

Strong track record – and new ideas Munich Re equity story

Munich RE

February 2017

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## Munich Re – Key metrics

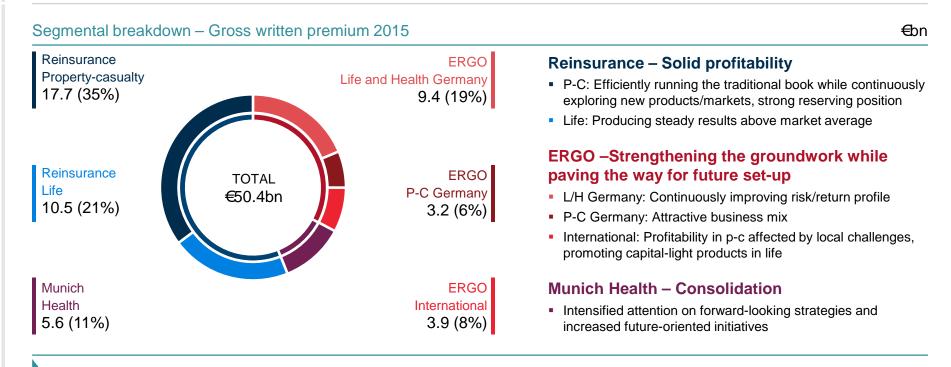


Key financial data	1		€bn	Key share	e data <sup>1</sup>				Compound annual growth rate <sup>1</sup> : 2005 – 2015			
	2015	2014	2013			2015	2014	2013	Premium	ns <sup>2</sup> Earnings	<sup>3</sup> Dividend <sup>3</sup>	Book value <sup>3</sup>
Shareholders' equity	31.0	30.3	26.2	Earnings pe	r share (€)	18.7	18.3	18.5	2.8%	4.8%	10.3% 🗪	6.1% 🗪
Operating result	4.8	4.0	4.4	Dividend pe	Dividend per share (€)		7.75	7.25	2.0%	4.0%	10.3%	0.1%
Net result	3.1	3.2	3.3	Book value per share (€)		188.4	178.2	146.2				
Debt leverage (%)	13.4	13.6	15.3	Share price (€)		184.6	165.8	160.2				
RoE (%)	10.0	11.3	12.5	Beta <sup>4</sup>		0.6	0.8	1.0	Key company data			
RoRaC (%)	11.5	13.2	12.1	P/E		9.9	9.1	8.7	Sector	Insurance	Currency	Euro
				P/B		1.0	0.9	1.1	Country Germany Accounting principles IF			oles IFRS
	Geographic breakdown –			Market capitalisation (€bn)		30.8	28.7	28.7				
Premiums <sup>2</sup> 2015				Dividend yie	ld (%)	4.5	4.7	4.5				
Other			Europe	Avg. daily tra	ading volume ('000)	813	700	667	Rating			
2.5 (5%)		26.3	(52%)	Type of share	No-par-value r	No-par-value registered shares			Stable AA rating from all agencies since 2006			
Asia-Pacific	Total			Votes Each share entitles the to one vote			holder					
4.7 (9%) <b>€50.4bn</b>			Dividend Paid out once per year in cash									
Narth America				Trading venues	•			Securities Reuters	s codes MUVGn	WKN 84	3002	
North America 16.7 (33%)				Shares o/s	166,843,961				Bloomberg			E0008430026

1 End of year. 2 Gross written premiums. 3 Per share. 4 Beta 250 relative to DAX (daily, raw).

## Munich Re covers the full insurance value chain

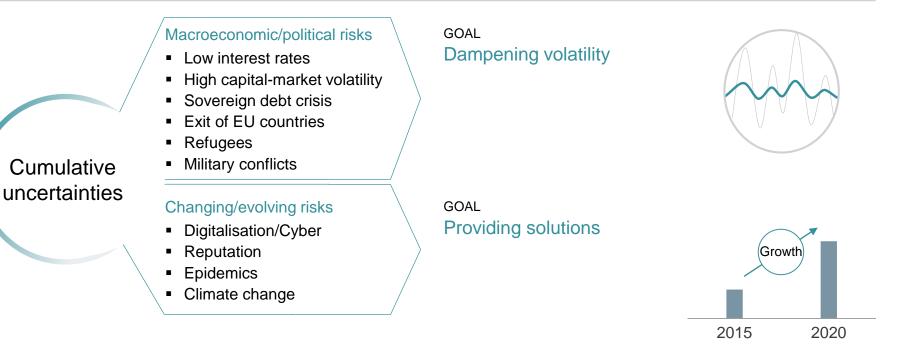




Realising synergies and economies of scope by combining primary and reinsurance under one roof

# Global environment becoming increasingly challenging while changing risks provide opportunities





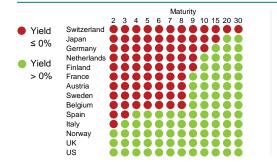
Proactive risk management builds up resilience in an unpredictable and unstable environment – Exploring attractive mid to long-term growth opportunities to overcome soft reinsurance markets

## Macroeconomic/political risks – Proactively limiting the economic impact



### Structural risks -

Coping with negative government bond yields<sup>1</sup>



### Impact

Ongoing decline of reinvestment yield putting pressure on running yield

Munich Re strategy Adhere to strict ALM

### Event-driven risks –

Increasing capital-market volatility, e.g. after Brexit vote



Volatile investment and FX result

### Munich Re strategy

Diversification

### - Munich Re investment portfolio

Well diversified – Group-wide trigger and limit system

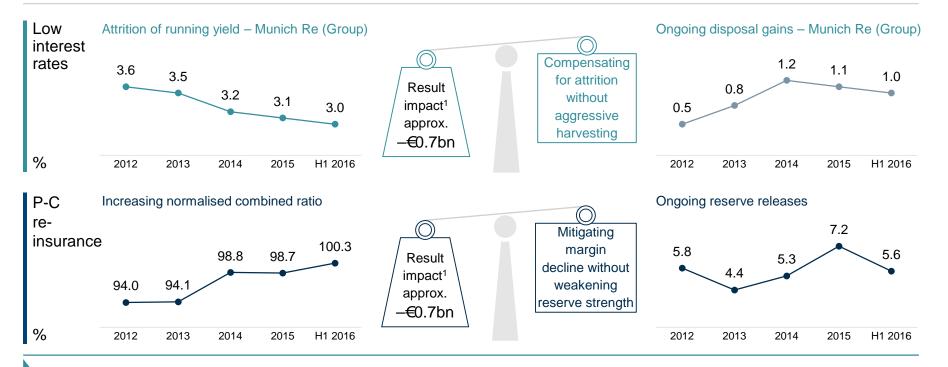
Hedging of macroeconomic risks – affecting both, assets and liabilities

Reasonable credit exposure – with high quality of counterparties

### Munich Re well-positioned to prevail through challenging times

1 Source: Bloomberg, UBS. July 2016.

# Strong balance sheet mitigates the impact of low interest rates and competitive p-c reinsurance markets

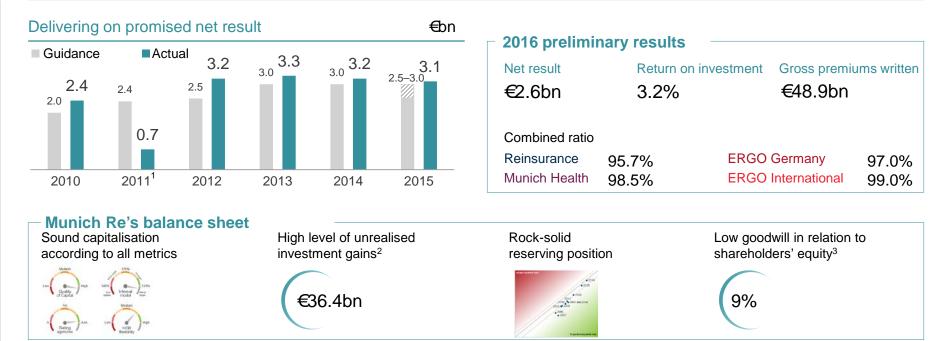


Strong balance sheet continues to translate into sustainable earnings



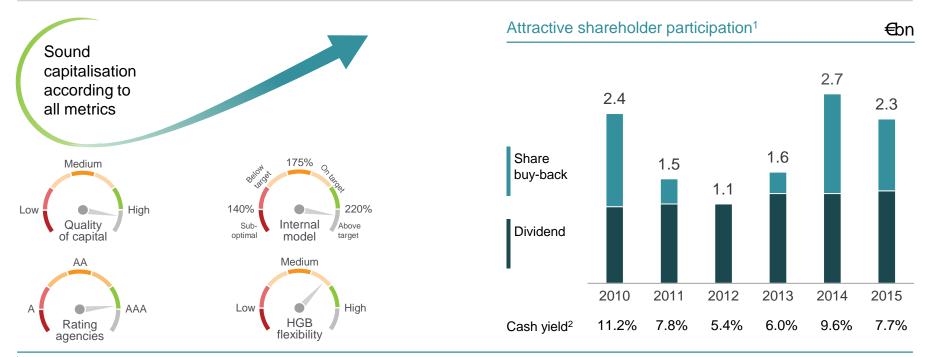
# Under-promise/over-deliver – Strong balance sheet continues to support sound earnings





Munich Re once again delivering strong results, despite persistent challenges of declining reinsurance margins and low interest rates Equity story

# Sound capital position according to all metrics facilitates financial flexibility, including high shareholder distribution



Munich Re continues to provide high cash returns to shareholders – Further increase of dividend per share to €8.60 in 2017 Munich RE 퉂

## Convincing track record in value generation



%

45

Return on equity % Risk/return profile<sup>1</sup> 16 Total shareholder return (p.a.) Value generation 18 14 Peer 3 15 12 Munich RE 🗮 12 10 Peer 4 9 Peer 5 Peer 2 8 Average cost of capital 6 6 Index Peer 6 3 4 Peer 1 2 0 Volatility of total shareholder return (p.a.) 0 -3 2005 2007 2009 2011 2013 2015 20 25 30 35 40

11-year average ROE: ~11.0% -Clearly exceeds average cost of capital: ~8% Annualised TSR: ~10.3% -Outperforming major peers and insurance index

### Balanced business portfolio paves the way for sustainable profitability

1 Annualised total shareholder return defined as price performance plus dividend yield over the period from 1.1.2005 until 31.1.2017; based on Datastream total return indices in local currency; volatility calculation with 250 trading days per year. Peers: Allianz, Axa, Generali, Hannover Re, Swiss Re, ZIG, Stoxx Europe 600 Insurance ("index").

Equity story

# Munich Re is well positioned to manage the current market environment and drive industry innovation



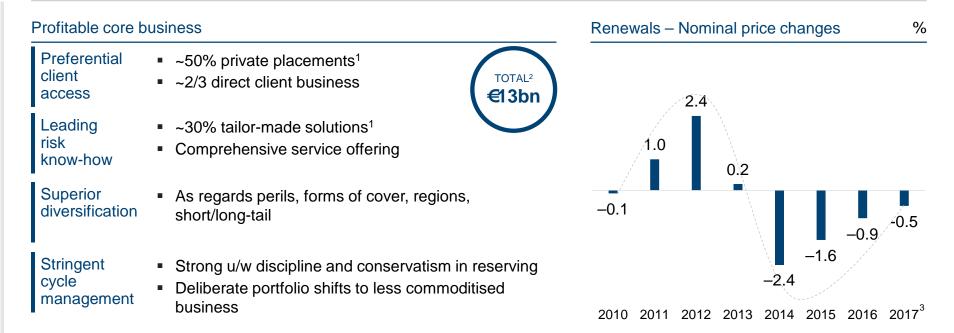
### Efficiently running the traditional book while continuously exploring new products/markets

1 e.g. Cyber insurance, performance guarantees for renewable energies. 2 e.g. Liability risks of oil platforms. 3 e.g. Satellite life-time insurance. 4 Gross premium written as at 31.12.2015. 5 Munich Re (Group); indirect effects on traditional business not included.





# Traditional p-c reinsurance – Portfolio profitability protected by disciplined underwriting and consistent cycle management



Traditional portfolio relatively resilient to pressure on rates - Diversification provides flexibility in managing the portfolio

## Emerging markets – Underinsurance provides business opportunities

bn

Future growth driven by demographic/economic changes -

1 Source: United Nations, Department of Economic and Social Affairs, Population Division (2015). 2 Source: Munich Re, Economic Research. Non-life, 2014.

