INVESTOR BRIEFING
SPECIAL AND FINANCIAL RISKS (SFR)

London, 11 October 2012
## Agenda

<table>
<thead>
<tr>
<th>Topic</th>
<th>Presenter</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>General overview of SFR</td>
<td>Thomas Blunck</td>
<td>3</td>
</tr>
<tr>
<td>Corporate Insurance Partner</td>
<td>August Pröbstl</td>
<td>14</td>
</tr>
<tr>
<td>Financial Risks</td>
<td>Thomas Lallinger</td>
<td>26</td>
</tr>
<tr>
<td>Aviation/Space</td>
<td>Guido Funke</td>
<td>39</td>
</tr>
<tr>
<td>Agriculture</td>
<td>Karl Murr</td>
<td>52</td>
</tr>
<tr>
<td>Backup</td>
<td></td>
<td>64</td>
</tr>
</tbody>
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**General overview**

The Special and Financial Risks Division focuses on particular business models and fosters innovation.

### Non-life business – Strategic alignment¹

<table>
<thead>
<tr>
<th>Region</th>
<th>Strategic alignment</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global Clients/ North America</td>
<td></td>
<td>34.1</td>
</tr>
<tr>
<td>Germany, Asia-Pacific, Australia</td>
<td></td>
<td>25.0</td>
</tr>
<tr>
<td>Europe, Latin America</td>
<td></td>
<td>22.3</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td><strong>€16.9bn</strong></td>
</tr>
</tbody>
</table>

### Special and Financial Risks (SFR)

1. **Strategic rationale**
   - Direct business with large (corporate) risks
   - Niche-specific strategies
   - Innovative primary insurance products/systems
   - Driven by monoline buying pattern of the client
   - Worldwide relevance and responsibility

2. **Synergies with asset management**
   - Investments in renewable energies/infrastructure
   - Steering of credit risks across both sides of the balance sheet
   - Risk trading unit: centre of competence for ILS²

### Regional units

- Solutions/services for regional composite insurers in non-life
- Pooling of know-how in regional markets

### Global clients

- Serving major international insurance groups/Lloyd’s syndicates
- Pooling of know-how for lines linked to composite insurers

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¹ Gross written premiums as at 31.12.2011 based on annual report.
² Insurance-linked securities, e.g., catastrophe bonds.
Four business units within SFR providing widespread (re)insurance solutions for complex and innovative risks

**Agriculture**
- Wide range of coverage for crop, livestock, greenhouses and forestry plantations
- Crop solutions based on public-private partnerships

**Corporate Insurance Partner**
- Providing solutions to large international corporations in broker-driven industrial insurance market covering property, energy, engineering, casualty, and special enterprise risks

**Aviation/Space**
- Covering trade credit and surety risks as well as specific enterprise risks which might endanger events/projects or financial stability of corporates (e.g., contingency, geothermal, weather)

**Financial Risk**
- 18%
- 25%
- 38%
- TOTAL GWP\(^1\) €2.8bn

\(^1\) As at 31.12.2011. Economic view. Difference to annual report figure (€3.1bn). Further details are explained in the backup.

Well-balanced business portfolio – Diversification across industries, regions and pricing cycles

**Illustrative**
- Agriculture
- Corporate Insurance Partner
- Aviation/Space
- Financial Risks

Portfolio of complementary profiles delivering attractive and stable results

### Strategic rationale

**Risk Solutions** embedded in all divisions including SFR – Total premium volume ~€3.6bn

<table>
<thead>
<tr>
<th>Division</th>
<th>Risk Solutions</th>
<th>Traditional non-life reinsurance</th>
<th>Total non-life</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global Clients/ North America</td>
<td>41%</td>
<td>59%</td>
<td>92%</td>
</tr>
<tr>
<td>Europe, Latin America</td>
<td>6%</td>
<td>92%</td>
<td>28%</td>
</tr>
<tr>
<td>Special and Financial Risks</td>
<td>21%</td>
<td>72%</td>
<td>72%</td>
</tr>
<tr>
<td>Total</td>
<td>21%</td>
<td>79%</td>
<td>79%</td>
</tr>
</tbody>
</table>

**Risk Solutions – Premium breakdown within reinsurance segments**

1. Based on gross written premium.

### Rationale

- Different channel or value chain repartition to access risks
- Optimum risk proximity and excellence secured
- Efficient set-up – no separate legal entity
- Detaching Munich Re from the cycle in non-life business

**Examples**

- HSB, AMIG, Lloyd Watkins
- Bell & Clements
- CIP, GAUM, part. Aviation/Space

### SFR product pipeline is one important driver of innovation for the whole reinsurance group

**Innovation within dedicated special units**

- **Special Enterprise Risks:** Photovoltaic performance, wind serial loss, concentrating solar power performance guarantee, cloud computing IT risk, intellectual property rights, pharma concepts, marine hire protection, etc.

**Examples**

**Primary insurance growth**

- Corporate Insurance Partner: Reputation risk, non-physical damage business interruption
- Financial Risks: Exploration risk, weather, MalariaNoMore
- Aviation/Space: System coverage for Other-3-billion, protection for space investments

**Maturity/standardisation**

- Transfer to reinsurance units, e.g. providing traditional capacity for photovoltaic risk covers

**Insurance product life cycle**

- **Premiums**
  - Research and development
  - Exclusive and direct marketing by Munich Re
  - Transfer to or cooperation with reinsurance clients

ILUSTRATIVE
Leveraging underwriting and investment expertise within prudent risk accumulation management

Munich Re risk assessment

- Research of natural hazards and climate change impacts
- World's largest database of natural hazards
- Extensive underwriting expertise (esp. engineering)

Business opportunities

- Growing demand for innovative risk transfer solutions enriched by asset management impulses
- Examples
  - Performance guarantees (wind, photovoltaic)
  - Exploration risk (geothermal energy)

- Fits well into Munich Re’s climate strategy
- Largely independent of business cycle
- Innovative solutions for complex new risks

Possible business volume by 2015 – Mid three-digit €m range

Asset management

- Significant expansion of renewable energy (RENT) and infrastructure investments making use of extensive underwriting expertise
- Examples
  - Photovoltaic
  - Onshore wind energy
  - Energy grid

- Long-term, predictable cashflow streams
- Largely independent of economic cycles
- Attractive yield in low-interest environment
- Providing portfolio diversification benefits

Targeted investment volume by 2015 – ~€2.5bn in RENT, ~€1.5bn in infrastructure

Holistic steering of credit risks for assets and liabilities enhancing consistency and improving swift execution

Munich Re’s enterprise risk management (ERM)

- Risk strategy
  - Clear limits define the framework for operational action

Risk cycle

- Comprehensive overview with special focus on main issues
- Based on right balance between flexibility and stability

Risk governance & management culture as solid base

ERM and “Global Head of Credit”

- Integrated Risk Management
  - Group-wide ERM for credit
  - Credit fully integrated into Group-wide ERM – Comprehensive limit, trigger and early-warning system

- Risk modelling for credit (assets/liab)
  - Consistent modelling of credit risk
  - Consistent stress scenarios (and correlation assumptions)
  - Top-down allocation of risk capital

- SFR/Asset-Liability-Management Business credit strategy
  - Global responsibility for credit risk
  - Definition of credit appetite for assets and liabilities within limits
  - Top-down allocation of capacities according to profitability; swift shifting procedures in place
  - Accumulation control on a common IT platform
General overview

Attractive and diversifying contribution to Munich Re's financials (1/2)

SFR and reinsurance non-life: Gross written premiums – Substantial growth

<table>
<thead>
<tr>
<th>Year</th>
<th>SFR</th>
<th>Non-life without SFR</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>2.0</td>
<td>14.2</td>
</tr>
<tr>
<td>2008</td>
<td>2.4</td>
<td>15%</td>
</tr>
<tr>
<td>2009</td>
<td>2.5</td>
<td>19%</td>
</tr>
<tr>
<td>2010</td>
<td>2.5</td>
<td>2.5</td>
</tr>
<tr>
<td>2011</td>
<td>2.8</td>
<td>16.9</td>
</tr>
</tbody>
</table>

CAGR: +8.8%

CAGR: +4.4%

Globally diversified SFR portfolio with above-average growth

Increasing SFR premium contribution to total reinsurance non-life portfolio

All business areas based on core competencies of Munich Re non-life – synergies with Munich Re

1 Left chart: Economic view, figures are shown after elimination of intra-Group business, see backup. Right chart: Annual report. 2007 adjusted for agriculture business considered for the first time within SFR from 2008.

