

# Close to the Customer

ANNUAL REPORT 2015

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<sup>1</sup> EBIT (before non-recurring items) adjusted for amortisation of intangible assets and depreciation of tangible assets.  
<sup>2</sup> Basis points.

<sup>2</sup> Basis points.

# CORPORATE PROFILE

## THE LINDE GROUP

In the 2015 financial year, The Linde Group generated revenue of EUR 17.944 bn, making it one of the leading gases and engineering companies in the world, with approximately 64,500 employees working in more than 100 countries worldwide. The strategy of The Linde Group is geared towards long-term profitable growth and focuses on the expansion of its international business with forward-looking products and services. Linde acts responsibly towards its shareholders, business partners, employees, society and the environment in every one of its business areas, regions and locations across the globe. The company is committed to technologies and products that unite the goals of customer value and sustainable development.

## ORGANISATION

The Group comprises three divisions: Gases and Engineering (the two core divisions) and Other Activities (the logistics services company Gist). The largest division, Gases, has three segments: EMEA (Europe, Middle East and Africa), Asia/Pacific and the Americas. These segments are further subdivided into nine Regional Business Units (RBUs). In addition, Linde has established five Global Governance Centres (GGCs) for the Gases Division which are centrally managed and operate across the regions: GGC Merchant & Packaged Gases (liquefied gases and cylinder gas), GGC Electronics (electronic gases), GGC Healthcare, GGC Operations and GGC Deliver. The Group has also set up the Group-wide function Opportunity & Project Development in order to take better advantage of business opportunities.

## GASES DIVISION

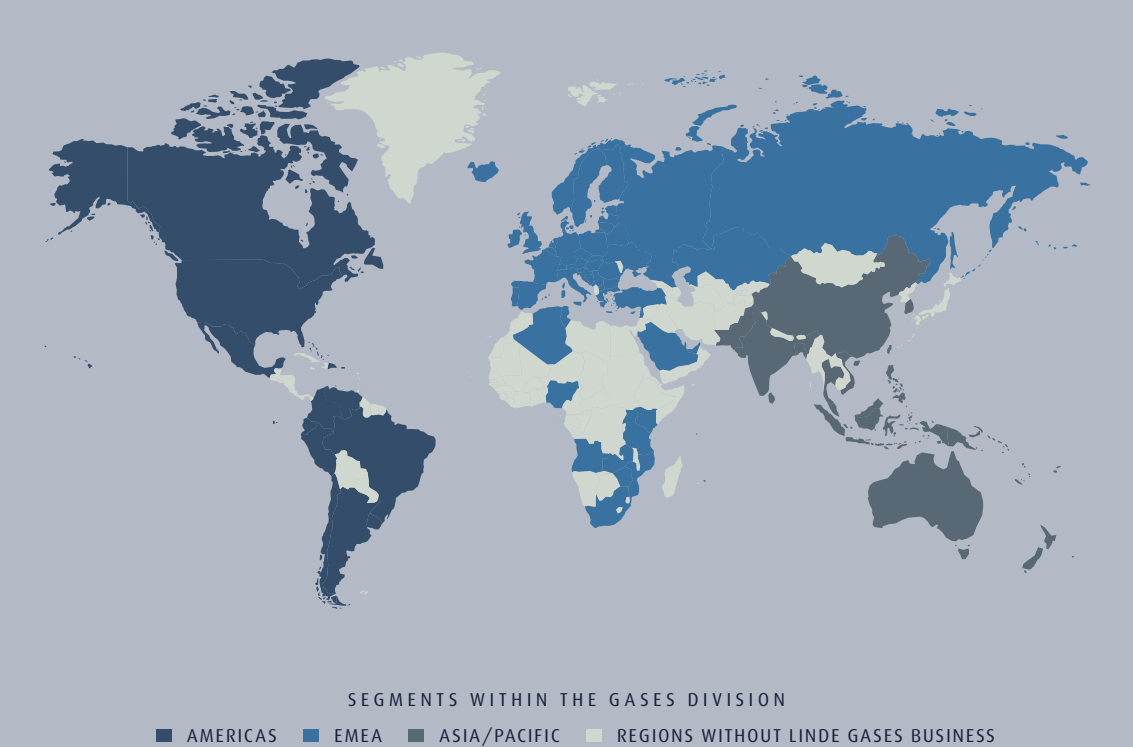
The Linde Group is a world leader in the international gases market. The company offers a wide range of compressed and liquefied gases as well as chemicals, and is the partner of choice across a huge variety of industries. Linde gases are used, for example, in the energy sector, steel production, chemical processing, environmental protection and welding, as well as in food processing, glass production and electronics. The company is also investing in the expansion of its Healthcare business (medical gases and services), and is a leading global player in the development of environmentally friendly hydrogen technologies.

## ENGINEERING DIVISION

Linde's Engineering Division is successful throughout the world, with its focus on promising market segments such as olefin, natural gas, air separation, hydrogen and synthesis gas plants. In contrast to virtually all competitors, the company can rely on its own extensive process engineering know-how in the planning, project development and construction of turnkey industrial plants. Linde plants are used in a wide variety of fields: in the petrochemical and chemical industries, in refineries and fertiliser plants, to recover air gases, to produce hydrogen and synthesis gases, to treat natural gas and to produce noble gases.

# THE LINDE WORLD

With its gases and engineering operations, Linde is represented in more than 100 countries around the world. The Gases Division has three segments: EMEA (Europe, Middle East and Africa), Asia/Pacific and the Americas. These segments are further subdivided into nine Regional Business Units (RBUs). This structure means that Linde is in the best position to respond to local and regional market conditions in the gases business and to meet its gases customers requirements as effectively as possible. Active the world over, the Engineering Division specialises in olefin plants, natural gas plants, air separation plants and hydrogen and synthesis gas plants.



## CUSTOMER SEGMENTATION WITHIN THE GASES DIVISION

FOOD & BEVERAGES	CHEMISTRY & ENERGY	METALLURGY & GLASS	MANUFACTURING INDUSTRY	ELECTRONICS	HEALTHCARE	OTHERS
Aquaculture & water treatment	Energy	Glass & fibre optics	Aerospace	Solar	Hospital care	Education & research
Beverages	Fine & petro-chemistry	Heat treatment	Automotive	Semi-conductor	Homecare	Retail
Food	Pharma	Non-ferrous	Heavy construction & machinery	Chip packaging	Gas therapies	Distributors
	Other chemistry	Steel	Light metal fab. & prod.		Care concepts	
		Other metallurgy & glass	Other manufacturing			

## OUR VISION

We will be the leading global gases  
and engineering company, admired for our people,  
who provide innovative solutions that make  
a difference to the world.

## OUR COMPANY VALUES

PASSION TO EXCEL.

INNOVATING FOR CUSTOMERS.

EMPOWERING PEOPLE.

THRIVING THROUGH DIVERSITY.

# ABOUT THIS REPORT

## [ PART OF THE COMBINED MANAGEMENT REPORT ]

### PREPARATION OF THE MANAGEMENT REPORT

This management report has been prepared in accordance with the rules set out in German Accounting Standards DRS 20 and DRS 17. DRS 20 governs the preparation of management reports for German capital market based holding companies which are required by § 315a of the German Commercial Code (HGB) to prepare a Group management report in accordance with § 315 HGB. DRS 17 governs the reporting of the remuneration of the members of executive bodies of groups. Linde also follows the German Corporate Governance Code presented by the "Government Commission on the German Corporate Governance Code" and as amended from time to time. Linde's Group management report has been combined with the management report of Linde AG in accordance with § 315 (3) HGB in conjunction with § 298 (3) HGB. The management report presented here is therefore entitled the combined management report. The annual financial statements of Linde AG, which are prepared in accordance with the provisions of the German Commercial Code (HGB), and the combined management report will be published simultaneously in the electronic German Federal Gazette (Bundesanzeiger). The information set out on the following pages applies to both The Linde Group and Linde AG unless otherwise indicated. Sections containing information which relates only to Linde AG are clearly designated as such.

### CONSOLIDATED FINANCIAL STATEMENTS AND NOTES TO THE GROUP FINANCIAL STATEMENTS

The consolidated financial statements of Linde Aktiengesellschaft for the year ended 31 December 2015 have been prepared in accordance with International Financial Reporting Standards (IFRS) issued by the International Accounting Standards Board (IASB) as adopted by the European Union pursuant to EU Regulation No. 1606/2002 of the European Parliament and the Council on the application of International Accounting Standards in the European Union.

### AUDIT

KPMG AG Wirtschaftsprüfungsgesellschaft has audited the Group financial statements which were prepared in accordance with International Financial Reporting Standards (IFRS) including the combined management report for the year ended 31 December 2015. Their unqualified audit opinion is presented on *PAGES 221 TO 222*.

### SUSTAINABILITY REPORTING

Linde publishes non-financial performance indicators and qualitative information on the subject of sustainable management in its Annual Report. The Corporate Responsibility (CR) Report provides supplementary detailed information on this topic. The Group complies with internationally recognised standards for sustainability reporting, such as the Global Reporting Initiative (GRI) guidelines and the requirements set out in the United Nations Global Compact. The current version of the Corporate Responsibility Report is available online at [WWW.LINDE.COM/CR-REPORT](http://WWW.LINDE.COM/CR-REPORT).





# Close to the customer

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For Linde, being close to our customers means a lot more than geographical proximity – we partner with them, advise them and actively support them. Every day, our aim is to reach out to our customers and exceed expectations through constant open dialogue and technology breakthroughs that add true value.

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## Close to the customer

### 1

#### Tailored applications

at Linde mean being a strong partner to our customers and successfully executing the most complex of projects. The decision to jointly tackle new challenges is always built on trust – the kind of trust that we win by combining engineering excellence with innovative power, experience and reliability.

The results speak for themselves – whether we are engineering a world-scale petrochemical plant in Siberia or optimising a food freezing solution in Malaysia.

PAGE III

### 2

#### Dynamic services

at Linde mean intensifying dialogue with our customers. The more you listen, the more you learn and the better you can meet a customer's individual needs. And that is the key to delivering services that quickly help our customers achieve lasting efficiency gains. We free our customers up to focus on their core business and adapt rapidly to new challenges.

As part of our global Customer Experience initiative, we are establishing many new customer touchpoints. The Engineering Division is demonstrating how one-on-one engagement with our customers is driving business success. And our Healthcare business is delivering services that benefit society as a whole.

PAGE IX

### 3

#### Innovative drive

at Linde means breaking the mould in a spirit of partnership. By anticipating future challenges, we transition ideas to pilot projects – which can then be rapidly and effectively advanced to market maturity by working closely with customers. These projects set new collaborative benchmarks for technical progress.

The development of a digital cylinder valve, for instance, marks a key step for both Linde and its customers on the journey towards Industry 4.0. This type of data intelligence can be used to pre-empt demand and optimise supply chains.

PAGE XV

# Tailored applications

At Linde, the development of tailored applications begins with an in-depth understanding of our customers' needs. Our objective is not only to meet but, even more importantly, to exceed expectations. By combining engineering excellence with innovative drive and reliability, we are able to deliver projects to the very highest execution standards.

Over time, this winning combination has bolstered our leading position in the development and delivery of complex projects and provided a solid foundation for lasting customer ties.

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# 1

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Through permafrost  
with precision

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Tailored applications

1

# Through permafrost with precision

ENGINEERING

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58° 12' N, 68° 16' O



## Tobolsk

Siberia's second oldest city,  
major refining centre and  
key petrochemical hub.

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*TOBOLSK IS A KEY LOCATION FOR SIBUR. THE COMPANY IS NOW BUILDING ONE OF RUSSIA'S LARGEST ETHYLENE PLANTS NEAR THE EXISTING POLYMER PLANT.*

## THROUGH PERMAFROST WITH PRECISION ENGINEERING

**Tobolsk, Siberia. Dense fog billows over the vast steppes of Western Siberia. Huge amounts of crude oil and natural gas are extracted from the depths of this region. Not far from the Russian city of Tobolsk, the country's leading petrochemical company, SIBUR, is taking a major stride into the future by constructing one of Russia's largest ethylene plants – and Linde is playing a decisive role in the project.**

Known simply as Tobolsk2, this ambitious project spans an area equivalent to one hundred football pitches. In practice, though, the plant's size and complexity pose less of a challenge than the local climate and geography. In winter, temperatures here fall as low as minus 40 or even minus 50 degrees Celsius, while icy winds turn work into an extreme endurance test for people on the ground. These conditions also place exceptional demands on equipment and logistics. Frozen solid in winter, the active layer above the permafrost thaws in summer, turning the rock-hard ground into wetlands. Supplying the construction site with materials and resources is thus a major logistical feat, requiring meticulous planning to ensure key components from around the globe always reach the

site on time. The river routes to Tobolsk are the only feasible option for heavy plant components – but even they are only navigable in summer. While the waterways start thawing from the upper reaches in spring, in autumn they freeze from the estuary back towards the headwaters again. So in the worst case scenario, a delay of just a few days could mean postponing a delivery to the next summer. When it came to selecting a reliable partner for this project, the SIBUR management team knew from the outset that it needed a company capable of stepping up to these extreme conditions.

Linde made it straight to SIBUR's shortlist, thanks partly to the wealth of experience that Linde has gained from the successful delivery of around 4,000 petrochemical plants worldwide. In addition, Linde had already won SIBUR's trust by constructing a polypropylene plant at Tobolsk. Ultimately, though, the key success factor in securing this follow-up contract was the company's outstanding engineering know-how and comprehensive engineering, procurement and construction (EPC) experience in realising complex facilities. Time and again, major projects involving billion-euro investments have demonstrated Linde's ability to exceed customer expectations with execution excellence and exceptional reliability. Pioneering reference projects such as Hammerfest (Norway), Borouge (Abu Dhabi) and Pearl (Qatar) provide concrete proof of this, weighing in Linde's favour when it comes to new orders.

Since 2012, Linde has been working on one of the world's largest polyolefin processing plants in Tobolsk, designed to generate high-quality feedstock for polymer production. In total, around 100,000 tonnes of concrete and 60,000 tonnes of steel are going into Tobolsk2's construction, as well as almost 5,000 kilometres of cable.

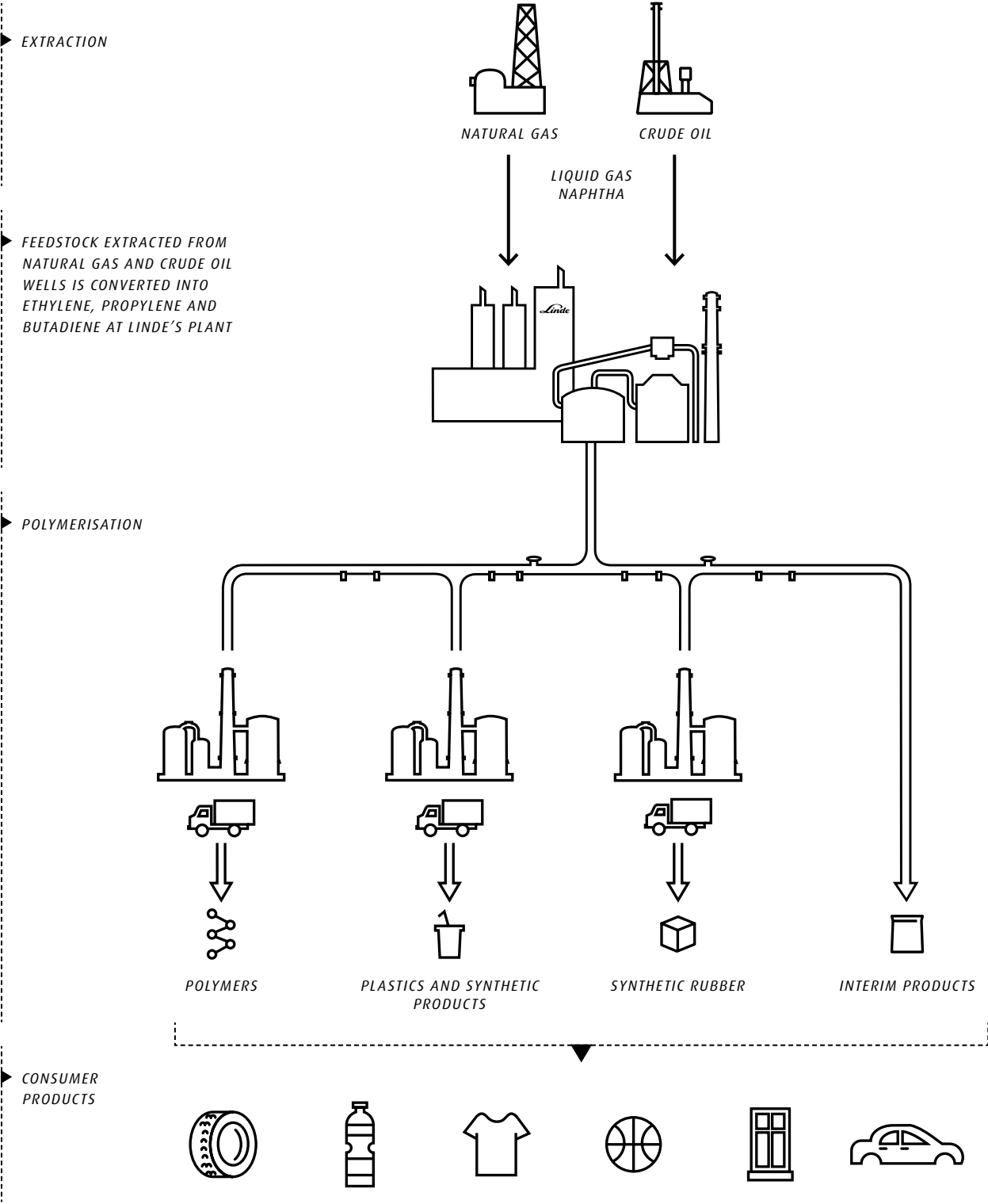
Even selecting and combining the materials is a challenge. Every individual plant component must be able to withstand the extreme local temperatures and permit start-up and shut-down at any time, while also contributing to cost efficiency. Linde is channelling the technology know-how that it has gained as one of the world's leading plant engineers into this project, further cementing the company's position at the forefront of the market.

Work progressed well in 2015, with the project running on schedule. Construction work should be completed in 2020. When it goes on stream, the plant will produce ethylene at a rate of around 1.5 million tonnes per annum (tpa), as well as 500,000 tpa of propylene and 100,000 tpa of butadiene. The scale of Tobolsk2 already makes it a key project for the region as a whole. In the future, it will enable the Russian polymer industry to meet sharply rising demand for feedstock without relying on imports. This will enhance SIBUR's value chain deep into the downstream industry sectors.

AT A GLANCE

# Extended product portfolio

SIBUR EXTENDS ITS VALUE CHAIN WITH THE HELP OF AN ETHYLENE PLANT BUILT BY LINDE



Tailored applications

1

## Spiralling success

FOOD

Frozen food is a real success story within the food business. In Germany alone, annual consumption of frozen food has jumped from around 17 kilograms per person in 1984 to 42 kilograms in 2014.

These figures show just how dynamic this industry is – and also give some indication of how fierce competition must be. Frozen food is a billion-euro business. Securing a place at the pinnacle requires constant innovation, new product lines and ongoing technology optimisation.

For many years now, Malaysian frozen food producer MacFood has placed its trust in Linde's engineering know-how. This was recently put to the test once again in a bid by MacFood to save liquid nitrogen and thus drive down the costs of its freezing process. The particular challenge here was to retain the existing spiral freezers and accomplish the entire revamp without interrupting production. A global first, since no freezer system had ever been upgraded in this way before.

Following an in-depth analysis of a spiral freezer, Linde Malaysia presented a solution in February 2015 that not only increased efficiency by up to 20 percent but also gave MacFood over 30 percent more production capacity. Instead of 2,000 kilos per hour, the new system can now freeze 2,900 kilos. Thanks to this revamp, MacFood has saved investment costs to the tune of around 4 million euros. All the more impressive considering that this performance gain only applies to one of three such freezers to date – so the potential here remains huge.

This successful outcome has far-reaching benefits for Linde, too. MacFood has chosen to secure the services of Linde Malaysia for another seven years with a total contract volume of 50 million euros.

### SUCCESS STORY

## Contract extended

PARTNERSHIP SECURED INTO THE FUTURE

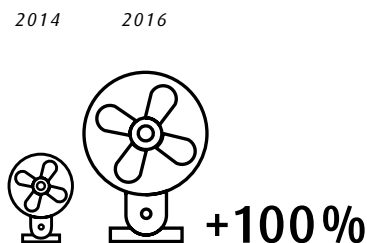
Linde has been a reliable partner to PEMEX since 2000, supporting the efficient extraction of crude oil in Mexico. Building on Linde's commitment to continually developing its plants, PEMEX decided ahead of time to extend the existing contract to 2027.

### FACTS & FIGURES

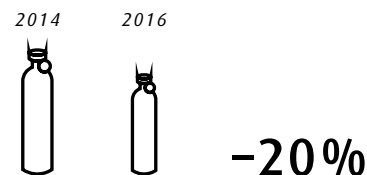
## Positive outcomes

LINDE IMPROVES NUMEROUS FACTORS

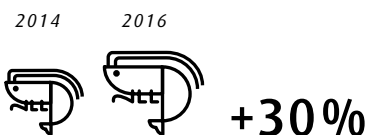
GAS FLOW VELOCITY ACCELERATED  
FROM 3 TO 6 METRES PER SECOND



LIQUID NITROGEN CONSUMPTION  
REDUCED BY AROUND 20 PERCENT



PRODUCTION CAPACITY INCREASED  
BY AROUND 30 PERCENT





# Dynamic services

Direct communication and active, one-on-one engagement with customers is the key to building trust in our role as partner and advisor. Our goal is to anticipate changing customer requirements and dynamically adapt our service offering to a constantly evolving business environment.

We need to truly understand our customers' needs in order to develop services that match those needs. This basic belief informs all of our actions and dealings, helping to strengthen our long-term partnerships and unlock new and promising business opportunities.

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**Customer Experience:  
No voice unheard**

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**Telehealth:  
Helping patients become  
more independent**

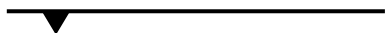
PAGE XIV

Dynamic services

2

# No voice unheard

*CUSTOMER EXPERIENCE*



*WORLDWIDE*



## Pilot countries

The Voice of the Customer platform has been successfully rolled out to fifteen countries around the globe: Australia, Austria, Canada, China, the Czech Republic, Denmark, Germany, India, Ireland, Malaysia, New Zealand, Norway, South Africa, Sweden and the UK.

## AT A GLANCE

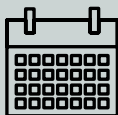
## Customer Experience – listen, learn, live

LINDE'S VOICE OF THE CUSTOMER (VOC) PLATFORM GIVES CUSTOMERS NUMEROUS TOUCHPOINTS BEYOND THE ANNUAL CUSTOMER EXPERIENCE (CX) SURVEY.

2015

- ▶ 12 KEY MARKETS
- ▶ 2,500 PARTICIPANTS
- ▶ ANNUAL RESPONSE

CX SURVEY



DIALOGUE (VOC)



2015

- ▶ ROLLED OUT TO 15 COUNTRIES;  
14 MORE TO FOLLOW
- ▶ 28,000 PARTICIPANTS IN UK ALONE
- ▶ CONTINUOUS ENGAGEMENT

## Touchpoints along the customer journey

TYPICAL TOUCHPOINTS FOR A CYLINDER CUSTOMER



## Benefits

FOR LINDE

- ▶ BUILD CUSTOMER LOYALTY
- ▶ STRENGTHEN IMAGE
- ▶ MOTIVATE EMPLOYEES

FOR THE CUSTOMER

- ▶ EASIER, MORE DIRECT INTERACTION WITH LINDE
- ▶ FASTER SERVICE
- ▶ OPTIMISED EXPERIENCE OVERALL

## Outcome

INSIGHTS COLLECTIVELY GAINED FROM CUSTOMER ENGAGEMENT INITIATIVES FLOWED INTO 118 OPTIMISATION PROJECTS IN 2015. THE FOLLOWING IS JUST ONE EXAMPLE:

Oct 2015

OPTIMISATION PROJECT  
KICKED OFF IN CHINA

500

CUSTOMERS USE  
THE NEW SERVICE

530

TRUCKS  
ARE NET-  
WORKED



App

FOR CUSTOMERS  
TO CHECK DELIVERY  
STATUS

25%

DROP IN NUMBER OF QUERIES  
ON DELIVERY STATUS

## NO VOICE UNHEARD CUSTOMER EXPERIENCE

Listening to the customer: a virtue that companies often preach but seldom practise. Linde is striving to make the voice of every single customer heard. Not only does this strengthen business relationships, the resulting dialogue helps Linde make targeted improvements to products, processes and services. Which is why the company is intensifying its efforts in this area and aiming for even greater customer engagement around the world.

Listen and learn – so the mantra goes. It follows then, that the more we listen the more we learn. Learning from customers is only possible if they can engage directly and easily. Moreover, the loop must be closed: the insights collectively gained from customer engagement must be directly channelled into the right projects, strategies and processes. Intensifying dialogue between Linde and customers therefore has been and continues to be the aim of the company-wide Customer Experience (CX) programme.

The CX programme wants to ensure that all voices are heard. In the Gases Division, for example, cylinder customers may not have the same natural touchpoints as a client with an on-site gas

production plant. Yet they contribute just as much to revenue. The CX programme will make it just as easy for this base of around two million cylinder customers to reach Linde.

An annual survey run by Linde in twelve key markets provides the basis for a deeper understanding of customer needs. The results of this customer engagement can drive strategy in a top-down manner. But that's not all. Complementing this, the CX programme provides mechanisms to encourage dialogue at a transactional level. This follows a bottom-up approach, led by continuous customer engagement with frontline employees.

A key tool in this initiative is the Voice of the Customer platform. This increases the number of channels and touchpoints customers can use to reach Linde. At each stage in the customer journey – be it cylinder deliveries, collections, telephone orders, invoicing or in-shop purchases – they have the opportunity to provide feedback. A digital dashboard bundles customer comments and suggestions in real time. Urgent issues are processed immediately and queries are forwarded to the appropriate departments.

Linde began rolling out this platform internationally in 2015, and 2016 will see additional countries hooking up. Information gathered in this way regularly flows into the 120 or so optimisation projects currently underway in response to customer feedback. The three main focus areas for Linde at present are query management, ease of contacting Linde and delivery.

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### FACTS & FIGURES

## Close to the customer – the world over

HIGHLIGHT CUSTOMER EXPERIENCE  
ACTIVITIES ORGANISED BY LINDE

- Customer survey (12 countries)
  - Voice of the Customer platform (15 countries)
  - Thank You campaign (UK)
  - Buddy programme (UK)
  - CX Gold Star award (India)
- 

In China, for example, Linde got closer to its customers by launching the company's first-ever delivery tracking service. The e-notification app service keeps customers informed of their delivery status. It updates arrival times and provides a delivery notice one hour before delivery – via phone, text messaging or WeChat, a Chinese smartphone chat application.

Increasing customer touchpoints is, however, not the only success factor behind vibrant and productive customer engagement. It is also important to embed customer engagement deep within a company's culture. Which is why the CX initiative includes a variety of measures to ensure that all Linde employees, irrespective of individual roles, experience customer interaction first hand. One example is the UK's Customer Experience Month. It included a Thank You campaign where 300,000 customers were invited to Linde and personally thanked by employees. Also in the UK, the "buddy" programme sees non-customer-facing employees buddied up with frontline employees for a day. In India, the CX Gold Star award is given to employees who submit the best ideas for improving customer experience.

The Customer Experience programme will continue into 2016 with numerous initiatives to inspire and energise customer dialogue – all with the aim of ensuring that no voice goes unheard.

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#### SUCCESS STORY

## Culture promoting customer engagement

### LE CUSTOMER SERVICES

Linde Engineering's Customer Services (CS) team is all about one-on-one customer engagement. The team's work reaches deep within the companies it serves, supporting plant modifications, revamps and, more recently, even plant relocations. This is probably the most challenging undertaking in helping customers respond to changing market dynamics. The CS department is firmly on the path to success, doubling order volume every year since 2013.

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Dynamic services

## 2

## Helping patients become more independent

TELEHEALTH

Beds in British hospitals are scarce – the nation's public healthcare facilities have been chronically overstretched for many years now. Care at home is a potential answer to this escalating bed crisis. The National Health Service (NHS) relies on private contractors – such as BOC, UK member of The Linde Group – to deliver homecare services. BOC's telehealth offering is much more than an innovative care model. Digital networking across patients, doctors and nursing staff not only relieves the NHS, it also increases patient autonomy. This means that BOC's offering has both a social and economic dimension, since caring for patients is extremely time-intensive and associated with very high costs for family members and their employers. Against the backdrop of ageing populations in industrialised countries, healthcare has now become a major economic factor.

## FACTS &amp; FIGURES

## Close to the customer – the world over

## CUSTOMER EXPERIENCE ACTIVITIES

In 2013, there were 2.8 hospital beds per thousand people in the United Kingdom – one of the lowest rates of any OECD member. By contrast, the equivalent rate for Germany was 8.3. And even this peak figure within Europe was topped by Korea (11.0) and Japan (13.3).



UK

2.8



GERMANY

8.3



SOUTH KOREA

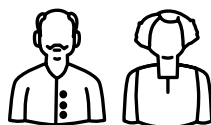
11.0



JAPAN

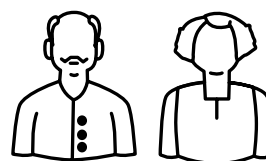
13.3

There are currently more than 11.4 million UK citizens over the age of 65. By 2050, this share of the population will rise sharply to exceed the 19-million mark.



CITIZENS OVER THE AGE OF 65 IN 2014

11.4 m



CITIZENS OVER THE AGE OF 65 BY 2050

19.0 m

# Innovative drive

At Linde, innovative drive is a key success factor – for us as a company and for our customers. Many of our long-term relationships are built on our determination to challenge the limits of technology and give our customers the early-adopter advantage. Our mission is always to help our customers master tomorrow's challenges.

This ambitious drive benefits both us and our customers by enabling innovative products and better services – all of which have the potential to leverage untapped market opportunities.

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3

Digital cylinder valve:  
Into the digital age

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Innovative drive

3

# Into the digital age

*DIGITAL CYLINDER VALVE*



55° 51' N, 4° 15' O



## Glasgow

Scotland's largest city.  
Flourishing industry,  
especially around crude  
oil, natural gas, chemicals  
and biotech, have made  
Glasgow the UK's third-  
largest industrial hub.





## INTO THE DIGITAL AGE DIGITAL CYLINDER VALVE

Big data is driving process efficiency gains around the world. And at Linde, valves are now communicating to bring the benefits of digitalisation to customers. Not only does Linde's innovative digital cylinder valve simplify every-day management of industrial gases, it is yet another example of how the company's innovative capabilities are adding value to its customers.

Linde is taking its next big step towards Industry 4.0 in Scotland. Since December 2015, the company has been conducting field tests for a new digital cylinder valve inspired by LIV® IQ – a smart valve already in use in the medical sector.

Known as EVOS™ DCi, this latest advance is designed for customers of industrial gases. This new generation of gas cylinders dynamically communicates information on contents and location to gas users. The digital valve is connected to an online system that displays its key parameters via an app. Networking the virtual with the physical, the Internet of Things marks a quantum leap in process optimisation. The customer now always knows exactly where their gas cylinders are and how much gas they have left. This saves a huge amount of time.

Thanks to the digital valve, Linde can analyse customer consumption patterns and respond swiftly to new needs. This increases efficiency and minimises risks on the customer side. The cylinder's digital technology thus ensures uninterrupted supply and business continuity. To put it simply, when the contents of one cylinder are running low, the next one is already on its way. This leaves customers of all sizes, from solo welders to chemical or refining giants, free to concentrate on developing their business – rather than worrying about supply chain security.

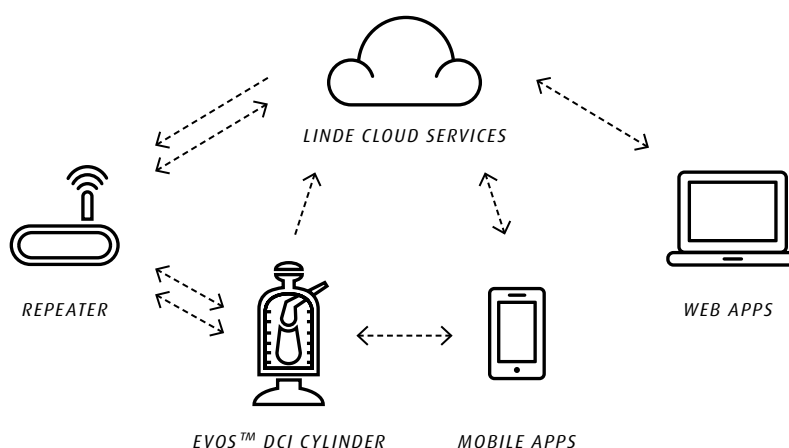
The smart EVOS™ DCi cylinder valve is a defining step in the transition towards the technologies of tomorrow. These are enabled by big data, which Linde is leveraging to unlock the markets of the future – for itself and for its customers.

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AT A GLANCE

## The networked cylinder

LINDE'S NEW SMART VALVE WILL ENABLE CUSTOMERS TO EASILY MONITOR, MANAGE AND ANALYSE THEIR GAS CONSUMPTION.



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# Group Governance

## SECTION 1

# LETTER TO THE SHAREHOLDERS



## *Ladies and Gentlemen,*

2015 was a turbulent year for you, as Linde shareholders, or for us as a company. Our share price performance has not been satisfactory over the past few months. This is due to a number of factors. The weak global economy, particularly in the emerging markets, which are key markets for us, had a marked negative impact on global industrial production. What is more, geopolitical tension, local trouble spots and low oil prices fuelled a marked reluctance to invest among our customers in the plant construction segment.

In this challenging environment, we have been able to maintain stable earnings power and achieve a solid overall result. The Group reaped the benefits of positive exchange rate effects and achieved growth in both Group revenue and operating profit. Linde achieved a 5.3 percent increase in Group revenue in the 2015 financial year to EUR 17.944 bn. At EUR 4.131 bn, Group operating profit exceeded the prior-year value by 5.4 percent.

We will be sticking unreservedly to our reliable dividend policy in the future as well. At the Annual General Meeting on 3 May 2016, the Executive Board and Supervisory Board will propose the payment of a dividend of EUR 3.45 per share (2014: EUR 3.15 per share). This implies an increase in dividend of 9.5 percent, which is disproportionately high relative to earnings growth. This sends out a positive signal to you, our shareholders, and reflects our firm conviction that we will be able to ensure stable and profitable business development in the future, too.

Although some markets fell short of expectations, we nevertheless wrote a number of considerable success stories last year. These include the long-term extension of our supply agreement with PEMEX in Mexico and, last but not least, the strategic partnership with Gazprom in Russia, which paved the way for our first plant construction agreement.

The overall pronounced reluctance to embark on large-scale investments due to sustained low oil prices ultimately forced us to revise our revenue forecast for the full year 2015 because of the weaker engineering business. In the medium term, we are likely to continue operating in a market environment characterised by moderate growth, geopolitical instability and extremely volatile capital markets. As a result, we adjusted our 2017 targets for Group

operating profit and the return on capital employed (ROCE) in the fourth quarter of the year to reflect the new environment.

There is no doubt that we are currently experiencing a period of uncertainty. We are still aiming to ensure stable, sustainable and profitable growth for the Company.

Adjusted for currency effects, we expect a Group revenue performance between -3 percent and +4 percent in the 2016 financial year. As far as Group operating profit is concerned, we also expect a currency-adjusted development between -3 percent and +4 percent in the current year. We have set a value of around 9 percent as our target for the return on capital employed.

Dear shareholders, rest assured that we plan to tackle the challenge facing us head on. We have made a conscious decision to focus on our strengths: promising innovations, application-oriented products and services, and competitive, energy-efficient plants.

The backbone of our Company is the interplay between the Gases and Engineering Division. And we plan to maintain this integration in the future, too. We can exploit synergies in the two areas to further strengthen our business with the construction and operation of facilities for major customers. In our business with liquefied gases and cylinder gas, and in the healthcare sector, we will be further increasing our network density and ensuring that we can be even closer to our customers by offering convincing services. Where it makes sense to do so, we will also be supplementing these activities with targeted smaller and medium-sized acquisitions in promising areas.

I am convinced that we will be able to build further on our success despite a very challenging market environment. Linde is well positioned to rise to the challenges of the future. We have a robust business model, a highly diverse customer base, business relationships in a large number of different sectors and a global presence in key growth markets.

We will continue to concentrate on what we do best in your interest: namely offering our customers the most innovative solutions and the best services. Our aim is to take action from a position of strength to ensure that we manage Linde as a guarantor of stability and reliability for you, our shareholders.



DR WOLFGANG BÜCHELE  
[CHIEF EXECUTIVE OFFICER OF LINDE AG]

# THE EXECUTIVE BOARD

**DR WOLFGANG BÜCHELE**  
**BORN 1959**

Doctorate in Natural Sciences [Dr. rer. nat.],  
Degree in Chemistry  
Chief Executive Officer

Responsible for Opportunity & Project Development  
and the following Corporate & Support Functions:  
Corporate Communications & Investor Relations,  
Corporate Internal Audit, Corporate Office,  
Corporate Strategy & Market Intelligence,  
Group Human Resources, Group Legal & Compliance,  
SHEQ [Safety, Health, Environment, Quality] and Gist  
Member of the Executive Board since 2014

**THOMAS BLADES**  
**BORN 1956**

Bachelor of Science in Electrical Engineering [Dipl.-Ing.]

Responsible for the Americas segment,  
for the Global Governance Centres Deliver,  
Healthcare and Operations, and for the  
Global Gases Businesses Helium & Rare Gases  
Member of the Executive Board since 2012

**DR CHRISTIAN BRUCH**  
**BORN 1970**

Doctorate in Engineering [Dr.-Ing.]  
Degree in Mechanical Engineering

Responsible for the Engineering Division and for the  
Corporate & Support Function Technology & Innovation  
Member of the Executive Board since 2015

**GEORG DENOKE**  
**BORN 1965**

Degree in Information Science  
Degree in Business Administration [BA]

Responsible for the Corporate & Support Functions  
Group Accounting & Reporting, Group Information Services,  
Group Insurance, Group Mergers & Acquisitions,  
Group Procurement, Group Risk Management, Group Tax,  
Group Treasury, Operational Finance,  
Financial Control & Investments, Real Estate and for  
Finance/Financial Control for the EMEA, Americas and  
Asia/Pacific segments  
Human Resources Director  
Member of the Executive Board since 2006

**BERND EULITZ**  
**BORN 1965**

Degree in Engineering

Responsible for the EMEA  
[Europe, Middle East, Africa] segment  
Member of the Executive Board since 2015

**SANJIV LAMBA**  
**BORN 1964**

Chartered Accountant  
Bachelor of Commerce

Responsible for the Asia/Pacific segment and for the Global  
Governance Centres Merchant & Packaged Gases [liquefied  
gases and cylinder gas] and Electronics [electronic gases]  
Member of the Executive Board since 2011



THOMAS BLADES – SANJIV LAMBA – BERND EULITZ  
DR WOLFGANG BÜCHELE – GEORG DENOKE – DR CHRISTIAN BRUCH  
[FROM LEFT TO RIGHT]

# THE SUPERVISORY BOARD

## Members of the Supervisory Board

**DR MANFRED SCHNEIDER**  
[CHAIRMAN]

Former Chairman of the Supervisory Board  
of Bayer AG

**HANS-DIETER KATTE**<sup>1</sup>  
[DEPUTY CHAIRMAN]

Chairman of the Pullach Works Council,  
Engineering Division, Linde AG

**MICHAEL DIEKMANN**  
[SECOND DEPUTY CHAIRMAN]

Former Chairman of the Board of Management  
of Allianz SE

**PROFESSOR DR**  
**ANN-KRISTIN ACHLEITNER**

Professor at the  
Technical University Munich [TUM]

**DR CLEMENS BÖRSIG**<sup>2</sup>

Chairman of the Board of Management  
of Deutsche Bank Foundation,  
Former Chairman of the Supervisory Board  
of Deutsche Bank AG

**ANKE COUTURIER**<sup>1</sup>

Head of Global Pensions,  
Linde AG

**FRANZ FEHRENBACH**

Chairman of the Supervisory Board of Robert Bosch GmbH,  
Managing Partner  
of Robert Bosch Industrietreuhand KG

**GERNOT HAHL**<sup>1</sup>

Chairman of the Worms Works Council,  
Gases Division, Linde AG

**DR MARTIN KIMMICH**<sup>1</sup>

Second Authorised Representative, IG Metall Munich

**DR VICTORIA OSSADNIK**

Member of the Board of Management  
of Microsoft Deutschland GmbH  
(Member of the Supervisory Board since 7 January 2016)

**XAVER SCHMIDT**<sup>1</sup>

Trade Union Secretary of IG Bergbau,  
Chemie, Energie Hanover

**FRANK SONNTAG**<sup>1</sup>

Chairman of the Dresden Works Council,  
Engineering Division, Linde AG

**Members who left the Supervisory Board on  
31 December 2015:**

**KLAUS-PETER MÜLLER**

Chairman of the Supervisory Board  
of Commerzbank AG

<sup>1</sup> Employee representative.

<sup>2</sup> Independent expert member as defined by § 100 (5) and § 107 (4) of the German Stock Corporation Act (AktG).

Memberships of other German statutory supervisory boards and comparable German and foreign boards are shown in *NOTE [37]* of the Notes to the Group financial statements.



## Supervisory Board committees

### MEDIATION COMMITTEE

[in accordance with § 27 (3) of the German Codetermination Act (MitbestG)]

- DR MANFRED SCHNEIDER  
[CHAIRMAN]
- HANS-DIETER KATTE<sup>1</sup>
- MICHAEL DIEKMANN
- XAVER SCHMIDT<sup>1</sup>

### STANDING COMMITTEE

- DR MANFRED SCHNEIDER  
[CHAIRMAN]
- HANS-DIETER KATTE<sup>1</sup>
- MICHAEL DIEKMANN
- FRANZ FEHRENBACH
- GERNOT HAHN<sup>1</sup>

### AUDIT COMMITTEE

- DR CLEMENS BÖRSIG<sup>2</sup>  
[CHAIRMAN]
- PROFESSOR DR ANN-KRISTIN ACHLEITNER
- GERNOT HAHN<sup>1</sup>
- HANS-DIETER KATTE<sup>1</sup>
- DR MANFRED SCHNEIDER

### NOMINATION COMMITTEE

- DR MANFRED SCHNEIDER  
[CHAIRMAN]
- MICHAEL DIEKMANN
- FRANZ FEHRENBACH

<sup>1</sup>Employee representative.

<sup>2</sup>Independent expert member as defined by § 100 (5) and § 107 (4) of the German Stock Corporation Act (AktG).

Memberships of other German statutory supervisory boards and comparable German and foreign boards are shown in *NOTE [37]* of the Notes to the Group financial statements.

## REPORT OF THE SUPERVISORY BOARD



Dear shareholders,

Despite the global economic slump, our Company continued to grow during the 2015 financial year.

The Supervisory Board would like to thank the Executive Board and all Linde Group employees across the globe for their active commitment and their performance over the last financial year.

## Overview

During the reporting year, the Supervisory Board conducted detailed reviews of the Group's situation, its prospects and its strategic development, as well as the future long-term positioning of The Linde Group and key individual initiatives. We monitored and advised the Executive Board in the running of its business operations in accordance with the duties assigned to us by law, the articles of association and the Supervisory Boards procedural rules. Through verbal updates at our meetings and in the form of written reports, the Executive Board regularly provided us with timely and comprehensive updates on company performance, the economic situation, profitability and plans for the company and its subsidiaries, as well as briefing us on all issues relevant to the strategy being pursued by the company and its subsidiaries, planning, business development, the risk situation, risk management and compliance. We assessed the plausibility of all documents presented to us and regularly consulted the Executive Board on significant issues. The Supervisory Board was involved in all major decisions made by the company. These include Executive Board transactions and measures requiring the approval of the Supervisory Board. This applies in particular to the annual capital expenditure programme, major acquisitions, divestments, and defined capital and financial measures. In our committees and at meetings of the full Supervisory Board, we carried out critical reviews of the reports and proposed resolutions submitted by the Executive Boards and put forward our suggestions. The Chairman of the Supervisory Board also ensured that he remained up to date on the current business situation, significant business transactions and decisions taken by the Executive Board, doing so through various channels including the minutes of Executive Board meetings. He maintained close contact with the Executive Board and with the Chief Executive Officer in particular, sharing information and ideas, and held regular consultations with the CEO on the Group's strategy, planning, business development, risk situation, risk management and compliance. On the basis of the reports submitted by the Executive Board and the auditors report, the Supervisory Board was able to satisfy itself as to the effectiveness of the risk monitoring system set up in

accordance with § 91 (2) of the German Stock Corporation Law (AktG). At no time during the year did the Supervisory Board raise any objections in relation to the sound and efficient management of the Group.

## Meetings and resolutions of the Supervisory Board

Five Supervisory Board meetings were held in the 2015 financial year: four scheduled and one extraordinary meeting. With the exception of two meetings which one Supervisory Board member was unable to attend in each case, all twelve Supervisory Board members took part in the meetings. The members who were unable to attend participated in the passing of resolutions by casting their votes in writing. The members of the Executive Board took part in the Supervisory Board meetings unless the Chairman of the Supervisory Board decided otherwise. Where necessary, the Supervisory Board met without any Executive Board members being present. This tends to be the case when the items on the agenda relate to the Executive Board itself.

In addition to reviewing current business developments, the Supervisory Board meetings also addressed Linde's financial and risk situation, strategy, compliance with legal regulations and with internal guidelines, and key individual business transactions requiring Supervisory Board approval. After a thorough review of the documents submitted and detailed discussions on the proposals of the Executive Board, the Supervisory Board granted all the necessary approvals. In 2015, all of the resolutions adopted by the Supervisory Board were adopted at meetings.

Once again during the reporting year, the Supervisory Board's advisory and monitoring activities focused on the Group's growth prospects, its individual lines of business and its reportable segments. We regularly discussed the potential impact of the global economic situation and currency effects, the impact of oil price developments and the order situation in the plant construction sector with the Executive Board, alongside issues relating to the development of individual markets, while also discussing how to plan for the future and considering the stability of future developments. Activities in 2015 also focused on the efficiency improvement programme that was launched in 2014 and on the acquisition of the US homecare company American HomePatient, Inc.

At the Supervisory Board meeting to approve the financial statements on 13 March 2015, we discussed in detail and approved the annual financial statements of

Linde AG and the Group financial statements for the year ended 31 December 2014 and agreed the proposed appropriation of earnings. On the basis of a proposal made by the Standing Committee, we agreed on the targets reached in relation to the variable cash emoluments and total emoluments earned by the individual Executive Board members for 2014. In addition, we issued the declaration of compliance with the German Corporate Governance Code and adopted the Report of the Supervisory Board and the Corporate Governance Report for 2014, as well as the agenda for the Annual General Meeting, including the proposed resolutions. In addition to its regular reports on business performance and the general position of The Linde Group, the Executive Board also presented us with an updated plan for the 2015 financial year and the updated medium-term business plan. This included information on variances from the prior-year budget. The Executive Board dealt in detail with selected key performance indicators and briefed us on their financial and operational impact on Linde. In addition, the Chief Executive Officer provided a progress report on the development of the organisational model. The Act on the Equal Participation of Women and Men in Leadership Positions in the Private Sector and the Public Sector (*Gesetz für die gleichberechtigte Teilhabe von Frauen und Männern an Führungspositionen in der Privatwirtschaft und im öffentlichen Dienst*) and its implementation within The Linde Group was also addressed.

Immediately before the Annual General Meeting on 12 May 2015, the Executive Board reported on business performance in the first quarter of 2015, as well as on current business development and Linde's economic situation. The Executive Board also briefed us on acquisition opportunities in the healthcare business. After being provided with detailed information by the Executive Board, we also consented to a transaction requiring approval, which related to an internal refinancing measure. The meeting also addressed the 2014 mandatory EMIR audit pursuant to § 20 of the German Securities Trading Act (*WpHG*), a system audit on compliance with the requirements set out in the Securities Trading Law. Additionally, the meeting was used to prepare for the subsequent shareholder meeting.

At an extraordinary meeting held on 25 June 2015, the Supervisory Board took a detailed look at the planned acquisition of the US homecare company American HomePatient, Inc. We used this meeting to look at the transaction in detail and assess the associated opportunities and risks, the entrepreneurial and strategic objectives pursued in connection with the acquisition, its feasibility, the plans for the financing of the transaction and the impact on our Company. We then approved the acquisition of the company in line with the Executive Board's proposal.

At our meeting on 25 September 2015, the Executive Board outlined in detail the economic situation facing The Linde Group and its divisions and described the outlook for the full 2015 financial year. A focus report also outlined the status of the homecare acquisition project in the US. The meeting also focused on progress made in implementing

the strategies highlighted in earlier years, strategic development and the Group's competitive environment. The latest developments in relation to strategy and the competitive position of The Linde Group and its divisions were covered in detail. Key questions discussed included the strategic positioning and direction of Linde and its divisions, and projects considered or launched in this regard, as well as the impact of such projects on The Linde Group's financial position, net assets and results of operations. Taking into account the current general economic climate, the Executive Board outlined the opportunities and risks in an internationally competitive environment, as well as the significance and further development of the efficiency improvement programme. The Executive Board also explained the implementation of the new Act on the Equal Participation of Women and Men in Leadership Positions at the two levels of management below Executive Board level. The Supervisory Board set a target for the proportion of women on the Executive Board of Linde AG for the period leading up to 30 June 2017.

At the final meeting of the year on 7 December 2015, we looked at current business developments and the performance of the Group in comparison with its main competitors. We also looked at the situation, opportunities, risks and strategy of the US healthcare subsidiary Lincare Holdings Inc. In particular, the report of the Lincare CEO addressed the imminent state price cuts for services in the US healthcare business and the integration of the planned acquisition of American HomePatient Inc., which was approved by the Supervisory Board in June 2015. The Executive Board also reported on the current business and financial situation following the conclusion of the third quarter. On the basis of comprehensive documentation, we also dealt with the preview of the 2015 financial statements, the budget for the 2016 financial year and the medium-term business plan for the years 2017 to 2019, including financial, capital expenditure and human resources plans. Each of these was considered in detail. We carried out an extensive review of the assumptions made by the Executive Board, particularly with regard to the risks for the Group associated with the general economic environment. The Executive Board explained any variances between the plans and targets and the actual results. We also discussed the proposal made by the Executive Board to have the 2016 investment programme approved in detail. After careful examination, we granted our approval. Finally, in the absence of the Executive Board, we took a detailed look at the results of the Supervisory Board's efficiency review and discussed improvement measures for our Supervisory Board activities. Based on the outcome of the efficiency review, suggestions regarding future personnel changes on the Supervisory Board and additional topics to be addressed by the Supervisory Board were taken up. We also discussed the regular limit on the length of Supervisory Board membership.

## Committees and committee meetings

The Supervisory Board continues to have four committees: the Mediation Committee, formed under § 27 (3) of the German Codetermination Act (MitbestG), the Standing Committee, the Audit Committee and the Nomination Committee. The Chairman of the Supervisory Board chairs all the committees with the exception of the Audit Committee. The current members of each committee are listed on [PAGE 7](#). Information about the responsibilities of each committee is given in the Corporate Governance Report on [PAGES 14 TO 21](#).

The Standing Committee of the Supervisory Board held two meetings during the reporting year, one of which was held in the form of a teleconference. In addition, one resolution was passed by written proceedings. The Chairman of the Standing Committee also remained in close contact with the other committee members outside meetings in order to liaise on particular issues. The Standing Committee addressed personnel matters relating to active and former Executive Board members and prepared Supervisory Board decisions on the remuneration of the Executive Board. The meetings also looked at issues relating to the Act on the Equal Participation of Women and Men in Leadership Positions. The Standing Committee also adopted changes to the articles of association required as a result of the issuing of shares to fulfil share options and gave its consent to members of the Executive Board taking up mandates and secondary occupations with other companies, establishments and institutions. In a teleconference held at short notice, the Executive Board informed the Standing Committee and the Chairman of the Audit Committee of an ad hoc disclosure under capital market law relating to an adjustment to the mid-term targets for 2017.

The Audit Committee met on four occasions during the year under review in the presence of the auditors, the Chief Executive Officer and the Chief Financial Officer. It discussed and reviewed in detail the annual financial statements of Linde AG and the Group financial statements, the management reports, the proposed appropriation of profits and the audit reports, including the report on the audit focus and the oral presentation by the auditors of the main results of the audit. The Audit Committee raised no objections on the basis of its reviews. No significant weaknesses in the accounting-related internal control system or in the system for the early identification of risks were detected by the auditors. The Executive Board also discussed the interim and half-year financial reports with the Audit Committee, taking into account auditor's report on the review prior to their publication. In addition, this Committee prepared the proposal from the Supervisory Board on the appointment of the auditors at the Annual General Meeting, issued the audit mandate to the auditors, determined the audit focus and agreed the audit fees. The Audit Committee monitored the independence,

qualifications, rotation and efficiency of the auditors and the services provided by the auditors in addition to the audit itself. It also entered into an agreement with the auditors in accordance with the Group's internal rules about the provision of services not related to the audit, and the auditors informed the Committee at each of its meetings about the fees it had charged in relation to such services. Furthermore, it kept up to date on the evolution of the risk management system and compliance structures, compliance issues, any legal or regulatory risks, the risk position and the identification and monitoring of risk within the Group. The Audit Committee also reviewed the evolution of internal control systems within the Group based on a presentation by the Executive Board. It received a report on the structure, roles and responsibilities within the Internal Audit department, on its audit work and the audit plan for 2015. The Audit Committee was briefed on the efficiency of the internal control system, risk management system and internal audit system; it discussed the findings in detail and was duly satisfied as to the efficacy of the systems in question. The Executive Board also briefed the Audit Committee on a regular basis with regard to the status of various activities relating to the external and internal financing of the Group and the safeguarding of its liquidity. Other issues included the 2014 mandatory EMIR audit pursuant to § 20 of the German Securities Trading Act (WpHG), and the random review of the annual and consolidated financial statements for 2014 conducted by the German Financial Reporting Enforcement Panel (Deutsche Prüfstelle für Rechnungslegung). The random review did not lead to any findings. For selected agenda items, department heads also attended meetings of the Audit Committee, submitting reports and answering questions. In addition, the Chairman of the Audit Committee held talks on issues of significance in the periods between committee meetings, with the Chairman of the Supervisory Board, Chief Executive Officer, Chief Financial Officer and the auditors in particular. The Audit Committee and, where necessary, the Supervisory Board were regularly apprised of the outcome of these discussions.

In 2015, the members of the Nomination Committee discussed candidates for Supervisory Board by-elections on several occasions outside of meetings. In December 2015, they ultimately made a recommendation on a successor for Klaus-Peter Müller, who left the Supervisory Board at his own request with effect from 31 December 2015. When making its recommendation, the Nomination Committee took account of all requirements and objectives regarding the composition of the Supervisory Board based on the legislation and the German Corporate Governance Code, including diversity and, in particular, the participation of women in the Supervisory Board.

The Mediation Committee did not need to be convened.

With the exception of one Audit Committee meeting which the Chairman of the Audit Committee was unable to attend, all committee members attended the committee meetings.

The committee chairmen reported in detail on the agendas and outcomes of their committee meetings at the plenary Supervisory Board meeting following their sessions.

## Corporate governance and declaration of compliance

We continually monitor changes to the German Corporate Governance Code and permanently verify that the provisions are being implemented correctly. In March 2016, the Executive Board and the Supervisory Board issued an updated declaration of compliance in accordance with § 161 of the German Stock Corporation Act (AktG) and made it permanently available to its shareholders on the Company's website [WWW.LINDE.COM](http://WWW.LINDE.COM). Further information on corporate governance at Linde can be found in the Corporate Governance Report. *SEE PAGES 14 TO 21.*

Board to approve the financial statements on 9 March 2016. The auditors took part in the discussions both at the Audit Committee meeting and at the meeting of the full Supervisory Board. They presented the main results of their audits and were able to provide supplementary information and to answer questions. The Audit Committee also presented the results of its review to the Supervisory Board. We conducted our own examination of all of the documents submitted and the audit reports and discussed them in detail. After considering the results of the preliminary review by the Audit Committee and the final results of our own review of the documents submitted to us by the Executive Board and by the auditors, we find no grounds for objection and concur with the results of KPMG's audit. We hereby approve and adopt the financial statements of Linde AG and the Group financial statements for the year ended 31 December 2015 as drawn up by the Executive Board; the annual financial statements of Linde AG are hereby final. We also approve the Executive Boards proposal for the appropriation of profits.

## Annual financial statements and Group financial statements

KPMG AG Wirtschaftsprüfungsgesellschaft, Berlin, (KPMG) audited the annual financial statements of Linde AG prepared in accordance with the principles set out in the German Commercial Code (HGB), as well as the consolidated financial statements of The Linde Group for the year ended 31 December 2015 prepared in accordance with IFRS as adopted by the European Union including the combined management report of Linde AG and The Linde Group in accordance with German generally accepted standards for the audit of financial statements and in supplementary compliance with International Standards on Auditing (ISA). The auditors have confirmed that the Group financial statements and the combined management report meet the requirements set out in § 315a (1) of the German Commercial Code (HGB) and have issued unqualified opinions on both the Group financial statements and annual financial statements. In accordance with the terms of its engagement, KPMG performed audit reviews of the interim and half-yearly financial reports in the 2015 financial year. At no time did these reviews give rise to any objections. KPMG also confirmed that the system for the early identification of risks complies with legal requirements. In the 2015 financial year, the audit focused on the "Quality assessment of the Internal Audit activities of Linde AG". No significant weaknesses in the accounting-related internal control system or in the system for the early identification of risks were detected by the auditors. Once again during the reporting year, the auditors declared their independence to the Audit Committee.

The documents relating to the financial statements and the audit reports were issued to all members of the Supervisory Board in good time. They were then the subject of extensive deliberations at the Audit Committee meeting on 8 March 2016 and the meeting of the Supervisory

## Changes to the composition of the Supervisory Board and the Executive Board

Klaus-Peter Müller resigned from the Supervisory Board with effect from 31 December 2015. Dr Victoria Ossadnik was legally appointed to succeed him with effect from 7 January 2016. The Supervisory Board would like to thank Klaus-Peter Müller for many years of positive collaboration and the key contribution he made to the success of the Company. The Supervisory Board appointed Franz Fehrenbach to succeed Klaus-Peter Müller as member of the Standing Committee and the Nomination Committee. An overview of the composition of the Supervisory Board and its committees is provided on [PAGES 6 TO 7](#).

Dr Christian Bruch and Bernd Eulitz took up their positions on the Executive Board of Linde AG on 1 January 2015. They were appointed to succeed Professor Dr Aldo Belloni, who left the Executive Board on 31 December 2014 after reaching the age limit. Dr Christian Bruch is responsible for the Engineering Division and for Technology & Innovation on the Executive Board. Bernd Eulitz is in charge of the EMEA gases segment.

MUNICH, 9 MARCH 2016  
ON BEHALF OF THE SUPERVISORY  
BOARD



DR MANFRED SCHNEIDER  
[CHAIRMAN OF THE SUPERVISORY  
BOARD OF LINDE AG]

# Corporate Governance

## CORPORATE GOVERNANCE DECLARATION AND CORPORATE GOVERNANCE REPORT

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### Compliance with the German Corporate Governance Code and declarations of compliance

Linde AG follows the German Corporate Governance Code presented by the Government Commission on the German Corporate Governance Code and as amended from time to time. In March 2015, the Executive Board and Supervisory Board of Linde AG issued a declaration of compliance with the recommendations of the German Corporate Governance Code as amended on 24 June 2014 in accordance with § 161 of the German Stock Corporation Act (AktG) and made this declaration permanently available to the public on the Linde website.

After the declaration of compliance was issued in March 2015, the German Corporate Governance Code was amended on 5 May 2015. These amendments came into force upon their publication in the official section of the German Federal Gazette on 12 June 2015. The Executive Board and Supervisory Board of Linde AG studied the requirements of the German Corporate Governance Code as amended on 5 May 2015 in detail before issuing the following declaration of compliance in March 2016.

"The Executive Board and the Supervisory Board of Linde AG declare in accordance with § 161 of the German Stock Corporation Act:

All the recommendations of the Government Commission on the German Corporate Governance Code as amended on 24 June 2014 have been complied with since the last declaration of compliance was issued, and the version amended on 5 May 2015 is currently complied with and will be complied with in the future, except for the following exception.

#### *Clause 4.2.3 para 2 sentence 6*

In accordance with clause 4.2.3 para 2 sentence 6 of the German Corporate Governance Code the Executive Board members remuneration in total and as to its variable components should be capped at a given maximum amount. Employment contracts with Executive Board members do not include a ceiling for the Executive Board members' total remuneration; variable components are capped as is described below.

The components of the variable cash emoluments are limited in terms of amounts. The Long Term Incentive Plan which provides for remuneration in the form of options to purchase shares (performance shares) and bonus shares linked to personal investment (matching shares) has a cap in terms of amounts at the time of the granting of option rights and matching shares rights. However, the value of the performance shares and matching shares after a multi-year qualifying period is not limited in terms of amounts. An additional cap like that was not deemed appropriate. In such a case, the synchronisation of interests of shareholders and Executive Board members to be achieved by share-based remuneration would be disrupted, which in our opinion would not be in the shareholders interest.

Since in future the value of the performance shares and the matching shares after expiration of a multi-year qualifying period are not to be capped, a ceiling for the remuneration amount will not be set in future."

The current and former declarations of compliance with the German Corporate Governance Code are available on the company's website at [WWW.LINDE.COM/DECLARATIONOFCOMPLIANCE](http://WWW.LINDE.COM/DECLARATIONOFCOMPLIANCE).

Linde AG also complies with the suggestions made in the Code, with only one exception:

The Code suggests that it should be possible for shareholders to follow the Annual General Meeting via modern communication media (e.g. the Internet). We transmit the opening remarks made by the Chairman of the Supervisory Board and also the Chief Executive Officers' speech, but not the general discussion. In principle, the articles of association permit the transmission of the Annual General Meeting in full via electronic media. However, out of respect for shareholders' privacy, we do not transmit the contributions of individual speakers. Nevertheless, we will continue to follow developments closely.



## Corporate governance practices

Linde AG has traditionally attached great importance to sound, responsible management and supervision geared towards the creation of sustainable value added. Our success has always been based on close and efficient co-operation between the Executive and Supervisory Boards, consideration of shareholders, interests, an open style of corporate communication, proper accounting and audit procedures, as well as a responsible approach to risk and to statutory and Group-internal rules and regulations.

Linde upholds high ethical standards. In 2007, the Executive Board developed a corporate philosophy entitled The Linde Spirit and devised a new code of conduct known as the Code of Ethics, launching both throughout the Group. In 2013, a new version of The Linde Spirit brochure was issued in order to highlight the major importance of the core values to which the Group is committed. The Linde Spirit describes the corporate culture which is manifested in the Linde vision and the values and principles that underpin day-to-day activities. The 2013 edition of the brochure reflects how The Linde Spirit is translated into everyday reality. The Code of Ethics sets out the commitment made by all employees in The Linde Group to comply with legal regulations and to uphold and protect the ethical and moral values of the Group. It is based on Linde's corporate culture and accords with its global values and fundamental principles. The Executive Board has also issued its own guidelines on competition/antitrust law, preventing corruption, the engagement of sales agents, occupational safety, environmental and health protection, quality and procurement. Like the Code of Ethics, these guidelines apply to all employees throughout The Linde Group. A global code of conduct for Linde AG suppliers was also published in 2013, with the aim of making our expectations of our suppliers even more transparent to them. The Healthcare Compliance Guide was adopted and published in 2014. This supplements the global guideline on preventing corruption and, subject to stricter laws at local level, imposes minimum standards governing responsible and ethical cooperation with healthcare professionals and medical establishments, advertising material, cooperation and interaction with patient organisations and the protection of patient data, as well as the setting of rules for clinical studies.

### **Compliance**

To reinforce compliance with both legal regulations and voluntary principles, the Group has a global compliance organisation. Linde's Group-wide compliance activities are focused in particular on antitrust law, the fight against corruption, export control and data protection. A binding risk analysis process (compliance risk assessment) was introduced in 2014, covering the issues of general compliance, antitrust law and corruption. The full-time employees working in Compliance are affiliated to Group Legal. Compliance officers have been appointed in the

divisions, business units and operating segments to support Group-wide observance of the compliance programme. The Chief Compliance Officer coordinates and implements compliance measures. The Executive Board and the Audit Committee of the Supervisory Board are regularly informed about the current state of progress in the compliance organisation, including measures aimed at communicating existing rules of conduct to employees, training employees in those rules and updating the rules as necessary. Training is provided for Linde employees worldwide. Classroom-based courses are supplemented by a Group-wide e-learning programme. By the end of 2015, Linde had held more than 138,000 compliance training sessions, more than 55,000 e-learning training sessions on the code of conduct and some 10,000 e-learning sessions on antitrust law. In addition, around 22,000 members of staff were provided with training on site by skilled trainers. We thereby create a working environment in which our employees are entirely familiar with our rules and guidelines.

The Integrity Line reporting system is an important element of the compliance framework at The Linde Group. It enables both internal and external stakeholders to raise issues or report any doubts or suspicions that they might have. In 2015, the Internal Audit, Human Resources, and Group Legal departments and the department for Health, Safety and the Environment carried out around 140 investigations worldwide on the basis of information received via the Integrity Line. If an internal investigation reveals that the doubts or suspicions raised were justified, a prescribed process is used to determine which measures are required. Linde also checks that these measures have, in fact, been implemented.

All information on Linde's core values and compliance policy can be found on the Company's website at [WWW.LINDE.COM/GUIDELINESCOREVALUES](http://WWW.LINDE.COM/GUIDELINESCOREVALUES) and [WWW.LINDE.COM/CORPORATEGOVERNANCE](http://WWW.LINDE.COM/CORPORATEGOVERNANCE).

### **Executive Board and Supervisory Board procedures**

Linde AG, which has its registered office in Munich, is governed by the provisions of the German Stock Corporation Act (AktG) and the German Co-Determination Act (MitbestG), capital market regulations and the rules set out in its articles of association. The Executive Board and Supervisory Board are responsible for the management and supervision functions assigned to them. They cooperate closely in the interests of Linde to ensure the continuation of the Group as a going concern and to create sustainable value added. They must act in the interests of the shareholders and for the benefit of the Group.

## Executive Board

The Executive Board of Linde AG is responsible for managing the Company and conducting its business. Its actions and decisions are geared towards the best interests of the Group, taking into consideration the concerns of shareholders, employees, customers and other stakeholder groups. Its aim is to create sustainable value for stakeholders. The Executive Board establishes the strategic direction of the Group, agrees this strategy with the Supervisory Board, ensures it is properly implemented and reviews the progress made during regular discussions with the Supervisory Board. It is also responsible for annual and multi-year business plans, Group financing and the preparation of quarterly, half-yearly, annual and Group financial statements. In addition, the Executive Board ensures that appropriate risk management and risk control systems are in place and provides regular, timely and detailed reports to the Supervisory Board on all relevant Group issues including strategy, medium-term business plans, business trends, the risk situation, risk management and compliance with legal regulations and internal Group guidelines. The Executive Board also takes the necessary measures to facilitate compliance in the Group companies. Given the Group's extensive reach across international markets and industry sectors, the Executive Board is responsible for ensuring that this diversity is reflected at management level. The goal is to put together the best teams worldwide. The Group's HR strategy includes the definition, delivery and continuous evolution of Group-wide talent development programmes. Linde supports intercultural diversity by adopting an international human resources policy and making appointments across national borders. Another of Linde's main priorities in the area of diversity is the promotion of female managers. In 2015, Linde introduced information and communication workshops on the topic of gender diversity for top management. The Executive Board is also supporting numerous employee initiatives to promote women. These include networking events, training programmes for women with management responsibility or leadership potential, and a pilot mentoring scheme. Regarding the proportion of women working at the two levels of management below Executive Board level, the Executive Board has set targets in line with the Act on the Equal Participation of Women and Men in Leadership Positions in the Private Sector and the Public Sector (*Gesetz für die gleichberechtigte Teilhabe von Frauen und Männern an Führungspositionen in der Privatwirtschaft und im öffentlichen Dienst*). The proportion of women in the first management tier below the Executive Board is to rise to 14 percent (11 percent at Linde AG) by 30 June 2017 and 18 percent (18 percent at Linde AG) by 30 June 2022. In 2015, the proportion of female senior managers in this tier was 11 percent. In the second management tier below the Executive Board, Linde is aiming for the proportion of women to rise to 17 percent (15 percent at Linde AG) by 30 June 2017 and 22 percent (20 percent at Linde AG) by 30 June 2022. This figure was 16 percent in 2015. Further

information on these targets and on diversity in The Linde Group can be found in the report *EMPLOYEES AND SOCIETY* on *PAGES 79 TO 83*.

Key Executive Board activities and transactions require the approval of the Supervisory Board. This applies in particular to the annual capital expenditure programme, major acquisitions, divestments, and defined capital and financial measures. The Supervisory Board can also specify special approval requirements in individual cases. While in office, members of the Executive Board are bound by a detailed restraint clause. Any conflicts of interest must be disclosed immediately to the Supervisory Board, as well as to fellow Board members. No such conflicts of interest arose for any member of the Executive Board during the reporting period.

The procedural rules of the Executive Board govern the work it performs, the allocation of responsibilities to individual members, the issues which must be dealt with by the full Executive Board and the majority required for resolutions to be passed by the Executive Board. The Executive Board passes resolutions at meetings held on a regular basis. A simple majority of the votes cast is sufficient for a resolution to be passed, unless a greater majority is prescribed by law. If the vote is tied, the Chairman has the casting vote. Without prejudice to the collective responsibility of all members of the Executive Board, each member of the Executive Board has individual responsibility for the functions assigned to him when the decisions of the Executive Board are being made. It is incumbent upon the Chairman of the Executive Board to assume responsibility not only for the functions assigned to him, but also to coordinate all areas of responsibility entrusted to the Executive Board in a proper manner. He is the main point of contact between the Executive Board and the Supervisory Board and represents the company in public. The Executive Board has consisted of six members since 1 January 2015. At the moment, the Executive Board has exclusively male members, with one falling into the over-40 age group and five in the 50 to 60 category. The appointments to the Executive Board also take into account the international operations of The Linde Group. Sanjiv Lamba is an Indian national and Thomas Blades is from the UK. The composition of the Executive Board is also such that all of the required areas of expertise are covered.

As of the balance sheet date, no member of the Executive Board was a member of more than three supervisory boards of listed companies outside The Linde Group or of comparable supervisory bodies of other business entities. Information about memberships held by members of the Executive Board on other German statutory supervisory boards or comparable German and foreign boards of business entities is given in the Notes to the Group financial statements. *SEE NOTE [37]*.

The Executive Board has no committees.

Information on the composition of the Executive Board and on individual Board members, including their responsibilities and duties, may be found in the overview on *PAGE 4* or on the Linde website. The CVs of Executive Board members are available on the Linde website.

### *Supervisory Board*

Equal numbers of shareholder representatives and employee representatives sit on the Supervisory Board of Linde AG, which comprises, in accordance with the company's articles of association, the minimum number of members as specified in the relevant regulations. Currently, the minimum number specified by law is twelve. The appointment of the members of the Supervisory Board is also governed by the relevant legal regulations. In accordance with the recommendations of the German Corporate Governance Code, the shareholder representatives were elected individually at the last election to the Supervisory Board at the Annual General Meeting on 29 May 2013. The current term of office of the members of the Supervisory Board ends with the closure of the Annual General Meeting in 2018. The Supervisory Board's Nomination Committee prepares for the election of shareholder representatives by the General Meeting. When proposing candidates to the Supervisory Board, it takes into account the targets set by the Supervisory Board in terms of its future composition, as well as such criteria as the requirements of the German Stock Corporation Act (AktG), the Corporate Governance Code and the Supervisory Board's procedural rules. The composition of the Supervisory Board is balanced to ensure that its members collectively possess the knowledge, skills and professional experience necessary to enable them to discharge their duties in a group with global operations in a fit and proper manner. All Supervisory Board members must ensure that they have sufficient time to perform those duties. When submitting proposals to the Annual General Meeting regarding the election of new Supervisory Board members, the Supervisory Board checks that the candidates are able to invest the time likely to be required. At present, no members of the Supervisory Board sit on the executive board of a listed company. Linde AG undertakes to support Supervisory Board members as appropriate in the pursuit of any training or professional development necessary for the performance of their duties. New members are provided with comprehensive induction documents and information upon their appointment to the Supervisory Board. Additionally, specialist presentations by internal and external expert speakers are arranged for Supervisory Board members.

The Supervisory Board appoints the Executive Board and monitors and advises the Executive Board in the running of its business operations. Executive Board decisions that are of fundamental importance to the Group require the approval of the Supervisory Board. With regard to the composition of the Executive Board, the Supervisory Board considers diversity in addition to the appropriate professional qualifications of candidates. The "Act on the Equal Participation of Women and Men in Leadership Positions in the Private Sector and the Public Sector" subjects Linde AG to the obligation to set targets for the proportion of women on the Executive Board and at the two levels of management below the Executive Board. These targets have to be met by 30 June 2017 for the first time. As far as

the Supervisory Board is concerned, a binding ratio of at least 30 percent applies to the underrepresented gender for new appointments from 2016 onwards. In the medium and long term, the Supervisory Board is aiming to have at least one woman on the company's Executive Board. Given the short period of time available to meet this target by the maximum deadline of 30 June 2017 set by the legislator, it does not, however, believe that this target can be met. The appointment periods and terms of the employment contracts of all Executive Board members expire after 30 June 2017, with one exception. To prevent setting a target that the Supervisory Board does not feel is realistic or in the interests of the company given the resources at its disposal, the Supervisory Board has set a target of 0 percent, which corresponds to the current status quo, for the period leading up to 30 June 2017. This does not, of course, rule out a situation in which the Supervisory Board would consider the aim of increasing the proportion of women in the Executive Board if it had to fill an unexpected vacancy on the Executive Board before this point in time.

The Chairman of the Supervisory Board, Dr Manfred Schneider, coordinates the work of the plenary Supervisory Board and chairs its meetings. He is responsible for ensuring that resolutions passed by the Supervisory Board and its committees are duly executed and he is authorised to issue the statements on behalf of the Supervisory Board required to implement the resolutions of the Supervisory Board and its committees. The Chairman of the Supervisory Board maintains close contact with the Executive Board and the Chairman of the Executive Board in particular throughout the year, sharing information and ideas.

### *Targets of the Supervisory Board regarding its composition*

The Supervisory Board has defined the following specific targets for its composition in accordance with clause 5.4.1 of the German Corporate Governance Code. These take into account the particular situation of the Group, the Group's international reach, potential conflicts of interest, the number of independent Supervisory Board members, an age limit for Supervisory Board members, a regular limit on the length of membership of the Supervisory Board and the need for diversity.

#### — International expertise

With operations in more than 100 countries, The Linde Group has a global footprint. To reflect this, at least five of the Supervisory Board members should have extensive international expertise.

#### — Potential conflicts of interest and independence

At least 75 percent of the Supervisory Board members should have no direct or indirect business, financial or personal ties with the company or its corporate bodies, a controlling shareholder or a company affiliated with the latter that could constitute a significant and not just temporary conflict of interest or raise concerns regarding partiality. The mere existence of an employment

relationship between employee representatives and the company or its affiliated companies does not preclude impartiality as described above. Supervisory Board members should not have management or advisory roles on the executive bodies of the main competitors of The Linde Group. No more than two former Executive Board members should sit on the Supervisory Board.

- **Age limit for Supervisory Board members**  
Supervisory Board members should be no older than 72.
- **Standard threshold for membership of the Supervisory Board**  
The Supervisory Board has set three terms of office as the maximum period of membership of the Supervisory Board. This maximum threshold is to be adhered to as a general rule.
- **Diversity**  
The Supervisory Board is committed to diversity in its composition and to the fair representation of women in particular. As Linde Aktiengesellschaft is a listed stock corporation that is subject to the German Codetermination Act (MitbestG), the Supervisory Board consists of at least 30 percent female and at least 30 percent male members in line with the principles set out in § 96 (2) of the German Stock Corporation Act (AktG).

The current composition of the Supervisory Board matches the above-stated objectives and the areas of expertise currently covered by its membership include engineering, law and economics, as well as finance, accounting and financial control.

Thanks to professional experience gained during their careers to date, all of the current Supervisory Board members have a particular level of international expertise. No conflicts of interest arose for any member of the Supervisory Board during the 2015 financial year. Where such conflicts of interest do occur, they must be disclosed immediately to the Supervisory Board. No Supervisory Board members currently have management or advisory roles on the executive bodies of any of Linde's major competitors. Four Supervisory Board members, Anke Couturier, Gernot Hahl, Hans-Dieter Katte and Frank Sonntag, are company employees. No other consultancy, service or work contracts have been concluded between Supervisory Board members and the company. No former members of the company's Executive Board are currently members of the Supervisory Board. One Supervisory Board member, Dr Manfred Schneider, reached the age limit in the 2010 financial year. At the Annual General Meeting in 2013, the member in question was also re-elected for a five-year term. When proposing candidates for the 2013 elections, the Supervisory Board was aware of the age limit defined in the procedural rules. However, it had good reason for also proposing candidates who had already reached 72 or who would reach this age during their term of office. The appointments were approved at the Annual General Meeting. Dr Manfred Schneider will leave the Supervisory Board at his own request with effect from 20 May 2016.

The Supervisory Board currently has three members in the over-40 age category, five members in the over-50 category, three members in the over-60 category and one member who is over 70. The Government Commission on the German Corporate Governance Code presented a new version of the Code on 5 May 2015 which was published on 12 June 2015 and states that a regular limit of length of membership is now also to be specified for the members of the Supervisory Board. As a result, the Supervisory Board set a regular limit on the length of membership. Two of the Supervisory Board members elected by the employees, Gernot Hahl and Hans-Dieter Katte, have been members of the Supervisory Board since 1998. Due to the resignation from office of the Supervisory Board member representing the shareholders, Klaus-Peter Müller, on 31 December 2015, the proportion of women on the Supervisory Board has been increased to 25 percent. There are now three women on the Supervisory Board: Prof Dr Dr Ann-Kristin Achleitner, Anke Couturier and the court-appointed Dr Victoria Ossadnik. Dr Victoria Ossadnik and Professor Dr Wolfgang Reitzle are to be nominated for election to the Supervisory Board at the Annual General Meeting to be held on 3 May 2016. Professor Dr Wolfgang Reitzle was member and Chairman of the Company's Executive Board up until 20 May 2014. Now that the two-year cool-down period prescribed by law has expired, he is set to succeed Dr Manfred Schneider. The election of the candidates nominated would take account of all requirements and objectives regarding the composition of the Supervisory Board based on the legislation, the German Corporate Governance Code and the procedural rules and resolutions of the Supervisory Board. This also applies, in particular, to the targets and requirements regarding diversity and, in particular, the participation of women on the Supervisory Board. Total compliance with these objectives regarding gender distribution on the Company's Supervisory Board has been rejected; the minimum gender distribution levels set out in § 96 (2) sentence 1 AktG would, however, be met. Professor Dr Wolfgang Reitzle would be the only former Executive Board member of the Company's Supervisory Board. The Supervisory Board has checked that the candidates are able to invest the time likely to be required for their Supervisory Board duties. Even if the two candidates are elected by the Annual General Meeting on 3 May 2016, the targets set out by the Supervisory Board regarding its composition, including the objectives relating to international expertise and impartiality, will be met.

The procedural rules of the Supervisory Board include rules regarding the independence of its members. No member of the Supervisory Board is in a personal or commercial relationship with the company or its bodies that could represent a conflict of interests. One member of the Supervisory Board, Dr Victoria Ossadnik, is currently still a member of the management of a company with which Linde has a business relationship. Transactions with this company take place under the same conditions as for non-related third parties. These transactions do

not affect Dr Victoria Ossadnik's independence. Linde AG has no controlling shareholder whose relationship with a member of the Supervisory Board could jeopardise that member's independence. Consequently, the Supervisory Board is composed exclusively of individuals with a sufficient level of independence.

Information about the members of the Supervisory Board and their memberships of other legally prescribed German supervisory boards and/or comparable German or foreign boards of business entities is given in the Notes to the Group financial statements. *SEE NOTE [37]*. The CVs of Supervisory Board members are available on the Linde website.

### ***Supervisory Board committees***

The Supervisory Board has four committees, which lay the groundwork for the plenary Supervisory Board. If it is permitted by law and laid down in the procedural rules of the Supervisory Board, decision-making powers may in individual cases be delegated by the Supervisory Board to these committees. The Chairman of the Supervisory Board chairs all the committees with the exception of the Audit Committee. The committee chairmen report back to the Supervisory Board on the work of their committees, doing so at the first plenary Supervisory Board meeting following the committee meeting.

The Standing Committee, which comprises three shareholder representatives and two employee representatives, advises the Supervisory Board in particular on the appointment and removal of members of the Executive Board and on decisions regarding the remuneration system for the Executive Board, including the terms and conditions of employment contracts, pension contracts and any other contracts pertinent to the remuneration of Executive Board members, and the total remuneration of individual Executive Board members. Moreover, the Standing Committee is responsible for approving transactions with Executive Board members and related parties, as well as for approving other activities of the Executive Board members, especially the holding of positions on supervisory boards and comparable boards of business entities that are not part of The Linde Group. It also provides advice on long-term succession planning for the Executive Board and reviews the efficiency of the work of the Supervisory Board on a regular basis. After preparatory work by the Standing Committee, the full Supervisory Board discusses the results of the efficiency review, identifies improvements that can be made and stipulates appropriate measures.

The Audit Committee similarly comprises three shareholder representatives and two employee representatives. It lays the groundwork for the decisions of the Supervisory Board regarding the adoption of the annual financial statements and the approval of the Group financial statements, taking account of the auditors' reports, and makes arrangements with the auditors. It supports the Supervisory Board in the execution of its supervisory duties and monitors, in particular, the accounting process and the effectiveness of the internal control system, risk

management system and internal audit system, as well as the statutory audit. It also deals with compliance issues. The Executive Board also discusses the interim and half-year financial reports with the Audit Committee prior to publication. The Audit Committee also makes a recommendation to the plenary Supervisory Board regarding the proposal for the election of the company's auditors. The Chairman of the Audit Committee, Dr Clemens Börsig, is an independent financial expert and, in common with Professor Dr Ann-Kristin Achleitner and Dr Manfred Schneider, has specialist knowledge and many years experience of financial reporting and the application of accounting principles and internal control systems.

The Nomination Committee comprises the Chairman of the Supervisory Board, the Second Deputy Chairman of the Supervisory Board and one other shareholder representative. It makes recommendations to the Supervisory Board on proposed candidates for the election of shareholder representatives at the Annual General Meeting.

The Mediation Committee, formed under the provisions of the German Codetermination Act (*MitbestG*), comprises the Chairman of the Supervisory Board, the Deputy Chairman of the Supervisory Board (elected by the employee representatives on the Supervisory Board), one shareholder representative and one employee representative. It makes suggestions to the Supervisory Board regarding the appointment of Executive Board members if the required majority of two-thirds of the votes cast by Supervisory Board members is not obtained in the first ballot.

The Supervisory Board and its committees pass resolutions at meetings which are convened on a regular basis.

The names of those sitting on the Supervisory Board and on the Supervisory Board committees when the annual financial statements were being prepared are given on *PAGES 6 TO 7* or may be consulted on the Internet at [WWW.LINDE.COM/SUPERVISORYBOARD](http://WWW.LINDE.COM/SUPERVISORYBOARD). Information about the activities of the Supervisory Board and its committees and about the work it has done with the Executive Board in the 2015 financial year is provided in the Report of the Supervisory Board. *SEE PAGES 8 TO 13*.

## Additional corporate governance information

### *Annual General Meeting*

The shareholders assert the rights accorded to them by law and by the articles of association either before or during the Annual General Meeting by exercising their right to vote. Each share entitles the shareholder to one vote.

The Annual General Meeting takes place within the first six months of each financial year. Notice of the Annual General Meeting, together with the reports and documents required by law for the meeting, including the financial report, is published, along with the agenda for the meeting, the conditions governing participation, an overview of shareholder rights, forms for voting by post, plus shareholder counter-motions and nominations, on the Linde website in both German and English, and is thus easily accessible for shareholders. Notice of the Annual General Meeting and the associated documents may also be transmitted electronically to shareholders if they so wish.

Shareholders who are unable to attend the Annual General Meeting or who leave the meeting before voting has commenced have the option of exercising their vote through a proxy of their choice or a proxy appointed by the company who then votes in accordance with their instructions. Proxy forms may also be submitted in electronic form. Moreover, shareholders have the option of casting their votes without appointing a proxy in writing or using electronic media (ballot by mail).

The Executive Board of Linde AG presents the annual financial statements and Group financial statements, together with the combined management report, for approval at the Annual General Meeting. The Annual General Meeting passes resolutions regarding the appropriation of profits, the ratification of the acts of the Executive Board and Supervisory Board, the appointment of the auditors and generally also the election of shareholder representatives to the Supervisory Board. Decisions are also made at the Annual General Meeting about the content of the articles of association, key structural measures, capital measures and the authorisation to repurchase shares. The meeting has the opportunity to approve the remuneration system for Executive Board members. Once the Annual General Meeting has closed, the results of the votes on each agenda item are published on the Company's website without delay.

### *Consequential loss and liability insurance*

The company has taken out consequential loss and directors and officers liability insurance (D & O) for the members of the Executive Board and Supervisory Board. For members of the Executive Board, the retention in accordance with legal rules is 10 percent of the claim, up to a figure of one and a half times the fixed annual emoluments of the Board member in question. An appropriate retention

has been agreed for members of the Supervisory Board in accordance with the recommendation set out in the German Corporate Governance Code.

### *Directors' dealings*

Linde AG publishes without delay as stipulated by law transactions subject to notification under § 15a of the German Securities Trading Act (WpHG) which have been executed by the persons named therein, in particular transactions carried out by members of the executive bodies of the company and related parties involving shares in the company or related financial instruments. The transactions reported to Linde AG in the past financial year can be accessed on the company's website.

### *Interests in share capital*

The total holdings of all the members of the Executive Board and Supervisory Board in Linde AG shares or related financial instruments during the financial year did not exceed 1 percent of the shares issued by the company. On 31 December 2015, Executive Board members held a total of 174,000 shares and share options in Linde AG (0.094 percent of shares issued), while Supervisory Board members held a total of 9,000 shares and share options in Linde AG (0.005 percent of shares issued).

### *Remuneration of the Executive Board and Supervisory Board*

The remuneration report, which also includes information on the share-based emoluments, can be found on [PAGES 22 TO 36](#) of this financial report.

### *Communications and stakeholder relations*

Linde AG complies with the legal requirement to treat all its shareholders equally. Transparency plays an important role and the company always aims to provide shareholders and the public with comprehensive, consistent and up-to-date information. Linde makes extensive use of the Internet as a reporting tool. Comprehensive facts and figures about Linde are available online. Interested parties can subscribe to an electronic newsletter on the company's website or keep up to date on the latest Linde developments via social media.

A financial calendar, which is also published on Linde AG's website, keeps our shareholders and the general public informed about the dates of the company's main recurring publications, the Annual General Meeting, the Press Conference on the annual results and analyst conferences. Linde AG publishes ad-hoc announcements, press releases and notifiable securities transactions (directors' dealings) in the media specified by the law and on its website. The company's articles of association are also available on its website. Four times in the financial year, Linde reports to its shareholders on its business performance, the net assets, financial position and results of operations of the Group, the forecast for the future, and opportunities and risks. Linde provides information to the capital market and

to the public every quarter through analysts conferences and press conferences or in the form of teleconferences. These coincide with the publication of quarterly, half-year and annual results. Regular events where the CEO and CFO meet institutional investors and financial analysts also ensure a continual exchange of information with the financial markets. Linde also regularly arranges Capital Market Days, featuring presentations and workshops. Executive Board members and in-house experts provide institutional investors and financial analysts with information on the latest developments in strategic markets and divisions. The dates and locations of roadshows, investors conferences and Capital Market Days are published on the Linde website. The presentations given at these events are also available to view on the website, which additionally contains video and audio recordings of major events.

