Roth & Rau AG **Annual Report 2010**

# Contents

# Key Figures in accordance with IFRS

## Operating performance

| € 000s | 2010 | 2009 | Change |
|---|---|---|---|
| Sales | 285,357 | 197,903 | 44.2 % |
| International share in % | 90.1 | 82.8 | 7.3 PP |
| New orders | 417,072 | 195,687 | 113.1 % |
| Orders on hand as of 31.12. | 336,484 | 204,769 | 64.3 % |
| One-off items affecting EBITDA | -41,520 | 0 | / |
| EBITDA | -5,444 | 24,318 | / |
| One-off items affecting EBIT | -44,710 | 0 | / |
| EBIT | -27,290 | 16,100 | / |
| Consolidated net income after minority interests | -25,809 | 12,929 | / |
| Earnings per share in € | -1.64 | 0.94 | / |
| Employees as of 31.12. | 1,209 | 874 | 38.3 % |

## Key figures before one-off items (for information)

| € 000s | | | |
|---|---|---|---|
| EBITDA, adjusted | 36,076 | 24,318 | 48.4 % |
| EBITDA margin in %, adjusted | 12.6 | 12.3 | 0.3 PP |
| EBIT, adjusted | 17,420 | 16,100 | 8.2 % |
| EBIT margin in %, adjusted | 6.1 | 8.1 | -2.0 PP |

## Balance sheet and cash flow

| € 000s | | | |
|---|---|---|---|
| Total assets | 433,269 | 298,819 | 45.0 % |
| Shareholders' equity | 251,352 | 219,278 | 14.6 % |
| Equity ratio in % | 58.0 | 73.4 | -15.4 PP |
| Investments | 89,021 | 23,468 | 279.3 % |
| Cash flow from operating activities | 54,103 | -1,359 | / |
| Cash and cash equivalents | 107,741 | 66,041 | 63.1 % |

# Key Figures: 5-Year Overview

## Sales

in € million

| | |
|---|---|
| 2006 | 42.9 |
| 2007 | 146.2 |
| 2008 | 272.1 |
| 2009 | 197.9 |
| 2010 | 285.4 |

## New orders

in € million

| | |
|---|---|
| 2006 | 129.1 |
| 2007 | 244.6 |
| 2008 | 269.7 |
| 2009 | 195.7 |
| 2010 | 417.1 |

## EBIT

in € million

| | |
|---|---|
| 2006 | 4.5 |
| 2007 | 13.9 |
| 2008 | 28.5 |
| 2009 | 16.1 |
| 2010 | -27.3 |

## Orders on hand

as of 31 December in € million

| | |
|---|---|
| 2006 | 102.2 |
| 2007 | 200.6 |
| 2008 | 213.0 |
| 2009 | 204.8 |
| 2010 | 336.5 |

## Consolidated net income

in € million

| | |
|---|---|
| 2006 | 2.9 |
| 2007 | 11.7 |
| 2008 | 23.0 |
| 2009 | 12.9 |
| 2010 | -25.8 |

## Employees

as of 31 December

| | |
|---|---|
| 2006 | 137 |
| 2007 | 236 |
| 2008 | 606 |
| 2009 | 874 |
| 2010 | 1,209 |

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# Targets and Results

| 2010 Targets | 2010 Results |
|---|---|
| Sales of € 285 million | Sales target of € 285 million achieved |
| EBIT margin of around 9 % | The Group's earnings performance in the past year was affected by one-off items of € -52,983k, of which € 44,710k was charged to EBIT. As a result, EBIT amounted to € -27,290k in the 2010 financial year. EBIT before one-off items amounted to € 17,420k, equivalent to an EBIT margin of 6.1 %. |
| Rapid integration of new group companies | To sustainably secure its competitiveness, in the third quarter of 2010 Roth & Rau introduced a cost and structure optimisation programme called CRiSP providing, among other measures, for a restructuring of the Roth & Rau Group and the resultant integration of group companies. Furthermore, OTB's research and development projects (e.g. ink-jet printing activities) have been integrated into Roth & Rau's current projects. Further measures involved establishing inter-company project teams, creating central marketing structures and adopting shared corporate principles in conjunction with a uniform presence on the market. |
| Acquisitions focusing on expanding the company's product and technology portfolio and boosting its market position | The acquisition of OTB Solar B.V. has enabled Roth & Rau AG to expand its market share as a crystalline silicon solar technology equipment provider and has provided the company with access to new competitive technologies. |

| 2010 Targets | 2010 Results |
|---|---|
| Investments in research and development, focusing on high-efficiency solar cell technologies | The main focus in the past year involved further developing technologies for use in the manufacture of high-efficiency solar cells. The rapid progress made in these projects was supported in particular by the launch of operations with a pilot production line at our Technology Centre in Hohenstein-Ernstthal. It was there as well that the prototypes of the amorphous silicon and TCO coating systems required for the industrial production of hetero junction cells began operations at the end of 2010. The development of production technologies for the mass production of hetero junction solar cells is due to be completed in the current 2011 financial year. We received our first order for this new technology in September 2010 already. The passivation of the reverse sides of solar cells with an aluminium oxide coating as an additional option enabling the output efficiency rates of multicrystalline silicon solar cells to be improved by up to 1 % is also about to be launched on the market. |
| Expand Roth & Rau Academy to offer even better training and motivation to employees | We accord high priority to training our employees. The extensive range of training courses we offer includes technical product training courses, training and certifying our product managers, passing on specialist skills in the fields of quality assurance and occupational health and safety, legal and compliance, as well as soft skills. |
| Include group companies in our environmental protection and sustainability measures | The results of environmental protection and sustainability measures at the Roth & Rau Group are summarised in a sustainability report. All group companies are gradually being included in the scope of this report. The sustainability report can be downloaded from the Investor Relations/Corporate Social Responsibility section of the company's internet site at www.roth-rau.de. |

## 2011 Targets

- Increase gross performance and sales to between € 300 million and € 325 million
- EBIT margin of between 4 % and 7 %
- Implement CRiSP structure and cost optimisation programme
- Market launch of new products for use in the manufacture of high-efficiency solar cells (HELiA system series for the production of hetero junction cells, new MAiA generation for the passivation of the reverse side of multicrystalline cells, ink-jet printers under the PiXDRO brand)
- Further expand service and spare parts business in Asia, including creation of resources for the production and procurement of spare parts in China
- Restructure turnkey business. In future, customers are to be offered equipment packages in combination with various services. These can be adapted to customers' needs and range from project management through to production ramp-up.
- Continue R&D activities in field of high-efficiency solar cell technologies
- Boost sales in non-PV business (tap growth potential in fields of semiconductor, display and optics industries at Roth & Rau MicroSystems, Roth & Rau Muegge and OTB)

# Interview

with the Chief Executive Officer Dr. Dietmar Roth

Dr. Roth, in 2010 the economy recovered from the crisis, economic activity picked up markedly and the solar industry recorded another boom year. In contrast, Roth & Rau incurred the first-ever loss in the company's history. What were the reasons?

The reasons were not so much of an operational nature – our company, too, benefited from the macroeconomic and industry-specific trends. But we needed to make valuation adjustments for old turnkey projects and to establish unplanned provisions for legal and tax risks from current large-scale projects. In addition, there were non-recurrent effects from changes in the recognition of SiNA 2 plants and the streamlining of our product portfolio. Non-recurrent effects totalled approximately EUR 53 million and it was impossible to offset this amount at operating level.

The first value adjustments to turnkey projects were required already in the third quarter and now further adjustments had to be made in the financial statements for the year 2010. Are you taking too many risks in your projects?

Ever since we entered the turnkey market in 2006, we have gone through a significant learning curve and we certainly made mistakes at some points. Looking back, we realise that we primarily made mistakes with regard to the risk assessment of some customers and also where contracts are concerned. But in my opinion, the most important fact is that the market for turnkey production lines has changed fundamentally. Many of our customers who are now in default based their plans for expansion on the Southern European market. These expectations remained unfulfilled when the Spanish market suddenly evaporated in 2009 due to the reduction of the government subsidy for solar power. As a result, some of our customers, especially in India, were hit hard. Other customers got into financial difficulties as a result of the financial market crisis. New entrants to the photovoltaic market, who accounted for a large proportion of our potential turnkey customers, were hit particularly hard by the market changes and the financial crisis.

Did this also apply to your customer SpectraWatt, whose impending bankruptcy led to your second profit warning in December 2010?

This is difficult to say for us as outsiders. At the beginning, things looked very good for SpectraWatt. The company was backed by high-calibre investors. In the large-scale project sector, you cannot get 100 percent protection against such developments. But they have made us rethink our position and we are now asking ourselves if we want to bear these project risks in future or if we can serve the turnkey market in a different way.

Does that mean that you will exit the turnkey market?

No, first of all it means that we will place the strategic focus on the single-equipment business and will continue the turnkey activities in a modified form. We primarily want to economically exploit the expertise gained from the different turnkey projects over the past years. From now on we offer potential turnkey customers an equipment package and a technology package. While the former covers our production plants, the latter comprises all relevant services, from project management to the start-up of the complete production plant to process optimisation. Other equipment that is needed by our customers but not in our portfolio is sourced directly by customers from the respective manufacturers. This allows our customers to cut costs, while we have significantly reduced our risks in the turnkey sector, as we no longer bear the risk as general contractor.

We have already won the first turnkey contract based on this new model, which shows that there is demand in the market and that we have taken the right approach.

Dr. Dietmar Roth, Chief Executive Officer

You have always described the turnkey business as an important growth driver. Is this no longer the case?

Five to six years ago, turnkey systems were a market requirement, with many new entrants looking for turnkey solutions. If you wanted to establish yourself as an equipment supplier, you had to deliver turnkey solutions. But the solar industry has become more mature and has changed and we are adjusting to the market. We clearly see the turnkey market on the decline. Entering this market is becoming increasingly difficult to potential newcomers, as many established manufacturers have already reached the critical mass and simply cannot be matched on either the cost side or the product side. This is why we expect the number of new entrants - and hence demand for traditional turnkey solutions – to decline sharply.

So where do you see potential for future growth?

We believe that we will win additional share through the concentration on our core competencies in the single-equipment business and the launch of new, forward-looking products and technologies.

Your competitors continue to rely on the turnkey business. Do you not see the risk of weakening your competitive position?

No, we are convinced that it is only a question of time until our competitors reposition themselves in the turnkey business.

Before addressing the other strategic changes you announced at the beginning of this year, let us take another look at the fiscal year 2010. What was the year like for your company in terms of operations – ignoring the valuation adjustments and bad debt losses?

2010 was still a good year in terms of sales revenues and incoming orders. We generated high sales revenues and won important new contracts primarily from our regular customers in Asia. The year 2010 saw the highest order book in the history of our company and this trend has continued in the first few months of 2011.

As far as our product portfolio is concerned, we launched an extremely competitive product last year, namely SiNA 2, an antireflective coating facility of the next generation. Our customers are aware of the product's technical benefits and the cost advantages if offers over competitor products, which is why we have already received numerous orders for this new product.

Your CFO departed at the end of last year. Was this personnel decision related to the negative earnings trend?

The full Management Board accepts responsibility for the overall development which has certainly included mistakes also in the financial area and there were differences of opinion about the future strategy of the Group. Ultimately, however, Mr Bovenschen left the company for personal reasons.

### Have you made any progress in the search for a successor to the position of CFO?

A small team of very experienced and competent people of the second management tier has assumed temporary responsibility for the finance department. We will not rush things and will choose a suitable successor carefully. Our aim is to announce a new CFO at the Annual General Meeting in July at the latest.

### What are the most important things that you have learnt from such a crisis year and that will therefore be of use in the coming fiscal years?

Crisis years are years that you should use to critically review established structures and processes and to correct them if necessary. This is what we have been doing in the past months, when we analysed processes and made weaknesses transparent. We are now optimising processes throughout the Group.

We have launched a comprehensive set of measures under the name of "CRiSP", which we aim to implement by the year 2012 and which forms the basis for the long-term improvement in profitability.

### A major element of CRiSP is the streamlining of the product portfolio. Which products will be affected?

We will discontinue those products that have shown that they are not profitable in the market and will instead concentrate our resources on future-proof products with a high USP. On the one hand, these are the coating facilities for existing cell concepts, coating facilities for the hetero junction technology and the ink-jet printing technology from OTB. Going forward, both the standardisation of our production processes and our development projects will focus on these products. As I said before, we will no longer offer complete turnkey production lines in the familiar form but will add advisory and technology transfer services to our portfolio.

### As part of the new strategic positioning, you are also planning a new service concept. Can you give us some details?

As the solar industry continues to mature, the importance of excellent customer support increases, too. This is clearly reflected in growing demand and steady sales growth in the spare parts and service segment. Accordingly, we intend to further expand our activities in this segment. As a key element of our new service concept, we will use our turnkey expertise for technological support. Moreover, we want to build up our own resources for the Asian market in China.

### You have also announced your intention to restructure the Group. What exactly does that mean?

Our M&A activities over the past years have resulted in a very complex corporate structure. The aim is to reduce this complexity significantly and to cut costs in the process. For this purpose, we have closely examined all Group companies and assessed them with a view to the new strategic positioning. As a result, we will reduce the number of Group companies significantly.

### Let's take a look at the current year. What are your expectations?

There is a general market consensus that the solar industry will grow at double-digit rates in 2011 and 2012. We have no doubt about this, as this view is also confirmed by our order backlog for 2011. The large Asian manufacturers, in particular, plan to make further investments with a view to achieving grid parity as quickly as possible.

This also forms the basis for our plans. Our growth forecasts are underpinned by our core products. As I said before, we also want to grow our service segment.

### What about research and development? What will be the focus of your R&D activities?

Our core products will grow in line with the market, which is why it is important that we maintain our competitive advantages and generate new USPs. In this context, we will focus, among other things, on developing the next generation of antireflective coating facilities, SiNA 3.

Generally speaking, we will continue our research and development activities at a high level, although the budget for 2011 will be reduced as compared to last year. This is attributable to the fact that major one-time expenses incurred for the new technology centre and in the context of expiring projects will not recur.

### Do you expect the first positive effects resulting from the change of strategy to be felt already in 2011?

The measures we have initiated to optimise our structures and costs will take effect over two years. We expect to see the first effects already in 2011, although the bulk will be reflected in our key figures for 2012.

The production of SiNA-2 will certainly have a strong influence on our profitability. We are still in the ramp-up phase. Once this has been completed, we will be able to produce much faster and at much lower cost than today. We expect this to result in a strong positive effect in 2012.

### What are your exact sales and earnings targets for the next two fiscal years?

Our guidance for 2011 assumes sales rising to between € 300 million and € 325 million. In the first half year we will still see the effects of the accounting changes relating to our SiNA 2 plants. Initially there will be an increase in inventory assets, leading to higher total output being recognised although the bulk of the sales and profits will not materialise before the second half of 2011. However, this will revert to a normal pattern in the year 2012 when total output and sales are expected to show a stable trend again. We want to achieve a clear increase in our profit margins and believe that it is realistic to report an EBIT margin between 4 and 7 percent for 2011. As for 2012, we expect a positive double-digit margin reflecting the progressive effect of our improved cost position.

Dr. Dietmar Roth
Chief Executive Officer

# Report of the Supervisory Board

Dear Shareholders,

The Supervisory Board performed the tasks required of it by law, the company's Articles of Association, the German Corporate Governance Code and its own Code of Procedure with great care once again in the 2010 financial year. We monitored the Management Board in its management of the company and assisted it in an advisory capacity. In its regular oral and written reports, the Management Board at all times kept us extensively and promptly informed of all transactions of major significance and on developments in the company's key performance figures. In its reports, the Management Board dealt in particular with strategic issues relevant to corporate planning and business policy, as well as to the Group's business performance, risk situation, risk management and compliance. Furthermore, the Supervisory Board continually formed its own impression of the company's situation and also maintained close contact with the Management Board outside the framework of Supervisory Board meetings.

The Supervisory Board held a total of eight meetings in the year under report (4 February, twice on 30 March, 10 May, 10 August, 23 September, 8 November and 14 December). In addition, a total of four telephone conferences were also held (1 February, twice on 10 February, 16 June). As in the past, for reasons of efficiency the Supervisory Board decided not to form any committees. No Supervisory Board member attended fewer than half of the meetings. At its meetings, the Supervisory Board regularly dealt with the current operating performance of the Group and its business divisions. One particular focus here involved the development in the Group's earnings, financial and risk situation. Other than this, the most important topics of discussion in the past financial year included:

- Audit and approval of 2009 annual financial statements and of 2010 interim reports, including risk reporting
- Preparation of 2010 Annual General Meeting
- Strategic alignment of research and development activities
- Implementation of planned acquisitions (OTB Solar B.V.) and identification of further potential strategic takeovers

- Establishment of subsidiaries/acquisition of shares in R³T GmbH and SLS Solar Line Saxony GmbH
- Execution of a capital increase by drawing on Authorised Capital I
- Execution of a capital increase by drawing on Authorised Capital II
- Medium and long-term business planning
- Discussion of economic performance of individual business divisions
- Adjustment and allocation of phantom stocks to Management Board members in line with the Phantom Stock Programme for members of the Management Board
- Management Board personnel matters
- Internal audit activities
- Process and structure optimisation measures at the holding company (AG) and the Group
- Review and adaptation of the Codes of Procedure for the Management and Supervisory Boards to the latest version of the German Corporate Governance Code
- Self-assessment of the Supervisory Board in line with Point 5.6 of the German Corporate Governance Code
- Review of internal controlling system (IKS) in line with § 107 (3) of the German Stock Corporation Act (AktG)
- Extension of the Hohenstein-Ernstthal location (construction of new Office Building 4)
- Acquisition of treasury stock based on authorisation granted by the Annual General Meeting on 21 May 2010 for the purpose of issuing shares to employees on the occasion of the company's 20th anniversary
- Granting and withdrawal of powers of procuration
- Transactions requiring approval in line with the Code of Procedure for the Management Board

Eberhard Reiche, Chairman of the Supervisory Board

All measures and transactions requiring approval by the Supervisory Board were presented to us correctly and in good time for the adoption of resolutions. In the year under report, these chiefly related to M&A activities, medium and long-term business and investment plans and supply agreements. Following suitable inspection, we granted our approval in all cases.

Furthermore, we also subjected the efficiency of our activities to the scheduled review required by the German Corporate Governance Code in the past year and concluded that the work of the Supervisory Board was handled efficiently.

As in the previous year, no conflicts of interest requiring immediate disclosure to the Supervisory Board and subsequent report to the Annual General Meeting arose among members of the Management or Supervisory Boards in the 2010 financial year.

## Corporate governance

The Management and Supervisory Boards addressed the further enhancement of corporate governance at the Group once again in the past 2010 financial year. One key focus in this respect involved the latest amendments to the German Corporate Governance Code in its version dated 26 May 2010. The Management and Supervisory Boards submitted their updated Declaration of Conformity pursuant to § 161 of the German Stock Corporation Act (AktG) on 7 April 2011 and made this permanently available to shareholders on the internet at www.roth-rau.de. Explanations of deviations from the Code and further information about corporate governance at Roth & Rau can be found in the Corporate Governance Report from Page 16 onwards.

## Audit of annual and consolidated financial statements

The Annual General Meeting elected PricewaterhouseCoopers Aktiengesellschaft Wirtschaftsprüfungsgesellschaft, Frankfurt am Main, as auditors for the 2010 financial year. Before issuing the relevant mandate, the Supervisory Board obtained the Statement of Independence from the auditor in line with Point 7.2.1 of the German Corporate Governance Code.

The auditor audited the annual financial statements and the management report of Roth & Rau AG prepared in accordance with the requirements of the German Commercial Code (HGB) for the 2010 financial year and granted these unqualified audit opinions. The auditor also granted unqualified audit opinions to the consolidated financial statements and group management report prepared in accordance with International Financial Reporting Standards (IFRS) for 2010. The audit also included the information and controlling system established by the Management Board. The auditor ascertained that the system was suitable to meet the relevant legal requirements.

The audit reports and all documents relating to the financial statements were forwarded to all Supervisory Board members in good time. These were discussed in detail at the meeting held to approve the financial statements on 7 April 2011, which was also attended by the auditor. The auditor reported on the key findings of the audit and was available to answer any additional questions and provide further explanations. Following our own detailed audit, which did not lead to any objections, we endorsed the audit findings of the auditor in full and approved the annual and consolidated financial statements prepared by the Management Board for the 2010 financial year. The annual financial statements are thus adopted. Following our own review, we endorsed the Management Board's proposal in respect of the appropriation of net unappropriated profit.

## Changes in Management Board

The Supervisory Board appointed Dr. Paulus Breddels as a member of the Management Board with responsibility for the operating business (Chief Operating Officer – COO) as of 1 September 2010. Dr. Breddels is responsible for the following areas: production, quality management, supply chain, product management/development and integration.

Carsten Bovenschen's appointment to the Management Board was amicably terminated as of 15 December 2010. The Supervisory Board would like to thank Mr. Bovenschen for his constructive work in recent years. Until the position of CFO has been reoccupied, Dr. Dietmar Roth, CEO of Roth & Rau AG, will be responsible for the finance department. Dr. Roth was already responsible for this area prior to Mr. Bovenschen's appointment to the Management Board.

The Roth & Rau Group is currently undergoing a process of change requiring both strategic decisions and adjustments to operations. The Management and Supervisory Boards are working together closely and on a basis of mutual trust on these decisions of fundamental importance to the further development of the Group. We believe that, with the measures taken, the Management Board has created a basis for the company's profitable performance in 2011.

We would like to thank the Management Board and all employees for their work and for the great commitment they showed in the past financial year. Our thanks are also due to shareholders in Roth & Rau AG for the trust they have placed in our company.

The Supervisory Board

Eberhard Reiche
Chairman of the Supervisory Board
Hohenstein-Ernstthal, 7 April 2011

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# Corporate Governance

For Roth & Rau, corporate governance has long meant focusing the company's management and supervision on sustainably increasing the company's value. The Management and Supervisory Boards are committed to responsible, transparent corporate governance and base their actions in this respect on the recommendations and suggestions made by the German Corporate Governance Code.

In the following pages, the Management and Supervisory Boards provide joint report on corporate governance at Roth & Rau AG:

In April 2011, the Management and Supervisory Boards jointly submitted an updated Declaration of Conformity pursuant to § 161 of the German Stock Corporation Act (AktG) and published this in the investor relations section of the company's homepage at www.roth-rau.de. We comply with virtually all of the recommendations made by the German Corporate Governance Code in its latest version dated 26 May 2010. The Declaration of Conformity can also be found at the end of this corporate governance report on Page 20.

## Shareholders and Annual General Meeting

Shareholders in Roth & Rau AG are able to exercise their rights, including their voting rights, at the Annual General Meeting. In the run-up to the Annual General Meeting, we therefore provide shareholders with extensive information about the past financial year and all matters relevant to the items to be voted on. The documents and information relating to the Annual General Meeting and the invitation setting out the proposed agenda items are published at an early date in the investor relations section of www.roth-rau.de, where the voting results and presentation by the Management Board are also published after the Annual General Meeting. Shareholders may either exercise their voting rights at the Annual General Meeting in person or have them exercised by an authorised person of their choice. They also have the option of assigning their voting rights to a voting proxy appointed by the company and obliged to act in line with their instructions. The voting proxy can be contacted throughout the Annual General Meeting. We do not comply with the suggestion to broadcast the event on the internet. We believe that the costs involved exceed the resultant benefits for our company and our shareholders.

## Cooperation between Management and Supervisory Boards

To achieve their common objective of sustainably increasing the company's value, the Management and Supervisory Boards work together in every respect closely and on a basis of trust. The Management Board manages the company under its own responsibility with the aim of achieving sustainable value growth. It formulates the Group's strategic alignment, agrees this with the Supervisory Board and ensures its implementation. The principles governing cooperation between Management Board members are laid down in the Code of Procedure for the Management Board. The Management Board provides the Supervisory Board with regular, extensive reports on the Group's latest business performance, corporate planning, risk situation, opportunity and risk management and compliance. These reports include comments on and explanations of any variances between the Group's business performance and the relevant budgets and targets. The Supervisory Board monitors the Management Board and accompanies it in an advisory capacity. It is directly involved in decisions of fundamental significance for the company. Significant business transactions require its approval. Further information about the work of the Supervisory Board and the cooperation between the Management and Supervisory Boards can be found in the report of the supervisory board from Page 12 onwards.

In line with § 6 of the Articles of Association, the company's Management Board comprises at least one individual. The number of members is determined by the Supervisory Board. Currently, the Management Board has three members. As in the previous year, the Supervisory Board also has three members, all of whom are deemed independent in line with the recommendations of the German Corporate Governance Code. The names of members of the Management and Supervisory Boards and the positions they hold have been listed under Note 7.4. to the consolidated financial statements.

The term in office of the Supervisory Board members expires upon the conclusion of the coming Annual General Meeting passing resolution on the approval of their actions for the 2010 financial year.

The Code of Procedure for the Supervisory Board also sets out requirements for the composition of the Supervisory Board. Accordingly, each Supervisory Board member must have the knowledge, skills and specialist experience necessary to perform his duties correctly, taking due account of the company's international activities. The composition of the Supervisory Board should also account for diversity considerations. To ensure that it is impartial in advising and supervising the Management Board, the Supervisory Board should also include what it itself considers to be an adequate number of independent members. Here, Supervisory Board members are deemed independent when they do not have any business or personal links to the company or its Management Board that could give rise to any conflict of interest. At least one independent member of the Supervisory Board must have expert knowledge of accounting or auditing. Each Supervisory Board member ensures that he has sufficient time to perform the duties incumbent on him.

In their decisions, the members of the Management and Supervisory Boards are obliged solely to safeguard the interests of the Roth & Rau Group. No member of either the Management Board or the Supervisory Board was confronted with any conflict of interest requiring immediate disclosure to the Supervisory Board and subsequent report to the Annual General Meeting in the 2010 financial year.

Roth & Rau has concluded financial loss liability insurance policies (D&O insurance) for members of the Management and Supervisory Boards. The D&O contracts concluded for Management and Supervisory Board members provide for deductibles in line with the German Act on the Appropriateness of Management Board Compensation (VorstAG) and the German Corporate Governance Code.

## Compensation report

Roth & Rau AG discloses the compensation of members of the Management and Supervisory Boards on an individual basis and broken down into its respective components. The extensive compensation report, which also sets out the basis for determining the compensation paid, its amount and structure, can be found in the group management report from Page 35 onwards. The compensation report also forms part of the corporate governance report.

## Opportunity and risk management

Responsible corporate governance also involves maintaining a balanced, level-headed approach towards opportunities and risks. The Management Board of Roth & Rau AG ensures that opportunity and risk management structures suitable for the early detection and monitoring of potential opportunities and risks are in place. The early warning risk detection system, which is also checked by the auditors, is continually enhanced by Roth & Rau and adapted to the changing framework. The Management Board provides the Supervisory Board at regular intervals with detailed reports about the Group's current risk situation. Further information can be found in the opportunity and risk report from Page 63 onwards.

## Compliance

Compliance is the term used to describe all measures taken to ensure correct legal conduct on the part of the company, its directors and officers and its employees in terms of legal requirements and prohibitions and company guidelines. The Roth & Rau Compliance Programme is intended to safeguard our employees against any infringement of legislation and support them in correctly applying such legislation and company guidelines. The compliance guidelines set out minimum standards of conduct for all of the Group's employees. Fighting corruption is one key focus of group-wide compliance activities. Alongside this, compliance measures also serve to prevent insider offences, uphold occupational health and safety standards, protect the company's security, avoid any infringements of antitrust law and ensure IT security.

Compliance processes are regularly audited by the internal auditors. A.V.A.T.I.S – Revisionsgesellschaft mbH Wirtschaftsprüfungsgesellschaft, an internal audit company based in Chemnitz, is commissioned to perform the internal audit.

## D&O share transactions and share ownership

§ 15a of the German Securities Trading Act (WpHG) requires the company's management staff and individuals closely related to such to disclose transactions involving shares in Roth & Rau AG when such transactions reach or exceed a total amount of € 5,000 per calendar year. We publish these disclosures (Directors' Dealings) on our internet site. We did not receive any notifications of such transactions in the year under report.

The Management Board owned 5.02 % of the shares in Roth & Rau AG at the balance sheet date on 31 December 2010. Of this total, 4.90 % was attributable to the company's CEO, Dr. Dietmar Roth. No member of the Supervisory Board owned any shares in the company.

## Transparency

Transparent communications form the basis for building up a long-term relationship of trust with our shareholders and the general public. At Roth & Rau, we maintain a close, open dialogue with the capital markets and ensure that all target groups are treated equally. The internet allows interested parties to inform themselves at all times about the company's situation. At www.roth-rau.de, we publish all ad-hoc announcements, press releases, financial reports and company presentations in German and English. The financial calendar also available there provides information on regularly recurring publication dates, the date of the next Annual General Meeting and on capital market conferences at which the Management Board is due to present the company. Upon publication of our quarterly and annual financial statements, we regularly offer teleconferences for analysts and investors at which the Management Board is available to answer questions. We then make recordings of the teleconferences and the relevant presentations freely available on our internet site.

## Accounting and auditing

Roth & Rau prepares its consolidated financial statements and interim reports in accordance with International Financial Reporting Standards (IFRS). The annual financial statements of Roth & Rau AG are prepared in line with the requirements of the German Commercial Code (HGB). Interim reports are discussed by the Supervisory Board with the Management Board prior to publication. Consistent with the resolution adopted by the Annual General Meeting, we once again commissioned PricewaterhouseCoopers Aktiengesellschaft Wirtschaftsprüfungsgesellschaft, Frankfurt am Main, to audit the financial statements for 2010. The declaration outlining the extent of any other financial or economic links to Roth & Rau AG, which was obtained in advance, did not provide any grounds for objection. In line with the requirements of the German Corporate Governance Code, we agreed with the auditor that the Supervisory Board Chairman would be informed without delay of any grounds for disqualification or impartiality arising in the course of the audit. Moreover, the auditor also provides immediate report on all significant findings and occurrences of relevance to the duties of the Supervisory Board. Furthermore, the auditor also informs the Supervisory Board in the event of the discovery of any facts revealing inaccuracies in the Declaration of Conformity submitted by the Management and Supervisory Boards pursuant to § 161 of the German Stock Corporation Act (AktG).

## Declaration of Conformity pursuant to § 161 AktG

The Management and Supervisory Boards of Roth & Rau AG identify with the objectives of the German Corporate Governance Code and are committed to transparent, sustainable corporate management and supervision. They hereby declare that – with the following exceptions – Roth & Rau AG complied with the recommendations made by the German Corporate Governance Code government commission between submitting the previous Declaration of Conformity and 1 July 2010 (Code version dated 18 June 2009) and from 2 July 2010 onwards (Code version dated 26 May 2010) and will continue to do so in future:

a) In Point 5.1.2, the Corporate Governance Code recommends setting an age limit for members of the Management Board. Roth & Rau AG believes that the setting of an age limit for members of the Management Board would limit the Supervisory Board in its choice of suitable members for the Management Board.

b) Point 5.3 recommends that the Supervisory Board should form committees. The Supervisory Board of Roth & Rau AG consists of three members. In view of this circumstance, the company does not believe that forming committees would enhance the efficiency of the Supervisory Board's activity.

c) Point 5.4.1: In terms of its composition, the Supervisory Board accords the greatest priority to ensuring that its members collectively have the expertise, skills and specialist experience necessary for them to perform their duties correctly. Due account is also taken of the company's specific situation, its international activities, potential conflicts of interest and diversity considerations. Moreover, the Supervisory Board also aims to ensure suitable representation of female members in future. The Supervisory Board believes that these objectives are sufficiently specific and has not stated any more detailed targets. In this point, therefore, Roth & Rau AG does not comply with the recommendation made in Point 5.4.1.

d) According to the recommendations made in Point 5.4.6 of the Corporate Governance Code, members of the Supervisory Board should receive performance-related compensation alongside their fixed compensation. The Articles of Association of Roth & Rau AG only provide for fixed compensation of Supervisory Board members. This is intended to do justice the independence required by the Supervisory Board to perform its supervisory function. The performance of this function should not be linked to any financial incentives.

e) Due to delays in the preparation of the annual financial statements, the company this year slightly exceeded the publication deadline of 90 days after the end of the financial year recommended in Point 7.1.2 of the Code. In future, Roth & Rau AG will comply once again with the publication deadlines recommended by the German Corporate Governance Code.

Hohenstein-Ernstthal, 7 April 2011

| | |
|---|---|
| For the Management Board | For the Supervisory Board |
| Dr. Dietmar Roth | Eberhard Reiche |

# Roth & Rau's Share

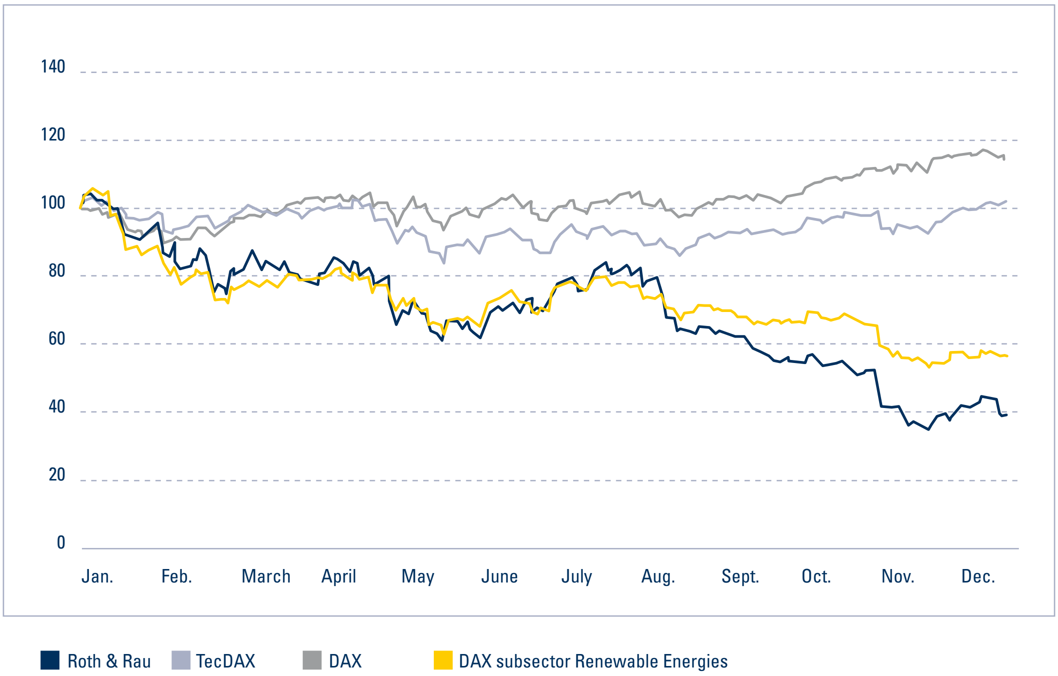
## Share price performance

Stock markets began 2010 on a downbeat note, with share prices coming under pressure across the board. This was due above all to concerns about pending refinancing problems in Greece and the efforts to avert a euro crisis. The only source of positive momentum was the increasingly marked economic recovery. The German DAX index reached its annual low at 5,434 points on 5 February already. A slight recovery then set in from mid-February onwards, in the course of which most indices moved slightly into positive territory once again. Continuing uncertainty about the euro crisis and worries that the savings measures introduced by numerous countries could throttle the hesitant economic upturn nevertheless led to a renewed dip in prices in the second quarter. The DAX fell back below the 6,000 point mark and the TecDAX, in which Roth & Rau's share is also listed, reached its annual low at 691 points on 25 May. Stock markets initially moved sideways in the third quarter, but this development was followed by a relatively stable upward trend from September onwards. The DAX then increased consistently, rising above 7,000 points on 7 December for the first time since June 2008. The German lead index reached its annual high at 7,078 points on 22 December. It subsequently closed the year at 6,914 points, 14.3 % up on the beginning of the year. The TecDAX also developed positively in the second half, managing to make up for earlier substantial losses by the end of the year. It closed at 851 points on 30 December, equivalent to a slight improvement of 1.9 % on the beginning of the year.

All in all, solar stocks underperformed the overall market in the past year, a development also reflected in the performance of the DAXsubsector Renewable Energies at the German Stock Exchange. Alongside Roth & Rau, this sector index includes 14 further solar stocks. Roth & Rau's share was also unable to escape the impact of the weak market climate. Not only that, in the first half of the year, the capital increases executed in February and April further intensified the pressure on the company's share price. The share reached its annual high at € 33.15 on 14 January 2010 already. Following a temporary recovery towards the middle of the year and a positive start to the third quarter, the downward trend in the share price then continued through to the end of the year. This was also due in part to the corrections in the forecasts for the 2010 financial year. The share closed at € 12.29 on 30 December 2010, down 61.3 % on the beginning of the year.

**Performance comparison of Roth & Rau's share in 2010**

indexed, in %




As a result of this performance in the share price, the company's market capitalisation dropped to € 199.2 million at the end of the year, down from € 417.0 million one year earlier. Average daily trading volumes across all German stock exchanges rose slightly to € 2.7 million (2009: € 2.5 million). In the TecDAX ranking as of 31 December 2010, Roth & Rau's share thus occupied 29th position in terms of market capitalisation (2009: 16th position) and 14th position in terms of trading volumes (2009: 13th position).

## Investor relations

The regular, personal exchange of information with our investors is a matter of top priority for the Management Board and investor relations managers at Roth & Rau AG. By communicating with our investors continuously, promptly and extensively, we aim to enhance the trust capital market players place in Roth & Rau AG in the long term. This is especially the case during difficult periods. Given the announcements made by the company in recent months, there has been a noticeable increase in investors' desire to communicate with us. We aim to respond to all of the matters and questions raised by our shareholders and are available at all times to answer questions both by telephone and by e-mail. Our contact details and the names of our contact partners can be found on Page 164 of this report.

During the 2010 financial year we took part in a total of 18 road shows and 11 capital market conferences in Europe and the USA. Alongside the company's business performance and strategy, frequent topics of discussion also included questions concerning regional market developments, the impact of the reduction in solar subsidies in Germany, the latest trends in technology and technological developments at Roth & Rau. This close, personal dialogue helped reinforce existing contacts and attract new investors. Specifically, the company's regular discussion partners in the past year included Deka, Swisscanto and Governance for Owners.

Not only that, in April 2010 we welcomed around 35 invited analysts and investors to our third Investors Day in Hohenstein-Ernstthal. Presentations and a tour of the plant provided participants in this event with in-depth insights into the operating business at Roth & Rau AG.

The teleconferences held upon publication of our quarterly reports provide a further regular forum for sharing information. To further enhance transparency for our private shareholders, we also make excerpts from the teleconferences freely available on our internet site afterwards.

We cultivate our contacts with private investors in particular at the Annual General Meeting, our main event each year, as well as via the investor relations section of our internet site. Here, we publish all key information about our company performance and about Roth & Rau's share. What's more, press releases, ad-hoc announcements and presentations are also made available without delay on our website, as are our quarterly and annual reports. The financial calendar also provides information about major dates during the financial year, such as the Annual General Meeting and quarterly and annual report publication dates.

## Analysts' recommendations

The company is monitored and evaluated by various analysts. The current assessments are coloured by the negative earnings performance in the past financial year and therefore mostly involve "sell" recommendations. With the measures we have introduced to adapt our strategy and boost our earnings, we are making every effort to turn Roth & Rau into a more attractive investment once again. A list of the latest analysts' recommendations can be found on our website under Investor Relations/Share Information.

## Shareholders and Annual General Meeting

The capital increases executed in the first half of 2010 have led to changes in the company's shareholder structure. The share capital was initially increased to € 15,179,999.00 on 10 February 2010 by issuing 1,379,999 new shares. Furthermore, at the beginning of April Roth & Rau executed a capital increase in kind to help finance its takeover of OTB Solar B.V. This involved 1,027,046 new shares being issued to OTB Solar's parent company, the OTB Group B.V. In return, the OTB Group assigned all shares in OTB Solar to Roth & Rau AG. The share capital rose to a total of € 16,207,045.00 as a result. The new shareholder structure is as follows: The shareholding held by the company founders reduced from 13.34 % to 11.35 %. Alongside the founders, the OTB Group B.V. has also become a new major shareholder, with a 6.34% stake in the company. The free float amounts to 82.31 %.

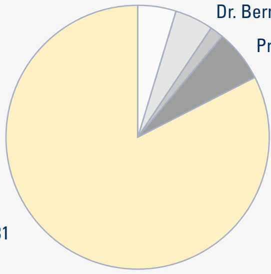
This year's Annual General Meeting was held in Hohenstein-Ernstthal on 21 May 2010. In its presentation, the Management Board dealt in particular with the Group's strategic alignment and its planned investment projects. Shareholders welcomed the growth plans presented by the company and approved the creation of Authorised Capital I, thus securing additional financing scope. Following the Annual General Meeting, we published the Management Board's presentation and the voting results on our internet site. The next Annual General Meeting will take place in Hohenstein-Ernstthal on 8 July 2011.

## Share buyback for anniversary shares

On the occasion of the company's 20th anniversary, the Management Board decided to award five Roth & Rau shares each to the employees of the Group and its affiliated companies as a token of its appreciation. For this purpose, 4,500 shares were acquired in a market-sensitive manner and at an average price of € 22.74 each on 24 June 2010. The shares were assigned to the employees in the fourth quarter of 2010.

## Shareholder structure

as of 31 December 2010, in %




## Key data for Roth & Rau's share

| | |
|---|---|
| ISIN | DE000A0JCZ51 |
| WKN | A0JCZ5 |
| Market segment | Regulated Market (Prime Standard) |
| Market ticker | R8R |
| Reuters Instrument Code | R8RG.DE |
| Stock exchanges | Xetra, Frankfurt, Berlin, Düsseldorf, Hamburg, Munich, Stuttgart |
| Indices | TecDAX, DAX Plus Family, CDAX, ÖkoDAX |
| Designated sponsor | Commerzbank AG |

## Key figures for Roth & Rau's share

| | 2010 | 2009 |
|---|---|---|
| Share capital as of 31.12. in € | 16,207,045.00 | 13,800,000.00 |
| No. of shares as of 31.12. | 16,207,045 | 13,800,000 |
| Annual high in € | 33.15 | 32.10 |
| Annual low in € | 10.83 | 11.01 |
| Year-end closing price in € | 12.29 | 30.22 |
| Average daily trading volume (no. of shares) | 134,137 | 123,657 |
| Average daily trading volume (€ million) | 2.7 | 2.5 |
| Market capitalisation as of 31.12. in € million | 199.2 | 417.0 |
| Earnings per share in € | -1.64 | 0.94 |

All share prices refer to XETRA closing prices.


Roth & Rau AG
Annual Report 2010

# Group Management Report


ROTH
&RAU
Fraunhofer

# Company

## Group structure and business activities

The Roth & Rau Group has been one of the world's leading suppliers of production equipment and innovative production technologies for the photovoltaics industry for more than ten years now. Furthermore, Roth & Rau also designs and manufactures process systems for plasma and ion beam assisted thin film and surface processing systems tailored to customers' specific requirements. The product portfolio is supplemented by software products in the fields of system management and production supervision, as well as by maintenance and service offerings.

### Legal structure

A total of 25 companies have been fully consolidated and one indirect 50 % interest in a joint venture has been included at equity in the consolidated financial statements as of 31 December 2010.

The largest acquisition made in the past year involved the takeover of the Dutch company OTB Solar B.V. OTB is strongly positioned as a competitor of the Group, especially in Asia, and has a number of promising products that superbly complement our own technology and product portfolio.

Further details of changes in the scope of consolidation and a complete overview of group companies as of 31 December 2010 can be found in Note 1.2.2. of the Notes to the Consolidated Financial Statements.