2050 2015 2030 Asia/Oceania I atin America Africa Europe North America

Young and growing population<sup>1</sup>

Demographic changes -Rise of affluent middle class and significant population growth ...

3 Source: Munich Re. Geo Risks Research, NatCatSERVICE, 1980-2014.

... drive economic growth -Higher wealth and better education further increases insurance spending/penetration

Munich Re is tapping the potential with know-how, client proximity and a strong capital position

Emerging markets often highly exposed to nat

### Africa 5

%

North

America Australia

> Europe South

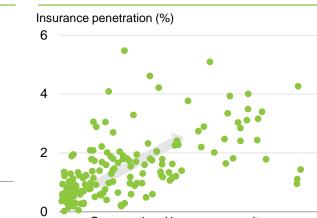
America

Asia

cat risks - Higher risk awareness reduces underinsurance

10

8



Insurance penetration still low<sup>2</sup>

### Gross national income per capita

Insured share of nat cat losses<sup>3</sup> %



43

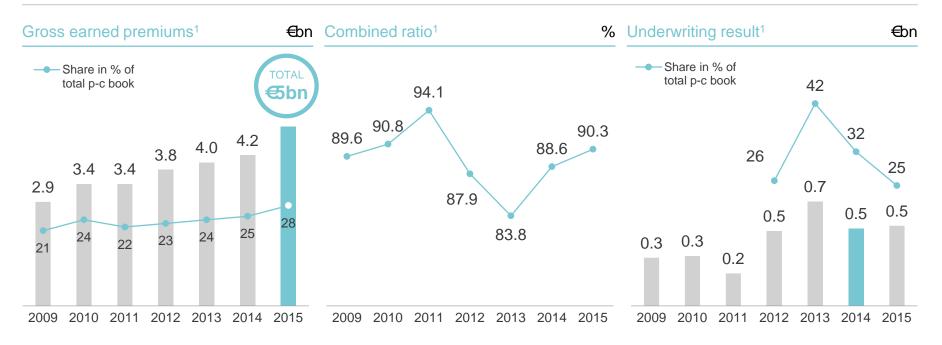
13

38

28

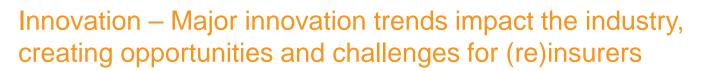
# Risk Solutions – Highly valuable business segment with strong top and bottom-line contribution



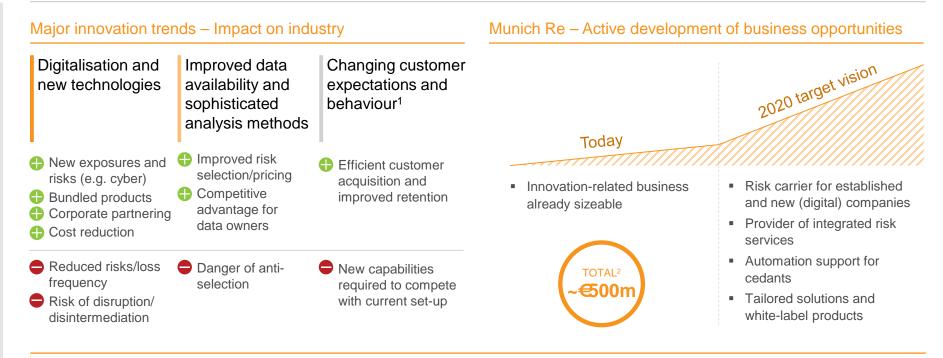


### Business largely detached from reinsurance cycle

1 Management view, not comparable with IFRS reporting.







Munich Re fosters innovation throughout the global organisation – Tapping new profit pools by expanding market boundaries with innovative products and services

1 Consumer and commercials. 2 Gross premium written as at 31.12.2015. Munich Re (Group); indirect effects on traditional business not included.

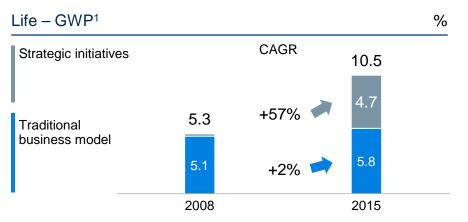
## Reinsurance - Portfolio mix on the move



Property-casualty – GWP<sup>1</sup> % CAGR Risk 18.0 16.6 Solutions 5.0+15% Traditional -2% book 14.7 13.0 2008 2015

As a leading Tier-1 reinsurer, successfully managing cyclical and structural market changes

- Active cycle and portfolio management in traditional business ...
- ... while continuously expanding attractive growth areas, e.g. Risk Solutions, as well as tailor-made and innovative products



Strong existing book complemented with well-established initiatives and innovative capacity

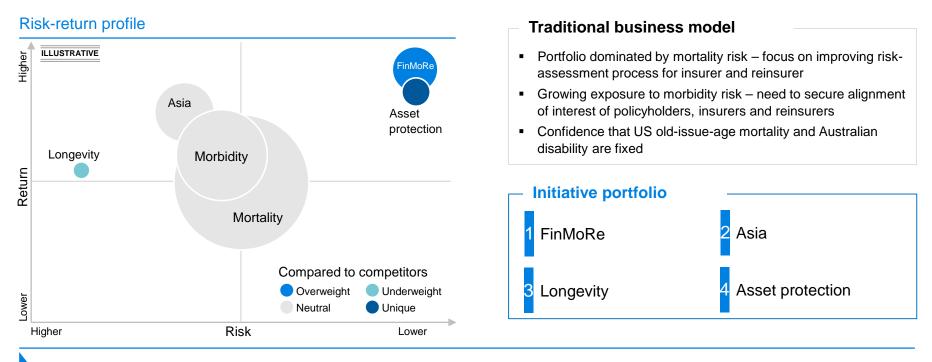
- Traditional mortality risk remains core ...
- ... while strategic initiatives have become a substantial part of the portfolio, mainly driven by organic growth in Asia and financially motivated reinsurance business

Traditional business remains an important earnings generator, while investment in new products/solutions safeguards future profitability

1 Gross premiums written.

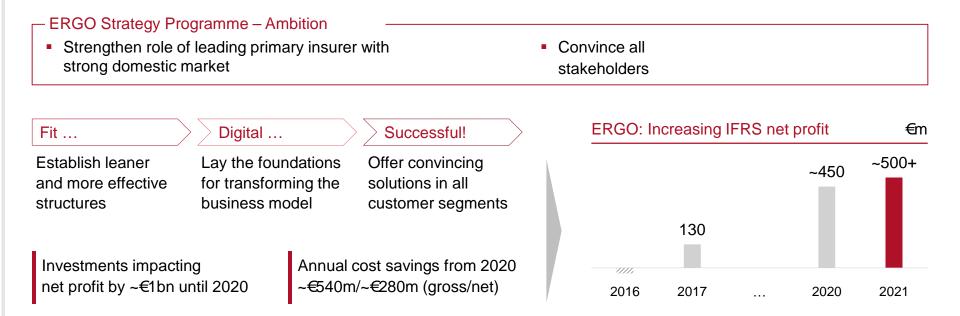
# Reinsurance Life – Core business supplemented by well-established initiatives





Mortality risk dominates, while contribution from initiatives is increasing

# ERGO – Strategy Programme strengthens sustainable competitiveness



ERGO's profitability will cover its cost of capital from 2020 and create incremental added value thereafter



Equity story

# Munich Health – Business measures show first signs of stabilisation



### Organisation



- Enhanced organisational structures implemented
- Improvements in underwriting and client management
- Further specified strategic focus
- Intensified Group-wide business synergies

### Markets/clients



- Growth initiatives for South-East Asia and Middle East
- Repositioning in the US
- Enhanced customer experience across Munich Health
- Strengthened value proposition for reinsurance clients

### Innovation/digitalisation



- Digital health target picture
- Development and implementation of innovative and digital health solutions
- Embedding of business analytics into processes, decisions and value proposition

Agenda 2016 - Intensified attention on forward-looking strategies and increased future-oriented initiatives

## Strong track record – and new ideas



StrongSuccessfully dealing with challenging economic conditions –track recordWe remain a strong partner for clients and reliable for shareholders, delivering on our promises

BusinessFocus on insurance risks safeguarding sustainable value creation –strategyComplementary business profiles limiting correlation to capital market development

Rigorous riskBased on a high level of diversification, actively managing the low-yield environment and strictlymanagementbudgeting all our insurance risks

Strong capital<br/>positionContinuously built up over years – Continuing the long-term track record of attractive capital repatriation<br/>while keeping the flexibility to seize opportunities for profitable growth

## Backup



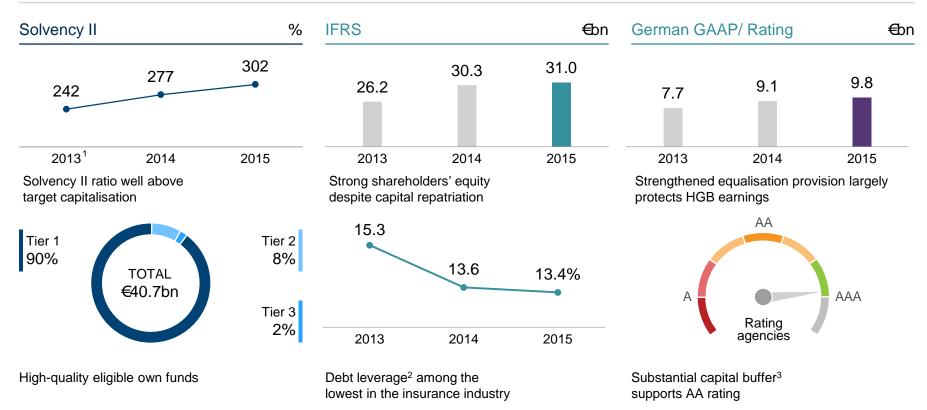
### Key financials – Our aim is sustained profitable growth

Munich Re		2015	2014	2013	2012	2011
Gross written premiums	€bn	50.4	48.8	51.1	52.0	49.5
Operating result	€m	4,819	4,028	4,398	5,349	1,180
Taxes on income	€m	-476	312	-108	-878	552
Consolidated result	€m	3,122	3,171	3,333	3,204	712
Thereof attributable to minority interests	€m	15	18	29	16	10
Investments	€bn	215.1	218.9	202.2	213.8	201.7
Return on equity	%	10.0	11.3	12.5	12.5	3.3
Equity	€bn	31.0	30.3	26.2	27.4	23.3
Off-balance-sheet reserves <sup>1</sup>	€bn	16.0	17.4	8.7	11.0	5.7
Net technical provisions	€bn	198.5	198.4	187.7	186.1	181.2
Staff at 31 December		43,554	43,316	44,665	45,437	47,206
Our shares						
Earnings per share	€	18.73	18.31	18.45	17.94	3.94
Dividend per share	€	8.25	7.75	7.25	7.00	6.25
Amount distributed	€m	1,335	1,298	1,254	1,255	1,110
Share price at 31 December	€	184.55	165.75	160.15	136.00	94.78
Market capitalisation at 31 December <sup>2</sup>	€bn	30.8	28.7	28.7	24.4	17.0
No. of shares at year-end (ex own shares)	m	166.8	172.9	179.3	179.3	177.6

1 Including amounts attributable to minority interests and policyholders. 2 This includes own shares earmarked for retirement.

## Sound capital position according to all metrics





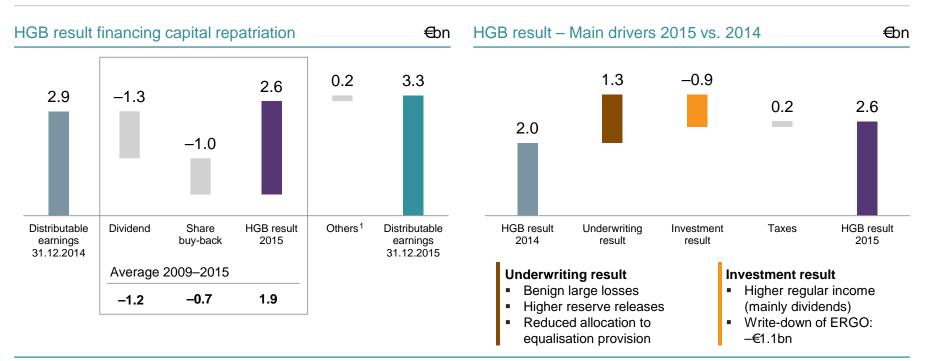
## **IFRS** capital position



Equity				€m	Capitalis	ation			€br	
Equity 31.12.2015	30,966		C	Change Q3	0.3	0.4	0.4	0.4	0.4	
Consolidated result	2,095	I		684			4.3	4.3	4.2	
Changes					4.4	4.4	4.5	4.0		
Dividend	-1,329			_						
Unrealised gains/losses	2,315			304						
Exchange rates	-565			-177						
Share buy-backs	-711			-318						
Other	-416			-149	•	•			-	
Equity 30.9.2016	32,355			343	13.6	13.4	12.8	12.6	12.4	
Unrealised gains/losse	S	Exchange rates			30.3	31.0	31.8	32.0	32.4	
Fixed-interest securities 9M: +€2,353m Q3: +€	 84m	FX effect mainly drive	n by US\$		2014	2015	Q1 2016	Q2 2016	Q3 2016	
	5				De	bt leverage	<sup>1</sup> (%)			
Non-fixed-interest securities						Senior and other debt <sup>2</sup>				
9M: <b>–€31m</b> Q3: <b>+€</b>	222m				Su	bordinated	debt			
					Eq	uity				

1 Strategic debt (senior, subordinated and other debt) divided by total capital (strategic debt + equity). 2 Other debt includes Munich Re bank borrowings and other strategic debt.

