

# IUMI



## Global marine insurance report

Astrid Seltmann, IUMI F&F vice chairman, Analyst/Actuary @ Cefor, the Nordic Association of Marine Insurers



**Genova**  
18-21 September 2016

# GLOBAL MARINE INSURANCE REPORT

- **Global Marine Insurance – Overview**

- Focus: Challenges (Market & data)

- **P&I – Income & claims**

- **Cargo – Market & results**

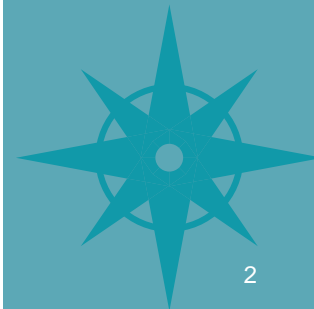
- Focus: Accumulation claim effect (Tianjin)

- **Hull – Market & results**

- Focus: 2015 versus 2016 claims & exposure

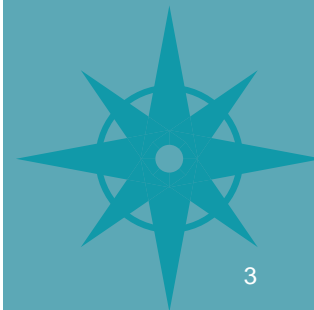
- **Offshore Energy – Market & results**

- Focus: Low oil price and no remedy.



# MARKET CHALLENGES

- Economic & political environment
  - Oil price
  - Weather / climate
  - Technological development
  - Trading areas
  - Volatility in all areas
- Identify – and quantify! – impact on world trade, fleet, safety, ..., and consequently the insurance industry (volumes, values, income, claims). Ideally proactively.



# DATA CHALLENGES: THE GURU APPROACH?

TRADEWINDS 18 SEPTEMBER 2015

falling by 5.8% to \$7.6bn, according to IUMI actuarial guru, Astrid Seltmann.

## 'LUCKY' YEAR SAVES HULL BUT HIKE IN CLAIMS SEES



► **ASTRID SELTMANN:** IUMI's actuarial expert says the 2014 global hull premium has actually fallen by 5.8% to \$7.6bn. **Photo:** JIM MULRENAN

A long run of hull insurance-market losses has been broken — but not in a way that gives underwriters grounds to break out the champagne.

Statistics prepared for the International Union of Marine Insurance (IUMI) conference in Berlin points to 2014 being a profitable year for hull underwriters (see story, right) but only because claims were at an extraordinarily low level.

So 2014 was not the end of a prolonged negative cycle but one year that looks to be turning out well.

There was no sign of an upturn in hull premium levels, with the

global hull premium actually falling by 5.8% to \$7.6bn, according to IUMI actuarial guru, Astrid Seltmann.

There had been 18 consecutive years of loss for the global hull market up to 2014.

But it looks as if last year was not part of a new trend but a freak year as a result of the absence of major claims.

Seltmann expects 2015 to be a further year of underwriting loss for the global hull market as there has been a run of big claims through the first half of the year.

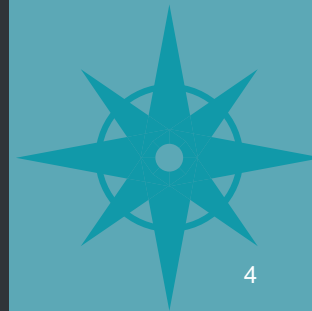
"I don't like to speak about lucky years but there was an extraordi-

nary absence of major claims in 2014. Enjoy, but it is not the new normal. The big claims will come again — and they already have in 2015," Seltmann, the Nordic Association of Marine Insurers' (Cefor) actuary, told the conference.

Seltmann warns that the hull market continues to face challenges, not least from growth in the number of large high-value vessels such as mega-boxships and cruiseships.

Major claims were also accounting for a bigger share of the total claims bill, she says.

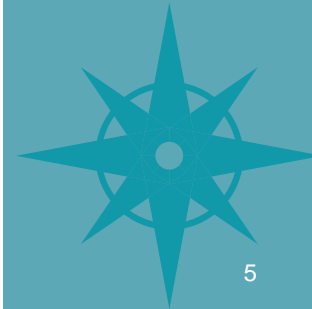
"Major claims are not disappearing just because of one year," she



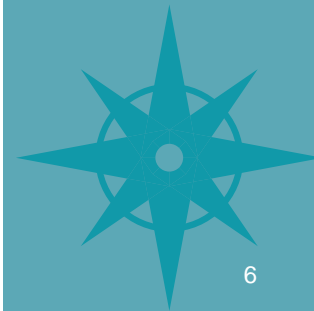
# DATA CHALLENGES

- Data changes retrospectively!
- Missing and double-reported data.
- Exchange rates
  - Volatility (what is 'real' change?)
  - Inconsistent application (as of which date)
- What the hell is a loss ratio triangulation?
- Consistent global data: impossible!
  - The guru challenge:

Derive meaningful  
insight & messages!



# THE GURU APPROACH – RECEIVING DATA & INSIGHT



# GLOBAL MARINE INSURANCE REPORT

## ■ **Global Marine Insurance – Overview**

- Focus: Challenges (market & data)
- **P&I – Income & claims**
- **Cargo – Market & results**
  - Focus: Accumulation claim effect (Tianjin)
- **Hull – Market & results**
  - Focus: 2015 versus 2016 claims & exposure
- **Offshore Energy – Market & results**
  - Focus: Low oil price and no remedy.



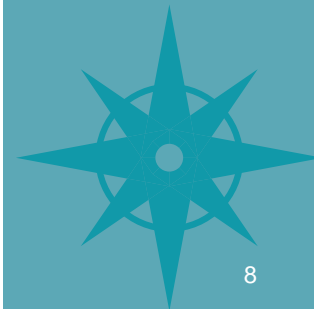
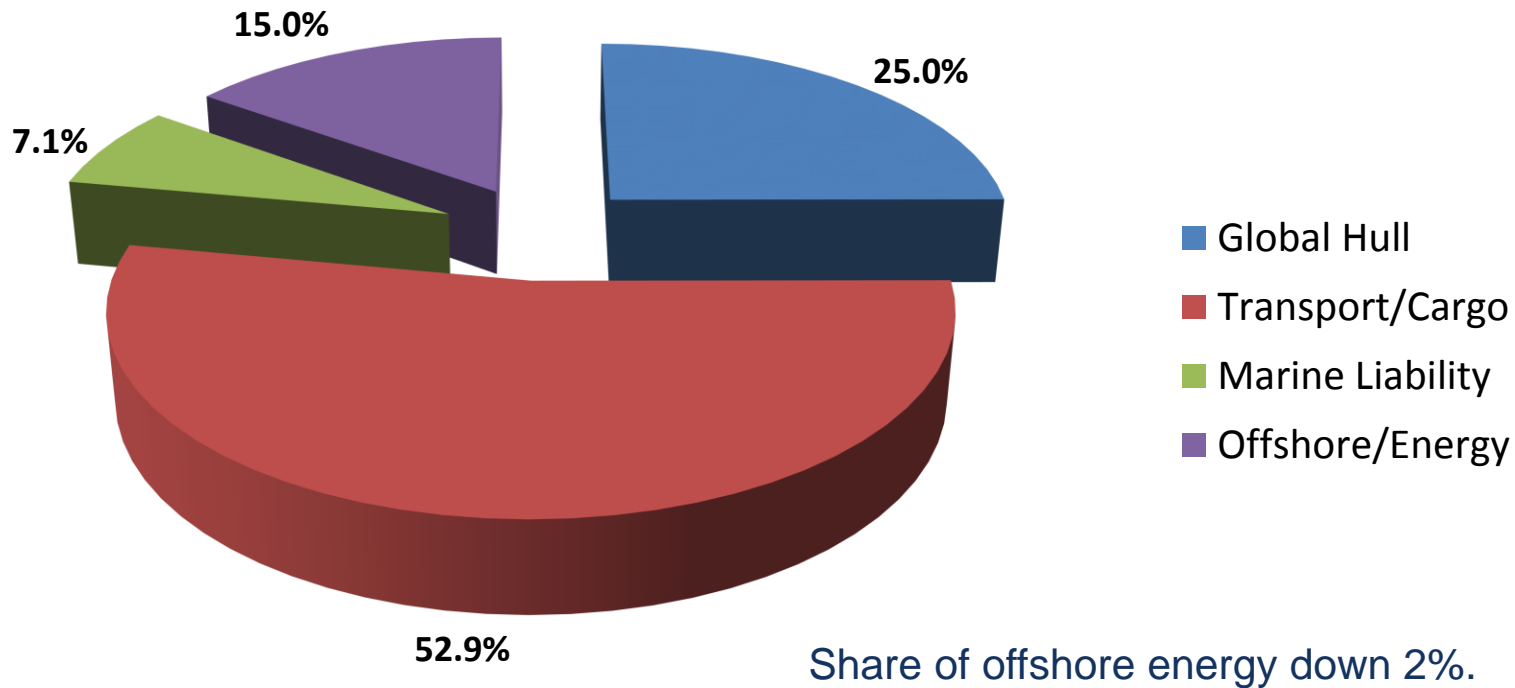
# MARINE PREMIUM 2015

## 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!

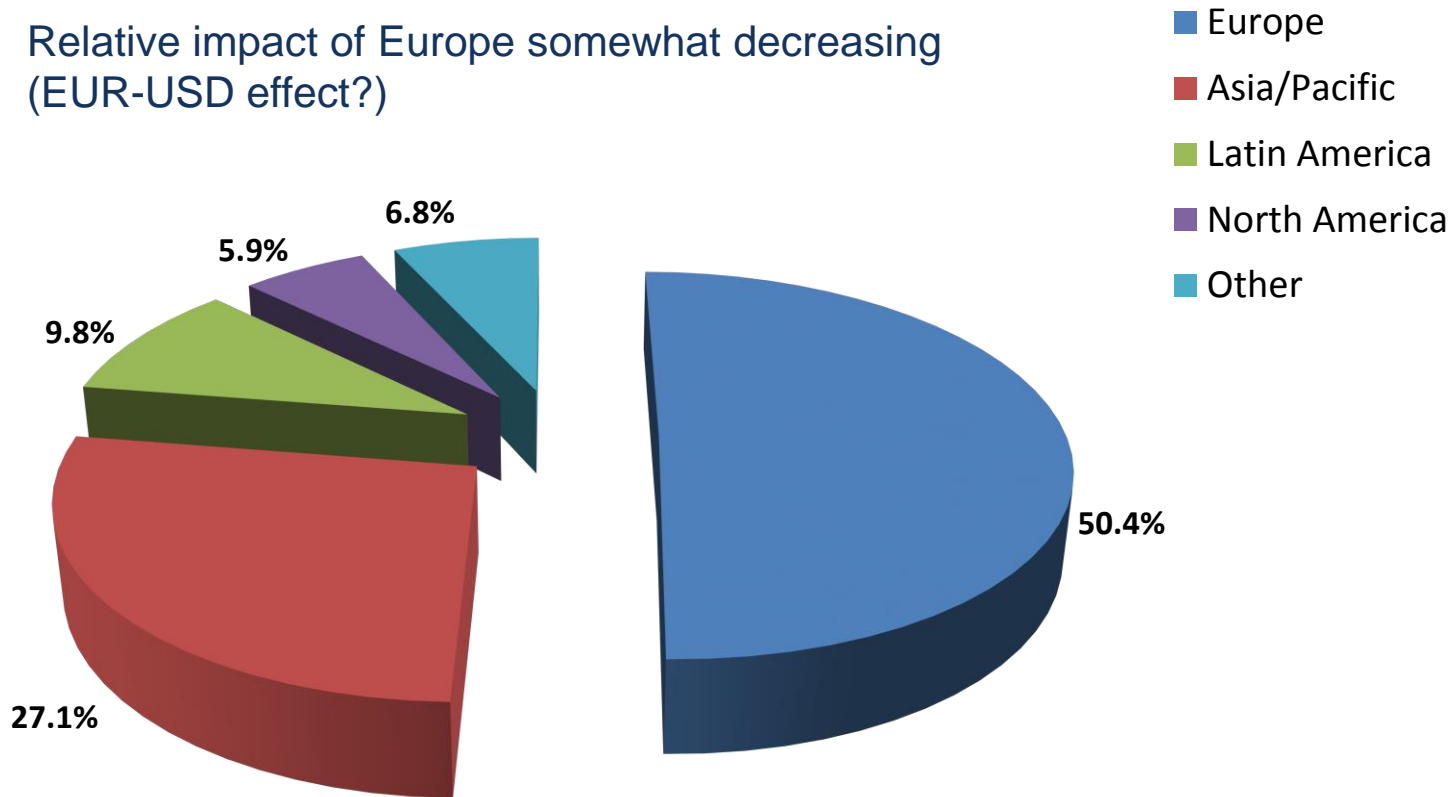




# MARINE PREMIUM 2015

## BY REGION

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



Total: 29.9 USD billion



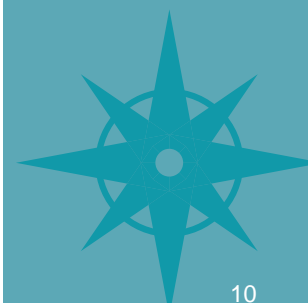
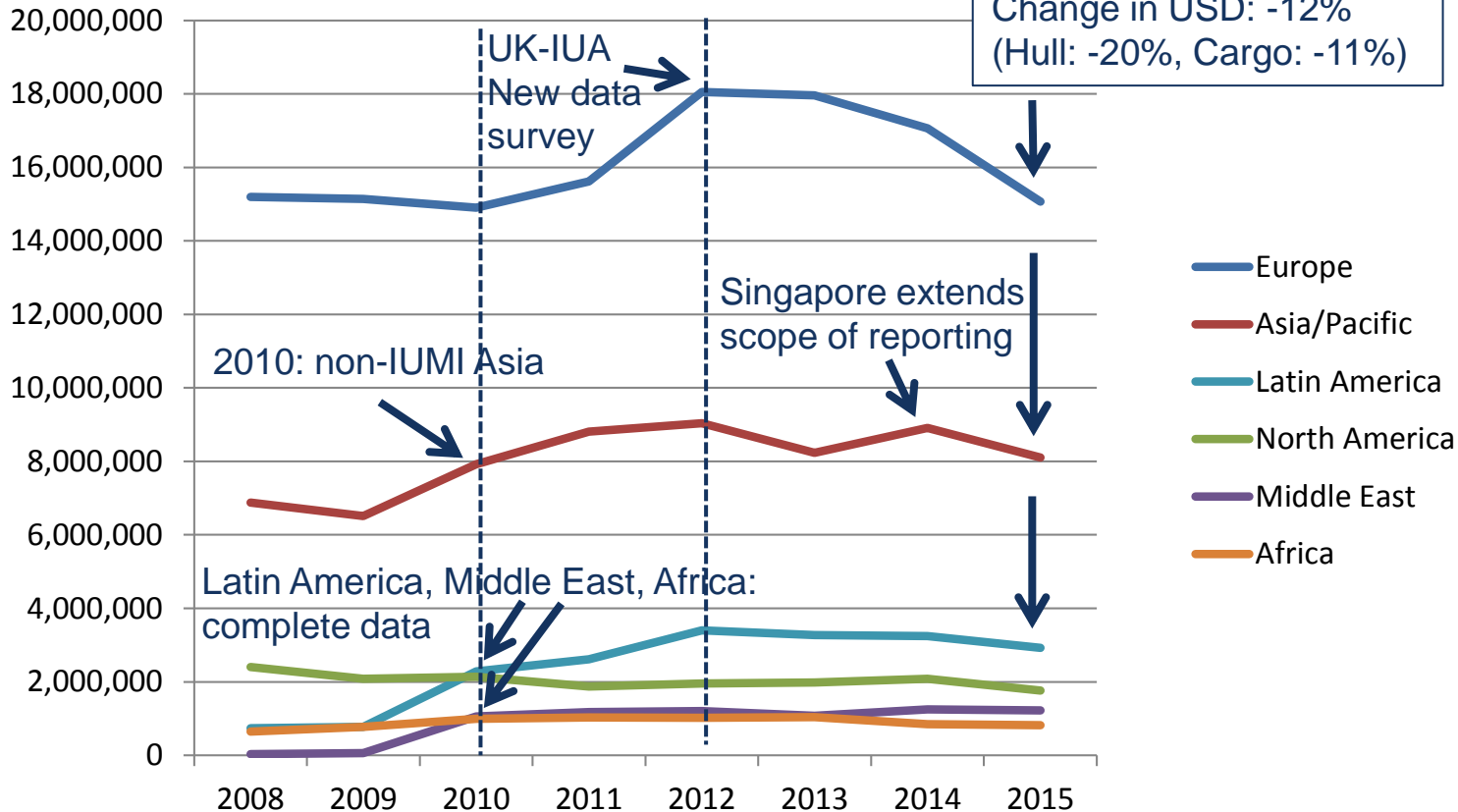
# MARINE PREMIUM 2008-2015

## DATA AS REPORTED AS OF 2016



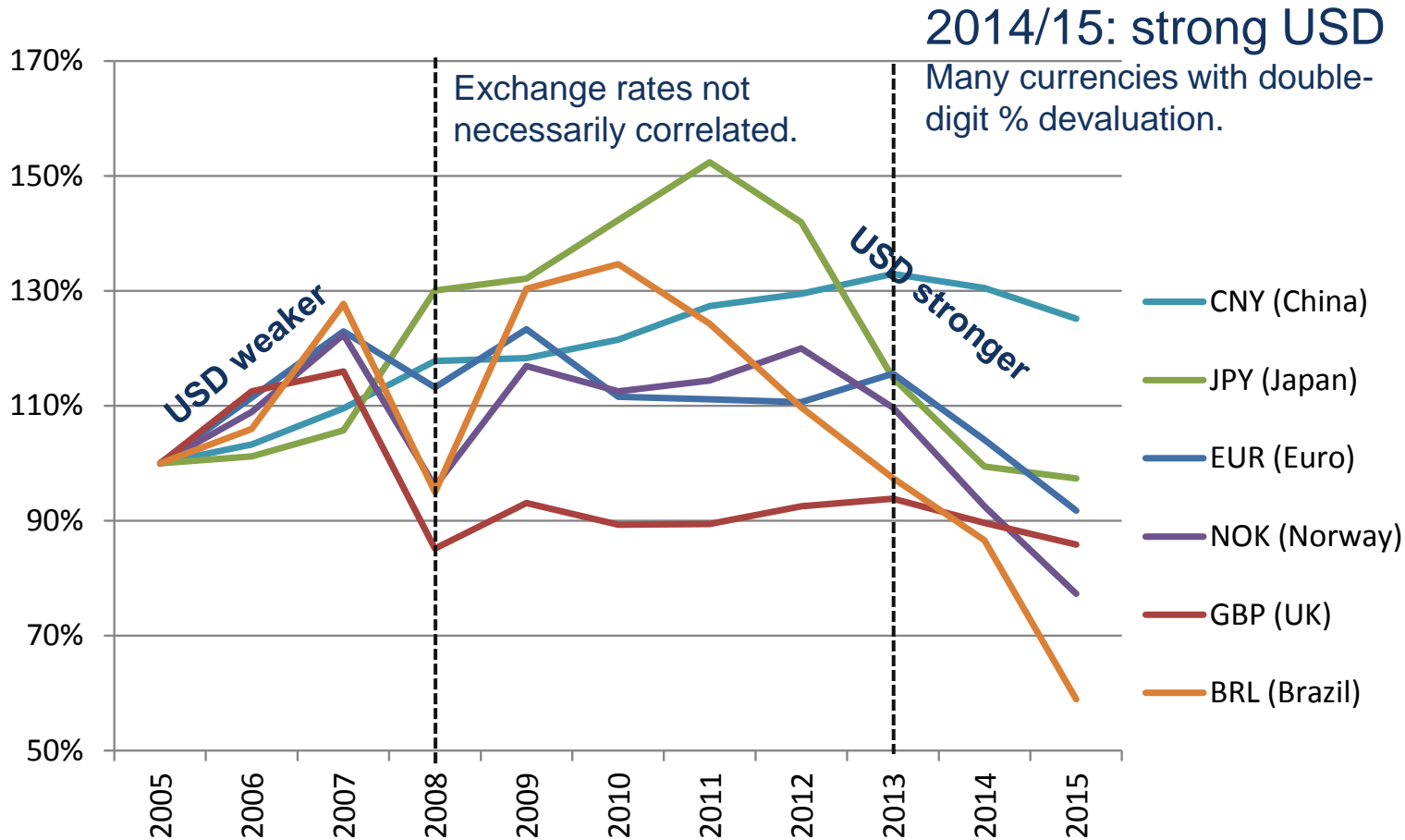
2014: 33.4 USD bill. / 2015: 29.9 USD bill.  
Strong USD «reduces» income in most currencies!

