



Insurance Perspectives of Risk Analysis

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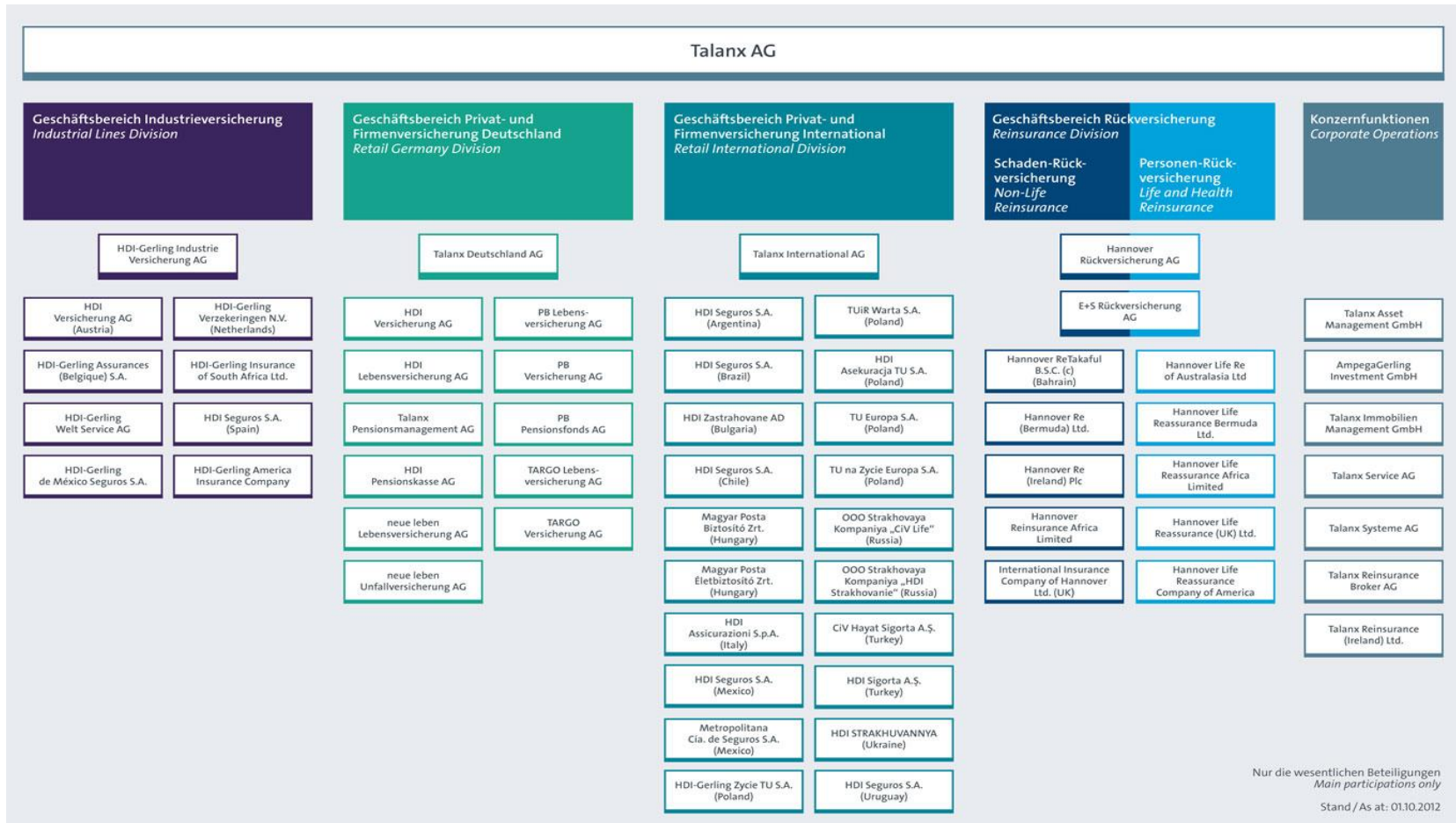
Schedule

- Who is HDI Gerling Industrie Versicherung AG?
- What are Engineering Insurances?
- Which Risk Management issues does the Technical Insurer focus on?
- Example Offshore Wind Power as a new technology

HDI Gerling Industrie Versicherung AG

a part of the Talanx Group

Industrial -----Commercial and Private (D & Int.) incl. Life----- Reinsurance-----Internal