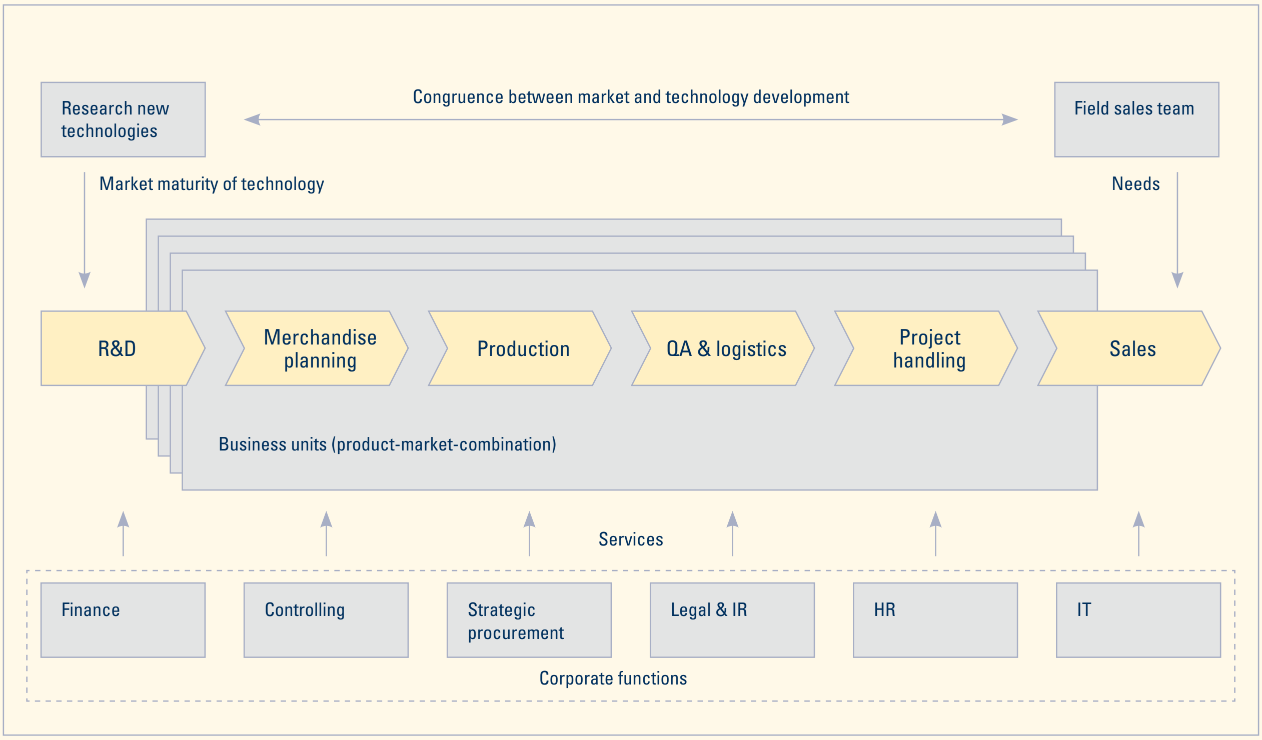
### CRiSP cost and structure optimisation programme

To safeguard its competitiveness on a sustainable basis, in the third quarter of 2010 Roth & Rau launched a cost and structure optimisation programme called CRiSP aimed at improving the Group's profitability. Specifically, CRiSP includes adjustments to the product portfolio, the Group's structure, the organisation of its structures and processes and process optimisation measures.

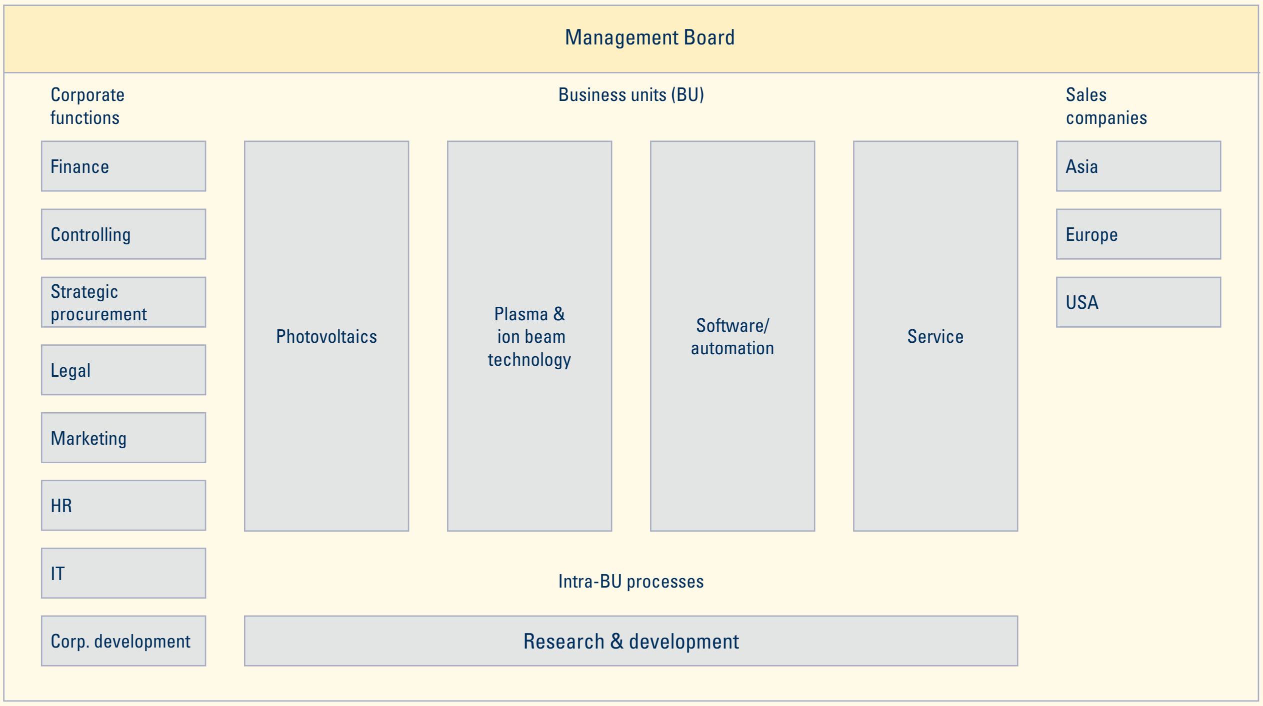
One key focus involves reducing the complexity of the Group's structure. Taking due account of the Group's new strategic alignment (details of which can be found in the Strategy chapter from Page 33 onwards), the number of group companies is to be reduced over the next 12 months. The aim is to cut structural costs and exploit synergies by integrating the remaining group companies more closely.

To address market needs more effectively, the Group will be managed by strategic business units in future. The new corporate structure is to be implemented in the photovoltaics and service segments by the end of the first half of 2011. Each business unit will be responsible for its entire business process, from submitting offers via the order process through to final acceptance of the relevant system by the customer. The resultant reduction in the number of interfaces and pooling of sales activities and administrative functions between companies should help enhance the Group's efficiency.

## Business unit structure




## Target structure by end of first half of 2011 (draft version)



Research and development activities will also be provided with a clearer process orientation in future. The future concentration of R&D at the main location in Hohenstein-Ernstthal will enhance the integration of the group divisions involved and will help reduce costs.

Furthermore, adjustments are also being made to the Group's product portfolio. Products no longer capable of profitable implementation on the market are being removed from the portfolio, while related development projects are being discontinued. The turnkey business is being adapted to the change in market needs and will be continued in modified form. The extensive expertise available at the Roth & Rau Group, ranging from project planning through to production ramp-up, is to be offered in future in the form of separate advisory and technology transfer services. This should therefore minimise the risks the company faced in the past due to its role as general contractor for turnkey projects.

In parallel to its organisational realignment, the Group has also defined further extensive cost-cutting measures with the following main focuses:

- Reducing production costs, especially by exploiting the savings potential arising due to the highly standardised production of the SiNA 2 generation.
- Exploiting cost benefits on the procurement market. By reducing production and procurement times, the Group aims to achieve a targeted reduction in its working capital.
- Significantly streamlining administration activities. Costs in this area had previously risen, mainly on account of the Group's rapid external growth in the recent past.

## Organisation

The Roth & Rau Group is centrally managed by Roth & Rau AG as the holding company. Numerous key group functions, such as sales, marketing, treasury, controlling, risk management, quality management, intellectual property rights and IT are pooled at Roth & Rau AG. Individual group companies are bound by codes of procedure and act in line with the strategic alignment defined by the Group. Within this structure, all companies contribute towards expanding the Roth & Rau Group's position as one of the world's leading photovoltaics technology and equipment providers.

## International service and sales network

The Roth & Rau Group has an international service and sales organisation that is being continually expanded. In Asia, the world's most important solar market, Roth & Rau has proprietary subsidiaries and representations in China, India, Malaysia, Taiwan, Hongkong, Singapore and Korea. In the past year, the Group's international presence was boosted above all by the merger of Roth & Rau's and OTB's sales companies. We are also present in the USA, where the solar industry is playing an increasingly important role. Proximity to our customers and direct accessibility on location are important, especially when it comes to offering a flexible and extensive range of after-sales services. These factors help boost customer retention.

## Segments and value creation

In the past 2010 financial year, the products and services of the Roth & Rau Group were pooled in the three segments of photovoltaics, plasma and ion beam technology and other activities. As part of the reorganisation of the Group, the four business units of photovoltaics, plasma and ion beam technology, software/automation and services will gradually be established in the course of 2011.

The **photovoltaics** segment comprises the products, technologies and services for the photovoltaics industry. The SiNA and MAiA in-line production systems are among the key products offered by Roth & Rau AG. The SiNA antireflective coating system enables cells to be coated with a layer of silicon nitride, thus reducing the share of light reflected away from the surface and achieving a passivation of contaminations and defects in the silicon wafer. Antireflective coating is a decisive factor in determining the solar cells' output efficiency. SiNA systems are currently offered with various production capacities ranging from five to 100 MWp. Since 2010, we have also been offering the latest generation of SiNA systems (SiNA 2), which is mainly characterised by lower operating costs and has been very well received on the market. In future, we will be pursuing a two-brand strategy for our antireflective coating systems. Whereas SiNA is chiefly of interest to the operators of large-scale production lines, the DEPx system offered by OTB is targeted in particular at the market segment of small to medium-sized production facilities.

MAiA is a system concept facilitating the implementation of new plasma technologies, such as the coating of solar cells on both sides, the manufacture of multilayer coats and dry etching processes. The equipment's modular structure also allows various plasma processes to be combined within a single system.

The portfolio is supplemented by thermal process systems, such as the CAMiNI furnace and the CALiPSO diffusion furnaces, low numbers of which were sold for the first time in connection with turnkey projects in 2010.

The equipment business contributes the largest share of the Roth & Rau Group's sales and earnings and has great growth potential. In view of this, we will be according greater strategic significance to this field in future and will be focusing on the further development of single equipment. The strategic realignment will be also be accompanied by measures to streamline the product portfolio. Promising products, such as SiNA, MAiA, CAMiNI and DEPx, will be retained while others, including the SiNUS and TiTUS crystallisation furnaces and the METx screen printing system at OTB, will no longer be offered in future. On the other hand, products with promising prospects, such as the HELiA systems used to manufacture highly efficient hetero junction cells, will be included in the portfolio.

The turnkey production line business field will also be adapted to the change in external conditions. In particular, we will no longer act as general contractor for future projects. We will rather offer our customers attractive packages consisting of single equipment and a range of project management, technology transfer and production ramp-up support services meeting the needs both of new entrants to the industry and those of established manufacturers.

Further information about the Group's future strategic alignment can be found in the Strategy chapter on Page 33.

The **plasma and ion beam technology** segment is the Group's technological "germ cell" and is therefore particularly important in strategic terms. This segment focuses above all on customised system solutions and processes for plasma and ion beam assisted thin film and surface processing processes suitable for use in a wide variety of industrial sectors and in research and development. Among the most important products in this segment are the IonScan equipment series, which is used for thin film thickness trimming in the semiconductor industry and polishing error correction in precision optics, and AK series systems for the large-scale coating of surfaces for use in the semiconductor and optics industries.

**Further activities** important for the Roth & Rau Group are pooled in the other activities segment. These largely involve the spare parts and services business, software products for use in managing systems and supervising complex production processes through to the automation of entire factories, and further products and services offered to customers outside the photovoltaics sector. To account for the growing importance of the spare parts and services business, this field will be managed as a business unit in its own right following the restructuring of the Group.

The extensive Segment Report can be found from Page 56 onwards.

## Main sales markets and competitive position

The Roth & Rau Group further expanded its international business in the past year. As a percentage of sales, exports rose year-on-year from 82.8 % to 90.1 %. With a 77.3 % share (2009: 51.3 %), Asia remained the Group's most important sales market. The increase here was chiefly driven by strong growth in business volumes in the markets of China, India, South-East Asia, Taiwan and Korea. From a current perspective, the India in particular is among the most important growth markets in Asia. Overall, the European market has witnessed a further decrease in significance. Only a small volume of single equipment was sold in Germany and Europe. We expect Germany's significance in the global solar market to decline further in the coming years. The markets in Southern and Eastern Europe and in the USA have also developed more slowly than expected.

There have been no material changes in the Group's competitive situation. Centrotherm photovoltaics AG is still our main competitor in the antireflective coating systems business field. We estimate Roth & Rau's share of the global market at around 50 % (including OTB). Alongside centrotherm, further competitors include Shimadzu in the Japanese market and smaller providers such as Jusung Engineering and Singulus. However, based on our assessment these companies probably lost market share in the past year. Longstanding production experience, technological competence and competitive cell output efficiency rates represent significant barriers to market entry. This is particularly apparent in the increasing trend towards Chinese manufacturers offering systems on the market based on established manufacturers' models. These products do not yet match the high technological standards set by European manufacturers, but could gain significance in future.

The competitive environment in the turnkey production line business has also remained unchanged. Here, the Group's main competitors were centrotherm photovoltaics and Gebrüder Schmid. Compared with the equipment business, the turnkey business witnessed an overall decline in the past year. This development was mainly due to the higher technological expertise available at cell manufacturers in core markets, a factor that impeded demand for turnkey solutions.

The spare parts and services business is characterised by tough domestic competition, especially in China. Together with high import levies, this means that it is hardly possible for foreign providers to provide a competitive range of services. As one of our declared aims is to acquire market share in this field, we plan to open a proprietary spare parts production facility in China in the near future.

Roth & Rau's position in the market for specialist systems targeted by our plasma and ion beam technology segment improved compared with the previous year. We have managed to establish ourselves across Europe as a provider of large-scale coating systems for optics applications.

# Strategy and corporate management

## Strategy

The solar industry is maturing, a process that is being accompanied by substantial structural changes. A process of selection is underway, especially in the field of technology development. Those technologies that have proven especially successful and sustainable are being developed further, while others that have failed to deliver sustainable benefits are no longer being pursued. Not only that, increasing industry experience has also enhanced market players' maturity and individual technological expertise, as a result of which demand for complete solutions is increasingly giving way to demand for standardised single equipment accompanied by a strong range of servicing and technological support services.

### Strategic adjustment to boost earnings strength

Against this backdrop, the Management Board of Roth & Rau AG has adopted a new strategic alignment for the Group, one intended to safeguard Roth & Rau's leading market position and create a basis for boosting the Group's earnings strength on a long-term basis. The key cornerstones of our new strategic alignment are presented below:

1. Focus on single equipment business
   In future, Roth & Rau will be focusing on its core competencies in the single equipment (individual systems) business. To this end, we will be streamlining our product portfolio and discontinuing production of unsustainable products. In future, our strategic focus will be on coating systems for cell concepts already established on the market, as well as on coating systems for forward-looking technologies such as hetero junction technology.

   The turnkey business is to be adapted to the change in market requirements and continued in modified form. This is intended to reduce the risks Roth & Rau faced in the past in its capacity as general contractor for such large-scale projects. In particular, it is planned in future to offer the extensive production expertise available at the Roth & Rau Group, from project planning through to production ramp-up, on the market in the form of advisory and technology transfer services. The structural and personnel adjustments required in this respect have already been initiated and will be completed in the second quarter of 2011.

2. New service concept with extended scope
   As the solar industry gains in maturity, excellent customer support is becoming an ever more important factor. One of our most important strategic tasks therefore remains that of consistently expanding our range of spare parts and services.

   Here, our range of services will be extended in future to include technological services and support to factories during the ramp-up stage. In the past, we only offered these components in the context of our turnkey business.

   One further focus involves building up local resources for the services and spare parts business in China for the Asian market as a whole. To this end, we plan to open a proprietary spare parts manufacturing facility in China in the near future. After all, regional proximity to our customers, competent support from our employees on location and short reaction and service times represent key competitive advantages in the services business.

3. Boosting our earnings strength
   Our declared aim is to generate double-digit EBIT margins once again in the medium term. To achieve this, in our CRiSP programme we have introduced extensive measures aimed at boosting our earnings strength. As well as streamlining our product portfolio, the measures involved will focus on optimising our internal processes. In this regard, we also plan to reduce the complexity of the Group's structure. Further information about the CRiSP programme can be found on Page 28.

4. Securing USPs in the long term by pursuing research and development
   To sustainably boost our market position and tap further growth potential we will have to secure USPs in future as well. The only way to achieve this is to ensure that our systems and technologies are continually enhanced. For that reason, research and development will remain a key strategic focus in the coming years as well.

   Consistent with our new strategic alignment, we will be focusing even more closely on our core coating system products. We began work on developing the third generation of our SiNA systems series in the first quarter of 201. Our aim here is to further extend our competitive advantages in terms of production costs and output efficiency rates. Not only that, we will further promote the development of production systems based on hetero junction technology to enable us to offer systems suitable for mass production before the end of the current financial year. Further information about our research and development activities can be found from Page 38 onwards.

5. Strengthening our market position in key markets and accessing new markets
   Solar energy is constantly gaining in importance for the future worldwide energy supply. Solar energy is expected to be able to compete with conventional energy sources in just a few years' time. Today already, the Roth & Rau Group is present in the most important international solar markets, a development chiefly due to the consistent expansion of our location network over the past two years. To further boost our global market position, we will therefore be expanding our existing locations, especially in core Asian markets, with a main focus on China, currently our largest market, and India, a key market for the future. We still see Russia, the Middle East and South America as promising markets for the future, but these markets are currently developing more slowly than expected.

## Corporate management

The Management Board is responsible for formulating and implementing the Group's long-term targets, which are aimed at sustainably increasing the company's value.

The management of the Roth & Rau Group is based on long-term corporate plans formulated in regular strategic discussions on Management Board level and with the relevant heads of department. The results of this process are systematically implemented at the operating units on the basis of short and medium-term budgets.

The key figures used to assess the Group's achievement of its financial targets are sales, gross performance, earnings before interest, taxes, depreciation and amortisation (EBITDA), earnings before interest and taxes (EBIT), net current assets and cash flow from operating activities. As important early indicators of the future development in consolidated sales, the new orders and orders on hand figures are highly relevant for the Group's budgeting and controlling.

Internal corporate management also includes detailed budgeting compiled on the basis of the aforementioned key figures, as well as a group-wide controlling system broken down by segment and project. Budget and actual values for the various key figures are analysed in regular reports, with the results being forwarded to the Director of Group Controlling and the Management Board. This ensures that budget variances can be detected at an early stage, thus enabling the company to take corresponding measures and to adjust its targets to the changed circumstances.

Furthermore, well-structured, regular reports to the capital markets represent a further component of value-based management at Roth & Rau. Our extensive, transparent reports inform capital market participants in detail about our targets and the degree to which they are achieved, thus assisting them in determining a suitable company valuation (→ Corporate Governance Report, Transparency chapter on Page 19).

## Compensation report

In the interests of transparent communications, Roth & Rau discloses the compensation paid to the members of its Management and Supervisory Boards on an individual basis and broken down into its respective components. This compensation report also forms part of the corporate governance report (Page 16).

### Compensation of the Management Board

The Supervisory Board of Roth & Rau AG lays down the structure of the compensation system, reviews this regularly and determines the overall compensation of individual Management Board members. In this, it gives due consideration to the appropriateness of compensation, which is measured in terms both of the personal performance of the Management Board member and the economic situation, performance and future prospects of the company, as well as of customary levels of compensation taking due account of comparative companies and of the compensation structure otherwise in place at the company.

The compensation of Management Board members consists of a non-performance-related component, which includes the annual salary, fringe benefits, pension commitments and insurance benefits, and a performance-related component, which consists of a bonus and share-based payment of a long-term incentive nature (phantom stocks programme – PSP).

The contracts with Management Board members provide for payment of compensation should their activities on the Board be prematurely terminated without compelling reason. Such compensation is limited to a maximum of two annual salaries, including fringe benefits, and may not compensate the member for any period in excess of the remaining term of the employment contract. Should their activities on the Board be prematurely terminated due to a change of control, Management Board members receive compensation amounting to three basic annual salaries, nevertheless limited to a maximum of the compensation due for the remaining contractual term. Change of control is taken as the receipt of a notification pursuant to § 21 (1) of the German Securities Trading Act (WpHG) that a shareholder or group of shareholders hold no less than 50 % of the voting rights in the company, the conclusion of an affiliation agreement with the company as a dependent company pursuant to § 291 et seq. of the German Stock Corporation Act (AktG) or the incorporation of the company pursuant to § 319 of the German Stock Corporation Act (AktG). The pension commitment made to Thomas Hengst becomes vested upon any change of control, irrespective of the fulfilment of any waiting period or other contractual arrangements. Irrespective of this, the pension commitment made to Dr. Dietmar Roth is already vested.

**Non-performance-related compensation components** include basic compensation paid monthly in the form of a salary. In addition, Management Board members also receive additional benefits, in particular premiums for accident and direct insurance policies, the reimbursement of travel expenses and non-cash benefits in the form of the private use of company cars.

Furthermore, pension commitments providing for retirement or invalidity pensions, as well as for provision for dependants, have been made to Management Board members. While the pension commitments towards Dr. Dietmar Roth are already vested, this will only be the case for Thomas Hengst following five years of activity on the Management Board at Roth & Rau AG. In the case of Dr. Paulus Breddels, the company pays contributions under an existing contract with a pension fund.

Management Board members receive a bonus as a **performance-related compensation component**. The bonus for Dr. Dietmar Roth is based on the earnings before interest and taxes (EBIT) generated by the company. The bonuses for Thomas Hengst and Dr. Paulus Breddels, by contrast, are based in equal share on EBIT and on the achievement of individual target agreements. Consolidated EBIT pursuant to IFRS serve as the basis for reference here. The bonuses are capped at a maximum of 150 % of the basic annual salary in the case of Dr. Dietmar Roth, at a maximum of 100 % for Thomas Hengst and a maximum of 50 % in the case of Dr. Paulus Breddels. Bonuses are paid following approval of the consolidated financial statements by the Supervisory Board.

Members of the Management Board also receive a share-based payment of a long-term incentive nature involving risk within the framework of the phantom stock programme (PSP). A total of 60,000 virtual shares (phantom stocks) whose value is linked to Roth & Rau's share price performance were allocated to Management Board members for this purpose in 2010. Phantom stocks may only be exercised following a lock-up period of two years following allocation. This is dependent on achievement of a specified exercise hurdle corresponding to a predetermined base price upon allocation plus 10 % p.a. Any profit arising for Management Board members participating in the programme upon exercising their phantom stocks must automatically be invested in full in shares in the company that are subject to a two-year lock-up period. Overall, therefore, the investment of the Management Board members is subject to a four-year assessment period.

A maximum limit of € 1 million per tranche has been set for the amount paid out. Due to the failure to reach the exercise hurdle, the first tranche, incepted in the 2008 financial year, did not lead to any payment. The phantom stocks in the first tranche have thus lapsed without replacement. Further information about the PSP can be found in Note 4.4.3.1. of the Notes to the Consolidated Financial Statements. The main components of the compensation paid to Management Board members are presented in the following table. The previous year's figures are stated in brackets. The fringe benefits received in the 2010 financial year amounted to € 126k for Dr. Dietmar Roth (2009: € 120k), € 76k for Carsten Bovenschen (2009: € 71k), € 45k for Thomas Hengst (2009: € 23k) and € 20k for Dr. Paulus Breddels (2009: € 0k).

### Key compensation components of the Management Board

| € 000s | Annual salary | Bonus | Total |
|---|---|---|---|
| Dr. Dietmar Roth | 220 (220) | 0 (330) | 220 (550) |
| Carsten Bovenschen (until 15.12.2010) | 180 (180) | 0 (180) | 180 (360) |
| Thomas Hengst (since 01.07.2009) | 138 (50) | 60 (50) | 198 (100) |
| Dr. Paulus Breddels (since 01.09.2010) | 80 (0) | 20 (0) | 100 (0) |
| Total | 618 (450) | 80 (560) | 698 (1,010) |

| Phantom stock programme | Number of phantom stocks as of 31.12. | Volume of capital reserve as of 31.12. (€ 000s) | Volume of provisions as of 31.12. (€ 000s) |
|---|---|---|---|
| Dr. Dietmar Roth | 28,000 (20,000) | 26 (18) | 0 (9) |
| Carsten Bovenschen (until 15.12.2010) | 21,000 (14,000) | 0 (14) | 0 (7) |
| Thomas Hengst (since 01.07.2009) | 21,000 (11,000) | 18 (15) | 0 (0) |
| Dr. Paulus Breddels (since 01.09.2010) | 14,000 (0) | 5 (0) | 0 (0) |
| Total | 84,000 (45,000) | 49 (47) | 0 (16) |

The employment relationship between Roth & Rau AG and Carsten Bovenschen was terminated by cancellation agreement dated 15 December 2010 and effective as of 28 February 2011. The cancellation agreement provides for the payment € 100,000.00 to Mr. Bovenschen as of the effective date as compensation for the premature termination of his employment contract. No performance-related or variable components of compensation will be paid by Roth & Rau AG for the 2010 or 2011 financial years. The company pension plan/pension commitment made towards Mr. Bovenschen became vested as of 15 December 2010.

In the cancellation agreement concluded with Carsten Bovenschen, Roth & Rau AG guaranteed that OTB Solar B.V., based in Eindhoven, Netherlands, would make an offer to Mr. Bovenschen concerning the conclusion of an employment contract as the managing director of this company with a term running from 1 March 2011 until 28 February 2014. This offer should provide for basic annual compensation of € 200,000.00 and variable compensation of € 100,000.00, with variable compensation of € 50,000.00 being guaranteed for the period from 1 March 2011 to 31 December 2011. Other than this, the terms of the employment relationship with OTB Solar B.V. should correspond to the terms previously provided for in Mr. Bovenschen's management board contract at Roth & Rau AG. Should OTB Solar B.V. not make any corresponding offer by 28 February 2011, Roth & Rau AG undertook, irrespective of the assignment of any blame, to compensate Mr. Bovenschen in cash in such a way as to place him in the same position as if an employment contract had been concluded with OTB Solar B.V. with the aforementioned contents. In this respect, the total amount of payments due, including the compensation for the premature termination of his management board contract, would be capped at two annual salaries in line with Point 4.2.3 of the German Corporate Governance Code.

### Compensation of the Supervisory Board

The compensation of the Supervisory Board is governed by § 12 of the Articles of Association of Roth & Rau AG. Accordingly, each member receives fixed annual compensation of € 15k payable after the end of each financial year, as well as a meeting allowance of € 750 per meeting day. The Supervisory Board Chairman receives two-and-a-half and his Deputy one-and-a-half times the fixed compensation and meeting allowance. Moreover, Roth & Rau also reimburses the expenses of Supervisory Board members. No performance-related compensation components are foreseen for the Supervisory Board.

**Total compensation of the Supervisory Board**

| € 000s | 2010 | 2009 |
|---|---|---|
| Eberhard Reiche, Chairman | 56 | 56 |
| Prof. Dr. Alexander Michaelis, Deputy Chairman | 34 | 33 |
| Daniel Schoch | 22 | 23 |
| Total | 112 | 112 |

## Declaration on corporate governance (§ 289a HGB)

The declaration on corporate governance by Roth & Rau AG can be found in the investor relations/corporate governance section of the company's internet site at www.roth-rau.de.

## Research and development

Technologically leading, innovative products are the bedrock of our company's long-term success. Our intensive research and development activities enable us to introduce products that set standards and harbour growth potential. We consistently base our actions in this respect on customers' needs.

We have cultivated close cooperations with national and international universities and research institutes for many years now. In the 2010 financial year, we worked in particular with the Swiss Institute of Microtechnology (IMT) at the Université de Neuchâtel (part of the Ecole Polytechnique Fédérale de Lausanne since 1 January 2009) to promote the development of highly efficient solar cells. Alongside IMT, the Energy Research Centre of the Netherlands (ECN), the Fraunhofer Institute for Solar Energy Systems (ISE), the Fraunhofer Institute for Ceramic Technologies and Systems (IKTS) and the Fraunhofer Institute for Electron Beam and Plasma Technology (FEP) are also longstanding partners of the company, as is the University of New South Wales in Australia.

In the past year we managed to bring several major development projects to a successful conclusion, a process that involved substantial, planned investments. In view of this, development expenses grew by 64.1 % to € 19,131k in the 2010 financial year (2009: € 11,658k). As a proportion of sales, the development expense quota thus amounted to 6.7 %, as against 5.9 % in the previous year. A total of 163 employees worldwide, and thus 49.5 % more than in the previous year, worked on the development of our products in the past financial year (2009: 109).

Activities in the **photovoltaics** segment continued to focus on the development of high-efficiency cell technologies aimed at simultaneously boosting output efficiency rates and reducing production costs. In terms of achieving higher output efficiency rates, the development of so-called hetero junction technology formed the main focus of our activities in the past year. Hetero junction technology represents an enhancement of a technology already known of, but which has so far only been put to industrial use by a single company. Hetero junction cells consist of a monocrystalline silicon wafer onto both sides of which the electrically active solar cell structures are applied in the form of thin films of amorphous silicon and a transparent, conductive oxide (TCO) film intended to promote the absorption and conduction of the electrical current generated. Not only that, amorphous silicon has superb passivation properties, guarantees a high light yield and shows excellent temperature behaviour, all of which factors result in output efficiency rates in excess of 20 %.

Alongside these activities, we also worked on enhancing the concept of the selective emitter. This technology involves an additional production step in which higher endowed areas of the emitter are produced locally around the front contact lines. This means that more charge carriers are available, helping to increase the flow of electricity and thus raise the solar cell's output efficiency by between 0.5 % and 1 %. To manufacture selective emitters, Roth & Rau makes use of the laser doping process developed at the University of New South Wales (laser doped selective emitter). The printed selective emitter concept developed by OTB Solar was also investigated further. Here, the phosphoric materials required for the endowment are printed onto the wafer using ink jet printing. This process promises to be a particular cost-effective version of the selective emitter and is to be prepared for mass production by the end of 2011.

The company also consistently pressed ahead with developing upgrades for existing cell production lines. These are intended to achieve higher output efficiency rates for systems already in production as well. The passivation of the reverse side of the cell with a coating of aluminium oxide represents a promising possibility in this respect. In the past year, we tested this process with numerous customers and with very successful results.

The rapid progress made with these projects was facilitated in particular by the launch of operations with a pilot production line at our Technology Centre in Hohenstein-Ernstthal in the past year. Not only that, at the end of 2010 we commenced operations with prototypes of the amorphous silicon and TCO coating systems required for the industrial production of hetero junction cells, the core section of the production line, at our location in Hohenstein-Ernstthal. On this basis, the systems and production technologies involved in hetero junction technology are to be transferred to mass production in the current financial year. We received our first order for this new technology in September 2010 already.

Further focuses of activity in 2010 included successfully completing the development of new systems for the diffusion and firing process steps and of coating systems for use in the manufacture of cadmium telluride thin film solar modules.

As in the previous year, research and development activities in the **plasma and ion beam technology** segment concentrated on enhancing products and processes in the fields of ion beam technology and large-scale plasma technologies. Here, the main focus was on forward-looking technologies, such as EUVL lithography in the semiconductor industry, OLEDs and precision surface processing in the optics industry.

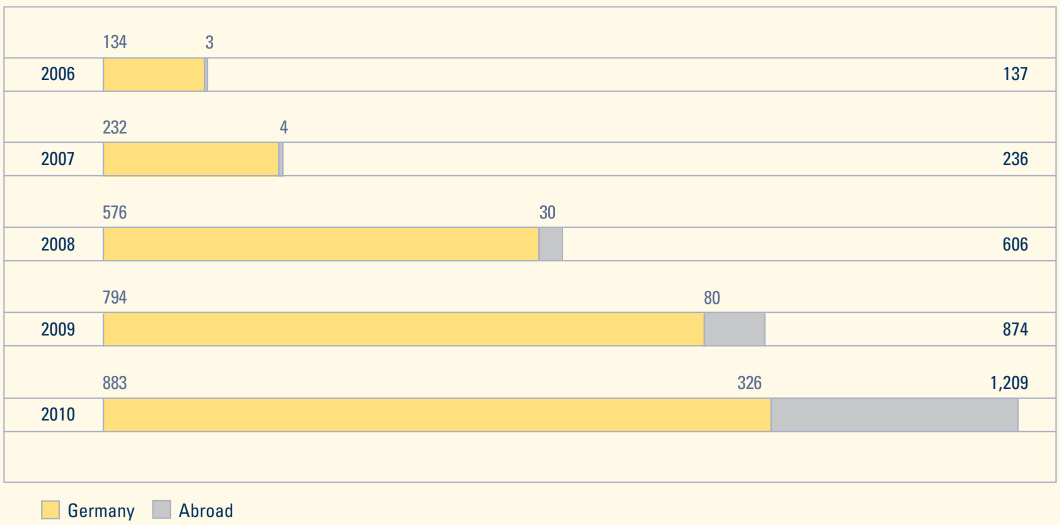
Research and development in the other activities segment mainly involved software developments at our AIS Automation subsidiary. Among other projects, this company has enhanced its FabEagle production management system for use in the photovoltaics industry and successfully launched this onto the market.

## Employees

The Roth & Rau Group had a total of 1,209 employees as of 31 December 2010. Compared with the end of 2009, the workforce thus grew by 335 employees, or by 38.3 % (2009: 874). This increase was mostly attributable to the acquisition of OTB Solar, as well as to the stocking up of personnel totals in the research and development, technology and engineering departments. Due to internal regrouping measures, the number of employees working in administration reduced compared with the previous year. The number of employees abroad rose sharply from 80 to 326, an increase largely attributable to the new OTB subsidiary with its 196 employees in foreign locations.

**Employees**

as of 31 December




Group Management Report
Company
Group Management Report
Business Framework
Group Management Report
Business Performance
Group Management Report
Opportunity and Risk Report
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Subsequent Events and Outlook
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### Employees

by function as of 31 December

| | 2010 | 2009 | Change |
|---|---|---|---|
| Production | 498 | 333 | 49.5 % |
| Research and development | 163 | 109 | 49.5 % |
| Technology/sales | 374 | 232 | 61.2 % |
| Administration (excl. Management Board) | 118 | 153 | -22.9 % |
| Other | 14 | 13 | 7.7 % |
| | 1,167 | 840 | 38.9 % |
| Trainees | 42 | 34 | 23.5 % |
| Total | 1,209 | 874 | 38.3 % |

### Training and development

The Roth & Rau Group has many employees who have worked at the company for many years now and have a correspondingly extensive wealth of experience. As part of our sustainable personnel policy, we accord great value to handing on our knowledge to younger employees and to targeted training measures for our next generation of staff. We are currently training personnel in seven technical and commercial vocations. As of 31 December 2010, we employed a total of 42 trainees, eight more than one year earlier. Over and above this, we offer ongoing supervision to a growing number of student trainees and graduands in virtually all areas of the company.

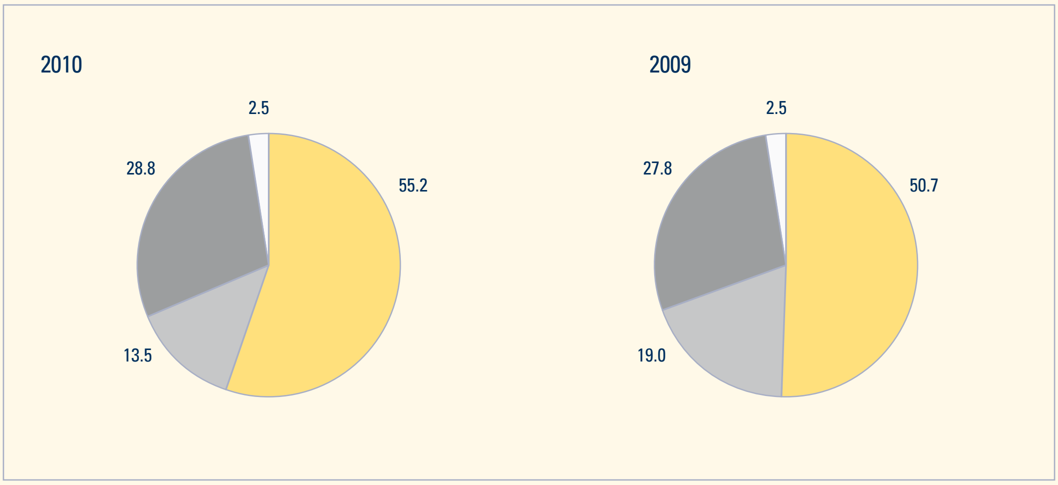
To satisfy our growing need for qualified specialist and management staff, we maintained close contacts with universities and research institutes in the region also in the past financial year. Together with West Saxony College (Westsächsische Hochschule) in Zwickau, for example, we offer the microsystems technology dual study programme with the possibility of majoring in photovoltaics. At the beginning of the 2010 training year we once again took on two trainees within the framework of this dual study programme. Furthermore, in cooperation with regional vocational training colleges and technical colleges, we also offer study programmes in production technology and business administration. These measures are accompanied by our regular participation in employment and recruiting fairs.

Due to higher international standards and technical innovations, the provision of training to our employees is a very important factor. In our personnel development activities, we determine the individual development needs of each individual employee in regular one-to-one meetings. On this basis, a development plan setting out individual competency targets is compiled. In the past year, we invested € 543k in training measures (2009: € 419k). The training courses offered include technical product training programmes, the training and certification of project managers as well as the training and development of service staff by suppliers. Alongside technical expertise in the fields of quality management, environmental management and occupational safety, legal and compliance, and production, training is also offered in soft skills, such as intercultural competence, presentation techniques, stress management, communications, personal management and time management.

The qualifications structure chart showed a further shift in favour of engineers, scientists and technicians with university qualifications in the past financial year, a development which reflects the targeted promotion of development-related departments.

### Qualifications structure

in %




Engineers, scientists and other employees with university qualifications
Technicians and specialist staff without university qualifications
Skilled workers
Support staff

### Compensation structure

A transparent, easily comprehensible compensation system that also accounts for employees' individual performance helps boost employee motivation and satisfaction levels. There were no changes in the compensation system in the past year. Alongside their fixed monthly compensation, all employees of the Roth & Rau Group apart from trainees and senior employees receive an individual variable compensation component which is reviewed quarterly. This is based on the qualifications and specific performance of the individual employees, as well as on the company's overall performance measured in terms of operating earnings (EBIT). Alongside their fixed compensation, senior employees also receive a variable compensation component based on individual target agreements.

Moreover, members of the Management Board, further management staff and selected employees are also entitled to participate in a share-based compensation programme (phantom stocks programme). Further information about this can be found in the Compensation Report from Page 35 onwards and in Note 4.4.3.1. of the Notes to the Consolidated Financial Statements.

### Personnel expenses

Due to the growth in the workforce and a pay increase averaging 4.5 %, personnel expenses rose by 58.1 % to € 61,229k in 2010 (2009: € 38,724k). Of this total, € 52,349k related to wages and salaries (2009: € 32,879k), € 7,943k to social security contributions (2009: € 5,351k) and € 937k to pension expenses (2009: € 494k). The personnel expense quota amounted to 21.5 %, as against 19.6 % in the previous year.

## Procurement

In its procurement, the Roth & Rau Group has maintained its close relationships based on a spirit of partnership with its longstanding suppliers, while at the same time expanding its supplier base with new partnerships. Increasing attention has been paid to best cost country sourcing, which involves commissioning suppliers in the most suitable countries for the respective product so as to further streamline the value chain and generate cost savings.

Overall, due to the marked economic recovery the global procurement market changed from a buyers' market into a clear sellers' market in 2010. Supply bottlenecks arose in particular for electronics components, a development that nevertheless only affected us indirectly via our sub-suppliers.

Roth & Rau has a group-wide strategic procurement process which sets out standards for awarding contracts. Accordingly, all product groups with order volumes of more than € 1 million have to be publicly tendered. Procurement for the various product groups is exclusively managed by interdisciplinary product group teams consisting of the relevant category manager and the technology specialists responsible for the respective product group. The resultant team decision ensures that a balance is found between technical and commercial considerations when reaching decisions concerning the choice of supplier.

A consistent evaluation structure was introduced for the Group's strategic procurement activities in the past year. This helps to enhance quality and offers support to managers in their negotiations with suppliers. A supplier relationship management system has been introduced as the basis for evaluation. Suppliers are evaluated by product group and by reference to seven criteria, such as product quality, supply reliability and innovation and development competence. This process is being driven by the category managers and will lead to a qualified classification of the company's suppliers. Based on this evaluation, measures will be determined for suppliers. Underperformers will be removed from the relevant lists, while high performers will have the opportunity to further expand their business with Roth & Rau.

With the conversion of production from project-based production to line production, we also increasingly standardised our production planning measures in the past financial year. The resultant improvement in transparency and budgeting reliability enabled us to conclude master agreements on more favourable terms for the following six months in the second half of the year. Alongside cost savings, this has also significantly enhanced supply reliability.

## Responsibility and social commitment

Acting responsibly and social commitment are key components of the corporate culture at the Roth & Rau Group. With this responsibility in mind, we have promoted various projects in Germany and abroad for many years now.

As a supplier to the solar industry, we are convinced that solar energy makes an important contribution towards combating energy-related poverty in developing countries. In its "World Energy Outlook 2010" report, the International Energy Agency (IEA) states that 1.4 billion people – more than 20 % of the world's population – still have no access to electricity. Around 87 % of these people live in rural areas, mainly in Southern Africa and Asia. In view of this, we have supported the Solar Energy Foundation in an electrification project in Ethiopia for several years now. Based on the principle of "helping people to help themselves", solar energy systems are installed to provide lighting to schools, for example, enabling pupils to be taught after sundown and thus enhancing the population's educational opportunities. People locally take responsibility for the financing and technical operation of the systems. By training specialists, this also creates jobs. Further information about this project can be found on the internet at www.sonne-stiften.de.

We also take responsibility in our own region, focusing here on promoting young people and upcoming talent and on supporting cultural events. In Hohenstein-Ernstthal and the surrounding area, for example, we support schools and children's day-care centres. In the field of sports sponsoring, we are promoting talented young swimmers and "Racing Team Germany", a junior motorcycle racing team at the Sachsenring racetrack in Hohenstein-Ernstthal.

A further emphasis is on projects within the Group aimed at improving employee satisfaction and motivation. Alongside health promotion, our efforts focus above all on making it easier for employees to combine their family and work commitments. The instruments here range from flexible working hours through to our own child day-care centre. These measures are aimed not only at our existing employees, but should also help to increase the share of female employees in our company as well in the longer term. In our health promotion, we rely above all on offering a wide range of sports activities. Alongside these, the employees' joint participation in sporting events, such as the company football championship and regional marathons, is intended to boost team spirit and employees' sense of community. Since 2009, our occupational health and safety management system has been certified under OHSAS 188001 (Occupational Health and Safety Assessment Series). This is one of the best-known standards laying down requirements for improving employees' health and safety at their workplaces.

## Sustainability and environmental protection

The sustainability approach of Roth & Rau Group's management incorporates the interests of all relevant target groups (stakeholders) in its actions and strategic decisions. In the previous chapters we explained how we implement this specifically in terms of our employees, suppliers and the company as a whole. As a supplier to the solar industry, we believe that we are especially obliged to help protect the climate and the environment.

On the one hand, with our products we are supporting the further development of regenerative energies and are thus also assuming responsibility for a sustainable energy supply for succeeding generations. On the other hand, we ensure that environmentally-friendly technologies are used to manufacture, utilise and dispose of our products wherever this is possible and economically feasible. Not only that, the conscious and efficient use of raw materials, energy and water and consistent separation of waste are second nature to us. When it comes to managing hazardous goods, we have implemented special environmental protection measures which also include in-depth training for the relevant employees and specialist companies.