**Currency effect – Example Germany**  
Real change: -2%  
(Hull: -12%, Cargo: 0%)  
Change in USD: -12%  
(Hull: -20%, Cargo: -11%)



# USD EXCHANGE RATE 2005-2015

AGAINST SELECTED CURRENCIES, INDEX, 2000=100%

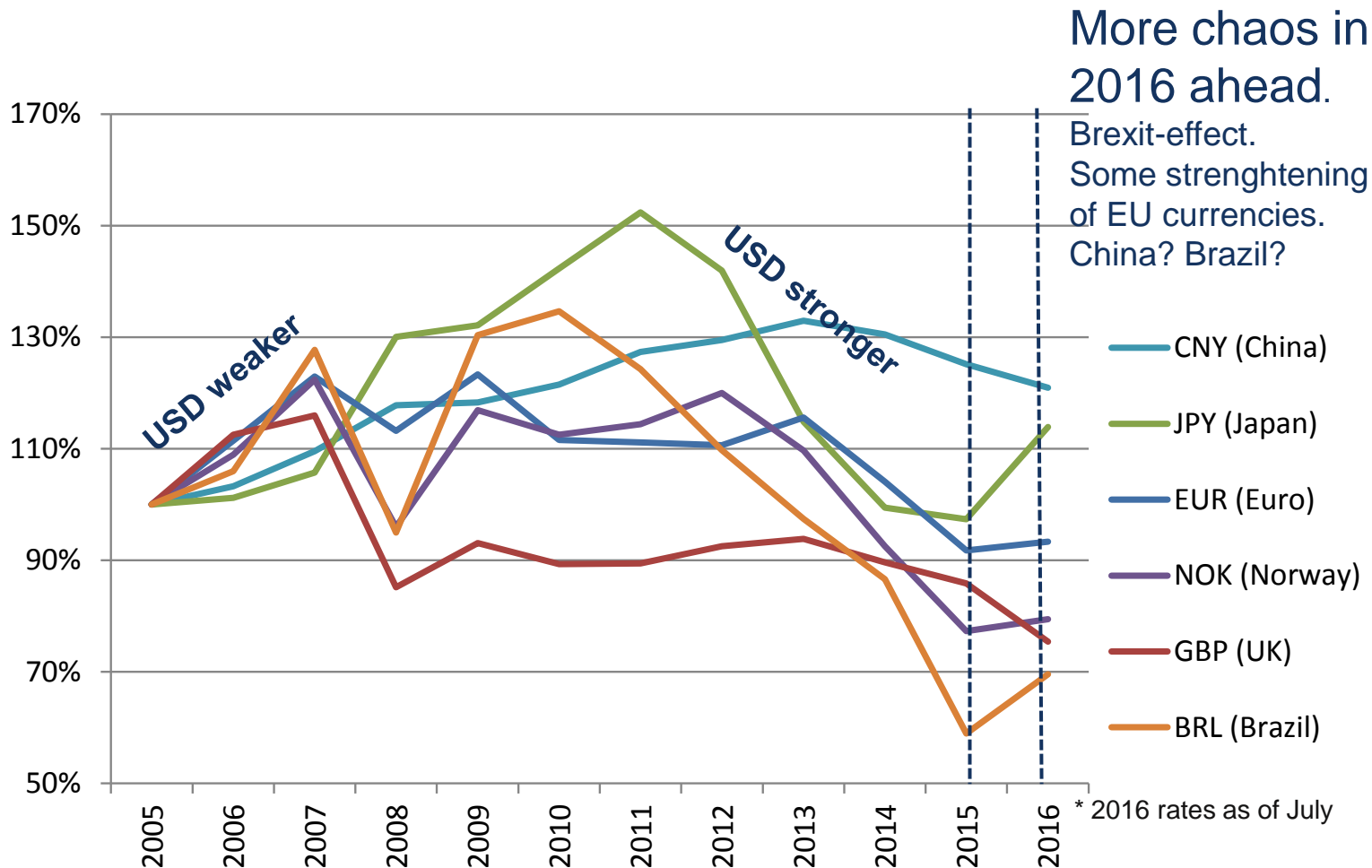


Source: Norges Bank exchange rates, as of December each year.

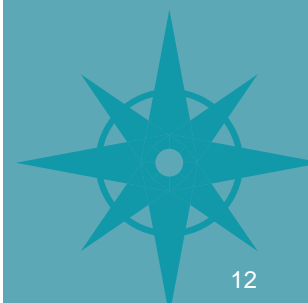


# USD EXCHANGE RATE UNTIL 2016

AGAINST SELECTED CURRENCIES, INDEX, 2000=100%

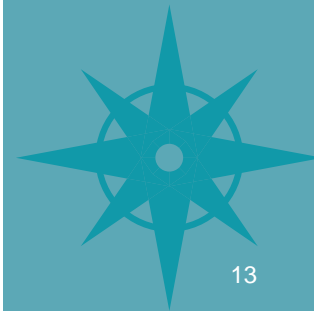


Source: Norges Bank exchange rates.



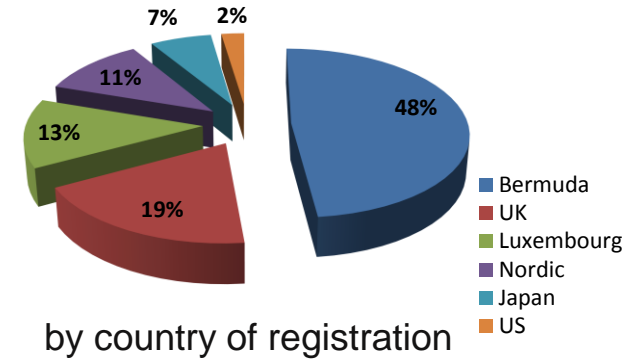
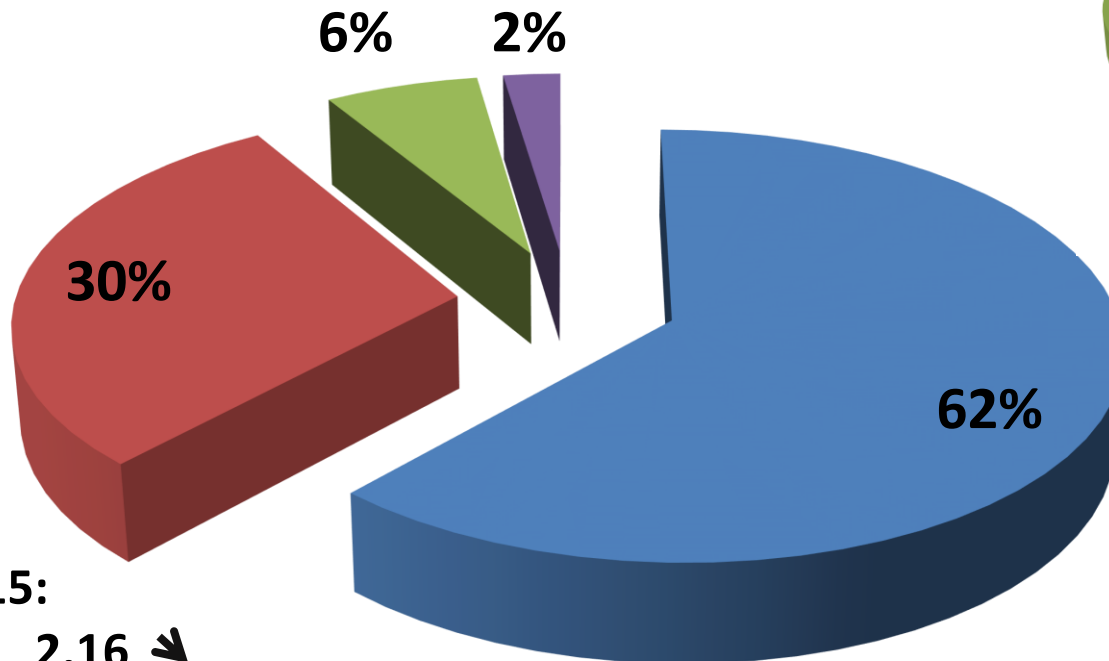
# GLOBAL MARINE INSURANCE REPORT

- **Global Marine Insurance** – Overview
  - Focus: Challenges (market & data)
- **P&I** – Income & claims
- **Cargo** – Market & results
  - Focus: Accumulation claim effect (Tianjin)
- **Hull** – Market & results
  - Focus: 2015 versus 2016 claims & exposure
- **Offshore Energy** – Market & results
  - Focus: Low oil price and no remedy.



# P&I CLUBS INTERNATIONAL GROUP

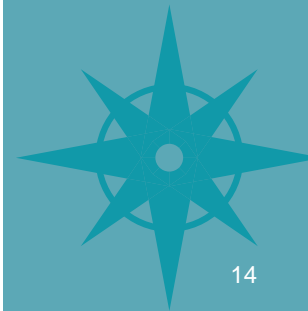
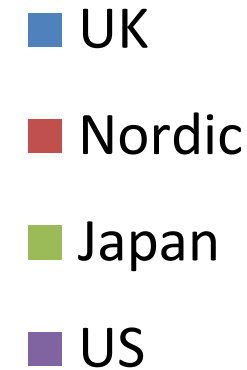
## GROSS CALLS (PREMIUM) 2015 – OPERATIONAL LOCATION



by country of registration

### Calls 2015:

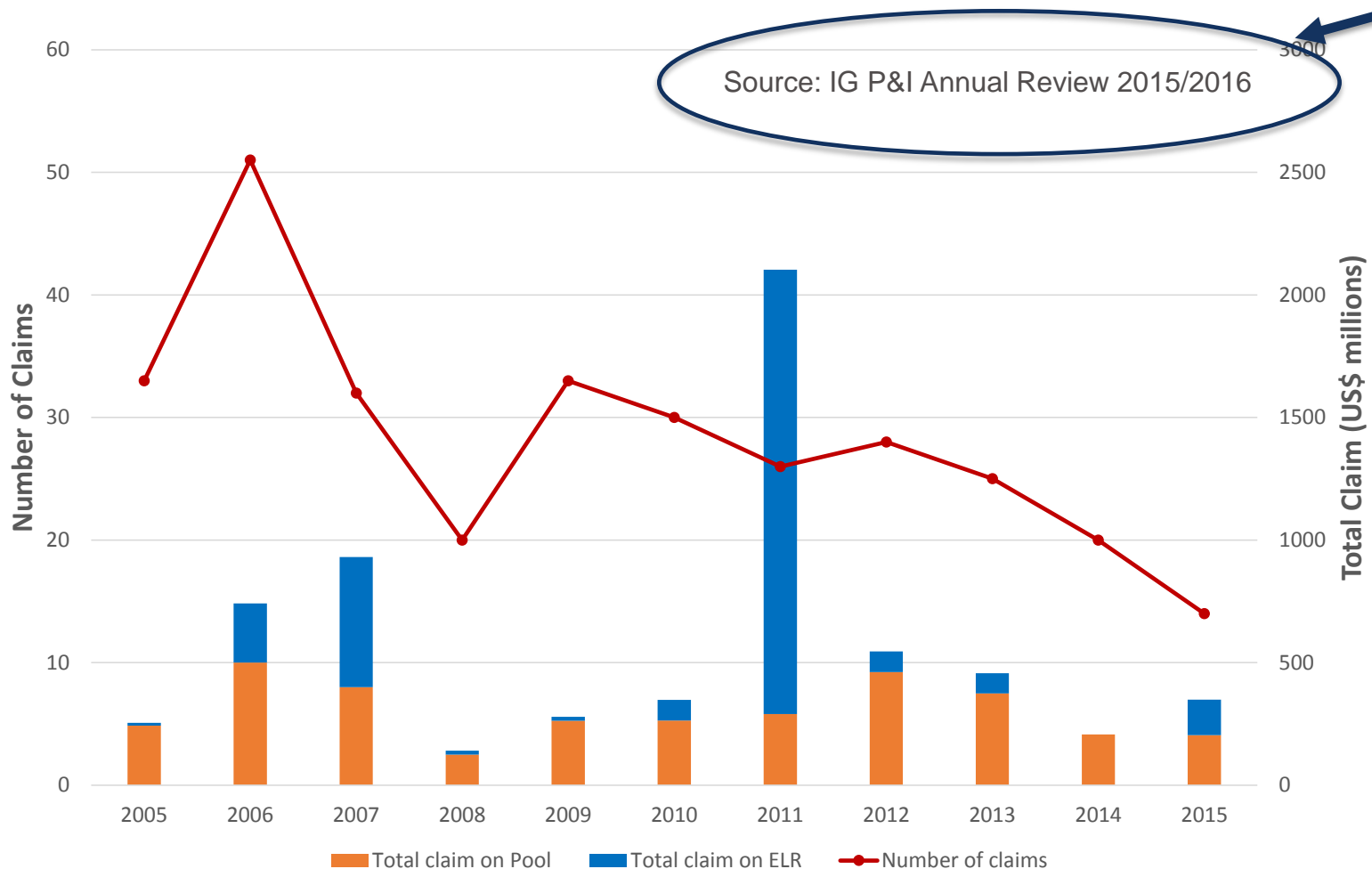
UK:	2.16	↘	
Nordic:	1.03	↘	
Japan:	0.22	↘	
US:	0.08	↘	
<b>Total:</b>	<b>3.50</b>		<b>(USD billion) ↘ Slightly down (-0.19)</b>



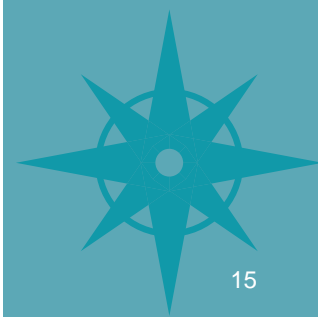
# P&I POOL CLAIMS BY POLICY YEAR



“Fourth consecutive year of reduced **frequency** of claims impacting on the Group pool and General Excess Loss reinsurance programme.”  
 “**Severity** of 2015/16 claims exceeds that of 2014/15 notifications.”

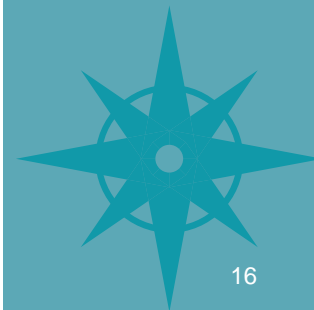


Read this to understand complexity of exposure under P&I liability!



# GLOBAL MARINE INSURANCE REPORT

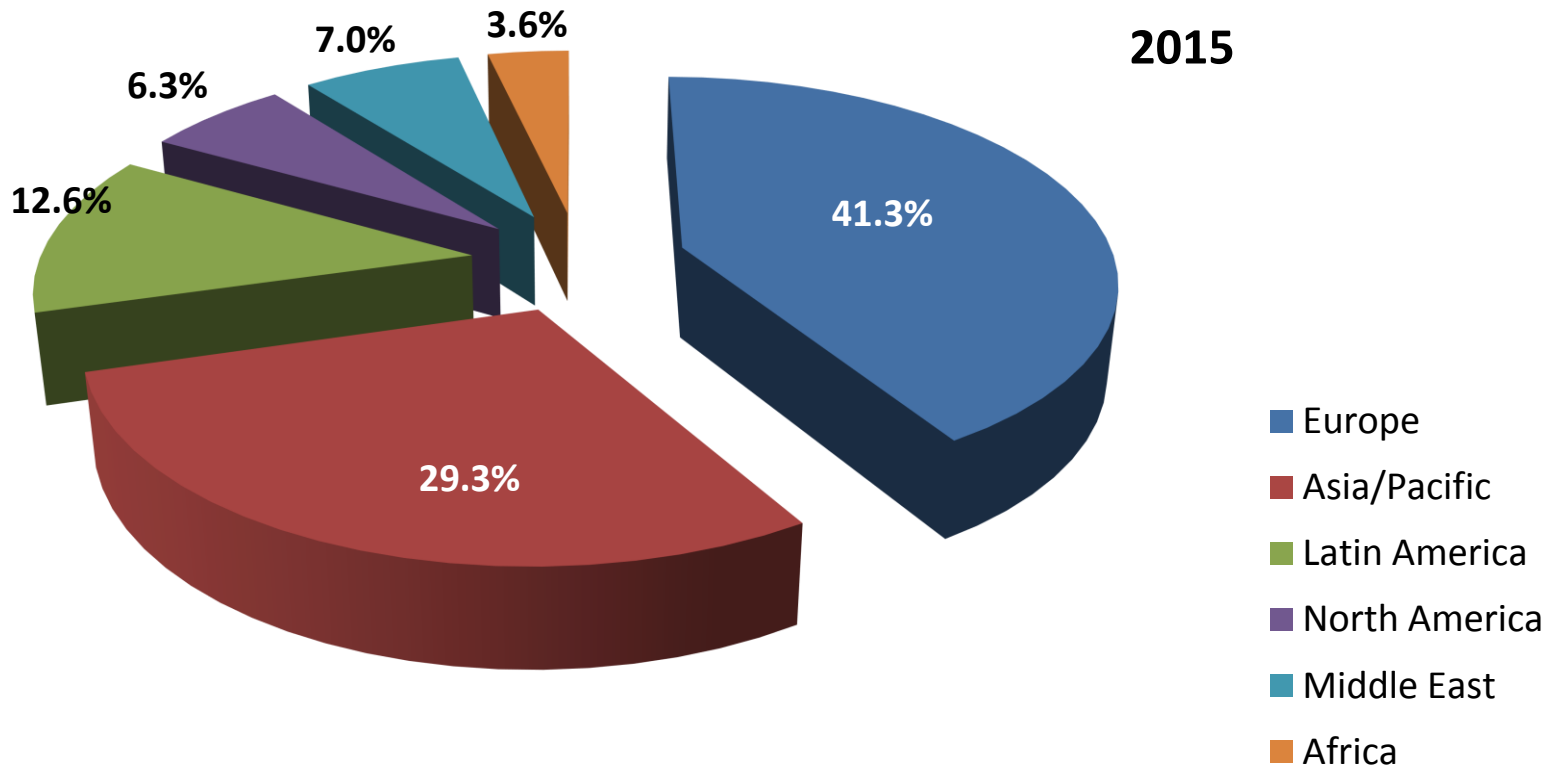
- **Global Marine Insurance** – Overview
  - Focus: Challenges (market & data)
- **P&I** – Income & claims
- **Cargo** – Market & results
  - Focus: Accumulation claim effect (Tianjin)
- **Hull** – Market & results
  - Focus: 2015 versus 2016 claims & exposure
- **Offshore Energy** – Market & results
  - Focus: Low oil price and no remedy.