Investor Briefing – Special and Financial Risks

General overview

Attractive and diversifying contribution to Munich Re's financials (2/2)

Combined ratio – Better than average

<table>
<thead>
<tr>
<th>Year</th>
<th>SFR</th>
<th>Non-life reinsurance</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>96.4</td>
<td>86.0</td>
</tr>
<tr>
<td>2008</td>
<td>96.4</td>
<td>96.2</td>
</tr>
<tr>
<td>2009</td>
<td>109.6</td>
<td>95.3</td>
</tr>
<tr>
<td>2010</td>
<td>100.5</td>
<td>94.7</td>
</tr>
<tr>
<td>2011</td>
<td>113.6</td>
<td>76.6</td>
</tr>
</tbody>
</table>

Underwriting result – Significant contribution

<table>
<thead>
<tr>
<th>Year</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>266</td>
<td>78</td>
<td>-226</td>
<td>121</td>
<td>605</td>
</tr>
</tbody>
</table>

• Combined ratio of SFR largely uncorrelated to reinsurance non-life business – less gearing to nat cat risks (2011) and higher exposure to credit risks (2009)

• All SFR business lines contributing positively to total profitability with pleasing average combined ratios in recent years

• Overall, lower capital intensity in comparison to traditional non-life business

1 Economic view, figures are shown after elimination of intra-Group business. 2 Annual report. 3 Technical result without technical interest.
Strategic ambition – Continuous value generation in specialised business models and innovative strength

**Strategic targets**

<table>
<thead>
<tr>
<th>Gross written premiums</th>
<th>€bn</th>
<th>Combined ratio</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>2.8</td>
<td>92.6</td>
<td>&lt; 95%</td>
</tr>
<tr>
<td>2016</td>
<td>&gt; 3.5</td>
<td>92.6</td>
<td>&lt; 95%</td>
</tr>
</tbody>
</table>

CAGR: ~5%

**Key focus initiatives**

- Strengthening of global footprint in specialised business models
- Fostering client centricity/unique selling proposition
- Further improvements of underwriting excellence
- Expanding innovative leadership through product developments

Expected growth mainly driven by agriculture, industrial business and innovation

Stable economic profitability despite slightly higher combined ratio

**Key takeaways**

- Bundling of global and specialised business models in SFR allows execution of specialised/niche strategies complementary to Munich Re’s non-life business
- Above-average profitability and growth
- All business areas based on core competencies of Munich Re non-life – synergies with Munich Re
- No further separation from traditional non-life business and Risk Solutions (e.g. legal entity)
### General overview of SFR

**Corporate Insurance Partner**

- **Thomas Blunck**

**Financial Risks**
- **Thomas Lallinger**

**Aviation/Space**
- **Guido Funke**

**Agriculture**
- **Karl Murr**

**Backup**

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### Corporate Insurance Partner – Providing tailor-made solutions for large corporate clients

#### Target clients
- Global 5,000 companies and leading players in their industries and large complex projects

#### Provided solutions
- Insurance solutions for target clients or reinsurance covers for their captives worldwide

#### Deal flow

**Demand**
- Industrial and non-industrial international corporate clients

**Distribution**
- Industrial insurance typically placed by brokers
- ~70% of CIP’s portfolio generated by top four brokers

**Carriers (examples)**
- Munich Re
  - e.g. Great Lakes
  - UK, AAIC\(^2\), Peslic\(^3\)
- Third-party fronting company
  - e.g. local primary insurer
- Captive

**Solution**
- Munich Re Corporate Insurance Partner (CIP)

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1. Marsh, AON, Willis and JLT.
Industrial insurance – Huge market segment offering opportunities for growth and innovation

**Market shares of industrial insurers**

- Corporate Insurance Partner: ~1%
- Rest: ~20%

**Top 3**
- ~50%

**Top 4–10**
- ~30%

**Total Market**
- €50–60bn

1 Bubble size = premium potential. 2 No uniform segment definition; important industrial insurers include ACE, AGCS, AXA, Charleroi, Lloyd's, Swiss Re, Talanx, XL, Zurich. 3 Not considering local champions.

**CIP deliberately following qualified follower approach with modest market share – Lean set-up geared to generating sustainable profits above industry average**

**Lines of business**

- **General property**
  - Property damage
  - Business interruption
- **Casualty**
  - General liability
  - Product liability
  - D&O liability
- **Energy**
  - Mining, oil and gas
  - Property damage
  - Business interruption
- **Special Enterprise Risks**
  - Supply chain interruption
  - Performance guarantees
  - Reputational damage
- **Engineering**
  - Operational power
  - Construction all risks
  - Erection all risks

**Product examples**

- Machinery breakdown
- Nat cat covers
- Professional indemnity
- Intellectual property rights
- Offshore in combination with onshore
- Non-physical damage
- Business interruption
- Cyber risk covers
- Builders' risks
- Advanced loss of profit/delay in start-up

**Client management**

Client management team pursues cross-selling and up-selling potentials and provides access to Munich Re's entire range of know-how and solutions for corporate clients.
**CIP’s unique selling proposition**

**Solidity**
Ensuring stability through independent net capacity, financial credibility and execution power

**Expertise**
Adding value to clients’ business proposition with industry- and risk-specific expertise

**Imagination**
Breaking new ground as business enabler in dialogue with our clients

**Solutions**
Delivering a comprehensive range of solutions, research capabilities and know-how with Munich Re inside

**Opportunities**
- New demand from corporations for innovative solutions will further develop from industry-specific trends …
- … while strong capacity allows for participation in harder markets in traditional lines business
- Alternative business sourcing (e.g. financial institutions); cooperations with MGAs and Munich Re’s RENT investments

**Challenges**
- Ongoing lack of investment alternatives and excess capacity in (re)insurance markets could lead to softer markets in traditional lines
- Economic recession in key markets
- Bottom-line volatility from large losses – nat cat and man-made

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**Global footprint provides full access to selected business**

**Network of about 235 experts worldwide**

- Long-term strategy of team strengthening, including expansion of international footprint; local representative offices to broaden access to traditional business and new solutions
- Team enlargement in Munich/London/USA – New hubs/intra-Group cooperation models in Paris, Singapore, Brazil, Hong Kong, Tokyo, Canada and Australia