Linde considers not only the interests of its shareholders but also the concerns of its stakeholders, who are a key element in the Group's success. As far as possible, all stakeholders are included in corporate communications. Linde's stakeholders include all its employees, customers and suppliers, as well as trade associations and government bodies.

### ***Accounting, audit and risk management***

Linde AG prepares its Group financial statements and the Group half-year financial report and interim financial reports in accordance with International Financial Reporting Standards (IFRS) as adopted by the European Union. The preparation of the statutory annual financial statements of Linde AG, on which the dividend payment is based, complies with German Commercial Code (HGB). The annual financial statements and the Group financial statements are prepared by the Executive Board, examined by the Supervisory Board and audited by the auditors. As obliged by law, the members of the Executive Board confirm that, to the best of their knowledge, the annual financial statements, the Group financial statements and the combined management report provide a true and fair view, describing the main opportunities and risks associated with the likely future development of the Group and the Company. The audit procedures are in accordance with German auditing regulations and German generally accepted standards for the audit of financial statements promulgated by the Institut der Wirtschaftsprüfer (the Institute of Public Auditors in Germany) and, in the case of the Group financial statements, in supplementary compliance with International Standards on Auditing. The audit procedures also include a review of the system for the early identification of risks. The Audit Committee meets the Executive Board to discuss the interim and half-year financial reports in detail prior to publication.

In May 2015, the Supervisory Board issued the mandate for the audit of the annual financial statements and Group financial statements to KPMG AG Wirtschaftsprüfungsgesellschaft, Berlin, who had been appointed at the Annual General Meeting as auditors of the annual

financial statements and Group financial statements for the 2015 financial year and had also been appointed to conduct audit reviews of the interim and half-year financial reports for the 2015 financial year. Since the preparation of the 2015 annual financial statements and Group financial statements, the Global Lead Partner from KPMG has been Mr Harald von Heynitz. The auditors issued a detailed declaration confirming their independence to the Audit Committee of the Supervisory Board. There were no conflicts of interest. It was agreed with the auditors that the Chairman of the Supervisory Board and the Chairman of the Audit Committee would be informed immediately during the audit of any potential reasons for the disqualification of the auditors or for their lack of impartiality, unless these could be eliminated without delay. The auditors were obliged to report immediately all the significant audit findings and events arising from the audit that have an impact on the duties of the Supervisory Board. The auditors have also undertaken to inform the Supervisory Board if they discover facts in the course of their audit which reveal any inaccuracies in the company's declaration of compliance with the German Corporate Governance Code.

Linde has reporting, monitoring and risk management systems in place which are continually being updated and adapted by the Executive Board to take account of changing circumstances. The internal audit department performs reviews at regular intervals of the efficiency and effectiveness of the risk management system and the internal control system. The auditors also assess the system in place for the early identification of risk and provide regular reports on their findings at a global level to the Executive Board and Supervisory Board. Additionally, the Audit Committee supports the Supervisory Board in monitoring the activities of executive management and also deals with risk management issues in this context. It receives regular reports from the Executive Board about risk management, the risk position, and the identification and monitoring of risks. In addition, it is informed on a regular basis about existing risks and the evolution of those risks. Moreover, the Audit Committee has agreed with the auditors that, if necessary, they will report to the Committee any significant weaknesses that they identify in the internal control system in relation to the accounting process and in the system for the early identification of risks. Further details about risk management in The Linde Group are provided in the Opportunity and risk report on [PAGES 91 TO 107](#). This includes the report on the accounting-related internal control system.



# REMUNERATION REPORT

(PART OF THE  
COMBINED MANAGEMENT REPORT)

CORPORATE GOVERNANCE	<14
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AND CORPORATE	
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The remuneration report sets out the structure, basic features and amount of the remuneration payable to members of the Executive Board and Supervisory Board. It forms part of the combined management report for Linde AG and The Linde Group and takes account of the recommendations of the German Corporate Governance Code. The remuneration report also contains the information which is legally required under the provisions of the German Commercial Code (HGB). This information is therefore not repeated in the Notes to the Group financial statements.

## 1. Remuneration of the Executive Board

The full Supervisory Board is responsible for determining the total emoluments of each individual member of the Executive Board. In line with the procedural rules of the Supervisory Board, it is incumbent upon the Standing Committee to do the groundwork so that the Supervisory Board can pass resolutions relating to remuneration.

The remuneration system for the Executive Board, described in more detail below, has applied since 1 January 2012. It was approved at the 2012 Annual General Meeting of Linde Aktiengesellschaft with a majority of 96.45 percent. With effect from 1 January 2014, the Supervisory Board made minor amendments to take account of the corresponding changes to the German Corporate Governance Code. No amendments were made in 2015.

The amount and structure of the remuneration payable are based on the size and international reach of the Group, its economic and financial situation, its performance and prospects and the unit of the Group for which the Executive Board member is responsible, as well as on customary remuneration practice among peers and the remuneration structure which applies elsewhere in the company. To gauge customary practice among peers, Linde

compares its remuneration system with that of several other groups of companies (DAX 30 companies, similar German and international companies). As regards the remuneration structure which applies elsewhere in the company, the Supervisory Board considers when determining the emoluments of the Executive Board the relationship between the remuneration of the Executive Board and that of senior management and the staff overall, also in terms of its development over time. To do so, it has established how to identify members of senior management and the relevant members of staff. The emoluments also depend on the duties of each individual member of the Executive Board, and on his or her personal performance and the performance of the Executive Board as a whole. The remuneration is calculated so that it is competitive at international level and gives Board members an incentive to create sustainable performance and sustainable growth in a dynamic environment. In its evaluation and weighting of various criteria, the Supervisory Board was advised by an independent external expert on executive pay. The amounts of the fixed cash emoluments and the variable remuneration components were subject to a scheduled review as at 1 January 2014 and some adjustments were made. No adjustments were made in 2015.

The remuneration system places particular emphasis on sustainable business development. There is a significant focus on multi-year remuneration components. As a result of the obligation to invest part of the variable cash emoluments in Linde shares and to hold those shares for several years and as a result of the granting of a Long Term Incentive Plan in the form of options to purchase Linde shares (performance shares) and bonus shares (matching shares) after compulsory personal investment by the Executive Board member, the remuneration of the members of the Executive Board is linked to the price of Linde shares. This creates a long-term incentive to achieve a positive Group performance.

The members of the Executive Board receive no remuneration for any Group offices held.

### *Total emoluments*

The remuneration system comprises the following components:

- fixed monthly cash emoluments;
- benefits in kind/other benefits;
- variable cash emoluments which are paid in cash in April of the following year linked to an obligation to use 40 percent of the cash amount (after the deduction of tax) to acquire Linde shares and hold them for a period of at least four years;
- a Long Term Incentive Plan, which provides for multi-year share-based remuneration in the form of options to purchase shares (performance shares) and bonus shares linked to personal investment by the Executive Board member (matching shares);
- pension commitments.



Of these components, the fixed cash emoluments, the benefits in kind/other benefits and the pension commitments are not performance-related, while the variable cash emoluments and the Long Term Incentive Plan are performance-related.

The regular target remuneration for a year (i.e. the total of fixed cash emoluments, variable cash emoluments and entitlements under the Long Term Incentive Plan) comprises the following targets for the performance-related entitlements:

- 25 percent fixed cash emoluments;
- 30 percent one-year variable cash emoluments;
- 45 percent multi-year variable emoluments, of which:
  - around 50 percent obligatory investment in Linde shares required to be held for at least four years;
  - around 50 percent share-based remuneration components from the Long Term Incentive Plan, of which:
    - 80 percent performance shares;
    - 20 percent matching shares.

The relative weighting of fixed and variable remuneration components is therefore around 25 percent (fixed cash emoluments) to around 75 percent (variable cash emoluments, performance shares and matching shares), while within the variable remuneration components around 40 percent is determined solely on a one-year basis and around 60 percent on a multi-year basis. As a result, the remuneration system is highly performance-related and determined predominantly on a multi-year basis. Around 65 percent of the variable emoluments are directly linked with performance indicators or long-term management targets.

### ***Fixed cash emoluments***

Each member of the Executive Board receives fixed monthly cash emoluments.

### ***Benefits in kind/Other benefits***

Benefits in kind are also provided which are taxed in accordance with the fiscal regulations applicable in each case. They comprise mainly the cost or monetary advantage of insurance benefits at normal market rates and the provision of company cars.

### ***Variable cash emoluments***

Variable cash emoluments are based on two equally-weighted key ratios, return on capital employed (ROCE) and the operating margin, based on the customary definitions used by the Group which are given on [PAGES 45 TO 46](#). For each of the two measurement factors, a minimum target is defined in the form of an ambitious performance hurdle. If this hurdle is not reached in respect of one of the measurement factors, the variable cash emoluments linked to this factor are not paid. If neither minimum target is reached, there is no entitlement at all to variable cash emoluments. The amount of the variable

cash emoluments based on reaching the ROCE and operating margin targets may be modified by an individual performance component.

If the entitlement to variable cash remuneration is met as a result of target achievement, 60 percent of the variable cash remuneration calculated on this basis is paid in cash, with no further obligation attached to the amount (cash component). 40 percent of the total amount of the one-year variable remuneration is paid in cash at the same time as the cash component, but there is an obligation on the Executive Board member to re-invest this portion of the total amount in Linde AG shares (deferral component). The member of the Executive Board must invest the net amount of the deferral component (estimated to be 50 percent of the gross amount) in Linde shares and must hold these shares for a period of at least four years.

### ***Measurement factors for variable cash emoluments Group ROCE***

The variable cash remuneration for all the members of the Executive Board is based on the Group ROCE achieved in the financial year, to the extent that each member receives a fixed euro amount for each 0.1 percent of Group ROCE achieved. The variable cash remuneration is only paid if Group ROCE exceeds or equals an ambitious minimum return on capital which has been defined (performance hurdle).

### ***Operating margin***

The variable cash remuneration is based on the operating margin achieved in the area for which the Executive Board member is responsible. The operating margin is calculated as the ratio of operating profit (EBITDA, [SEE GLOSSARY](#)) to revenue. A fixed euro amount is paid to each Board member for each 0.1 percent of operating margin achieved. For the Chief Executive Officer and Chief Financial Officer, this is based on the operating margin of the Group. For those members of the Executive Board responsible for operations, the margin in the gases segments or the Engineering Division for which he or she is responsible is relevant. In both cases, payment is only made if ambitious minimum margins derived from specific market conditions are met. The Supervisory Board may attach additional conditions to the establishment and the amount of the remuneration entitlement linked to the operating margin. These conditions should be set in the light of the prevailing market situation.

### ***Individual performance component***

To reflect the personal performance of Executive Board members, the amounts calculated on the basis of the two measurement factors (Group ROCE and the operating margin) are multiplied using a performance multiplier of between 0.8 and 1.2. The Supervisory Board may exercise its discretion to reduce or increase the amounts calculated as a result of the achievement of one or both targets by up to 20 percent, to take account of the individual performance of the Executive Board member.

### *Deferral component*

Of the variable cash remuneration, 40 percent is paid but effectively deferred, as the Executive Board member has an obligation to invest the net amount in Linde shares and to hold these shares for a period of at least four years from the date they are transferred to a securities account (deferral shares). The net amount of the deferral component is paid directly to a bank with instructions to acquire the deferral shares for the Executive Board members in a block order on the third stock exchange trading day after the Annual General Meeting of Linde AG, to transfer the shares to a separate securities account and to manage them. The shares must be newly acquired in the market. It is not possible to use shares for this purpose which are already held by the Executive Board members. The deferral shares carry dividend rights during the blocked period. The dividend is paid to the Executive Board members.

### *Cap*

The cash component (i.e. 60 percent of the variable cash remuneration, calculated on the basis of one or both the targets being met and payable in cash) is capped at 250 percent of the fixed cash emoluments. The deferral component (the remaining 40 percent of the variable cash remuneration) is capped at 165 percent of the fixed cash emoluments as at the date on which it is paid.

In exceptional circumstances which lead to an unforeseen increase in the value of the deferral shares by the end of the blocked period, where this is not due to the performance of the Executive Board member, the Supervisory Board has the right to offset this by reducing the amount of the cash and/or deferral components in subsequent years.

### *Regular reviews*

The Supervisory Board conducts regular reviews of the targets set and the calibration of the variable remuneration, including the performance hurdles, in order to prevent potential distortions. It may also take into account non-recurring items or the specific impact on both measurement factors (Group ROCE and the operating margin) of any investment or acquisition projects.

### *Share-based emoluments*

#### *Long Term Incentive Plan 2012*

It was resolved at the Annual General Meeting on 4 May 2012 to replace the Linde Performance Share Programme 2007 for the Executive Board and other executives with the new Long Term Incentive Plan 2012 (LTIP 2012). Like the previous programme, this scheme provides for the granting of options to purchase shares in Linde (performance shares). Executive Board members and selected executives are required to make a compulsory personal investment in shares of the company at the beginning of the scheme. For the shares acquired by a scheme participant as a personal investment, bonus shares (matching shares) are granted at the end of the four-year qualifying period if certain conditions are met.

The members of the Executive Board are granted options and rights to matching shares for a specified sum. The number of options or matching share rights to be allocated to each member of the Executive Board is determined on the basis of the fair value per option or per right to a matching share at the grant date calculated in an actuarial report. Of the remuneration, 80 percent of the amount which may be earned as a result of participating in the LTIP 2012 if the target is reached relates to performance shares and 20 percent to matching shares. The company has the option of making a payment in cash to the scheme participants instead of issuing performance shares and/or matching shares. In exceptional circumstances, the Supervisory Board may restrict the option rights and matching rights granted to the Executive Board members in terms of content, either in full or in part. The first tranche under the LTIP 2012 was issued after the 2012 Annual General Meeting.

### *Options to purchase performance shares*

The plan participants are granted a certain number of options in various annual tranches. The Supervisory Board determines the allocation of options to members of the Executive Board. Each option confers the right, if certain targets are met, to purchase one share in Linde AG (performance shares) at the exercise price, which is equivalent in each case to the lowest issue price, currently EUR 2.56. The options in a tranche have a five-year term. If the conditions required for the exercise of the options are met, they may first be exercised once a four-year qualifying period calculated from the issue date has expired (the performance period). Options may only be exercised if certain performance targets are reached, which are based on movements in earnings per share and relative total shareholder return. Equal weighting is given to these two performance targets in terms of the total options allocated. Within each of these performance targets, a minimum target must be reached if the options in a particular tranche are to become exercisable, and there is also a stretch target. If the stretch target for one of these performance targets is reached, all the options relating to that performance target in that particular tranche become exercisable. If the minimum target within a performance target is reached, 12.5 percent of all the options in the relevant tranche may be exercised and the plan participant receives a corresponding number of performance shares on payment of the lowest issue price per share. If the relevant stretch target is reached, 50 percent of all the options to purchase performance shares in the relevant tranche may be exercised. If the minimum target is exceeded, but the stretch target is not reached, the number of options that may be exercised is dependent on the percentage by which the minimum target is exceeded.

Further information about the value of the options, and about the structure, conditions and, in particular, the performance targets of the scheme is given in *NOTE [28]* of the Notes to the Group financial statements.

### Personal investment and matching shares

The number of Linde shares which must be purchased as a personal investment is determined by the Supervisory Board for each member of the Executive Board and corresponds to 20 percent of the target remuneration which may be earned by participating in the LTIP 2012. For each share in Linde acquired by a scheme participant as a personal investment and held by the participant during the four-year qualifying period for the options, one matching share in Linde is granted free of charge. Conditions for granting matching shares are a personal investment in shares of the company by the scheme participant at the appropriate time, the unrestricted holding of such shares during the qualifying period and the existence of a service contract at the end of the qualifying period in respect of which no notice has been given.

Movements in the options and rights to matching shares issued to members of the Executive Board under the Long Term Incentive Plan 2012 were as follows in the period under review:

#### 1 OPTIONS, MATCHING SHARES – LONG TERM INCENTIVE PLAN 2012

		Options			Matching shares		
		At 01.01.	Granted in the financial year	At 31.12.	At 01.01.	Granted in the financial year	At 31.12.
		in units	in units	in units	in units	in units	in units
<b>Executive Board members in office at 31.12.2015</b>							
Dr Wolfgang Büchele (from 01.05.2014) (Chief Executive Officer from 20.05.2014)	2015	12,304	11,921	24,225	1,428	1,267	2,695
	2014	–	12,304	12,304	–	1,428	1,428
Thomas Blades	2015	21,220	5,960	27,180	2,376	633	3,009
	2014	15,068	6,152	21,220	1,662	714	2,376
Dr Christian Bruch (from 01.01.2015)	2015	2,592 <sup>1</sup>	4,470	7,062	291 <sup>1</sup>	475	766
	2014	–	–	–	–	–	–
Georg Denoke	2015	22,758	7,450	30,208	2,555	792	3,347
	2014	15,068	7,690	22,758	1,662	893	2,555
Bernd Eulitz (from 01.01.2015)	2015	3,181 <sup>1</sup>	4,470	7,651	355 <sup>1</sup>	475	830
	2014	–	–	–	–	–	–
Sanjiv Lamba	2015	21,220	5,960	27,180	2,376	633	3,009
	2014	15,068	6,152	21,220	1,662	714	2,376
<b>TOTAL</b>	2015	83,275	40,231	123,506	9,381	4,275	13,656
<b>TOTAL</b>	2014 <sup>2</sup>	60,272	38,450	98,722	6,648	4,463	11,111

<sup>1</sup> Rights outstanding at the start of the reporting period from the time spent as an executive in The Linde Group.

<sup>2</sup> 2014 including Professor Dr Aldo Belloni (member of the Executive Board until 31.12.2014).

All options held at 31 December 2015 were not yet exercisable. The exercise price of all options is currently EUR 2.56 per option. During the 2015 financial year, none of the options and/or rights to matching shares held by members of the Executive Board expired or were forfeited. Matching shares were not allocated. The weighted average remaining term of the options and rights to matching shares is 1.8 years (2014: 2.3 years).

As a prerequisite for participation in the Long Term Incentive Plan 2012, the Executive Board members made the following personal investment in Linde shares of the company in the 2015 financial year: Dr Wolfgang Büchele 1,267 (2014: 1,428), Thomas Blades 633 (2014: 714), Dr Christian Bruch 475, Georg Denoke 792 (2014: 893), Bernd Eulitz 475 and Sanjiv Lamba 633 (2014: 714).

Information about the rules which apply to the option schemes in the event of a change of control is given on [PAGES 112 TO 113](#) of the combined management report for Linde AG and The Linde Group (Disclosures in accordance with § 289 (4), § 315 (4) of the German Commercial Code (HGB)).

**Total cost of share-based emoluments  
and remeasurement of virtual shares**

The total cost of share-based emoluments in 2015 was EUR 6 m (2014: EUR 18 m). During the financial year, the following cost was recognised in respect of share-based payment instruments held by members of the Executive Board currently in office and the gain on remeasurement of current entitlements to virtual shares in Linde:

**€ 2 COST OF SHARE-BASED PAYMENTS AND CHANGE IN VALUE OF EXISTING ENTITLEMENT  
TO VIRTUAL SHARES****Executive Board members in office at 31.12.2015**

<i>in EUR</i>		<i>Cost of share-based payments (without virtual shares)</i>	<i>Change in value of virtual shares<sup>1</sup></i>
Dr Wolfgang Büchele (from 01.05.2014) (Chief Executive Officer from 20.05.2014)	2015 2014	395,929 145,802	– –
Thomas Blades	2015 2014	177,881 322,935	21,856 47,752
Dr Christian Bruch (from 01.01.2015)	2015 2014	72,648 –	– –
Georg Denoke	2015 2014	227,403 387,603	24,876 54,349
Bernd Eulitz (from 01.01.2015)	2015 2014	70,391 –	– –
Sanjiv Lamba	2015 2014	177,881 369,368	18,912 41,320
<b>TOTAL</b>	2015	<b>1,122,133</b>	<b>65,644</b>
<b>TOTAL</b>	2014 <sup>2</sup>	<b>4,869,835</b>	<b>285,411</b>

<sup>1</sup> In 2012 and 2013, 40 percent of the variable cash remuneration was converted as at the balance sheet date into virtual shares with dividend entitlement and not paid for at least another three years. (The amounts paid in each case are dependent on movements in Linde's share price.)

<sup>2</sup> 2014 including Professor Dr Aldo Belloni (Member of the Executive Board until 31.12.2014) and Professor Dr Wolfgang Reitzle (Chairman of the Executive Board until 20.05.2014): Professor Dr Aldo Belloni expense EUR 1,286,012, change in value EUR 74,825; Professor Dr Wolfgang Reitzle expense EUR 2,358,115, change in value EUR 67,165. The share-based emoluments for 2014 include the cost on the retirement of the Board member of all the annual tranches not yet recognised as an expense.

In the statutory financial statements of Linde AG, the company has availed itself of the option not to recognise share-based remuneration systems as personnel expenses, in accordance with legal regulations. For the matching shares of Linde AG employees, a cost of EUR 1.4 m (2014: EUR 1.8 m) was recognised as an expense in accordance with the German Commercial Code (HGB). Of this amount, EUR 0.4 m (2014: EUR 0.9 m) related to rights to matching shares of members of the Executive Board.

**Pension commitments**

For members joining the Executive Board of the company on or after 1 January 2012, a defined contribution pension scheme was introduced in the form of a direct commitment, which will provide benefits comprising old age pensions, disability pensions and surviving dependants pensions. For new members, the annual contributions made by the company during the period of employment will be 45 percent of the fixed cash emoluments (and therefore around 11 percent of the target emoluments). After 15 years of service on the Board, a target pension level of around 50 percent of the final fixed cash emoluments would be achieved as an old age pension. The capital is invested

with an external provider. The pension commitment is designed to be similar to the Linde Pension Plan (Linde Vorsorgeplan) for employees. Insolvency insurance is provided as a result of the integration of the pension commitments into the existing Contractual Trust Arrangement (CTA). The contributions participate in the performance of the CTA and also participate in potential CTA surpluses. The model provides for guaranteed minimum interest of 3 percent plus any overperformance. The regular old age pension is payable from the age of 65 and in the case of early retirement from the age of 62. The employer's contributions are legally non-forfeitable in accordance with the German Company Pension Act (BetrAVG). The current

account balance inclusive guaranteed interest are taken as a basis for calculating the benefits when due. In the case of death or invalidity, a minimum benefit is payable for a period of service on the Board of less than ten years. In this case, the amount payable is topped up by the missing contributions to the amount that would have been payable if the Executive Board member had served on the Board for ten years (up to a maximum age of 65), as long as the period served on the Board was at least three years. Those entitled to the full pension account are, firstly, the widow, widower or surviving civil partner of the Executive Board member and, secondly, orphans of the Executive Board member if there is no widow, widower or surviving civil partner.

The pension payable is calculated on the basis of the mortality tables and interest rates which are valid when the pension is drawn. In all cases, the Executive Board member may choose to have his or her pension paid in one of three ways:

- as a lump sum;
- in five to ten annual instalments with the accrual of interest (depending on the term) until the payments are due;
- in the form of payments for life including an annual increase of 1 percent per annum.

On request and with the Group's agreement, the Executive Board member may opt for other payment variants.

Pension commitments for Georg Denoke and Sanjiv Lamba, who were already on the Executive Board of the company at 1 January 2012, are set out in individual contracts. The pension is based on a particular percentage of the last fixed monthly pensionable emoluments paid. The percentage rate on entry is 20 percent. This percentage increases by 2 percent for every year of service completed by the Executive Board member. The maximum percentage that can be achieved for the pension is 50 percent of the last fixed monthly emoluments paid. Payments are made on a monthly basis once the member has retired from the Group and is eligible for his or her pension (old age pension from the age of 65, pension for medical disability or incapacity for work, and surviving dependants pension in the event of death). Widowed spouses receive 60 percent of the pension of the deceased member of the Executive Board. The commitments also include benefits for any orphans or children who have lost one parent. Each child entitled to maintenance receives 10 percent (in the case of children who have lost one parent) up to a maximum of 25 percent (in the case of orphans) of the pension of the contracting party, generally until his or her 18th year, although maintenance may continue to be paid until he or she reaches the age of 27. If the deceased has left several children, the amounts are reduced proportionately and limited in total to half the pension to which the contracting party was entitled. The total maintenance payments to surviving dependants must not exceed the full amount of the pension of the contracting party. Current pensions

are adjusted annually to take account of the change in the consumer price index for private households based on information provided by the German Statistical Office. If a member of the Executive Board has reached the age of 55 and completed ten years of service on the Executive Board, and his or her employment contract is terminated early by the Supervisory Board or his or her term of office is not extended for reasons beyond the control of the Executive Board member, he or she would immediately receive the pension earned, taking into account other income. If, however, an Executive Board member has not completed ten years of service or if the employment contract is terminated before he or she reaches the age of 55, he or she acquires entitlement by law to a pension as a supplement to the occupational pension in the amount specified by law, provided the Executive Board member was employed by the company for a minimum period of three consecutive years.

### *Emoluments of the Executive Board for 2015*

With regard to the composition of the Executive Board, the following changes were made in the 2015 financial year: with effect from 1 January 2015, Dr Christian Bruch and Bernd Eulitz were appointed to the Executive Board of Linde AG. They replaced Professor Dr Aldo Belloni, who retired on 31 December 2014. The total cash remuneration for members of the Executive Board for performing their duties at Linde AG and its subsidiaries in and/or for the 2015 financial year was EUR 11,578,045 (2014: EUR 11,967,739). Of this amount, EUR 4,295,945 (2014: EUR 4,263,230) related to fixed remuneration components which are not performance-related and EUR 7,282,100 (2014: EUR 7,704,509) to variable short-term or long-term performance-related remuneration components. The measurement of benefits in kind and other benefits was based on their value for tax purposes. 60 percent of the variable cash emoluments, i.e. EUR 4,369,260 (2014: EUR 4,622,705) will be paid. 40 percent, i.e. EUR 2,912,840 (2014: EUR 3,081,804) is required to be invested (after the deduction of tax) in Linde shares which must be held for a qualifying period of four years. This therefore constitutes a long-term remuneration component. The total remuneration of the members of the Executive Board in 2015 was EUR 14,953,014 (2014: EUR 15,092,622). Included in the total remuneration are options and rights to matching shares which were granted to members of the Executive Board under the Long Term Incentive Plan. In each case, the options and matching shares are included at their value on allocation. In the 2015 financial year, members of the Executive Board were granted a total of 40,231 (2014: 38,450) options with a value on allocation of EUR 67.11 (2014: EUR 65.02) per option and 4,275 (2014: 4,463) rights to matching shares with a value on allocation of EUR 157.91 (2014: EUR 140.01) per right to a matching share.

Subject to the approval of the annual financial statements of Linde AG for the year ended 31 December 2015, the emoluments for the individual members of the Executive Board for 2015 (including variable emoluments calculated on the basis of Group ROCE after non-recurring items of 8.7 percent) are as follows:

## E 3 TOTAL REMUNERATION OF MEMBERS OF THE EXECUTIVE BOARD

Executive Board members in office at 31.12.2015

		Cash emoluments				Long Term Incentive Plan		Total	Pensions	
		Fixed emoluments	Benefits in kind/ Other benefits	Variable cash emoluments	Total cash emoluments <sup>2</sup>	Options	Matching shares	Total emoluments	Service cost in financial year <sup>3</sup> IFRS	Service cost in financial year <sup>3</sup> HGB
				current <sup>1</sup> (60%)	non-current <sup>2</sup> (40%)					
<i>in EUR</i>										
Dr Wolfgang Büchele (from 01.05.2014)										
(Chairman from 20.05.2014)	2015	1,200,000	37,733	1,075,500	717,000	3,030,233	800,018	200,072	4,030,323	651,268
	2014	800,000	101,671	701,800	467,867	2,071,338	800,006	199,934	3,071,278	453,316
	2015	600,000	21,955	722,760	481,840	1,826,555	399,976	99,957	2,326,488	309,022
Thomas Blades	2014	600,000	28,481	697,080	464,720	1,790,281	400,003	99,967	2,290,251	298,789
Dr Christian Bruch (from 01.01.2015)	2015	500,000	20,630	476,070	317,380	1,314,080	299,982	75,007	1,689,069	305,849
	2014	–	–	–	–	–	–	–	–	–
	2015	750,000	20,761	840,000	560,000	2,170,761	499,970	125,065	2,795,796	256,911
Georg Denoke	2014	722,500	23,296	786,555	524,370	2,056,721	500,004	125,029	2,681,754	163,924
	2015	500,000	28,157	522,090	348,060	1,398,307	299,982	75,007	1,773,296	308,020
Bernd Eulitz (from 01.01.2015)	2014	–	–	–	–	–	–	–	–	–
	2015	600,000	16,709	732,840	488,560	1,838,109	399,976	99,957	2,338,042	274,349
Sanjiv Lamba	2014	581,250	69,017 <sup>4</sup>	687,060	458,040	1,795,367	400,003	99,967	2,295,337	176,221
<b>TOTAL</b>	2015	4,150,000	145,945	4,369,260	2,912,840	11,578,045	2,699,904	675,065	14,953,014	2,105,419
<i>(in percent)</i>		28	1	29	19	77	18	5	100	
<b>TOTAL</b>	2014 <sup>5</sup>	3,969,861	293,369	4,622,705	3,081,804	11,967,739	2,500,019	624,864	15,092,622	1,228,535
<i>(in percent)</i>		26	2	31	20	79	17	4	100	

<sup>1</sup> 60 percent of the variable cash remuneration is paid directly in the year following the balance sheet date.<sup>2</sup> 40 percent of the variable cash remuneration is paid out in the year following the balance sheet date with the obligation to purchase shares in Linde and hold these shares for at least four years.<sup>3</sup> No past service cost arose in the 2014 or 2015 financial years.<sup>4</sup> Sanjiv Lamba received an anniversary bonus of EUR 50k.<sup>5</sup> 2014 including Professor Dr Aldo Belloni (Member of the Executive Board until 31.12.2014) and Professor Dr Wolfgang Reitzle (Chairman of the Executive Board until 20.05.2014).

2014 includes Professor Dr Aldo Belloni (Member of the Executive Board until 31 December 2014) with total emoluments of EUR 2,966,933 and a service cost of EUR 136,285 (IFRS) and EUR 119,718 (HGB), as well as Professor Dr Wolfgang Reitzle (Chairman of the Executive Board until 20 May 2014) with total emoluments of EUR 1,787,069. The 2014 Financial Report shows the distribution among the various components.

In the 2015 financial year, the service cost for pension obligations in accordance with IFRS was EUR 2,105,419 (2014: EUR 1,228,535), while the figure in accordance with the German Commercial Code (HGB) was EUR 1,590,875 (2014: EUR 1,022,807). At the balance sheet date, the present value for accounting purposes of pension commitments accruing to the individual Board members was as follows: Dr Wolfgang Büchele EUR 1,111,884 (2014: EUR 453,316) (Group), EUR 1,006,674 (2014: EUR 375,989) (Linde AG); Thomas Blades EUR 1,262,717 (2014: EUR 985,861) (Group), EUR 1,181,352 (2014: EUR 869,377) (Linde AG); Dr Christian Bruch EUR 848,196 (Group), EUR 654,033 (Linde AG); Georg Denoke EUR 2,789,595 (2014: EUR 2,777,049) (Group), EUR 1,965,365 (2014: EUR 1,513,921) (Linde AG); Bernd Eulitz EUR 861,327 (Group), EUR 692,771 (Linde AG); Sanjiv Lamba EUR 1,158,813 (2014: EUR 983,190) (Group), EUR 819,326 (2014: EUR 539,886) (Linde AG). The change in the present value

of the pension commitments is the result of the unwinding of interest of entitlements acquired in previous years, actuarial gains and changes in holdings. The present values of the pension commitments accruing to Dr Christian Bruch and Bernd Eulitz, who were appointed to the Executive Board on 1 January 2015, include their vested rights from their time spent as executives within The Linde Group.

***Disclosures in accordance with the requirements of the German Corporate Governance Code***

Disclosed in the table below, in accordance with the requirements set out in the German Corporate Governance Code, is the allocated remuneration of the Executive Board for the 2015 financial year including other benefits and including the maximum and minimum emoluments attainable in the case of variable remuneration components. In contrast to the *TABLE ENTITLED "TOTAL REMUNERATION OF MEMBERS OF THE EXECUTIVE BOARD"*, the one-year variable remuneration is disclosed in the table below at the target value, which is the value that would apply if all the targets were fully met. As in the *TABLE ENTITLED "TOTAL REMUNERATION OF MEMBERS OF THE EXECUTIVE BOARD"*, the options and rights to matching shares included in the share-based remuneration (Long Term Incentive Plan) are reported at fair value on the grant date. The option rights and rights to matching shares only become exercisable or are only transferred after a four-year qualifying period has elapsed. In each case, the number of option rights or rights to matching shares is determined by the actual targets met after the qualifying period has expired. Therefore, the value of the rights may be higher or lower than the figures disclosed in the table below, depending on the prevailing share price at the date of transfer. Moreover, in contrast to the *TABLE ENTITLED "TOTAL REMUNERATION OF MEMBERS OF THE EXECUTIVE BOARD"*, the total remuneration in the table below includes the pension expense.

#### 4 REMUNERATION ALLOCATED DURING THE YEAR

Executive Board members in office at 31.12.2015

Remuneration allocated during the year, in EUR	Dr Wolfgang Büchele Member of the Executive Board from 01.05.2014 Chairman of the Executive Board from 20.05.2014			
	2014	2015	2015 (Min)	2015 (Max)
Fixed emoluments	800,000	1,200,000	1,200,000	1,200,000
Other benefits	101,671	37,733	37,733	37,733
<b>TOTAL</b>	<b>901,671</b>	<b>1,237,733</b>	<b>1,237,733</b>	<b>1,237,733</b>
One-year variable emoluments				
Short-term cash emoluments <sup>1,2</sup>	773,120	1,095,900	0	3,000,000
Multi-year variable emoluments	1,515,353	1,730,690	0	3,714,355
including long-term cash emoluments (deferral) <sup>3,4</sup>	515,413	730,600	0	1,980,000
including Long Term Incentive Plan 2014 (qualifying period: 4 years) <sup>5</sup>				
Options	800,006	-	-	-
Matching shares	199,934	-	-	-
including Long Term Incentive Plan 2015 (qualifying period: 4 years) <sup>5</sup>				
Options	-	800,018	0	1,564,704
Matching shares	-	200,072	0	169,651
<b>TOTAL</b>	<b>3,190,144</b>	<b>4,064,323</b>	<b>1,237,733</b>	<b>7,952,088</b>
Service cost	453,316	651,268	651,268	651,268
<b>TOTAL EMOLUMENTS</b>	<b>3,643,460</b>	<b>4,715,591</b>	<b>1,889,001</b>	<b>8,603,356</b>

Executive Board members in office at 31.12.2015

Remuneration allocated during the year, in EUR	Georg Denoke Member of the Executive Board from 12.09.2006			
	2014	2015	2015 (Min)	2015 (Max)
Fixed emoluments	722,500	750,000	750,000	750,000
Other benefits	23,296	20,761	20,761	20,761
<b>TOTAL</b>	<b>745,796</b>	<b>770,761</b>	<b>770,761</b>	<b>770,761</b>
One-year variable emoluments				
Short-term cash emoluments <sup>1,2</sup>	866,505	856,500	0	1,875,000
Multi-year variable emoluments	1,202,703	1,196,035	0	2,321,032
including long-term cash emoluments (deferral) <sup>3,4</sup>	577,670	571,000	0	1,237,500
including Long Term Incentive Plan 2014 (qualifying period: 4 years) <sup>5</sup>				
Options	500,004	-	-	-
Matching shares	125,029	-	-	-
including Long Term Incentive Plan 2015 (qualifying period: 4 years) <sup>5</sup>				
Options	-	499,970	0	977,483
Matching shares	-	125,065	0	106,049
<b>TOTAL</b>	<b>2,815,004</b>	<b>2,823,296</b>	<b>770,761</b>	<b>4,966,793</b>
Service cost	163,924	256,911	256,911	256,911
<b>TOTAL EMOLUMENTS</b>	<b>2,978,928</b>	<b>3,080,207</b>	<b>1,027,672</b>	<b>5,223,704</b>

<sup>1</sup> 60 percent of the variable cash remuneration is paid in cash with no further obligation incumbent on the Executive Board member.

<sup>2</sup> Capped at 250 percent of the fixed emoluments. The individual maximum values disclosed are the potential maximum values in terms of amount in accordance with the agreed upper limit: i.e. 250 percent of the fixed emoluments.

<sup>3</sup> 40 percent of the variable cash remuneration is paid out in cash with the obligation to purchase shares in Linde and hold these shares for at least four years.

<sup>4</sup> Capped at 165 percent of the fixed emoluments. The individual maximum values disclosed are the potential maximum values in terms of amount in accordance with the agreed upper limit: i.e. 165 percent of the fixed emoluments.

<sup>5</sup> The value of the options and rights to matching shares are not limited in terms of amount once the qualifying period has elapsed. The amounts disclosed are the individual maximum amounts if both the performance targets are met in full and are based on the closing price of Linde shares on 31 December 2015 (EUR 133.90).



**Thomas Blades**  
Member of the Executive Board from 08.03.2012

2014	2015	2015 (Min)	2015 (Max)
600,000	600,000	600,000	600,000
28,481	21,955	21,955	21,955
<b>628,481</b>	<b>621,955</b>	<b>621,955</b>	<b>621,955</b>
778,080	742,200	0	1,500,000
1,018,690	994,733	0	1,856,545
518,720	494,800	0	990,000
400,003	-	-	-
99,967	-	-	-
-	399,976	0	781,786
-	99,957	0	84,759
<b>2,425,251</b>	<b>2,358,888</b>	<b>621,955</b>	<b>3,978,500</b>
298,789	309,022	309,022	309,022
<b>2,724,040</b>	<b>2,667,910</b>	<b>930,977</b>	<b>4,287,522</b>

**Dr Christian Bruch**  
Member of the Executive Board from 01.01.2015

2014	2015	2015 (Min)	2015 (Max)
-	500,000	500,000	500,000
-	20,630	20,630	20,630
-	<b>520,630</b>	<b>520,630</b>	<b>520,630</b>
-	487,950	0	1,250,000
-	700,289	0	1,474,693
-	325,300	0	825,000
-	-	-	-
-	-	-	-
-	299,982	0	586,090
-	75,007	0	63,603
-	<b>1,708,869</b>	<b>520,630</b>	<b>3,245,323</b>
-	305,849	305,849	305,849
-	<b>2,014,718</b>	<b>826,479</b>	<b>3,551,172</b>

**Bernd Eulitz**  
Member of the Executive Board from 01.01.2015

2014	2015	2015 (Min)	2015 (Max)
-	500,000	500,000	500,000
-	28,157	28,157	28,157
-	<b>528,157</b>	<b>528,157</b>	<b>528,157</b>
-	534,060	0	1,250,000
-	731,029	0	1,474,693
-	356,040	0	825,000
-	-	-	-
-	-	-	-
-	299,982	0	586,090
-	75,007	0	63,603
-	<b>1,793,246</b>	<b>528,157</b>	<b>3,252,850</b>
-	308,020	308,020	308,020
-	<b>2,101,266</b>	<b>836,177</b>	<b>3,560,870</b>

**Sanjiv Lamba**  
Member of the Executive Board from 09.03.2011

2014	2015	2015 (Min)	2015 (Max)
581,250	600,000	600,000	600,000
69,017	16,709	16,709	16,709
<b>650,267</b>	<b>616,709</b>	<b>616,709</b>	<b>616,709</b>
747,015	775,800	0	1,500,000
997,980	1,017,133	0	1,856,545
498,010	517,200	0	990,000
400,003	-	-	-
99,967	-	-	-
-	399,976	0	781,786
-	99,957	0	84,759
<b>2,395,262</b>	<b>2,409,642</b>	<b>616,709</b>	<b>3,973,254</b>
176,221	274,349	274,349	274,349
<b>2,571,483</b>	<b>2,683,991</b>	<b>891,058</b>	<b>4,247,603</b>

Disclosed in the table below, in accordance with the requirements set out in the German Corporate Governance Code, is remuneration received, comprising fixed emoluments, other benefits, one-year variable emoluments and multi-year variable emoluments, set out according to the relevant reference year, and the pension expense in and/or for the 2015 financial year. The remuneration received table does not include any remuneration for former members of the Executive Board. In contrast to the multi-year variable emoluments granted disclosed above, this table shows the actual value of multi-year emoluments granted in prior years and received in 2015. No tranche of the Long Term Incentive Plan was exercisable in the 2015 financial year. The qualifying period for the Long Term Incentive Plan 2012 ends in 2016.

## 5 REMUNERATION RECEIVED DURING THE YEAR

Executive Board members in office at 31.12.2015

	Dr Wolfgang Büchele Member of the Executive Board from 01.05.2014 Chief Executive Officer from 20.05.2014		Thomas Blades Member of the Executive Board from 08.03.2012		
Remuneration received during the year, in EUR	2014	2015	2014	2015	
Fixed emoluments	800,000	1,200,000	600,000	600,000	
Other benefits	101,671	37,733	28,481	21,955	
<b>TOTAL</b>	<b>901,671</b>	<b>1,237,733</b>	<b>628,481</b>	<b>621,955</b>	
One-year variable emoluments					
Short-term cash emoluments <sup>1</sup>	701,800	1,075,500	697,080	722,760	
Multi-year variable emoluments	467,867	717,000	464,720	481,840	
including long-term cash emoluments (deferral) <sup>1</sup>	467,867	717,000	464,720	481,840	
including Long Term Incentive Plan 2011 (qualifying period: 2011–2014)	–	–	–	–	
Others	0	0	0	0	
<b>TOTAL</b>	<b>2,071,338</b>	<b>3,030,233</b>	<b>1,790,281</b>	<b>1,826,555</b>	
Service cost	453,316	651,268	298,789	309,022	
<b>TOTAL EMOLUMENTS</b>	<b>2,524,654</b>	<b>3,681,501</b>	<b>2,089,070</b>	<b>2,135,577</b>	

<sup>1</sup> 60 percent of the variable cash remuneration is paid in cash with no further obligation incumbent on the Executive Board member. 40 percent of the variable cash remuneration is paid out in cash with the obligation to purchase shares in Linde and hold these shares for at least four years.

### Other remuneration-related arrangements

The Supervisory Board has the right, at its own discretion, to award a special payment to an Executive Board member for exceptional performance. Again in the 2015 financial year, no such payment was granted. Any potential special payment is capped at an amount which, when taken together with the cash component and deferral component for that financial year, does not exceed the cap in terms of the amount for the one-year variable emoluments.

<i>Dr Christian Bruch</i> <i>Member of the Executive Board</i> <i>from 01.01.2015</i>		<i>Georg Denoke</i> <i>Member of the Executive Board</i> <i>from 12.09.2006</i>		<i>Bernd Eulitz</i> <i>Member of the Executive Board</i> <i>from 01.01.2015</i>		<i>Sanjiv Lamba</i> <i>Member of the Executive Board</i> <i>from 09.03.2011</i>	
2014	2015	2014	2015	2014	2015	2014	2015
-	500,000	722,500	750,000	-	500,000	581,250	600,000
-	20,630	23,296	20,761	-	28,157	69,017	16,709
-	520,630	745,796	770,761	-	528,157	650,267	616,709
-				-			
-	476,070	786,555	840,000	-	522,090	687,060	732,840
-	317,380	879,451	560,000	-	348,060	814,517	488,560
-	317,380	524,370	560,000	-	348,060	458,040	488,560
-	-	355,081	-	-	-	356,477	-
-	0	0	0	-	0	0	0
-	1,314,080	2,411,802	2,170,761	-	1,398,307	2,151,844	1,838,109
-	305,849	163,924	256,911	-	308,020	176,221	274,349
-	1,619,929	2,575,726	2,427,672	-	1,706,327	2,328,065	2,112,458

***Benefits in the event of termination of a contract***

In the event that they are not reappointed between the age of 55 and 63 for reasons beyond their control, Executive Board members Georg Denoke and Sanjiv Lamba will receive in accordance with their existing contracts a lump sum severance payment of 50 percent of their annual cash remuneration (fixed emoluments and that portion of the variable cash emoluments which is to be paid in cash with no obligation to invest in shares (60 percent)) for the last full financial year before the termination of their employment.

In compliance with the German Corporate Governance Code, all contracts with members of the Executive Board include the following provision. In the event of the early termination of the employment contract of a member of the Executive Board without due cause for that termination, his or her severance pay will be capped at twice the annual cash emoluments (fixed emoluments and that portion of the variable cash emoluments which is to be paid in cash with no obligation to invest in shares (60 percent)) ("severance cap"). The calculation is based on the annual cash emoluments for the last full financial year prior to the removal of the member from the Executive Board. If the annual cash emoluments of the member of the Executive Board for the financial year in which his or her employment is terminated are likely to be significantly higher or lower than the annual cash emoluments for the last full financial year, the Supervisory Board may at its discretion make an adjustment to the calculation of the annual cash emoluments. If the remaining term of the employment contract is less than two years, the severance pay is calculated pro rata. For the period on the basis of which the severance pay is determined, the Executive Board members receive no pension payments.

If Linde AG is acquired by another company and there is a change of control, and an employment contract is terminated within nine months of that date by mutual consent or as a result of a failure to renew the contract at the appropriate time or as a result of the resignation of the Executive Board member due to his or her position on the Board being unduly compromised by the takeover, members of the Executive Board have an entitlement to benefits based on their contractual cash emoluments but limited in extent. However, the burden of proof is on the member of the Executive Board to demonstrate the actual circumstances of his or her dismissal as a result of which his or her position has been unduly compromised. The recommendation of the German Corporate Governance Code relating to severance caps in the event of a change of control is also being followed. In accordance with the Code, all Executive Board contracts provide for severance pay in the event of a member retiring early from the Board due to a change of control equivalent to the amount payable in the event of early retirement from the Board without cause under any other circumstances. Moreover, the Executive Board member would receive additional compensation equivalent to his or her annual cash emoluments (fixed

emoluments and that portion of the variable cash emoluments which is to be paid in cash with no obligation to invest in shares (60 percent)). The additional compensation would not be payable if the member of the Executive Board had served on the Board for less than three years or if he or she had not yet reached the age of 52 or had already reached the age of 63 when the employment contract ended. If the member of the Executive Board receives benefits on the occasion of or in connection with the acquisition by a majority shareholder, a controlling interest or another legal entity, these are taken into account when the compensation and severance pay benefits are calculated. The pension entitlement is determined in accordance with the rules for the early termination of an employment contract without cause.

If the employment contract of a member of the Executive Board is terminated with due cause, no payments are made to the Board member.

Executive Board members are bound by a restraint clause for a period of two years following the termination of their contracts. By way of compensation, the company undertakes to pay former Board members an amount equivalent to 50 percent of their fixed emoluments during the period of restraint. The compensation qualifies in full for pension benefits.

If the member of the Executive Board leaves the company's service as a result of death or incapacity for work, he or she or his or her heirs are entitled to the fixed monthly emoluments for the month in which the employment contract ended, and for the following six months. Moreover, he or she or his or her heirs are entitled to that proportion of the variable cash emoluments in respect of that part of the year in which the member of the Executive Board was active. In this case, 100 percent of the amount is paid in cash.

***Loans and advances***

During the financial year, no loans or advances were made to members of the Executive Board.

***Total emoluments of former members of the Executive Board***

Former members of the Executive Board and their surviving dependants received total emoluments of EUR 2,214,936 in the 2015 financial year (2014: EUR 3,290,586). The total emoluments also include changes in the value of annual tranches of share-based remuneration that have been recognised as an expense and previous claims under virtual shares for former Executive Board members.

A provision has been made in the Group financial statements for current pensions and future pension benefits in respect of former members of the Executive Board and their surviving dependants of EUR 58,771,380 (2014: EUR 58,273,773). In the annual financial statements of Linde AG, a provision of EUR 50,381,450 was made (2014: EUR 44,793,684). The differences in the amounts disclosed are attributable to different accounting parameters being used to calculate the figures included in the Group financial statements and the annual financial statements.

## 2. Remuneration of the Supervisory Board

The remuneration of the Supervisory Board is determined at the Annual General Meeting based on a proposal from the Executive Board and Supervisory Board. It is governed by Article 11 of the articles of association.

Under the new system approved at the 2013 Annual General Meeting, the remuneration of the Supervisory Board changed so that it comprises only fixed emoluments.

### *Annual fixed emoluments*

Each member of the Supervisory Board receives annual fixed emoluments of EUR 150,000.

### *Emoluments of the Chairman and Deputy Chairmen of the Supervisory Board*

The Chairman of the Supervisory Board receives annual fixed emoluments of EUR 450,000 and each of the Deputy Chairmen receives annual fixed emoluments of EUR 225,000. These fixed amounts also include the recompense for chairing and serving on committees.

### *Emoluments of the Standing Committee and Audit Committee*

Each member of the Standing Committee and the Audit Committee (excluding the Chairman and Deputy Chairmen of the Supervisory Board) receives EUR 30,000 in addition to his or her annual fixed emoluments and the Chairman of the Audit Committee receives EUR 60,000 in addition to his or her annual fixed emoluments.

### *Attendance fees*

The company pays members of the Supervisory Board an attendance fee of EUR 1,000 every time they attend a Supervisory Board meeting or committee meeting. This amount remains unchanged if several meetings take place on the same day.

### *Payment date, VAT and reimbursement of expenses*

The remuneration of the Supervisory Board is paid after the end of the relevant financial year. The company reimburses members of the Supervisory Board for their expenses and also for VAT on their emoluments and on their expense reimbursements. The company can take out liability insurance for the benefit of members of the Supervisory Board to cover the legal liability arising from their activities as Board members.

### *Voluntary personal investment*

The members of the Supervisory Board made a personal commitment to the Supervisory Board that, in return for 25 percent of the fixed gross emoluments payable in each financial year, they would purchase shares in Linde and in each case hold these shares for the duration of their membership of the Supervisory Board of Linde AG. This

does not apply if the Supervisory Board members remit at least 85 percent of their fixed emoluments to the Hans Böckler Foundation in accordance with the guidelines of the Confederation of German Trade Unions (DGB) or to the employer as a result of an obligation under a service or employment contract. If in these cases the proportion of fixed emoluments transferred is less than 85 percent, the personal commitment applies to the proportion of the fixed emoluments which has not been transferred.

In 2014 and 2015, the Supervisory Board members fulfilled their personal commitment. No cost arose for the company as a result. The Supervisory Board bought Linde shares on the stock market and reported the purchases in accordance with the German Securities Trading Act (WpHG).

### *Emoluments of the Supervisory Board for 2015*

The total emoluments of the Supervisory Board (fixed emoluments and attendance fees) amounted to EUR 2,512,000 (2014: EUR 2,509,000) plus VAT of EUR 477,280 (2014: EUR 476,710). The total cost for the attendance fees was EUR 82,000 (2014: EUR 79,000).

The following table lists the remuneration of the individual members of the Supervisory Board by component in the 2015 and 2014 financial years:

## 6 EMOLUMENTS OF THE SUPERVISORY BOARD

<i>in EUR</i>		<i>Fixed emoluments<sup>1</sup></i>	<i>Emoluments for sitting on committees<sup>1</sup></i>	<i>Attendance fees<sup>1</sup></i>	<i>Total emoluments<sup>1</sup></i>
Dr Manfred Schneider (Chairman)	2015	450,000	–	10,000	460,000
	2014	450,000	–	10,000	460,000
Hans-Dieter Katte <sup>2</sup> (Deputy Chairman)	2015	225,000	–	10,000	235,000
	2014	225,000	–	10,000	235,000
Michael Diekmann (Second Deputy Chairman)	2015	225,000	–	6,000	231,000
	2014	225,000	–	7,000	232,000
Prof Dr Dr Ann-Kristin Achleitner	2015	150,000	30,000	9,000	189,000
	2014	150,000	30,000	8,000	188,000
Dr Clemens Börsig	2015	150,000	60,000	8,000	218,000
	2014	150,000	60,000	8,000	218,000
Anke Couturier	2015	150,000	–	5,000	155,000
	2014	150,000	–	4,000	154,000
Franz Fehrenbach	2015	150,000	–	4,000	154,000
	2014	150,000	–	4,000	154,000
Gernot Hahl <sup>2</sup>	2015	150,000	60,000	9,000	219,000
	2014	150,000	60,000	10,000	220,000
Dr Martin Kimmich <sup>2</sup>	2015	150,000	–	5,000	155,000
	2014	150,000	–	4,000	154,000
Klaus-Peter Müller	2015	150,000	30,000	6,000	186,000
	2014	150,000	30,000	6,000	186,000
Xaver Schmidt <sup>2</sup>	2015	150,000	–	5,000	155,000
	2014	150,000	–	4,000	154,000
Frank Sonntag <sup>2</sup>	2015	150,000	–	5,000	155,000
	2014	150,000	–	4,000	154,000
<b>TOTAL</b>	2015	<b>2,250,000</b>	<b>180,000</b>	<b>82,000</b>	<b>2,512,000</b>
<i>(in percent)</i>		<b>90</b>	<b>7</b>	<b>3</b>	<b>100</b>
<b>TOTAL</b>	2014	<b>2,250,000</b>	<b>180,000</b>	<b>79,000</b>	<b>2,509,000</b>
<i>(in percent)</i>		<b>90</b>	<b>7</b>	<b>3</b>	<b>100</b>

<sup>1</sup> Amounts excluding VAT.<sup>2</sup> The employee representatives have decided to forward their remuneration to the Hans Böckler Foundation in accordance with the guidelines of the Confederation of German Trade Unions.*Loans, advances and other emoluments*

At 31 December 2015, there were no loans or advances to members of the Supervisory Board. Moreover, the members of the Supervisory Board received no payments or advantages in 2015 or 2014 for services they provided individually, in particular advisory or agency services.

# LINDE IN THE CAPITAL MARKET

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## *DAX achieves positive annual result despite considerable fluctuations*

The 2015 stock market year was characterised by the monetary policy pursued by the central banks and by geopolitical events, particularly in Ukraine and Syria. Terrorist attacks by IS in France also gave rise to a state of emergency and created a mood of increasing uncertainty. The strong US dollar and the drop in commodities prices exacerbated the debt crisis in some emerging markets and sent share prices south.

Nevertheless, Germany's leading index, the DAX, was able to hold its own in this difficult international environment. In the first few months of the year, the announcement of monetary policy easing made by the European Central Bank allowed the DAX to climb to one record level after the other. By 10 April, the index had climbed from 9,806 points at the end of 2014 to 12,374 points. The DAX was more volatile in the second quarter until the devaluation of the Chinese currency triggered a slump on the international stock markets in August. The pronounced uncertainty on the global markets continued to affect the DAX. On 24 September, it fell to its year low of 9,427 points – meaning that it had lost almost one quarter of its value compared with the high reached in April.

An upward trend emerged again from mid-September onwards before coming to an abrupt end in early December. The European Central Bank opted not to comply entirely with the high expectations of a further expansion of the loose monetary policy, a move which proved to be a source of negative impetus for a while. Debates relating to refugees and the Volkswagen scandal only served to increase the feeling of uncertainty among investors. What is more, the US Federal Reserve hiked its key interest rate for the very first time in nine years on 16 December 2015. Despite all of these developments, the 2015 stock market year was a positive one on the whole, not least due to a lack of investment alternatives: Germany's leading index closed trading on 30 December 2015 having gained 9.6 percent.

This means that the DAX outperformed all of Europe's other major stock market indices. The MSCI Europe Index only gained 2.2 percent. The FTSEurofirst 300 Index, London, rose by 5.0 percent, with the DJ EURO STOXX gaining 8.0 percent. The CAC 40 Index, Paris, reached a similar level to the DAX, climbing by 8.5 percent.

Compared with the European markets, the US stock markets painted a disappointing picture: the S & P 500 Index lost 0.7 percent in a year-on-year comparison. The technology index NASDAQ (NASDAQ composite) achieved better performance, rising by 5.7 percent. The emerging economies were unable to keep up with these developments and lost substantial value: the MSCI Emerging Markets Index, for example, dipped by 17.0 percent in the year under review.

## *Performance of Linde shares*

Despite the positive stock market environment, Linde shares came under considerable pressure, especially in the second half of 2015. They closed the year at EUR 133.90 on 30 December 2015, down by 13.2 percent on the closing price for 2014 of EUR 154.20. This also pushed Linde stock market value down to EUR 24.857 bn. Compared with market capitalisation of EUR 28.625 bn at the end of 2014, this equates to a drop of EUR 3.768 bn.

Linde shares initially made a very strong start to the new stock market year, touching on a year high of EUR 193.85 on 18 March. This also represented an all-time high for Linde. The second quarter brought a volatile period in which Linde shares were no longer able to keep up with the German leading index. The downward trend was exacerbated by the Chinese crisis, sending Linde shares spiralling down to EUR 147.15 on 24 August 2015. Due to the uncertainty on the global markets, this negative trend continued, with Linde's shares continuing to lose value until 24 September 2015.

Positive newsflow signalled the start of a brief period of recovery, albeit a merely temporary one. On 30 November 2015, Linde was forced to adjust its targets for the return on capital employed (ROCE) and the Group operating profit for 2017. The main reasons behind these adjustments relate to a considerable change in the overall environment compared with October 2014, when the original targets were set. First, the rates of growth in industrial production that are relevant to the industrial gases business continued to drop considerably across the globe. Second, state price cuts for services in the US Healthcare business are likely to be more pronounced than originally expected in 2016 and 2017. In addition, the Engineering Division will make less of a contribution to Group operating profit than originally expected. This is primarily due to a lower order intake due to a general reluctance to invest among customers, also due to what are likely to be low oil prices in the medium term. By 14 December 2015, Linde shares had fallen to the year low of EUR 128.05.

This setback in Linde's share price does not, however, raise any doubt as to its fundamentally solid and stable business model. This business model is characterised by long-term contractual structures, a broad-based customer portfolio and a stable cash flow.

The restructuring programme, which was launched in 2014 and was largely concluded in 2015, as well as the well-known HPO (High Performance Organisation) concept

designed to achieve sustainable productivity gains, are creating a positive perception of Linde's focus on profits on the capital market.

The capital market is increasingly evaluating responsible behaviour in the corporate sector with investments that take the principles of sustainable management into account (Socially Responsible Investment, SRI). Linde is represented in a number of SRI funds, indices and ranking systems. Among others, Linde forms part of the global Dow Jones Sustainability Index (DJSI World), the FTSE-4Good Index Serie, the MSCI Global Sustainability Index, the Ethibel Sustainability Index (ESI) and the STOXX Global ESG Leaders Index.

The leading international rating agencies Moody's and Standard & Poor's award Linde a high credit rating. In December 2015, both agencies confirmed Linde's good credit rating of A+ and A2 respectively, with a stable outlook. These ratings recognise the Group's conservative financial policy and its robust business model as well as its good liquidity situation.

During the financial year, Linde was able to benefit repeatedly from these ratings and from the good conditions in the international capital markets for corporate bonds. In the fourth quarter of 2015, for example, Linde placed three bonds worth a total of EUR 230 m. The first bond, which has a term of five years and a fixed coupon of 0.634 percent, has a volume of EUR 50 m. The second private placement, which has a term of 12 years and a fixed coupon of 1.652 percent, has a volume of EUR 80 m. The EUR 100 m bond has a term of fifteen years and a fixed coupon of 1.9. The proceeds of the issue were used to redeem a EUR 600 m bond which fell due in December 2015.

In 2015, the EUR 2.5 bn credit facility agreed in July 2013 was successfully extended by one year to 2020. The credit facility originally ran for five years, with two options to extend the facility, in each case by one year (subject to the agreement of the lenders).

With the syndicated credit facility supplementing its liquid funds, Linde had a solid general liquidity reserve at the end of 2015.

#### € 7 CAPITAL MARKET-BASED FIGURES

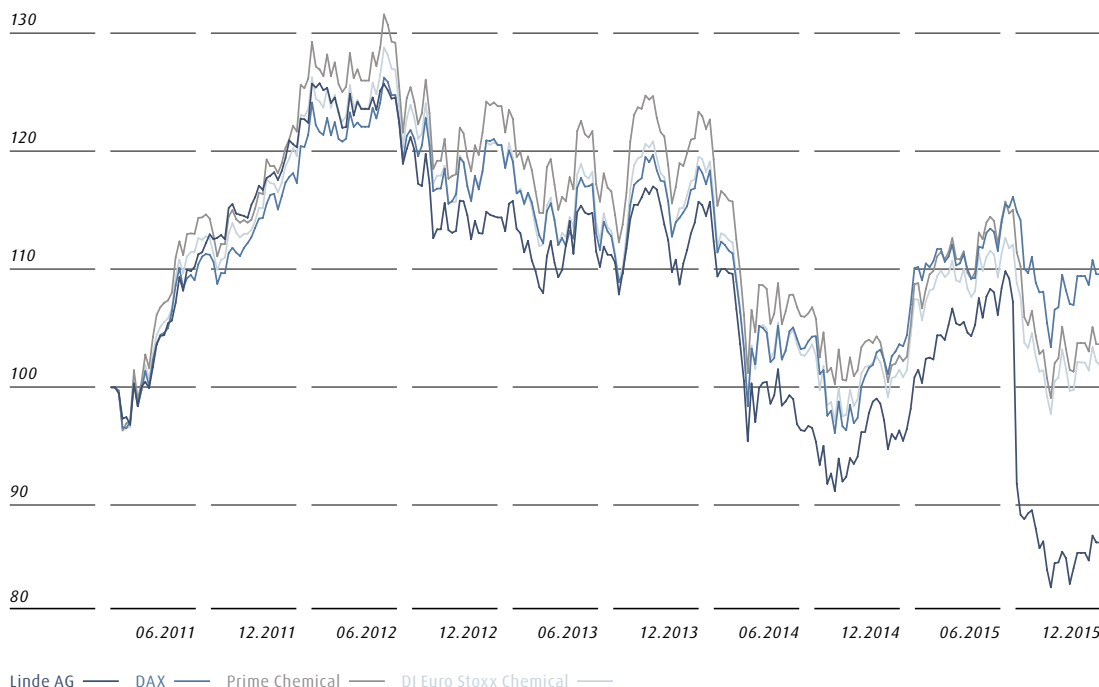
		2015	2014
Number of shares with dividend entitlement for the financial year	units	185,638,071	185,638,071
Year-end closing price	EUR	133.90	154.20
Year high	EUR	193.85	157.30
Year low	EUR	128.05	139.15
Total dividend of Linde AG for the financial year	EUR m	640	585
Market capitalisation <sup>1</sup>	EUR m	24,857	28,625
Average weekly volume	No.	2,510,206	2,267,308
Volatility <sup>1</sup> (200 days)	%	30.2	16.2
<b>Information per share</b>			
Cash dividend	EUR	3.45	3.15
Dividend yield	%	2.6	2.0
Operating cash flow	EUR	19.35	16.17
Earnings (reported EPS)	EUR	6.19	5.94

<sup>1</sup> As at 31 December.



## 1 LINDE SHARE: PRICE PERFORMANCE 2011–2015 COMPARED WITH INDICES

Index in %



## 8 LINDE PERFORMANCE IN COMPARISON WITH THE MOST IMPORTANT INDICES<sup>1</sup>

	2015 in percent	Weighting Linde shares in percent
Linde (including dividend)	-11.6	-
Linde (excluding dividend)	-13.2	-
DAX	9.6	2.64
Prime Chemical	3.7	10.84
DJ EURO STOXX	8.0	0.64
DJ EURO STOXX Chemical	1.9	7.96
FTSEurofirst 300	5.0	0.37
FTSE E300 Chemical	3.1	7.53
MSCI Europe	2.2	0.33

<sup>1</sup> As at 31.12.2015.

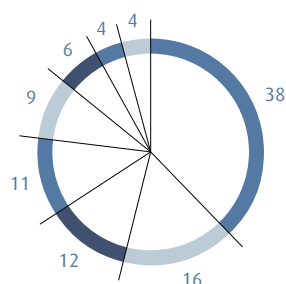
### Stable shareholder structure

In the annual shareholder identification survey, Linde identified the shareholders of around 76 percent (2014: around 79 percent) of the outstanding shares on the balance sheet date of 31 December 2015. These are solely institutional investors. In the case of the shareholders who have not been identified, it is assumed that 76 percent of these shares too can be allocated to institutional investors. On the basis of this approach to the calculation, the proportion of private investors who held shares in Linde at 31 December 2015 was around 6 percent (2014: 5 percent).

The proportion of institutional investors from the US came in at around 38 percent at the end of the reporting year, as in the previous year (2014: 38 percent). This means that US investors continue to constitute the largest group of investors from a single country. The proportion of shares held by European institutional investors fell slightly to 57 percent (2014: 58 percent). The proportion of shares held by institutional investors in the Scandinavian countries also fell to 12 percent (2014: 13 percent). At 31 December 2015, German institutional investors held 11 percent of Linde's shares (2014: 14 percent). The proportion of institutional investors from the UK rose slightly year-on-year to 16 percent (2014: 15 percent), as did the proportion of French investors at 9 percent (2014: 7 percent). The proportion of Asian investors remained constant in the 2015 financial year at 4 percent (2014: 4 percent). The proportion of investors focusing on sustainability once again came to around 11 percent in the 2015 financial year (2014: 11 percent).

In the past year, Linde has again succeeded in broadening its investor base to include a number of investors who take a long-term view. The Group's business model is geared towards sustainable, profitable growth. Linde also benefits from a stable financing structure and therefore offers investors an attractive investment with the opportunity for long-term wealth creation.

## 1 INSTITUTIONAL INVESTOR HOLDINGS BY REGION IN %



USA	38 (2014: 38)	France	9 (2014: 7)
UK	16 (2014: 15)	Other	6 (2014: 5)
Scandinavia	12 (2014: 13)	Switzerland	4 (2014: 4)
Germany	11 (2014: 14)	Asia	4 (2014: 4)

### Dividend payment

Linde has adopted an earnings-based dividend policy geared towards continuity. At the Annual General Meeting on 3 May 2016, the Executive Board and Supervisory Board will propose the payment of a dividend of EUR 3.45 per share. This is an increase of 9.5 percent compared with last year's dividend of EUR 3.15. This gives a dividend payout ratio of 55.7 percent (2014: 53.1 percent). The dividend yield, based on the year-end closing price, was around 2.6 percent (2014: 2.0 percent).

### Resolutions passed at the Annual General Meeting on 12 May 2015

The remaining 2007 conditionally authorised capital resolved by the Annual General Meeting held on 5 June 2007 in the amount of EUR 4,842,237.44 in accordance with Article 3.9 of the articles of association was cancelled in full. As a result, Article 3.9 of the articles of association was deleted without substitution. The previous Article 3.10 of the articles of association became Article 3.9 of the articles of association.

### High level of investor relations (IR) activities sustained

In the 2015 financial year, Linde once again stepped up its intensive communication with capital market participants. More than 1,000 investor talks were held with investors. At almost 60 conferences and roadshows around the world, several events for private investors and in the course of plant visits on several continents, Linde offered its shareholders and potential investors the opportunity to speak personally to representatives of the Group, including members of the Executive Board.

The Group also held an event for sell-side analysts. This event, which has become a fixture in recent years, provides analysts with an opportunity for dialogue with members of the Executive Board of Linde AG about new trends and about the business performance and future of the Group.

A key focus of Linde's communications with the capital markets is the strategic development of the Group. In particular, the focus is on exploiting the Group's strengths, thereby enhancing the efficiency of the Group as a whole even further. Linde also explained current business developments within the entire Group, as well as the impact of exchange rates and the global economic climate, and was able to convince national and international investors alike of the potential offered by its products, technologies and services.

Transparency, continuity and reliability will continue to be the hallmarks of Linde's IR work in 2016, too. The IR team will be drawing attention to the arguments that still make an investment in Linde an attractive option for investors: its forward-looking and robust business model characterised by long contract periods, financing geared towards the long term and an excellent position in the fast-growing business sectors.

All current information about Linde shares can be found on the Group's website at [www.linde.com](http://www.linde.com) in the Investor Relations section. If you have any questions or require information, the IR team will be happy to help on +49.89.35757-1321. You can also direct your questions to Linde online by sending an e-mail to [investorrelations@linde.com](mailto:investorrelations@linde.com).

## 9 LINDE SHARE INFORMATION

Type of share	Bearer shares
Stock exchanges	All German stock exchanges
Security reference numbers	ISIN DE0006483001
	CUSIP 648300
Reuters (Xetra)	LING.DE
Bloomberg	LIN GR

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# Combined Management Report

## SECTION 2

# Fundamental information about the Group

## BUSINESS MODEL OF THE LINDE GROUP

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### *The Linde Group*

The Linde Group is a gases and engineering company with global operations. Its Corporate Centre is based in Munich, Germany. Linde has around 64,500 employees and is represented in more than 100 countries worldwide. It generated revenue of EUR 17.944 bn in the 2015 financial year. The Group comprises three divisions:

- Gases Division
- Engineering Division
- Other Activities

### *Gases Division*

The company offers a wide range of compressed and liquefied gases as well as chemicals, and is the partner of choice across a huge variety of industries. Linde gases are used, for example, in the energy sector, steel production, chemical processing, environmental protection and welding, as well as in food processing, glass production and electronics. The Group is also investing in the expansion of its Healthcare business (medical gases, medical devices, clinical care and related services) and is a leading global player in the development of environmentally friendly hydrogen technology.

### **Industrial gases**

Linde produces and markets the air gases oxygen, nitrogen and argon which it makes in its own air separation plants [SEE GLOSSARY] as well as hydrogen, acetylene, carbon monoxide, carbon dioxide, shielding gases for welding applications, noble gases and high-purity specialty gases. Linde gases are used across all the continents of the world in almost all industry sectors, in trade, and in science and research. Linde also develops and markets systems and plants for gases applications all over the world in several technological application centres. In addition, the Group provides its customers with comprehensive support services and technical equipment. The Linde Industrial Gases segment is the world's largest supplier of welding and safety products.

### **Medical gases**

With its Healthcare segment, Linde is a global leader in the supply of high-quality products and services for the integrated treatment of patients with respiratory disorders. The portfolio comprises gaseous medication and related medical products for patients and medical staff. Linde operates its healthcare business in more than 60 countries and all products and services meet high safety, quality and efficacy standards as stipulated by the healthcare authorities.

Its products and services are used to diagnose and treat a whole range of conditions. Linde Healthcare provides medical gases, medical devices and clinical treatments for use in anaesthesia and for the treatment of chronic obstructive pulmonary disease (COPD), sleep apnoea, pulmonary hypertension [SEE GLOSSARY] and pain relief

### **Product areas**

Within the Gases Division, Linde allocates its activities to the following product areas:

- On-site
- Healthcare
- Cylinder gases
- Liquefied gases

In the case of the on-site business, customers are generally supplied via an on-site production plant, while in the other product areas gases are delivered to the customer in gas cylinders or tankers.

### Operational management

On the organisational front, the Gases Division comprises three segments: EMEA, Asia/Pacific and the Americas. Responsibilities are allocated on the basis of a regional structure. Within the three segments, Regional Business Units (RBUs) are responsible for the operating business. This structure allows the Group to take account of the great importance of local and regional market conditions in the gases business.

In the course of developing its organisational model, Linde introduced a number of changes with effect from 15 January 2015:

The reportable segments are now the same as the operating segments. One member of the Executive Board is responsible for each of the operating segments. In the EMEA segment, the RBU Continental & Northern Europe was divided into three new RBUs RBU Central Europe, RBU Northern Europe and RBU Southern Europe. In the Asia/Pacific segment, the Group expanded RBU Greater China to include South Korea, an important market especially for the electronic gases business. The new RBU is called RBU East Asia. At the same time, RBU South & East Asia was renamed RBU South Asia & ASEAN *[SEE GLOSSARY]*. The three segments in the Gases Division now comprise nine Regional Business Units.

Linde has also set up five Global Governance Centres (GGCs) which are managed centrally and act on a Group-wide basis: GGC Merchant & Packaged Gases (liquefied gases and cylinder gas), GGC Electronics (electronic gases), GGC Healthcare, GGC Operations and GGC Deliver. These units will, for example, establish best practice and ensure that the process standards which have been defined are implemented and continually enhanced across the Group. The former Global Business Unit (GBU) Healthcare and the Business Area (BA) Electronics have merged into the newly created GGCs. The work of the former GBU Tonnage (on-site business) has been assumed by the RBUs and in particular for the development of new projects by a Group-wide function entitled Opportunity & Project Development (OPD), which is designed to exploit investment-based business opportunities even more effectively than before. Moreover, Linde's purchasing activities have been bundled together across the Group (Global Procurement).

The Corporate & Support Functions provide assistance to the business units of the Group. *SEE MANAGEMENT ORGANISATION, PAGES 226 TO 227.*

### Engineering Division

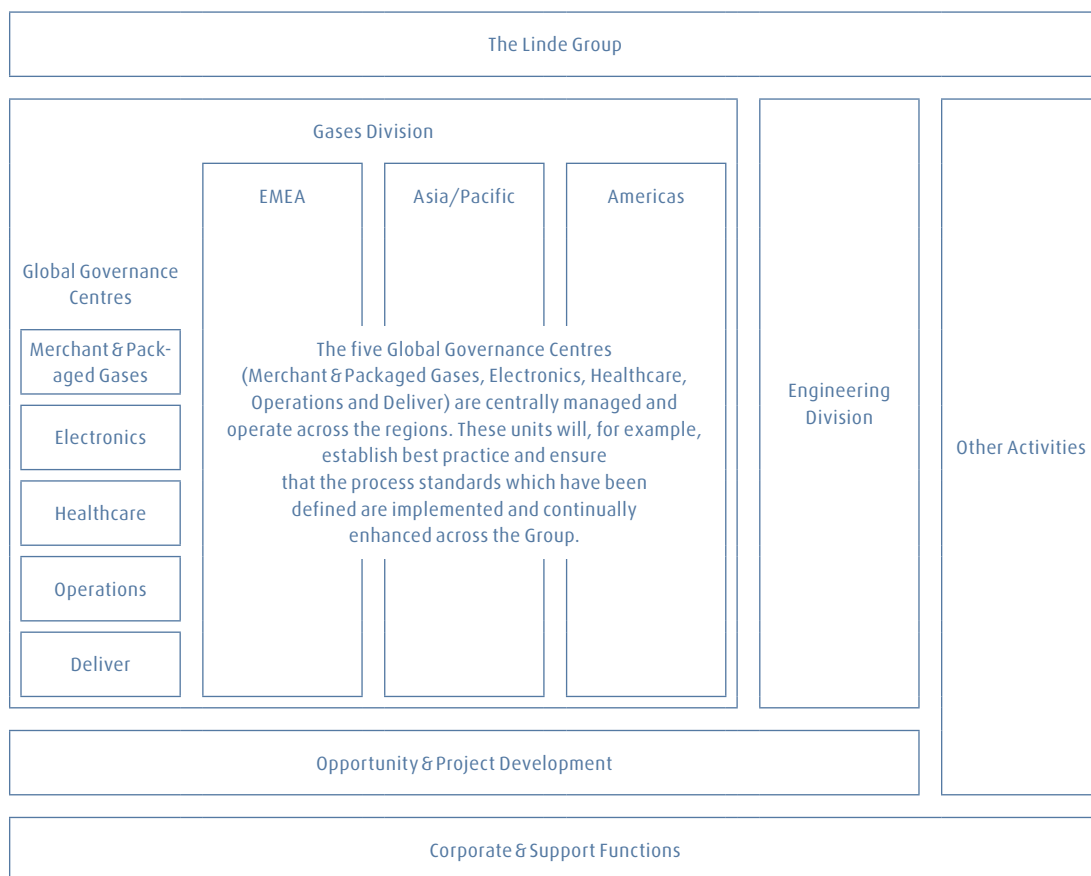
Linde's Engineering Division is successful throughout the world, with its focus on promising market segments such as olefin plants *[SEE GLOSSARY]*, natural gas plants, air separation plants, and hydrogen and synthesis gas plants. In contrast to virtually all competitors, the company can rely on its own extensive process engineering know-how in the planning, project development and construction of turnkey industrial plants. Linde plants are used in a wide variety of fields: in the petrochemical and chemical industries, in refineries and fertiliser plants, to recover air gases, to produce hydrogen and synthesis gases, to treat natural gas and to produce noble gases. The Engineering Division either supplies plants directly to the customer or to the Gases Division, which operates the plants on behalf of the customer under a gases supply contract.

The Engineering Division is centrally managed and assisted by the Corporate & Support Functions. At Group level, one of the members of the Executive Board is responsible for the Engineering Division. *SEE MANAGEMENT ORGANISATION, PAGES 226 TO 227.*

### Other Activities

Other Activities comprises the operations of logistics services company Gist. Gist specialises in the distribution of chilled food and beverages, and operates principally in the United Kingdom and in Ireland.

#### ORGANISATION OF THE LINDE GROUP



### Corporate management

The Executive Board is international in composition and is responsible for the management of the company. Each operational member of the Executive Board is responsible for one segment. *SEE MANAGEMENT ORGANISATION, PAGES 226 TO 227.* By reflecting the operating model in the allocation of responsibilities to individual members of the Executive Board, the Group ensures that the individual strengths and skills of the Executive Board members are used effectively at both regional and product level.

# VALUE-BASED MANAGEMENT OF THE LINDE GROUP

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Other non-financial indicators include the number of serious transport incidents [SEE GLOSSARY], the number of work-related accidents, CO<sub>2</sub> emissions, and water and energy consumption. Further information on these figures is given on PAGES 84 TO 90 of this financial report.

## *Core financial performance indicators*

One of the key elements of Linde's corporate strategy is the pursuit of sustainable earnings-based growth, with the aim of achieving a steady increase in corporate value. To measure the medium-term and long-term financial success of this value-based management strategy, the Group uses the following core performance indicators:

- Group revenue and the revenue of the Gases Division and the Engineering Division,
- Group operating profit (Earnings Before Interest, Tax, Depreciation and Amortisation, EBITDA) and the operating profit of the Gases Division and the Engineering Division,
- Group operating margin and the operating margin for the Engineering Division and for the segments EMEA, Asia/Pacific and Americas and
- return on capital employed (ROCE) for the Group.

These performance indicators are submitted on a regular basis to the entire Executive Board and are used for internal management purposes. The variable remuneration of the Executive Board is also based on these performance indicators. SEE REMUNERATION REPORT, PAGES 22 TO 36.

## *Other financial and non-financial indicators*

To manage its operating business and represent its performance, Linde also uses other indicators such as EBIT (Earnings Before Interest and Tax, SEE GLOSSARY), free cash flow before financing activities (operating free cash flow) and segment-specific performance indicators such as order intake in the Engineering Division. Order intake is a key indicator of future business performance in the plant construction business, which is geared towards the long term. Another financial indicator used is earnings per share (EPS). Since this figure is based on post-tax earnings, it also takes account of financing and fiscal components.

The calculations of operating free cash flow and of earnings per share are given on PAGES 67 AND 145 of this financial report.

**Calculation of the core financial performance indicators**

The core performance indicator ROCE is calculated as EBIT adjusted for non-recurring items divided by capital employed. In the 2015 financial year, ROCE calculated in this way was 9.4 percent (2014: 9.5 percent).

The calculation of ROCE for The Linde Group can be summarised as follows:

**DEFINITION OF ROCE****RETURN**

EBIT (including share of profit or loss from associates and joint ventures)
--

+ / -

Non-recurring items
---------------------

/

**CAPITAL EMPLOYED<sup>1</sup>**

Equity
--------

+

Financial debt
----------------

+

Liabilities from finance leases
---------------------------------

+

Net pension obligations
-------------------------

-

Cash & cash equivalents and securities
--

-

Receivables from finance leases
---------------------------------

<sup>1</sup> Calculated as the average of the figures as at 31 December of the current year and 31 December of the prior year.

Group operating profit (EBITDA) is calculated by adjusting Group EBIT for non-recurring items and for the amortisation of intangible assets and depreciation of tangible assets. The amortisation of intangible assets and depreciation of tangible assets are included in functional costs. This information is disclosed in the segment information on PAGES 124 TO 125.

The operating margin is derived from two of the performance indicators (revenue and operating profit).

EBIT is calculated as Group revenue less cost of sales and other functional costs (marketing and selling expenses, research and development costs, administration expenses) less other operating expenses. In addition, the figure includes other operating income and the share of profit or loss

from associates and joint ventures. SEE TABLE 12, PAGE 56.

EBIT is also adjusted for non-recurring items. Non-recurring items are items which, due to their nature, frequency and/or extent, are likely to have an adverse impact on how accurately the key financial figures reflect the sustainability of the earning capacity of The Linde Group in the capital market.

During the reporting period, non-recurring items related to restructuring costs.

A reconciliation between the reported performance indicators and the performance indicators after adjusting for non-recurring items is given in NOTE [40] OF THE NOTES TO THE GROUP FINANCIAL STATEMENTS.



# TARGETS AND STRATEGY OF THE LINDE GROUP

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## *A world leader*

Linde has set itself the target of becoming the leading integrated gases and engineering company in the world. This means becoming the leading company not only in terms of its key financial figures, such as revenue and operating profit, but also in terms of its reputation in the market and with customers and all other stakeholders. Linde sees its role as providing its customers with high-quality products and services and offering sustainable value added, as well as serving those customers in the best way possible. In order to achieve this, it is constantly enhancing its proximity to customers, also by opening Application Centres. Linde also aims to create a unique selling point by offering innovative products and services, as well as showing in-depth knowledge of the customer's industry. Linde's growth is based on innovations that serve customers and help to boost productivity on the customer's side.

Linde is committed to behaving responsibly towards people and the environment and to conserving natural resources. Safe, stable processes and exemplary conduct form the basis for this growth. The Group complies thereby with its foundational principle of sustainability, one of four principles underlying the Linde Spirit. The Linde Spirit defines the values of the Group. More information about this can be found at [WWW.LINDE.COM/LINDESPIRIT](http://WWW.LINDE.COM/LINDESPIRIT).

## *Sustainable, earnings-based growth*

The strategy of the Group is geared towards sustainable, earnings-based growth. Using its integrated business model as a base, Linde is always working to achieve improvements in the Group's performance and focusing on the expansion of the Group's business activities. The resilience of the integrated business model has been proven in the past and offers numerous opportunities that the Company will continue to exploit in the future, too.

The company wants to continue to strengthen its core business and to take best advantage of the synergies between its engineering business and gases business. The Group is committed to further expanding its strong customer focus and cooperating closely with its customers

on a long-term basis, developing innovative gases applications which are tailor-made for its customers' requirements and offer customers added value.

Linde is also keen to benefit disproportionately from the following growth areas: the environment and health. Another of the Group's objectives is to exploit the excellent opportunities presented by the growth regions in the most effective way possible.

Especially in China, Linde has a leading market position. The Group became involved here at an early stage, installing technologies which were relevant to those markets, thus gaining a competitive advantage. Linde intends to exploit these advantages and to stabilise and expand its revenue over the coming years.

The company's focus is on the development and commissioning of systems that are characterised by a competitive cost structure, high levels of energy efficiency and low maintenance expenses. This further improves competitiveness in the on-site business. In order to achieve this, Linde invests, first and foremost, in particularly promising projects in this product area.

In the promising market for energy and environmental technologies, Linde is continuing to expand its product portfolio. The range comprises processes and technologies required along the entire length of the value chain of renewable and fossil fuels: from production via conversion, transport and storage to their most efficient use. The Group has also focused its research funds on the continuing development of this promising market.

With its broad range of skills in the plant construction business, the Group is also well equipped to deal with the growing importance of liquefied natural gas (LNG).

In the field of liquefied gases, Linde plans to make even better use of its existing structures within the geographical market presences, the aim being to further increase market penetration and to offer customers applications and services that are truly unique.

Moreover, Linde is a pioneer in the development of hydrogen technology and is continuing to drive forward the establishment of a hydrogen filling station infrastructure. The Group is also working on exploiting growing market potential for its technical skills in the field of power-to-gas. Examples of this are processes designed to convert energy from renewable sources into gas, such as hydrogen, so that it can be stored more easily.

With well in excess of one million healthcare customers worldwide, Linde is a leading gases companies in this field. Linde is leveraging the international platform to expand its respiratory therapies and clinical care services in a targeted manner. The Group has defined its strategy in the Healthcare segment as tapping into synergy effects, making further improvements to its sales and cost structures, increasing the patient density in existing markets and successfully launching new services such as telehealth services.

Another element of Linde's strategy is to ensure that it benefits from long-term growth drivers in the global healthcare sector. The market is characterised by a growing,

ageing population, an increase in chronic diseases such as asthma and COPD (chronic obstructive pulmonary disease), and a greater emphasis on patient care in settings other than hospitals. Rising prosperity especially in Asia is also generating ever-growing demand for healthcare.

### **High Performance Organisation**

Linde continues to refine its processes on the basis of its HPO (High Performance Organisation) programme, a holistic concept designed to achieve sustainable efficiency gains.

The Group began to apply this programme in 2008 and is continuing to implement the measures defined therein. These activities are linked to measurable targets. Linde is seeking to achieve reductions in gross costs of EUR 750 m to EUR 900 m in the four-year period from 2013 to 2016. The Group sees potential above all in the supply chain for the cylinder gas and liquefied gases business as well as in the areas of procurement and IT. Linde intends to further develop the organisation of procurement in order to continue to achieve a lasting positive impact on costs and cash flow in future, and laid a key foundation stone in this respect in the year under review with a global procurement organisation. The focus is on both the spending and the process side of things. In addition to making structural changes, the Group will also continue to work on optimising its supplier portfolio and product range in order to reduce costs. The aim of these projects is to implement the structures which will ensure that procedures continue to be effective in future. Important factors in this context are cooperation across functional and organisational boundaries, standardisation and optimised processes. Moreover, Linde is implementing pricing initiatives to counteract rising costs in the volatile markets for energy and raw materials.

### **Sustainability**

Sustainability is a vital component of Linde's strategy. The Group combines long-term economic added value with ecological and social responsibility. Linde wants to apply the fundamental principle of sustainability to an even greater extent to drive its business operations. The Group is constantly analysing how its products help its customers develop more sustainable processes: e.g. through increased energy efficiency or reduced emissions. The Executive Board of Linde AG decides on the key themes relating to sustainable development. In 2015, those decisions included setting a new climate protection target and more detailed targets for the proportion of women in management positions. Experts from within the Group advise on strategic activities of sustainability and prepare decision papers for the Executive Board. These experts include the heads of the following Corporate & Support Functions: Corporate Communications & Investor Relations, Group Human Resources, Group Legal & Compliance, Corporate Internal Audit and SHEQ [SEE GLOSSARY]. Linde is continuously evaluating subjects relevant to the sustainable development of the Group, based on an ongoing analysis of the requirements of external stakeholders and the findings of workshops involving in-house experts on particular topics and strategies. The process also incorporates information about environmental and social risks obtained from Group risk management. Based on this materiality analysis, Linde defines its priorities for sustainability measures. The Group maintains regular contact in a variety of ways with its main stakeholders. These include Linde employees, shareholders, customers, suppliers, non-governmental organisations, politicians, the scientific and research community, neighbours and the general public. Linde is also involved in trade associations and scientific collaborations with specialist and sustainability networks. One of the sustainability networks it supports is the UN Global Compact.

### Medium-term targets

Linde will continue to pursue a corporate strategy of sustainable earnings-based growth and has set itself measurable targets within this context: For the 2017 financial year, Linde has set itself the target, depending on economic developments and based on the exchange rates that applied in November 2015, of achieving Group operating profit of between EUR 4.2 bn and EUR 4.5 bn and a return on capital employed (ROCE) in the range of between 9 percent and 10 percent.

