GLOBAL MARINE INSURANCE REPORT 2017

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Cefor

IUMI
2017 TOKYO
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Warning!

Figures reflect the 2017 state of reporting/ estimates and will change retrospectively!

For comparison purposes, do NOT compare figures in this report to last year's report, but check **updated** premiums and loss ratios for the last ten years at www.iumi.com !

Global Marine Insurance report

- **Global Marine Insurance** – Overview
- **Cargo** – Market & Results
- **Hull** – Market & Results
- **Offshore Energy** – Market & Results

For for download at www.iumi.com:

- Marine premiums by country
- Loss ratios triangulations: Hull, Cargo, Energy

Focus/New in 2017

- New: Loss ratios Asia & Latin America (Cargo & Hull, accounting year)
- Cargo: Recent deterioration.
- Hull: Vessel value & claims trends.
  Major versus serious casualties.
- Offshore energy: Survival training?
- Hurricanes are back, too.

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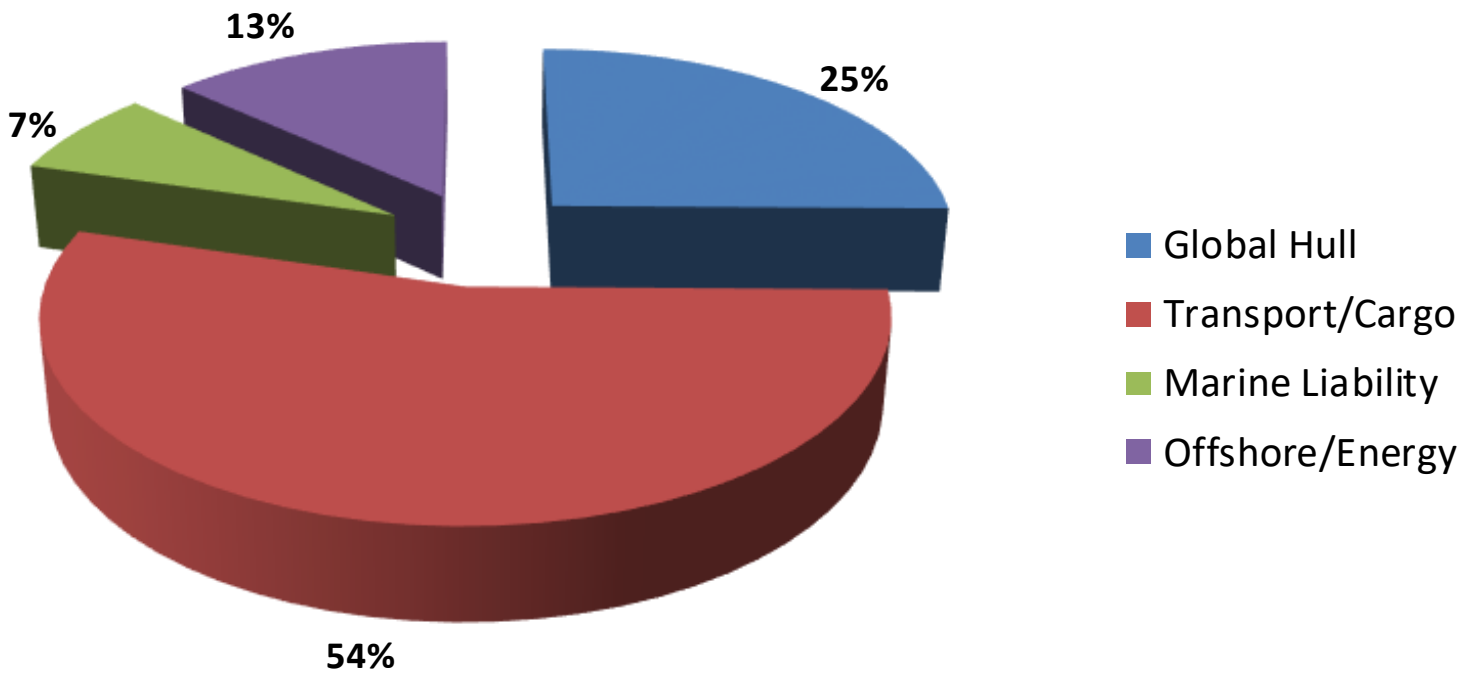
Marine Premium 2016