# Distributable earnings of parent company – Main drivers

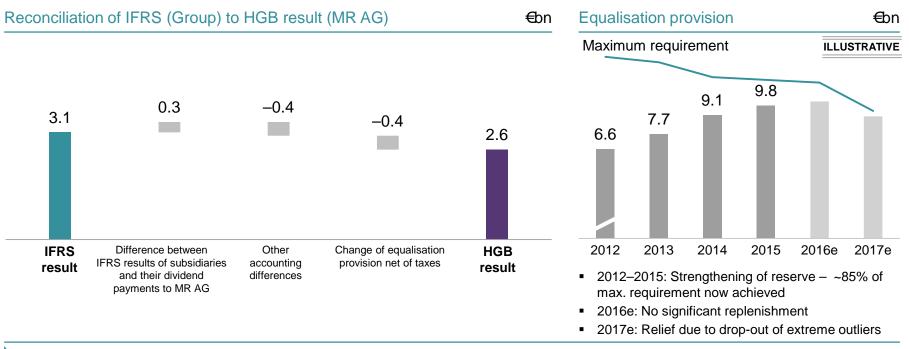


Underwriting result protected by strong reserves, replenishment largely completed – Distributable earnings sensitive to adverse capital market development



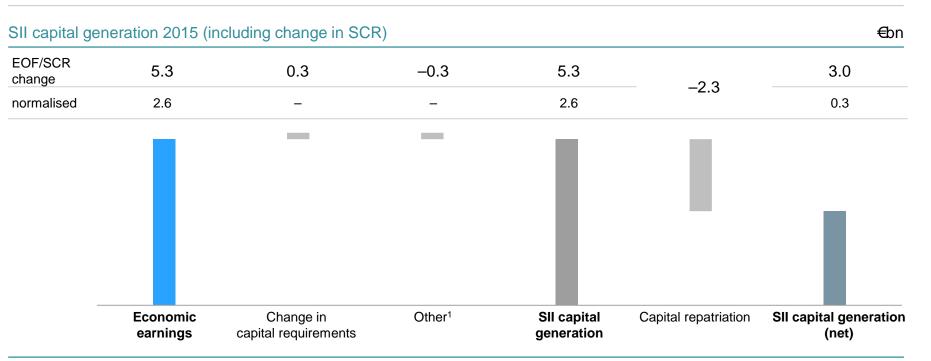
## Solid German GAAP (HGB) earnings





Underwriting result protected by strong reserves, replenishment largely completed – Distributable earnings sensitive to adverse capital market development

# Strong Solvency II capital generation supports financial flexibility



### SII capital generation exceeds capital repatriation



## Change in eligible own funds



Change in SII eligible own funds		€bn
EOF 31.12.2014	38.2	
Opening adjustments	-0.3	Retrospective adjustments of own funds not qualifying as changes of reporting period
EOF 01.01.2015	38.0	Opening balance for determination of overall change in reporting period
Economic earnings	5.3	Economic performance of the period resulting in OF change
Capital measures	-2.5	Dividend: €1.3bn Share buy-back: €1.0bn and other <sup>1</sup>
Change in other own funds items	-0.1	Development of non-available own funds items and own funds for FCIIF and IORP <sup>2</sup>
EOF 31.12.2015	40.7	Closing balance subject to SII Day-1 reporting



# Profit and loss attribution provides consistent reporting of economic performance across business units

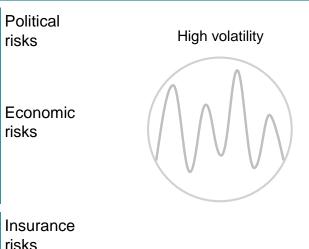
Munich Re (Group) 2015 €bn	RI Life	RI L P-C	ERGO ife and health Germany	ERGO P-C Germany	ERGO Intl.	Munich Health	Munich Re (Group)
Operating economic earnings	1.5	1.7	-0.3	0.1	0.0	0.0	3.0
Expected return existing business	0.2	0.2	0.2	0.0	0.1	0.0	0.7
New business value	0.9	0.2	0.3	0.3	0.0	0.0	1.7
Operating variances existing business	0.2	1.3	-0.7	-0.2	0.0	0.0	0.6
Other operating variances	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Economic effects	0.3	0.7	0.8	0.0	0.1	0.0	2.0
Other non-operating earnings	0.1	-0.1	0.5	-0.1	-0.1	0.0	0.3
Total economic earnings	1.8	2.3	1.1	0.1	0.1	0.0	5.3
Capital measures							-2.5
Changes in other own funds items							-0.1
Change in SII EOF							2.7

Positive economic earnings contribution from all business units – But with differing underlying drivers

## Proactive risk management builds up resilience in an unpredictable and unstable environment



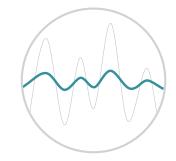
### Current environment



### Risk management measures stabilise SII ratio

- Diversified investment portfolio
- Group-wide trigger system for ALM risks
- Hedging strategy
- Limits for sovereigns
- High quality of counterparties
- Forward-looking scenario analysis

### Dampening of volatility



- Limits and budgets
- Management of accumulations
- Strict underwriting guidelines
- Retrocession for peak nat cat scenarios

No major movement in SCR reflects unchanged risk profile of Munich Re (Group)

## Breakdown of Solvency Capital Requirement (SCR) by risk category according to Munich Re internal model<sup>1</sup>



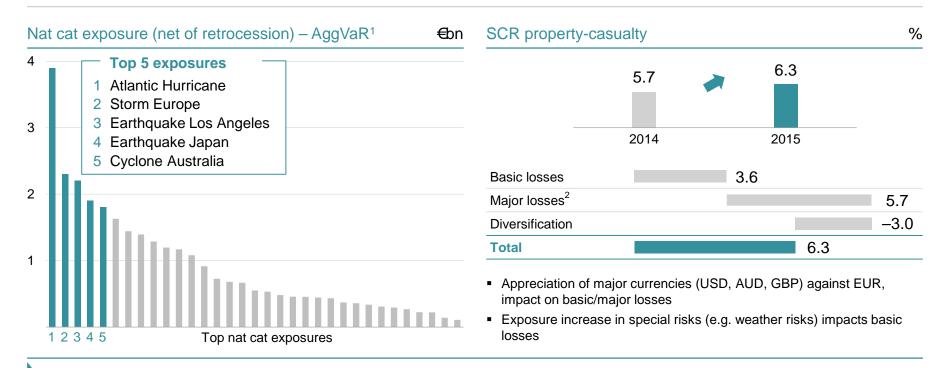
Risk category	Grou	р		RI	ERGO	MH	
	2014 <sup>2</sup>	2015	Delta	2015	2015	2015	Remarks
PropCasualty	5.7	6.3	0.6	6.2	0.4		P-C: Increase driven by reinsurance – FX and growth in special risks
Life/Health	4.8	4.7	-0.1	3.8	1.3	0.3	
Market	8.8	8.7	-0.1	5.8	4.3		
Credit	4.6	4.2	-0.5	2.7	1.6		Credit: De-risking of investment portfolio and full implementation of SII methodology
Operational risk	1.0	1.0	_	0.8	0.4	0.1	
Other <sup>3</sup>	0.2	0.1	-0.1				
Simple sum	25.1	25.1	_	19.3	8.0	0.4	
Diversification	-9.1	-9.3	-0.1	-7.4	-2.1	0.0	Diversification benefit: 37%
Тах	-2.2	-2.3	-0.2	-2.0	-0.7	-0.1	Loss-absorbing capacity of deferred taxes
Total SCR	13.8	13.5	-0.3	9.9	5.2	0.3	

1 Munich Re uses a full internal model, which was approved by BaFin and core college in 2015. 2 After reconciliation into SII metric. 3 Capital requirements for other financial sectors,

e.g. institutions for occupational retirement provisions.

## Risk-bearing capacity allows high exposure for peak scenarios, but only at adequate price levels

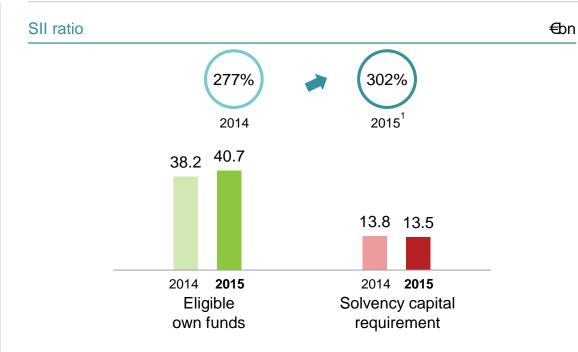




High diversification between natural catastrophe risks, both by region and perils, adequately reflected in internal model

## Further improvement of Solvency II ratio





### n Remarks

- Fully consolidated approach appropriately covers risk situation of Munich Re (Group)
- No application of optional transitionals, LTG or other measures in solo entities and at Group level by end of 2015 ...
- ... which remains an option for selected life entities subject to assessment of further development of interest rates

Capitalisation in the SII regime remains very comfortable

## Further improvement of Solvency II ratio



#### Munich Reactions SII ratio % >220% Above target capitalisation Capital repatriation 302% Increased risk-taking Holding excess capital to meet external Transition into constraints SII metric 175% - 220%Target capitalisation 220% Optimum level of capitalisation 140% - 175%Below target capitalisation Tolerate (management decision) or 175% If necessary, take management action (e.g. risk transfer, scaling-down of activities; raising of hybrid capital) 140% <140%: Sub-optimum capitalisation Take risk-management action (e.g. risk transfer, scaling-down of activities; raising of hybrid capital) or 100% in exceptional cases, tolerate situation (management decision) 2009 2010 2011 2012 2013 2014 2015

## Sensitivities of SII ratio



### SII ratio – Sensitivity

Ratio as at 31.12.15	302
Interest rate +50bps1	313
Interest rate –50bps1	290
Spread +100bps	272
Equity markets +30%	317
Equity markets –30%	286
FX –20%	299
Inflation +100bps	298
Atlantic Hurricane <sup>2</sup>	282
UFR –100bps	298
Volatility adjustment	319
	175 220

### Assumptions

%

- Use of full consolidated accounts for Munich Re (Group)
- No consideration of optional long-term-guarantee measures, e.g.
  - Transitionals
  - (Dynamic) volatility adjustment
  - Matching adjustment
- Credit risk considered for all fixed-income securities, including government bonds (e.g. in EEA)

### All relevant stress scenarios leave Munich Re's SII ratio in a comfortable range

Backup: Group - Solvency II

# SII ratio – Munich Re's sensitivities reflect full economic impact



### Application of optional SII measures – Impact on SII ratio and sensitivities

Reduction of	Use of dynamic volatility adjustment	No credit risk for EEA government bonds	Application of D&A method for US subsidiaries
spread sensitivity	~1/2	~1/3	~1/5
equity sensitivity			~1/3
SII ratio	~339%	~329%	~285%