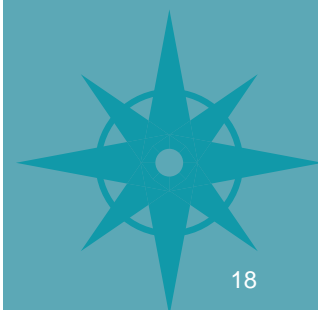


# CARGO PREMIUM 2015 - BY REGION

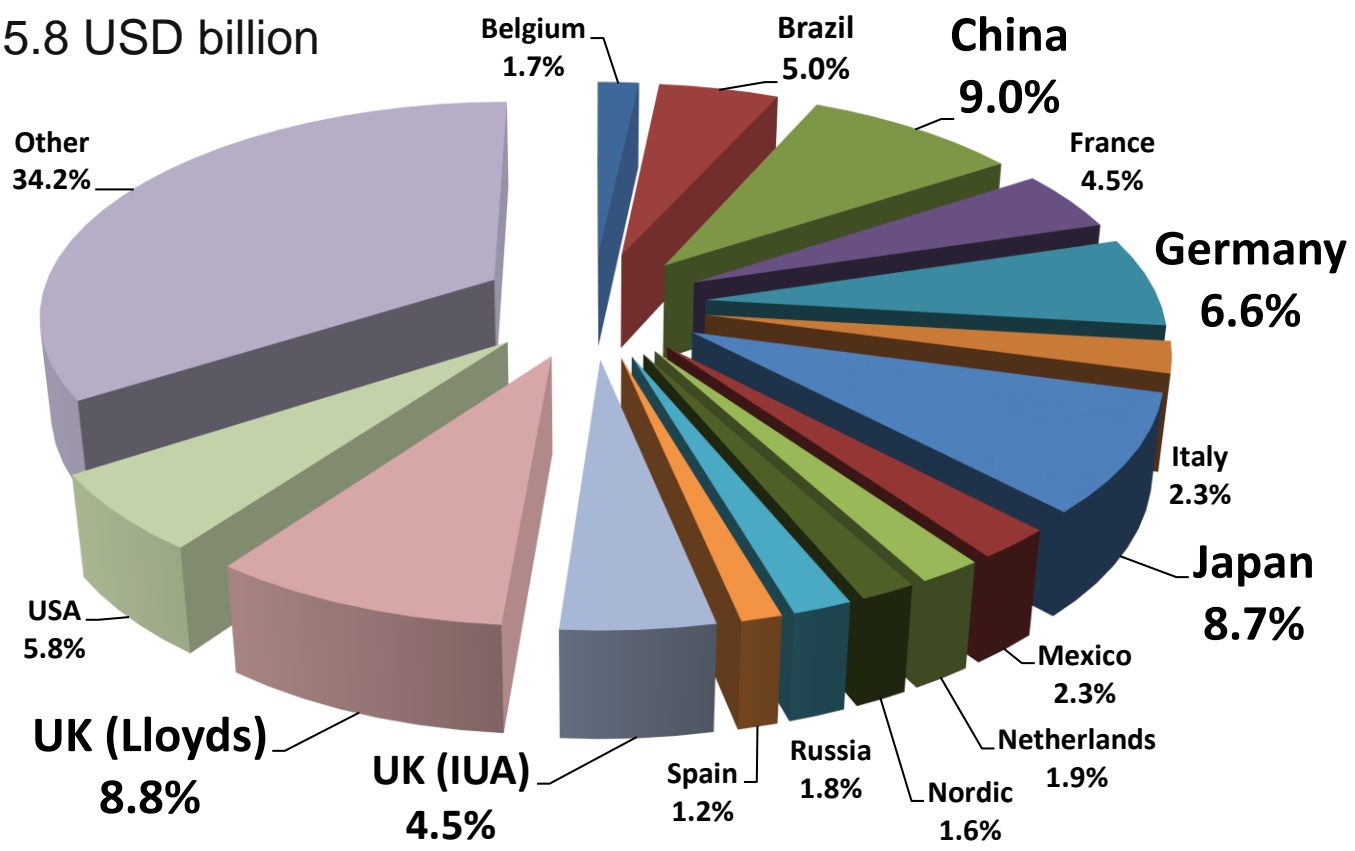
Total: 15.8 USD billion / Change 2014 to 2015: -9.1%  
Reduction partly due to strong USD.



# CARGO PREMIUM 2015 - BY MARKETS



Total: 15.8 USD billion

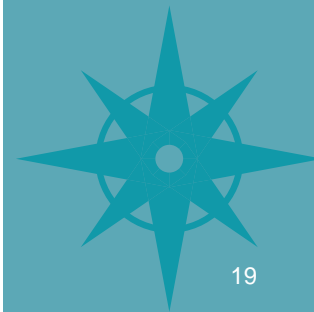
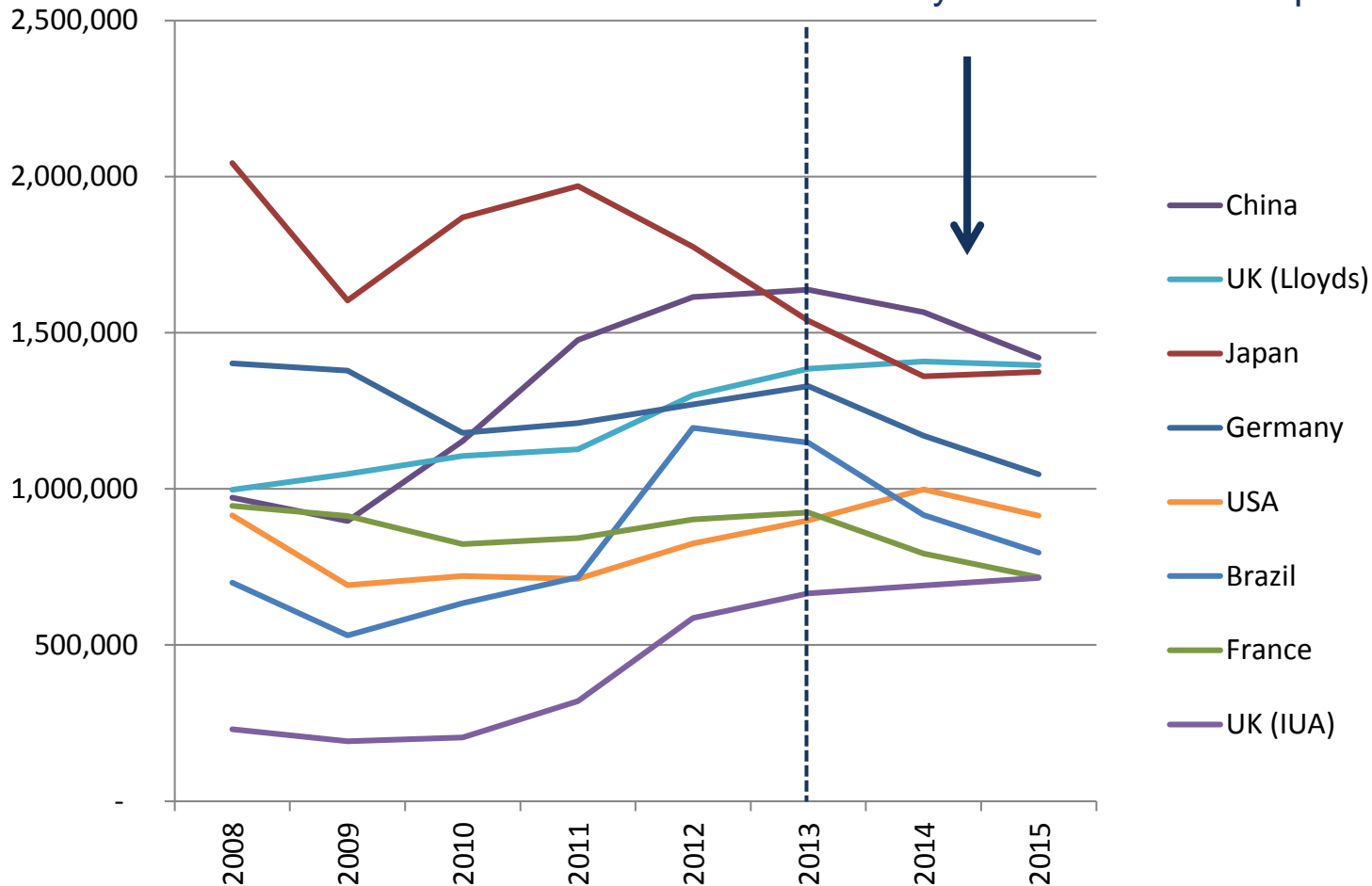


# CARGO PREMIUM 2008-2015

## SELECTED MARKETS



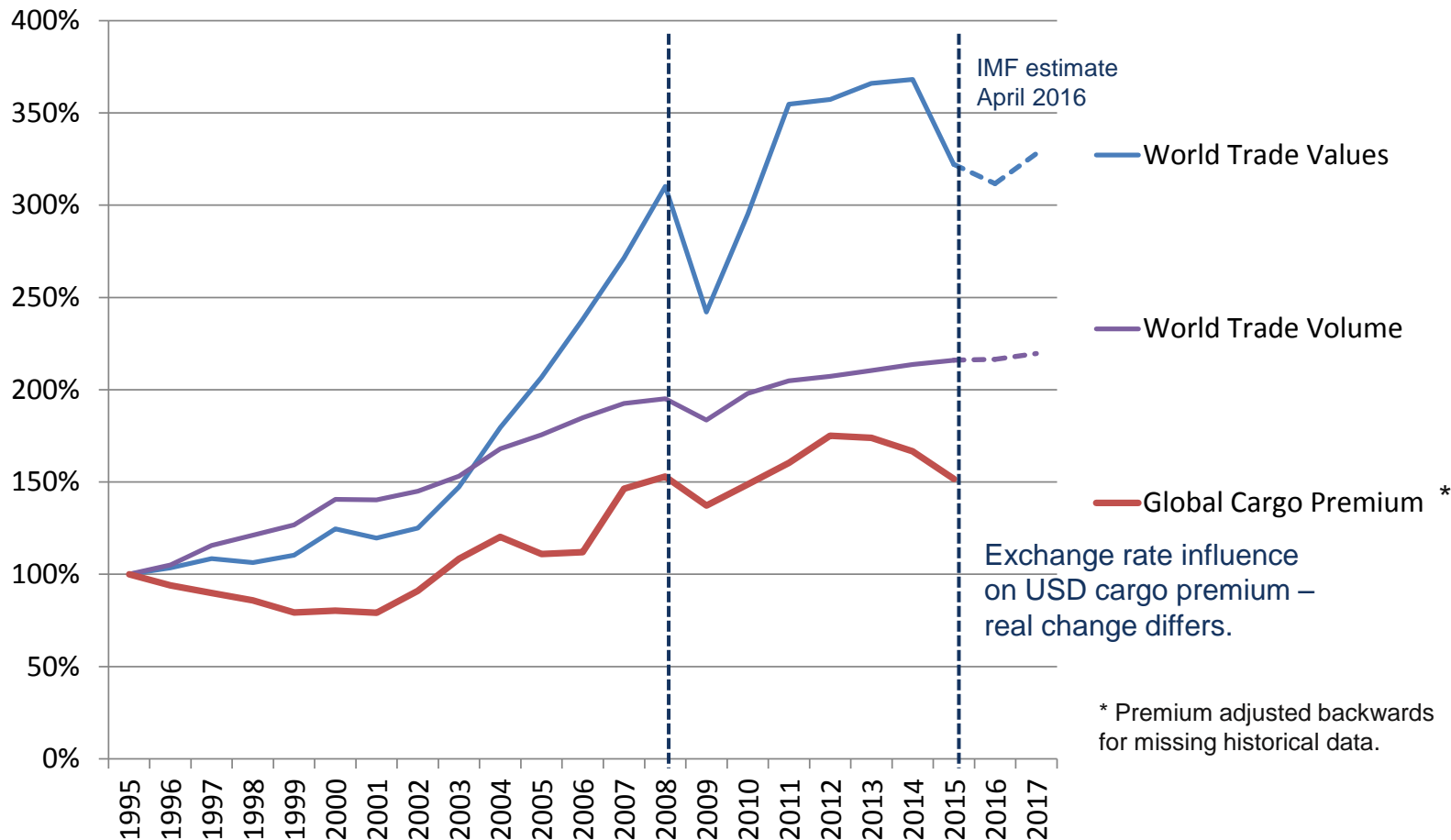
2014/15: strong USD «reduces» income of most countries. Difficult to identify real market development.



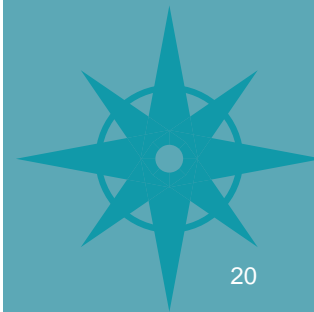
# CARGO PREMIUM / WORLD TRADE VALUES & EXPORTS



Index of evolution, 1995=100%



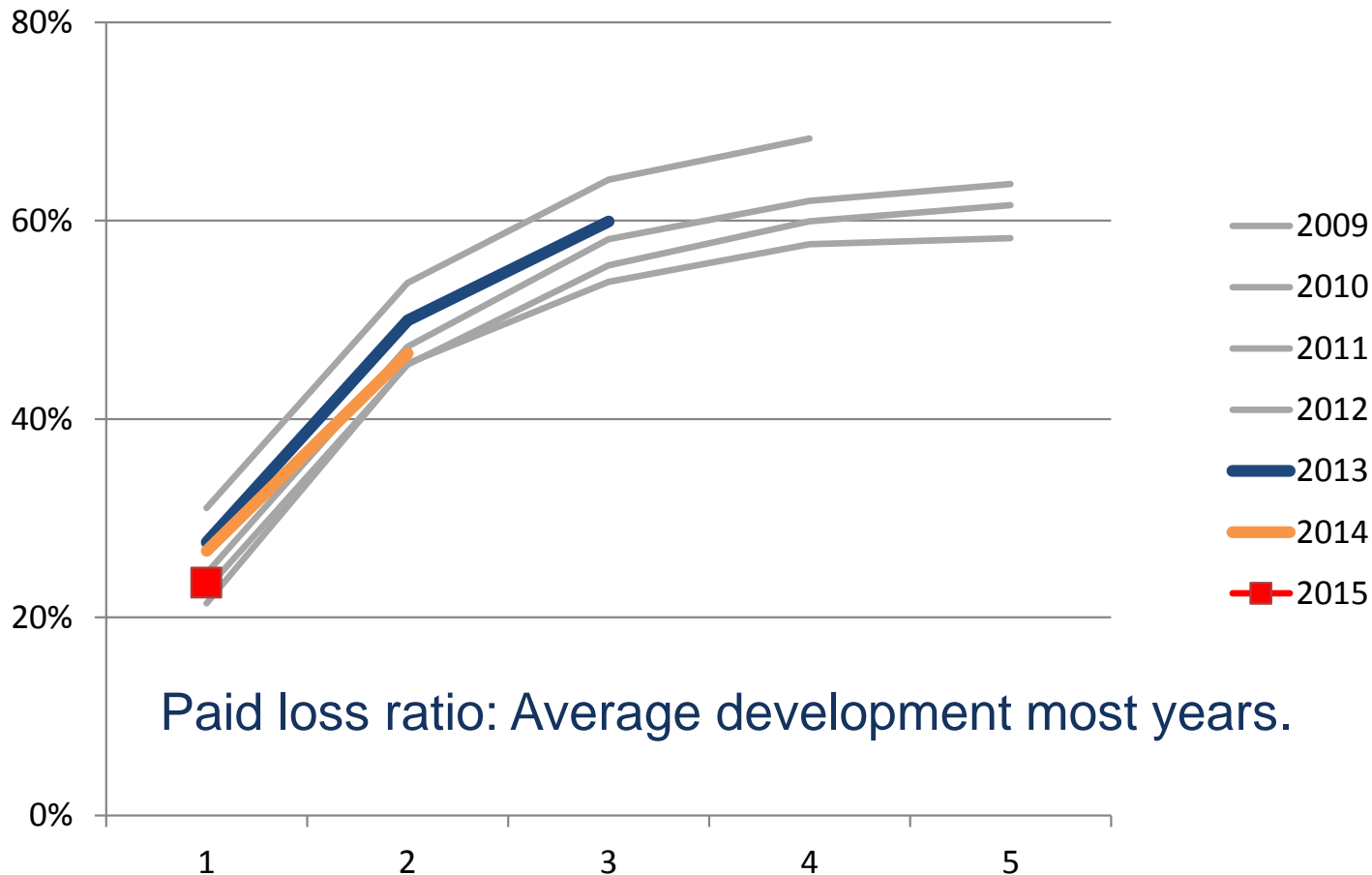
Source: World trade volume & values: IMF World Economic Outlook, April 2016



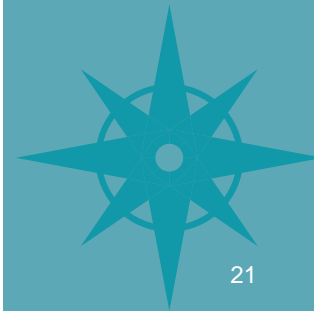
# CARGO – GROSS\* LOSS RATIOS PAID CLAIMS, AS REPORTED



EUROPE/USA\*, UNDERWRITING YEARS 2009-15, AS AT 1, 2, 3, 4, 5 YEARS



Paid loss ratio: Average development most years.