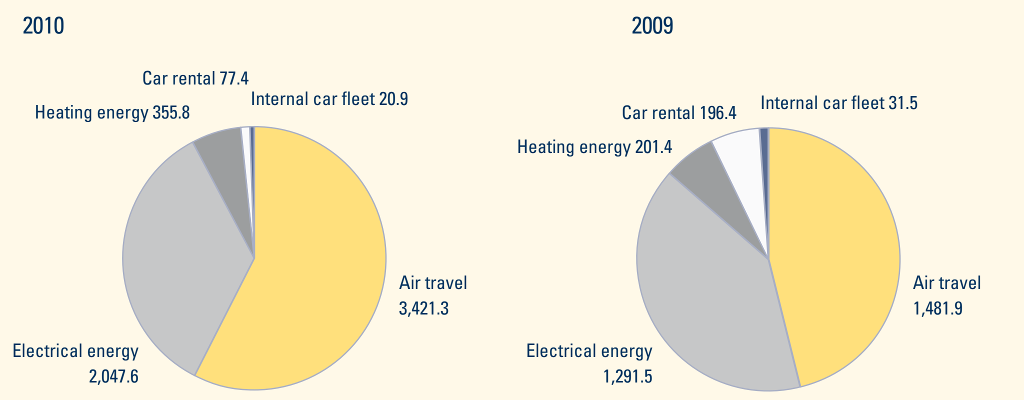
The environmental management system at Roth & Rau AG has been certified under the international ISO standard 14001:2004. We therefore conform to a globally recognised standard in terms of what company environmental management should involve and achieve. These measures include continually reviewing the environmental impact of a company in terms of its emissions and waste, for example. In the past financial year we enhanced our environmental and occupational health and safety management system and also prepared our subsidiaries for the certification of their management systems in this area.

Furthermore, the Energy Management working group addressed the enhancement of energy management in line with EN 16001:2009 and the implementation of technical and organisation measures to exploit the company's energy optimisation potential. To this end, consumption data and the costs of selected processes and activities were regularly recorded and assessed in terms of their environmental impact. The following table shows the most important key figures for Roth & Rau AG.

| | 2010 | 2009 |
|---|---|---|
| Electrical energy consumption in kWh | 3,326,496 | 2,076,314 |
| Heating energy consumption in kWh | 1,523,980 | 866,057 |
| Water consumption in m³ | 7,693 | 3,235 |

$CO_2$ emissions amounted to 5,923.0 tons in 2010 (2009: 3,202.7 tons) and were caused as follows:

**$CO_2$ emissions**
in tons




The sharp rise in consumption figures is due in particular to the growth in the company's business activities, as well as to the integration of new group companies.

Detailed information about sustainability management at the Roth & Rau Group can be found in the Sustainability Report, which can be downloaded from the company's website at www.roth-rau.de.

## Takeover law disclosures

The following disclosures made pursuant to § 315 (4) of the German Commercial Code (HGB) refer to the situation on the balance sheet date on 31 December 2010.

### Composition of share capital

The share capital of Roth & Rau AG amounted to € 16,207,045.00 as of 31 December 2010 and was divided into 16,207,045 individual bearer shares. Each share has a proportionate amount of € 1.00 of the share capital and entitles its holder to one vote at the Annual General Meeting. All shares involve the same rights and obligations.

### Restrictions on voting rights or the assignment of shares

A lockup agreement is in place with the major shareholder OTB Group B.V., which holds 6.34 % of the shares in Roth & Rau AG, until 31 July 2011. There are no further restrictions on the assignment of shares or they are not known to the Management Board. The Management Board is also not aware of any restrictions on voting rights.

### Equity interests, shares granting special rights and voting right control

Direct or indirect shareholdings in the capital of Roth & Rau AG which exceed 10 % of the voting rights do not exist or are not known to the Management Board. There are no shares with special rights granting powers of control. Furthermore, the Board is not aware of any voting right controls in the event of employees holding an interest in the capital and not exercising their rights of control directly.

### Appointment and dismissal of Management Board members and amendments to Articles of Association

The appointment and dismissal of members of the Management Board is governed by § 84 and § 85 of the German Stock Corporation Act (AktG), as well as by § 6 of the Articles of Association of Roth & Rau AG. According to the Articles of Association, the Supervisory Board is responsible for appointing members of the Management Board and for determining their number. Amendments to the Articles of Association are adopted by the Annual General Meeting and, pursuant to § 179 et seq. of the German Stock Corporation Act (AktG), require approval by at least three quarters of the share capital represented upon adoption of the resolution. In deviation to this requirement, § 11 of the Articles of Association allows the Supervisory Board to adopt amendments to the Articles of Association which only affect the respective formulation.

### Powers of the Management Board to issue shares

Authorised Capital I: Pursuant to § 5 (6) of the Articles of Association, the Management Board is authorised until 20 May 2015, subject to approval by the Supervisory Board, to increase the company's share capital on one occasion or in several partial amounts by a total of up to € 1,620,704.00k by issuing a total of up to 1,620,704 new bearer shares in return for cash contributions.

Subject to approval by the Supervisory Board, the Management Board may exclude shareholders' subscription rights

1. When the issue amount of the new shares does not fall significantly short of the stock market price of equivalent shares in the company upon the issue amount being determined pursuant to § 203 (1) and (2) and § 186 (3) Sentence 4 of the German Stock Corporation Act (AktG). This authorisation to exclude subscription rights only applies to the extent that the total prorated amount in the share capital attributable to those shares to be issued in the context of the capital increase does not exceed 10 % of the share capital either upon this authorisation taking effect or upon this authorisation being exercised. The prorated amount in the share capital of those shares issued or disposed of to the exclusion of subscription rights during the term of this authorisation with direct or analogous application of § 186 (3) Sentence 4 of the German Stock Corporation Act (AktG) must be imputed to the aforementioned maximum amount for the exclusion of subscription rights; shares issued or to be issued during the term of this authorisation as a result of bonds with conversion or option rights issued in accordance with this requirement must also be imputed to the aforementioned maximum amount.
2. In order to exclude subscription rights relating to residual amounts.
3. To the extent necessary to protect against dilution in order to grant subscription rights to new shares to bearers of conversion or option rights issued or to be issued by the company or its group companies to the extent to which they would be entitled to such having exercised their conversion or option rights.

Authorised Capital II: Pursuant to § 5 (7) of the Articles of Association, the Management Board is authorised until 17 May 2014, subject to approval by the Supervisory Board, to increase the company's share capital on one occasion or in several partial amounts by a total of up to € 1,732,954.00k by issuing a total of up to 1,732,954 new individual bearer shares in return for cash and/or non-cash contributions.

Subject to approval by the Supervisory Board, it may exclude shareholders' subscription rights:
1. Upon any capital increase executed in return for non-cash contributions in order to acquire companies, parts of companies or shareholdings in companies.
2. In order to exclude subscription rights relating to residual amounts.
3. To the extent necessary to protect against dilution in order to grant subscription rights to new shares to bearers of conversion or option rights issued or to be issued by the company or its group companies to the extent to which they would be entitled to such having exercised their conversion or option rights.

Conditional Capital: Pursuant to § 5 (8) of the Articles of Association, the share capital is conditionally increased by up to € 3,241,409.00 by issuing up to 3,241,409 new individual bearer shares. The conditional capital increase serves to grant bearer shares to the bearers or creditors of convertible and/or warrant bonds, profit participation rights and/or profit participation bonds and/or combinations of these instruments issued by the company or by its direct or indirect group companies in return for cash consideration on the basis of the authorisation adopted under Agenda Item 9 at the Annual General Meeting on 21 May 2010 to the extent that such instruments grant conversion or option rights to bearer shares in the company or stipulate an obligation to exercise such conversion rights. The issue of new bearer shares from conditional capital may only be executed at a conversion or option price corresponding to the requirements of the authorisation adopted under Agenda Item 9 at the Annual General Meeting on 21 May 2010. The conditional capital increase may only be executed to the extent that option or conversion rights are exercised or to the extent that the bearers or creditors with such conversion obligations actually meet their conversion obligations and to the extent that such obligations are not satisfied by drawing on treasury stock or new shares resulting from the exercising of authorised capital. New bearer shares have the same profit participation rights as equivalent shares already in circulation.

The Management Board is authorised, subject to approval by the Supervisory Board, to stipulate further details governing the execution of capital increases from Authorised Capital I and Authorised Capital II and the execution of conditional capital increases.

### Powers of the Management Board to buy back shares

By resolution of the Annual General Meeting on 21 May 2010 the company is authorised until 20 November 2012 to acquire treasury stock up to a total of 10 % of the current share capital. Such acquisition may also be undertaken by group companies dependent on the company or by third parties acting on behalf of the company or such group companies.

The acquisition may be executed via the stock exchange, by means of a public purchase offer addressed to all shareholders or by means of a public call for the submission of sales offers. In the case of acquisition via the stock exchange, the purchase price may not be more than 10 % higher or 30 % lower than the average closing price of the company's share weighted in terms of daily trading volumes on the Xetra trading system (or any successor system replacing the Xetra system) of the Stock Exchange in Frankfurt am Main on the three trading days preceding the acquisition of the shares. In the case of a public purchase offer or a public call for the submission of sales offers, the purchase price thereby offered or the limits of the price range offered (excluding ancillary acquisition costs) may not be more than 10 % higher or 20 % lower than the average closing price of the company's share weighted in terms of daily trading volumes on the Xetra trading system (or any successor system replacing the Xetra system) of the Stock Exchange in Frankfurt am Main on the five trading days preceding publication of the purchase offer or of the public call for the submission of sales offers. Should any substantial variances to the purchase price offered or the limits of the price range offered arise in the stock market price of the company's share in Xetra trading (or any successor system replacing the Xetra system) of the Stock Exchange in Frankfurt am Main in the period following publication of such purchase offer or such public call for the submission of sales offers, then the offer or call may be adjusted. In this case, the new offer is based on the average price on the five trading days prior to publication of such adjustment. The volume of the offer may be limited. Should the total subscription for the offer exceed this volume or, in the case of a call for the submission of sales offers, should not all offers be accepted in the event of there being several equivalent offers, then acceptance must be consistent with the ratio of the shares thereby offered. Preferred acceptance of lower numbers of up to 50 shares offered by the company for acquisition may be provided for per shareholder.

Alongside disposal via the stock exchange or by means of an offer addressed to all shareholders, the Management Board is also authorised, subject to approval by the Supervisory Board, to use the treasury stock acquired in accordance with the aforementioned authorisation as follows:

1. Treasury stock may be sold to third parties to the exclusion of shareholders' subscription rights in return for cash payment at a price that does not fall materially short of the stock market price of equivalent shares in the company at the time of such sale. This authorisation to exclude subscription rights is only valid to the extent that the shares to be disposed of do not account for a prorated amount of the existing share capital in the company of more than 10% either upon this authorisation becoming effective or upon this authorisation being exercised. This maximum amount includes the prorated amount of share capital attributable to any shares issued during the term of this authorisation to the exclusion of subscription rights by direct or analogous application of § 186 (3) Sentence 4 of the German Stock Corporation Act (AktG). It also includes those shares issued or to be issued during the term of this authorisation as a result of bonds with conversion or option rights issued in accordance with this requirement.
2. Treasury stock may be offered and assigned to third parties to the exclusion of shareholders' subscription rights in return for non-cash consideration in connection with the acquisition of companies, parts of companies or shareholdings.
3. Treasury stock may be used to the exclusion of shareholders' subscription rights to satisfy subscription and conversion rights arising as a result of the exercising of option or conversion rights or to satisfy conversion obligations granted or imposed due to the authorisation to issue warrant and/or convertible bonds, profit participation rights and/or profit participation bonds and/or combinations of these instruments adopted under Agenda Item 9 at the Annual General Meeting on 21 May 2010.
4. Treasury stock may be granted to the exclusion of shareholders' subscription rights to employees in the company and to the directors, officers and employees of affiliated companies as a token of appreciation in the context of the company's 20th anniversary to the extent that no employee, director or officer may receive more than five shares each in the course of this measure.
5. Treasury stock may be retired without any further resolution by the Annual General Meeting. Retirement leads to a reduction in the share capital. The Supervisory Board is authorised to amend the formulation of the Articles of Association in line with the scope of such retirement. Deviating from this provision, the Management Board may determine that the share capital should remain unchanged upon such retirement and that the portion of share capital attributable to other shares should rather increase pursuant to § 8 (3) of the German Stock Corporation Act (AktG). In this case, the Management Board is authorised to adjust the disclosure of the number of shares in the Articles of Association.

The aforementioned authorisations to acquire, retire, resell or otherwise use treasury stock may also be exercised in part.

Shareholders' statutory subscription rights to treasury stock are excluded pursuant to § 71 (1) No. 8 and § 186 (3) and (4) of the German Stock Corporation Act (AktG) to the extent that these shares are used in accordance with the aforementioned authorisations set out in Points (1) to (5).

Together with other shares in the company already acquired by the company and still in its possession or which are attributable to the company pursuant to § 71d and § 71e of the German Stock Corporation Act (AktG), the treasury stock acquired on the basis of this authorisation may at no time exceed 10 % of the company's share capital.

The company acted on this authorisation to a limited extent in the year under report by using the treasury stock referred to in Point (4). Further information can be found under Roth & Rau's Share on Page 24.

Roth & Rau AG did not own any treasury stock as of 31 December 2010.

### Major agreements subject to change of control following a takeover bid

The syndicated loan agreement concluded in 2008, consisting of a working capital credit line of up to € 50 million and a guarantee line of up to € 110 million, and the promissory note bond of € 19 million taken up in the previous year include customary clauses applicable in the event of a takeover bid. Mandatory unscheduled repayments of the full amount have been agreed in the event of any shareholder holding 50 % or more of the voting rights in the company.

### Compensation agreements in the event of a takeover bid

Members of the Management Board receive compensation amounting to three basic annual salaries, nevertheless not exceeding a maximum of the compensation due for their remaining contractual terms, in the event of their contracts being prematurely terminated due to a change of control. Change of control is defined as notification under § 21 (1) of the German Securities Trading Act (WpHG) that one shareholder or a pool of several shareholders hold at least 50 % of the voting rights, the conclusion of an affiliation agreement with the company as a dependent company as defined in § 291 et seq. of the German Stock Corporation Act (AktG) or incorporation of the company pursuant to § 319 of the German Stock Corporation Act (AktG). The pension commitment made to the Management Board member Thomas Hengst on the basis of his employment contract becomes vested upon any change of control, irrespective of the completion of any potential waiting period or other contractual arrangements.

# Business Framework

## Macroeconomic developments

The global economy showed a marked recovery from the effects of the worldwide financial and economic crisis in 2010. Global gross domestic product (GDP) grew by 4.8 % in the past year following the decline of 0.9 % reported for 2009.

However, the pace of growth in the global economy lost considerable momentum as the year progressed. Growth was slowed by the consolidation measures introduced in numerous economies and the marked tightening up of fiscal policy in an increasing number of countries. These factors were reflected in particular in the development in global trade volumes, which hardly grew at all in the second half of 2010.

Above all, the pace of growth in developing and emerging economies, which had been driven by expansive economic policies in the first half of the year, reduced noticeably in the second half of the year. One exception here was China, whose economy showed strong growth until recently. Chinese GDP rose by 10.7 % in 2010. In the USA, as in most other industrialised economies, the rate of manufacturing output growth faltered with the gradual expiry of the stimulus provided by economic recovery programmes. What's more, the USA has had to contend with a persistently high unemployment rate of 9.8 %. GDP growth amounted to 2.8 %, thus slightly exceeding the aggregate figure for the industrialised economies as a whole (+2.4 %).

The euro area economy stabilised in 2010. Overall, euro area GDP grew by 1.7 %, with a variety of developments in individual member states. Alongside Germany, Finland and Austria showed especially marked growth, while output in the Spanish and Greek economies continued to decline. Against the backdrop of the debt crisis, moreover, the situation on the financial markets also deteriorated once more. On the other hand, the consolidation measures, in some cases drastic, introduced in the relevant countries have begun to show initial positive effects.

The German economy has recovered from the global economic crisis faster than expected even a year ago. Following a decline of 4.7% in 2009, price-adjusted gross domestic product (GDP) showed marked growth of 3.6% in 2010. In their spring survey, leading economic research institutes had still only expected growth of 1.5%. The higher level of growth was due on the one hand to the export sector, which reassumed its role as key growth driver for the German economy in the past year following negative growth rates in 2008 and 2009. Exports thus rose by 14.1 % overall in 2010, while imports showed slightly lower growth of 12.6 %. The resultant trade balance thus contributed 1.3 percentage points to the growth in GDP. On the other hand, the domestic economy also generated increasing growth momentum. Alongside investments in equipment, which rose sharply by 10.9 %, private consumer spending also showed a noticeable recovery. Government consumption spending grew by 2.3 % and private consumer spending by 0.4 %. The latter figure benefited from rising employment totals and the increase in private household disposable incomes due to the massive scaling back in reduced working hours' schemes and collectively agreed pay increases.

## Sector developments

The global photovoltaics market showed strong growth in the past year, with demand being driven above all by the drastic reductions in photovoltaics module prices during the 2009 crisis year. According to various sector studies, the market volume in 2010, measured in terms of the global increase in installed photovoltaics output capacities, amounted to between 13 and 16 gigawatts. The market thus grew by around 120 % between 2009 and 2010.

The German solar market also witnessed significant growth in the past financial year. Demand for photovoltaics applications was driven, especially in the first half of the year, by purchases being brought forward due to the reduction in feed-in compensation from 1 July 2010 and favourable financing conditions. Based on estimates compiled by the BSW-Solar industry association, solar electricity systems with a total output of between 7 and 8 gigawatts were installed in Germany in the past year alone. With a share of around 50 %, Germany was thus still the world's largest solar market in 2010.

Suppliers of production equipment benefited from this development in the past year. The reduction in solar subsidies in Germany and the ongoing pressure on solar module prices intensified cost pressure at manufacturers. To survive in the market and generate profitable growth in the longer term, manufacturers will be increasingly obliged to achieve significant cuts in their production costs over the next two to three years. In view of this, there was a further migration in the production of solar cells and solar modules to Asia. This led to a wave of investment, especially in China, that has continued into the new year and filled equipment providers' order books. Large Chinese manufacturers in particular have invested heavily in expanding their capacities and now have the world's largest cell production factories. European and North American manufacturers, by contrast, have forfeited some of their competitive edge.

Given increasing competitive and cost pressure, there is ever greater demand for new technologies facilitating higher output efficiency rates in parallel with lower production costs in the crystalline silicon solar cell segment. Developments here are being promoted both by the equipment industry and by large cell manufacturers themselves. Many cell manufacturers currently see hetero junction technology as offering the best prospects in this respect.

Thin film technologies, especially hard hit by the crisis, are in greater demand once again. Thin film solar modules based on cadmium telluride (CdTe) technologies are still the most cost effective, and the only ones to be manufactured in mass production. Given the technological progress made in terms of higher output efficiency rates both for CdTe and for CIGS and a-Si thin film solar modules, we expect thin film technologies to gain further market share in future. However, even in the longer term we do not expect these technologies to replace crystalline technology.

## Summary of business framework

The boom in the solar industry has also benefited business at Roth & Rau AG. There has been a sharp rise in new orders in the single equipment business and new developments such as the second SiNA generation have met with a very successful reception on the market. The increasing migration of cell and module production to Asia led our export quota to rise to 90.1 %. Demand for turnkey production lines was unable to keep up with this growth, a development attributable above all to the increasing maturity of the solar industry and the declining attractiveness of the solar market for new entrants. In recent years, the many established providers in the market have built up an enormous head start in terms of their experience and cost structures, a factor that has significantly raised barriers to entry in the cell and module production segment. Roth & Rau has reacted to this development by realigning its strategy to focus on the single equipment business and on its core coating competency (→ Strategy chapter, Page 33).

# Business Performance

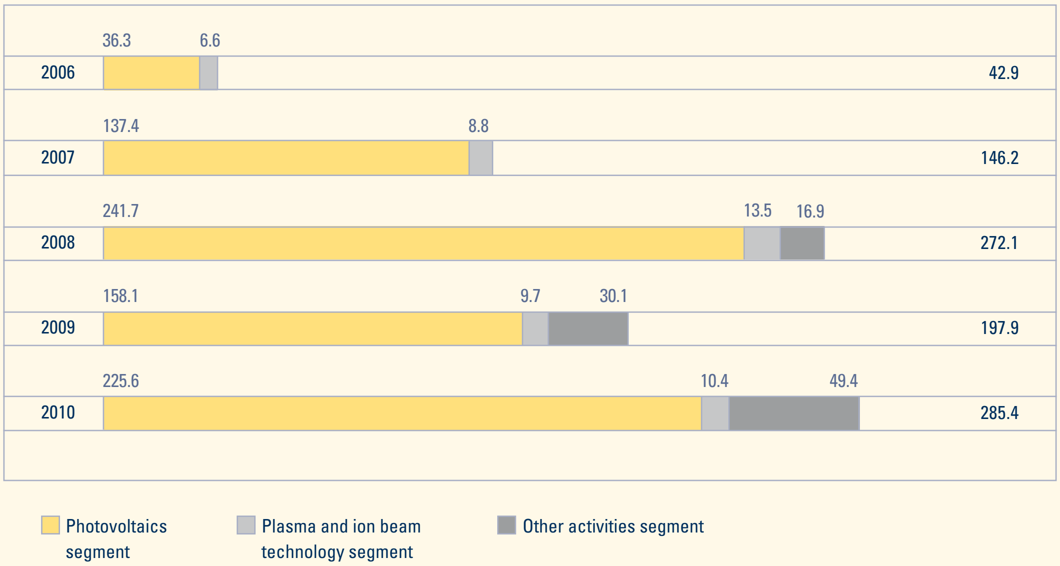
## Sales performance

The Roth & Rau Group generated **sales** of € 285,357k in the 2010 financial year, thus exceeding the previous year's figure of € 197,903k by 44.2 %. The Group's **gross performance** rose by 57.5 % from € 209,349k to € 329,708k. This figure includes changes in inventories amounting to € 19,819k (2009: € -3,568k) and own work capitalised of € 24,532k (2009: € 15,014k). At € 5,865k, other operating income was also higher than in the previous year (2009: € 4,950k).

The increase in sales in the past year was driven above all by strong growth in the solar industry and the resultant rise in investment in production equipment. Sales in the fourth quarter of 2010 amounted to € 96,119k (2009: € 38,389k). The OTB Solar subsidiary acquired in the 2010 financial year contributed € 84,559k to consolidated sales. With a 79.1 % share, the photovoltaics segment once again generated the largest share of sales. The plasma and ion beam technology and other activities segments accounted for 3.6 % and 17.3 % of sales respectively. Further information about developments in the individual segments can be found in the Segment Report from Page 56 onwards.

### Multiyear overview of sales

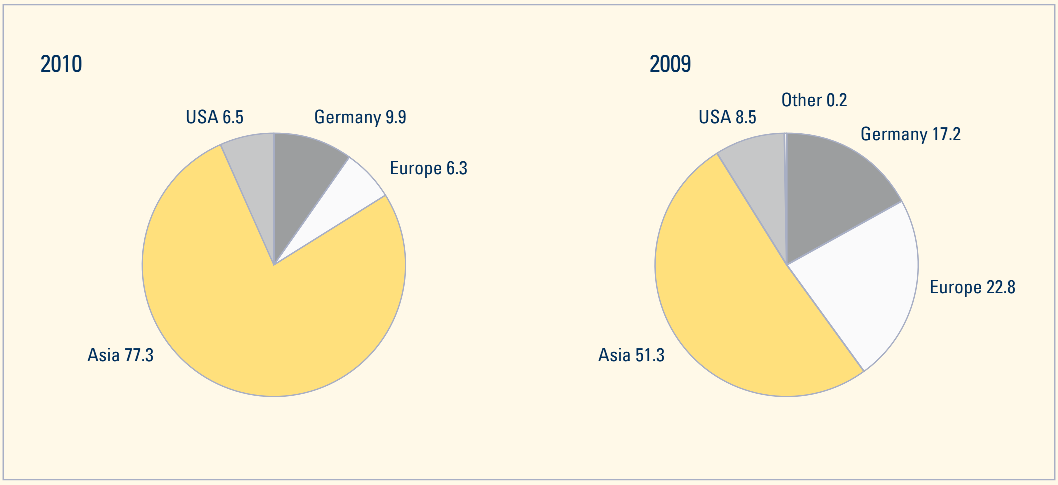
€ million




The export quota rose further in the past year. Overall, 90.1 % of sales, equivalent to € 257,034k, were generated with foreign customers in 2010. With sales of € 220,605k, Asia was, as in previous years, the main focus of the international business (2009: € 101,493k). This reflects the increasing significance of Asian countries for the solar industry.

**Sales by region**

in %




## Earnings performance

The Group's earnings performance in the past year was significantly influenced by one-off items totalling € -52,983k (of which € 44,710k charged to EBIT and € 8,273k to net financial expenses). In view of this, **earnings before interest and taxes (EBIT)** amounted to € -27,290k in the 2010 financial year (2009: € 16,100k). Excluding one-off items, EBIT amounted to € 17,420k.

Of the one-off items, around € 8,430k related to impairment losses already recognised for turnkey projects as of 30 September 2010 and a further amount of € 12,500k (of which € 4,227k charged to EBIT and € 8,273k to net financial expenses) was recognised on account of the threat of insolvency at the Group's US customer SpectraWatt. Both developments were already published in ad-hoc announcements in the fourth quarter of 2010. In addition to these items, further impairment losses of € 10,248k have been recognised for existing turnkey projects and provisions of € 11,395k for legal and tax risks in connection with major projects still underway. Furthermore, upon introducing a new strategic alignment providing, among other factors, for a streamlining of the product portfolio, the Management Board has discontinued activities in specified product groups and related development projects. This has involved further one-off impairment losses of around € 3,910k.

One major one-off item of € 6,500k resulted from the necessary conversion of the accounting method used to recognise single equipment in the SiNA series from the percentage of completion method to measurement at cost. Recognition of the relevant profits has thus been postponed to the current 2011 financial year.

The items in the income development showed the following specific developments:

**Cost of materials** showed a significant increase of 60.3 % from € 118,059k to € 189,216k. This development reflects the integration of OTB Solar, whose component production involves a very high share of externally supplied modules. As a percentage of sales, the materials quota rose correspondingly from 59.7 % to 66.3 %.

The integration of OTB Solar and the ongoing stocking up of personnel resources in the research and development, technology, engineering, sales and administration departments led the total number of employees to increase from 874 to 1,209 as of 31 December 2010. Accordingly, **personnel expenses** for the past financial year rose by 58.1 % from € 38,724k to € 61,229k. As a percentage of sales, the personnel expense quota amounted to 21.5 % (2009: 19.6 %). Further information can be found in the Employees chapter from Page 39 onwards.

**Other operating expenses** rose sharply from € 33,198k to € 90,572k. This figure includes impairment losses of € 27,125k recognised on current assets (2009: € 742k). These involved part of the write-downs on the SpectraWatt project and write-downs of inventories in the turnkey business. Merchandise delivery costs grew by € 8,099k to € 13,844k (2009: € 5,745k) on account of increased business volumes and the growth in the volume of systems supplied. Advertising and travel expenses, which rose due to the increasing internationalisation of business activities, amounted to € 10,532k, as against € 6,789k in the previous year. Furthermore, legal and advisory expenses for provision against risk increased by € 9,494k to € 15,972k and miscellaneous expenses incurred in the context of customary business activities rose by € 5,852k to € 12,085k. A detailed description of the items included in other operating expenses can be found in Note 5.8. of the Notes to the Consolidated Financial Statements.

**Earnings before interest**, **taxes**, **depreciation and amortisation (EBITDA)** amounted to € -5,444k (2009: € 24,318k). This figure includes an amount of € 41,520k in connection with the one-off items outlined above. Excluding one-off items, operating EBITDA amounted to € 36,076k.

The increase in **depreciation and amortisation** by € 13,628k to € 21,846k also reflects one portion of the one-off items. This figure thus includes write-downs of € 4,429k on development projects, technologies and related non-current assets no longer continued or required in the context of the new group strategy. Scheduled depreciation of property, plant and equipment and amortisation of intangible assets and capitalised research and development expenses rose from € 8,097k to € 17,417k, with OTB Solar accounting for € 6,309k of this increase. This figure includes write-downs of € 4,887k on assets in the context of purchase price allocations (2009: € 2,523k).

**Net financial expenses** amounted to € -6,968k and were chiefly influenced by the write-down of the convertible bond granted to the Group's customer SpectraWatt. In the 2009 financial year, Roth & Rau AG had participated in a financing round for this US customer with an amount corresponding to around € 11.2 million (USD 15.0 million). In the course of the financial year, this amount was offset against outstanding payment receivables and recognised under those other non-current receivables subsequently written down as of 31 December 2010. In view of this factor, financial expenses rose year-on-year from € 1,217k to € 9,457k. Financial income grew from € 1,824k to € 2,489k, a development chiefly due to the recognition of income on a pre-hedging (interest) measure in the context of the promissory note bond transaction.

**Earnings before taxes** (EBT) therefore amounted to € -34,258k (2009: € 16,707k). These negative annual earnings figures led to a positive tax item of € 8,403k.

After taxes and minority interests, **consolidated net income** for the past financial year amounted to € -25,809k, equivalent to **earnings per share** of € -1.64 (2009: € 0.94).

### Sales and earnings position

| € 000s | 2010 | 2009 | Change |
|---|---|---|---|
| Sales | 285,357 | 197,903 | 44.2 % |
| International share in % | 90.1 | 82.8 | 7.3 PP |
| One-off items affecting EBITDA | -41,520 | 0 | / |
| EBITDA | -5,444 | 24,318 | / |
| One-off items affecting EBIT | -44,710 | 0 | / |
| EBIT | -27,290 | 16,100 | / |
| Net financial expenses | -6,968 | 607 | / |
| EBT | -34,258 | 16,707 | / |
| Consolidated net income after minority interests | -25,809 | 12,929 | / |
| Earnings per share in € | -1.64 | 0.94 | / |
| before one-off items (for information): | | | |
| EBITDA, adjusted | 36,076 | 24,318 | 48.4 % |
| EBITDA margin in %, adjusted | 12.6 | 12.3 | 0.3 PP |
| EBIT, adjusted | 17,420 | 16,100 | 8.2 % |
| EBIT margin in %, adjusted | 6.1 | 8.1 | -2.0 PP |

## Order situation

The Group's order situation in 2010 was characterised by the global increase in capacities in the photovoltaics industry. At € 417,072k, the volume of orders received more than doubled compared with the previous year. The new group subsidiary OTB Solar contributed € 112,668k to incoming orders in 2010. Orders on hand amounted to € 336,484k as of 31 December 2010, equivalent to growth of 64.3 % on the previous year's reporting date. The book-to-bill ratio, which expresses new orders as a proportion of sales, improved from 1.0 to 1.5.

The net new order figure of € 25,004k for the fourth quarter of 2010 includes the effects of the write-downs on turnkey projects. New orders totalling € 142,079k were received in the final quarter, while the conservative measurement of existing orders in the order books led to the retirement of orders worth around € 117,075k. Reference is made in this respect to the Events After the Balance Sheet Date chapter.

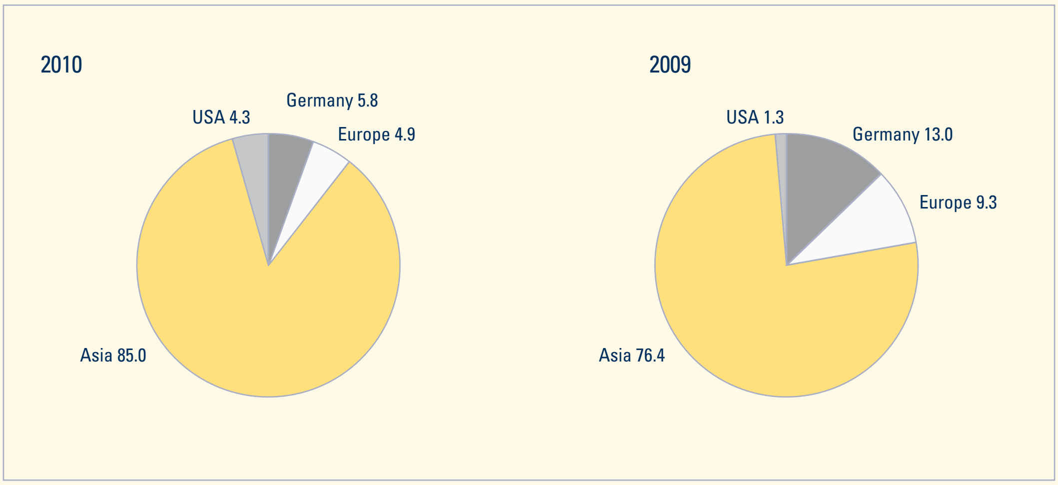
### Order position

| € 000s | 2010 | 2009 | Change |
|---|---|---|---|
| New orders | 417,072 | 195,687 | 113.1 % |
| International share in % | 94.2 | 87.0 | 7.2 PP |
| Orders on hand as of 31.12. | 336,484 | 204,769 | 64.3 % |
| Book-to-bill ratio | 1.5 | 1.0 | 50.0 % |

The international share of new orders rose further from 87.0 % to 94.2 % in the past financial year, with 85.0 % of new orders, and thus the great majority, once again coming from Asia (2009: 76.4 %). This growth is attributable to the increasing migration of solar cell and module production to Asia, and especially to China. While Germany and Europe have become less significant in relative terms, demand has picked up noticeably in the USA. Here, the Group managed to acquire new orders of € 18,090k (2009: € 2,439k), as a result of which the US share of total new orders rose from 1.3 % to 4.3 %.

**New orders by region**

in %




With new orders of € 344,502k, the **photovoltaics segment** accounted for the overwhelming share of new orders (2009: € 161,677k). This corresponds to an 82.6 % share of new orders. Orders in the single equipment business showed especially marked growth from € 56,983k to € 321,116k. Here, Roth & Rau profited from the successful launch of the new generation of SiNA series antireflective coating systems, which stand out compared with the previous model on account of their substantial cost benefits and numerous technological innovations. Moreover, one key milestone involved the sale to a US customer of the company's first mass production system based on hetero junction technology. This new cell technology, developed in the Swiss Technology Centre operated by Roth & Rau Switzerland, enables efficiency rates in excess of 20 % to be achieved while at the same time ensuring favourable production costs. Following adjustments, new orders in the turnkey business amounted to € 23,386k. These adjustments related to projects where the customers have not yet met their contractual obligations and where the further implementation of the respective projects is currently deemed uncertain.

The **plasma and ion beam technology** segment received new orders worth € 23,379k in total, equivalent to year-on-year growth of 147.4 %. This development was chiefly due to the significantly better investment climate in the semiconductor industry and to major follow-up orders for existing and newly developed products. In particular, the Group managed to acquire follow-up orders from an existing customer for IonScan systems used to determine the frequency of acousto-electrical filters in mobile communications.

New orders in the **other activities** segment doubled from € 24,559k in the previous year to € 49,191k. This growth was mainly driven by an increase in new orders in the spare parts and services business by € 23,028k to € 33,714k.

### New orders by segment

| € 000s | 2010 | 2009 | Change |
|---|---|---|---|
| Photovoltaics | 344,502 | 161,677 | 113.1 % |
| Single equipment | 321,116 | 56,983 | 463.5 % |
| Turnkey | 23,386 | 104,694 | -77.7 % |
| Plasma and ion beam technology | 23,379 | 9,451 | 147.4 % |
| Other activities | 49,191 | 24,559 | 100.3 % |
| Spare parts and services | 33,714 | 10,686 | 215.5 % |
| Software | 9,994 | 9,073 | 10.2 % |
| Miscellaneous | 5,483 | 4,799 | 14.3 % |
| Total | 417,072 | 195,687 | 113.1 % |

## Segment report

The business activities of the Roth & Rau Group in the 2010 financial year were subdivided into the three segments of photovoltaics, plasma and ion beam technology and other activities. Detailed information about the products and technologies in each segment can be found in the Segments and Value Creation chapter from Page 30 onwards.

Consistent with internal management reporting structures, key segment figures have been presented prior to consolidation and purchase price allocation items. This enables the operating performance of the individual segments to be assessed (→ Notes to Consolidated Financial Statements, Note 3.).

### Photovoltaics

The photovoltaics segment generated sales of € 225,596k in the 2010 financial year, equivalent to a 42.7 % improvement on the previous year's figure. Its share of consolidated sales amounted to 79.1 %, as against 79.9 % in the previous year.

The single equipment business field contributed the largest share of sales, with revenues of € 202,834k (2009: € 85,102k). This increase was driven by the dynamic growth in the solar industry in the past year and by the expansion of production capacities at established manufacturers. EBIT were unable to keep pace with sales, as earnings were negatively affected to the tune of € 6,500k due to the amended accounting treatment of the second generation of SiNA systems and by an amount of € 2,324k due to the write-down of capitalised development expenses. Overall, EBIT in the single equipment business field amounted to € 9,099k, as against € 10,083k in the previous year.

The sales performance of the turnkey production lines business field reflects the reduced volume of business activity in this area. Extensive impairment losses, including write-downs of inventories and of the customer receivable due from SpectraWatt and risk provisions, were recognised in the third and fourth quarters of 2010. In total, the one-off items recognised in the turnkey product segment amounted to € -35,871k. Following adjustment, this business field generated sales of € 22,762k in the 2010 financial year, down from € 72,983k in the previous year. EBIT amounted to € -36,691k (previous year: € 1,503k).

As a whole, the photovoltaics segment therefore reported EBIT of € -27,592k.

The number of employees in this segment rose from 468 to 690 as of the balance sheet date.

**Key figures: photovoltaics**

| € 000s | Single equipment 2010 | Single equipment 2009 | Turnkey production lines 2010 | Turnkey production lines 2009 | Total 2010 | Total 2009 | Change |
|---|---|---|---|---|---|---|---|
| Sales | 202,834 | 85,102 | 22,762 | 72,983 | 225,596 | 158,085 | 42.7 % |
| EBITDA | 20,029 | 12,464 | -34,264 | 2,582 | -14,235 | 15,046 | / |
| EBITDA margin in % | 9.9 | 14.6 | / | 3.5 | / | 9.5 | / |
| EBIT | 9,099 | 10,083 | -36,691 | 1,503 | -27,592 | 11,586 | / |
| EBIT margin in % | 4.5 | 11.8 | / | 2.1 | / | 7.3 | / |
| Employees as of 31.12. | 571 | 377 | 119 | 91 | 690 | 468 | 47.4 % |

## Plasma and ion beam technology

Sales in the plasma and ion beam technology (PIB) segment increased by 7.4 % from € 9,690k to € 10,404k in the past financial year. This segment therefore accounted for a 3.6 % share of consolidated sales (2009: 4.9 %).

This segment's profitability improved markedly in the period under report. EBIT rose year-on-year from € 302k to € 1,825k, equivalent to an EBIT margin of 17.5 %.

A total of 89 employees worked in this segment as of 31 December 2010.

**Key figures: plasma and ion beam technology**

| € 000s | 2010 | 2009 | Change |
|---|---|---|---|
| Sales | 10,404 | 9,690 | 7.4 % |
| EBITDA | 3,146 | 1,440 | 118.5 % |
| EBITDA margin in % | 30.2 | 14.9 | 15.3 PP |
| EBIT | 1,825 | 302 | 504.3 % |
| EBIT margin in % | 17.5 | 3.1 | 14.4 PP |
| Employees as of 31.12. | 89 | 62 | 43.5 % |

## Other activities

Other activities, the Group's third segment, generated sales of € 49,357k in the 2010 financial year, equivalent to a 63.8 % improvement on the previous year's figure. Its share of consolidated sales therefore rose from 15.2 % to 17.3 %.

The main sales driver in this segment was the increasingly important spare parts and services business. Sales here surged from € 10,383k to € 33,954k. Sales with other products reduced from € 4,396k to € 3,826k. The software segment, which mainly consists of the AIS Automation and Romaric Automation subsidiaries, contributed € 11,577k to segment sales (2009: € 15,349k).

The earnings performance of the other activities segment was affected in the past financial year by the substantial investments in building up service structures in Asia, start-up expenses at the service companies located there and the high import levies charged by China on spare parts from Europe. EBIT amounted to € 3,924k (2009: € 6,602k), equivalent to an EBIT margin of 8.0 % (2009: 21.9 %). Once the development stage has been completed – and accounting for improved cost structures – we expect this segment to generate positive earnings momentum in the coming financial year.

The number of employees working in this segment rose from 344 to 430 as of 31 December 2010.

**Key figures: other activities**

| | Spare parts and services | | Software | | Miscellaneous | | Total | | Change |
|---|---|---|---|---|---|---|---|---|---|
| € 000s | 2010 | 2009 | 2010 | 2009 | 2010 | 2009 | 2010 | 2009 | |
| Sales | 33,954 | 10,383 | 11,577 | 15,349 | 3,826 | 4,396 | 49,357 | 30,128 | 63.8 % |
| EBITDA | 2,393 | 2,021 | 3,120 | 4,639 | 692 | 1,039 | 6,205 | 7,699 | -19.4 % |
| EBITDA margin in % | 7.0 | 19.5 | 26.9 | 30.2 | 18.1 | 23.6 | 12.6 | 25.6 | -13.0 PP |
| EBIT | 1,522 | 1,849 | 1,796 | 3,852 | 606 | 901 | 3,924 | 6,602 | -40.6 % |
| EBIT margin in % | 4.5 | 17.8 | 15.5 | 25.1 | 15.8 | 20.5 | 8.0 | 21.9 | -13.9 PP |
| Employees as of 31.12. | 189 | 124 | 163 | 165 | 78 | 55 | 430 | 344 | 25.0 % |

## Financial and net asset position

### Principles and objectives of financial management

The main objectives of the financial management policies pursued by the Roth & Rau Group are to safeguard the company's financial flexibility and independence and to optimise its financing costs by working with a suitable capital structure. Two key focuses in this respect involve managing financing risks and liquidity management. The liquidity supply, financing of all group companies and currency management are handled on a central basis by Roth & Rau AG. Derivative financial instruments are regularly used as hedging instruments, but not for trading or speculative purposes (→ Notes to Consolidated Financial Statements, Note 1.5.19.).

The Group's liquidity budgets are compiled on an annual basis and reviewed and updated monthly. Furthermore, the Management Board also receives weekly liquidity reports providing budget/actual comparisons and thus facilitating short-term liquidity forecasts. Operative liquidity management is organised at the respective group companies.

Available liquid funds are invested in line with uniform requirements across the Group in order to secure as consistent a rate of return on the credit balances as possible. Capital is invested exclusively at financial institutions of high credit standing and in financial assets with short capital commitment terms and subject to no, or only slight, fluctuations in value.

### Strategic financing measures

The operating business is chiefly financed by prepayments from customers and internal resources. Over and above this, we cover our capital requirements by taking up short and long-term financing facilities. In this, we accord priority to maintaining a highly diversified investor structure and a broad spread of maturity dates. Further financing scope is provided by our access to the capital market and the syndicated loan facility with a total volume of € 160 million and a term running until 2013. Furthermore, a promissory note bond transaction with a volume of € 19 million was performed in 2010 to provide medium-term refinancing for infrastructure investments at the Group's Hohenstein-Ernstthal location. The various tranches of this facility have terms of between five and seven years (→ Notes to Consolidated Financial Statements, Note 4.4.1.). The main financing facilities include customary agreements requiring compliance with specified key figures (covenants). Roth & Rau had met all of its contractual obligations as of 31 December 2010.

### Significance of off-balance-sheet financing instruments for the Group's financial and net asset position

The Group has not made use of any off-balance-sheet financing instruments to finance its operations. We draw above all on operating leases for various items of technical equipment and plant and operating equipment. In terms of their scope, however, these arrangements do not have any material influence on the financial and net asset position of the Roth & Rau Group ( →Notes to Consolidated Financial Statements, Note 1.5.11.).

## Cash flow analysis

Notwithstanding the difficult underlying framework, the Roth & Rau Group can report a pleasing development in its cash flow for the year under report.

The cash flow from operating activities amounted to € 54,103k, as against € -1,359k in the previous year. The consolidated net income of € -25,855k was offset by higher depreciation and amortisation of € 21,856k (2009: € 8,228k). Other non-cash income and expenses amounted to € 34,541k and mainly included value adjustments for receivables and inventories, as well as risk provisions in the turnkey business.

Within working capital, the cash flow was mainly burdened by the increase in inventories, which accounted for € 38,928k. Inventories were chiefly affected by the transition to module production upon the launch of the second generation of the SiNA system series, and thus by the resultant conversion of accounting policy from the percentage of completion method to measurement at cost, as well as by the increase in inventories at OTB Solar. The cash flow from operating activities was increased, on the other hand, by the reduction in receivables from long-term construction contracts by € 39,652k, the increase in prepayments received by € 40,421k and the increase in business-related liabilities by € 14,245k. Overall, the inflow of funds resulting from the reduction in working capital amounted to € 34,788k.