by line of business

Total estimate 2016: 27.5 USD billion / Change 2015 to 2016: -9%

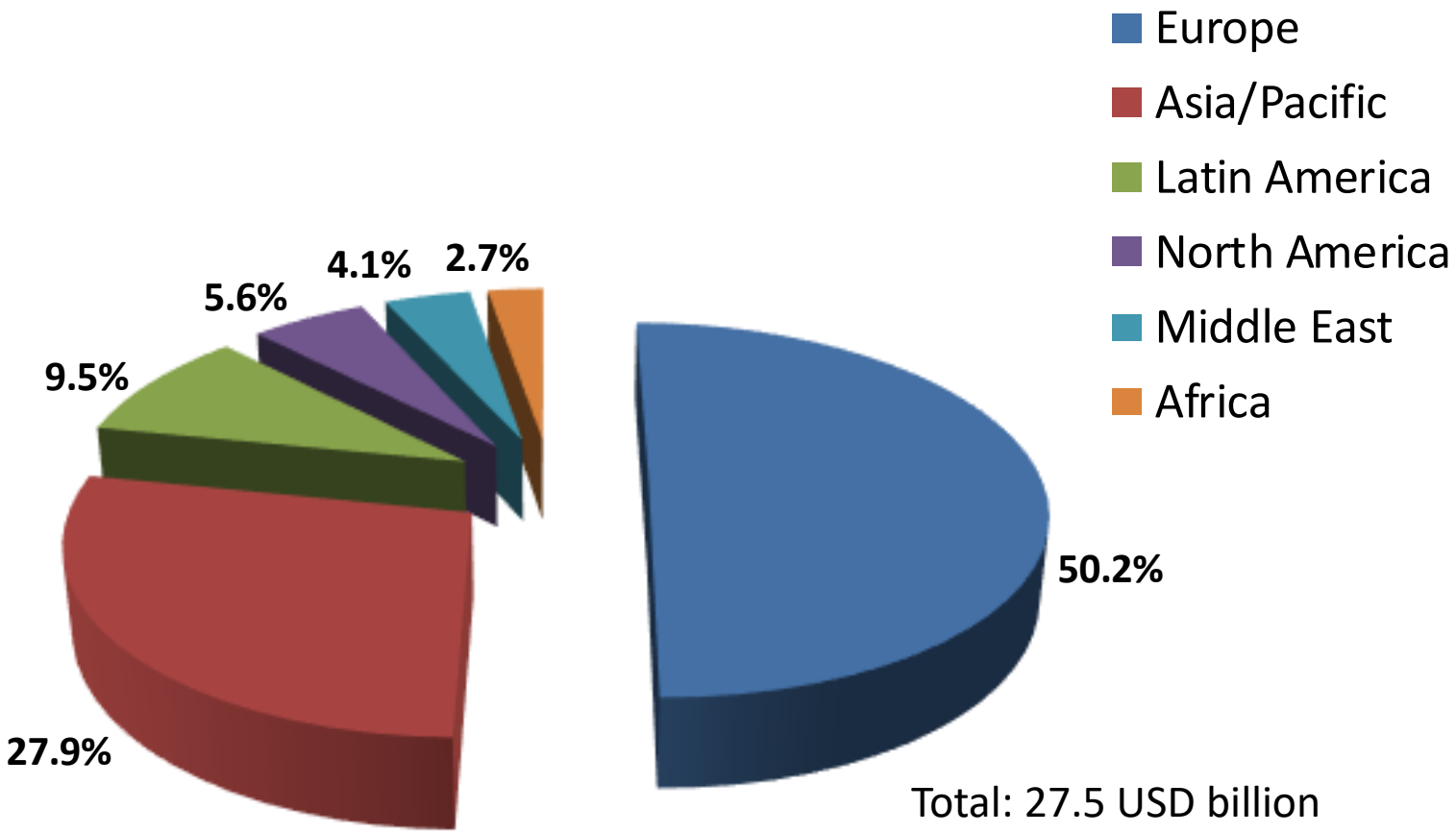
NB: Exchange rate effects due to recent strong USD!