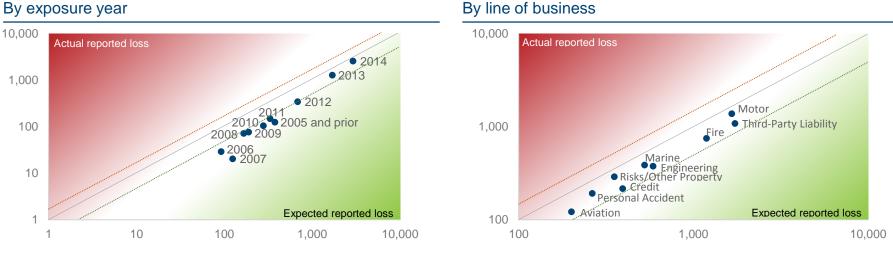
Combined spread sensitivity would go down to ~10% pts. – Spread +100bps: SII ratio  $302\% \rightarrow 292\%$  (instead of 272%)

For comparability of published SII numbers, a detailed view on applied measures is necessary

## Actual versus expected comparison – Loss-monitoring yields consistent picture across years

Reinsurance group – Comparison of incremental expected losses with actual reported losses<sup>1</sup>





Legend:	Green	Actuals below expectation	Solid line	Actuals equal expectation
	Red	Actuals above expectation	Dotted line	Actuals are 50% above/below expectations

#### Actual losses consistently below actuarial expectations - Very strong reserve position

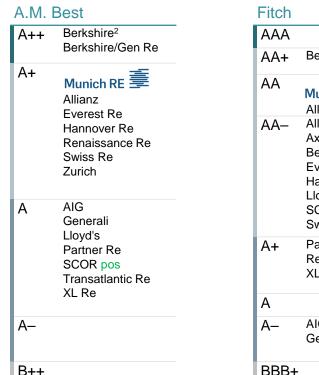


€m

## Positive run-off result without weakening resilience against future volatility

Ultimate losses <sup>1</sup> (adjusted to exchange rates as at 31.12.2015) €m							Ultimate reduction								
Accident year (AY)								Prior-year releases of €1.5bn							
Date	≤2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Total	driven by reinsurance portfolio		
31.12.2005	50,061												<ul> <li>Favourable actual vs.</li> </ul>		
31.12.2006	50,702	11,387											expected comparison		
31.12.2007	50,767	11,444	12,708										facilitates ultimate reductions		
31.12.2008	50,303	11,332	12,911	14,127									for prior years		
31.12.2009	49,857	11,104	12,811	14,381	13,878								<ul> <li>Reserve position remains strong</li> <li>AY 2015: Prudent initial</li> </ul>		
31.12.2010	49,546	10,819	12,736	14,331	13,819	14,287									
31.12.2011	49,401	10,730	12,694	14,033	13,364	14,521	18,455						assessment		
31.12.2012	49,092	10,544	12,316	13,880	13,238	14,400	18,596	15,209							
31.12.2013	48,997	10,570	12,079	13,711	13,238	14,469	18,278	15,032	15,124						
31.12.2014	48,917	10,455	11,998	13,430	12,925	14,453	17,892	14,830	15,336	15,092					
31.12.2015	48,637	10,373	11,762	13,296	12,693	14,289	17,731	14,591	15,301	15,115	14,369				
CY 2015 run- off change	280	82	236	133	232	163	160	239	36	-23	_	1,538	Reinsurance <sup>2</sup> €1,535m ERGO €3m		
CY 2015 run- off change (%)	0.6	0.8	2.0	1.0	1.8	1.1	0.9	1.6	0.2	-0.2	_	0.9			

# Insurance financial strength ratings<sup>1</sup> providing for strong competitive position



Fitch	
AAA	
AA+	Berkshire/Gen Re
AA	Munich RE Allianz
AA–	Allianz <sup>2</sup> Axa Berkshire <sup>2</sup> Everest Re Hannover Re <sup>3</sup> Lloyd's SCOR Swiss Re <sup>3</sup>
A+	Partner Re Renaissance Re XL Re
A	
A–	AIG <sup>2</sup> Generali
BBB+	

#### Moody's Aaa Berkshire/Gen Re Aa1 Allianz Germany Aa2 Berkshire<sup>2</sup> Aa3 Munich RE 🚍 Allianz SE Axa SCOR Swiss Re Zurich Everest Re A1 Partner Re Renaissance Re Transatlantic A2 XL Re Generali Germany A3 Generali<sup>2</sup> Baa1



Standard & Poor's

AAA	
AA+	Berkshire/Gen Re
AA	Allianz Berkshire <sup>2</sup>
AA-	Munich RE Axa Hannover Re Renaissance Re SCOR Swiss Re Zurich
A+	AIG Everest Re Lloyd's Partner Re Transatlantic Re XL Re
А	
A–	AIG <sup>2</sup> neg
BBB+	

1 As at 9 November 2016. 2 Issuer rating of holding. 3 Based on public information.

## Munich Re (Group) – Outstanding bonds

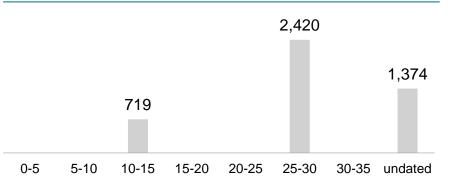


#### Subordinated bonds<sup>1</sup>

Nominal volume	Coupon rate p. a.	Emission/Issue	Maturity	First possible redemption date
€900m	Until 2022 6.25%, thereafter variable	2012	2042	26 May 2022
£450m	Until 2022 6.625%, thereafter variable	2012	2042	26 May 2022
€1,000m	Until 2021 6.00%, thereafter variable	2011	2041	26 May 2021
€1,349m	Until 2017 5.767%, thereafter variable	2007	Undated	12 June 2017
£300m	Until 2018 7.625%, thereafter variable	2003	2028	21 June 2018

€m

#### Maturity pattern of Munich Re Group bonds





## Munich RE

## ILS market platform complements our core business with alternative capacity and earnings potential

#### Strategic scope of our ILS market activity

#### Munich Re's view on ILS market benefits

- Multi-year price stability
- Diversification of capacity channels
- Collateralised capacity
- Complement of product range as regards earnings potential
- Profitable investment opportunities in insurance risks which fits Munich Re's portfolio

#### Munich Re's ILS related competencies

- Dedicated ILS team covering the whole ILS value chain from analytics to structuring and placement
- Deployment of our actuarial and geoscientific expertise to offer ILS structuring and advisory services – we act as neutral advisors
- Ability for opportunistic allocation of reinsurance capacity to ILS investments

#### Integrated ILS approach

#### Management of our own risks

- Portfolio optimisation and balance sheet protection (e.g. selling of peak risk overhangs)
- Management of P&L-volatility through cat bonds (cycle management)
- Diversification of capacity

#### Management of our clients' risks

- Complement to traditional reinsurance
- ILS consulting and project management
- Structuring and placement support
- Risk fronting and transformation

#### Propriety ILS investment portfolio

- Growing investor in the ILS primary and secondary market
- "Buy and hold"-strategy
- Opportunistic allocation of reinsurance capacity to profitable ILS investment opportunities

## Outstanding insurance-linked securities (ILS)



	Transaction	Closing	Maturity	Volume	Perils covered
For clients	Vitality Re VIII Re Ltd.	1/2017	1/2021	US\$ 200m	US health risks
	Vitality Re VII Re Ltd.	1/2016	1/2020	US\$ 200m	US health risks
	Bosphorus 2 Re Ltd.	8/2015	8/2018	US\$ 100m	Earthquake Turkey
	Azzurro Re I Ltd.	6/2015	1/2019	€200m	Italy Earthquake
	World Bank CCRIF	6/2014	6/2017	US\$ 30m	Caribbean Wind & Earthquake
	Lion Re DAC	4/2014	4/2017	€190m	Windstorm Europe
For Munich Re's book <sup>1</sup>	Eden Re II Ltd. (Series 2017-1)	12/2016	3/2021	US\$ 360m	Various perils
	Queen Street XII Re DAC	5/2016	4/2020	US\$ 190m	Hurricane US & Windstorm Europe
	Queen Street XI Re DAC	12/2015	6/2020	US\$ 100m	Hurricane US & Cyclone Australia
	Queen Street X Re DAC	3/2015	6/2018	US\$ 100m	Hurricane US & Cyclone Australia
	Queen Street IX Re DAC	2/2014	6/2017	US\$ 100m	Hurricane US & Cyclone Australia

- Generation of fee income
- Active investor in the primary and secondary market
- Improvement of own risk/return profile and cost efficiency
- Utilisation of unexhausted risk budgets
- Offering one-stop shopping to clients as sponsors

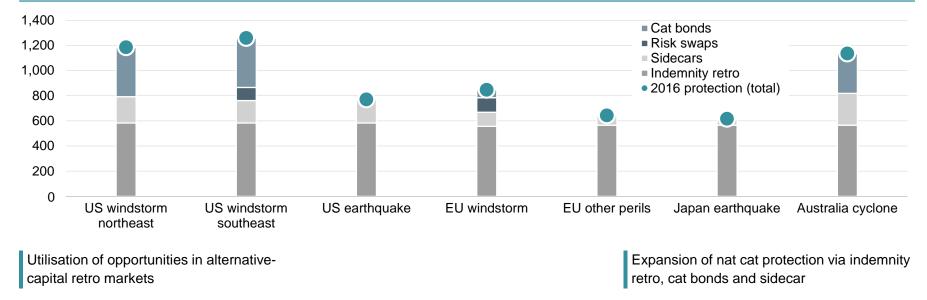
Munich Re's Capital Partners unit is a recognised player in the ILS market

## Munich Re's maximum in-force nat cat protection



€m

Munich Re's maximum in-force nat cat protection as at January 2016



Retrocession use reflects favourable market terms

As at January 2016. Protection before reinstatement premiums. 1 Earthquake Europe, including Turkey.

## Broad external recognition for Munich Re's corporate responsibility performance

Dow Jones Sustainability Indices In Collaboration with RobecoSAM (

Permanently listed since 2001



Permanently listed since 2001



The STOXX® Global ESG Leaders Index represents leading companies from an ESG point of view



Munich Re has been included in the Bronze Class of the best and most sustainable companies by Robeco SAM



Munich Re has constantly achieved high rating results (AAA) in the MSCI ESG rating



Ranked 3rd place in the insurance industry

EURONEXT

Europe 1D

Rated "Prime" in Corporate Responsibility Rating 2015; Munich Re counts to the best-in-class insurers



Munich Re is represented in the ESI Excellence Europe and ESI Excellence Global (based on ratings results from Vigeo)

Munich Re represented in Vigeo indexes

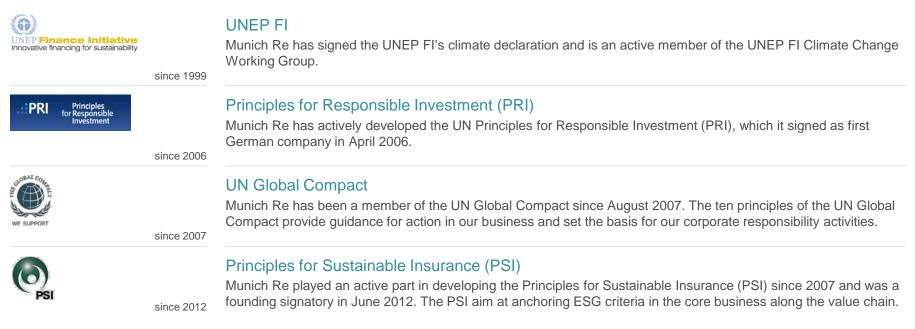


EURONEXT

viceo

## Munich Re's international cooperation – A strong commitment towards corporate responsibility

### Examples





## 2016 net result of €2.6bn meets annual guidance – Increased dividend of €8.60 per share<sup>1</sup>

### Munich Re (Group) – 2016 (Q4 2016)

NET RESULT €2.6bn (€0.5bn)

Sound underlying performance without dilution of strong balance sheet – investments in ERGO Strategy Programme and FX gains OPERATING RESULT €4.0bn (€0.8bn)

Reinsurance combined ratio of 95.7% (101.9%), technical result of almost €500m in life re – ERGO with slightly negative 2016 (positive Q4) net result

#### INVESTMENT RESULT Rol: 3.2% (2.7%)

Solid return given low interest rates – prudent asset liability management once again proved beneficial

#### SHAREHOLDERS' EQUITY

€31.8bn (-1.8% vs. 30.9.)