The outflow of funds for investing activities rose year-on-year by € 13,102k from € 25,243k to € 38,345k. The Group invested € 19,031k in property, plant and equipment (2009: € 7,372k) and € 17,045k in intangible assets (2009: € 11,578k). These figures mainly reflect the acquisition of OTB Solar and the investments made in the development division. The outflow of funds for acquisitions of subsidiaries, less cash and cash equivalents thereby acquired, amounted to € 2,212k. The remaining € 250k related to investments in financial assets. Further details can be found in the Investments chapter on Page 62 onwards.

Financing activities resulted in a positive cash flow of € 25,998k in the 2010 financial year. The inflow of € 35,880k from the cash capital increase was countered by loan repayments of € 24,446k. The taking up of the promissory note bond led to an inflow of funds of € 19,000k.

The Roth & Rau Group had a pleasing volume of liquid resources as of 31 December 2010. Cash and cash equivalents amounted to € 107,741k (2009: € 66,041k). Furthermore, unutilised guarantee and credit lines amounting to around € 105,080k were available for the Group's financing.

### Select key figures: liquidity position

| € 000s | 2010 | 2009 |
|---|---|---|
| Cash flow | 19,315 | 25,636 |
| Decrease (+) / increase (-) in working capital | 34,788 | -26,995 |
| Cash flow from operating activities | 54,103 | -1,359 |
| Cash flow from investing activities | -38,345 | -25,243 |
| Cash flow from financing activities | 25,998 | -1,771 |
| Cash and cash equivalents at beginning of period | 66,041 | 91,515 |
| Changes in cash and cash equivalents due to changes in exchange rates, scope of consolidation and valuation | -56 | 2,899 |
| Cash and cash equivalents at end of period | 107,741 | 66,041 |

## Balance sheet

Total assets increased by € 134,450k to € 433,269k as of 31 December 2010 (2009: € 298,819k). This substantial year-on-year growth was chiefly due to the consolidation of OTB Solar and the capital increases executed in the first half of the year.

On the asset side of the balance sheet, intangible assets rose by € 51,139k from € 49,585k to € 100,724k. Intangible assets included capitalised development expenses of € 15,631k (2009: € 10,886k), as well as intangible assets of € 37,542k determined in the context of preliminary purchase price allocations (2009: € 15,552k). Furthermore, intangible assets increased by € 3,650k due to additional purchase price components in connection with earlier acquisitions. Property, plant and equipment increased by € 14,924k to € 42,952k, a development chiefly due to the construction of a new office building at the Group's Hohenstein-Ernstthal location, as well as to the consolidation of OTB. Moreover, tax loss carryovers at OTB Solar in particular led the Group's deferred tax assets to rise by € 16,685k from € 651k to € 17,336k. Overall, non-current assets grew by € 83,107k from € 79,744k to € 162,851k as of 31 December 2010, accounting for a 37.5 % share of total assets, as against 26.7 % one year earlier.

Current assets rose from € 219,075k to € 270,418k as of the 2010 balance sheet date. On the one hand, inventories showed a marked increase of € 43,129k to € 65,129k. This growth in stocks was due to the dynamic development in orders, the consolidation of OTB Solar and the transfer of former customer projects to proprietary holdings. Moreover, inventories were also increased by the transition to modular production upon the launch of the second generation of the SiNA system series. In this context, the company was required to convert its accounting treatment of these items from the percentage of completion method to measurement at cost. Alongside the rise in inventories, this change in accounting policies was also reflected in a corresponding reduction in receivables from long-term construction contracts by € 44,138k to € 50,294k. At € 35,338k, trade and other receivables were slightly up on the previous year's figure (2009: € 33,385k). Cash and cash equivalents showed marked growth of € 41,700k to € 107,741k. This increase was chiefly due to the taking up of the promissory note bond of € 19,000k, cash holdings of € 7,711k at OTB Solar, and a higher volume of prepayments received as of the balance sheet date. Overall, the share of total assets accounted for by current assets declined from 73.3 % to 62.5 % (excluding cash and cash equivalents: 37.6 %, as against 51.2 % in the previous year). The share of total assets attributable to liquid funds rose slightly from 22.1 % to 24.9 %.

On the liabilities side of the balance sheet, shareholders' equity rose by € 32,074k to € 251,352k as of 31 December 2010 (2009: € 219,278k). While the capital increases executed in the first half of 2010 led share capital to increase by € 2,407k to € 16,207k and the capital reserve to rise by € 57,403k to € 206,901k, these positive items were countered by the annual net deficit of € -25,809k. In conjunction with the sharp rise in total assets, the equity ratio thus reduced to 58.0 % at the 2010 balance sheet date, down from 73.4 % in the previous year.

Non-current debt rose by € 9,044k to € 32,806k (2009: € 23,762k). Within this item, long-term loans were affected in particular by the taking up of the promissory note bond, rising by € 18,304k to € 22,043k as a result. Deferred tax liabilities amounted to € 10,741k (2009: € 19,914k). Non-current debt thus accounted for 7.6 % of the balance sheet total (2009: 8.0 %).

Current debt showed a sharp increase of € 93,332k from € 55,779k to € 149,111k. A significant share of this increase was due to the rise in prepayments received by € 40,661k to € 45,950k (2009: € 5,289k). This item largely involved a prepayment for a major project received as of the balance sheet date on 31 December 2010, and which was thus not yet offset by any work done. Furthermore, due in particular to the risk provisions recognized in the context of turnkey project handling and the initial consolidation of the OTB Group, current provisions rose by € 26,899k from € 10,569k to € 37,468k. Given the dynamic development in new orders and improved cash management, moreover, liabilities from long-term construction contracts grew by € 7,248k to € 9,716k, while trade payables and other liabilities increased by € 10,016k to € 45,205k. Current debt accounted for 34.4 % of the balance sheet total, as against 18.7 % in the previous year.

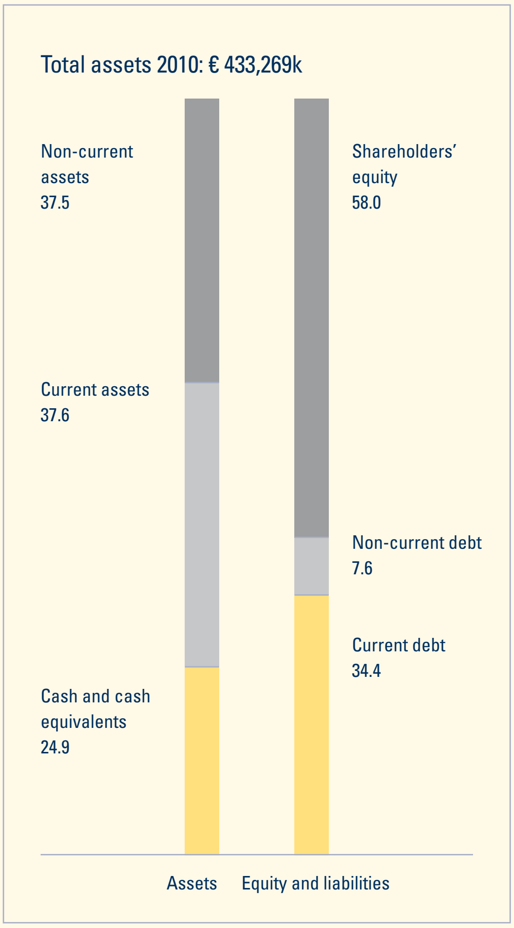
Net debt (debt capital minus cash and cash equivalents) increased year-on-year by € 60,676k to € 74,176k (2009: € 13,500k).

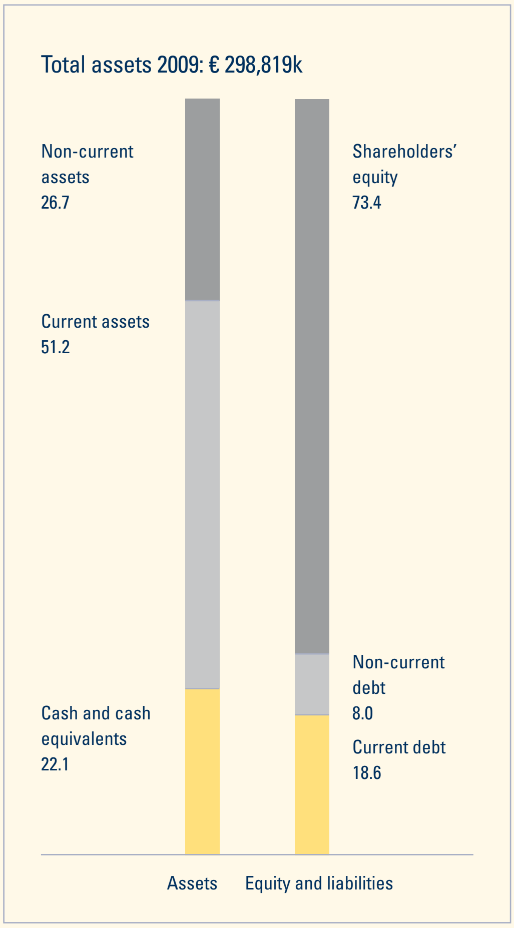
### Select balance sheet figures

| € 000s | 31.12.2010 | 31.12.2009 | Change |
|---|---|---|---|
| Total assets | 433,269 | 298,819 | 45.0 % |
| Shareholders' equity | 251,352 | 219,278 | 14.6 % |
| Equity ratio in % | 58.0 | 73.4 | -15.4 PP |

Asset and capital structure

in %




## Investments

The investments made in the 2010 financial year mainly involved research and development activities, the acquisition of OTB Solar B.V. and the construction of a further office building at the Group's main location in Hohenstein-Ernstthal. At € 89,021k, total investments were significantly higher than the previous year's figure of € 23,468k. Purchase price allocations resulted in additions of € 37,542k to intangible assets, of which € 18,885k related to goodwill, € 5,231k to technology, € 5,016k to orders on hand, € 4,734k to customer relationships and € 3,676k to the brand. Investments in property, plant and equipment totalled € 19,031k, as against € 7,371k in the previous year. Moreover, goodwill rose by € 3,650k due to additional purchase price components in connection with acquisitions made in previous years. Furthermore, capitalised development expenses, less attributable government grants, accounted for € 15,631k of total investments (2009: € 10,886k). Roth & Rau invested € 1,414k in other intangible assets (2009: € 668k).

## Summary of business performance

The 2010 financial year at the Roth & Rau Group was characterised by a positive sales performance and a sharp rise in new orders. Given the high volume of one-off write-downs, largely relating to the turnkey business, however, this performance was not reflected in the Group's key earnings figures. The measures foreseen in the Group's new strategic alignment include reducing risks in the turnkey business. By streamlining our product portfolio and implementing our extensive cost-cutting and structural optimisation programme we have introduced the right measures to secure the Roth & Rau Group's leading market position and to boost its long-term earnings strength. In view of this, we are positive in our assessment of the opportunities available to the Group in terms of its future operating and financial performance. More detailed information about future developments can be found in the Outlook from Page 68 onwards.

# Opportunity and Risk Report

The sustainable success of a company's performance is dependent on the company having a deliberate and controlled approach towards managing opportunities and risks. Dynamic worldwide growth in the sector in which the Roth & Rau Group operates regularly provides us with opportunities which we intend to exploit successfully. On the other hand, it is also important to manage potential risks appropriately so as to safeguard the company's continued existence. Opportunity and risk management therefore forms a key component of corporate management at the Roth & Rau Group.

## Opportunity and risk management system

The opportunity and risk management system is structured in such a way as to enable risks to be detected, evaluated and managed at an early stage. We define risks in this respect as including both those events which could impact negatively on the future of the Group as well as any failure to react to or adequately exploit possibilities for development and opportunities. We are making consistent efforts to improve our early warning risk detection, evaluation and management instruments and methods and to adapt these to the changing framework within which the Group operates.

Firmly anchoring the risk management system within existing organisational, reporting and management structures enables risks to be monitored across the entire Group. Not only that, all group employees have been made aware of potential risks and instructed to report these as appropriate. Individual risks are recorded at all group departments on a quarterly basis in line with specified risk categories and are then aggregated on group level at the central group controlling department. Subsequent evaluation provides information as to their probability of occurrence and maximum level of damages, as well as to any potential to endanger the company's continued existence. Given the long-term nature of the project business, this procedure is already adopted to analyse and assess orders in the acquisition stage. The risks identified are allocated to five risks classes requiring hierarchically structured reporting. Depending on the risk class, the decisions as to whether risks should be avoided, reduced or hedged are taken either on operating management level or by the Management Board.

The Management Board is provided at regular intervals with detailed information on the latest risk situation. Any material risks arising at short notice or risks to the company's continued existence are reported directly and outside the usual reporting framework when necessary. The Supervisory Board is informed by the Management Board by means of quarterly aggregate risk reports compiled on the basis of individual risk evaluation.

### Significant features of the internal control and risk management system with regard to the group financial reporting process (§ 315 (2) No. 5 HGB)

The Roth & Rau Group's internal control system for financial reporting (IKS) and risk management system are structured so as to avoid or detect any material misstatements in the financial reporting process and to safeguard the effectiveness, economic efficiency and correctness of group financial reporting and compliance with the relevant legal requirements.

The group finance and group controlling departments at Roth & Rau AG are responsible for the processes involved in group financial reporting and the preparation of the management report. These are based on the regular financial reports prepared during the financial year (budget, actual and year-on-year comparison) in the context of operating business management (→ Corporate Management, Page 34). Legislative amendments, amendments to accounting standards and other requirements are continuously monitored in terms of their relevance and potential implications for the consolidated financial statements. IKS processes are amended when necessary.

The consolidation of subsidiaries is performed via a group-wide reporting system. Working closely together with the group finance department, the group controlling department is responsible for the uniform implementation of reporting and consolidation processes across the Group and is available to assist group companies in complying with the guidelines and procedures valid throughout the Group.

To minimise risks, the IKS system includes organisational checks and controls, such as work and process guidelines, consistent application of the dual control principle, the setting of responsibilities and deputisation regulations, and IT checks. Furthermore, IKS processes relevant to the financial reporting process are continuously monitored within the framework of the risk management system.

## Opportunities

### Sector-specific opportunities

The solar industry is still in the early stages of its long-term growth. This will be driven on the one hand by rising energy demand and on the other by the challenges presented by climate change. Moreover, experts view the achievement of grid parity, i.e. the point at which electricity generated from solar energy becomes competitive with gross electricity prices in private households, as representing a key growth driver. Solar cell and module manufacturers are thus coming under ever greater pressure to reduce their costs and innovate. This in turn is leading to increasing demand for inexpensive, innovative technologies and production processes, a development from which Roth & Rau stands to benefit given its position as one of the leading international equipment providers.

The emergence of new, rapidly growing markets around the world is also creating opportunities. Ever more governments are accounting for the increasing importance of solar energy in their future energy supply by introducing new legislation promoting its development. Among other countries, we see the USA, India and China, where we already have locations, as especially promising markets. From a current perspective, Russia and the Middle East represent further major markets of the future. To enable us to benefit early from growth opportunities in the international solar market in future as well, we are making efforts to continually expand the Roth & Rau Group's global presence.

### Corporate strategy opportunities

The expansion of its portfolio, its position of technological leadership in the photovoltaics market and the market-leading quality of its products provide Roth & Rau with corporate strategy opportunities. The company's strategic focus therefore involves investing in research and development, quality assurance and employee training measures. The integration of the subsidiaries acquired in recent years should also generate synergies on the market and in the development of new products.

Given its product range, which is largely based on research and development applications, the plasma and ion beam technology segment represents the Group's technological "germ cell", where customised system solutions and processes are developed for a variety of industrial sectors. This provides Roth & Rau with the opportunity to access further areas of application which could enable the company to diversify its business model, broaden its market base and spread its risks.

### Performance opportunities

Performance potential is available along the entire value chain, from procurement through production to sales and marketing. By integrating our suppliers into the production process, for example, we can exploit optimisation and quality reserves, thus improving our profitability. Over and above this, the increasing expansion of our international network of service and sales locations helps us to structure our distribution channels and marketing measures more efficiently.

## Risks

### Macroeconomic risks

The Group's business performance is influenced by macroeconomic developments in the relevant sales markets, which are increasingly migrating to Asia. To minimise any dependence on individual markets, we are further expanding our global presence and our regionally diversified customer base. Our export quota amounted to 90.1 % in the 2010 financial year.

### Sector-specific risks

The Roth & Rau Group is especially dependent on ongoing developments in the photovoltaics industry and on this customer group's willingness to invest. Changes in the regulatory framework may also inhibit customers' willingness to invest. Changes, for example, in the legislation promoting solar electricity could lead to slower market growth due to financial incentives in individual countries being reduced or abolished. Furthermore, the current investment boom in Asia could also lead to excess capacities. These factors could impact negatively on demand for Roth & Rau's products. We are countering this risk by expanding our international market position and offering technologically leading products.

Risks may also arise from changes in the competitive framework. The process of market consolidation currently underway on all levels of the value chain due to mergers, strategic alliances and acquisitions means that increasing numbers of new competitors are entering the market and previous competitive relationships are changing fundamentally. Furthermore, there is the risk that competitors, especially those in Asia, will draw on aggressive pricing policies to boost their position in the market and thus acquire additional market share. We are countering these risks with the high quality of our products, technologically sophisticated solutions and customer retention measures.

### Corporate strategy risks

There is the risk that the company may assess future market developments erroneously. Moreover, rapid technological change may mean that Roth & Rau's products no longer satisfy market requirements. We try to minimise this risk by closely observing the market and competitive climate, maintaining ongoing communications with our customers and suppliers and pursuing a broad range of research and development activities. We counter the risk of potentially erroneous technological developments by forging development partnerships with customers, suppliers and research institutes.

The targeted acquisition of profitable, high-growth companies and company shareholdings and establishment of joint ventures are intended to contribute to the Group's long-term growth and expansion of its product portfolio. Any erroneous investment or misjudgement of the risks involved in individual transactions or of the risks resulting from the subsequent integration of companies acquired into the Group could impact negatively on the Group's net asset, financial and earnings position. These risks are limited by undertaking detailed financial and legal reviews in advance of the transactions and by the ongoing monitoring performed by the investment controlling department.

The company's rapid growth is accompanied by ever greater requirements in its organisational, management and risk structures, as well as by increased complexity in terms of its corporate structure. This leads to the risk that not all key corporate management and controlling tasks will be performed efficiently. To avert this risk, we are making consistent efforts to optimise our internal processes and structures. The company has also further boosted its resources in key management positions. In the third quarter of 2010, Roth & Rau launched a cost and structure optimisation programme called CRiSP in order to enhance its profitability. Specifically, CRiSP includes adjustments to the company's product portfolio and to the Group's corporate, organisational and process structures, as well as measures to optimise processes.

Roth & Rau's ongoing internationalisation strategy exposes the company to political, macroeconomic and legal risks in the relevant target countries. These could limit the success of its expansion. We counter these risks by working on location with experienced specialists and managers who have extensive knowledge of local markets.

### Performance risks

Roth & Rau is exposed to procurement risks resulting from the potential loss of suppliers, as it procures a major share of the upstream components and modules necessary for its products from suppliers. These components generally involve specialist or key equipment. With its preferred suppliers, Roth & Rau in some cases already has longstanding business relationships or long-term supply agreements. Should it nevertheless lose a supplier, then the company would have to turn to other providers, which could result in less favourable procurement terms or delays in production. We are managing these risks by increasingly standardising our modules and components and by drawing on vertical integration. Not only that, we have also considerably extended the number of alternative suppliers for our most important product groups and enhanced our supplier management.

We avert those risks resulting from potential product defects and the resultant liability claims by ensuring comprehensive quality assurance checks on components procured externally and by permanently monitoring our production activities within our quality management framework. Moreover, the correct delivery and functionality of the systems is monitored by qualified service technicians and engineers. Furthermore, systems are only handed over to customers following complete inspection for potential defects.

### Personnel risks

Personnel risks mainly involve any loss of employees in key positions or shortage in the supply of qualified specialist staff. Roth & Rau limits this risk with deputisation and early succession regulations and with programmes promoting the next generation of key personnel. Not only that, we also create incentives by offering appropriate, performance-based compensation and voluntary social benefits, as well as permanently optimising working conditions. A further crucially important factor is the ongoing promotion of employee training and development measures and the tailoring of these to market requirements and the company's specific needs. At the Roth & Rau Academy, we offer an extensive range of business and technical training programmes.

### Financial risks

The Roth & Rau Group is exposed to various risks when financing its growth strategy and making the investments this involves. The company currently does not face any liquidity risk, as it has a high volume of liquid funds, adequate equity resources and long-term credit agreements. It is also currently not subject to any interest rate risk in connection with floating interest rate loans, as these have been secured with hedging instruments (interest swaps). Exchange rate risks also only play a subordinate role at the Roth & Rau Group, as the overwhelming share of its international sales is invoiced in euros. When necessary, we draw on project-related currency hedging transactions. We counter potential credit risks (default risks) by performing detailed creditworthiness checks before accepting the relevant orders, insuring against bad debt and ensuring consistent receivables management.

In 2006, Roth & Rau AG concluded a contract with Conergy SolarModule GmbH & Co. KG concerning the supply and assembly of four cell production lines at Conergy's location in Frankfurt/Oder with a total order value of approximately € 58 million. The assembly of the lines was completed and operations began in 2008 and 2009. Roth & Rau AG performed its services in spite of payments not being made in some cases and breaches of duties of cooperation on the part of Conergy SolarModule GmbH & Co. KG. Roth & Rau AG believes that it is still entitled to claims of approximately € 8 million in connection with the contract. Conergy SolarModule GmbH & Co, KG, however, claims that the company failed to perform its deliveries and services in accordance with the contract and therefore refuses to settle the company's outstanding payment claims and has asserted damages claims that exceed the receivables due to Roth & Rau AG many times over. A lawsuit was filed at Hamburg District Court in connection with this matter in early February. The Management Board of Roth & Rau AG believes that the claims asserted by Conergy SolarModule GmbH & Co. KG are groundless both in terms of their substance and of their amount. Moreover, the agreed limitation of liability alone leads the Management Board to believe that the remaining claim at Roth & Rau AG should certainly exceed any damages claims on the part of Conergy SolarModule GmbH & Co. KG. The Management Board's opinion in this matter is corroborated by legal surveys it has commissioned from two renowned law firms.

Further details about individual financial risks can be found in Note 7.1. of the Notes to the Consolidated Financial Statements.

### Legal risks

Patent-related legal risks may result from any unwitting infringement of third-party intellectual property rights. Given that part of Roth & Rau's expertise is not protected by patents, the possibility of competitors asserting claims against Roth & Rau due to the infringement of property rights cannot be excluded, although no such legal disputes have materialised to date. Conversely, there is also the risk that third parties will copy Roth & Rau's expertise and infringe patents or other property rights. We attempt to minimise this risk by reaching strict confidentiality agreements with employees, customers and partners in research and development projects.

We avert other legal risks involving warranty or customer recourse claims by means of efficient quality management and consistent warranty and liability regulations. Alongside these, our compliance department monitors potential sources of risk and obtains external legal advice where necessary.

Disclosures concerning pending legal disputes can be found in Note 7.2. of the Notes to the Consolidated Financial Statements.

### Summary of risk position

To evaluate our overall risk position we assess risks in terms of their probability of occurrence. Accordingly, 9.8 % of individual risks are allocated to the "High Risk" category (probability of occurrence > 75 %), 30.5 % to the "Medium Risk" category (probability of occurrence > 50 %) and 59.7 % to the "Low Risk" category (probability of occurrence < 25 %).

All in all, the risks facing the Roth & Rau Group are thus manageable. There are currently no risks which could endanger the company's continued existence. Even in the unlikely event of all negative implications of all risks cumulatively materialising within a given year, then no risk to the company's continued existence is discernible.

# Events after the Balance Sheet Date and Outlook

## Events after the balance sheet date

The first measures within the CRiSP cost and structure optimisation programme were implemented at the beginning of 2011. These also involved staff cuts affecting 55 employees in the turnkey projects, research and development, product development, procurement and administration departments at the Hohenstein-Ernstthal location. Six employees moved to Roth & Rau Microsystems at the Wüstenbrand location. A further reduction by 20 employees is planned at other locations of the Roth & Rau Group in Germany. Furthermore, it is also planned to reduce employee totals at the Group's outlets in Korea, Australia, Singapore and the USA. Roth & Rau MicroSystems, Roth & Rau Muegge, AIS Automation Dresden and Roth & Rau India are not affected by the staff cuts.

Furthermore, there has also been a change in the Group's investment structure since the balance sheet date. Roth & Rau Muegge GmbH increased its shareholding in R³T GmbH, Taufkirchen, Germany from 60 % to 100 % in January 2011.

Orders on hand as of 31 December 2010 include a major turnkey order of € 94.4 million. Due to the strategic decision taken by Roth & Rau AG to adapt its turnkey business to the change in market circumstances and to reduce its risks as a general contractor, this order was cancelled in the first quarte of 2011 on the basis of mutual agreement with the customer. The prepayments received as of 31 December 2010 include a prepayment of € 27.7million that was repaid in the first quarter of 2011.

Further details about events after the balance sheet date can be found in Note 7.6. of the Notes to the Consolidated Financial Statements.

## Outlook

### Macroeconomic developments

Based on the assessment of the Kiel Institute of the World Economy (IfW), the moderate expansion in the global economy is set to continue in 2011. The pace of economic growth is being held back, especially in industrialised economies, by a further tightening in fiscal policy in an increasing number of countries and consolidation processes in the private sector. GDP growth in the industrialised economies is expected to amount to 1.9% in 2011. For 2012, the experts expect the growth in economic output to accelerate once again, as the factors impeding growth will gradually lose effect. This decline in growth momentum in the industrialised economies is expected to slow down the pace of export growth in emerging economies. In some emerging economies, this will be accompanied by more restrictive monetary and fiscal policies intended to counter any economic overheating. Against this backdrop, experts expect China's GDP to grow by 8.1 % in the current year and by 8.5 % in the coming year. The global economy is forecast to grow by 3.6 % for 2011 and by 4.0 % in 2012.

Economic growth in the euro area as well will be held back in 2011 by member states' restrictive fiscal policies. What's more, government spending will also only show weak growth until 2012. The export sector, by contrast, is expected to generate positive momentum this year. Overall, experts expect GDP to rise by 1.3 % in both 2011 and 2012.

The substantial, unexpected upturn in the German economy in 2010 will in all likelihood continue in weaker form in the current financial year as well. The German Council of Economic Advisors (Sachverständigenrat) thus expects to see GDP growth of 2.2% in 2011, following 3.6% in the past year. Domestic demand in particular is expected to provide growth momentum. Private consumer spending should be positively affected by the continuing robust state of the labour market and improvements in consumers' incomes, while investment activity stands to benefit from the comparatively low level of real-term interest rates. Given reduced momentum in the global economy, exports are expected to show less marked growth than in the past year. The Council expects exports to rise by 6.7 % in 2011.

The further development in the global economy nevertheless remains subject to substantial risks. On the one hand, the global financial crisis has not yet been fully mastered, as is borne out by the ongoing banking and sovereign debt crises in individual countries. This remains a source of uncertainty and volatility on financial markets. On the other hand, the possibility of the debt crisis in Europe spilling over onto other countries, including larger economies, currently cannot be excluded. This could force increasing numbers of countries to step up their savings measures, a development which would in turn slow down economic growth in Europe. Moreover, uncertainty remains as to the extent to which the economic recovery will be held back by the consolidation of fiscal policy planned in virtually all industrialised economies.

### Sector developments

Most sector experts agree that the global solar market will continue to grow in 2011. Forecast growth rates nevertheless range from 25 % to just under 40 %, thus underlying the uncertainty in the market. Measured in terms of the global increase in installed photovoltaics output capacities, this would correspond to a market volume of between 17 and 22 gigawatts.

The year-on-year decline in the rate of market growth is attributed in part to the reduced momentum expected in Germany due to the reduction in solar subsidies. The German market, which still accounted for around 50 % of the global solar market in the past year, is therefore set to decline in significance in the coming years. Jefferies investment bank expects Germany's share of the global market to reduce to around 24 % by 2012.

Irrespective of this development, various research institutes still expect Germany to remain the world's largest photovoltaics market this year. Estimates of the growth in installed capacities in Germany in 2011 range between 7 and 9 gigawatts, depending on whether further unscheduled adjustments to feed-in compensation rates are resolved in the current year and the extent to which these would result in additional investments being brought forward. German solar manufacturers are optimistic with regard to the current year. According to the BSW Solar association, they intend to expand their production capacities further in 2011 to account for the long-term increase in demand for renewable energies. In Germany alone, the share of electricity demand covered by photovoltaics is set to rise from 2 % currently to around 10 % in 2020.

The extent to which the weaker level of demand in Germany can be compensated for in the longer term, and by which markets, is currently still unclear. Numerous countries plan to introduce new subsidy programmes, but changes also have to be expected in existing programmes, especially in Europe. We see substantial medium to long-term potential in the large Asian markets of China and India, as well as in Taiwan and Korea – as sales markets both for solar modules and for equipment. The North American market continues to fall short of our expectations. We do not expect to see any significant changes here in the short term. Markets in Eastern Europe and in the Middle East have witnessed a slight upward trend, but are still only developing slowly.

The further development in solar module prices also represents a crucial factor in determining future market growth. The further reductions in feed-in compensation levels announced for 2011 will additionally increase pressure on prices. Sarasin Bank, for example, expects prices to reduce by around 10 % to 20 % a year.

Alongside these developments, the process of consolidation in the sector is also set to continue. Operators of smaller-scale production lines in particular will no longer be able to absorb the rising pressure on costs, as a result of which the market will increasingly be dominated in coming years by a small number of large cell manufacturers. There are also efforts to achieve further consolidation in the equipment segment. These are aimed at enabling companies to offer a broad portfolio of products and technologies on a single stage, or across various stages, of the value chain.

### Developments at the Roth & Rau Group

In the current 2011 financial year, we will continue to focus on realigning the Group and optimising its processes to boost profitability. In the first quarter of 2011 we adopted measures to implement the Group's new strategic alignment and have already implemented these in some cases. Here, cost-cutting measures are planned for the production and administration departments. Not only that, to improve cost structures at the Roth & Rau Group we also intend to cut staff totals (→ Events After the Balance Sheet Date, Page 68). We have also set ourselves the target of improving our working capital by reducing production and procurement times. We expect our CRiSP cost and structure optimisation programme to show initial positive effects in the current financial year already. These measures should show their full impact on our financial and earnings position from the 2012 financial year (→ Strategy, Page 33). Further details about our CRiSP cost and structure optimisation programme can be found on Page 28 of our Annual Report.

We expect sales to increase to between € 300 million and € 325 million in the 2011 financial year, with the largest share of sales being recognised in the second half of 2011. Given the amended accounting treatment of SiNA 2 systems (→Note 1.5.1. of the Notes to the Consolidated Financial Statements), the volume of inventories will initially increase in the 2011 financial year through till final acceptance of the first new-generation systems. This will also be reflected in an increase in our gross performance, a key figure we will be focusing on more closely in the current financial year in terms of our operating targets and key management figures. Building on the initial impact of the CRiSP cost and structure optimisation programme, and following the write-downs required in the 2010 financial year, we expect our earnings performance to improve once again in the 2011 financial year. We believe that a positive EBIT margin of between 4 % and 7 % is realistic for the current financial year. Here too, the effects of the conversion in accounting practice will be apparent. Due to the measurement of SiNA 2 systems at cost, earnings are only recognised upon the final acceptance date. In this respect, 2011 is to be viewed as a year of transition. In 2012, we expect market demand to settle and thus to see stable developments in the Group's gross performance and sales. In terms of our EBIT margin, the clearer impact of our cost enhancement measures should enable us to achieve a positive double-digit percentage figure in 2012.

The **order situation** has shown highly dynamic developments in the current financial year to date, thus underlining our positive assessment of our operating performance in 2011. Our order books in the field of single equipment for the photovoltaics industry are already sufficiently full to secure production capacity rates through to the end of the year. Of current orders on hand, around 65 % involve orders for the new SiNA 2 system generation, most of which will only be ready for final acceptance in the second half of 2011. Following an above-average volume of new orders in 2010, we nevertheless expect total new orders to be slightly weaker in the current year as a whole. New order volumes remained high in the first two months of the current financial year, but may reduce in the second half of the year. Our budgets currently foresee new orders of around € 300 million in 2011.

The Group continues to have a robust foundation in terms of its **financing** and **liquidity**. With liquid funds of € 107,741k as of 31 December 2010 and unutilised guarantee and credit lines of around € 105,080k, we are in a comfortable position to start the current financial year.

In our **plasma and ion beam technology** segment, we will continue to focus in 2011 on market segments with high development potential, such as the optics industry. Our main focus here once again will be on ion beam technologies and large-scale applications for plasma processes, areas in which we already managed to acquire major orders from existing customers, as well as new customers, in 2010 already.

Consistent with our new strategic alignment, the main focus of our **research and development** activities in the current year will be on our core coating systems products. Specifically, we will complete the development of production technologies for the mass production of hetero junction solar cells and press ahead with developing the third generation of our SiNA system series. Overall, the research and development budget will reduce compared with 2010, which was affected by one-off items in connection with the development of the Technology Centre and the completion of major projects. With a budgeted volume of around € 19 million, research and development activities once again represent the most important item in our **investment strategy**. Further investments relate to the completion of the new office building at the company's main location.

Hohenstein-Ernstthal, 31 March 2011

| | | |
|---|---|---|
| Dr. Dietmar Roth | Thomas Hengst | Dr. Paulus Breddels |
| Chief Executive Officer | Chief Sales Officer | Chief Operating Officer |

Roth & Rau AG
**Annual Report 2010**

# Consolidated Financial Statements

as of 31.12.2010 (IFRS)

# Consolidated Balance Sheet

## Assets

| € 000s | Note | 31.12.2010 | 31.12.2009 |
|---|---|---|---|
| **Non-current assets** | | | |
| Intangible assets | 4.1.1. | 100,724 | 49,585 |
| Property, plant and equipment | 4.1.2. | 42,952 | 28,028 |
| Financial assets | 4.1.3. | 326 | 384 |
| Other non-current receivables | 4.1.4. | 1,363 | 936 |
| Investment property | 4.1.5. | 150 | 160 |
| Deferred tax assets | 4.1.6. | 17,336 | 651 |
| Total non-current assets | | 162,851 | 79,744 |
| **Current assets** | | | |
| Inventories | 4.2.1. | 65,129 | 22,000 |
| Receivables from long-term construction contracts | 4.2.2. | 50,294 | 94,432 |
| Trade and other receivables | 4.2.3. | 35,338 | 33,385 |
| Current tax receivables | 4.2.4. | 11,916 | 3,217 |
| Cash and cash equivalents | 4.2.5. | 107,741 | 66,041 |
| Total current assets | | 270,418 | 219,075 |
| **Total assets** | | **433,269** | **298,819** |

## Shareholders' equity and debt

| € 000s | Note | 31.12.2010 | 31.12.2009 |
|---|---|---|---|
| **Shareholders' equity** | | | |
| Share capital | 4.3.1. | 16,207 | 13,800 |
| Capital reserve | 4.3.2. | 206,901 | 149,498 |
| Revenue reserves | 4.3.3. | 6,041 | 6,041 |
| Other reserves | 4.3.4. | 57 | 54 |
| Unappropriated retained earnings | 4.3.5. | 21,935 | 47,744 |
| Share attributable to shareholders in parent company | | 251,141 | 217,137 |
| Minority interests | 4.3.6. | 211 | 2,141 |
| Total shareholders' equity | | 251,352 | 219,278 |
| **Non-current debt** | | | |
| Non-current loans | 4.4.1. | 22,043 | 3,739 |
| Deferred tax liabilities | 4.4.2. | 10,741 | 19,914 |
| Non-current provisions | 4.4.3. | 22 | 109 |
| Total non-current debt | | 32,806 | 23,762 |
| **Current debt** | | | |
| Liabilities from long-term construction contracts | 4.5.1. | 9,716 | 2,468 |
| Trade payables and other liabilities | 4.5.2. | 45,205 | 35,189 |
| Prepayments received | 4.5.3. | 45,950 | 5,289 |
| Current loans | 4.5.4. | 1,077 | 1,002 |
| Current tax liabilities | 4.5.5. | 9,695 | 1,262 |
| Other provisions | 4.5.6. | 37,468 | 10,569 |
| Total current debt | | 149,111 | 55,779 |
| Total debt | | 181,917 | 79,541 |
| **Total shareholders' equity and debt** | | **433,269** | **298,819** |

# Consolidated Income Statement (Total cost method)

| € 000s | Note | 01.01.–31.12.2010 | 01.01.–31.12.2009 |
|---|---|---|---|
| Sales | 5.1. | 285,357 | 197,903 |
| Increase/decrease in stocks of finished products and work in progress | 5.2. | 19,819 | -3,568 |
| Capitalised services rendered to own account | 5.3. | 24,532 | 15,014 |
| Gross performance | | 329,708 | 209,349 |
| Other operating income | 5.4. | 5,865 | 4,950 |
| Cost of materials | 5.5. | -189,216 | -118,059 |
| Personnel expenses | 5.6. | -61,229 | -38,724 |
| Amortisation of intangible assets and depreciation of property, plant and equipment | 5.7. | -21,846 | -8,218 |
| Other operating income | 5.8. | -90,572 | -33,198 |
| Earnings before interest and taxes | | -27,290 | 16,100 |
| Financial income | | 2,489 | 1,824 |
| Financial expenses | | -9,457 | -1,217 |
| Net financial result | 5.9. | -6,968 | 607 |
| Earnings before taxes | | -34,258 | 16,707 |
| Taxes on income | 5.10. | 8,403 | -3,735 |
| Earnings after taxes | | -25,855 | 12,972 |
| of which: earnings attributable to minority interests | 4.3.6. | 46 | -43 |
| of which: earnings attributable to shareholders in Roth & Rau AG | 4.3.5. | -25,809 | 12,929 |
| Earnings carried forward from previous year | | 47,744 | 34,815 |
| Allocation to revenue reserves | | 0 | 0 |
| Unappropriated retained earnings | 4.3.5. | 21,935 | 47,744 |

| | | | |
|---|---|---|---|
| **Basic earnings per share in €/share (IAS 33)** | 5.11. | **-1.64** | **0.94** |

# Consolidated Statement of Comprehensive Income

| € 000s | 01.01.–31.12.2010 | 01.01.–31.12.2009 |
|---|---|---|
| Earnings after taxes on income | -25,855 | 12,972 |
| Gains and losses on translation of financial statements of foreign subsidiaries (currency translation) | 41 | 8 |
| Gains and losses on revaluation of available-for-sale financial assets | -53 | -635 |
| Gains and losses on cash flow hedges | 0 | 353 |
| Taxes on values changes recognised in equity | 15 | 83 |
| Other income and expenses | 3 | -191 |
| Comprehensive income | -25,852 | 12,781 |
| Allocation of comprehensive income to | | |
| Minority interests | 46 | -43 |
| Shareholders in Roth & Rau AG | -25,806 | 12,738 |

# Statement of Changes in Group Equity

| € 000s | Share capital | Capital reserve | Revenue reserves | Other reserves | Unappropriated retained earnings | Total | Minority interests | Total equity |
|---|---|---|---|---|---|---|---|---|
| Balance at 1 January 2010 | 13,800 | 149,498 | 6,041 | 54 | 47,744 | 217,137 | 2,141 | 219,278 |
| Other gains and losses | | | | | | | | |
| Available-for-sale financial assets | 0 | 0 | 0 | -53 | 0 | -53 | 0 | -53 |
| Cash flow hedges | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Currency translation differences | 0 | 0 | 0 | 41 | 0 | 41 | 0 | 41 |
| Taxes | 0 | 0 | 0 | 15 | 0 | 15 | 0 | 15 |
| Total | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 3 |
| Transactions with owners | | | | | | | | |
| Proceeds from capital increases | 1,380 | 58,964 | 0 | 0 | 0 | 60,344 | 0 | 60,344 |
| Issue of shares for company acquisition | 1,027 | 0 | 0 | 0 | 0 | 1,027 | 0 | 1,027 |
| Costs of capital increase | 0 | -2,280 | 0 | 0 | 0 | -2,280 | 0 | -2,280 |
| Surplus (deficit) | 0 | 0 | 0 | 0 | -25,809 | -25,809 | -46 | -25,855 |
| Allocation to revenue reserves | 0 | 54 | 0 | 0 | 0 | 54 | 0 | 54 |
| Taxes | 0 | 665 | 0 | 0 | 0 | 665 | 0 | 665 |
| Total | 2,407 | 57,403 | 0 | 0 | -25,809 | 34,001 | -46 | 33,955 |
| Change in scope of consolidation | 0 | 0 | 0 | 0 | 0 | 0 | -1,884 | -1,884 |
| **Balance at 31 December 2010** | **16,207** | **206,901** | **6,041** | **57** | **21,935** | **251,141** | **211** | **251,352** |

| € 000s | Share capital | Capital reserve | Revenue reserves | Other reserves | Unappropriated retained earnings | Total | Minority interests | Total equity |
|---|---|---|---|---|---|---|---|---|
| Balance at 1 January 2009 | 13,800 | 149,457 | 6,041 | 245 | 34,815 | 204,358 | 2,098 | 206,456 |
| Other gains and losses | | | | | | | | |
| Available-for-sale financial assets | 0 | 0 | 0 | -635 | 0 | -635 | 0 | -635 |
| Cash flow hedges | 0 | 0 | 0 | 353 | 0 | 353 | 0 | 353 |
| Currency translation differences | 0 | 0 | 0 | 8 | 0 | 8 | 0 | 8 |
| Taxes | 0 | 0 | 0 | 83 | 0 | 83 | 0 | 83 |
| Total | 0 | 0 | 0 | -191 | 0 | -191 | 0 | -191 |
| Transactions with owners | | | | | | | | |
| Proceeds from capital increases | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Issue of shares for company acquisition | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Surplus (deficit) | 0 | 0 | 0 | 0 | 12,929 | 12,929 | 43 | 0 |
| Employee stock option programmes | 0 | 41 | 0 | 0 | 0 | 41 | 0 | 12,972 |
| Total | 0 | 41 | 0 | 0 | 12,929 | 12,970 | 43 | 41 |
| **Balance at 31 December 2009** | **13,800** | **149,498** | **6,041** | **54** | **47,744** | **217,137** | **2,141** | **219,278** |

# Consolidated Cash Flow Statement

| € 000s | Note | 01.01.–31.12.2010 | 01.01.–31.12.2009 |
|---|---|---|---|
| Consolidated net income | | -25,855 | 12,972 |
| Depreciation/amortisation of non-current assets | 4.1. | 21,856 | 8,228 |
| Gains/losses on disposal of property, plant and equipment | | 1,022 | 992 |
| Change in deferred taxes | 5.10. | -12,125 | 2,929 |
| Changes in value of derivative financial instruments | | -41 | 361 |
| Change in non-current provisions | 4.4.3. | -104 | -14 |
| Non-cash expenses and income | | 34,541 | 127 |
| Change in value of equity-settled phantom stock program | 4.4.3.1. | 21 | 41 |
| Cash flow | | 19,315 | 25,636 |
| Increase (-) / decrease (+) in inventories | 4.2.1. | -38,928 | 8,570 |
| Increase (-) / decrease (+) in receivables from long-term construction contracts | 4.2.2. | 39,652 | -17,948 |
| Increase (-) / decrease (+) in receivables and other assets | 4.2.3. | -27,850 | -4,043 |
| Increase (+) / decrease (-) in prepayments received on orders | 4.5.3. | 40,421 | -5,173 |
| Increase (+) / decrease (-) in liabilities from long-term construction contracts | 4.5.1. | 7,248 | -5,878 |
| Increase in business-related liabilities | 4.5.2. | 14,245 | -2,523 |
| Increase (-) / decrease (+) in working capital | | 34,788 | -26,995 |
| Cash flow from operating activities | | 54,103 | -1,359 |
| Investments in intangible assets | 4.1.1. | -17,045 | -11,578 |
| Investments in property, plant and equipment | 4.1.2. | -19,031 | -7,372 |
| Acquisition of subsidiaries, less cash acquired | 4.1.1.2. | -2,212 | -6,158 |
| Investments in financial assets | 4.1.3. | -250 | -270 |
| Proceeds from disposal of property, plant and equipment | | 193 | 135 |
| Cash flow from investing activities | | -38,345 | -25,243 |
| Capital increase | | 35,880 | 0 |
| Change in level of shareholding in subsidiaries | 4.3.1. | -2,156 | 0 |
| Costs of capital increase | 4.3.2. | -2,280 | 0 |
| Taking up of loans | 4.4.1. | 19,000 | 0 |
| Redemption of loans | 4.4.1. | -24,446 | -1,771 |
| Cash flow from financing activities | | 25,998 | -1,771 |
| Increase in cash and cash equivalents | 4.2.5. | 41,756 | -28,373 |
| Cash and cash equivalents at beginning of period | | 66,041 | 91,515 |
| Changes in cash and cash equivalents due to changes in exchange rates, scope of consolidation and valuation | | -56 | 2,899 |
| **Cash and cash equivalents at end of period** | | **107,741** | **66,041** |

Roth & Rau AG
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# Notes to the Consolidated Financial Statements

as of 31 Dezember 2010

# 1. Organisation and principle accounting policies

## 1.1. Business and company

Roth & Rau AG, the parent company based in Hohenstein-Ernstthal (ISIN DE000A0JCZ51), is a supplier of plasma processing systems to the photovoltaics industry. In addition, the company offers components and processing systems based on plasma and ion beam technology to other sectors. The systems are developed by Roth & Rau and produced and marketed worldwide by the photovoltaics and plasma and ion beam technology segments.