Offshore energy share down 2%, Cargo up 2%.

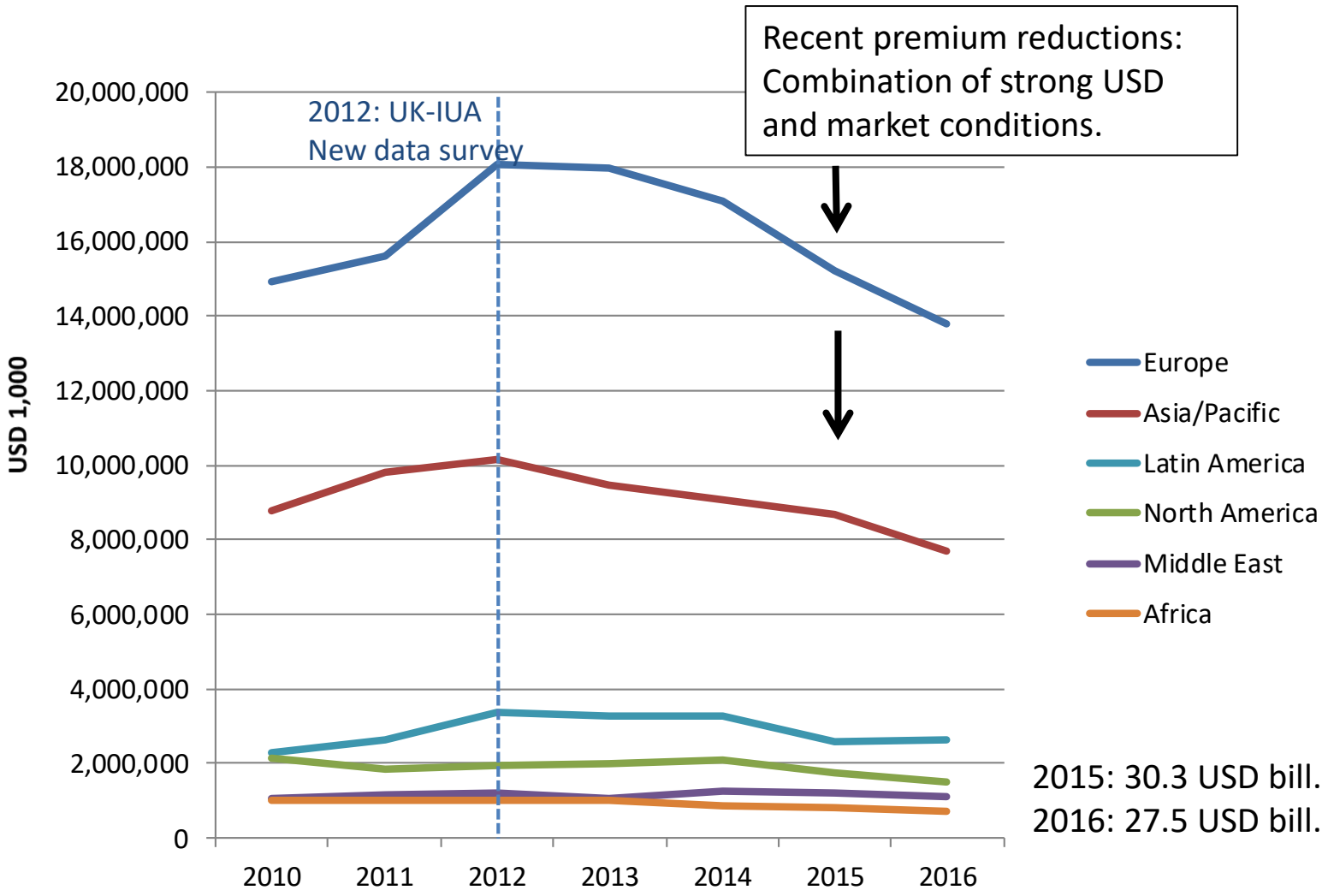
Marine Premiums 2016

by region



Total: 27.5 USD billion

Marine premiums by region 2010-2016, Data as reported 2017

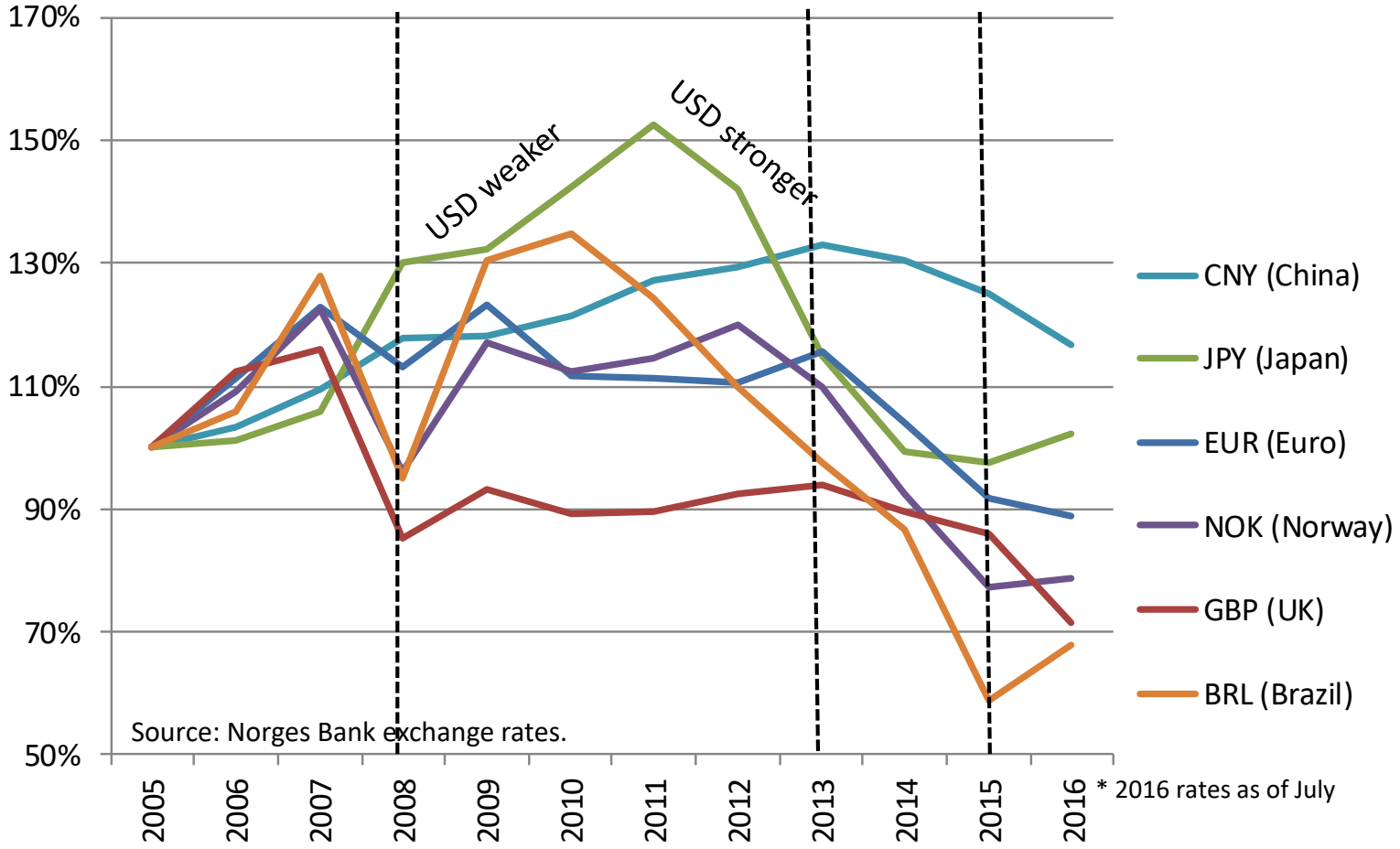


USD Exchange rates 2005-2016