Originally, the Group had aimed to achieve Group operating profit of between EUR 4.5 bn and EUR 4.7 bn and a return on capital employed (ROCE) in the range of between 11 percent and 12 percent in the 2017 financial year. Linde adjusted these targets in the fourth quarter. The main reasons behind the adjustments relate to a considerable change in the overall environment compared with October 2014, when the original targets were set. First, the rates of growth in industrial production that are relevant to the industrial gases business continued to drop considerably across the globe. Second, state price cuts for services in the US Healthcare business are likely to be more pronounced than expected in 2016 and 2017. In addition, the Engineering Division will make less of a contribution to Group operating profit than originally expected. This is mainly due to the lower order intake due to investment restraint among customers as a result of the current low oil prices.

Linde has also set itself a number of further targets. These targets focus in particular on further improvements in the area of safety and environmental protection and in the area of personnel development. Priorities are production-related safety and transport safety, increasing energy efficiency and reducing emissions, and diversity in the workforce.

Linde has already exceeded the original target it had set itself of improving the average energy intensity of the Group's air separation plants by 5 percent by 2017. The benchmark was the global average efficiency of the air separation plants operating at the design plant load. The reference year was 2008. In the reporting year, Linde has also reached its target of improving the energy efficiency of its HyCO plants [\[SEE GLOSSARY\]](#) by 2 percent by the end of 2015 compared with the reference year of 2009. Linde set itself a new climate protection target in 2015: By 2020, Linde is seeking to avoid a total of 6 million tonnes of CO<sub>2</sub> emissions compared with the year 2009 in its air separation plants and HyCO plants. Measures contributing to this target include technical improvements in plant design and more efficient production processes. As a safety-conscious company, Linde wants to continuously reduce the rate of workplace accidents around the world resulting in at least one lost working day per million hours worked by 2020 in comparison with the base year 2012.

In 2015, as part of its global safety initiative, Linde reviewed its performance indicators and targets. The Group's target for transport safety has been to halve the number of serious transport incidents per million kilometres travelled

by the end of 2017 compared with 2012. In future, incidents previously classified as non-preventable will be included in a new target. The Group is planning to communicate the new target in the 2016 Financial Report at the latest. Information about the targets is also given under [SAFETY AND ENVIRONMENT ON PAGES 84 TO 90](#).

On the personnel front, Linde had set itself the target in 2011 of increasing the proportion of women in senior management positions to between 13 and 15 percent by 2018. In 2015, the Group extended this target: New targets have been set for the proportion of women on the Supervisory Board and Executive Board as well as in the first and second tiers of management below the Executive Board. You can find further information on these targets under [CORPORATE GOVERNANCE DECLARATION AND CORPORATE GOVERNANCE REPORT ON PAGES 16, 17 AND 18 AND UNDER EMPLOYEES AND SOCIETY ON PAGES 79 TO 83](#).

# Report on the economic position of the Group

## MACROECONOMIC ENVIRONMENT

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### 10 GROSS DOMESTIC PRODUCT (GDP) IN REAL TERMS<sup>1</sup>

	% Weighting <sup>2</sup>	% Growth				
		2011	2012	2013	2014	2015
EMEA	29.4	2.6	0.5	0.9	1.6	1.5
Eurozone	15.7	1.6	-0.8	-0.3	0.9	1.5
Germany	4.6	3.7	0.6	0.4	1.6	1.5
Asia/Pacific	26.4	7.0	5.9	5.9	5.9	5.5
China	14.7	9.5	7.7	7.7	7.3	6.9
Americas	33.5	2.4	2.3	1.9	2.1	1.5
USA	24.4	1.6	2.2	1.5	2.4	2.4
<b>WORLD</b>	<b>100.0</b>	<b>3.3</b>	<b>2.5</b>	<b>2.4</b>	<b>2.7</b>	<b>2.5</b>

<sup>1</sup> Source: Oxford Economics. The prior-year figures have been adjusted on the basis of the latest available data (as at 14 January 2016). The regional growth rates are only based on countries in which Linde operates. Information on individual countries and the world corresponds to the data from Oxford Economics.

<sup>2</sup> Weighting is based on GDP 2015.

### 11 INDUSTRIAL PRODUCTION (IP)<sup>1</sup>

	% Growth				
	2011	2012	2013	2014	2015
EMEA	3.4	-0.9	-0.3	1.3	1.0
Eurozone	2.3	-3.1	-0.9	0.6	0.7
Germany	7.4	-0.4	0.1	1.5	0.7
Asia/Pacific	9.5	7.4	5.1	5.1	4.2
China	10.6	8.2	7.9	7.3	5.9
Americas	3.0	1.9	1.8	2.7	-
USA	3.0	2.8	1.9	3.7	1.3
<b>WORLD</b>	<b>4.3</b>	<b>2.4</b>	<b>2.3</b>	<b>3.3</b>	<b>1.8</b>

<sup>1</sup> Source: Oxford Economics. The prior-year figures have been adjusted on the basis of the latest available data (as at 14 January 2016). The regional growth rates are only based on countries in which Linde operates. Information on individual countries and the world corresponds to the data from Oxford Economics.

### *Global economic trends*

Linde operates in more than 100 countries worldwide and offers its customers a diverse portfolio of products and services. Macroeconomic trends and economic conditions in the various regions therefore both have a significant influence on the Group's business situation. To put the business performance of Linde into perspective, a summary is given below of the economic trends in 2015.

Based on data from Oxford Economics, global economic growth emerged weaker in 2015 than in 2014. In a global economy characterised by macroeconomic and geopolitical uncertainty, global real gross domestic product (GDP) rose by 2.5 percent, a slightly lower rate than in 2014 (2.7 percent). Global industrial production (IP), an important indicator for Linde's business, increased by 1.8 percent only, compared to 3.3 percent in 2014. In fact, the global economy has grown more slowly than had been expected at the beginning of 2015, when economists were still forecasting a GDP and IP growth of 2.9 percent each. In the course of the past year, the world economy was adversely affected by significant slowdown among emerging markets, decline of commodity prices and its subsequent effect on the capital expenditure cuts in the mining industry in numerous countries. Continued geopolitical tensions and local trouble spots again hampered economic growth and recoveries in many countries. As a consequence of heightened uncertainty, currencies and financial markets showed high volatility in 2015.

### *EMEA (Europe, Middle East and Africa)*

The economy in the EMEA region as a whole saw a growth rate of 1.5 percent in 2015 (2014: 1.6 percent). Industrial production grew by 1.0 percent, but decelerated compared to 2014 (1.3 percent). Whereas the actual GDP growth meets the forecast precisely, industrial production was lower than had originally been forecast at the beginning of 2015. Similar to the previous year, there were substantial variations in economic trends in the various EMEA sub-regions. In Western Europe, the positive trend continued with a GDP increase of 1.7 percent (2014: 1.3 percent). Out of the major economies in Western Europe, Germany, Spain, and the UK saw relatively robust trends. In Germany, GDP rose by 1.5 percent in 2015, which was close to its rate of 2014 (1.6 percent). The UK achieved growth of 2.2 percent (2014: 2.9 percent). Spain showed particularly strong growth to the tune of 3.2 percent, compared with GDP growth of only 1.4 percent in the previous year. After years of recession in Italy and stagnation in Portugal, both countries also achieved moderate growth in 2015. France achieved a higher increase in GDP as well with a growth rate of 1.1 percent compared to 0.2 percent in 2014.

In Eastern Europe, the economy weakened in 2015, driven by the large economic output slumps in Russia and Ukraine. GDP in Eastern Europe shrunk by 0.6 percent in 2015 compared to an increase of 1.3 percent in 2014. Industrial production in Eastern Europe decreased by 0.6 percent (2014: 2.7 percent). The positive economic development in Poland, Hungary, the Czech Republic, Romania and

Turkey could not compensate for the negative development especially in Russia (–3.8 percent), but also in Ukraine (–11.0 percent) and Belarus (–3.2 percent).

In the Middle East, economic growth remained strong in 2015: GDP rose by 3.1 percent compared to 4.0 percent in 2014.

In the African economies, positive trends continued but dampened compared to the previous year. GDP of those African countries where Linde is present rose by 2.7 percent (2014: 4.2 percent). GDP in South Africa grew by 1.4 percent in 2015, slightly below the rate in 2014. Industrial production on the other hand increased slightly by 0.3 percent only (2014: 0.1 percent).

### *Asia/Pacific*

The most favourable economic trends in 2015 were once again to be seen in the Asia/Pacific region. Here, GDP rose by 5.5 percent (2014: 5.9 percent) and industrial production by 4.2 percent (2014: 5.1 percent).

China reported slightly slower growth and announced GDP growth of 6.9 percent (2014: 7.3 percent), while industrial production expanded by 5.9 percent (2014: 7.3 percent). Both figures are slightly below the forecast. The Indian economy has made a remarkable turnaround since mid-2013: GDP growth reached 7.4 percent in 2015 compared to 7.1 percent in 2014. In South & East Asia, GDP was up 5.7 percent in 2015, similar to what was achieved in 2014 (5.6 percent). Industrial production rose by 4.0 percent (2014: 2.9 percent).

In Australia, the economic situation did not change significantly in 2015. The global drop in commodities prices resulted in a continued reluctance to invest: while GDP still increased by 2.4 percent (2014: 2.6 percent), industrial production rose by 2.1 percent only, which is much lower than in 2014 (2014: 4.6 percent). This increase was driven by the positive development in mining, while manufacturing activity has again declined in 2015.

### *Americas*

GDP growth in the Americas region reached 1.5 percent, well below the rate in 2014 (2.1 percent). This was mainly driven by the recession in Brazil. The economic development in the US was again relatively robust in 2015. GDP increased by 2.4 percent in 2015 (2014: 2.4 percent). However, industrial production growth has disappointed. At only 1.3 percent, the rate was down considerably on the prior-year value of 3.7 percent and on early 2015's forecast of 3.2 percent, largely due to the strong US dollar and the decline in investments in the oil industry.

In South America, on the other hand, the economic environment deteriorated in the wake of the recession in Brazil: GDP in the region decreased by 2.0 percent and industrial production fell by 4.8 percent, worsening the trends from 2014 (GDP: 0.6 percent, IP: -2.2 percent). GDP in Brazil, the biggest economy of the region, fell by 3.7 percent in 2015 after coming in at +0.1 percent in 2014. Meanwhile, industrial production in Brazil experienced an even deeper shock decreasing by 7.8 percent (2014: -2.9 percent).

The economic overview presented here for GDP and industrial production is based on the dataset from Oxford Economics as of 14 January 2016.

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## *Gases industry*

The global gases market reported slightly slower growth in the 2015 financial year than in the previous year. Demand varied from region to region and from industrial sector to industrial sector. The competitive situation was characterised by ongoing consolidation, particularly by the planned takeover of Airgas by Air Liquide in the US.

North America, Europe and Asia remain the largest sales markets for industrial gases. The fastest rate of growth in 2015 was once more in Asia.

The global steel industry is still suffering from excess capacity as a direct consequence of the slowdown in global economic growth. In China, which is by far the world's biggest steel producer, there is still significant excess capacity. Decisions to close individual steelworks were unable to influence this situation to any considerable degree. According to information released by the World Steel Association, global steel production fell by 2.9 percent in 2015 (China: 2.3 percent). Steel production was on a particularly pronounced downward trend in the US, with a comparatively small decline in the European Union. In the rest of Europe, on the other hand, the drop was more pronounced.

Developments in the chemical and energy sector (oil and gas) were also characterised by considerable challenges. The very low oil and gas prices and resulting uncertainty translated into a marked drop in new investment projects. In the long term, however, investment activity is expected to bounce back due to the ongoing rise in the demand for fossil resources. Investment activity in the petrochemical industry also showed relatively weak development last year on the back of volatile commodities prices and lower demand growth. The competitive standing of the European petrochemical industry, however, recovered considerably vis-à-vis North America last year due to the drop in commodities prices.

The overall conditions for refineries improved slightly in 2015. Margins increased slightly in an environment of low commodities prices in general – particularly in North America. Market participants were hesitant to embark on new investments due to existing excess capacity and the mood of uncertainty.

The manufacturing industry showed subdued development across the board in the 2015 financial year.

New technologies such as additive production processes (e.g. laser welding) could, however, provide new impetus for the demand for industrial gases in the long term. The construction industry continued to show stable growth worldwide last year, although growth on the large Chinese market was slightly slower than in previous years.

In the glass industry, on the other hand, the demand for applications that help to reduce energy consumption and avoid emissions continues to rise. This trend continued in 2015.

The electronics industry once again showed dynamic development in 2015. Ongoing improvements to production processes in semiconductor manufacturing continue to boost the demand for high-purity gases. The demand for microchips used in mobile end devices, however, is growing at a slower rate, because the sale of smartphones is now only rising very slightly. At the same time, fewer PCs and tablets are being sold. New fields of application relating to digitalisation, SSD storage media and automotive electronics should, however, continue to supply positive impetus in the future.

The environment for LEDs [\[SEE GLOSSARY\]](#) continues to improve. The market is benefiting from growing public awareness of lighting applications which are environmentally friendly and energy-efficient.

The performance of the food and beverage industry was once again relatively steady in 2015. This development is being driven by the ongoing trend towards healthier eating, higher consumption of meat protein and more processed foods. At the same time, demand for convenience [\[SEE GLOSSARY\]](#) products continues to rise.

The global healthcare market was very stable again in 2015. Long-term growth drivers remain the ongoing population growth and population ageing, the increase in chronic conditions such as asthma or COPD (chronic obstructive pulmonary disease) and the general trend towards greater prevention and more intensive patient care, also outside of a hospital environment. This is, however, combined with moves to step up savings drives in healthcare systems and greater regulation, which is putting more pressure on costs.

***Plant construction***

The market environment in the international large-scale engineering business was characterised by high levels of volatility and more intense competition in 2015, not least due to the low oil and natural gas prices. Investments and, as a result, the market volume fell considerably in a year-on-year comparison. Political instability in the Middle East and North Africa, as well as weak growth rates in up-and-coming markets such as India and China further intensified this trend.

***Air separation plants***

Excess capacity in the global steel industry and the low oil prices, which pose a challenge to the industry in general, resulted in lower demand for new air separation plants. This clearly exacerbated the competitive and cost pressure in 2015. By contrast, Linde was able to secure a significant share of the air separation projects still available on the market, e.g. in the US and India.

***Olefin plants***

The market for olefin plants was also marked by a general reluctance to invest in 2015. Due to the combination of low oil prices, lower growth on consumer markets and considerable new capacities for polyolefins already under construction, investors across the globe postponed, shelved or reassessed their projects. This did not affect ongoing projects in 2015.

***Natural gas plants***

Due to the low prices of oil, natural gas and LNG, the oil and gases industry slashed its investment level drastically in 2015 and postponed a large number of investment decisions. Nevertheless, Linde was able to secure a large-scale milestone project in 2015 with the contract for a gas processing plant in eastern Russia.

***Hydrogen and synthesis gas plants***

The weaker Chinese economy, coupled with low energy costs, meant that the petrochemical industry was more reluctant to invest in 2015. A large number of gasification projects were postponed. This had an impact on Linde's acid gas removal activities (Rectisol technology) and propane dehydrogenation (PDH) projects. In Russia, too, investments could only be made in refineries to a limited degree due to the low oil prices.



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Global economic growth slowed in the course of the year, lagging behind expectations yet again. Particularly in the emerging markets and in some up-and-coming economies, economic momentum was not as strong as had been predicted. The constant drop in oil prices resulted in faltering demand, which hit new projects in the plant construction sector particularly hard.

In this challenging environment, Linde nevertheless managed to remain relatively stable in respect of its earnings power. The Group reaped the benefits of positive exchange rate effects and achieved growth in both Group revenue and operating profit.

## *Revenue, operating profit and ROCE*

Linde achieved a 5.3 percent increase in Group revenue in the 2015 financial year to EUR 17.944 bn (2014: EUR 17.047 bn). Positive exchange rate effects had an impact here. In particular, the exchange rates of certain currencies (the US dollar, the British pound and the Chinese renminbi) to the euro moved significantly, especially in the first six months of the year. This created positive exchange rate effects arising on the translation of various local currencies into the reporting currency (the euro). After adjusting for exchange rate effects, Group revenue was 2.3 percent below the figure for the prior year.

As far as Group operating profit is concerned, Linde achieved a value that was up by 5.4 in a year-on-year comparison to EUR 4.131 bn (2014: EUR 3.920 bn). Exchange rate effects also need to be taken into consideration here. If an adjustment were to be made for these effects, the Group operating profit would have dropped by 2.4 percent.

The Group operating margin in 2015 was 23.0 percent (2014: 23.0 percent).

Return on capital employed (ROCE) after adjusting for non-recurring items was 9.4 percent in 2015 (2014: 9.5 percent). ROCE is calculated as EBIT adjusted for non-recurring items divided by average capital employed. When looking at the ROCE development, it is important to bear in mind that the average capital employed rose considerably due to exchange rate effects. The capital employed is derived from the items in the statement of financial position, which are converted using the exchange rates on balance sheet date. The exchange rate of the euro as at 31 December 2015 had fallen considerably against most local currencies as against 31 December 2014. This development resulted in

an increase in capital employed due to exchange rate effects and, as a result, to a lower ROCE despite the improved income figure.

## *Results of operations*

The income statement prepared using the cost of sales method shows that The Linde Group made a gross profit of EUR 6.369 bn in the 2015 financial year (2015: EUR 5.750 bn) after deducting cost of sales. This produces a gross margin of 35.5 percent (2014: 33.7 percent). The cost of sales increased at a slower rate during the reporting period than revenue, rising by 2.5 percent to EUR 11.575 bn (2014: EUR 11.297 bn). It should be noted here that the figure for the prior-year period was adversely affected by impairment losses recognised.

Restructuring costs of EUR 192 m were recognised in functional costs in the year under review. These costs relate to structural and organisational measures being taken to enhance the efficiency of the Group as part of the Customer Focus Initiative and have been classified as a non-recurring item. In 2014, restructuring costs and impairment losses totalling EUR 295 m were recognised as a non-recurring item.

EBIT in the 2015 financial year came to EUR 2.043 bn, which was higher than the figure for the previous year of EUR 1.885 bn. After adjusting for non-recurring items, Linde reported EBIT of EUR 2.235 bn as at 31 December 2015 (2014: EUR 2.180 bn).

The financial result (financial income less financial expenses) in 2015 was a net loss of EUR 397 m (2014: net loss of EUR 365 m). This change is largely due to valuation effects.

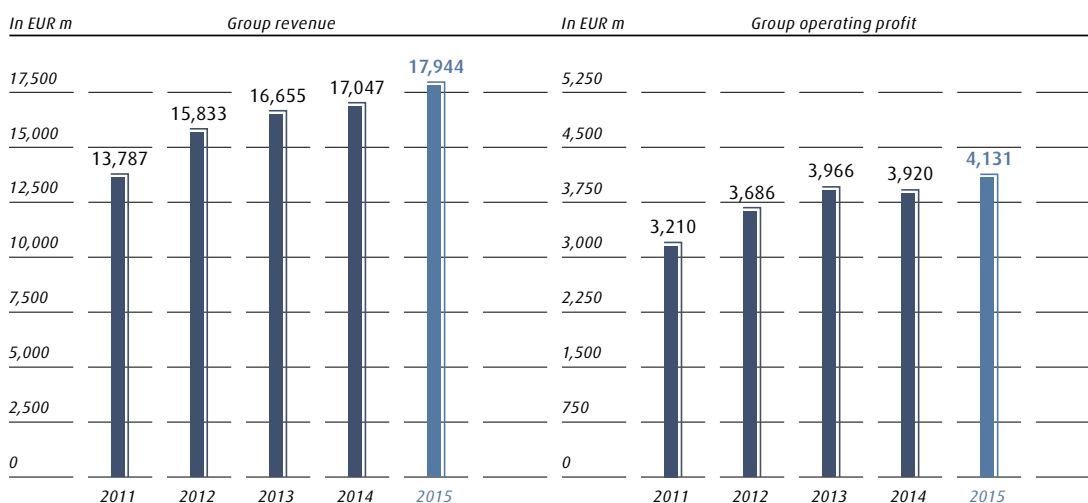
This means that Linde achieved earnings before tax in the 2015 financial year of EUR 1.646 bn (2014: EUR 1.520 bn).

The income tax expense was EUR 394 m (2014: EUR 358 m). This produces an income tax rate of 23.9 percent (2014: 23.6 percent). Linde's profit for the year (after deducting the tax expense) was EUR 1.252 bn (2014: EUR 1.162 bn).

After adjusting for non-controlling interests, profit for the year attributable to Linde AG shareholders was EUR 1.149 bn (2014: EUR 1.102 bn). This gives earnings per share for the 2015 financial year of EUR 6.19 (2014: EUR 5.94). Earnings per share before non-recurring items was EUR 6.91 (2014: EUR 7.13).

N.B.: The reconciliation of the key financial figures before non-recurring items is given in *NOTE [40]* of the Notes to the Group financial statements.

## 11.1 GROUP REVENUE AND GROUP OPERATING PROFIT



## 12 RESULTS OF OPERATIONS OF THE LINDE GROUP

	2015		2014	
	in EUR m	in percent	in EUR m	in percent
Revenue	17,944	100.0	17,047	100.0
Cost of sales	11,575	64.5	11,297	66.3
<b>GROSS PROFIT ON REVENUE</b>	<b>6,369</b>	<b>35.5</b>	<b>5,750</b>	<b>33.7</b>
Marketing and selling expenses	2,711	15.1	2,476	14.5
Research and development costs	132	0.7	106	0.6
Administration expenses	1,664	9.3	1,488	8.7
Other operating income	421	2.3	486	2.9
Other operating expenses	252	1.4	303	1.8
Share of profit or loss from associates and joint ventures (at equity)	12	0.1	22	0.1
<b>EBIT</b>	<b>2,043</b>	<b>11.4</b>	<b>1,885</b>	<b>11.1</b>
Financial result	-397		-365	
<b>PROFIT BEFORE TAX</b>	<b>1,646</b>		<b>1,520</b>	
Income tax expense	394	23.9	358	23.6
<b>PROFIT FOR THE YEAR</b>	<b>1,252</b>		<b>1,162</b>	
attributable to Linde AG shareholders	1,149		1,102	
attributable to non-controlling interests	103		60	

## 13 REVENUE AND OPERATING PROFIT BY DIVISION

in EUR m	2015		2014	
	Revenue	Operating profit	Revenue	Operating profit
Gases Division	15,168	4,151	13,982	3,835
Engineering Division	2,594	216	3,106	300
Other Activities (including consolidation)	182	-236	-41	-215
<b>GROUP</b>	<b>17,944</b>	<b>4,131</b>	<b>17,047</b>	<b>3,920</b>

# GASES DIVISION

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In the Gases Division, Linde generated revenue in the 2015 financial year of EUR 15.168 bn, an increase of 8.5 percent when compared with the figure for the prior year period (2014: EUR 13.982 bn). On a comparable basis, after adjusting for exchange rate effects and changes in the price of natural gas, Linde would have achieved an increase in revenue of 2.1 percent. After making an additional adjustment of EUR 86 m, which is the contribution to revenue made by the LPG business acquired by Linde during the reporting period from Wesfarmers Kleenheat Gas Pty Ltd, the increase in revenue was 1.5 percent. Revenue has been adversely affected not only by the prevailing weak economic environment, but also by current low energy costs and the expiry of on-site contracts.

Operating profit in the Gases Division rose by 8.2 percent in the period under review to EUR 4.151 bn (2014: EUR 3.835 bn). The operating margin remained stable at 27.4 percent (2014: 27.4 percent).

Capital expenditure in the Gases Division in the 2015 financial year was EUR 1.881 bn (2014: EUR 1.890 bn). Most of this investment was in large-scale projects in the on-site and liquefied gases product areas.

Varying business trends were to be seen in the individual segments in the Gases Division, depending on prevailing economic conditions.

## 14 GASES DIVISION

in EUR m	2015	2014
Revenue	15,168	13,982
Operating profit	4,151	3,835
Capital expenditure (excluding financial assets)	1,881	1,890
Number of employees (at the balance sheet date)	52,395	53,436

## 15 REVENUE AND OPERATING PROFIT BY DIVISION

in EUR m	2015			2014		
	Revenue	Operating profit	Operating margin in percent	Revenue	Operating profit	Operating margin in percent
EMEA	6,010	1,790	29.8	5,980	1,778	29.7
Asia/Pacific	4,157	1,063	25.6	3,812	1,010	26.5
Americas	5,183	1,298	25.0	4,314	1,047	24.3
Consolidation	-182			-124		
<b>GASES DIVISION</b>	<b>15,168</b>	<b>4,151</b>	<b>27.4</b>	<b>13,982</b>	<b>3,835</b>	<b>27.4</b>

## EMEA (Europe, Middle East, Africa)

In EMEA, Linde's largest sales market, the Group generated revenue of EUR 6.010 bn in the 2015 financial year, which was slightly higher than the figure achieved in the previous year (2014: EUR 5.980 bn). On a comparable basis, revenue fell by 1.2 percent. When comparing with the revenue generated in 2014, it should be noted that at the end of 2014 Linde transferred a large hydrogen plant in Italy to the customer on expiry of the contract. Since then, no revenue has been generated with that plant. The operating profit came to EUR 1.790 bn and was negatively affected by impairment losses on receivables of EUR 22 m that had to be recognised in the third quarter of 2015 due to the insolvency of a customer in the UK. Compared with the prior-year value, the operating profit increased slightly by 0.7 percent (2014: EUR 1.778 bn). The operating margin was 29.8 percent (2014: 29.7 percent).

Different business trends were to be seen in the product areas of the various sub-regions of the EMEA segment.

The on-site business, where Linde supplies gases on site to major customers, was affected by declining volumes, particularly as a result of the expiry of the on-site contract in Italy. Linde was nevertheless able to achieve revenue growth in this product area, especially in the Middle East & Eastern Europe. Against the prevailing backdrop of modest economic growth in Europe and South Africa, revenue in the liquefied gases business was down on the prior-year period. The cylinder gas product area also continued to see relatively modest trends. Revenue in both these product areas is being adversely affected by current low energy costs, especially in the LPG business. In its Healthcare business, Linde achieved growth in virtually all regions.

Business performance in the EMEA segment was supported by the start-up of new plants. In January, for example, a new air separation plant went into production

in Sweden as scheduled. Under an on-site agreement, the plant supplies the customer Perstorp with 18,300 standard cubic metres of oxygen per hour in Stenungsund. The investment made was around EUR 40 m.

At the beginning of 2015, Linde also signed a contract in Sweden to build a hydrogen filling station at Arlanda Airport. Construction was completed on schedule in the third quarter of 2015.

In addition, in March 2015, a hydrogen filling station for hydrogen-powered buses was opened in Aberdeen in Scotland. The contract forms part of the HyTrEc (Hydrogen Transport Economy) project, which aims to improve access to the use of hydrogen as an alternative source of energy in the North Sea region. The hydrogen filling station is operated by Linde.

Linde is a pioneer in the development of hydrogen technology and is continuing to drive forward the establishment of a hydrogen filling station infrastructure for fuel-cell vehicles. The Group is working together with Daimler on plans to build 20 hydrogen filling stations in Germany. This project is part of the H<sub>2</sub> Mobility Initiative, a joint initiative set up by Linde and five other partners. The aim is to build a total of 400 hydrogen filling stations in Germany by 2023.

In Port Elizabeth, South Africa, the Group successfully brought an air separation plant on stream in the second quarter of 2015. The plant produces 150 tonnes of liquefied gases per day and supplies industrial gases and medical gases to customers in the Eastern Cape region. The investment made was around EUR 23 m.

A CO<sub>2</sub> purification and liquefaction plant started production in Denizli, Turkey, in the second quarter of 2015. The plant purifies and liquefies 240 tonnes of CO<sub>2</sub> per day and supplies liquefied CO<sub>2</sub> to customers in the region in the food industry. At the same time, Linde signed a long-term supply agreement for raw CO<sub>2</sub> with Zorlu Energy, one of the largest energy companies in Turkey.

In June 2015, an air separation plant came on stream in Trinec in the Czech Republic. This plant supplies 34,000 standard cubic metres of liquefied oxygen and 34,500 standard cubic metres of liquefied nitrogen per hour to steel producer Trinecke Železárny, based on the renewal of an existing long-term supply contract. The total investment was around EUR 62 m.

In the third quarter of 2015, an air separation plant started production on the Kryvyi Rih site in Ukraine, supplying gaseous oxygen and nitrogen to ArcelorMittal, the world's largest steel producer. The plant has a capacity of 34,500 standard cubic metres of oxygen and 25,200 standard cubic metres of nitrogen per hour and also supplies liquefied gases to the regional market. The investment made was around EUR 60 m.

At the Hamburg-Harburg refinery site, a hydrogen system erected by Linde for Nynas AB, one of the world leaders in naphthenic specialty oils (NSPs) and bitumen, started operations in the fourth quarter as planned. Linde will use the system to supply Nynas with approx. 400,000 m<sup>3</sup> of hydrogen a day. The Linde Engineering Division erected

a steam reformer for this purpose, which is operated by the Gases Division as part of a long-term on-site contract. Investment in the project came to around EUR 30 m.

The project forms part of the extensive overhaul of the refinery in Hamburg-Harburg, which has been developed as a specialised production site for naphthenic specialty oils. Nynas' total production capacity for NSPs has increased significantly as a result. These specialty oils are used, among other things, in tire manufacture, transformers, printing ink, industrial rubber and lubricants.

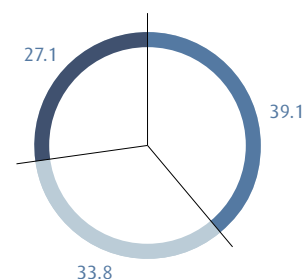
In the fourth quarter of the year, Linde concluded a long-term supply agreement with the customer CP Kelco. Linde will use an ECOVAR plant to supply the company from the paper and pulp industry with 1,100 standard cubic metres of nitrogen an hour in Äänekoski (Finland) from 2016 onwards.

Linde has also concluded a long-term gas supply agreement on the supply of 5,100 standard cubic metres of oxygen an hour with the customer Metsä Fibre, which is based in the same location. The plant, which will be one of the world's largest oxygen producers using what is known as Vacuum Pressure Swing Adsorption (VPSA) technology, is scheduled to be commissioned in the third quarter of 2017. Both ECOVAR plants will be built by Linde's Engineering Division.

In Dammam (Saudi Arabia), Linde brought an air separation plant for the liquefied gases market on stream in the 2015 financial year. The plant has a capacity of 165,000 tonnes of liquefied nitrogen and oxygen per day and was built by the Engineering Division. The investment volume was around EUR 26 m.

Linde also opened an acetylene plant in the UK in October 2015. The plant, which was associated with an investment volume of around EUR 45 m, underscores Linde's long-term commitment to the manufacturing industry in the UK and Ireland.

## 02 ANALYSIS OF REVENUE BY SEGMENT IN %



EMEA	39.1 (2014: 42.4)
Americas	33.8 (2014: 30.6)
Asia/Pacific	27.1 (2014: 27.0)

## Asia/Pacific

Business trends in the Asia/Pacific segment were again supported principally by positive exchange rate effects. Linde generated revenue of EUR 4.157 bn in the 2015 financial year, up by 9.1 percent in a year-on-year comparison (2014: EUR 3.812 bn). The comparable revenue growth came in at 1.0 percent. Growth here was underpinned by the contribution to revenue of EUR 86 m made by the LPG business of Wesfarmers Kleenheat Gas Pty Ltd, which Linde acquired in February. If an adjustment were also to be made for this effect, revenue would be 1.0 percent below the figure for the prior-year period. Operating profit rose by 5.2 percent to EUR 1.063 bn (2014: EUR 1.010 bn), giving an operating margin of 25.6 percent (2014: 26.5 percent). The margin reported in 2014 reflected the positive effect of profits from the disposal of non-current assets.

Within the Asia/Pacific segment, the greatest increases in revenue were to be seen in the on-site business in China and India. Revenue generated by the cylinder gas product area was below that achieved in the prior-year period. The liquefied gases business saw quite positive trends in this segment. In both product areas, low energy costs and lower LPG prices had the effect of depressing revenue.

In India, Linde has erected its first location for the filling of cylinders for the healthcare segment in Siliguri, located in the east of the country. Investments were made in cryogenic liquid hydrogen storage facilities, state-of-the-art facilities for the filling of cylinders and a local laboratory. India's healthcare sector is one of the fastest growing sectors of the country's economy and the establishment of this location represents a key milestone in the Company's efforts to expand its healthcare business in smaller developing towns and cities across India.

In the South Pacific, the prevailing weak economic environment in manufacturing industry and declining investment in the mining industry had an adverse impact on growth. In the LPG business which is vital to Australia, lower oil prices hampered revenue growth, as the price reductions were passed on to the customers. Moreover, the expiry of on-site contracts led to reductions in revenue in this region too. In response, structural and organisational measures already undertaken as part of the Customer Focus Initiative are expected to reduce costs and support profitability in this region.

In the first quarter of 2015, an air separation plant went on stream in Quanzhou, China, which supplies gases to Fujian Refining & Petrochemical. The plant is operated by Fujian Linde-FPCL Gases Company Limited, a joint venture between SINOPEC Fujian Petrochemical Company Limited and Linde. The profit generated by this plant is included in the share of profit or loss from associates and joint ventures (at equity) in the Group's statement of profit or loss.

In April 2015, Linde also successfully brought another air separation plant on stream in China. This plant has a capacity of 87,500 standard cubic metres of liquefied oxygen

and 10,000 standard cubic metres of liquefied nitrogen per hour and will supply customers in the Tianjin region. The amount of the investment was around EUR 27 m.

During the third quarter, Linde brought on stream an air separation plant in Taiwan on schedule. The plant supplies nitrogen to customers in the semiconductor industry in Hsinchu Science Park. The amount of the investment was around EUR 28 m.

As a result of renewing existing supply contracts with power-plant operator Seetec and with Samsung Total Petrochemicals Co., Ltd. (STC) in the Seosan petrochemical cluster in South Korea, Linde has been able to expand its capacity on this site. During the reporting period, another air separation plant was successfully brought on stream here. The plant produces oxygen and nitrogen and also supplies products for the regional market. The amount of the investment was around EUR 62 m.

In November 2015, Linde announced that it would be erecting an air separation plant worth just under EUR 15 m in Rupganj (Bangladesh). The plant, which is the biggest of its kind in Bangladesh, is expected to produce 100 tonnes of liquefied gases per day. It will supply several customers from various different sectors of industry from 2018 onwards. There are also plans to construct a filling station for cylinder gases in the same location.

Positive impetus also came from Singapore in the reporting period. Here, Linde was able to expand its business relationship with the chemicals company Celanese.

## Americas

In the Americas segment, revenue increased significantly period under review by 20.1 percent to EUR 5.183 bn (2014: EUR 4.314 bn). On a comparable basis, revenue rose by 7.7 percent. When compared with the prior-year period, operating profit increased by 24.0 percent to EUR 1.298 bn (2014: EUR 1.047 bn). The operating margin rose to 25.0 percent (2014: 24.3 percent). Within this context, it is important to bear in mind that the prices for feedstock such as natural gas that are passed on to customers fell in 2015 in a year-on-year comparison, which had a positive impact on the operating margin.

In the healthcare business, Linde was able to achieve significant growth in revenue in North America as a result of the rise in the number of patients requiring care and new products.

In the fourth quarter, Linde signed an agreement on the takeover of the company American HomePatient, Inc., which specialises in respiratory therapy. After all of the necessary permits were obtained, the acquisition was completed with effect from 31 January 2016. The company has 220 branches in 38 federal states and operates primarily in the east of the US. In the last financial year, American HomePatient generated revenue of around EUR 260 m with a good 2,700 employees. Given the growing number of patients requiring care and the associated synergy effects, the acquisition is expected to help counteract the

negative effects likely to come as a result of state price cuts for services in the US Healthcare business over the next few years. Linde is also making ongoing adjustments to its cost structure and continues to pursue a strategy of organic growth.

The business with liquefied gases and cylinder gas in North America showed very positive development, mainly thanks to the market for electronic and specialty gases.

On the major petrochemical site at La Porte, Texas, in the United States, Linde brought on stream during the reporting period a large air separation plant and a new gasification train for its existing synthesis gas complex. Linde has invested a total of more than USD 200 m in this project. The new air separation plant is the largest plant of its type operated by Linde in the United States. Together with the new gasification unit, it will also comprise the largest complex in the world for the production and subsequent processing of synthesis gas to be based on natural gas. In the Houston area, Linde therefore has a fully-integrated site for the production of air gases and syngas products. The liquefied gases oxygen, nitrogen and argon also produced by the plant will serve to supply the fast-growing regional market in the area around the Houston Ship Channel. The expansion project will ensure that Linde is able to provide long-term security of supply to its petrochemical customers in La Porte.

A hydrogen plant was brought on stream as scheduled in Charleston, Tennessee (US) during the period under review. Under a long-term on-site agreement, the plant will supply the customer Wacker with 2,040 normal cubic metres of hydrogen per hour. The amount of the investment was around EUR 20 m.

In Mexico, Linde successfully extended the contract for the supply of nitrogen with its long-standing customer PEMEX – the state crude oil group – until 2027 in the period under review. Linde supplies the customer with 1,500 million normal cubic metres of nitrogen a day from a total of five air separation plants. The nitrogen generated by the plants in Mexico is transported to the Gulf of Mexico via a pipeline, where it is pressed at high pressure into the Cantarell oil field as a safe way of increasing output. Cantarell is one of the largest offshore oil fields in the world and is also Mexico's main supplier of crude oil.

Business trends in the individual countries in South America have continued to be modest in 2015. The economic situation in the region is characterised by high inflation and low growth rates. This environment is also slowing Linde's business performance in the region. Nevertheless, Linde has been able to achieve slight growth on a comparable basis in all of its product areas. The cylinder gas business in Brazil has however seen a downward trend.

## Product areas

As explained in the comments on the segments, each product area contributed to a different extent to the business performance of the Gases Division.

In the Healthcare business, Linde increased revenue in the 2015 financial year on a comparable basis by 7.4 percent to EUR 3.665 bn (2014: EUR 3.412 bn) and thus achieved the largest growth in this division. The homecare business developed particularly well in the Americas segment.

In the on-site product area, revenue fell on a comparable basis by 0.6 percent to EUR 3.847 bn (2014: EUR 3.872 bn). After adjusting for the non-recurring effects of the expiry of contracts, revenue in this product area was 2.1 percent higher than the figure achieved in the prior year.

Trends in the liquefied gases business were relatively steady. Revenue here increased slightly by 1.7 percent to EUR 3.616 bn (2014: EUR 3.555 bn).

In the cylinder gas product area, revenue on a comparable basis was EUR 4.040 bn, which was 0.4 percent above the figure for the previous year (2014: EUR 4.023 bn). It should be noted here that current low energy prices have depressed revenue from liquefied gases and cylinder gas, especially in the LPG business. In these two product areas, the acquisition of the LPG business from Wesfarmers Kleenheat Gas Pty Ltd had a positive impact. The discontinuation of carbon tax in Australia had an adverse impact on cylinder gas revenue, as the cost of this levy had until now been passed on to the customer.

### € 16 GASES DIVISION: REVENUE BY PRODUCT AREA

in EUR m	2015	2014 <sup>1</sup>	Change in percent
Liquefied gases	3,616	3,555	1.7
Cylinder gases	4,040	4,023	0.4
On-site	3,847	3,872	-0.6
Healthcare	3,665	3,412	7.4
<b>GASES DIVISION</b>	<b>15,168</b>	<b>14,862</b>	<b>2.1</b>

<sup>1</sup> Adjusted for exchange rate effects and changes in the price of natural gas.

# ENGINEERING DIVISION

GASES DIVISION <57  
ENGINEERING DIVISION 61  
OTHER ACTIVITIES >64

Revenue and earnings trends in Linde's international plant construction project business reflected the progress made on individual projects. Revenue in the Engineering Division fell in the financial year of 2015 by 16.5 percent to EUR 2,594 bn (2014: EUR 3,106 bn). Due to the current low price of oil and the resultant faltering demand in plant construction, order intake in the period under review came to EUR 2,494 bn (2014: EUR 3,206 bn). Although the order backlog at the end of December remained high at EUR 4,541 bn (2014: EUR 4,672 bn), the low order intake in the first half of the year, in particular, had already had an impact on the revenue trend.

Operating profit fell to EUR 216 m (2014: EUR 300 m). The operating margin was 8.3 percent, which was not as high

as the figure for the prior year of 9.7 percent. However, this value is still above the industry average and matches the target of around 8 percent that Linde had set itself for the 2015 financial year.

At 55.2 percent, the lion's share of order intake was attributable to Europe. Linde received orders worth around EUR 500 m from both North America and Asia/Pacific in the 2015 financial year.

Almost half of new orders related to natural gas plants. The rest of the order intake was spread relatively evenly across the remaining types of plant.

## 17 ENGINEERING DIVISION

in EUR m	2015	2014
Revenue	2,594	3,106
Order intake	2,494	3,206
Order backlog	4,541	4,672
Operating profit	216	300
Operating margin	8.3%	9.7%
Capital expenditure (excluding financial assets)	32	41
Number of employees (at the balance sheet date)	7,038	7,330

## 18 ENGINEERING DIVISION: REVENUE AND ORDER INTAKE BY REGION

in EUR m	Revenue		Order intake	
	2015	2014	2015	2014
Europe	934	926	1,376	1,943
North America	998	798	562	754
South America	26	20	12	34
Asia/Pacific	459	1,131	443	362
Middle East	121	172	80	78
Africa	56	59	21	35
<b>ENGINEERING DIVISION</b>	<b>2,594</b>	<b>3,106</b>	<b>2,494</b>	<b>3,206</b>

## 19 ENGINEERING DIVISION: REVENUE AND ORDER INTAKE BY PLANT TYPE

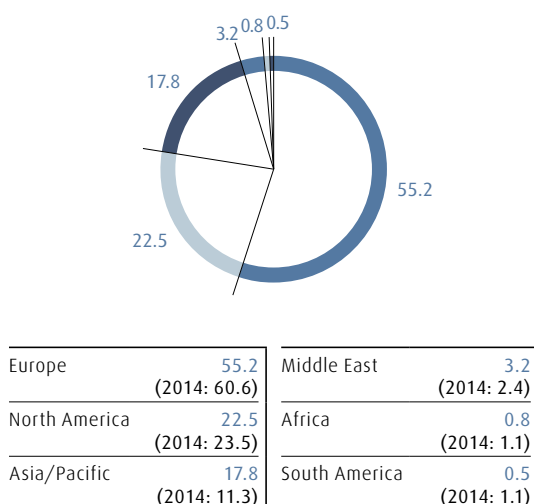
in EUR m	Revenue		Order intake	
	2015	2014	2015	2014
Olefin plants	683	494	321	1,557
Natural gas plants	572	835	1,135	724
Air separation plants	406	901	426	248
Hydrogen and synthesis gas plants	690	631	355	487
Other	243	245	257	190
<b>ENGINEERING DIVISION</b>	<b>2,594</b>	<b>3,106</b>	<b>2,494</b>	<b>3,206</b>

### Olefin plants

The market for olefin plants was marked by a general reluctance to invest in 2015. The low oil prices, lower growth on consumer markets and new capacities for polyolefins already under construction resulted in many projects being postponed or shelved. Nevertheless, Linde was able to establish a solid competitive position.

In the 2015 financial year, Linde's Engineering Division received an order to reconstruct an ethylene plant at the Záluží site in Litvinov (Czech Republic) from the Czech petrochemical company Unipetrol. The order covers engineering, procurement and construction services relating to the reconstruction of the plant. The total order value for the reconstruction work to be performed by Linde comes to more than EUR 40 m. The ethylene plant, which was damaged in an accident in the summer of 2015, is scheduled to be fully functional again in the third quarter of 2016.

#### 3 ORDER INTAKE BY REGION IN %



### Natural gas plants

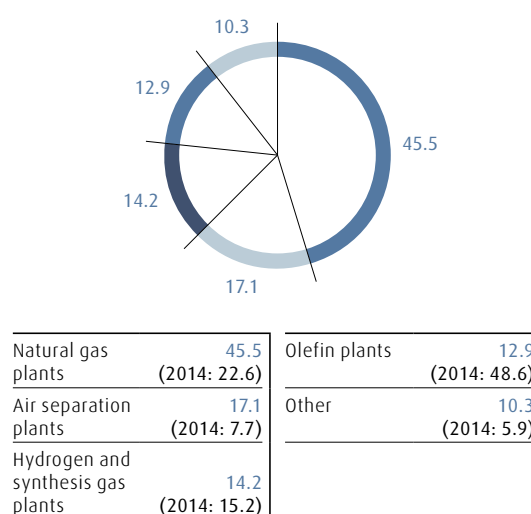
The prices of oil, natural and liquefied gas were unusually low throughout 2015. This prompted the oil and gas industry to reduce capital expenditure across the board, postponing the majority of investment decisions.

In a move that bucked this trend, Gazprom, Gazprom Pererabotka Blagoweschtschensk and the latter's general contractor NIPiGas selected Linde as the licensor of the natural gas processing technology for the Amur GPP project (Amur Gas Processing Plant) in eastern Russia. Linde will be responsible for engineering and for the procurement of plants for the extraction of ethane and liquefied gas components (natural gas liquids – NGL) and for the separation of nitrogen (nitrogen rejection unit – NRU), as well as for a helium extraction and liquefaction plant. The plant, which is to be erected in five phases in the period leading up to 2024, will form part of the pipeline project known as the Power of Siberia, which is designed to connect natural gas fields in eastern Siberia with north-eastern China. At the end of December 2015, Linde and NIPiGas concluded

an agreement on the engineering and procurement of the components specified for all five project phases. The first phase includes two NGL and NRU plant lines and one helium generation plant. The corresponding engineering work is already underway. Once it is completed, Amur GPP will be one of the world's largest gas processing projects, with a processing capacity of up to 49 billion cubic metres of natural gas per year.

In addition, the Engineering Division won two contracts during the reporting period to build key components for two large natural gas liquefaction plants in North America.

#### 4 ORDER INTAKE BY PLANT TYPE IN %



### Air separation plants

Due to the overall economic conditions, the demand for new air separation plants was relatively low in the 2015 financial year. Despite a year-on-year increase, the number of projects commissioned was limited in the entire market segment – especially in China. In spite of this difficult environment, Linde was able to attract a significant share of these orders.

In the first quarter of 2015, for example, Linde was awarded a contract to build an air separation plant for steel-producer Bhushan Power & Steel Limited in India. The Group will construct the plant on the Rengali site. Under the terms of the agreement, Linde will be responsible for the basic and detailed engineering as well as for the procurement and supply of the equipment and plant components.

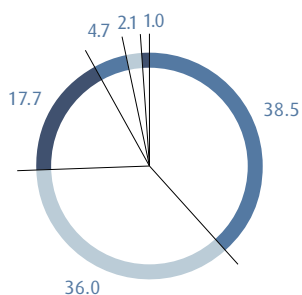
The 2015 financial year saw Linde being commissioned by the Taiwanese chemicals corporation Formosa, which ranks among the world's largest, to build an air separation plant for the production of oxygen and nitrogen in Point Comfort in Texas (USA). The order is worth EUR 75 m in total.

In June 2015, Linde officially brought a new large-scale air separation plant and a new gasification train on stream in La Porte, Texas (USA) for its existing syngas complex. The new plant was built by Linde Engineering and is the largest air separation plant operated by Linde in the US.



Furthermore, additional air separation plants in Trinec, Czech Republic, and in Dammam, Saudi-Arabia, which the Engineering Division erected for the relevant national companies of the Gases Division, went on stream in the period under review.

#### 5 REVENUE BY REGION IN %



North America	38.5 (2014: 25.7)	Middle East	4.7 (2014: 5.5)
Europe	36.0 (2014: 29.9)	Africa	2.1 (2014: 1.9)
Asia/Pacific	17.7 (2014: 36.4)	South America	1.0 (2014: 0.6)

#### Hydrogen and synthesis gas plants

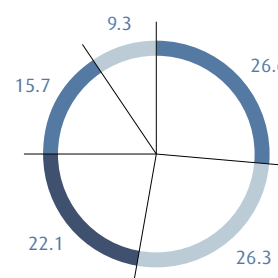
The development of the market segment for hydrogen and synthesis gas plants has slowed down considerably. In addition to the low oil prices and the change in economic climate, the strong US dollar resulted in much more intense competition, particularly with European competitors. In eastern Europe, the weak Russian rouble resulted in greater entrepreneurial restraint. Nevertheless, Linde succeeded in winning orders in this product area, too.

In May 2015, for example, the Engineering Division was awarded a contract by Técnicas Reunidas, Madrid (Spain) to supply six pressure swing adsorption (PSA) plants for the customer Petronas in Pengerang (Malaysia). The order is worth over USD 20 m in total. The capacity of the plant is more than 430,000 standard cubic metres of hydrogen per hour which is used for downstream processes within the Petronas refinery. The contract encompasses engineering, procurement and the delivery of the six plants.

In the 2015 financial year, Linde also successfully launched its new product line of innovative, cost-effective hydrogen generators known as HYDROPRIME® on the market. Hydro-Chem, a US subsidiary of the Linde Engineering Division, performed extensive tests on the plants, which are based on the tried-and-tested steam methane reforming technology, proving their reliability in various applications. As a competitive local production alternative to the conventional supply of liquefied gases, the HYDROPRIME® line is now going into series production. HYDROPRIME® is Linde's response to the rising demand for efficient, compact plants that are easy to install. HYDROPRIME® plants are characterised by the fact that they are reliable, environmentally friendly and

safe. The plants are fully automatic with fail-safe controls, allowing remote monitoring and operation. The new compact steam reformers do not take up much space and are based on a basic framework and a modular design. This enables not only easy installation, but also easy access for maintenance purposes.

#### 6 REVENUE BY PLANT TYPE IN %



Hydrogen and synthesis gas plants	26.6 (2014: 20.3)	Air separation plants	15.7 (2014: 29.0)
Olefin plants	26.2 (2014: 15.9)	Other	9.4 (2014: 7.9)
Natural gas plants	22.1 (2014: 26.9)		

#### Other types of plant

During the reporting period, Linde was awarded the contract to supply a helium refrigeration plant to the European Spallation Source (ESS) in Lund, Sweden. The plant will be delivered to Lund in the summer of 2017 and will then have been installed and brought on stream by the summer of 2018. The European Spallation Source is an interdisciplinary research centre based on the world's most intense source of neutrons.

During the reporting period, the Engineering Division was awarded a contract in France to supply the cryogenic helium distribution system for the ITER fusion reactor currently under construction in Cadarache in southern France. The cryogenic distribution boxes will be fabricated and delivered to Cadarache by the middle of 2019 with subsequent installation and start-up by 2021. The contract is worth around EUR 32 m.

## OTHER ACTIVITIES

ENGINEERING DIVISION	<61
<b>OTHER ACTIVITIES</b>	<b>64</b>
NET ASSETS AND	>65
FINANCIAL POSITION	
OF THE LINDE GROUP	

In the 2015 financial year, the Other Activities segment comprised Linde's logistics services company Gist.

Gist specialises in the distribution of chilled food and beverages and operates in a relatively stable market. It generated revenue in 2015 of EUR 607 m (2014: EUR 567 m).

The Linde subsidiary stepped up its long-term business relationship with the international retail chain Marks & Spencer even further, extending its existing long-term service agreement by a further twelve years. In addition to the home markets of the UK and Ireland, operations in Continental Europe in the 2015 financial year focused primarily on northern France and the Netherlands.

As it expands its business activities in Continental Europe, Gist is able to benefit from the extensive capacity it has developed to deliver temperature-sensitive products on time and to exploit the diverse synergies arising from its core business in the British Isles.

# NET ASSETS AND FINANCIAL POSITION OF THE LINDE GROUP

OTHER ACTIVITIES <64  
NET ASSETS AND 65  
FINANCIAL POSITION  
OF THE LINDE GROUP  
GROUP STATEMENT >67  
OF CASH FLOWS

## Net assets

As in the previous year, exchange rate effects had a strong impact on the Group's net assets in the 2015 financial year. Items in the statement of financial position increased in value as a result of the weak euro. In the 2015 financial year, Linde also focused on making acquisitions and investments which will continue to drive forward its business expansion.

Total assets rose by EUR 922 m to EUR 35.347 bn at 31 December 2015 (31 December 2014: EUR 34.425 bn).

On the assets side, the vast majority of Linde's total assets, or around 80 percent, related to non-current assets. Within the figure for non-current assets, the largest items were goodwill of EUR 11.604 bn (31 December 2014: EUR 11.055 bn) and tangible assets of EUR 12.782 bn (31 December 2014: EUR 12.151 bn).

As far as goodwill is concerned, the increase of EUR 549 m was largely due to exchange rate effects. The acquisitions made in the year under review contributed EUR 45 m (2014: EUR 62 m) to the increase.

Other intangible assets, comprising customer relationships, brand names and other intangible assets, fell in 2015 by EUR 162 m to EUR 2.760 bn (31 December 2014: EUR 2.922 bn). This was due primarily to amortisation of EUR 317 m, although the decline was partially offset by positive exchange rate effects.

Tangible fixed assets increased by EUR 631 m from EUR 12.151 bn to EUR 12.782 bn. Additions from capital expenditure totalling EUR 1.889 bn and positive exchange rate effects of EUR 303 m were offset by depreciation of EUR 1.577 bn.

Within current assets, trade receivables were the biggest item. They fell during the reporting period by EUR 337 m to EUR 2.724 bn (31 December 2014: EUR 3.061 bn). The reduction in receivables of EUR 407 m was partially offset by positive exchange rate effects.

Current and non-current receivables from finance leases, which almost exclusively relate to gas supply contracts classified as leases in accordance with IFRIC 4, fell by EUR 29 m to EUR 269 m. The decrease was due to amortisation of these lease receivables.

Securities fell by EUR 100 m to EUR 421 m, largely due to disposals (31 December 2014: EUR 521 m).

Equity rose by EUR 1.182 bn to EUR 15.449 bn (31 December 2014: EUR 14.267 bn). Factors contributing to the increase were earnings after tax of EUR 1.252 bn and the higher figure for other comprehensive income. Exchange rate movements had a particularly positive impact here. Dividend payments of EUR 701 m reduced the equity figure. The equity ratio at 31 December 2015 was 43.7 percent (31 December 2014: 41.4 percent).

The provisions for pensions and similar obligations came to EUR 1.068 bn, down on the previous year (31 December 2014: EUR 1.265 bn). This drop was mainly due to changes in actuarial assumptions – particularly the slight increase in the discount rate. In the previous year, additions to pension plans in Germany totalling EUR 300 m resulted in an increase in plan assets and, consequently, in a drop in the pension provision.

For off balance sheet commitments, see *NOTE [38] OF THE NOTES TO THE GROUP FINANCIAL STATEMENTS*.

## Financial position

Financial management at Linde comprises capital structure management, the financing of Group companies, cash and liquidity management, the management of market price risks (e.g. currency risk and interest rate risk) and pension assets, and the management of counterparty risk and country risk. Group Treasury *[SEE GLOSSARY]* controls centrally the global financial management of all the Group companies. More detailed information about this can be found on *PAGES 68 TO 69*.

The capital structure of the Group is determined in such a way as to optimise cost and risk. Gross financial debt fell during the reporting period by EUR 373 m to EUR 9.483 bn (31 December 2014: EUR 9.856 bn). In October 2015, Linde Finance B.V. issued three bonds accounting for a total volume of EUR 230 m under the EUR 10 bn Debt Issuance Programme. All three issues are guaranteed by Linde AG. The proceeds of the issue were used to redeem a EUR 600 m bond which fell due in December 2015.

Net financial debt comprises gross financial debt less short-term securities and cash and cash equivalents. It fell during the reporting period by EUR 553 m to EUR 7.645 bn (31 December 2014: EUR 8.198 bn). The decrease was due to a variety of sometimes contrary effects: The good operating cash flow, for example, reduced net financial debt, whereas investments, the payout of dividends and exchange rate and valuation effects resulted in an increase.

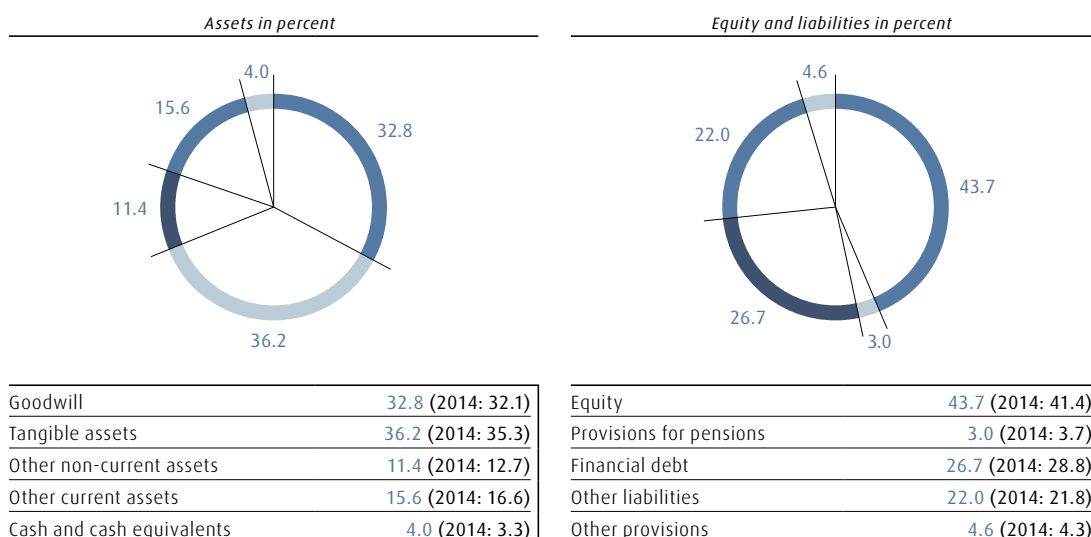
The dynamic indebtedness factor (net financial debt to operating profit over the past twelve months) was 1.9 at 31 December 2015. This is down on the figure as at the end of the previous financial year (31 December 2014: 2.1) and remains below the upper limit Linde had set itself of 2.5.

The Group's gearing (the ratio of net debt to equity) was 49.5 percent as at 31 December 2015 (31 December 2014: 57.5 percent).

The maturity profile of the financial debt demonstrates that The Linde Group continues to be financed on a long-term basis. Of the gross financial debt, EUR 1.023 bn (31 December 2014: EUR 1.294 bn) is disclosed as current. Of the non-current financial debt of EUR 8.460 bn (31 December 2014: EUR 8.562 bn), EUR 3.426 bn (31 December 2014: EUR 4.293 bn) is due in more than five years.

With short-term securities of EUR 421 m, cash and cash equivalents of EUR 1.417 bn and the EUR 2.5 bn syndicated credit facility, available liquidity for Linde at 31 December 2015 was EUR 3.315 bn (31 December 2014: EUR 2.864 bn). Linde once again successfully extended the term of the syndicated credit facility agreed in July 2013 by one year until 2020. The credit line originally had a term of five years with two options to extend the facility, in each case by one year (subject to the agreement of the lenders).

#### 7 BALANCE SHEET AS A PERCENTAGE OF TOTAL ASSETS OF EUR 35.347 BN (2014: EUR 34.425 BN)



# GROUP STATEMENT OF CASH FLOWS

NET ASSETS AND	<65
FINANCIAL POSITION	
OF THE LINDE GROUP	
GROUP STATEMENT	67
OF CASH FLOWS	
FINANCING AND MEASURES	>68
TO SAFEGUARD LIQUIDITY	

At EUR 3.593 bn, the operating cash flow as at 31 December 2015 was up considerably, namely by 19.7 percent on the prior-year value (2014: EUR 3.001 bn). This means that cash flow showed an above-average increase compared with operating profit, which rose by 5.4 percent to EUR 4.131 bn. It should be noted that in 2014 Linde made a payment of EUR 300 m to provide additional funding for the defined benefit pension plans in Germany. After adjusting for this one-off item, the cash flow was 8.8 percent higher than in the previous year. In addition to the solid operating profit due to positive exchange rate effects, a one-off payment of EUR 159 m that Linde received within the context of the revision of a high-volume gas supply contract with a customer from Singapore also contributed to this increase. Income taxes paid fell from EUR 599 m to EUR 533 m in the 2015 financial year.

The change in working capital came to EUR 55 m on the balance sheet date, roughly on a par with the prior-year level (2014: EUR 62 m). Two contrary effects have to be taken into account in this regard: the good working capital management in the Gases Division was offset by lower advance payments received in the Engineering Division.

Payments made for investments in tangible fixed assets, intangible assets and financial assets came to EUR 1.970 bn, down by EUR 39 m on the prior year (2014: EUR 2.009 bn). Payments made for investments in consolidated companies came to EUR 113 m (2014: EUR 65 m) and largely include the payment for the acquisition of the assets and liabilities of the LPG business of Wesfarmers Kleenheat Gas Pty Ltd as part of an asset deal in the amount of EUR 53 m.

The operating free cash flow therefore came to EUR 1.699 bn on the balance sheet date (2014: EUR 1.288 bn).

Payments of EUR 99 m were received in the period under review resulting from the sale of securities (2014: payouts of EUR 350 m).

Net balance of loans and capital market liabilities raised and redeemed was EUR -430 m in 2015 (2014: EUR 27 m). It should be noted here that a EUR 600 m bond was redeemed by Linde in 2015. 2014 includes a payout for the issue of a EUR 300 m bond by Linde to provide additional funding for the pension plans in Germany.

After deducting dividend payments of EUR 701 m (2014: EUR 645 m) and net interest payments of EUR 364 m

(2014: EUR 358 m) as well as other changes, the change in cash and cash equivalents in 2015 was an increase of EUR 279 m (2014: decrease of EUR 64 m).

## 20 GROUP STATEMENT OF CASH FLOWS (SUMMARY)

<i>in EUR m</i>	2015	2014
<b>OPERATING PROFIT</b>	<b>4,131</b>	<b>3,920</b>
Change in working capital	55	62
Income taxes paid	-533	-599
Other changes	-60	-82
<b>CASH FLOW FROM OPERATING ACTIVITIES BEFORE TRANSFER TO PENSION PLANS</b>	<b>3,593</b>	<b>3,301</b>
Transfer to pension plans	-	-300
<b>OPERATING CASH FLOW</b>	<b>3,593</b>	<b>3,001</b>
Cash outflow for investments in tangible assets, intangible assets and financial assets (excluding securities)	-1,970	-2,009
Payments for investments in consolidated companies	-113	-65
Cash inflows from the disposal of assets	189	361
<b>OPERATING FREE CASH FLOW</b>	<b>1,699</b>	<b>1,288</b>
Payments for/proceeds from investments in securities	99	-350
Net cash inflows/outflows from the proceeds/repayment of loans and capital market debt	-430	27
Dividend payments to Linde AG shareholders and non-controlling interests	-701	-645
Net interest payments	-364	-358
Other changes	-24	-26
<b>CHANGE IN CASH AND CASH EQUIVALENTS</b>	<b>279</b>	<b>-64</b>

# FINANCING AND MEASURES TO SAFEGUARD LIQUIDITY

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## Financing principles and objectives

The aim of external financing and measures to safeguard liquidity is to ensure that the Group has adequate liquidity at all times. The international financial and sovereign debt crisis made it clear how important it is for companies to procure sufficient liquidity.

For Linde, external financial headroom is maintained primarily by the capital markets and a major international banking group. Within the Group, the principle of internal financing applies: i.e. the financing requirements of subsidiaries are covered wherever possible by intra-Group loans. In accordance with this guiding principle, the subsidiaries were again financed in 2015 mainly by Dutch finance company, Linde Finance B.V., and by Linde AG. Centralised financing makes it possible for Group companies to act as a single customer on the capital markets. This ensures that the subsidiaries are financed in a cost-efficient way.

Group companies are financed either by the cash surpluses of other business units in cash pools (the Eurozone, the UK, Scandinavia, the US, Australia, China and other Asian countries), or by Group loans from Linde Finance B.V. and/or Linde AG, taking into consideration any risks specific to that particular country. Group Treasury also negotiates credit facilities with local banks, to take account of particular legal, fiscal or other requirements. Especially in countries with currency restrictions, to finance small amounts or for projects with specific local requirements local financing is used.

In view of the financial and sovereign debt crisis, Linde maintained an adequate liquidity position in 2015. In addition to cash and cash equivalents of EUR 1.417 bn, Linde also holds securities totalling EUR 421 m. These securities are mainly German government bonds with maturities of less than one year.

### *Syndicated credit facility*

Linde has a EUR 2.5 bn syndicated revolving credit line at its disposal. In total, 33 major German and international banks used by Linde are involved in the syndicated facility, providing the Group with a high level of flexibility in its financing. The credit line was initially due to expire in 2018 but had two options to extend the facility, in each case by one year (subject to the agreement of the lenders). After extending the line for the first time in 2014, Linde successfully exercised its second extension option in June 2015: with the consent of the banks, the term of the credit line was extended by one more year, until 2020. This means that the Group has ensured that it continues to have a long-term solid general liquidity reserve. The facility is unutilised at the end of the 2015 financial year and also serves as back-up for Linde's EUR 2 bn Commercial Paper Programme [SEE GLOSSARY]. At 31 December 2015, there were no commercial papers outstanding under this programme.

### *Capital market activities*

During the 2015 financial year, Linde again made successful use of the capital markets for refinancing purposes. It also extended the maturity profile of its financial debt again, ensuring long-term financing of the Group.

In October 2015, Linde Finance B.V. made three issues with a total volume of EUR 230 m under the EUR 10 bn Debt Issuance Programme: a five-year fixed-interest EUR 50 m bond with a coupon of 0.634 percent, a 12-year fixed-interest EUR 80 m bond with a coupon of 1.652 percent, and a fifteen-year fixed-interest EUR 100 m bond with a coupon of 1.9 percent. All three issues are guaranteed by Linde AG. The proceeds of the issue were used to redeem a EUR 600 m bond which fell due in December 2015.

Under the EUR 10 bn Debt Issuance Programme, issues totalling EUR 6.891 bn in various currencies were outstanding at 31 December 2015 (31 December 2014: EUR 7.255 bn).

## E21 SELECTION OF OUTSTANDING PUBLIC BONDS

Issuer	Rating	Nominal amount	Coupon rate in percent	Maturity date	ISIN
Linde Finance B.V. <sup>1</sup>	A2/A+	GBP 200 m	6.500	29/01/2016	XS0123544529
Linde Finance B.V.	A2/A+	EUR 1,000 m	4.750	24/04/2017	XS0297699588
Linde Finance B.V.	A2/A+	EUR 750 m	3.125	12/12/2018	XS0718526790
Linde Finance B.V.	A2/A+	EUR 500 m	1.750	11/06/2019	XS0790015548
Linde Finance B.V.	A2/A+	AUD 100 m	4.250	20/06/2019	XS0947397302
Linde Finance B.V.	A2/A+	USD 200 m	3-M \$ Libor + 0.470	21/08/2019	XS1101833306
Linde Finance B.V.	A2/A+	EUR 600 m	3.875	01/06/2021	XS0632659933
Linde Finance B.V.	A2/A+	GBP 300 m	5.875	24/04/2023	XS0297700006
Linde Finance B.V.	A2/A+	EUR 300 m	1.875	22/05/2024	XS1069836077
Linde Finance B.V.	A2/A+	USD 200 m	3.434	26/08/2026	XS1102559850
Linde AG	A2/A+	NOK 2,000 m	2.750	28/09/2017	XS0835302513
Linde AG	A2/A+	USD 500 m	1.500	18/04/2018	DE000A1R0733
Linde AG	A2/A+	EUR 1,000 m	1.750	17/09/2020	XS0828235225
Linde AG	A2/A+	EUR 650 m	2.000	18/04/2023	DE000A1R07P5
<i>Subordinated bonds<sup>1</sup></i>					
Linde Finance B.V.	Baa1/A-	EUR 700 m	7.375	14/07/2066 Call right from 2016	XS0259604329
Linde Finance B.V.	Baa1/A-	GBP 250 m	8.125	14/07/2066 Call right from 2016	XS0259607777

<sup>1</sup> These bonds were not issued under the Debt Issuance Programme.

## Rating

Since 1999, the creditworthiness of The Linde Group has been rated by the leading international rating agencies Moody's and Standard & Poor's (S & P). The rating is an essential requirement for a successful and sustainable presence in the capital market. The Group's stated objective remains a strong "investment grade" rating.

Over recent years, Linde's ratings have continued to improve, based on the Group's solid business model and conservative financial policy. Both rating agencies recently confirmed Linde's long-term rating in December of the reporting year. S & P gives The Linde Group an A+ rating, while Moody's has assigned the Group an A2 rating. The subordinated bonds are rated at A- by S & P and Baa1 by Moody's.

## E22 RATING 2015

Rating agencies	Long-term rating	Outlook	Short-term rating
Moody's	A2	Stable	P-1
Standard & Poor's	A+	Stable	A-1

# CAPITAL EXPENDITURE OF THE LINDE GROUP

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The capital expenditure decision-making and allocation process is centralised in The Linde Group. Every item of capital expenditure which exceeds specific size criteria must be approved by the member of the Executive Board responsible for that area, by a central investment committee or by the full Executive Board. Capital expenditure decisions are carefully reviewed, as they are a critical success factor for a project-based, investment-focused company such as Linde.

In 2015, Linde continued to apply its growth-based capital expenditure strategy. The Group has again invested specifically in those areas in which opportunities exist for above-average growth and which contribute towards increasing the profitability and competitiveness of the Group. During the reporting period, Linde's investment activity focused not only on the on-site product area, but also particularly on the liquefied gases and cylinder gas product areas.

Investment in tangible and intangible assets in the 2015 financial year (excluding financial assets) totalled EUR 1.936 bn (2014: EUR 1.954 bn). The investment ratio was 10.8 percent of Group revenue (2014: 11.5 percent).

Most of the Group's capital expenditure (EUR 1.881 bn; 2014: EUR 1.890 bn) was once again incurred for the global expansion of its gases business. This means that capital expenditure was down slightly on the forecast for the 2015 financial year, which expected to see capital expenditure roughly on a par with the previous year. The investment ratio in the Gases Division in 2015 was 12.4 percent of revenue (2014: 13.5 percent).

In addition, Linde continued to strengthen its good competitive position in the international market by spending a total of EUR 120 m on acquisitions and investments in financial assets (2014: EUR 95 m). Investments in consolidated companies during the 2015 financial year totalled EUR 107 m (2014: EUR 67 m).

The remaining investment in financial assets of EUR 13 m (2014: EUR 28 m) related mainly to capital increases in joint ventures or non-current loans to associates and joint ventures. If these investments are included, total capital expenditure in the 2015 financial year was EUR 2.056 bn (2014: EUR 2.049 bn).

## € 23 CAPITAL EXPENDITURE BY DIVISION

<i>in EUR m</i>	2015	2014
Gases Division	1,881	1,890
Engineering Division	32	41
Other Activities <sup>1</sup>	23	23
<b>GROUP (EXCLUDING FINANCIAL ASSETS)</b>	<b>1,936</b>	<b>1,954</b>
Financial assets	120	95
<b>GROUP</b>	<b>2,056</b>	<b>2,049</b>

<sup>1</sup> Including consolidations.

## € 24 CAPITAL EXPENDITURE OF THE GASES DIVISION BY REPORTABLE SEGMENT (EXCLUDING FINANCIAL ASSETS)

	2015		2014	
	<i>in EUR m</i>	<i>in percent</i>	<i>in EUR m</i>	<i>in percent</i>
EMEA	895	47.6	946	50.1
Asia/Pacific	386	20.5	413	21.9
Americas	600	31.9	531	28.0
<b>GASES DIVISION</b>	<b>1,881</b>	<b>100.0</b>	<b>1,890</b>	<b>100.0</b>



# EXECUTIVE BOARD SUMMARY OF THE 2015 FINANCIAL YEAR FOR THE LINDE GROUP

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The global economy grew at a slower rate in the 2015 financial year than had been expected. In the course of the year, the economy was adversely affected in particular by an increase in geopolitical tensions. In addition, the continued low oil prices had a negative impact on the investment activities of many customers, particularly in the international market for large-scale plant construction. This also has a negative impact on Linde's Engineering Division.

In this environment, Linde's performance was relatively stable, although the Group was not able to meet all its targets in full. Linde achieved a 5.3 percent increase in revenue in the 2015 financial year to EUR 17.944 bn (2014: EUR 17.047 bn). Originally, Linde had set itself a target of generating revenue of between EUR 18.2 bn and EUR 19.0 bn. After adjusting for exchange rate effects, Group revenue fell by 2.3 percent. This development is largely due to the unfavourable overall developments in the plant construction segment. Linde had already made a corresponding adjustment to its revenue forecast for the 2015 financial year in the middle of the year, lowering the target range for Group revenue to between EUR 17.9 bn and EUR 18.5 bn.

As far as Group operating profit is concerned, Linde achieved a value that was up by 5.4 in a year-on-year comparison to EUR 4.131 bn (2014: EUR 3.920 bn). This puts the Group's profit within the range of EUR 4.1 bn to EUR 4.3 bn, in line with the forecast released at the start of the 2015 financial year. If an adjustment were to be made for the effects of changes in exchange rates, the Group operating profit would have dropped by 2.4 percent.

The Group operating margin in 2015 was unchanged as against the previous year at 23.0 percent (2014: 23.0 percent).

The return on capital employed (ROCE) after adjusting for non-recurring items was 9.4 percent in 2015 (2014: 9.5 percent), hitting the target of between 9 percent and 10 percent.

The results of operations were once again adversely affected by non-recurring items in 2015. These include restructuring costs of EUR 192 m (2014: EUR 66 m). In 2014, restructuring costs, and also impairment losses totalling EUR 229 m, were recognised as non-recurring items.

Against this backdrop, Linde reported earnings per share of EUR 6.19 in 2015 (2014: EUR 5.94). Earnings per share prior to non-recurring items stood at EUR 6.91 (2014: EUR 7.13).

In the Gases Division, Linde generated revenue of EUR 15.168 bn in the 2015 financial year (2014: EUR 13.982 bn), in line with the revenue target of between EUR 14.9 bn and EUR 15.4 bn that was announced at the start of the year. This value also puts Linde within the higher range of EUR 15.1 bn and EUR 15.5 bn that was announced in the middle of the year. After exchange rate effects, revenue increased by 0.7 percent.

As far as operating profit in the Gases Division is concerned, Linde achieved a value that was up by 8.2 in a year-on-year comparison to EUR 4.151 bn (2014: EUR 3.835 bn). Once again, this allowed Linde to achieve a value that fell within both the originally planned range of EUR 4.05 bn to EUR 4.25 bn, and the adjusted range announced in the middle of the year of between EUR 4.1 bn and EUR 4.3 bn. If there had been no exchange rate fluctuations, the Gases Division would have achieved a slight year-on-year increase in operating profit.

The development in the operating margins reported by the segments in the Gases Division varied: EMEA 29.8 percent (2014: 29.7 percent), Asia/Pacific 25.6 percent (2014: 26.5 percent), Americas 25.0 percent (2014: 24.3 percent). The increase in the operating margin in the Americas was partly due to the drop in the price of natural gas, which was passed on to customers and had an impact on margin development as a result. In the Asia/Pacific segment, the prior-year margin was influenced by positive one-off effects resulting from the sale of non-current assets.

Due to the sustained low oil prices, Linde generated revenue of EUR 2.594 bn in the Engineering Division in the 2015 financial year (2014: EUR 3.106 bn), down by 16.5 percent. The range that Linde was originally aiming for, namely between EUR 3.0 bn and EUR 3.3 bn, was not reached. On the other hand, the Engineering Division met the revenue forecast as adjusted in the middle of the year, which predicted a figure of between EUR 2.5 bn and EUR 2.7 bn.

The operating margin of the Engineering Division was also in line with expectations at 8.3 percent (2014: 9.7 percent): Linde had sought to achieve a figure of around 8 percent for the 2015 financial year.

Linde will maintain its dividend policy, which is geared towards continuity: At the Annual General Meeting on 3 May 2016, the Executive Board and Supervisory Board will propose the payment of a dividend of EUR 3.45 per

share. This is an increase of 9.5 percent compared with last year's dividend. This would mean that the dividend increase is disproportionately high compared to the group operating profit trend, which still continues to be the basis for determining the dividend at Linde, however.

# NET ASSETS, FINANCIAL POSITION AND RESULTS OF OPERATIONS OF LINDE AG

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affiliated companies. Linde AG also enters into Credit Support Annexes (CSAs) with banks. Under these agreements, the positive and negative fair values of derivatives held by Linde AG are collateralised with cash on a regular basis. The corresponding amounts due from banks are disclosed under this heading.

Linde AG holds 100 percent of the shares in a special fund. This fund is disclosed in securities held as current assets. In the course of 2015, the holding of securities fell by EUR 100 m.

Liquid assets fell by EUR 20 m to EUR 359 m.

Equity (before the appropriation of profit) rose by EUR 83 m to EUR 9.845 bn. Two contrary effects in particular have to be taken into account in this regard: The profit for the year of EUR 669 m resulted in an increase in equity, while the payout of the dividend for 2014 in the amount of EUR 585 m reduced equity.

The equity ratio increased slightly from 47.2 percent to 47.3 percent as a result.

Total provisions came to EUR 1.070 bn, up slightly on the prior year. The liabilities of Linde AG fell in 2015 by EUR 34 m to EUR 9.911 bn.

## General information

Linde AG, which comprises the Linde Gas and Linde Engineering Divisions and the Corporate Centre, is the holding company and management company of The Linde Group.

The statutory financial statements of Linde AG are prepared in accordance with the provisions of the German Commercial Code (HGB) and the German Stock Corporation Act (AktG). The main differences between these financial statements and the Group financial statements which are prepared in accordance with International Financial Reporting Standards (IFRS) are in respect of revenue recognition and the measurement of financial instruments. The core financial performance indicator (and also the sole financial performance indicator) of Linde AG is the profit for the year. The dividend payable to Linde AG shareholders is distributed out of the profit for the year.

In the year under review, net assets of Linde Engineering Dresden GmbH in the amount of EUR 74 m were taken over by Linde AG as part of a spin-off.

## Net assets of Linde AG

The total assets of Linde AG increased in 2015 by EUR 163 m, from EUR 20.663 bn to EUR 20.826 bn.

Tangible assets fell by EUR 55 m to EUR 18.038 bn. The share of tangible assets in relation to total assets came to 86.6 percent (2014: 87.6 percent). Financial assets make up a significant share of the tangible assets. This is due to Linde AG's function as the parent company of The Linde Group. In the period under view, financial assets fell by EUR 102 m. Receivables and other assets rose from EUR 1.668 bn to EUR 1.985 bn. The main contributory factor here was the increase in financial receivables from

## 25 BALANCE SHEET STRUCTURE OF LINDE AG AS A PERCENTAGE OF TOTAL ASSETS

	31.12.2015		31.12.2014	
	in EUR m	in percent	in EUR m	in percent
<b>Assets</b>				
Financial assets	17,499	84.0	17,601	85.2
Other non-current assets	539	2.6	492	2.4
Receivables and other assets	1,985	9.5	1,668	8.1
Securities	400	2.0	500	2.4
Liquid assets	359	1.7	379	1.8
Other assets	44	0.2	23	0.1
<b>TOTAL ASSETS</b>	<b>20,826</b>	<b>100.0</b>	<b>20,663</b>	<b>100.0</b>
<b>Equity and liabilities</b>				
Equity	9,845	47.3	9,762	47.2
Provisions for pensions	274	1.3	184	0.9
Other provisions	796	3.8	772	3.7
Liabilities	9,911	47.6	9,945	48.2
<b>TOTAL ASSETS</b>	<b>20,826</b>	<b>100.0</b>	<b>20,663</b>	<b>100.0</b>

## Financial position of Linde AG

The net financial debt of Linde AG (securities held as non-current assets, securities held as current assets, financial liabilities, financial receivables, liquid assets) fell in 2015 by EUR 405 m, from EUR 6.756 bn to EUR 6.351 bn.

This is mainly due to the drop in financial liabilities to affiliated companies of EUR 220 m. In addition, the financial receivables from externals rose by EUR 170 m as a result of Credit Support Annexes (CSA). At present, the amount stated is EUR 240 m (2014: 70 m).

As the international plant construction business is project business and revenue is only received once the project is completed, there are always fluctuations in the regional figures year by year.

The order intake of the Linde Engineering Division fell by 25.0 percent in a year-on-year comparison to EUR 1.603 bn (2014: EUR 2.137 bn).

The order backlog reached EUR 6.853 bn at the end of the year under review, up by 23.8 percent on the prior-year value (EUR 5.535 bn). The average duration of a contract is around three years.

## Results of operations of Linde AG

Revenue in Linde AG in the 2015 financial year was EUR 2.097 bn, significantly higher than the figure for 2014 of EUR 1.888 bn. EBIT, on the other hand, fell from EUR 37 m to EUR –11 m.

In the Linde Gas Division, revenue rose slightly, by 1.1 percent, to EUR 1.321 bn (2014: EUR 1.307 bn). In the Linde Engineering Division, Linde AG reported a year-on-year increase in revenue to EUR 809 m in the 2015 financial year (2014: EUR 618 m).

All in all, Linde AG recognised revenue from contracts mainly in the following countries in the 2015 financial year: Malaysia, the US, Russia, China and South Korea.

Linde AG generated 47.2 percent (2014: 52.7 percent) of its sales revenue from customers in Germany. Exports accounted for 52.8 percent (2014: 47.3 percent) of revenue, with 42.3 percent (2014: 44.8 percent) relating to Europe, 34.7 percent (2014: 31.6 percent) to the Asia/Pacific region and 19.3 percent (2014: 14.8 percent) relating to the Americas. Sales to Africa accounted for 3.7 percent of Linde AG's exports in 2015 (2014: 8.8 percent). Most of the export business relates to the Linde Engineering Division.

## **26** **RESULTS OF OPERATIONS OF LINDE AG** **(SUMMARY)**

<i>in EUR m</i>	<i>2015</i>	<i>2014</i>
Revenue	2,097	1,888
Cost of sales	1,382	1,134
<b>GROSS PROFIT ON REVENUE</b>	<b>715</b>	<b>754</b>
Functional costs	868	783
Other income	381	297
Other expenses	239	231
<b>EBIT</b>	<b>-11</b>	<b>37</b>
Investment income	901	680
Other financial result	-246	-134
<b>PROFIT BEFORE TAXES ON INCOME</b>	<b>644</b>	<b>583</b>
Income tax expense	-25	-70
<b>PROFIT FOR THE YEAR</b>	<b>669</b>	<b>653</b>
Transfer to revenue reserves	-29	-68
<b>UNAPPROPRIATED PROFIT</b>	<b>640</b>	<b>585</b>

The gross margin fell from 39.9 percent to 34.1 percent. The main reason for the drop in the margin is the increase in the proportion of revenue relating to the Linde Engineering Division compared with the prior year. The engineering business generally has lower gross margins than the gases business.

The increase in functional costs to EUR 868 m (2014: EUR 783 m) is largely due to restructuring costs, and to the merger of Linde Engineering Dresden GmbH.

The increase in other income and other expenses is largely due to the income from the reversal of provisions in the amount of EUR 97.9 m (2014: EUR 63.3 m), as well as to exchange rate effects in the reporting year.

Investment income rose in 2015 to EUR 901 m (2014: EUR 680 m). Included in the figure are dividends of EUR 819 m (2014: EUR 517 m) and income from profit-sharing agreements of EUR 82 m (2014: EUR 163 m). Linde AG has direct or indirect profit-sharing agreements with most of its German subsidiaries. For the dividend payments which derive from subsidiaries mainly outside Germany, distributions are voted on in the individual companies.

The main changes under the heading other financial result were impairment losses of EUR 30 m (2014: EUR 11 m) recognised on financial assets and exchange losses on the measurement of the plan assets relating to pension obligations of EUR 37 m (2014: exchange rate gains: EUR 53 m).

Earnings before taxes came to EUR 644 m, which was higher than the prior-year figure of EUR 583 m.

After taking tax into account, Linde AG generated a profit for the year of EUR 669 m in 2015 (2014: EUR 653 m). This was up by 2.5 percent in a year-on-year comparison. The original forecast was for an increase of between 5 percent and 10 percent.

# RESEARCH AND DEVELOPMENT

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## The Linde Group

Ongoing innovation and continuous, focused research and development activities are vital for the long-term success of a global technology company such as Linde. As a result, manifold activities were bundled and expanded in the new Technology & Innovation Corporate & Support Function in the 2015 financial year.

During the 2015 financial year, Linde spent a total of EUR 132 m on research and development (2014: EUR 106 million). As at 31 December 2015, there were 348 employees in total working in this field (2014: 390), of whom 221 in the Gases Division and 127 in the Engineering Division. To protect its innovations from the competition, Linde filed 287 new patents across the Group over the course of the past financial year. On 31 December 2015, 3,232 patents protected various Linde technologies. Many of them feature sustainability aspects, with more than 500 patents relating to chemicals & the environment, clean energy and hydrogen technology.

By drawing on the findings of its research, the Group is continuously moving into new areas of application for its gases and is constantly striving to make further improvements to its processes and plant technologies. This application development is almost always set in the context of commissions and therefore involves close liaison with customers, taking into account their requirements. The Linde Group pays particular attention to the environmental compatibility of its production processes. More than half of research and development projects in the year under review were also aimed at achieving environmental advantages.

To achieve these goals, Linde combines the skills in its Gases Division with those in its Engineering Division, whilst also involving leading institutions and companies in various cooperation projects. Linde is focusing, in particular, on the use and production of environmentally friendly H<sub>2</sub> as a source of fuel. When it comes to hydrogen, Linde is also focusing on large-scale technical energy storage and the further processing of basic materials for the chemicals industry.

Once again during the year under review Linde was able to demonstrate its pioneering role in environmentally

friendly hydrogen technology. A range of newly opened hydrogen filling stations in Germany, Austria, the US and Sweden are testimony to this. In October 2015, the joint venture H<sub>2</sub>Mobility, which has its registered office in Berlin, went into operation. This joint venture between various industrial corporations, including Linde, aims to gradually expand the network of hydrogen filling stations in Germany. The aim is to have around 400 hydrogen filling stations in operation by 2023. The demand for Linde's hydrogen fuelling technology rose steadily in the period under review. This also increased the utilisation of the world's first small-series production facility for hydrogen filling stations, based on the ionic compressor IC 90, which opened in 2014. The facility produced around 30 systems for various markets. Six systems were destined for the Japanese market alone thanks to a framework agreement between Linde and the Iwatani Cooperation.

In July 2015, the world's largest plant for the generation of green hydrogen went into operation in EnergiePark Mainz. The joint venture is seen as a lighthouse project in the field of regenerative energy. The main aim of EnergiePark Mainz is to use excess electricity from regenerative electricity sources such as wind power plants to separate water into oxygen and hydrogen. The green hydrogen generated in this manner can be stored and then used later to generate electricity again, among other possible uses.

The liquefaction of air is another technology that Linde is enhancing in order to save energy. During this process, ambient air is liquefied using electricity. It can then be stored in cryogenic tanks and converted into electricity using an expansion turbine as and when required. The main advantage compared with other storage technologies is that liquid gas storage facilities can be set up anywhere, with no geological restrictions. Working with a partner from the power station and energy sector, Linde developed its first large-scale system during the year under review and is preparing the corresponding demonstration. At the same time, Linde is already working on the next generation of systems offering even better performance levels.

Over and above the innovations relating to products, applications and services, the Corporate & Support Function T & I pursues projects based on a broader understanding of innovation. The development of the H<sub>2</sub>Bike, an electric bike that runs on a fuel cell, bears testimony to Linde's expertise in using hydrogen as an energy source. Linde's contribution to the long-term commercialisation of hydrogen also includes the fact that it has created an attractive application example.

## Gases Division

In the Gases Division, Linde invested EUR 84 m in research and development in 2015 (2014: EUR 72 m), focusing its activities on four customer segments of particular strategic importance: chemicals & energy, metallurgy & glass, food & beverages, and manufacturing.

Development projects focused on the development and improvement of environmentally friendly and sustainable production processes, e.g. by reducing emissions and gas-based water purification. This area also includes PLASTINUM Foam E, which replaces harmful propellants such as HCFCs [SEE GLOSSARY] or HFCs [SEE GLOSSARY] with CO<sub>2</sub>.