Roth & Rau AG is registered in the Commercial Register of Chemnitz District Court under the number HRB 19213. It is a company limited in liability, founded in Germany and based in 09337 Hohenstein-Ernstthal, An der Baumschule 6–8.

The consolidated financial statements of the Roth & Rau Group ("the Group") for the financial year as of 31 December 2010 were approved for publication by resolution of the Management Board at its meeting on 31 March 2011. The Management Board of Roth & Rau AG comprises Dr. Dietmar Roth (CEO), Dr. Paulus Breddels (COO) and Thomas Hengst (CMO). The Supervisory Board consists of Eberhard Reiche (Supervisory Board Chairman), Prof. Dr. Alexander Michaelis (Deputy Chairman) and Daniel Schoch.

## 1.2. Principal accounting policies

### 1.2.1. Basis of preparation

In general, application has been made of the historic cost principle in the preparation of these consolidated financial statements, with the exception of derivative financial instruments and financial assets available for sale, which have been measured at fair value.

The consolidated financial statements have been compiled in euros, the Group's functional currency. Unless otherwise stated, all figures have been rounded up or down to the nearest thousand (€ 000s) in line with customary commercial practice.

In these IFRS annual financial statements and the comparative information contained therein, application has been made without exception of all International Financial Reporting Standards (IFRS/IAS) of the International Accounting Standards Board (IASB) and Interpretations of the International Financial Reporting Interpretations Committee (IFRIC) in the form requiring compulsory application in the EU as of the balance sheet date.

The following table presents the new or revised Standards (IAS/IFRS) and Interpretations (IFRIC) requiring compulsory application from 1 January 2010 or voluntarily applied prematurely from 1 January 2010, as well as their implications for the Group:

| Standard/Interpretation | | Compulsory application from | Adopted by EU Commission | Implications |
|---|---|---|---|---|
| IFRIC 18 | Transfers of Assets from Customers | 1 November 2009 | 27 November 2009 | No implications |
| IFRIC 17 | Distributions of Non-cash Assets to Owners | 1 November 2009 | 26 November 2009 | No implications |
| Amendments to IFRS 1 | Additional Exemptions for First-time Adopters | 1 January 2010 | 23 June 2010 | No implications |
| IFRS 1 | First-time Adoption of IFRSs | 1 January 2010 | 25 November 2009 | No implications |
| Amendments to IFRS 2 and IFRIC 11 | Share-based Payments – Group Cash-settled Share-based Payments | 1 January 2010 | 23 March 2010 | No material implications |
| Amendments to IAS 39 | Financial Instruments: Recognition and Measurement – Eligible Hedged Items (July 2008) | 1 July 2009 | 15 September 2009 | No implications |
| IFRIC 12 | Service Concession Arrangements | 30 March 2009 | 25 March 2009 | No implications |
| IFRIC 15 | Agreements for the Construction of Real Estate | 1 January 2010 | 22 July 2009 | No implications |
| IFRIC 16 | Hedges of a Net Investment in a Foreign Operation | 1 July 2009 | 4 June 2009 | No implications |
| IFRS 3 | Business Combinations | 1 July 2009 | 3 June 2009 | Due to the goodwill calculation option provided for in the standard, which may be exercised on a case-by-case basis, no general statement can be made about the implications for the consolidated financial statements. |
| IAS 27 | Consolidated and Separate Financial Statements | 1 July 2009 | 3 June 2009 | No material implications |
| IFRS Improvements (April 2009) | Improvements to Various Standards | 1 January 2010 | 23 March 2010 | No material implications |

The following table presents the new or revised Standards (IAS/IFRS) and Interpretations (IFRIC) not yet requiring compulsory application in the 2010 financial year, as well as their implications for the Group:

| Standard/Interpretation | | Compulsory Application from | Adopted by EU Commission | Implications |
|---|---|---|---|---|
| IAS 24 | Related Party Disclosures | 1 January 2011 | 19 July 2010 | No implications |
| IAS 32 | Financial Instruments: Classification of Rights Issues | 1 February 2010 | 23 December 2009 | No material implications |
| IFRS 1 | Limited Exemption from Comparative IFRS 7 Disclosures for First-time Adopters | 1 July 2010 | 30 June 2010 | No material implications |
| IFRS 9 | Financial Instruments | 1 January 2013 | No | The Roth & Rau Group is currently reviewing the resultant implications for the presentation of its net asset, financial and earnings and its cash flow |
| IFRS Improvements (May 2010) | Improvements to Various Standards | Various (1 July 2010/ 1 January 2011) | 18 February 2011 | No material implications |
| IFRIC 14 | Prepayments of a Minimum Funding Requirement | 1 January 2011 | 19 July 2010 | No implications |
| IAS 12 | Deferred Taxes: Recovery of Underlying Assets | 1 January 2012 | No | No material implications |
| IFRS 7 | Disclosures on Financial Instruments | 1 July 2011 | No | No material implications |
| IFRS 1 | Severe Hyperinflation and Removal of Fixed Dates | 1 July 2011 | No | No implications |
| IFRIC 19 | Extinguishing Financial Liabilities with Equity Instruments | 1 July 2010 | 23 July 2010 | No implications |

## 1.2.2. Consolidation principles

The consolidated financial statements include the financial statements of Roth & Rau AG and its subsidiaries as of 31 December 2010. Subsidiaries are fully consolidated from the date of acquisition, i.e. from the date on which the Group gains control (control concept). The financial statements of the subsidiaries have been prepared using the same accounting policies and as of the same reporting date as the financial statements of the parent company.

All intragroup balances, income and expenses have been eliminated in full, as have all unrealised gains and losses on intragroup transactions.

One indirectly held 50 % shareholding has also been included as a joint venture pursuant to IAS 31, as this company is jointly managed and it is therefore possible to exercise significant influence over the company's business policy. This company is included in the consolidated financial statements using the equity method and was initially recognised at cost. The Group's share of the profit and losses at this company has been recognised in the income statement from the date of acquisition, while its share of changes in reserves has been recognised in group reserves. Accumulated changes following acquisition have been offset against the carrying amount of the investment. Unrecognised gains on transactions performed between group companies and this company included using the equity method have been eliminated in line with the level of shareholding held in this company by Roth & Rau AG.

To ensure uniform accounting policies at all companies included in the consolidated financial statements, their accounting policies have been based on uniform group accounting guidelines.

The following subsidiaries have been included in the consolidated financial statements as of 31 December 2010:

### Photovoltaics segment

#### Roth & Rau Dünnschicht Solar GmbH

Roth & Rau Dünnschicht Solar GmbH, based in Hohenstein-Ernstthal, was founded as a wholly-owned subsidiary of Roth & Rau AG by notarised agreement dated 1 February 2008. The company's object is the development of modern surface technologies for use in plant construction, especially for refining thin film surfaces in the context of solar and photovoltaics technology, the industrial manufacture and sale of these systems and of system components of this nature, as well as the performance of related services. The company's share capital amounts to € 25k. The company was consolidated for the first time in the quarterly financial statements as of 31 March 2008.

#### SLS Solar Line Saxony GmbH

Based on a notarised agreement dated 11 February 2008, the subsidiary SLS Solar Line Saxony GmbH ("SLS") was jointly founded with USK Karl Utz Sondermaschinen GmbH ("USK") to develop and manufacture automation solutions for use in silicon cell production. The company's share capital amounts to € 4,000k. Roth & Rau AG holds 51 % and USK 49 % of the company's shares. Roth & Rau AG acquired the remaining 49 % of the shares in November 2010 and thus now holds a 100 % stake. The company was already consolidated in the quarterly financial statements as of 31 March 2008.

### Roth & Rau Switzerland AG

Roth & Rau Switzerland AG was established as a wholly-owned subsidiary of Roth & Rau AG by notarised agreement dated 8 April 2008. The company's object is the performance of development work in cooperation with the University of Neuchâtel – Institute of Microtechnology in the field of hetero junction technology (HJT). Its share capital amounts to CHF 100,000. Roth & Rau Switzerland AG was consolidated for the first time as of 30 June 2008.

### Roth & Rau Italy S.r.l. (previously TECNOFIMES SRL)

Roth & Rau AG took over 100 % of the shares in TECNOFIMES S.R.L., based in Monza/Italy, as of 1 January 2009. The name of the Italian subsidiary was changed to Roth & Rau Italy S.r.l. as of 7 October 2009. The company was consolidated for the first time in the quarterly financial statements as of 31 March 2009.

### Roth & Rau CTF Solar GmbH (previously CTF Solar GmbH)

On the basis of a share purchase and assignment agreement dated 23 February 2009, Roth & Rau AG acquired all of the shares in CTF Solar GmbH, Kelkheim, from the management and the investment company Murphy & Spitz Green Capital AG. Roth & Rau CTF Solar GmbH has the expertise required to manufacture turnkey production lines for use in the manufacture of thin film solar modules on a cadmium telluride basis (CdTe solar modules). The company was consolidated for the first time in the quarterly financial statements as of 31 March 2009. The company headquarters was transferred to Hohenstein-Ernstthal in March 2010.

### OTB Solar B.V.

Roth & Rau AG acquired all of the shares in OTB Solar B.V. (hereinafter "OTB") on the basis of a purchase agreement dated 5 February 2010. The shares were transferred on 1 April 2010. The company's headquarters is in Eindhoven, Netherlands. OTB Solar B. V. is the sole shareholder in PixDro B. V. and NedX Solar (Shanghai)Trading Ltd. The product portfolio of the OTB companies (hereinafter: OTB) consists of systems and technologies for the solar industry, especially antireflective coating systems and turnkey production lines for use in the manufacture of crystalline silicon solar cells. Moreover OTB's core competencies also include high-rate PECVD coating processes and industrial ink-jet printing applications with interesting potential for use in the production of new, high-efficiency solar cells.

### PixDro B.V.

OTB Solar B.V. owns 100 % of the shares in PixDro B.V., as a result of which Roth & Rau AG also indirectly held 100 % of the shares in PixDro B.V. as of 31 December 2010. The company's headquarters is in Eindhoven, Netherlands. PixDro specialises in research and development for industrial ink-jet printing applications and the production of such systems for use in research and industry.

## Plasma and ion beam technology segment

### Roth & Rau MicroSystems GmbH (previously Ion-Tech GmbH)

Roth & Rau AG acquired 100 % of the shares in Ion-Tech GmbH (closely related company) on the basis of a share purchase and assignment agreement dated 15 December 2008. The shareholders' meeting held on 8 October 2009 resolved to rename the company as Roth & Rau MicroSystems GmbH. It was also resolved to increase the company's share capital by € 475,000 from € 25,000 to € 500,000 by way of an effective capital increase in return for non-cash contributions. The plasma ion beam technological operation of Roth & Rau AG was contributed as a non-cash contribution. The capital increase was registered in the Commercial Register on 21 December 2009. The company was consolidated for the first time as of 1 January 2009.

## Other activities segment

### AIS Automation Dresden GmbH

AIS Automation Dresden GmbH operates as a system and software provider in the field of automation and information technology for the photovoltaics and semiconductor industries. By notarised share purchase and assignment agreement dated 9 June 2008, Roth & Rau AG acquired 100 % of the shares in AIS Automation Dresden GmbH. The company was consolidated for the first time in the quarterly financial statements as of 30 September 2008.

### Romaric Automation Design Inc.

Solar Holding Inc. acquired 100 % of the shares in Romaric Automation Design Inc (Romaric), based in Salt Lake City, USA, on 1 July 2009. Roth & Rau AG thus indirectly holds 100 % of the shares in Romaric Automation Design Inc. Founded in 2001, Romaric specialises in manufacturing execution systems (MES) and has extensive experience in software automation for highly standardised manufacturing companies, especially in the semiconductor industry. The company was consolidated for the first time in the quarterly financial statements as of 30 September 2009.

### Roth & Rau Muegge GmbH (previously Muegge-electronic GmbH)

Roth & Rau AG acquired 100 % of the shares in Muegge-electronic GmbH on the basis of a share purchase and assignment agreement dated 21 November 2008. The contract came into effect on 5 December 2008. The operations of Muegge-electronic GmbH involve the development, manufacture and sale of electro-technical appliances and systems for use in microwave technology and industrial electronics applications. The company supplies Roth & Rau with microwave systems technology, one of the core components of the SiNA antireflective coating systems. The company's name was changed to Roth & Rau Muegge GmbH as of 11 January 2010. Roth & Rau Muegge GmbH was consolidated for the first time as of 1 January 2009.

Roth & Rau Muegge GmbH holds a 50 % shareholding in Cober Muegge LLC, Norwalk, USA. This shareholding has been included in the consolidated financial statements using the equity method.

### R³T Rapid Reactive Radicals Technology GmbH

Roth & Rau Muegge GmbH acquired a further 40 % of the shares in R³T Rapid Reactive Radicals Technology GmbH on 25 February 2010. R³T is a manufacturer of remote microwave plasma generators for the semiconductor industry. R³T develops and sells remote plasma sources with a uniquely compact construction for the generation of highly charged and reactive radicals for dry chemicals processes. The purchase price amounted to € 300k, plus maximum expected bonuses of € 350k.

Together with the existing 60 % shareholding as of 31 March 2010, R³T GmbH was fully consolidated in the first quarter of 2010. Roth & Rau AG thus indirectly held a 60 % shareholding in R³T Rapid Reactive Radicals Technology GmbH as of 31 December 2010.

In January 2011, Roth & Rau Muegge GmbH acquired a further 40 % of the shares and thus currently owns 100 % of the shares in R³T GmbH.

The company is allocated to the plasma and ion beam technology segment.

The prorated assets and liabilities of companies accounted for using the equity method are presented in the following table.

| 31.12.2010<br>€ | 60 % – fully consolidated<br>R³T GmbH | 50 %<br>Cober Muegge |
|---|---|---|
| Non-current assets | - | 0 |
| Current assets | - | 103,223 |
| Non-current debt | - | 0 |
| Current debt | - | 7,248 |
| Income | - | 50,714 |
| Expenses | - | -48,553 |
| Share of profit and loss / comprehensive income | - | 2,161 |

| 31.12.2009<br>€ | 20 %<br>R³T GmbH | 50 %<br>Cober Muegge |
|---|---|---|
| Non-current assets | 5,086 | 0 |
| Current assets | 98,592 | 86,134 |
| Non-current debt | 0 | 0 |
| Current debt | 88,336 | 18,745 |
| Income | 260,469 | 127,014 |
| Expenses | -253,446 | -119,144 |
| Share of profit and loss / comprehensive income | 7,023 | 7,870 |

## Service and sales companies

### Solar Holding Inc.

Solar Holding Inc., based in Delaware/USA, was founded by notarised agreement dated 3 March 2008. This wholly-owned subsidiary is intended to serve as a subholding of Roth & Rau AG for its US subsidiaries. The share capital amounts to US$ 100. The company was consolidated for the first time in the interim financial statements as of 30 September 2008.

### Roth & Rau USA Inc.

Solar Holding Inc. established Roth & Rau USA Inc., a wholly-owned subsidiary based in Framingham/USA, by notarised agreement dated 10 March 2008. Roth & Rau AG thus indirectly holds 100 % of the shares. The business activities of Roth & Rau USA Inc. should primarily involve sales and services in the US market. Its share capital amounts to US$ 100. The company was consolidated for the first time in the interim financial statements as of 30 September 2008.

### Roth & Rau (Shanghai) Trading Co. Ltd.

Roth & Rau AG is the sole shareholder of Roth & Rau (Shanghai) Trading Co., Ltd., based in Shanghai/China, which was founded in March 2008 to manage sales, installation and customer service in the Chinese market. The subsidiary's share capital amounts to € 567k. Roth & Rau (Shanghai) Trading Co., Ltd. was consolidated for the first time as of 30 June 2008.

### NedX Solar (Shanghai) Trading Co. Ltd.

OTB Solar B.V. owns 100 % of the shares in this company based in Shanghai/China. Accordingly, Roth & Rau AG indirectly held 100 % of the shares in the company as of 31 December 2010. The subsidiary's share capital amounts to € 127k. NedX Solar (Shanghai) Trading Co., Ltd. was consolidated for the first time as of 30 June 2010.

### Roth & Rau Singapore Pte. Ltd.

Roth & Rau AG founded its wholly-owned subsidiary Roth & Rau Singapore Pte. Ltd. on 18 August 2008. This company's headquarters is in Singapore. Its share capital amounts to SGD 10,000. Roth & Rau Singapore Pte. Ltd. acts as a service and sales company in Asia. The company was consolidated for the first time as of 31 December 2008.

### Roth & Rau Korea Co. Ltd.

Roth & Rau AG founded its wholly-owned subsidiary Roth & Rau Korea Co. Ltd. in December 2008. This company's headquarters is in Seoul. The share capital of € 30k was paid in on 7 January 2009. The business activities of Roth & Rau Korea Co. Ltd. should chiefly involve sales and services in the South Korean market. The company was consolidated for the first time as of 31 March 2009.

### Roth & Rau Australia Pty. Ltd.

Roth & Rau Australia Pty Ltd., based in Sydney, was founded on 30 April 2009. The purpose of this wholly-owned subsidiary is to assist Roth & Rau on location in developing the planned production system for silicon solar cells at the University of New South Wales (UNSW). The Solar Industrial Research Facility (SIRF), which complies with industrial standards, enables UNSW to develop silicon solar cell technologies from laboratory to serial production stages. These innovative technologies are also to be channelled into the development of new products and turnkey production systems at Roth & Rau in future. The SIRF will be the first solar research and development facility of its kind in the Asia-Pacific region. The company's share capital amounts to AUD 100,000. The company was consolidated for the first time as of 30 June 2009.

### Roth & Rau Hongkong Limited

Roth & Rau Hongkong Limited was founded on 25 February 2010. This wholly-owned subsidiary is allocated to the service and sales companies segment. The company's headquarters is in Lantau, Hong Kong.

### Roth & Rau India Pvt. Ltd.

Roth & Rau India Pvt. Ltd., Mumbai, is a 99.99 % subsidiary of Roth & Rau AG. The remaining 0.01 % is held by the subsidiary Roth & Rau Dünnschicht Solar GmbH. This Indian sales and service company commenced business operations as of 1 August 2009. Its share capital amounts to INR 100,000. The company was consolidated for the first time as of 30 June 2009.

### Roth & Rau – Ortner GmbH (previously Ortner cleanroom logistic systems GmbH)

On 24 April 2009, Roth & Rau AG signed the purchase agreement to take over 100 % of the shares in Ortner cleanroom logistic systems GmbH ("Ortner"), Dresden. The contract was executed on 24 July 2009. Ortner specialises in the installation, maintenance and operation of production systems in the semiconductor and photovoltaics industries. Its particular strengths lie in installing and commissioning automatic handling systems for crystalline and thin film production lines, as well as in coordinating maintenance and analysing production processes to minimise downtime and reduce costs. The company has longstanding experience in the semiconductor industry. The management of Ortner cleanroom logistic systems GmbH will continue to run the company's operating business. The company was consolidated for the first time as of 30 September 2009. Its name was changed to Roth & Rau – Ortner GmbH as of 13 January 2010.

### Roth & Rau – Ortner USA Inc. (previously Ortner c.l.s. USA Inc.)

Roth & Rau – Ortner GmbH is the sole shareholder in Roth & Rau Ortner c.l.s. USA Inc, based in Salt Lake City, Utah, USA. The company's share capital amounts to US$ 50,000. The company was consolidated for the first time as of 30 September 2009. Roth & Rau AG indirectly holds 100 % of the shares via Roth & Rau – Ortner GmbH.

Roth & Rau – Ortner Malaysia Sdn. Bhd, (previously Ortner c.l.s. Malaysia Sdn. Bhd.)
Roth & Rau – Ortner GmbH is the sole shareholder in Roth & Rau Ortner Malaysia Sdn. Bhd, a company based in Kuala Lumpur which was founded in 2008 with share capital of MYR 100,000. The company was consolidated for the first time as of 30 September 2009. Roth & Rau AG indirectly holds 100 % of the shares in this company as well.

## 1.3. Foreign currency translation

The consolidated financial statements are presented in euros, which is the Group's functional currency. That is the currency of the primary economic environment in which the Roth & Rau Group operates. Each company within the Group determines its own functional currency. In the year under report the euro was the functional currency of all subsidiaries except Romaric Automation Design Inc. The items included in the financial statements of the respective companies have been measured using this functional currency.

Foreign currency transactions are initially translated into the Group's functional currency at the exchange rate valid on the date of the transaction. Monetary assets and liabilities denominated in foreign currencies are translated into the functional currency using the spot rate of exchange on the balance sheet date. All currency differences are recognised through profit or loss. Income and expenses are translated at the rate valid on the date of the respective transaction. Asset and liability items at the Group are measured at the reporting rate date, while income and expenses at companies with functional currencies other than the euro have been measured at the average exchange rate (USD 2010 average rate: 1.3257 (previous year: 1.3948)). Any foreign currency differences arising due to translation have been recognised through profit or loss.

Reporting date rates as of 31.12.2010:

| | Exchange rate 1 € = | Reporting date rate on 31.12.2010 | Reporting date rate on 31.12.2009 |
|---|---|---|---|
| Swiss francs | CHF | 1.2504 | 1.4836 |
| Chinese renminbis | CNY | 8.8220 | 9.8350 |
| South Korean wons | KRW | 1.4991 | 1.6669 |
| Indian rupees | INR | 59.7580 | 67.0400 |
| Canadian dollars | CAD | 1.3322 | 1.5128 |
| US dollars | USD | 1.3362 | 1.4406 |
| Australian dollars | AUD | 1.3136 | 1.6008 |
| Singapore dollars | SGD | 1.7136 | 2.0194 |
| Malaysian ringgits | MYR | 4.0950 | 4.9326 |
| Hong Kong dollars | HKD | 10.3856 | 11.1709 |
| British pounds | GBP | 0.8608 | 0.8881 |
| Japanese yens | JPY | 108.65 | 133.16 |

## 1.4. Changes in accounting policies

The accounting policies explained below are consistent with those applied in the previous set of consolidated financial statements.

## 1.5. Summary of principal accounting policies

### 1.5.1. Recognition of earnings and expenses

Sales correspond to the fair value of the consideration received or to be received within the usual course of business activities from the sale of goods and services. Sales are recognised net of any returns, rebates and discounts.

Roth & Rau recognises sales when their amount can be reliably determined, when it is sufficiently likely that the company will receive the resultant economic benefit and when the specific criteria set out below are met for each type of activity.

Sales, interest and commission income from financial services and other operating income are only recognised once the respective services have been performed or when the respective goods and products have been supplied, i.e. once the relevant risks have passed to the customer. Sales involving products (delivery of plant) are generally only recognised upon acceptance by the customer.

Where the construction contracts involve long-term customer-specific construction contracts based on fixed-price contracts (first-generation coating systems (SiNA 1) and turnkey projects), contract revenues and contract costs are recognised in line with their percentage of completion as of the balance sheet date. The Group meets the conditions governing the application of the percentage of completion method laid down in IAS 11. This method is applied to construction contracts whose earnings can be reliably estimated. Prorated earnings are recognised from the beginning of construction work. When the earnings cannot yet be reliably estimated, sales are only recognised at the level of contract costs probably collectible. Prorated earnings are thus not recognised. Expected losses on construction contracts are recognised immediately.

Where the revenues from a services transaction can be reliably estimated, then the relevant earnings are also recognised in line with their percentage of completion.

Where the systems are manufactured in modular form (SiNA 2 second-generation coating systems), the conditions governing the application of IAS 11 are no longer met. In these cases, sales are only recognised once the work has been completed in line with IAS 18 (completed contract method). Where separate provision of the delivery and the installation work is agreed with the customer, the respective sales are already recognised upon shipment. Any losses expected on current orders are accounted for directly in the form of reductions in the amount recognised for the work performed.

Operating expenses are recognised in the income statement upon the supply or service being claimed or at the date on which they are incurred.

Interest income is recognised pro rata temporis, while interest expenses are recognised in part using the effective interest method and in part on a prorated basis depending on the relevant contractual obligations.

### 1.5.2. Borrowing costs

Following the amendments to IAS 23, those borrowing costs relating to assets requiring significant time to be prepared for their intended use or sale (qualifying assets) must be capitalised. The corresponding interest expenses must be calculated using the effective interest rate method. These amendments do not have any material implications for the consolidated financial statements.

### 1.5.3. Taxes on income

Taxes on annual earnings comprise current and deferred taxes. Taxes on income are recognised in the income statement with the exception of taxes relating to items recognised directly in equity, in which case the respective taxes are also recognised in equity.

Actual tax refund claims and tax liabilities for current and prior periods are measured at the amount at which the refund from or payment to the tax authorities is expected. The calculation of the amount is based on the tax rates and legislation in force at the balance sheet date.

Deferred tax assets may only be recognised as assets to the extent that it is probable that future taxable income will be available to realise the respective claim. Deferred taxes are stated for all temporary differences between the tax base for the assets/liabilities and their carrying amounts in the IFRS financial statements (so-called liability method). However, the tax deferral is omitted both upon initial recognition and subsequently if an asset or a liability arises in the context of a transaction which is not a business combination and, at the time of the transaction, affects neither the accounting profit or loss nor the taxable profit or loss.

Deferred tax assets and liabilities are measured at the tax rates expected to apply in the period in which the asset is realised or the liability settled. These are based on the tax rates and tax laws valid at the balance sheet date. Account is taken of future changes in tax rates to the extent that substantive conditions precedent have been met within the legislative procedure as of the balance sheet date. Deferred tax assets have been netted against deferred tax liabilities in cases where they refer to income taxes due to the same tax authority and if a right exists to offset actual tax refund claims against actual tax liabilities.

### 1.5.4. Earnings per share

Basic earnings per share have been calculated by dividing the share of earnings attributable to shareholders in Roth & Rau AG by the average number of shares in circulation.

### 1.5.5. Business combinations and goodwill

Business combinations are accounted for using the purchase method laid down in IFRS 3. The cost of a company acquisition is measured as the fair value of the assets given, equity instruments issued and liabilities incurred or assumed at the date of exchange, plus costs directly attributable to the company acquisition. Identifiable assets acquired and liabilities and contingent liabilities assumed in a business combination are measured initially at fair value on the date of acquisition. Goodwill is initially measured at cost, this being the excess of the cost of the business combination over the Group’s share of the net assets acquired. After initial recognition, the goodwill is measured at cost less any accumulated impairment losses. For the purpose of the impairment test pursuant to IAS 36, the goodwill acquired in a business combination is allocated from the date of acquisition to each of the Group’s cash generating units (CGUs) expected to benefit from the synergies of the business combination. A cash generating unit is the smallest identifiable group of assets generating cash flows that are largely independent of the cash flows from other assets or other groups of assets.

In line with IFRS 3 “Business Combinations”, goodwill is not subject to scheduled amortisation but is rather tested for impairment each year in line with IAS 36 on the level of the relevant CGU. The cash generating units used for the purpose of goodwill impairment testing frequently correspond to the operating segments or individually acquired subsidiaries.

Goodwill impairment testing is performed by comparing the recoverable amount of the CGU with its carrying amount including goodwill. The recoverable amount is the higher of the CGU’s fair value less costs to sell and its value in use. When determining the recoverable amount of a CGU, Roth & Rau first calculates its fair value (less costs to sell) using generally recognised valuation methods. These are based on the five-year budgets adopted for the CGU in the period under report. Subsequent measurement is based on discounted cash flow (DCF) calculations.

Should the carrying amount exceed the recoverable amount, then the difference must be deducted through profit or loss from the goodwill allocated to the relevant CGU.

### 1.5.6. Impairment of non-financial assets

The Group assesses at each balance sheet date whether there are any indications of impairment of non-financial assets. If any indications exist or when annual impairment testing for an asset is required, the Group estimates the asset’s recoverable amount. The recoverable amount of an asset is the higher of the fair value of the asset or cash generating unit (CGU) less disposal costs or its value in use. For assets excluding goodwill, an assessment is made at each balance sheet date as to whether there are any indications that previously recognised impairment losses no longer apply or have decreased.

### 1.5.7. Intangible assets

Intangible assets not acquired in a business combination are measured at cost on initial recognition. The costs of intangible assets acquired in a business combination correspond to their fair value on the date of acquisition. In subsequent periods, intangible assets are carried at cost less any accumulated amortisation and any accumulated impairment losses. Internally generated intangible assets, excluding development expenses eligible for capitalisation, are not capitalised, but are rather recognised as expenses in the income statement in the period in which they are incurred. A distinction is made between intangible assets with finite useful lives and those with indefinite useful lives.

Intangible assets with finite useful lives are amortised over their useful economic lives on a straight-line basis and depending on the type of asset involved pursuant to IAS 38 “Intangible Assets” and assessed for impairment should there be any indications that the intangible asset might be impaired. The period and method of amortisation for assets with finite useful lives are reviewed at least at the end of each financial year. Changes in the expected useful life or the expected pattern of consumption of future economic benefits embodied in the asset are accounted for by changing the amortisation period or method, as appropriate, and are treated as changes in accounting estimates.

Intangible assets with indefinite useful lives are tested for impairment at least annually either individually or on the level of the cash generating unit. These intangible assets are not subject to scheduled amortisation. The useful life of the intangible assets is reviewed annually to ascertain whether the assessment of indefinite life continues to be supportable. Apart from capitalised goodwill, the Group has no assets with indefinite useful lives.

Gains or losses arising from derecognition of intangible assets are measured as the difference between the net disposal proceeds and the carrying amount of the asset and are recognised through profit or loss in the period in which the asset is derecognised.

### Research and development expenses

In line with IAS 38, research expenses are recognised as expenses in the period in which they are incurred. Development expenditure on individual projects is only recognised as an intangible asset when the Group can demonstrate:

- the technical feasibility of completing the intangible asset so that it will be available for internal use or sale
- its intention to complete and its ability to use or sell the asset
- how the asset will generate future economic benefits
- the availability of resources to complete the asset
- the ability to measure reliably the expenditure attributable to the intangible asset during development.

At Roth & Rau, this relates to a series of development projects partly subsidised with grants from various federal and state ministries and from the European Commission, as well as projects with private cooperation partners which are in the development stage, or already in the pilot stage. In particular, development expenses include direct costs and overhead shares of personnel and material expenses for proprietary and third-party application technology, engineering technology and other departments, provided that these perform corresponding services, and costs of test facilities and technology used in this area of research and development.

Public subsidies are in principle deducted from the costs of acquisition or manufacture. Following initial recognition, development expenses are measured using the cost model, which requires the asset to be carried at cost less any accumulated amortisation (estimated useful life of three years) and any accumulated impairment losses. Amortisation begins when development is complete and the asset is available for use. The asset is amortised over the period of expected future benefit. During the period of development, the asset is tested for impairment annually. An impairment loss is recognised through profit or loss as soon as the asset's carrying amount exceeds its recoverable amount.

### Licences

The licence acquired for the use of intellectual property is subject to scheduled amortisation over a period of three years in line with the term of the cooperation and licence agreement.

### Brand, customer relationship and orders on hand

The Roth & Rau Group has identified and determined the fair values of the brand, customer relationships, technology and orders on hand pursuant to IFRS 3 "Business Combinations". Reference is made to 4.1.1.2.

## 1.5.8. Property, plant and equipment

Property, plant and equipment is stated at cost, net of any accumulated depreciation and/or any accumulated impairment losses. Repair and maintenance costs are recognised in the income statement as incurred. The present value of the expected cost for the decommissioning of the asset after its use is included in the cost of the respective asset if the recognition criteria for a provision are met.

Depreciation is calculated on a straight-line basis over the useful life of the asset as follows:
- Buildings: 25 to 57 years
- Technical equipment, plant and office equipment: 5 to 15 years

An item of property, plant and equipment is derecognised when no economic benefits are expected from its further use or disposal. Any gain or loss arising on derecognition of the asset (calculated as the difference between the net disposal proceeds and the carrying amount of the asset) is recognised through profit or loss in the period in which the asset is derecognised. The residual values, useful lives and method of depreciation of the assets are reviewed at the end of each financial year and adjusted prospectively if appropriate.

Assets whose costs amount to between € 150 and € 1,000 are pooled and depreciated over five years. Assets costing less than € 150 are fully expensed in the year of addition. "Traditional" rules of depreciation over a defined useful life are only applied for assets whose costs exceed € 1,000. This is consistent with German tax law. This regulation has been applied to assets acquired or manufactured after 31 December 2007, but does not have any material implications for the financial statements.

## 1.5.9. Investment property

Investment property is measured initially at cost, including transaction costs. The carrying amount does not include the costs of day to day servicing. Subsequent to initial recognition, properties held as financial investments are measured at amortised cost, net of scheduled depreciation and any impairment losses. Land and buildings held to generate rental income (investment property) are recognised at amortised cost separately from other items of property, plant and equipment, although the useful lives on which depreciation is based correspond to those for internally used property, plant and equipment.

Due to a lack of market or comparative data, the property has been measured at amortised cost.

### 1.5.10. Government grants

Government grants received in connection with investments in non-current assets are deducted from costs on the asset side pursuant to IAS 20.24.

Government grants are recognised when there is reasonable assurance that the company will receive the grants and comply with the conditions attached to the grants.

Grants relating to expense items are recognised as income over the period necessary to match the grant to the costs that they are intended to compensate.

### 1.5.11. Leases

The determination of whether an arrangement contains a lease is based on the economic substance of the arrangement at inception date and requires an estimation of whether the fulfilment of the contractual arrangement is dependent on the use of a specific asset or assets or the arrangement conveys a right to use the asset. The Group has no leasing contracts which could be deemed to represent finance leases.

Leasing arrangements in which the majority of the risks and rewards involved in ownership of the leased item remain with the lessor are classified as operating leases. Payments made in connection with an operating lease (on a net basis having accounted for incentive payments made by the lessor) are recognised in the income statement on a straight-line basis over the term of the lease.

### 1.5.12. Inventories

Raw materials and supplies, work in progress and finished products are recognised as inventories. Current prepayments made for inventory items are recognised at face value.

Costs of inventories are determined using the average cost method and include costs of acquisition and those costs incurred to bring the inventories to their present location and condition. Risks to inventories resulting from their period of storage and impaired utility are accounted for with appropriate write-downs to net realisable value. Raw materials and supplies are subsequently measured at the lower of average cost (average cost method) and their net realisable value.

Work in progress and finished products are recognised at cost. Specifically, as well as directly allocable costs, production costs also include production-related material and manufacturing overheads, including production-related depreciation and a commensurate share of necessary overhead costs. Consistent with IAS 23.11, borrowing costs have not been capitalised as part of acquisition or production costs. Production costs of internally produced work in progress and finished products include production-related overheads based on normal capacity utilisation.

Where necessary, inventories have been stated at their lower net realisable value. The net realisable value is equivalent to the expected selling price less disposal, sales and production costs.

### 1.5.13. Construction contracts

Future receivables from long-term construction contracts are recognised using the percentage of completion (POC) method laid down in IAS 11 to the extent that a customer-specific construction contract exists. This involves the prorated portion of profit being recognised in line with the percentage of completion, provided that it is possible to reliably determine the percentage of completion and the total costs and total revenues of the respective contracts in a way permitted by IAS 11. The percentage of completion of individual contracts is calculated using the cost-to-cost method. Prorated earnings are recognised from the beginning of construction work. When the earnings cannot yet be reliably estimated, sales are only recognised at the level of contract costs probably collectible.

Contract costs include directly attributable costs and a share of overheads. Borrowing costs are recognised as expenses.

Prepayments received for the individual order are deducted from the prorated contract revenues calculated in this way. The resultant net balance is stated as appropriate as a receivable or liability from long-term construction contracts.

### 1.5.14. Trade and other receivables

Receivables and other assets are measured at face value. Foreign currency receivables are translated at the spot rate on the date of the transaction pursuant to IAS 21.21 and subsequently measured at the rate on the balance sheet date pursuant to IAS 21.23.

The tax receivables included in other receivables mainly involve corporate income tax refunds, VAT prepayments and commission payments measured at face value.

### 1.5.15. Cash and cash equivalents

This balance sheet item includes cash holdings, credit balances at banks and short-term deposits with an original term of less than three months. Cash and cash equivalents are recognised at face value. The development in funds constituting cash and cash equivalents pursuant to IAS 7 is presented in the cash flow statement. Moreover, this item also includes securities relating to investments in money market funds which are available on a daily basis. These securities have been assigned without exception to the available-for-sale category and are measured at fair value. Changes in value are recognised directly in equity through to disposal.

### 1.5.16. Share capital

Ordinary shares are classified as shareholders' equity. Additional costs directly attributable to the issue of ordinary shares are deducted from shareholders' equity following deduction of tax effects.

### 1.5.17. Share-based payment

To promote the achievement of its economic targets, Roth & Rau introduced a share-based compensation programme (phantom stock programme or PSP) entitling managers to subscribe phantom stocks as a long-term compensation instrument of an incentive nature and, in the case of the Management Board, also involving risk. The development in the value of the phantom stocks is linked to the development in the price of Roth & Rau's share. The phantom stocks thus allocated may be exercised following a lockup period of two years from allocation and subject to the achievement of the exercise hurdle (specified base price upon allocation + 10 % p.a.). The phantom stocks may not be traded and do not entitle their holders to share subscription rights.

Phantom stock options may be paid in cash or in shares. In the first tranche, the members of the Management Board received 50 % share-based and 50 % cash-based option rights. In the second tranche, the contractual terms were amended so that Management Board members are only granted share-based option rights. Senior employees basically only receive cash-based option rights.

The calculation of the fair value accounts for all market conditions linked to the exercising of virtual options. The remaining exercise terms are factored into the calculation of the estimated number of exercisable options. The relevant personnel expenses are recognised in the capital reserve (equity-settled share) and under non-current provisions (cash-based share), taking due account of the pro-rated work performed over the vesting period as of the balance sheet date.

In line with IFRS 2, share options are recognised at fair value on the basis of option price models and taking due account of the terms of the commitment and personnel turnover rates. The compensation expenses are recognised through profit or loss over the period until the claims become vested. The fair value of phantom stock options was calculated using actuarial surveys and by reference to a simulation programme specially adapted to the agreed strategy (Monte Carlo process). Geometric Brownian motion was assumed for movements in the share price. Volatility has been calculated pursuant to IFRS 2 B25(b) as historic volatility based on the average performance of shares in Roth & Rau AG from 1 April 2009 to 31 December 2010 in line with the remaining terms of the option rights.

## 1.5.18. Provisions

### Pensions and other post-employment benefits

The Group maintains defined benefit pension plans mainly involving pension plans in Germany. Defined benefit pension plans are measured pursuant to IAS 19 (Employee Benefits) using the projected unit credit method, in which the non-current provisions to be recognised are based on actuarial surveys as of the balance sheet date.

The calculation takes account not only of the pensions and vested rights known of at the reporting date, but also of expected future increases in salary and pensions. Pensions are financed by the pension fund or by Deutscher Pensionsfonds AG. 80 % of the financing consists of equity instruments and 20 % of other asset instruments. As the requirements governing recognition as plan assets are met, the asset values are netted against the obligation.

In line with IAS, the discount factor is based on long-term investment rates. The underlying discount factor reflects the interest rates paid at the balance sheet date for blue-chip fixed-income securities with congruent terms. Application has been made of the corridor method set out in IAS 19.92f. The calculation has also referred to the biometric probability figures included in the 2005 G mortality tables compiled by Prof. Klaus Heubeck. The fair values of plan assets and the existing pension obligation are reported on a net basis. This led to an asset surplus as of 31 December 2010 which has been recognised under other receivables.

In the income statement, current service cost, the impact of the correction due to the asset limit and actuarial gains/losses are recognised under pension expenses, while interest expenses and the expected return on plan assets are recognised in the net financial result.

### Other provisions

Provisions are recognised when the Group has a present obligation (legal or constructive) as a result of a past event, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation. Where the Group expects some or all of a provision it has recognised to be reimbursed (e.g. under an insurance contract), the reimbursement is recognised as a separate asset, but only when reimbursement is virtually certain.

The expense relating to any provision is presented in the income statement net of any reimbursement. If the effect of the time value of money is material, provisions are discounted using a current pre-tax rate that reflects the risks specific to the liability. Where discounting is used, the increase in the provision due to the passage of time is recognised as a financial expense.

## 1.5.19. Derivative financial instruments

The Group uses derivative financial instruments, such as forward currency contracts and interest swaps, to hedge against interest and exchange rate risks respectively. These derivative financial instruments are recognised at fair value upon the conclusion of the respective contract and are subsequently remeasured at fair value. Derivative financial instruments are carried as financial assets when their fair values are positive and as financial liabilities when their fair values are negative. Gains or losses arising within the financial year from changes in the fair value of derivative financial instruments are recognised directly through profit or loss. The fair value of forward currency contracts is the difference between the forward exchange rate and the contractually agreed rate. The forward exchange rate is referenced to current forward exchange rates for contracts with similar maturity profiles. The fair value of interest swap contracts is determined by reference to valuation models based solely on empirical market data.

Since the fourth quarter of 2009, the Group has foregone any application of hedge accounting to present hedge relationships.

## 1.5.20. Non-derivative financial instruments

Available-for-sale financial assets are non-derivative financial assets that are either allocated to this category or not classified in any other of the categories presented. They are assigned to non-current assets unless the management has the intention of selling them within twelve months of the balance sheet date.

Regular purchases and sales of financial assets are recognised on the trading day, i.e. on the day on which the Group commits itself to purchase or sell the asset in question. Financial assets not belonging to the "measured at fair value through profit or loss" category" are initially recognised at fair value plus transaction costs. Financial assets belonging to this category are initially recognised at fair value, with the related transaction costs being recognised through profit or loss. Financial assets are derecognised when the rights to payments from the financial assets have expired or been assigned and the Group has assigned all major risks and opportunities involved in ownership. Any objective indications of impairment are accounted for with impairment losses recognised in the financial result. In its assessment of potential impairment, the Roth & Rau Group refers to all available information, such as market conditions, and the duration and extent of the decline in value. Any reduction in value by an average of at least fifteen percent below acquisition cost and lasting more than twelve months is taken as an objective indication of impairment.

Available-for-sale financial assets and assets in the "at fair value through profit or loss" category are measured at fair value following initial recognition.

Loans and receivables are non-derivative assets with fixed or determinable payments that are not quoted on an active market. Following initial recognition, loans and receivables are carried at amortised cost, accounting where necessary for allowances and discounts (effective interest method). Allowances are stated for loans and receivables when there are objective indications that the amount is no longer collectible in full. Such allowances are chiefly recorded in allowance accounts. Loans and receivables are derecognised upon classification as highly unlikely to be collectible.

Changes in the fair values of monetary and non-monetary securities classified as available-for-sale are recognised directly in equity. Where securities classified as available-for-sale are sold or impaired, the accumulated changes in the fair value previously recognised in equity must be recognised under "Other income" in the income statement as "Gains/(losses) on securities". Interest income resulting from application of the effective interest method for securities in the "available-for-sale" category is recognised in the income statement under "Other income".