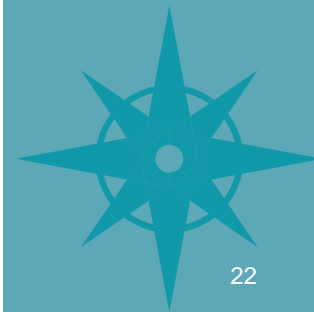
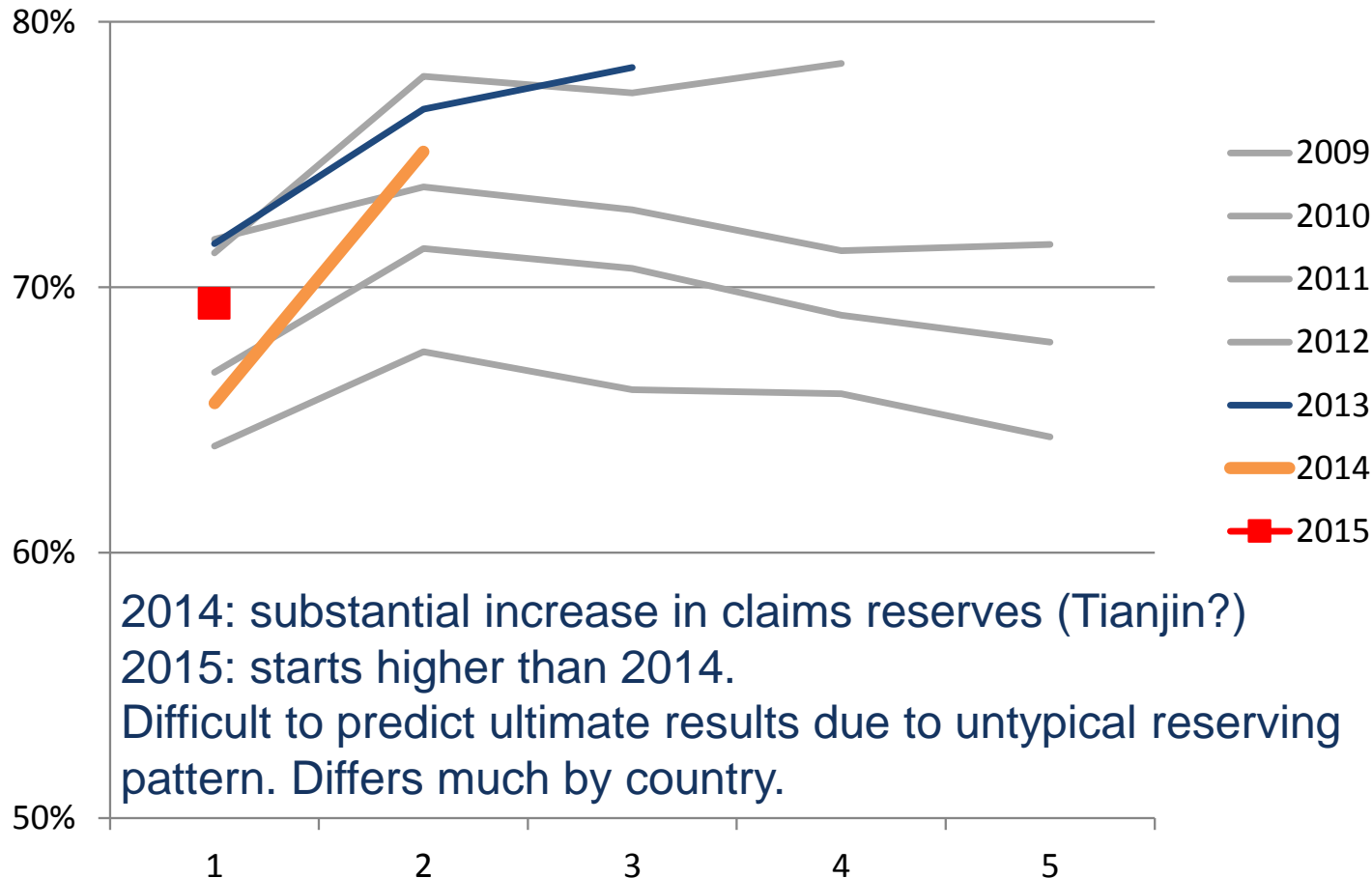


\* Technical break even: gross loss ratio does not exceed 100% minus the expense ratio (acquisition cost, capital cost, management expenses)

\*\* Data: Belgium, France, Germany, Netherlands, Italy, Spain (until 2007), UK, USA

# CARGO – GROSS\* LOSS RATIOS PAID+OUTSTANDING CLAIMS, AS REPORTED

EUROPE/USA\*\*, UNDERWRITING YEARS 2009-15, AS AT 1, 2, 3, 4, 5 YEARS

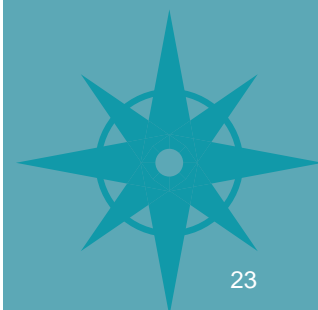
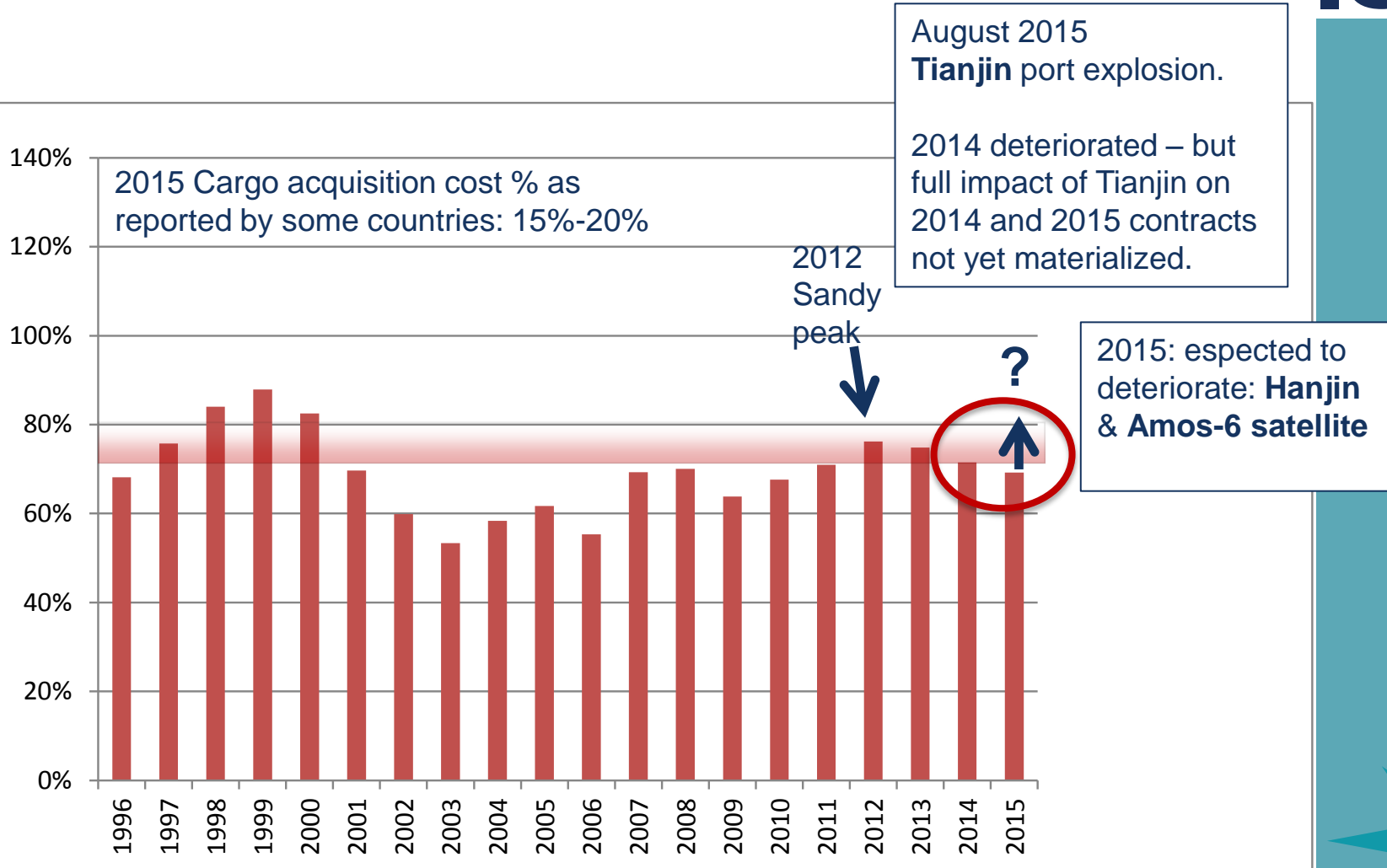


\* Technical break even: gross loss ratio does not exceed 100% minus the expense ratio (acquisition cost, capital cost, management expenses)

\*\* Data: Belgium, France, Germany, Netherlands, Italy, Spain (until 2007), UK, USA

# CARGO – ULTIMATE\* LOSS RATIOS

EUROPE/USA\*\*, UNDERWRITING YEARS 1996 TO 2015

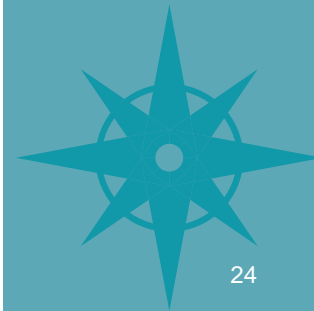


\* Technical break even: gross loss ratio does not exceed 100% minus the expense ratio (acquisition cost, capital cost, management expenses)

\*\* Data: Belgium, France, Germany, Netherlands, Italy, Spain (until 2007), UK, USA

# CARGO CONCLUSIONS

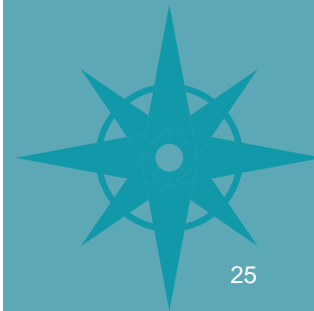
- Market:
  - Strong USD 'hides' local market growth.
  - Market growth and results differ by region.
- Results:
  - Full Tianjin effect on 2014 and 2015 underwriting years still unclear (and figures do not include Asian loss ratios).
- Claims:
  - Tianjin port explosion largest single loss event ever.
  - Auto industry major contributor to cargo/stock losses.
  - Risk of costly cargo claims expected to increase:
    - **Natural catastrophes** (Thailand floods, Sandy, but none 2014/15)
    - **Increased accumulation risk** (Tianjin port)
  - 2016 potential large claims: Hanjin, Amos-6 satellite
- Outlook:
  - Negative impact of China economy slow-down and commodity price slide (oil, products) on world trade and cargo premiums.
  - Difficult to predict impact of changing economic environment.





# GLOBAL MARINE INSURANCE REPORT

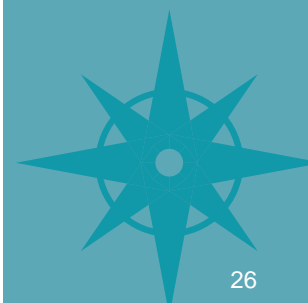
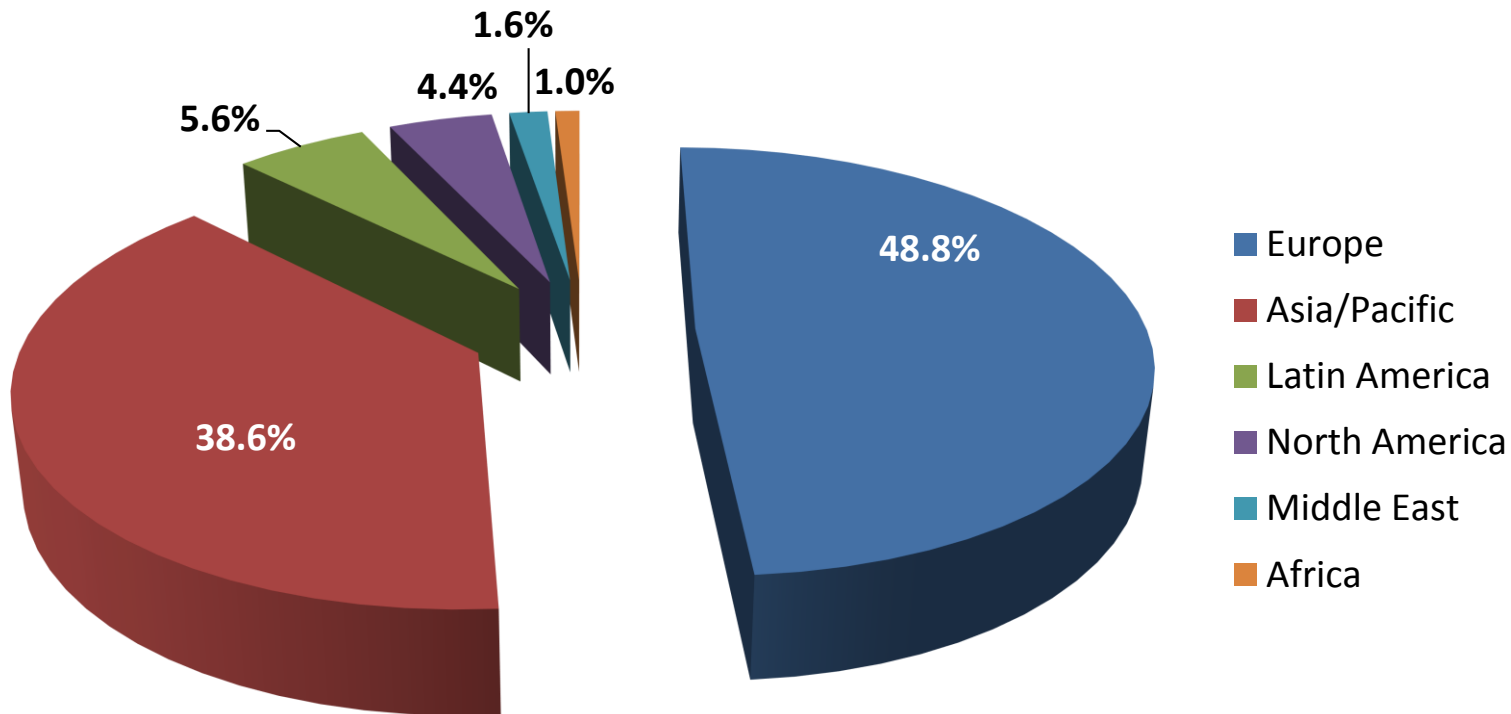
- **Global Marine Insurance** – Overview
  - Focus: Challenges (market & data)
- **P&I** – Income & claims
- **Cargo** – Market & results
  - Focus: Accumulation claim effect (Tianjin)
- **Hull** – Market & results
  - Focus: 2015 versus 2016 claims & exposure
- **Offshore Energy** – Market & results
  - Focus: Low oil price and no remedy.



# HULL PREMIUM 2015 – BY REGION

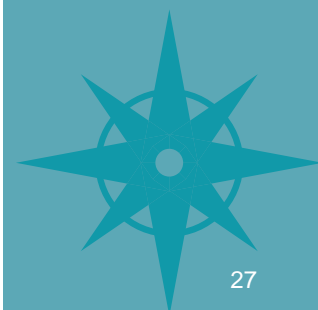
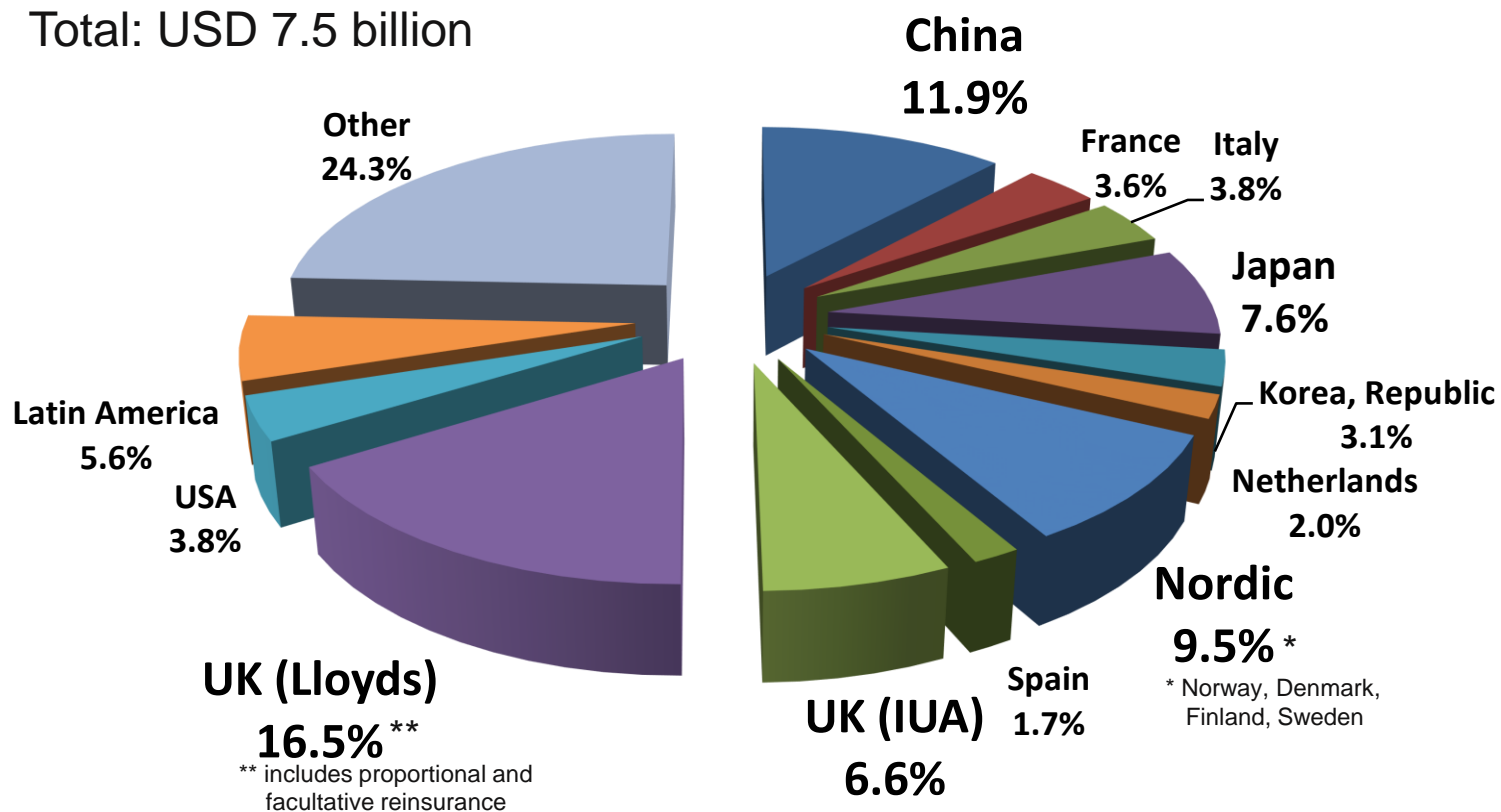