against selected currencies, Index, 2000=100%

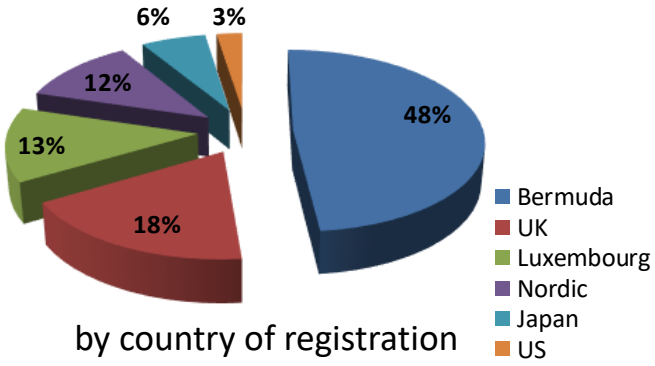
2014/15: strong USD – many currencies with double-digit % devaluation against USD.

2016: most currencies stabilize/some strengthen against USD

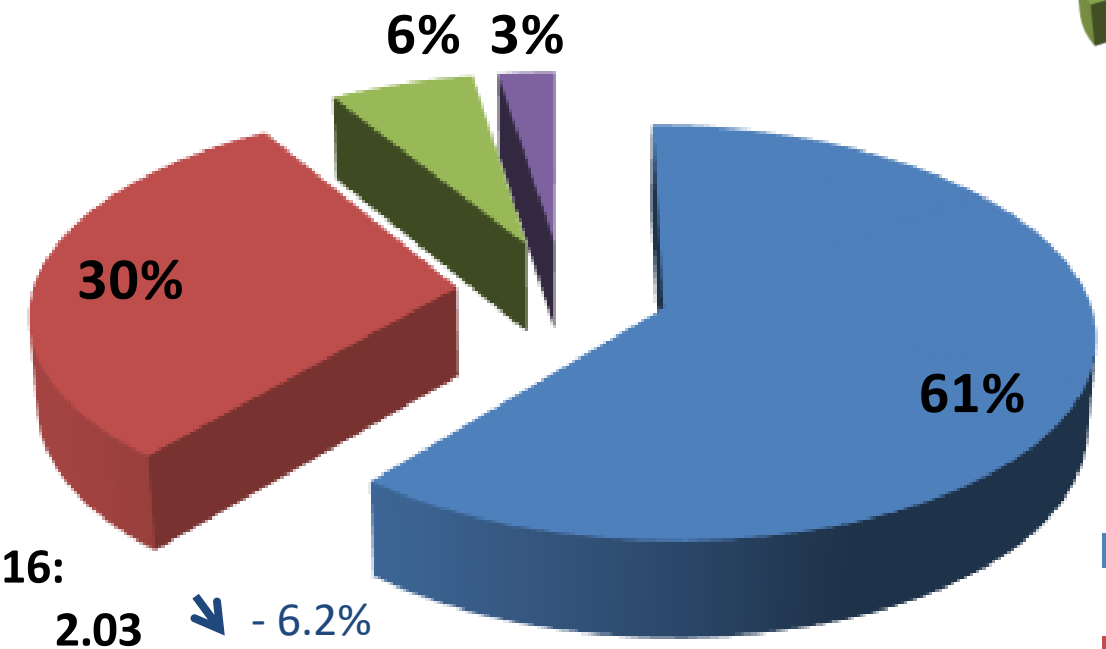


P&I Clubs International Group

Gross Calls (premium) 2016 – Operational location



by country of registration



Calls 2016:

UK:	**2.03**	↘ - 6.2%
Nordic:	**1.00**	↘ - 2.8%
Japan:	**0.21**	↘ - 6.5%
US:	**0.08**	↘ - 0.7%
Total:	**3.32 (USD billion)**	↘ All down: - 5.1%