**Portfolio – Regional breakdown**

<table>
<thead>
<tr>
<th>Region</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asia/Rest of World</td>
<td>17%</td>
</tr>
<tr>
<td>Australia</td>
<td>7%</td>
</tr>
<tr>
<td>Latin America</td>
<td>15%</td>
</tr>
<tr>
<td>Europe</td>
<td>25%</td>
</tr>
<tr>
<td>North America</td>
<td>36%</td>
</tr>
</tbody>
</table>

**TOTAL** €525m

- Global and flexible access to business supported by strong underwriting, loss-control engineering and claims expertise (“one voice to the market”)
- Further growth opportunities in US property (moderate to balance peak nat cat exposure) and US liability (local experts since 2011)

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Key figures – Substantial top-line growth with volatile bottom-line contribution

Corporate Insurance Partner

### Gross written premium

<table>
<thead>
<tr>
<th>Year</th>
<th>€m</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>328</td>
</tr>
<tr>
<td>2008</td>
<td>346</td>
</tr>
<tr>
<td>2009</td>
<td>453</td>
</tr>
<tr>
<td>2010</td>
<td>508</td>
</tr>
<tr>
<td>2011</td>
<td>525</td>
</tr>
</tbody>
</table>

### Combined ratio

<table>
<thead>
<tr>
<th>Year</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>100.2</td>
</tr>
<tr>
<td>2008</td>
<td>61.1</td>
</tr>
<tr>
<td>2009</td>
<td>64.8</td>
</tr>
<tr>
<td>2010</td>
<td>129.1</td>
</tr>
<tr>
<td>2011</td>
<td>106.4</td>
</tr>
</tbody>
</table>

### Underwriting result

<table>
<thead>
<tr>
<th>Year</th>
<th>€m</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>120</td>
</tr>
<tr>
<td>2008</td>
<td>0</td>
</tr>
<tr>
<td>2009</td>
<td>168</td>
</tr>
<tr>
<td>2010</td>
<td>129</td>
</tr>
<tr>
<td>2011</td>
<td>-33</td>
</tr>
</tbody>
</table>

- Top-line growth of ~60% over four years driven by capabilities to seize growth opportunities in a challenging market environment, e.g. engineering, oil and gas, US liability and green tech innovation.
- High volatility of industrial insurance business as ultimate risk carrier.
- Five-year average combined ratio of 92.3%.
- Outlook: More balanced target portfolio to provide enhanced stability and profitability.
- Sound underlying performance over five years despite major losses.
- Severe nat cats in 2010 (earthquake Chile, flood Australia) and 2011 (earthquake Japan, flood Thailand, US tornadoes).

Proof-points in CIP portfolio development: Restructuring

**General property**

- Loss drivers identified in 2011.
- Certain industries (e.g. food, steel).
- Prior-year losses play a higher role than assumed.
- Portfolio changes will be completed in 2012.
- Basic loss ratios for underwriting years 2011/12 show positive trend.
- Findings translated into further improvement regarding pricing, risk-based capital allocation and steering.

- Property well on track regarding return to profitability.
- Findings will improve quality of single risk underwriting within entire Munich Re.

**Energy – Mining**

- Identification of specific loss drivers, e.g. business interruption risks.
- Introduction of walk-away criteria regarding scope, structure and pricing of coverage.
- Readiness to swiftly reduce top-line by 20%.
- Supply/demand swings (e.g. BRIC).
- Volatility of commodity prices/"price spikes".
- Complexity in assessing bottleneck exposures and coping with industry developments.

- Portfolio change completed by end of 2012.
- Lower portfolio exposure from intransparent pricing mechanism of insureds.
Proof-points in CIP portfolio development: innovation and growth

**Innovation**

- **Special Enterprise Risks**
  - GreenTech – Insurance as business enabler
    - New insurance solutions for original equipment manufacturers (OEM) to insure technology risks connected performance guarantees
    - Bundling technology and credit risk at project level improves financing framework for banks and investors
    - Munich Re's insurance cover provides quality seal supporting (new) market entries

- The value of new insurance solutions must be quantifiable to the customer and goes beyond pure risk transfer
- Know-how synergies at work with RENT and Hartford Steam Boiler

**Growth**

<table>
<thead>
<tr>
<th>Energy – Oil and gas¹</th>
<th>€m</th>
</tr>
</thead>
<tbody>
<tr>
<td>~70</td>
<td>80–100</td>
</tr>
<tr>
<td>Post dot-com and WTC</td>
<td>2004–2010</td>
</tr>
<tr>
<td>Building market reputation as expertise-driven carrier</td>
<td>Premiums fluctuating 10% up and down due to cycle</td>
</tr>
<tr>
<td>Since market reaction in April 2010, substantial increase</td>
<td></td>
</tr>
</tbody>
</table>

- Clients and brokers perceive our business appetite as transparent and consistent
- In-depth industry and market intelligence allows us to evaluate further business potential
- Strong market position helps to realise opportunities

¹ Gross written premium.

Lines of business – Further grow and diversify the portfolio of traditional and individual risk solutions

**Portfolio – Lines of business**

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Inner Ring = 2009</th>
<th>Middle Ring = 2011</th>
<th>Outer Ring = 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Property</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Energy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Engineering</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Casualty</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SER¹</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Top-down portfolio steering towards target picture based on line-specific risk appetites, risk selection capabilities and underwriting strategies
- Improved diversification by line of business, geographies, short- and long-tail business as well as control of peak accumulation scenarios
- Continuous monitoring of market rate developments, competitive environment and performance of individual profit pools and loss drivers
- Innovation: Expanding the frontiers of insurability through SER product pipeline/innovative covers

**Target portfolio 2017**
Balanced lines of business contributing in a range of ~20% each

Driving profitable growth towards a more balanced target portfolio by seizing market opportunities in traditional lines while expanding innovative business

¹ Special Enterprise Risks.
**Outlook on lines of business – Gearing to higher growth and profitability potential**

<table>
<thead>
<tr>
<th>CIP – Business portfolio</th>
<th>Steering growth and profitability</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>High</strong></td>
<td>• International footprint and industrial expertise allow for scalable growth</td>
</tr>
<tr>
<td></td>
<td>• Re-aligned risk appetite with clear focus on target industries</td>
</tr>
<tr>
<td><strong>Low</strong></td>
<td>• Further expand territorial spread in oil and gas</td>
</tr>
<tr>
<td></td>
<td>• Eliminate loss drivers involving large mining conglomerates</td>
</tr>
<tr>
<td><strong>Property</strong></td>
<td>• Seize growth opportunities in target markets (e.g. Energy liability)</td>
</tr>
<tr>
<td></td>
<td>• Discipline in managing systemic risks (e.g. Financial Institutions)</td>
</tr>
<tr>
<td><strong>Energy</strong></td>
<td>• Expand international footprint &amp; focused strategic partnerships</td>
</tr>
<tr>
<td></td>
<td>• Strict discipline in managing nat cat and financial loss components</td>
</tr>
<tr>
<td><strong>Casualty</strong></td>
<td>• Innovative product pipeline creates niche markets</td>
</tr>
<tr>
<td></td>
<td>• Seize first-mover advantages detached from cycle effects</td>
</tr>
<tr>
<td><strong>Engineering</strong></td>
<td>• Portfolio shift from traditional to non-competitive innovative products will continue – innovative products generating growth, additional profit and enhanced portfolio diversification while reducing cycle dependency</td>
</tr>
<tr>
<td><strong>Special Enterprise Risks</strong></td>
<td>• Innovative solutions providing opportunities for the reinsurance operations to exploit such niches with ceding clients – Know-how synergies such as RENT, geo-scientific and industry-specific know-how perceived as differentiator by key clients and brokers</td>
</tr>
</tbody>
</table>