Total: 7.5 USD billion / Change 2014 to 2015: -8.4%



# HULL PREMIUM 2015 – BY MARKETS

Total: USD 7.5 billion

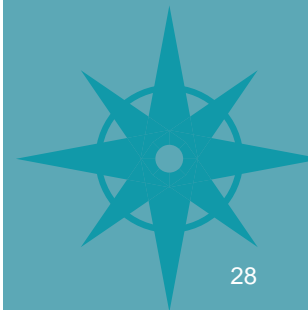
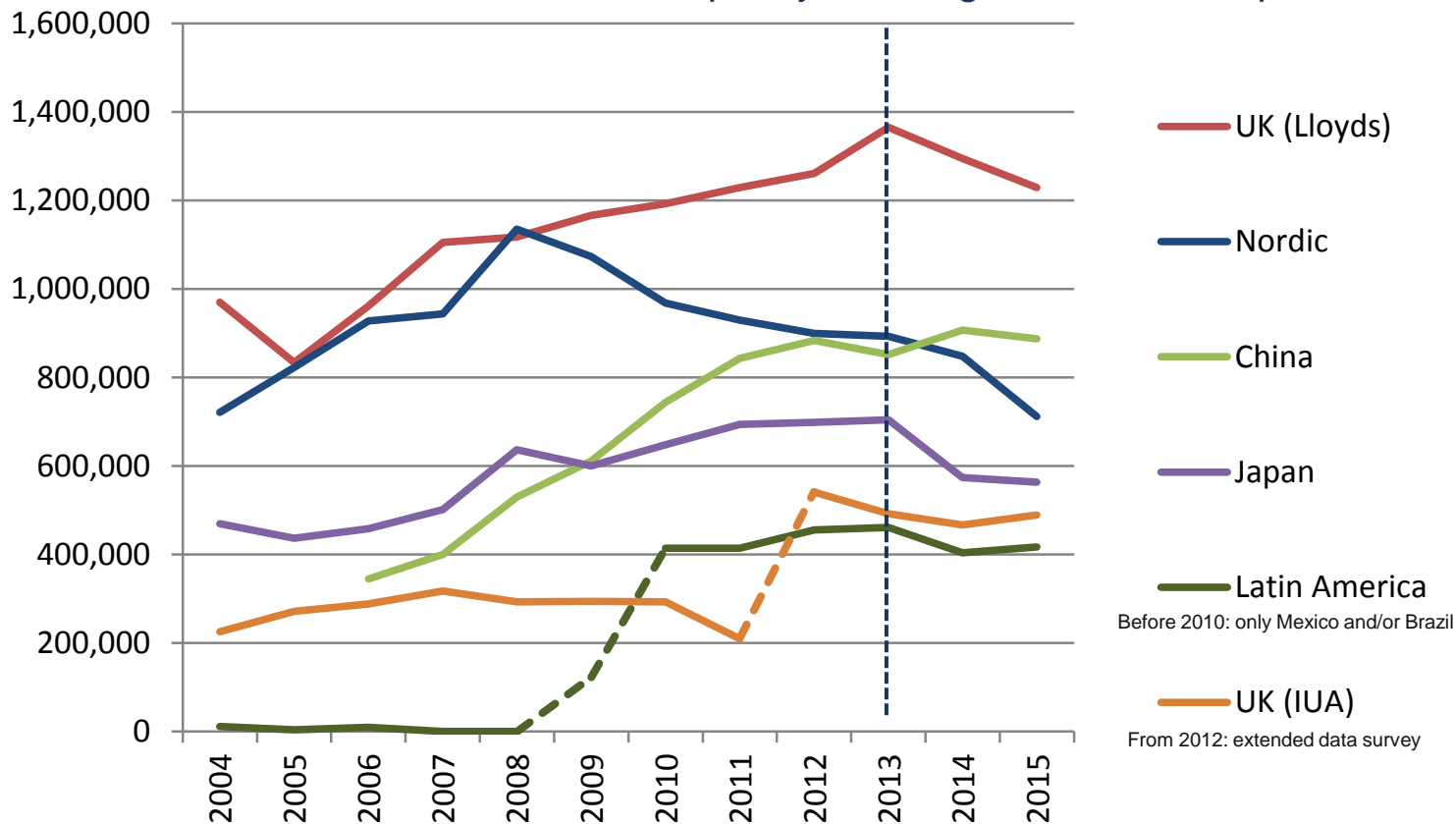


# HULL PREMIUM 2004-2015

## SELECTED MARKETS



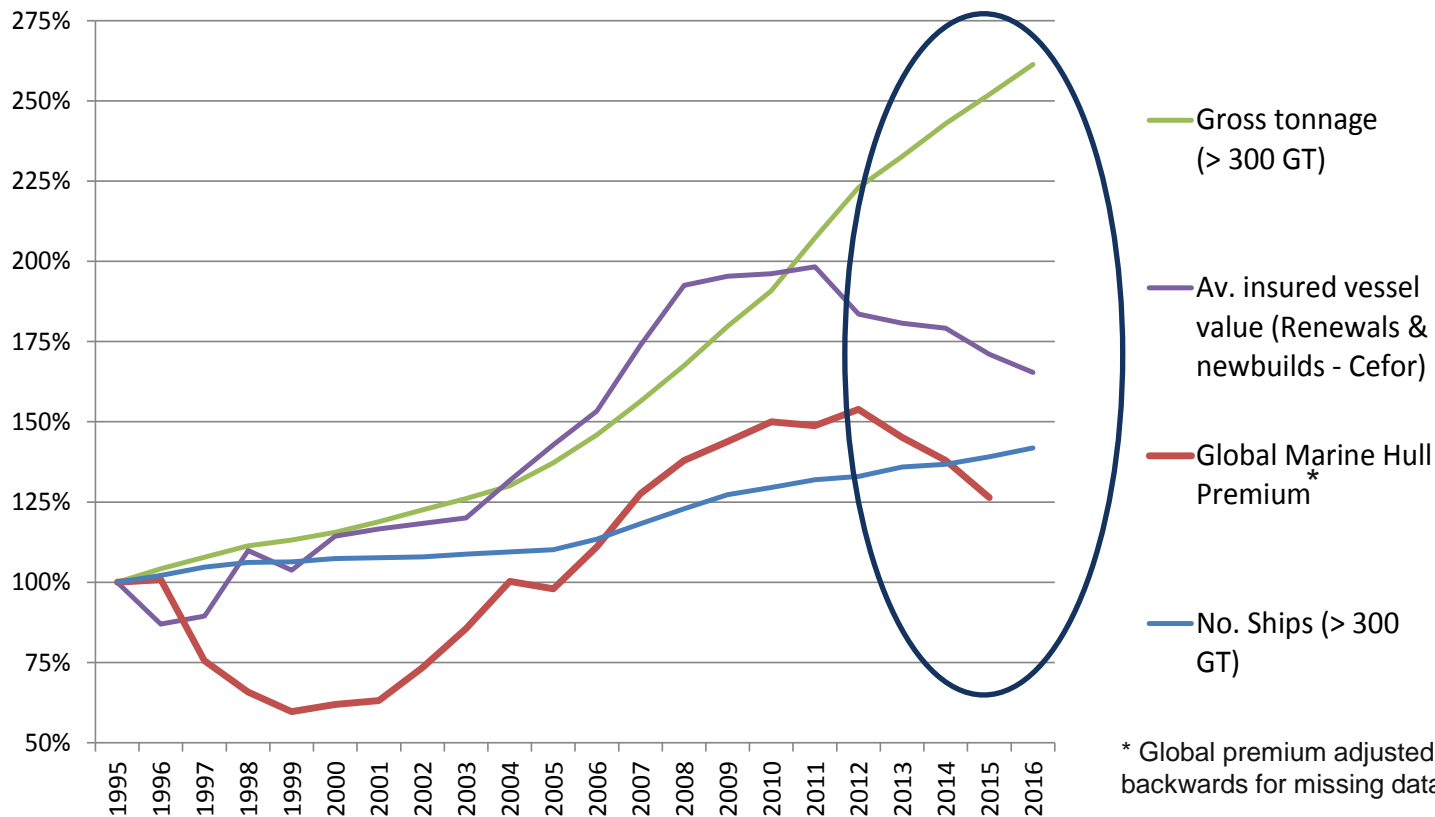
Exchange rate effects, but difficult to specify due to global nature of portfolio.



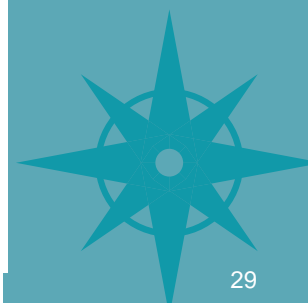
# HULL PREMIUM / WORLD FLEET

INDEX OF EVOLUTION, 1995 = 100%

World fleet continues to grow, especially in tonnage.  
Hull premium deteriorates in line with ship values – not only exchange rates.

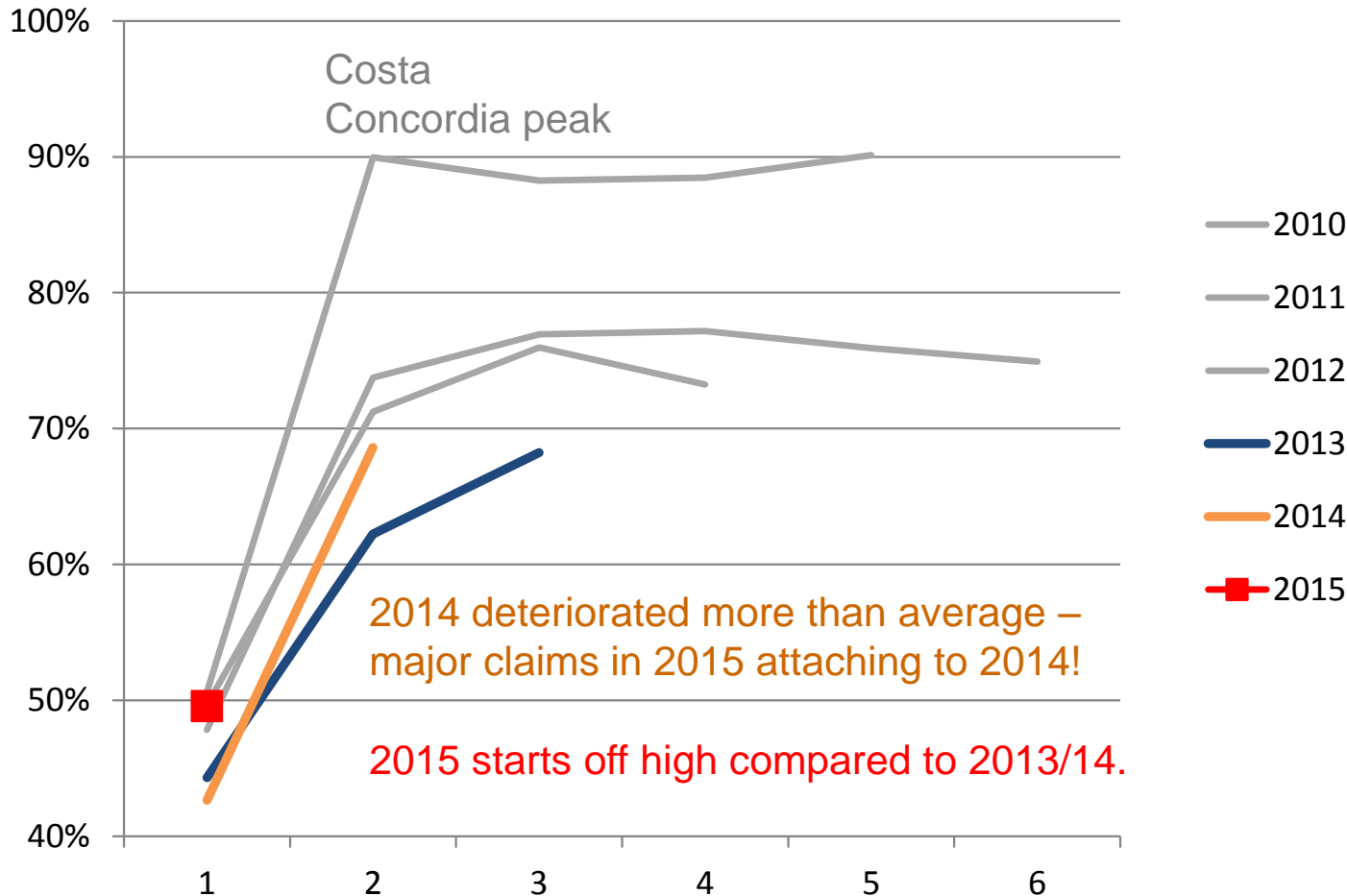


\* Global premium adjusted backwards for missing data.



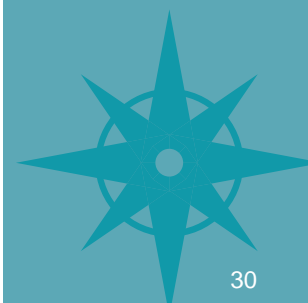
# HULL – GROSS\* LOSS RATIOS PAID+OUTSTANDING, AS REPORTED

EUROPE/USA\*\*, UNDERWRITING YEARS 2010 TO 2015



\* Technical break even: gross loss ratio does not exceed 100% minus the expense ratio (acquisition cost, capital cost, management expenses)

\*\* Data: Belgium, France, Germany, Italy, UK, USA



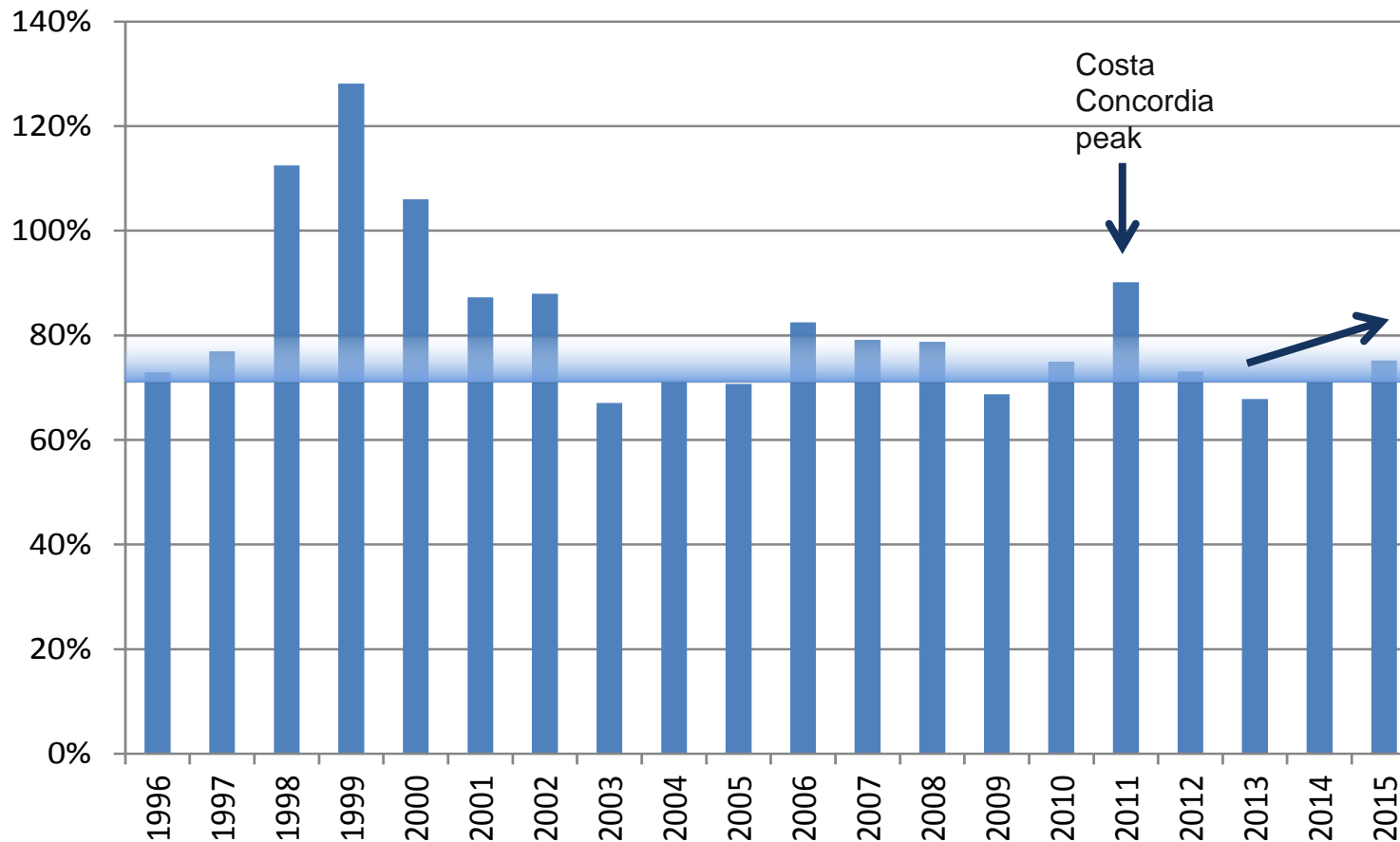
# HULL – ULTIMATE LOSS RATIOS\*

EUROPE/USA\*\*, UNDERWRITING YEARS 1996 TO 2015



2013/2014 profited by low number of major losses in 2014 – but 2014 deteriorated above average (2015 major losses).

2015: impacted by 2015 major losses and deteriorating premiums.



2015 Hull acquisition cost % as reported by some countries: 12%-18%

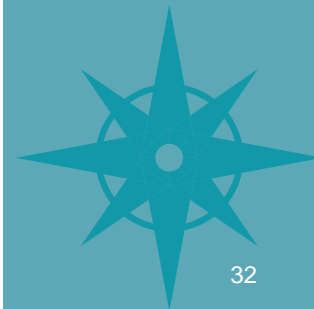


\* Technical break even: gross loss ratio does not exceed 100% minus the expense ratio (acquisition cost, capital cost, management expenses)

\*\* Data: Belgium, France, Germany, Italy, Spain (until 2007), UK, USA

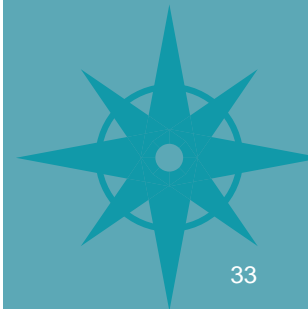
# GLOBAL MARINE INSURANCE REPORT

- **Global Marine Insurance** – Overview
  - Focus: Challenges (market & data)
- **P&I** – Income & claims
- **Cargo** – Market & results
  - Focus: Accumulation claim effect (Tianjin)
- **Hull** – Market & results
  - Focus: 2015 versus 2016 claims & exposure
- **Offshore Energy** – Market & results
  - Focus: Low oil price and no remedy.