In addition, Linde forged ahead with intensifying and boosting the efficiency of customer processes with the aim of reducing energy requirements, increasing productivity and/or making it more flexible and reducing the total cost of ownership. Within this context, Linde developed solutions such as OXYGON XL in 2015. The solution for ladle preheating in the metal industry is setting new standards in terms of energy efficiency and flexibility.

The past reporting year also saw Linde make further improvements to its technology for cleaning surfaces in the manufacturing sector. Dry ice (low-temperature carbon dioxide) is used for environmentally-friendly and solvent-free cleaning. Linde was able to further strengthen the CRYOCLEAN® product family as a result.

In the field of lightweight automotive construction or additive manufacturing, Linde was able to support the production of new, high-performance materials, for example. Linde is working, among other things, on solutions to boost efficiency in the production of aluminium sheets for the automotive industry.

Another focal point of research and development activities last year was improving quality standards and the shelf life of foods along the entire value chain using cryogenic freezing and refrigerating, as well as protective packaging gases. In the year under review, Linde expanded its market-leading CRYOLINE® series of cryogenic freezers to include the CRYOLINE®SI immersion IQF freezer. The CRYOLINE®SI is an all-in-one solution that uses a liquid nitrogen bath followed by a tunnel freezer for the highest-quality IQF (individually quick frozen) food products. The CRYOLINE®SI is suitable for high-volume IQF products, such as prawns, chopped, cubed fruit, vegetables or meat and individual components for the manufacture of ready meals.

Increasing safety in production is also a key focal point of Linde's R & D activities. In the 2015 financial year, Linde developed a nitrogen-based solution specifically for large-scale biomass silos that considerably reduces the risk of fire and ensures that any pockets of fire can be extinguished quickly and efficiently. One special project in the 2015 financial year was the use of digitalisation to further develop the cylinder business. Linde had already developed a smart cylinder valve for the healthcare sector in the past. The knowledge and experience gleaned from the LIV®IQ technology provide the basis

for a digitalised solution that can be used in an industrial context. Field testing of the EVOS™ DCi cylinder valve started in December 2015. Linde was awarded a prize for the industrial design of the previous EVOS™ valve and digitalisation is the next logical step. The smart cylinder valve records key data such as the filling level and location independently and sends this information to the cloud [SEE GLOSSARY].

In the food and beverages sector, the development and commercialisation of SLOVOX DropIn mark a key milestone. This technology can be used to pump additional oxygen into the enclosures of sea water fish farms. The additional oxygen helps to optimise living and growth conditions for the fish.

The promotion of research and development also remains a high priority for the healthcare business. Ongoing improvements to licensed products, coupled with new products and services, enable Linde to tap into new markets in this promising sector. In particular, the Group backs research which focuses on the medical applications of gases and on the development of devices and services that address the needs of patients with chronic respiratory diseases.

With this in mind, Linde reopened its research fund, which was launched in 2010, to new applications in the 2015 financial year and will be awarding further research grants. The REALfund (REAL = Research, Evolve, Advance, Lead) promotes clinical research and innovative research projects in respiratory medicine and is aimed at doctors, healthcare professionals and scientists. Around 40 applications were received from institutions across the globe within a very short space of time, including applications from highly renowned institutions.

## Engineering Division

In the 2015 financial year, the Engineering Division spent a total of EUR 48 m on research and development activities (2014: EUR 34 m). As in previous years, this money was primarily allocated to the development of new and existing technologies in the product lines of natural gas plants, air separation plants, olefin plants, and hydrogen and synthesis gas plants. Linde is always looking for ways to make further improvements in the energy efficiency and environmental credentials of its plants.

Linde also forged ahead with a pilot project, supported by partners, relating to a substantially improved steam reformer process for producing synthesis gas in the 2015 financial year. This procedure is said to allow synthesis gas to be produced in a more energy-efficient manner and producing fewer emissions while using less vapour at the same time. In certain specific applications, CO<sub>2</sub> can be processed as an additional feedstock, which has a positive

impact on the environmental balance sheet. A pilot plant has been commissioned for this project at Linde's site in Pullach, involving an investment of EUR 5 m.

As part of the large-scale natural gas processing project Amur (Amur GPP) in Russia, Linde has been able to bring a new procedure for integrated natural gas separation and nitrogen removal to the commercialisation phase. This procedure is characterised by a high CO<sub>2</sub> tolerance level and has the potential to play a key role in the future exploitation of nitrogen-rich natural gas reserves or the use of tertiary oil recovery using nitrogen.

The 2015 financial year also saw Linde develop an innovative procedure for the separation of helium from natural gas and bring this procedure to the commercialisation stage. The method consists of integrated membrane and adsorption separation steps and allows even smaller quantities of helium to be produced in a cost-effective manner and independently of natural gas liquefaction plants.

### 27 RESEARCH AND DEVELOPMENT

	Expenditure (in EUR m)					Number of employees				
	2015	2014	2013	2012	2011	2015	2014	2013	2012	2011
Gases Division	84	72	68	74	72	221	257	241	246	220
Engineering Division	48	34	24	27	26	127	133	126	139	122
<b>GROUP</b>	<b>132</b>	<b>106</b>	<b>92</b>	<b>101</b>	<b>98</b>	<b>348</b>	<b>390</b>	<b>367</b>	<b>385</b>	<b>342</b>

## Linde AG

In the 2015 financial year, Linde AG spent a total of EUR 129 m (2014: EUR 128 m) on research and development (R & D), which was slightly less than the amount spent by The Linde Group (EUR 132 m). Where subsidiaries conduct research and development, they charge their costs to Linde AG on a cost-plus basis. This mark-up is eliminated at Group level. Licence fees paid to subsidiaries are also eliminated at Group level.

R & D expenditure in the Linde Gas Division came to EUR 103 m in 2015 (2014: EUR 105 m). In the Linde Engineering division, Linde AG invested EUR 26 m (2014: EUR 23 m) in the development of new and existing technologies for all the main types of plant.

As at 31 December 2015, Linde AG employed a total of 220 staff in research and development (2014: 233 employees). Of these, 118 employees (2014: 133 employees) were in the Linde Gas Division and 102 employees (2014: 100 employees) were in the Linde Engineering Division.



# EMPLOYEES AND SOCIETY

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## Employees across the world

Factors which are crucial to Linde's long-term success are the commitment, motivation and qualifications of its employees. Linde's personnel strategy therefore focuses on developing and promoting talent and providing attractive working conditions.

At 31 December 2015, The Linde Group employed a total of 64,538 staff, a decrease of 1,053 compared with the previous year-end. During the reporting year, Linde refined its structures and processes. The aim is to make the Group even more responsive to customers' wishes and to increase its competitiveness and intensify its focus on growth areas. 11.2 percent of employees left the Group in 2015 at their own request. Depending on the region, this turnover rate ranged from 2.1 percent in the Regional Business Unit (RBU) Southern Europe to 22.7 percent in North America. The overall staff turnover rate, which includes employees retiring and being dismissed as well as employees reaching the end of temporary contracts, was 18.7 percent.

### 28 EMPLOYEES BY SEGMENT AT THE BALANCE SHEET DATE

	31.12.2015	31.12.2014
Gases Division	52,395	53,436
EMEA	21,067	21,779
Asia/Pacific	11,533	12,175
Americas	19,795	19,482
Engineering Division	7,038	7,330
Other Activities	5,105	4,825
<b>GROUP</b>	<b>64,538</b>	<b>65,591</b>

## Remuneration and social benefits

The remuneration package of Linde employees comprises not only a fixed salary component but also variable remuneration components depending on the position of the employee within the Group. Linde also offers its staff various additional benefits in line with the overall and competitive conditions in the different regions. These benefits include occupational pensions and contributions towards health insurance or medical screening. Personnel expenses in 2015 totalled EUR 3.928 bn (2014: EUR 3.536 bn), with EUR 3.378 bn (2014: EUR 3.069 bn) attributable to salaries

(including social security contributions) and EUR 307 bn (2014: EUR 293 m) to pensions. During the reporting year, 42.6 percent of the Group's staff were employed on the basis of collective wage agreements (2014: 46.5 percent).

Linde ensures its employees' remuneration is appropriate and in line with the market and conducts internal and external comparisons of remuneration on a regular basis. Over the past few years, Linde has paid special attention here to fair remuneration for female and male employees in comparable positions.

Linde uses a Group-wide IT system to ensure fair staff appraisals. This system includes for example performance evaluations which are binding for managers and job evaluations, of all executive positions. The evaluations take account of such criteria as transparency, equal opportunities and pay in line with market conditions. Managers' pay is based on the extent to which Group targets and the employee's individual targets have been achieved. Depending on the business area, sustainability targets such as safety and diversity may also be relevant to the calculation. Senior managers also participate directly in the company's growth in value through the Linde Long Term Incentive Plan. In the 2015 financial year, managers below Executive Board level invested in 22,637 Linde shares via the scheme. For each of these shares, the plan participants are entitled to an additional Linde share on the expiry of the four-year qualifying period.

Employees in more than 50 countries have access to occupational pensions and healthcare benefits. Around 80 percent of Linde employees are members of occupational pension schemes. Through defined benefit plans [SEE GLOSSARY], 26,088 active employees are being paid an occupational pension and a further 16,416 former employees have acquired a vested claim to a company pension. In total, 29,116 pensioners are drawing an occupational pension from the Group. At Linde, globally binding rules apply to the modification, introduction or closure of pension plans. Any such measure must be agreed with the Global Pension Committee, which is composed of the Chief Executive Officer, the Chief Financial Officer and experts in accounting, finance and human resources.

## Winning talent

A key element of Linde's human resources strategy is to recruit skilled employees and to increase long-term loyalty of its staff. The Group therefore cooperates with universities and research institutions around the world in order to attract newly qualified graduates. Linde also provides training opportunities in various technical and commercial areas. In Germany alone, the Group offers training in 21 different professions. In the year under review, half of one year's cohort of apprentices and trainees in Germany were taken on as permanent employees at the end of their vocational training and a further 47 percent were offered a fixed-term contract. The number of apprentices and trainees as a proportion of the total number of employees in the Group was 0.9 percent in 2015, of which 53 percent were in non-German companies.

In 2016, Linde is planning to increase the total number of new positions for new apprentices and trainees in Germany to 100. In 2015, 82 apprentices and trainees were recruited there.

In the year under review, Linde stepped up its activities aimed at winning and retaining talented employees. Measures relating to its corporate culture which will enhance its status as an attractive employer are one of the areas on which it is focusing. Here, Linde relies on transparency. Under a pilot scheme in North America, Linde established a presence in 2015 on a social media platform where applicants and employees can rate companies.

### Professional development

Linde promotes the individual development of its employees. In 2015, the Group invested around EUR 14 m in the professional development of its staff. Group-wide professional development programmes are provided through Linde University. These cover such subject areas as personnel management, intercultural communications and diversity. During the year, for example, around 500 managers in the Regional Business Unit (RBU) South Asia & ASEAN took part in training on handling change processes within the Group and more than 80 employees and managers in North America completed training on intercultural communications.

As part of the Group-wide Six Sigma programme, Linde provides employees with training to successfully identify opportunities for improvement in all areas of the Group, from production to administration. Projects during the year focused on more efficient processes and the quality of products and services. In 2015, Lean Six Sigma training was delivered to more than 1,100 employees. Over 800 optimisation projects were completed, leading to total cost savings of more than EUR 40 m.

### Work-life balance

Linde helps its employees achieve a better work-life balance by providing a wide range of opportunities worldwide. In particular, these include flexible working models such as flexitime, part-time work and teleworking arrangements. Part-time employees accounted for around 2 percent of the workforce in 2015. In the Corporate Centre, a new company agreement came into effect during the financial year, making it possible for employees to work from home under certain conditions. In Germany, a total of 434 employees took parental leave during the year, 42 percent of whom were fathers. In the same period, 209 employees in Germany returned to Linde after a period of parental leave.

The Group also focuses on helping employees who are reliant on childcare or have a family member who requires care and on providing assistance during periods of poor health or social hardship. The measures taken by Linde are designed to suit the specific local situation and demands on the Group. In Germany, Linde provides its employees with a childcare subsidy. A service bureau is also available to help employees find appropriate childcare places and

to provide care in exceptional circumstances. Since the introduction of the service in 2007, the bureau's services have been used more than 2,200 times.

Linde promotes the physical and mental health of its employees in many countries. Advice on coping with family crises and addiction problems is provided, for example, and the Group has also introduced initiatives designed to prevent illness. In 2015, events were held, for example, in the South Pacific region covering areas such as mental health in the workplace and conflict resolution.

### Diversity

As a group with global operations, Linde relies on employees who understand local markets and customers and use their different experiences and perspectives to enrich the work of their team. At 31 December 2015, employees from 134 different countries worked in the Group, while 64 nations were represented in the German companies alone. The proportion of senior managers from countries other than Germany in The Linde Group was around 70 percent in the reporting year, with 49 nations represented at this level. In 2015, around 200 Linde employees were sent on secondment to subsidiaries abroad.

Linde's executives play an important role in promoting diversity. On the Executive Board, Thomas Blades is responsible for Diversity & Inclusion. For a number of years, diversity has been an integral part of Linde's executive development programmes. It is also considered when employee evaluations take place. In the Asia/Pacific region, which comprises 15 countries, the Group launched an initiative in 2015 on diversity in the workplace which involved talks, mentoring schemes and workshops and the setting up of women's networking groups. In the United States, Linde promoted inter-generational exchange programmes and exchanges between African American and Latin American colleagues.

An important priority for Linde in the area of diversity is to increase the number of women in management positions. As part of a joint initiative set up by all 30 DAX companies in Germany, Linde set itself the target in 2011 of increasing the proportion of women in senior management positions to between 13 and 15 percent by 2018. In 2015, the proportion of women in senior management positions was 14.8 percent. During the reporting year, the Group replaced this target with more detailed targets for the two upper tiers of management. The proportion of women in the first management tier below the Executive Board should rise to 14 percent by 2017 and 18 percent by 2022. In 2015, the proportion of female senior managers in this tier was 11 percent. In the second management tier below the Executive Board, Linde wants the proportion of women to be 17 percent by 2017 and 22 percent by 2022. This figure was 16 percent in 2015. In order to meet these targets, the Linde Executive Board is supporting various employee initiatives promoting women. These include cross-departmental networking events and training programmes for women with management responsibility or leadership potential. An internal mentoring programme

was launched in 2015 in Germany. Experienced managers provide support particularly to women to enable them to continue to develop their personal and professional skills. This programme should be expanded in 2016. The proportion of women taking part in the Global Leadership Development Circle, the development programme for senior managers, came to 23 percent in 2015 (2014: 27 percent). In accordance with statutory regulations, the Group has also set itself targets for the proportion of women on the Supervisory Board and Executive Board. More detailed information about these targets is given in the *CORPORATE GOVERNANCE DECLARATION AND CORPORATE GOVERNANCE REPORT ON PAGES 17 TO 18*.

### *Involving employees*

Linde relies on the experience of its employees and dialogue with its staff to implement improvements and respond to change. With its People Excellence initiative, Linde supports the willingness of its employees at all levels of the company to engage in continuous learning and change. Among other things, this programme aims to provide professional development opportunities for managers and to devise schemes which recognise exceptional performance. Between November 2014 and February 2015, around 180 employees were trained as People Excellence Champions. Their expertise shall help managers to plan and implement measures which will contribute towards enhancing employee commitment and performance. Linde awards employees around the world who make a particular effort to uphold its corporate goals and corporate values. One of the prizes awarded by the Group in 2015 was to a project team in China and Korea. The team, which runs numerous talent and employee development schemes, contributed to Linde being selected as one of the 50 best employers in those countries by the Top Employers Institute.

Linde strives to work together with employee representatives and trade unions on the basis of partnership and trust, aiming to reconcile the interests of the Group and of the workforce. Linde's system of employee representation in Germany is two-tiered, consisting of a central works council for the Group as a whole and works councils in the decentralised units. Cross-border issues are dealt with by Linde's European Works Council, which currently has 27 members and protects the rights of employees in Europe to information, consultation and advice. There are regional-level works councils in many other countries.

Employee satisfaction is a key factor in Linde's success. Open feedback from staff enables management and the Group to continue to develop. Linde therefore conducts global employee surveys on a regular basis. The Group also encourages its employees to play their part, bringing their knowledge and ideas to the company to introduce improvements and innovations. A cross-departmental team in Germany developed a new concept for idea management in 2015. This consists of a new process to select those ideas for improvement which will be implemented

from the suggestions submitted by employees as well as for rewarding for the best ideas. This new concept shall be introduced in 2016.

### *Occupational safety and health protection*

One of the key aims of Linde's global safety management is to protect its employees. The Group has therefore set out global standards governing occupational safety and health protection. Linde carries out risk assessments and audits to ascertain whether the right conditions are in place to ensure safety at work. In 2015, audits were conducted at 52.6 percent of Linde's operating sites (2014: 57.4 percent).

Linde has set itself the target to continuously reduce the number of workplace accidents resulting in lost working days per million hours worked by employees by 2020. The reference year is 2012. In 2015, the rate of workplace accidents at Linde sites around the world per million hours worked was 2.7 (2014: 2.4). The equivalent figure for contractors [SEE GLOSSARY] during 2015 was 2.2 (2014: 1.8). It is with the deepest regret that the Group must report that two Linde employees lost their lives while working for the Group in 2015 in road accidents in Brazil and Tunisia.

As part of its global safety initiative, Linde has launched numerous measures designed to continue to reduce safety risks and to reinforce the importance of personal responsibility and safety-conscious behaviour. Around 30 to 50 percent of workplace accidents and chronic illnesses at Linde can be attributed to manual or repetitive activities. Many of the Group's health protection initiatives therefore focus in particular on the risks associated with such activities. One such initiative in 2015 was the introduction of powered movers at 25 sites in North America for lifting and transporting cylinders containing liquefied oxygen weighing up to 360 kilograms. These powered machines allow employees to avoid heavy physical exertion. In the Gist Division, 99 percent of personnel handling heavy loads received training on how to do so safely in 2015.

During the financial year, Linde devised a new health care management programme. The initiative focuses on areas such as work-life balance and preventive measures to enhance health protection. Starting in Germany in 2016, employees shall be offered a broad range of options as a result of this initiative.

### *Labour standards and human rights*

Linde commits to the principles of the UN Human Rights Charter. It also seeks to ensure that working conditions within the Group comply with the core labour standards of the International Labour Organisation (ILO) and with other international obligations and industry standards. Linde conducts regular reviews across all regions to establish whether processes have been set up to ensure compliance with labour standards. The Group's central guidelines take human rights into account. These guidelines include the Code of Conduct, purchasing guidelines and purchasing agreements, the Integrity Line Policy [SEE GLOSSARY] and Group risk management. In the Group position on human rights adopted in 2014, the Group describes the processes which confirm its commitment.

Over the past three years, more than 200 audits have been conducted at the Group's business locations which covered social topics such as the avoidance of child labour and the provision of safe, fair working conditions. To detect potential weaknesses, Linde also evaluates the information supplied to the Integrity Line. This is a service which employees and external stakeholders can use to report any breaches of the Group's commitment. Around 26 percent of the reports received via the service line in 2015 related to human resources issues. In various regions, Linde took steps to raise employee awareness. During the financial year, for example, more than 650 employees in India attended training on workplace harassment.

### *Social commitment*

Linde is involved in a variety of projects around the world near its business locations. Its main focus is on education. The Group also supports selected initiatives in areas such as safety, environmental protection, health and social affairs as well as some cultural projects. Cross-regional involvement in such projects is managed by the Group's Corporate Centre, while local initiatives are coordinated by employees in the region concerned. In 2015, Linde provided funding of several million euro for projects and initiatives worldwide, of which around EUR 2.4 m was donated by the Group. As a result of its social commitment during the year under review, Linde was able to reach, to provide an example, more than 125,000 children, school pupils and students.

### *Education and research*

Linde supports science education projects in several countries, for example exhibitions, scientific or technical experiments, or competitions. The Group provided foundation capital of over EUR 8 m to set up the Carl von Linde Academy at the Technical University of Munich. By the end of the summer semester of 2015, around 18,000 students had attended courses offered by the Academy. The institution provides engineering, IT and natural science students with key skills that extend beyond the limits of their theoretical subjects, covering such areas as innovation and business ethics. In Munich, home to the Group's Corporate Centre, Linde is also a founding member of the

Deutsches Museum Future Initiative, the aim of which is to modernise the largest technology museum in the world. By 2018, it will have provided financial backing of EUR 5 m. Linde has also formed a public-private partnership with the Schloss Hansenberg boarding school in Hesse, Germany. The school fosters the talents of pupils with particularly strong academic and social skills. Since the beginning of the Group's involvement in 2004, more than 600 pupils have completed their education at the school.

In 2015, for the fifth consecutive year, Linde supported the Shell Eco-marathon, a competition for young engineers which promotes sustainable mobility and takes place every year in several regions of the world. As a global partner, the Group assumed responsibility for supplying the hydrogen to fill the fuel-cell vehicles used in the competition, while Linde engineers supported the event organisers and participants by providing technical expertise. In the United States, Linde sponsored a competition where school pupils designed their own hydrogen-powered model cars. More than 200 school pupils took part in the event which aims to promote interest in mathematics and technical subjects.

### *Safety*

As a company which places special emphasis on safety, Linde is involved in a number of road safety projects. Several thousand children in the UK have taken part so far in the Child Road Safety Programme organised by Gist, Linde's logistics division. Under this scheme, truck drivers visit primary schools, bringing their vehicles with them, and talk to pupils about road traffic risks. In 2015, Gist received an award for this programme from the charity Brake which campaigns for child road safety.

As a founding member of a road safety initiative, Linde enables young people in Australia and New Zealand to receive safety training just before they take their driving test. Each year, around 50,000 school pupils take part in the scheme.

### *Improving living conditions and health*

In many countries, Linde supports projects which help to improve living conditions for the people in that particular region. During the financial year, for example, the Group sponsored a project in India which helps women learn to read, write and count so that they have the skills to find employment. In several regions, Linde continued to donate products such as medical gases and medical devices for charitable purposes in 2015.

### *Voluntary work and disaster relief*

Linde supports the voluntary work of its employees, for example, by granting staff time off work as well as in some regions by matching employees' donations. In 2015, over 1,300 Linde employees volunteered around the world. After the earthquake in Nepal in April 2015, employees and the Group donated a total of around EUR 160,000 as a result of various initiatives to charitable organisations.

## E 29 ADDITIONAL INDICATORS ABOUT EMPLOYEES

		2015	2014
<b>Structure of the workforce</b>			
Age structure of the staff			
Staff up to 30 years old	in %	17.6	18.4
Staff between 31 and 50 years old	in %	57.6	57.5
Staff over 50 years old	in %	24.8	24.1
Temporary staff	in %	8.6	8.6
Part-time employees	in %	1.9	2.1
Number of employees in Germany		8,014	8,090
Employees on parental leave in Germany (at 31.12.)		434	369
Apprentices and trainees in total workforce	in %	0.9	0.9
Apprentices and trainees in Germany	in %	3.0	3.2
Proportion of female employees			
in total workforce	in %	29.3	28.7
in Germany	in %	25.4	25.4
in senior management positions	in %	14.8	13.9
Nationalities of employees in Germany		64	65
Non-German nationalities in senior management positions	in %	69.5	71.0
Severely disabled employees in Germany	in %	3.6	3.4
Staff covered by collective wage agreements	in %	42.6	46.5
<b>Employee retention and training</b>			
Number of new hires		11,554	12,049
thereof women	in %	45.5	46.2
Staff turnover rate <sup>1</sup>	in %	11.2	10.0
Average length of service	in years	9.0	8.4
Employees who have taken up training opportunities	in %	56.9	66.2
Average training days (per employee)		2.9	3.1
Average expenditure on training programmes (per employee)	in EUR	384.2	349.8
<b>Occupational safety and health protection</b>			
Workplace accidents with at least one day of employee absence	per million hours worked	2.7	2.4
Workplace accidents with at least one day of employee absence		365	318
Fatal industrial accidents of employees		2	2
Fatal industrial accidents of contractors		1	3
Number of days sick leave (per employee)		5.6	5.3

<sup>1</sup> The staff turnover rate relates to employees who have left the Group voluntarily during the financial year.

# SAFETY AND ENVIRONMENTAL PROTECTION

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## Strategy

Linde has set up a global management system for safety and environmental protection based on guidelines and standards which apply worldwide. The Group focuses on minimising safety risks and reducing its environmental impact as well as on ensuring efficient use of energy, resources and materials. Linde's products and technologies also support customers' efforts to make their business processes safer, more efficient and more environmentally friendly.

Linde conducts audits worldwide to verify compliance with the prescribed standards. In order to identify areas of weakness, Linde records incidents which have particular relevance for safety and environmental protection. In addition, near misses from which Linde can learn lessons are documented. To ensure that it is prepared for events such as natural disasters, serious crime and pandemics, the Group also draws up risk management plans. Linde's top priority is the protection of its employees, business partners, neighbours and property.

The Group cooperates with the authorities in the areas surrounding its business locations on safety and environmental protection. In the course of the reporting year, for example, it carried out safety training or emergency drills at around 70 sites worldwide, in conjunction with fire brigades or other local organisations.

Within the framework of its global safety initiative, Linde conducted a worldwide survey among its senior managers at the beginning of 2015 about the Group's safety culture. Based partly on the results of this survey, existing targets and performance indicators were reviewed and redefined. Training schemes and awareness-raising activities with a regional focus support Linde in its goal to eliminate workplace accidents and traffic accidents. In the Regional Business Unit (RBU) South Asia & ASEAN, for example, some 6,000 employees and contractors in 80 locations took part in a Safety Day during the financial year. Within Linde Engineering, training was provided in 2015 in several regions to executives, employees and contractors on construction sites on how to handle safety issues and manage the risk of accidents. To increase the sense of personal responsibility of all executives in the

operating business units of the Group still further, Linde has set safety targets which are linked to the executives' salaries.

Once again during the reporting year, Linde received several awards in recognition of its commitment to safety and environmental protection. In the UK, for example, the Group won an Occupational Health and Safety Award from the Royal Society for the Prevention of Accidents (RoSPA). The organisation highlighted the involvement of Linde employees and the commitment of its leadership.

## Production

Linde experts work at locations around the world to identify and assess risks that may arise from production. In addition, the Group has introduced the Major Hazards Review Programme (MHRP, *SEE GLOSSARY*) to record the greatest potential hazards on a uniform basis worldwide. The Group-wide system enables Linde to set up control mechanisms to minimise the risks arising from its plants. By the end of 2015, the Group had certified more than 90 percent of the relevant plants in accordance with the MHRP process. In the course of the reporting year, Linde also started to introduce a global standard for quantitative risk analyses on its sites.

Linde pays attention to production safety from the initial planning stage of its new plants. This includes the effective protection of particularly sensitive ecosystems. In the reporting year, Linde conducted a review of more than 600 of its production sites worldwide. The aim of the review was to establish whether any of these sites are located in the vicinity of international protected areas. None of the sites investigated lay within or in the vicinity of a particularly sensitive protected area as defined by the International Union for Conservation of Nature (IUCN, *SEE GLOSSARY*).

During the reporting year, around 1,400 safety, environmental protection and health protection audits were carried out on the Group's sites by Linde itself or by third parties. The Group's internal audits are conducted in accordance with the provisions of the international certification processes for quality, environmental management and safety (ISO 9001, ISO 14001 and OHSAS 18001). Several of Linde's sites also have external certifications. In 2015, additional sites, for example in Ecuador, China and Romania, were externally certified in accordance with environmental management standard ISO 14001. The Group's plants supplying carbon dioxide to the food industry for the production of carbonated drinks are certified to the food safety system certification FSSC 22000.

## Transport

The global safety management procedures at Linde also cover the transportation of products. The Group works constantly to bring down the number of transport incidents. In 2015, as part of its global safety initiative, Linde reviewed its performance indicators and targets. Until now, the Group's target has been to halve the number of preventable serious transport incidents per million kilometres travelled by the end of 2017 compared with 2012.

In future, incidents previously classified as non-preventable will be included in a new five-year target yet to be defined. The Group is planning to communicate the new target in the 2016 Annual Report at the latest. According to the new definition, Linde has been able to reduce the frequency of all serious transport incidents per million kilometres travelled since 2012 by around 16 percent. To improve transport safety, the Group has defined a number of different measures. Linde constantly reviews local and global operating standards for driving and vehicle activities and integrates them into its global standard database. In 2015, Linde's safety standards were enhanced, for example, to reduce risks arising from in-vehicle distractions. The Group also provided training during the reporting year to support the global directive on the fitting and use of vehicle mirrors within its commercial vehicle fleet. This initiative aims to reduce the risks from blind spots around vehicles.

Drivers employed by Linde's transport service providers also participate in the Group's regular education programmes on transport standards. Since 2007, uniform safety and operational standards have applied throughout the Group to drivers working for Linde's transport service providers. Compliance with these standards is a condition set out in the purchase agreements made with these contractors. In the reporting year, the Group also expanded its defensive driving training programme beyond commercial vehicle drivers, making it compulsory for drivers of all vehicle types. Over the past three years, Linde has provided training to more than 15,000 passenger car and light vehicle drivers worldwide.

In order to obtain information vital to the improvement of transport safety, Linde launched courses in 2015 designed to improve the skills of the Group's internal incident investigators in several countries, including some in Asia. The aim is to conduct incident investigations consistently throughout the Group. Linde is planning to extend the course to North and South America in 2016. The Group is also investing in technology which will provide information that will help determine the causes of incidents. By the end of 2015, Linde had fitted on-board camera recording systems to a quarter of its global commercial fleet. The proportion of the fleet fitted with such systems is expected to increase in 2016. Once again, Linde recognised many drivers in various regions in 2015 for their personal commitment to safety and their incident-free records.

### **Product stewardship**

Linde monitors product safety along the entire product value chain. The Group's global standards relate not only to the manufacture of products and their transportation, but also to the use of those products. Linde examines potential risks which might arise from existing products, products which are used in new applications or new products which have recently been launched onto the market. Key aspects to consider when the Group conducts risk assessments are the quantities of products sold and the properties of products such as toxicity. For locations

where particularly sensitive chemicals are produced or handled, Linde has devised standardised product safety risk assessments.

In 2015, Linde developed a new global guideline on product stewardship, which brings together existing provisions relating to the handling of products.

During the reporting year, the Group also continued to work on safety initiatives relating to acetylene gas cylinders. In various countries, Linde is testing the use of a new type of sealing cap for acetylene cylinders which is better at preventing damage to the valves and gas leaks when the cylinders are being transported in customers' vehicles. In 2014, the Group had already launched a training initiative to raise awareness among customers of potential risks which might arise when acetylene is transported. A total of around EUR 40,000 was invested in these measures.

Linde holds around 25,000 safety data sheets for its products in a variety of languages. The Group is currently implementing new software to help develop an automatic system for generating consistent product information in all regions by the end of 2016 in all the languages required. Depending on the risk potential, Linde also assesses whether conditions are in place for the proper handling of gases on customer sites. In addition, the Group offers services such as inspection, maintenance and repairs relating to the supply of gases to the customer. Linde also organises training for both its employees and its customers to promote the responsible handling of its products. Through an in-house training programme, around 6,500 participants in ten European countries received instruction in 2015 on how to handle gases safely.

### **International standards**

The Group continuously checks that it is complying with legal regulations. Linde provides information on a global internet platform about how it complies with the provisions of REACH [SEE GLOSSARY], the EU Regulation on chemicals. The Group is currently preparing for the third registration phase in 2018. Only a small number of the substances produced by Linde is required to be registered under REACH. To ensure the successful implementation of the provisions of REACH, Linde also seeks to engage with customers and suppliers and works together with the European Industrial Gases Association (EIGA).

When operating production plants for medical gases, Linde's Healthcare product area complies worldwide with Good Manufacturing Practice [SEE GLOSSARY] for pharmaceutical products. As the legally responsible manufacturer of medical devices, Linde is implementing the requirements of the European RoHS Directive (Restriction of Hazardous Substances, SEE GLOSSARY) in its Healthcare business around the world.

Through its product stewardship programme, the Group also supports the Global Product Strategy (GPS, SEE GLOSSARY) devised by the International Council of Chemical Associations for the safe handling of chemical substances and the United Nations' Globally Harmonised System (GHS) of Classification and Labelling of Chemicals.



## Suppliers

Linde has business relationships with suppliers in more than 100 countries. When selecting suppliers, the Group considers not only commercial criteria such as quality, price and availability, but also aspects such as safety and environmental protection. In 2013, Linde introduced a global Code of Conduct for Suppliers, setting out minimum requirements in the areas of safety, environmental protection, labour rights and human rights, and corporate integrity. New suppliers automatically sign up to the Code of Conduct and there has been a continual process of ensuring that suppliers with whom contracts were signed prior to 2013 need to sign up to the Code. By the end of 2015, more than three quarters of all Linde's strategic suppliers had signed up to the Code of Conduct. During the financial year, the Group provided training on the implementation of the Code of Conduct for Suppliers to around 20 percent of employees working in procurement.

## Evaluating suppliers

Linde conducts random checks to ensure that its suppliers are complying with the guidelines set out in the Code of Conduct, focusing on suppliers with a higher risk in areas such as environmental protection, safety and social responsibility. During the financial year, the Group reviewed just under 1,000 suppliers to ensure that they complied with its guidance on environmental protection, social issues and other issues relating to sustainability. Linde investigates breaches of the Group's requirements by its suppliers. When conducting audits of construction sites in 2015, Linde identified around 200 deviations, some of which related for example to work permit procedures and construction traffic. The Group then works together with the contractors affected to devise measures to improve the situation and to monitor their implementation. Six cases were reported in 2015 via the Group's Integrity Line relating solely to supplier relationships. In one case, the supplier relationship was terminated.

Linde also involves selected suppliers in the training it delivers on safety and environmental management. It included, for example, more than 1,000 employees of contractors in its global initiative, which aims to strengthen awareness of safety on construction sites in the Linde Engineering division. Contractors' drivers participate in Linde's own driver education programmes and training. Measures such as these are designed to ensure that suppliers comply with the Group's requirements and that Linde helps its suppliers to improve their performance. During the financial year, the Group worked together with 25 selected suppliers to develop business continuity plans. These should ensure that the best possible way is found to resume business operations following unexpected events such as natural disasters. The aim was to identify any potential risks and to remedy any weaknesses in procurement processes. A number of changes were made as a result, with some suppliers introducing back-up systems for critical processes and increasing inventory levels of finished products and critical equipment parts.

## Raw materials

Efficient use of resources enables Linde to reduce its environmental impact and cut costs. The most important raw material used by the Group in the production of its gases is air. More than 80 percent of the weight of gases sold by Linde in 2015 was derived from this renewable resource. In the case of carbon dioxide, another of the Group's main products, around 80 percent of the raw material required is recovered from recycling processes. Another major raw material used by Linde is natural gas. In addition, key materials processed include steel and aluminium, which are required in particular for the manufacture of components used in plant construction. In order to manufacture products, the Group's most important input is energy. The main packaging material used by Linde is gas cylinders. In general, these are re-used. A typical Linde cylinder has a lifespan of many years and is refilled on average four times a year. Currently, there are around 25 million Linde cylinders in circulation. Linde examines its supply chain for conflict minerals [SEE GLOSSARY] listed in the US Dodd-Frank Act. Against this background, for example, all Linde Electronics suppliers are required to confirm that their products are conflict-free. Linde checks that this is indeed the case in the course of its regular supplier audits.

## Renewable raw materials

Linde technologies underpin the use of renewable energy and renewable raw materials. For example, the Group is participating in a pilot project launched in 2015 in Mainz, Germany. In what is currently the largest electrolysis plant in the world, surplus renewable energy, especially wind power, is being converted into hydrogen. SEE RESEARCH AND DEVELOPMENT, PAGE 76. In Scandinavia, Linde customers have been able to purchase hydrogen produced entirely from renewable energy such as wind power since 2014, which is certified with a guarantee of origin.

## Energy and climate protection

Linde is working on making more efficient use of resources and reducing greenhouse gas emissions. To do so, it relies on global energy management of plants and processes around the world. The Group provides its customers with gases and technologies which decrease the consumption of natural resources and encourage the use of renewable energy.

The Linde Group controls its energy consumption and greenhouse gas emissions worldwide and reports thereon based on the standards set out in the Greenhouse Gas Protocol [SEE GLOSSARY]. To make the CO<sub>2</sub> balance sheet of the main air gases transparent for its customers, the Group uses a standard formula which has been externally certified. In 2015, Linde was included in CDP's [SEE GLOSSARY] regional Carbon Disclosure Leadership DACH index for the fourth time in a row. Through this index, the independent organisation recognises the quality of companies' reporting on climate protection.



### Global targets

Around 60 percent of the Group's total CO<sub>2</sub> emissions are by-products of electricity generation by energy providers and are reported by Linde as indirect emissions. Most of this electricity is required for the operation of the company's more than 400 air separation plants. Linde has already exceeded the global target it had set itself of improving the average energy intensity of the Group's air separation plants by 5 percent by 2017. By the end of 2015, Linde had achieved efficiency improvements of more than 6 percent compared with the reference year 2008. The benchmark is the global average efficiency of the air separation plants operating at the design plant load. The Group achieved the target mainly through continuous improvements in efficiency in the air separation plants newly brought on stream: for example, by using more efficient compressors and turbines.

Direct emissions at Linde stem mainly from steam reforming in hydrogen and synthesis gas plants (HyCO plants, [SEE GLOSSARY](#)). The Group achieved the target it had set itself of increasing the energy efficiency of its HyCO plants installed around the world by 2 percent by the end of 2015. Linde had increased the energy efficiency of the plants concerned by 2.7 percent by the end of the reporting year compared with the reference year 2009.

The Group has set itself a new climate protection target: By 2020, Linde is seeking to avoid a total of 6 million tonnes of CO<sub>2</sub> emissions compared with the year 2009. To meet this target, the company is focusing on technical improvements in plant design and more efficient production processes in its HyCO and air separation plants.

Another key focus of the Group's climate protection measures is the transportation of products. Linde's own transport fleet and transport service providers carrying Linde goods covered more than 1 billion kilometres in 2015. Optimised routes, better use of transport capacity and defensive driving training helps the Group reduce the number of kilometres travelled, cut the amount of fuel consumed and bring down the level of transport emissions.

### Energy consumption

As an energy-intensive company, Linde requires a reliable and competitively priced energy supply and is constantly reviewing the energy efficiency of its production processes. The Group's energy consumption rose by around 1 percent in 2015 compared with the prior year. In the financial year, Linde took part in the European Union's Emissions Trading System [\[SEE GLOSSARY\]](#) at seven of its hydrogen production sites. There were around 1.1 million tonnes of CO<sub>2</sub> emissions at these plants during the year. Linde was allocated emissions allowances for around 0.9 million tonnes of CO<sub>2</sub> in 2015. Further certificates were purchased.

In the reporting year, Linde identified around 200 projects that helped reduce the Group's energy consumption and CO<sub>2</sub> emissions. Implementing these projects saved the Group costs of over EUR 23 million in 2015. For example, Linde has increased the energy efficiency of compressors at 14 production sites. This was done by replacing old

installations with new and more energy-efficient models. As a result of these projects alone, the Group achieved cost savings in the financial year of over EUR 1.6 m.

In Europe, Linde has worked on the implementation of the provisions of the European Union's Energy Efficiency Directive (EED) in 2015. These include regular energy audits for companies at production sites, distribution sites and offices, or alternatively certification in accordance with ISO 50001. The global standard testifies to systematic energy management, which allows efficiency potential to be recognised. Since 2012, around 85 percent of Linde Gas production plants in Germany have been certified according to ISO 50001. The Group is also exploring the use of renewable energy, the current level of which largely reflects the energy mix applicable in the various regions. In the US state of California, Linde won the 2015 COOL Planet Award presented by Southern California Edison and non-profit organisation The Climate Registry [\[SEE GLOSSARY\]](#) in recognition of its energy management and commitment to reducing greenhouse gases.

### Products

Linde offers its customers various solutions to make production and energy generation processes more environmentally friendly. The Group's gases and technologies help customers reduce emissions to a large extent. In its oxyfuel plants, which are used for example by the glass and steel industries, the combustion air is enriched with oxygen, resulting in much more efficient combustion than if normal ambient air was used. Hydrogen produced by Linde is utilised by the oil industry in fuel desulphurisation. Desulphurised fuel combined with a filter cuts emissions of soot particles, which like CO<sub>2</sub> contribute to the greenhouse effect. In 2015, the use of these two technologies alone by Linde customers avoided around 30 million tonnes of CO<sub>2</sub> emissions. Linde products are also deployed in the mobility sector to reduce environmental pollution. The use of liquefied natural gas (LNG, [SEE GLOSSARY](#)) or hydrogen reduces or eliminates emissions from cars, buses, trucks and ships. Linde is investing in this area as well as in the development of forward-looking, efficient refuelling technology. It is also cooperating with partners to set up a supply infrastructure. In addition, Linde is researching projects involving the recycling and storage of CO<sub>2</sub>. In Germany, the Group opened the Linde Pilot Reformer research facility in Pullach in 2015. New processes for the production of synthesis gas [\[SEE GLOSSARY\]](#) using CO<sub>2</sub> will be tested at this facility. [SEE RESEARCH AND DEVELOPMENT, PAGE 78.](#)

### *Emissions to air*

Linde monitors emissions worldwide not only of greenhouse gases but also of air pollutants in accordance with relevant local legislation. Normally, the operation of the Group's air separation plants results in hardly any direct emissions to air. Other production processes, for example in hydrogen plants and steam boilers, can result in emissions of inorganic gases such as carbon monoxide (CO), sulphur oxides (SO<sub>x</sub>) and nitrogen oxides (NO<sub>x</sub>). Volatile organic compounds (VOC) are mainly released during the coating and cleaning of metals such as those used in gas cylinders, storage tanks and plant components.

Linde works together with its customers and with scientific and research partners to develop solutions which will reduce emissions to air. LoTOx™ technology is being used, for example, to capture and store nitrogen oxides from waste gases arising from combustion processes. By the end of 2015, Linde had installed more than 30 such systems in customers' plants around the world, especially in the United States and China. These systems are capable of preventing more than 17,000 tonnes of NO<sub>x</sub> per annum being emitted into the air.

### *Water*

Linde works continuously to ensure the efficient use of water on its sites and to reduce emissions to water. More than 85 percent of Linde's water requirement is used in cooling processes. Most of this cooling water is just heated, and can subsequently be fed back into the water system without the need for further treatment. The Group takes care to ensure that the temperature reached does not pose any risk to the surrounding ecosystem. The rest of the company's water requirement is used in the manufacture of products, as a source of steam and in office buildings.

Total water use in 2015 was around 681 million cubic metres (2014: 682 million cubic metres). Of this amount, water consumption excluding once-through water came to around 52.8 million cubic metres (2014: 50.7 million cubic metres). Linde uses closed-loop systems as a means of reducing its water consumption, as these enable water to be used several times. The amount of waste water reported at the Group's locations worldwide in 2015 was around 14.0 million cubic metres (2014: 13.2 million cubic metres). In accordance with the regulatory requirements on site, Linde measures emissions of phosphates, nitrates and organic compounds to water.

### *Initiatives for efficient use of water*

During the reporting year, Linde reviewed water supplies at its key production sites worldwide. Just under one fifth of these sites are in regions which experience water stress or water scarcity according to the definition of the World Business Council for Sustainable Development (WBCSD, [SEE GLOSSARY](#)). In Europe, Linde experts in plant construction, water and water chemistry joined forces in 2014 to create an interdisciplinary network. The aim of this project is to optimise the use of water and cooling water systems. Since the beginning of the project, Linde has inspected

39 plants at 19 locations in the region and has implemented a number of improvements. In two air separation plants, the quantity of water and waste water being processed has been reduced by 13,000 cubic metres per annum as a result of optimising cooling circuits, equivalent to cost savings of around EUR 15,000. The Group expects this initiative to produce total cost savings of over EUR 2 million between 2014 and 2016. The cost savings achieved so far have already exceeded the investment made in the project. In the course of the financial year, the Group also delivered training to 50 employees in Europe on topics such as saving water, water treatment and handling claims. There are plans to expand this programme over the coming years. Linde also offers its water management expertise to its customers. In 2015, the Group launched an initiative which analyses the entire water circuit in customers' new plants. The aim is to use fresh water in a way which is resource-efficient in regions with water scarcity and to recycle the waste water produced. Linde is working together with universities and other partners on research into new methods of water processing which will reduce the use of chemicals when waste water is treated.

### *Products for water protection*

Linde gases and technologies are used to eliminate harmful substances in drinking water and bodies of water and also help to treat waste water. In this way, they enable the Group to support its industrial customers in meeting stricter environmental regulations. Around 750 million cubic metres of water, for example, was brought up to drinking water quality in 2015 in six countries using the Solvocar® process from Linde installed by customers. After a major fire in a fertiliser warehouse in southern Germany, Linde's Solvox® process helped to reduce the concentration of ammonium nitrate in a river to such an extent that the fish deaths feared were prevented. The process is also used successfully in river desalination.

### *Waste*

Linde's environmental management aims to keep the consumption of resources as low as possible and to consider regularly how waste can be avoided. The Group's main waste products are oil and oleaginous materials, waste which contains metal and gas cylinders which have reached the end of their useful life. By using closed-loop systems for products, Linde increases material efficiency and resource efficiency and cuts the volume of waste produced. Lime slurry, for example, a by-product of acetylene production, can be re-used in other industries without any further treatment being required. Any waste which is not suitable for re-use or recycling is disposed of in an environmentally sound manner. The Group classifies its waste as hazardous or non-hazardous in accordance with the relevant legislation in the country in which it is operating. Linde focuses in particular on hazardous waste when devising measures to achieve further reductions in waste. The overall amount of waste fell in 2015 compared with 2014, as less waste was produced on construction sites.

The Group's waste management objectives are based on regional requirements, as the type of waste produced differs greatly from one site to another depending on the processes being carried out. During the financial year, Linde achieved the target it had set itself of increasing the waste recycling rate in the UK to 70 percent by 2015. By the end of 2015, a 71 percent recycling rate for waste was achieved in the region. Across the Group, the recycling rate was around 43 percent. During the financial year, as part of a national campaign in New Zealand, Linde expanded its activities relating to the proper disposal of environmentally harmful refrigerants such as chlorofluorocarbons (CFCs), which are used for example in old refrigeration and air conditioning units. Working together with other companies, Linde offers free collection and disposal to both customers and non-customers. Since the start of the campaign in 1993, more than 290 tonnes of refrigerants have been collected. This is equivalent to a reduction in CO<sub>2</sub> emissions of up to 260,000 tonnes.

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		2015	2014
<b>Use of resources</b>			
Electricity consumption	<i>in million MWh</i>	26.8	26.2
of which by air separation plants	<i>in million MWh</i>	23.9	23.5
Natural gas consumption	<i>in million MWh</i>	39.5	39.5
of which by HyCO plants	<i>in million MWh</i>	25.4	24.9
Consumption of other energy sources <sup>1</sup>	<i>in million MWh</i>	12.6	12.2
Water consumption <sup>2</sup>	<i>in million m<sup>3</sup></i>	52.8	50.7
<b>Emissions</b>			
Direct CO <sub>2</sub> emissions	<i>in million t</i>	7.1	7.3
of which by HyCO plants	<i>in million t</i>	4.0	4.0
Transport fleet <sup>3</sup>	<i>in million t CO<sub>2</sub> e</i>	0.92	0.88
Indirect CO <sub>2</sub> emissions	<i>in million t</i>	15.4	15.0
of which by air separation plants	<i>in million t</i>	13.7	13.5
Other greenhouse gas emissions <sup>4</sup>	<i>in million t CO<sub>2</sub> e</i>	1.7	1.5
Total greenhouse gas emissions	<i>in million t CO<sub>2</sub> e</i>	25.1	24.7
Waste	<i>in thousand t</i>	71.5	94.1
Non-hazardous waste	<i>in %</i>	69	76
Hazardous waste	<i>in %</i>	31	24
Waste water	<i>in million m<sup>3</sup></i>	14.0	13.2
<b>Audits and training</b>			
Production sites certified to ISO 9001	<i>in %</i>	66.4	72.1
Production sites certified to ISO 14001	<i>in %</i>	31.0	30.5
Production sites certified to OHSAS 18001	<i>in %</i>	16.1	15.7
Sites where occupational health and safety audits have been conducted <sup>5</sup>	<i>in %</i>	52.6	57.4
Sites where environmental audits have been conducted <sup>5</sup>	<i>in %</i>	48.0	50.0
Employees of Linde Gas who have taken up HSE training opportunities	<i>in %</i>	65.1	62.6
<b>Transport safety</b>			
Serious transport incidents involving trucks <sup>6</sup>	<i>per 1 million km</i>	0.101	0.104

<sup>1</sup> Examples of other energy sources are heating oil, biofuel energy, propane, butane, thermal energy and diesel fuel. From 2015, this figure also includes diesel consumption by Linde's transport contractors. The 2014 figure has been recalculated.

<sup>2</sup> Water consumption relates to used drinking water and industrial water. Once-through water is drawn from a natural or other source, then just warmed and finally piped back into the original source at a temperature posing no risk to the surrounding ecosystem.

<sup>3</sup> From 2015, this figure also includes greenhouse gas emissions generated by Linde's transport contractors. The 2014 figure has been recalculated.

<sup>4</sup> This includes greenhouse gases specified in the Kyoto Protocol: methane (CH<sub>4</sub>), nitrous oxide (laughing gas, N<sub>2</sub>O), perfluorocarbons (PFCs), hydrofluorocarbons (HFCs), sulphur hexafluoride (SF<sub>6</sub>) and nitrogen trifluoride (NF<sub>3</sub>).

<sup>5</sup> The figures disclosed relate to internal and external audits conducted at production sites worldwide.

<sup>6</sup> The performance indicator was redefined in 2015. The new definition includes not only preventable transport incidents but also incidents previously classified as non-preventable. The 2014 figure has been recalculated.

# OPPORTUNITY AND RISK REPORT

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## Opportunity management

As a group with a global footprint, Linde operates in a dynamic environment in which new market opportunities are constantly emerging. To achieve sustainable profitable growth, the Group must be able to recognise such opportunities when they arise and exploit them effectively, while at the same time properly evaluating risks. In the course of strategic discussions between the Executive Board and those personnel responsible for the operating units, which take place on a regular basis, opportunities and potential investments are identified, evaluated, managed and controlled. The development of the strategy of The Linde Group is based to a large extent on the results of these meetings. In turn, this strategy and the corporate goals derived therefrom are also the starting point for Linde's risk management process. *SEE RISK REPORT, PAGES 93 TO 107.*

Fundamentally, Linde is seeking to achieve a good balance between opportunities and risks. Its overriding objective is to increase the value of the Group for all stakeholders by tapping into new market opportunities.

To the extent that it is probable that such opportunities will arise, their expected impact has already been recognised in the Group's strategy and goals, in its outlook for 2016 and in its medium-term targets, as is explained in this report. The following section therefore focuses on potential future developments which might lead to a positive variance from the Group's short-term outlook and medium-term targets.

## Opportunity areas

### *Opportunities which might arise if the performance of the global economy were better than expected*

Linde operates in more than 100 countries worldwide and supplies almost all industry sectors. Particularly in the faster-growing economies, Linde holds significant market shares in the relevant market areas. Linde is therefore particularly strong in those markets which are expected to expand at the fastest rate, even in the medium term. Global economic growth and worldwide industrial production have

a decisive influence on growth in the Group's revenue and earnings. In 2016, economists are forecasting that global gross domestic product in real terms will rise by 2.6 percent and that worldwide industrial production will also increase, namely by 2.3 percent. *SEE OUTLOOK, PAGES 108 TO 110.* If the economy as a whole were to grow at a faster rate than that originally forecast, this could have a more positive impact on revenue and earnings trends in The Linde Group and the earnings trend in Linde AG than is being projected.

### *Opportunities arising from increased climate protection efforts and the growing importance of natural gas as a fuel*

Modern society still depends on energy supplies which are affordable, reliable and environmentally friendly. Demand for energy around the world is continuing to rise, and this is also posing a threat to the climate and the environment. Achieving an economy increasingly based on clean energy necessitates the continued expansion of renewable energy sources and the use of new technologies to ensure that finite resources are utilised in the most environmentally friendly way possible. Linde has the technical skills required to benefit from the market opportunities in this area.

One example of this is the efficient exploitation of oil and natural gas reserves (Enhanced Oil and Gas Recovery: EOR and EGR, *SEE GLOSSARY*) through the use of industrial gases such as nitrogen.

Linde is also well equipped for the rising demand for natural gas. The Group controls the technologies along the value added chain from the liquefaction and transport of natural gas to its safe delivery to the end user.

In the context of climate change, the greenhouse gas carbon dioxide (CO<sub>2</sub>) has a particular role to play. Linde provides the technologies to reduce and recycle CO<sub>2</sub>. In 2015, for example, Linde bought one of the largest plants for the separation and purification of carbon dioxide on stream for the Saudi-Arabian petrochemical company Sabic. Linde is developing, for example, plants for the purification of waste gases and capture of carbon dioxide in power stations. Linde is also involved in recycling CO<sub>2</sub> in greenhouses through its Dutch subsidiary OCAP.

Hydrogen may assume a key function in the supply of energy in future, not only as a fuel but also as storage for electricity generated from renewable energy sources. Linde is a pioneer in the ongoing development of hydrogen technology and is supporting the breakthrough of this ecofriendly fuel in a wide variety of fields.

If global climate protection measures are expanded, the market for environmental technologies will continue to grow. This could have a more positive impact on revenue and earnings trends in The Linde Group and the earnings trend in Linde AG than is being projected.

### ***Opportunities which might arise as a result of regulatory changes in the healthcare sector***

The global growth area healthcare is driven by demographic trends and improvements in diagnostics and therapies, especially in the case of chronic respiratory disorders. In addition, increasing numbers of people are gaining access to healthcare, especially in the emerging economies. What is more, rising pressure on healthcare budgets is providing private companies with the opportunity to create new offerings that are both cost and benefit effective. As a result of the targeted acquisitions and investments it has made in the past few years, Linde is now a globally leading gases healthcare company specialising along an integrated respiratory care path.

The healthcare market is largely state-regulated and is governed by specific authorisation and licensing rules. If the relevant reimbursement policy enables more people to be offered access to wide-ranging medical services, especially in the emerging economies, this could have a more positive impact on revenue and earnings trends in The Linde Group and the earnings trend in Linde AG than is being projected. Infrastructure investment, progress in medical diagnostic procedures and increasing wealth in the emerging economies might also have a positive impact on revenue and earnings trends.

### ***Opportunities resulting from innovation, research and development***

A key element in Linde's business success is its ability to bring innovations to the market which offer sustainable value added. Therefore, the Group is constantly working on improving the quality of its research and development activities and increasing the extent of its cooperation with customers and partners. A broader understanding of the term "innovation" and the resulting culture is creating scope for innovation projects that form an additional source of mobilisation for the company. If even greater progress is made in this area than is currently anticipated, this could mean that more new or improved products and services will be launched onto the market or will become available sooner than expected. This might lead to an increase in the revenue and earnings of The Linde Group and a more positive earnings trend in Linde AG.

Additional information about future R & D opportunities can be found in *RESEARCH AND DEVELOPMENT, PAGES 76 TO 78*.

### ***Financial opportunities***

Movements in interest rates have an impact on Linde's financial result. The Group keeps a close eye on events in the international financial markets, in order to identify and respond swiftly to any opportunities arising. *SEE FINANCING AND MEASURES TO SAFEGUARD LIQUIDITY, PAGES 68 TO 69*.

Exchange rates also have an impact on Group revenue and Group operating profit. Currency differences arise as a result of the translation of various local currencies into the euro (the reporting currency). The greater the

volatility of the euro in relation to other currencies, the more significant the impact of currency translation on Linde's revenue and earnings.

If movements in interest rates and exchange rates prove more favourable to the Group than is currently being forecast, this could have a more positive impact on the financial result and/or the revenue and operating profit of The Linde Group and the earnings of Linde AG than is currently being projected.

### ***Opportunities in purchasing***

Purchase prices also have an impact on the profitability of the Group. This applies particularly to material groups which are dependent on raw materials such as steel, aluminium and brass as well as on energy costs. Linde pursues a portfolio purchasing strategy across the entire Group. Within the framework of its High Performance Organisation (HPO) concept, designed to achieve sustainable efficiency gains, the Group has taken organisational measures and has introduced improved processes in order to continue to improve its purchasing performance and to make controls in this area even more transparent. In 2015, Linde stabilised its procurement activities primarily in "best cost countries" *[SEE GLOSSARY]* at a high level, particularly in India, Korea and China.

If the measures introduced were to generate even greater improvements than are currently anticipated, and/or if the cost of raw materials were to fall, this could have a more positive impact on revenue and earnings trends in The Linde Group and the earnings trend in Linde AG than is being projected.

### ***Opportunities arising from organisational and process-related improvements***

Constant improvements in Linde's business processes and strict cost management help to ensure that the Group's profitability and competitiveness continue to be strengthened. Linde has established a holistic concept which is designed to achieve sustainable efficiency gains. This is linked to measurable targets. *SEE OUTLOOK, PAGES 108 TO 110*. Linde sees the greatest potential for optimisation in the supply chain of its cylinder gas and liquefied gases business as well as in the areas of purchasing and IT. One example of this is the standardisation and automation of gas filling plants in various regions of the world.

If Linde were to exceed its targets in connection with efficiency gains, this would have a more positive impact on revenue and earnings trends in the Group and in Linde AG than is being projected.

### *Opportunities arising from acquisitions*

The takeover of American HomePatient, which was completed with effect from 31 January 2016, will strengthen Linde's presence in the homecare segment. The Group has a strong market position in the United States and Europe, the most important markets in this field. Further acquisitions in the regional industrial gases business or in the healthcare sector could have a more positive impact on revenue and earnings trends of The Linde Group and Linde AG than is currently being projected.

## Risk management and internal control system

### *Risk policy*

Linde, a technology company with global operations, is exposed to a great variety of risks in the course of its international business. A willingness to take entrepreneurial risks enables the Group to exploit opportunities as they arise. Therefore, Linde deliberately accepts risks, as long as they are reasonable and can be managed and controlled, and bears such risks if they are expected to provide opportunities to create a sustainable increase in shareholder value.

In this context, the purpose of risk management is to make it more certain that growth and earnings targets as well as strategic objectives are met. The Executive Board of the Group has established a risk management system (Enterprise Risk Management System or ERM system), the basic principles of which are laid down in Group guidelines and which is reviewed in terms of effectiveness and efficiency at regular intervals. The ERM system has been tailored to suit Linde's corporate structure and takes into consideration not only economic risks but also ecological and social risks.

### *Enterprise Risk Management system*

The key elements of the ERM concept are the risk management system and the internal control system, which are interrelated. The design of the systems is based on the Three Lines of Defence Model (TL0D) [SEE GLOSSARY], proposed in the recommendation issued by FERMA [SEE GLOSSARY] and the ECIIA [SEE GLOSSARY] on the implementation of Article 41 of the 8th EU Directive, which seeks to provide a structured account of the interaction between the various actors in risk management and internal control.

The risk management system focuses on the identification and handling of risks. It seeks to address not only those risks that might affect the viability of the Group as a going concern, as required by the German Law on Control and Transparency in Business (KonTraG, SEE GLOSSARY), but also all significant risks for the Group. The international standard ISO 31000/2009, which sets out best practice for risk management, forms the framework around which Linde's risk management system is built.

The aim of the internal control system is to prevent risks arising in the course of operations by adopting appropriate controls, especially with regard to conformity with the law, compliance with strategy, the quality of accounting and reporting, the quality of processes and the protection of assets. Linde does not limit itself to risks that might have a direct impact on the net assets, financial position or results of operations of the Group, but also includes risks which might have an indirect impact on key financial figures, such as risks to the Group's reputation. The internal control system comprises all the controls which are embedded in the Group's business operations. The structure of the internal control system is based around the globally recognised framework published in 2013 by COSO (the Committee of Sponsoring Organisations of the Treadway Commission) and entitled "Internal Control Integrated Framework".

### *Internal control system*

The internal control system comprises general principles, procedures and regulations aimed at the organisational implementation of corporate decisions. Linde establishes controls in the form of central guidelines, standards and best practices. These define the overall framework and limits within which operating business activities are to be performed. Guidelines, standards and best practices are based on external requirements and internal corporate targets, as well as risk assessments. They are designed to ensure that corporate decisions are adhered to and that all necessary measures are taken to prevent any risks to the achievement of the corporate objectives in accordance with the corporate strategy set by the management. The following guidelines, standards and best practices are examples of components of the internal control system:

- **Compliance Management System (CMS):** Linde implements a CMS, the main components of which include the analysis of compliance risks, training sessions on compliance guidelines and the monitoring of adherence to processes and controls.
- **Guidelines for antitrust law compliance:** The guidelines for antitrust law compliance provide an overview of the main principles of antitrust law. The regulations on how to deal with competitors form a key focal point. These regulations are supplemented and set out in greater detail in Best Practice Guidelines.
- **Anti-corruption compliance:** To avoid the risk of corruption, Linde has introduced a Group guideline on how employees should deal with gifts, hospitality and invitations. In the Healthcare product area, these rules are set out in greater detail and supplemented by the global Healthcare Compliance Guide.
- **Compliance guideline for business partners:** The compliance guideline for business partners states that payments to business partners can only be

made for lawful activities. So, for example, before a contract is concluded, a review of the business partner must be conducted based on certain criteria.

- **Capital expenditure guideline:** The decision and allocation process for capital expenditure in the Group is centralised. Each major item of capital expenditure is approved by a central investment committee and/or by the Executive Board of The Linde Group.
- **Treasury guideline:** The Treasury guideline, which applies worldwide, essentially addresses the financial risks which may be encountered by a group with global operations, such as counterparty risk, liquidity risk and risks arising from changes in interest rates and exchange rates. Clear guidelines are set for the Group to minimise these risks and to manage them actively. A monthly report on these risks is produced by the Treasury Committee, which is chaired by the Chief Financial Officer.
- **Purchasing guideline:** Global purchasing activities present stringent requirements in terms of business conduct. Linde adheres to the principles of free and fair competition. The Group therefore rejects any illegal business practices when purchasing goods and services. Linde has supplemented its employee code of conduct with a purchasing guideline which applies equally to all Group personnel. In these rules, Linde sets out principles relating to business conduct and the avoidance of conflicts of interest.
- **Code of Conduct for Suppliers of The Linde Group:** To prevent the occurrence of ecological, social and compliance risks in the supply chain, Linde introduced a global Code of Conduct for Suppliers. This has formed part of new contracts with suppliers since 2013.
- **Corporate Responsibility:** Linde is committed to responsible behaviour in all its divisions. In key areas such as safety and environmental protection, Linde has devised guidelines and standards which provide concrete examples of how to incorporate the CR guideline into the Group's daily business.

### *Structure and responsibilities*

At the start of the year under review, the refined organisational model passed by the Executive Board came into force. It is designed to lay the organisational foundation for an improvement in customer focus and competitive standing and to step up the focus on high-growth areas. The organisational changes also provided further details on the interfaces and responsibilities for the internal control system, as provided for by the Three Lines of Defence Model (TL0D).

The Corporate & Support Functions set out company-wide guidelines and standards for the functional management of Linde's operating segments. They support the operating segments in the introduction and application of the guidelines and standards.

The Global Governance Centres are responsible for defining company-wide standards and best practices for the relevant areas within the Gases Division. Operating Segment Hubs (OS Hubs) at the interface between the Global Governance Centres and the operating segments use initiatives to coordinate and support the implementation of the central requirements within the operating segments of the Gases Division.

The operating segments are responsible for the implementation and ongoing application of control activities. These control activities are designed to ensure the reliable implementation of the central requirements in operating procedures.

They must incorporate special regional features, such as local legal requirements, into the internal control system.

The Corporate & Support Functions and Global Governance Centres in turn monitor, from the perspective of the Group/the Gases Division, whether the controls applied in the relevant areas are appropriate and effective in order to sufficiently prevent the identified risks from materialising, or to identify and correct these risks. They are responsible for resolving any weak points identified within the internal control system in a suitable manner.

The Internal Audit department is responsible for reviewing the internal control system from a procedural and functional perspective. The Corporate & Support Functions, the Global Governance Centres and the operating segments have to use regular "self-assessments" to assess and document whether processes in the individual functional areas comply with the rules and with security requirements, and whether the controls implemented have been effective. Internal Audit is responsible for the coordination and evaluation of this process.



### ***Accounting-related internal control system***

The procedures for the preparation of the Group financial statements are centrally defined, monitored and implemented.

Accounting and reporting guidelines which apply across the Group set out the minimum requirements for the local units and ensure compliance with legal regulations and the articles of association.

Accounting transactions are recorded by the local subsidiaries of The Linde Group. In the 2010 financial year, Linde started to concentrate some bookkeeping functions in shared service centres in order to centralise and standardise its processes. Shared service centres are now to be found in Europe and Asia/Pacific and provide services for countries in EMEA, Asia/Pacific and North America. The existing controls were transferred at the same time as the functions, while additional controls to ensure proper accounting were also implemented.

This information, recorded either locally or at the shared service centres, is combined with supplementary information into a Group reporting package and submitted by the local units using a standardised Group-wide reporting system.

The reporting and consolidation system is a fully integrated system which not only collects data for the preparation of the quarterly financial statements and Group financial statements on a systematic basis, but also provides data for the monthly management reporting, budget data and data which is relevant to Financial Control and other central departments. All the consolidation procedures are carried out centrally. In particular cases, such as the measurement of pension obligations, external experts are used.

The internal control system procedures, which are geared towards the proper preparation and reliability of the Group accounting records, ensure that business transactions are recorded on a timely basis in accordance with legal regulations and the articles of association and that the records of these transactions are complete. They also ensure that inventories are properly drawn up, and that assets and liabilities are appropriately recognised, measured and disclosed. The separation of administration, implementation, execution and authorisation functions reduces the chance of fraud.

The key controls used to ensure the proper preparation and reliability of the accounting records are:

- automated controls, such as reconciliation routines relating to the figures and systems access controls based on the authorisation concept,
- manual controls, such as variance and trend analyses based on defined key figures and comparisons with budget figures, as well as plausibility checks. The reliability of the accounting procedures is also underpinned by monthly discussions with the operating units about the principal key figures.

The accounting-related internal control system ensures that the accounting and reporting process complies with International Financial Reporting Standards (IFRS) as adopted in the European Union, the German Commercial Code (HGB) and other relevant regulations and laws.

### ***Risk management system***

#### **Structure and responsibilities**

The central risk management department, a Corporate & Support Function, is responsible for devising a standardised Group-wide risk management process and for risk reporting. Those with local responsibility for risk in the operating units are responsible for the implementation of the centrally devised risk management process.

Linde distinguishes between risks which relate to the entire Group (Group risks and corporate risks) and risks arising from the activities of the operating segments whose impact and risk management is limited to certain operating segments (business risks). Group risks and corporate risks are identified by members of the Executive Board and/or heads of the Corporate & Support Functions and Global Governance Centres, and are managed by the personnel to whom the responsibility for those risks has been allocated. Business risks are managed by those responsible for the operating segments in the divisions. They identify, analyse, manage and monitor their risks on a regular basis.

To ensure that standard procedures are applied to the identification and evaluation of business risks in the operating segments, the central risk management department provides those responsible with the risk management tools and methods they require. It also coordinates the Group-wide recording of all significant risks for the Group and continues to develop the tools and methods required to identify and evaluate risks.

#### **Risk identification, evaluation and management**

At the very heart of all risk management is a cyclical risk management process, involving a series of steps from the identification of a risk, to the analysis, evaluation and management of the risk.

The management team of each operating unit within the Group identifies the main risks affecting that unit. The executives in the various units categorise each risk they have identified and evaluate it in terms of criteria determined centrally, including the potential impact of the risk on the Group and the expected probability of its occurrence. When analysing the impact of the risk, Linde considers not only the impact on the results of operations, but also the impact on non-monetary aspects such as safety, reputation and strategy. When evaluating the potential impact of risks and the expected probability of their occurrence, the operating units use a standard scale devised by the central risk management department. This scale has four different risk ratings ranging from low risk to very high risk. Each risk is awarded a risk rating on this standard scale based on its potential impact and a risk rating based on the expected probability of its occurrence.

For each risk, the next step for those in charge is to plan the measures which can be taken to manage the risk, so that the risk may be reduced to an acceptable level. The management of the risk comprises a selection or a combination of measures to avoid risk, transfer risk, reduce risk and control risk. For each risk, responsibility for the risk is assumed by an individual appointed by management. This person then assesses the risk on a regular basis and monitors any measures taken to manage the risk.

The operating units record the information gathered by the risk management process in risk registers. These registers are updated at least every quarter. Risk workshops involving the management teams of the operating units are an important tool for Linde when identifying and evaluating risks and determining the measures to be taken to manage those risks. When identifying risks, a great variety of areas which might entail risk, both within and outside the Group, are taken into consideration. The areas covered by the risk assessments include not only internal processes and resources as well as the economic, financial, legal and regulatory environment, but also social and ecological aspects.

One particular tool which is designed to transfer risk is insurance. Linde has taken out appropriate insurance against potential losses and liability risks to ensure that the potential financial consequences of any risks which have arisen are eliminated or limited. The Group constantly ensures that its insurance is at the optimum level, based on the specific requirements of the business units.

### **Risk reporting**

Risk reporting is managed by the central risk management department. The units included in the risk reporting process differ from those included in the consolidation for accounting purposes in accordance with the IFRS to the extent that risk reporting applies to all operating units which are either fully consolidated or included in the Group financial statements on a line-by-line basis, and for which the annual revenue exceeds a certain figure determined internally. In addition, other operating units which do not meet the aforementioned criteria may be included in the risk reporting process on the basis of specific risk assessments. Uniform standards apply throughout the Group to the reporting of the status of any significant risks and any changes in those risks. Local units make their risk reports using Group-wide web-based reporting tools. Moreover, any risks which arise unexpectedly or which have repercussions for the whole Group are communicated directly to the appropriate Group personnel, irrespective of the normal reporting channels.

Every quarter, the Executive Board is presented with a risk report prepared by the central risk management department, which is then discussed at an Executive Board meeting. The Executive Board presents a report on the risk situation of the Group at the quarterly meetings of the Audit Committee.

The risk report submitted to the Executive Board comprises a description of the significant Group, corporate

and business risks, as well as the corresponding risk assessments and the main measures taken to manage the risks. It also includes a description of the activities of the central risk management department.

In order to assess the risks, the ratings regarding the potential impact of the risk and the expected probability of its occurrence are reported. These ratings are selected by the employees responsible for risk in line with the standard scale of four ratings devised by the central risk management department.

### **Audit**

The internal audit department performs reviews at regular intervals of the efficiency and effectiveness of the risk management system and the internal control system. Independent external auditors (KPMG AG Wirtschaftsprüfungsgesellschaft) also assess the effectiveness of the early recognition system for risks and submit regular reports about the outcome of their reviews to the Group Executive Board and Supervisory Board.

KPMG AG Wirtschaftsprüfungsgesellschaft also audits the Group financial statements and performs a review of the interim and half-year financial reports. Operating units which are material to the Group are also subject to a review or audited by companies in the KPMG AG Wirtschaftsprüfungsgesellschaft network. In the course of the audit of the Group financial statements, key audit issues are also regularly identified and reported.

Both the external auditors and the internal auditors are involved in the testing of subsystems which are relevant to accounting and reporting, such as the Treasury system and the bookkeeping systems of the operating units.

### **Continuous improvement**

Linde's risk management system is forward-looking. It is continuously being improved in order to enhance its effectiveness.

The company reviews all internal controls as and when required, thus ensuring that processes are constantly enhanced. The accounting-related internal controls are reviewed and optimised on a regular basis to ensure an efficient, functional process. The chart of accounts used throughout the Group, for instance, is adapted regularly to meet new internal or external requirements.

## Risk areas

Risks which Linde considers significant and which might have a relevant adverse impact on The Linde Group and on its net assets, financial position and results of operations, were they to occur, are described below.

These comprise, firstly, individual Group & corporate risks or business risks, which, irrespective of the probability of their occurrence, have been allocated the highest of the four ratings in the rating scale in terms of their potential impact. Secondly, they comprise clusters of individual business risks with the same cause which are not significant to The Linde Group in terms of their individual rating for the potential impact of the risk, but might have a significant adverse impact if viewed as a risk cluster and aggregated.

To provide a better overview, the risks are summarised below by risk area. Each risk area highlights the main direct cause of the risk. A description is given not only of the potential impact of the risk but also of the principal strategies currently being employed to manage the risk (from a net perspective). Unless otherwise stated, the risks relate to all segments, although the extent to which they do so may vary.

The order in which the risk areas are shown is based on the Group's current estimate of the relative overall importance of the risk area compared with the other risk areas, starting with the risk area with the greatest relative importance. This does not apply to the description of the risks within a risk area. The estimate of the relative importance of a risk area is based on a comprehensive assessment of the total number of all the individual risks included in the risk area and the ratings of those risks for their potential impact.

### *Economic risks*

Under economic risks, Linde includes risks arising from uncertainty in the global economy as well as customer and sales risks which relate to specific customer or product segments or sales markets.

#### **Risks associated with the global economy**

As a company with global operations, Linde is dependent on cyclical trends in the global economy. A number of risk factors are currently responsible for the uncertainty regarding the future development of the global economy. The main structural challenge facing the global economy remains the high level of sovereign debt in key European economies, as well as in the US and major emerging markets. Uncertainty regarding the nature, scope and time of structural reforms to reduce sovereign debt and generate steady growth could put a damper on the investment climate and pose a risk to the forecast growth outlook in the medium term. The positive special effects on global economic growth that are currently expected to materialise in the short term, mainly due to the general low interest rate level, the low oil price and the expansive fiscal policies, could fuel further uncertainty regarding structural reforms. The uncertain future contractual relationship between the

United Kingdom and the European Union, as well as the related economic consequences, could also have a negative impact on the investment climate and the growth prospects for Europe.

This year will also be characterised by numerous economic challenges. The uncertainty regarding the stability of the positive growth outlook for the US and the future monetary policy pursued by the US Federal Reserve, as well as its impact on the currencies and economies of the emerging markets, are risk factors for the global economy. Following the key rate hike implemented by the Federal Reserve in December of last year, it is not yet clear whether or not, and to what extent, central banks in other countries will also raise their interest rates this year in order to prevent large-scale capital outflows. Interest rate policy measures could put the economies of these countries under pressure and result in increased volatility on the financial markets, with a potential negative impact on the global economy.

The risk of a more pronounced growth slowdown than expected on the Asian and other high-growth markets, as well as the possibility of a continued weak economic environment in the South Pacific region, could have a negative impact on the global economy.

Further economic risks could arise from the uncertain political development of the world's geopolitical crisis spots. In particular, the global increase in the risk of terrorism could prompt short-term economic slumps.

These economic risks and the further development of oil prices are interrelated. On the one hand, a low oil price could help to stimulate the economy, particularly in Europe's export-oriented countries. On the other, sustained low oil prices, or a further drop in oil prices, could further exacerbate the general reluctance to invest in the energy sector, particularly in those countries that are heavily reliant on oil. This would, in turn, have a negative impact on the providers from the industrialised nations. A prolonged phase of low oil prices would increase the risk of mounting insolvency rates among fracking companies in the US or state bankruptcies, both of which would have a negative impact on the financial markets and the global economy.

Should the global economy weaken significantly, there would be the threat of lost sales, a potential lack of new business and an increase in the risk of bad debts in the operating business due to the increasing inability of customers to make payments.

In its function as the parent company of The Linde Group, Linde AG holds investments in Group companies. The carrying amounts of these investments run the risk of a diminution in value should the economic situation or exchange rates of these Group companies change for the worse. This scenario might have an adverse impact on the net income for the year of Linde AG.

Linde operates in many countries and regions, supplying almost all industry sectors. Because of the high level of diversification of its end customers, both in terms of sector and geographical situation, Linde is not exposed to

the volatility of a single end customer market. The impact of individual risks on the Group is reduced as a result of Linde's dual focus on its gases business (which comprises a wide variety of application areas) and plant construction (with its diversified product lines). These two sectors may be affected differently in terms of revenue and earnings when there are changes in certain economic conditions.

#### **Risks associated with competition**

Global competition means that the Group is exposed to the risk of losing market share in all product areas, which may in turn result in a fall in revenue and profit. Increased competition is to be seen in markets with good growth potential, despite high barriers to market entry. Weaker growth prospects coupled with the risk of excess capacity and the migration of existing industries are increasing the economic pressure on the more mature markets.

Linde's overriding strategy is to counter the risks associated with competition by constantly conducting analyses of the market environment, its situation in relation to the competition and the legal framework in each business segment and region. The Group obtains vital information about customer requirements by maintaining regular contact with customers, reinforcing its proximity to the market. Linde uses the information it receives to develop and supply products and services tailored to suit the needs of the market and to enhance its competitive position and continue to raise its market profile.

In the case of industrial gases, for example, Linde is able to stand out from the competition as a result of its technical expertise with gases applications and its profile as an integrated provider of gases and engineering services which can offer various construction and operating models.

Moreover, Linde is continuing with the rigorous implementation of its schemes to reduce costs and improve the efficiency of its processes, with the aim of enhancing its competitiveness.

In plant construction, experts from Linde's Engineering and Gases Divisions have been working on enhancing the competitiveness of the plant portfolio by adopting even greater standardisation and modularisation.

In the cylinder gas business, a modular, scalable plant programme for filling plants was developed. This should make it possible in future to use a modular approach to adapt filling plants to suit a variety of market conditions, so that they do not require much space, yet achieve increased productivity and provide optimal occupational safety. One key component of this new plant concept is the automation of the various filling plant modules which is currently being realised in a number of global projects in order to ultimately build a fully automated filling plant.

#### **Sales risks in the Healthcare product area**

In the Healthcare product area, cost pressure in the healthcare sector and the current trend towards outsourcing by government agencies and health insurance funds means there is a greater risk that the planned growth

and profitability targets cannot be met. These factors are especially evident in sales markets in the United States and in Europe.

Linde's mitigation strategy in the Healthcare product area involves focusing on the development of innovative products and services which take account of the increasing downward pressure on costs in the healthcare sector. These include, for example, new forms of treatment which reduce the length of time patients spend in hospital, and the use of new technologies which make it possible to treat homecare patients more efficiently. These innovations are also promoted by conducting specific healthcare customer surveys on a regular basis. Linde has also used targeted acquisitions to improve its cost structure.

#### **Customer and sales risks associated with the commercialisation of new customer projects and existing projects**

Customer and sales risks associated with both the commercialisation of new customer projects or follow-up projects and existing projects cannot be eliminated, especially in the growth markets. There might be technical or economic reasons on the customer side or in the sales markets which could require changes being made to the project or contract, as a result of which it may not be possible to produce the quantities originally assumed in the business plan in full or it may only be possible to produce such quantities behind schedule. This might give rise not only to uneconomic production processes, but also to significant adverse variances from budgeted cash flow, thereby jeopardising the revenue and earnings targets attached to the investment. To ensure that critical shortfalls are identified and remedied at an early stage, Linde has introduced project prioritisation and additional project management measures. Moreover, the Group has taken steps to ensure that all relevant parties are involved in the risk assessment before the project commences. Close customer relationships and market observation, also during the project term, help ensure that any problems can be solved in partnership with the customer early on.

#### **Sales risks associated with sustained low oil prices**

Oil prices started falling continually from the summer of 2014, a trend that took the markets completely by surprise. Particularly for the Engineering Division, the uncertainty regarding the further development in the oil price poses a risk to the achievement of short-term order intake targets. Potential customers in the petrochemical and natural gas processing industry could well postpone their investment plans further if the climate of uncertainty continues. When it comes to integrated gases projects in the energy sector, the reluctance to invest among customers is also a risk that affects the Gases Division. In the plant construction sector, Linde aims to limit any negative impact by making the most of downturn phases to improve project execution processes for the next upswing.

### *Risks associated with the provision of services*

Risks associated with the provision of services comprise all those risks arising from processes taking place at the operating sites of Linde's divisions, including the distribution of products and related logistics services. These include safety risks during the production process, production risks such as machinery failure, plant breakdowns and capacity bottlenecks, project risks in plant construction and risks associated with products and services.

#### **Safety risks**

The manufacturing of products and construction of plants by the Group may entail risks associated with the production, filling, storage and transport of raw materials, goods or waste. These risks, if not handled appropriately, might lead to personal injury, damage to property or environmental damage, which in turn might result in business interruptions, monetary penalties, compensation payments or environmental clean-up costs. The reputation of The Linde Group could also suffer if any such event were to occur.

Linde strives to be a leader in the areas of safety, health protection and environmental protection. All these aspects are integrated into its management systems. The Group-wide SHEQ (Safety, Health, Environment, Quality) function manages the continuous process of improvement in these areas.

One of the Group's main preventive strategies is ensuring high safety standards for production processes and service processes. Processes with a particularly high exposure to risk have to comply with strict safety requirements. One of the ways Linde dealt with this was to develop and introduce a Major Hazards Review Programme. This programme is used for the systematic evaluation of risks which might lead to accidents or damage to property or to the environment. It helps the Group minimise the risk of incidents that might occur if the safety levels being maintained in its processes were inadequate and it is constantly being updated so as to address potential new risks. In the Engineering Division, Linde also places great emphasis on the uniform integration of safety, health and environmental protection and quality into plant construction and project execution processes. By applying clearly-structured process-based management standards, the Group ensures that relevant aspects, from the engineering design to the assembly and commissioning of the plants on the project sites, are planned, implemented and monitored.

A risk to Linde's employees and to the net assets, financial position and results of operations of the Group is also posed by natural disasters, pandemics and terrorist or other criminal attacks. These risks may also have an indirect impact on Linde if the Group's customers are significantly affected by any of them.

Linde addresses these risks, which are covered in some cases by insurance, via Crisis and Business Continuity Management. In the business units, under the direction of the

Group-wide SHEQ function, local risk reduction measures and contingency plans are implemented. The aim is to minimise as far as possible the potential consequences of serious events and to ensure the fastest possible return to normal operations, even in the case of highly improbable events or losses of a grave nature.

#### **Production risks**

A business interruption at one of Linde's main plants or at a customer's on-site plant could adversely affect the results of operations and reputation of the Group. This would be particularly true if the interruption to the business were to be caused by an accident which also resulted in personal injury or damage to the environment.

Therefore, Linde gives high priority to measures designed to prevent business interruptions. These include, in particular, the monitoring and maintenance of plants so that such incidents may be avoided, and the provision of spare parts of strategic importance. If, despite these preventive measures, a business interruption should occur, the Group has supply networks operating between its production plants so that any business interruption would have only a limited effect or no effect at all on its customers.

In the liquefied gases and cylinder gas product area, the key plants are storage facilities and filling plants. Many of these plants are also important logistics and distribution centres for whole regions, supplying gases from nearby production plants to customers and distribution partners. The availability of storage facilities and filling plants ensures high standards of delivery, short delivery times and minimal transport costs in each region. A business interruption at one of the Group's main plants might therefore have an adverse impact on various products and a number of different customers in a region. Strict compliance with quality and safety standards and environmental protection standards during the manufacture, storage, transport and use of Linde's products is an important element in the avoidance of business interruptions. Moreover, the modular construction of the sites and their fitting out with abundant and versatile filling systems contribute to the robustness of the sites and their processes. As with on-site plants, Linde also has a supply network in most regions with filling plants which would help to reduce or avoid the negative impact of a business interruption on a particular site.

### Project risks in plant construction

Complex major plant construction projects pose particular problems for risk management. The Group's Engineering Division handles significant contracts which may be worth several hundred million euros and where construction may take a number of years.

Typically, the division is involved in the design and construction of turnkey plants. Potential risks may arise as a result of the costings and execution of such complex projects which are subject to uncertainty. Risks may include unexpected technical problems, supply bottlenecks and quality problems with suppliers of major components, unforeseen developments during on-site assembly and problems with partners or subcontractors. Such risks may cause project delays and cost overruns. To manage the risks in plant construction, Linde applies methods, already in the tendering phase, to assess the impact on the profitability of a large-scale project of potential variances from budgeted cost for individual components. The Group conducts simulations of the opportunities and risks associated with each project using numerical methods of analysis. By continually monitoring changes in parameters alongside the progress of the project, Linde is able to identify potential project risks at an early stage and to take appropriate measures to counter them. These risk management tools are constantly being updated and modified to meet the increasing demands of the market.

### Risks associated with products and services

Risks associated with products and services may in extreme cases result in consequences such as potential liability claims, the loss of customers or damage to the Group's reputation. Principal possible causes of risks associated with products and services are product defects or an inadequate level of customer care when Linde is providing services, especially in the Gist division or Healthcare product area.

Linde counters such risks by maintaining the safety and high quality of its products, product information and services. To ensure that products are safe, risk management is based on the concept of product stewardship. The potential hazards and risks that might arise for human beings and the environment from a product during its life-cycle are analysed and the relevant potential risk is determined. Linde takes the measures which are necessary to avoid the risks which have been identified or, if that is not possible, to reduce the risks to an acceptable level.

Product stewardship begins at the moment when key raw materials and supplies and services are purchased. The Group favours suppliers who aim to achieve the same high standards in occupational safety, health protection, environmental protection and quality as Linde itself, and who can demonstrate this, for example, by the fact that they have the appropriate management systems in place.

Customers are also involved in safety management. In the Gases Division, Linde conducts customer screenings for critical products prior to delivery. These investigations aim to minimise the risks which might arise from improper handling of the Group's gases or chemicals.

Linde continually updates its product safety information, such as product safety sheets. The Group takes account of national and international guidelines such as REACH (Registration, Evaluation, Authorisation and Restriction of Chemicals) and GHS (Globally Harmonised System of Classification and Labelling of Chemicals). If, despite all these precautions, problems should arise, the Group's emergency teams are on stand-by to provide support.

To ensure the highest possible levels of safety for patients over the entire life-cycle of Linde's pharmaceutical products, such products are monitored on a continuous basis using the Vigilance Signal Detection System *[SEE GLOSSARY]*. Regular analysis is performed on the safety of pharmaceutical products in Periodic Safety Update Reports (PSURs).

## *Financial market risks and country risk*

### **Financial market risks**

Due to its global operations, Linde is exposed to a number of financial market risks. In particular, these include counterparty risk, liquidity risk and risks arising from movements in interest rates, share prices and exchange rates. These risks continue to be monitored very closely, given the uncertainty in the financial markets, especially in the eurozone.

The basic strategies for the management of interest rate risk, currency risk and liquidity risk and the objectives and principles governing Linde's financing are determined by the Treasury Committee, led by the Chief Financial Officer. This committee usually meets once a month and comprises representatives from Corporate & Support Functions Treasury and Accounting & Reporting.

One of the main criteria for the management of counterparty risk is the credit rating of the counterparty. The Group also monitors changes in other relevant capital market parameters, such as movements in credit default swaps [SEE GLOSSARY] or in the market capitalisation of counterparties. Trading and position limits are defined on this basis. Regular reviews of these limits are performed by a supervisory unit which is independent of the trading entity. Both Linde AG and Linde Finance B.V. also conclude Credit Support Annexes (or CSAs) with their principal banks. Under these agreements, the positive and negative fair values of derivatives are collateralised with cash on a regular basis by the contracting parties. This significantly reduces counterparty risk.

With regard to the management of liquidity risk, Linde has for years pursued a prudent and conservative policy of safeguarding liquidity. As in the past, it has continued to have access to the capital markets in the 2015 financial year. In addition, the EUR 2.5 bn syndicated credit facility which serves as a liquidity reserve and is due to expire in 2019 has been extended by one year as a result of the exercise of one of the options to extend the period for which the facility is available. As a result, Linde has access to agreed unutilised financing commitments of EUR 2.5 bn available until 2020 which are provided by an international banking group. This diversification of financing sources ensures that a concentration of risk in the area of liquidity is avoided.