Strong capitalisation according to all metrics continues to provide the basis for high pay-outs

#### HGB RESULT (GERMAN GAAP)

Significantly above €3bn

Distributable earnings improved substantially, despite capital repatriation of €2.3bn

#### JANUARY RENEWALS

Strict focus on bottom-line

- Premium change: -4.9%
- Price change: ~ -0.5%



## Reconciliation of operating result with net result



Reconciliation of operatin	econciliation of operating result with net result			
	9M 2016	Q3 20'		
Operating result	3,202	1,01		
Other non-operating result	-313	—11		
Goodwill impairments	-9			
Net finance costs	-162	-5		
Taxes	-623	-16		
Net result	2,095	68		

Other non-operating result			Tax rates		
	9M 2016	Q3 2016		9M 2016	Q3 2016
Foreign exchange	325	6	Group	22.9	19.3
	440	0	Reinsurance	19.6	20.2
Restructuring expenses	-410	-9	ERGO	-356.0	37.7
Other	-229	-108	Munich Health	18.7	31.2

### Munich Re – The leading global reinsurer

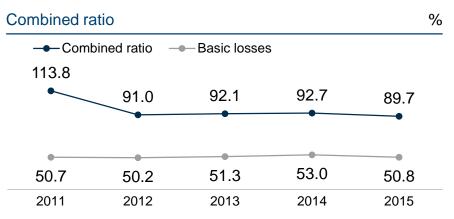


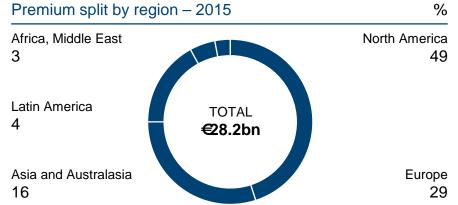
Rank	Company	Country	Net reinsurance premiums written 2015 (US\$ m)
1	Munich Re	Germany	33,624
2	Swiss Re	Switzerland	30,442
3	Hannover Re	Germany	16,121
4	Berkshire Hathaway Re	USA	13,382
5	SCOR	France	13,111
6	Lloyd's	UK	10,021
7	Reinsurance Group of America	USA	8,571
8	China Re	China	7,717
9	Everest Re	Bermuda	5,378
10	Partner Re	Bermuda	5,230
11	Korean Re	Korea	3,728
12	MS&AD Holdings	Japan	3,581
13	Transatlantic Holdings Inc.	USA	3,387
14	Sompo	Japan	2,978
15	Tokio Marine	Japan	2,747
16	Mapfre Re	Spain	2,725
17	Maiden Re	Bermuda	2,514
18	General Ins. Corp. of India	India	2,473
19	R+V Versicherung	Germany	2,106
20	XL Catlin	Bermuda	2,091
	Total top 40		193,687

### **Reinsurance – Overview**



		2015	2014	2013	2012	2011
Gross written premiums	€bn	28.2	26.8	27.8	28.2	26.0
Investments	€bn	89.2	88.0	79.2	83.8	79.5
Net technical provisions	€bn	65.4	63.5	60.5	61.1	62.7
Major losses (net)	€m	1,046	1,162	1,689	1,799	5,048
Thereof natural catastrophes	€m	149	538	764	1,284	4,538



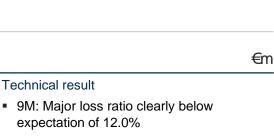


### Reinsurance Property-casualty 9M 2016 vs. 9M 2015

Gross premiums written	€m
9M 2015	13,583
Foreign exchange	-330
Divestments/investments	0
Organic change	480
9M 2016	13,733

- Negative FX effects mainly driven by GBP
- Organic growth due to several new deals, particularly in motor and fire

Major result drivers			
	9M 2016	9M 2015	
Technical result	1,642	1,870	-228
Non-technical result	368	414	-46
thereof investment result	1,266	1,450	-184
Other	-248	-565	317
Net result	1,761	1,718	43
	Q3 2016	Q2 2016	
Technical result	597	289	308
Non-technical result	108	498	-390
thereof investment result	411	754	-343
Other	-147	-10	-137
Net result	558	778	-220



 Q3: Lower basic losses, as Q2 was inflated by various larger claims just below the outlier threshold

#### Investment result

- 9M: Reduced disposal gains and lower regular income
- Q3: Negative impact from equity derivatives (hedging) and less dividend income
- Q3: Return on investment 2.6%

#### Other

- 9M: FX result of €299m vs. –€225m, high contribution from GBP
- 9M: Tax rate 20.2% vs. 11.0%



## Reinsurance Property-casualty - Combined ratio

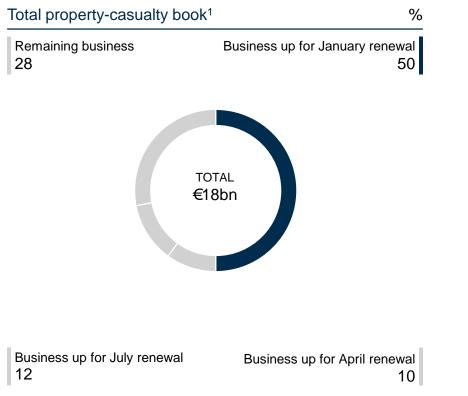


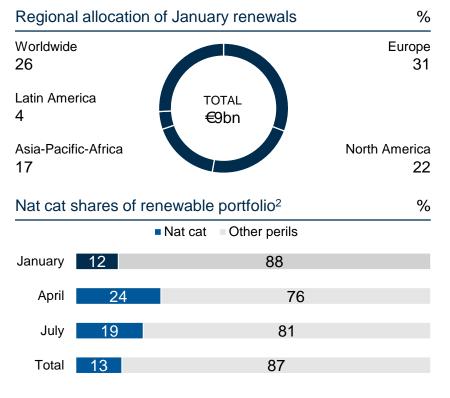
Combined ratio % Basic losses Major losses Expense ratio 7.2 92.7 53.0 32.5 2014 99.8 89.7 50.8 6.2 32.6 2015 91.2 <sup>92.3</sup> <sup>93.3</sup> <sup>94.5</sup> 7.2 55.2 31.3 9M 2016 93.7 55.3 6.6 30.6 92.5 Q3 2016 92.5 88.4 Major Reserve Normalised Nat cat Man-made releases1 combined ratio<sup>2</sup> losses 7.2 9M 2016 3.7 3.5 -5.499.9 78.6 6.6 3.4 3.1 Q3 2016 -5.098.9 Ø Annual Q4 Q1 Q1 Q3 ~12.0 ~8.0 Q2 Q3 Q4 Q2 ~4.0 expectation 2014 2015 2015 2015 2015 2016 2016 2016

1 Basic losses; in Q3 mainly fire; no corresponding sliding-scale effects. 2 Based on 4%-pts. reserve releases.



## January renewals – Business up for renewal roughly half of total P-C book, regional focus on Europe





1 Gross premiums written. Economic view - not fully comparable with IFRS figures. 2 Total refers to total P-C book, incl. remaining business.



## January renewals – Cycle management reduction mitigated by Munich RE new business opportunities, further slow-down in price decline

#### January renewals 2017

%	100	-14.4	85.6	-2.7	12.2	95.1
€m	8,982	-1,297	7,685	-241	1,094	8,538
		Change in	premium		-4.9%	
		Thereof p	rice movement <sup>1</sup>		~ -0.5%	
		Thereof cl	nange in exposu	re for our share	-4.4%	Ļ
				_		
	Total renewable	Cancelled	Renewed	Decrease	New	Estimated
	from 1 January			on renewable	business	outcome

- Overall premium decline due to disciplined underwriting partly offset by new business opportunities
- Price change of -0.5% less pronounced compared with last year
- Continued pressure on XL business, while price decline for US nat cat lower than in the past
- Proportional business remains resilient

#### Overall portfolio profitability was maintained and remains above cost of capital

### Reinsurance Life 9M 2016 vs. 9M 2015

Munich	RE	

Gross premiums		€m	
9M 2015			7,653
Foreign exchange			-263
Divestments/investm		0	
Organic change		1.	-178
9M 2016			7,212

- Negative FX effects driven by Can\$ and GBP
- Negative organic change due to cancellation/ modification of large capital-relief deals, ...
- ... partly offset by growth in Asia, Canada, UK

Major result drivers			
	9M 2016	9M 2015	
Technical result	318	247	71
Non-technical result	66	88	-21
thereof investment result	469	628	-159
Other	-16	-163	147
Net result	369	172	197
	Q3 2016	Q2 2016	
Technical result	146	103	43
Non-technical result	20	119	-99
thereof investment result	164	240	-76
Other	-31	-7	-24
Net result	134	214	-80

#### **Technical result**

- Q3: Strong contribution mainly from Asia, Canada and Europe supported by one-off effects
- Well on track to achieve annual target of ~€400m

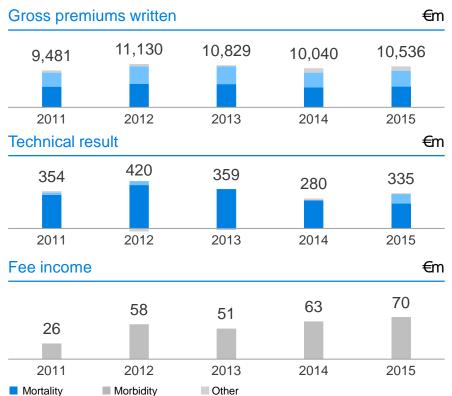
#### Investment result

- 9M: Lower interest income from deposits retained on assumed reinsurance due to cancellation/modification of large capitalrelief deals
- 9M: Lower disposal gains
- Q3: Return on investment 2.7%

#### Other

- 9M: FX result of €84m vs. –€79m, high contribution from GBP
- 9M: Tax rate of 16.7% vs. 24.0%

# Solid IFRS performance notwithstanding random large claims



#### Main effects 2015

- Positive currency effects
- Largely flat development of traditional business

- Adjusted for two single large outlier claims in North America, ...
- ... performance in line with or slightly better than expectations

- Parts of financially-motivated reinsurance recognised outside the technical result
- Performance fully in line with expectations



# Benefit from growth opportunities and closing open issues



#### Canada

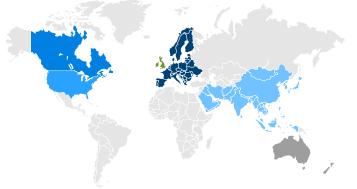
- Pressure on volumes and margins increased significantly in 2015 – new business generation has dropped
- IFRS profits continue to be strong

#### USA

- High new business value with attractive risk-return profile
- Legacy block will continue to affect IFRS profits

#### UK

- Continued pressure on volumes/margins in protection business
- Successful proposition for financially motivated reinsurance and longevity
- Results from in-force portfolio continue to be healthy



#### **Continental Europe**

- Challenging market environment limits value generation
- Pleasing IFRS profit from healthy portfolio

Strong new business generation against pressure from competition and challenging economic environment

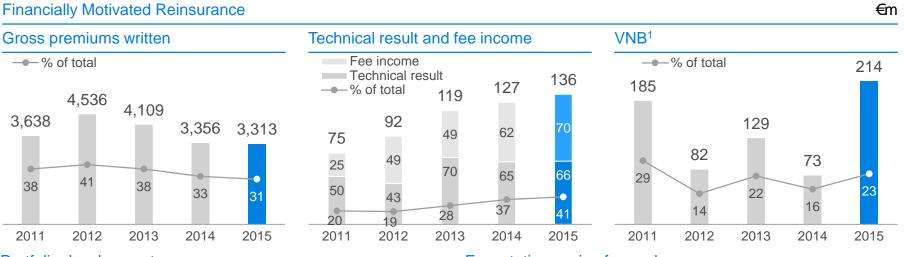
#### Asia

- Very satisfactory development of new business and in-force portfolio
- Product drift trend to become challenging

#### Australia

- Disability business performing in line with expectations
- Transfer into new business proposition underway

## Financially Motivated Reinsurance – Well-established value proposition, strong demand prevails



#### Portfolio development

- Increasing result contribution an indicator of overall success
- Geographically well-diversified
- 2015 new business, particularly from Asia and Europe
- First Solvency II solutions executed

#### Expectations going forward

- Demand will remain high
- Number, size and type of transactions are difficult to predict and will vary on an annual basis



## Asia – Sustained growth across all major markets

Asia														€n
Gross p	premium	s written			Technic	Technical result and fee income		VNB <sup>1</sup>						
<b></b> %	of total 1,178				Τe	ee income echnical re of total			86		% of total			198
959		872	871	910	35 0 35	55 1 54	62 4 58	59 5 54	<u>9</u> 77	56	81	97	93	
10	11	8	9	9	35	12	15	19	26	9	14	17	21	21
2011	2012	2013	2014	2015	2011	2012	2013	2014	2015	2011	2012	2013	2014	2015
Portfolic	o develor	oment					E	xpectation	ons going	g forward				