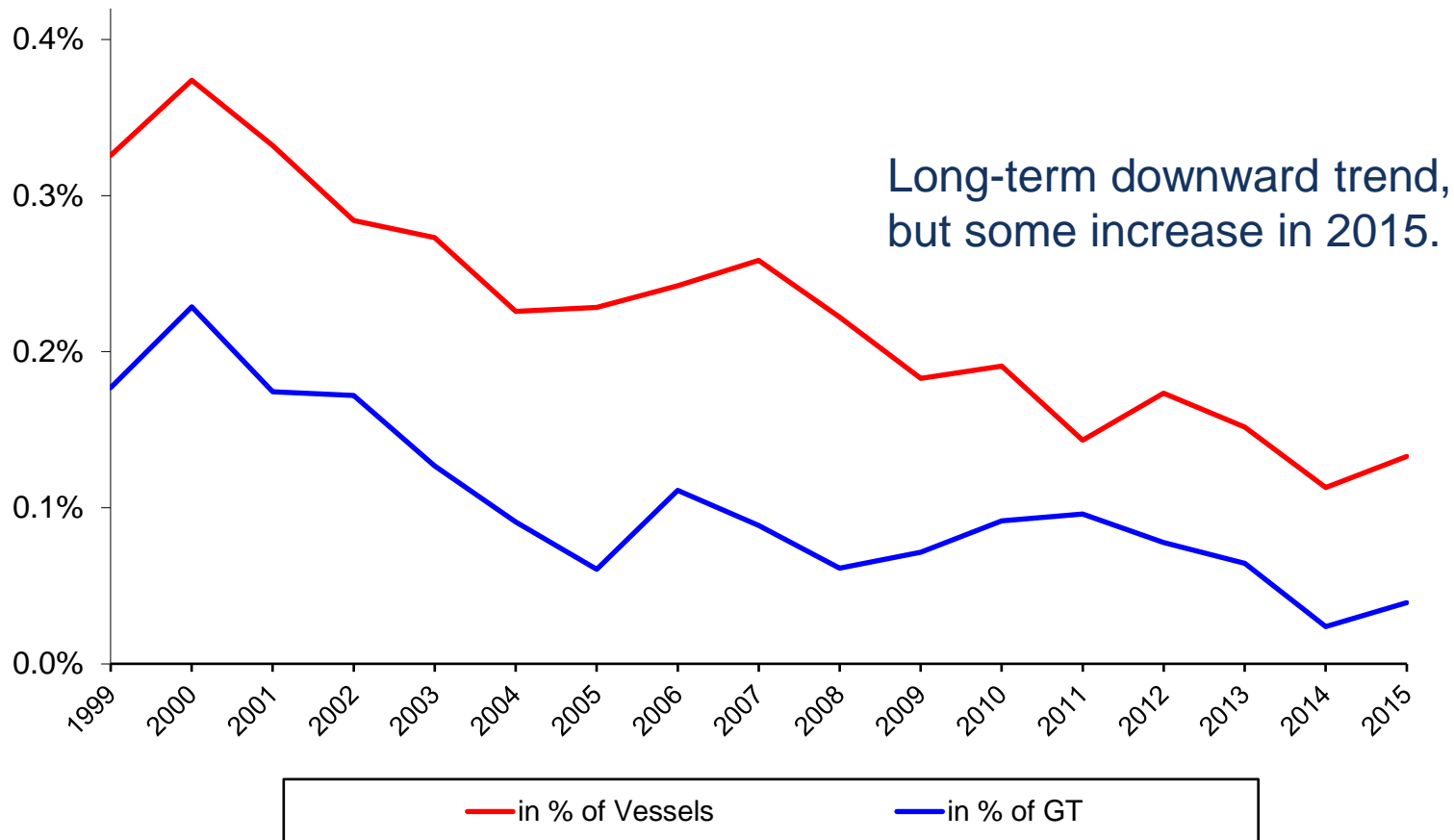


# HULL CLAIMS TRENDS

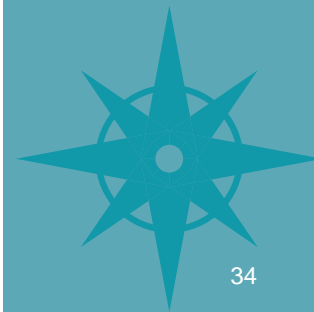


# TOTAL LOSS FREQUENCY 1999-2015

TOTAL LOSSES AS % OF WORLD FLEET, VESSELS > 500 GT



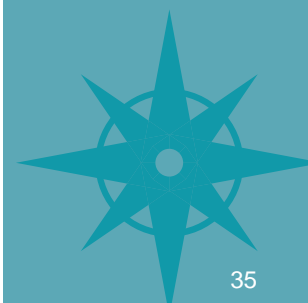
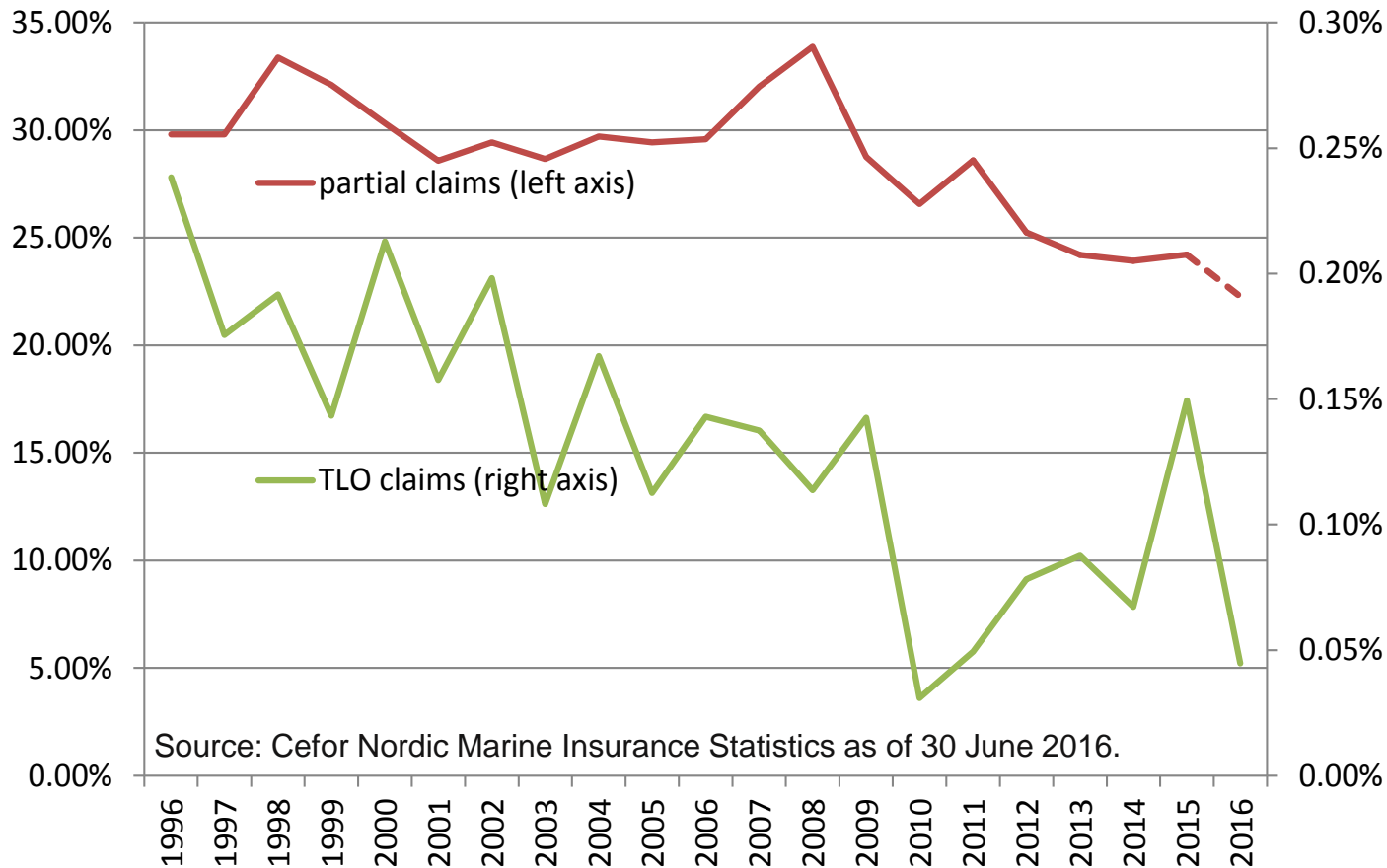
Source: Lloyds List Intelligence (Casualty stats) & Clarkson Research (World Fleet)



# CLAIMS FREQUENCY AS OF JUNE 2016



All claims: Downward trend continues.  
 Total losses: Long-term positive trend.  
 Continues in 2016 after 2015 increase (?).

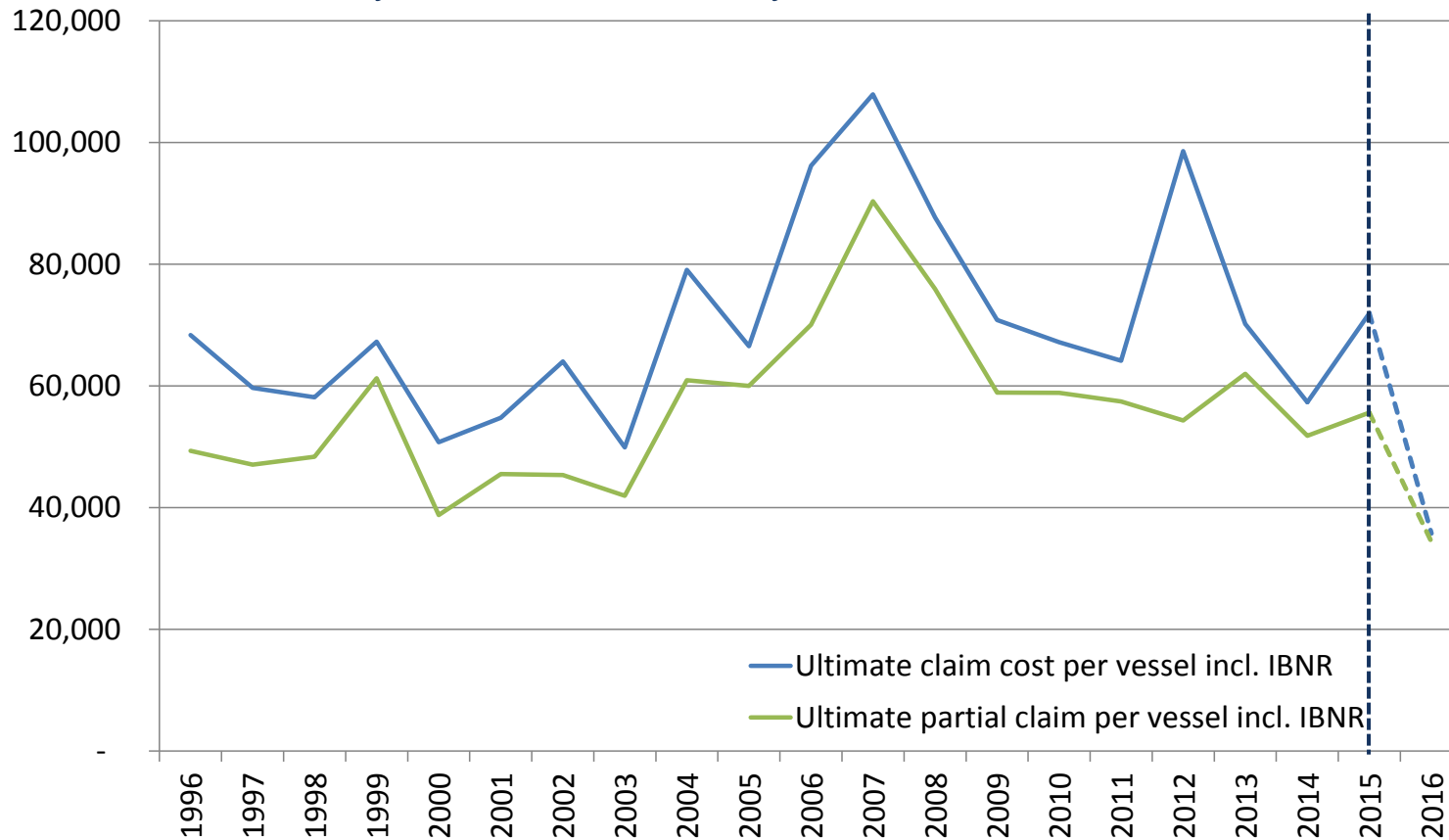


# CLAIM COST PER VESSEL (USD)

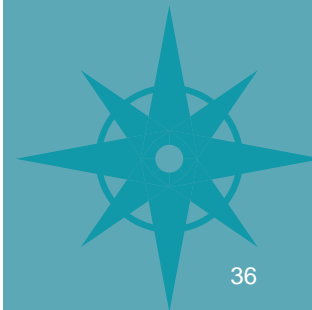
## ESTIMATED ULTIMATE CLAIM COST



Total loss impact as well as partial claim cost per vessel substantially reduced in first half year 2016.

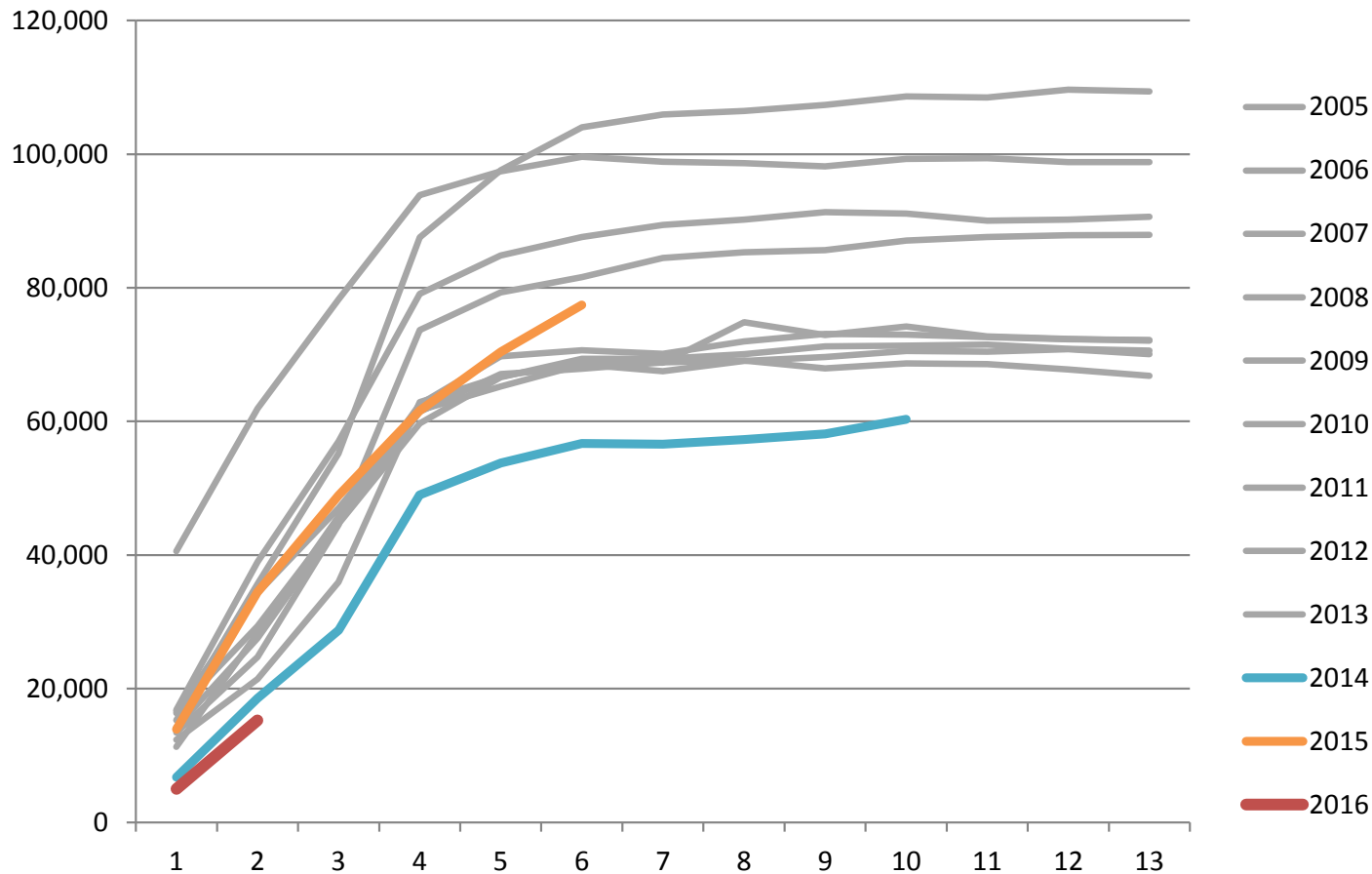


Source: Cefor Nordic Marine Insurance Statistics as of 30 June 2016.

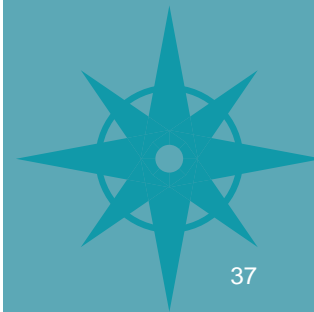


# CLAIM COST PER VESSEL: QUARTERLY DEVELOPMENT, BY ACCIDENT YEAR

2015 relatively high cost due to major claims impact. 2016 starts low.

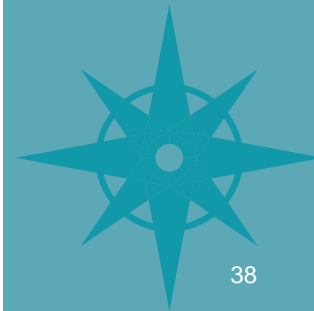


Source: Cefor Nordic Marine Insurance Statistics as of 30 June 2016.



# HULL CLAIMS TRENDS

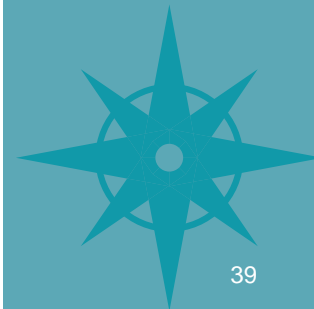
- **Claims frequency:** Long-term positive trend.
- **Total loss frequency:** Long-term positive trend, continues after (intermediary?) recent increase.
- **Repair cost:** Stable to positive trend. Positive influence of strong USD? (yards in non-US areas)
- **Major losses:** Volatile with strong impact!
  - 2012: very strong impact
  - 2014: Exceptionally few major claims.
  - 2015: Increased impact – back to expected level.
  - 2016: Exceptionally few as of 30 June. Rest of 2016?
  - 2017: ?