Interest rate risk arises as a result of fluctuations in interest rates caused by the markets. These fluctuations affect both the interest expense borne by The Linde Group and the fair value of financial instruments. Interest rate risk is centrally managed. On the basis of the operational business model and using the results of sensitivity and scenario analysis, the Treasury Committee determines ranges for the fixed-floating ratio of the financial liabilities and in the main currencies: Euro (EUR), British Pounds (GBP), US Dollars (USD) and Australian Dollars (AUD). Group Treasury manages the rates within the agreed ranges and submits reports to the Treasury Committee about the measures implemented. Methods of hedging exposure to the risk include entering into trading transactions with banks

(short-term, medium-term and long-term interest rate derivatives) and using long-term fixed-interest bonds and loans. In 2015, on average 62 percent of the exposure of the Group was financed at fixed rates, while at year-end the figure was 67 percent.

In the case of exchange rate risk, it is important to differentiate between operational transaction risks, which are the result for example of supply contracts for individual transactions or projects spread across different currency zones, and translation risks. Translation risks arise from the currency translation of the financial statements of subsidiaries where those subsidiaries have a functional currency other than the Group reporting currency.

Business operations and financing activities which are not in the local currency inevitably lead to foreign currency cash flows. The Group guideline states that individual business units must monitor the resulting transaction risks themselves and agree appropriate hedging transactions with Group Treasury, based on predetermined minimum hedging rates, provided there are no other reasons not to hedge the exposure in this way.

Translation risks are hedged within authorised ranges. It should be observed that the translation risk arises in respect of operating profit and/or revenue only when the financial statements of Linde's subsidiaries are translated into the reporting currency (EUR). The use of financial derivatives and, as a result, being prepared to accept considerable volatility in the financial result at the level of the profit for the year may however have a mitigating effect on this risk. In the Group's view, it is therefore not possible to make a meaningful hedge against the exposure to this particular risk. On the other hand, Linde does hedge against the exposure to currency-related fluctuations in net asset values at Group level.

Hedging decisions are made according to the risk strategies of the Treasury Committee. Forward exchange transactions, cross-currency interest rate swaps [SEE GLOSSARY], currency options and foreign currency loans are all used here. The main currencies are US Dollars (USD), British Pounds (GBP), Australian Dollars (AUD) and some Eastern European, South American and Asian currencies. In the Gases Division, the Group also uses financial instruments, especially to hedge against exposure to changes in the price of electricity, natural gas and propane gas.

In the project business in the Engineering Division, foreign currency risks are reduced as much as possible by natural hedges: for example, by purchasing supplies and services in the currency of the contract. Any foreign currency amounts over and above this are fully hedged as soon as they arise, generally by entering into forward exchange transactions.

Financing and hedging decisions are based on the financial information obtained from the Group's treasury management system and its financial and liquidity forecasts. These are embedded in the general financial reporting system, which is also used in the areas of Financial Control and Accounting & Reporting.

With regard to the organisation of the Treasury department, the principle of segregation of duties between the front, middle and back offices is rigorously observed and monitored throughout the risk management process. This means that there is a strict personal and organisational separation between the dealing, the processing and the verification of a financial transaction. Linde uses a treasury management system to implement, record and evaluate transactions. Treasury operations are subject to regular internal and external audits, generally once a year. For further information, *SEE NOTE [29] OF THE NOTES TO THE GROUP FINANCIAL STATEMENTS.*

In certain countries, companies in The Linde Group have defined benefit commitments to their employees under occupational pension schemes. Depending on the structure of the schemes, one-off payments may be made or the employees may be entitled to a pension for life with an annual increase which may be variable or inflation-linked. As a result, the Group is exposed to risks arising from unexpectedly high rates of inflation or increases in life expectancy.

The amount of the obligation is the actuarial present value of all pension commitments and is expressed as the Defined Benefit Obligation (DBO) under IFRS. The amount of the obligation is subject to annual changes in the valuation assumptions, especially those relating to the discount rate and the rate of inflation. This gives rise to interest rate risks and inflation risks.

In most pension schemes, the obligation is covered by assets which are maintained separately. The worth of the pension assets is subject to fluctuations in the fair value of those assets: e.g. bonds and shares. Therefore, Linde is exposed to market risks, especially interest rate risks, spread risks and equity risks.

The risks relating to pension obligations on the one hand and pension assets on the other, and therefore to the net funding position of pensions, are quantified and evaluated on a regular basis by Linde. There is a natural conflict between a significant reduction of the risk and the achievement in the long term of the return on assets required to keep pace with the potential increase in the obligation.

As a guideline, the Executive Board defines risk tolerance at Group level. Measures designed to modify scheme structure are coordinated by the Global Pension Committee and implemented in the local pension schemes. The impact of various scenarios such as high rates of inflation, recession or deflation on the net funding position of pensions is analysed and incorporated into investment decisions. The Group Investment Panel for Pension Assets assesses the long-term opportunities and risks associated with various asset classes and makes decisions or recommendations regarding the investment strategy of the major pension schemes. The investment panel is chaired by the Chief Financial Officer and receives advice from external experts.

## Country risk

A fundamental risk for Linde, as for all companies, is posed by potential radical changes in the political, legal and social environment. Potential risks that Linde might encounter in different countries as a global corporation include the nationalisation or expropriation of assets, legal risks, the prohibition of capital transfers, bad debts with government institutions, war, terrorist attacks and other unrest. Political unrest and wars may also be the cause of indirect risks (economic risks, project risks and risks associated with commercialisation), as a result for example of political and economic sanctions which may extend beyond the borders of the actual region in crisis. For example, the current conflict between Russia and Ukraine might have an impact on Linde's plant construction in Russia, leading to delays or cancellations relating to the implementation of existing projects. There could also be an indirect negative impact on Linde companies in other countries in the Gases Division and in other markets in the Engineering Division if Linde customers were to change their plans as a result of the unrest or due to the potential escalation of sanctions.

There is the fundamental risk that embargoes are agreed for certain countries in which Linde operates, which could have an adverse impact on existing trading relations or investment plans which are in place even before the embargo comes into force. To manage these risks, Linde employs risk assessment tools to evaluate the Group's risk situation in terms of the impact of risk on its net assets, financial position and results of operations and to ensure capital adequacy and cross-border financing at optimal levels of risk. At the same time, individual capital expenditure projects are evaluated for political risk, and target returns on investment are set accordingly. On the basis of this evaluation, the risks are covered, if appropriate, by German government guarantees for direct foreign investment, tailored insurance solutions or similar financial instruments available in the market. Counterparty risk for export business is also assessed, and limited if necessary by hedging instruments such as Hermes guarantees.



## **Regulatory and legal risks**

### **Regulatory risks**

Changes in the regulatory environment might have a negative impact on Linde's costs and international competitiveness. Examples of this are the design of the EU Emissions Trading Scheme and the extra burden being placed on energy-intensive industrial gases production by the increase in electricity prices as a result of additional statutory levies.

In the Healthcare product area, which is largely state-regulated, regulatory changes might also pose risks to Linde which have been described in the section on economic risks above.

The Group is also affected by measures being taken to regulate the international financial markets. In a variety of jurisdictions, Linde must comply with comprehensive rules and reporting requirements when processing financial transactions. Breaches of these rules and requirements may incur significant penalties from the relevant supervisory authorities. Examples which could be quoted here are the Dodd Frank Act in the United States and European Market Infrastructure Regulation (EMIR).

Linde counters these risks by conducting a continuous forward-looking observation and analysis of the legal environment in the various business units and by developing the systems required. In addition, the measures described in the section on risks associated with competition (which are designed to ensure constant customer contact and the development of innovative products and services) contribute towards a reduction in the potential adverse impact of changes in the regulatory environment.

### **Legal risks**

With its international operations, The Linde Group is exposed to numerous legal risks. These may include, in particular, risks relating to product liability, competition and antitrust law, export control, data protection, patent law, procurement law, tax legislation and environmental protection. The outcome of any currently pending or future proceedings can often not be predicted with any certainty. Legal or regulatory judgements or agreed settlements might give rise to expenses which are not covered, or are not fully covered, by insurance benefits. These expenses might have an impact on the Group's business and its earnings.

Certain companies in The Linde Group are party to various legal proceedings in the ordinary course of business. The outcome of the litigation to which Linde Group companies are party cannot be readily foreseen, but Linde believes that such litigation should be disposed of without material adverse effect on its financial position or results of operations.

Prior to the current accounting period, the Brazilian competition authority CADE imposed fines on a number of gases companies, including Linde's Brazilian subsidiary, on the grounds of alleged anti-competitive business conduct in the years 1998 to 2004. Seen from today's perspective, Linde assumes that this decision will not stand up to judicial review.

Certain subsidiaries in The Linde Group are party to lawsuits in the United States, including some in which claims for damages in high amounts have been asserted, for alleged injuries arising from exposure to manganese, asbestos and/or toxic fumes in connection with the welding process. In these cases, the subsidiaries are typically one of several or many other defendants. Based on the litigation experience to date, together with current assessments of the claims being asserted and applicable insurance, Linde believes that the continued defence and resolution of the welding fumes litigation will not have a material adverse effect on the financial position or results of operations of the Group. Nonetheless, the outcome of these cases is inherently uncertain and difficult to predict. The subsidiaries have insurance that covers most or part of the costs and any judgements associated with these claims. The legal actions described above are those currently considered to involve major legal risks. They do not necessarily represent an exhaustive list.

### **Strategic risk**

Linde's long-term growth targets are based inter alia on the growth areas of energy, the environment and health, as well as on dynamic trends in the fast-growing economies.

Achieving the growth targets entails risks both within and outside the Group. Risks arise on the one hand from uncertainty about the future evolution of these growth areas, which are influenced by political, social, legal and economic factors.

On the other hand, there are also risks associated with the internal measures adopted by the Group to achieve its targets. These include strategic initiatives, e.g. the expansion of the product portfolio, acquisition and investment projects and dealing with a broader understanding of the term "innovation". The risks associated with such projects are principally the result of the uncertainty attached to assumptions about the future development of the underlying business model and to the amount of the net investment in an acquisition project or the net cash inflow from an investment project. Investments in tangible assets, acquisitions and sales are discussed and approved by the investment committee or at meetings of the Executive Board. At the beginning of the project, careful consideration is given to the assumptions about the project, the feasibility of the project and the specific risks attached to that project. The Group evaluates, for example, country risk and currency risk, the credit ratings of individual customers and trends in the local (gases) markets, as well as the underlying terms and conditions of the contract and the cost of the investment.

In addition, the Executive Board, the Supervisory Board and Group management personnel hold regular meetings to evaluate the extent to which targets associated with strategic initiatives have been achieved and then implement any corrective measures required. This also involves Linde paying close attention to global economic trends, so that it can take the necessary steps to adapt to changing conditions, by adjusting the timeframe or geographical application of its targets.

Overexposure to a single region, customer segment or a particular technology might, for example, have an adverse impact on Linde's net assets, financial position and results of operations and on its future growth prospects if the assumed overall circumstances change, i.e. in a situation where economic conditions worsen or customers fail to extend their contracts. To counter this risk, the Group applies portfolio management to define and monitor target ranges for its investments. In addition, Linde's integrated business model means that it is in a position to offer its customers different construction and operator models and thus to manage its concentration risk.

### *Purchasing and supply chain risks*

A key element in the success of the business units is the ready availability of products and services purchased by Linde, which must be of suitable quality, and obtainable in appropriate quantities at prices in line with market conditions. This applies not only to certain gases which Linde does not produce itself, but also in particular to material groups which are dependent on raw materials such as steel, aluminium and brass as well as energy.

To reduce risk, Linde pursues a portfolio strategy across the entire Group. This strategy is organised on the basis of defined groups of materials, which are used to categorise all products and services. Reviews are performed for each group of materials to ascertain security of supply, any dependence on suppliers and the supplier portfolio. The Group develops appropriate purchasing strategies using the category management method [SEE GLOSSARY]. The global purchasing organisation and the regional and local purchasing organisations are involved in this process, from the development of strategy to its implementation in the relevant country, so that the information available about local markets can be incorporated into the development of purchasing strategies.

Methods of best practice adopted centrally and supplier selection and evaluation tools are used throughout the Group to support the purchasing organisations.

In addition to adopting purchasing strategies based on groups of materials, Linde is continuing to optimise its supplier portfolio and the contract status of its suppliers so as to minimise purchasing risks. For products and services where the price depends to a great extent on volatile primary markets, the cost risks are minimised by using time-optimised agreements. An example of this is the purchase of energy. On the purchasing side, the impact of price volatility risks relating to the procurement of electricity and natural gas is cushioned by long-term purchasing strategies in the deregulated energy markets. Linde's procurement activities in the relevant wholesale energy markets are governed by a global risk guideline which determines the ranges for price hedging over the next few years. Compliance with the guideline is monitored by a global committee. Data transparency is established by means of a professional IT tool for the energy trade. Furthermore, on the sales side, due to the

amount of energy consumed in industrial gases production, fluctuations in the price of electricity and natural gas are passed through to customers using appropriate price formulas.

When Linde purchases gases, it counters procurement risks and price risks by means of strict technical apportionment (purchase, own production or purification of gases) and geographical distribution. Unforeseen fluctuations in sales volumes can thus be offset. Where take-or-pay agreements have been concluded with gases suppliers, sales risks might possibly arise for the Group if it has not also entered into corresponding agreements with customers. Linde has established management processes to identify, evaluate and, if necessary, limit such risks.

Risks may arise for The Linde Group if long-term procurement contracts are not matched by sales contracts covering a similarly long period. The risks of fluctuations in demand and prices on the sales side are therefore considered by Linde before it enters into long-term purchase contracts.

### *IT risks*

Many processes in the Linde organisation are dependent on the reliability of the IT infrastructure, software applications and data. Therefore, breakdowns or interruptions in the relevant systems or data loss generally have a negative impact on business processes or production. Longer-term shutdowns or critical data loss could adversely affect the net assets, financial position and results of operations of the Group. Breaches of data protection rules, unauthorised data retrieval or the loss of personal data or sensitive corporate data might result in compensation claims, penalty charges, competitive losses and long-term damage to reputation and a loss of confidence in the company.

The current state of the existing security measures is monitored via a Security Reporting process and is reviewed by the IT internal audit department and external IT auditors. These regular assessments and audits identify any amendments and improvements that might be required, thus contributing to continuous, sustainable improvement in the effectiveness of the security measures. The protective measures have been combined to form a multi-stage defence of the systems and data against attacks from outside (malware infection, cyber attacks, invasion attempts). An internal process is used on a regular basis to identify sensitive applications and IT infrastructures which are then subjected to special penetration tests with the help of external experts. There are also specific protective precautions for the networks to reduce the risk of a computer virus spreading from a production site to plant control systems or other production sites. In 2015, further protective measures were also taken allowing the active identification of unusual data traffic in the networks in order to pinpoint the possible start of a malware infection. In order to ensure that systems can be restored within a reasonable period in the event of catastrophic failures or data loss, business-relevant applications run in global

data centres that back the data up to remote locations. Emergency recovery plans are tested on a regular basis to make certain that they are workable.

The Group is continually adopting measures to keep the current IT landscape (including software applications) technically up to date, based on a long-term programme of consolidation. This will make a significant contribution towards ensuring information security and the provision of adequate support for the Group's business processes. To counter the risk that insufficient resources and expertise will be available to maintain company-specific application software developed in-house (which might mean, in the worst-case scenario, that business-critical processes were inadequately supported), Linde has devised a standardised process for the development, testing and use of application software.

The IT project LEAP (Linde Excellence across Processes) is a major strategic company initiative with the aim of achieving synergy effects thanks to the global standardisation of business processes within The Linde Group. There are some project risks attached to the project, due to its size and to the fact that some of the applications are business-critical and will be affected when the project is implemented. In the current roll-out phase of Linde Template to the operating units, there is the risk that, when the changeover from the current processes to the standardised processes takes place, complications might arise in some countries. In the worst case, these might result in breakdowns or temporary interruptions in business processes. To counter this risk, the initiative is being introduced sequentially in different countries. Moreover, in each country where the changeover is taking place, change management techniques will be used to involve the personnel responsible in planning and preparing for it before the operation actually commences. The Group will therefore be able to benefit from the experience it has acquired in countries which have already adopted the new Linde Template.

### *Personnel risks*

The success of the Group is dependent on the commitment, motivation and skills of its employees and executives. The principal risk factors associated with attracting well-qualified staff and ensuring their long-term loyalty to the Group are the ever-increasing shortage of skilled personnel and fierce competition in the labour market. Competition for employees of the right calibre is now becoming even more intense, especially in the Asian markets.

The volatile and demanding market environment means that Linde needs to have the ability to make constant improvements in its processes and to act swiftly to adapt its organisational structure to keep up with rapidly changing industry requirements. Each individual employee has to be ready and willing to embrace change. This attitude is an essential prerequisite for the successful implementation of the processes of change. For Linde, maintaining a relationship with employee representatives

and trade unions which is based on mutual trust and constructive cooperation plays a particularly significant role here.

To address these risk factors, the Group is adopting a holistic approach towards attracting and supporting its employees. The approach is based on Linde's corporate culture and corporate values, which seek to strike a balance between trust and supervision and which focus on employee development. The Group places special emphasis on its employees assuming personal responsibility and thinking and acting in an entrepreneurial way.

In past years, Linde has paid particular attention to well-targeted succession planning for management positions, establishing personnel development schemes as a result. Staff development, the cornerstone of long-term employee loyalty, enhances the skills of management personnel and fosters their commitment to the Group. Key aspects of Linde's management development programme are the variety of opportunities on offer for professional development, the provision of support and advice to target groups, mentoring and coaching programmes, the early identification and advancement of high achievers and those with potential, and attractive remuneration packages in line with market rates.

Linde's staff development schemes is supplemented by extensive opportunities for gaining qualifications and for professional development. This comprehensive programme strengthens its position as an attractive employer in the competitive market for skilled workers. The Group is drawing up new professional development schemes for engineering in particular, further enhancing its attractiveness as an employer.

Linde also trains graduate engineers on university courses with a work experience element and is dealing with the shortage of engineers by continuing to develop its own in-house training schemes. By applying these measures and collaborating more closely with selected higher education institutions, the Group is able to offer skilled employees excellent professional prospects.

**Research and development risks**

The capacity to innovate is key to the success of a technology company such as Linde. The Group's research and development activities focus not only on improvements in existing customer processes, but also on new technologies and gases applications which may form the basis for future business success. Linde is concentrating in particular on the following growth areas: energy and the environment, metallurgy, food, health and new materials. One key aspect for Linde is a broader understanding of the term "innovation" and the promotion of a comprehensive innovation culture. This also includes organisational development, i.e. the way in which Linde will do business with its customers using innovative products and services in the future, and how new technologies such as digitalisation can be used to further boost the efficiency and customer focus of internal corporate processes, allowing Linde to set itself apart from the competition.

Innovative projects differ from normal capital expenditure projects because of their novelty. Generally, the more innovative the project, the greater the risks attached to it. Despite the great opportunities for growth which may be presented by the activities of Linde's research departments, there is a risk that, due to the high level of complexity of the technologies and markets and the fast rate of change associated with them, projects might be postponed, or might not be able to proceed for technological, economic, legal, patent law or safety reasons. The collaboration with research and development partners can give rise to additional risks to the project's success, e.g. the risk that a partner might become insolvent. On the other hand, there is also the risk that competitors might develop new technologies faster or in a more sustainable manner and then launch them onto the market and of this presenting a threat to Linde's core technologies. In order to be even more effective in combating these risks throughout the entire innovation process, from the generation of ideas to the profitable marketing of innovative products and services, Linde has taken organisational measures to improve the use of innovative power and competencies on the application development rise and to pursue an even more systematic approach to developing opportunities. The area of innovation has been combined across the Group in the Corporate & Support Function Technology & Innovation (T&I). This unit monitors major technological trends, checking continually whether innovative ideas within the Group are a good fit with Linde's overall strategy and have the potential to generate profitable growth. This work is supported by cooperation with leading companies and universities and by strategies to protect the Group's intellectual property. T&I also coordinates Linde's participation in the work of standard-setting bodies and associations and its representation on many relevant industry committees, such as those concerned with hydrogen technology. The Group is actively involved in the development of future standards, as the marketing of innovations may depend on compliance with those standards. The Corporate & Support

Function T&I is also responsible for application development, which is embedded in the operating segments, ensuring the necessary degree of proximity to customers. Company-wide initiatives, in the area of digitalisation, for example, are also managed centrally by this department.

**Environmental risks**

As discussed in the section on Safety risks above, the Group's various operating processes in particular are also associated with risks which might lead to environmental damage. Linde understands and knows about the environmental impact of its processes and is therefore in a position to develop and implement plans to limit and control such effects. The Group focuses in particular on reducing emissions and on making continual improvements to its operations to ensure the efficient use of resources, materials and energy. Linde is involved, for instance, in improving the energy efficiency of its production plants and in increasing the performance of its transport fleet. However, the possibility that the Group's activities might lead to environmental damage or that remediation works might cost more than originally budgeted cannot be completely ruled out.

**Tax risks**

As a group with global operations, Linde is governed by the tax rules and regulations applicable in each country in which it operates. When tax rules change, this may result in a higher tax expense and the need to make higher tax payments. In addition, changes in tax legislation may have a significant impact on the Group's tax receivables and tax liabilities as well as on its deferred tax assets and deferred tax liabilities. Moreover, uncertainty about the tax environment in some regions may restrict the Group's opportunities to enforce its rights under the law. Linde also operates in countries with complex tax regulations which could be interpreted in different ways. Future interpretations of these regulations and/or changes in the tax system might have an impact on the tax liabilities, profitability and business operations of the Group. Linde is regularly audited by the tax authorities in various jurisdictions. Tax risks which might arise from the issues discussed above are identified and evaluated on an ongoing basis by the Group.

### *Executive Board summary of the risk situation*

The three major risk areas for the Group continue to be economic risks, risks associated with the provision of services and financial market and country risks. As far as the risk categories of moderate relative significance are concerned, strategic risks moved down the rankings year-on-year to fall behind regulatory and legal risks, while procurement and supply chain risks moved up two positions, overtaking IT risks, since the previous year.

When it comes to the risk categories at the lower end of the ranking, research and development risks have moved up two notches since the previous year, while tax-related risks have fallen to the very bottom of the rankings. Since the risk categories in the middle and at the bottom of the rankings are very close to each other in terms of their ranking, the risk situation for Linde on the whole has not changed to any considerable degree compared with the previous year.

Given the risk management procedures in place, the Executive Board has not identified any risks in the 2015 financial year which might, individually or in total, have an adverse impact on Linde's net assets, financial position and results of operations and thereby on the viability of Linde as a going concern.

If there were to be a change in circumstances, risks which are currently unknown or deemed to be immaterial might gain in importance. Linde has made the organisational arrangements necessary to ensure that it becomes aware at an early stage of any apparent changes in risk situations and makes an appropriate response to such changes.

# OUTLOOK

OPPORTUNITY AND <91  
RISK REPORT  
**OUTLOOK 108**  
DECLARATION ON CORPO- >111  
RATE GOVERNANCE IN  
ACCORDANCE WITH § 289a  
OF THE GERMAN  
COMMERCIAL CODE (HGB)

## Macroeconomic trends

As of January 2016, economists are expecting a similarly low level of growth in the global economy in 2016 as was achieved in 2015. However, the outlook remains highly uncertain and dependant on various opportunities and risks, some of which emerged already in 2015. First of all, there are developments in the emerging markets: The Chinese government is still faced with the particular challenge of driving ahead with the country's current economic transformation without allowing any major inefficiencies to creep in. Another challenge relates to economic development in Brazil and Russia in a complex political environment. These two countries, like other emerging markets, are heavily reliant on oil price developments, which will remain a focal issue in 2016. Any increase or decrease comes hand-in-hand with advantages and disadvantages, respectively, for individual countries and industries. But regardless of the actual price that would be set on the market, it is this volatility and unpredictability that affects the investment plans in many industries. Last but not least, the central banks have a key role to play. Even in the uncertain growth environment that this year will bring, they will have to maintain investor trust regarding significant monetary policy shifts. As a result, they remain a key source of impetus for the global financial system and the global economy. Of course, existing geopolitical tensions as well as possible new trouble spots could further negatively affect the economic developments in 2016.

Against this background, Oxford Economics (OE) is currently predicting growth in global real gross domestic product (GDP) of 2.6 percent in 2016, following a rise of 2.5 percent in 2015. Global industrial production (IP) is forecast to grow by 2.3 percent in 2016, stronger than in 2015 (1.8 percent). Notable to mention is the consensus that the global economy is set for another year of below average growth.

If additional negative developments emerge in 2016, it may be the case that the growth engines we could usually rely on in the past stop working. Oxford Economics is expecting considerable variations in economic trends in different regions of the world for 2016. In the EMEA region (Europe, Middle East, Africa), economists are expecting an increase in economic output of 1.9 percent, a solid growth

compared to the 2015 result (1.5 percent). OE is predicting an increase of industrial production by 1.6 percent in 2016 (2015: 1.0 percent).

In Western Europe and the Euro area, the economy is expected to continue its path of fragile recovery. OE is forecasting a GDP growth of 1.9 percent for Western Europe in 2016, which is slightly higher than the growth seen in 2015 (1.7 percent). The growth forecast for the Euro area is 1.8 percent in 2016 (2015: 1.5 percent). The positive economic trend in Germany should accelerate further in 2016. Here, a GDP growth of 2.1 percent is expected (2015: 1.5 percent).

In the Middle East and Eastern Europe region, a diverging development is expected in 2016. In the Middle East, economists are predicting a GDP growth of 1.9 percent, lower than what had been achieved in 2015 (3.1 percent). In Eastern Europe, GDP is expected to recover to a growth of 1.2 percent (2015: -0.6 percent). Russia is expected to experience another year of recession with a GDP growth of 1.0 percent (IP: -0.4 percent). For South Africa, Oxford Economics is expecting a slight improvement in the economic climate with a GDP growth rate of 1.7 percent (2015: 1.4 percent).

Growth in the Americas region is expected to be at 1.8 percent (2015: 1.5 percent) and is mainly driven by a positive development in the US. Here, both the forecasts released by economic institutes and the recent decision made by the US Federal Reserve to raise key rates highlight the assumed strength of the domestic economy. Oxford Economics is predicting a GDP growth rate of 2.4 percent in the US in 2016 (2015: 2.4 percent), while industrial production is expected to increase by 0.4 percent only. This is a large drop compared to the previous year (2015: 1.3 percent) which already was well below the rate achieved in 2014 (3.7 percent).

For South America, economists are forecasting only a minor improvement in 2016. The still negative trend is driven by the ongoing recession in Brazil. GDP in South America is expected to decline by 1.0 percent (2015: -2.0 percent). Industrial production is expected to shrink by 1.1 percent (2015: -4.8 percent). The recession in Brazil is expected to continue as 2016 GDP is expected to decline by another 2.6 percent in addition to the fall by 3.7 percent in 2015. In the absence of significant policy change the situation in Brazil will not fundamentally improve in the next years.

As in previous years, the strongest growth rates in 2016 are once again expected in the Asia/Pacific region. OE is forecasting that economic output in this region will rise by 5.4 percent (2015: 5.5 percent). Industrial production is expected to increase by 4.8 percent (2015: 4.2 percent). Within the Asia/Pacific region, it is anticipated that China and India will have the fastest rate of growth. GDP in China is expected to grow by 6.3 percent in 2016, marking another year of slow deceleration (2015: 6.9 percent). Industrial production is forecast to increase by 4.9 percent (2015: 5.9 percent). These trends are forecast under the condition that the government will remain capable to deal with the challenges related to a smooth transition towards a more consumer-driven economy and avoid a "hard-landing"

scenario. For India, Oxford Economics is even expecting a GDP growth rate of 7.4 percent (same as in 2015) and a growth of IP by 6.5 percent (2015: 4.7 percent).

Australian GDP is expected to increase by 2.7 percent in 2016 (2015: 2.4 percent). A decline in mining investment over the next few years is, however, also expected to put pressure on growth in the manufacturing industry.

The economic forecasts presented here are based on the dataset from Oxford Economics as of 14 January 2016.

## Industry sector outlook

### *Gases industry*

The forecasts for global economic development suggest that growth rates on the global gases market in 2016 will be roughly on a par with 2015 – although this outlook remains overshadowed by considerable risks. While the market environment in Europe is expected to improve slightly, the growth outlook for the sector in the emerging economies has clouded over slightly. The slight slowdown in the industrial economy in the US and the subdued investment climate for new large-scale projects in the oil and gas, chemicals and steel sectors are likely to influence the market environment. The healthcare sector remains characterised by considerable growth potential, although price pressure continues to mount.

### *Plant construction*

Due to the low oil prices, sector experts predict that the willingness to invest will remain volatile or weak on the international market for large-scale plant construction in 2016. Competitive and price pressure will continue to rise due to the smaller market volume on the whole.

The trends seen in recent years will continue in 2016. These include the global increase in energy requirements, the constant rise in the demand for environmentally friendly technologies and the increased focus on unconventional sources of energy.

## Outlook – Group

In the light of the macroeconomic trends and industry sector outlook described above, and adjusted for currency effects, Linde expects a Group revenue performance in the range of –3 percent to +4 percent in the current 2016 financial year. As far as Group operating profit is concerned, Linde also expects a currency-adjusted development in the range of –3 percent to +4 percent in the 2016 financial year.

The currency-adjusted growth forecast is based on Group revenue and Group operating profit in 2015. It needs to be taken into account, however, that the euro gained value again at the beginning of the 2016 financial year. At the same time, the currencies that are important for Linde such as the US dollar, British pound, Chinese renminbi, Australian dollar and South African rand, in particular, proved to be very volatile. Currency translation effects resulting

from the conversion of the individual currencies into euro as the reporting currency have a significant impact on revenue and earnings. Taking the foreign exchange rates as at January 2016<sup>1</sup> as a basis, for instance, 2015 Group revenue would have amounted to EUR 17.470 bn and Group operating profit to EUR 4.025 bn.

Linde is seeking to achieve a return on capital employed (ROCE) of around 9 percent in the 2016 financial year.

NB: A description of the Group's medium-term targets is given in *TARGETS AND STRATEGY OF THE LINDE GROUP, PAGES 47 TO 49*.

### *Outlook – Gases Division*

The development of the product areas within the Gases Division depends on various factors. Linde's solid on-site project pipeline will make a positive contribution to the revenue and earnings development in the 2016 financial year. In the liquefied gases and cylinder gas product areas, business performance depends primarily on the macroeconomic trends. The Healthcare business will continue to make a positive contribution to revenue development. Nevertheless, the revenue contribution in 2016 will be much lower than in 2015 due to state price cuts for services in the US Healthcare business. At the same time, price adjustments mean that earnings in this product area are likely to decline.

Depending on the general conditions as described above and on economic developments, Linde is looking to achieve the following targets in the Gases Division in the 2016 financial year: The currency adjusted revenue is to be at least at the level of the previous year 2015 and could increase by up to 5 percent. The performance of currency-adjusted operating profit is expected to range between –1 percent and +6 percent.

The margins of the individual segments (EMEA, Asia/Pacific and Americas) are expected to be around the same as those achieved in 2015.

### *Outlook – Engineering Division*

The market environment in the international market for large-scale plant construction is expected to remain extremely volatile in the current year 2016. Although Linde can fall back on a solid order backlog, the positive revenue contributions from these orders will not yet have a full impact in 2016 due to the project structure.

Linde therefore expects the Engineering Division to achieve revenue of between EUR 2.0 bn and EUR 2.4 bn in the 2016 financial year and anticipates an operating margin of around 8 percent.

<sup>1</sup> Forward exchange rates for the end of 2016

## Capital expenditure

Linde's investment strategy targets opportunities which offer above-average growth rates. The Group will continue to pursue the same approach in the 2016 financial year.

Based on the investment decisions it has already made and the great number of investment opportunities still available, Linde expects the investment ratio in the Gases Division in 2016 to correspond to between 11 percent and 12 percent of the revenue, i.e. down on the level for the 2015 financial year (investment ratio 2015: 12.4 percent).

## Financing

In the 2016 financial year, Linde will continue to apply its strategy of safeguarding liquidity and maintaining long-term financing. Depending on developments in the financial markets and the growth opportunities available, Linde continues to regard 2.5 as the upper limit for its dynamic indebtedness factor (net financial debt to operating profit).

The profitable growth defined by the Group's medium-term targets should continue to be financed mainly by the cash flow from operating activities. Linde intends to use the cash flow remaining after deducting capital expenditure to cover its financing costs, future rises in dividend payments expected at the current time and the systematic repayment of its financial debt.

## Dividends

Continuity and prudence will remain the most important criteria for Linde's dividend policy in future. As in previous years, the Group will generally determine the level of the dividend for the 2016 financial year on the basis of the operating profit figures, while at the same time taking long-term expectations regarding business developments into account.

## Outlook – Linde AG

For Linde AG, the parent company of The Linde Group, net income for the year is the core performance indicator. *SEE NET ASSETS, FINANCIAL POSITION AND RESULTS OF OPERATIONS OF LINDE AG, PAGES 73 TO 75.* Investment income for the year is the figure which has the greatest influence on this performance indicator.

Based on the prevailing macroeconomic and sector-specific situation which has been described in detail above, the Group expects an improvement in the net income for the year of Linde AG of around 5 percent in 2016, compared with the figure for 2015.

## Statements relating to the future

The combined management report contains statements relating to the future which are based on managements, current estimates about future developments. These statements are not to be understood as guarantees that these expectations will prove to be true. The future development and the results actually achieved by The Linde Group and its affiliated companies are dependent on a number of risks and uncertainties and may therefore deviate significantly from the statements relating to the future. Linde has no plans to update its statements relating to the future, nor does it accept any obligation to do so.



# DECLARATION ON CORPORATE GOVERNANCE IN ACCORDANCE WITH § 289a OF THE GERMAN COMMERCIAL CODE (HGB)

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CORPORATE GOVERNANCE	
IN ACCORDANCE WITH	
§ 289a OF THE GERMAN	
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The Executive Board and Supervisory Board of Linde AG approved the prescribed declaration pursuant to § 161 of the German Stock Corporation Act (AktG) on the recommendations of the German Corporate Governance Code and made it accessible to the shareholders on a permanent basis. The Declaration of Compliance has been published on the Internet at [WWW.LINDE.COM/DECLARATIONOFCOMPLIANCE](http://WWW.LINDE.COM/DECLARATIONOFCOMPLIANCE).

The Declaration on Corporate Governance can be found on the Internet at [WWW.LINDE.COM/CORPORATEGOVERNANCE](http://WWW.LINDE.COM/CORPORATEGOVERNANCE).

More information about corporate governance at Linde is given in the section entitled Corporate Governance on *PAGES 14 TO 21* of the Annual Report.

# TAKEOVER-RELATED DISCLOSURES

DECLARATION ON CORPORATE GOVERNANCE IN ACCORDANCE WITH § 289a OF THE GERMAN COMMERCIAL CODE (HGB) **TAKEOVER-RELATED DISCLOSURES** 112  
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## *Capital subscribed*

Information about the composition of capital subscribed is given in *NOTE [22]* of the Notes to the Group financial statements.

## *Restrictions affecting voting rights or the transfer of shares*

In the 2007 financial year, it was resolved at the Annual General Meeting to introduce a share option scheme (Linde Performance Share Programme 2007) for management boards and lower-ranking executives under which up to 3.5 million subscription rights can be issued. If members of the management board or certain lower-ranking executives subscribe for or acquire shares as a result of exercising options, 25 percent of those shares or, under certain conditions, shares equivalent to 25 percent of the total number of options exercised are subject to a two-year lock-up period. Under this share option scheme, subscription rights have been issued in each of the years 2007 to 2011.

## *Shareholdings exceeding 10 percent of voting rights*

Linde AG is not aware of any direct or indirect shareholdings which reach or exceed 10 percent of the voting rights.

## *Shares with special rights*

There are no shares with special rights which confer powers of control on the holder.

## *Method of controlling voting rights if employees hold shares and do not exercise their control rights directly*

Employees who hold shares in Linde AG exercise their control rights directly like other shareholders in accordance with legal regulations and the rules set out in the articles of association.

## *Legal regulations and rules set out in the articles of association governing the appointment and removal of members of the Executive Board and changes to the articles of association*

The members of the Executive Board are appointed and removed by the Supervisory Board in accordance with §§ 84 and 85 of the German Stock Corporation Act (AktG) and § 31 of the German Codetermination Act (MitbestG). Appointments are for a maximum term of five years. It is permissible for members of the Executive Board to be reappointed or for their term of office to be extended, although in each case for a maximum period of five years. Pursuant to § 31 of the German Codetermination Act (MitbestG), the appointment of a member of the Executive Board requires at least a two-thirds majority of the members of the Supervisory Board.

According to Article 5.1 of the articles of association, the Executive Board consists of several members. The Supervisory Board determines the number of Executive Board members. According to Article 5.2 of the articles of association, the Supervisory Board can nominate one of the members of the Executive Board as Chairman of the Executive Board and one as Deputy Chairman. The Supervisory Board may revoke the appointment of a member of the Executive Board or the nomination of one of the members of the Executive Board as Chairman of the Executive Board if there is good cause to do so pursuant to § 84 (3) of the German Stock Corporation Act (AktG).

Changes to the articles of association require a resolution to be passed at the Annual General Meeting in accordance with § 119 (1) No. 5 and § 179 AktG. Resolutions at the Annual General Meeting require a simple majority of the votes cast, as set out in Article 13.2 of the articles of association and, if a majority of shares is required, a simple majority of the share capital represented at the vote, as long as mandatory legal rules do not require a different majority. According to Article 9.5 of the articles of association, the Supervisory Board is authorised to make amendments to the articles of association concerning only the form of words used.

## *Powers of the Executive Board to issue and repurchase shares*

Information about the powers of the Executive Board to issue and repurchase shares is given in *NOTE [22]* of the Notes to the Group financial statements.

***Significant agreements relating to a change of control subsequent to a takeover bid***

If there is a change of control, the hybrid bonds issued in 2006 may be called in and repaid early.

In the financial years 2007 to 2015, Linde AG issued benchmark bonds under its EUR 10 bn Debt Issuance Programme, either itself or via Linde Finance B.V. Under the terms and conditions of the bond issues, in the event of a change of control, the bond creditor may demand immediate repayment if the change of control leads to withdrawal of the rating or to a reduction in the rating to or below certain rating levels for unsubordinated unsecured liabilities.

There are also other significant financing agreements in place, each of which includes specific rules which apply in the event of a change in control. These rules set out, in particular, the duty to provide information to the contracting party, as well as the cancellation rights of the contracting party.

There are customer contracts with clauses which grant the customer special cancellation rights in the event of a change of control. If these special cancellation rights are exercised, the contracts provide for appropriate compensation.

Under the terms and conditions of the Linde Long Term Incentive Plan 2012 (LTIP 2012) for management boards and lower tiers of management, in the event of a change of control, special rules may be adopted. The special rules which apply to the share options issued in 2012 to 2015 are that, in the event of a change of control, cancellation rights apply, which means that options may be settled in cash in an amount to be determined.

***Compensation arrangements made by the Company with members of the Executive Board or with employees which will apply in the event of a takeover bid***

If there is a takeover of Linde AG and the employment contracts of the members of the Executive Board are terminated, the members of the Executive Board may be entitled to certain compensation payments based on their contractual emoluments. These compensation payments have an upper limit. A more detailed description of the effect of the rules on change of control on Executive Board members is given in the Remuneration report.

# EVENTS AFTER THE BALANCE SHEET DATE

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With effect from 31 January 2016, Linde acquired 100 percent of the shares of the US company American HomePatient Inc. This company specialises in respiratory therapy for patients suffering from COPD (chronic obstructive pulmonary disease). In the 2014 financial year, American HomePatient generated revenue of around EUR 260 m with a good 2,700 employees. Linde intends to use the acquisition to

expand its position in the healthcare services sector and to generate further synergy potential with the existing Linde business. The purchase price was USD 225 m before purchase price adjustments. Since the acquisition date is so close to the date on which the consolidated financial statements were drawn up, no further conclusive information is available.

Moreover, effective 17 February 2016 Linde sold 40.1 percent of its shares in Linde-Huayi (Chongqing) Gases Co., Ltd, which is held in the Asia/Pacific segment, to the minority shareholder, thus handing over its majority stake in the company within the meaning of IFRS 10. After the sale Linde still holds a stake of 19.9 percent and continues to have significant influence within the meaning of IAS 28. The sale of the shares had still been subject to the approval of the People's Republic of China's Ministry of Commerce (MOFCOM). The approval was granted on 17 February 2016. The sale mainly comprises the deconsolidation of hydrogen plants and associated financial liabilities.

No other significant events occurred for The Linde Group between the balance sheet date and 19 February 2016.

MUNICH, 19 FEBRUARY 2016

DR WOLFGANG BÜCHELE  
[CHIEF EXECUTIVE OFFICER]

GEORG DENOKE  
[MEMBER OF THE EXECUTIVE BOARD]

THOMAS BLADES  
[MEMBER OF THE EXECUTIVE BOARD]

BERND EULITZ  
[MEMBER OF THE EXECUTIVE BOARD]

DR CHRISTIAN BRUCH  
[MEMBER OF THE EXECUTIVE BOARD]

SANJIV LAMBA  
[MEMBER OF THE EXECUTIVE BOARD]

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# Group Financial Statements

## SECTION 3

# GROUP STATEMENT OF PROFIT OR LOSS

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PROFIT OR LOSS  
GROUP STATEMENT OF >117  
COMPREHENSIVE INCOME

## 31 GROUP STATEMENT OF PROFIT OR LOSS

<i>in EUR m</i>	<i>Note</i>	<i>2015</i>	<i>2014</i>
Revenue	[8]	17,944	17,047
Cost of sales		11,575	11,297
<b>GROSS PROFIT</b>		<b>6,369</b>	<b>5,750</b>
Marketing and selling expenses		2,711	2,476
Research and development costs		132	106
Administration expenses		1,664	1,488
Other operating income	[9]	421	486
Other operating expenses	[9]	252	303
Share of profit or loss from associates and joint ventures (at equity)		12	22
<b>EBIT</b>		<b>2,043</b>	<b>1,885</b>
Financial income	[11]	42	50
Financial expenses	[11]	439	415
<b>PROFIT BEFORE TAX</b>		<b>1,646</b>	<b>1,520</b>
Income tax expense	[12]	394	358
<b>PROFIT FOR THE YEAR</b>		<b>1,252</b>	<b>1,162</b>
attributable to Linde AG shareholders		1,149	1,102
attributable to non-controlling interests		103	60
Earnings per share in EUR – undiluted	[13]	6.19	5.94
Earnings per share in EUR – diluted	[13]	6.18	5.91

# GROUP STATEMENT OF COMPREHENSIVE INCOME

GROUP STATEMENT OF <116  
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GROUP STATEMENT OF 117  
COMPREHENSIVE INCOME  
GROUP STATEMENT OF >118  
FINANCIAL POSITION

## 32 GROUP STATEMENT OF OTHER COMPREHENSIVE INCOME

<i>in EUR m, SEE NOTE [22]</i>	2015	2014
PROFIT FOR THE YEAR	1,252	1,162
OTHER COMPREHENSIVE INCOME (NET OF TAX)	622	147
ITEMS THAT WILL BE RECLASSIFIED SUBSEQUENTLY TO PROFIT OR LOSS	609	648
Unrealised gains/losses on available-for-sale financial assets	-7	-10
Unrealised gains/losses on hedging instruments	-477	-650
Currency translation differences	1,093	1,308
ITEMS THAT WILL NOT BE RECLASSIFIED SUBSEQUENTLY TO PROFIT OR LOSS	13	-501
Remeasurement of defined benefit plans	13	-501
<b>TOTAL COMPREHENSIVE INCOME</b>	<b>1,874</b>	<b>1,309</b>
attributable to Linde AG shareholders	1,747	1,185
attributable to non-controlling interests	127	124

# GROUP STATEMENT OF FINANCIAL POSITION

GROUP STATEMENT OF <117  
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GROUP STATEMENT OF 118  
FINANCIAL POSITION  
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## 33 GROUP STATEMENT OF FINANCIAL POSITION

<i>in EUR m</i>	<i>Note</i>	<i>31.12.2015</i>	<i>31.12.2014</i>
<b>Assets</b>			
Goodwill	[14]	11,604	11,055
Other intangible assets	[14]	2,760	2,922
Tangible assets	[15]	12,782	12,151
Investments in associates and joint ventures (at equity)	[16]	242	240
Other financial assets	[16]	57	85
Receivables from finance leases	[18]	217	248
Trade receivables	[18]	2	3
Other receivables and other assets	[18]	426	549
Income tax receivables	[18]	9	3
Deferred tax assets	[12]	327	306
<b>NON-CURRENT ASSETS</b>		<b>28,426</b>	<b>27,562</b>
Inventories	[17]	1,241	1,155
Receivables from finance leases	[18]	52	50
Trade receivables	[18]	2,724	3,061
Other receivables and other assets	[18]	778	723
Income tax receivables	[18]	277	216
Securities	[19]	421	521
Cash and cash equivalents	[20]	1,417	1,137
Non-current assets classified as held for sale and disposal groups	[21]	11	-
<b>CURRENT ASSETS</b>		<b>6,921</b>	<b>6,863</b>
<b>TOTAL ASSETS</b>		<b>35,347</b>	<b>34,425</b>



### 34 GROUP STATEMENT OF FINANCIAL POSITION

<i>in EUR m</i>	<i>Note</i>	<i>31.12.2015</i>	<i>31.12.2014</i>
<b>Equity and liabilities</b>			
Capital subscribed		475	475
Conditionally authorised capital of EUR 57 m (2014: EUR 62 m)			
Capital reserve		6,736	6,730
Revenue reserves		7,146	6,564
Cumulative changes in equity not recognised through the statement of profit or loss		221	-363
<b>TOTAL EQUITY ATTRIBUTABLE TO LINDE AG SHAREHOLDERS</b>	<b>[22]</b>	<b>14,578</b>	<b>13,406</b>
Non-controlling interests	[22]	871	861
<b>TOTAL EQUITY</b>		<b>15,449</b>	<b>14,267</b>
Provisions for pensions and similar obligations	[23]	1,068	1,265
Other non-current provisions	[24]	530	492
Deferred tax liabilities	[12]	1,750	1,726
Financial debt	[25]	8,460	8,562
Liabilities from finance leases	[26]	55	51
Trade payables	[27]	3	2
Other non-current liabilities	[27]	847	648
<b>NON-CURRENT LIABILITIES</b>		<b>12,713</b>	<b>12,746</b>
Current provisions	[24]	1,089	1,012
Financial debt	[25]	1,023	1,294
Liabilities from finance leases	[26]	23	23
Trade payables	[27]	3,223	3,485
Other current liabilities	[27]	1,255	1,073
Income tax payables	[27]	568	525
Liabilities in connection with non-current assets classified as held for sale and disposal groups	[21]	4	-
<b>CURRENT LIABILITIES</b>		<b>7,185</b>	<b>7,412</b>
<b>TOTAL EQUITY AND LIABILITIES</b>		<b>35,347</b>	<b>34,425</b>

# GROUP STATEMENT OF CASH FLOWS

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GROUP STATEMENT OF 120  
CASH FLOWS  
STATEMENT OF CHANGES >122  
IN GROUP EQUITY

## 35 GROUP STATEMENT OF CASH FLOWS

<i>in EUR m, SEE NOTE [30]</i>	<i>Note</i>	<i>2015</i>	<i>2014</i>
Profit before tax		1,646	1,520
<i>Adjustments to profit before tax to calculate cash flow from operating activities</i>			
Amortisation of intangible assets/depreciation of tangible assets	[14], [15]	1,896	1,969
Impairments of financial assets	[16]	16	1
Profit/loss on disposal of non-current assets		-19	-77
Net interest	[11]	366	368
Finance income arising from finance leases in accordance with IFRIC 4/IAS 17	[11]	18	19
Share of profit or loss from associates and joint ventures (at equity)	[16]	-12	-22
Distributions/dividends received from associates and joint ventures	[16]	22	15
Income taxes paid	[12]	-533	-599
<i>Changes in assets and liabilities</i>			
Change in inventories	[17]	-45	-23
Change in trade receivables	[18]	291	-214
Change in provisions	[23], [24]	-22	31
Change in trade payables	[27]	-191	299
External funding/allocation to plan assets re. defined benefit plans	[23]	-	-300
Change in other assets and liabilities		160	14
<b>CASH FLOW FROM OPERATING ACTIVITIES</b>		<b>3,593</b>	<b>3,001</b>
Payments for tangible and intangible assets and plants held under finance leases in accordance with IFRIC 4/IAS 17		-1,894	-1,957
Payments for investments in consolidated companies	[3]	-113	-65
Payments for investments in financial assets		-76	-52
Payments for investments in securities	[19]	-953	-656
Proceeds on disposal of securities	[19]	1,052	306
Proceeds on disposal of tangible and intangible assets and amortisation of receivables from finance leases in accordance with IFRIC 4/IAS 17		88	151
Proceeds on disposal of consolidated companies and from purchase price repayment claims		1	99
Proceeds on disposal of non-current assets held for sale and disposal groups	[21]	12	42
Proceeds on disposal of financial assets		88	69
<b>CASH FLOW FROM INVESTING ACTIVITIES</b>		<b>-1,795</b>	<b>-2,063</b>

### 36 GROUP STATEMENT OF CASH FLOWS

in EUR m, SEE NOTE [30]

	Note	2015	2014
Dividend payments to Linde AG shareholders and non-controlling interests	[33]	-701	-645
Cash outflows for the purchase of own shares	[22]	-	-5
Interest received	[11]	182	168
Interest paid	[11]	-546	-526
Proceeds of loans and capital market debt	[25]	3,150	3,003
Cash outflows for the repayment of loans and capital market debt	[25]	-3,580	-2,976
Cash outflows for the repayment of liabilities from finance leases	[26]	-24	-21
<b>CASH FLOW FROM FINANCING ACTIVITIES</b>		<b>-1,519</b>	<b>-1,002</b>
<b>CHANGE IN CASH AND CASH EQUIVALENTS</b>		<b>279</b>	<b>-64</b>
<b>OPENING BALANCE OF CASH AND CASH EQUIVALENTS</b>	<b>[20]</b>	<b>1,137</b>	<b>1,178</b>
Effects of currency translation		3	23
Cash and cash equivalents reported as non-current assets classified as held for sale and disposal groups	[21]	-2	-
<b>CLOSING BALANCE OF CASH AND CASH EQUIVALENTS</b>	<b>[20]</b>	<b>1,417</b>	<b>1,137</b>

# STATEMENT OF CHANGES IN GROUP EQUITY

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## STATEMENT OF CHANGES IN GROUP EQUITY

*in EUR m, SEE NOTE [22]*

	<i>Capital subscribed</i>	<i>Capital reserve</i>	
<b>AT 01.01.2014</b>	<b>475</b>	<b>6,712</b>	
Profit for the year	-	-	
Other comprehensive income (net of tax)	-	-	
<b>TOTAL COMPREHENSIVE INCOME</b>	-	-	
Dividend payments	-	-	
Changes as a result of share option schemes	-	18	
Repurchase of own shares	-	-	
<b>TOTAL CONTRIBUTIONS BY AND DISTRIBUTIONS TO OWNERS OF THE COMPANY</b>	-	18	
<b>OTHER CHANGES</b>	-	-	
<b>AT 31.12.2014/01.01.2015</b>	<b>475</b>	<b>6,730</b>	
Profit for the year	-	-	
Other comprehensive income (net of tax)	-	-	
<b>TOTAL COMPREHENSIVE INCOME</b>	-	-	
Dividend payments	-	-	
Changes as a result of share option schemes	-	6	
<b>TOTAL CONTRIBUTIONS BY AND DISTRIBUTIONS TO OWNERS OF THE COMPANY</b>	-	6	
<b>OTHER CHANGES</b>	-	-	
<b>AT 31.12.2015</b>	<b>475</b>	<b>6,736</b>	

Revenue reserves		Cumulative changes in equity not recognised through the statement of profit or loss				Total equity attributable to Linde AG shareholders	Non-controlling interests	Total equity
Remeasurement of defined benefit plans	Retained earnings	Currency translation differences	Available-for-sale financial assets	Hedging instruments				
-482	7,005	-1,179	14	221	12,766	820	13,586	
-	1,102	-	-	-	1,102	60	1,162	
-498	-	1,240	-9	-650	83	64	147	
-498	1,102	1,240	-9	-650	1,185	124	1,309	
-	-557	-	-	-	-557	-88	-645	
-	-	-	-	-	18	-	18	
-	-5	-	-	-	-5	-	-5	
-	-562	-	-	-	-544	-88	-632	
-	-1	-	-	-	-1	5	4	
-980	7,544	61	5	-429	13,406	861	14,267	
-	1,149	-	-	-	1,149	103	1,252	
14	-	1,066	-6	-476	598	24	622	
14	1,149	1,066	-6	-476	1,747	127	1,874	
-	-585	-	-	-	-585	-116	-701	
-	-	-	-	-	6	-	6	
-	-585	-	-	-	-579	-116	-695	
-	4	-	-	-	4	-1	3	
-966	8,112	1,127	-1	-905	14,578	871	15,449	

# SEGMENT INFORMATION

(PART OF THE NOTES TO THE GROUP FINANCIAL STATEMENTS)

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## 38 SEGMENT INFORMATION

	<i>Segments</i>	
	<i>Gases Division</i>	
	2015	2014
<i>in EUR m, SEE NOTE [31]</i>		
Revenue from third parties	15,157	13,966
Revenue from other segments	11	16
<b>TOTAL REVENUE FROM THE REPORTABLE SEGMENTS</b>	<b>15,168</b>	<b>13,982</b>
<b>OPERATING PROFIT</b>	<b>4,151</b>	<b>3,835</b>
Restructuring costs (non-recurring item)	160	64
Amortisation of intangible assets/depreciation of tangible assets	1,863	1,937
<b>EBIT</b>	<b>2,128</b>	<b>1,834</b>
Capital expenditure (excluding financial assets)	1,881	1,890

*in EUR m*

Revenue from third parties
Revenue from other segments
<b>TOTAL REVENUE FROM THE REPORTABLE SEGMENTS</b>
<b>OPERATING PROFIT</b>
Restructuring costs (non-recurring item)
Amortisation of intangible assets/depreciation of tangible assets
<b>EBIT</b>
Capital expenditure (excluding financial assets)

Segments								
Engineering Division		Other Activities		Reconciliation		Group		
2015	2014	2015	2014	2015	2014	2015	2014	
2,188	2,516	599	565	–	–	17,944	17,047	
406	590	8	2	–425	–608	–	–	
2,594	3,106	607	567	–425	–608	17,944	17,047	
216	300	44	62	–280	–277	4,131	3,920	
30	–	–	–	2	2	192	66	
41	35	30	33	–38	–36	1,896	1,969	
145	265	14	29	–244	–243	2,043	1,885	
32	41	20	13	3	10	1,936	1,954	

Segments								
Gases Division								
EMEA		Asia/Pacific		Americas		Total Gases Division		
2015	2014	2015	2014	2015	2014	2015	2014	
5,984	5,969	4,130	3,792	5,043	4,205	15,157	13,966	
26	11	27	20	140	109	11	16	
6,010	5,980	4,157	3,812	5,183	4,314	15,168	13,982	
1,790	1,778	1,063	1,010	1,298	1,047	4,151	3,835	
87	38	40	17	33	9	160	64	
688	665	584	645	591	627	1,863	1,937	
1,015	1,075	439	348	674	411	2,128	1,834	
895	946	386	413	600	531	1,881	1,890	

SEGMENT  
INFORMATION

## 39 REVENUE BY LOCATION OF CUSTOMER

<i>in EUR m</i>	2015	2014
Europe	6,574	6,560
Germany	1,305	1,261
UK	1,698	1,559
Asia/Pacific	4,950	5,079
China	1,199	1,299
Australia	1,121	1,124
North America	5,218	4,238
USA	4,691	3,734
South America	663	623
Africa	539	547
<b>GROUP REVENUE</b>	<b>17,944</b>	<b>17,047</b>

## 40 NON-CURRENT ASSETS BY LOCATION OF COMPANY

<i>in EUR m</i>	2015	2014
Europe	10,840	10,468
Germany	1,262	1,198
UK	1,585	1,544
Asia/Pacific	8,135	8,076
China	1,641	1,616
Australia	1,246	1,310
North America	7,161	6,406
USA	2,749	2,411
South America	417	471
Africa	593	707
<b>NON-CURRENT SEGMENT ASSETS</b>	<b>27,146</b>	<b>26,128</b>

The information disclosed by country excludes goodwill.



# Notes to the Group Financial Statements

## PRINCIPLES

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GROUP STATEMENT OF  
PROFIT OR LOSS

### [1] Basis of preparation

The Linde Group is an international technology group which operates across the globe. The parent company of The Linde Group is Linde Aktiengesellschaft. The registered office of Linde AG is in Munich, Germany (Munich Commercial Register, ref. HRB 169850).

The consolidated financial statements of Linde Aktiengesellschaft for the year ended 31 December 2015 have been prepared in accordance with International Financial Reporting Standards (IFRS) issued by the International Accounting Standards Board (IASB) as adopted by the European Union pursuant to EU Regulation No. 1606/2002 of the European Parliament and the Council on the application of International Accounting Standards in the European Union. The consolidated financial statements also comply with the additional requirements set out in § 315a (1) of the German Commercial Code (HGB). All the Standards which were in force at the balance sheet date have been applied and, in addition, those set out in *NOTE [7]* which have been applied early.

The reporting currency is the Euro. All amounts are shown in millions of euro (EUR m), unless stated otherwise.

The Group statement of profit or loss has been prepared using the cost of sales method.

The financial statements of the main operating entities which are included in the consolidated financial statements have been audited by KPMG AG Wirtschaftsprüfungsgesellschaft. The annual financial statements of companies included in the consolidation are drawn up at the same balance sheet date as the annual financial statements of Linde Aktiengesellschaft.

### [2] Principles of consolidation

Companies are consolidated using the acquisition method. The cost of an acquisition is measured at the fair value of assets acquired and the liabilities assumed or transferred at the date of acquisition. Acquisition-related costs are recognised in profit or loss when they arise. The identifiable assets, liabilities and contingent liabilities acquired as a result of a business combination are recognised at their fair values at the date of acquisition. After the purchase price allocation, the remaining difference between the purchase price and the share of net assets acquired restated at their fair values is recognised as goodwill. Adjustments regarding contingent consideration after the one-year adjustment period, disclosed as a liability at the date of acquisition, are recognised in profit or loss. To date, non-controlling interests have always been measured in Linde at the appropriate share of the identifiable net assets in the company acquired.

Where non-controlling interests are acquired, any remaining balance between the acquisition cost and the share of net assets acquired is offset directly in equity.

Intra-Group sales, income and expenses and accounts receivable and payable are eliminated.

Intra-Group profits and losses arising from intra-Group deliveries of non-current assets and inventories are also eliminated.

The same principles apply to the measurement of companies accounted for using the equity method as for the consolidation of subsidiaries.

### [3] Acquisitions

An acquisition is deemed to be significant if its total assets after the purchase price allocation (inclusive of goodwill) exceed EUR 50 m. The major acquisition in the financial year was the acquisition of the LPG business from Wesfarmers Kleenheat Gas Pty Ltd, which is based on Australia's east coast.

#### ***LPG business acquired from Wesfarmers Kleenheat Gas Pty Ltd on Australia's east coast***

On 20 February 2015, The Linde Group acquired the assets and liabilities of the LPG business of Wesfarmers Kleenheat Gas Pty Ltd on the east coast of Australia under an asset deal. From that date, the business has been included in full in the consolidated financial statements of The Linde Group. The aim of the acquisition was to continue to expand the LPG distribution network on the east coast of Australia. After adjusting for some cash items and liabilities, the purchase price was EUR 53 m, which was settled in cash. As at 31 December 2015, all liabilities were settled. The main components of the goodwill of EUR 3 m remaining after the purchase price allocation are synergies with the Group's existing LPG business on the east coast of Australia as well as going concern synergies arising from

the business acquired. The goodwill is not tax-deductible. Compared with the previous quarter, the goodwill has dropped by EUR 1 m due to additional deferred tax assets that had to be set up.

In the course of the acquisition, Linde acquired assets of EUR 12 m which, at the date of acquisition, had already been put up for sale due to stipulations made by the Australian Competition & Consumer Commission. By the reporting date, these assets had been sold in full at the value stated and the revenue associated with the sale had already been received.

No receivables were acquired in the course of the acquisition.

### Other acquisitions

In the 2015 financial year, Linde made acquisitions to expand its business in the Industrial Gases and Healthcare product areas in the EMEA and Americas segments. The total purchase price for these acquisitions was EUR 54 m, of which EUR 50 m was paid in cash. The total purchase price includes deferred purchase price payments and contingent consideration. Sometimes separate transactions were agreed with former owners. In the course of these corporate acquisitions, Linde has acquired non-current assets as well as inventories. Total goodwill arising was EUR 42 m, including fair value adjustments in the course of purchase price allocations of EUR 7 m. Part of the goodwill (EUR 39 m) is tax-deductible. Key components of the goodwill relate to synergy potential and access to new sales markets.

Linde has not acquired any receivables in the course of these acquisitions.

### € 41 IMPACT OF ACQUISITIONS ON THE NET ASSETS OF THE LINDE GROUP

Opening balance upon initial consolidation	Fair value	
	Kleenheat	Other
in EUR m		
Non-current assets	36	14
Inventories	5	1
Other current assets	1	–
Non-current assets classified as held for sale and disposal groups	12	–
Equity (attributable to Linde AG)	50	12
Liabilities	4	3

### € 42 IMPACT OF ACQUISITIONS ON THE PROFIT FOR THE YEAR OF THE LINDE GROUP

in EUR m	Profit for the year since the acquisition date	Profit for the year since the beginning of the financial year 01.01.2015 <sup>1</sup>
Kleenheat	2	2
Other	12	17

<sup>1</sup> When these amounts were calculated, the fair value adjustments were assumed to be the same as those at the acquisition date.

### € 43 IMPACT OF ACQUISITIONS ON THE REVENUE OF THE LINDE GROUP

in EUR m	Revenue since the acquisition date	Revenue since the beginning of the financial year 01.01.2015 <sup>1</sup>
Kleenheat	86	97
Other	31	51

<sup>1</sup> When these amounts were calculated, the fair value adjustments were assumed to be the same as those at the acquisition date.

## [4] Scope of consolidation

The Group financial statements comprise Linde AG and all the companies over which Linde AG is able to exercise control as defined by IFRS 10 or joint control together with other parties as defined by IFRS 11. Companies over which Linde AG can exercise joint control are included in the consolidated financial statements on a line-by-line basis or using the equity method, depending on the characteristics of the company. If Linde AG holds a majority of the voting rights in a company, this generally indicates that it exercises control over the company in the absence of any other restrictive contractual agreements. If Linde AG holds the same number of voting rights as another company, this generally indicates joint control, unless other (contractual) rights result in control being exercised by one of the shareholders. A detailed explanation of the discretionary powers and assumptions governing the decision as to whether control or joint control is being exercised is given in *NOTE [7]*.

Associates over which Linde AG can exercise significant influence as defined by IAS 28 are also accounted for using the equity method. Significant influence is presumed if Linde AG holds (directly or indirectly) 20 percent or more of the voting rights in an investee, unless it can be clearly demonstrated that this is not the case.

Non-consolidated subsidiaries, when taken together, are immaterial from the Groups point of view in terms of total assets, revenue and profit or loss for the year and do not have a significant impact on the net assets, financial position and results of operations of the Group. For that reason, they are not included in the consolidated financial statements.

The following table shows the structure of companies included in the consolidated financial statements of The Linde Group and movements during the financial year:

### 4.4 COMPANIES INCLUDED IN THE SCOPE OF CONSOLIDATION

	At 31.12.2014	Additions	Disposals	At 31.12.2015
<b>CONSOLIDATED SUBSIDIARIES</b>	<b>535</b>	<b>4</b>	<b>11</b>	<b>528</b>
of which within Germany	18	1	1	18
of which outside Germany	517	3	10	510
<b>PROPORTIONATELY CONSOLIDATED COMPANIES</b>	<b>5</b>	<b>-</b>	<b>-</b>	<b>5</b>
of which within Germany	-	-	-	-
of which outside Germany	5	-	-	5
<b>COMPANIES CONSOLIDATED USING THE EQUITY METHOD</b>	<b>35</b>	<b>2</b>	<b>-</b>	<b>37</b>
of which within Germany	3	2	-	5
of which outside Germany	32	-	-	32
<b>NON-CONSOLIDATED SUBSIDIARIES</b>	<b>59</b>	<b>1</b>	<b>10</b>	<b>50</b>
of which within Germany	1	-	1	-
of which outside Germany	58	1	9	50

Changes in the scope of the consolidation may arise as a result of acquisitions, sales, mergers or closures, or as a result of changes in the assessment as to whether Linde AG exercises control or joint control over a company.

Most of the disposals were mergers and liquidations. Significant additions during the financial year are shown in *NOTE [3]*.

In the 2015 financial year, there were no effects on the equity of The Linde Group from changes in ownership interests in subsidiaries which did not result in either a loss of control or the acquisition of control.

The following fully-consolidated subsidiaries are exempt under the provisions of § 264 (3) and § 264b of the German Commercial Code (HGB) from the duty to prepare full annual financial statements and a management report in accordance with the rules for corporations set out in §§ 264 ff. HGB and to have them audited and publish them.

#### € 45 COMPANIES EXEMPT FROM THE DISCLOSURE OBLIGATIONS

<i>Name</i>	<i>Registered office</i>
Commercium Immobilien- und Beteiligungs-GmbH	Munich
Gas & More GmbH (formerly Heins & Co. GmbH)	Pullach
Hydromotive GmbH & Co. KG	Leuna
Linde Electronics GmbH & Co. KG	Pullach
Linde Gas Produktionsgesellschaft mbH & Co. KG	Pullach
Linde Gas Therapeutics GmbH	Oberschleissheim
Linde Remeo Deutschland GmbH	Blankenfelde-Mahlow
Linde Schweißtechnik GmbH	Pullach
Linde Welding GmbH	Pullach
MTA GmbH Medizin-Technischer Anlagenbau	Mainhausen
Selas-Linde GmbH	Pullach
Tega-Technische Gase und Gasetechnik Gesellschaft mit beschränkter Haftung	Würzburg
Unterbichler Gase GmbH	Munich

A list of the shareholdings of The Linde Group is given in *NOTE [41]*.

## [5] Foreign currency translation

Transactions in foreign currency are translated into the relevant functional currency of the individual entity on the transaction date. After initial recognition, foreign currency fluctuations relating to monetary items are recognised in profit or loss. For non-monetary items, historic translation rates continue to form the measurement basis.

Translation differences arising from the translation of items into the reporting currency continue to be recognised in other comprehensive income. The financial statements of foreign subsidiaries, including any fair value adjustments identified in the course of a purchase price allocation, are translated in accordance with the functional currency concept set out in IAS 21 The Effects of Changes in Foreign Exchange Rates.

Assets and liabilities, contingent liabilities and other financial commitments are translated at the mid-rate on the balance sheet date (closing rate method). Items in the statement of profit or loss and the net income for the year are translated at a rate which approximates to the translation rate on the date of the transaction (the average rate).

Differences arising from the translation of equity are recognised in other comprehensive income.

The financial statements of foreign companies accounted for using the equity method are translated using the same principles for the adjustment of equity as are applied to consolidated subsidiaries.

The financial statements of subsidiaries outside Germany which report in a functional currency which is the currency of a hyperinflationary economy are adjusted for the change in purchasing power arising from the inflation.

Since 1 January 2010, Linde's activities in Venezuela, which is classified as a hyperinflationary economy in accordance with IAS 29 Financial Reporting in Hyperinflationary Economies, have been reported after adjustment for the effects of inflation. The rate of inflation is calculated using an inflation index derived from exchange rate movements.

## [6] Currencies

The principal exchange rates used are set out below:

### 46 PRINCIPAL EXCHANGE RATES

Exchange rate EUR 1 =	ISO code	Exchange rates on balance sheet date		Average rates for the year	
		31.12.2015	31.12.2014	2015	2014
Argentina	ARS	14.05343	10.24078	10.26795	10.77206
Australia	AUD	1.49183	1.48084	1.47802	1.47214
Brazil	BRL	4.30163	3.21518	3.69700	3.11940
Canada	CAD	1.50315	1.40591	1.41916	1.46599
China	CNY	7.05243	7.50845	6.97578	8.18499
Czech Republic	CZK	27.02527	27.65959	27.28359	27.53506
Hungary	HUF	315.53554	316.60565	309.95693	308.69539
Malaysia	MYR	4.66296	4.23024	4.33630	4.34290
Norway	NOK	9.60318	9.04242	8.95181	8.35564
Poland	PLN	4.26117	4.28704	4.18471	4.18442
South Africa	ZAR	16.80825	13.99917	14.16740	14.39463
South Korea	KRW	1,277.14050	1,323.45492	1,256.27746	1,398.12305
Sweden	SEK	9.17495	9.43320	9.35721	9.09911
Switzerland	CHF	1.08828	1.20289	1.06803	1.21463
Turkey	TRY	3.16877	2.82439	3.02340	2.90375
United Kingdom	GBP	0.73685	0.77679	0.72610	0.80610
USA	USD	1.08605	1.20985	1.11003	1.32851

## [7] Accounting policies

The Group financial statements have been prepared under the historical cost convention, with the exception of derivative financial instruments, available-for-sale financial assets, and plan assets relating to externally funded defined benefit pension obligations, which are stated at their fair values.

The financial statements of companies included in the consolidated financial statements of The Linde Group have been prepared using uniform accounting policies in accordance with IFRS 10 Consolidated Financial Statements.

### Recently issued accounting standards

The IASB and IFRIC have revised numerous standards and have issued many new ones in the course of their projects to develop IFRS and achieve convergence with US GAAP. Of these, the following standards are mandatory in the consolidated financial statements of The Linde Group for the year ended 31 December 2015:

→ Improvements to IFRSs (2011–2013)

### Recently issued accounting standards which have not yet been applied

The following standards have been issued by the IASB, but have not been applied in the consolidated financial statements of The Linde Group for the year ended 31 December 2015, as they are either not yet effective and/or have not yet been adopted by the European Union:

- IFRS 15 Revenue from Contracts with Customers including Amendments to IFRS 15 (first-time application according to IASB in financial years beginning on or after 1 January 2018)
- IFRS 9 Financial Instruments and Subsequent Amendments (Hedge Accounting and Amendments to IFRS 9, IFRS 7 and IAS 39 as well as Amendments to IFRS 9/IFRS 7: Mandatory Effective Date and Transition Disclosures) (first-time application according to IASB in financial years beginning on or after 1 January 2018)
- Amendments to IAS 19 Employee Benefits: Defined Benefit Plans – Employee Contributions (first-time application according to IASB in financial years beginning on or after 1 July 2014)
- Amendments to IFRS 11 Joint Arrangements: Accounting for Acquisitions of Interests in Joint Operations (first-time application according to IASB in financial years beginning on or after 1 January 2016)

- Amendments to IFRS 10 and IAS 28: Sale or Contribution of Assets between an Investor and its Associate or Joint Venture (first-time application postponed indefinitely by the IASB)
- Amendments to IFRS 10, IFRS 12 and IAS 28: Investment Entities: Applying the Consolidation Exception (first-time application according to IASB in financial years beginning on or after 1 January 2016)
- Amendments to IAS 16 Property, Plant and Equipment and IAS 38 Intangible Assets: Clarification of Acceptable Methods of Depreciation and Amortisation (first-time application according to IASB in financial years beginning on or after 1 January 2016)
- Amendments to IAS 1: Disclosure Initiative (first-time application according to IASB in financial years beginning on or after 1 January 2016)
- Improvements to IFRSs (2010–2012), (first-time application according to IASB in financial years beginning on or after 1 July 2014)
- Improvements to IFRSs (2012–2014), (first-time application according to IASB in financial years beginning on or after 1 January 2016)

### IFRS 15

The new standard on revenue recognition seeks to create a framework which brings together the multiplicity of rules which have until now been set out in a number of different standards and interpretations. At the same time, its objective is to establish a uniform set of basic principles which will apply to all industry sectors and all categories of revenue transactions.

In future, companies preparing their financial statements in accordance with IFRS will determine when to recognise revenue (at what time or over which period) and how much revenue to recognise by applying five steps. In addition to the five-step model, the standard includes a number of additional rules covering various issues in detail, such as accounting for contract costs and contract modifications.

In particular, the new rules set out below may give rise to changes from existing practice:

- Recognition of revenue when control is transferred. The point in time at which (or the period of time over which) revenue is recognised is determined by the transfer of control over the goods or services to the customer (control approach). The transfer of risks and rewards (risk and reward approach) is only an indication that a transfer of control may have taken place.
- Specific rules on arrangements with multiple elements
- New criteria for revenue recognition over the period in which the performance obligation is satisfied
- More extensive disclosures in the notes to the financial statements

The new rules become effective for the financial years beginning on or after 1 January 2018. Earlier application is permitted and recommended. EU endorsement is still pending.

IFRS 15 will replace IAS 11 Construction Contracts and IAS 18 Revenue, as well as IFRIC 13 Customer Loyalty Programmes, IFRIC 15 Agreements for the Construction of Real Estate, IFRIC 18 Transfer of Assets from Customers and SIC 31 Revenue – Barter Transactions Involving Advertising Services.

A detailed analysis is currently being conducted to evaluate the impact of IFRS 15.

### IFRS 9

IFRS 9, which was published in July 2014, replaces the existing guidelines in IAS 39 Financial Instruments: Recognition and Measurement. IFRS 9 presents revised guidance on the classification and measurement of financial instruments, including a new expected credit loss model for calculating impairment on financial assets, as well as new general hedge accounting requirements. It also carries forward from IAS 39 the requirements for recognition and derecognition of financial instruments. IFRS 9 – subject to adoption into EU law – first needs to be applied to financial years which start on or after 1 January 2018. Earlier application is permitted.

IFRS 9 may result in changes in the classification and measurement of financial assets and financial liabilities in the consolidated financial statements of The Linde Group.

The remaining standards have no significant impact on the net assets, financial position and results of operations of The Linde Group.

### Revenue recognition

Revenue comprises sales of products and services as well as lease and rental income, less discounts and rebates.

Revenue from the sale of goods is recognised when the risks of ownership have been transferred to the customer, the consideration can be reliably determined and it is probable that the associated receivables will be collected. If the customer is to take delivery of the goods, the relevant sale will not be recognised until the customer has accepted delivery. In the case of long-term service contracts, revenue is recorded on a straight-line basis over the period of the contract.

Revenue from customer-specific construction contracts is recognised in accordance with IAS 18 Revenue and/or IAS 11 Construction Contracts, based on the stage of completion of the contract (percentage of completion method, or PoC method). Under this method, revenue is only recognised when the outcome of a construction contract can be estimated reliably.

For revenue and earnings recognition relating to lease transactions, see the section below on accounting for leases.

### Long-term construction contracts

Long-term construction contracts are measured using the PoC method. The stage of completion of each contract is determined by the ratio of the costs incurred to the expected total cost (cost-to-cost method). When the outcome of a construction contract cannot be estimated reliably, revenue is recognised only to the extent of the contract

costs incurred (zero profit method). If the cumulative contract output (costs incurred plus profits disclosed) exceeds payments on account on an individual contract, the construction contract is disclosed under Trade receivables. If there is a negative balance after deducting payments on account, the amount is disclosed under Trade payables. Anticipated losses on contracts are recognised in full, based on an assessment of identifiable risks.

The financial income from long-term construction contracts is disclosed in other operating income as a result of its clear relationship with the Groups operating business.

### ***Cost of sales***

Cost of sales comprises the cost of goods and services sold and the cost of merchandise sold. It includes not only the cost of direct materials and direct manufacturing expenses, but also overheads including depreciation of production plants, amortisation of certain intangible assets and inventory write-downs.

### ***Research and development costs***

Research costs and development costs which cannot be capitalised are recognised immediately in profit or loss.

### ***Financial result***

The financial result includes interest expenses on liabilities, dividends received, interest income on receivables and gains and losses on financial instruments recognised in profit or loss. The net interest cost relating to pension provisions and any loss on remeasurement of certain embedded derivatives are also included in financial expenses.

Interest income and interest expenses are recognised in profit or loss on the basis of the effective interest rate method.

Dividends are recognised in profit or loss when they have been declared. Dividend payments made by operating companies which are reported at cost or at fair value in which Linde holds more than 10 percent of the voting rights and which have a clear connection to Linde's core operating business are recognised in other operating income. Core businesses are defined as those business areas which make a material contribution to the revenue of a division. A material contribution is deemed to be one of around 20 percent.

Finance income relating to finance leases is calculated using the effective interest rate method. In addition, any gain on remeasurement of certain embedded derivatives is disclosed in financial income.

### ***Intangible assets***

Intangible assets comprise goodwill, customer relationships, brand names, that portion of development costs which may be recognised as an asset, patents, software, licences and similar rights.

Purchased and internally generated intangible assets are stated at acquisition cost or manufacturing cost less accumulated amortisation and any impairment losses. An internally generated intangible asset is recognised if it can be identified as an asset, if it is probable that the future economic benefits that are attributable to the asset will flow to Linde, and if the cost of the asset can be measured reliably. Amortisation of intangible assets is recognised under the heading in the statement of profit or loss which corresponds to its functional features. It is important to determine whether the intangible assets have finite or indefinite useful lives. Goodwill, intangible assets with indefinite useful lives and intangible assets not yet ready for use are not amortised, but are subject instead to an impairment test once a year, or more often if there is any indication that an asset may be impaired.

The impairment test in accordance with IAS 36 Impairment of Assets compares the carrying amount of the cash-generating unit or of the asset to be tested with the recoverable amount. The recoverable amount is the higher of an asset's fair value less costs to sell and its value in use.

According to IAS 36 Impairment of Assets, goodwill is allocated to the cash-generating unit (CGU), the lowest level at which goodwill is monitored for internal management purposes, and tested for impairment at least once a year at this level. This level corresponds to the operating and, at the same time, reportable segments EMEA, Americas and Asia/Pacific, as well as the Engineering Division and Other Activities. The impairment test involves initially comparing the value in use of the cash-generating unit with its carrying amount. If the carrying amount of the cash-generating unit exceeds the value in use, a test is performed to determine whether the fair value of the asset less costs to sell is higher than the carrying amount. Any impairment losses relating to an intangible asset with an indefinite useful life are recognised in the statement of profit or loss and disclosed in functional costs.

To calculate the value in use of the cash-generating units, post-tax future cash inflows and outflows are derived from corporate financial budgets approved by management which cover a detailed planning period of five years. The calculation of the terminal value is based on the future net cash flows from the latest available detailed planning period. The post-tax interest rates used to discount the cash flows take into account industry-specific and country-specific risks relating to the particular cash-generating unit. When the terminal value is discounted, declining growth rates are used, which are lower than the growth rates calculated in the detailed planning period and which serve mainly to compensate for a general inflation rate.

Intangible assets with finite useful lives are amortised over the estimated useful life of the assets, and the amortisation expense is disclosed under the heading in the



statement of profit or loss which corresponds to the functional features of the underlying asset. Customer relationships are stated at acquisition cost and amortised on a straight-line basis over their estimated useful life of between five and 40 years. The estimated useful life of customer relationships purchased is calculated on the basis of the term of the contractual relationship underlying the customer relationship, or on the basis of expected customer behaviour. If there are any indications of impairment in the intangible assets, an impairment test is performed.

If the reason for an impairment loss recognised in prior years no longer exists, the carrying amount of the intangible asset is increased to a maximum figure of the carrying amount that would have been determined had no impairment loss been recognised. This does not apply to goodwill.

Costs incurred in connection with the purchase for consideration and in-house development of software used internally, including the costs of bringing this software to an operational state, are capitalised and amortised on a straight-line basis over an estimated useful life of three to eight years.

### ***Tangible assets***

Tangible assets are reported at acquisition cost or manufacturing cost less accumulated depreciation based on the estimated useful life of the asset and any impairment losses. The manufacturing cost of internally-generated plants comprises all costs which are directly attributable to the manufacturing process and an appropriate portion of production overheads. The latter include production-related depreciation, a proportion of administration expenses and a proportion of social costs. The acquisition cost or manufacturing cost is reduced by government grants. For qualifying tangible assets, where the purchase or manufacture takes more than one year, the borrowing costs during the construction period are also capitalised. Recognition at manufacturing cost is based on the assumption of normal output. Tangible assets are depreciated using the straight-line method and the depreciation expense is disclosed in the statement of profit or loss under the heading which corresponds to the functional features of the underlying asset. If a tangible asset comprises several significant components with different useful lives, the depreciation is calculated separately for the various components. Existing legal or de facto site restoration obligations are included in the cost of the components based on the discounted expected settlement. The depreciation method and the estimated useful lives of the assets are reviewed on an annual basis and adapted to prevailing conditions.

The following useful lives apply to the different types of tangible assets:

### **47 USEFUL LIVES OF TANGIBLE ASSETS**

Buildings	10–40 years
Technical equipment	6–15 years
Other equipment, operating and office equipment	3–20 years

If significant events or market developments indicate an impairment in the value of the tangible asset, Linde reviews the recoverability of the carrying amount of the asset by testing for impairment. The carrying amount of the asset is compared with the recoverable amount, which is defined as the higher of the assets fair value less costs to sell and its value in use. To determine the recoverable amount on the basis of value in use, estimated future cash flows are discounted at a rate which reflects the risk specific to the asset. If the net carrying amount exceeds the recoverable amount, an impairment loss is recognised. When estimating future cash flows, current and expected future inflows as well as segment-specific, technological, economic and general developments are taken into account. If an impairment test is carried out on tangible assets at the level of a cash-generating unit which also includes a portion of allocated goodwill, and an impairment loss is recognised, then impairment losses will be recognised first in respect of the goodwill and then in respect of the other assets based on their relative carrying amounts, taking into account the fair value of the assets. If the reason for an impairment loss recognised in prior years no longer exists, the carrying amount of the tangible asset is increased to a maximum figure of the carrying amount that would have been determined had no impairment loss been recognised.

For the accounting treatment of assets held under leases, see the section below on accounting for leases.



### *Associates and joint ventures*

Associates and joint ventures are accounted for under the equity method at cost at the date of acquisition. In subsequent periods, the carrying amount is adjusted up or down to reflect Linde's share of the comprehensive income of the investee. Any distributions received from the investee and other changes in the investee's equity reduce or increase the carrying amount of the investment. If the losses of an associate or joint venture attributable to The Linde Group equal or exceed the value of the interest held in this associate or joint venture, no further losses are recognised unless the Group incurs an obligation or makes payments on behalf of the associate or joint venture. If there are any indications of impairment in the investments in associates or joint ventures, the carrying amount of the relevant investment is subject to an impairment test. If the reason for an impairment loss recognised in prior years no longer exists, the carrying amount of the investment is increased to a maximum figure of the share of net assets in the associate or joint venture.

### *Inventories*

Inventories are reported at the lower of acquisition or manufacturing cost and net realisable value. Net realisable value is the estimated selling price less the estimated costs of completion and the estimated costs necessary to make the sale. Manufacturing cost includes both direct costs and appropriate indirect material and production costs, as well as production-related depreciation charges. Administration expenses and social costs are included if they can be allocated to production. In addition, for inventories where the purchase or manufacture takes more than one year, the borrowing costs are capitalised. Recognition at manufacturing cost is based on the assumption of normal output. Inventories are generally measured on a moving average basis or using the FIFO (first in, first out) method.

### *Financial instruments*

Financial assets and liabilities are only recognised in the Group statement of financial position when Linde becomes bound by the contractual provisions of the financial instrument. In the normal course of events, purchases and sales of financial assets are accounted for on settlement day. The same does not apply to derivatives, which are accounted for on the trading day.

According to IAS 39 Financial Instruments: Recognition and Measurement, financial instruments must be categorised as financial instruments held for trading or at fair value through profit or loss, available-for-sale financial assets, held-to-maturity financial investments, or loans and receivables. No financial instruments were reclassified in the 2015 financial year. The Linde Group does not avail itself of the fair value option, whereby financial assets or financial liabilities are classified as fair value through profit or loss when they are first recognised.

Available-for-sale financial assets include equity instruments and debt instruments. If equity instruments are not held for trading or measured at fair value through profit or loss, they are classified as available-for-sale financial assets. Debt instruments are included in this category if they are held for an unspecified period and can be sold depending on the market situation.

Financial instruments are initially recognised at fair value. Transaction expenses which are directly attributable to the acquisition or issue of financial instruments are only included in the determination of the carrying amount if the financial instruments are not recognised at fair value through profit or loss.

The subsequent measurement of available-for-sale financial assets is based on the separate recognition in equity as other comprehensive income of unrealised gains and losses, inclusive of deferred tax, until they are realised. Equity instruments for which no price is quoted in an active market and for which the fair value cannot be reliably determined are reported at cost. If the fair value of available-for-sale financial assets falls below cost and if there is objective evidence that the asset is impaired, the cumulative loss recognised directly in equity is transferred to profit or loss. Impairment reversals are recognised in equity for equity instruments and in profit or loss for debt instruments.

Loans and receivables and held-to-maturity financial investments are measured at amortised cost using the effective interest rate method. Where there is objective evidence that the asset is impaired, it is recognised at the present value of expected future cash flows if this is lower than amortised cost. The present value of expected future cash flows is calculated using the original effective interest rate of the financial asset.

The Linde Group conducts regular impairment reviews of the following categories of financial assets: loans and receivables, available-for-sale financial assets and held-to-maturity financial investments. The following criteria are applied:

- [a] significant financial difficulty of the issuer or obligor,
- [b] breach of contract, such as a default or delinquency in payments of interest or principal,
- [c] the lender, for economic or legal reasons relating to the borrowers financial difficulty, granting to the borrower a concession that would not otherwise be considered,
- [d] it becoming probable that the borrower will enter bankruptcy or other financial reorganisation,
- [e] the disappearance of an active market for that asset because of financial difficulties,
- [f] a recommendation based on observable data from the capital market,
- [g] information about significant changes with an adverse effect that have taken place in the technological, economic or legal environment of a contracting party,
- [h] a significant or prolonged decline in the fair value of the financial instrument.

A financial asset is eliminated if Linde loses its contractual entitlement to cash flows from such an asset or if it transfers virtually all the risks and opportunities associated with that financial asset. In the 2015 financial year, no financial assets that would qualify for elimination were transferred by Linde.

Under IAS 39 Financial Instruments: Recognition and Measurement, all derivative financial instruments are reported at fair value, irrespective of their purpose or the reason for which they were acquired.

In the case of a fair value hedge, derivatives are used to hedge the exposure to changes in the fair value of assets or liabilities. The gain or loss from the change in fair value of the derivative is recognised immediately in profit or loss. At the same time, the carrying amount of the hedged item is adjusted for the corresponding gain or loss with respect to the hedged risk, which is also recognised immediately in profit or loss.

In the case of a cash flow hedge, derivatives are used to hedge the exposure to variability in cash flows associated with an asset or liability which has been recognised or with forecast transactions. The hedge-effective portion of the gains or losses arising from the remeasurement at fair value of these derivative financial instruments is initially disclosed as other comprehensive income in "Cumulative changes in equity not recognised in the statement of profit or loss". A transfer is made to the statement of profit or loss when the hedged underlying transaction is realised. The hedge-ineffective portion of the changes in fair value is recognised immediately in profit or loss.

In the case of hedges of a net investment in a foreign operation, hedging instruments are used to hedge the exposure to translation risks arising from investments in a foreign functional currency. Gains and losses arising from these hedging instruments are accounted for in equity as other comprehensive income as part of "Cumulative changes in equity not recognised in the statement of profit or loss" until the company is disposed of or sold.

If the requirements for hedge accounting are not met, the gain or loss on the remeasurement of derivative financial instruments at fair value is recognised in profit or loss.

Under IAS 39 Financial Instruments: Recognition and Measurement, embedded derivatives (i.e. derivatives which are included in host contracts) are separated from the host contract and accounted for as derivative financial instruments, if certain requirements are met.

For more information about risk management and the impact on the balance sheet of derivative financial instruments, see *NOTE [29]*.