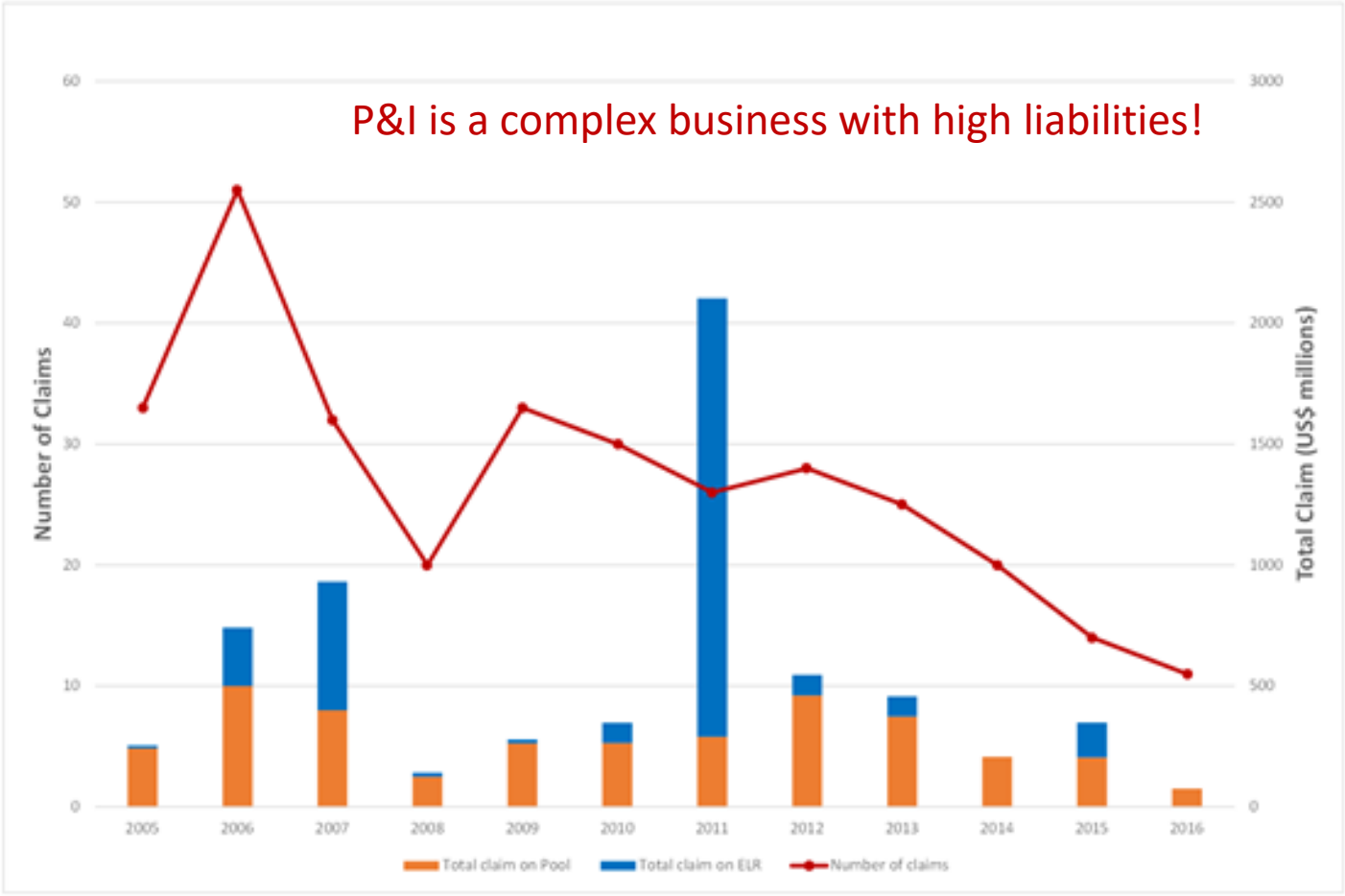
- UK
- Nordic
- Japan
- US

Source: International Group of P&I Clubs

P&I Pool claims by policy year

Source: Annual Review of the International Group of P&I Clubs

Pool claims on 2016/17 policy year reduced compared to 2015/16.
IG P&I: “This continues the encouraging trend of more benign large claims…”



Check Annual Review of the Int. Group of P&I Clubs to understand complexity of exposure under P&I liability:
https://static.mycoracle.com/igpi_website/media/adminfiles/IGPI_Annual_Review_16-17_nSXn9m4.pdf

