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Container Vessels
and Risk Aggregation

The Cargo Underwriter‘s View

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Agenda

1. Container vessels and accumulation: scenarios
2. From unknown accumulations to transparency?
3. Consequences
4. Conclusion

Container vessels and accumulation: scenarios

1. Total loss of a 10,000 TEU container vessel:

– Value of the vessel:	EUR 200,000,000
– Costs	EUR 2,500,000
– Average value per 20 ft container:	EUR 20,000
– Average value of cargo:	EUR 200,000,000
– Containers (Hull):	EUR 20,000,000

=> **Claim = EUR 422,500,000**

2. Average value EUR 50,000 / EUR 100,000:

=> Claim = EUR 722,500,000 / EUR 1,222,500,000

Container vessels and accumulation: scenarios

3. Collision of two 10,000 TEU container vessels and total loss:
   - Value of the vessels: EUR 400,000,000
   - Costs EUR 5,000,000
   - Average value per 20 ft container: EUR 20,000
   - Average value of cargo: EUR 400,000,000
   - Containers (Hull): EUR 40,000,000

   => Claim = EUR 845,000,000

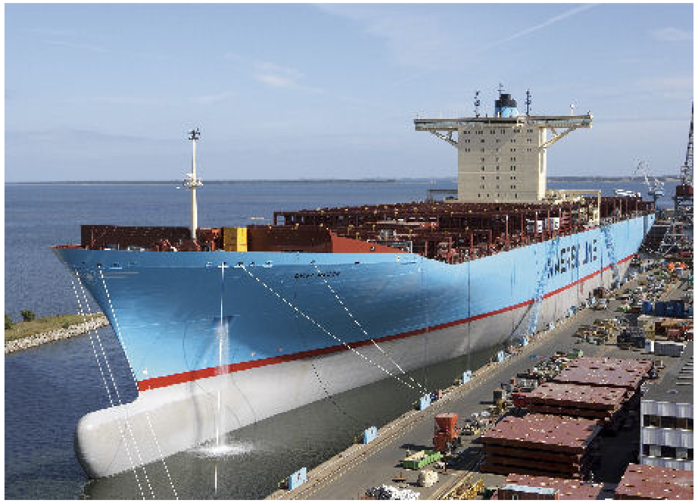
4. Average value EUR 50,000 / EUR 100,000:

   => Claim = EUR 1,445,000,000 / EUR 2,245,000,000

Container vessels and accumulation: scenarios

- 10,000 TEU is not the end: 20,000 TEU?

This is MV
Emma Maersk
11,000 TEU
(13,000 TEU)



=> Accumulation scenario: + € 1-2 Billion

- Is the collision/total loss of two vessels really the worst case?

Why unknown accumulations? Perspective of a cargo underwriter

- Open Policies with a rate on annual turnover: no declaration of shipments in advance
- The Underwriter limits the exposure per vessel for each policy ...
- ... but he can’t limit and monitor the aggregation of all of his clients on one vessel, because he doesn’t know
  – how many of his clients have cargo on board
  – and to what extent (value)

