RENEWABLE ENERGIES – GROWTH DRIVERS FOR THE INSURANCE INDUSTRY

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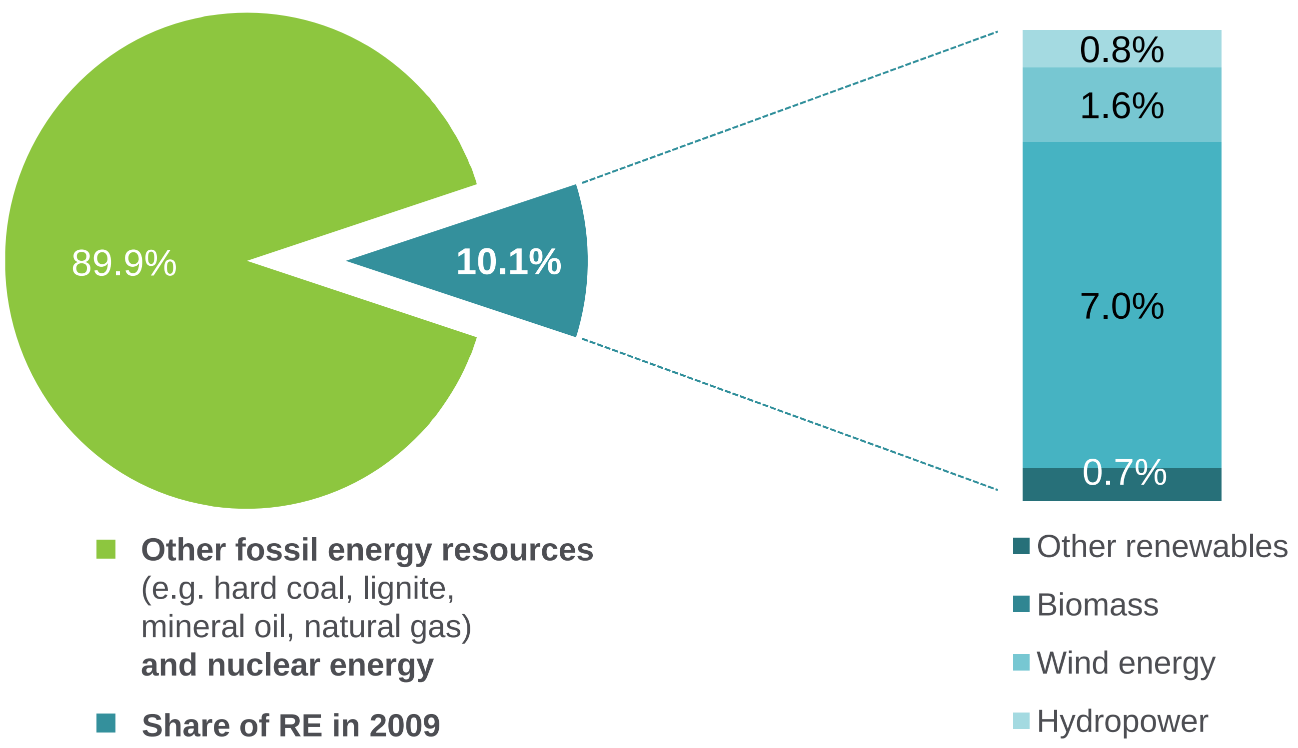
Munich RE

Proportion of renewable energy sources in relation to total energy consumption in Germany 2009

Total: 8,714 petajoules[1)]



1) Source: Working Group on Energy Balances (AGEB)

Source: German Fed. Min. for the Environment, Nature Conservation and Nuclear Safety