Receivables and liabilities from finance leases, trade receivables and trade payables, financial debt, as well as other receivables and assets and other liabilities, are reported at amortised cost as long as they are not derivative financial instruments. Differences between historic cost and the repayment amount are accounted for using the effective interest rate method. Appropriate impairment losses are recognised if specific risks are identified. The carrying amount of the financial debt which comprises the hedged item in a fair value hedge is adjusted for the corresponding gain or loss with respect to the hedged risk.

Financial instruments which contain both an equity portion and a liability portion are classified in accordance with IAS 32 Financial Instruments: Presentation. The financial instruments issued by The Linde Group are classified entirely as financial liabilities and reported at amortised cost. No part thereof is classified separately as an equity instrument.

### ***Deferred taxes***

Deferred tax assets and liabilities are accounted for in accordance with IAS 12 Income Taxes under the liability method in respect of all temporary differences between the carrying amounts of the assets and liabilities under IFRS and the corresponding tax base used in the computation of taxable profit, and in respect of all consolidation adjustments affecting net income and unused tax loss carryforwards.

Deferred tax assets are only recognised for unused tax losses to the extent that it is probable that taxable profits will be available in future years against which the tax losses can be utilised. Deferred taxes are calculated at the tax rates that apply to the period when the asset is realised or the liability is settled, using tax rates set out in laws that have been enacted or substantively enacted in the individual countries by the balance sheet date.

Tax credits which relate to capital expenditure are recognised in accordance with the provisions of IAS 12 Income Taxes. They are not offset against the relevant capital expenditure.

### ***Provisions for pensions and similar obligations***

The actuarial valuation of pension provisions is based on the projected unit credit method set out in IAS 19 Employee Benefits for defined benefit obligations. This method takes into account not only vested future benefits and known pensions at the balance sheet date, but also expected future increases in salaries and pensions. The calculation of the provisions is determined using actuarial reports based on biometric assumptions.

The fair value of the plan assets (adjusted if necessary to comply with the rules relating to the asset ceiling set out in IAS 19.64) is deducted from the present value of the pension obligations (gross pension obligation) to give the net pension obligation or net pension asset in respect of defined benefit pension plans. According to IAS 19.64, a net pension asset may only be disclosed if The Linde Group, under its obligation as an employer, has the right to receive a refund of the surplus or to reduce future contributions.

The net interest expense for the financial year is calculated by multiplying the net pension obligation or net pension asset at the beginning of the period by the interest rate underlying the discounting of the gross defined benefit obligation at the beginning of the period.

The discount rate is calculated on the basis of the returns achieved on the relevant call date for high quality fixed-interest corporate bonds in the market. The currency and period to maturity of the underlying bonds correspond to the currency and probable period to maturity of the post-employment benefit obligations.

Remeasurements comprise on the one hand the actuarial gains and losses on the remeasurement of the gross defined benefit obligation and on the other hand the difference between the return on plan assets actually realised

and the return assumed at the beginning of the period, which is based on the discount rate of the corresponding gross defined benefit obligation. If a pension plan is overfunded and the asset ceiling applies, remeasurements also comprise the change in the net asset from the application of the asset ceiling rules to the extent that this has not been accounted for in net interest.

Actuarial gains and losses arise from changes in actuarial assumptions or from variations between earlier actuarial assumptions and actual events.

All remeasurements (i.e. actuarial gains and losses, the cumulative effect of an asset ceiling and the effects of an increase in the pension obligation in accordance with IFRIC 14 The Limit on a Defined Benefit Asset, Minimum Funding Requirements and their Interaction) are offset immediately in other comprehensive income.

The expense arising from additions to the pension provisions is allocated to functional costs. The net interest expense or net interest income from defined benefit plans is disclosed in the financial result. For each pension plan, it is established whether the net figure is a net interest expense or net interest income and the amounts are disclosed accordingly in the financial result.

### ***Other provisions***

In accordance with IAS 37 Provisions, Contingent Liabilities and Contingent Assets, Other provisions are recognised when a present obligation to a third party exists as a result of a past event, it is probable that an outflow of resources will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation.

Provisions are recognised for all identifiable risks and liabilities of uncertain timing or amount. The amounts provided are the best estimate of the probable expenditure required to settle the obligation and are not offset against recourse claims. The estimate of the obligation includes any cost increases which need to be taken into account at the balance sheet date. Provisions which relate to periods of more than twelve months are discounted.

Provisions for warranty claims are recognised taking current or estimated future claims experience into account.

Site restoration obligations are capitalised when they arise, at the discounted value of the obligation, and a provision for the same amount is established at the same time. The depreciation charged on the asset and the unwinding of interest applied to the provision are both allocated as an expense to the periods of use of the asset.

Provisions for restructuring are recognised if a formal, detailed restructuring plan has been drawn up and communicated to the relevant parties.

Cost of sales also includes additions to the provisions for warranties and provisions for onerous contracts. Warranty provisions are established for the estimated cost at the date of sale of that particular product. Provisions for onerous contracts are made in full in the reporting period in which the estimated cost of the particular contract exceeds the expected revenue.

For general and business risks, insurance contracts are entered into with an insurer outside the Group. The costs arising from these insurance contracts are recognised in functional costs.

In previous years, companies in The Linde Group acted as reinsurers in respect of some of the above-mentioned insurance contracts. The provisions of this type which still exist fall within the scope of IFRS 4 Insurance Contracts. Insurance risks are recognised in the Group financial statements in the form of a provision for unsettled claims. The provision for payment obligations comprises insurance claims which have arisen by the balance sheet date but which have not yet been settled. Provisions for claims which have been notified by the balance sheet date are based on estimates of the future costs of the claims including loss adjustment expenses. These are set up on the basis of individual obligations. Provisions for claims incurred but not reported at the balance sheet date (IBNR) are set up to take account of the estimated cost of claims. Due to the fact that no information is available about the extent of these claims, estimates are made based on industry experience. The provision is calculated using actuarial and statistical methods.

Income tax provisions are disclosed in income tax liabilities.

### *Accounting for leases*

Lease agreements are classified as finance leases in accordance with IAS 17 Leases if they transfer substantially all the risks and rewards incidental to ownership of the leased asset to the lessee. All other leases are operating leases. Linde Group companies enter into lease agreements both as lessor and as lessee.

When Linde enters into an agreement as the lessor of assets held under a finance lease, the future minimum lease payments due from the customer, equivalent to the net investment in the lease, are disclosed under Receivables from finance leases. Finance income is spread over the reporting periods using the effective interest rate method.

When Linde is the lessee under a finance lease agreement, the assets are disclosed at the beginning of the lease under tangible assets at the fair value of the leased asset or, if lower, at the present value of the minimum lease payments, while the corresponding liabilities to the lessor are recognised in the balance sheet as Liabilities from finance leases. When the present value is calculated, the interest rate underlying the lease agreement is used or, if that is not available, the incremental borrowing rate. Depreciation charged on this tangible asset and the reduction of the lease liability are recorded over the lease term. If the useful life of the asset is shorter than the lease term, this should be used to determine the depreciation period instead. Whereas the leased property is depreciated on a straight-line basis over the lease term, the related lease liability is amortised using the effective interest rate method. Over the course of the lease term, this results in a difference between the lease obligation and the carrying amount of the leased property.

Rental and lease payments made by Linde under operating leases are recognised in functional costs in the statement of profit or loss on a straight-line basis over the lease term.

According to IFRIC 4 Determining whether an Arrangement contains a Lease, if specific criteria are met, certain arrangements should be accounted for as leases that do not take the legal form of a lease. In particular, in the Gases Division, certain gas supply contracts are classified as embedded leases if fulfilment of the arrangement depends upon a specific asset and if the gas customer obtains substantially all the production capacity of the asset. If an embedded lease exists, the criteria set out in IAS 17 Leases are used to examine in each individual case whether, under the gas supply contract, substantially all the risks and rewards incidental to ownership of the plant have been transferred to the gas customer. The first step in the review process is to separate that portion of the gas supply contract which relates to the embedded lease from the rest of the contract. Then it is established whether the minimum lease payments thus identified amount to substantially all the fair value of the plant and whether the minimum lease term is for the major part of the plant's economic life. Any other clauses in the agreement, especially those relating to the transfer of ownership, the acquisition or the extension of the lease term, are also examined for their impact on the transfer of risks and rewards incidental to ownership of the plant. If these review procedures establish that a gas supply contract contains a finance lease component, the investment in the plant is recognised in revenue not affecting profit or loss and the resulting receivable is disclosed under Receivables from finance leases.

In the case of operating leases or embedded operating leases, if the economic ownership of the leased asset is not transferred to the customer as lessee, but remains with Linde as lessor, the lease income from the operating lease is recognised in revenue on a straight-line basis over the lease term.

### ***Non-current assets held for sale and disposal groups and discontinued operations***

Non-current assets and disposal groups are classified separately in the balance sheet as held for sale if they are available for sale in their present condition and the sale is highly probable. Assets that are classified as held for sale are measured at the lower of their carrying amount and their fair value less costs to sell. Liabilities classified as directly related to non-current assets held for sale are disclosed separately as held for sale in the liabilities section of the balance sheet. For discontinued operations, additional disclosures are required in the Notes, as long as the requirements for classification as discontinued operations are met.

### ***Discretionary decisions and estimates***

The preparation of the Group financial statements in accordance with IFRS requires discretionary decisions and estimates for some items, which might have an effect on their recognition and measurement in the statement of financial position and statement of profit or loss. The actual amounts realised may differ from these estimates. Estimates are required in particular for:

- the assessment of the need to recognise and the measurement of impairment losses relating to intangible assets, tangible assets and inventories, *SEE NOTES [14], [15] AND [17]*,
- the determination of the estimated useful lives of tangible assets and the assessment as to which components of cost may be capitalised. *SEE NOTE [15]*,
- the assessment of the need to recognise provisions for bad debts. *SEE NOTE [18]*,
- the recognition and measurement of pension obligations. *SEE NOTE [23]*,
- the recognition and measurement of other provisions. *SEE NOTE [24]*,
- the assessment of the stage of completion of long-term construction contracts. *SEE NOTES [18] AND [27]*,
- the assessment of lease transactions,
- the measurement of assets acquired and liabilities assumed on the formation of business combinations. *SEE NOTE [3]*,
- the assessment as to whether Linde exercises control, joint control or significant influence over companies in which it holds less than 100 percent of the voting rights. *SEE NOTES [4] AND [7]*.

Any change in the key factors which are applied in impairment reviews of goodwill, other intangible assets, tangible assets or inventories may possibly result in higher or lower impairment losses or no impairment losses at all being recognised. *SEE NOTE [14] FOR SENSITIVITY INFORMATION.*

Other significant estimates include the determination of estimated useful lives for intangible assets and tangible assets. Uniform Group guidelines based on past experience apply to estimated useful lives in the main asset classes.

Assumptions also need to be made when Linde assesses whether an asset may be capitalised and which components of the cost of the asset may be capitalised. Estimates need to be made here, for example, of the expected future economic benefits of an asset or the expected future costs of the dismantling of plants. In addition, the capitalisation of costs which are incurred during the operating phase of an asset, such as the costs of upgrades to plants or their complete overhaul, depends on whether these costs will lead to better or higher output or whether they extend the estimated useful life of the asset.

Establishing provisions for bad debts is based to a large extent on making estimates and assessments about individual amounts receivable. These estimates and assessments are founded on the creditworthiness of that particular customer, prevailing economic trends and an analysis of historic bad debts on a portfolio basis. Individual provisions for bad debts take account of both customer-specific and country-specific risks.

The obligation arising from defined benefit pension commitments is determined on the basis of actuarial assumptions. Key actuarial assumptions include the discount rate, trends in pensions and vested future benefits, and life expectancy. The discount rate is determined on the basis of returns achieved on the relevant call date for high quality fixed-interest corporate bonds in the market. The currency and period to maturity of the underlying bonds correspond to the currency and probable period to maturity of the post-employment benefit obligations. If such returns are not available, the discount rates are based on market returns for government bonds.

Sensitivity analyses of significant actuarial assumptions made are provided in *NOTE [23]*.

The recognition and measurement of other provisions are based on the assessment of the probability of an outflow of resources, and on past experience and circumstances known at the balance sheet date. The actual outflow of resources at a future date may therefore vary from the figure included in other provisions. Different discretionary decisions and estimates are required for different types of provision. The main estimates used for each type of provision are set out below.

In the case of provisions for site restoration obligations, an estimate is made, based on past experience, of future costs expected to be incurred to dismantle plants and restore the land on which the plant was built to its original condition. The expected costs are reassessed on an annual basis and the amount of the provision is adjusted if required.

Provisions for warranties and onerous contracts include provisions for warranties and provisions for litigation. Assumptions are made here about the probability of occurrence of the risk and the expected future outflow of resources. The uncertainty associated with the measurement of warranty provisions is relatively moderate, as Linde has recourse to historic warranty cost ratios when determining the amounts to be set aside.

Litigation is associated with great uncertainty. A significant amount of discretion is required to assess whether a present obligation to a third party exists at the balance sheet date as a result of a past event, whether it is probable that an outflow of resources will be required in future to settle the obligation and whether a reliable estimate can be made of the amount of the obligation. The current status of outstanding litigation is regularly reviewed and updated by the Groups legal department and lawyers appointed by the Group. Changes to this status as a result of new information may result in adjustments being made to the provision.

Provisions for other obligations include provisions for costs which are expected to arise on the completion of major projects. There is an increased level of uncertainty associated with the measurement of these provisions. Provisions for obligations relating to personnel primarily include provisions for holiday pay and provisions for wages and salaries. The uncertainty associated with the measurement of these provisions is very low, as the expected costs can be relatively reliably determined.

The assessment of the stage of completion of long-term construction contracts is based on the percentage of completion (PoC) method, subject to certain conditions being met. When applying this method, it is necessary to evaluate the stage of completion of the contract. Moreover, it is necessary to provide estimates of total contract costs and total contract revenue and make an assessment of the risks attached to the contract, including technical, political and regulatory risks. According to the PoC method, the stage of completion of the contract is determined on the basis of the proportion that contract costs incurred for work performed to date bear to the estimated total contract costs. For major projects, the calculation and analysis of the stage of completion of the project takes into account in particular contract costs incurred by subcontractors.

External experts are sometimes used to assist with the calculation of these costs. When the outcome of a construction contract cannot be estimated reliably, revenue is recognised only to the extent of the contract costs incurred which can probably be covered, and the contract costs in the period in which they are incurred are recognised as an expense (zero profit method).

Changes in estimates may lead to an increase or decrease in revenue.

Discretionary decisions are required to be made, for example, in assessing whether substantially all the risks and rewards incidental to ownership of a leased asset have been transferred to the lessee. Linde enters into lease agreements principally as lessee (procurement leases). Under IFRIC 4, gas supply agreements may though be classified as embedded lease agreements if certain conditions apply. In these cases, Linde acts as the lessor. To establish whether an embedded finance lease exists in respect of Linde's on-site plants, assumptions need to be made about the allocation of the consideration received from the

customer. Consideration, in the form of payments from the customer, is used on the one hand to finance the plants and on the other to provide the customer with maintenance services. Whether lease agreements are classified as operating leases or finance leases will depend on the exercise of discretion.

When classifying procurement lease agreements, Linde must also make assumptions: e.g. to determine the appropriate interest rate or the residual value or estimated useful lives of the underlying assets.

Business combinations require estimates to be made when determining fair values for assets, liabilities and contingent liabilities acquired, as well as for contingent components of the purchase prices. The nature of the estimate depends on the measurement methods applied. When discounted cash flow methods are used, primarily to measure intangible assets (but which are also used to calculate contingent consideration), discretionary aspects include in particular the time period and amount of the cash flow and the determination of an appropriate discount rate. If cost-based methods are used, the main discretionary element is the assessment of the comparability of the reference objects with the objects to be measured. When making discretionary decisions about purchase price allocations in the case of business combinations where the total assets acquired including goodwill exceed EUR 100 m, Linde takes advice from experts in the field, who assist in arriving at the decisions and provide reports backing their opinions.

When assessing whether Linde exercises control, joint control or significant influence over companies in which it holds less than 100 percent of the voting rights, discretionary decisions may have to be made. Above all in cases where Linde holds 50 percent of the voting rights, a decision has to be taken as to whether there are other contractual rights or particularly relevant facts or circumstances which might mean that Linde has power over the potential subsidiary or that joint control exists. If joint control exists, Linde needs to distinguish whether the investment is a joint operation or a joint venture. This distinction is dependent on whether Linde has rights to the assets and obligations for the liabilities of the arrangement or whether it has rights to the net assets of the arrangement. To make the distinction, Linde must consider the structure and legal form of the company, any contractual agreements which might apply and any other relevant circumstances.

Companies for which the principal object is the construction and operation of gas production plants, and yet in which Linde holds less than 100 percent of the voting rights, are fully consolidated if Linde holds the advantage in terms of know-how. In these cases, The Linde Group has assumed responsibility for the operation of the companies plants and the companies are therefore dependent on Linde technology. This is also reflected in the licensing agreements in force and by the integration of production into the processes of The Linde Group and/or the interrelationships between the various decision-makers. The operation of

the plants is the principal driver of variable returns from the companies and therefore Linde exercises control (as defined by IFRS 10) over these companies.

In addition, companies are fully consolidated if Linde exerts increased management authority in those companies and is able to exercise, on the basis of individual contracts, the most extensive decision-making powers over major portions of the operating activities of the entities. On this basis, Linde has the opportunity to determine those activities of the entities which significantly affect the variable returns of the companies and therefore to exercise control (as defined by IFRS 10) over the companies.

Linde accounts on a line-by-line basis in accordance with the rules set out in IFRS 11 for certain joint arrangements where the sole object is to supply the shareholders. In the absence of any fixed supply quotas, the assets and liabilities are accounted for on the basis of the share of equity held in these companies by The Linde Group.

Changes to contractual agreements or facts or circumstances are monitored and are evaluated to determine whether they have a potential impact on the assessment as to whether Linde is exercising control or joint control over its investment.



# NOTES TO THE GROUP STATEMENT OF PROFIT OR LOSS

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## [8] Revenue

Revenue is analysed by activity in the segment information in the Group financial statements. In 2015, there were no customers from whom the Group derived over 10 per cent of its revenue. For a detailed analysis of revenue by product in the Gases Division and by plant type in the Engineering Division, *SEE PAGES 60 TO 63 OF THE COMBINED MANAGEMENT REPORT*.

Revenue is derived from the following activities:

### € 48 REVENUE

<i>in EUR m</i>	2015	2014
Revenue from the sale of goods and services	16,118	14,910
Revenue from long-term construction contracts	1,826	2,137
<b>TOTAL</b>	<b>17,944</b>	<b>17,047</b>

## [9] Other operating income and expenses

### € 49 OTHER OPERATING INCOME

<i>in EUR m</i>	2015	2014
Exchange gains	118	130
Profit on disposal of non-current assets	37	73
Compensation payments received	18	77
Income arising from changes to pension schemes	42	–
Ancillary revenue	13	14
Income from the reversal of provisions	24	24
Financial income from long-term contract manufacture	18	19
Income from feestanding foreign currency hedges	15	6
Miscellaneous operating income	136	143
<b>TOTAL</b>	<b>421</b>	<b>486</b>

The drop in other operating income by EUR 65 m was largely the result of the drop in the profit on disposal of non-current assets.

### € 50 OTHER OPERATING EXPENSES

<i>in EUR m</i>	2015	2014
Exchange losses	102	116
Expenses from feestanding foreign currency hedges	9	6
Loss on disposal of non-current assets	21	16
Expenses related to pre-retirement part-time work schemes	3	2
Miscellaneous operating expenses	117	163
<b>TOTAL</b>	<b>252</b>	<b>303</b>

The drop in operating expenses from EUR 303 m to EUR 252 m largely resulted from the drop in miscellaneous operating expenses from EUR 163 m to EUR 117 m.



## [10] Other information on the Group statement of profit or loss

During the 2015 financial year, personnel expenses of EUR 3.928 bn (2014: EUR 3.536 bn) were recognised in functional costs. The increase in expenses is primarily due to exchange rate effects. The figures for amortisation and depreciation are given in the segment information.

## [11] Financial income and expenses

### € 51 FINANCIAL INCOME

in EUR m	2015	2014
Net interest income from defined benefit plans, <i>SEE NOTE [23]</i> .	7	13
Interest from finance leases in accordance with IFRIC 4/IAS 17	19	20
Income from investments	–	1
Other interest and similar income	16	16
<b>TOTAL</b>	<b>42</b>	<b>50</b>

The drop in financial income is largely due to the reduction in net interest income from defined benefit plans, because the interest rates to be applied in the 2015 financial year were lower than in the previous year.

### € 52 FINANCIAL EXPENSES

in EUR m	2015	2014
Net interest expense from defined benefit plans, <i>SEE NOTE [23]</i> .	31	30
Impairment of financial investments	1	1
Other interest and similar charges	407	384
<b>TOTAL</b>	<b>439</b>	<b>415</b>

The increase in other interest and similar charges is due to negative valuation effects.

In interest income and interest expenses, gains and losses from fair value hedge accounting are offset against each other, in order to give a fair presentation of the economic effect of the underlying hedging relationship. Interest income and interest expenses relating to derivatives were also disclosed net.

## [12] Taxes on income

Taxes on income in The Linde Group can be analysed as follows:

### € 53 INCOME TAX EXPENSE

in EUR m	2015	2014
Current tax expense (+) and income (–)	465	485
Tax expense (+) and income (–) relating to prior periods	13	–53
Deferred tax expense (+) and deferred tax income (–)	–84	–74
<b>TOTAL</b>	<b>394</b>	<b>358</b>

In the reporting period, the tax expense and income relating to prior periods includes current tax expense of EUR 43 m (2014: current tax income of EUR 54 m) and deferred tax income of EUR 30 m (2014: deferred tax expense of EUR 1 m). Included in tax income and expense relating to prior periods are the positive and negative effects of facts established by external tax audits in various countries. Of the total amount of deferred tax income, EUR 80 m (2014: EUR 52 m) relates to the change in temporary differences.

The income tax expense disclosed for the 2015 financial year of EUR 394 m is EUR 57 m lower than the expected income tax expense of EUR 451 m, a theoretical figure arrived at by applying the German tax rate of 27.4 percent (2014: 27.4 percent) to Group earnings before taxes on income. Tax effects recognised directly in equity are shown in detail in *NOTE [22]*.

The difference between the expected income tax expense and the figure disclosed is explained below:

#### € 54 EXPECTED AND DISCLOSED INCOME TAX EXPENSE

<i>in EUR m</i>	2015	2014
Net income before taxes	1,646	1,520
Income tax rate of Linde AG (including trade tax, (in %))	27.4	27.4
<b>EXPECTED INCOME TAX EXPENSE</b>	<b>451</b>	<b>416</b>
Foreign tax rate differential	-5	-28
Effect of associates	-3	-6
Reduction in tax due to tax-free income	-147	-98
Increase in tax due to non-tax-deductible expenses	63	65
Tax expense and income relating to prior periods	13	-53
Effect of changes in tax rate	-8	3
Change in other permanent differences	-18	-15
Other deviations	48	74
<b>INCOME TAX EXPENSE DISCLOSED</b>	<b>394</b>	<b>358</b>
Effective tax rate (in %)	23.9	23.6

In the 2015 financial year, the corporate income tax rate in Germany was 15.0 percent (2014: 15.0 percent). Taking into account an average rate for trade earnings tax of 11.6 percent (2014: 11.6 percent) and the solidarity surcharge (0.8 percent in both 2015 and 2014), this gives a tax rate for German companies of 27.4 percent (2014: 27.4 percent). This tax rate is also used to calculate deferred tax at German companies.

Income tax rates for companies outside Germany vary between 12.5 percent and 40.0 percent.

Temporary differences relating to investments in subsidiaries of EUR 120 m (2014: EUR 178 m) have not led to the recognition of deferred tax, either because the differences are not expected to reverse in the near future as a result of their realisation (due to distributions or the disposal of the company) or the profits are not subject to taxation.

In the reporting period, other changes consisted of an expense arising from a change in the valuation allowance of EUR 47 m (2014: EUR 84 m). The recognition of a deferred tax asset in respect of losses brought forward not previously recognised and temporary differences did not have any positive impact (2014: EUR 13 m). The positive impact of the utilisation of loss carryforwards in respect of which no deferred tax asset had yet been recognised was EUR 4 m in 2015 (2014: EUR 0 m).

#### € 55 DEFERRED TAX ASSETS AND LIABILITIES

<i>in EUR m</i>	2015		2014	
	Deferred tax assets	Deferred tax liabilities	Deferred tax assets	Deferred tax liabilities
Intangible assets	5	763	8	820
Tangible assets	266	1,213	256	1,080
Financial investments	109	144	90	160
Current assets	465	855	507	963
Provisions	334	199	357	143
Liabilities	950	476	959	493
Tax loss carryforwards and tax credits	98	-	62	-
Amounts offset	-1,900	-1,900	-1,933	-1,933
<b>TOTAL</b>	<b>327</b>	<b>1,750</b>	<b>306</b>	<b>1,726</b>

The tax credits in the 2015 financial year related mainly to investment incentives, as in the prior year.

Movements in the deferred tax asset and the deferred tax liability were not solely due to movements which have been recognised in profit or loss, but also to movements which have been recognised in other comprehensive income not affecting profit or loss, exchange rate movements in respect of deferred tax recognised in a foreign currency, and movements in deferred tax as a result of the purchase and sale of subsidiaries.

Deferred tax disclosed in other comprehensive income not affecting profit or loss totalled EUR 362 m (2014: EUR 408 m). Of this amount, deferred tax assets of EUR 294 m (2014: EUR 350 m) were attributable to provisions and deferred tax assets of EUR 68 m (2014: EUR 58 m) were attributable to current assets.

The carrying amount of deferred tax assets is reduced to the extent that it is no longer probable that the deferred tax asset will be realised. The carrying amount of deferred tax assets which relate to potential reductions in the tax base of EUR 1,020 bn (2014: EUR 866 m) was therefore reduced by EUR 225 m (2014: EUR 208 m), as it is not probable that the underlying tax loss carryforwards and tax credits of EUR 864 m (2014: EUR 708 m) and deductible temporary differences of EUR 156 m (2014: EUR 158 m) will be utilised. Of the revised figure for total potential reductions in the tax base of EUR 864 m (2014: EUR 708 m) which relate to adjusted tax loss carryforwards and tax credits, EUR 276 m (2014: EUR 182 m) may be carried forward for up to ten years and EUR 588 m (2014: EUR 526 m) may be carried forward for longer than ten years.

Deferred tax assets relating to tax loss carryforwards and tax credits of EUR 98 m (2014: EUR 62 m) were recognised mainly because it is projected that there will be taxable profit against which the unused tax losses and tax credits may be offset.

#### € 56 TAX LOSS CARRYFORWARDS NOT YET USED

<i>in EUR m</i>	2015	2014
May be carried forward for up to 10 years	323	203
May be carried forward for longer than 10 years	39	3
May be carried forward indefinitely	650	508
<b>TOTAL</b>	<b>1,012</b>	<b>714</b>

The movement in tax loss carryforwards is mainly due to additions in Brazil, China, Germany, India, Russia and Saudi Arabia. There were also tax loss carryforwards relating to US state tax of EUR 416 m (2014: EUR 289 m).

Distributions to Linde AG shareholders do not have any impact on taxes on income at the level of Linde AG.

## [13] Earnings per share

### € 57 EARNINGS PER SHARE

<i>in EUR m</i>	2015	2014
Net income after taxes – attributable to Linde AG shareholders	1,149	1,102
<i>Shares in thousand units</i>		
Weighted average number of shares outstanding	185,638	185,635
Dilution as a result of share option schemes	417	730
Weighted average number of shares outstanding – diluted	186,055	186,365
<b>EARNINGS PER SHARE <i>in EUR</i> – UNDILUTED</b>	<b>6.19</b>	<b>5.94</b>
<b>EARNINGS PER SHARE <i>in EUR</i> – DILUTED</b>	<b>6.18</b>	<b>5.91</b>

Included in the figure for diluted earnings per share is the issue of shares relating to the employee share option schemes, to the extent that these have not already been exercised. Options exercised are also included in the calculation of the weighted average number of shares outstanding (fully diluted), on a weighted basis until the date they are exercised.

Further information about the option schemes is given in NOTE [28].

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## [14] Goodwill/other intangible assets

Movements in the intangible assets of The Linde Group during the 2015 financial year and in the previous year were as follows:

### 58 SCHEDULE OF INTANGIBLE ASSETS – ACQUISITION COST

<i>in EUR m</i>	<i>Goodwill</i>	<i>Customer relationships</i>	<i>Brands</i>	<i>Other intangible assets</i>	<i>Total</i>
<b>AT 01.01.2014</b>	<b>10,400</b>	<b>3,417</b>	<b>481</b>	<b>1,262</b>	<b>15,560</b>
Currency adjustments	600	176	35	60	871
Additions due to acquisitions	62	14	–	–	76
Additions	–	–	–	56	56
Disposals	–	–	–	32	32
Reclassifications	–	–	–	8	8
<b>AT 31.12.2014/01.01.2015</b>	<b>11,062</b>	<b>3,607</b>	<b>516</b>	<b>1,354</b>	<b>16,539</b>
Currency adjustments	506	119	17	34	676
Additions due to acquisitions	45	7	2	–	54
Additions	–	1	–	46	47
Disposals	–	61	–	18	79
Reclassifications	–	2	–	14	16
Reclassification as assets held for sale	–2	–	–	–	–2
<b>AT 31.12.2015</b>	<b>11,611</b>	<b>3,675</b>	<b>535</b>	<b>1,430</b>	<b>17,251</b>

## 59 SCHEDULE OF INTANGIBLE ASSETS – CUMULATIVE AMORTISATION

<i>in EUR m</i>	<i>Goodwill</i>	<i>Customer relationships</i>	<i>Brands</i>	<i>Other intangible assets</i>	<i>Total</i>
<b>AT 01.01.2014</b>	<b>5</b>	<b>1,132</b>	<b>163</b>	<b>789</b>	<b>2,089</b>
Currency adjustments	2	74	14	36	126
Additions due to acquisitions	–	–	–	–	–
Depreciation	–	227	25	104	356
Impairments	–	11	–	10	21
Disposals	–	–	–	31	31
Reclassifications	–	–	–	1	1
<b>AT 31.12.2014/01.01.2015</b>	<b>7</b>	<b>1,444</b>	<b>202</b>	<b>909</b>	<b>2,562</b>
Currency adjustments	–	51	6	21	78
Depreciation	–	182	26	109	317
Impairments	–	–	–	2	2
Disposals	–	54	–	18	72
Reclassifications	–	2	–	–2	–
<b>AT 31.12.2015</b>	<b>7</b>	<b>1,625</b>	<b>234</b>	<b>1,021</b>	<b>2,887</b>
<b>NET BOOK VALUE AT 31.12.2015</b>	<b>11,604</b>	<b>2,050</b>	<b>301</b>	<b>409</b>	<b>14,364</b>
<b>NET BOOK VALUE AT 31.12.2014</b>	<b>11,055</b>	<b>2,163</b>	<b>314</b>	<b>445</b>	<b>13,977</b>

In the statement of financial position at 31 December 2015, the total figure for goodwill is EUR 11.604 bn (2014: EUR 11.055 bn). Goodwill arising on acquisitions made in the 2015 financial year was EUR 45 m (2014: EUR 66 m).

The total net carrying amount of trademarks acquired in the course of acquisitions was EUR 301 m (2014: EUR 314 m) at the balance sheet date. The brand names acquired in the course of the BOC acquisition and other acquisitions have been classified as intangible assets with finite useful lives since the 2011 financial year as a long-term rebranding programme for the relevant brands has begun. These brand names are amortised on a straight-line basis over a period of twelve years. At 31 December 2015, their net carrying amount was EUR 187 m (2014: EUR 213 m).

The brand names acquired in the course of Lincare acquisition have indefinite useful lives and are included in the North America region. These were the subject of an impairment test in 2015, based on assumptions of a pre-tax interest rate of 10.3 percent and growth in the terminal value of 1.0 percent. The carrying amount at 31 December 2015 was EUR 114 m (2014: EUR 101 m).

The amortisation expense for intangible assets with finite useful lives of EUR 317 m (2014: EUR 356 m) was disclosed in functional costs, principally in marketing and selling expenses.

Software solutions are the main component of other intangible assets. In connection with the in-house development of software used internally in the SAP environment, additions during the financial year include development costs of EUR 7 m (2014: EUR 14 m). Other development costs of EUR 4 m for software applications in the homecare business were capitalised. In the previous year, development costs of EUR 2 m were capitalised for internally generated

sales-related software applications. At the balance sheet date, the assets concerned were still in development and have therefore not yet been amortised.

An impairment test of goodwill was carried out at 30 September 2015. No impairment losses were recognised as a result. Neither were any impairment losses recognised when a further impairment test of goodwill was carried out at 31 December 2015 to take account of changes in the overall environment.

The recoverable amount of goodwill was determined as its value in use, as in the previous year. To calculate its value in use, a discounted cash flow method was used. A detailed five-year plan was used as the basis for the calculation of cash flows. The economic growth rates and overall conditions assumed for the detailed planning period were based on the latest estimates from international economic research institute Oxford Economics. The operating margin in the individual segments was assumed to remain largely stable at the level seen in 2015 throughout the detailed planning period. The inflation assumption for the planning period is 0.5 percent for all cash-generating units and reflects the euro-based rate of inflation.

The following table provides a summary of the allocated goodwill and the assumptions used:

#### 60 ASSUMPTIONS FOR THE IMPAIRMENT TEST OF GOODWILL

	Book value of allocated goodwill		Pre-tax WACC based on region-specific premiums and discounts at impairment test date		Post-tax WACC based on region-specific premiums and discounts at impairment test date		Average annual growth rate in gross domestic product in planning period		Average annual growth rate in industrial production in planning period		Long-term growth rate	
	in EUR m		in percent		in percent		in percent		in percent		in percent	
	At 31.12. 2015	At 31.12. 2014	31.12. 2015	30.09. 2014	31.12. 2015	30.09. 2014	2015	2014	2015	2014	2015	2014
EMEA	5,098	5,018	8.1	6.9	6.4	5.5	2.0	2.2	1.9	2.4	0.5	0.5
Asia/Pacific	1,967	1,953	8.2	7.1	6.4	5.5	4.1	4.5	3.9	5.1	0.8	0.8
Americas	3,916	3,483	9.4	7.9	6.2	5.3	2.5	2.7	2.7	3.5	0.8	0.5
Engineering Division	277	272	8.6	9.4	6.6	7.0	3.2	3.1	3.0	3.6	0.8	0.8
Other activities	346	329	5.1	6.8	4.2	5.5	2.5	2.2	1.2	1.3	0.8	0.8
<b>GROUP</b>	<b>11,604</b>	<b>11,055</b>										

## [15] Tangible assets

Movements in the tangible assets of The Linde Group in the 2015 financial year were as follows:

#### 61 SCHEDULE OF TANGIBLE ASSETS – ACQUISITION COST

in EUR m	Land, rights equivalent to real property and buildings	Technical equipment and machinery	Other equipment, furniture and fixtures	Plants under construction	Total
<b>AT 01.01.2014</b>	<b>2,919</b>	<b>21,144</b>	<b>1,547</b>	<b>1,761</b>	<b>27,371</b>
Currency adjustments	22	974	-31	44	1,009
Additions due to acquisitions	-	-	-	4	4
Additions	28	436	72	1,362	1,898
Disposals	40	408	71	3	522
Reclassifications	88	979	50	-1,081	36
<b>AT 31.12.2014/01.01.2015</b>	<b>3,017</b>	<b>23,125</b>	<b>1,567</b>	<b>2,087</b>	<b>29,796</b>
Currency adjustments	47	674	-7	-4	710
Additions due to acquisitions	6	29	-	5	40
Additions	38	538	95	1,218	1,889
Disposals	24	288	71	2	385
Reclassifications	42	1,333	30	-1,380	25
Reclassification as assets held for sale	-2	-4	-	-	-6
<b>AT 31.12.2015</b>	<b>3,124</b>	<b>25,407</b>	<b>1,614</b>	<b>1,924</b>	<b>32,069</b>

## 62 SCHEDULE OF TANGIBLE ASSETS – CUMULATIVE DEPRECIATION

<i>in EUR m</i>	<i>Land, rights equivalent to real property and buildings</i>	<i>Technical equipment and machinery</i>	<i>Other equipment, furniture and fixtures</i>	<i>Plants under construction</i>	<i>Total</i>
<b>AT 01.01.2014</b>	<b>1,343</b>	<b>13,502</b>	<b>1,137</b>	<b>5</b>	<b>15,987</b>
Currency adjustments	-11	525	-24	9	499
Depreciation	85	1,195	99	-	1,379
Impairments	14	74	5	120	213
Disposals	26	379	70	-	475
Reclassifications	1	63	-22	-	42
<b>AT 31.12.2014/01.01.2015</b>	<b>1,406</b>	<b>14,980</b>	<b>1,125</b>	<b>134</b>	<b>17,645</b>
Currency adjustments	27	378	-6	8	407
Depreciation	92	1,365	111	-	1,568
Impairments	1	6	1	1	9
Disposals	20	276	70	1	367
Reclassifications	-	64	-14	-21	29
Reclassification as assets held for sale	-1	-3	-	-	-4
<b>AT 31.12.2015</b>	<b>1,505</b>	<b>16,514</b>	<b>1,147</b>	<b>121</b>	<b>19,287</b>
<b>NET BOOK VALUE AT 31.12.2015</b>	<b>1,619</b>	<b>8,893</b>	<b>467</b>	<b>1,803</b>	<b>12,782</b>
<b>NET BOOK VALUE AT 31.12.2014</b>	<b>1,611</b>	<b>8,145</b>	<b>442</b>	<b>1,953</b>	<b>12,151</b>

Tangible assets include leased buildings, technical equipment and machinery, and fixtures, with a carrying amount totalling EUR 78 m (2014: 77 m). Due to the form of the underlying finance leases, these tangible assets are attributable to The Linde Group in its capacity as the economic owner of the assets. Of the total of EUR 78 m, EUR 23 m (2014: EUR 30 m) relates to buildings, EUR 17 m (2014: EUR 8 m) to technical equipment and machinery and EUR 38 m (2014: EUR 39 m) to vehicles.

Also included in tangible assets is technical equipment held under embedded operating leases on the sales side. Of the total minimum lease payments due in future from the customer from such embedded operating leases, EUR 64 m is due within one year (2014: EUR 51 m). EUR 309 m is due within one to five years (2014: EUR 360 m) and EUR 810 m is due in more than five years (2014: EUR 1.047 bn).

Impairment tests were based on the recoverable amount of the assets examined, whereby generally the value in use was applied. The discount rates used (WACC) were based on those used in the impairment test for goodwill. Impairment losses of EUR 9 m were recognised in 2015 (2014: EUR 213 m). The impairment losses related mainly to production plants and were allocated to the following segments: EUR 2 m (2014: EUR 4 m) to EMEA, EUR 4 m (2014: EUR 119 m) to Asia/Pacific and EUR 1 m (2014: EUR 90 m) to the Americas. EUR 2 m (2014: EUR 0 m) was recognised in the Engineering Division. The impairment losses relating to tangible assets are largely included in cost of sales and in research and development costs.

There were no reversals of impairment losses in 2015 or in 2014.

Borrowing costs during the construction phase of EUR 52 m (2014: EUR 42 m) were capitalised, based on a pre-tax interest rate of 3.6 to 3.8 percent (2014: 3.6 to 3.8 percent).

The cost of tangible assets was reduced in the 2015 financial year by government grants of EUR 7 m (2014: EUR 9 m).

Tangible assets of EUR 56 m (2014: EUR 56 m) were pledged as security.

## [16] Investments in associates and joint ventures/other financial assets

Movements in the financial assets of The Linde Group during the 2015 financial year were as follows:

### € 63 SCHEDULE OF FINANCIAL INVESTMENTS – ACQUISITION COST

<i>in EUR m</i>	<i>Investments in associates and joint ventures (at equity)</i>	<i>Other investments</i>	<i>Non-current loans<sup>1</sup></i>
<b>AT 01.01.2014</b>	<b>223</b>	<b>104</b>	<b>31</b>
Currency adjustments	20	6	1
Additions	33	17	5
Disposals	20	54	7
Reclassifications	-5	-	-
<b>AT 31.12.2014/01.01.2015</b>	<b>251</b>	<b>73</b>	<b>30</b>
Currency adjustments	8	4	1
Additions	16	7	2
Disposals	22	29	2
Reclassifications	-	6	-1
<b>AT 31.12.2015</b>	<b>253</b>	<b>61</b>	<b>30</b>

<sup>1</sup> Out of the non-current loans, EUR 12 m (2014: EUR 15 m) is related to loans to associates or joint ventures.

### € 64 SCHEDULE OF FINANCIAL INVESTMENTS – CUMULATIVE AMORTISATION

<i>in EUR m</i>	<i>Investments in associates and joint ventures (at equity)</i>	<i>Other investments</i>	<i>Non-current loans</i>
<b>AT 01.01.2014</b>	<b>9</b>	<b>15</b>	<b>5</b>
Currency adjustments	2	1	-
Depreciation	-	-	1
Disposals	-	4	-
<b>AT 31.12.2014/01.01.2015</b>	<b>11</b>	<b>12</b>	<b>6</b>
Depreciation	-	12	4
<b>AT 31.12.2015</b>	<b>11</b>	<b>24</b>	<b>10</b>
<b>NET BOOK VALUE AT 31.12.2015</b>	<b>242</b>	<b>37</b>	<b>20</b>
<b>NET BOOK VALUE AT 31.12.2014</b>	<b>240</b>	<b>61</b>	<b>24</b>

### € 65 NET BOOK VALUE OF FINANCIAL INVESTMENTS

	<i>Investments in associates and joint ventures (at equity)</i>	<i>Other investments</i>	<i>Non-current loans</i>	<i>Total</i>
Net book value at 31.12.2015	242	37	20	299
Net book value at 31.12.2014	240	61	24	325



The share of profit or loss from associates and joint ventures in the 2015 financial year was EUR 12 m (2014: EUR 22 m). Within the Gases Division, EUR 3 m of the total figure related to EMEA (2014: EUR 9 m) and EUR 11 m to the Asia/Pacific segment (2014: EUR 12 m). In the Americas segment, EUR 1 m was recognised in the previous year.

Of the profit or loss from associates and joint ventures, there were no unrecognised losses on the balance sheet date (2014: EUR 2 m).

On the balance sheet date, there were no contingent liabilities relating to shares in associates or joint ventures (2014: EUR 4 m).

At 31 December 2015, there were no open orders from joint ventures and associates (2014: EUR 36 m). There were no significant restrictions on the ability of the associates and joint ventures to transfer dividends or funds to Linde or to repay loans to Linde either.

More information about associates and joint ventures is given in *NOTE [41]*. Aggregate financial information about joint ventures is given below, based on the investment in those joint ventures held by Linde:

#### € 66 AGGREGATE FINANCIAL INFORMATION ABOUT JOINT VENTURES (AT EQUITY)

<i>in EUR m</i>	<i>2015</i>	<i>2014</i>
Profit for the year	14	19
Other comprehensive income (net of tax)	5	10
<b>TOTAL COMPREHENSIVE INCOME</b>	<b>19</b>	<b>29</b>

Aggregate financial information about associates based on the investment in those associates held by Linde is immaterial and is therefore not disclosed separately.

## [17] Inventories

#### € 67 INVENTORIES

<i>in EUR m</i>	<i>31.12.2015</i>	<i>31.12.2014</i>
Raw materials, consumables and supplies	116	118
Unfinished goods, services in progress	202	200
Finished goods	585	497
Merchandise	227	231
Prepayments	111	109
<b>TOTAL</b>	<b>1,241</b>	<b>1,155</b>

At 31 December 2015, the total inventory allowance was EUR 122 m (2014: EUR 108 m).

[18] Receivables from finance leases, trade receivables, other receivables and other assets and income tax receivables

#### € 68 RECEIVABLES AND OTHER ASSETS

in EUR m	Current		Non-current		Total	
	31.12.2015	31.12.2014	31.12.2015	31.12.2014	31.12.2015	31.12.2014
<b>RECEIVABLES FROM FINANCE LEASES</b>	<b>52</b>	<b>50</b>	<b>217</b>	<b>248</b>	<b>269</b>	<b>298</b>
Receivables from percentage of completion contracts	174	511	–	–	174	511
Other trade receivables	2,550	2,550	2	3	2,552	2,553
<b>TRADE RECEIVABLES</b>	<b>2,724</b>	<b>3,061</b>	<b>2</b>	<b>3</b>	<b>2,726</b>	<b>3,064</b>
Other tax receivables	226	226	19	34	245	260
Derivatives with positive fair values	160	151	156	258	316	409
Prepaid pension costs	–	–	118	171	118	171
Other receivables and assets	392	346	133	86	525	432
<b>OTHER RECEIVABLES AND OTHER ASSETS</b>	<b>778</b>	<b>723</b>	<b>426</b>	<b>549</b>	<b>1,204</b>	<b>1,272</b>
<b>INCOME TAX ASSETS</b>	<b>277</b>	<b>216</b>	<b>9</b>	<b>3</b>	<b>286</b>	<b>219</b>

#### Receivables from finance leases

Almost all the receivables from finance leases relate to agreements which are classified as embedded finance leases according to IFRIC 4/IAS 17. The counterparty risk arising from receivables from finance leases is covered by the air separation plants and other plants underlying the contracts.

The data relating to receivables from finance leases is as follows:

#### € 69 RECEIVABLES FROM FINANCE LEASES

in EUR m	31.12.2015	31.12.2014
<b>TOTAL FUTURE MINIMUM LEASE PAYMENTS (GROSS INVESTMENT)</b>	<b>336</b>	<b>363</b>
due within one year	71	67
due in one to five years	198	206
due in more than five years	67	90
<b>PRESENT VALUE OF MINIMUM LEASE PAYMENTS</b>	<b>269</b>	<b>298</b>
due within one year	52	50
due in one to five years	157	167
due in more than five years	60	81
<b>UNEARNED FINANCE INCOME INCLUDED IN THE MINIMUM LEASE PAYMENTS</b>	<b>67</b>	<b>65</b>

### Receivables from percentage of completion contracts

Receivables from percentage of completion (PoC) contracts comprise the aggregate amount of costs incurred and recognised profits, less advance payments received.

At the balance sheet date, costs incurred and profits recognised on long-term construction contracts amounted to EUR 4.987 bn (2014: EUR 4.174 bn), offset against advance payments of EUR 5.474 bn (2014: EUR 4.473 bn). This gave rise to receivables of EUR 174 m (2014: EUR 511 m) and liabilities of EUR 661 m (2014: EUR 810 m).

### Other trade receivables

Other trade receivables are due from a large number of customers in a wide variety of industry sectors and many different regions. To assess the recoverability of accounts receivable, the creditworthiness of customers is subject to constant review. Credit loss insurance is taken out if required.

#### 70 FINANCIAL ASSETS PAST DUE BUT NOT IMPAIRED

2015, in EUR m	< 30 days	30–60 days	60–90 days	90–180 days	>180 days
Trade receivables	319	50	32	1	1
Other receivables and assets	–	–	–	–	–
2014, in EUR m					
Trade receivables	261	49	44	1	1
Other receivables and assets	4	–	–	–	–

In the case of financial assets which are neither past due nor impaired, there were no indications at the balance sheet date of any potential impairment.

## [19] Securities

Short-term securities decreased during the 2015 financial year, namely by EUR 100 m from EUR 521 m to EUR 421 m, mainly as a result of disposals.

There were held-to-maturity securities at 31 December 2015 of EUR 13 m (2014: EUR 12 m). Regular reviews are performed of the creditworthiness of counterparties and clearly defined limits have been set.

## [20] Cash and cash equivalents

Cash and cash equivalents of EUR 1.417 bn (2014: EUR 1.137 bn) comprised mainly cash at banks and money market funds which have maturities of three months or less.

#### 71 CASH AND CASH EQUIVALENTS

in EUR m	31.12.2015	31.12.2014
Bank balances	739	663
Money market funds	200	264
Cheques	5	1
Cash	1	2
Cash equivalents	472	207
<b>TOTAL</b>	<b>1,417</b>	<b>1,137</b>

The Linde Group concludes Credit Support Annexes (CSAs) with banks to reduce counterparty risk. Under these agreements, the positive and negative fair values of derivatives held by Linde AG and Linde Finance B.V. are collateralised with cash on a regular basis. At 31 December 2015, an amount of EUR 371 m was disclosed in cash and cash equivalents as a result of these agreements (2014: EUR 141 m).

## [21] Non-current assets classified as held for sale and disposal groups

On 31 December 2015, assets with a carrying amount of EUR 11 m were reported as non-current disposal groups held for sale. These mainly relate to cash holdings, trade receivables and plant and machinery, as well as buildings from the Asia/Pacific segment. The disposal group is scheduled for sale in the coming year. A corresponding sale agreement has already been signed. The assets were not subject to any impairments.

## [22] Equity

### € 72 EQUITY

in EUR	31.12.2015	31.12.2014
<b>SHARE CAPITAL</b>	<b>475,476,940.80</b>	<b>475,476,940.80</b>
Nominal value of own shares	243,479.04	243,479.04
<b>ISSUED SHARE CAPITAL</b>	<b>475,233,461.76</b>	<b>475,233,461.76</b>
<b>AUTHORISED CAPITAL (TOTAL)</b>	<b>84,119,265.28</b>	<b>84,119,265.28</b>
Authorised Capital I	47,000,000.00	47,000,000.00
Authorised Capital II	37,119,265.28	37,119,265.28
<b>CONDITIONALLY AUTHORISED CAPITAL (TOTAL)</b>	<b>57,240,000.00</b>	<b>62,082,237.44</b>
2007 conditionally authorised capital	–	4,842,237.44
2012 conditionally authorised capital	10,240,000.00	10,240,000.00
2013 conditionally authorised capital	47,000,000.00	47,000,000.00

### *Capital subscribed, authorised and conditionally authorised capital, subscription rights*

The company's subscribed capital at the balance sheet date amounts to EUR 475,476,940.80 and is fully paid up. It is divided into 185,733,180 shares at a notional par value of EUR 2.56 per share. The shares are no-par value shares. Each share confers a voting right and is entitled to dividend. In accordance with § 71b of the German Stock Corporation Act (AktG), the company is not entitled to dividends or to voting rights in respect of the 95,109 own shares it holds at 31 December 2015.

No new no-par value shares were issued in the 2015 financial year. This means that the company's subscribed capital did not change in the 2015 financial year.

### € 73 NUMBER OF SHARES

	2015	2014
<b>NUMBER OF SHARES AT 01.01.</b>	<b>185,733,180</b>	<b>185,648,912</b>
Exercise of Long Term Incentive Plan (LTIP 2007)	–	84,268
Number of shares at 31.12.	185,733,180	185,733,180
Own shares	95,109	95,109
<b>NUMBER OF SHARES OUTSTANDING AT 31.12.</b>	<b>185,638,071</b>	<b>185,638,071</b>

### ***Authorised capital***

At 31 December 2015, the authorised capital comprised the following:

#### ***Authorised Capital I:***

Based on a resolution passed at the Annual General Meeting held on 29 May 2013, the Executive Board was authorised, with the approval of the Supervisory Board, to increase capital subscribed by up to EUR 47,000,000.00 until 28 May 2018 against cash or non-cash contributions by issuing, on one or more occasions, a total of up to 18,359,375 new bearer shares at a notional par value of EUR 2.56. The new shares must be offered for subscription to the shareholders. However, the Executive Board is entitled, with the approval of the Supervisory Board, to exclude the subscription rights of shareholders for the residual amounts, and to exclude subscription rights to the extent that holders of option rights and/or conversion rights or conversion obligations issued by Linde AG or by any of its direct or indirect subsidiaries may be granted the subscription rights to new shares to which they are entitled when they exercise their option rights and/or conversion rights or settle the conversion obligation. Moreover, the Executive Board is authorised, with the approval of the Supervisory Board, to exclude the subscription rights of shareholders, provided the issue price of the new shares arising from a capital increase against cash contributions is not significantly lower than the price of shares of the same type traded on the stock exchange at the time the issue price is finally determined, which should be as soon as possible after the placement of the shares, and the proportion of the capital subscribed constituted by the shares issued does not exceed 10 percent of the capital subscribed either when this authorisation becomes effective or when it is exercised. In determining the capital limit, account must be taken of that part of capital subscribed which relates to those shares which are used to service options and/or convertible bonds. This is only the case if the options and/or convertible bonds are issued in accordance with § 186 (3), sentence 4, of the German Stock Corporation Law (AktG) while excluding the subscription rights of shareholders during the lifetime of this authorisation. Account must also be taken of that part of the share capital which relates to those shares which are issued on the basis of the authorised capital, or sold after repurchase as own shares, during the lifetime of this authorisation in accordance or compliance with § 186 (3), sentence 4, of the German Stock Corporation Act (AktG). The Executive Board is also authorised, with the approval of the Supervisory Board, to exclude subscription rights in the case of capital increases against non-cash contributions, especially in the course of the acquisition of companies, businesses or investments in companies, or on the formation of business combinations. The Executive Board is further authorised, with the approval of the Supervisory Board, to exclude subscription rights for an amount of up to EUR 3,500,000.00 to the extent necessary to issue shares to the employees of Linde AG

and/or its affiliated companies while excluding the subscription rights of shareholders. The Executive Board is authorised to determine the remaining details of the capital increase and its implementation, with the approval of the Supervisory Board. The new shares can also be transferred to certain banks specified by the Executive Board, which assume the responsibility of offering them to shareholders (indirect subscription rights).

#### ***Authorised Capital II:***

Based on a resolution passed at the Annual General Meeting on 4 May 2012, the Executive Board was authorised, with the approval of the Supervisory Board, to increase capital subscribed by up to EUR 70,000,000 until 3 May 2017 against cash or non-cash contributions by issuing, on one or more occasions, a total of up to 27,343,750 new bearer shares at a notional par value of EUR 2.56.

After effecting the ordinary capital increase in the 2012 financial year out of Authorised Capital II, the Executive Board was also authorised, with the approval of the Supervisory Board, to increase capital subscribed by up to EUR 37,119,265.28 until 3 May 2017 against cash and/or non-cash contributions by issuing, on one or more occasions, a total of up to 14,499,713 new bearer shares at a notional par value of EUR 2.56. The new shares must be offered for subscription to the shareholders. However, the Executive Board is entitled, with the approval of the Supervisory Board, to exclude the subscription rights of shareholders for the residual amounts, and to exclude subscription rights to the extent that holders of options and/or convertible bonds issued by Linde AG or by any of its direct or indirect subsidiaries may be granted the subscription rights to new shares to which they are entitled when they exercise their rights of conversion or option rights or settle the conversion obligation. Moreover, the Executive Board is authorised, with the approval of the Supervisory Board, to exclude the subscription rights of shareholders, provided the issue price of the new shares arising from a capital increase against cash contributions is not significantly lower than the price of shares traded on the stock exchange at the time the issue price is finally determined, which should be as soon as possible after the placement of the shares, and the proportion of the capital subscribed constituted by the shares issued does not exceed 10 percent of the capital subscribed either when this authorisation becomes effective or when it is exercised. In determining the capital limit, account must be taken of that part of capital subscribed which relates to those shares which are used to service options and/or convertible bonds. This is only the case if the options and/or convertible bonds are issued in accordance with § 186 (3), sentence 4, of the German Stock Corporation Act (AktG) while excluding the subscription rights of shareholders during the lifetime of this authorisation. Account must also be taken of that part of the share capital which relates to those shares which are issued on the basis of the authorised capital, or sold after repurchase as own shares, during the lifetime of this authorisation in

accordance or compliance with § 186 (3), sentence 4, of the German Stock Corporation Act (AktG). The Executive Board is also authorised, with the approval of the Supervisory Board, to exclude subscription rights in the case of capital increases against non-cash contributions, especially in the course of the acquisition of companies, businesses or investments in companies, or on the formation of business combinations. The Executive Board is authorised to determine the remaining details of the capital increase and its implementation, with the approval of the Supervisory Board. The new shares can also be transferred to certain banks specified by the Executive Board, which assume the responsibility of offering them to shareholders (indirect subscription rights).

### ***Conditionally authorised capital***

The conditionally authorised capital at 31 December 2015 comprised the following:

#### ***2012 conditionally authorised capital:***

The issued share capital can be increased by up to EUR 10,240,000 by the issue of up to 4,000,000 new bearer shares with a notional par value of EUR 2.56 if certain conditions are met (2012 conditionally authorised capital). The conditionally authorised increase in capital is approved solely for the purpose of granting subscription rights (share options) to members of the Executive Board of the company, members of the executive bodies of affiliated companies within Germany and outside Germany and to selected executives in the company and in affiliated companies within Germany and outside Germany in accordance with the provisions set out in the authorisation agreed at the Annual General Meeting on 4 May 2012 (Long Term Incentive Plan 2012). The conditionally authorised share capital will only be issued if subscription rights are exercised in accordance with the authorisation granted and the company does not meet its obligation in cash or with own shares. The new shares issued as a result of the exercise of options are first entitled to dividend in the financial year in which, at the date of their issue, a resolution has not yet been passed at the Annual General Meeting regarding the appropriation of profit.

#### ***2013 conditionally authorised capital:***

The issued share capital can be increased by up to EUR 47,000,000.00 by the issue of up to 18,359,375 new bearer shares with a notional par value of EUR 2.56 if certain conditions are met (2013 conditionally authorised capital). The increase in share capital will only take place if (i) the holders and/or creditors of the convertible bonds or warrant-linked bonds, both existing bonds and in addition convertible and/or warrant-linked bonds to be issued by the company or by Group companies controlled by the company by 28 May 2018, as a result of the authorisation granted to the Executive Board by the resolution passed at the Annual General Meeting on 29 May 2013, exercise their conversion or option rights or if (ii) the holders and/or creditors of convertible bonds to be issued by

the company or by Group companies controlled by the company by 28 May 2018, as a result of the authorisation granted to the Executive Board by the resolution passed at the Annual General Meeting on 29 May 2013, settle their conversion obligation, although in cases (i) and (ii) only insofar as own shares are not used for this purpose. The new shares are issued at the option or conversion price to be determined in each case in accordance with the resolution regarding authorisation referred to above. The new shares participate in profit from the beginning of the financial year in which they are issued as a result of the exercise of conversion or option rights or settlement of the conversion obligation. The Executive Board is authorised to determine the remaining details of the conditionally authorised capital increase and its implementation, with the approval of the Supervisory Board.

### ***Authorisation to purchase own shares:***

The Executive Board is authorised until 3 May 2017 by a resolution passed at the Annual General Meeting on 4 May 2012 to acquire own shares up to 10 percent of capital subscribed at the date of the resolution or, if lower, of the capital subscribed at the date the relevant authorisation is exercised.

These shares may be purchased on the stock exchange, by way of a public purchase offer addressed to all shareholders or by way of a public invitation to all shareholders to submit sale offers.

The own shares acquired under this authorisation may:

- be sold via the stock exchange or by an offer to all shareholders,
- with the approval of the Supervisory Board, also be sold otherwise,
- with the approval of the Supervisory Board, be offered and transferred in the context of the direct or indirect acquisition of companies, businesses or investments in companies, and in the context of the formation of business combinations,
- be appropriated to settle option and/or convertible bonds which the company or a direct or indirect subsidiary of the company has issued or will issue,
- be granted, in the case of a sale of acquired own shares by an offer to all shareholders or a capital increase with subscription rights, to holders of option and/or conversion rights issued by the company or a direct or indirect subsidiary of the company in the same amount as that to which they would be entitled after exercising the option and/or conversion rights or after settlement of a conversion obligation,
- be granted in fulfilment of the company's obligations under the Linde Management Incentive Programme following the resolution passed at the Annual General Meeting on 14 May 2002 (agenda item 8),
- be granted in fulfilment of the company's obligations under the Linde Performance Share Programme following the resolution passed at the Annual General Meeting on 05 June 2007 (agenda item 7),

- be granted in fulfilment of the company's obligations under the Linde Performance Share Programme following the resolution passed at the Annual General Meeting on 4 May 2012 (agenda item 8),
- be issued to members of the Executive Board and to persons currently or formerly employed by the company, and to members of executive bodies of Linde's affiliated companies, or be used to service the rights or obligations to purchase own shares attributable to the persons named heretofore, or
- be redeemed, with the approval of the Supervisory Board.

The Company holds a total of 95,109 own shares. This corresponds to a share of EUR 243,479.04, or 0.05 percent, of the capital subscribed. The shares are being used to fulfil the rights to transfer shares of the company under the Matching Share Plan to all participants in the plan, including the members of the Executive Board.

### ***Capital reserve***

The capital reserve comprises the premiums arising on the issue of shares and the expenses relating to the issue of option rights to employees in accordance with IFRS 2 Share-based Payments.

### ***Revenue reserves***

Included under this heading are the past earnings of the companies included in the Group financial statements, to the extent that these have not been distributed.

In addition, the effects of the remeasurement of defined benefit plans and the effects of the limit on a defined benefit asset (asset ceiling as set out in IAS 19.64) have been recognised in revenue reserves. This makes it quite clear that these amounts will not be transferred to profit or loss in future periods. A deferred tax effect of EUR -56 m was recognised in the movement in revenue reserves as a result of actuarial gains and losses (2014: EUR 173 m).

**Cumulative changes in equity not recognised through the statement of profit or loss**

Disclosed under this heading are the differences arising on the translation of the financial statements of foreign subsidiaries and gains or losses on the remeasurement of securities and hedging instruments, accounted for in equity rather than being recognised in the statement of profit or loss.

Movements in cumulative changes in equity not recognised in profit or loss were as follows:

**€ 74 MOVEMENT IN CUMULATIVE CHANGES NOT RECOGNISED THROUGH THE STATEMENT OF PROFIT OR LOSS**

in EUR m	2015			2014		
	Before tax	Tax effect	Net	Before tax	Tax effect	Net
MOVEMENT IN CURRENCY TRANSLATION DIFFERENCES	1,093	–	1,093	1,308	–	1,308
MOVEMENT IN UNREALISED GAINS/LOSSES ON AVAILABLE-FOR-SALE FINANCIAL ASSETS	–9	2	–7	–14	4	–10
Movement in accumulated unrealised gains/losses	–8	2	–6	–	–1	–1
Realised gains/losses	–1	–	–1	–14	5	–9
MOVEMENT IN UNREALISED GAINS/LOSSES ON HEDGING INSTRUMENTS	–484	7	–477	–721	71	–650
Movement in accumulated unrealised gains/losses	–466	2	–464	–705	67	–638
Realised gains/losses	–18	5	–13	–16	4	–12

**Non-controlling interests**

The interests of the non-controlling shareholders in equity relate mainly to the following Group companies:

**€ 75 NON-CONTROLLING INTERESTS**

in EUR m	31.12.2015	31.12.2014
LINDE LIENHWA INDUSTRIAL GASES CO. LTD., Taiwan	268	256
BOC-TISCO GASES CO., Ltd., China	73	81
African Oxygen Limited, South Africa	73	80
Shanghai HuaLin Industrial Gases Co. Ltd., China	50	47
Ma'an Shan BOC-Ma Steel Gases Company Limited, China	49	45
LINDE INDIA LIMITED, India	47	44
MIG Production Company Limited, Thailand	35	34
Saudi Industrial Gas Company, Saudi Arabia	33	29
Linde Gas Algeria S.p.A., Algeria	31	32
Linde Engineering (Dalian) Co. Ltd., China	24	25
Various other companies	188	188
<b>TOTAL</b>	<b>871</b>	<b>861</b>

The voting rights of non-controlling shareholders correspond to their share of the equity in the companies concerned. Detailed information about individual subsidiaries which have non-controlling shareholders is not disclosed due to the individual figures not being material. Further information about the individual companies is given in the list of shareholdings on *PAGES 202 TO 219*.

**Capital structure management**

Linde's capital structure management is based on various financial performance indicators such as the equity ratio and the dynamic indebtedness factor. The aim of the capital structure management is to obtain unrestricted access to the capital market and to achieve a stable credit rating. Further information about this can be found in the *COMBINED MANAGEMENT REPORT ON PAGES 65 TO 66 AND 68 TO 69*.



## [23] Provisions for pensions and similar obligations

### 76 PROVISIONS FOR PENSIONS AND SIMILAR OBLIGATIONS

in EUR m	31.12.2015	31.12.2014
Provisions for pensions	1,056	1,247
Provisions for similar obligations	12	18
<b>TOTAL PROVISIONS</b>	<b>1,068</b>	<b>1,265</b>
Pension assets	118	171

Pension provisions are recognised in accordance with IAS 19 Employee Benefits for obligations relating to future benefits and current benefits payable to current and former employees of The Linde Group and their surviving dependants.

Different countries have different pension systems, due to the variety of legal, economic and fiscal conditions applicable in each country. These are generally based on the remuneration and length of service of the employees.

The provisions for similar obligations include bridging payments in Germany as well as other obligations.

Occupational pension schemes can be either defined contribution or defined benefit schemes. In the case of defined contribution plans [SEE GLOSSARY], the company incurs no obligation other than the payment of contributions to an external pension fund.

In the case of defined benefit plans, the company's obligation is to meet the defined benefit commitments to current and former employees. Two different methods can be distinguished: the recognition of provisions for pensions and the use of externally financed pension schemes. The Linde Group's main defined benefit plans are described below.

The defined benefit commitments in Germany relate to old age pensions, invalidity pensions and surviving dependants pensions. These commitments are based principally on defined contribution pension rules, whereby

vested rights for periods of service prior to 1 January 2002 based on earlier final-salary pension scheme rules have to be taken into account. In addition, there are direct commitments in respect of the salary conversion scheme in the form of a cash balance plan [SEE GLOSSARY]. The resulting pension payments are calculated on the basis of an interest guarantee and the performance of the corresponding investment. There are no minimum funding requirements. The pension obligations in Germany are partly funded by a Contractual Trust Arrangement (CTA).

Defined benefit commitments in the UK agreed prior to 1 July 2003 are earnings-related and dependent on the period of service, and relate to old age pensions, invalidity pensions and surviving dependants pensions.

With effect from 1 April 2011, the amount of future increases in inflation-linked pensions and of increases in pensionable emoluments was restricted.

Legal, regulatory and contractual minimum funding requirements are in place. Pension obligations in the UK are to a great extent funded. Defined benefit pension plans were closed to new entrants from 1 July 2003.

Defined benefit commitments in the United States relate to old age pensions, invalidity pensions and surviving dependants pensions. The commitments are based on pension regulations which are dependent on the period of service and salary of the employee. Most of the pension plans take the form of cash balance plans. The plan participants have the option to take a lump-sum payment or annual pension payments. Legal and regulatory minimum funding requirements are in place.

Pension obligations in the United States are currently fully funded. The amount of the pension obligation (actuarial present value of the defined benefit obligation, or DBO) is calculated using actuarial valuation methods, which require the use of estimates. In addition to assumptions about mortality and disability, the following assumptions which depend on the economic situation in that particular country are also relevant, so that for countries outside Germany weighted average figures based on the obligation are given:

### 77 ASSUMPTIONS USED TO CALCULATE THE PROVISIONS FOR PENSIONS

	Germany		UK		Other Europe		USA		Other countries	
in %	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014
Discount rate	2.50	2.20	3.90	3.60	1.64	1.95	3.60	3.50	4.05	4.72
Growth in future benefits	2.50	2.25	2.50	2.50	1.84	2.63	–	–	3.98	4.05
Growth in pensions	1.63	1.64	3.28	3.19	1.05	1.34	1.96	1.95	1.41	1.72

The growth in future benefits comprises expected future increases in salaries, which are estimated annually, taking inflation and the economic situation into account.

The sensitivity analysis below demonstrates the extent to which the present value of the defined benefit obligation changes when, in each case, just one of the actuarial assumptions changes while the other actuarial assumptions remain the same. The impact of any correlation between the various assumptions has not been taken into account.

#### € 78 SENSITIVITY ANALYSIS

in EUR m	Change	Germany		UK	
		31.12.2015	31.12.2014	31.12.2015	31.12.2014
	+ 50 bp	-111	-111	-349	-336
Discount rate	- 50 bp	125	128	383	385
	+ 50 bp	10	12	-	-
Growth in future benefits	- 50 bp	-11	-13	-	-
	+ 50 bp	68	74	307	316
Growth in pensions	- 50 bp	-62	-64	-284	-281

For the pension plans in Germany, an increase of one year in life expectancy would result in an increase in the defined benefit obligation of 5.1 percent. The sensitivity analysis of life expectancy in Germany is based on pension funds held at 31 December 2012. The underlying assumptions have not changed significantly between that date and the balance sheet date.

For the pension plans in the UK, an increase of one year in life expectancy would result in an increase in the DBO of 3.0 percent (2014: 3.0 percent). For the pension plans in the United States, no sensitivity analysis of life expectancy was prepared, as the plan participants generally avail themselves of the option to be paid a lump sum.

In Germany, life expectancy is calculated on the basis of the "2005 G mortality tables" produced by Professor Dr Klaus Heubeck. Pension plans in the UK use their own mortality tables and biometric assumptions. These are determined on the basis of actual experience in a pool of comparable pension plans. At the balance sheet date, the average life expectancy applicable to pension plans in the UK is 22.0 years for a male pensioner aged 65 (2014: 22.0 years) and 23.5 years for a female pensioner aged 65 (2014: 23.5 years), while the future average life expectancy at the pensionable age of 65 for active members of the pension plans is currently 23.8 years for men aged 45 (2014: 23.8 years) and 26.1 years for women aged 45 (2014: 26.0 years).

<i>Other Europe</i>		<i>USA</i>		<i>Other countries</i>		<i>Total</i>	
<i>31.12.2015</i>	<i>31.12.2014</i>	<i>31.12.2015</i>	<i>31.12.2014</i>	<i>31.12.2015</i>	<i>31.12.2014</i>	<i>31.12.2015</i>	<i>31.12.2014</i>
-35	-60	-29	-25	-11	-15	-535	-547
39	71	30	27	16	17	593	628
9	17	2	2	4	8	25	39
-8	-15	-2	-2	-7	-6	-28	-36
17	61	-	-	3	4	395	455
-27	-54	-	-	-3	-3	-376	-402

Reconciliation of the defined benefit obligation and of the plan assets:

€ 79 RECONCILIATION OF THE DBO AND OF THE PLAN ASSETS

in EUR m	Germany		UK	
	Defined benefit obligation	Plan assets	Defined benefit obligation	Plan assets
<b>AT 01.01.2014</b>	<b>1,139</b>	<b>-423</b>	<b>3,291</b>	<b>-3,342</b>
Service cost	24	-	36	-
Current service cost	24	-	36	-
Past service cost	-	-	-	-
Interest expense (+)/interest income (-)	42	-23	156	-159
Remeasurements	269	-33	380	-160
Return on plan assets (excluding amounts included in interest expenses and income)	-	-33	-	-160
Actuarial gains (-)/losses (+)	269	-	380	-
Effects from changes in demographic assumptions	-	-	-83	-
Effects from changes in financial assumptions	266	-	474	-
Effects from changes in experience adjustments	3	-	-11	-
Employer contributions	-	-302	-	-62
Employee contributions	9	-9	1	-1
Pension payments made	-50	1	-123	123
Settlement payments	-	-	-	-
Effects of changes in exchange rates	-	-	243	-239
Changes in scope of consolidation/other changes	-1	1	-	2
<b>AT 31.12.2014/01.01.2015</b>	<b>1,432</b>	<b>-788</b>	<b>3,984</b>	<b>-3,838</b>
Service cost	42	-	52	-
Current service cost	42	-	52	-
Past service cost	-	-	-	-
Effects of plan curtailments	-	-	-	-
Effects from plan settlements	-	-	-	-
Interest expense (+)/interest income (-)	31	-17	152	-147
Remeasurements	-75	11	-234	167
Return on plan assets (excluding amounts included in interest expenses and income)	-	11	-	167
Actuarial gains (-)/losses (+)	-75	-	-234	-
Effects from changes in demographic assumptions	-	-	-	-
Effects from changes in financial assumptions	-70	-	-165	-
Effects from changes in experience assumptions	-5	-	-69	-
Employer contributions	-	-2	-	-76
Employee contributions	13	-13	1	-1
Pension payments made	-52	2	-143	143
Settlement payments	-	-	-	-
Effects of changes in exchange rates	-	-	218	-208
Changes in scope of consolidation/other changes	-	-	-	3
<b>AT 31.12.2015</b>	<b>1,391</b>	<b>-807</b>	<b>4,030</b>	<b>-3,957</b>

Other Europe		USA		Other countries		Total	
Defined benefit obligation	Plan assets	Defined benefit obligation	Plan assets	Defined benefit obligation	Plan assets	Defined benefit obligation	Plan assets
702	-526	450	-512	259	-270	5,841	-5,073
20	-	17	-	10	-	107	-
20	-	16	-	11	-	107	-
-	-	1	-	-1	-	-	-
23	-18	19	-21	14	-16	254	-237
177	-48	13	24	26	-7	865	-224
-	-48	-	24	-	-7	-	-224
177	-	13	-	26	-	865	-
1	-	12	-	-	-	-70	-
185	-	16	-	17	-	958	-
-9	-	-15	-	9	-	-23	-
-	-19	-	-1	-	-7	-	-391
5	-5	-	-	1	-1	16	-16
-27	20	-26	23	-26	23	-252	190
-	-	-	-	-	-	-	-
-8	-	63	-66	14	-13	312	-318
2	-2	-	-	-	-	1	1
894	-598	536	-553	298	-291	7,144	-6,068
-37	-	19	-	10	-	86	-
21	-	19	-	11	-	145	-
-4	-	-	-	-	-	-4	-
-24	-	-	-	-1	-	-25	-
-30	-	-	-	-	-	-30	-
14	-7	20	-21	13	-14	230	-206
5	-25	-2	41	-2	2	-308	196
-	-25	-	41	-	2	-	196
5	-	-2	-	-2	-	-308	-
-14	-	-4	-	-	-	-18	-
24	-	-1	-	1	-	-211	-
-5	-	3	-	-3	-	-79	-
-	-13	-	-	-	-9	-	-100
3	-3	-	-	1	-1	18	-18
-22	15	-36	33	-41	36	-294	229
-290	290	-	-	-	-	-290	290
20	-14	60	-62	-11	15	287	-269
3	2	-	-	2	1	5	6
590	-353	597	-562	270	-261	6,878	-5,940

In the reporting year, the reorganisation of defined benefit plans in the Netherlands resulted in a large part of the pension schemes being transferred to a pension fund. This had a positive effect on operating profit in the amount of EUR 42 m in total. The positive effect included income from a plan curtailment of EUR 22 m, income from a plan settlement of EUR 30 m and expenses of EUR 10 m which are not, however, included in the pension expense.

In 2014, Linde transferred an amount of EUR 300 m in respect of the German defined benefit pension plans to the existing Contractual Trust Arrangement (CTA). The funds allocated were obtained by issuing a bond for the same amount. The increase in plan assets led to a reduction in the net interest expense in respect of defined benefit pension obligations in Germany.

Actual income from plan assets in external pension funds in 2015 was EUR 10 m (2014: EUR 461 m). This was lower than the interest income from plan assets of EUR 206 m (2014: EUR 237 m) calculated at the corresponding DBO interest rate.

Employer's contributions in the 2015 financial year totalled EUR 100 m (2014: EUR 391 m). The employer contributions for the previous year include the amount of

EUR 300 m transferred to the existing Contractual Trust Arrangement (CTA) to fund the German defined benefit pension plans.

Payments of employer's contributions to increase plan assets in external pension funds in the 2016 financial year are expected to amount to EUR 99 m. These include EUR 30 m (2015: EUR 30 m) which relates to special payments in the UK to close the ongoing shortfall in the UK pension plans in the medium term in accordance with local valuation rules. The relevant funding plan runs until March 2017, unless the shortfall is made up sooner, in which case it is terminated early.

The expense for newly acquired pension entitlements in the financial year and the net interest cost for each respective financial year are determined each year on the basis of the prior years net obligation at the balance sheet date.

The weighted average duration of the defined benefit obligations in The Linde Group at 31 December 2015 is 16.8 years (2014: 16.4 years).

During the reporting period, the following items relating to defined benefit obligations were recognised in the income statement.

#### 80 PENSION EXPENSE RELATING TO DEFINED BENEFIT PLANS

in EUR m	Germany		UK	
	2015	2014	2015	2014
Service cost	42	24	52	36
Current service cost	42	24	52	36
Past service cost	–	–	–	–
Gains (-)/losses (+) from plan curtailments	–	–	–	–
Gains (-)/losses (+) from plan settlements	–	–	–	–
Net interest expense (+)/income (-)	14	19	5	-3
Interest expense from DBO	31	42	152	156
Interest income from plan assets	-17	-23	-147	-159
Other effects recognised through profit or loss	–	–	3	2
Total net pension cost	56	43	60	35

For the external financing of defined benefit obligations, The Linde Group uses standard international models for the transfer of pension assets (e.g. pension funds and Contractual Trust Arrangements). Pension plans financed via external pension funds exist principally in Australia, Canada, Germany, Hong Kong, Ireland, the Netherlands, New Zealand, Norway, South Africa, Spain, Switzerland, the UK and the US.

In some countries, Linde is obliged to make contributions to plan assets as a result of legal requirements or contractual agreements. In certain countries, however, these increases in plan assets will not lead to the recognition of an asset because of the asset ceiling described in IAS 19.64 (IFRIC 14). In 2015, there was no asset ceiling.

<i>Other Europe</i>		<i>USA</i>		<i>Other countries</i>		<i>Total</i>	
<i>2015</i>	<i>2014</i>	<i>2015</i>	<i>2014</i>	<i>2015</i>	<i>2014</i>	<i>2015</i>	<i>2014</i>
-37	20	19	17	10	10	86	107
21	20	19	16	11	11	145	107
-4	-	-	1	-	-1	-4	-
-24	-	-	-	-1	-	-25	-
-30	-	-	-	-	-	-30	-
7	5	-1	-2	-1	-2	24	17
14	23	20	19	13	14	230	254
-7	-18	-21	-21	-14	-16	-206	-237
-	-	-	-	1	1	4	3
-30	25	18	15	10	9	114	127

Funding status of the defined benefit obligation:

#### 81 FUNDING STATUS OF THE DEFINED BENEFIT OBLIGATION

in EUR m	Germany		UK	
	2015	2014	2015	2014
Actuarial present value of pension obligations (defined benefit obligation)	1,391	1,432	4,030	3,984
of which unfunded pension obligations	60	64	–	–
of which funded pension obligations	1,331	1,368	4,030	3,984
Fair value of plan assets	–807	–788	–3,957	–3,838
<b>NET OBLIGATION</b>	<b>584</b>	<b>644</b>	<b>73</b>	<b>146</b>
Cumulative effect of asset ceiling	–	–	–	–
<b>AMOUNT AT 31.12.</b>	<b>584</b>	<b>644</b>	<b>73</b>	<b>146</b>
of which pension provision (+)	584	644	97	173
of which pension asset (–)	–	–	–24	–27

The Linde Group is exposed to various risks in relation to defined benefit pension schemes. In addition to general actuarial risks, the Group is exposed to currency risk and investment risk in respect of the plan assets. *SEE OPPORTUNITY AND RISK REPORT, PAGES 91 TO 107.*

Plan assets and the defined benefit obligation may fluctuate over time. To compensate for such fluctuations, potential fluctuations in the defined benefit obligation

are taken into account in the course of the investment management of the plan assets. In ideal circumstances, plan assets and pension obligations are influenced in the same way by external factors, which provides a natural protection against such factors (liability-driven investment). Moreover, the broadly-based portfolio structure of plan assets in The Linde Group results in diversification of capital market risk.

#### 82 PORTFOLIO STRUCTURE OF PENSION ASSETS

in EUR m	Germany		UK	
	2015	2014	2015	2014
Shares	212	224	732	690
Fixed-interest securities	363	423	2,404	2,493
Property	46	38	126	140
Insurance	–	–	–	–
Other	186	103	695	515
<b>TOTAL</b>	<b>807</b>	<b>788</b>	<b>3,957</b>	<b>3,838</b>

Plan assets comprise mainly shares and fixed-interest securities. Prices quoted in an active market are not available in the case of property and insurance.

Financial instruments issued by companies in The Linde Group are not included in plan assets to a significant extent. Property which is used by Group companies is not included in plan assets.

#### Defined contribution plans

The total of all pension costs relating to defined contribution plans in 2015 was EUR 221 m (2014: EUR 186 m). Of this amount, contributions to state pension schemes in 2015 totalled EUR 110 m (2014: EUR 90 m).



Other Europe		USA		Other countries		Total	
2015	2014	2015	2014	2015	2014	2015	2014
590	894	597	536	270	298	6,878	7,144
156	164	80	73	39	39	335	340
434	730	517	463	231	259	6,543	6,804
-353	-598	-562	-553	-261	-291	-5,940	-6,068
237	296	35	-17	9	7	938	1,076
-	-	-	-	-	-	-	-
237	296	35	-17	9	7	938	1,076
237	296	83	74	55	60	1,056	1,247
-	-	-48	-91	-46	-53	-118	-171

Other Europe		USA		Other countries		Total			
2015	2014	2015	2014	2015	2014	2015	in %	2014	in %
95	149	121	140	79	104	1,239	20.9	1,307	21.5
109	319	364	356	111	108	3,351	56.4	3,699	61.0
42	40	-	-	11	15	225	3.8	233	3.8
51	52	-	-	17	16	68	1.1	68	1.1
56	38	77	57	43	48	1,057	17.8	761	12.6
353	598	562	553	261	291	5,940	100.0	6,068	100.0

## [24] Other provisions

At the balance sheet date, other provisions had the following maturity structure:

## € 83 OTHER PROVISIONS

in EUR m	Current		Non-current		Total	
	2015	2014	2015	2014	2015	2014
PROVISIONS FOR TAXES	23	21	–	–	23	21
Obligations from delivery transactions	151	160	69	77	220	237
Warranty obligations and risks from transactions in course of completion	117	105	45	64	162	169
Obligations relating to personnel	511	493	83	86	594	579
Insurance obligations	–	–	–	7	–	7
Dismantling obligations	6	6	234	206	240	212
Other obligations	281	227	99	52	380	279
OTHER PROVISIONS	1,066	991	530	492	1,596	1,483
<b>TOTAL</b>	<b>1,089</b>	<b>1,012</b>	<b>530</b>	<b>492</b>	<b>1,619</b>	<b>1,504</b>

Provisions for taxes include only other taxes.

The provisions for warranty obligations and risks from transactions in course of completion consist principally of provisions for anticipated losses on transactions, for litigation and for guarantees and warranty obligations. The provisions for warranty obligations relate mainly to the Engineering Division and are generally utilised within three years.

The provisions for obligations relating to personnel comprise mainly provisions for pre-retirement part-time work, outstanding holidays, anniversaries, and wages and salaries not yet paid. The provision for obligations relating to pre-retirement part-time work is based on individual contractual agreements. The insurance obligations in the 2015 financial year related solely to Priestley Dublin Reinsurance Company Limited.

The provisions for dismantling obligations are stated at the discounted settlement amount on the date the plant comes on stream. A corresponding item is recognised in tangible assets and is subject to depreciation. The provision is compounded over the duration of the underlying contracts. Due to the wide range of residual terms of the contracts, the residual term of the provision falls mainly in a range of between one and twenty years. Changes in estimates, where these involve a change in assumptions about future cost trends or changes in interest rates are adjusted for in the carrying amount of the relevant plant without affecting profit or loss.

The unwinding of interest applied to other long-term provisions amounted to EUR 7 m (2014: EUR 8 m).

## € 84 MOVEMENTS IN OTHER PROVISIONS

in EUR m	Opening balance at 01.01.2015	Changes in the scope of consolidation <sup>1</sup>	Utilisation	Release	Addition	Transfer	Closing balance at 31.12.2015
PROVISIONS FOR TAXES	21	–14	12	8	36	–	23
Obligations from delivery transactions	237	–13	36	35	67	–	220
Warranty obligations and risks from transactions in course of completion	169	13	56	57	97	–5	161
Obligations relating to personnel	579	15	340	25	356	9	594
Insurance obligations	7	–	–	7	–	–	–
Dismantling obligations	212	12	5	6	27	–	240
Other obligations	279	4	44	51	197	–4	381
OTHER PROVISIONS	1,483	31	481	181	744	–	1,596
<b>TOTAL</b>	<b>1,504</b>	<b>17</b>	<b>493</b>	<b>189</b>	<b>780</b>	<b>–</b>	<b>1,619</b>

<sup>1</sup> Including currency differences.

## [25] Financial debt

Financial debt comprises interest-bearing obligations of The Linde Group, analysed as follows:

### 85 FINANCIAL LIABILITIES

in EUR m	Current		Non-current				Total	
	Due within one year		Due in one to five years		Due in more than five years		2015	2014
	2015	2014	2015	2014	2015	2014		
Subordinated bonds	–	–	–	–	1,050	1,049	1,050	1,049
Other bonds	383	710	4,460	3,717	2,321	3,095	7,164	7,522
Commercial papers (CP)	79	75	–	–	–	–	79	75
Liabilities to banks	491	490	432	394	18	125	941	1,009
Other financial liabilities	70	19	142	158	37	24	249	201
<b>GROSS FINANCIAL DEBT</b>	<b>1,023</b>	<b>1,294</b>	<b>5,034</b>	<b>4,269</b>	<b>3,426</b>	<b>4,293</b>	<b>9,483</b>	<b>9,856</b>
Less: Securities	421	521	–	–	–	–	421	521
Less: Cash and cash equivalents	1,417	1,137	–	–	–	–	1,417	1,137
<b>NET FINANCIAL DEBT</b>	<b>–815</b>	<b>–364</b>	<b>5,034</b>	<b>4,269</b>	<b>3,426</b>	<b>4,293</b>	<b>7,645</b>	<b>8,198</b>

Of the subordinated bonds and other bonds at 31 December 2015, EUR 662 m and EUR 2.397 bn respectively (2014: EUR 650 m and EUR 2.603 bn respectively) were in a fair value hedging relationship. If there had been no adjustment to the carrying amount as a result of fair value hedging relationships outstanding at the year-end which had been agreed, the subordinated bonds of EUR 1.050 bn would have been EUR 12 m lower and the other bonds of EUR 7.164 bn would have been EUR 65 m lower. In total, financial debt has increased by a total of EUR 77 m (2014: EUR 111 m) as a result of fair value hedging relationships.

Of the other bonds, EUR 681 m was in a cash flow hedging relationship at 31 December 2015 (2014: EUR 713 m).

The Linde Group concludes Credit Support Annexes (CSAs) with banks to minimise counterparty risk. Under these agreements, the positive and negative fair values of derivatives held by Linde AG and Linde Finance B.V. are collateralised with cash on a regular basis. The amount arising from these agreements which is disclosed in bank loans and overdrafts within financial debt is EUR 65 m (2014: EUR 80 m).

In the 2015 and 2014 financial years, there were no defaults or breaches of loans payable.

The bonds are analysed as follows:

### 86 FIXED-INTEREST BONDS

Issuer	Nominal volume in relevant currency (ISO code)	EUR m <sup>1</sup>	Weighted average residual maturity (in years) <sup>2</sup>	Weighted average effective interest rate (in percent) <sup>2,3</sup>
Linde Finance B.V., Amsterdam/Linde AG, Munich	EUR 5,730 m	5,769	4.1	3.5
Linde Finance B.V., Amsterdam	GBP 750 m	1,030	3.1	6.9
Linde Finance B.V., Amsterdam/Linde AG, Munich	USD 700 m	639	4.7	2.1
Linde AG, Munich	NOK 2,000 m	208	1.8	2.8
Linde Finance B.V., Amsterdam	AUD 100 m	67	3.5	4.3
<b>TOTAL</b>		<b>7,713</b>		

<sup>1</sup> Includes adjustments relating to hedging transactions.

<sup>2</sup> Subordinated bonds issued by Linde are included only until the end of the period when Linde may first exercise its right to call in the bond.

<sup>3</sup> Effective interest rate in the relevant currency.