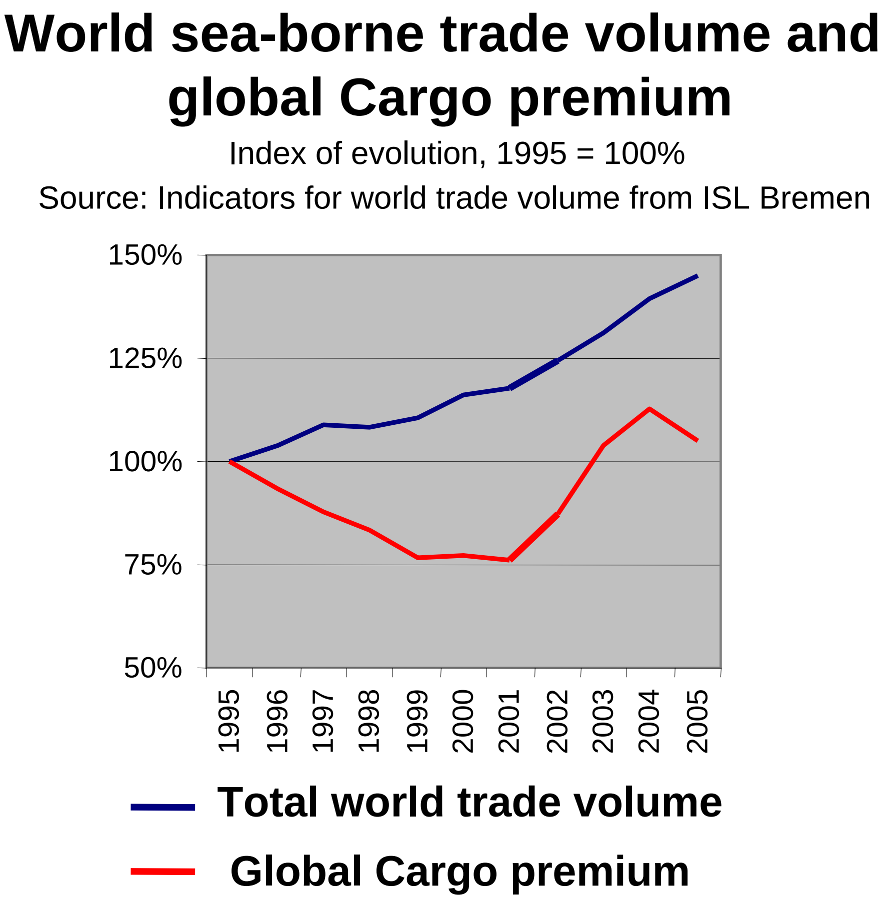
Can unknown accumulations be revealed?

- Turnover Policies were designed to save workload for clients, brokers, and insurers
- They were implemented at a time when EDP was not available
- With today’s EDP systems it should be possible “to go back to the roots” in principle, i.e. **declaration in advance of each and every single shipment of all clients**

Wishful thinking
or a feasible approach?

- Clients use EDP systems for the administration of the purchase and distribution of their goods
- The forwarders use EDP systems for the administration of their orders
- All members of the supply chain use EDP
- ISPS code
- If it’s possible to match all such data single declarations of shipments should be feasible

Evolution of insured values and insurance premiums



It seems that clients benefit from the lack of transparency

Wishful thinking
or a feasible approach?

- If cargo insurers receive all this information they will realise that there are many more shipments than anticipated
  (due to off-shoring, out-sourcing etc.)
- Declaration policies will generate much more premium volume unless the technical rates per destination are reduced correspondingly
- Since the clients may anticipate higher prices they probably will refuse to give all this data
- Will the competition “allow” this innovation?

What will be the consequence of the revealed accumulation?

- Let’s assume the underwriter knows that he has € 50m in cargo on board a vessel of which he is also the Hull Insurer for € 50m
- Is the underwriter in a position to react?
- If his event cover in his reinsurance program is below this amount he can increase his reinsurance protection ...
- ... but he can’t withdraw from his exposure

=> **Accumulation is revealed but will remain**

Do cargo insurers really have a problem with the status quo?

- If they have an adequate RI event cover?
- But the higher their retention is the more their technical result can be affected
- And Solvency II will “force” European insurers to reveal unknown accumulations. Otherwise their solvability will be affected and they need more equity