- Sustained growth path
- Premium volatility from financially-motivated deals
- Tailor-made market and client strategies
- Growth supported by broad range of services
- 2015 exceptional year in terms of IFRS profit and new business generation

#### Expectations going forward

- Insurance and reinsurance markets will continue their growth path flattening growth rates to be expected
- Demand for solvency relief and financing solutions remains high
- Increase in competition and pressure on prices, but underwriting discipline remains high

Munich RE 🗮

## Longevity – Book developed carefully in line with risk appetite



€m

Longevity Gross premiums written Technical result and fee income Strategic proposition Longevity considered to be primarily a risk management tool to balance mortality 2,788 portfolio and to stabilise earnings 381 Uncertainty around future mortality trend 312 requires prudent approach in pricing and 1.366 valuation 1,040 982 887 120 53 3 21 2011 2012 2013 2014 2015 2011 2012 2013 2014 2015

### Portfolio development

- Portfolio comprises longevity swaps in UK
- No significant VNB expectation
- 2014: Participation in the large AVIVA scheme
- 2015: One further transaction concluded with a leading specialist life insurer

#### Expectations going forward

- Evolutionary development of portfolio within clearly defined risk tolerance
- Careful investigation of expansion into other markets
- High market potential but also significant pressure on prices
- Continuation of highly selective approach in choosing transactions on which to quote

## Asset protection – Comprehensive solutions to complex financial risks

Asset protection



#### **Product portfolio**

- Solutions to Basel III and Solvency II needs
- Resolution of accounting asymmetry
- ALM solutions for smaller players
- Development of modern savings products

#### Strategic proposition

- Legal, regulatory and structuring expertise
- Fully functional hedging platform

#### Portfolio development

- Portfolio continues to gain significance
- Growing contribution to new business value
- Previous years positively affected by terminations in the portfolio that caused an earlier-than-expected margin release

#### Expectations going forward

- Existing book dominated by Asia/Japan
- Current opportunities mainly in Europe and Asia/Japan
- Exploration of business potential in North America

€m

## New business profitability





- Very good new business profitability relative to economic risk capital (RoRaC spread)
- Relatively higher profitability drives the increased RoRaC spread (level of economic risk capital comparable to 2014)
- New business profitability relative to total investment in new business (IRR spread) influenced by increased level of supervisory capital (impact of Solvency II) and tailormade re-insurance solutions (FinMoRe)
- Increased share of FinMoRe business (usually of shorter duration) decreases payback period of 2015 new business

Backup: ERGO

## ERGO – Overview

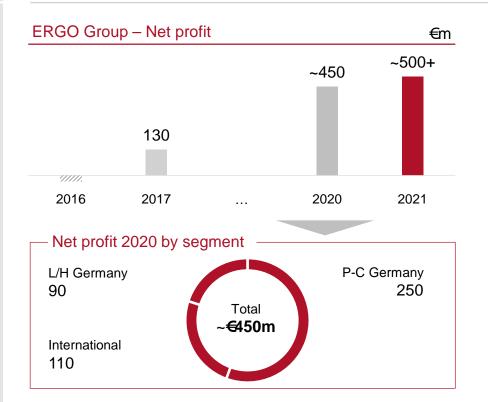


		2015	2014	2013	2012	2011
Gross written premiums	€bn	16.5	16.7	16.7	17.1	17.4
Investments	€bn	131.0	135.5	126.7	124.9	117.0
Net technical provisions	€bn	130.3	132.4	125.1	122.8	116.1
Combined ratio p-c Germany	%	97.9	95.3	96.7	98.0	95.5
Combined ratio p-c International	%	104.7	97.3	98.7	99.8	104.5

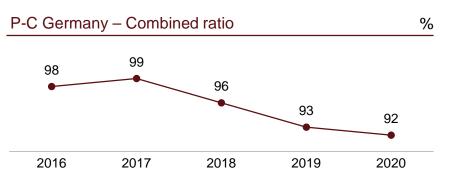
Premium split by region – 2015		%	Distribution channels – New bus	iness 2015 %
Rest of World 14		Germany 73	Banks/other 6	Tied agents 56
Belgium 2	TOTAL <b>€16.5bn</b>		Direct 18	
UК 3		Poland 8	Broker 20	

## ERGO Strategy Programme – Financial impact









1 After policyholder participation and taxes.

### ERGO Life and Health Germany 9M 2016 vs. 9M 2015

Gross premiums w	ritten €m
9M 2015	7,025
Foreign exchange	-2
Divestments/investmen	nts 0
Organic change	-200
9M 2016	6,823

#### • Life: –€177m

Decline in regular premiums due to ordinary attrition while single premiums suffered from lower product sales

#### Health: —€23m Positive development in supplementary insurance but overcompensated by discontinuation of a large contract; comprehensive cover flat

Major result drivers	5		
	9M 2016	9M 2015	
Technical result	207	263	-55
Non-technical result	331	51	280
thereof investment result	3,698	3,141	557
Other	-519	-181	-339
Net result	19	133	-113
	Q3 _2016	Q2 2016	
Technical result	5	119	-114
Non-technical result	10	227	-217
thereof investment result	895	1,538	-642
Other	-64	-291	227
Net result	-49	55	-104

#### Technical result

 Q3: Decrease mainly due to usual assessment of interest-rate assumptions in Life –€97m/–€66m (gross<sup>1</sup>/net)

#### Investment result

- 9M: Significant increase of derivative result, partly reversed in Q3
- 9M: Release of unrealised gains for ZZR, mainly in H1 2016
- 9M: Lower regular income
- Q3: Return on investment 2.9%

#### Other

- 9M: Restructuring expenses of €218m/ €40m (gross/net) in Q2; negative one-off effect from accounting difference between IFRS and local GAAP regarding pension liabilities and extraordinary tax charges (Health) in Q1
- 9M: Tax rate of 86.0% vs. 25.6%

€m

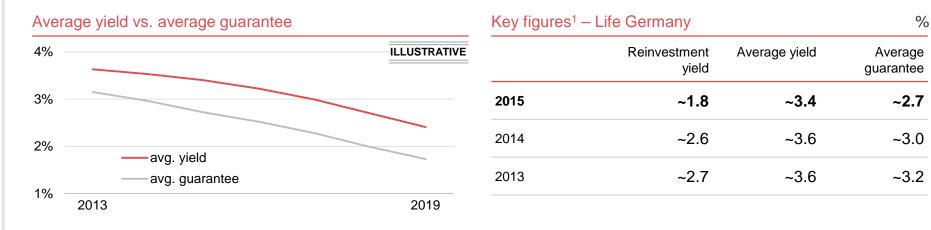
## ERGO Life Germany – Separation of traditional back book and new business strengthens focus



Life insurance legal ent	New business		
ERGO Leben	Victoria Leben	ERGO Pensionskasse	ERGO VORSORGE
Traditional back book			New business promoting
New business from port	capital-light products		
		Special case of underwriting agreements	
<ul> <li>Focus on administration</li> </ul>	um volume and more than five million management advantages, such as onflicts on ng	n policies	<ul> <li>Risk carrier for new business</li> <li>Concentration on capital-market- related and biometric products</li> <li>More efficient set-up and bundling of competencies in capital-market related products</li> </ul>

## Declined reinvestment yield still with low impact on average yield ...

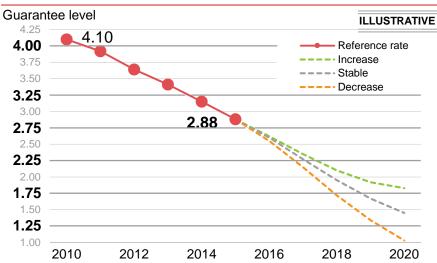




#### Average yield vs. average guarantee

- Long duration of fixed-income portfolio keeps average yield at relatively high level
- Asset and liability duration difference far below one year
- Non-interest-bearing ZZR reduces average guarantee 2015 by ~50bp
- Low bonus rates: 2.7% vs. market average 2.85% (3.16% in previous year)

## ... while measures to support guarantees have financial impact in 2015



#### ZZR – Low interest-rate reserve

- Local GAAP reserve against low interest rates
- Expected accumulated ZZR in 2016: ~€3.5bn
- Partly financed through unrealised gains positive impact on IFRS earnings when realised
- Effect on IFRS net income in 2015: €71m

#### Interest-rate hedging programme

- Started in 2005 Protection against reinvestment risk via receiver swaptions
- Continuously buys additional slices, depending on capital market and portfolio development
- Effect on IFRS net income in 2015: –€11m

Key financials <sup>2</sup> – €bn	Free RfB	Terminal bonus fund	Unrealised gains	Accumulate ZZR
2015	0.9	1.6	12.2	2.5
2014	0.9	1.7	14.6	1.5
2013	0.8	2.0	5.9	0.8

%

#### Average yield vs. average guarantee

1 Based on interest-rate scenarios. 2 German GAAP figures.

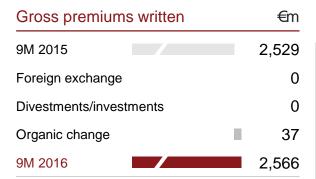
Munich RE

### ERGO Life New business (statutory premiums)



Germany (including direct business)	H1 2016	H1 2015	▲ abs.	▲ %
New business	408	515	-107	-20.7
Regular premiums	104	108	-5	-4.4
Single premiums	305	407	-102	-25.1
Annual premium equivalent (APE) <sup>1</sup>	134	149	-15	-10.1
International				
New business	365	494	-128	-26.0
Regular premiums	69	65	5	7.1
Single premiums	296	429	-133	-31.0
Annual premium equivalent (APE) <sup>1</sup>	99	108	-9	-8.1

### ERGO Property-casualty Germany (1) 9M 2016 vs. 9M 2015



 Positive development in almost all lines of business

Major result drivers			
	9M 2016	9M 2015	
Technical result	124	141	-17
Non-technical result	-37	106	-144
thereof investment result	31	171	-140
Other	_169	13	-156
Net result	-83	234	_317
	Q3 2016	Q2 2016	
Technical result	40	69	-29
Non-technical result	8	2	6
thereof investment result	23	23	0
Other	39	-139	101
Net result	10	-68	77

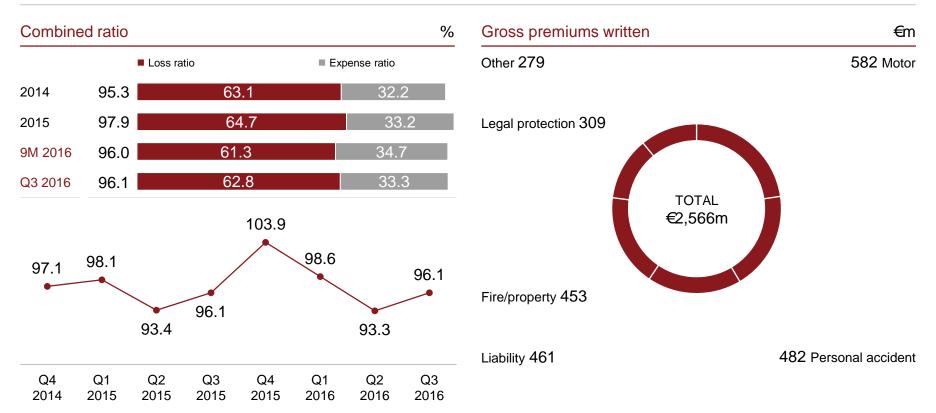


		€m
9M		Technical result
2015		• 9M: Combined ratio up slightly to 96.0%
141	-17	<ul> <li>9M: Expansion of title insurance caused higher expense ratio (+2.0%-pts.) as well</li> </ul>
106	-144	as lower loss ratio (-1.9%-pts.)
171	-140	<ul> <li>9M: Major losses slightly lower compared to previous year</li> </ul>
13	-156	<ul> <li>Q3: Losses esp. in fire and liability</li> </ul>
234	-317	Investment result
		9M: Lower disposal gains
Q2 2016		<ul> <li>Q3: Lower equity impairments and losses on derivatives</li> </ul>
		Q3: Return on investment: 1.4%
69	-29	Other
2	6	<ul> <li>9M: Restructuring expenses of €173m/</li> </ul>
23	0	€116m (gross/net) in Q2; negative one-off effect from accounting difference between

- IFRS and local GAAP regarding pension liabilities in Q1
- 9M: Tax rate of 26.6% vs. -21.4%

## ERGO Property-casualty Germany (2)





## ERGO International (1) 9M 2016 vs. 9M 2015

Gross premiums written		€m
9M 2015		2,936
Foreign exchange		-96
Divestments/investments	1	-47
Organic change	1.	-46
9M 2016		2,747