## 87 VARIABLE-INTEREST BONDS

<i>Issuer</i>	<i>Nominal volume in relevant currency (ISO code)</i>	<i>EUR m</i>	<i>Weighted average residual maturity (in years)</i>	<i>Weighted average coupon (in percent)<sup>1</sup></i>
Linde Finance B.V., Amsterdam	USD 490 m	451	2.7	1.0
Linde Finance B.V., Amsterdam	EUR 50 m	50	2.4	0.5
<b>TOTAL</b>		<b>501</b>		

<sup>1</sup> Current coupon in the relevant currency.**Subordinated bonds**

There is a right to call the EUR 700 m and GBP 250 m subordinated bonds issued in July 2006 which have a final maturity date of 14 July 2066. This right applies as from 14 July 2016. If the right to call the loan is not exercised on this date, the coupon will attract interest at a variable rate (3-month Euribor +4.125 percent for the euro bond and 3-month LIBOR +4.125 percent for the bond in British pounds). The right to call the loan will then be available every quarter on the due date for interest payment.

The coupon payment may be suspended on any due date for interest payment. Coupon payments not made will be made up if The Linde Group makes payments for securities *pari passu* or subordinated securities or Linde AG makes dividend payments.

**Other bonds**

In October 2015, Linde Finance B.V. made three issues with a total volume of EUR 230 m under the EUR 10 bn Debt Issuance Programme: a five-year fixed-interest EUR 50 m bond with a coupon of 0.634 percent, a twelve-year fixed-interest EUR 80 m bond with a coupon of 1.652 percent, and a 15-year fixed-interest EUR 100 m bond with a coupon of 1.9 percent. All three issues are guaranteed by Linde AG. The proceeds of the issue were used to redeem a EUR 600 m bond which fell due in December 2015.

**Euro commercial papers**

The Linde Group uses a Euro Commercial Paper Programme for short-term financing. Under the programme, the issuers are Linde AG and Linde Finance B.V. with a guarantee from Linde AG. The volume of the programme is EUR 2 bn. At 31 December 2015, there were no commercial papers outstanding under this programme.

**Bank loans and overdrafts**

In July 2013, Linde agreed a new EUR 2.5 bn syndicated credit facility which is available for a five-year period, with two options to extend the facility, in each case by one year (subject to the agreement of the lenders). 33 major German and international banks used by Linde are involved in the consortium offering the credit facility. In 2015, Linde successfully extended the facility until 2020.

**Financial covenants**

No financial covenants are contained in the agreement relating to the EUR 2.5 bn syndicated credit facility.

The bank loans and overdrafts of African Oxygen Limited include various financial covenants relating to key financial figures in African Oxygen Limited. All the financial covenants relating to African Oxygen Limited were fulfilled in the 2015 and 2014 financial years.

## [26] Liabilities from finance leases

Liabilities from finance leases are repaid over the lease term. They have the following residual lease terms at the balance sheet date:

### 88 LIABILITIES FROM FINANCE LEASES

<i>in EUR m</i>	<i>31.12.2015</i>	<i>31.12.2014</i>
<b>TOTAL FUTURE MINIMUM LEASE PAYMENTS (GROSS INVESTMENT)</b>	<b>115</b>	<b>114</b>
due within one year	22	23
due in one to five years	43	36
due in more than five years	50	55
<b>PRESENT VALUE OF MINIMUM LEASE PAYMENTS</b>	<b>78</b>	<b>74</b>
due within one year	23	23
due in one to five years	35	30
due in more than five years	20	21
<b>FINANCE CHARGE INCLUDED IN THE MINIMUM LEASE PAYMENTS</b>	<b>37</b>	<b>40</b>

The carrying amounts of assets held under finance leases are disclosed principally under tangible assets. *SEE NOTE [15]*. These assets comprise distribution equipment, vehicles and other fixtures and fittings. Buildings are also included here. Some of the lease agreements contain extension clauses, purchase options or price adjustment clauses customary in the market.

[27] Trade payables, other liabilities,  
liabilities from income taxes

## 89 TRADE PAYABLES AND OTHER LIABILITIES

in EUR m	Current		Non-current		Total	
	2015	2014	2015	2014	2015	2014
Percentage of completion (PoC)	661	810	–	–	661	810
Other	2,562	2,675	3	2	2,565	2,677
<b>ACCOUNTS PAYABLE FOR GOODS AND SERVICES</b>	<b>3,223</b>	<b>3,485</b>	<b>3</b>	<b>2</b>	<b>3,226</b>	<b>3,487</b>
Payments received on account of orders	223	163	9	12	232	175
Other taxes	207	171	4	5	211	176
Social security	62	61	1	1	63	62
Derivatives with negative fair values	189	158	486	377	675	535
Other liabilities	574	520	347	253	921	773
<b>OTHER LIABILITIES</b>	<b>1,255</b>	<b>1,073</b>	<b>847</b>	<b>648</b>	<b>2,102</b>	<b>1,721</b>
<b>INCOME TAX LIABILITIES</b>	<b>568</b>	<b>525</b>	<b>–</b>	<b>–</b>	<b>568</b>	<b>525</b>
<b>TOTAL</b>	<b>5,046</b>	<b>5,083</b>	<b>850</b>	<b>650</b>	<b>5,896</b>	<b>5,733</b>

Percentage of completion trade payables of EUR 661 m (2014: EUR 810 m) relate to advance payments received on construction contracts, where these exceed the state of completion of the contract.

Income tax payables are disclosed as current in accordance with IAS 1.69 (d) as they are due with immediate effect and generally Linde has no option to defer them. Included in the income tax payables disclosed are amounts which may not fall due until more than twelve months after the balance sheet date.

Also included in income tax payables are payables relating to prior periods arising from external tax audits in various countries.

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### [28] Share option schemes

#### *Linde Performance Share Programme 2012*

It was resolved at the Annual General Meeting of Linde AG held on 4 May 2012 to introduce a performance share programme for management (Long Term Incentive Plan 2012 – LTIP 2012), under which up to 4 million options can be issued over a total period of five years. For this purpose, the issued share capital can be increased by up to EUR 10,240,000 by the issue of up to 4 million bearer shares with a notional par value of EUR 2.56 if certain conditions are met (2012 conditionally authorised capital).

The aim of LTIP 2012 is to encourage continuing loyalty to The Linde Group of management personnel in Linde AG and its affiliated companies within and outside Germany by creating a variable remuneration component in the form of shares which will act as a long-term incentive and which entails an element of risk.

The options may be issued in annual tranches during the authorised period. Each option confers the right to purchase one share in Linde AG at the exercise price, which is equivalent in each case to the lowest issue price, currently EUR 2.56 per share. Linde AG may decide, at its own discretion, at any time until the beginning of the exercise period that the option entitlements of the option holders may be met by providing own shares or making a payment in cash instead of issuing new shares out of the share capital conditionally authorised for this purpose. The Linde Performance Share Programme 2012 is designed as share-based payment with compensation provided in the form of equity instruments. Each individual tranche may be issued within a period of 16 weeks after the Annual General Meeting of Linde AG. The options may not be exercised until a qualifying period has expired. The qualifying period begins on the issue date which has been determined and ends on the fourth anniversary of the issue date. If options are to be exercised, this must take place during a period of twelve months from the end of the relevant qualifying period (the exercise period).

#### *Performance targets*

Options may only be exercised if and to the extent that performance targets are reached. The performance targets for each individual tranche of options are based on movements in (i) earnings per share and (ii) relative total shareholder return. Within each individual tranche of options, equal weighting is given to the “earnings per share” performance target and the “relative total shareholder return” performance target. Within each of these performance targets, a minimum target must be reached if the options are to become exercisable, and there is also a stretch target. If the stretch target for one of these performance targets is reached, all the options relating to that performance target become exercisable.

#### *“Earnings per share” performance target*

The minimum target for the “earnings per share” performance target is reached if the diluted earnings per share of the company adjusted for non-recurring items for the financial year ending before the expiry of the qualifying period achieves a compound average growth rate (CAGR) of 6 percent when compared with the diluted earnings per share of the company adjusted for non-recurring items for the financial year ending before the issue of the options. The stretch target for the “earnings per share” performance target is reached if the diluted earnings per share of the company adjusted for non-recurring items for the financial year ending before the expiry of the qualifying period achieves a CAGR of at least 11 percent when compared with the diluted earnings per share of the company adjusted for non-recurring items for the financial year ending before the issue of the options. The calculation of the “earnings per share” performance target is derived from the diluted earnings per share of the company adjusted for non-recurring items disclosed in the audited Group financial statements of The Linde Group for the appropriate financial year. If no adjustment for non-recurring items has been made in that financial year, the relevant figure is the diluted earnings per share disclosed in the Group financial statements. Non-recurring items are items which, due to their nature, frequency and/or scope, might have an adverse impact on the extent to which the diluted earnings per share figure provides an informative picture of the ability of The Linde Group to sustain its profitability in the capital market. Adjusting diluted earnings per share for non-recurring items is designed to increase transparency in respect of the Groups ability to sustain profitability. If the minimum target is reached, 12.5 percent of all the options in the relevant tranche may be exercised. If the stretch target is reached, 50 percent of all the options in the relevant tranche may be exercised: i.e. all the options dependent on this performance target. If the minimum target is exceeded, but the stretch target is not reached, the number of options that may be exercised is determined on a straight-line basis and will lie between 12.5 percent and 50 percent of all options issued on the same issue date, depending on the extent by which the minimum target is

exceeded and the proximity of the figure to the stretch target. If this calculation does not result in a round figure, the percentage should be rounded to one decimal point.

Details of the calculation of earnings per share are given in *NOTE [13]*. The “earnings per share” performance target is regarded as a non-market performance condition as defined by IFRS 2.

### ***“Relative total shareholder return” performance target***

The minimum target for the “relative total shareholder return” performance target is reached if the total shareholder return of the Linde AG share exceeds the median of the values for total shareholder return in the control group (described below) in the period between the issue date and the beginning of the exercise period. If the control group contains an even number of values, the average of the two values lying in the middle is deemed to be the median. The stretch target for the “relative total shareholder return” performance target is reached if the total shareholder return of the Linde AG share is in the upper quartile of the values for total shareholder return in the control group in the period between the issue date and the beginning of the exercise period. The total shareholder return of the Linde AG share comprises (i) the absolute increase or decrease in the price of a Linde AG share when compared to its initial value and (ii) the dividend per share paid plus the value of any statutory subscription rights attributable to one Linde AG share (as a result of capital increases). In each case, the calculation relates to the period between (and inclusive of) the issue date and the third last stock exchange trading day in the Xetra trading system (or in a comparable successor system) of the Frankfurt Stock Exchange before the exercise period. The absolute increase or decrease in price of the Linde AG share corresponds to the difference between the average of the closing prices (or of equivalent successor prices) of Linde shares in the Xetra trading system (or in a comparable successor system) of the Frankfurt Stock Exchange over the period between (and inclusive of) the 62nd stock exchange trading day to the third last stock exchange trading day before the exercise period (the final value) and the initial value. The initial value of the share for the determination of the total shareholder return is the average of the closing prices (or of equivalent successor prices) of Linde shares on the last 60 stock exchange trading days in the Xetra trading system (or in a comparable successor system) of the Frankfurt Stock Exchange before the issue date of the subscription rights. For the purposes of the LTIP 2012, the value of one statutory subscription right is the volume-weighted average of the closing prices in that period in which the subscription rights are traded in the Xetra trading system (or a comparable successor system) of the Frankfurt Stock Exchange. The control group comprises companies in the DAX 30 at that time, with the exception of Linde itself. Companies which are either excluded from or included in the DAX 30 during the period on which the calculation of the total shareholder return is based are ignored for the

purposes of the calculation. When determining the total shareholder return for shares in the control group, Linde may have recourse to data supplied by a recognised independent provider of financial data. If a company in the control group trades different classes of share or shares with differing profit entitlements on the stock exchange, only the shares which form the basis for the determination of the DAX 30 value are taken into consideration. If the minimum target is reached, 12.5 percent of all the options in the relevant tranche may be exercised. If the stretch target is reached, 50 percent of all the options in the relevant tranche may be exercised: i.e. all the options dependent on this performance target. If the minimum target is exceeded, but the stretch target is not reached, the number of options that may be exercised is determined on a straight-line basis and will lie between 12.5 percent and 50 percent of all options issued on the same issue date, depending on the extent by which the minimum target is exceeded and the proximity of the figure to the stretch target. If this calculation does not result in a round figure, the percentage should be rounded to one decimal point.

The “relative total shareholder return” target is regarded as a market-based performance condition as defined by IFRS 2 and is included in the measurement of the option price.



In accordance with IFRS 2 Share-based Payment, the total value of share options granted to management is determined at the issue date using an option pricing model. The total value calculated of the share options at the issue date is allocated as a personnel expense over the period in which the company receives service in return from the employee. This period is generally the same as the agreed qualifying period. The other side of the entry is made directly in equity (capital reserve).

Movements during the financial year in share options outstanding are disclosed in the table below:

#### € 90 OPTIONS – LONG TERM INCENTIVE PLAN 2012

	<i>LTIP – Number of options</i>
<b>AT 01.01.2014</b>	<b>733,965</b>
granted	302,199
exercised	–
forfeited	32,328
expired	–
<b>AT 31.12.2014/01.01.2015</b>	<b>1,003,836</b>
of which exercisable at 31.12.2014	–
granted	322,456
exercised	–
forfeited	49,470
expired	–
<b>AT 31.12.2015</b>	<b>1,276,822</b>
of which exercisable at 31.12.2015	–

The average remaining period in the LTIP 2012 is 23 months (2014: 29 months). The exercise price for all the tranches in the LTIP 2012 is EUR 2.56.

The calculation of the expense is based on the fair value of the options issued, using a Monte Carlo simulation for the fair value calculation. The following measurement parameters were used:

#### € 91 MONTE CARLO SIMULATION MODEL – LTIP 2012

	<i>1st tranche 2012</i>	<i>2nd tranche 2013</i>	<i>3rd tranche 2014</i>	<i>4th tranche 2015</i>
<i>Date of valuation</i>	<i>02.07.2012</i>	<i>03.06.2013</i>	<i>02.06.2014</i>	<i>02.06.2015</i>
Expected share volatility (in %)	22.54	21.08	19.95	16.65
Risk-free interest rate (in %)	0.44	0.36	0.24	–0.10
Expected dividend yield (in %)	2.50	2.50	2.50	2.50
Initial value of Linde shares (in EUR)	120.60	147.85	154.55	174.30
Exercise price (in EUR)	2.56	2.56	2.56	2.56
Number of participants	1,001	1,020	1,048	1,007

The volatility figure underlying the valuation is based on historical and implicit volatility, taking the remaining periods of the share options into account.

## 92 OPTIONS PER EXERCISE HURDLE – LONG TERM INCENTIVE PLAN 2012

	Option price	Weighting	Fair value	Probability	Calculated value at 31.12.
	in EUR	in %	in EUR	in %	in EUR
<b>1st tranche 2012</b>					
Earnings per share	106.74	50	53.37	–	–
Relative total shareholder return	52.31	50	26.16		26.16
<b>TOTAL</b>		<b>100</b>	<b>79.53</b>		<b>26.16</b>
<b>2nd tranche 2013</b>					
Earnings per share	131.42	50	65.71	–	–
Relative total shareholder return	67.75	50	33.88		33.88
<b>TOTAL</b>		<b>100</b>	<b>99.59</b>		<b>33.88</b>
<b>3rd tranche 2014</b>					
Earnings per share	137.72	50	68.86	40	27.54
Relative total shareholder return	74.96	50	37.48		37.48
<b>TOTAL</b>		<b>100</b>	<b>106.34</b>		<b>65.02</b>
<b>4th tranche 2015</b>					
Earnings per share	155.34	50	77.67	40	31.07
Relative total shareholder return	72.08	50	36.04		36.04
<b>TOTAL</b>		<b>100</b>	<b>113.71</b>		<b>67.11</b>

The probability that the “earnings per share” performance target would be reached is taken into account when calculating options that will be exercisable in future. In the financial year under review, the probability that the “earnings per share” performance target would be reached in respect of the first tranche (allocated in the 2012 financial year) and the second tranche (allocated in the 2013 financial year) was adjusted from 40 percent to 0 percent. This results in an impact on earnings of EUR 9 m, which was recognised in functional costs. Otherwise, there were no changes from the previous year in the value of options per exercise hurdle.

The volatility figure underlying the valuation is based on the historical volatility of Linde shares. The expected volatility is calculated on the basis of the historical values in the three years preceding the issue date of the options.

**Personal investment, matching shares**

A pre-condition of participation in the LTIP 2012 for plan participants in Band 5 or above in Linde's internal management structure is compulsory personal investment in shares of the company at the beginning of each tranche of the scheme. In the case of members of the Executive Board, the number of shares that each individual Board member must purchase as a personal investment is determined by the Supervisory Board. For other Linde executives in Band 5 or above, it is the Executive Board which determines the number of shares that must be purchased by each individual. For each share acquired by a scheme participant as a personal investment and held by the participant in respect of each tranche throughout the qualifying period for the options, one matching share in Linde AG will be granted at the end of the qualifying period at no cost to the participant. However, Linde is permitted to pay an amount in cash to those entitled to options instead of granting them matching shares. Conditions which apply to the granting of matching shares include: a personal investment in Linde AG shares by the scheme participant at the appropriate time, the unrestricted holding of such shares during the qualifying period of the corresponding tranche and, except in the event of the termination of the service or employment contract of the scheme participant before the end of the qualifying period (special cases) when different rules shall apply, the existence of a service or employment contract with the scheme participant at the end of the qualifying period in respect of which no notice has been given. Plan participants in Band 4 of Linde's internal management structure may make a voluntary personal investment in Linde AG shares and will be granted matching shares accordingly, subject to the aforementioned conditions.

The fair value of the entitlement to one matching share in the first tranche (2012) is EUR 109.26. The fair value of the entitlement to one matching share in the second tranche (2013) is EUR 133.95. The fair value of the entitlement to one matching share in the third tranche (2014) is EUR 140.01. The fair value of the entitlement to one matching share in the fourth tranche (2015) is EUR 157.91.

The effect on earnings of the recognition of the expense in the statement of profit or loss of The Linde Group is shown in the table below. The same amount was recognised in the capital reserve.

**€ 94 PERSONNEL EXPENSES –  
LONG TERM INCENTIVE PLAN 2012**

in EUR m	2015	2014
<b>TOTAL</b>	<b>6</b>	<b>17</b>

In the previous year, personnel expenses of EUR 1 m were recognised for the Linde Performance Share Programme LTIP 2007, which expired in 2014.

**€ 93 MATCHING SHARES –  
LONG TERM INCENTIVE PLAN 2012**

	LTIP – Number of matching shares
<b>AT 01.01.2014</b>	<b>66,285</b>
granted	29,102
forfeited	3,123
allocated	–
<b>AT 31.12.2014/01.01.2015</b>	<b>92,264</b>
granted	33,030
forfeited	6,118
allocated	–
<b>AT 31.12.2015</b>	<b>119,176</b>

## [29] Financial instruments

The following table shows the fair values of financial instruments by category and includes a comparison of the fair values of the financial instruments with their carrying amounts.

### 95 FINANCIAL ASSETS AT 31.12.2015

	Financial instruments	
	Fair value	Carrying amount
<i>in EUR m</i>		Cash and cash equivalents
Investments and securities at fair value	430	-
Investments and securities at amortised cost	21	-
Receivables from finance leases	321	-
Trade receivables	2,552	-
Receivables from percentage of completion contracts	174	-
Derivatives with positive fair values	316	-
Other receivables and assets	643	-
Cash and cash equivalents	1,417	1,417
<b>TOTAL</b>	<b>5,874</b>	<b>1,417</b>

### 96 FINANCIAL LIABILITIES AT 31.12.2015

<i>in EUR m</i>	
Financial liabilities	
Liabilities from finance leases	
Trade payables (excluding PoC)	
Derivatives with negative fair values	
Sundry liabilities	
<b>TOTAL</b>	

Financial instruments						Balance sheet values	
Carrying amount							
Loans and receivables	Held-to-maturity financial assets	Freestanding derivatives	Derivatives designated as hedging instruments	Available-for-sale financial assets	Total	Financial instruments outside scope of IAS 39	Total
-	-	-	-	430	430	-	430
6	15	-	-	-	21	-	21
-	-	-	-	-	-	269	269
2,552	-	-	-	-	2,552	-	2,552
174	-	-	-	-	174	-	174
-	-	44	272	-	316	-	316
304	-	-	-	-	304	339	643
-	-	-	-	-	1,417	-	1,417
3,036	15	44	272	430	5,214	608	5,822

Financial instruments						Balance sheet values	
Fair value		Carrying amount					
		Financial liabilities at amortised cost	Freestanding derivatives	Derivatives designated as hedging instruments	Total	Financial instruments outside scope of IAS 39	Total
	9,987	9,483	-	-	9,483	-	9,483
	64	-	-	-	-	78	78
	2,567	2,565	-	-	2,565	-	2,565
	675	-	90	585	675	-	675
	921	572	-	-	572	349	921
	14,214	12,620	90	585	13,295	427	13,722

## E97 FINANCIAL ASSETS AT 31.12.2014

	Financial instruments		
	Fair value	Carrying amount	
<i>in EUR m</i>		Cash and cash equivalents	
Investments and securities at fair value	554	–	
Investments and securities at amortised cost	20	–	
Receivables from finance leases	344	–	
Trade receivables	2,553	–	
Receivables from percentage of completion contracts	511	–	
Derivatives with positive fair values	409	–	
Other receivables and assets	603	–	
Cash and cash equivalents	1,137	1,137	
<b>TOTAL</b>	<b>6,131</b>	<b>1,137</b>	

## E98 FINANCIAL LIABILITIES AT 31.12.2014

<i>in EUR m</i>	
Financial liabilities	
Liabilities from finance leases	
Trade payables (excluding PoC)	
Derivatives with negative fair values	
Sundry liabilities	
<b>TOTAL</b>	

Financial instruments						Balance sheet values	
Carrying amount							
Loans and receivables	Held-to-maturity financial assets	Freestanding derivatives	Derivatives designated as hedging instruments	Available-for-sale financial assets	Total	Financial instruments outside scope of IAS 39	Total
-	-	-	-	554	554	-	554
6	14	-	-	-	20	-	20
-	-	-	-	-	-	298	298
2,553	-	-	-	-	2,553	-	2,553
511	-	-	-	-	511	-	511
-	-	126	283	-	409	-	409
266	-	-	-	-	266	337	603
-	-	-	-	-	1,137	-	1,137
3,336	14	126	283	554	5,450	635	6,085

Financial instruments						Balance sheet values	
Fair value		Carrying amount					
		Financial liabilities at amortised cost	Freestanding derivatives	Derivatives designated as hedging instruments	Total	Financial instruments outside scope of IAS 39	Total
	10,481	9,856	-	-	9,856	-	9,856
	71	-	-	-	-	74	74
	2,677	2,677	-	-	2,677	-	2,677
	535	-	28	507	535	-	535
	773	599	-	-	599	174	773
	14,537	13,132	28	507	13,667	248	13,915

The fair value of financial instruments is generally determined using stock exchange prices. If stock exchange prices are not available, the fair value is determined using measurement methods customary in the market, based on market parameters specific to the instrument.

The fair value of derivative financial instruments is determined as follows. Options are valued by external partners using the Black-Scholes option pricing model. Futures [SEE GLOSSARY] are measured with recourse to the

stock exchange price in the relevant market. All other derivative financial instruments are measured by discounting expected future cash flows using the net present value method. As far as possible, the entry parameters used in these models are relevant observable market prices and interest rates at the balance sheet date, obtained from recognised external sources.

These calculations are based on the following interest curves:

#### € 99 INTEREST CURVES

2015, in percent	EUR	USD	GBP	AUD	SEK	RUB	NOK
Interest for six months	-0.10	0.78	0.69	2.66	-0.22	11.77	1.08
Interest for one year	-0.06	0.86	0.73	2.21	-0.30	12.08	0.87
Interest for five years	0.33	1.73	1.61	2.46	0.72	10.79	1.26
Interest for ten years	1.00	2.19	2.03	2.97	1.62	10.69	1.87
2014, in percent							
Interest for six months	0.11	0.29	0.62	3.03	0.31	24.64	1.34
Interest for one year	0.16	0.44	0.65	2.51	0.24	20.20	1.20
Interest for five years	0.36	1.76	1.47	2.54	0.64	13.02	1.39
Interest for ten years	0.81	2.27	1.89	3.03	1.26	12.23	1.91

The following table shows the financial instruments in The Linde Group which are measured at fair value. Linde uses the following hierarchy to determine and disclose fair values based on the method used to ascertain their fair values:

→ Level 1: Quoted prices (unadjusted) in active markets for identical assets and liabilities.

→ Level 2: Inputs other than quoted market prices included within Level 1 that are observable for the asset or liability, either directly or indirectly.  
→ Level 3: Inputs for the asset or liability that are not based on observable market data.

#### € 100 FINANCIAL ASSETS AND LIABILITIES MEASURED AT FAIR VALUE AT 31.12.2015

in EUR m	Level 1	Level 2	Level 3
Investments and securities	415	-	-
Freestanding derivatives with positive fair values	-	44	-
Derivatives designated as hedging instruments with positive fair values	-	272	-
Freestanding derivatives with negative fair values	-	90	-
Derivatives designated as hedging instruments with negative fair values	-	585	-

#### € 101 FINANCIAL ASSETS AND LIABILITIES MEASURED AT FAIR VALUE AT 31.12.2014

in EUR m	Level 1	Level 2	Level 3
Investments and securities	511	-	-
Freestanding derivatives with positive fair values	-	126	-
Derivatives designated as hedging instruments with positive fair values	-	283	-
Freestanding derivatives with negative fair values	-	28	-
Derivatives designated as hedging instruments with negative fair values	-	507	-



During the reporting year, there were no transfers between Levels 1, 2 and 3 of the fair value hierarchy. The investments and securities category also included financial assets (available-for-sale financial assets) of EUR 15 m (2014: EUR 43 m) for which a fair value cannot be reliably determined. There is currently no intention to sell these assets.

For loans and receivables which are measured at amortised cost, there are generally no liquid markets. The exception to this is bonds issued by Linde AG and Linde Finance B.V., which are placed and traded in the capital market. The fair value of these instruments is determined using the current stock exchange price (Level 1). For current loans, receivables and liabilities recognised at amortised cost, it is assumed that the fair value corresponds to the carrying amount. For all other loans and receivables, the fair value is determined by discounting expected future cash flows. The interest rates applied to the loans are the same as those that would apply to new loans secured with the risk structure, original currency and maturity. Fair value is determined using the discounted cash flow method, taking into account individual credit ratings and other market circumstances in the form of credit and liquidity spreads generally applied in the market (Level 2).

In the 2015 financial year, there were no differences between the fair value of a financial instrument when it was first recognised and the amount which would have been recognised at that time had the valuation methods described above been used.

In the 2015 financial year, net financial gains and losses arose as follows:

#### 102 NET FINANCIAL GAINS AND LOSSES

<i>in EUR m</i>	<i>2015</i>	<i>2014</i>
From freestanding derivatives	180	204
From loans and receivables	93	100
From available-for-sale financial assets	-8	2
of which reported in the income statement	1	14
of which reported in cumulative changes in equity not recognised in the income statement	-9	-12
From financial liabilities at amortised cost	-414	-341
<b>TOTAL</b>	<b>-149</b>	<b>-35</b>

The net financial gains and losses on financial instruments arise from changes in fair value, the recognition and reversal of impairment losses, eliminations and exchange rate fluctuations. In the financial year under review, there was a considerable increase in the impairment losses for trade receivables.

The net financial gains and losses correspond to the valuation gains and losses of the financial instruments, but exclude interest and dividends.

Freestanding derivatives comprise all those derivatives which are not designated as hedging instruments. They include those derivatives in economic hedging relationships not designated as hedges in respect of which gains and losses arising from the underlying transaction and the hedged item are recognised at the same time in the statement of profit or loss.

The financial result includes fees and other costs of capital of EUR 15 m (2014: EUR 13 m) relating to financial instruments not at fair value through profit or loss.

No interest income has been accrued which relates to impaired financial instruments, especially receivables.

Impairment loss on financial assets:

### € 103 IMPAIRMENT LOSS ON FINANCIAL ASSETS AT 31.12.2015

<i>in EUR m</i>	<i>Carrying amount before impairment</i>	<i>Cumulative impairment loss</i>	<i>Carrying amount after impairment</i>	<i>Of which impairment loss for 2015 financial year</i>
Investments and securities at fair value	442	12	430	12
Investments and securities at amortised cost	26	5	21	–
Receivables from finance leases	269	–	269	–
Trade receivables	2,878	326	2,552	139
Receivables from percentage of completion contracts	174	–	174	–
Derivatives with positive fair values	316	–	316	–
Other receivables and assets	646	3	643	–
Cash and cash equivalents	1,417	–	1,417	–

### € 104 IMPAIRMENT LOSS ON FINANCIAL ASSETS AT 31.12.2014

<i>in EUR m</i>	<i>Carrying amount before impairment</i>	<i>Cumulative impairment loss</i>	<i>Carrying amount after impairment</i>	<i>Of which impairment loss for 2014 financial year</i>
Investments and securities at fair value	556	2	554	1
Investments and securities at amortised cost	25	5	20	–
Receivables from finance leases	298	–	298	–
Trade receivables	2,848	295	2,553	62
Receivables from percentage of completion contracts	511	–	511	–
Derivatives with positive fair values	409	–	409	–
Other receivables and assets	606	3	603	–
Cash and cash equivalents	1,137	–	1,137	–

Impairment losses on trade receivables can be analysed as follows:

### € 105 IMPAIRMENT LOSS ON TRADE RECEIVABLES

<i>in EUR m</i>	<i>Cumulative impairment loss</i>
<b>AT 01.01.2014</b>	<b>305</b>
Currency adjustments	13
Increase in impairment losses recorded in the statement of profit and loss	62
Write-offs charged against cumulative impairment losses	–85
<b>AT 31.12.2014/01.01.2015</b>	<b>295</b>
Currency adjustments	12
Increase in impairment losses recorded in the statement of profit and loss	139
Write-offs charged against cumulative impairment losses	–120
<b>AT 31.12.2015</b>	<b>326</b>

The carrying amounts of the financial assets recognised take into account the highest possible risk of default. A summary of financial assets past due but not impaired is presented in *NOTE [18]*. The increase in impairments is primarily due to the renewed increase in outstanding receivables and payment terms with the federal health insurance programmes within the US healthcare system. In the UK, a receivable was also written down due to the insolvency of a customer.

The interest income and interest expense from financial instruments not measured at fair value through profit or loss were as follows:

**€ 106 INTEREST INCOME/EXPENSE FROM FINANCIAL INSTRUMENTS NOT MEASURED AT FAIR VALUE**

<i>in EUR m</i>	<i>2015</i>	<i>2014</i>
Interest income	40	37
Interest expenses	350	354
<b>TOTAL</b>	<b>-310</b>	<b>-317</b>

Not included here are the interest income and interest expense from derivatives or the interest income and interest expense from assets and liabilities outside the scope of IFRS 7.

### ***Risk positions and risk management***

The Linde Group is exposed to a variety of financial risks. These include in particular: counterparty risk, liquidity risk, interest rate risk, exchange rate risk and other market price risks. These are described below. For further information about risk management in The Linde Group, please refer to the disclosures in the combined management report.

SEE OPPORTUNITY AND RISK REPORT, PAGES 91 TO 107.

### ***Counterparty risk***

Counterparty risk is the risk that a counterparty does not meet his or her contractual payment obligations and that this leads to a loss for The Linde Group.

The Linde Group deals in principle with counterparties who have a good credit rating. Regular reviews are performed of the creditworthiness of counterparties and clearly defined limits have been set. Experience during the economic crisis has shown that credit standings can change very quickly. It is therefore possible that, despite the Group's monitoring process, counterparties might delay payments or fail to make them at all. The Linde Group does not believe that it has any significant exposure to default risk arising from any individual counterparty. The concentration of the counterparty risk is limited due to the Group's broad and uncorrelated customer base. With the exception of Medicare, the federal health insurance programme within the US health system, the single largest debtor constitutes less than 2 percent of the total figure for trade receivables in The Linde Group. Medicare constitutes 9 percent of the Group's trade receivables.

The risk positions outstanding are subject to strict limits and are continually monitored. The carrying amounts of financial assets reported in the balance sheet, taking into account impairment losses, represent the highest possible default risk, without including the value of any collateral.

A significant criterion for the management of counterparty risk relating to financing and capital market transactions is the credit rating of the relevant counterparty. Linde limits the extent and duration of any commercial transactions to be concluded accordingly. Regular reviews are performed by a supervisory unit which is independent of the trading department to ensure compliance with all the limits set. The Linde Group has concluded bilateral Credit Support Annexes (CSAs) with the majority of the banks with which financial instruments are traded. On the basis of such agreements, the positive and negative fair values of derivatives held by Linde AG and Linde Finance B.V. for the purpose of interest rate and currency management are collateralised with cash on a regular basis. In this way, the default risk arising from these instruments is minimised. These transactions are subject to the rules of the framework agreement for financial derivative transactions, whereby the rights and obligations associated with the exchange of collateral do not qualify for netting in the balance sheet. A willingness to enter into CSAs with Linde AG and Linde Finance B.V. is an essential prerequisite to being accepted as a counterparty by Linde. In this connection, The Linde Group issued EUR 371 m (2014: EUR 141 m) as collateral for derivatives with negative fair values and received EUR 65 m (2014: EUR 80 m) as collateral for derivatives with positive fair values. In addition, a unilateral CSA was concluded with a trading platform for commodities derivatives in Sweden, and EUR 2 m was issued as collateral for negative market values. The Linde Group also has financial assets with a carrying amount of EUR 5 m (2014: EUR 4 m) which are pledged as collateral for liabilities or contingent liabilities. In the 2015 and 2014 financial years, no additional significant collateral was held by The Linde Group apart from the CSAs described above.

# **107 FINANCIAL ASSETS/LIABILITIES SUBJECT TO OFFSETTING OR ENFORCEABLE MASTER AGREEMENTS FOR FINANCIAL DERIVATIVE TRANSACTIONS**

31.12.2015, in EUR m	Gross amount of recognised financial assets/liabilities	Gross amount of recognised financial assets/liabilities set off in the balance sheet	Net amount of financial assets/liabilities presented in the balance sheet	Financial instruments that qualify for netting	Net amount before CSAs	Collaterals received from collateral agreements	Collaterals due to pledged collateral agreements	Net amount
Derivatives with positive fair values	316	–	316	–235	81	–62	27	46
Derivatives with negative fair values	–675	–	–675	235	–440	–3	346	–97
Trade receivables	9	4	5	–	5	–	–	5
Trade payables	6	4	2	–	2	–	–	2
<b>TOTAL</b>	<b>–344</b>	<b>8</b>	<b>–352</b>	<b>–</b>	<b>–352</b>	<b>–65</b>	<b>373</b>	<b>–44</b>
<b>31.12.2014, in EUR m</b>								
Derivatives with positive fair values	409	–	409	–303	106	–57	9	58
Derivatives with negative fair values	–535	–	–535	303	–232	–23	132	–123
Trade receivables	5	3	2	–	2	–	–	2
Trade payables	4	3	1	–	1	–	–	1
<b>TOTAL</b>	<b>–117</b>	<b>6</b>	<b>–123</b>	<b>–</b>	<b>–123</b>	<b>–80</b>	<b>141</b>	<b>–62</b>

† The terms governing CSAs may result in the net fair value position per counterparty being over-secured.

## **Liquidity risk**

Liquidity risk is the risk that the Group will no longer be able to meet its financial payment obligations. Contractual undiscounted expected future cash flows from financial liabilities are shown in the table below:

# **108 FUTURE CASH FLOWS FROM FINANCIAL LIABILITIES – 2015**

in EUR m	Due within one year	Due in one to five years	Due in more than five years
Cash outflows from non-derivative financial liabilities	4,492	6,013	3,693
Cash outflows from derivatives with negative fair values	196	1,406	1,092
of which settled gross	191	1,306	715
related cash inflows as a result of gross settlement	152	1,080	587

# **109 FUTURE CASH FLOWS FROM FINANCIAL LIABILITIES – 2014**

in EUR m	Due within one year	Due in one to five years	Due in more than five years
Cash outflows from non-derivative financial liabilities	4,865	6,344	3,599
Cash outflows from derivatives with negative fair values	128	1,100	785
of which settled gross	121	1,036	342
related cash inflows as a result of gross settlement	108	920	304

In the case of derivative financial instruments, only those with negative fair values are included in the cash outflows presented above in accordance with IFRS 7.39 (b). In the case of derivatives settled gross, both the cash outflow and the cash inflow on the settlement of the derivative are included in the analysis to avoid distortions in the presentation.

### Interest rate risks

Interest rate risks arise from market fluctuations in interest rates. As a result of its financing activities, The Linde Group is exposed to a risk from interest rate changes. At 31 December 2015, The Linde Group held interest-bearing instruments (net, including interest rate derivatives/hedges) totalling EUR 7.829 bn (2014: EUR 8.139 bn). Of these, EUR 2.586 bn (2014: EUR 3.112 bn) related to instruments bearing interest at variable interest rates and EUR 5.243 bn (2014: EUR 5.028 bn) to instruments bearing interest at fixed rates. This is equivalent to a Group-wide fixed-rate ratio of 67 percent (2014: 62 percent).

The Linde Group sees the euro, US dollars, Australian dollars and British pounds as the currencies which have a significant impact on its financing activities. At the balance sheet date, The Linde Group had total holdings of interest-bearing

instruments in euros of EUR 4.470 bn (2014: EUR 4.879 bn) [fixed-rate ratio: 52 percent (2014: 49 percent)], in US dollars of USD 2.075 bn (2014: USD 2.264 bn) [fixed-rate ratio: 88 percent (2014: 85 percent)], in Australian dollars of AUD 794 m (2014: AUD 910 m) [fixed-rate ratio: 45 percent (2014: 54 percent)] and in British pounds of GBP 169 m (2014: GBP 75 m) [fixed-rate ratio: 100 percent (2014: 91 percent)]. In addition, Linde has partially used forward payer swaps to provide an element of hedging against exposure to rising interest rates with regard to future bond issues.

Based on instruments bearing interest at variable rates and financial instruments hedging interest rate risks which The Linde Group holds or has issued, a hypothetical change in the interest rates applicable to the respective instruments would have had the following effects (if exchange rates remained constant):

#### 110 EFFECT OF CHANGES IN INTEREST RATES – 2015

Currency, in EUR m	Change	Recognised in profit or loss	Directly in equity
EUR	+ 100 bp	-22	89
	- 100 bp	22	-95
GBP	+ 100 bp	1	-6
	- 100 bp	-1	6
USD	+ 100 bp	-2	68
	- 100 bp	2	-69
AUD	+ 100 bp	-3	8
	- 100 bp	3	-8
Other currencies	+ 100 bp	1	7
	- 100 bp	-1	-7

#### 111 EFFECT OF CHANGES IN INTEREST RATES – 2014

Currency, in EUR m	Change	Recognised in profit or loss	Directly in equity
EUR	+ 100 bp	-25	104
	- 100 bp	25	-112
GBP	+ 100 bp	-	-9
	- 100 bp	-	9
USD	+ 100 bp	-3	75
	- 100 bp	3	-76
AUD	+ 100 bp	-3	8
	- 100 bp	3	-8
Other currencies	+ 100 bp	-	4
	- 100 bp	-	-4

### Exchange rate risks

Due to its activities as an international group, The Linde Group is exposed to exchange rate risks. Its broad spread of activities over many different currency areas and its local business model result in a low concentration of risk for the Group.

The Linde Group monitors and manages its exchange rate risk, a risk which has an impact on its operations. The gross exchange rate risk encompasses all the operating activities of the Group. This gross exchange rate risk is reduced by around 82 percent (2014: 86 percent) through hedging. Therefore, The Linde Group is exposed at the balance sheet date to a net exchange rate risk from operating activities involving foreign currency corresponding to 18 percent (2014: 14 percent) of the original unsecured risk.

The risk of exchange rate movements is monitored for internal management purposes on the basis of a value-at-risk, which relates to positions in currencies other than the relevant functional currency.

The value-at-risk is calculated on the basis of historical data (250 working days) in accordance with international banking standards. The value-at-risk presents the maximum potential loss based on a probability of 97.5 percent for a holding period of twelve months. The calculation takes into account correlations between the transactions being considered; the risk of a portfolio is generally lower than the total of the respective individual risks.

At 31 December 2015, the value-at-risk was EUR 26 m (2014: EUR 17 m).

### Other market price risks

As a result of its energy purchases, The Linde Group is exposed to risks arising from changes in commodity prices. The Linde Group monitors and manages these commodity price risks arising from the purchase of electricity and natural gas for use in production. These hedging operations are governed by strict risk management guidelines, compliance with which is constantly being monitored. Commodity price risks are hedged in the main by long-term supply contracts or limited by the form and structure of sales contracts. Derivatives are also used to a much lesser extent to hedge against the exposure to changes in the price of electricity, natural gas and propane gas. The commodity price risk from financial instruments is therefore not material.

## Hedge Accounting

### Cash flow hedges

The Linde Group hedges cash flows at both Group and company levels, based on agreed minimum hedging rates. At the company level, future transactions which are highly probable are hedged against foreign exchange risks. A rolling 15-month budget or the budgets for individual customer-specific projects are used for this purpose.

In general, these hedges are accounted for as cash flow hedges in accordance with IAS 39 Financial Instruments: Recognition and Measurement. The effective portion of the gain or loss on the hedging instruments is recognised directly in equity and released to the statement of profit or loss when the hedged cash flows are also recognised in the statement of profit or loss or if a hedged future transaction is no longer expected to occur. In addition, the risks associated with changes in interest rates relating to certain financial liabilities or future financing measures are hedged by derivative financial instruments and accounted for as cash flow hedges.

The Linde Group also hedges the exposure to commodity price risks which arise in the normal course of business from its procurement transactions and results in open risk positions. To reduce the extent of the risk, The Linde Group enters into a small number of electricity, natural gas and propane gas derivatives. Usually, hedging relationships of this type are also designated as cash flow hedging relationships, if this accords with the facts.

If the hedged future transactions (forecast transactions as defined by IAS 39) result in the recognition of a non-financial asset or liability, the initial carrying amounts of these are adjusted for the amount recorded in equity. This is usually the case for non-current assets and inventories.

The following table presents a reconciliation of the reserve for cash flow hedges:

#### € 112 RESERVE FOR CASH FLOW HEDGES

in EUR m	2015	2014
<b>OPENING BALANCE AT 01.01.</b>	<b>-259</b>	<b>-14</b>
Additions	7	-229
Transfers to the statement of profit or loss	-18	-16
of which relating to revenue	-12	-4
of which relating to cost of sales	-11	-13
of which relating to financial income and expenses	5	1
<b>CLOSING BALANCE AT 31.12.</b>	<b>-270</b>	<b>-259</b>

In the 2015 financial year, income of EUR 2 m (2014: EUR 1 m) was recognised in the financial result which related to forecast transactions which did not take place. Most of the amount related to currency hedges in respect of forecast revenue in foreign currency.

No amounts were recognised in 2015 or 2014 as a result of ineffectiveness in cash flow hedges.

Cash flows and the gains and losses from those hedging instruments are expected to be as follows:

#### 113 CASH FLOWS, GAINS AND LOSSES FROM CASH FLOW HEDGES – 2015

<i>in EUR m</i>	<i>Within one year</i>	<i>In one to five years</i>	<i>In more than five years</i>	<i>Total</i>
Cash flows from hedging instruments	4	-454	-199	-649
Gain/loss	-4	-134	-132	-270

#### 114 CASH FLOWS, GAINS AND LOSSES FROM CASH FLOW HEDGES – 2014

<i>in EUR m</i>	<i>Within one year</i>	<i>In one to five years</i>	<i>In more than five years</i>	<i>Total</i>
Cash flows from hedging instruments	-33	-322	-252	-607
Gain/loss	-8	-62	-189	-259

### Fair value hedges

The Linde Group uses interest rate swaps to hedge the exposure to changes in the fair value of financial assets and financial liabilities as a result of interest rate changes. If the hedge is deemed to be effective, the carrying amount of the hedged item is adjusted for changes in the fair value attributable to the hedged risk.

The following table shows the changes in underlying transactions and hedging instruments in fair value hedging relationships recognised in profit or loss.

#### 115 FAIR VALUE HEDGES

<i>in EUR m</i>	<i>2015</i>	<i>2014</i>
From hedged transactions	35	-44
From hedging instruments	-34	41
<b>INEFFECTIVENESS</b>	<b>1</b>	<b>-3</b>

### *Hedges of a net investment in a foreign operation*

The Linde Group hedges its exposure to translation risk by taking out loans in foreign currency and by entering into forward exchange contracts and cross-currency interest rate swaps. These hedges generally qualify as hedges of a net investment in a foreign operation (referred to below as net investment hedges) in accordance with IAS 39 Financial Instruments: Recognition and Measurement and hence the effective portion of the hedge is transferred to equity. If the foreign operation is subsequently sold or relinquished, the amount recognised in equity is released to the statement of profit or loss.

No amounts were recognised in 2015 or 2014 as a result of ineffectiveness in net investment hedges.

Fair value of financial instruments designated as hedges:

#### € 116 FAIR VALUE OF FINANCIAL INSTRUMENTS DESIGNATED AS HEDGES

<i>in EUR m</i>	<i>2015</i>	<i>2014</i>
<b><i>Cash flow hedges</i></b>		
Forward exchange transactions	12	2
Interest rate/cross-currency interest rate swaps	-234	-203
Commodities	-22	-18
Financial liabilities	240	155
<b><i>Fair value hedges</i></b>		
Interest rate swaps	90	123
<b><i>Net investment hedges</i></b>		
Forward exchange transactions	-60	-110
Cross-currency interest rate swaps	-99	-18
Financial liabilities in foreign currencies	1,435	1,373
<b>TOTAL</b>	<b>1,362</b>	<b>1,304</b>



## [30] Group statement of cash flows

The statement of cash flows shows the source and application of funds. In accordance with IAS 7 Cash Flow Statements, cash flows from operating activities are distinguished from cash flows from investing and financing activities.

The cash and cash equivalents disclosed in the statement of cash flows comprise all cash and cash equivalents disclosed in the statement of financial position: i.e. cash in hand, bank balances and money market funds with a maturity of three months or less. Cash and cash equivalents of EUR 8 m (2014: EUR 9 m) are subject to drawing restrictions as a result of currency export restrictions. The cash flows from investing and financing activities are calculated on the basis of payments, while the cash flow from operating activities is derived indirectly from earnings before taxes on income.

When the cash flow from operating activities is calculated, the changes in assets and liabilities are adjusted for the effects of currency translation and changes in Group structure. As a result, it is not possible to reconcile the figures to the differences between the headings in the published Group statement of financial position.

Distributions received and income taxes paid included in cash inflow from operating activities are disclosed separately. Cash inflows from associates and joint ventures are disclosed in cash inflow from operating activities. Finance income from embedded finance leases (IFRIC 4/IAS 17) has been included in cash inflow from operating activities, due to the fact that such income is clearly related to the operating business of The Linde Group, while capitalised borrowing costs of EUR 52 m (2014: EUR 42 m) are disclosed in cash flow from investing activities. All other interest payments are disclosed in cash flow from financing activities.

For cash outflows relating to newly consolidated companies, please refer to the Group statement of cash flows. *SEE TABLES 35 AND 36, PAGES 120 TO 121.* In the Group statement of financial position, EUR 4 m (2014: EUR 8 m) has been recognised as liabilities which are not included in the cash outflows for consolidated companies.

All in all, no cash and cash equivalents were received as a result of acquisitions (2014: EUR 1 m).

Investing activities comprise additions to and disposals of tangible assets, financial assets, intangible assets and consolidated companies. Additions and disposals in foreign currency have been translated at average rates.

## [31] Segment information

IFRS 8 Operating Segments requires information to be provided for each operating segment. The definition of operating segments and the scope of the information prepared for segment reporting is based, among other things, on the information made available on a regular basis to the full Executive Board and, as a result, on the internal management within the organisation. The full Executive Board is regularly provided with key profitability and revenue figures that are relevant for a decision-making perspective for the following areas:

- EMEA (Europe, Middle East and Africa)
- Asia/Pacific
- Americas
- Engineering Division
- Other Activities

In accordance with IFRS 8, The Linde Group therefore reports in five segments. The "Reconciliation" column comprises corporate activities and consolidation adjustments. *SEE TABLE 38, PAGES 124 TO 125.*

A brief description of the segments is given below:

### **Gases Division (EMEA, Asia/Pacific and Americas):**

The activities of the Gases Division comprise the production, sale and distribution of gases for applications in industry, medicine, environmental protection and in research and development. In addition, this division offers technical application know-how, specialised services and the necessary hardware to use the gases. The business model in the three segments within the Gases Division (EMEA, Asia/Pacific and Americas) is largely identical in each segment.

### **Engineering Division:**

The activities of the Engineering Division comprise the design and realisation of turnkey olefin plants, plants for the production of hydrogen and synthesis gases and the processing of natural gas, and air separation plants. This division also develops and manufactures plant components and offers specialised services.

### **Other Activities:**

Other Activities comprises Gist, a leading supplier of logistics and supply chain solutions with business operations mainly in the UK.

### **Segment accounting policies**

For the reportable segments, the same accounting policies apply as those set out in *NOTE [7]*. Exceptions apply to Group financing, which is allocated to Corporate. Pension obligations are allocated to the segment in which the relevant employees work. The provision for existing pension obligations arising from the BOC pension plan in respect of the legal entities in the UK is allocated to the EMEA segment. The service cost was charged to the EMEA and

Corporate segments. Transactions between the reportable segments described above are conducted under the same conditions as for non-related third parties.

To arrive at the figure for the Gases Division as a whole from the figures for the three reportable segments within the Gases Division, consolidation adjustments of EUR 182 m (2014: EUR 124 m) have been applied to revenue. Therefore, it is not possible to arrive at the figure for the Gases Division as a whole by merely adding together the figures for the reportable segments in the Gases Division.

Segment profit is calculated on the basis of operating profit.

Capital expenditure per segment represents the amounts invested during the financial year from the point of view of the subsidiary. Included in the "Reconciliation" column are not only consolidation adjustments required from the Group's point of view, but also adjustments as a result of variances in Group acquisition and manufacturing cost as a result of supplies made by the Engineering Division to the Gases Division.

The reconciliation of segment revenue to Group revenue and segment operating profit to Group earnings before taxes on income are shown below:

#### € 117 RECONCILIATIONS OF SEGMENT REVENUE AND OF THE SEGMENT RESULT

<i>in EUR m</i>	2015	2014
<b>Revenue</b>		
Total revenue from the segments	18,369	17,655
Consolidation	-425	-608
<b>GROUP REVENUE</b>	<b>17,944</b>	<b>17,047</b>
<b>Operating profit</b>		
Operating profit from segments	4,411	4,197
Operating profit from corporate activities	-288	-246
Restructuring costs (non-recurring item)	192	66
Amortisation and depreciation	1,896	1,969
Financial income	42	50
Financial expenses	439	415
Consolidation	8	-31
<b>PROFIT BEFORE TAX</b>	<b>1,646</b>	<b>1,520</b>

## [32] Employees

The average number of employees (including part-time employees pro-rata) can be analysed as follows:

#### € 118 EMPLOYEES BY SEGMENT

	2015	2014
Gases Division	52,960	52,361
EMEA	21,449	21,669
Asia/Pacific	11,828	12,205
Americas	19,683	18,487
Engineering Division	7,186	7,192
Other Activities	4,904	4,769
<b>GROUP</b>	<b>65,050</b>	<b>64,322</b>

In 2015, the average number of employees in the companies included in the Group financial statements on a line-by-line basis was 164 (2014: 164)

### [33] Recommendation for the approval of the annual financial statements and appropriation of profit of Linde AG

The unappropriated profit of Linde Aktiengesellschaft at 31 December 2015 was EUR 640,451,344.95 (2014: EUR 584,759,923.65).

The annual financial statements of Linde AG prepared in accordance with the German Commercial Code (HGB) and the German Stock Corporation Act (AktG) are published and filed in the German Federal Gazette (Bundesanzeiger).

#### € 119 BALANCE SHEET OF LINDE AG – ASSETS

in EUR m	31.12.2015	31.12.2014
Intangible assets	106	111
Tangible assets	433	381
Financial assets	17,499	17,601
<b>NON-CURRENT ASSETS</b>	<b>18,038</b>	<b>18,093</b>
Inventories	3,139	2,345
less advance payments received from customers	-3,139	-2,345
Receivables and other assets	1,985	1,668
Securities	400	500
Liquid assets	359	379
<b>CURRENT ASSETS</b>	<b>2,744</b>	<b>2,547</b>
Prepaid expenses and deferred charges	44	23
<b>TOTAL ASSETS</b>	<b>20,826</b>	<b>20,663</b>

#### € 120 BALANCE SHEET OF LINDE AG – EQUITY AND LIABILITIES

in EUR m	31.12.2015	31.12.2014
Capital subscribed	475	475
Conditionally authorised capital of EUR 57 m (2014: EUR 62 m)		
Capital reserve	6,563	6,564
Revenue reserves	2,167	2,138
Unappropriated profit	640	585
<b>EQUITY</b>	<b>9,845</b>	<b>9,762</b>
Provisions for pensions and similar obligations	274	184
Other provisions	796	772
<b>PROVISIONS</b>	<b>1,070</b>	<b>956</b>
<b>LIABILITIES</b>	<b>9,911</b>	<b>9,945</b>
<b>TOTAL ASSETS</b>	<b>20,826</b>	<b>20,663</b>

#### € 121 INCOME STATEMENT OF LINDE AG

in EUR m	2015	2014
<b>REVENUE</b>	<b>2,097</b>	<b>1,888</b>
Cost of sales	1,382	1,134
<b>GROSS PROFIT ON REVENUE</b>	<b>715</b>	<b>754</b>
Marketing and selling expenses	320	297
Research and development costs	129	128
General administration expenses	419	358
Other operating income	381	297
Other operating expenses	239	231
Investment income	901	680
Other interest and similar income	274	279
of which from affiliated companies EUR 216 million (2014: EUR 214 m)		
Amortisation of financial assets and securities held as current assets	30	11
Interest and similar charges	490	402
of which to affiliated companies EUR 217 million (2014: EUR 232 m)		
<b>PROFIT ON ORDINARY ACTIVITIES</b>	<b>644</b>	<b>583</b>
Income tax expense	-25	-70
<b>PROFIT FOR THE YEAR</b>	<b>669</b>	<b>653</b>
Transfer to revenue reserves	-29	-68
<b>UNAPPROPRIATED PROFIT</b>	<b>640</b>	<b>585</b>

The Executive Board recommends that, when the annual financial statements of Linde AG are approved at the meeting of the Supervisory Board on 9 March 2016, the Supervisory Board proposes that the appropriation of profit of EUR 640,451,344.95 (2014: EUR 584,759,923.65) be voted on at the Annual General Meeting on 3 May 2016:

- payment of a dividend of EUR 3.45 (2014: EUR 3.15) per no-par value share entitled to dividend. The total dividend payout for 185,638,071 (2014: 185,638,071) no-par value shares entitled to dividend amounts to EUR 640,451,344.95 (2014: EUR 584,759,923.65).

The 95,109 treasury shares held by the Company without any dividend entitlement at the time of the proposal are not included in the calculation of the amount to be distributed.

## [34] Related party transactions

In addition to the subsidiaries included in the Group financial statements, Linde AG is related, directly or indirectly, while carrying out its normal business activities to non-consolidated subsidiaries, joint ventures and associates. The business relationships with these companies are generally conducted under the same conditions as for non-related third parties. Related companies which are controlled by The Linde Group or over which The Linde Group may exercise significant influence are disclosed in the list of shareholdings, arranged by division.

The full list of Group shareholdings (*SEE NOTE [41]*) has been filed in the electronic German Federal Gazette. The information about the remuneration of the Executive Board and the Supervisory Board is set out in *NOTE [35]*.

The volume of transactions of The Linde Group with these related parties is set out below.

Services provided by the Group to related parties:

### 122 REVENUE WITH RELATED PARTIES

in EUR m	2015				2014			
	Non-consolidated subsidiaries	Associates or joint ventures	Other related parties	Total	Non-consolidated subsidiaries	Associates or joint ventures	Other related parties	Total
Sales of goods	–	14	–	14	–	12	–	12
Revenue based on PoC	–	7	–	7	–	19	–	19
Other revenue	–	–	–	–	–	1	–	1

Services provided by related parties to the Group:

### 123 PURCHASED GOODS AND SERVICES FROM RELATED PARTIES

in EUR m	2015				2014			
	Non-consolidated subsidiaries	Associates or joint ventures	Other related parties	Total	Non-consolidated subsidiaries	Associates or joint ventures	Other related parties	Total
Goods and services purchased from related parties	4	110	–	114	5	120	–	125

Related persons are mainly the members of the Executive Board and Supervisory Board. In 2015, there were no significant transactions between The Linde Group and members of the Executive Board and Supervisory Board or their family members which are outside the bounds of existing employment, service or appointment agreements or remuneration contracts.

Some members of Linde's Executive Board and Supervisory Board hold similar positions in other companies. Linde has normal business relationships with virtually all these companies. The sale and purchase of goods and services to and from these companies take place under the usual market conditions.

At the balance sheet date, receivables from and liabilities to related parties were as follows:

#### 124 RECEIVABLES FROM AND LIABILITIES TO RELATED PARTIES

in EUR m	31.12.2015				31.12.2014			
	Non-consolidated subsidiaries	Associates or joint ventures	Other related parties	Total	Non-consolidated subsidiaries	Associates or joint ventures	Other related parties	Total
Receivables from related parties	3	31	–	34	3	14	–	17
Liabilities to related parties	1	38	–	39	1	36	–	37

There were no charge-free guarantee agreements in place for associates or joint ventures on the balance sheet date (2014: EUR 4 m), nor any open purchase orders relating to joint ventures (2014: EUR 36 m).

### [35] Additional information about the Supervisory Board and Executive Board

Disclosed below are the total emoluments of the Executive Board and the Supervisory Board as required by § 315a (1) in conjunction with § 314 (1) No. 6 of the German Commercial Code (HGB). The information required by IAS 24.17 regarding the total emoluments of the Executive Board is also reported in this Note.

#### Supervisory Board

The total emoluments of the Supervisory Board shown in the table below are based on the cost incurred in the financial year in accordance with IAS 24.17.

#### 125 EMOLUMENTS OF THE SUPERVISORY BOARD (INCL. VAT)

in EUR	2015	2014
Fixed emoluments	2,891,700	2,891,700
Attendance fees	97,580	94,010
<b>TOTAL EMOLUMENTS</b>	<b>2,989,280</b>	<b>2,985,710</b>

At 31 December 2015, there were no advances or loans to members of the Supervisory Board. This was also the case at 31 December 2014.

#### Executive Board

The total emoluments of the Executive Board in accordance with the provisions of the German Commercial Code (HGB) and German Accounting Standard DRS 17 were as follows:

#### 126 EMOLUMENTS OF THE EXECUTIVE BOARD IN ACCORDANCE WITH THE GERMAN COMMERCIAL CODE (HGB)

in EUR	2015	2014
Fixed emoluments/Benefits in kind/Other benefits	4,295,945	4,263,230
Variable cash emoluments short-term	4,369,260	4,622,705
Variable cash emoluments long-term	2,912,840	3,081,804
<b>TOTAL CASH EMOLUMENTS</b>	<b>11,578,045</b>	<b>11,967,739</b>
Long Term Incentive Plan (value on the grant date)	3,374,969	3,124,883
<b>TOTAL EMOLUMENTS</b>	<b>14,953,014</b>	<b>15,092,622</b>
Service cost for pension obligation	1,590,875	1,022,807
<b>TOTAL EMOLUMENTS (HGB)</b>	<b>16,543,889</b>	<b>16,115,429</b>

## 127 SHARES GRANTED FROM SHARE-BASED PAYMENTS

	2015		2014	
	units	Value per unit when granted in EUR	units	Value per unit when granted in EUR
Options (LTIP 2012)	40,231	67.11	38,450	65.02
Matching shares (LTIP 2012)	4,275	157.91	4,463	140.01

In the reporting year as well as the in the year before, there were no advances or loans to members of the Executive Board.

Total remuneration paid to former members of the Executive Board and their surviving dependants amounted to EUR 2,214,936 (2014: EUR 3,290,586). A provision of EUR 58,771,380 (2014: EUR 58,273,773) has been made in The Linde Group for current pensions and future pension benefits in respect of former members of the Executive Board and their surviving dependants. Within Linde AG, the corresponding provision was EUR 50,381,450 (2014: EUR 44,793,684).

The emoluments of the Executive Board in accordance with IAS 24.17, based on the cost incurred in the financial year, were as follows:

## 128 EMOLUMENTS OF THE EXECUTIVE BOARD IN ACCORDANCE WITH IFRS

in EUR	2015	2014
Short-term cash emoluments	8,665,205	8,885,935
Long-term cash emoluments	2,912,840	3,081,804
<b>TOTAL CASH EMOLUMENTS</b>	<b>11,578,045</b>	<b>11,967,739</b>
Change in value of virtual shares	65,644	285,411
Cost Long Term Incentive Plan	1,122,133	4,869,835
Service cost for pension obligation	2,105,419	1,228,535
<b>TOTAL EMOLUMENTS (IFRS)</b>	<b>14,871,241</b>	<b>18,351,520</b>

In the course of 2015 no post-employment benefits arose (2014: EUR 582 thousand).

The remuneration report presents the basic features and structure of the remuneration of the Executive Board. It is presented on *PAGES 22 TO 36* of the 2015 Financial Report as part of the combined management report.

## [36] Declaration of Compliance with the German Corporate Governance Code and Declaration on Corporate Governance in accordance with § 289 a of the German Commercial Code (HGB)

The Executive Board and Supervisory Board of Linde AG approved the prescribed declaration pursuant to § 161 of the German Stock Corporation Act (AktG) on the recommendations of the German Corporate Governance Code and made it accessible to the shareholders on a permanent basis. The Declaration of Compliance has been published on the Internet at [WWW.LINDE.COM/DECLARATIONOFCOMPLIANCE](http://WWW.LINDE.COM/DECLARATIONOFCOMPLIANCE).

The Declaration on Corporate Governance can be found on the Internet at [WWW.LINDE.COM/CORPORATEGOVERNANCE](http://WWW.LINDE.COM/CORPORATEGOVERNANCE).

A detailed commentary on corporate governance at Linde is set out in the Corporate Governance section of the Financial Report.

## [37] Other board membership

[Disclosures regarding other Board memberships are as at 31 December 2015 or the date on which the member joined the Supervisory Board]

### *Supervisory Board*

Members of the Supervisory Board of Linde Aktiengesellschaft are members of the following other German statutory supervisory boards and comparable German and foreign boards:

#### **DR MANFRED SCHNEIDER**

Chairman of the Supervisory Board of Linde AG,  
Former Chairman of the Supervisory Board of Bayer AG

##### EXTERNAL OFFICES:

RWE AG (Chairman of the Supervisory Board)

#### **HANS-DIETER KATTE**

Deputy Chairman of the Supervisory Board of Linde AG,  
Chairman of the Pullach Works Council,  
Engineering Division, Linde AG

#### **MICHAEL DIEKMANN**

Second Deputy Chairman of the Supervisory Board of Linde AG,  
Former Chairman of the Board of Management of Allianz SE

##### EXTERNAL OFFICES:

BASF SE (Deputy Chairman of the Supervisory Board)  
Fresenius Management SE  
Fresenius SE & Co. KGaA  
(Deputy Chairman of the Supervisory Board)  
Siemens AG

##### EXTERNAL OFFICES:

Allianz Australia Ltd. (Non-Executive Director)

#### **PROFESSOR DR ANN-KRISTIN ACHLEITNER**

Professor at the Technical  
University Munich [TUM]

##### EXTERNAL OFFICES:

METRO AG  
Münchener Rückversicherungs-Gesellschaft  
Aktiengesellschaft, Munich

##### EXTERNAL OFFICES:

ENGIE SA (formerly GDF SUEZ SA)  
(member of the Conseil d'Administration)

#### **DR CLEMENS BÖRSIG**

Chairman of the Board of Management of  
Deutsche Bank Foundation,  
Former Chairman of the Supervisory Board of  
Deutsche Bank AG

##### EXTERNAL OFFICES:

Bayer AG  
Daimler AG

##### EXTERNAL OFFICES:

Emerson Electric Company  
(Member of the Board of Directors)  
Istituto per le Opere di Religione (IOR)  
(Member of the Board of Superintendence)

#### **ANKE COUTURIER**

Head of Global Pensions, Linde AG

#### **FRANZ FEHRENBACH**

Chairman of the Supervisory Board of Robert Bosch GmbH,  
Managing Partner of Robert Bosch Industrietreuhand KG

##### EXTERNAL OFFICES:

BASF SE  
Robert Bosch GmbH (Chairman of the Supervisory Board)  
STIHL AG (Deputy Chairman of the Supervisory Board)

##### EXTERNAL OFFICES:

STIHL Holding AG & Co. KG  
(Member of the Advisory Board)

#### **GERNOT HAHL**

Chairman of the Worms Works Council,  
Gases Division, Linde AG

#### **DR MARTIN KIMMICH**

Second Authorised Representative, IG Metall Munich

##### EXTERNAL OFFICES:

MTU Aero Engines AG  
Nokia Solutions and Networks Management GmbH

#### **DR VICTORIA OSSADNIK**

Member of the Board of Management of  
Microsoft Deutschland GmbH  
(Member of the Supervisory Board since 7 January 2016)

##### MEMBERSHIP OF OTHER GERMAN STATUTORY SUPERVISORY BOARDS

##### MEMBERSHIP OF COMPARABLE GERMAN AND FOREIGN BOARDS

**XAVER SCHMIDT**

Trade Union Secretary of IG Bergbau, Chemie,  
Energie Hanover

— EXTERNAL OFFICES:

Berufsgenossenschaftliches Universitätsklinikum  
Bergmannsheil GmbH  
(Alternate Chairman of the Supervisory Board)

**FRANK SONNTAG**

Chairman of the Dresden Works Council,  
Engineering Division, Linde AG

**Members who left the Supervisory Board on  
31 December 2015:**

**KLAUS-PETER MÜLLER**

Chairman of the Supervisory Board of Commerzbank AG

— EXTERNAL OFFICES:

Commerzbank AG (Chairman of the Supervisory Board)  
Fresenius Management SE  
Fresenius SE & Co. KGaA

— EXTERNAL OFFICES:

Parker Hannifin Corporation  
(Member of the Board of Directors)

**Executive Board**

In addition to their individual management functions in affiliated companies and in companies in which an investment is held, members of the Executive Board of Linde Aktiengesellschaft are members of the following German statutory supervisory boards and comparable German and foreign boards:

**DR WOLFGANG BÜCHELE**

Chief Executive Officer

— EXTERNAL OFFICES:

Merck KGaA (Chairman of the Supervisory Board)

— EXTERNAL OFFICES:

E. Merck KG  
(Member of the Board of Partners)  
Kemira Oyi, Finland  
(Member of the Board of Directors)

**THOMAS BLADES**

Member of the Executive Board

**DR CHRISTIAN BRUCH**

Member of the Executive Board

**GEORG DENOKE**

Member of the Executive Board

— EXTERNAL OFFICES:

SGL Carbon SE

**BERND EULITZ**

Member of the Executive Board

— GROUP OFFICES:

African Oxygen Limited  
(Chairman of the Board of Directors)

**SANJIV LAMBA**

Member of the Executive Board

— GROUP OFFICES:

LINDE INDIA LIMITED  
(Chairman of the Board of Directors)

— MEMBERSHIP OF OTHER GERMAN  
STATUTORY SUPERVISORY BOARDS

— MEMBERSHIP OF COMPARABLE  
GERMAN AND FOREIGN BOARDS



## [38] Contingent liabilities and other financial commitments

### € 129 CONTINGENT LIABILITIES

in EUR m	31.12.2015	31.12.2014
Guarantees	4	3
Warranties	8	15
Other contingent liabilities	54	64
<b>TOTAL</b>	<b>66</b>	<b>82</b>

#### Warranties and guarantee agreements

Contingent liabilities arise in Linde primarily from warranties and guarantee agreements. In exceptional cases, Linde enters into guarantee agreements with banks to secure loans in non-consolidated subsidiaries.

#### Other contingencies

The Engineering Division regularly enters into contracts with consortium partners to build turnkey industrial plants, under which the consortium partners assume joint and several liability to the customer for the total volume of the contract. There are clear internal rules here as to how the liability should be split between the partners. At present, there are plant construction orders with one of our consortium partners totalling EUR 1.137 bn (2014: EUR 1.106 bn). Linde currently anticipates that there will be no joint and several liability claim and has therefore not disclosed any contingent liability in respect of these contracts.

#### Other financial commitments

Other financial commitments include lease commitments relating to operating leases and commitments relating to orders. Commitments relating to orders are in respect of open orders for which a contractual payment obligation has already been agreed.

### € 130 OTHER FINANCIAL COMMITMENTS

in EUR m	31.12.2015	31.12.2014
Obligations under non-cancellable operating leases	544	564
Capital expenditure commitments (tangible fixed assets)	335	383
Capital expenditure commitment (intangible assets)	9	8
<b>TOTAL</b>	<b>888</b>	<b>955</b>

Total minimum lease payments under non-cancellable operating leases are analysed by due date as follows:

### € 131 PROCUREMENT LEASES

in EUR m	31.12.2015	31.12.2014
Total minimum lease payments (gross investment)		
due within one year	144	145
due in one to five years	282	284
due in more than five years	118	135
<b>TOTAL</b>	<b>544</b>	<b>564</b>

The minimum lease payments relate to leased buildings, technical equipment, fixtures, furniture and equipment (procurement leases). They are in respect of a large number of individual contracts. In the 2015 financial year, costs arising from operating leases of EUR 265 m (2014: EUR 246 m) were recognised.

#### Litigation

The Linde Group or one of its Group companies are involved in current or foreseeable legal or arbitration proceedings in the normal course of business.

In 2010, the Brazilian competition authority CADE imposed fines on a number of gases companies, including Linde's Brazilian subsidiary, on the grounds of anticompetitive business conduct in the years 1998 to 2004. The amount relating to The Linde Group is around BRL 188 m. Based on the exchange rate ruling at the balance sheet date, this is equivalent to around EUR 44 m. Seen from today's perspective, Linde assumes that this decision will not stand up to judicial review and deems the possibility of an outflow of resources to be extremely unlikely. As a result, no provision has been set up as a liability and the matter is not reflected in the contingent liabilities either.

Linde is also party to various current or foreseeable legal or arbitration proceedings in respect of which the probability of a claim is unlikely or the impact on the economic situation of The Linde Group will be immaterial. Appropriate provisions for potential financial liabilities have been made in the relevant Group company for all other proceedings in which Linde is involved.

## [39] Auditors' fees and services

KPMG, the auditors of the Group financial statements, provided the following services to companies in The Linde Group:

### 132 AUDITORS' FEES AND SERVICES

in EUR m	2015		2014	
	Group	Thereof KPMG AG <sup>1</sup>	Group	Thereof KPMG AG <sup>1</sup>
Audit (including expenses)	10	3	10	3
Other attestation services	2	1	2	1
Tax consultancy	1	–	1	–
Other services	1	–	–	–
<b>TOTAL</b>	<b>14</b>	<b>4</b>	<b>13</b>	<b>4</b>

<sup>1</sup> KPMG AG Wirtschaftsprüfungsgesellschaft.

In the table above, audit comprises the fees for the audit of the consolidated financial statements of The Linde Group and of the statutory annual financial statements of Linde AG and the subsidiaries included in the consolidated financial statements.

Other attestation services comprise mainly reviews of the quarterly reports, the issue of a comfort letter, due diligence reviews, confirmation of compliance with specific contractual agreements and other review procedures.

Tax consultancy costs relate mainly to the preparation of tax returns, transfer pricing analyses and tax advice relating to current or proposed business transactions.

## [40] Reconciliation of key financial figures

The key financial figures relating to The Linde Group are presented below after adjusting for non-recurring items. Non-recurring items are items which, due to their nature, frequency and/or extent, are likely to have an adverse impact on how accurately the key financial figures reflect the sustainability of the earning capacity of The Linde Group in the capital market.

### 133 KEY FINANCIAL FIGURES ADJUSTED FOR NON-RECURRING ITEMS

in EUR m	31.12.2015			31.12.2014		
	As reported	Non-recurring items	Key financial figures before non-recurring items	As reported	Non-recurring items	Key financial figures before non-recurring items
Revenue	17,944	–	17,944	17,047	–	17,047
Cost of sales	–11,575	35	–11,540	–11,297	223	–11,074
<b>GROSS PROFIT ON REVENUE</b>	<b>6,369</b>	<b>35</b>	<b>6,404</b>	<b>5,750</b>	<b>223</b>	<b>5,973</b>
Research and development costs, marketing, selling and administration expenses	–4,507	157	–4,350	–4,070	68	–4,002
Other operating income and expenses	169	–	169	183	4	187
Share of profit or loss from associates and joint ventures (at equity)	12	–	12	22	–	22
<b>EBIT</b>	<b>2,043</b>	<b>192</b>	<b>2,235</b>	<b>1,885</b>	<b>295</b>	<b>2,180</b>
Financial result	–397	–	–397	–365	–	–365
Income tax expense	–394	–53	–447	–358	–25	–383
<b>PROFIT FOR THE YEAR</b>	<b>1,252</b>	<b>139</b>	<b>1,391</b>	<b>1,162</b>	<b>270</b>	<b>1,432</b>
attributable to Linde AG shareholders	1,149	133	1,282	1,102	221	1,323
attributable to non-controlling interests	103	6	109	60	49	109
<b>EBIT</b>	<b>2,043</b>	<b>192</b>	<b>2,235</b>	<b>1,885</b>	<b>295</b>	<b>2,180</b>
Amortisation of intangible assets/ depreciation of tangible assets	–1,896	–	–1,896	–1,969	229	–1,740
<b>OPERATING PROFIT</b>	<b>3,939</b>	<b>192</b>	<b>4,131</b>	<b>3,854</b>	<b>66</b>	<b>3,920</b>
Equity including non-controlling interests	15,449	139	15,588	14,267	270	14,537
Plus: Financial debt	9,483	–	9,483	9,856	–	9,856
Plus: Liabilities from finance leases	78	–	78	74	–	74
Less: Receivables from finance leases	269	–	269	298	–	298
Less: Cash, cash equivalents and securities	1,838	–	1,838	1,658	–	1,658
Plus: Net pension obligations	950	–	950	1,094	–	1,094
<b>CAPITAL EMPLOYED</b>	<b>23,853</b>	<b>139</b>	<b>23,992</b>	<b>23,335</b>	<b>270</b>	<b>23,605</b>
<b>EARNINGS PER SHARE in EUR – UNDILUTED</b>	<b>6.19</b>	<b>0.72</b>	<b>6.91</b>	<b>5.94</b>	<b>1.19</b>	<b>7.13</b>
<b>EARNINGS PER SHARE in EUR – DILUTED</b>	<b>6.18</b>	<b>0.71</b>	<b>6.89</b>	<b>5.91</b>	<b>1.19</b>	<b>7.10</b>
<b>RETURN ON CAPITAL EMPLOYED (ROCE) in %</b>	<b>8.7</b>		<b>9.4</b>	<b>8.3</b>		<b>9.5</b>

[41] List of shareholdings of The Linde Group and Linde AG at 31 December 2015 in accordance with the provisions of § 313 (2) No. 4 of the German Commercial Code (HGB)

The results of companies acquired in 2015 are included as of the date of acquisition. The information about the equity and the net income or net loss of the companies is as at 31 December 2015 and complies with International Financial Reporting Standards, unless specifically disclosed below.