The fair values of quoted shares are measured on the basis of current bid prices. The fair values of financial assets for which there is no active market or which are unlisted are measured using suitable valuation methods. These include reference to recent transactions between independent business partners, the use of current market prices of other assets which are basically the same as the asset in question, discounted cash flow (DCF) methods and option models based as far as possible on market data and as little as possible on company-specific data.

The Group assesses at each balance sheet date whether there are any indications of impairment for each financial asset or group of financial assets.

### 1.5.21. Financial debt

Following initial recognition, financial debt is measured at amortised cost (repayment amount). Financial debt with a term of more than 12 months is reported as non-current financial debt.

## 2. Key accounting judgements, estimates and assumptions

The preparation of the annual financial statements requires assumptions and estimates to be made to a certain extent. These have affected the amounts recognised for assets and liabilities, as well as for income and expenses. All estimates and assumptions are continuously reassessed and are based on empirical values and other factors, including expectations as to future events, which appear reasonable in the circumstances. The assumptions and estimates are based in each case on the information currently available. In particular, the expected future business performance has been based on the circumstances prevalent upon the preparation of the annual financial statements and on future developments in the global and sector-specific environment which are assumed to be realistic. Should the developments in the underlying framework lying outside the control of the management deviate from these assumptions, the amounts actually arising may differ from those originally expected. Should actual developments deviate from those expected, the assumptions and, if necessary, the carrying amounts of the assets and liabilities thereby affected will be adjusted accordingly. Upon the preparation of the annual financial statements, the underlying assumptions and estimates were not subject to any significant risks. Based on the information currently available, no substantial adjustment is therefore to be expected in the carrying amounts of the assets and liabilities stated in the balance sheet in the following financial year.

These assumptions and estimates principally involve assessing the ongoing value of intangible assets (research and development and goodwill; c.f. Note 5.1.1.), the determination of uniform useful lives for property, plant and equipment and assets let, the collectability of receivables and the recognition and measurement of provisions (especially pensions and stock options).

### Intangible assets

Apart from individual development projects, the assessment of the ongoing value of intangible assets, especially goodwill, did not have any implications in the year under report. Impairment losses were recognised for individual development projects (c.f. Note 4.1.1.). By analogy with the previous year, any change in the discount rates by +/- 10 % would not have any implications for the ongoing value of goodwill in the year under report.

### Receivables from long-term construction contracts

Future receivables from long-term construction contracts in particular are accounted for using the percentage of completion method (POC) pursuant to IAS 11. The percentage of completion of individual contracts is calculated using the cost-to-cost method. Longstanding experience and improved preliminary costing mean that the company can now reliably estimate the results of construction contracts. Where in exceptional cases the result of a construction contract cannot be reliably estimated, contract revenues are recognised at the level of contract costs incurred (zero profit margin method). Further details can be found in Note 4.2.2..

Had the expected assessment of percentage of completion been 10 % higher, then receivables would have been € 10,189k higher, liabilities would have been € 2,838k higher and sales would thus have been € 7,351k higher. Conversely, had the percentage of completion been 10 % lower, then receivables would have been € 46,113k lower, liabilities would have been € 33,200k higher and sales would thus have been € 12,913k lower.

Had the expected assessment of percentage of completion in the previous year been 10 % higher, then receivables would have been € 48,411k higher, liabilities would have been € 36,776k lower and sales would thus have been € 11,635k higher. Conversely, had the percentage of completion been 10 % lower, then receivables would have been € 69,190k lower, liabilities would have been € 47,693k higher and sales would thus have been € 21,497k lower.

Changes in the level of contract costs expected, especially for turnkey projects, led to changes in the percentage of completion in the year under report, and thus to sales being corrected by € -2,423k.

### Taxes on income

The expected amount of actual taxes on income and the temporary differences resulting from the differing treatment of certain balance sheet items in the IFRS consolidated financial statements and the tax financial statements have to be evaluated for each taxable entity.

Temporary differences, where they exist, generally result in the recognition of deferred tax assets and liabilities in the consolidated financial statements. The management has to make judgements when assessing actual and deferred taxes. When assessing the probability of deferred tax assets being utilised in future, reference has to be made to various factors, such as past earnings performance, operating budgets, loss carryover periods and tax planning strategies. Any deviation between actual results and these estimates could impact negatively on the net asset, financial and earnings position, as could any adjustment in these estimates in future periods. Where adjustments are made to the value of deferred tax assets, the relevant items have to be written down and charged to earnings by analogy with their original recognition. Conversely, impaired deferred tax assets may have to be recognised through profit or loss or in equity.

## 3. Segment report

Consistent with IFRS 8, the Group bases its segment reporting on its internal reporting structures. The respective figures are thus reported on the one hand broken down by operating segment and on the other broken down in terms of the geographical distribution of external sales by customer location. The business divisions are organised and managed separately in line with the nature of the products and services offered. Each segment thus represents a strategic business division whose range of products and markets are distinct from those of other segments. Segment information has in principle been based on the same methods of recognition and measurement as those applied in the annual financial statements.

In line with management reporting structures, operating segments are reported in a way that is consistent with internal reports to key decision makers. The management has been identified as the key decision maker. Reporting is based on the presentation of segment earnings prior to consolidation and purchase price allocation items.

Consolidation chiefly involves the elimination of intercompany profits under inventories. The accounting principles for the segments correspond to those outlined for the Group under Accounting Policies. “Earnings before taxes” as presented in the income statement represent the benchmark used to measure the earnings strength of the Group’s individual segments.

Sales between segments are performed at transfer prices customary in the market.

The photovoltaics segment includes products, technologies and services for the photovoltaics industry.

The equipment business generates the largest contribution to the sales and earnings of the Roth & Rau Group and has high growth potential. Among other products, this business field includes SiNA, MAiA, CAMiNI and DEPx, which are offered with various levels of production capacity.

Sales generated from the sale of production lines used to manufacture crystalline silicon solar cells are reported in the turnkey segment.

The most important products in the plasma and ion beam technology segment include the IonScan system series for thin film thickness trimming in the semiconductor industry and polishing error correction in precision options, as well as AK series systems for application in the large-scale coating of surfaces for the semiconductor and optics industries.

The software segment comprises software products for use in managing systems and supervising complex production processes through to the automation of entire factories and further products and services provided to customers outside the photovoltaics industry.

The spare parts and services segment includes sales generated from the sale of spare parts and from the services, such as maintenance and servicing, performed in the worldwide services business.

## 3.1. Segment report by business field

| 01.01.–31.12.2010 € 000s | Photovoltaics equipment | Photovoltaics turnkey | Plasma and ion beam technology | Software | Spare parts and services | Other | Total | Margin in % | Consolidation | Badwill on purchase price allocation | Writedowns on purchase price allocation | Group figure after consolidation | Margin in % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| External sales | 202,834 | 22,762 | 10,404 | 11,577 | 33,954 | 3,826 | 285,357 | | 0 | | | 285,357 | |
| Internal sales | 54,201 | 9,451 | 2,306 | 1,228 | 8,260 | 0 | 75,446 | | -75,446 | | | 0 | |
| Total sales | 257,035 | 32,213 | 12,710 | 12,805 | 42,214 | 3,826 | 360,803 | | -75,446 | | | 285,357 | |
| EBITDA | 20,029 | -34,264 | 3,146 | 3,120 | 2,393 | 692 | -4,884 | -1.7 | -559 | 0 | -1 | -5,444 | -1.9 |
| Depreciation and amortisation | 10,930 | 2,427 | 1,321 | 1,324 | 871 | 86 | 16,959 | | 0 | | 4,887 | 21,846 | |
| EBIT | 9,099 | -36,691 | 1,825 | 1,796 | 1,522 | 606 | -21,843 | -7.7 | -559 | 0 | -4,888 | -27,290 | -9.6 |

| 01.01.–31.12.2009 € 000s | Photovoltaics equipment | Photovoltaics turnkey | Plasma and ion beam technology | Software | Spare parts and services | Other | Total | Margin in % | Consolidation | Badwill on purchase price allocation | Writedowns on purchase price allocation | Group figure after consolidation | Margin in % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| External sales | 85,102 | 72,983 | 9,690 | 15,349 | 10,383 | 4,396 | 197,903 | | 0 | | | 197,903 | |
| Internal sales | 8,361 | 9,515 | 772 | 1,226 | 4,106 | 0 | 23,980 | | -23,980 | | | 0 | |
| Total sales | 93,463 | 82,498 | 10,462 | 16,575 | 14,489 | 4,396 | 221,883 | | -23,980 | | | 197,903 | |
| EBITDA | 12,464 | 2,582 | 1,440 | 4,639 | 2,021 | 1,039 | 24,185 | 12.2 | -1,008 | 1,141 | 0 | 24,318 | 12.3 |
| Depreciation and amortisation | 2,381 | 1,079 | 1,138 | 787 | 172 | 138 | 5,695 | | 0 | | 2,523 | 8,218 | |
| EBIT | 10,083 | 1,503 | 302 | 3,852 | 1,849 | 901 | 18,490 | 9.3 | -1,008 | 1,141 | -2,523 | 16,100 | 8.1 |

The reconciliation with consolidated net income is as follows:

| | 2010 | 2009 |
|---|---|---|
| Operating earnings | -27,290 | 16,100 |
| Financial income | 2,489 | 1,824 |
| Financial expenses | -9,457 | -1,217 |
| Taxes on income | 8,403 | -3,735 |
| Earnings after taxes | -25,855 | 12,972 |

There were no customers accounting for 10 % of total sales in the year under report. In the previous year, 13 % of sales, or € 25,751k, were generated within a single customer in the photovoltaics equipment segment.

## 3.2. Segment report by region

This reporting format is based on geographical considerations and shows the distribution of external sales by customer location. Segment assets are allocated to the respective location.

Roth & Rau AG manages its activities by reference to the results of its business fields, rather than to regional earnings contributions. No further segmentation is therefore required.

| 01.01.–31.12.2010 € 000s | Photo-voltaics equipment | Photo-voltaics turnkey | Photo-voltaics total | Plasma and ion beam technology | Software | Spare parts and services | Other | Total | Share |
|---|---|---|---|---|---|---|---|---|---|
| Germany | 487 | 7,618 | 8,105 | 7,174 | 7,648 | 3,495 | 1,901 | 28,323 | 9.9 % |
| International | 202,347 | 15,144 | 217,491 | 3,230 | 3,929 | 30,459 | 1,925 | 257,034 | 90.1 % |
| Europe | 6,224 | 646 | 6,870 | 626 | 1,448 | 8,024 | 845 | 17,813 | 6.3 % |
| Asia | 191,509 | 8,008 | 199,517 | 487 | 59 | 19,654 | 888 | 220,605 | 77.3 % |
| USA | 4,614 | 6,490 | 11,104 | 2,117 | 2,422 | 2,747 | 131 | 18,521 | 6.5 % |
| Other | 0 | 0 | 0 | 0 | 0 | 34 | 61 | 95 | 0.0 % |
| Total | 202,834 | 22,762 | 225,596 | 10,404 | 11,577 | 33,954 | 3,826 | 285,357 | |

| 01.01.–31.12.2009 € 000s | Photo-voltaics equipment | Photo-voltaics turnkey | Photo-voltaics total | Plasma and ion beam technology | Software | Spare parts and services | Other | Total | Share |
|---|---|---|---|---|---|---|---|---|---|
| Germany | 7,716 | 5,295 | 13,011 | 5,736 | 10,519 | 2,434 | 2,295 | 33,995 | 17.2 % |
| International | 77,386 | 67,688 | 145,074 | 3,954 | 4,829 | 7,949 | 2,102 | 163,908 | 82.8 % |
| Europe | 15,188 | 19,666 | 34,854 | 2,046 | 2,334 | 4,570 | 1,378 | 45,182 | 22.8 % |
| Asia | 62,198 | 35,333 | 97,531 | 647 | 434 | 2,610 | 271 | 101,493 | 51.3 % |
| USA | 0 | 12,688 | 12,688 | 1,256 | 2,061 | 633 | 134 | 16,772 | 8.5 % |
| Other | 0 | 1 | 1 | 5 | 0 | 136 | 319 | 461 | 0.2 % |
| Total | 85,102 | 72,983 | 158,085 | 9,690 | 15,348 | 10,383 | 4,397 | 197,903 | |

The regional distribution of assets is as follows:

| 01.01.–31.12.2010<br>€ 000s | Germany | Europe | Asia | USA | Other | Total |
|---|---|---|---|---|---|---|
| Intangible assets | 94,744 | 5,453 | 0 | 527 | 0 | 100,724 |
| Property, plant and equipment | 40,527 | 1,831 | 529 | 55 | 10 | 42,952 |
| Investment property | 150 | 0 | 0 | 0 | 0 | 150 |

| 01.01.–31.12.2009<br>€ 000s | Germany | Europe | Asia | USA | Other | Total |
|---|---|---|---|---|---|---|
| Intangible assets | 48,986 | 53 | 0 | 546 | 0 | 49,585 |
| Property, plant and equipment | 27,210 | 400 | 359 | 52 | 7 | 28,028 |
| Investment property | 160 | 0 | 0 | 0 | 0 | 160 |

# 4. Disclosures on individual items in the balance sheet

## 4.1. Non-current assets

### 4.1.1. Intangible assets

Intangible assets include acquired assets resulting in particular from company acquisitions and internally generated intangible assets from development projects. The development in intangible assets has been presented in the Non-current Asset Schedule.

# Development in non-current assets

| | Historic Cost | | | | | |
|---|---|---|---|---|---|---|
| € 000s | Balance at 01.01. | Acquisitions | Additions | Disposals | Reclassifications | Currency effects |
| **Development in intangible assets** | | | | | | |
| **2009** | | | | | | |
| Industrial property rights and similar rights and values | 1,375 | 240 | 668 | 38 | 0 | 0 |
| Brand | 1,240 | 0 | 0 | 0 | 0 | 0 |
| Customer relationships | 3,367 | 0 | 0 | 0 | 4,648 | 0 |
| Technology | 0 | 0 | 0 | 0 | 3,792 | 0 |
| Orders on hand | 1,848 | 0 | 0 | 0 | 200 | 0 |
| Goodwill | 12,767 | 0 | 24 | 0 | 6,912 | 0 |
| Development expenses | 13,378 | 1,702 | 10,886 | 721 | 0 | 9 |
| | **33,975** | **1,942** | **11,578** | **759** | **15,552** | **9** |
| **2010** | | | | | | |
| Industrial property rights and similar rights and values | 2,245 | 744 | 1,414 | 40 | 0 | 0 |
| Brand | 1,240 | 3,676 | 0 | 0 | 0 | 0 |
| Customer relationships | 8,015 | 4,734 | 0 | 0 | 0 | 0 |
| Technology | 3,792 | 21,188 | 0 | 0 | 0 | 0 |
| Orders on hand | 2,048 | 5,016 | 0 | 0 | 0 | 0 |
| Goodwill | 19,703 | 22,535 | 0 | 0 | 0 | 0 |
| Development expenses | 25,254 | 0 | 15,631 | 476 | -267 | 43 |
| | **62,297** | **57,893** | **17,045** | **516** | **-267** | **43** |
| **Development in property, plant and equipment** | | | | | | |
| **2009** | | | | | | |
| Land | 577 | 0 | 220 | 70 | 0 | 0 |
| Buildings | 14,855 | 2,260 | 187 | -38 | 0 | 0 |
| Technical equipment and machinery | 4,266 | 631 | 3,217 | 318 | 713 | 0 |
| Other equipment, office and plant equipment | 4,959 | 879 | 1,910 | 165 | 0 | 0 |
| Prepayments made and assets under construction | 713 | 0 | 1,837 | 0 | -713 | 0 |
| | **25,370** | **3,770** | **7,371** | **515** | **0** | **0** |
| **2010** | | | | | | |
| Land | 727 | 0 | 308 | 0 | 0 | 0 |
| Buildings | 17,340 | 0 | 34 | 98 | | 0 |
| Technical equipment and machinery | 8,509 | 1,175 | 1,908 | 840 | 8,021 | 0 |
| Other equipment, office and plant equipment | 7,583 | 2,831 | 2,558 | 727 | 4 | 0 |
| Prepayments made and assets under construction | 1,838 * | 0 | 14,223 | 86 | -7,758 | 0 |
| | **35,997 *** | **4,006** | **19,031** | **1,751** | **267** | **0** |
| **Development in financial assets** | | | | | | |
| Shares in non-consolidated subsidiaries | | | | | | |
| 2009 | 11,006 | 205 | 270 | 99 | -10,998 | 0 |
| 2010 | 384 | -238 | 252 | 72 | 0 | 0 |
| Total non-current assets excluding investment property 2009 | 70,351 | 5,917 | 19,219 | 1,373 | 4,554 | 9 |
| **Total non-current assets excluding investment property 2010** | **98,678 *** | **61,661** | **36,328** | **2,339** | **0** | **43** |
| Development in investment property | | | | | | |
| 2009 | 335 | 0 | 0 | 0 | 0 | 0 |
| 2010 | 335 | 0 | 0 | 0 | 0 | 0 |
| Total non-current assets including investment property 2009 | 70,686 | 5,917 | 19,219 | 1,373 | 4,554 | 9 |
| **Total non-current assets including investment property 2010** | **99,013 *** | **61,661** | **36,328** | **2,339** | **0** | **43** |

| | Depreciation and Amortisation | | | | | | | Carrying Amounts | |
|---|---|---|---|---|---|---|---|---|---|
| Balance at 31.12. | Balance at 01.01. | Acquisitions | Additions | Impairments | Disposals | Reclassifications | Balance at 31.12. | Balance at 31.12. | Balance at 01.01. |
| 2,245 | 437 | 148 | 491 | 0 | 40 | 78 | 1,114 | 1,131 | 938 |
| 1,240 | 41 | 0 | 83 | 0 | 0 | 0 | 124 | 1,116 | 1,199 |
| 8,015 | 169 | 0 | 882 | 0 | 0 | 0 | 1,051 | 6,964 | 3,198 |
| 3,792 | 0 | 0 | 434 | 0 | 0 | 0 | 434 | 3,358 | 0 |
| 2,048 | 924 | 0 | 1,124 | 0 | 0 | 0 | 2,048 | 0 | 924 |
| 19,703 | 1,579 | 0 | 0 | 0 | 0 | 0 | 1,579 | 18,124 | 11,188 |
| 25,254 | 3,466 | 0 | 2,853 | 121 | 0 | -78 | 6,362 | 18,892 | 9,912 |
| **62,297** | **6,616** | **148** | **5,867** | **121** | **40** | **0** | **12,712** | **49,585** | **27,359** |
| | | | | | | | | | |
| 4,363 | 1,114 | 265 | 850 | 0 | 30 | 0 | 2,199 | 2,164 | 1,131 |
| 4,916 | 124 | 0 | 266 | 0 | 0 | 0 | 390 | 4,526 | 1,116 |
| 12,749 | 1,051 | 0 | 1,427 | 0 | 0 | 0 | 2,478 | 10,271 | 6,964 |
| 24,980 | 434 | 6,519 | 4,106 | 427 | 0 | 0 | 11,486 | 13,494 | 3,358 |
| 7,064 | 2,048 | 0 | 3,762 | 0 | 0 | 0 | 5,810 | 1,254 | 0 |
| 42,238 | 1,579 | 0 | 0 | 0 | 0 | 0 | 1,579 | 40,659 | 18,124 |
| 40,185 | 6,362 | 0 | 3,577 | 1,897 | 7 | 0 | 11,829 | 28,356 | 18,892 |
| **136,495** | **12,712** | **6,784** | **13,988** | **2,324** | **37** | **0** | **35,771** | **100,724** | **49,585** |
| | | | | | | | | | |
| 727 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 726 | 576 |
| 17,340 | 1,114 | 625 | 481 | 0 | 0 | 0 | 2,220 | 15,120 | 13,741 |
| 8,509 | 1,363 | 285 | 829 | 0 | 0 | 0 | 2,477 | 6,032 | 2,903 |
| 7,583 | 1,817 | 679 | 920 | 0 | 146 | 0 | 3,270 | 4,313 | 3,142 |
| 1,837 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,837 | 713 |
| **35,996** | **4,295** | **1,589** | **2,230** | **0** | **146** | **0** | **7,968** | **28,028** | **21,075** |
| | | | | | | | | | |
| 1,035 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1,034 | 726 |
| 17,276 | 2,220 | 0 | 518 | 0 | 0 | 0 | 2,738 | 14,538 | 15,120 |
| 18,773 | 2,477 | 881 | 1,210 | 1,553 | 508 | 0 | 5,613 | 13,160 | 6,032 |
| 12,249 | 3,270 | 1,303 | 1,701 | 552 | 580 | 0 | 6,246 | 6,003 | 4,313 |
| 8,217 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8,217 | 1,838 * |
| **57,550** | **7,968** | **2,184** | **3,429** | **2,105** | **1,088** | **0** | **14,598** | **42,952** | **28,029 *** |
| | | | | | | | | | |
| 384 | 0 | 51 | 0 | 0 | 51 | 0 | 0 | 384 | 11,006 |
| 326 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 326 | 384 |
| 98,677 | 10,911 | 1,788 | 8,097 | 121 | 237 | 0 | 20,680 | 77,997 | 59,440 |
| **194,371** | **20,680** | **8,968** | **17,417** | **4,429** | **1,125** | **0** | **50,369** | **144,002** | **77,998 *** |
| | | | | | | | | | |
| 335 | 164 | 0 | 11 | 0 | 0 | 0 | 175 | 160 | 171 |
| 335 | 175 | 0 | 10 | 0 | 0 | 0 | 185 | 150 | 160 |
| 99,012 | 11,075 | 1,788 | 8,108 | 121 | 237 | 0 | 20,855 | 78,157 | 59,611 |
| **194,706** | **20,855** | **8,968** | **17,427** | **4,429** | **1,125** | **0** | **50,554** | **144,152** | **78,158 *** |



* rounding up difference: +/- € 1k

#### 4.1.1.1. Development expenses

Development expenses of € 19,131k were capitalised in line with IAS 38 for new products and production processes in the period under report (previous year: € 11,658k). Following the deduction of grants of € 3,500k requested or received for these projects (previous year: € 1,493k), a net amount of € 15,631k was recognised as an addition to development expenses (previous year: € 10,165k). Development expenses of € 14,056k not eligible for capitalisation were recognised as expenses (previous year: € 4,818k). Impairments of € 1,897k were charged to earnings in the financial year under report in connection with development expenses previously capitalised (previous year: € 121k). The impairments related to projects affected among other measures by the streamlining of the product portfolio in the context of the new strategic alignment in the turnkey business. Furthermore, specific product groups and related development projects have been discontinued due to lack of utilisation prospects or inadequate future cash flows.

The expansion of research and development activities is intended to extend the product range and access new areas of activity. Research and development activities at Roth & Rau AG focused in the year under report on new systems and innovative technologies for use in crystalline photovoltaics aimed at raising efficiency and suitability for production and thus at attaining cost leadership. The process portfolio could be significantly expanded by cooperating with various international research and development institutions. To this end, at the Technology Centre in Hohenstein-Ernstthal operations began with a pilot line enabling the entire solar cell production process to be run through. Within the first weeks of operation it was already possible to achieve cell results comparable with those achieved in the best production processes worldwide. The pace of development and learning at Roth & Rau AG has thus attained a new level of quality. The pilot line will now be used in cooperation with group companies, leading industry partners and institutes to work on the further development of systems and processes and to perform customer specimen tests.

In the photovoltaics segment, capitalised development services include the enhancement of established systems and production concepts for plasma-assisted separation systems, the development of new system concepts for thermal and innovative processes and production technologies for high-efficiency multicrystalline and monocrystalline solar cells.

Development expenses were mainly capitalised in connection with the following projects in the 2010 financial year:

##### Crystalline silicon solar cells

Main focuses in the field of crystalline photovoltaics included:
- Further development of existing SiNA systems for SiNA Release 2 with new coating components
- Development of a high-efficiency crystalline silicon solar cell production technology
- Development and optimisation of inexpensive, environmentally-friendly metallisation processes
- Development of new plasma-based coating and etching processes to increase output efficiency of crystalline silicon solar cells; particular noteworthy here is the development of reverse side passivation films based on aluminium oxide.

##### Thin film solar modules

- Development of a new system to separate cadmium telluride on glass.

Within the other activities segment, the expenses incurred to enhance the VAC product for its successful 5.0 release in the fourth quarter of 2010 and to enhance the MES version at AIS Automation Dresden GmbH have been capitalised as development expenses.

### 4.1.1.2. Purchase price allocation

The goodwill resulting from the acquisitions of R³T GmbH and OTB in 2010 has been recognised under intangible assets. The intangible assets and useful lives determined in the context of the purchase price allocations for R³T GmbH and OTB Solar B. V. in 2010 are structured as follows:

| | | | |
|---|---|---|---|
| Technology | € 5,231k | Useful life | 8 years |
| Customer relationship | € 4,734k | Useful life | 4 – 10 years |
| Brand | € 3,676k | Useful life | 15 years |
| Orders on hand | € 5,016k | Useful life | 1 year |

### Purchase price allocation for OTB Solar B. V.

Roth & Rau AG acquired all of the shares in OTB Solar B.V. (hereinafter "OTB") on the basis of a purchase agreement dated 5 February 2010. The shares were assigned on 1 April 2010. OTB's product portfolio includes systems and technologies for the solar industry, especially antireflective coating systems and turnkey production lines for use in the manufacture of crystalline silicon solar cells. Furthermore, industrial ink-jet printing applications are also among OTB's core competencies.

The acquisition will enable Roth & Rau to increase its market share as a provider of crystalline solar technology equipment and in the turnkey business. Furthermore, the company has secured access to competitive new technologies, thus further promoting the expansion in its product portfolio.

The goodwill of € 18,602k is mainly attributable to the human capital available among employees at the acquired company and not eligible for capitalisation, as well as to the synergies expected to be generated by the transaction. Consolidation-related goodwill is not deductible for tax purposes. Deferred tax assets of € 11,439k have been recognised to account for the difference between the consolidation-related goodwill and the tax-deductible goodwill available at OTB due to an earlier restructuring process.

The acquisition costs and fair values of the net assets thereby acquired are presented below. The purchase price allocation was performed in line with IFRS 3R. The goodwill has been calculated as follows:

OTB Solar B.V.

€ 000s

| | |
|---|---|
| Acquisition costs | |
| Liquid funds, including transaction costs from 2009* | 5,698 |
| Issue of treasury stock | 25,491 |
| Total value | 31,189 |
| | |
| Cash and cash equivalents | 1,088 |
| Intangible assets | 26,957 |
| Property, plant and equipment | 1,798 |
| Deferred tax assets | 17,720 |
| Inventories | 12,177 |
| Receivables and other assets | 5,650 |
| Non-current loans | -22,228 |
| Provisions | -8,262 |
| Trade payables and other liabilities | -15,665 |
| Prepayments received | -239 |
| Current loans | -1,337 |
| Tax liabilities | -4,428 |
| Deferred tax liabilities | -394 |
| Net assets | 12,587 |
| Goodwill | 18,602 |

* The transaction costs incurred in 2009 amounted to € 198k.

The market price of the shares required to settle part of the purchase price amounted to € 24.82 on 1 April 2010.

The fair values of the assets and liabilities have been determined by reference to expected market prices.

OTB Solar B.V. has a financial obligation of € 394k in connection with a letting arrangement for the company's headquarters in Eindhoven.

Since 1 April 2010, OTB has contributed € 84,559k to Group sales and € 8,399k to Group earnings (EBIT). Had OTB already been included in the consolidated financial statements as of 1 January 2010, then the Group would have reported additional sales of € 10,746k and additional annual earnings of € -4,552k.

Purchase price allocation for R³T GmbH:
On 25 February 2010, Roth & Rau Muegge GmbH acquired a further 40 % of the shares in R³T Rapid Reactive Radicals Technology GmbH. Together with the existing 60 % stake, R³T GmbH has been fully consolidated. The acquisition costs and fair values of the net assets thereby acquired are presented below. The purchase price allocation was performed in line with IFRS 3R. The goodwill has been calculated as follows:

R³T GmbH

€ 000s

| | |
|---|---|
| Acquisition costs | |
| Liquid funds, including transaction costs from 2009* | 691 |
| Total value | 691 |
| | |
| Intangible assets | 899 |
| Property, plant and equipment | 24 |
| Inventories | 227 |
| Receivables and other assets | 126 |
| Non-current loans | -260 |
| Provisions | -55 |
| Trade payables and other liabilities | -37 |
| Tax liabilities | -5 |
| Deferred tax liabilities | -239 |
| Net assets | 680 |
| Minority interests | -272 |
| Net assets acquired by Roth & Rau AG | 408 |
| Goodwill | 283 |

* The transaction costs incurred in 2009 amounted to € 41k.

Since 25 February 2010, R³T GmbH has contributed € 192k to Group sales and € 187k to Group earnings (EBIT). Had R³T GmbH already been included in the consolidated financial statements as of 1 January 2010, then the Group would have reported additional sales of € 30k and additional annual earnings of € -55k.

Including pro-forma earnings at OTB Solar B.V. and at R³T GmbH, earnings per share (in €) would have been as follows:

| | |
|---|---|
| Reported | -1.64 |
| Plus pro-forma earnings | -1.93 |

Purchase price adjustment:

The goodwill recognised in the previous year in connection with the acquisition of the Ortner Group and of Roth & Rau Italy S.r.l. increased by a total of € 3,650k in 2010 due to retrospective purchase price adjustments (“earn out”).

The purchase price for the acquisition of the Ortner Group is conditional on the future development in after-sale revenues at the Group and had to be increased by € 500k in 2010 due to the achievement of the contractually defined volume of after-sales revenues at the Roth & Rau Group. For 2011, should the existing sales budget agreed with the management be achieved, then the variable purchase price component will increase by a further amount of € 1,750k. This has also been accounted for in goodwill.

The agreement concerning the acquisition of Roth & Rau Italy S.r.l. provides for a variable purchase price component conditional on this company’s future sales and EBIT performance. The minimum criteria thereby agreed for both key figures were met in 2010, as a result of which an additional purchase price component of € 700k had to be accounted for in the year under report. Based on existing sales and earnings budgets, the agreed criteria will also be met for 2011, as a result of which the goodwill recognised as of the balance sheet date was increased by a further amount of € 700k to account for variable purchase price components.

Overall, the goodwill reconciliation schedule for the year under report is structured as follows:

| € 000s | 31.12.2010 | 31.12.2009 |
|---|---|---|
| Goodwill at beginning of period | 18,124 | 11,188 |
| Addition due to acquisitions | 18,884 | 6,936 |
| Retrospective purchase price in 2010 | 3,650 | 0 |
| Goodwill impairment | 0 | 0 |
| Goodwill at end of period | 40,658 | 18,124 |

* rounding up difference: € 1k

#### 4.1.1.3. Impairment test

Goodwill is not subject to scheduled amortisation, but is rather tested annually for impairment pursuant to IAS 36. The impairment test is performed as of 31 December each year.

The ongoing value of goodwill is calculated by reference to the recoverable amounts for the cash generating units (CGUs) to which the goodwill has been allocated.

Eight major goodwill-bearing CGUs have been identified at the Group for this purpose. Total goodwill amounted to € 40,659k as of 31 December 2010 (previous year: € 18,124k).

The recoverable amount of a CGU is determined by calculating its "fair value less cost to sell" using the discounted cash flow method. Reference is made to the budgeted discounted cash flows in the five-year budget approved by the management. The "fair value less cost to sell" is generally calculated on the basis of estimated rates of sales growth in the relevant markets. The calculation takes account both of past data and of expected future growth. The figures used in key assumptions are basically consistent with external sources of information.

The major goodwill-bearing CGUs thereby calculated are as follows:

| CGU | Carrying amount of goodwill 2010 (€ 000s) | Share of total goodwill | WACC | Terminal value growth rate | Assumption underlying corporate budgeting |
|---|---|---|---|---|---|
| OTB Solar B.V. | 18,602 | 45.75 % | 12.30 % | 1.50 % | Past and future market growth |
| AIS Automation Dresden GmbH | 11,211 | 27.57 % | 10.40 % | 1.50 % | Past and future market growth |
| Roth & Rau Muegge GmbH | 3,737 | 9.19 % | 11.85 % | 1.50 % | Past and future market growth |
| Roth & Rau – Ortner GmbH | 3,625 | 8.92 % | 9.64 % | 1.50 % | Past and future market growth |
| Roth & Rau Italy s.r.l. | 2,225 | 5.47 % | 10.40 % | 1.50 % | Past and future market growth |
| Roth & Rau MicroSystems GmbH | 532 | 1.31 % | 10.40 % | 1.50 % | Past and future market growth |
| Romaric Automation Design Inc. | 443 | 1.09 % | 10.40 % | 1.50 % | Past and future market growth |
| R³T GmbH | 283 | 0.70 % | 10.55 % | 1.50 % | Past and future market growth |

No goodwill was critical. The 2010 impairment test did not identify any impairment requirement.

### 4.1.2. Property, plant and equipment

The development in property, plant and equipment is presented in Note 4.1.1.

Additions to property, plant and equipment consist of investments of € 19,031k made in the customary course of business (previous year: € 7,371k) and additions totalling € 4,006k due to the acquisition of OTB Solar B.V. and R³T GmbH (previous year: € 3,770k).

A further amount of € 4,286k was invested in the construction of a new office building at the Hohenstein-Ernstthal location, including a large car park, and an amount of € 5,298k was invested in expanding the existing Technology Centre. The pieces of land used for the car park, with total surface areas of approximately 12,335 m², were acquired from the "Am Sachsenring" Oberlungwitz special purpose association in 2010 for a total amount of € 303k.

Prepayments made include a prepayment of € 1,980k for the EVA foil production line.

### 4.1.3. Financial assets

The development in financial assets is presented in Note 4.1.1..

Financial assets involve financial instruments in the "available for sale" category exclusively relating to the share of € 75k in the subsidiary consolidated at equity (previous year: € 125k). Due to materiality considerations, this item has not been reported separately in the balance sheet.

The prorated share of this company's profit and losses, already outlined in Note 1.2.2., has been recognised in the income statement from the date of acquisition. The share of changes in reserves has been recognised in group reserves. Accumulated changes following acquisition have been offset against the carrying amount of the investment.

### 4.1.4. Other non-current receivables

Other non-current receivables include deposits paid for rental agreements and a non-current loan granted by Roth & Rau Muegge GmbH to its 50 % shareholding, which has been consolidated at equity.

### 4.1.5. Investment property

Investment property relates to the land and building currently let out at "Gewerbering 10, Hohenstein-Ernstthal, Wüstenbrand District". The rental income amounted to € 36k in 2010 (previous year: € 42k). The maintenance expenses incurred in the year under report were immaterial.

Due to the lack of market or comparative data, the property has been measured at amortised cost. The buildings are subject to straight-line depreciation of 4 % p.a. No costs directly attributable to the financial investments were incurred in 2010.

### 4.1.6. Deferred tax assets

Deferred tax assets are outlined in Note 5.10.

## 4.2. Current assets

### 4.2.1. Inventories

This item is structured as follows:

| € 000s | 31.12.2010 | 31.12.2009 |
|---|---|---|
| Raw materials and supplies | 15,971 | 5,512 |
| Work in progress | 42,972 | 5,549 |
| Prepayments received for orders | -6,910 | 0 |
| Finished products and goods | 3,263 | 1,275 |
| Prepayments made | 9,833 | 9,664 |
| Total | 65,129 | 22,000 |

The increase in inventories was due to the ongoing robust development in new orders, the integration of the OTB Group and the reclassification of former customer projects to inventories. Furthermore, inventories have also been increased by the gradual transition to modular production.

As of 31 December 2010, the OTB Group accounted for inventories of € 5,433k.

Other than this, the increase in inventories was chiefly due to the conversion to a modular production concept for the second generation of our coating systems.

Inventories also rose in the year under report on account of the reclassification of former customer projects from receivables from long-term construction contracts to own-account stocks. The management assumes that these components can be used for current orders in 2011 and valued the relevant components, written down to their net disposal values, at an amount of € 7,695k as of 31 December 2010 (c.f. other operating expenses, Note 5.8.).

### 4.2.2. Receivables and liabilities from long-term construction contracts

This item is structured as follows:

| € 000s | 31.12.2010 | 31.12.2009 |
|---|---|---|
| ASSETS | | |
| Receivables | 147,582 | 243,233 |
| ./. less prepayments received | -97,288 | -148,801 |
| | 50,294 | 94,432 |
| LIABILITIES | | |
| Liabilities | 12,461 | 40,544 |
| ./. less prepayments received | -22,177 | -43,012 |
| | -9,716 | -2,468 |

The respective orders are reported under “receivables from long-term construction contracts” on the asset side and under “liabilities from long-term construction contracts” on the liabilities side. In cases where the prepayments exceed the cumulative work performed, the excess balance is reported as a liability under liabilities from long-term construction contracts or under prepayments received.

Based on a cautious valuation, an expected loss of € 4,783k has been recognised for three current customer projects. The respective impairment losses (impairment of current assets) have been recognised under other operating expenses.

This item is structured as follows:

Construction contracts in progress

| € 000s | 31.12.2010 | 31.12.2009 |
|---|---|---|
| Prorated sales recognised | 160,043 | 283,777 |
| Prepayments received | -119,465 | -191,813 |
| Net balance | 40,578 | 91,964 |
| Assets recognised in balance sheet | 50,294 | 94,432 |
| Liabilities recognised in balance sheet | -9,716 | -2,468 |
| Net balance | 40,578 | 91,964 |
| Costs | 123,984 | 240,530 |
| Prorated earnings | 40,842 | 43,247 |
| Anticipated loss | -4,783 | 0 |
| | 160,043 | 283,777 |

### 4.2.3. Trade and other receivables

This item is structured as follows:

| € 000s | 31.12.2010 | 31.12.2009 |
|---|---|---|
| Trade receivables | 28,418 | 26,671 |
| Other receivables and financial assets | 6,920 | 6,714 |
| Total | 35,338 | 33,385 |

Trade receivables amount to € 44,765k and have been reported less allowances of € 16,347k at a net amount of € 28,418k. They have terms of under one year. There are allowances of € 16,347k (previous year: € 1,995k). Individual allowances are recognised based on the assessment of the Management Board. Reference is made to criteria such as the number of days overdue and creditworthiness checks obtained from external institutions.

OTB accounted for trade receivables of € 9,580k and other receivables of € 1,748k as of 31 December 2010.

The final invoice for the major project performed for Conergy, a customer of the Group, was compiled in 2010. In view of the pending legal dispute, individual allowances have been recognised for the full amount of the outstanding receivables of € 8,413k (net).

Furthermore, individual allowances have been recognised for receivables due from the US solar cell manufacturer SpectraWatt due to the pending discontinuation of business activities at that company. Supplies and prepayments totalling US$ 10,312k were converted into a convertible bond in 2010. Due to the existing risk of insolvency, the convertible bond (€ 7,717k) and the related interest claims (€ 556k), the supplies already finally invoiced (€ 1,229k) and the receivables due for current projects (€ 2,128k) have all been written down in full.

Overall, the allowances recognised under trade receivables are structured as follows:

| € 000s | Balance at 01.01.2010 | Addition due to acquisition | Utilised | Reversed | Added | Balance at 31.12.2010 |
|---|---|---|---|---|---|---|
| Individual allowance | 1,640 | 84 | 202 | 1,044 | 15,635 | 16,113 |
| General portfolio allowance | 355 | 0 | 199 | 7 | 85 | 234 |
| Total | 1,995 | 84 | 401 | 1,051 | 15,720 | 16,347 |

The Group had foreign-currency receivables of € 4,279k as of the balance sheet date (previous year: € 117k). Foreign-currency receivables have been measured at the reporting date rate. They include a large number of individual items. There were no material deviations between their carrying amounts and their fair values.

Other receivables and financial assets are structured as follows:

| € 000s | 31.12.2010 | 31.12.2009 |
|---|---|---|
| Suppliers with debit balances | 1,277 | 641 |
| Deferred research and development grants | 1,440 | 1,628 |
| Receivables for investment grants | 48 | 1,067 |
| Deferred interest claims | 0 | 43 |
| Deferred bonuses | 488 | 57 |
| Financial derivatives | 57 | 31 |
| Receivables from insurance companies | 1,434 | 1,368 |
| Deferred expenses and accrued income – residual balance | 829 | 1,272 |
| Miscellaneous | 1,347 | 607 |
| Total | 6,920 | 6,714 |

Reference is made to Notes 1.5.19. et seq. and to Note 4.6. in respect of financial derivatives and other financial instruments.

### 4.2.4. Current tax receivables

This item includes tax refund claims in connection with VAT, corporate income tax, the solidarity surcharge and trade tax.

| € 000s | 31.12.2010 | 31.12.2009 |
|---|---|---|
| Income tax receivables | 2,526 | 2,848 |
| VAT receivables | 9,381 | 369 |
| Payroll tax receivables | 9 | 0 |
| Total | 11,916 | 3,217 |

VAT receivables rose sharply compared with the previous year, a development directly due to the build-up in German inventory capacities. Furthermore, input tax refund claims were affected by the prepayments made in connection with the construction of the new office building at the Hohenstein-Ernstthal location.

### 4.2.5. Cash and cash equivalents

| € 000s | 31.12.2010 | 31.12.2009 |
|---|---|---|
| Cash holdings | 24 | 11 |
| Credit balances at banks | 103,177 | 31,687 |
| Marketable securities | 4,540 | 34,343 |
| Total | 107,741 | 66,041 |

Cash and cash equivalents are recognised at face value.

In addition to cash holdings and short-term bank deposits with terms of less than three months, this item also includes time and overnight deposits as well as securities which are available on a daily basis and thus classified as cash equivalents. The securities belong without exception to the “available for sale” category and are measured at fair value. Changes in their value are recognised in equity until disposal (c.f. Note 4.6.).

## 4.3. Shareholders’ equity

Reference is made to the Statement of Changes in Group Equity for further information on changes in shareholders’ equity at the Roth & Rau Group in the 2010 financial year.

### 4.3.1. Share capital

Share capital amounted to € 16,207k as of 31 December 2010 (31 December 2009: € 13,800k) and was divided into 16,207,045 individual non-par bearer shares. All individual shares are paid up in full or contributed in kind.

Reference is made to the information in Management Report in respect of the resolutions adopted at the Annual General Meeting of Roth & Rau AG on 21 May 2010.

On 10 February 2010, Roth & Rau AG successfully executed a share placement in an accelerated book building process. Within the framework of a private placement, a total of 1,379,999 shares were placed at a price of € 26.00 per share. This transaction provided Roth & Rau AG with gross emissions proceeds of around € 35.9 million, which were used to boost the company’s balance sheet structure and to partly finance the acquisition of OTB Solar B.V. A total of 1,379,999 bearer shares with a pro-rated amount in share capital of € 1.00 each were issued within the framework of a capital increase from authorised capital. As a result, the company’s share capital increased from € 13,800,000 to € 15,179,999.

A capital increase in kind to partly finance the takeover of OTB Solar B.V. was executed upon its entry in the Commercial Register on 6 April 2010. This involved issuing 1,027,046 new shares to OTB Solar’s parent company, the OTB Group B.V., which in return assigned all of its shares in OTB Solar to Roth & Rau AG. On the basis of the authorisation granted by amendment to the Articles of Association on 18 May 2009, the share capital was thus increased by € 1,027,046.00 to € 16,207,045.00. Following this partial utilisation, the authorised capital created in line with the resolution dated 18 May 2009 (Authorised Capital II - € 2,760,000.00) still amounted to € 1,732,954.00. In respect of the capital increase in kind, a report dated 17 March 2010 is available from SUSAT & PARTNER OHG Wirtschaftsprüfungsgesellschaft concerning the audit it performed pursuant to § 205 (5) of the German Stock Corporation Act (AktG) in conjunction with § 3 (3-5, 34,35) of the German Stock Corporation Act (AktG). In this report, the auditors confirm that the value of the shares in OTB Solar acquired by Roth & Rau AG as of 17 March 2010 exceeds the lowest issue amount for the Roth & Rau shares issued to this end, plus the agreed cash payment, amounting to € 6,527,046 in total.