# HULL PORTFOLIO TRENDS

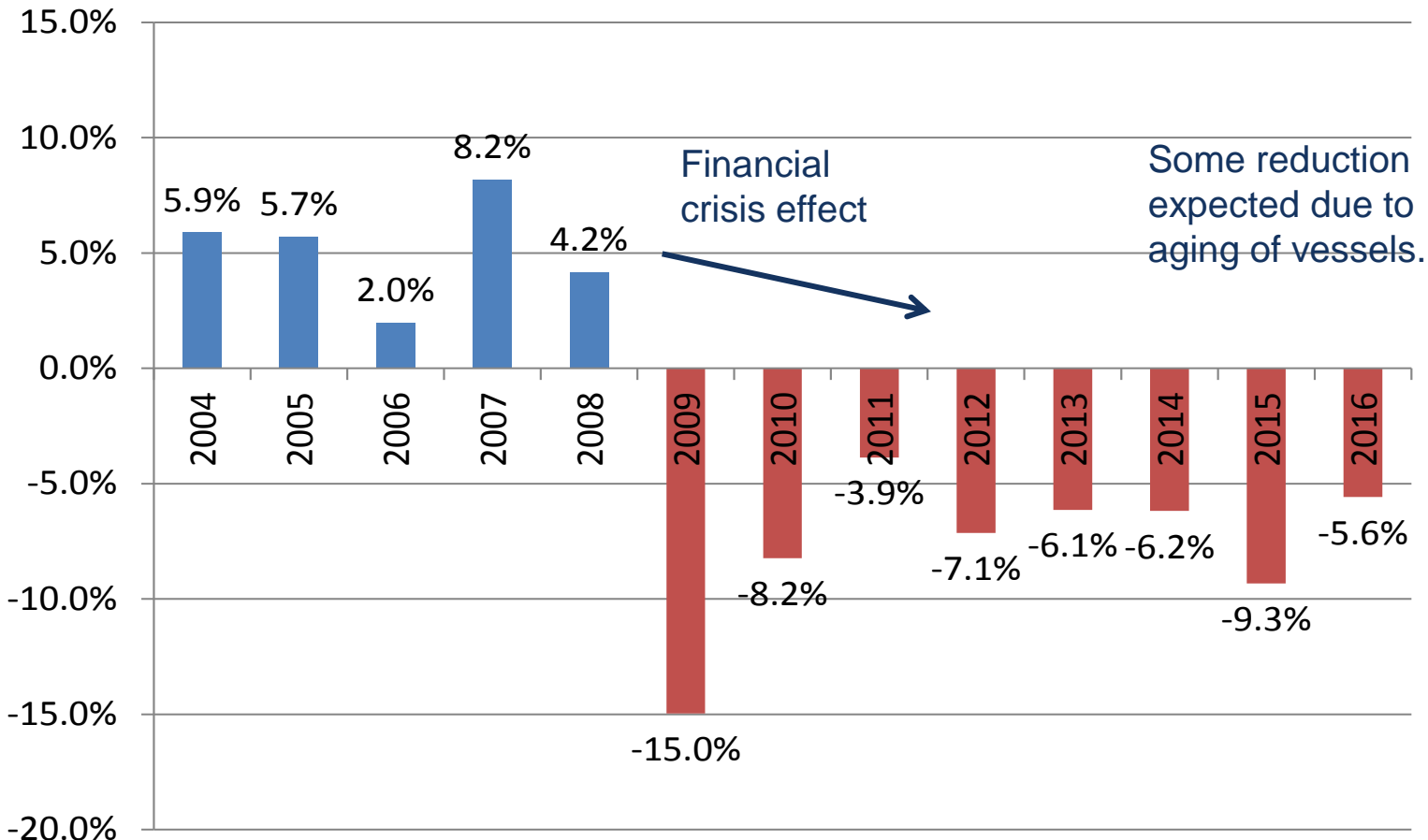


© Astrid Seltmann (Regal Princess in Oslo)

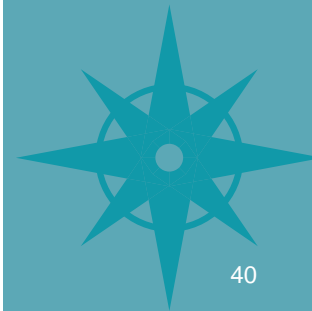


# CHANGE IN VALUES ON RENEWAL

= VALUE ON RENEWAL / VALUE PREVIOUS UW YEAR FOR SAME VESSELS



Source: Cefor Nordic Marine Insurance Statistics as of June 2016

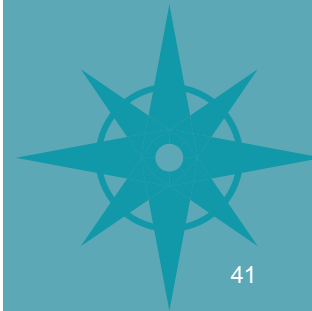
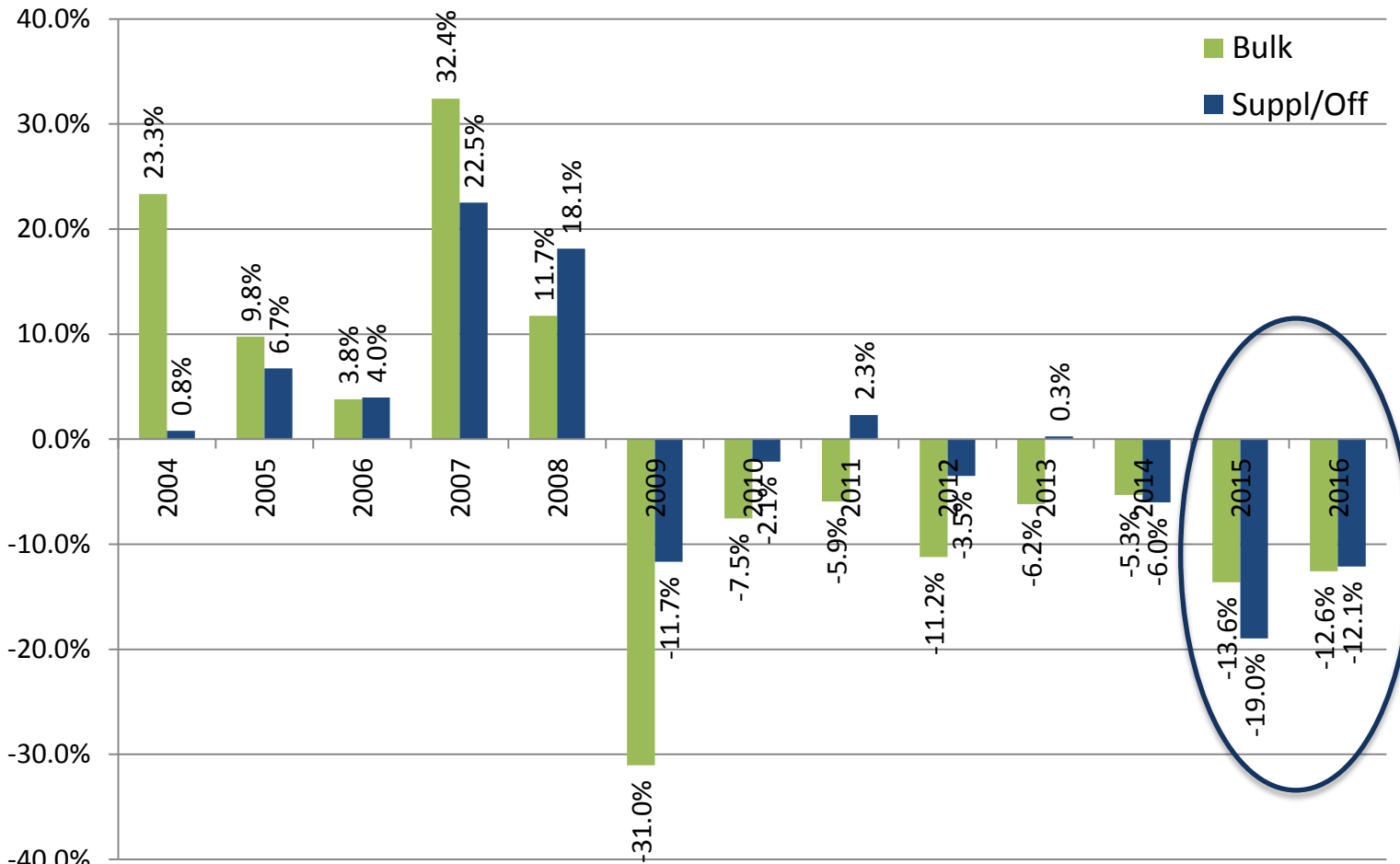




# BULK & SUPPLY/ OFFSHORE

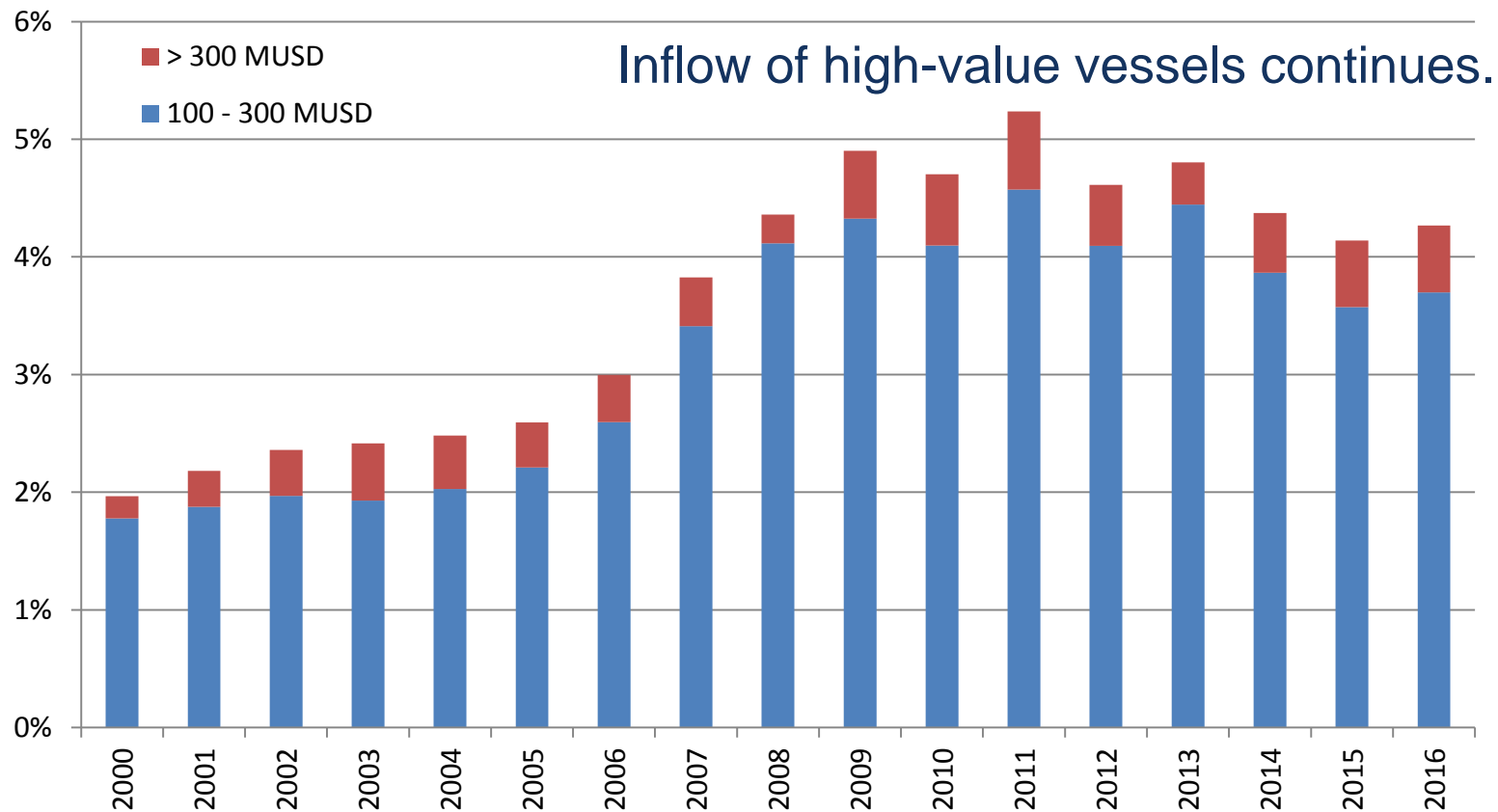


STRONG DROP IN VALUES ON 2015 AND 2016 RENEWALS!

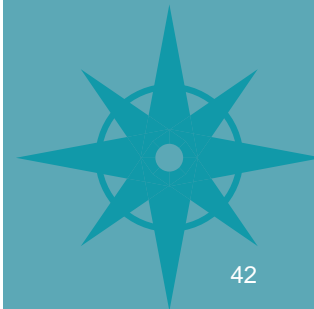


# THE RISK EXPOSURE

## PORTFOLIO SHARE OF SHIPS WITH VALUES XS USD 100 MILLION



Source: Cefor Nordic Marine Insurance Statistics as of June 2016



# HULL PORTFOLIO TRENDS

- **World fleet**

Growth continues, but slowing down.

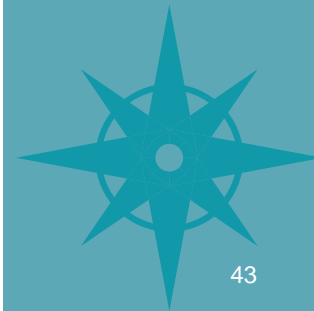
- **Insured vessel values**

Renewals: strong reduction on supply/offshore and bulk vessels 2015 and 2016.

New builds: Inflow of high-value vessels continues, outweighs value reduction on renewals.

- **Global Hull premium**

Deteriorates in line with values, not only strong USD effect.



# ISSUES TO MONITOR (AND PRICE)



© Astrid Seltmann

High-value risks

Oil price, fuel quality,  
effect of ECA's?

The human factor/  
Qualification

Climate changes

Law and liability changes

Accumulation

Arctic risks

New technology

Navigation



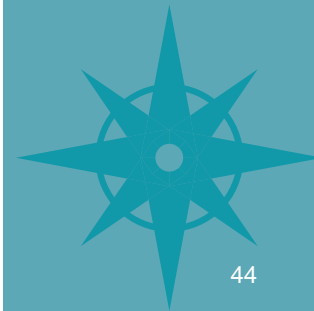
Dagfinn Bakke



© Astrid Seltmann

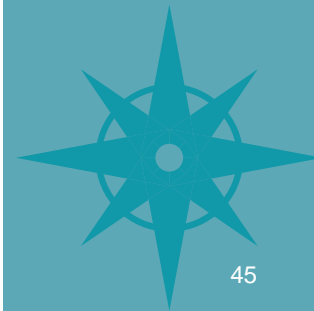


© Astrid Seltmann



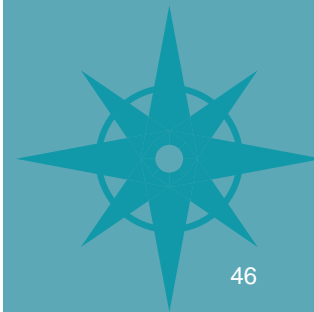
# HULL CONCLUSIONS

- **Claims**
  - Repair cost: stable to downward trend.
  - Total losses: (intermediate?) increase in 2015, else long-term downward trend
  - Major losses: Volatile!  
Impact differs substantially between years.  
Potential risk must be taken into account.
- **Premiums** deteriorate in line with values.
- **Exposure** increases. New risks.
- **For sustainability:** All risk aspects must be taken into account!



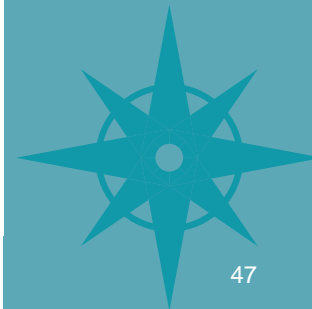
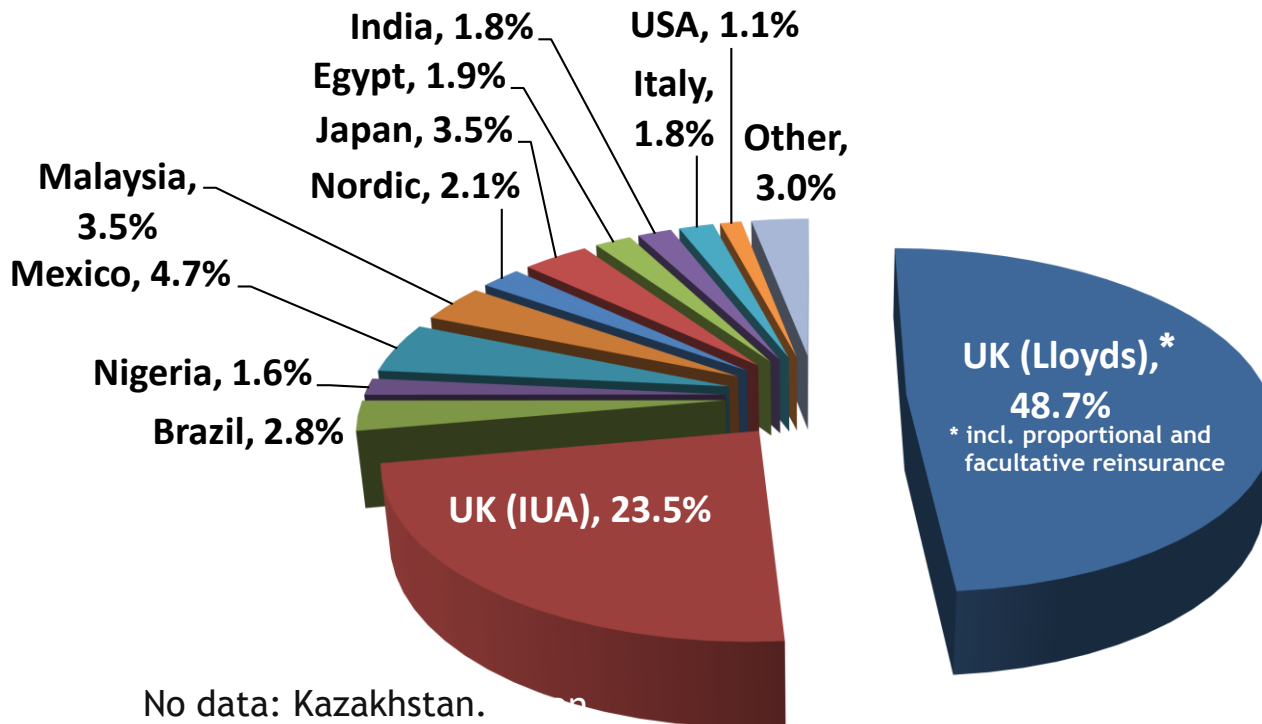
# GLOBAL MARINE INSURANCE REPORT

- **Global Marine Insurance** – Overview
  - Focus: Challenges (market & data)
- **P&I** – Income & claims
- **Cargo** – Market & results
  - Focus: Accumulation claim effect (Tianjin)
- **Hull** – Market & results
  - Focus: 2015 versus 2016 claims & exposure
- **Offshore Energy** – Market & results
  - Focus: Low oil price and no remedy.

