Global Marine Insurance
Casualty trends

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CONTENTS

• The Global Marine Insurance Market

• Vessel values & fleet trends with impact on casualty trends

• CASUALTY TRENDS

Main data sources:
Premiums: IUMI (Global Marine Insurance Report published September 2016)
Fleet data: Clarkson Research, Lloyds List Intelligence
Vessel values: The Nordic Marine Insurance Statistics (NoMIS)
Casualties: Lloyds List Intelligence;
The Nordic Marine Insurance Statistics (NoMIS)
CONTENTS – CASUALTY TRENDS

SHIPOWNERS’ LIABILITY (Crew, Environment, collision etc.)

- Pool claims International Group of P&I Clubs

OFFSHORE ENERGY

- Casualties on mobile offshore units

HULL CASUALTY TRENDS

- Total and major losses and their impact
- ‘Serious’ (LLI / IMO etc.) versus ‘Major’ (Insurance) casualties – beware of the terminology!
- Trends by type of casualty
- Trends by vessel type / age group
- Special:
  - Cost driving factors
  - Effect of Lay-ups on the claims frequency
THE GLOBAL MARINE INSURANCE MARKET
MARINE PREMIUM 2015
BY LINE OF BUSINESS

Total: 29.9 USD billion / Change 2014 to 2015: -10.5%
NB: Strong USD «reduces» premium in USD as compared to local currency!

2015

- Global Hull: 25.0%
- Transport/Cargo: 52.9%
- Marine Liability: 15.0%
- Offshore/Energy: 7.1%

MARINE PREMIUM 2015
BY REGION

Relative impact of Europe somewhat decreasing
(EUR-USD effect?)

Total: 29.9 USD billion

HULL PREMIUM 2015 – BY REGION

Total: 7.5 USD billion / Change 2014 to 2015: -8.4%

P&I CLUBS INTERNATIONAL GROUP
PROTECTION & INDEMNITY = SHIPOWNERS’ LIABILITY

GROSS CALLS (PREMIUM) 2015 – OPERATIONAL LOCATION

Calls 2015:
UK: 2.16
Nordic: 1.03
Japan: 0.22
US: 0.08
Total: 3.50 (USD billion)
VESSEL VALUES
Decrease in av. vessel values despite increase in av. vessel size
Under stable market conditions, some value reduction normal due to the aging factor (<= 5%).

CHANGE IN VALUES – ALL VESSELS
COMPARING INSURED VALUE OF SAME VESSELS IN TWO CONSECUTIVE YEARS

Nordic Marine Insurance Statistics
BULK, SUPPLY/ OFFSHORE: STRONG DROP IN VALUES

NoMIS
Nordic Marine Insurance Statistics

Bulk Suppl/Off

<table>
<thead>
<tr>
<th>Year</th>
<th>Bulk</th>
<th>Suppl/Off</th>
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<tr>
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<td>23.3%</td>
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<tr>
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<td>0.9%</td>
<td>-11.8%</td>
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<tr>
<td>2006</td>
<td>9.8%</td>
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<td>2007</td>
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<tr>
<td>2008</td>
<td>4.6%</td>
<td>-6.4%</td>
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<tr>
<td>2009</td>
<td>16.7%</td>
<td>-1.8%</td>
</tr>
<tr>
<td>2010</td>
<td>23.7%</td>
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<tr>
<td>2011</td>
<td>4.4%</td>
<td>-2.4%</td>
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<tr>
<td>2012</td>
<td>-29.5%</td>
<td>-6.6%</td>
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<tr>
<td>2013</td>
<td>-7.5%</td>
<td>-6.2%</td>
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<tr>
<td>2014</td>
<td>16.7%</td>
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<td>2015</td>
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<td>-14.1%</td>
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<tr>
<td>2016</td>
<td>-14.2%</td>
<td>-11.1%</td>
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WORLD FLEET – AVERAGE AGE
VESSELS > 100 GT

Source: Clarksons Research, January 2017
NEWBUILDINGS WORLD FLEET
LESS THAN AND ABOVE 5,000 GROSS TON

Less new buildings -> fleet age increases.
New buildings larger in size.

Source: Lloyds List Intelligence, World Fleet Update
CASUALTY TRENDS

No claim – just a matter of perspective!
TYPES OF (INSURED) CASUALTIES

- Physical damage – vessels, offshore energy units, cargo
- Third party liability
  - To object e.g. collision
  - People (passengers, crew)
  - Environmental damage (e.g. oil spill)
- Loss of income
- Terror etc.
P&I POOL CLAIMS BY POLICY YEAR
= SHIPOWNERS’ LIABILITY CLAIMS

No. of claims in 2015/16 policy year below five-year average of 23 claims per year. Claims frequency and severity likely to be well below the peak years of 2006 and 2011.