Existing shareholders were not entitled to subscribe shares in either capital increase, as a result of which their shares have been correspondingly diluted. The new shareholder structure of Roth & Rau AG is as follows: Dr. Dietmar Roth (founder and CEO) now holds 4.90 % (previously: 5.76 %); Dr. Bernd Rau (founder): 4.65 % (previously: 5.46 %); Prof. Dr. Silvia Roth (founder): 1.80 % (previously: 2.12 %) of the shares in Roth & Rau AG. Furthermore, as a new major shareholder the OTB Group B.V. also holds 6.34 % of Roth & Rau’s shares. The shares held by the OTB Group are subject to a lockup period of 16 months following issue.

Acting on the authorisation to acquire treasury stock granted by the Annual General Meeting on 18 May 2009 and by supplementary resolution of the Annual General Meeting on 21 May 2010, Roth & Rau AG acquired 4,500 treasury stock (0.03 % of the share capital). These shares were assigned to employees as a token of appreciation upon the company's 20th anniversary.

The Group did not own any treasury stock at the balance sheet date, neither did it have any conditional capital or stock options.

The number of shares developed as follows:

| | |
|---|---|
| Balance at 31.12.2009 | 13,800,000 |
| Cash capital increase | 1,379,999 |
| Capital increase in kind | 1,027,046 |
| Balance at 31.12.2010 | 16,207,045 |

### 4.3.2. Capital reserve

The increase in the capital reserve includes premiums on the issue of shares, amounting to € 58,964k, against which issue costs of € 2,280k have been offset, less the allocable income tax benefit of € 665k. Furthermore, the capital reserve also includes the equity-settled share of phantom stock options, amounting to € 101k (previous year: € 47k).

### 4.3.3. Revenue reserves

No annual net surplus was generated pursuant to German commercial law in the 2010 financial year. In line with § 58 of the German Stock Corporation Act (AktG), no amount has therefore been allocated to statutory revenue reserves.

### 4.3.4. Other reserves

Other reserves contain changes in the value of those available-for-sale securities recognised directly in equity, including allocable deferred taxes. In the previous financial year, this item also included the effective portions of cash flow hedges and allocable taxes.

| € 000s | Cash flow hedge | Available for sale | Foreign currency differences | Total |
|---|---|---|---|---|
| Balance at 01.01.2010 | 0 | 46 | 8 | 54 |
| Additions | 0 | 176 | 41 | 217 |
| Withdrawals | 0 | -229 | 0 | -229 |
| Changes in deferred taxes | 0 | 15 | 0 | 15 |
| Balance at 31.12.2010 | 0 | 8 | 49 | 57 |

| € 000s | Cash flow hedge | Available for sale | Foreign currency differences | Total |
|---|---|---|---|---|
| Balance at 01.01.2009 | -250 | 495 | 0 | 245 |
| Additions | 400 | 167 | 8 | 575 |
| Withdrawals | -47 | -802 | 0 | -849 |
| Change in deferred taxes | -103 | 186 | 0 | 83 |
| Balance at 31.12.2009 | 0 | 46 | 8 | 54 |

### 4.3.5. Unappropriated retained earnings

Unappropriated retained earnings developed as follows:

| € 000s | 31.12.2010 | 31.12.2009 |
|---|---|---|
| Earnings carried forward as of 01.01. | 47,744 | 34,815 |
| Consolidated net income attributable to shareholders in Roth & Rau AG | -25,809 | 12,929 |
| Allocation to revenue reserves | 0 | 0 |
| Unappropriated retained earnings as of 31.12. | 21,935 | 47,744 |

The Management Board proposes not paying any dividend to shareholders for the past financial year.

### 4.3.6. Minority interests

Of the consolidated net income of € -25,855k, an amount of € -46k is attributable to R³T GmbH. In the previous year, minority shareholders (in USK Karl Utz Sondermaschinen GmbH) were entitled to consolidated net income of € 43k.

## 4.4. Non-current debt

### 4.4.1. Non-current loans

| € 000s | 31.12.2010 | remaining term < 1 year | remaining term 1 to 5 years | remaining term >5 years | 31.12.2009 | remaining term < 1 year | remaining term 1 to 5 years | remaining term >5 years |
|---|---|---|---|---|---|---|---|---|
| Financial liabilities | 23,120 | 1,077 | 11,543 | 10,500 | 4,675 | 936 | 3,739 | 0 |
| Promissory note bonds | 19,000 | 0 | 8,500 | 10,500 | 0 | 0 | 0 | 0 |
| PNB (5-Y floating) – interest swap | 8,500 | 0 | 8,500 | 0 | 0 | 0 | 0 | 0 |
| PNB (7-Y floating) – interest swap | 7,000 | 0 | 0 | 7,000 | 0 | 0 | 0 | 0 |
| SSD (7-Y fixed) | 3,500 | 0 | 0 | 3,500 | 0 | 0 | 0 | 0 |
| To banks | 3,739 | 936 | 2,803 | 0 | 4,675 | 936 | 3,739 | 0 |
| Sparkasse Chemnitz | 300 | 200 | 100 | 0 | 500 | 200 | 300 | 0 |
| BW Bank | 300 | 200 | 100 | 0 | 500 | 200 | 300 | 0 |
| BW Bank – interest swap | 1,200 | 400 | 800 | 0 | 1,600 | 400 | 1,200 | 0 |
| Deutsche Bank (AIS) | 439 | 73 | 366 | 0 | 513 | 73 | 440 | 0 |
| Deutsche Bank (AIS) | 376 | 63 | 313 | 0 | 438 | 63 | 375 | 0 |
| Sparkasse Langen-Seligenstadt | 715 | 0 | 715 | 0 | 715 | 0 | 715 | 0 |
| Sparkasse Langen-Seligenstadt | 409 | 0 | 409 | 0 | 409 | 0 | 409 | 0 |
| Miscellaneous | 381 | 141 | 240 | 0 | 0 | 0 | 0 | 0 |

#### Promissory note bonds

Two promissory note bonds with floating interest rates and a nominal total of € 15,500k and one promissory note bond with a fixed interest rate and a nominal total of € 3,500k are currently outstanding. Of these, one facility with a nominal total of € 8,500k has a term running until 2015, while the other facilities with a nominal total of € 10,500k have terms running until 2017. All three promissory note bonds are payable upon final maturity.

#### Liabilities to banks

Loan liabilities of € 2,615k are governed by quarterly or half-yearly repayment agreements. The remaining loans are payable upon final maturity.

Loan liabilities of € 3,739k serving to finance company property are secured by land charges.

All other financial liabilities referred to and the existing syndicated loan facility are unsecured and are subject to customary financial covenants.

Upon the acquisition of OTB Solar B.V., Roth & Rau AG redeemed all of that company's financial liabilities, amounting to € 22,228k, at Coöperatieve Centrale Raiffeisen-Boerenleenbank B.A.

All financial liabilities with floating interest rates, amounting to € 16,700k, are hedged with corresponding interest hedges (interest swaps).

Financial liabilities are recognised at amortised cost using the effective interest method.

### 4.4.2. Deferred tax assets and liabilities

Reference is made to Notes 1.5.3. and 5.10..

Deferred taxes have been calculated using a tax rate of 29.2 % (previous year: 29.2 %). The calculation of deferred taxes has been based on a corporate income tax rate of 15 %. Moreover, account has also been taken of a solidarity surcharge of 5.5 % of corporate income tax and an average trade tax multiplier of 382 %. From 1 January 2011, the companies located in the Netherlands will be subject to an income tax rate of 25 % (previously: 25.5 %). At the other foreign companies, the implications of the various tax rates are immaterial.

Temporary recognition and measurement differences for individual balance sheet items resulted in statement of the following taxes:

| | 31.12.2010 | | 31.12.2009 | |
|---|---|---|---|---|
| € 000s | Assets | Liabilities | Assets | Liabilities |
| Non-current assets | 11,097 | 16,078 | 1,035 | 9,144 |
| Receivables | 4,634 | 15,506 | 1,508 | 12,992 |
| Provisions | 858 | 23 | 42 | 23 |
| Miscellaneous | 20 | 1,366 | 14 | 1,140 |
| Liabilities | 1,296 | 1,990 | 40 | 3 |
| Derivative financial instruments | 0 | 0 | 0 | 18 |
| Loss carryovers | 23,653 | 0 | 1,418 | 0 |
| Total before netting | 41,558 | 34,963 | 4,057 | 23,320 |
| Netting | -24,222 | -24,222 | -3,406 | -3,406 |
| Amount recognised in balance sheet | 17,336 | 10,741 | 651 | 19,914 |

Of the deferred tax assets of € 41,558k (previous year: € 4,057k), € 28,984k are to be classified as non-current (previous year: € 2,459k) and € 12,574k as current (previous year: € 1,589k).

Of the deferred tax liabilities of € 34,963k (previous year: € 23,320k), € 13,324k are to be classified as non-current (previous year: € 8,889k) and € 21,639k as current (previous year: € 14,431k). Deferred tax assets have been recognised for tax loss carryovers, as these are expected to be utilised in the next five financial years. No deferred tax assets have been recognised for loss carryovers totalling € 1,453k at a subsidiary.

There is an asset-side outside basis difference of € 4,957k due to temporary differences in connection with shares in OTB Solar B.V. The respective deferred tax items have not been recognised as the temporary difference is not expected to be reversed in the foreseeable future.

Deferred tax liabilities have not been recognised on outside basis differences of € 21,671k (previous year: € 7,520k) due to the control exercised by the parent company over distribution behaviour and the time of reversal. A permanent difference within the control of the parent company has therefore been assumed.

## 4.4.3. Non-current provisions

This item includes the cash-settled share of the measurement of the phantom stock programme, amounting to € 6k (previous year: € 109k).

### 4.4.3.1. Phantom stock

To promote the achievement of its financial targets, Roth & Rau has introduced a share-based compensation programme (phantom stock programme or PSP) as a long-term compensation instrument entitling managers and selected employees to subscribe phantom stock. The virtual options are divided into up to five tranches and are allocated twelve months following allocation of the previous respective tranche. Each tranche may be exercised following expiry of a lockup period of two years (vesting period) and is settled in cash or by issuing shares in line with the specific requirements of the programme. When the virtual options are exercised, Roth & Rau AG is obliged to pay (either in cash or by issuing shares) the difference in value, corresponding to the difference between the reference price specified at the beginning of the option programme and the average, unweighted closing price of the share on the sixty trading days preceding the exercising of phantom stocks in the given tranche (exercise price). Phantom stocks allocated within a given tranche are deemed to have been exercised as of the first trading day on Frankfurt Stock Exchange following expiry of the respective lockup period, provided that the exercise hurdle has been achieved. Phantom stocks may only be exercised when the exercise price has risen by 10 % p.a. on the reference price since allocation of the respective tranche (exercise hurdle). To settle the obligation arising for equity-settled options, upon such options being exercised the company acquires shares and credits them to the programme participant for a further year in a blocked security deposit at a depositing bank.

The aggregate total of gross PSP gains calculated in this way for all participants in the first tranche may not exceed € 1,000k; otherwise, the respective amounts are to be reduced proportionately per participant. This requirement also applies to tranches two to five outlined below.

Roth & Rau issued 57,000 option rights as the first tranche on 1 September 2008. The specified base price amounted to € 32.69. This tranche expired in the year under report. The 57,000 options lapsed due to the exercise hurdle not being met.

Roth & Rau hat issued 66,000 option rights as the second tranche on 1 September 2009. The specified base price amounted to € 22.61. These options are due to mature on 1 September 2011.

A third tranche with 102,000 option rights was issued on 1 September 2010. The specified base price amounted to € 23.53. These options are due to mature on 1 September 2012.

The following table presents the change in phantom stocks outstanding in the first and second tranches.

| € 000s | 31.12.2010 | 31.12.2009 |
|---|---|---|
| Balance at beginning of year under report | 119,000 | 57,000 |
| Granted | 102,000 | 66,000 |
| Forfeited | -53,000 | 0 |
| Lapsed | -6,000 | -4,000 |
| Exercised | 0 | 0 |
| Balance at end of period | 162,000 | 119,000 |

Of the 162,000 phantom stock options outstanding, none was exercisable as of 31 December 2010. Of these option rights, 84,000 are 100 % equity-settled and 78,000 are 100 % cash-settled. Personnel turnover led to 6,000 options being forfeited in the period under report.

The calculation outlined in Note 1.5.17. has been based on the following parameters:

1st tranche

| | |
|---|---|
| Issue date | 01.09.2008 |
| Term from issue date | 2 years and 1 day |
| Remaining term on valuation date | None |
| Risk-free interest rate in percent p.a. | 0.77 |
| Expected volatility in Roth & Rau's share in percent p.a. | 57.85 |
| Expected dividends | 0 |
| Relevant stock market price of Roth & Rau AG on exercise date | € 17.50 |
| Base price | € 32.69 |
| Exercise hurdle | € 39.55 |

2nd tranche

| | |
|---|---|
| Issue date | 01.09.2009 |
| Term from issue date | 2 years and 1 day |
| Remaining term on valuation date | 9 months |
| Risk-free interest rate in percent p.a. | 0.56 |
| Expected volatility in Roth & Rau's share in percent p.a. | 51.91 |
| Expected dividends | 0 |
| Relevant stock market price of Roth & Rau AG on balance sheet date | € 12.29 |
| Base price | € 22.61 |
| Exercise hurdle | € 27.35 |

3rd tranche

| | |
|---|---|
| Issue date | 01.09.2010 |
| Term from issue date | 2 years and 1 day |
| Remaining term on valuation date | 1 year and 9 months |
| Risk-free interest rate in percent p.a. on balance sheet date | 0.87 |
| Risk-free interest rate in percent p.a. on issue date | 0.59 |
| Expected volatility of Roth & Rau's share in percent p.a. on balance sheet date | 54.06 |
| Expected volatility of Roth & Rau's share in percent p.a. on issue date | 73.16 |
| Expected dividends | 0 |
| Relevant stock market price of Roth & Rau AG on balance sheet date | € 12.29 |
| Relevant stock market price of Roth & Rau AG on issue date | € 20.60 |
| Base price | € 23.53 |
| Exercise hurdle | € 28.47 |

| Cash-settled portion | Number of options expected to be vested | Intrinsic value per option in € = payment amount | Current value per option in € | Payment obligation | Provision as of 31.12.2010 in € 000s |
|---|---|---|---|---|---|
| Tranche 2008 | 0 | 0 | 0.000 | 0 | 0 |
| Tranche 2009 | 38,000 | 0 | 0.084 | 0 | 2 |
| Tranche 2010 | 40,000 | 0 | 0.510 | 0 | 4 |

| Equity-settled portion | Number of options expected to be vested | Intrinsic value per option in € = payment amount | Current value per option in € | Payment obligation | Provision as of 31.12.2010 in € 000s |
|---|---|---|---|---|---|
| Tranche 2008 | 0 | 0 | 0.000 | 0 | 52 |
| Tranche 2009 | 17,000 | 0 | 3.012 | 0 | 34 |
| Tranche 2010 | 46,000 | 0 | 1.953 | 0 | 15 |

In the measurement of the provision and the capital reserve for phantom stock options at the valuation date no account was taken of options expected to lapse due to the departure of beneficiaries from the company.

In connection with the option programme, expenses totalling € 54k were recognised as personnel expenses for the increase in the capital reserve in the year under report (previous year: € 41k). Furthermore, income of € 106k (previous year: € 0k) and expenses of € 3k (previous year: € 101k) were recognised due to the allocation to non-current provisions in the year under report. The cash-settled portion (78,000 options) has been recognised under non-current provisions. The equity-settled portion (84,000 options) has been recognised in the capital reserve within shareholders' equity in the balance sheet.

#### 4.4.3.2. Pension obligation

Alongside its own defined benefit pension plans, the Group also assumed defined benefit plans upon its acquisition of AIS Automation Dresden GmbH. Having already assigned the pension commitments at Roth & Rau AG to Deutscher Pensionsfonds in 2008, in 2009 the Group outsourced the pension commitments at AIS Automation Dresden GmbH by way of assignment to Deutscher Pensionsfonds (DPAG) pursuant to § 3 (66) of the German Income Tax Act (EStG) and to the ZDHUK pension fund pursuant to § 4d of the German Income Tax Act (EStG). This was financed by a one-off payment of € 934k on 1 October 2009. All pension claims are thus now fully fund-financed.

Furthermore, pension commitments have been made to two Management Board members, namely Carsten Bovenschen and Thomas Hengst. These are financed via a pension fund. As a small volume of risks remain at the Group, a defined benefit liability still has to be recognised at the Group. The asset surplus of plan assets over the pension provision for Roth & Rau AG and AIS Automation Dresden GmbH, amounting to € 421k, has been recognised under other receivables as of 31 December 2010.

Consistent with the agreed pension plans, upon reaching retirement age the beneficiaries are entitled to payment of a monthly pension or, if applied for, to a one-off capital payment. In the event of inability to work, the beneficiaries receive a monthly working incapacity pension until such time that their lifelong retirement pension takes effect. Should inability to work arise prior to 30 November 2011, then the beneficiaries receive an additional working incapacity pension. In the event of fatality, surviving dependants receive a guaranteed monthly surviving dependants' pension from the additional insurance provided for this purpose.

The monthly retirement pension is dependent on the contractually agreed percentage of the guaranteed basic annual salary upon the beneficiary reaching the contractually agreed retirement age. Where the contractually agreed guaranteed basic annual salary is increased, the company undertakes to correspondingly increase the assessment base.

No payments were made to the statutory pension scheme for Management Board members and various other company founders in the year under report, as these individuals are not subject to mandatory coverage under the statutory pension scheme. Reference is made to Note 5.6. concerning the contributions made to the statutory pension scheme for the company's other employees.

The following table presents the actuarial assumptions underlying the pension obligations recognised:

| in % | 31.12.2010 | 31.12.2009 |
|---|---|---|
| Interest rate | 5.60 | 6.00 |
| Pension trend | 2.00 | 2.00 |
| Personnel turnover | 0.00 | 0.00 |
| Return expected on plan assets | 5.00 | 5.00 |
| Salary trend | 0.00 | 0.00 |

Composition of pension provisions

| € 000s | 31.12.2010 | 31.12.2009 |
|---|---|---|
| Defined benefit obligation at end of year | 3,023 | 2,539 |
| Unrecognised actuarial gains/losses | -473 | -452 |
| less fair value of plan assets | -3,206 | -2,877 |
| Adjustment due to asset limit | 235 | 310 |
| Amount of provision (asset surplus) | -421 | -480 |

The development in the present value of the pension obligations is presented in the following table:

| € 000s | 31.12.2010 | 31.12.2009 |
|---|---|---|
| Balance at 01.01. | 2,539 | 2,285 |
| Service cost | 228 | 199 |
| Interest expense | 152 | 128 |
| Actuarial gains/losses | 104 | -73 |
| Balance at 31.12. | 3,023 | 2,539 |

The following table presents the calculation of the annual expense for the provision recognised as of 31 December 2010.

| € 000s | 31.12.2010 | 31.12.2009 |
|---|---|---|
| Service cost | 228 | 199 |
| Interest expense | 152 | 128 |
| Expected return | -144 | -122 |
| Impact of outsourcing of pension obligations | 0 | -325 |
| Recognition of actuarial gains/losses | 212 | 0 |
| Impact of correction of asset limit | -76 | 256 |
| Balance at 31.12. | 372 | 136 |

In the income statement, current service cost, the impact of the correction of the asset limit and actuarial gains/losses have been recognised under pension expenses, while the interest expense and expected return on plan assets have been recognised in the net financial result.

The Group has plan assets with a fair value of € 3,206k (31 December 2009: € 2,877k). The contributions paid exclusively involve employer contributions. The development in the respective fair value is presented in the following table:

| € 000s | 31.12.2010 | 31.12.2009 |
|---|---|---|
| Balance at 01.01. | 2,877 | 2,223 |
| Expected return | 144 | 122 |
| Actuarial gains/losses | -128 | 58 |
| Contributions | 313 | 474 |
| Balance at 31.12. | 3,206 | 2,877 |

The expected return on plan assets is based on the fair value of the plan assets at the beginning and end of the financial year, adjusted to account for contributions and pension payments made.

The actual return on plan assets is presented in the following table:

| € 000s | 31.12.2010 | 31.12.2009 |
|---|---|---|
| Expected return on plan assets | 144 | 122 |
| Actuarial gains/losses | -128 | 58 |
| Actual return on plan assets | 16 | 180 |

The following amounts were recognised for defined benefit plans in the current and previous reporting periods.

| € 000s | 2010 | 2009 | 2008 | 2007 | 2006 |
|---|---|---|---|---|---|
| Present value of obligation | 3,023 | 2,539 | 2,285 | 629 | 575 |
| Fair value of plan assets | 3,206 | 2,877 | 2,223 | 194 | 153 |
| Plan deficit / (surplus) | -183 | -338 | 62 | 435 | 422 |
| Deviation between actual and expected level of gains/ losses on plan obligation | 54 | 72 | 22 | 0 | 0 |
| Deviation between actual and expected level of gains/ losses on plan assets | -128 | 148 | 9 | 0 | 0 |

The Group expects to make payments of € 104k to the pension fund for the defined benefit plans in 2011 (previous year: € 196k).

## 4.5. Current debt

### 4.5.1. Liabilities from long-term construction contracts

Reference is made to Notes 1.5.1., 1.5.21., and 4.2.2. in respect of liabilities from long-term construction contracts.

### 4.5.2. Trade payables and other liabilities

This item is structured as follows:

| € 000s | 31.12.2010 | 31.12.2009 |
|---|---|---|
| Trade payables | 35,847 | 33,856 |
| Other liabilities | 9,358 | 1,333 |
| Total | 45,205 | 35,189 |

Trade payables all have remaining terms of under one year. Other liabilities amounted to € 9,358k for the 2010 financial year (previous year: € 1,333k).

The Group had foreign currency liabilities of € 2,141k at the balance sheet date (previous year: € 1,846k). These were written up by € 61k to the exchange rate at the balance sheet date.

| € 000s | 31.12.2010 | 31.12.2009 |
|---|---|---|
| Financial instruments | | |
| Customer credit balances | 643 | 266 |
| Derivative financial instruments | 121 | 137 |
| Miscellaneous | 6,593 | 471 |
| | 7,357 | 874 |
| Other | | |
| Deferred income and accrued expenses | 57 | 12 |
| Personnel liabilities | 1,944 | 447 |
| | 2,001 | 459 |
| Total | 9,358 | 1,333 |

Other liabilities all have remaining terms of under one year.

In the balance sheet, other liabilities have been reported together with trade payables in the trade payables and other liabilities item, amounting to € 45,205k (previous year: € 35,189k).

### 4.5.3. Prepayments received

This item is structured as follows:

| € 000s | 31.12.2010 | 31.12.2009 |
|---|---|---|
| Total | 172,325 | 197,492 |
| Of which due within one year | 172,325 | 197,492 |
| Of which secured by bank guarantees | 50,148 | 28,529 |
| Of which netted with receivables | 97,288 | 149,191 |
| Of which netted with liabilities | 22,177 | 43,012 |
| Of which recognised as liabilities | 45,950 | 5,289 |

### 4.5.4. Current loans

Current loans consist of the repayment amounts for non-current loans due in 2010, amounting to € 1,077k (previous year: € 936k). Reference is made to Note 4.4.1.

### 4.5.5. Current tax liabilities

This item includes expected retrospective payments of € 2,762k for trade tax, corporate income tax and the solidarity surcharge for 2010 (previous year: € 607k), as well as of € 6,933k for VAT and payroll taxes (previous year: € 655k), amounting to € 9,695k in total (previous year: € 1,262k).

### 4.5.6. Current provisions

This item is structured as follows:

| € 000s | Balance at 01.01.2010 | Addition due to acquisition | Utilised | Reversed | Added | Balance at 31.12.2010 |
|---|---|---|---|---|---|---|
| Other provisions | | | | | | |
| Personnel | 4,352 | 1,412 | 4,479 | 440 | 6,363 | 7,208 |
| Outstanding invoices/ services | 2,287 | 5,039 | 4,165 | 224 | 7,808 | 10,745 |
| Guarantees | 1,927 | 1,862 | 1,461 | 332 | 3,594 | 5,590 |
| Winding up of con- tracts/damages | 0 | 0 | 0 | 0 | 8,327 | 8,327 |
| Costs of foreign perma- nent establishments | 0 | 0 | 0 | 0 | 4,332 | 4,332 |
| Miscellaneous | 2,003 | 4 | 1,499 | 698 | 1,456 | 1,266 |
| Total | 10,569 | 8,317 | 11,604 | 1,694 | 31,880 | 37,468 |

Current provisions for personnel mainly involve overtime, bonuses and vacation. Outstanding invoices and services chiefly relate to sales commissions and invoices still outstanding for materials and third-party services. The provision for warranties has been calculated on the basis of historic warranty expenses and estimates of future costs. The level of provision accounts both for guarantee expenses actually incurred in the past and for technical information concerning product weaknesses discovered in the construction or trial stages or upon installation of the product. The outflow of the amounts stated as provisions is expected to occur within one year.

The provision for the winding up of contracts involves the costs incurred for winding up contracts and additional costs due to projects not being completed on time and to risks in connection with legal disputes.

Roth & Rau has founded permanent establishments abroad in connection with turnkey and single equipment projects. The resultant tax obligations and necessary related expenses have been accounted for in the provisions for the costs of foreign permanent establishments. Furthermore, non-current provisions of € 106k for phantom stocks were reversed and credited to earnings in the year under report.

In the previous year, current provisions were structured as follows:

| € 000s | Balance at 01.01.2010 | Addition due to acquisition | Utilised | Reversed | Added | Balance at 31.12.2010 |
|---|---|---|---|---|---|---|
| Other provisions | | | | | | |
| Personnel | 2,839 | 435 | 2,334 | 163 | 3,575 | 4,352 |
| Outstanding invoices/ services | 2,501 | 1 | 452 | 24 | 261 | 2,287 |
| Guarantees | 1,762 | 348 | 1,480 | 171 | 1,468 | 1,927 |
| Miscellaneous | 521 | 74 | 511 | 2 | 1,921 | 2,003 |
| Total | 7,623 | 858 | 4,777 | 360 | 7,225 | 10,569 |

## 4.6. Other disclosures on financial instruments

Financial instruments comprise primary and derivative financial instruments.

On the asset side, primary financial instruments mainly consist of receivables, other financial assets and cash and cash equivalents. On the liabilities side, primary financial instruments chiefly involve liabilities measured at amortised cost.

Holdings of primary and derivative financial instruments are reported in the balance sheet. Any default risks identified for financial assets are recognised in the form of impairments.

Furthermore, the company generally also makes use of derivative financial instruments, which are deployed to hedge foreign currency risk. The forward exchange transactions entered into by the Group are intended to hedge significant cash flows denominated in foreign currencies from the operating business. Depending on the significance of the transaction in the individual case, Roth & Rau concludes forward exchange transactions to hedge purchases of materials or sales of its systems in foreign currencies. To hedge interest rate risk, the Group concludes interest swaps in which the Group agrees to exchange with the counterparty, at specified intervals, the difference between fixed and floating rate interest amounts calculated by reference to an agreed-upon notional principal amount. The underlying obligation is hedged with these interest swaps. As in the previous year, the Group has foregone application of hedge accounting.

Financial instruments are initially measured at cost. Securities and publicly listed other investments held on a fair value basis are categorised and recognised at fair value pursuant to IAS 39. Changes in their value are recognised in the net financial result.

Other marketable securities are classified as "available for sale" and also measured at fair value. Changes in their value are recognised directly in equity, to the extent that their market value can be reliably determined. The Group has no financial assets allocable to the "held to maturity" category. Like all other financial assets, long-term lendings are categorised as "loans and receivables" and recognised at amortised cost.

Financial liabilities with fixed terms are measured at amortised cost using the effective interest method.

All derivative financial instruments entered into by the Group are initially recognised in the balance sheet at cost and subsequently measured at fair value at the balance sheet date. Changes in the fair value of derivatives are recognised in the income statement.

The fair values of forward exchange transactions are determined on the basis of current reference prices from the European Central Bank, taking due account of forward premiums and discounts. Currency options are measured on the basis of market listings or recognised option price calculation models. The fair values of interest hedges are determined on the basis of discounted expected future cash flows.

Depending on their fair values at the balance sheet date, derivative financial instruments are recognised as other financial assets (if their fair value is positive) or as financial liabilities (if their fair value is negative).

| € 000s | Face value 31.12.2010 | Face value 31.12.2009 | Positive fair value 31.12.2010 | Positive fair value 31.12.2009 | Negative fair value 31.12.2010 | Negative fair value 31.12.2009 |
|---|---|---|---|---|---|---|
| Forward exchange contracts and currency options (term < 1 year) | 1,189 | 3,418 | 39 | 31 | 2 | 35 |
| Interest swaps | 16,700 | 1,600 | 18 | 0 | 69 | 102 |
| Total | 17,889 | 5,018 | 57 | 31 | 71 | 137 |

In the past year, the Group concluded forward exchange contracts and currency options for the sole purpose of hedging future cash flows in US dollars.

### 4.6.1. Carrying amounts and fair values of financial instruments

The carrying amounts and fair values of the financial instruments within the scope of IFRS 7 are presented in the following table. The fair value of a financial instrument is the price at which a party would acquire the rights and/or obligations resulting from such financial instrument from an independent third party.

31.12.2010

| € 000s | Carrying amounts | | | | | Fair value |
|---|---|---|---|---|---|---|
| **Category** | Held for trading | Available for sale | | Loans and receivables | Total | |
| **Measurement standard** | Fair value (through profit or loss) | At cost | Fair value (in equity) | At cost | | |
| **Class** | | | | | | |
| ASSETS | | | | | | |
| Shares in unconsolidated affiliated companies | 0 | 250 | 0 | 0 | 250 | 250 |
| Receivables from financing measures | 0 | 0 | 0 | 105 | 105 | 105 |
| Deposits | 0 | 0 | 0 | 74 | 74 | 74 |
| Receivable from long-term construction contracts | 0 | 0 | 0 | 50,294 | 50,294 | 50,294 |
| Trade receivables | 0 | 0 | 0 | 28,417 | 28,417 | 28,417 |
| Securities | 50 | 0 | 0 | 0 | 50 | 50 |
| Other receivables | 0 | 0 | 0 | 6,921 | 6,921 | 6,921 |
| Currency-related derivatives – non-hedge | 39 | 0 | 0 | 0 | 39 | 39 |
| Interest-related derivatives – non-hedge | 18 | 0 | 0 | 0 | 18 | 18 |
| Cash and cash equivalents | 0 | 0 | 4,540 | 103,201 | 107,741 | 107,741 |

The shares in unconsolidated affiliated companies, amounting to € 250k, related to a solar energy fund. In the 2010 financial year, Roth & Rau AG invested an amount of € 250k (20 % of the voting rights) in a subsidiary fund, the Solar Energy I Fund, offered by Terra Nex Financial Engineering Ltd. (TNFE). The Solar Energy I subsidiary fund invests in start-up financing measures for solar energy projects; in the context of the first project Roth & Rau is the supplier of the modules. The aim of the subsidiary fund is to allow suppliers and other partners to profit from any upside returns on the project. Further investors will be included in the second stage of the project (2011). All existing shareholders will then collectively own 5 % of the shares in the new operational and management company (with 1–2 % attributable to Roth & Rau). Should the second stage not be reached, then the amount invested will be repaid in full. The fair value could not be observed on any market as of the balance sheet and has therefore been measured at amortised cost.

31.12.2010

| € 000s | Carrying amounts | | | Fair value |
|---|---|---|---|---|
| **Category** | Held for trading | Other liabilities | Total | |
| **Measurement standard** | Fair value (through profit or loss) | At amortised cost | | |
| **Class** | | | | |
| LIABILITIES | | | | |
| Non-current interest-bearing loans | 0 | 22,043 | 22,043 | 22,237 |
| Liabilities from long-term construction contracts | 0 | 9,716 | 9,716 | 9,091 |
| Trade payables | 0 | 36,924 | 36,924 | 34,734 |
| Miscellaneous other liabilities | 0 | 9,358 | 9,358 | 9,358 |
| Interest-related derivatives – non-hedge | 69 | 0 | 69 | 69 |
| Currency-related derivatives – hedging | 2 | 0 | 2 | 2 |

In the previous year, financial instruments were structured as follows:

31.12.2009

| € 000s | Carrying amounts | | | | | Fair value |
|---|---|---|---|---|---|---|
| **Category** | Held for trading | Available for sale | | Loans and receivables | Total | |
| **Measurement standard** | Fair value (through profit or loss) | At cost | Fair value (in equity) | At cost | | |
| **Class** | | | | | | |
| ASSETS | | | | | | |
| Shares in unconsolidated affiliated companies | 0 | 270 | 0 | 0 | 270 | 270 |
| Receivables from financing measures | 0 | 0 | 0 | 117 | 117 | 117 |
| Deposits | 0 | 0 | 0 | 44 | 44 | 44 |
| Receivable from long-term construction contracts | 0 | 0 | 0 | 94,432 | 94,432 | 94,432 |
| Trade receivables | 0 | 0 | 0 | 26,671 | 26,671 | 26,671 |
| Securities | 66 | 0 | 0 | 0 | 66 | 66 |
| Other receivables | 0 | 0 | 0 | 6,714 | 6,714 | 6,714 |
| Currency-related derivatives – non-hedge | 31 | 0 | 0 | 0 | 31 | 31 |
| Interest-related derivatives – non-hedge | 0 | 0 | 0 | 0 | 0 | 0 |
| Cash and cash equivalents | 0 | 0 | 34,343 | 31,698 | 66,041 | 66,041 |

31.12.2009

| € 000s | Carrying amounts | | | Fair value |
|---|---|---|---|---|
| **Category** | Held for trading | Other liabilities | Total | |
| **Measurement standard** | Fair value (through profit or loss) | At amortised cost | | |
| **Class** | | | | |
| LIABILITIES | | | | |
| Non-current interest-bearing loans | 0 | 3,739 | 3,739 | 3,837 |
| Liabilities from long-term construction contracts | 0 | 2,468 | 2,468 | 2,468 |
| Trade payables | 0 | 33,856 | 33,856 | 33,856 |
| Miscellaneous other liabilities | 0 | 1,333 | 1,333 | 1,333 |
| Interest-related derivatives – non-hedge | 102 | 0 | 102 | 102 |
| Currency-related derivatives – hedging | 35 | 0 | 35 | 35 |

The fair values of the financial instruments have been determined on the basis of the market information available at the balance sheet date and of the methods and assumptions presented below.

Specified financial instruments

| € 000s | 2010 | 2009 |
|---|---|---|
| Securities | 4,540 | 34,409 |
| at fair value through profit or loss | 50 | 66 |
| at fair value in equity | 4,490 | 34,343 |
| Non-current loans at amortised cost | 105 | 117 |
| | 4,645 | 34,526 |

**Receivables from long-term construction contracts, trade receivables and cash and cash equivalents:** Given the short maturities of these financial instruments, it is assumed that their fair values correspond to their carrying amounts.

**Other financial assets:** Financial assets available for sale include:

- Equity components measured at fair value. The portions of equity measured at fair value were based on stock market prices on 31 December.
- Equity components measured at cost. No fair values could be determined for equity components measured at cost, as no stock market or other market values were available. This item involves shares in unlisted companies for which there were no indications of permanent impairment at the balance sheet date and for which the discounting of expected cash flows was foregone due to the impossibility of determining cash flows reliably.

Financial assets measured at fair value through profit or loss include:
- Derivative financial instruments not covered by hedge accounting.
- Securities held for trading. Securities held for trading and measured at fair value were valued on the basis of stock market prices as of 31 December.

**Other receivables and assets:** These financial instruments are recognised at cost. Given the short maturities of these financial instruments, it is assumed that their fair values correspond to their carrying amounts.

**Financial liabilities:** Loans are recognised at their respective repayment amounts. The fair values of loans are determined as the present value of expected future cash flows. They are discounted by reference to customary market interest rates based on congruent maturities.

**Liabilities from long-term construction contracts and trade payables:** Given the short maturities involved, it is assumed that the fair values correspond to the carrying amounts.

**Other financial liabilities:** Financial liabilities measured at fair value through profit or loss include derivative financial instruments not covered by hedge accounting. The fair values of interest hedges (interest swaps) were determined on the basis of their discounted expected future cash flows. Reference was made to the market interest rates applicable for the remaining terms of the financial instruments.

Derivative financial instruments mainly involve derivative currency hedging contracts. The fair values of forward exchange transactions were determined on the basis of their discounted expected future cash flows. Reference was made to the market interest rates applicable for the remaining terms of the financial instruments. Currency options were measured using market listings or option price models.

In the case of miscellaneous other financial liabilities, it was assumed given the short maturities of these financial instruments that their fair values correspond to their carrying amounts.

The fair values were structured as follows:

| Fair value hierarchy | 2010 | | | | 2009 | | | |
|---|---|---|---|---|---|---|---|---|
| | Level 1 | Level 2 | Level 3 | Total | Level 1 | Level 2 | Level 3 | Total |
| **Financial assets** | | | | | | | | |
| Held for trading | 50 | 57 | 0 | 107 | 66 | 31 | 0 | 97 |
| Available for sale | 3,485 | 1,005 | 0 | 4,490 | 33,342 | 1,001 | 0 | 34,343 |
| **Financial liabilities** | | | | | | | | |
| Held for trading | 0 | 71 | 0 | 71 | 0 | 137 | 0 | 137 |

Valuation level 1: use without amendment of quoted prices on active markets of identical financial assets or financial liabilities.

Valuation level 2: use of input factors not involving quoted prices such as those in level 1, but which are observable for the financial asset or financial liability either directly (i.e. as a price) or indirectly (i.e. based on prices).

Valuation level 3: use of input factors not based on observable market data to measure the financial asset or financial liability (non-observable input factors).

## 4.6.2. Net gains or losses

| € 000s | 2010 | 2009 |
|---|---|---|
| Financial assets and financial liabilities measured at fair value through profit or loss | 185 | 229 |
| Financial assets available for sale | 214 | 802 |
| Loans and receivables | -22,780 | -1,995 |
| Financial liabilities measured at cost | 0 | 0 |

Net gains or losses on financial assets and liabilities measured at “fair value through profit or loss” include the results of changes in fair values. Net gains or losses on “available for sale” financial assets mainly consist of the profit realised on the sale of these financial instruments. Net gains or losses on “loans and receivables” mainly consist of the results of write-downs and write-ups, as well as interest expenses and interest income on these financial instruments.

Net gains and losses do not include any interest or dividend items.

### 4.6.3. Total interest income and expenses

Total interest income and expenses from continuing operations for financial assets and financial liabilities not measured at fair value through profit or loss were structured as follows:

### 4.6.4. Disclosures on derivative financial instruments

| € 000s | 2010 | 2009 |
|---|---|---|
| Total interest income | 2,213 | 986 |
| Total interest expenses | 761 | 444 |

Deployment of derivatives. The Group uses interest swaps for the exclusive purpose of hedging interest rate risks. Foreign currency risks are primarily hedged by forward exchange transactions and options.

Non-hedge derivatives. In the context of interest and value hedging, interest rate risks are limited by interest derivatives in the form of interest swaps. Interest swaps have been concluded to hedge existing interest rate risk in connection with floating-rate loans. The Roth & Rau Group does not recognise these derivatives as cash flow hedges pursuant to IAS 39, as the hedge accounting criteria set out in IAS 39 have not been met. The interest swaps have been recognised in the balance sheet at fair value. Changes in fair value are recognised through profit or loss in the net financial result. The nominal amount is € 16,700k, while the negative fair value of the interest derivatives amounts to € 51k.

## 5. Disclosures on individual items in the income statement

The income statement has been prepared using the total cost method. An income statement prepared using the cost of sales method has been additionally presented for information purposes.

### 5.1. Sales

The company recognises its sales in accordance with IAS 18. Sales increased by 44.2 % compared with the previous year (previous year: reduced by 27.3 %). The growth in sales in 2010 was due to increasing demand in the photovoltaics industry. A breakdown of sales by products and regions has been presented in Note 3.

## 5.2. Increase/decrease in stocks of finished products and work in progress

The increase in stocks of finished products and work in progress by € 19,819k (previous year: € 3,568k) is attributable to the stocks added due to the acquisition of OTB Solar B.V. (€ 2,678k). Stocks have also been increased by the gradual transition to modular production.

## 5.3. Capitalised services rendered to own account

In addition to the costs of manufacturing proprietary systems and machines, the capitalised services rendered to own account of € 24,532k (previous year: € 15,014k) chiefly involve capitalised manufacturing costs for development work. As well as costs of materials and of third-party services, manufacturing costs also include the relevant share of personnel expenses and depreciation and amortisation. Capitalised development expenses rose sharply compared with the previous year. This was due in particular to further amounts of € 6,005k capitalised for HJT technology. At the Swiss Technology Centre at Roth & Rau Switzerland, Roth & Rau has already been working for two years now on the development of systems technology for use in the production of solar cells based on hetero junction technology and simultaneously offering efficiency potential of more than 20 % and favourable manufacturing costs.

Development expenses of € 5,401k have been capitalised under technical equipment and machinery. The respective funds were mainly invested in the Technology Centre in Hohenstein-Ernstthal.

| € 000s | 2010 | 2009 |
|---|---|---|
| Capitalised services rendered to own account for publicly subsidised research and development projects | 19,131 | 11,658 |
| Capitalised services rendered to own account for internally used equipment | 5,401 | 3,356 |
| Total | 24,532 | 15,014 |

## 5.4. Other operating income

Other operating income mainly includes income from the reversal of impairments and provisions and income from exchange rate movements and derivative currency hedging instruments.

| € 000s | 2010 | 2009 |
|---|---|---|
| Income from real estate letting (investment property) | 36 | 42 |
| Income from reinsurance | 76 | 25 |
| Income from reversal of provisions | 1,800 | 360 |
| Income from foreign exchange differences | 927 | 1,413 |
| Non-period income | 65 | 96 |
| Reduction in allowances | 0 | 80 |
| Badwill from purchase price allocation | 0 | 1,141 |
| Material costs charged on | 231 | 0 |
| Miscellaneous income | 2,730 | 1,793 |
| Total | 5,865 | 4,950 |

In addition to grants capitalised in connection with development expenses, which are outlined in Note 4.1.1.1., the Group also received expense grants of € 532k in the year under report (previous year: € 131k). These have been allocated to miscellaneous income.

## 5.5. Cost of materials

| € 000s | 2010 | 2009 |
|---|---|---|
| Cost of raw materials, supplies and purchased goods | 169,055 | 106,158 |
| Cost of purchased services | 20,161 | 11,901 |
| Total | 189,216 | 118,059 |

As a percentage of sales, the materials quota amounted to 66.3 % (previous year: 59.7 %). Costs of purchased services mainly include the costs of contract staff, amounting to € 6,735k (previous year: € 1,820k). The expenses for raw materials, supplies and purchased goods include both system construction components and components for the turnkey business.

The increase in cost of materials was chiefly attributable to the inclusion of OTB in the scope of consolidation (€ 51,289k). OTB works with a very high share of externally supplied modules in its component production.

## 5.6. Personnel expenses

The composition of personnel expenses is presented in the following table.

| € 000s | 2010 | 2009 |
|---|---|---|
| Wages and salaries | 52,349 | 32,879 |
| Social security contributions | 7,943 | 5,351 |
| Pension expenses | 937 | 494 |
| Total | 61,229 | 38,724 |

Contributions of € 4,442k were paid to the statutory pension insurance scheme.

The average number of employees amounted to 1,073 during the 2010 financial year (previous year: 762). The 1,209 employees at the balance sheet date (previous year: 874) were deployed as follows:

| | as of 31.12.2010 | Average 2010 | as of 31.12.2009 | Average 2009 |
|---|---|---|---|---|
| Production | 498 | 409 | 333 | 306 |
| Research and development | 163 | 147 | 109 | 96 |
| Technology and sales | 374 | 343 | 232 | 222 |
| Administration | 118 | 156 | 153 | 124 |
| Other | 14 | 18 | 13 | 14 |
| Total | 1,167 | 1,073 | 840 | 762 |
| Trainees | 42 | 35 | 34 | 27 |
| Total | 1,209 | 1,108 | 874 | 789 |

An average of 1 employee was included for the shareholding recognised at equity (previous year: 8 employees).