Growth sector: Renewable energies
Premium volume in Germany 2009 and 2020

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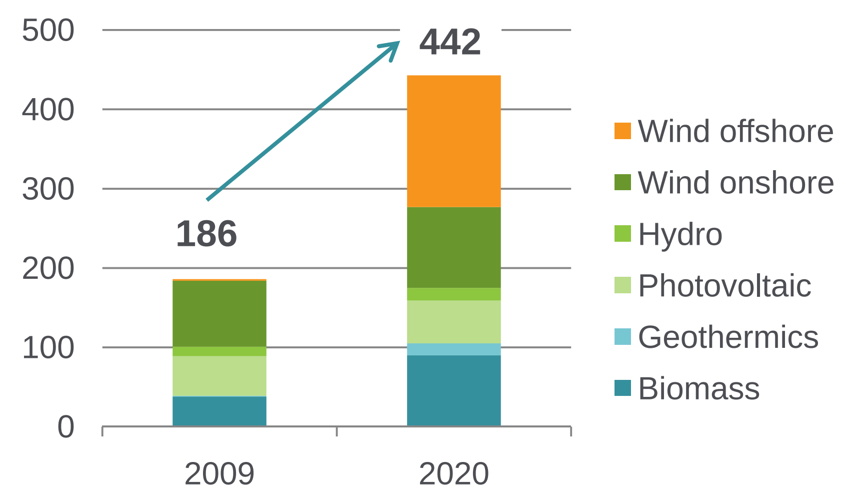
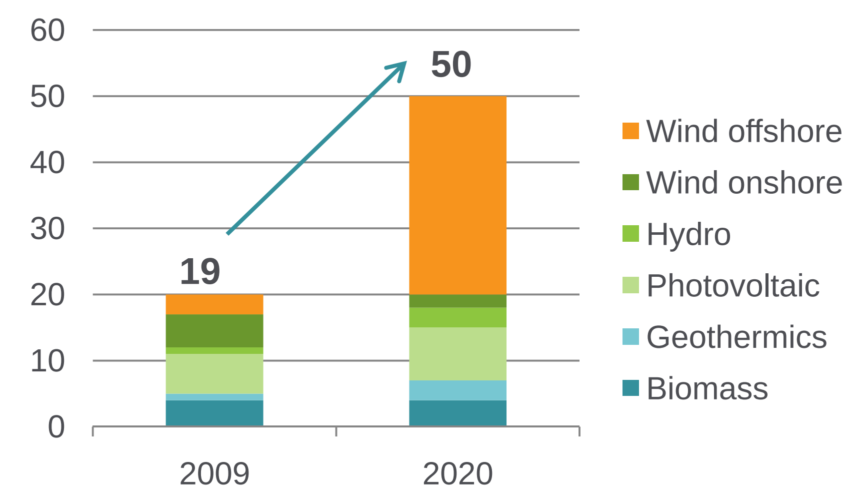
Premium volume with existing plants (€m)



Source: GDV (2009), Munich Re (2020)

Premium volume with project business (€m)



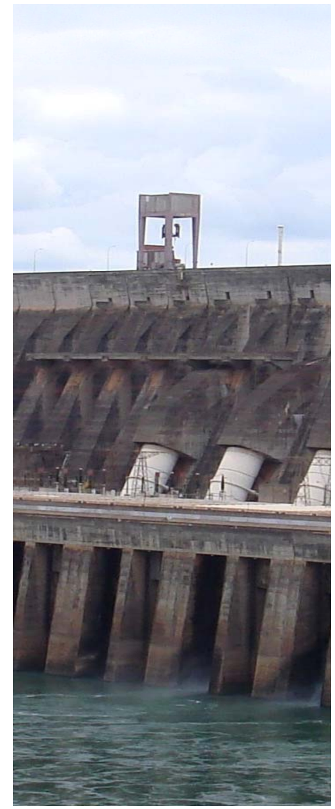
- Highest growth with wind power plants and biomass
- 60% of volume from project business in 2020 from offshore wind farms
- Loss potentials and accumulations pose a challenge for the insurance industry
- Munich Re backs profitability also in this field of business

Renewable energies:
New insurance solutions from Munich Re

Claims series cover

Performance guarantee cover

Exploaration risk with geothermics



Insurance for hydro plants

All risks cover for biomass plants

Source: Munich Re; Photo: Pixelio

CURRENT ISSUES

Low interest rate as challenge for insurers

Example	Planning	Interest-rate environment
▪ Insurance company with liability portfolio with €1m premium income ▪ Run-off period: ten years ▪ Interest-rate curve1.6–4.3%	▪ Discounted losses: €775,000 ▪ Costs: €200,000 ▪ Expected profit €25,000	▪ **Interest rates 1% lower than expected over the run-off period**

Discounted losses increase to €854,000 due to low interest rate

Result: Loss of €54,000 instead of €25,000 profit

Premium income has to rise by about €80,000 (8%)
in order to realise the planned profit