134 COMPANIES INCLUDED IN THE GROUP FINANCIAL STATEMENTS (IN ACCORDANCE WITH IFRS 10)

	Registered office	Country	Participating interest in percent	Thereof Linde AG in percent	Equity in EUR m	Profit/loss for the year in EUR m	Note
<b>Gases Division</b>							
<b>EMEA</b>							
AFROX – África Oxigénio, Limitada	Luanda	AGO	100		1.9	0.4	
LINDE GAS MIDDLE EAST LLC	Abu Dhabi	ARE	49	49	9.7	-2.9	f
LINDE HEALTHCARE MIDDLE EAST LLC	Abu Dhabi	ARE	49	49	-5.1	-3.8	f
LINDE HELIUM M E FZCO	Jebel Ali	ARE	100		4.6	0.8	
Linde Electronics GmbH	Stadl-Paura	AUT	100		10.3	1.0	
Linde Gas GmbH	Stadl-Paura	AUT	100		254.3	23.2	
PROVISIS Gase & Service GmbH	Bad Wimsbach-Neydharting	AUT	100		0.9	0.4	
Chemogas N.V.	Grimbergen	BEL	100		8.9	2.4	
Linde Gas Belgium NV	Grimbergen	BEL	100		0.9	-0.3	
Linde Homecare Belgium SPRL	Scalyn	BEL	100	100	4.4	0.5	
Linde Gas Bulgaria EOOD	Stara Sagora	BGR	100		8.3	-0.5	
Linde Gas BH d.o.o.	Zenica	BIH	85	85	3.2	-0.7	
"Linde Gaz Bel" FLLC	Telmy	BLR	100	99	0.8	-	
AFROX GAS & ENGINEERING SUPPLIES (BOTSWANA) (PTY) LIMITED	Gaborone	BWA	100		-	-	
BOTSWANA OXYGEN COMPANY (PTY) LIMITED	Gaborone	BWA	100		2.3	3.7	
BOTSWANA STEEL ENGINEERING (PTY) LIMITED	Gaborone	BWA	100		-	-	
HANDIGAS (BOTSWANA) (PTY) LIMITED	Gaborone	BWA	100		-	-	
HEAT GAS (PTY) LIMITED	Gaborone	BWA	100		-	-	
KIDDO INVESTMENTS (PTY) LIMITED	Gaborone	BWA	100		0.2	0.1	
PanGas AG	Dagmersellen	CHE	100		87.8	23.6	
RDC GASES & WELDING (DRL) LIMITED	Lubumbashi	COD	100		1.5	-0.7	
LINDE HADJIKYRIAKOS GAS LIMITED	Nicosia	CYP	51	51	9.1	0.9	
Linde Gas a.s.	Prague	CZE	100		196.8	57.9	
Linde Sokolovská s.r.o.	Prague	CZE	100		29.8	6.3	
Gas & More GmbH	Pullach	DEU	100		0.1	-	a
Hydromotive GmbH & Co. KG	Leuna	DEU	100	100	2.9	0.4	
Hydromotive Verwaltungs-GmbH	Leuna	DEU	100	100	0.1	-	
Linde Electronics GmbH & Co. KG	Pullach	DEU	100	100	25.3	0.2	
Linde Electronics Verwaltungs GmbH	Pullach	DEU	100	100	9.2	3.6	
Linde Gas Produktionsgesellschaft mbH & Co. KG	Pullach	DEU	100	100	341.6	0.1	

## E 134 COMPANIES INCLUDED IN THE GROUP FINANCIAL STATEMENTS (IN ACCORDANCE WITH IFRS 10)

	Registered office	Country	Participating interest	Thereof Linde AG	Equity	Profit/loss for the year	Note
			in percent	in percent	in EUR m	in EUR m	
Linde Gas Therapeutics GmbH	Oberschleißheim	DEU	100		48.1	–	a
Linde Gas Verwaltungs GmbH	Pullach	DEU	100	100	–	–	
Linde Hydrogen Concepts GmbH	Pullach	DEU	100		–	–	
Linde Remeo Deutschland GmbH	Blankenfelde-Mahlow	DEU	100		4.3	–	a
Linde Schweißtechnik GmbH	Pullach	DEU	100		1.2	–	a
Linde Welding GmbH	Pullach	DEU	100		0.3	–	a
MTA GmbH Medizin-Technischer Anlagenbau	Mainhausen	DEU	100		0.1	–	a
Tega-Technische Gase und Gasetechnik Gesellschaft mit beschränkter Haftung	Würzburg	DEU	100	6	2.8	–	a
Unterbichler Gase GmbH	Munich	DEU	100		0.9	–	a
AGA A/S	Copenhagen	DNK	100		13.5	3.3	
GI/LINDE ALGERIE SPA	Algiers	DZA	100	40	10.0	1.8	
Linde Gas Algerie S.p.A.	Algiers	DZA	66	66	86.4	10.7	
Abelló Linde, S.A.	Barcelona	ESP	100	100	130.7	–2.9	
LINDE ELECTRONICS, S.L.	Barcelona	ESP	100		–3.8	–0.2	
Linde Médica, S.L.	Barcelona	ESP	100		122.2	2.7	
LINDE MEDICINAL, S.L.	Barcelona	ESP	100		262.8	2.3	
LINDE SPAIN SA	Barcelona	ESP	100	100	0.1	–	
AS Eesti AGA	Tallinn	EST	100		29.1	4.0	
Kiinteistö Oy Karakaasu	Espoo	FIN	100		–2.1	–	c
Kiinteistö Oy Karaportti	Espoo	FIN	100		–3.4	–	c
Oy AGA Ab	Espoo	FIN	100		715.1	81.0	c
Teollisuuskaasut Suomi Oy	Espoo	FIN	100		2.4	–	c
TK-Teollisuuskaasut Oy	Espoo	FIN	100		–0.4	–0.1	c
LINDE ELECTRONICS SAS	Saint-Priest	FRA	100		2.7	0.1	
Linde France S.A.	Saint-Priest	FRA	100		135.1	10.2	
LINDE HOMECARE FRANCE SAS	Saint-Priest	FRA	100		32.8	0.8	
REMEO FRANCE SAS	Saint-Priest	FRA	100		–	–	
ALLWELD INDUSTRIAL AND WELDING SUPPLIES LIMITED	Nottingham	GBR	100		–0.3	–0.1	c, d
BOC HEALTHCARE LIMITED	Guildford	GBR	100		0.7	0.1	
BOC HELEX	Guildford	GBR	100		5,329.3	159.1	
EXPRESS INDUSTRIAL & WELDING SUPPLIES LIMITED	Nottingham	GBR	100		1.5	0.1	c, d
FLUOROGAS LIMITED	Guildford	GBR	100		0.1	–	
FUTURE INDUSTRIAL AND WELDING SUPPLIES LTD.	Nottingham	GBR	100		1.0	0.5	c, d
GAFFNEY INDUSTRIAL & WELDING SUPPLIES LTD	Nottingham	GBR	80		2.0	0.3	c, d
GAS & GEAR LIMITED	Nottingham	GBR	100		–	–	c
GAS INSTRUMENT SERVICES LIMITED	Nottingham	GBR	100		–	–	c, d
GWYNEDD INDUSTRIAL AND WELDING SUPPLIES LIMITED	Nottingham	GBR	100		–0.6	–	c, d
INDUSTRIAL & WELDING SUPPLIES (NORTH WEST) LIMITED	Nottingham	GBR	100		–2.1	0.1	c, d
INDUSTRIAL AND WELDING MANAGEMENT LIMITED	Nottingham	GBR	100		0.1	–	c, d
INDUSTRIAL SUPPLIES & SERVICES LIMITED	Nottingham	GBR	100		12.4	2.3	c, d
IWS (INDUSTRIAL & WELDING SUPPLIES) LIMITED	Guildford	GBR	100		–	–	c, d
LEEN GATE INDUSTRIAL & WELDING SUPPLIES (SCOTLAND) LIMITED	Nottingham	GBR	100		1.0	0.4	c, d
LEENGATE HIRE & SERVICES LIMITED	Nottingham	GBR	100		–	–	c, d

134 COMPANIES INCLUDED IN THE GROUP FINANCIAL STATEMENTS (IN ACCORDANCE WITH IFRS 10)

	Registered office	Country	Participating interest	Thereof Linde AG	Equity	Profit/loss for the year	Note
			in percent	in percent	in EUR m	in EUR m	
LEENGATE INDUSTRIAL & WELDING SUPPLIES (LINCOLN) LIMITED	Nottingham	GBR	100		0.3	–	c, d
LEENGATE INDUSTRIAL & WELDING SUPPLIES (NORTH EAST) LIMITED	Nottingham	GBR	100		1.2	0.1	c, d
LEENGATE INDUSTRIAL & WELDING SUPPLIES (NOTTINGHAM) LIMITED	Nottingham	GBR	100		–0.4	–0.1	c, d
LEENGATE INDUSTRIAL & WELDING SUPPLIES LIMITED	Nottingham	GBR	100		0.6	0.1	c, d
LEENGATE WELDING LIMITED	Nottingham	GBR	100		–	–	c, d
LINDE GAS HOLDINGS LIMITED	Guildford	GBR	100	100	–	2.6	c, d
LINDE HELIUM HOLDINGS LIMITED	Guildford	GBR	100		–	1.8	c, d
PENNINE INDUSTRIAL & WELDING SUPPLIES LIMITED	Nottingham	GBR	100		0.1	–	c, d
REMEO HEALTHCARE LIMITED	Guildford	GBR	100		–0.3	–0.2	
ROCK INDUSTRIAL & WELDING SUPPLIES LIMITED	Nottingham	GBR	88		2.0	0.4	c, d
RYVAL GAS LIMITED	Nottingham	GBR	100		–	–	c, d
W & G SUPPLIES LIMITED	Nottingham	GBR	100		0.2	–	c, d
WELDER EQUIPMENT SERVICES LIMITED	Nottingham	GBR	99		0.6	0.2	c, d
WESSEX INDUSTRIAL & WELDING SUPPLIES LIMITED	Nottingham	GBR	100		–0.4	–	c, d
Linde Hellas Monoprosopi E.P.E.	Mandra	GRC	100	100	37.8	–0.8	
LINDE PLIN d.o.o.	Karlovac	HRV	100	100	4.2	0.4	
Linde Gáz Magyarország Zrt.	Répcelak	HUN	100		126.7	29.6	
BOC (TRADING) LIMITED	Dublin	IRL	100		–	–	c
BOC GASES IRELAND HOLDINGS LIMITED	Dublin	IRL	100		7.1	20.0	
BOC Gases Ireland Limited	Dublin	IRL	100		26.1	24.9	c, d
COOPER CRYOSERVICE LIMITED	Dublin	IRL	100		1.7	–	
ISAGA ehf.	Reykjavík	ISL	100		13.4	3.3	
Linde Gas Italia S.r.l.	Arluno	ITA	100		142.9	0.9	
LINDE MEDICALE Srl	Arluno	ITA	100		26.9	3.5	
TOO Linde Gaz Kazakhstan	Almaty	KAZ	100	100	–4.7	3.1	
BOC Kenya Limited	Nairobi	KEN	65		13.2	1.7	
AFROX (LESOTHO) (PTY) LTD	Maseru	LSO	100		1.0	0.3	
LESOTHO OXYGEN COMPANY (PTY) LIMITED	Maseru	LSO	100		–	–	
AGA UAB	Vilnius	LTU	100		5.6	0.3	
AGA SIA	Riga	LVA	100		21.2	1.6	
LINDE GAS BITOLA DOOEL Skopje	Skopje	MKD	100		0.5	–	
Afrox Moçambique, Limitada	Maputo	MOZ	100		–	0.2	
BOC GASES MOZAMBIQUE LIMITED	Maputo	MOZ	100		–	–	
Linde Gases Moçambique, Limitada	Maputo	MOZ	100		–	–	
AFROX INTERNATIONAL LIMITED	Port Louis	MUS	100		–	–	
Afrox Malawi Limited	Blantyre	MWI	79		2.2	1.1	
IGL (PTY) LIMITED	Windhoek	NAM	100		4.6	2.9	
IGL PROPERTIES (PTY) LIMITED	Windhoek	NAM	100		0.2	0.1	
NAMOX Namibia (PTY) LIMITED	Windhoek	NAM	100		0.1	–	
REPTILE INVESTMENT NINE (PTY) LIMITED	Windhoek	NAM	100		–	0.1	
REPTILE INVESTMENT TEN (PTY) LIMITED	Windhoek	NAM	100		0.1	–	
BOC Gases Nigeria Plc	Lagos	NGA	60		9.4	–	
B.V. Nederlandse Pijpleidingmaatschappij	Rotterdam	NLD	100		8.3	–1.7	
Linde Electronics B.V.	Schiedam	NLD	100		7.0	2.3	

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	Registered office	Country	Participating interest	Thereof Linde AG	Equity	Profit/loss for the year	Note
			in percent	in percent	in EUR m	in EUR m	
Linde Gas Benelux B.V.	Schiedam	NLD	100		124.1	69.9	
Linde Gas Cryoservices B.V.	Eindhoven	NLD	100		1.3	1.1	
Linde Gas Therapeutics Benelux B.V.	Eindhoven	NLD	100		35.0	3.9	
Linde Homecare Benelux B.V.	Nuland	NLD	100		5.3	-0.9	
Naamloze Vennootschap Linde Gas Benelux	Schiedam	NLD	100		275.0	50.1	
OCAP CO2 B.V.	Schiedam	NLD	100		9.8	8.7	
AGA AS	Oslo	NOR	100		41.8	23.9	
Eurogaz-Gdynia Sp. z o.o.	Gdynia	POL	99		4.7	0.3	
LINDE GAZ POLSKA Spółka z o.o.	Krakow	POL	100	100	129.5	13.1	
LINDE GLOBAL SERVICES PORTUGAL, UNIPESSOAL LDA	Maia	PRT	100		0.5	0.4	
LINDE PORTUGAL, LDA	Lisbon	PRT	100		92.0	14.6	
LINDE SAÚDE, LDA	Maia	PRT	100		30.7	1.0	
LINDE GAZ ROMANIA S.R.L.	Timisoara	ROU	100		161.8	21.9	
OAQ "Linde Gas Rus"	Balashikha	RUS	100	100	37.2	-2.5	
OAQ "Linde Uraltechgaz"	Yekaterinburg	RUS	74	74	7.6	1.1	
Linde Jubail Industrial Gases Factory LLC	Al-Khobar	SAU	100	84	37.4	29.3	
Saudi Industrial Gas Company	Al-Khobar	SAU	51		70.4	-0.3	
LINDE GAS SRBIJA Industrija gas-ova a.d. Bečej	Bečej	SRB	87	87	6.6	0.9	
Aries 94 s.r.o.	Bratislava	SVK	100		2.1	0.5	
Linde Gas k.s.	Bratislava	SVK	100		25.9	5.0	
LINDE PLIN d.o.o.	Celje	SVN	100	100	9.6	1.1	
AB Held	Lidingö	SWE	100		-	-	
AGA Fastighet Göteborg AB	Lidingö	SWE	100		-	-	
AGA Gas Aktiebolag	Lidingö	SWE	100		-	-	
AGA Industrial Gas Engineering Aktiebolag	Lidingö	SWE	100		-	-	
AGA International Investment Aktiebolag	Lidingö	SWE	100		-	-	
AGA Medical Aktiebolag	Lidingö	SWE	100		-	-	
Agatronic AB	Lidingö	SWE	100		0.1	-	
CRYO Aktiebolag	Gothenburg	SWE	100		-	-	
Flaskgascentralen i Malmö Aktiebolag	Svedala	SWE	100		-	-	
Linde Healthcare AB	Lidingö	SWE	100		17.3	2.8	
NORLIC AB	Lidingö	SWE	90		16.0	2.0	
Svenska Aktiebolaget Gasaccumulator	Lidingö	SWE	100		0.1	-	
Svets Gas Aktiebolag	Lidingö	SWE	100		-	-	
HANDIGAS SWAZILAND (PTY) LIMITED	Mbabane	SWZ	100		-	-	
SWAZI OXYGEN (PTY) LIMITED	Mbabane	SWZ	100		1.3	1.5	
Linde Gas Tunisie S.A.	Ben Arous	TUN	60	60	5.9	-1.2	
Linde Gaz Anonim Şirketi	Istanbul	TUR	100	100	55.7	-3.9	
BOC Tanzania Limited	Dar es Salaam	TZA	100		0.6	-0.1	
BOC Uganda Limited	Kampala	UGA	100		0.9	0.1	
PJSC "Linde Gaz Ukraina"	Dnipropetrovsk	UKR	100	96	-2.5	-0.8	
African Oxygen Limited	Johannesburg	ZAF	56		208.5	25.0	
AFROX (PROPRIETARY) LIMITED	Johannesburg	ZAF	100		-	-	
AFROX AFRICAN INVESTMENTS (PTY) LIMITED	Johannesburg	ZAF	100		-2.1	0.4	
AFROX EDUCATIONAL SERVICES (PROPRIETARY) LTD	Johannesburg	ZAF	100		-	-	
AFROX PROPERTIES (PTY) LIMITED	Johannesburg	ZAF	100		1.9	0.3	

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	Registered office	Country	Participating interest	Thereof Linde AG	Equity	Profit/loss for the year	Note
			in percent	in percent	in EUR m	in EUR m	
AFROX SAFETY (PTY) LIMITED	Johannesburg	ZAF	100		0.2	1.1	
AMALGAMATED GAS AND WELDING (PTY) LIMITED	Johannesburg	ZAF	100		–	–	
AMALGAMATED WELDING AND CUTTING (PROPRIETARY) LIMITED	Johannesburg	ZAF	100		0.1	–	
AMALGAMATED WELDING AND CUTTING HOLDINGS (PROPRIETARY) LIMITED	Johannesburg	ZAF	100		–	–	
AWCE (PROPRIETARY) LIMITED	Johannesburg	ZAF	100		–	–	
HUMAN PERFORMANCE SYSTEMS (PTY) LIMITED	Johannesburg	ZAF	100		–	–	
INDUSTRIAL RESEARCH AND DEVELOPMENT (PTY) LIMITED	Johannesburg	ZAF	100		–0.1	–	
ISAS TRUST	Johannesburg	ZAF	100		3.3	1.2	
NASIONALE SWEISWARE (PTY) LTD	Johannesburg	ZAF	100		–	–	
NICOWELD (PTY) LIMITED	Sandton	ZAF	100		–	–	
PPE-ISIZO (PTY) LIMITED	Johannesburg	ZAF	100		–	–	
SAFETY GAS (PROPRIETARY) LIMITED	Johannesburg	ZAF	100		–	–	
AFROX ZAMBIA LIMITED	Ndola	ZMB	70		4.8	2.1	
BOC Zimbabwe (Private) Limited	Harare	ZWE	100		25.5	2.9	
<i>Asia/Pacific</i>							
AUSCOM HOLDINGS PTY LIMITED	North Ryde	AUS	100		86.0	–	c
BOC CUSTOMER ENGINEERING PTY LTD	North Ryde	AUS	100		8.4	–	
BOC GASES FINANCE LIMITED	North Ryde	AUS	100		30.6	60.9	
BOC GROUP PTY LIMITED	North Ryde	AUS	100		–3.6	–	
BOC Limited	North Ryde	AUS	100		293.3	114.7	
BOGGY CREEK PTY LIMITED	North Ryde	AUS	100		4.4	0.5	
ELGAS AUTOGAS PTY LIMITED	North Ryde	AUS	100		4.4	–	c
ELGAS LIMITED	North Ryde	AUS	100		212.7	51.9	
ELGAS RETICULATION PTY LIMITED	North Ryde	AUS	100		4.3	0.6	
FLEXIHIRE PTY. LTD.	North Ryde	AUS	100		17.7	0.3	
PACIFIC ENGINEERING SUPPLIES PTY LIMITED	North Ryde	AUS	100		–1.4	–	
SOUTH PACIFIC WELDING GROUP PTY LIMITED	North Ryde	AUS	100		20.0	7.0	
TIAMONT PTY LIMITED	North Ryde	AUS	100		4.9	0.6	
UNIGAS JOINT VENTURE PARTNERSHIP	Mulgrave	AUS	100		21.1	1.1	
UNIGAS TRANSPORT FUELS PTY LTD	North Ryde	AUS	100		6.7	–	c
Linde Bangladesh Limited	Dhaka	BGD	60		32.5	7.4	
Anhui JuLan Industrial Gases Co., Ltd.	Lu'an	CHN	100		1.8	–0.5	
ASIA UNION (SHANGHAI) ELECTRONIC CHEMICAL COMPANY LIMITED	Shanghai	CHN	100		–	–	
AUECC Shanghai	Shanghai	CHN	100		2.7	–	
AUECC Shanghai Co. Ltd.	Shanghai	CHN	100		16.5	–0.7	
BOC (China) Holdings Co., Ltd.	Shanghai	CHN	100		173.8	9.1	
BOC Gases (Nanjing) Company Limited	Nanjing	CHN	100		7.2	0.2	
BOC Gases (Suzhou) Co., Ltd.	Suzhou	CHN	100		54.8	3.2	
BOC Gases (Tianjin) Company Limited	Tianjin	CHN	100		11.7	–4.1	
BOCLH Industrial Gases (Chengdu) Co., Ltd	Chengdu	CHN	100		16.6	0.4	
BOCLH Industrial Gases (DaLian) Co., Ltd.	Dalian	CHN	100		13.7	–0.4	
BOCLH Industrial Gases (Shanghai) Co., Ltd.	Shanghai	CHN	100		13.1	–0.9	
BOCLH Industrial Gases (Songjiang) Co., Ltd.	Shanghai	CHN	100		0.8	4.5	



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			in percent	in percent	in EUR m	in EUR m	
BOCLH Industrial Gases (Suzhou) Co., Ltd.	Suzhou	CHN	100		34.3	-2.3	
BOCLH Industrial Gases (Waigaoqiao) Co., Ltd.	Shanghai	CHN	100		0.7	1.1	
BOCLH Industrial Gases (Xiamen) Co., Ltd.	Xiamen	CHN	100		8.4	-1.1	
BOC-TISCO GASES CO., Ltd	Taiyuan	CHN	50		146.6	24.2	f, i
Dalian Xizhong Island Linde Industrial Gases Co., Ltd.	Dalian	CHN	70		0.1	-	
Guangkong Industrial Gases Company Limited	Guangzhou	CHN	50		40.8	-4.7	f, i
Guangzhou GISE Gases Co., Ltd.	Guangzhou	CHN	50		31.8	0.2	f, i
Guangzhou Pearl River Industrial Gases Company Limited	Guangzhou	CHN	50		7.5	-1.1	f, i
Jianyang Linde Medical Gases Company Limited	Jianyang	CHN	100		1.4	0.1	
Linde (Quanzhou) Carbon Dioxide Co. Ltd.	Quanzhou	CHN	100		1.6	-0.2	
Linde Carbonic (Wuhu) Company Ltd.	Wuhu	CHN	60		3.9	-0.5	i
Linde Carbonic Company Ltd., Shanghai	Shanghai	CHN	60	46	11.4	-0.9	i
Linde Dahua (Dalian) Gases Co., Ltd	Dalian	CHN	50		33.7	1.6	f, i
Linde Electronics & Specialty Gases (Suzhou) Co Ltd.	Suzhou	CHN	100	100	5.2	-2.0	
Linde Gas Ningbo Ltd.	Ningbo	CHN	100		121.4	0.5	
Linde Gas Shenzhen Ltd.	Shenzhen	CHN	100		6.8	-	
Linde Gas Southeast (Xiamen) Ltd.	Xiamen	CHN	100		3.5	-	
Linde Gas Xiamen Ltd.	Xiamen	CHN	100	100	39.1	-6.4	
Linde Gas Zhenhai Ltd.	Ningbo	CHN	100		4.2	2.0	
Linde Gases (Changzhou) Company Limited	Changzhou	CHN	100		14.0	-2.9	
Linde Gases (Chengdu) Co., Ltd.	Chengdu	CHN	100		11.9	0.8	
Linde Gases (Fushun) Co., Ltd.	Fushun	CHN	100		1.8	-1.7	
Linde Gases (Hefei) Co., Ltd.	Hefei	CHN	100		7.9	-1.2	
Linde Gases (Huizhou) Co., Ltd.	Huizhou	CHN	100		0.6	-	
Linde Gases (Jilin) Co., Ltd.	Jilin	CHN	100		21.2	-0.4	
Linde Gases (Langfang) Co., Ltd.	Langfang	CHN	100		12.3	-1.3	
Linde Gases (Meishan) Co., Ltd.	Meishan	CHN	100		11.9	-2.9	
Linde Gases (Nanjing) Company Limited	Nanjing	CHN	100		-3.0	-2.4	
Linde Gases (Shanghai) Co., Ltd.	Shanghai	CHN	100		18.4	1.8	
Linde Gases (Suzhou) Company Limited	Suzhou	CHN	100		10.1	0.3	
Linde Gases (Xuzhou) Company Limited	Xuzhou	CHN	100		24.1	0.1	
Linde Gases (Yantai) Co., Ltd.	Yantai	CHN	90		47.3	-4.4	
Linde Gases (Zhangzhou) Co., Ltd.	Zhangzhou	CHN	100		16.4	1.8	
Linde Gases Daxie Company Limited	Ningbo	CHN	100		12.3	0.5	
Linde GISE Gas (Shenzhen) Co., Ltd	Shenzhen	CHN	50		11.6	1.3	f, i
Linde Huachang (Zhangjiagang) Gas Co. Ltd.	Zhangjiagang	CHN	75		4.9	-0.3	i
Linde Lienhwa Gases (Beijing) Co., Ltd.	Beijing	CHN	100		15.5	-0.2	
Linde Lienhwa Gases (Wuhan) Co., Ltd	Wuhan	CHN	100		2.5	-1.0	
Linde Nanjing Chemical Industrial Park Gases Co., Ltd.	Nanjing	CHN	100		8.4	-1.7	
Linde Qiangsheng Gases (Nanjing) Co., Ltd.	Nanjing	CHN	100		0.5	-1.2	
Linde-Huayi (Chongqing) Gases Co., Ltd	Chongqing	CHN	60		-33.6	-0.3	
Ma'anshan BOC-Ma Steel Gases Company Limited	City of Maanshan	CHN	50		98.3	22.6	f, i

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Shanghai BOC Huayang Carbon Dioxide Co., Ltd.	Shanghai	CHN	80		0.1	-0.1	
Shanghai BOC Industrial Gases Company Limited	Shanghai	CHN	100		3.5	-6.2	
Shanghai HuaLin Industrial Gases Co. Ltd.	Shanghai	CHN	50		99.5	21.6	f, i
Shanghai Linhua Gas Transportation Co., Ltd.	Shanghai	CHN	100		0.8	-0.1	
Shenzhen Feiying Industrial Gases Company Limited	Shenzhen	CHN	90		1.4	0.3	
Shenzhen South China Industrial Gases Co. Ltd.	Shenzhen	CHN	50		5.9	1.5	f, i
ZHENJIANG XINHUA INDUSTRIAL GASES CO., LTD.	Zhenjiang	CHN	100		0.2	-0.3	
BOC (FIJI) LIMITED	Lami Suva	FJI	90		3.2	1.4	
HKO DEVELOPMENT COMPANY LIMITED	Kowloon	HKG	100		-	-	
LIEN HWA INDUSTRIAL GASES (HK) LIMITED	Wan Chai	HKG	100		-	-	c
Linde Gas (H.K.) Limited	Hong Kong	HKG	100	100	433.1	6.1	
Linde GISE Gases (Hong Kong) Company Limited	Hong Kong	HKG	50		-	-	f, i
Linde HKO Limited	Hong Kong	HKG	100		103.0	19.2	
NEW SINO GASES COMPANY LIMITED	Tai Po	HKG	100		1.2	1.0	
P.T. Gresik Gases Indonesia	Jakarta	IDN	93		12.1	-2.9	
P.T. Gresik Power Indonesia	Jakarta	IDN	92		6.1	-3.3	
P.T. Townsville Welding Supplies	Jakarta	IDN	100		-	0.1	
PT. LINDE INDONESIA	Jakarta	IDN	100		16.5	-9.3	
BELLARY OXYGEN COMPANY PRIVATE LIMITED	Bellary	IND	50		14.8	1.8	f, i
LINDE INDIA LIMITED	Calcutta	IND	75		186.1	1.5	
Linde Korea Co., Ltd.	Pohang	KOR	100		307.4	30.8	
PS Chem Co., Ltd.	Gyeongsang-nam-do	KOR	100		7.7	1.0	
PSG Co., Ltd.	Busan	KOR	51		29.9	5.9	i
Sam Kwang Gas Tech Co., Ltd.	Seoul	KOR	100		4.6	1.3	
Ceylon Oxygen Ltd.	Colombo	LKA	100	100	20.1	-0.2	
DAYAMOX SDN BHD	Petaling Jaya	MYS	100		-	-	
Linde EOX Sdn. Bhd.	Petaling Jaya	MYS	100		22.1	1.1	
Linde Gas Products Malaysia Sdn. Bhd.	Petaling Jaya	MYS	100	100	22.5	5.0	
LINDE INDUSTRIAL GASES (MALAYSIA) SDN. BHD.	Petaling Jaya	MYS	80	80	7.9	-	
LINDE MALAYSIA HOLDINGS BERHAD	Petaling Jaya	MYS	100		84.5	67.1	
LINDE MALAYSIA SDN. BHD.	Petaling Jaya	MYS	100		140.3	36.4	
LINDE ROC SDN. BHD.	Petaling Jaya	MYS	100		0.4	0.7	
LINDE WELDING PRODUCTS SDN. BHD.	Petaling Jaya	MYS	100		0.6	-0.2	
BOC LIMITED	Auckland	NZL	100		49.1	25.3	
BOC NEW ZEALAND HOLDINGS LIMITED	Auckland	NZL	100		35.9	12.6	
ELGAS LIMITED	Auckland	NZL	100		20.7	2.4	
SOUTH PACIFIC WELDING GROUP (NZ) LIMITED	Auckland	NZL	100		0.1	-0.1	
Linde Pakistan Limited	Karatschi	PAK	60		15.1	1.2	
BATAAN INDUSTRIAL GASES INC	Pasig City	PHL	100		0.8	0.1	
BOC (PHILS.) HOLDINGS, INC.	Pasig City	PHL	100		20.4	-0.6	
CHATSWOOD INC	Makati City	PHL	62		-	-	c, e

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CIGC CORPORATION	Pasig City	PHL	100		1.7	0.2	
CRYO INDUSTRIAL GASES, INC	Pasig City	PHL	100		0.5	-	
GRANDPLAINS PROPERTIES, INC	Pasig City	PHL	40		2.5	0.2	f, i
LINDE PHILIPPINES (SOUTH), INC.	Mandaue City	PHL	100		24.1	4.2	
LINDE PHILIPPINES, INC.	Pasig City	PHL	100		29.2	0.1	
ROYAL SOUTHMEADOWS, INC	Mandaue City	PHL	40		0.9	-	f, i
BOC Papua New Guinea Limited	Lae	PNG	74		28.6	2.5	
Linde Gas Asia Pte. Ltd	Singapore	SGP	100		9.8	-2.5	
Linde Gas Singapore Pte. Ltd.	Singapore	SGP	100	100	91.3	11.7	
LINDE TREASURY ASIA PACIFIC PTE. LTD.	Singapore	SGP	100		0.4	0.1	
BOC GASES SOLOMON ISLANDS LIMITED	Honiara	SLB	100		3.6	0.6	
KTPV (THAILAND) LIMITED	Chachoengsao	THA	100		13.0	-	
Linde (Thailand) Public Company Limited	Samut Prakan	THA	100		220.7	17.2	
Linde Air Chemicals Limited	Samut Prakan	THA	99		44.5	8.0	
Linde HyCO Limited	Samut Prakan	THA	100		23.8	1.4	
MIG Production Company Limited	Samut Prakan	THA	54		70.7	12.5	
RAYONG ACETYLENE LIMITED	Samut Prakan	THA	87		2.8	-	
SKTY (Thailand) Limited	Chachoengsao	THA	100		45.2	0.1	
T.I.G. TRADING LIMITED	Samut Prakan	THA	100		4.8	0.1	
BOC (TONGA) LIMITED	Nuku'alofa	TON	100		0.1	-	
ASIA UNION ELECTRONIC CHEMICAL CORPORATION	Taipei	TWN	100		43.6	3.3	
CONFEDERATE TECHNOLOGY COMPANY LIMITED	Wuchi Town	TWN	89		9.9	1.3	c
FAR EASTERN INDUSTRIAL GASES COMPANY LIMITED	Kaohsiung	TWN	55		9.6	1.2	c
LIEN CHIA INDUSTRIAL GASES COMPANY LIMITED	Chiayi City	TWN	100		-	-	c
LIEN CHUAN INDUSTRIAL GASES COMPANY LIMITED	Zhongli	TWN	100		0.1	0.1	c
LIEN FUNG PRECISION TECHNOLOGY DEVELOPMENT CO., LTD	Taichung Hsien	TWN	100		3.8	0.4	c
LIEN HWA COMMONWEALTH CORPORATION	Taipei	TWN	100		2.3	1.2	c
LIEN HWA LOX CRYOGENIC EQUIPMENT CORPORATION	Taipei	TWN	89		3.1	0.3	c
LIEN JIAN LPG COMPANY LIMITED	Su'ao	TWN	60		0.3	-	c
LIEN SHENG INDUSTRIAL GASES COMPANY LIMITED	Hsinchu	TWN	100		0.4	0.4	c
LIEN TONG GASES COMPANY LIMITED	Kaohsiung	TWN	55		0.2	-	c
LIEN YANG INDUSTRIAL GASES COMPANY LIMITED	Yilan	TWN	100		0.7	0.4	c
LIEN YI LPG COMPANY LIMITED	Taoyuan City	TWN	60		2.0	0.1	c
LIENHWA UNITED LPG COMPANY LIMITED	Taipei	TWN	56		8.9	0.5	c
LINDE LIENHWA INDUSTRIAL GASES CO. LTD.	Taipei	TWN	50		282.3	55.9	c, f, i
UNITED INDUSTRIAL GASES COMPANY LIMITED	Hsinchu	TWN	55		139.0	38.6	c
YUAN RONG INDUSTRIAL GASES COMPANY LIMITED	Taipei	TWN	60		12.6	1.5	c
AUECC (BVI) HOLDINGS LIMITED	Tortola	VGB	100		0.8	-	c
BOC LIENHWA (BVI) HOLDING Co., Ltd.	Tortola	VGB	100		122.6	-	

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KEY PROOF INVESTMENTS LIMITED	Tortola	VGB	100		1.6	–	
PURE QUALITY TECHNOLOGY LIMITED	Tortola	VGB	100		–	–	c
SHINE SKY INTERNATIONAL COMPANY LIMITED	Tortola	VGB	100		0.8	–	c
SKY WALKER GROUP LIMITED	Tortola	VGB	100		0.1	–	c
Linde Gas Vietnam Limited	Ba Ria	VNM	100	100	3.2	0.8	
Linde Vietnam Limited Company	Ba Ria	VNM	100		0.7	–9.3	
BOC Samoa Limited	Apia	WSM	96		1.6	0.3	
<i>Americas</i>							
BOC GASES ARUBA N.V.	Santa Cruz	ABW	100		3.4	0.2	
Grupo Linde Gas Argentina S.A.	Buenos Aires	ARG	100	70	29.9	6.9	
Linde Salud S.A.	Buenos Aires	ARG	100	90	1.3	–0.2	
The Hydrogen Company of Paraguana Ltd.	Hamilton	BMU	100		36.9	18.3	
Linde Gases Ltda.	Barueri	BRA	100		138.5	–29.1	
LINDE-BOC GASES LIMITADA	São Paulo	BRA	100		8.6	1.9	
2961-8303 Québec Inc.	Montréal	CAN	100		–	–	c
Cen-Alta Welding Supplies Ltd.	Calgary	CAN	100		–	–	c
Oxygène Sorel-Tracy Inc.	Sorel-Tracy	CAN	100		–	–	c
Soudures Industrielles du Richelieu Métropolitain Inc.	Sorel-Tracy	CAN	100		–	–	c
BOC de Chile S.A.	Providencia	CHL	100		7.2	0.7	
Linde Gas Chile S.A.	Santiago	CHL	100		122.4	9.0	
Spectra Gases (Shanghai) Trading Co., LTD.	Shanghai	CHN	100		6.1	3.3	
Linde Colombia S.A.	Bogotá	COL	100		75.6	–0.2	
REMEO Medical Services S.A.S.	Bogotá	COL	100		0.1	–	
Linde Gas Curaçao N.V.	Willemstad	CUW	100		3.1	0.5	
LINDE GAS DOMINICANA, S.R.L.	Santo Domingo	DOM	100		5.4	1.7	
Agua y Gas de Sillunchi S.A.	Quito	ECU	100		1.0	0.2	
Linde Ecuador S.A.	Quito	ECU	100		74.0	4.2	
Spectra Gases Limited	Guildford	GBR	100		1.2	–	
BOC GASES DE MEXICO, S.A. DE C.V.	Mexico City	MEX	100		–	–	
Compañía de Nitrógeno de Cantarell, S.A. de C.V.	Santa Fe	MEX	100		140.2	15.6	
Compania de Operaciones de Nitrogeno, S.A. de C.V.	Santa Fe	MEX	100		4.0	3.3	c
SERVICIOS DE CANTARELL, S.A. DE C.V.	Santa Fe	MEX	100		–	–	c
SERVICIOS DE OPERACIONES DE NITROGENO, S.A. DE C.V.	Santa Fe	MEX	100		1.4	–0.1	c
Linde Gas Perú S.A.	Callao	PER	100		12.3	–0.4	
Linde Gas Puerto Rico, Inc.	Cataño	PRI	100		0.1	–1.3	
AGA S.A.	Montevideo	URY	100		12.6	1.5	
East Coast Oxygen Company	Bethlehem	USA	50		8.7	–2.8	f, i
Holox Inc.	Norcross	USA	100		–	–	
LAG Methanol LLC	Wilmington	USA	100		–	–	
Lincare (Consolidated financial statements) including:					832.5	240.6	
1536502 Ontario Inc.	Hamilton	USA	100				h
ACRO PHARMACEUTICAL SERVICES LLC	Harrisburg	USA	100				h
ALPHA RESPIRATORY INC.	Wilmington	USA	100				h

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CARING RESPONDERS LLC	Wilmington	USA	100				h
COMMUNITY PHARMACY SERVICES, LLC	Wilmington	USA	100				h
Complete Infusion Services, LLC	Bingham Farms	USA	100				h
CONVACARE SERVICES, INC.	Bloomington	USA	100				h
CPAP SUPPLY USA LLC	Wilmington	USA	100				h
Gamma Acquisition Inc.	Wilmington	USA	100				h
HEALTH CARE SOLUTIONS AT HOME INC.	Wilmington	USA	100				h
HOME-CARE EQUIPMENT NETWORK INC.	Plantation	USA	100				h
LINCARE EQUIPMENT LLC	Wilmington	USA	100				h
LINCARE HOLDINGS INC.	Wilmington	USA	100				h
LINCARE INC.	Wilmington	USA	100				h
LINCARE LEASING LLC	Wilmington	USA	100				h
LINCARE LICENSING INC.	Wilmington	USA	100				h
LINCARE OF CANADA ACQUISITIONS INC.	Wilmington	USA	100				h
LINCARE OF CANADA INC.	Toronto	USA	100				h
LINCARE OF NEW YORK, INC.	New York	USA	100				h
LINCARE PHARMACY SERVICES INC.	Wilmington	USA	100				h
LINCARE PROCUREMENT INC.	Wilmington	USA	100				h
LINCARE PULMONARY REHAB MANAGEMENT, LLC	Wilmington	USA	100				h
Lincare Pulmonary Rehab Services of Missouri, LLC	Clayton	USA	100				h
LINCARE PULMONARY REHAB SERVICES OF OHIO, LLC	Cleveland	USA	100				h
Linde RSS LLC	Wilmington	USA	100				h
Longcap DNS, LLC	Wilmington	USA	100				h
mdINR, LLC	Wilmington	USA	100				h
MED 4 HOME INC.	Wilmington	USA	100				h
MediLink HomeCare, Inc.	Trenton	USA	100				h
MEDIMATICS LLC	Wilmington	USA	100				h
MidSouth Distribution, Inc.	Texarkana	USA	100				h
MRB ACQUISITION CORP.	Plantation	USA	100				h
OCT Pharmacy, L.L.C.	Bingham Farms	USA	100				h
OPTIGEN, INC.	Plantation	USA	100				h
Patient Support Services, Inc.	Texarkana	USA	100				h
PULMOREHAB LLC	Wilmington	USA	100				h
Raytel Cardiac Services, Inc.	Wilmington	USA	100				h
Sleepcair, Inc.	Topeka	USA	100				h
Linde Canada Investments LLC	Wilmington	USA	100		14.9	0.3	
Linde Delaware Investments Inc.	Wilmington	USA	100		300.0	50.2	
Linde Energy Services, Inc	Wilmington	USA	100		-0.4	-	
Linde Gas North America LLC	Wilmington	USA	100		946.6	194.2	
Linde Merchant Production, Inc	Wilmington	USA	100		148.3	-0.1	
Linde North America, Inc.	Wilmington	USA	100	< 0,1	-268.7	0.7	
AGA Gas C.A.	Caracas	VEN	100		25.1	1.0	g
BOC GASES DE VENEZUELA, C.A.	Caracas	VEN	100		-0.8	-0.5	
PRODUCTORA DE GAS CARBONICO SA	Caracas	VEN	100		-0.4	-	
General Gases of the Virgin Islands, Inc.	Saint Croix	VIR	100		5.0	0.1	

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<b>Engineering Division</b>							
Linde Engineering Middle East LLC	Abu Dhabi	ARE	49	29	27.4	21.1	f
Linde (Australia) Pty. Ltd.	North Ryde	AUS	100	100	1.0	–	
Linde Process Plants Canada Inc.	Calgary	CAN	100		–7.0	–9.1	
Arboliana Holding AG	Pfungen	CHE	100		4.4	–	
Bertrams Heatec AG	Pratteln	CHE	100		3.1	–4.2	
Linde Kryotechnik AG	Pfungen	CHE	100		20.5	5.9	
Cryostar Cryogenic Equipments (Hangzhou) Co. Ltd.	Hangzhou	CHN	100	100	12.7	3.9	
Hangzhou Linde International Trading Co., Ltd.	Hangzhou	CHN	100		0.4	0.1	
Linde Engineering (Dalian) Co. Ltd.	Dalian	CHN	56	56	53.9	–3.9	
Linde Engineering (Hangzhou) Co. Ltd.	Hangzhou	CHN	75	75	33.2	5.1	
Selas-Linde GmbH	Pullach	DEU	100	100	40.0	–	a
CRYOSTAR SAS	Hésingue	FRA	100		57.8	24.7	
LINDE CRYOPLANTS LIMITED	Guildford	GBR	100		6.4	0.2	
Linde Engineering India Private Limited	New Delhi	IND	100	100	24.1	7.0	
LPM, S.A. de C.V.	Mexico City	MEX	100	90	8.6	–0.3	
Linde Engineering (Malaysia) Sdn. Bhd.	Kuala Lumpur	MYS	100	100	1.8	1.1	
OOO "Linde Engineering Rus"	Samara	RUS	100	100	–0.1	7.6	
Linde Arabian Contracting Co., Ltd.	Riyadh	SAU	100	90	18.3	5.4	
Cryostar Singapore Pte Ltd	Singapore	SGP	100	100	13.1	6.1	
Cryostar USA LLC	Wilmington	USA	100		1.4	1.2	
Linde Engineering North America Inc.	Wilmington	USA	100		–23.1	4.0	
Linde Process Plants, Inc.	Tulsa	USA	100		57.5	1.6	
Linde Engineering South Africa (Pty) Ltd.	Johannesburg	ZAF	100	100	13.2	6.6	
<b>Other Activities</b>							
BOC AIP Limited Partnership	North Ryde	AUS	100		895.8	97.0	
BOC Australia Pty Limited	North Ryde	AUS	100		66.0	20.0	
Gist Österreich GmbH	Wallern an der Trattnach	AUT	100		–0.1	–	c
Linde Österreich Holding GmbH	Stadl-Paura	AUT	100	62	749.3	105.8	
Gist Belgium BVBA	Lochristi	BEL	100		0.1	–0.1	c
PRIESTLEY COMPANY LIMITED	Hamilton	BMU	100		24.4	–	
Linde Canada Limited	Mississauga	CAN	100		390.5	97.3	
Linde Holding AG	Dagmersellen	CHE	100	100	19.5	0.4	
GISTRANS Czech Republic s.r.o.	Olomouc	CZE	100		4.1	0.9	
Commercium Immobilien- und Beteiligungs-GmbH	Munich	DEU	100	100	2,256.5	–	a
Linde US Beteiligungs GmbH	Munich	DEU	100		477.1	28.9	
LINDE INVESTMENTS FINLAND OY	Helsinki	FIN	100		1.1	0.1	
GIST FRANCE S.A.R.L.	Garges-lès-Gonesse	FRA	100		–0.1	0.4	c
Linde Holdings SAS	Saint-Priest	FRA	100		219.9	45.3	
The Boc Group S.A.S.	Hésingue	FRA	100		74.2	34.5	
AIRCO COATING TECHNOLOGY LIMITED	Guildford	GBR	100		3.3	–	
BOC CHILE HOLDINGS LIMITED	Guildford	GBR	100		41.1	–	
BOC DISTRIBUTION SERVICES LIMITED	Guildford	GBR	100		0.1	–	

### 134 COMPANIES INCLUDED IN THE GROUP FINANCIAL STATEMENTS (IN ACCORDANCE WITH IFRS 10)

	Registered office	Country	Participating interest	Thereof Linde AG	Equity	Profit/loss for the year	Note
			in percent	in percent	in EUR m	in EUR m	
BOC DUTCH FINANCE	Guildford	GBR	100		0.7	–	
BOC GASES LIMITED	Guildford	GBR	100		41.4	–	
BOC HOLDINGS	Guildford	GBR	100		4,337.4	901.3	
BOC INVESTMENT HOLDINGS LIMITED	Guildford	GBR	100		711.9	77.7	
BOC INVESTMENTS (LUXEMBOURG) LIMITED	Guildford	GBR	100		–	–	
BOC INVESTMENTS NO.1 LIMITED	Guildford	GBR	100		178.2	19.5	
BOC INVESTMENTS NO.5	Guildford	GBR	100		357.1	6.8	
BOC INVESTMENTS NO.7	Guildford	GBR	100		–	–	
BOC IRELAND FINANCE	Guildford	GBR	100		–	–	
BOC JAPAN	Guildford	GBR	100		–	–	
BOC KOREA HOLDINGS LIMITED	Guildford	GBR	100		118.0	0.6	
BOC LIMITED	Guildford	GBR	100		795.4	206.6	
BOC LUXEMBOURG FINANCE	Guildford	GBR	100		–	–	
BOC NETHERLANDS HOLDINGS LIMITED	Guildford	GBR	100		523.7	28.0	
BOC NOMINEES LIMITED	Guildford	GBR	100		–	–	
BOC PENSION SCHEME TRUSTEES LIMITED	Guildford	GBR	100		–	–	
BOC PENSIONS LIMITED	Guildford	GBR	100		–	–	
BOC RSP TRUSTEES LIMITED	Guildford	GBR	100		–	–	
BOC SEPS TRUSTEES LIMITED	Guildford	GBR	100		–	–	
BRITISH INDUSTRIAL GASES LIMITED	Guildford	GBR	100		–	–	
CRYOSTAR LIMITED	Guildford	GBR	100		–	–	
EHVIL DISSENTIENTS LIMITED	Guildford	GBR	100		–	–	
G.I. BAKER (TRANSPORT) LIMITED	Guildford	GBR	100		303.9	6.4	
GIST LIMITED	Guildford	GBR	100		168.1	25.1	
GIST PEOPLE SERVICES LIMITED	Guildford	GBR	100		0.1	–	
HANDIGAS LIMITED	Guildford	GBR	100		16.6	–	
HICK, HARGREAVES AND COMPANY LIMITED	Guildford	GBR	100		–	–	
INDONESIA POWER HOLDINGS LIMITED	Guildford	GBR	100		14.9	–	
LANSING GROUP LIMITED	Guildford	GBR	100	100	11.0	–	
LINDE CANADA HOLDINGS LIMITED	Guildford	GBR	100		–213.6	–59.6	
LINDE CRYOGENICS LIMITED	Guildford	GBR	100		283.0	14.9	
LINDE FINANCE	Guildford	GBR	100		–	–	
LINDE INVESTMENTS No.1 LIMITED	Guildford	GBR	100		3,876.7	423.6	
LINDE NORTH AMERICA HOLDINGS LIMITED	Guildford	GBR	100		1,461.4	–3.0	
LINDE UK HOLDINGS LIMITED	Guildford	GBR	100	85	14,752.3	397.5	
LINDE UK PRIVATE MEDICAL TRUSTEES LIMITED	Guildford	GBR	100		–	–	c
MEDISHIELD	Guildford	GBR	100		0.4	–	
MEDISPEED	Guildford	GBR	100		301.8	8.7	
RRS (FEBRUARY 2004) LIMITED	Guildford	GBR	100		–0.5	–	
SPALDING HAULAGE LIMITED	Guildford	GBR	100		417.5	4.1	
STORESHIELD LIMITED	Guildford	GBR	100		329.7	27.3	
THE BOC GROUP LIMITED	Guildford	GBR	100		9,544.1	1,325.9	
THE BRITISH OXYGEN COMPANY LIMITED	Guildford	GBR	100		0.1	–	
TRANSHIELD	Guildford	GBR	100		18.4	0.2	
WELDING PRODUCTS HOLDINGS LIMITED	Guildford	GBR	100		10.2	–	
BOC NO. 1 LIMITED	Saint Peter Port	GGY	100		1.5	–	
BOC NO. 2 LIMITED	Saint Peter Port	GGY	100		0.4	–	

### 134 COMPANIES INCLUDED IN THE GROUP FINANCIAL STATEMENTS (IN ACCORDANCE WITH IFRS 10)

	Registered office	Country	Participating interest	Thereof Linde AG	Equity	Profit/loss for the year	Note
			in percent	in percent	in EUR m	in EUR m	
BRITISH OXYGEN (HONG KONG) LIMITED	Hong Kong	HKG	100		9.5	–	
Linde Global Support Services Private Limited	Calcutta	IND	100		0.3	–	
BOC INVESTMENT HOLDING COMPANY (IRELAND) LIMITED	Dublin	IRL	100		16.5	–	
BOC Investments Ireland	Dublin	IRL	100		3.7	–	
Gist Distribution Limited	Dublin	IRL	100		6.9	6.2	
PRIESTLEY DUBLIN REINSURANCE COMPANY LIMITED	Dublin	IRL	100		34.3	6.2	
Gist Italy S.r.l.	Milan	ITA	100		–0.1	–	c
ALBOC (JERSEY) LIMITED	Saint Helier	JEY	100		1.8	29.6	
BOC AUSTRALIAN FINANCE LIMITED	Saint Helier	JEY	100		3.6	–	
BOC PREFERENCE LIMITED	Saint Helier	JEY	100		65.2	–	
BOC Europe Holdings B.V.	Dongen	NLD	100		409.5	28.9	
Fred Butler Netherlands B.V.	Amsterdam	NLD	100		21.8	–	
Gist Containers B.V.	Bleiswijk	NLD	100		–2.4	0.3	c
Gist Forwarding B.V.	Bleiswijk	NLD	100		–0.9	–	c
Gist Holding B.V.	Bleiswijk	NLD	100		8.4	–	c
Gist Nederland B.V.	Bleiswijk	NLD	100		–8.7	0.3	c
Linde Finance B.V.	Amsterdam	NLD	100		250.8	18.6	
Linde Holdings Netherlands B.V.	Schiedam	NLD	100	100	1,307.2	99.0	
The BOC Group B.V.	Dongen	NLD	100		44.9	14.9	
Linde Holdings New Zealand Limited	Auckland	NZL	100		2.2	12.6	
BOC GIST INC	Mkati City	PHL	100		0.1	–	
Linde Global IT Services s.r.o.	Bratislava	SVK	100		0.8	–0.1	
AGA Aktiebolag	Lidingö	SWE	100		1,506.4	–7.0	
BOC Intressenter AB	Helsingborg	SWE	100		37.4	0.6	
LindeGas Holding Sweden AB	Lidingö	SWE	100	100	3,725.1	20.6	
DeVine Products, Inc.	Wilmington	USA	100		–	–	
Gist USA LLC	Wilmington	USA	100		2.1	–1.5	
Linde Holdings, LLC	Wilmington	USA	100		200.8	31.0	
LINDE INVESTMENTS LLC	Wilmington	USA	100		1,293.8	2.9	
Linde LLC	Wilmington	USA	100		683.6	155.4	



135 COMPANIES INCLUDED IN THE GROUP FINANCIAL STATEMENTS ON A LINE-BY-LINE BASIS  
(IN ACCORDANCE WITH IFRS 11)

	Registered office	Country	Participating interest <i>in percent</i>	Thereof Linde AG <i>in percent</i>	Equity <i>in EUR m</i>	Profit/loss for the year <i>in EUR m</i>	Note
<b>Gases Division</b>							
<b>EMEA</b>							
Adnoc Linde Industrial Gases Co. Limited (Elixir)	Abu Dhabi	ARE	49	49	195.3	40.5	
OOO "Linde Azot Togliatti"	Togliatti	RUS	50		6.1	-1.3	
<b>Asia/Pacific</b>							
BOC-SPC Gases Co., Ltd.	Shanghai	CHN	50		21.3	4.4	
Chongqing Linde-SVW Gas Co., Ltd.	Chongqing	CHN	50		14.1	1.2	
Zibo BOC-QILU Gases Co., Ltd.	Zibo	CHN	50		27.8	3.7	

### 136 INVESTMENTS ACCOUNTED FOR USING THE EQUITY METHOD (IN ACCORDANCE WITH IAS 28)

	Registered office	Country	Participating interest in percent	Thereof Linde AG in percent	Equity in EUR m	Profit/loss for the year in EUR m	Note
<b>Gases Division</b>							
<b>EMEA</b>							
Krakovská s.r.o.	Nový Malín	CZE	37		0.2	–	c, d
Plyny Jehlár s.r.o.	Brest	CZE	34		0.1	–	c, d
Bomin Linde LNG Beteiligungs-GmbH	Hamburg	DEU	50	50	–	–	b, c
Bomin Linde LNG GmbH & Co. KG	Hamburg	DEU	50	50	6.3	–4.5	b, c
H <sub>2</sub> Mobility Deutschland GmbH & Co. KG	Berlin	DEU	28	28	5.7	–1.0	b, c
HELISON PRODUCTION S.p.A.	Skikda	DZA	51	51	36.0	–1.1	b, f
Messer Algeria SPA	Algiers	DZA	40		4.0	2.2	b, c
Oxígeno de Sagunto, S.L.	Barcelona	ESP	50		12.9	0.1	c, e
Oy Innogas Ab	Kulloo	FIN	50		1.3	–	b, c
Parhaat Yhdessä koulutussyhdistys ry	Vantaa	FIN	25		0.2	–	c, d
LIDA S.A.S.	Saint-Quentin-Fallavier	FRA	22		0.2	0.2	b, c, e
LIMES SAS	Saint-Herblain	FRA	50		4.4	–	b, c, d
Helison Marketing Limited	Saint Helier	GBR	51		20.5	8.4	b, f
Company for Production of Carbon Dioxide Geli DOO Skopje	Skopje	MKD	50	50	0.7	–	b
LES GAZ INDUSTRIELS LIMITED	Port Louis	MUS	38		6.1	0.1	e
ENERGY SOLUTIONS (PTY) LIMITED	Windhoek	NAM	26		–	–	e
Tjeldbergodden Luftgassfabrikk DA	Aure	NOR	38		13.8	3.0	b, c, d
<b>Asia/Pacific</b>							
Beijing Fudong Gas Products Co., Ltd.	Beijing	CHN	60		2.1	–0.1	b, c, d, f
Dalian BOC Carbon Dioxide Co. Ltd.	Dalian	CHN	50		1.0	–0.7	b
Fujian Linde-FPCL Gases Co., Ltd.	Quanzhou	CHN	50		85.0	10.5	b
Linde Carbonic Co. Ltd., Tangshan	Qian'an	CHN	80		0.5	–0.5	b, f
Nanjing BOC-YPC Gases CO., LTD.	Nanjing	CHN	50		73.0	15.1	b
INDUSTRIAL GASES SOLUTIONS SDN BHD	Petaling Jaya	MYS	50		1.8	1.1	b
Kulim Industrial Gases Sdn. Bhd.	Kuala Lumpur	MYS	50		26.8	–2.6	b, c, d, e
Map Ta Phut Industrial Gases Company Limited	Bangkok	THA	40		8.9	3.3	b, c
Blue Ocean Industrial Gases Co., Ltd.	Taipei	TWN	50		27.2	2.0	b, c, e
LIEN RUEY ENERGY CORPORATION LIMITED	Taipei	TWN	50		0.3	–	b, c
<b>Americas</b>							
CLIFFSIDE HELIUM, L.L.C.	Wilmington	USA	26		0.1	–	b
Cliffside Refiners, L.P.	Wilmington	USA	27		7.4	2.9	b
High Mountain Fuels, LLC	Wilmington	USA	50		9.8	0.3	b
Hydrochlor LLC	Wilmington	USA	50		11.1	–1.7	b
Spectra Investors, LLC	Branchburg	USA	49		2.1	–	b
<b>Other Activities</b>							
CAPTURE POWER LIMITED	Selby	GBR	33		–13.8	–10.9	b

## 137 NON-CONSOLIDATED SUBSIDIARIES

	Registered office	Coun- try	Partici- pating interest <i>in percent</i>	Thereof Linde AG <i>in percent</i>	Equity <i>in EUR m</i>	Profit/loss for the year <i>in EUR m</i>	Note
<b>Gases Division</b>							
<b>EMEA</b>							
LINDE PLIN d.o.o. Sarajevo	Sarajevo	BIH	100	100	–	–	c
AUTOGAS (BOTSWANA) (PROPRIETARY) LIMITED	Gaborone	BWA	100		N/A	N/A	
CUULSTICK VENTURES (PTY) LIMITED	Gaborone	BWA	100		N/A	N/A	
Linde Schweiz AG	Dagmersellen	CHE	100		0.1	–	c
COTSWOLD INDUSTRIAL & WELDING SUPPLIES LIMITED	Nottingham	GBR	100		–	–	c, d
ELECTROCHEM LIMITED	Guildford	GBR	100	100	–	–	c, d
GAS & EQUIPMENT LIMITED	Guildford	GBR	100		–2.1	–	c
HYDROGEN SUPPLIES LIMITED	Guildford	GBR	100	100	1.0	–	c
INTELLEMETRICS LIMITED	Glasgow	GBR	100		–	–	c, d
LEENGATE INDUSTRIAL & WELDING SUPPLIES (CANNOCK) LIMITED	Nottingham	GBR	100		0.3	–	c, d
Linde Gas Jordan Ltd	Zarqa	JOR	100		0.1	–0.1	c
EAST AFRICAN OXYGEN LIMITED	Nairobi	KEN	100		–	–	c
KS Luftgassproduksjon	Oslo	NOR	100		–	–	c
Norgas AS	Oslo	NOR	100		0.1	–	c
OOO "Linde Gas Helium Rus"	Moscow	RUS	100	100	–	–	c
ZAO "LH GermaneLabs Rus"	Moscow	RUS	51	51	–	–	c
Linde Technické Plyny spol. s r.o.	Bratislava	SVK	100		0.1	–	c
Nynäshamns Gasterminal AB	Lidingö	SWE	100		–	–	c
<b>Asia/Pacific</b>							
BOC SOLUTIONS PTY LIMITED	North Ryde	AUS	100		–	–	c
ELGAS SUPERANNUATION PTY. LTD.	North Ryde	AUS	100		–	–	c
BANGLADESH OXYGEN LIMITED	Dhaka	BGD	100		–	–	c, d
BOC Bangladesh Limited	Dhaka	BGD	100		–	–	c, d
Guangzhou GNIG Industrial Gases Company Limited	Guangzhou	CHN	60		–	–	c
Guangzhou Linde GISE Gases Company Limited	Guangzhou	CHN	50		0.2	–	c
BOC NOUVELLE-CALEDONIE SAS	Nouméa	NCL	100		–	–	c
BOC PAKISTAN (PVT.) LIMITED	Karachi	PAK	100		–	–	c, d
CIGI PROPERTIES, INC.	Mandaluyong City	PHL	100		–	–	c
DAVAO OXYGEN CORPORATION	Mandaue City	PHL	100		0.5	–	c, d, e
LIEN XIANG ENERGY CORPORATION LIMITED	Tainan	TWN	50		0.8	–	c
LUCK STREAM Co., Ltd.	Kaohsiung	TWN	100	100	2.2	0.1	c
<b>Americas</b>							
177470 CANADA INC.	Mississauga	CAN	100		0.9	–	c
177472 CANADA INC.	Mississauga	CAN	100		2.4	–	c
44001 ONTARIO LIMITED	Mississauga	CAN	100		1.1	–	c

### 137 NON-CONSOLIDATED SUBSIDIARIES

	Registered office	Country	Participating interest in percent	Thereof Linde AG in percent	Equity in EUR m	Profit/loss for the year in EUR m	Note
<b>Engineering Division</b>							
Cryostar do Brasil Equipamentos Rotativos & Criogenicos Ltda.	São Paulo	BRA	100	90	2.2	-1.4	c
Linde Engenharia Do Brasil Ltda.	Barueri	BRA	100	90	1.0	-	c
Linde Engineering Korea Ltd.	Seoul	KOR	100	100	1.1	0.2	c
LINDE SAUDI ARABIA LLC	Jubail	SAU	65	65	-0.6	-1.1	c
Linde Engineering Taiwan Ltd.	Taipei	TWN	100		0.8	0.1	c
<b>Other Activities</b>							
Linde Australia Holdings Pty Limited	North Ryde	AUS	100	100	-	-	c
CRIOSBANC FRANCE S.A.R.L.	Trappes	FRA	100		-	-	c
Hong Kong Oxygen & Acetylene Company Limited	Kowloon	HKG	100		0.7	-	c
GLPS TRUSTEES LIMITED	Guildford	GBR	100		-	-	c
AIRCO PROPERTIES INC	Wilmington	USA	100		N/A	N/A	
SELOX, INC	Nashville	USA	100		N/A	N/A	

# 138 OTHER INVESTMENTS (NOT CONSOLIDATED)

	Registered office	Country	Participating interest in percent	Thereof Linde AG in percent	Equity in EUR m	Profit/loss for the year in EUR m	Note
<b>Gases Division</b>							
<b>EMEA</b>							
Linde Vítkovice a.s.	Ostrava	CZE	50		9.3	-0.4	c, d
TKD TrockenEis und Kohlensäure Distribution GmbH	Fraunberg	DEU	50	50	0.4	0.1	c, d
AGA Føroyar Sp/f	Tórshavn	DNK	50		0.2	0.2	c, d
AGA HiQ Center Aps	Hillerød	DNK	50		0.4	-	c, d
Carbuero del Cinca S.A.	Monzón	ESP	20		6.7	0.3	c, d
Oxígeno de Andalucía, S.L.	San Roque	ESP	49		0.1	-	b, c, d
QUÍMICA BÁSICA, S.A.	Barcelona	ESP	33		1.4	-	b, c, d
NAMGAS (PTY) LIMITED	Windhoek	NAM	44		-	-	c
Fuel Cell Boat B.V.	Amsterdam	NLD	20		-	-	c
TASCO ESTATES LIMITED	Dar es Salaam	TZA	20		N/A	N/A	
INDUSTRIAL GAS DISTRIBUTOR HOLDINGS (PTY) LIMITED	Johannesburg	ZAF	26		-	-	
<b>Asia/Pacific</b>							
Guangzhou GNC Carbon Dioxide Company Ltd.	Guangzhou	CHN	50		-	-	b, c
HON CHEN Enterprise Co., Ltd.	Kaohsiung	TWN	50		0.7	-	c
SUN HSIN LPG COMPANY LIMITED	Yunlin	TWN	50		0.5	0.2	c
<b>Americas</b>							
HERA, HYDROGEN STORAGE SYSTEMS INC	Longueuil	CAN	20		-	-	
TOMOE TRANSTECH SPECIALTY GASES PTE LTD	Singapore	SGP	25		2.8	0.3	b, c, d
<b>Other Activities</b>							
"Caravell" Kühlgerätevertriebs GmbH	Ratingen	DEU	50	50	-	-	b
InfraLeuna GmbH	Leuna	DEU	25	25	340.2	3.6	c, d

## Key:

a Profit and loss transfer agreement.

b Joint venture

c Local GAAP.

d Figures from financial years prior to 2015.

e Financial year differs from the calendar year due to local circumstances.

f Consolidation method differs from percentage of shares held due to de facto control or a contractual agreement.

g The distribution of dividend for 2008 is subject to foreign exchange restrictions.

h No preparation of individual financial statements under commercial law.

i Distribution of dividend is subject to the approval of non-controlling interests.

N/A = No financial data available.

## [42] Events after the balance sheet date

With effect from 31 January 2016, Linde acquired 100 percent of the shares of the US company American HomePatient Inc. This company specialises in respiratory therapy for patients suffering from COPD (chronic obstructive pulmonary disease). In the 2014 financial year, American HomePatient generated revenue of around EUR 260 m with a good 2,700 employees. Linde intends to use the acquisition to expand its position in the healthcare services sector and to generate further synergy potential with the existing Lincare business. The purchase price was USD 225 m before purchase price adjustments. Since the acquisition date is so close to the balance sheet date, no further conclusive information is available.

Moreover, effective 17 February 2016 Linde sold 40.1 percent of its shares in Linde-Huayi (Chongqing) Gases Co., Ltd, which is held in the Asia/Pacific segment, to the minority shareholder, thus handing over its majority stake in the

company within the meaning of IFRS 10. After the sale Linde still holds a stake of 19.9 percent and continues to have significant influence within the meaning of IAS 28. The sale of the shares had still been subject to the approval of the People's Republic of China's Ministry of Commerce (MOFCOM). The approval was granted on 17 February 2016. The sale mainly comprises the deconsolidation of hydrogen plants and associated financial liabilities.

No other significant events occurred for the consolidated financial statements of Linde Group between the balance sheet date and 19 February 2016.

On 19 February 2016, the Executive Board of Linde AG released the consolidated financial statements for submission to the Supervisory Board. It is the responsibility of the Supervisory Board to examine the consolidated financial statements and to state whether it approves them. The Group financial statements, the statutory financial statements of Linde AG and the annual report are published on 10 March 2016 after they have been approved at the Supervisory Board meeting on 9 March 2016.

MUNICH, 19 FEBRUARY 2016

DR WOLFGANG BÜCHELE  
[CHIEF EXECUTIVE OFFICER]

GEORG DENOKE  
[MEMBER OF THE EXECUTIVE BOARD]

THOMAS BLADES  
[MEMBER OF THE EXECUTIVE BOARD]

BERND EULITZ  
[MEMBER OF THE EXECUTIVE BOARD]

DR CHRISTIAN BRUCH  
[MEMBER OF THE EXECUTIVE BOARD]

SANJIV LAMBA  
[MEMBER OF THE EXECUTIVE BOARD]

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## To Linde Aktiengesellschaft

### *Report on the Consolidated Financial Statements*

We have audited the accompanying consolidated financial statements of Linde Aktiengesellschaft, Munich, and its subsidiaries, which comprise the group statement of financial position, group statement of profit and loss, statement of comprehensive income, statement of changes in group equity, group statement of cash flows and notes to the group financial statements for the business year from 1 January to 31 December 2015.

### *Management's Responsibility for the Consolidated Financial Statements*

The management of Linde Aktiengesellschaft is responsible for the preparation of these consolidated financial statements. This responsibility includes preparing these consolidated financial statements in accordance with International Financial Reporting Standards as adopted by the EU, and the supplementary requirements of German law pursuant to § 315a Abs. 1 HGB (Handelsgesetzbuch: German Commercial Code), to give a true and fair view of the net assets, financial position and results of operations of the group in accordance with these requirements. The company's management is also responsible for the internal controls that management determines are necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

### *Auditor's Responsibility*

Our responsibility is to express an opinion on these consolidated financial statements based on our audit. We conducted our audit in accordance with § 317 HGB and German generally accepted standards for the audit of financial statements promulgated by the Institut der Wirtschaftsprüfer (IDW) as well as in supplementary compliance with International Standards on Auditing (ISA). Accordingly, we are required to comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing audit procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The selection

of audit procedures depends on the auditor's professional judgment. This includes the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In assessing those risks, the auditor considers the internal control system relevant to the entity's preparation of the consolidated financial statements that give a true and fair view. The aim of this is to plan and perform audit procedures that are appropriate in the given circumstances, but not for the purpose of expressing an opinion on the effectiveness of the group's internal control system. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

### *Audit Opinion*

Pursuant to § 322 Abs. 3 Satz 1 HGB, we state that our audit of the consolidated financial statements has not led to any reservations.

In our opinion, based on the findings of our audit, the consolidated financial statements comply in all material respects with IFRSs as adopted by the EU and the supplementary requirements of German commercial law pursuant to § 315a Abs. 1 HGB and give a true and fair view of the net assets and financial position of the Group as at 31 December 2015 as well as the results of operations for the business year then ended, in accordance with these requirements.

### *Report on the Combined Management Report*

We have audited the accompanying group management report of Linde Aktiengesellschaft, which is combined with the management report of the company for the business year from 1 January to 31 December 2015. The management of Linde Aktiengesellschaft is responsible for the preparation of this combined management report in compliance with the applicable requirements of German commercial law pursuant to § 315a Abs. 1 HGB (German Commercial Code). We conducted our audit in accordance with § 317 Abs. 2 HGB and German generally accepted standards for the audit of the combined management report promulgated by the Institut der Wirtschaftsprüfer [Institute of Public Auditors in Germany] (IDW). Accordingly, we are required to plan and perform the audit of the combined management report to obtain reasonable assurance about whether the combined management report is consistent with the consolidated financial statements and the audit findings, and as a whole provides a suitable view of the Group's position and suitably presents the opportunities and risks of future development.

Pursuant to § 322 Abs. 3 Satz 1 HGB, we state that our audit of the combined management report has not led to any reservations.

In our opinion, based on the findings of our audit of the consolidated financial statements and combined management report, the combined management report is consistent with the consolidated financial statements, and as a whole provides a suitable view of the Group's position and suitably presents the opportunities and risks of future development.

MUNICH, 19 FEBRUARY 2016

KPMG AG  
WIRTSCHAFTSPRÜFUNGSGESELLSCHAFT

[ORIGINAL GERMAN VERSION SIGNED BY:]

BECKER	V. HEYNITZ
WIRTSCHAFTS -	WIRTSCHAFTS -
PRÜFER	PRÜFER
[GERMAN PUBLIC	[GERMAN PUBLIC
AUDITOR]	AUDITOR]



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# Further Information

## SECTION 4



# RESPONSIBILITY STATEMENT

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To the best of our knowledge, and in accordance with the applicable reporting principles, the consolidated financial statements give a true and fair view of the net assets, financial position and profit or loss of the Group, and the combined management report includes a fair review of the development and performance of the business and the position of The Linde Group and of Linde AG, together with a description of the principal opportunities and risks associated with the expected development of The Linde Group and Linde AG.

MUNICH, 19 FEBRUARY 2016

LINDE AKTIENGESELLSCHAFT  
THE EXECUTIVE BOARD

DR WOLFGANG BÜCHELE  
[CHIEF EXECUTIVE OFFICER]

GEORG DENOKE  
[MEMBER OF THE EXECUTIVE BOARD]

THOMAS BLADES  
[MEMBER OF THE EXECUTIVE BOARD]

BERND EULITZ  
[MEMBER OF THE EXECUTIVE BOARD]

DR CHRISTIAN BRUCH  
[MEMBER OF THE EXECUTIVE BOARD]

SANJIV LAMBA  
[MEMBER OF THE EXECUTIVE BOARD]

# MANAGEMENT ORGANISATION

AS AT 19 FEBRUARY 2016

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<i>Executive Board Member</i>	<i>Responsibilities</i>	<i>Corporate &amp; Support Functions</i>
Dr Wolfgang Büchele, Chief Executive Officer	Gist, Opportunity & Project Development	Corporate Communications & Investor-Relations, Corporate Internal Audit, Corporate Office, Corporate Strategy & Market Intelligence, Group Human Resources, Group Legal & Compliance, SHEQ (Safety, Health, Environment, Quality)
Thomas Blades	Americas segment, Global Governance Centres Deliver, Healthcare, Operations, Global Gases Businesses Helium & Rare Gases	
Dr Christian Bruch	Engineering Division	Technology & Innovation
Bernd Eulitz	EMEA segment	
Sanjiv Lamba	Asia/Pacific segment, Global Governance Centres Merchant & Packaged Gases and Electronics	
Georg Denoke	Finance/Financial Control for the segments EMEA, Americas, Asia/Pacific	Group Accounting & Reporting, Group Information Services, Group Insurance, Group Mergers & Acquisitions, Group Procurement, Group Risk Management, Group Tax, Group Treasury, Operational Finance, Controlling & Investments, Real Estate

## 140 DIVISIONS

<i>Gases Division</i>	<i>Engineering Division</i>	<i>Gist</i>
See diagram below for organisation	Steve Bertone	Martin Gwynn
	Jürgen Nowicki	
	John van der Velden	
	Tilman Weide	

## 141 GASES DIVISION

<i>EMEA segment (Europe, Middle East, Africa)</i>	<i>Americas segment</i>	<i>Asia/Pacific segment</i>
RBU Northern Europe N.N.	RBU Americas Pat Murphy	RBU East Asia Steven Fang
RBU Central Europe Olaf Reckenhofer	Finance/Financial Control Americas Jens Lühring	RBU South Asia & ASEAN Rob Hughes
RBU Southern Europe Arnold Coppin	Lincare Kirsten Hoefer	RBU South Pacific Colin Isaac
RBU Africa & UK Sue Graham Johnston		Finance/Financial Control Asia/Pacific Binod Patwari
RBU Middle East & Eastern Europe Elena Skvortsova		
Finance/Financial Control EMEA Matthias v. Plotho		

## 142 GLOBAL GOVERNANCE CENTRES

GGC Merchant & Pack- aged Gases (liquefied gases and cylinder gas) Jens Waldeck	GGC Electronics (electronic gases) Andreas Weisheit	GGC Healthcare Dr Christian Wojczewski	GGC Operations Rudolf Lamm	GGC Deliver Ian Rennie
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## 143 GLOBAL FUNCTION

Opportunity & Project Development Ernst Rost
---

## 144 CORPORATE & SUPPORT FUNCTIONS

Corporate Communications & Investor Relations	Dr Harry Roegner
Corporate Internal Audit	Thomas Müller
Corporate Office	Andrea Reutershahn
Corporate Strategy & Market Intelligence	Holger Kirchner
Group Accounting & Reporting, Group Risk Management, Group Insurance, Real Estate	Björn Schneider
Group Human Resources	Werner Boekels
Group Information Services	Sandeep Sen
Group Legal & Compliance	Solms U. Wittig
Group Mergers & Acquisitions	Tim Husmann
Group Procurement	Christoph Clausen
Group Tax	Dr Wolfgang Salzberger
Group Treasury	Dr Sven Schneider
SHEQ (Safety, Health, Environment, Quality)	Phil Graham
Operational Finance, Controlling & Investments	Michael Ullrich
Technology & Innovation	Dr Andreas Opfermann

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## [ A ]

### ADDITIVE MANUFACTURING

The term “additive manufacturing” refers to all manufacturing techniques in which the part material is formed in an automated process by joining volume elements, preferably layer by layer. Both the term “additive manufacturing” and its German equivalent (generative Fertigungsverfahren) have been set out in corresponding standards in Germany (VDI 3403) and in the USA (ASTM F2792). The more literal German translation “Additive Fertigungsverfahren” is less common.

### AIR SEPARATION PLANT

Air separation plants use Linde processes to produce oxygen, nitrogen and argon.

### ASEAN

ASEAN is the acronym for the Association of Southeast Asian Nations. An international organisation based in Jakarta, Indonesia, which aims to promote economic, political and social cooperation between countries in South-East Asia who have also joined together to create a common economic space.

## [ B ]

### BEST COST COUNTRIES

A procurement strategy whereby companies source goods and services not only in their major sales markets, but also in countries offering the best conditions of purchase.

## [ C ]

### CARBON DISCLOSURE PROJECT (CDP)

This investor non-profit initiative aims to ensure that companies and municipalities publish their environmental data. Every year, the CDP collects data and information on corporate CO<sub>2</sub> emissions, climate risks, reduction targets and climate protection strategies based on standardised questionnaires completed on a voluntary basis.

### CASH BALANCE PLAN

A cash balance plan combines the characteristics of a defined benefit plan with those of a defined contribution plan. A cash balance plan guarantees the beneficiary a pension benefit. For each beneficiary, an individual account balance is maintained, which increases in value over the period of service and attracts a guaranteed interest rate. The account balance is then subsequently converted into a lump sum payment or a lifelong pension, depending on the structure of the scheme.

### CATEGORY

Category management is a structured process designed to analyse, define and implement procurement strategies for products and services.

### CLOUD

An abbreviation for cloud computing. The term refers to platforms for distributed computing across different hardware and software resources run by one or several providers.

### COMMERCIAL PAPER PROGRAMME

Programme for short-term notes on the capital market.

### CONFLICT MINERALS

The US Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act) defines conflict minerals as raw materials exploited and traded in the Democratic Republic of Congo or neighbouring countries which finance conflict. The Dodd-Frank Act applies to the substances or ores from which

these raw materials are extracted: tantalum (coltan), tin (cassiterite), wolfram and gold.

### CONTRACTORS

Employees from third party firms who provide services on Lindes behalf, especially transport services.

### CONVENIENCE PRODUCTS

Commercially processed food products which cut food preparation time in domestic households or in the catering trade.

### CRACKER

#### (ETHANE CRACKER)

Steam cracking plant in the petrochemical sector. Steam and heat are applied to transform hydrocarbons such as ethane into unsaturated hydrocarbons which are used as raw materials in the manufacture of plastics, varnishes, solvents and pesticides.

### CREDIT DEFAULT SWAPS

Credit default swaps (CDS) are credit derivatives designed to hedge the exposure to loan defaults. In return for the payment of a single premium or regular premiums, the buyer receives compensation from the seller in the event that the reference obligor named in the CDS contract defaults.

### CROSS-CURRENCY

#### INTEREST RATE SWAPS

An agreement between parties to exchange interest payments and principal on loans denominated in different currencies.

## [ D ]

### DEBT ISSUANCE PROGRAMME

Flexible refinancing programme with standardised documentation framework. It enables the issuer to cover its funding requirements by raising debt in different currencies and amounts with different maturity periods.

# DEFINED BENEFIT PLANS

Pension plans under which an enterprise/employer defines an amount of pension benefit to be provided as a function of one or more factors such as the age, length of service and salary of the employee. The actuarial risk and the investment risk are borne by the enterprise.

# DEFINED CONTRIBUTION PLANS

Pension plans under which the legal or constructive obligation of the enterprise/employer is limited to the amount it agrees to contribute to a separate entity, such as an insurance company. The level of benefits received by the employee is determined by the level of contributions paid by the enterprise (and if applicable also by the employee) to the separate entity, together with the investment returns arising from the contributions. The actuarial risk and the investment risk are borne by the employee.

# [E]

# EBIT

Abbreviation for Earnings before Interest and Tax. At Linde, this figure comprises gross profit on sales less functional costs and other operating expenses plus other operating income and share of profit or loss from associates and joint ventures, adjusted for non-recurring items.

# EBITDA

# (OPERATING PROFIT)

Abbreviation for Earnings before Interest, Tax, Amortisation and Depreciation. At Linde, EBIT (adjusted for non-recurring items) after adding back amortisation of intangible assets and depreciation of tangible assets.

# ECIIA

Abbreviation for the European Confederation of Institutes of Internal Auditing. ECIIA is the professional association which represents 33 national institutes of internal auditing across Europe. Its aim is to improve corporate governance by promoting professional standards for internal auditing.

# EMISSIONS TRADING

The European Union's emissions trading programme is a climate protection instrument aimed at cutting greenhouse gas emissions at the lowest possible economic cost.

# ENHANCED OIL AND GAS RECOVERY (EOR/EGR)

Enhanced recovery of oil or gas reserves to make the exploitation of the remaining reserves in a gas field or oilfield more efficient. The pump pressure in the seam is increased by injecting gases such as nitrogen and carbon dioxide.

# [F]

# FERMA

Abbreviation for Federation of European Risk Management Associations. FERMA brings together 20 national risk management associations from 18 European countries. The Federation represents a large number of sectors such as industry, financial services, healthcare, charitable organisations and local government agencies. FERMA supports its members in raising awareness and promoting the effective use of risk management, insurance solutions and risk financing in Europe.

# FUTURES

Forward contracts traded on a stock exchange with standardised contract volumes and underlying assets.

# [G]

# GLOBAL PRODUCT STRATEGY (GPS)

The Global Product Strategy of the International Council of Chemical Associations is designed to establish uniform global standards and procedures for companies in order to improve safety in connection with the handling of chemical substances.

# GOOD MANUFACTURING PRACTICE

Good manufacturing practice refers to quality assurance guidelines which apply to the production of pharmaceutical products and active ingredients.

# GREENHOUSE GAS PROTOCOL

Globally recognised standard designed to manage and quantify greenhouse gas emissions. The Greenhouse Gas Protocol originated from an initiative from the World Business Council for Sustainable Development (WBCSD) and the World Resources Institute (WRI).

# [H]

# HCF C

Abbreviation for the English specialist term "hydrochlorofluorocarbon". Corresponds to the German abbreviation FCKW for "Fluorchlorkohlenwasserstoffe". Compounds from this substance class are often used as propellants or refrigerants. Since they deplete the ozone layer in the stratosphere, their use is banned in many areas of application today.

# HFC

Abbreviation for the English specialist term "Hydrofluorocarbon". German: Fluorkohlenwasserstoffe. Compounds from this substance class are often used as propellants or refrigerants. Although hydrofluorocarbons do not deplete the ozone layer in the stratosphere, they are greenhouse gas emissions with a high potential impact on the climate, which is why their use is strictly regulated.

# HYCO PLANTS

A collective term for plants which produce hydrogen, carbon monoxide and synthesis gas. HyCO plants include in particular steam reformers, partial oxidation plants and methanol crackers.

## [ I ]

## INTEGRITY LINE

Linde system that employees can use to report internal and external stakeholder doubts or suspicions. If an internal investigation reveals that the doubts or suspicions raised were justified, a prescribed process is used within a defined timeframe to determine which measures are to be taken and to follow up on their implementation.

INTERNATIONAL UNION  
FOR CONSERVATION OF  
NATURE (IUCN)

International environmental organisation that is committed to nature conservation and species protection, as well as to the sustainable and responsible use of resources. Among other things, the IUCN draws up the "IUCN Red List of Threatened Species" and categorises protected areas.

## [ K ]

## KONTRAG

German Law on Control and Transparency in Business. This law makes it mandatory for the executive boards of listed companies to put a risk management programme in place. Its objective is to protect the interests of shareholders by safeguarding the profits and value of the enterprise.

## [ L ]

## LED

LED stands for light emitting diode. LEDs transform electrical energy into light. Similar to semiconductor diodes, they create directional light and are available in a variety of colours, sizes and shapes. These devices are used in many industries for signalling and lighting applications.

## LNG

Liquefied Natural Gas. LNG is regarded as a promising fuel of the future because of its high energy density, constant calorific value and high level of purity.

## [ M ]

MAJOR HAZARD REVIEW  
PROGRAMME

Linde set up this programme to ensure the safety of its production processes. The MHRP allows the Group to identify promptly potential risks that might result in accidents or damage to property or to the environment, and to introduce preventive safety and control measures.

## [ O ]

## OLEFIN PLANT

Petrochemical unit for the production of olefins such as ethylene and propylene from hydrocarbons.

## [ P ]

PULMONARY  
HYPERTENSION

Illness in which abnormally high blood pressure affects the blood vessels in the lungs and the pulmonary circulation. This is particularly damaging to the heart and lungs and restricts the supply of oxygen.

## [ R ]

## REACH

EU Regulation on the Registration, Evaluation and Authorisation of Chemicals.

RESTRICTION OF THE  
USE OF CERTAIN HAZ-  
ARDOUS SUBSTANCES  
(ROHS)

The revised RoHS EU Directive (2011/65/EU) is designed to restrict the use of certain hazardous substances in electrical and electronic equipment.

## [ S ]

SERIOUS TRANSPORT  
INCIDENTS

Transport-related incidents, such as traffic accidents, which have a considerable impact on the health of the parties concerned, result in environmental emissions which must be reported or give rise to a certain level of costs.

## SHEQ

Abbreviation for Safety, Health, Environment and Quality.

## SYNTHESIS GAS

Gas mixture of carbon monoxide and hydrogen or nitrogen and hydrogen used to produce methanol, ammonia and other basic chemicals.

## [ T ]

## THE CLIMATE REGISTRY

Non-profit association of federal states and provinces in North America that aims to independently record and monitor the greenhouse gas emissions of companies, municipalities and organisations. Participation is voluntary.

## TREASURY

The Treasury department ensures that the Group has sufficient funds and capital. It invests surplus funds, reduces financial risks and optimises costs and the return on financial transactions.

THREE LINES OF  
DEFENCE MODEL

The Three Lines of Defence Model shows the different roles involved in internal control. The interplay between the roles is split into the following three lines of defence: operating business units, central organisational units, independent audit and advisory units.



[ V ]

VIGILANCE SIGNAL  
DETECTION SYSTEM

A system to ensure the systematic ongoing safety of a pharmaceutical product. It aims to discover, evaluate and understand undesirable effects and side-effects of the product by assessing various sources such as incident reports, scientific and medical literature and clinical studies, so that appropriate measures may be taken to minimise risks.

[ W ]

W B C S D

The World Business Council for Sustainable Development is an organisation that is designed to motivate companies to do business more sustainably and provide them with support in this regard.

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## JANUARY

1 / 1

The Linde subsidiary AGA announced that it will open Stockholm's first hydrogen filling station in Arlanda. The hydrogen for the largest hydrogen filling station in Sweden close to Stockholm Airport will be produced in the AGA plant in Sandviken, where green electricity is used to split the water into hydrogen and oxygen.

## FEBRUARY

1 / 2

On 1 March, the internationally experienced healthcare expert Kristen Hoefer takes over at the helm of the US subsidiary Lincare, the global market leader for respiratory homecare. The acquisition of Lincare, which has its registered office in Clearwater, Florida, in August 2012 made Linde the world's leading healthcare provider in the gases industry.

2 / 2

Linde supports the Shell Eco-marathon for what is now the fifth time running, supplying the hydrogen to fill the fuel-cell vehicles used in this competition. Linde is a global partner of the event, which is aimed at engineering students and is held in Europe, the Americas and Asia on an annual basis.

## MARCH

1 / 3

Linde opens a new research and development centre specialising in the optimisation of combustion processes in Suzhou near Shanghai. In collaboration with metal and glass manufacturers, as well as research institutes, the aim is for the "Linde Combustion Centre" to

develop environmentally friendly combustion technologies, more efficient heat treatment processes and innovative gases applications. Linde's oxyfuel technology, which is already used in numerous applications, will play a key role in this process. The technology enables fuel savings of between 30% and 60% by using oxygen instead of ambient air.

2 / 3

Linde unveils the PREVENTUM™ Rapid Surface Chilling procedure, a solution that opens up new possibilities for process hygiene in the poultry production segment. Spraying the meat surface with cryogenically liquefied nitrogen reduces harmful bacteria by 90 percent without impairing the quality of the meat.

## APRIL

1 / 4

Linde receives a contract from Meyer Turku Shipyard in Finland to build a liquefied natural gas (LNG) tank system for a new Baltic Sea ferry via its Swedish engineering subsidiary. The modern high-speed ferry operated by AS Tallink Grupp will travel between Helsinki (Finland) and Tallinn (Estonia). The use of LNG as fuel will allow the ferry to operate below the emissions thresholds that apply in the local Emission Control Area (ECA).

2 / 4

In Bremerhaven, a ship sailing under the German flag, the car and passenger ferry MS Ostfriesland operated AG EMS, becomes the first to run on low-emission LNG. The initial fuelling of the approximately 94 m long Borkum ferry was conducted by the joint venture Bomin Linde LNG. After a successful test phase, the MS Ostfriesland has been operating a daily service since the middle of the year, saving more than one million litres of marine gas oil per year thanks to the use of LNG.

3 / 4

Linde's technologically advanced, ground-breaking gas cylinder valve, EVOS™ Ci wins the prestigious international design prize, the "Red Dot

Award: Product Design 2015". The EVOS™ valve range represents a significant leap from standard gas industry valves – not only in its striking, state-of-the-art ergonomic design – but also in terms of safety and productivity benefits delivered.

4 / 4

Germany's first hydrogen filling station located directly on the motorway opens in Geiselwind (Lower Franconia). The new H<sub>2</sub> filling pump located on the A3 between Würzburg and Nuremberg was jointly erected by Daimler, TOTAL and Linde and links the existing filling facilities in the metropolitan regions of Frankfurt/Main, Stuttgart and Munich with each other. The construction of a nationwide hydrogen infrastructure in Germany is accompanied by the planned market ramp-up of fuel cell cars from various manufacturers.

## MAY

1 / 5

Linde successfully launches its new and innovative line of cost-efficient hydrogen generation plants, HYDROPRIME®. HYDROPRIME® plants are characterised by the fact that they are highly reliable, safe and environmentally sound and offer numerous advantages over conventional hydrogen supply using electrolysis, conventional SMR plants or truck-based supply.

2 / 5

The second public hydrogen fuelling station in Austria is officially opened in Innsbruck. The H<sub>2</sub> station, which was erected in a joint effort by OMV and Linde, was built as part of the EU-funded HyFIVE (Hydrogen for Innovative Vehicles) project and bridges the existing H<sub>2</sub> hubs in Munich and Bolzano.

## JUNE

1 / 6

With the slogan "Collaborate. Innovate. Deliver.", The Linde Group technology company demonstrates how it is delivering true value to its customers at theACHEMA trade fair in Frankfurt. A number of reference projects, technology

showcases and service innovations illustrate Linde's integrated approach to customer success.

2 / 6

Linde brings its biggest US air separation plant and a further gasification train for synthesis gas production on stream in La Porte, Texas. The total investment of USD 250 m in the location forms part of Linde's expansion strategy in the US.

J U L Y

1 / 7

Linde is commissioned by the semiconductor manufacturer SK Hynix Semiconductor to build the world's largest generator of on-site fluorine for the company's factory in Icheon, South Korea. The use of molecular fluorine (F<sub>2</sub>) reduces the emission of greenhouse gases that are produced during chamber cleaning in connection with the manufacture of semiconductors, TFT LCD flat screens and thin-film solar cells.

2 / 7

The world's largest green hydrogen plant is inaugurated in Mainz after a construction period of almost one year. In the presence of Malu Dreyer, state premier of Rhineland-Palatinate, the inauguration signals the start of one of the flagship projects of Germany's energy revolution. The plant, which was jointly developed by Linde, Siemens, Stadtwerke Mainz AG and the Rhein-Main University of Applied Sciences, produces hydrogen using electricity from environmentally sound sources of energy. In the project, Linde is responsible for purifying, compressing, storing and distributing the hydrogen.

3 / 7

In Munich, the first public hydrogen fuelling service in the Bavarian state capital is opened at the TOTAL Multi-Energy fuelling station located on the city's Detmoldstrasse. Equipped with innovative refuelling technology from Linde, the station can offer different fuelling technologies at separate pumps.

A U G U S T

1 / 8

Linde announces the market launch of SOLVOX® Dropln, a highly effective and innovative technology for improving oxygen supplies in the fish farming industry. The system is designed to be used in sea cages which experience unhealthy water conditions due to poor oxygen levels. SOLVOX® Dropln is a compact and lightweight system that makes the current oxygenation process much easier.

S E P T E M B E R

1 / 9

Linde is admitted to the Dow Jones Sustainability World Index (DJSI) for the fourth year running. Linde's sustainability performance thus continues to rank in the top ten percent of its industry. Twenty categories in the areas of economic, environmental and social performance were assessed.

2 / 9

With the opening of another hydrogen filling station in Fellbach near Stuttgart, Daimler, Linde and TOTAL continue with their joint plans to expand the national hydrogen infrastructure.

O C T O B E R

1 / 10

A new research facility – the Linde Pilot Reformer – opens in Pullach near Munich – Linde's largest location worldwide. The facility, with an investment volume of around EUR 5 million, will be used to further refine steam reforming technology. The innovative dry reforming process developed in cooperation with Linde partners enables energy-efficient, lower-emission synthesis gas production with economical industrial-scale use of CO<sub>2</sub> as feedstock.

2 / 10

H<sub>2</sub> MOBILITY Deutschland officially starts work in the presence of German Transport Minister Alexander Dobrindt. The joint venture between six industry partners, including Linde, is designed to help forge ahead with the gradual expansion of the nationwide hydrogen filling station network. The aim is to have set up a total of 400 hydrogen

filling stations by 2023. On the sidelines of the event, Dr Büchele presents the German Transport Minister with an innovative pedelec (bike with an auxiliary electric motor) developed by Linde itself. What makes the bike special is the compact fuel cell that generates the electricity needed to help the cyclist using hydrogen as opposed to a conventional battery.

N O V E M B E R

1 / 11

Bomin Linde LNG and the Lithuanian oil and gas supply company Klaipėdos Nafta Establish sign a joint venture agreement with the aim of operating an LNG bunker supply vessel. The plan is for the vessel to supply the environmentally friendly LNG in both the Lithuanian port of Klaipėda and in other Baltic Sea ports from 2017 onwards.

2 / 11

The foundation stone is laid for The Linde Group's most state-of-the-art filling plant in the the Dorsten/Marl industrial park at the northern edge of the Ruhr region. Thanks to the very high degree of automation, the plant will be able to fill more than one million cylinders with industrial gases and carbon dioxide mixtures from the end of 2016 onwards. The innovative concept is later to be used in other company locations in various countries.

3 / 11

Linde invests the equivalent of EUR 14.6 million to build the largest air separation plant in Bangladesh. Once complete, the new plant will supply the growing food and beverage, manufacturing, pharmaceutical, healthcare and shipbuilding industries in this country of 160 million inhabitants.

D E C E M B E R

1 / 12

Linde makes another investment in the growing homecare markets with the planned takeover of American HomePatient, Inc. with effect from 31 January 2016. The company, which has its registered office in Brentwood (Tennessee), will expand the customer base of Linde's US subsidiary Lincare to

well in excess of one million patients in the US. American HomePatient has specialised in respiratory therapy and serves clients who are suffering from COPD (chronic obstructive pulmonary disease) and OSA (obstructive sleep apnoea).

2 / 1 2

Gazprom and its general contractor select Linde as the licensor of the natural gas processing technology for the Amur GPP project in eastern Russia. Linde is responsible for engineering and for the procurement of plants for the extraction of ethane and liquefied gas components and for the separation of nitrogen, as well as for a helium extraction and liquefaction plant. The plant is to be erected in five phases in the period leading up to 2024. The CEOs of both companies also sign an agreement on strategic cooperation covering the planning, construction and maintenance and natural gas plants. The cooperation includes process technology in the field of natural gas processing and liquefaction, the production of necessary plant components in Russia and helium production.

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FINANCIAL STATEMENTS

10 March 2016

Carl von Linde Haus, Munich,  
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JANUARY TO MARCH 2016

29 April 2016

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ANNUAL GENERAL MEETING  
2016

3 May 2016, 10 a.m.

International Congress Centre, Munich,  
Germany

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DIVIDEND PAYMENT

4 May 2016

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INTERIM REPORT  
JANUARY TO JUNE 2016

28 July 2016

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28 October 2016

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INTERIM REPORT  
JANUARY TO SEPTEMBER 2016

28 October 2016

[ 8 ]  
ANNUAL GENERAL MEETING  
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10 May 2017, 10 a.m.

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## STATEMENTS RELATING TO THE FUTURE

This annual report contains statements relating to the future which are based on managements current estimates about future developments. These statements are not to be understood as guarantees that these expectations will prove to be true. The future development and the results actually achieved by The Linde Group and its affiliated companies are dependent on a number of risks and uncertainties and may therefore deviate significantly from the statements relating to the future. Linde has no plans to update its statements relating to the future, nor does it accept any obligation to do so.

## FIVE-YEAR SUMMARY

		2011	2012 adjusted <sup>1</sup>	2013	2014	2015
<b>REVENUE</b>	<i>EUR m</i>	<b>13,787</b>	<b>15,833</b>	<b>16,655</b>	<b>17,047</b>	<b>17,944</b>
Inside Germany	%	9.0	8.2	7.9	7.4	7.3
Outside Germany	%	91.0	91.8	92.1	92.6	92.7
<i>Profit</i>						
Operating profit <sup>2</sup>	<i>EUR m</i>	3,210	3,686	3,966	3,920	4,131
EBIT	<i>EUR m</i>	2,152	2,055	2,171	1,885	2,043
EBIT (before non-recurring items)	<i>EUR m</i>	2,152	2,055	2,171	1,885	2,235
Profit before taxes on income (EBT)	<i>EUR m</i>	1,619	1,734	1,794	1,520	1,646
Profit for the year – attributable to Linde AG shareholders	<i>EUR m</i>	1,174	1,232	1,317	1,102	1,149
Earnings per share – undiluted <sup>3</sup>	<i>EUR</i>	6.88	6.93	7.10	5.94	6.19
Earnings per share – undiluted (before non-recurring items) <sup>3</sup>	<i>EUR</i>	6.88	6.93	7.10	7.13	6.91
Dividends	<i>EUR m</i>	428	500	500	585	640
Dividend per share	<i>EUR</i>	2.50	2.70	3.00	3.15	3.45
Number of shares outstanding as at (31.12.)	<i>in thou.</i>	171,061	185,189	185,588	185,638	185,638
<i>Asset structure</i>						
Intangible, tangible and financial assets	<i>EUR m</i>	21,269	25,971	25,184	26,453	27,445
Inventories	<i>EUR m</i>	1,036	1,112	1,088	1,155	1,241
Receivables <sup>4</sup>	<i>EUR m</i>	2,382	3,093	3,111	3,362	2,995
Cash, cash equivalents and securities	<i>EUR m</i>	2,674	2,108	1,348	1,658	1,838
Other assets	<i>EUR m</i>	1,554	2,013	2,018	1,797	1,828
Total assets	<i>EUR m</i>	28,915	34,297	32,749	34,425	35,347
<i>Capital structure</i>						
Equity	<i>EUR m</i>	12,144	13,658	13,586	14,267	15,449
Provisions	<i>EUR m</i>	2,838	2,613	2,381	2,769	2,687
Financial debt	<i>EUR m</i>	7,768	10,581	9,577	9,856	9,483
Other liabilities	<i>EUR m</i>	6,165	7,445	7,205	7,533	7,728
Total capital	<i>EUR m</i>	28,915	34,297	32,749	34,425	35,347
<i>Cash flow statement</i>						
Operating cash flow	<i>EUR m</i>	2,426	2,664	3,144	3,001	3,593
<b>NUMBER OF EMPLOYEES AT 31.12.</b>		<b>50,417</b>	<b>62,765</b>	<b>63,487</b>	<b>65,591</b>	<b>64,538</b>
Inside Germany	%	14.6	12.1	12.3	12.3	12.4
Outside Germany	%	85.4	87.9	87.7	87.7	87.6
<i>Key performance indicators</i>						
Capital expenditure	<i>EUR m</i>	1,367	2,038	2,268	1,954	1,936
Equity ratio	%	42.0	39.8	41.5	41.4	43.7
Return on capital employed (before non-recurring items)	%	11.0	10.2	9.7	9.5	9.4
EBIT return on sales	%	15.6	13.0	13.0	11.1	11.4
Cash flow from operating activities as a percentage of revenue	%	17.6	16.8	18.9	17.6	20.0

<sup>1</sup> Adjusted to reflect the effects of the first-time retrospective application of new/amended IFRS.

<sup>2</sup> EBIT (before non-recurring items) adjusted for amortisation of intangible assets/depreciation of tangible assets.

<sup>3</sup> Based on the weighted average number of shares outstanding.

<sup>4</sup> Incl. receivables from finance leases.

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