## 5.7. Depreciation and amortisation

| € 000s | 2010 | 2009 |
|---|---|---|
| Intangible assets | 10,838 | 3,014 |
| Property, plant and equipment | 5,534 | 2,230 |
| Development expenses | 5,474 | 2,974 |
| Total | 21,846 | 8,218 |

OTB, which was included in the scope of consolidation for the first time in 2010, accounted for € 6,309k. Of the total amount of € 4,887k recognised for depreciation and amortisation in connection with purchase price allocations, an amount of € 3,186k related to the purchase price allocation for OTB.

Depreciation and amortisation include impairment losses of € 4,429k (previous year: € 121k). A detailed breakdown of these items can be found in the Group's Non-current Asset Schedule (Note 4.1.1).

## 5.8. Other operating expenses

Other operating expenses mainly consist of impairments of current assets, the recognition of provisions, expenses for foreign exchange differences, derivative hedging instruments and cancellation agreements.

| € 000s | 2010 | 2009 |
|---|---|---|
| Premise expenses | 4,548 | 1,854 |
| Insurances, contributions and fees | 1,868 | 996 |
| Maintenance and repairs | 1,141 | 705 |
| Vehicle expenses | 1,913 | 1,310 |
| Advertising and travel expenses | 10,532 | 6,789 |
| Merchandise distribution expenses | 13,844 | 5,745 |
| Impairment losses on current assets | 27,125 | 742 |
| Non-period expenses | 208 | 1,000 |
| Legal and advisory expenses | 15,972 | 6,478 |
| Foreign exchange differences | 1,336 | 1,346 |
| Miscellaneous operating expenses | 12,085 | 6,233 |
| Total | 90,572 | 33,198 |

The total amount of miscellaneous operating expenses consists of numerous items which are immaterial on an individual basis.

Of miscellaneous operating expenses, an amount of € 7,343k is attributable to OTB.

The increase in merchandise distribution expenses was chiefly the result of higher transport expenses and of pending contractual penalties of € 2,327k due to individual projects and contracts not being handled in accordance with the respective contractual arrangements.

Impairment losses on current assets include in particular additions to individual allowances (especially € 8,413k for Conergy and € 1,229k for SpectraWatt). Furthermore, the figure also includes an expected loss of € 4,783k recognised due to the conservative measurement of three current turnkey projects and a correction of € 7,485k in the amounts expected to be redeemable from two turnkey projects terminated prematurely. The remaining components of these turnkey projects have been recognised under work in progress (c.f. Note 4.2.1.).

The legal and advisory expenses item also includes risks in connection with legal disputes. Miscellaneous operating expenses also include an amount of € 5,395k for the expected volume of fees and back payments (registration expenses, fines) that could be incurred due to the retrospective registration of permanent establishments (c.f. Note 4.5.6.).

## 5.9. Net financial result

| € 000s | 2010 | 2009 |
|---|---|---|
| Gains on fixed-income securities | 276 | 839 |
| Interest income | 2,213 | 985 |
| Subtotal | 2,489 | 1,824 |
| Interest expenses for banks | 761 | 444 |
| Other financial expenses | 0 | 90 |
| Guarantee fees | 392 | 564 |
| Write-downs of financial assets | 8,304 | 119 |
| Subtotal | 9,457 | 1,217 |
| Total | -6,968 | 607 |

Among other items, write-downs of financial assets include an amount of € 7,717k for default risk in connection with a convertible bond acquired during the financial year, plus the write-down of related interest claims of € 556k.

Interest income mainly includes income on short-term money investments. The other financial expenses item includes interest expenses for pensions and write-downs of marketable securities.

## 5.10. Taxes on income

| € 000s | 2010 | 2009 |
|---|---|---|
| Current tax expenses | 3,486 | 901 |
| Deferred tax expenses | -11,889 | 2,834 |
| Total | -8,403 | 3,735 |

The following reconciliation account presents the differences between the income tax expenses actually recognised and the income tax expenses expected. The expected income tax expenses correspond to earnings before taxes on income multiplied by the expected tax rate. The expected tax rate includes German corporate income tax, the solidarity surcharge and trade tax and was set at 29.2 % for the year under report (previous year: 29.2 %).

Reconciliation of tax expenses

| € 000s | 2010 | 2009 |
|---|---|---|
| Earnings before taxes | -34,258 | 16,707 |
| Expected tax expenses at 29.2 % | 10,003 | 4,878 |
| Change in expected tax expenses | | |
| Reduction in taxes for previous years | -1,614 | -99 |
| Tax impact of goodwill amortisation | 0 | 0 |
| Tax impact of badwill upon initial consolidation | 0 | -333 |
| Impact of unrecognised deferred taxes | -165 | 0 |
| Impact of deferred taxes not yet recognised on loss carryovers | 74 | 0 |
| Change in tax rate | -66 | 0 |
| Difference between group and local tax rates | 259 | 63 |
| Tax impact of tax-exempt income | -198 | -831 |
| Tax impact of business expenses not deductible | 106 | 34 |
| Deferred taxes on loss carryovers no longer utilisable | 0 | 36 |
| Other tax items | 4 | -13 |
| Actual tax expenses | 8,403 | 3,735 |

## 5.11. Earnings per share

Basic earnings per share are calculated as the quotient of the earnings attributable to shareholders and the weighted average number of shares in circulation during the financial year.

| € | 2010 | 2009 |
|---|---|---|
| Net surplus/deficit for period | -25,855,230.10 | 12,971,830.93 |
| Earnings attributable to minority interests | -46,251.20 | 43,045.14 |
| Consolidated earnings | -25,808,978.90 | 12,928,785.79 |
| Average number of shares | 15,776,467 | 13,800,000 |
| Earnings per share (€ /share) | -1.64 | 0.94 |

Consolidated net income amounted to € -25,808,978.90 as of 31 December 2010 (31 December 2009: € 12,928,785.79. Accordingly, basic earnings per share calculated in line with IAS 33 amounted to € -1.64 (31 December 2009: € 0.94).

No shares were outstanding either as of 31 December 2010 or as of 31 December 2009 which could have diluted earnings per share.

The share capital was increased on 10 February 2010 by issuing 1,379,999 new shares. Furthermore, by drawing on the authorisation granted by the amendment to the Articles of Association on 18 May 2009, the share capital was increased by € 1,027,046.00 to € 16,207,045.00 by way of a capital increase in kind executed to partly finance the takeover of OTB Solar B.V. Further details can be found in Note 4.3.1.

# 6. Disclosures on the cash flow statement

The cash flow statement has been presented separately. The financial funds presented encompass the cash and cash equivalents reported in the balance sheet.

Non-cash income and expenses mainly involve the impairment losses recognised on current assets. These include amounts of € 7,485k for write-downs of turnkey stocks, € 4,783k for losses anticipated on current turnkey projects and write-downs of financial assets, of which € 8,273k relate to the write-down of the convertible bond plus accumulated interest. Impairment losses of € 8,413k also had to be recognised on a turnkey project invoiced in 2010.

Investments are reported following the deduction of government grants. A sum of € 36,328k was invested in non-current assets (previous year: € 19,220k). Of this total, € 17,045k involved investments in intangible assets (previous year: € 11,578k). This figure includes capitalised development expenses of € 19,131k (previous year: € 11,658k) which, following the deduction of grants of € 3,500k (previous year: € 1,493k), led intangible assets to increase by € 15,631k (previous year: € 11,165k).

A total of € 19,031k was expended on investments in property, plant and equipment (previous year: € 7,372k). The company paid purchase prices, including transaction expenses, amounting to a total of € 3,300k for the acquisition of subsidiaries in the 2010 financial year (previous year: € 6,781k). Liquid funds of € 1,088k were taken over in connection with the acquisition of these subsidiaries (previous year: € 623k). Further details about the purchase prices paid can be found in Note 4.1.1.2..

The cash flows for the financial year under report include interest paid amounting to € 762k (previous year: € 482k) and interest received of € 1,658k (previous year: € 1,032k). Payments of taxes on income amounted to € 1,088k (previous year: € 2,915k).

The inflow and outflow of funds for financing activities includes proceeds from the taking up of bank loans and from the capital increase (less costs), as well as outgoing payments for the redemption of bank loans and an outgoing payment for the issuing of a loan.

# 7. Other disclosures

## 7.1. Objective and methods of financial risk management

### 7.1.1. Risk management

The Management Board has established a risk management system which enables risks to be handled deliberately and in a controlled manner and which is firmly integrated into existing organisational, reporting and management structures. No material changes were made to the company's risk management structures in the year under report.

Apart from derivative financial instruments, the Group's principal financial liabilities involve interest-bearing loans, trade payables and other liabilities. The main purpose of these financial liabilities is to finance the Group's business activities. The Group has receivables resulting from loans issued, trade receivables and other receivables, cash and cash equivalents and short-term deposits, all of which directly result from its business activities. Furthermore, the Group also has financial assets available for sale and enters into derivative financial transactions.

The Group is exposed to credit, liquidity and market risks.

Managing these risks is the responsibility of the Group's management. Roth & Rau's risk management system is based on clearly specified organisational processes and approval procedures. These are based on the "Risk Management Handbook", a set of work instructions binding for all employees and forming an integral component of quality management. The Group's quality management is in turn certified under ISO 9001:2000. All operating departments identify their individual risks on a quarterly basis, referring to specified risk categories, and evaluate these risks in terms of their probability of occurrence and potential damages. Project risks are analysed and evaluated along the same lines from the acquisition stage already. Risk management provides for three risk classes requiring tiered reporting. Depending on the risk class involved, decisions concerning the relevant measures are taken on the level of operating management or directly by the Management Board. All employees have been made aware of potential risks and called upon to provide reports accordingly. Based on these individual assessments, quarterly overall risk reports are compiled, enabling the Management Board to monitor and evaluate the current risk situation. In line with these evaluations, the Management Board also informs the Supervisory Board on an ongoing basis.

The Group has thus ensured that activities involving financial risks are performed in accordance with the relevant guidelines and procedures and that financial risks are identified, evaluated and managed in accordance with these guidelines, taking due account of the Group's risk propensity. In line with the Group's internal guidelines, no derivatives are traded for speculative purposes. The guidelines for the management of those risks presented below have been inspected and adopted by the company's management.

One of the Roth & Rau Group's most important financial objectives involves sustainably increasing the value of the Group in the interests of its investors, employees, customers and suppliers while at the same time upholding and safeguarding its ability to meet its financial obligations at all times. The Group is significantly assisted in achieving this objective by focusing on its profitability. This does not exclude the possibility of external growth by way of acquisitions. All entrepreneurial decisions accord great priority to increasing the Group's earnings strength, as well as to the resultant increase in the return on capital employed.

For the Roth & Rau Group, this form of capital management accords very great significance to creating adequate liquidity reserves, including a comfortable volume of free credit lines. Not only that, the maintenance of solid equity resources represents a key requirement for consistently upholding the Group's existing growth strategy. Liquidity reserves and free credit lines are continuously monitored within the framework of short and medium-term liquidity planning, as is the taking up of any credit facilities required as a result. The capital structure is regularly monitored on the basis of various key figures.

The ratio of net liquidity/debt to equity (gearing), the equity ratio and the net debt/EBITDA ratio represent important key figures in this respect. Net financial liabilities correspond to financial liabilities less cash and cash equivalents and marketable securities.

| € 000s | 2010 | 2009 |
|---|---|---|
| Liabilities to banks | -23,120 | -4,675 |
| Cash and cash equivalents | 107,741 | 66,041 |
| Net liquidity/debt | 84,621 | 61,366 |
| Equity | 251,352 | 219,278 |
| Equity ratio in % | 58.0 | 73.4 |
| Gearing in % | 33.7 | 27.9 |
| EBITDA | -5,444 | 24,318 |

The Group's capital structure continues to provide a solid basis for financing its existing corporate strategy.

### 7.1.2. Credit risk

Credit risk involves the risk of a business partner failing to meet its obligations in the context of a financial instrument or a customer master agreement and of this leading to a financial loss. The Group is exposed to default risks within the framework of its operating business activities (trade receivables in particular involve risks), as well as to risks within the framework of its financing activities, including deposits at banks and financial institutions, foreign exchange transactions and other financial instruments.

Credit risk from receivables: The creditworthiness and solvency of individual customers and suppliers had deteriorated, in some cases significantly, in the wake of the financial and economic crisis. Notwithstanding the widespread economic recovery, the performance of correspondingly detailed creditworthiness checks before accepting orders is therefore indispensable as a means of avoiding delays or defaults in payment. When accepting new orders, the Roth & Rau Group basically attempts to ensure that the resultant receivables are secured by credit orders or comparable instruments provided by international financial institutions. Existing customers of poorer creditworthiness are closely monitored within the Group's receivables management activities. Credit risk from customer receivables is managed by the relevant business unit in line with the Group's guidelines, procedures and checks for customer credit risk management.

Outstanding receivables from customers are monitored regularly, with deliveries to major customers (export business) generally being covered by credit orders.

Of total receivables of € 44,765k before impairment (previous year: € 28,666k), impairment losses have been recognised for an amount of € 16,347k (previous year: € 1,995k).

The maximum default risk is equivalent to the carrying amounts of the relevant receivables as presented in Note 4.2.3..

Receivables which are overdue but not impaired have been presented in the following schedule, broken down in terms of the period by which payment is overdue.

Maturity structure of unimpaired receivables and financial assets

| € 000s | Total receivables excluding impairments | Neither overdue nor impaired | Overdue but not impaired (in days) | | | |
|---|---|---|---|---|---|---|
| | | | up to 90 | 90 to 180 | 180 to 360 | up to 360 |
| as of 31.12.10 | | | | | | |
| Trade receivables | 28,566 | 7,678 | 11,671 | 1,827 | 2,007 | 5,381 |
| Other receivables and financial assets | 18,836 | 18,836 | 0 | 0 | 0 | 0 |
| as of 31.12.09 | | | | | | |
| Trade receivables | 25,098 | 17,785 | 2,504 | 924 | 1,802 | 2,083 |
| Other receivables and financial assets | 9,917 | 9,917 | 0 | 0 | 0 | 0 |

Credit risk from financial instruments and deposits: The credit risk relating to credit balances at banks and financial institutions is managed in accordance with the Group's guidelines. The capital resulting from issue proceeds is only invested at financial institutions of high creditworthiness. These funds are invested in financial assets which are not subject to any fluctuations in value, or only to a minor extent. They are invested in financial assets available at short notice to enable the Group to cover financing and liquidity requirements for planned investments and advance financing requirements for the operating business. Some procurement measures also require prepayments to suppliers. These can give rise to default risks. Prepayments made are covered in some cases by prepayment bonds/ credit orders.

### 7.1.3. Liquidity risk

The corporate treasury department uses a liquidity planning tool to constantly monitor the risk of any liquidity bottleneck arising and reports to the Management Board. The Group's objective here is to maintain a balance between consistently covering its funding requirements and ensuring flexibility by drawing on overdraft facilities and bank loans. No liquidity bottlenecks are discernible based on our current planning.

As of 31 December 2010, 25.4 % of the carrying amount of debt capital recognised in the consolidated financial statements was due to mature within one year.

As of 31 December 2010, the Group's financial liabilities had the maturity structure presented below. The disclosures are based on contractually agreed, undiscounted payments.

Maturity analysis of financial liabilities

| | 2011 | | 2012 – 2014 | | 2015 – 2018 | |
|---|---|---|---|---|---|---|
| € 000s | Interest | Repayment | Interest | Repayment | Interest | Repayment |
| **Primary financial liabilities/loans** | | | | | | |
| Financial liabilities | 695 | 1,077 | 1,842 | 2,772 | 1,013 | 19,271 |
| Trade payables | 0 | 35,847 | 0 | 0 | 0 | 0 |
| Other/miscellaneous liabilities | 0 | 9,358 | 0 | 0 | 0 | 0 |
| Derivative financial liabilities | 460 | 0 | 1,270 | 0 | 604 | 0 |
| | 1,155 | 46,282 | 3,112 | 2,772 | 1,617 | 19,271 |

## 7.1.4. Market risk

Market risk involves the risk of fluctuations in the fair value or future cash flows of a financial instrument due to changes in market prices. Market risk also includes the following types of risk – interest rate risk, currency risk and price risk – and is monitored using sensitivity analyses.

### 7.1.4.1. Interest rate risk

Interest rate risk involves the risk of fluctuations in the fair value or future cash flows of a financial instrument due to changes in market interest rates. The risk of fluctuations in market interest rates to which the Group is exposed primarily relates to non-current loans with floating interest rates.

To hedge interest rate risk, the Group concludes interest swaps in which it agrees to exchange with the counterparty, at specified intervals, the difference between fixed and floating rate interest amounts calculated by reference to an agreed-upon notional principal amount. These interest swaps hedge the underlying obligation.

Changes in the market interest rates of primary financial instruments with fixed interest rates only impact on earnings in cases where they are recognised at fair value. As a result, none of the financial instruments with fixed interest rates recognised at amortised cost are subject to changes in the interest rate as defined in IFRS 7. Interest rate risk is currently classified as moderate, as the Group has non-current financial liabilities of € 22,043k, of which financial liabilities of € 16,700k with floating interest rates have been hedged with corresponding interest swaps. The remaining financial liabilities have been agreed with fixed interest rates.

As the existing financial liabilities with floating interest rates were fully hedged by interest swaps at the balance sheet date, a hypothetical increase/reduction in market interest rates by 100 base points as of the balance sheet date would have no material impact on earnings after taxes, assuming all other variables remain unchanged; the other components of equity would remain unchanged. Were the interest or discount curve to change upwards (downwards) by 100 base points, then this would impact on earnings to the tune of € 231k (€ -231k).

### 7.1.4.2. Foreign currency risk

Foreign currency risk involves the risk of fluctuations in the fair value or future cash flow of a financial instrument due to exchange rate movements. The objective of currency hedging is to fix prices based on hedging rates to protect against unfavourable future fluctuations in exchange rates.

Exchange rate risks play a subordinate role at the Roth & Rau Group, as the Group invoices a high share of its sales in euros. Moreover, the company generally receives a not inconsiderable share of the purchase price upon conclusion of the contract, so that the risk of foreign currency fluctuations is low even for orders invoiced in foreign currencies. The Group generally concludes project-related forward cover transactions.

The foreign currency risk resulting from remaining unhedged financial instruments in foreign currencies for which currency fluctuations would impact on earnings is therefore classified as low.

The following table presents the sensitivity of the Group's consolidated earnings before taxes (due to changes in the fair values of monetary assets and liabilities) and equity to any reasonable movements in the US dollar exchange rate. All other variables have remained unchanged.

| Foreign currency risk US$ | Change in EUR/US$ exchange rate | Impact on earnings before taxes (€ 000s) |
|---|---|---|
| 2010 | 9 % | -1,653 |
| | -9 % | 1,653 |
| 2009 | 9 % | -256 |
| | -9 % | 256 |

Any hypothetical appreciation (depreciation) in the euro by 9 % compared with the US dollar as of 31 December 2010 would have led earnings before taxes to be € 1,653k lower (€ 1,653k higher), assuming all other variables remained unchanged.

The impact of any change in value has been presented on the basis of the Group's foreign currency sales and foreign currency procurement in the 2010 financial year.

### 7.1.4.3. Price risks

The publicly listed equities held by the Group are exposed to market price risks resulting from the uncertainty surrounding the future development in the value of these securities. The Group faces price risks for the shares it holds for liquidity management purposes in investment / money market funds. Had the securities price been 10 % lower (higher) at the balance sheet date, then equity would have been € 454k lower (€ 454k higher).

| Price risk | Price performance | Impact on earnings before taxes (€ 000s) |
|---|---|---|
| 2010 | 10 % | 454 |
| | -10 % | -454 |
| 2009 | 10 % | 3,434 |
| | -10 % | -3,434 |

## 7.2. Contingent liabilities

Contingent liabilities on the one hand include potential obligations whose actual materialisation is dependent on the occurrence of one or several uncertain future events which cannot be fully influenced. On the other hand, they are also deemed to include existing obligations which will probably not lead to any outflow of resources. Pursuant to IAS 37, contingent liabilities are not recognised in the balance sheet.

In respect of non-current assets subsidised by investment grants whose conditions for retention had not yet been met as of the balance sheet date, the company's tax consultants have issued written confirmation that no forms of utilisation detrimental to the respective grants (sale to a business operation not entitled to such grant) had been identified.

Due to a take-back obligation entered into in 2008 in respect of the sale of a coating system to a leasing company, the "residual capital value" as of 31 December 2010, corresponding to the buyback value upon extraordinary termination of the leasing contract by the leasing company, has been quantified as a financial obligation of € 163k as of 31 December 2010 (previous year: € 216k).

The Group has a guarantee facility of € 111,700k (previous year: € 111,395k), of which € 58,655k has been utilised (previous year: € 28,624k). Furthermore, the Group has unutilised overdraft facilities of € 52,035k.

### Legal disputes

Legal risks may result from any unwitting infringement of third-party intellectual property rights. Due in particular to the fact that a not inconsiderable share of Roth & Rau's expertise is not protected by proprietary patents, the risk cannot be excluded that competitors will assert claims against Roth & Rau in connection with the infringement of property rights. No such legal disputes have arisen to date. Conversely, there is also the risk that third parties will copy Roth & Rau's expertise and infringe patent or other property rights. To protect its extensive expertise, the company regularly concludes confidentiality agreements with its employees, customers and partners in research and development projects.

In an as yet unresolved legal dispute, an employee working in the USA for one of the company's customers who suffered substantial hand injuries due to a work-related accident in December 2004 in connection with the operation of a machine produced and supplied by Roth & Rau has filed a lawsuit against the company at an American court for damages and smart money. Based on an initial assessment by the US lawyers advising the company, if successful the lawsuit could lead to Roth & Rau being liable for an amount of between around US$ 2,500 and US$ 3,500. The company has a business liability insurance policy which covers this third-party liability risk. The sum insured amounts to € 5,000k, with a deductible of € 25k. A provision of € 25k has been recognised for the deductible. The insurance company has provided confirmation of cover. However, it cannot be ruled out that Roth & Rau will be held liable in connection with this or other accidents in future.

A lawsuit was filed at Hamburg District Court in early February in connection with an agreement concluded between Roth & Rau AG and Conergy SolarModule GmbH & Co. KG in 2006 concerning the delivery and construction of four cell production lines, their completion and assembly, and the currently outstanding payments due from Conergy SolarModule GmbH & Co. KG. Roth & Rau AG has recognised a corresponding provision to cover any damages payments.

## 7.3. Other financial obligations

The Group's financial obligations were structured as follows at the balance sheet date:

| € 000s | | of which maturing in | | |
|---|---|---|---|---|
| | Total amount | one year | between one and five years | more than five years |
| Obligations in connection with | | | | |
| purchase commitments | 40,965 | 40,965 | 0 | 0 |
| heritable building rights | 3,048 | 42 | 169 | 2,836 |
| master construction agreement | 5,447 | 5,447 | 0 | 0 |
| leasing contracts | 1,722 | 900 | 822 | 0 |
| rental contracts | 7,499 | 1,543 | 5,077 | 879 |
| licence and cooperation agreements | 300 | 300 | 0 | 0 |
| maintenance contracts | 5 | 5 | 0 | 0 |
| dismantling obligations | 3 | 3 | 0 | 0 |
| share purchase agreements | 150 | 150 | 0 | 0 |
| | 59,139 | 49,355 | 6,068 | 3,715 |

Purchase commitments involve obligations on the part of Roth & Rau AG in connection with orders placed in the year under report.

Roth & Rau AG is the beneficiary of two sets of heritable building rights with terms of 75 years each. The company pays ground rent of 6 % p.a. for these rights.

In the context of the construction of the new office complex at Roth & Rau AG, the company concluded a master construction agreement with a total value of € 8,785k, of which € 5,359k still has to be paid in 2011. A further amount of € 88k will be incurred for the construction of a new office in Shanghai.

The Group has concluded operating lease agreements for various items of technical equipment and plant and office equipment, all of which have terms of up to five years.

Obligations in connection with rental contracts relate in particular to a longer-term rental contract at OTB Solar B.V. (€ 6,737k). All other rental contract all have terms of up to five years.

The obligations in connection with the share purchase agreement relate to Muegge and the purchase agreement for further shares in the share capital of R3T.

### Cooperation and licence agreement with the University of Neuchâtel, Institute of Microtechnology

A cooperation and licence agreement was concluded with the Institute of Microtechnology (IMT) at the University of Neuchâtel in the 2008 financial year. This agreement governs a cooperation in the development of the expertise required to implement a highly efficient cell using hetero junction technology (HJT). The three-year fixed term for the research and development work begins on 15 April 2008 and ends on 15 April 2011. IMT receives an annual fee of € 180k over the three-year term as consideration for all work, supplies and obligations of relevance to this research and development work. An annual fee of € 120k is paid in return for the transfer of expertise and the granting of rights of use for this expertise and the patent.

### Licence agreement

In 2000, Roth & Rau AG acquired a technology licence for a period of 10 years. The licence fee payable is dependent on the net sales generated for the licensed system. Roth & Rau AG has entered into a further licence obligation with the Institute of Microtechnology (IMT) at the University of Neuchâtel (now EPFL Ecole Polytechnique Federale de Lausanne). Roth & Rau AG undertakes therein to pay compensation amounting to 1 % of the net sales of HJT lines. This compensation is limited to a maximum of € 300k p.a. for the term of the cooperation agreement (until 15 April 2011). The licence fee obligation remains effective for five years following termination of the contract, but the € 300k threshold then no longer applies.

### Litigation risks

In 2006, Roth & Rau AG concluded a contract with Conergy SolarModule GmbH & Co. KG concerning the supply and assembly of four cell production lines at Conergy's location in Frankfurt/Oder with a total order value of approximately € 58 million. The assembly of the lines was completed and operations began in 2008 and 2009. Roth & Rau AG performed its services in spite of payments not being made in some cases and breaches of duties of cooperation on the part of Conergy SolarModule GmbH & Co. KG. Roth & Rau AG believes that it is still entitled to claims of approximately € 8 million in connection with the contract. Conergy SolarModule GmbH & Co. KG, however, claims that the company failed to perform its deliveries and services in accordance with the contract and therefore refuses to settle the company's outstanding payment claims and has asserted damages claims that exceed the receivables due to Roth & Rau AG many times over. A lawsuit was filed at Hamburg District Court in connection with this matter in early February. The Management Board of Roth & Rau AG believes that the claims asserted by Conergy SolarModule GmbH & Co. KG are groundless both in terms of their substance and of their amount. Moreover, the agreed limitation of liability alone leads the Management Board to believe that the remaining claim at Roth & Rau AG should certainly exceed any damages claims on the part of Conergy SolarModule GmbH & Co. KG. The Management Board's opinion in this matter is corroborated by legal surveys it has commissioned from two renowned law firms.

## 7.4. Related party disclosures

Related parties of Roth & Rau AG are: members of the Management Board and Supervisory Boards, including their family relatives, and companies over which Roth & Rau AG, members of the Management and Supervisory Boards and their close family relatives can exercise significant influence.

### Management Board

The Management Board comprised the following individuals in the 2010 financial year:
Dr. Dietmar Roth (Chairman)
Thomas Hengst
Carsten Bovenschen (until 15 December 2010)
Dr. Paulus Breddels (since 1 September 2010)

### Dr. Dietmar Roth

Chief Executive Officer
Corporate Development, Research and Development, Legal & Compliance,
Production (until 1 September 2010)
Additionally since 15 December 2010: Finance and Controlling, Investments,
Human Resources, IT, Investor Relations
Member of the Expert Committee of the "Otto von Guericke"
Industrial Research Associations Working Group, Cologne

Carsten Bovenschen (until 15 December 2010)
Chief Financial Officer
Finance and Controlling, Investments, Human Resources, IT, Investor Relations
Until 1 September 2010: Supply Chain and Quality Management
Member of the Non-Executive Board at Industriepartner Capital Ltd. Düsseldorf
Member of the Expert Commission "Germany: Land of Entrepreneurs 2011"
Member of the Economic Advisory Board of the National Association for Sustainability and Eco-Social Market Economy (Bundesverband für Nachhaltigkeit und Ökosoziale Marktwirtschaft)

Thomas Hengst
Chief Sales Officer
Group Sales, Product Marketing, Global Customer Service
Until 1 September 2010: Product Management/Product Development

Dr. Paulus Breddels (since 1 September 2010)
Chief Operating Officer
Production, Integration, Quality Management, Supply Chain
Product Management/Product Development
Member of the Advisory Board at Holst Center, Eindhoven, Netherlands

Management Board compensation:
The compensation of the Management Board for the 2010 financial year is as follows:

| € 000s | Annual salary | | Fringe benefits | | Bonus | | Total | | No. of stock options | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2010 | 2009 | 2010 | 2009 | 2010 | 2009 | 2010 | 2009 | 2010 | 2009 |
| Dr. Dietmar Roth | 220 | 220 | 126 | 120 | 0 | 330 | 346 | 670 | 28,000 | 20,000 |
| Carsten Bovenschen (until 15 December 2010) | 180 | 180 | 76 | 71 | 0 | 180 | 256 | 431 | 21,000 | 14,000 |
| Thomas Hengst | 138 | 50 | 45 | 23 | 60 | 50 | 243 | 123 | 21,000 | 11,000 |
| Dr. Paulus Breddels (since 1 September 2010) | 80 | 0 | 20 | 0 | 20 | 0 | 120 | 0 | 14,000 | 0 |
| Total | 618 | 450 | 267 | 214 | 80 | 560 | 965 | 1,224 | 84,000 | 45,000 |

Fringe benefits, such as travel expenses, private use of a company car and direct insurance and contributions to a pension fund, paid in the 2010 financial year amounted to € 126k for Dr. Dietmar Roth (previous year: € 120k), to € 76k for Carsten Bovenschen (previous year: € 71k), to € 45k for Thomas Hengst (previous year: € 23k) and to € 20k for Dr. Paulus Breddels (previous year: € 0k).

No compensation was paid to Management Board members in connection with the phantom stock options plan in 2010. Further provisions totalling € 400k were recognised as of the balance sheet date in connection with Carsten Bovenschen's premature departure from the company (previous year: € 0k).

The contracts with Management Board members provide for payment of compensation should their activities on the Board be prematurely terminated without compelling reason. Such compensation is limited to a maximum of two annual salaries, including fringe benefits, and may not compensate the member for any period in excess of the remaining term of the employment contract. Should their activities on the Board be prematurely terminated due to a change of control, Management Board members receive compensation amounting to three basic annual salaries, nevertheless limited to a maximum of the compensation due for the remaining contractual term. Change of control is taken as the receipt of a notification pursuant to § 21 (1) of the German Securities Trading Act (WpHG) that a shareholder or group of shareholders holds no less than 50 % of the voting rights in the company, the conclusion of an affiliation agreement with the company as a dependent company pursuant to § 291 et seq. of the German Stock Corporation Act (AktG) or the incorporation of the company pursuant to § 319 of the German Stock Corporation Act (AktG). The pension commitment made to Thomas Hengst becomes vested upon any change of control, irrespective of the fulfilment of any waiting period or other contractual arrangements. Irrespective of this, the pension commitment made to Dr. Dietmar Roth is already vested.

Furthermore, pension commitments providing for retirement or invalidity pensions, as well as for provision for dependants, have been made to Management Board members. While the pension commitments towards Dr. Dietmar Roth are already vested, this will only be the case for Thomas Hengst following five years of activity on the Management Board at Roth & Rau AG. In the case of Dr. Paulus Breddels, the company pays contributions under an existing contract with a pension fund.

Dr. Dietmar Roth, CEO, held 794,796 shares, or 4.90 % of the shares in Roth & Rau AG as of 31 December 2010. The other members of the Management Board held the following number of shares in Roth & Rau AG at the balance sheet date: Carsten Bovenschen did not own any shares as of the balance sheet date, Thomas Hengst owned four shares and Dr. Paulus Breddels owned 19,005 shares.

### Supervisory Board

The Supervisory Board comprised the following individuals in the 2010 financial year:
Eberhard Reiche (Chairman)
Prof. Dr. Alexander Michaelis (Deputy Chairman)
Daniel Schoch

#### Eberhard Reiche

Chairman of the Supervisory Board
Director of the Internal Audit Department at envia Mitteldeutsche Energie AG

#### Prof. Dr. Alexander Michaelis

Deputy Chairman of the Supervisory Board
Director of the Fraunhofer Institute of Ceramic Technologies and Systems, Dresden
Professor at Technische Universität Dresden, Professor of Inorganic Non-Metallic Materials at the Institute of Material Science

#### Daniel Schoch

Member of the Supervisory Board
Director/Chief Financial Officer, Corestate Capital AG, Zug/Switzerland
Chairman of the Supervisory Board of Alta Fides AG, Frankfurt

The members of the Supervisory Board of Roth & Rau AG did not hold any shares in the company as of 31 December 2010.

The compensation of the Supervisory Board of Roth & Rau AG for the 2010 financial year is as follows:

#### Fixed compensation

| € 000s | 2010 | 2009 |
|---|---|---|
| Eberhard Reiche (Chairman) | 56 | 56 |
| Prof. Dr. Alexander Michaelis (Deputy Chairman) | 34 | 33 |
| Daniel Schoch | 22 | 23 |
| Total | 112 | 112 |

No agreements providing for compensation payments or other benefits for Supervisory Board members upon the conclusion of their membership of the Board have been reached between members of the Supervisory Board and the company. There are currently no conflicts of interest between their obligations towards the company and their private interests or other commitments.

No agreements governing the provision of pensions have been reached between members of the Supervisory Board and the company.

### Individuals in key positions

In addition to the members of the Management and Supervisory Boards listed above, individuals in key positions also include the following individuals with direct or indirect responsibility for planning, managing and supervising business activities, all of whom have been granted joint powers of representation.

**Dr. Bernd Rau**
Senior Vice President Research and Development
Dr. Rau held 752,964 shares, or 4.65 %, of Roth & Rau AG as of 31 December 2010
(previous year: 752,964 shares or 5.46 %).

**Prof. Dr. Silvia Roth**
Vice President Sales & Marketing
Wife of Dr. Dietmar Roth
Prof. Dr. Silvia Roth held 292,360 shares, or 1.80 %, of Roth & Rau AG as of 31 December 2010
(previous year: 292,360 shares or 2.12 %).

**Jana Meinel**
Head of Finance, Authorised Representative

**Dr. Martin Detje (until 31.12.2010)**
Head of ASCM (Turnkey)

**Lutz Eismann**
Vice President Operations & SiNA Department, Authorised Representative

**Dr. Egbert Vetter**
Vice President Research and Development, Authorised Representative

**Olaf-Matthias Isemer**
Vice President Supply Chain, Authorised Representative

Compensation totalling € 959k was paid to the aforementioned individuals in key positions in the 2010 financial year (previous year: € 809k). Moreover, provisions totalling € 225k were also recognised in favour of these individuals at the balance sheet date (previous year: € 111k). The compensation includes payments totalling € 133k for 2009. A total of 26,000 phantom stocks were issued to individuals in key positions (previous year: 50,000).

### Close family relatives

The individuals listed below are close family relatives of Dr. Dietmar Roth, member of the Management Board, or of Dr. Bernd Rau and Prof. Dr. Silvia Roth, individuals in key positions. These relatives work as employees of Roth & Rau AG and hold the following positions:

**Kristin Roth-Lüdemann (daughter of Prof. Dr. Silvia Roth)**
Sales Manager PV

Sascha Roth (son of Dr. Dietmar Roth)
until June 2010: Director of Group Controlling at Roth & Rau AG: since July 2010: Director of Finance and Controlling at AIS Automation Dresden GmbH

Ulrike Uhlig (daughter of Dr. Dietmar Roth)
Head of Accounts Department

Andrea Rau (wife of Dr. Bernd Rau)
HR and Administration

Friedrich Rau (son of Dr. Bernd Rau)
Sales and Customer Care

Compensation totalling € 248k was paid to these individuals in the 2010 financial year (previous year: € 189k). Furthermore, the company had also recognised provisions totalling € 28k at the balance sheet date in connection with the employment relationships of these close family relatives (previous year: € 35k). The compensation includes payments totalling € 7k for 2009.

Roth & Müller GbR
Roth & Müller GbR is a closely related company of Roth & Rau AG, as its shareholder Stefan Roth is the brother of the CEO, Dr. Dietmar Roth. Roth & Müller GbR is responsible for varnishing the switch-boxes of the coating systems.

The volume of business with Roth & Müller GbR amounted to € 9k in the 2010 financial year (previous year: € 50k). There were liabilities/provisions totalling € 3k in connection with this business relationship at the balance sheet date (31 December 2009: € 1k).

## 7.5. Auditor's fee

Fees of € 444k were recognised as expenses for auditing services performed by the auditor, PricewaterhouseCoopers AG Wirtschaftsprüfungsgesellschaft, in the 2010 financial year (previous year: € 180k). This figure includes expenses of € 139k for the audit of the 2009 financial statements. Fees of € 89k were paid for advisory services (previous year: € 58k).

## 7.6. Events after the balance sheet date

R³T Rapid Reactive Radicals Technology GmbH
The purchase and assignment contract dated 8 December 2010 was executed on 14 January 2011. Roth & Rau Muegge GmbH thus acquired a further 40 % of the shares in R³T Rapid Reactive Radicals Technology GmbH. The purchase price amounted to € 205k. Roth & Rau Muegge GmbH now holds 100 % of the shares, as a result of which Roth & Rau AG also holds an indirect shareholding of 100 %.

CRiSP cost and structure optimisation programme
To boost the company's profitability, Roth & Rau introduced a cost and structure optimisation programme called CRiSP in the third quarter of 2010. Specifically, CRiSP includes adjustments to the product portfolio, to the Group's structure, to its organisational and process structures, and process optimisation measures. The implementation of specific measures subsequently began in the first months of 2011. These include staff cuts involving 55 employees in the turnkey projects, research and development, product development, procurement and administration departments at the Hohenstein-Ernstthal location and a further 20 employees at other German locations within the Roth & Rau Group.

Further information about CRiSP can be found in the Group Management Report.

## 7.7. Approval for publication

The Management Board of Roth & Rau AG approved these IFRS consolidated financial statements for publication on 31 March 2011.

Hohenstein-Ernstthal, 31 March 2011

Dr. Dietmar Roth
Chief Executive Officer

Thomas Hengst
Chief Sales Officer

Dr. Paulus Breddels
Chief Operating Officer

# Responsibility statement

We hereby affirm that, to the best of our knowledge, the consolidated financial statements provide a true and fair view of the net asset, financial and earnings position of the Group in accordance with the accounting principles applicable and that the business performance, including the business results and situation of the Group, are depicted in the group management report so as to provide a true and fair view of actual circumstances, as well as of the principal opportunities and risks involved in the expected development of the Group.

Hohenstein-Ernstthal, 31 March 2011
Roth & Rau AG
The Management Board

Dr. Dietmar Roth

Thomas Hengst

Dr. Paulus Breddels

# Auditor's Report

We have audited the consolidated financial statements prepared by Roth & Rau AG, Hohenstein-Ernstthal, comprising the statement of financial position, the income statement, the statement of comprehensive income, statement of changes in equity, cash flow statement and the notes to the consolidated financial statements, together with the group management report for the business year from January 1 to December 31, 2010. The preparation of the consolidated financial statements and the group management report in accordance with the IFRSs, as adopted by the EU, and the additional requirements of German commercial law pursuant to § (Article) 315a Abs. (paragraph) 1 HGB („Handelsgesetzbuch": German Commercial Code) is the responsibility of the parent company's Management Board. Our responsibility is to express an opinion on the consolidated financial statements and on the group management report based on our audit.

We conducted our audit of the consolidated financial statements in accordance with § 317 HGB and German generally accepted standards for the audit of financial statements promulgated by the Institut der Wirtschaftsprüfer (Institute of Public Auditors in Germany) (IDW). Those standards require that we plan and perform the audit such that misstatements materially affecting the presentation of the net assets, financial position and results of operations in the consolidated financial statements in accordance with the applicable financial reporting framework and in the group management report are detected with reasonable assurance. Knowledge of the business activities and the economic and legal environment of the Group and expectations as to possible misstatements are taken into account in the determination of audit procedures. The effectiveness of the accounting-related internal control system and the evidence supporting the disclosures in the consolidated financial statements and the group management report are examined primarily on a test basis within the framework of the audit. The audit includes assessing the annual financial statements of those entities included in consolidation, the determination of the entities to be included in consolidation, the accounting and consolidation principles used and significant estimates made by the company's Management Board, as well as evaluating the overall presentation of the consolidated financial statements and the group management report. We believe that our audit provides a reasonable basis for our opinion.

Our audit has not led to any reservations.

In our opinion based on the findings of our audit the consolidated financial statements comply with the IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to § 315a Abs. 1 HGB and 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 group 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.

Dresden, 4 April 2011

PricewaterhouseCoopers
Aktiengesellschaft
Wirtschaftsprüfungsgesellschaft

| | |
|---|---|
| Klaus Dornaus | ppa. Frank Eichelmann |
| Wirtschaftsprüfer | Wirtschaftsprüfer |
| (German Public Auditor) | (German Public Auditor) |

# Consolidated Income Statement (Cost of sales method)

| € 000s | Note | 01.01.–31.12.2010 | 01.01.–31.12.2009 |
|---|---|---|---|
| Sales | | 285,357 | 197,903 |
| Costs incurred to generate sales (COGS) | | -210,313 | -146,879 |
| Gross profit | | 75,044 | 51,024 |
| Sales-related expenses | | -35,907 | -13,562 |
| Research and development expenses | | -14,056 | -4,818 |
| General administration expenses | | -29,566 | -15,546 |
| Other operating income | 5.4. | 5,864 | 4,950 |
| Other operating expenses | | -28,669 | -5,948 |
| Operating profit | | -27,290 | 16,100 |
| Net financial result | 5.9. | -6,968 | 607 |
| Earnings before taxes | | -34,258 | 16,707 |
| Taxes on income | 5.10. | 8,403 | -3,735 |
| Earnings after taxes | | -25,855 | 12,972 |
| of which: earnings attributable to minority interests | 4.3.6 | 46 | -43 |
| of which: earnings attributable to shareholders in Roth & Rau AG | 4.3.5. | -25,809 | 12,929 |
| Earnings carried forward from previous year | | 47,744 | 34,815 |
| Allocation to revenue reserves | | 0 | 0 |
| Unappropriated retained earnings | 4.3.5. | 21,935 | 47,744 |
| **Basic earnings per share in €/share (IAS 33)** | 5.11. | **-1.64** | **0.94** |

# Forward-looking statements

This Annual Report contains certain forward-looking statements referring in particular to the business, financial performance and income of Roth & Rau, to the economic and regulatory framework, to the business fields in which the Group operates and other factors. Forward-looking statements relate to future facts, events or other circumstances which do not represent historical facts. Such statements can be identified by their use of words such as “expect”, “intend”, “plan”, “assume” or “probably”. Such statements merely reflect the current expectations of Roth & Rau AG concerning future events and are subject to a series of risks and uncertainties.

These forward-looking statements are based on current estimates and assumptions made by the company to the best of its knowledge. Although Roth & Rau AG believes that they are appropriate at the present time, they may prove to be erroneous. Numerous factors may result in the actual performance of the Group, including the development in its net asset, financial and earnings position, deviating from the developments explicitly or implicitly assumed in the forward-looking statements. Should one or several of these changes or uncertainties materialise, or should the assumptions made by Roth & Rau AG prove to be inaccurate, then the possibility cannot be excluded that actual events will deviate materially from those described in this report as being assumed, estimated or expected. The Group may thus be prevented from achieving its financial and strategic targets. Roth & Rau AG has no intention of updating the forward-looking statements and sector and customer information presented in this Annual Report over and above its legal obligation to do so.

## Financial Calendar 2011

| | |
|---|---|
| Annual Results Press and Analysts’ Conference, Frankfurt am Main | 8 April |
| 3-month report | 13 May |
| Annual General Meeting, Hohenstein-Ernstthal | 8 July |
| 6-month report | 12 August |
| 9-month report | 15 November |
| German Equity Forum (Eigenkapitalforum), Frankfurt am Main | 21–23 November |


## Imprint

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**Published by**
Roth & Rau AG, Hohenstein-Ernstthal

**Editing**
Haubrok Investor Relations GmbH & Co. KG, Düsseldorf

**Concept and design**
visuphil®, Düsseldorf

**Photographs**
Martin Jehnichen

This Annual Report is also available in German. Both versions are available for downloading from the “Investor Relations/News & Publications/Reports” section of the company’s internet site at **www.roth-rau.de.** In cases of doubt, the German version is authoritative.


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