Growing need for action in a prolonged low interest-rate environment

Source: Munich Re

Current interest-rate development – No all-clear signal

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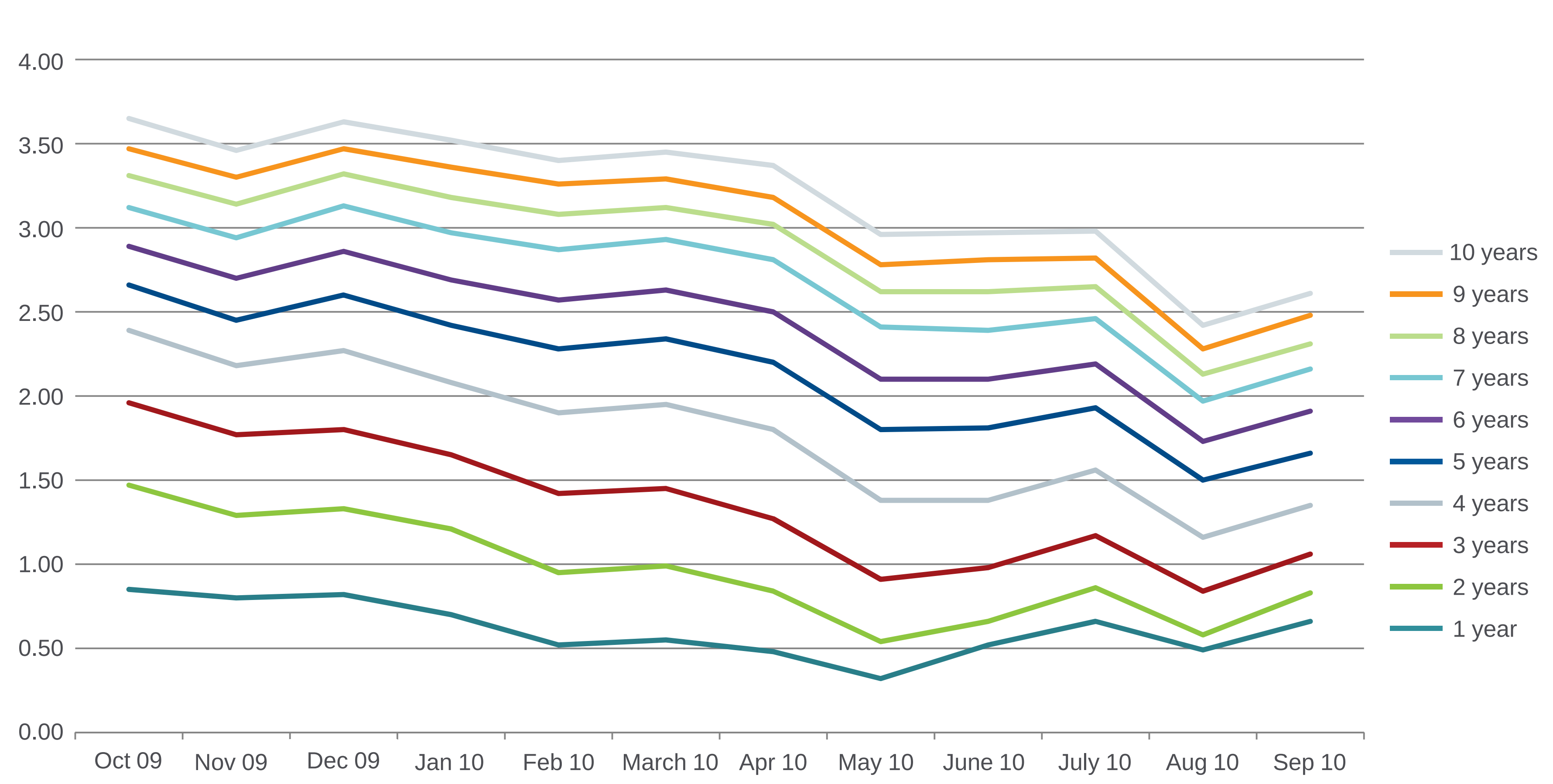
Euro government yield curves



Source: Bloomberg

Special policies for oil drilling operations – Update

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- **High demand for insurance coverage if of a substantial amount**
- **Very constructive discussions with leading brokers – Insurance consortium planned**

New cover

Project-specific liability policy:

- Cover for each well
- Insurance of all new and existing drilling operations
  - Exploration wells
  - Development wells (between discovery and production)
  - Production wells
  - Workovers (measures to improve production)

Limit: Up to US$ 20bn

Retention: approx. US$ 1–2bn

- Existing covers (company-specific liability policies) remain in place
- Possibly in order to cover the retention

Better coverage through significant increase in liability limits

Market and Munich Re outlook

- Forthcoming reinsurance renewals: Sidewards trend with prices based on the assumption of normal claims development
- In the case of portfolios with large losses, we expect price increases, especially in offshore energy and credit
- Higher rates anticipated also in Latin American property cat XL business (earthquake Chile) and nat cat Australia
- Munich Re expects to maintain the quality of its overall portfolio
- Munich Re will withdraw from business where risk-adequate prices cannot be realised
- This applies all the more in the current low interest-rate environment, where investment income on premiums earned is decreasing
- Very low interest rates make price increases necessary, especially in business involving long-term risks

THANK YOU VERY MUCH FOR YOUR ATTENTION.

Ludger Arnoldussen

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