Nur die wesentlichen Beteiligungen
Main participations only
Stand / As at: 01.10.2012



HDI Gerling Industrie Versicherung AG

a part of the Talanx Group

- Talanx Group's gross written premium: 23,7 Bil. €
- active in 150 countries
- 18.300 employees as of year-end 2011
- among the 12 largest European insurance providers by gross written premium



- HDI Gerling Industrie Versicherung AG form part of the Talanx Group
- active in >130 countries



Engineering Insurances among other Industrial Insurances

Liability

... cover mainly losses or damages of:

third party property or persons

Property

the insureds property if fire / natural hazards dominate

Engineering

the insureds property in case of projects or if technical risks are prevalent

Marine

goods, ships or aircrafts in transit

Motor

trucks or cars in transit

What are Engineering Insurances?

Engineering Insurances may cover:

- **Projects under construction**

- **EAR:** power, chemical, electronic or other production plants
- **CAR:** buildings, roads, bridges, tunnels or other civil works

- **Operations**

- **MB:** stationary machinery or mobile equipment
- **EE:** computer centers, medical equipment
- **CECR:** roads, bridges or tunnels

- **Business Interruption**

- **ALoP:** Advanced Loss of Profits for projects
- **LoP:** Loss of Profits for operations

→ ...and are often concerned with new technology and its risks!

Which New Technologies have been an issue for Engineering Insurances in the past?

- steam boilers
- heavy civils
- nuclear power plants
- waste incineration
- gas turbine power plants
- renewable energy
- high voltage direct current (HVDC)

Source: Nordic Yards




risk factors

- high forces or pressures
- high temperatures
- aggressive chemical substances
- unexperienced companies
- new materials
- unproven construction and dimensions

Engineering Insurances: Scope of Cover

unforeseen physical loss or damage

- due to any peril such as fire, explosion, natural hazards, faulty construction/ material /workmanship ...  new technology!
- of defined insured items or of the entire scope of a project
- at defined locations
- during a defined time period
- in the interest of a named insured and additional insureds and others to be subrogated
- for the reinstatement of the conditions prior to the occurrence
- plus specially agreed additional costs
- minus a deductible
- up to the sums insured or an agreed limit

Engineering Insurances have to exclude

foreseeable losses or damages due to

- normal weather conditions
- wear & tear
- known defects etc



new technology

▪ pure defects due to

- malconstruction
- malorganization
- unknown subsoil conditions or
- any other type of cost overruns



new technology

▪ uncoverable cumulative perils such as

- war or
- nuclear radiation
- in certain locations at least to be limited: natural perils, terrorism or other political perils

▪ wilful acts of the (co-)insured or his representatives

Which major issues do we consider within our Risk Management?

- prototypicality
- protection systems
- organisation and quality management
- time schedule
- working conditions
- technical conditions
- surrounding area
- subsoil conditions
- qualified staff
- losses in the past



Offshore Wind Power as an example for New Technology in the Engineering Insurance

- double power output
- offshore conditions
- expensive ships
- distance to next harbour
- winter storms
- subsea cables
- HVDC grid
- platforms
- lack of experience
- new design



Why do these issues serve for premium calculation?

Most single industrial and engineering risks are individual !

1. Analysis of risk criteria



assessment of the probability and the extent of possible losses or damages

2. Comparison of a **new risk** with a **known risk**



with **known requirements** for premium and conditions



additional premium, higher deductibles or more restrictive insurance contract conditions (or vice versa)



Source: Nordic Yards

The role of risk analysis during the underwriting process of special industrial risks

1. Data Acquisition
2. **Analysis**
3. Decision
4. Calculation of Premium
5. Quotation
6. Negotiation
7. Cover Note
8. Risk Surveillance



**UNDERWRITING
PROCESS**

Conclusion

- **Without** an **accurate analysis** of a risk to be insured **no adequate** premium, deductibles or **conditions** can be determined **by the insurer**.
- The more **uncertain** or vague the **information** given is the more the insurer has e.g. to **load additional premium** on his calculation.
- After signing a special risk the insurer can help in avoiding losses or damages.
- **HDI Gerling** has a **high experience** with **all** kinds of **technical risks**.
- There fore **our RM staff** can **recommend useful preventive measures** after site inspections.