**Key takeaways**

**Business portfolio – Improving profitability**
- Improving profitability, as loss drivers have been identified in traditional business and risk appetite has been redefined – completing consolidation phase to provide positive earnings contribution

**Strategy – Expansion of innovative products**
- Portfolio shift from traditional to non-competitive innovative products will continue – innovative products generating growth, additional profit and enhanced portfolio diversification while reducing cycle dependency

**Leverage Munich Re platform**
- Innovative solutions providing opportunities for the reinsurance operations to exploit such niches with ceding clients – Know-how synergies such as RENT, geo-scientific and industry-specific know-how perceived as differentiator by key clients and brokers

**Ambition**
- Continue strong organic growth at a combined ratio of ~90%
**Financial Risks: Overview**

**Strong footprint in credit and surety reinsurance with growing importance of innovative solutions**

<table>
<thead>
<tr>
<th>Portfolio – Breakdown by line of business and type of treaty</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Innovative solutions/ niche business</td>
<td>8%</td>
</tr>
<tr>
<td>Trade credit</td>
<td>67%</td>
</tr>
<tr>
<td>Surety</td>
<td>25%</td>
</tr>
<tr>
<td>Facultative Non-proportional</td>
<td>8%</td>
</tr>
<tr>
<td>Portfolio dominated by traditional reinsurance in trade credit and surety</td>
<td></td>
</tr>
<tr>
<td>Increasing importance of innovative solutions and niche business by exploiting various distribution channels</td>
<td></td>
</tr>
<tr>
<td>Strong alignment of interest with clients through predominantly proportional business</td>
<td></td>
</tr>
<tr>
<td>Limited impact of facultative transactions</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Traditional reinsurance business</th>
<th>Innovative solutions and niche business</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trade credit – Covers non-payment of buyers of goods or services for commercial, political or other financial reasons</td>
<td>Contingency – Event cancellation, film realisation, prize indemnity, sport personal accident, K&amp;R¹, etc.</td>
</tr>
<tr>
<td>Surety – Guarantees the fulfilment of contractual or legal obligations</td>
<td>Entrepreneurial – Geothermal and weather risks</td>
</tr>
<tr>
<td>Global credit – Direct cover for corporate credit risks</td>
<td></td>
</tr>
</tbody>
</table>

**Enhancing portfolio diversification by safeguarding leading position in traditional business while developing innovative segments**

¹ K&R = Kidnap & Ransom.
Primary market has adapted rapidly to challenging economic environment

**Market volume**

<table>
<thead>
<tr>
<th>Primary market</th>
<th>Thereof retained business (incl. intra-Group cessions)</th>
<th>Reinsurance market</th>
</tr>
</thead>
<tbody>
<tr>
<td>~13</td>
<td>~9</td>
<td>~4</td>
</tr>
</tbody>
</table>

- Estimated total premium of global credit and surety market: ~€13bn
- Approx. 1/3 of this premium volume is accessible for the private reinsurance market
- Medium-term growth expectation: 5% p.a. – driven by expansion of global trading volumes and increased risk awareness of suppliers
- Sustainable demand for reinsurance expected as peak risks require high capacities

**Current state of primary market**

- Second year of exceptional performance with combined ratios of all major players <85%
- Pressure on primary premium rates (~5% in 2011) stabilising since H2 2011 as economic uncertainties have become more obvious again
- Due to strict risk management measures since 2008, portfolios are more robust and of better quality compared to pre-crisis years

**Surety business**

- Satisfactory and stable performance mostly unaffected by economic crisis
- Only isolated claims in few countries without expected impact on global market

Reinsurance to benefit from sound growth expectations of primary market and sustainable demand for reinsurance

Cyclicality in trade credit well manageable due to dynamic portfolio management ability

**Main characteristics of trade credit and surety business**

<table>
<thead>
<tr>
<th>Trade credit</th>
<th>Surety business</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensitivity to economic cycles</td>
<td>Lower dependency on economic cycles as potential claims depend on multiple triggers as well as anti-cyclical governmental infrastructure projects</td>
</tr>
<tr>
<td>Contract duration</td>
<td>Medium to long-term business with tenors up to 7 years (average ~2–3 years) as surety bonds often cover all stages of construction or engineering projects by different bond types</td>
</tr>
<tr>
<td>Success factors</td>
<td>Assessment of the technical capacity and financial resources of the principal to adequately perform the contractual or legal obligations</td>
</tr>
<tr>
<td>Market</td>
<td>Highly concentrated global market. Three global leaders (Euler Hermes, Atradius and Coface) plus Sinosure have ~75–80% market share</td>
</tr>
<tr>
<td></td>
<td>Local markets due to specific legal and regulatory stipulations in most countries where few, but highly specialised surety companies are competing with banks</td>
</tr>
</tbody>
</table>

---

1 Figures are estimates based on data of ICISA (International Credit and Surety Association), PASA (PanAmerican Surety Association) and clients’ information on market data (excl. business of ECA/Export Credit Agencies).
2 Breath of obligations by the principal; unsuccessful litigation by the beneficiary due to insolvency of the principal; possible loss mitigation through fulfillment of the obligations by a substituting principal.
3 E.g. bid bond, advance payment bond, performance bond and maintenance bonds.
Munich Re is the leading reinsurer for most of our clients.

### Market position and competition

<table>
<thead>
<tr>
<th>Munich Re</th>
<th>Peer 1</th>
<th>Peer 2</th>
<th>Peer 3</th>
<th>Peer 4</th>
<th>Peer 5</th>
<th>Peer 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>%</td>
<td>17</td>
<td>14</td>
<td>10</td>
<td>7</td>
<td>6</td>
<td>6</td>
</tr>
</tbody>
</table>

- Intensified competition following the entry of new players after strong market rebound since 2009
- Whereas established and new small- and medium-sized reinsurers act as pure capacity providers with focus on price...
- ... only few larger reinsurers have recognised leadership ability

### Client strategy

- Access to all attractive business through long-standing client relationships and close contacts with specialist brokers
- Reinsurance structures are mostly characterised by proportional treaties in connection with excess of loss coverage
- Munich Re is the leading reinsurer, having significant shares with most of the larger clients, to some extent reducing future growth potential
- Growth aspirations in Asia and Latin America driving moderate overall volume increase
- Munich Re as preferred partner for special transactions due to technical know-how and strong risk-taking capacity

### Good state of the primary market has attracted ample capacity and intensified competition

1. GWP estimate based on data of ICISA (International Credit and Surety Association) related to total reinsurance market volume of ~€4bn. Peer group: Allianz Re, Axa Re, Hannover Re, Partner Re, SCOR and Swiss Re.