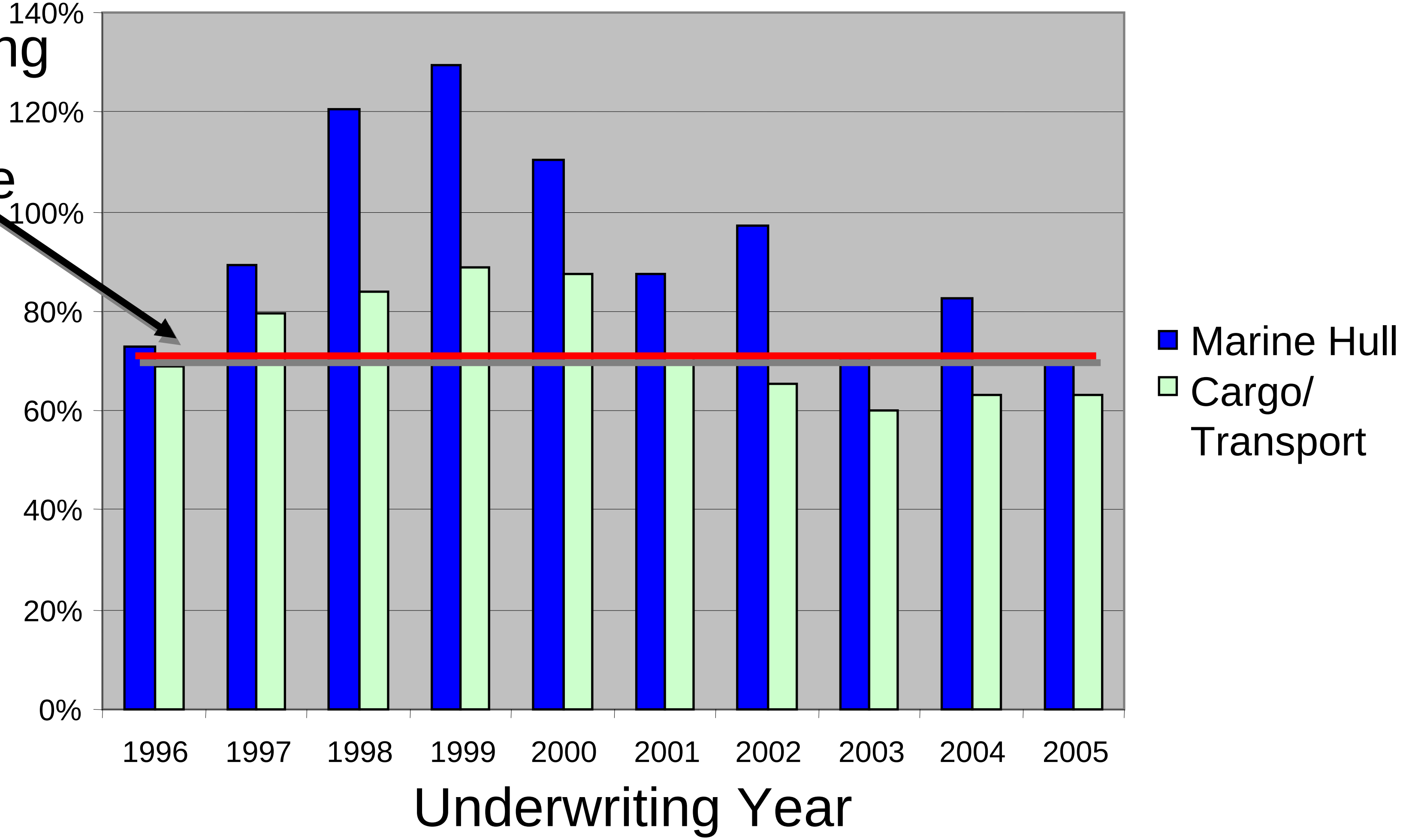
Solvency II will be a catalyst for transparency

- **Today:** required solvability margin = percentages of premiums and claims
- **2010:** calculated due to the real exposure
- Actuaries adore Property insurers, because they try to achieve full transparency
- This is the benchmark for Marine Insurance
- Actuaries will “punish” insufficient transparency => more equity => more profit => more technical margin... ~~Competitiveness~~

No margin for a total loss of one or two container vessels

Gross Ultimate Loss Ratio

Assuming a 30% expense ratio



Conclusion

- More transparency will not solve the accumulation problem regarding container vessels
- But more transparency is an important means to maintain the competitiveness under the new solvability rules
- There is a partial trade-off between transparency and equity or technical margin
- Advantages: Profit, stability of results
- Disadvantages: Losses, volatility of results

Conclusion

- The real problem for cargo insurers is the lack of sustained profitability
- The reason is mainly the empirical underwriting approach: targeting (attritional) loss ratios
- Solution: adequate large-loss margin
  - either on the whole portfolio (e.g. same percentage on gross premium)
  - or individual large-loss margins per policy
- Easy to implement, pragmatic, and promising

Regarding the accumulation problem one innovation will help us

Thank You!

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