Negative FX effects driven by PLN and TRY Life: –€247m

- Poland: Lower sales of bancassurance products
- Belgium: Decrease mainly due to reclassification of premiums
- Disposal of ERGO Italy (€77m)

P-C: +€58m

- Increase mainly driven by price increases in motor business in Poland and Baltic states
- First-time consolidation of ATE (€19m)

Major result drivers			
	9M 2016	9M 2015	
Technical result	-33	49	-82
Non-technical result	125	79	46
thereof investment result	396	390	6
Other	-140	-78	-62
Net result	-47	50	-98
	Q3 2016	Q2 2016	
Technical result	-23	-35	12
Non-technical result	41	63	-23
thereof investment result	103	166	-62
Other	-29	-49	20
Net result	-12	-21	9

	<mark>Technical result</mark> Life: –€119m (9M)
-82	<ul> <li>Usual assessment of interest-rate</li> </ul>
46	assumptions in Belgium in Q3: –€32m/–€22m (gross/net)
6	<ul> <li>Sale of ERGO Italy</li> </ul>
62 98	<ul> <li>P-C: +€37m (9M)</li> <li>UK: Lower claims expenses</li> <li>Turkey: Better loss development in motor TPL</li> </ul>
▲ 12	<ul> <li>Investment result</li> <li>Q3: Decline in net balance of derivatives</li> <li>Q3: Return on investment 2.9%</li> </ul>
-23	Other
-62	<ul> <li>9M: Restructuring expenses of €10m/€7m (gross/net) in Q2; payments for an</li> </ul>

exclusivity agreement in Q1

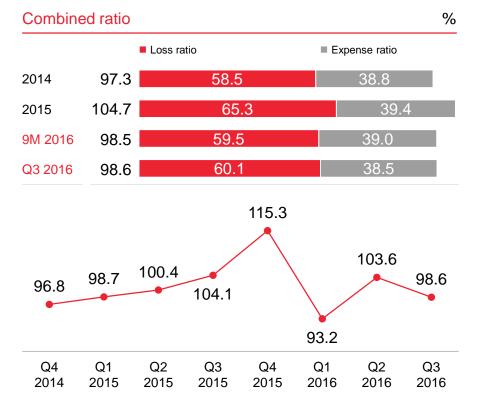
• 9M: Tax rate of 3.4% vs. 35.4%

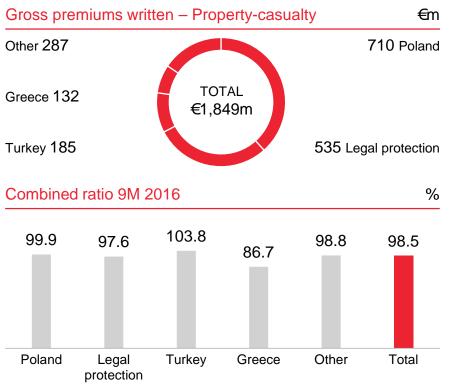


€m

## **ERGO** International (2)







## Backup: ERGO International

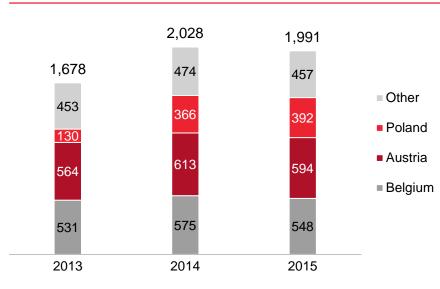
## ERGO International (3)

Poland						Turkey					€m
GWP <sup>1</sup>		€m	Combined	d ratio	%	GWP <sup>1</sup>		€m	Combine	d ratio	%
873 47 53 2013	816 <sup>Mo</sup> 43 57 2014	n-motor % tor %884 47 53 2015	96.0 2013	97.7 2014	102.4 • 2015	225 43 58 2013		n-motor % tor % 296 <u>36</u> 64 2015	108.5 • 2013	108.4 2014	154.9 2015
Legal pro	tection					Greece					%
GWP		€m	Combined	d ratio	%	GWP <sup>1</sup>		€m	Combine	d ratio	%
649	652	706	97.7	94.0	100.1	133 43 57		n-motor % otor % 140 49 51	81.3	68.7	69.7
2013	2014	2015	2013	2014	2015	2013	2014	2015	2013	2014	2015



# International life – Focus on new product strategies and in-force management





## Green-/brownfields, M&A and joint ventures (JV)

- China (50% participation) Business development in line with plan
- India (49% participation) First step of regulatory approval (R1) of JV granted in Q4 2015

- New business Promoting capital-light products
  - Belgium

%

New product strategy with focus on capital-light products under development

- Austria Introduction of new hybrid product in Q1 2016
- Poland

Already strong footprint with unit-linked products sold via bancassurance channel

### Back-book - Stringent portfolio management

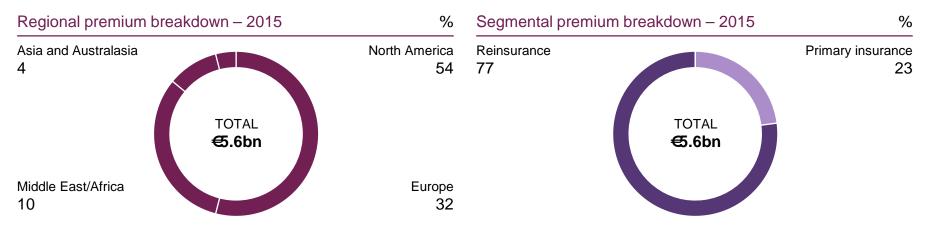
- Sale of ERGO Italy Exposure reduction to traditional life business in non-core region
- In-force management Ongoing efforts to reduce risk and enhance shareholder returns



## Munich Health – Overview



		2015	2014	2013	2012	2011
Gross written premiums	€bn	5.6	5.3	6.6	6.7	6.0
Investments	€bn	4.1	3.9	3.6	4.2	4.6
Net technical provisions	€bn	2.8	2.5	2.2	2.2	2.4
Combined ratio	%	99.9	98.8	98.3	100.2	99.5



## Munich Health 9M 2016 vs. 9M 2015

Munich	RE	Ţ

€m

Gross premiums w	itten €m
9M 2015	4,260
Foreign exchange	-101
Divestments/investmer	its 0
Organic change	-458
9M 2016	3,701

- Negative FX effects mainly due to Can\$
- Organic decrease mainly driven by reduced share and restructuring of one large treaty, and in US termination of poorly performing accounts...
- ... partly offset by growth in China, Middle East and Spain

Major result drivers			
	9M 2016	9M 2015	
Technical result	32	33	-1
Non-technical result	59	53	6
thereof investment result	81	92	-11
Other	-15	-2	-13
Net result	76	84	-8
	Q3 2016	Q2 2016	
Technical result	52	-16	68
Non-technical result	12	24	-12
thereof investment result	23	29	-6
Other	-19	8	-27
Net result	44	16	28

#### **Technical result**

- 9M: Overall combined ratio at 99.3% (-0.2%)
  - Reinsurance: 100.9% (+0.1%)
     Adverse impact of US business, albeit improved result in Q3
  - Primary insurance: 92.6% (-0.1%) Strong contribution from Spain
- Q3: Improvement driven by US reinsurance business and seasonal effects in Spain and Belgium

#### Investment result

- 9M: Stable regular income, lower disposal gains
- Q3: Return on investment 2.6%

Other

9M: Tax rate 18.7% vs. 1.3%

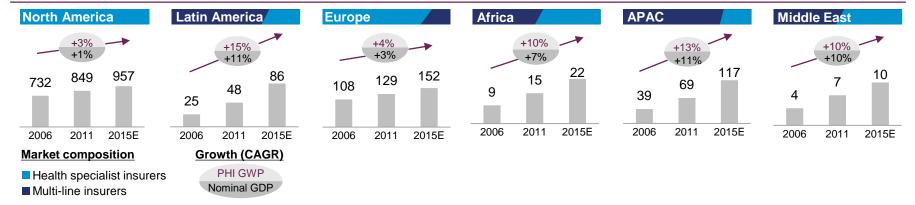


# Private health insurance growing worldwide above GDP, with digitalisation becoming an increasing driver

#### Growth drivers



### Private health insurance - Volume per region (GWP)



## Investment result

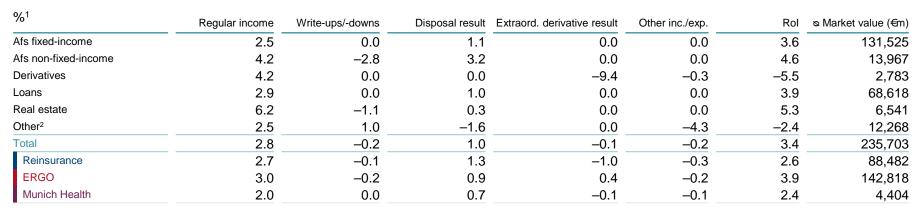


Investment result								€m
	Q2 2016	Return <sup>1</sup>	Q3 2016	Return <sup>1</sup>	9M 2016	Return <sup>1</sup>	9M 2015	Return <sup>1</sup>
Regular income	1,823	3.1%	1,550	2.6%	5,001	2.8%	5,588	3.1%
Write-ups/write-downs	-22	-0.0%	-43	-0.1%	-284	-0.2%	-653	-0.4%
Disposal gains/losses	910	1.5%	696	1.2%	1,823	1.0%	2,321	1.3%
Derivatives <sup>2</sup>	176	0.3%	-446	-0.7%	-196	-0.1%	-999	-0.6%
Other income/expenses	-137	-0.2%	-137	-0.2%	-402	-0.2%	-385	-0.2%
Investment result	2,750	4.7%	1,619	2.7%	5,942	3.4%	5,872	3.3%
Total return		8.9%		5.8%		9.3%		0.7%

3-month reinvestme	ent yield	Q3 2016	Write-ups/ write-downs	Disposal gains/losses	Derivatives	<u>9M 2016</u>	Write-ups/ write-downs	Disposal gains/losses	Derivatives
Q3 2016	1.8%	Fixed income <sup>3</sup>	15	506	-50	Fixed income <sup>3</sup>	-25	1,620	356
Q2 2016	1.6%	Equities	-41	190	-421	Equities	-296	334	-538
QZ 2010	1.070	Commodities/Inflation			7	Commodities/Inflation	78		-14
Q1 2016	1.9%	Other	-17	-1	18	Other	-41	-131	1

1 Annualised return on quarterly weighted investments (market values) in %. 2 Result from derivatives without regular income and other income/expenses. 3 Thereof interest-rate hedging ERGO: Q3 €48m/€7m (gross/net); 9M €494m/€59m (gross/net).

## Return on investment by asset class and segment 9M 2016

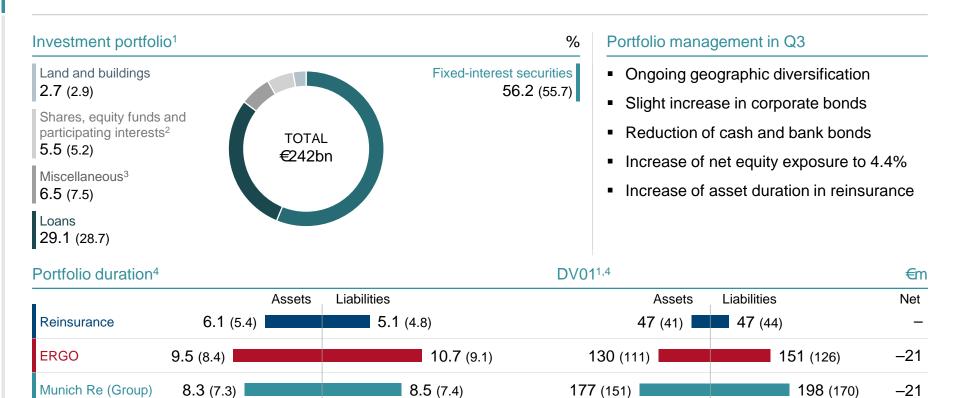


Return on investment Average 3.4% 4.7% 4.3% 4.1% 3.7% 3.4% 3.4% 3.0% 3.0% 2.9% 2.7% 2.7% 2.6% Q4 2013 Q1 2014 Q2 2014 Q3 2014 Q4 2014 Q1 2015 Q2 2015 Q3 2015 Q4 2015 Q1 2016 Q2 2016 Q3 2016

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## Investment portfolio

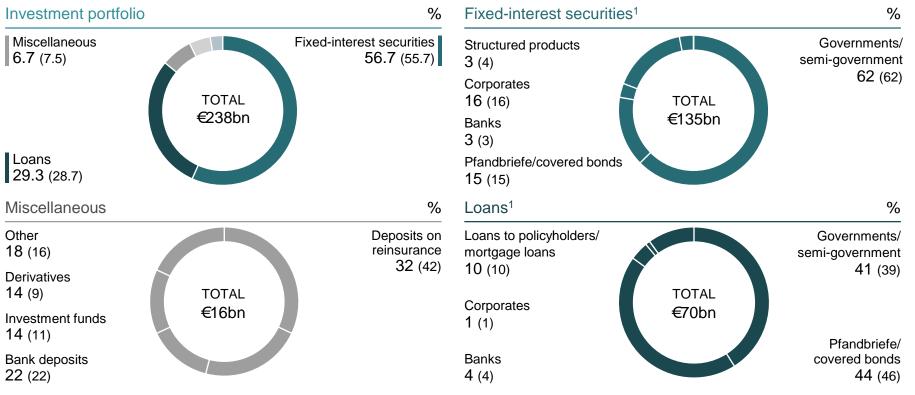




1 Fair values as at 30.9.2016 (31.12.2015). 2 Net of hedges: 4.4% (4.8%). 3 Deposits retained on assumed reinsurance, deposits with banks, investment funds (excl. equities), derivatives and investments in renewable energies and gold. 4 Market value change due to a parallel downward shift in yield curve by one basis point-considering the portfolio size of assets and liabilities (pre-tax). Negative net DV01 means rising interest rates are beneficial.