### Financial Risks: Trade credit and surety business

#### Portfolio continues to be above technical level despite price adjustments

**Renewals 2012**

<table>
<thead>
<tr>
<th>%</th>
<th>100.0</th>
<th>-6.2</th>
<th>93.8</th>
<th>0.7</th>
<th>2.5</th>
<th>96.9</th>
</tr>
</thead>
<tbody>
<tr>
<td>€m</td>
<td>574</td>
<td>-36</td>
<td>538</td>
<td>4</td>
<td>14</td>
<td>556</td>
</tr>
</tbody>
</table>

- Overall stable cessions to reinsurance market (2012, 2013)
- New business or higher shares with some clients could not fully compensate for lower cessions and share reductions of other clients
- Deliberate restriction on risk appetite for certain segments sets limitation on new/additional business
- Demanding clients after strong results narrowed the profit margin
- Portfolio continues to be above technical level despite assumption of higher loss ratios
- Munich Re’s financial stability and strategic sustainability with increasing relevance for our clients

#### Economic environment requires cautious determination of risk appetite and selection of clients
Financial Risks: Trade credit and surety business

Good credit quality of portfolio with low gearing to financial sector within a global portfolio

- Overall portfolio split (based on PML): 60% trade credit, 40% surety business
- Construction mainly relates to surety – retail/wholesale to trade credit
- Limited exposure to weaker peripheral Southern European countries
- Portfolio reduction of ~15% compared with peak at outbreak of financial crisis

Composition of portfolio mainly driven by selection of cedants and determination of shares in treaty programme

Client selection
- Preference for most professional clients in their market/product segments
- Alignment of interest secured by predominantly proportional treaties
- Focus on profitability of client relationships and terms/conditions over the cycle

Portfolio management
- Identification of trends in markets & client portfolios
- Clear breakdown of risk appetite for specific products, sectors and countries
- Actuarial skills
- Developing and independent pricing of reinsurance structures; technical risk-adequacy for the portfolio

Latest limits (incl. facultative business) and non-standard transactions are being evaluated on a stand-alone basis

Accumulation control and continuous monitoring of largest and non-standard risks within defined limit framework

Single risk underwriting

Risk management

Enterprise risk management

Deep knowledge of client’s portfolio and selection of most professional clients are of utmost importance

Munich Re
In worst-case scenario, rise of combined ratio expected to be less severe due to implementation of several measures

**Combined ratio development 2002–2011**

<table>
<thead>
<tr>
<th>Year</th>
<th>Ultimate premium</th>
<th>Expenses</th>
<th>Large losses</th>
<th>Basic losses</th>
<th>Average combined ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>200</td>
<td>300</td>
<td>100</td>
<td>50</td>
<td>100</td>
</tr>
<tr>
<td>2003</td>
<td>300</td>
<td>400</td>
<td>150</td>
<td>75</td>
<td>125</td>
</tr>
<tr>
<td>2004</td>
<td>400</td>
<td>500</td>
<td>200</td>
<td>100</td>
<td>150</td>
</tr>
<tr>
<td>2005</td>
<td>500</td>
<td>600</td>
<td>250</td>
<td>125</td>
<td>175</td>
</tr>
<tr>
<td>2006</td>
<td>600</td>
<td>700</td>
<td>300</td>
<td>150</td>
<td>200</td>
</tr>
<tr>
<td>2007</td>
<td>700</td>
<td>800</td>
<td>350</td>
<td>175</td>
<td>225</td>
</tr>
<tr>
<td>2008</td>
<td>800</td>
<td>900</td>
<td>400</td>
<td>200</td>
<td>250</td>
</tr>
<tr>
<td>2009</td>
<td>900</td>
<td>1000</td>
<td>450</td>
<td>225</td>
<td>275</td>
</tr>
<tr>
<td>2010</td>
<td>1000</td>
<td>1100</td>
<td>500</td>
<td>250</td>
<td>300</td>
</tr>
<tr>
<td>2011</td>
<td>1100</td>
<td>1200</td>
<td>550</td>
<td>275</td>
<td>325</td>
</tr>
</tbody>
</table>

**Main measures primary market**
- Active cancellation of limits and setting of risk-adequate limits
- Enforcement of significant increases in premium rates
- Implementation of stricter monitoring procedures

**Main measures Munich Re**
- Strict selection of professional primary insurance clients
- More restrictive risk appetite in selective sub-segments and markets
- Consistent implementation of adequate technical prices

---

**Contingency – Market leadership through strong know-how, established network and high capacity provision**

**Business overview**
- Special covers, i.e. event cancellation, film/media, prize indemnity, sports personal accident, kidnap and ransom
- Highly specialised market with attractive market potential and moderate competition

**Underwriting approach**
- Good actuarial pricing expertise in order to preserve profitability
- Long-term track record and great experience with an established internal and external network; expertise in claims handling
- Support from internal experts

**Unique selling proposition**
- Offering tailor-made solutions via various channels (reinsurance and direct approach)
- Market leadership through long-standing market presence and in-depth expertise
- Ability to provide the biggest capacities for major events

**Summer Olympics London 2012**
- Largest sport event in the world requires big capacity – Munich Re the largest capacity provider (~€300m)
- Underwriting support from internal experts (nat cat, political risks and construction)

---

**Financial Risks: Innovative solutions / niche business**

- Attractive niche business with growth potential and moderate competition owing to required expertise
Financial Risks: Innovative solutions / niche business

Weather covers provide protection against the impact of unfavourable weather conditions

### Business overview
- Majority of entrepreneurial activities are influenced by weather
- Limited penetration of insurance solutions indicates business potential
- Munich Re provides parametric protection against unfavourable weather conditions

### Unique selling proposition
- Well-known, high quality large-capacity provider with top financial stability
- Handling weather risks is part of Munich Re’s core business
- Meteorological and actuarial expertise
- Ability to offer wide product range by leveraging internal know-how

### Underwriting approach
- Strong actuarial pricing and meteorological/hydrological expertise
- Minimising the client’s basic risk predominantly requires tailor-made solutions
- Protection is based on objective and independent weather indices

### Weather hedge based on temperature
- Hedge against a mild winter in London Heathrow
- Protected client: Energy utility
- Required capacity > GBP 20m
- Linear payout based on temperature index above a specified strike

Relatively immature market with advanced products gives plenty of room for further growth – especially in the renewable energy sector

---

### Key figures – Satisfactory combined ratio in a period of high economic uncertainty

<table>
<thead>
<tr>
<th>Year</th>
<th>Gross written premium</th>
<th>Combined ratio</th>
<th>Underwriting result</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>709</td>
<td>85.6</td>
<td>96</td>
</tr>
<tr>
<td>2008</td>
<td>822</td>
<td>98.5</td>
<td>10</td>
</tr>
<tr>
<td>2009</td>
<td>631</td>
<td>82.4</td>
<td>129</td>
</tr>
<tr>
<td>2010</td>
<td>742</td>
<td>41.4</td>
<td>-493</td>
</tr>
<tr>
<td>2011</td>
<td>696</td>
<td>Average</td>
<td>409</td>
</tr>
</tbody>
</table>

- 2009: Cancellation of treaties, reduced risk appetite in specific segments and discontinuation of activities
- 2010: Benefit from higher premium rates in primary market
- 2009: Impact of large claims, higher frequency of losses and prudent reserving
- 2010/11: Lower insolvencies and absence of large losses
- Result reflects strong rebound of primary market after financial crisis
- 2010: More favourable reinsurance prices
- 2011: Substantial reserve releases

1 Excluding innovative solutions / niche business.
**Key takeaways**

### Core business within Munich Re Group

Financial Risks has been very profitable over the cycle and provides significant diversification from other non-life activities.

### Trade credit and surety business

Keep leading position with large clients and exploit growth opportunities in Asia and Latin America while managing the business cycle.

### Innovative solutions / niche business

Leverage special expertise in innovative solutions and niche businesses in order to develop the business and exploit Munich Re's competitive advantage.

### Ambition

Maintaining conservative underwriting approach with strong emphasis on meeting profitability thresholds – Combined ratio ~93% over the cycle.