OFFSHORE ENERGY CLAIMS TRENDS – MOBILES
NUMBER AND COST OF LOSSES – MOBILES
LOSSES > 1 USD MILLION

Data Source: Willis Claims Database
Claims Frequency versus Utilisation Rate as a Ratio of Contracted Rigs

Data Source: Willis Claims database, Clarksons Research, Energy Information Association
AVERAGE CLAIMS COST VERSUS OIL PRICE AND NUMBER OF LOSSES

Data Source: Willis Claims Database
HULL CASUALTY TRENDS – FREQUENCY
TOTAL LOSSES 2000-2016 (LLI)
AS % OF WORLD FLEET, VESSELS > 500 GT

Total losses:
Long-term positive trend.

Source: Losses: Lloyds List Intelligence; Fleet numbers: Clarkson Research Services;
TANKER TOTAL LOSSES 2000-2016 (LLI)
AS % OF WORLD TANKER FLEET, TANKERS > 500 GT

Source: Losses: Lloyds List Intelligence; Fleet numbers: Clarkson Research Services;
BULKER TOTAL LOSSES 2000-2016 (LLI)
AS % OF WORLD BULKER FLEET, BULKERS > 10,000 DWT

Source: Losses: Lloyds List Intelligence; Fleet numbers: Clarkson Research Services;
CONTAINER TOTAL LOSSES 2000-2016 (LLI)
AS % OF WORLD CONTAINER FLEET

Source: Losses: Lloyds List Intelligence; Fleet numbers: Clarkson Research Services;
CLAIMS FREQUENCY* (NOMIS): LONG-TERM POSITIVE TRENDS

* = No. of claims divided by no. of insured vessels

- **Partial loss frequency**
- **Total loss frequency**

Pre-financial crisis peak

- **Partial claims (left axis)**
- **TLO claims (right axis)**
CLAIMS FREQUENCY > CERTAIN COST LEVELS: STABLE TO POSITIVE TRENDS

NoMIS
Nordic Marine Insurance Statistics
HULL CASUALTY TRENDS – COST
CLAIM COST PER VESSEL – INCLUDING/EXCLUDING TOTAL LOSSES

Strong total loss impact

2003-08: Strong increase in repair cost per vessel.
Since 2009: repair cost stable; Volatility by major claims impact.
CLAIM COST PER VESSEL: INCREASING VOLATILITY BY MAJOR CLAIMS

2004: first claim > USD 50 million

2012/13/15: strong major claims impact

2014/16: little major claims impact

Claim bands:
- > 50 MUSD
- 30-50 MUSD
- 10-30 MUSD
- 5-10 MUSD
- 1-5 MUSD
- <= 1 MUSD
- IBNR
CLAIMS EXCEEDING 10 USD MILLION AS % OF TOTAL CLAIM COST

Strong volatility and impact on annual costs by major claims.
CLAIMS FREQUENCY – ALTERNATIVE FACTS (?)
LLOYDS LIST INTELLIGENCE: ‘SERIOUS’ CASUALTIES AS % OF WORLD FLEET
VESSELS > 500 GT

LLI: Strong increase in ‘serious’ casualties in 2015 and 2016.

So who’s right?

Source: Losses: Lloyds List Intelligence; Fleet numbers: Clarkson Research Services;
ANSWER: BOTH!
BEWARE OF THE TERMINOLOGY!

- ‘Serious’ casualty = serious related to the nature of the casualty (Lloyds List Intelligence, IHS, Clarkson Research, IMO)

- ‘Major’ claim = extraordinary costly casualty, e.g. > 5 USD million (Insurer terminology)

Major claims are normally the result of serious casualties, but serious casualties are not necessarily costly.

- ‘Total loss’ = vessel is lost or damaged beyond repair.

The perception of a ‘total loss’ is near equal by all parties.

For insurers, a total loss means being liable to pay the insured value of the vessel (or even more, including salvage costs and 3\(^{rd}\) party liability). A ‘constructive total loss’ occurs when the assumed repair costs exceed e.g. 80% of the insured vessel value.
NOMIS VERSUS LLI CASUALTIES:
SPLIT BY ‘SERIOUS’/‘NON-SERIOUS’ (LLI) & 5 USD MILLION COST (NOMIS)
HULL CASUALTIES – BY TYPE OF CASUALTY
Total Losses 2002 – 2016
by cause, all vessel types, vessels > 500 GT

Source: LLI, total losses as reported by Lloyds List
NUMBER OF CLAIMS BY TYPE OF CASUALTY

Total number of claims:

2011-2015: 16,854
2016: 3,053

NoMIS
Nordic Marine Insurance Statistics
Total cost of claims in USD million:

2011-2015: 4,471.3

2016: 491.7
FREQUENCY OF CLAIMS > USD 500,000
BACK TO PRE-BOOM LEVEL

NoMIS
Nordic Marine Insurance Statistics

Machinery
Collision, Contact, Grounding, Ice
Other
Fire/Explosion
Heavy weather

0.00%
0.20%
0.40%
0.60%
0.80%
1.00%
1.20%
1.40%
1.60%
1.80%

AVERAGE CLAIM COST (USD 1,000)
STRONG VOLATILITY OF FIRE/EXPLOSION IMPACT

NoMIS
Nordic Marine Insurance Statistics

Fire/Explosion
Collision, Contact, Grounding, Ice
Machinery
Heavy weather
Other
CLAIMS TRENDS
BY AGE GROUP AND VESSEL TYPE
CLAIMS FREQUENCY, BY AGE GROUP

NoMIS Nordic Marine Insurance Statistics

- 0-5 years
- 5-10 years
- 10-15 years
- 15-20 years
- 20-100 years

2011-2013
2014-2016
2011-2016

- 2011-2013
- 2014-2016
- 2011-2016
CLAIM COST PER VESSEL, BY AGE GROUP
CLAIMS FREQUENCY, BY VESSEL TYPE

NoMIS
Nordic Marine Insurance Statistics

- Bulk
- Cargo
- Cont./Car/RoRo
- Passenger
- Tank
- Supply/Off

2011-2013
2014-2016
2011-2016

- 2011-2013
- 2014-2016
- 2011-2016
CLAIM COST PER VESSEL, BY VESSEL TYPE

- Bulk
- Cargo
- Cont./Car/RoRo
- Passenger
- Tank
- Supply/Off

2011-2013
2014-2016
2011-2016

Bar chart showing the claim cost per vessel type with different years.
SUMMARY CASUALTY TRENDS

- **Total loss frequency**: Long-term positive trend continues in 2016 after some increase 2015.

- **Overall claims frequency**: Long-term stable to downwards trend.

- **Repair cost**: Increase before financial crisis. Since 2009 relative stable at pre-crisis level. Correlation with certain parameters (e.g. steel price, USD exchange rate, labour cost). May be positively influenced by strong USD (repairs paid in other currencies).

- **Major (=costly) claims trends**:
  - More expensive single claims.
    (increasing vessel sizes, more complex objects)
  - Increasing Volatility
    Strong impact in some years (2012, 2013, 2014), little in other years (2014, 2016). Difficult to estimate major claims impact for a specific year due to random occurrence.

- **‘Serious’ casualties**: Strong increase in 2015 & 2016. Majority of ‘serious’ casualties no ‘major’ claims in terms of cost. **A high share of ‘serious’ casualties should nevertheless give rise to concern and be investigated.**

- **Lay-ups**: Does a higher share of inactive vessels keep the claims frequency/cost at bay?
SPECIAL FOCUS:
- COST DRIVING FACTORS
- EFFECT OF LAY-UP ON CLAIMS FREQUENCY & COST
COST DRIVING FACTORS

Cost driving factors inflation index, 2000 = 100%

Sources: Claim indices: Cefor NoMIS data as of 31.12.2016; Exchange rates: Norges Bank, Ship operation costs: Moore Stephen's, Steel: CRU Steel Price Index
LAY-UP EFFECT – EXAMPLE:
CONTAINER VESSELS LAID UP IN 2009
CLAIMS FREQUENCY OF CONTAINER V. IN LAY-UP IN 2009 VERSUS ACTIVE VESSELS

NoMIS
Nordic Marine Insurance Statistics

No. of active Container vessels covered
No. of Container vessels in Lay-Up in 2009
Claims Frequency - active Container vessels
Claims Frequency - Container vessels in Lay-Up in 2009
CLAIM COST PER VESSEL OF CONTAINER V.
IN LAY-UP IN 2009 VERSUS ACTIVE VESSELS

Sources: Claim indices: Cefor NoMIS data as of 31.12.2016; Exchange rates: Norges Bank, Ship operation costs: Moore Stephen’s, Steel: CRU Steel Price Index
SUMMARY LAY-UP EFFECT ON CLAIMS TRENDS

Container vessels in lay-up in 2009:

- Claims frequency was reduced by half during the period of inactivity.
- Claims frequency & cost were above average both before and after lay-up period!
  Why also before lay-up? Substandard container vessels first put into lay-up?

Supply/Offshore vessels in lay-up in 2016:

- Claims frequency equally reduced during period of inactivity in 2016
- …but claims frequency before lay-up period was normal!
- How claims frequency develops after lay-up period remains to be seen!
  May be challenging to reactivate complex objects.
ISSUES TO MONITOR

High-value risks

- Oil price, fuel quality
- Arctic risks
- Changes in regulation (liabilities)
- Fire on RoRo & Container vessels

Human factor/Qualification

- Climate change

Value accumulation

- New technology
- Internet of things/complex technologies
- Navigation

Cyber risk

MSC Safety discussions!
IUMI REPORTS 2016/17:

Conference publications:

Spring statistics on Cargo, Hull, Offshore energy:

IUMI Statistics: https://iumi.com/statistics
THANK YOU.
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