## Investment portfolio Fixed-interest securities and miscellaneous





## Fixed-income portfolio Total



Rating structure		%	Regional breakdown				%
<bb and="" nr<="" th=""><th></th><th>AAA</th><th></th><th>Without</th><th>With</th><th>Tota</th><th>al</th></bb>		AAA		Without	With	Tota	al
6 (6)		42 (42)		Participation	participation	30.6.2016	31.12.2015
BB			Germany	4.3	24.8	29.1	29.2
2 (2)	TOTAL		US	14.6	1.5	16.2	16.4
BBB	€214.1bn		France	2.2	5.3	7.5	7.3
12 (12)			UK	3.3	2.3	5.6	6.1
Α		AA	Canada	3.8	0.4	4.2	3.8
10 (10)		27 (27)	Netherlands	1.1	3.0	4.1	4.0
		<b>_</b> ; (2;)	Supranationals	0.7	3.2	4.0	3.4
Maturity structure		%	Spain	1.2	1.7	2.9	3.3
		0.1.0000	Italy	1.2	1.4	2.6	2.4
n.a. 2 (2)		0–1 years 10 (9)	Australia	1.9	0.6	2.4	2.5
2 (2)			Belgium	0.8	1.5	2.3	1.8
	AVERAGE	1–3 years	Ireland	0.6	1.5	2.0	2.5
>10 years	MATURITY	12 (13)	Austria	0.3	1.7	2.0	2.1
36 (35)	9.1 years	3–5 years	Norway	0.3	1.2	1.5	1.6
		13 (14)	Sweden	0.2	1.3	1.5	1.6
7–10 years		5–7 years	Other	7.1	5.0	12.1	11.9
16 (16)		<b>11</b> (11)	Total	43.6	56.4	100.0	100.0

## Fixed-income portfolio Governments/semi-government



%

3.1

4.9

3.1 3.5 2.9 2.6

1.9 1.7 1.7 1.9 11.0 100.0

31.12.2015 27.4 18.9 6.6 5.2 3.5

Rating structure		%	Regional breakd	lown			
BB		AAA		Without	With	Tota	
2 (2)		45 (46)		Participation	participation	30.6.2016	3
BBB			Germany	3.1	24.1	27.3	
10 (10)	TOTAL		US	17.0	1.1	18.1	
A	€113.3bn		Supranationals	1.3	6.1	7.5	
7 (8)			Canada	5.4	0.2	5.7	
AA			France	1.6	2.2	3.8	
36 (35)			Belgium	1.2	2.7	3.8	
			UK	3.7	0.0	3.7	
Maturity structure		%	Italy	1.5	1.9	3.4	
>10 years		0–1 years	Spain	1.2	1.9	3.1	
46 (44)		9 (9)	Australia	2.7	0.0	2.7	
			Austria	0.4	2.2	2.7	
	AVERAGE	1–3 years	Poland	1.4	0.6	2.0	
	MATURITY	11 (12)	Netherlands	0.7	1.3	2.0	
	11.0 years	3–5 years	Finland	0.2	1.6	1.8	
		11 (13)	Ireland	0.3	1.5	1.8	
7–10 years		5–7 years	Other	7.6	3.0	10.6	
14 (14)		9 (8)	Total	49.4	50.6	100.0	

## Fixed-income portfolio Corporate bonds (excluding bank bonds)



#### % Rating structure NR AAA 1 (1) 1 (1) <BB 2 (2) TOTAL AA €22.2bn 6 (7) BB 10 (11) BBB 33 (30) 48 (48) Maturity structure % >10 years 0-1 years 18 (16) 7 (6) AVERAGE 7–10 years 1–3 years MATURITY 15 (15) 21 (23) 6.7 years 5-7 years 3–5 years 23 (22) 17 (18)

А

Regional breakdown		%
	30.6.2016	31.12.2015
Utilities	19.2	21.1
Industrial goods and services	12.5	12.7
Oil and gas	11.8	10.9
Telecommunications	8.4	8.5
Financial services	7.3	7.9
Healthcare	6.1	6.7
Technology	5.5	3.5
Food and beverages	5.0	4.1
Retail	4.4	3.9
Media	4.3	4.5
Automobiles	3.4	2.8
Basic resources	3.3	3.5
Personal and household goods	3.0	2.7
Other	5.7	7.2

## Fixed-income portfolio Bank bonds



1 Classified as Tier 1 and upper Tier 2 capital for solvency purposes. 2 Classified as lower Tier 2 and Tier 3 capital for solvency purposes. Approximation – not fully comparable with IFRS figures. Fair values as at 30.6.2016 (31.12.2015).



## On- and off-balance-sheet reserves (gross)



€m	31.12.2014	31.12.2015	31.3.2016	30.6.2016	30.9.2016
Market value of investments	235,849	230,529	232,941	237,519	241,824
Total reserves	31,470	25,969	32,025	34,530	36,401
On-balance-sheet reserves					
Fixed-interest securities	11,967	7,886	11,494	13,685	14,077
Non-fixed-interest securities	2,270	2,446	2,239	1,966	2,357
Other on-balance-sheet reserves <sup>1</sup>	311	201	179	164	182
Subtotal	14,548	10,533	13,911	15,816	16,617
Off-balance-sheet reserves					
Real estate <sup>2</sup>	2,006	2,273	2,184	2,176	2,190
Loans and investments (held to maturity)	14,400	12,610	15,350	15,926	16,991
Associates	516	553	579	613	603
Subtotal	16,922	15,436	18,114	18,714	19,784
Reserve ratio	13.3%	11.3%	13.7%	14.5%	15.1%

## On-balance-sheet reserves



On-balance-sheet reserves			€m
	30.9.2016		Change Q3
Investments afs	16,434	/	783
Valuation at equity	75		8
Unconsolidated affiliated enterprises	85		11
Cash-flow hedging	22		-1
Total on-balance-sheet reserves (gross)	16,617	/	801
Provision for deferred premium refunds	-7,566		-456
Deferred tax	-2,350		-45
Minority interests	–17		–1
Consolidation and currency effects	-205	1	13
Shareholders' stake	6,479		312

## Off-balance-sheet reserves



Off-balance-sheet reserves			€m
	30.9.2016	Char	nge Q3
Real estate <sup>1</sup>	2,190		15
Loans	16,991		1,065
Associates	603		-9
Total off-balance-sheet reserves (gross)	19,784		1,070
Provision for deferred premium refunds	-14,870		-899
Deferred tax	-1,503		-60
Minority interests	-1		0
Shareholders' stake	3,410		111

## Sensitivities to interest rates, spreads and equity markets



Sensitivity to risk-free interest rates – Basis points	-50	-25	+50	+100
Change in gross market value (€on)	+9.6	+4.7	-8.8	-16.9
Change in on-balance-sheet reserves, net (€bn) <sup>1</sup>	+2.1	+1.0	-1.9	-3.7
Change in off-balance-sheet reserves, net (€bn) <sup>1</sup>	+0.4	+0.2	-0.4	-0.8
P&L impact (€bn) <sup>1</sup>	+0.1	+0.0	-0.1	-0.1
Sensitivity to spreads <sup>2</sup> (change in basis points)			+50	+100
Change in gross market value (€on)			-6.5	-12.3
Change in on-balance-sheet reserves, net (€bn) <sup>1</sup>			-1.2	-2.3
Change in off-balance-sheet reserves, net (€bn) <sup>1</sup>			-0.3	-0.6
P&L impact (€bn) <sup>1</sup>			-0.0	-0.1
Sensitivity to equity and commodity markets <sup>3</sup>	-30%	-10%	+10%	+30%
EURO STOXX 50 (3,002 as at 30.9.2016)	2,101	2,702	3,302	3,903
Change in gross market value (€on)	-4.3	-1.4	+1.4	+4.5
Change in on-balance-sheet reserves, net (€bn) <sup>1</sup>	-0.9	-0.4	+0.8	+2.5
Change in off-balance-sheet reserves, net (€bn) <sup>1</sup>	-0.8	-0.3	+0.3	+0.8
P&L impact (€bn) <sup>1</sup>	-1.7	-0.5	+0.0	+0.2

1 Rough calculation with limited reliability assuming unchanged portfolio as at 30.9.2016. After rough estimation of policyholder participation and deferred tax; linearity of relations cannot be assumed. Approximation – not fully comparable with IFRS figures. 2 Sensitivities to changes of spreads are calculated for every category of fixed-interest securities, except government securities with AAA ratings. 3 Worst-case scenario assumed including commodities: impairment as soon as market value is below acquisition cost. Approximation – not fully comparable with IFRS figures.

## Development of shares in circulation



Shares (millions)	31.12. 2015	own shares in	Retirement of own shares in 9M 2016	30.9. 2016	Weighted a (millions)	verage num	ber of shares	s in circulatio	on
Shares in circulation	162.8	-4.4	-	158.4	172.2	165.9	162.0	161.0	159.3
Own shares held	4.1	+4.4	-5.8	2.6					
Total	166.8	_	-5.8	161.1					
					2014	2015	Q1 2016	Q2 2016	Q3 2016

## Mission of Investor & Rating Agency Relations



#### Responsibility

Munich Re's communication with the capital market / financial community

#### External communication

#### Increase transparency

on financial performance, strategy and expectations about future perspectives within the principles of a credible, accurate, complete and timely provision of relevant information

### Target

Achieving a fair valuation and optimising the cost of capital by increasing information efficiency between Munich Re and the financial community while developing a relationship of trust with our investor base

#### Main objective

Active communication to support a fair capital-market valuation of Munich Re shares and outstanding bonds

#### Internal communication

#### Transmission

of investors' and creditors' demands, and the capital markets' perception of Munich Re, to management and staff

### Target

Support management in the setting of ambitious targets as well as in the execution of a value-based and shareholderoriented strategy

We aim to enhancing Munich Re's visibility and attractiveness in the international financial community

## **Financial calendar**



2017	
15 March	Balance sheet press conference for 2016 financial statements Analysts' conference in Munich with videocast
26 April	Annual General Meeting 2017, ICM – International Congress Centre Munich
9 May	Quarterly statement as at 31 March 2017 <sup>1</sup>
9 August	Half-year financial report as at 30 June 2017
9 November	Quarterly statement as at 30 September 2017 <sup>1</sup>

1 Munich Re is adjusting its financial reporting format following an amendment to the regulations of the Frankfurt stock exchange. The half-year financial reports and annual reports will remain unchanged. However, instead of issuing quarterly reports for the first and third quarters, we will release reports in the new form of quarterly statements from 2016 onwards. We will continue to present and explain the figures for each quarter in telephone conferences for analysts and journalists, and in press releases.

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This presentation contains forward-looking statements that are based on current assumptions and forecasts of the management of Munich Re. Known and unknown risks, uncertainties and other factors could lead to material differences between the forward-looking statements given here and the actual development, in particular the results, financial situation and performance of our Company. The Company assumes no liability to update these forward-looking statements or to make them conform to future events or developments.