---

### General overview of SFR

<table>
<thead>
<tr>
<th>Task</th>
<th>Person</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thomas Blunck</td>
<td></td>
</tr>
</tbody>
</table>

### Corporate Insurance Partner

<table>
<thead>
<tr>
<th>Task</th>
<th>Person</th>
</tr>
</thead>
<tbody>
<tr>
<td>August Pröbstl</td>
<td></td>
</tr>
</tbody>
</table>

### Financial Risks

<table>
<thead>
<tr>
<th>Task</th>
<th>Person</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thomas Lallinger</td>
<td></td>
</tr>
</tbody>
</table>

### Aviation/Space

<table>
<thead>
<tr>
<th>Task</th>
<th>Person</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guido Funke</td>
<td></td>
</tr>
</tbody>
</table>

### Agriculture

<table>
<thead>
<tr>
<th>Task</th>
<th>Person</th>
</tr>
</thead>
<tbody>
<tr>
<td>Karl Murr</td>
<td></td>
</tr>
</tbody>
</table>

### Backup

<table>
<thead>
<tr>
<th>Task</th>
<th>Person</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Space – Attractive (re)insurance niche market

Space – Market development¹

<table>
<thead>
<tr>
<th>Year</th>
<th>US$m</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>677</td>
</tr>
<tr>
<td>2008</td>
<td>899</td>
</tr>
<tr>
<td>2009</td>
<td>898</td>
</tr>
<tr>
<td>2010</td>
<td>876</td>
</tr>
<tr>
<td>2011</td>
<td>875</td>
</tr>
</tbody>
</table>

Space – Market share²

<table>
<thead>
<tr>
<th>Carrier</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Munich Re</td>
<td>18%</td>
</tr>
<tr>
<td>Peer 1</td>
<td>12%</td>
</tr>
<tr>
<td>Peer 2</td>
<td>8%</td>
</tr>
<tr>
<td>Peer 3</td>
<td>5%</td>
</tr>
<tr>
<td>Rest (~35 carriers)</td>
<td>57%</td>
</tr>
</tbody>
</table>

Munich Re is the market leader in space insurance

Space insurance specifics

- Increasing demand for satellite applications
  
  Economic and demographic development as well as technological progress
- Low degree of commoditisation
  
  Space insurance covers are individually designed, every space risk is a “prototype”
- Claims specifics
  
  Loss mitigation measures rarely available and loss investigations complicated
- High volatility
  
  High severity (expected to rise due to dual launches) and limited number of launches
- Differential terms are the rule

Space insurance matches Munich Re’s premium provider aspiration

Aviation/Space

Space – Specialty market with a high demand for tailor-made solutions

- Munich Re covers the underperformance of satellites due to unforeseen events
  
  During the launch and commissioning phase
  
  In the in-orbit phase of the satellite
- Satellites mainly used for communication purposes

Investor Briefing – Special and Financial Risks
Munich Re

Aviation/Space

Space – Munich Re providing tailor-made solutions for complex space risks

Drivers of our leadership position

- **Solution-oriented client service**
  Designing customised coverages for each individual satellite risk
- **Personal relationships and reliability**
  Strong, long-standing and close client relationships
- **Professional expertise**
  Combining a broad range of expertise from space and insurance industry
- **Solid financial strength**
  Financial strength enabling us to retain gross risks – no retrocession

Maintaining our leadership position

- Prepared to satisfy increasing demand for satellite applications
- New launch vehicles and new satellite technologies providing new opportunities and exposures
- Relevance of financial security is expected to grow
- **Client reach**: Deepening our relationships with strategic clients and expanding into new client segments (e.g. government missions)
- Developing and offering new products to anticipate future demand (e.g. loss-of-revenue product, government missions)

Munich Re meeting client demand by providing technical expertise, client-oriented solutions and a high level of reliability

Aviation/Space

Space – Portfolio focused on primary insurance and proportional short-tail business

Portfolio – Type of cover

- **Proportional**
- **Primary insurance**
- **Launch**
- **In-orbit**
- **Short-tail**

0% 25% 50% 75% 100%

- Munich Re moved up the value chain to offer primary insurance more than 15 years ago
- Current book is dominated by launch product (covering the launch phase plus the first year in orbit)

Sustainable profitability achieved through underwriting strength and learning from losses

Risk management

Underwriting excellence key for risk management

- Individual underwriting of every single risk
- Risk assessment – Combining the broad range of underwriting expertise with Munich Re's comprehensive global loss and exposure database

Lessons learned

- Coverage design should avoid ambiguities
- Avoid multi-year policies to counter risk of change
Aviation – Attractive (re)insurance market with few leading players and ample capacity available

**Aviation – Market development**

<table>
<thead>
<tr>
<th>Year</th>
<th>US$bn</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>6.1</td>
</tr>
<tr>
<td>2008</td>
<td>6.1</td>
</tr>
<tr>
<td>2009</td>
<td>6.3</td>
</tr>
<tr>
<td>2010</td>
<td>6.5</td>
</tr>
<tr>
<td>2011</td>
<td>6.4</td>
</tr>
</tbody>
</table>

Increasing global demand for air traffic partially offset by pressure on rates

**Aviation – Market share (net)**

<table>
<thead>
<tr>
<th></th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Munich Re</td>
<td>10%</td>
</tr>
<tr>
<td>Peer 1</td>
<td>10%</td>
</tr>
<tr>
<td>Peer 2</td>
<td>10%</td>
</tr>
<tr>
<td>Peer 3</td>
<td>9%</td>
</tr>
<tr>
<td>Peer 4</td>
<td>7%</td>
</tr>
<tr>
<td>Rest (30–40 carriers)</td>
<td>54%</td>
</tr>
</tbody>
</table>

Munich Re maintaining leading position despite the competitive environment

Source: Munich Re estimate. 1 Gross written premiums, including commissions. 2 Based on net earned premiums per ultimate carrier (primary insurance and reinsurance). Peers: AGCS, Chartis, Hannover Re, Swiss Re.

Aviation – Standardised, highly competitive specialty market with large catastrophe exposure

**Aviation (re)insurance specifics**

- High degree of commoditisation
  - Products are mostly standardised
- Low correlation
  - Low correlation with other industry peak scenarios (except terrorism)
- High limits bought
  - Airlines and manufacturers buy limits up to USD 2.25bn and general aviation clients buy limits up to USD 500m
- High volatility
  - Rising demand for bigger planes and higher indemnities increasing industry’s catastrophe PMLs
- Reinsurance
  - Small but attractive segment, detached from original market, absorbing most of the catastrophe exposure
Aviation – Specialised set-ups operating along the value chain coupled with Munich Re’s franchise value

Core strengths applying to all specialised set-ups
- Close personal relationship
- Superior financial strength
- Underwriting excellence

Market access via specialised set-ups

<table>
<thead>
<tr>
<th>Primary / Reinsurance</th>
<th>Global Aerospace pool</th>
<th>Munich Re direct</th>
<th>Pritchard</th>
<th>Munich Re treaty re-insurance</th>
</tr>
</thead>
</table>
|                       | - Insurance pool (Munich Re share 45%) underwritten by MGA  
                       | - Leading insurer for manufacturers and airlines  
                       | - Leading insurer for general aviation in North America | - Qualified follower  
                       | - Offering capacity for major airlines and manufacturers | - Lloyd’s syndicate owned by Munich Re  
                       | - Leading insurer of 3rd/4th-tier airlines | - Supporting insurance clients globally with reinsurance protection for aviation  
                       |                                                                          | - Among top three treaty reinsurers |