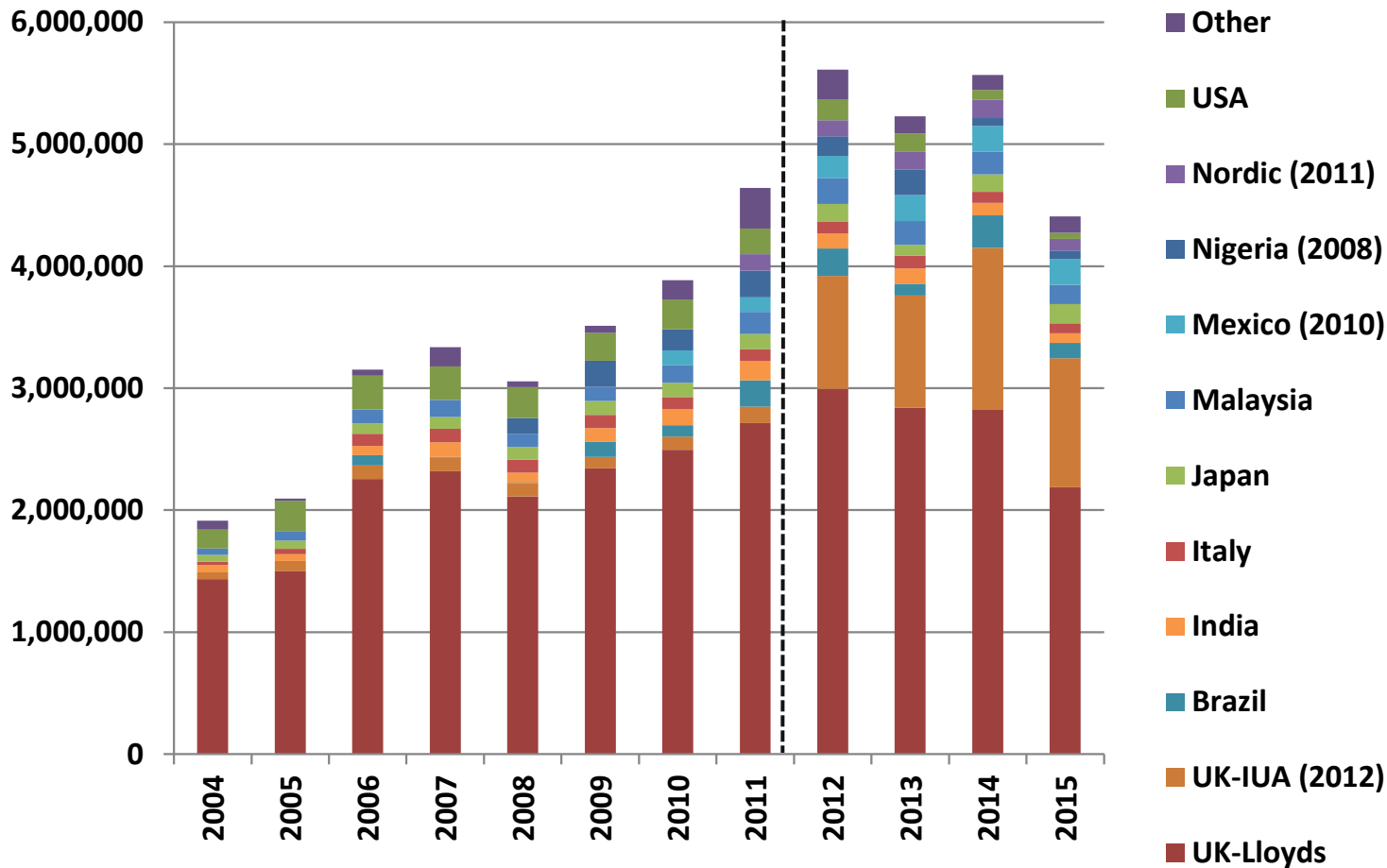


# OFFSHORE ENERGY PREMIUM 2015

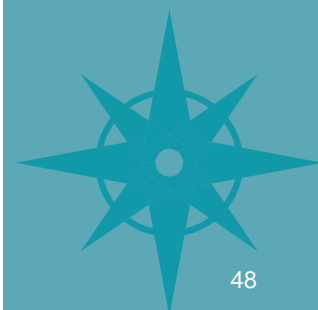
Total: 4.5 USD billion / Change 2014 to 2015: -20%!  
(major part written in USD – no big USD rate effect)



# OFFSHORE ENERGY PREMIUM 2004 – 2015



Nordic, Nigeria, Mexico: no data available before indicated year;  
UK- IUA: from 2012 extended data survey; Kazakhstan: no data available;

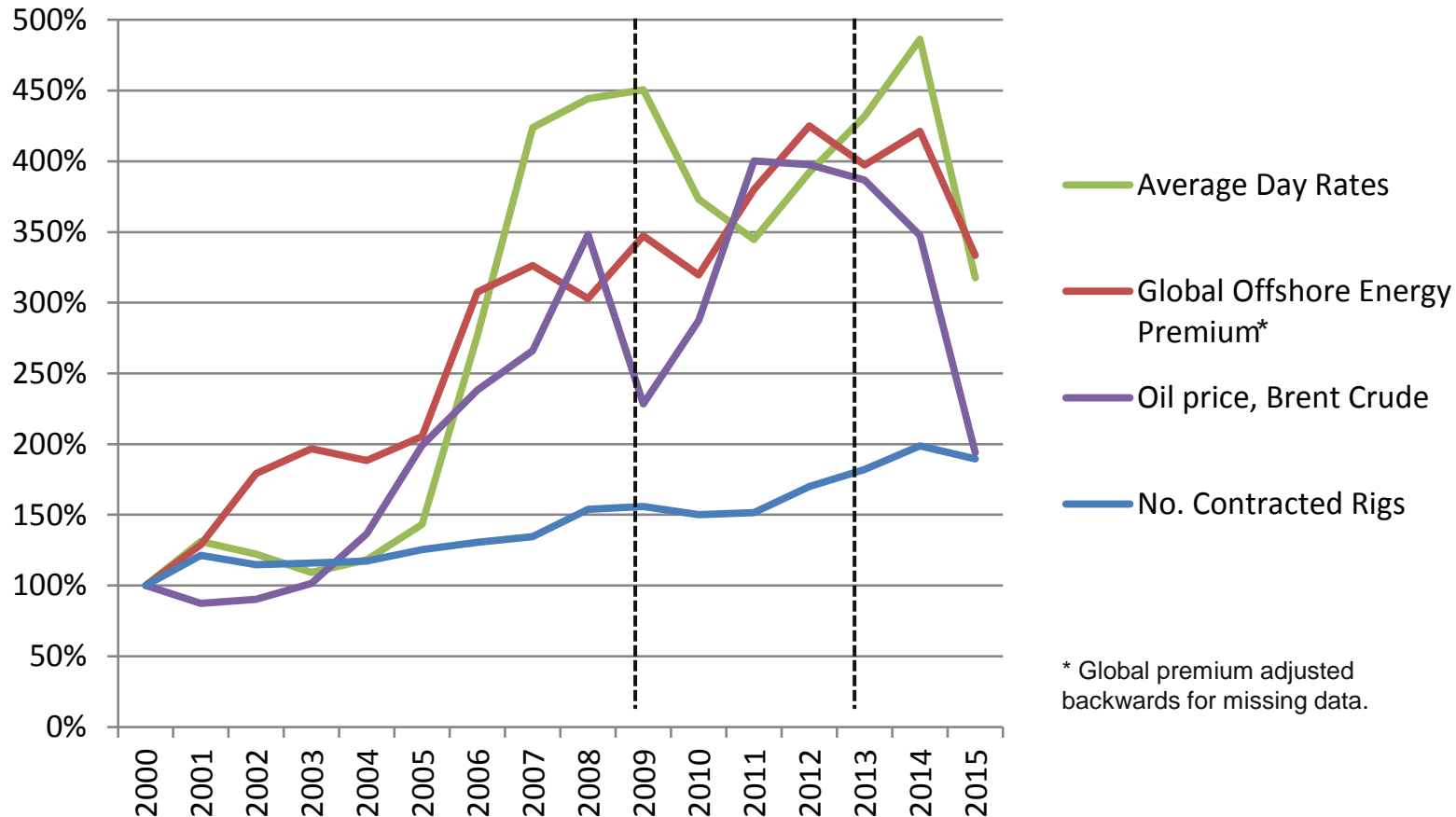




# OFFSHORE ENERGY PREMIUM

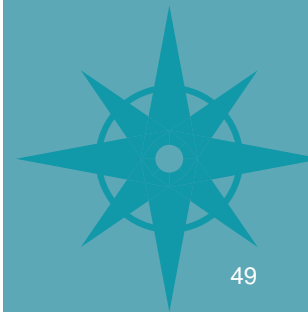
## ENERGY MOBILES, DAY RATES, OIL PRICE

Index of evolution, 2000 = 100%



\* Global premium adjusted backwards for missing data.

Source: Day rates, contracted rigs: Clarkson Research

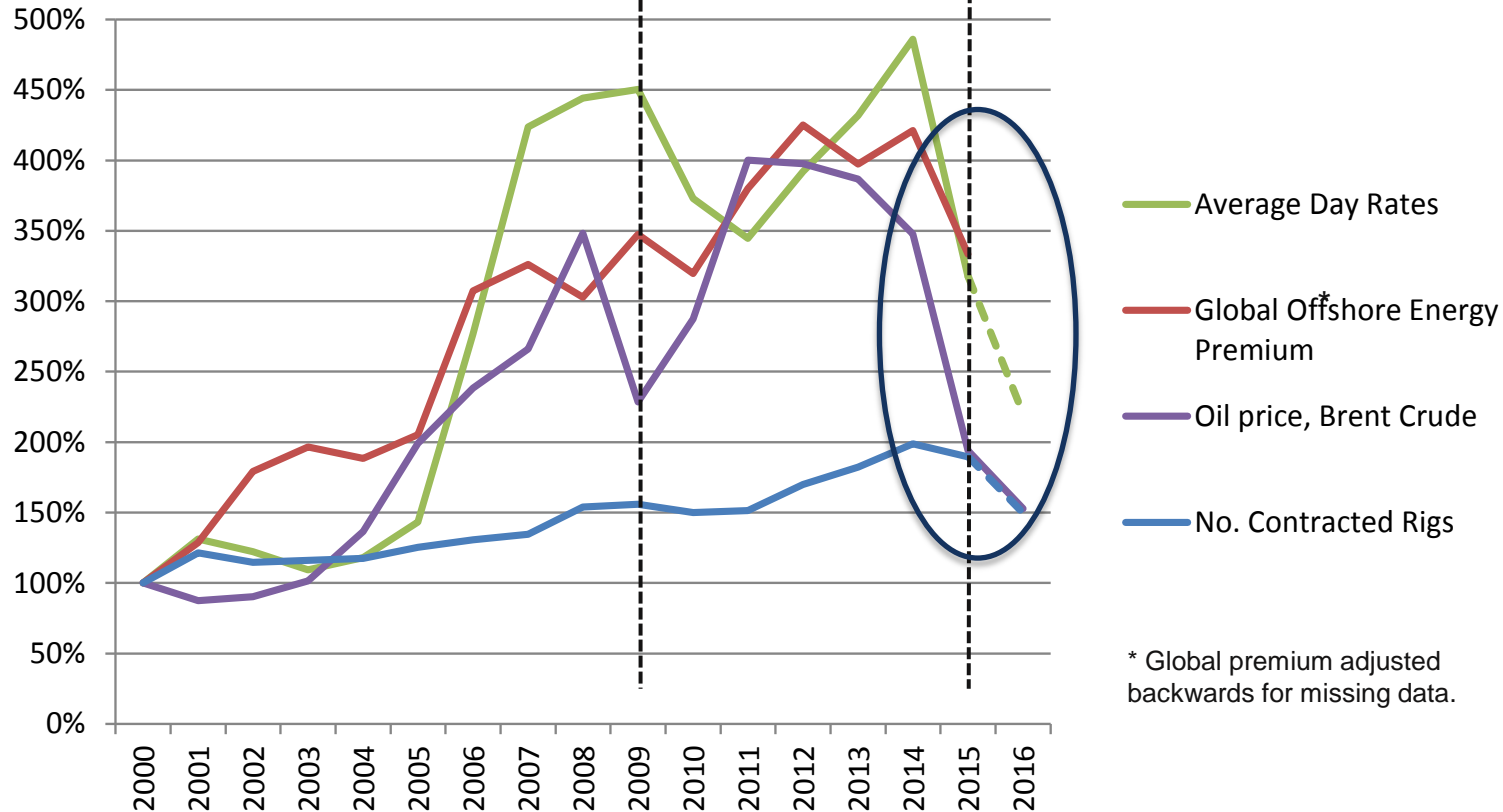


# OFFSHORE ENERGY INTO 2016

## ENERGY MOBILES, DAY RATES, OIL PRICE

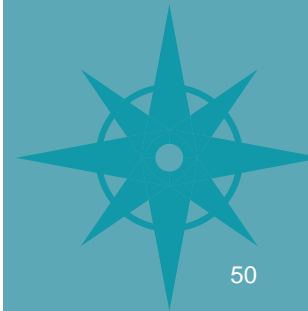


Index of evolution, 2000 = 100%



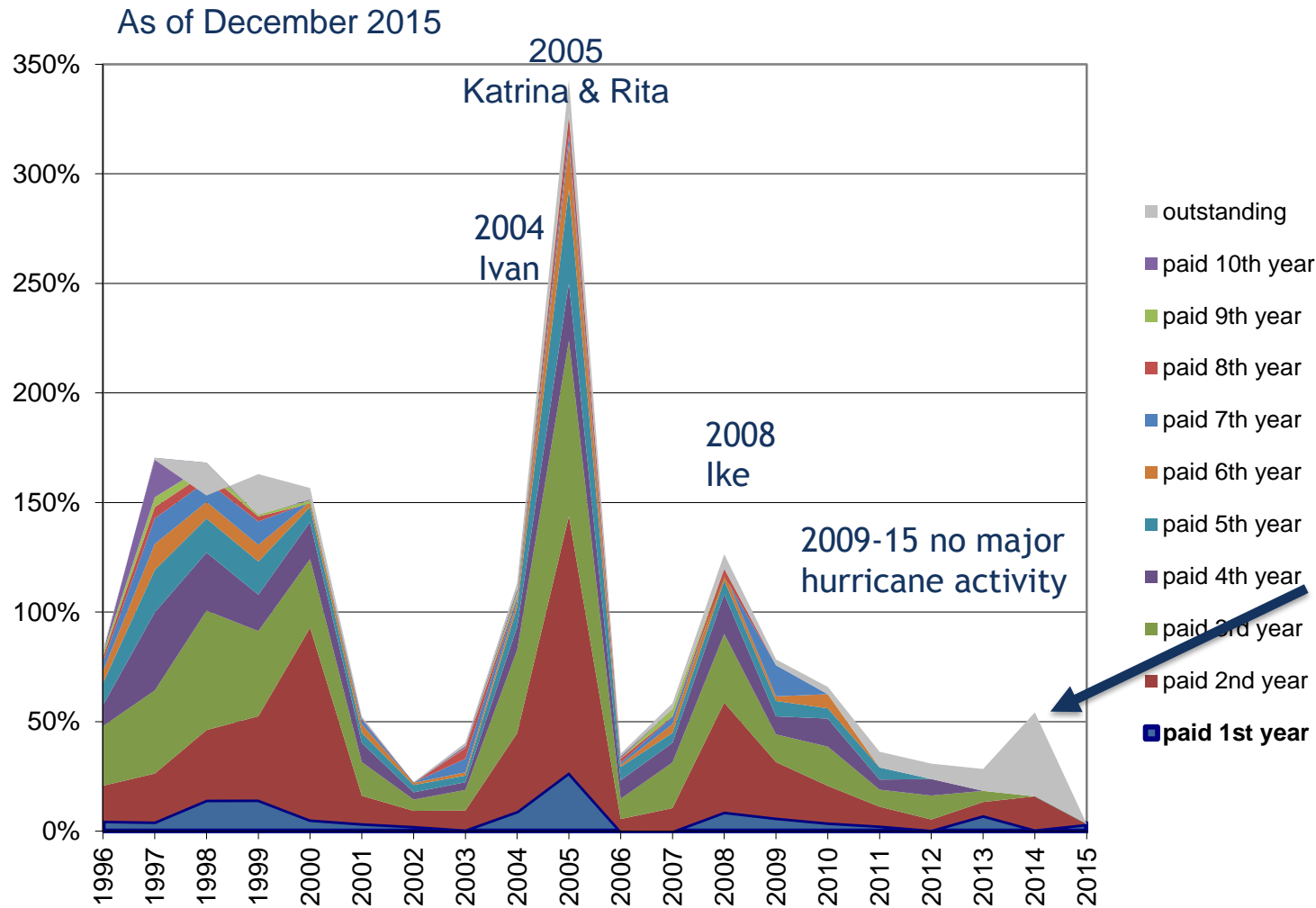
\* Global premium adjusted backwards for missing data.

Source: Day rates, contracted rigs: Clarkson Research



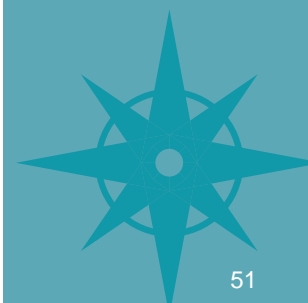
# Offshore Energy – Loss Ratios (incl. liability)

Underwriting years 1996 to 2015 / data from UK, US and Nordic



Strong increase in 2014 loss reserves.

Both 2014 and 2015 expected to deteriorate substantially.



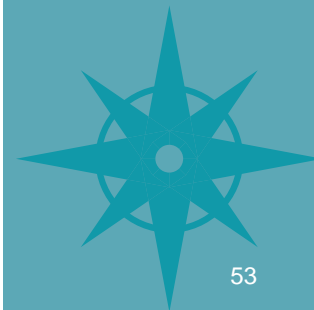
# OFFSHORE ENERGY – AS OF 2015

- Substantial drop in premiums in 2015.  
May decrease further when projects not realized.
- Hurricane/weather impact little in recent years  
(Gulf of Mexico)
- Series of high-profile losses in 2015  
(7 > USD 100 million / 2 > USD 400 million)  
& 2016 Tullow claim
- Recent years still develop until cost is fully known.



# OFFSHORE ENERGY – 2016

- Strong drop in premiums continues into 2016
- Under current market conditions no chance to continue positive results of years 2011-2013.
- The oil price drama!
  - Downturn in activity / many mobiles currently idle
  - Costly new projects postponed (deep-water, Arctic)
- More risk retained in captives
- Low interest rates / stock market instability
- Weather: Not the main challenge currently - but a single event can produce significant losses.





## GENERAL CONCLUSIONS – OUTLOOK 2016

- **Hull and cargo**  
2014 results deteriorated substantially and above average.  
Deterioration expected due to severe 2015 claims affecting 2014 – and 2015 – underwriting years.
- **Offshore energy**  
Extremely demanding market environment (oil price). No end in sight.
- **Market environment**
  - Low interest rates / stock market volatility.
  - Political uncertainty in many areas.
  - Difficult to predict.
  - Increasing exposure (high values/accumulation), new technology, Arctic risks, climate,...



**End of 2016 guru oracle. Comments?**

**Genova**  
18-21 September 2016

**IUMI**

  
**Cefor**

Astrid Seltmann, Analyst/Actuary @ Cefor  
(The Nordic Association of Marine Insurers)  
astrid.seltmann@cefor.no, [www.cefor.no](http://www.cefor.no)

# EXPLANATION OF TECHNICAL TERMS

**Gross premium** = Premium for insurance including the provision for anticipated losses (the pure premium) and for the anticipated expenses (loading), including also commission and brokerage but excluding taxes and other contributions on insurance premiums. Before deduction of any ceded reinsurance.

**Written premium** = Complete premium due for insurance policies which start, i.e. "are written", in a specific year (= the underwriting year of the policy). Does not give any information on actual premium payments/instalments, i.e. the cash flow.

**Paid claims** = Amounts the insurer has paid for known and registered claims less recoveries.

**Outstanding claims reserve** = Claims reserve for reported, but not yet (fully) paid claims, of which the insurer has an estimation of the total amount to be paid. Includes loss adjustment expenses = Sum of total claims estimates minus any amounts already paid for these claims.

**Total claim** = Paid amounts + outstanding claims reserve for all reported claims.

**IBNR** = "Incurred but not reported" = additional claims reserve on top of the outstanding claims reserve, and which for claims incurred, but not yet known or registered in the insurer's system. The necessary IBNR reserve is derived by statistical methods based on historical claims ladder statistics.

**Loss ratio** = Claims divided by premiums. Indicator of whether premiums are calculated correctly to match claims and other expenses.

**Gross loss ratio (in this presentation)** = Sum of total claims (and IBNR reserves), divided by gross written premiums

**Underwriting year basis** = Insurance figures are registered with the calendar year in which the insurance policy starts, and to which the covered risks accordingly attach to. Example: a policy with cover period 01.07.06-30.06.07 has underwriting year 2006. Both claims occurring in 2006 and 2007 for risks attaching to this policy are thus attributed to underwriting year 2006. The underwriting year is not closed, so underwriting year figures change as long as there are payments related to policies with this underwriting year.

**Accident year** = Claims are registered with the calendar year in which an accident happens. Claims attaching to the same policy may thus be attributed to different accident years. Example: for the policy with cover period 01.07.06-30.06.07 a claim occurring in 2007 has accident year 2007, but underwriting year 2006. The accident year is not closed, so figures will change as long as there are claims payments related to claims occurred in that accident year, e.g. a claim payment made in 2009 for an accident which happened in 2007 will be attributed to accident year 2007.

**Accounting year (also booking year)** = Insurance figures, regardless of their original source date, are booked into that year of account which is open at the time of actually entering the figures in the books. Contrary to the underwriting and accident year, the accounting year is closed at some point in time, usually at the end of one calendar year, such that figures do not change any more once the accounting year is closed. These give the insurance results usually published in companies' annual reports.