1 GALM is a partially owned MGA, underwriting on behalf of a pool of insurers.

Global Aerospace pool
- Leading insurer of 3rd/4th-tier airlines

Munich Re direct
- Lloyd’s syndicate owned by Munich Re
- Leading insurer of 3rd/4th-tier airlines

Pritchard
- Supporting insurance clients globally with reinsurance protection for aviation
- Among top three treaty reinsurers

Portfolio – Breakdown by source

<table>
<thead>
<tr>
<th>Source</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global Aerospace pool</td>
<td>25</td>
</tr>
<tr>
<td>Reinsurance</td>
<td>25</td>
</tr>
<tr>
<td>Direct</td>
<td>25</td>
</tr>
<tr>
<td>Pritchard</td>
<td>25</td>
</tr>
</tbody>
</table>

Portfolio steering
- Strategic expansion of set-ups with leading position (e.g. Global Aerospace pool, Pritchard) due to ability to charge above-average prices …
- … while actively managing the cycle of the direct airline book

Portfolio – Type of cover

<table>
<thead>
<tr>
<th>Cover</th>
<th>Airlines</th>
<th>Manufacturers</th>
<th>General aviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary insurance</td>
<td></td>
<td></td>
<td>Reinsurance</td>
</tr>
<tr>
<td>Proportional</td>
<td></td>
<td></td>
<td>XL</td>
</tr>
<tr>
<td>Short-tail</td>
<td></td>
<td></td>
<td>Long-tail</td>
</tr>
</tbody>
</table>

0% 25% 50% 75% 100%
Aviation – ... and aligned to market trends and key success factors

### Trends and our approach in aviation market

<table>
<thead>
<tr>
<th>Airlines</th>
<th>Manufacturers</th>
<th>General aviation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Market trends</strong></td>
<td>Strong pressure on rates due to ample short-tail capacity, price-sensitive buyers and (recently) absence of major losses</td>
<td>Longer-tail; buyers are more sensitive to financial security and long-term partnerships, but pressure on rates</td>
</tr>
</tbody>
</table>
| **Success factors** | • Cycle/PML management to manage volatility and price adequacy  
• Differentiate opportunistic vs. partnership clients | • Differentiate from the mainstream and offer value-added solutions | • Efficient set-up essential  
• Succeed through risk selection, channel management and value added offerings |
| **Action** | • Primary insurance: Focusing on set-ups with leading position and on core clients that value our services and security  
• Reinsurance: Reducing proportional reinsurance for major risks and maintaining position in XoL reinsurance | Increasing share of business with best-in-class GA underwriting partners (on proportional basis) and offer XoL for cat exposure | Deliberately reducing business to sustain profitability level |

### Direct book – Airlines rate development vs. Munich Re market share

<table>
<thead>
<tr>
<th>Rate index</th>
<th>Market share</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.5%</td>
<td>2.5%</td>
</tr>
<tr>
<td>4.5%</td>
<td>6.5%</td>
</tr>
<tr>
<td>140%</td>
<td>6.5%</td>
</tr>
<tr>
<td>120%</td>
<td>4.5%</td>
</tr>
<tr>
<td>100%</td>
<td>2.5%</td>
</tr>
<tr>
<td>80%</td>
<td>6.5%</td>
</tr>
<tr>
<td>60%</td>
<td>4.5%</td>
</tr>
</tbody>
</table>

Source: Munich Re research. 1 Rate = net premiums/passengers. 2007=100%. 2012e=estimation.
Key figures – Good performance in Aviation/Space due to disciplined underwriting and strong market position

- Gross written premium
  - 2007: €476m
  - 2008: €535m
  - 2009: €605m
  - 2010: €634m
  - 2011: €551m

- Combined ratio
  - 2007: 98.0%
  - 2008: 95.5%
  - 2009: 83.2%
  - 2010: 87.7%
  - 2011: 59.9%

- Underwriting result
  - 2007: €42m
  - 2008: €79m
  - 2009: €66m
  - 2011: €205m

- Active cycle management in aviation leads to reduced top line in 2011
- Growth between 2007 and 2010 partly driven by increasing shares in strategic partnerships
- Good profitability driven by selective underwriting, strong market position and below-average major losses
- Reserve release from prior underwriting years in 2011
- Five-year average combined ratio of 83.7%
- Aviation and space profitable lines of business within Munich Re with a significant contribution to Group net earnings

Aviation/Space – Key takeaways

**Market outlook**
- In the short run, pressure on rates expected to continue. However, in the long run, aviation and space are still attractive industries because of demographic and economic effects
- Additionally, increasing recognition of financially strong insurance carriers expected

**Market characteristics**
- Aviation and space are two different markets – know-how-driven space market demands customised solutions while standardised, highly competitive aviation market is more capacity-driven

**Strategy**
- Munich Re maintains and expands its leading position based on its core competencies
  - Superior financial security providing clients with high level of reliability
  - Solution-oriented underwriting excellence fostering intensity and continuity of personal relationships
  - Specialised set-ups facilitating efficient market access

**Ambition**
- Combined ratio of below 94% over the cycle
Crop insurance – Attractive specialty market for Munich Re

**Crop insurance market development**

- Only ~20% of agricultural land is insured
- US constitutes biggest crop insurance market
- Positive trend in premium development due to increasing commodity prices
- Further implementation of crop insurance markets likely

**Reinsurance market shares**

- Munich Re clear market leader with proven strategy – SystemAgro
- Munich Re market developer and pioneer in agricultural (re)insurance
- Strategic long-term partnerships secure high market share

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**Benefit from strategy: Reinsurance market leader**

1. Gross written premiums.
2. Munich Re estimate based on gross written premiums. Peers: Allianz Re, Hannover Re, Partner Re, Scor, Swiss Re.
Agriculture

Characteristics of crop insurance markets

Non-comprehensive approach and activities of stakeholders

- Farmer
- Public sector
- Insurance industry

No sustainable crop insurance market will develop
- Adverse selection
- Low market penetration
- Substantial basic risk not covered

Public-private partnership (PPP)

- Involved interests and dependencies have to be translated into a sustainable system approach
- Only after system installation is there an existing crop insurance market

Balanced and self adjusting PPP systems for crop insurance are in the public interest

Agro insurance specifics – PPP as agricultural insurance system

SystemAgro

- Public sector
- Market risks
- Central agency
- Specialised SystemAgro multi-peril crop insurance
- Specialised reinsurers
- Farmers
- Agrifinance and agribusiness

Agro insurance specifics

- What is SystemAgro?
  - Built on international experience
  - Public-private framework for sustainable agricultural insurance
  - A system rather than a product (central: comprehensive coverage)
  - Local solutions built around general key components

Key components of SystemAgro

- Integrated in agricultural law and policy
- Public co-financing of premiums and cat losses
- Open to all farmers
- Transparent, uniform coverage
- Comprehensive coverage benefitting individual farmers
- Operated through specialised crop insurers

Sustainable agricultural insurance follows from SystemAgro
Munich Re portfolio – Focus on PPP systems rather than products

Portfolio – Type of cover 2011

<table>
<thead>
<tr>
<th>Type</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>PPP</td>
<td>56%</td>
</tr>
<tr>
<td>Proportional</td>
<td>25%</td>
</tr>
<tr>
<td>Reinsurance</td>
<td>19%</td>
</tr>
</tbody>
</table>

Risk management
- Prepared to introduce and develop sustainable crop insurance systems
- Quota shares preferred
- Minor shares in stop-loss covers
- Knowledge for agricultural primary insurance secured via MGA participations

Portfolio – Regional breakdown

- North America
- Europe
- Latin America
- Rest of world

Inner Ring = 2007
Outer Ring = 2011

Portfolio steering
- US system established and sustainably successful long-term
- Strength of PPP markets: high penetration (regional spread) and stability
- Governmental decisions challenge PPP markets

Agriculture

Strategy – Transferring experience via SystemAgro to new markets

Lion’s share in established markets – Substantial participation in growing markets with SystemAgro approach

Competitive advantages
- Specialised and centralised set-up for agriculture allows quick response to client demand and secures multi-year contracts (long-term commitment)
- Comprehensive agricultural expertise through experienced and stable team;
- strategic partnering with specialised agro-insurance companies, universities, agribusiness and technology companies;
  ownership of share in MGAs to secure expertise in primary insurance

30 years’ experience form the basis for creating sustainable systems and business opportunities
US crop insurance market – Overview

**USA – Largest crop insurance market worldwide**

- **MPCI development**
  - Premiums (US$ bn, LHS)
  - Insured acres (million, RHS)

- **Federal subsidised MPCI programme**
  - ~60% of the premium is subsidised
  - FCIC reimburses each company for acquisition and operational costs
  - FCIC administers the MPCI programme and bears associated expenses
  - Catastrophe reinsurance: Extensive proportional and non-proportional reinsurance

**MPCI causes of loss and crop composition**

- **CROP INDUSTRY PREMIUM 2011 ~US$ 12.8bn**

**US crop insurance market – Profit and loss sharing mechanism limiting upside and downside potential**

- **Individual policy assignment to one "risk fund"**
  - Assigned risk fund
    - For historically unprofitable business
    - Profit and loss potential strictly limited
    - Cession limit per state (gross premium): 75%
  - Commercial fund
    - For historically profitable business
    - Maximum profit but also maximum loss potential
    - Business distribution per state (group 1–3)

- **Standard reinsurance agreement (SRA)**
  - Minimum loss ratio 89%
  - Maximum loss ratio 117%

- **SRA smoothing industry loss ratios**
  - Original loss ratio 139%
  - Retained loss ratio 91%

- **Definition of state group 1–3**
  - Group 1: Historically profitable states
  - Group 2: Other states
  - Group 3: States characterised by hitherto low insurance density
US drought – Impact on Munich Re's agricultural business

**US drought severity**
- Abnormally dry
- Drought: Moderate
- Drought: Severe
- Drought: Extreme
- Drought: Exceptional

<table>
<thead>
<tr>
<th>May</th>
<th>June</th>
<th>July</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Optimal growing conditions</td>
</tr>
<tr>
<td></td>
<td></td>
<td>75% of corn and soybean area affected – ~50% of Munich Re's US MPCI portfolio</td>
</tr>
</tbody>
</table>

**Munich Re loss expectation**
- Liabilities by public vs. private sector
- Expected combined ratio 120–130% for Munich Re's US portfolio in 2012
- Low administration expenses of ~2% and below-average commissions due to losses – expected total expense ratio in 2012: <10%
- Expected combined ratio in 2012 for aggregate agriculture portfolio below 120%

**Subsidised MPCI system limiting loss potential for Munich Re – US drought increasing loss history thus leading to improvement of insurance terms**
- Even large cat events do not jeopardise the system – involvement will be continued

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1 RMA = Risk Management Agency.

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Investor Briefing – Special and Financial Risks
Agriculture
Key figures – Long-term track record with sustainable growth and profitability

<table>
<thead>
<tr>
<th>Gross written premium</th>
<th>€m</th>
<th>Combined ratio</th>
<th>%</th>
<th>Underwriting result</th>
<th>€m</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>509</td>
<td>90.4</td>
<td></td>
<td>96.0</td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>697</td>
<td>97.5</td>
<td></td>
<td>97.3</td>
<td></td>
</tr>
<tr>
<td>2009</td>
<td>814</td>
<td>90.3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td>663</td>
<td>97.3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td>1,061</td>
<td>Average</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

- Leading position in agricultural reinsurance with five-year average combined ratio of 94.3%
- Rather stable development as state-supported crop insurance in the USA limits loss potential
- Doubling of premium volume over the last four years driven by strong market position, rising commodity prices and positive currency contribution from US dollar

Key takeaways

Crop insurance market
- No clear separation between primary insurance and reinsurance
- Potential growth: Agriculture has governmental attention with increased awareness of SystemAgro

Reinsurance
- Munich Re well positioned with partners in food and agriculture business, specialised insurance partners and own MGAs
- Munich Re has important role in introducing "System" approach
- Uninformed capacity will retreat from the market

Potential
- Currently ~€17bn premium from PPP systems (less than 20% of insurable land)
- Farmers, governments and insurance industry realised success of PPP and further markets will follow

Ambition
- In its leading market position, Munich Re continues developing sustainable crop insurance markets
- Munich Re is strictly focused on sustainable profitability and will systematically increase its crop insurance portfolio – Ambition: combined ratio ~95% over the cycle
SFR also includes business from some subsidiaries and insurance risk-transfer solutions

Reconciliation of economic view vs. annual report – Organisational set-up
### Difference between economic view and annual report

**Reconciliation of economic view vs. annual report – Gross written premiums as at 31.12.2011**

<table>
<thead>
<tr>
<th>Economic view</th>
<th>Specialty business written outside SFR</th>
<th>Premiums from subsidiaries</th>
<th>Consolidation effects, mainly retrocession</th>
<th>Annual report</th>
</tr>
</thead>
<tbody>
<tr>
<td>€bn</td>
<td>2.8</td>
<td>-0.2</td>
<td>0.4</td>
<td>0.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3.1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Data set used for this presentation</th>
<th>Almost all relating to credit business allocated to other regional units</th>
<th>Mainly New Re – others including e.g. GLUK¹</th>
<th>All Munich Re retrocession business bundled within SFR unit</th>
<th>Includes premiums from subsidiaries and retrocession</th>
</tr>
</thead>
</table>

**Differences in scope impacting combined ratio on single-year basis – but average annual difference over five years (2007 – 2011) only 0.2 percentage points**

¹ Great Lakes UK.

### Financial calendar

**FINANCIAL CALENDAR**

<table>
<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>7 November 2012</td>
<td>Interim report as at 30 September 2012</td>
</tr>
<tr>
<td>14 November 2012</td>
<td>Citi &quot;Global Financial Conference 2012&quot;, Hong Kong</td>
</tr>
<tr>
<td>4 December 2012</td>
<td>UBS &quot;Senior Investor Day&quot;, Munich</td>
</tr>
<tr>
<td>7 December 2012</td>
<td>Citi Global Financial Conference 2012, London</td>
</tr>
<tr>
<td>16 January 2013</td>
<td>Commerzbank &quot;German Investment Seminar 2013&quot;, New York</td>
</tr>
<tr>
<td>23 January 2013</td>
<td>Cheuvreux &quot;12. German Corporate Conference 2013&quot;, Frankfurt</td>
</tr>
<tr>
<td>5 February 2013</td>
<td>Preliminary key figures 2012 and renewals</td>
</tr>
<tr>
<td>13 March 2013</td>
<td>Analysts’ conference, London</td>
</tr>
</tbody>
</table>
**Disclaimer**

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