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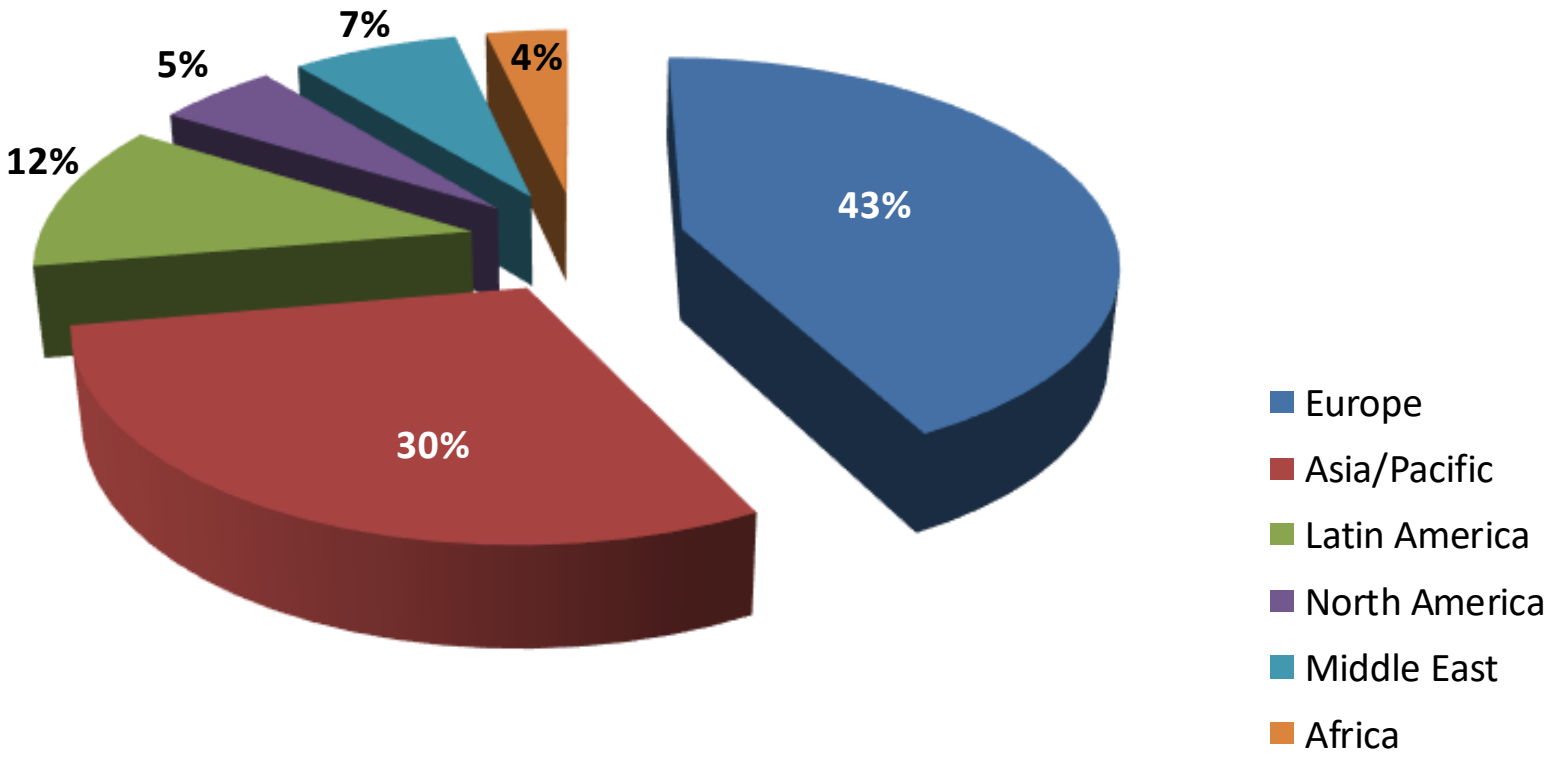
Cargo Premium 2016 – by region

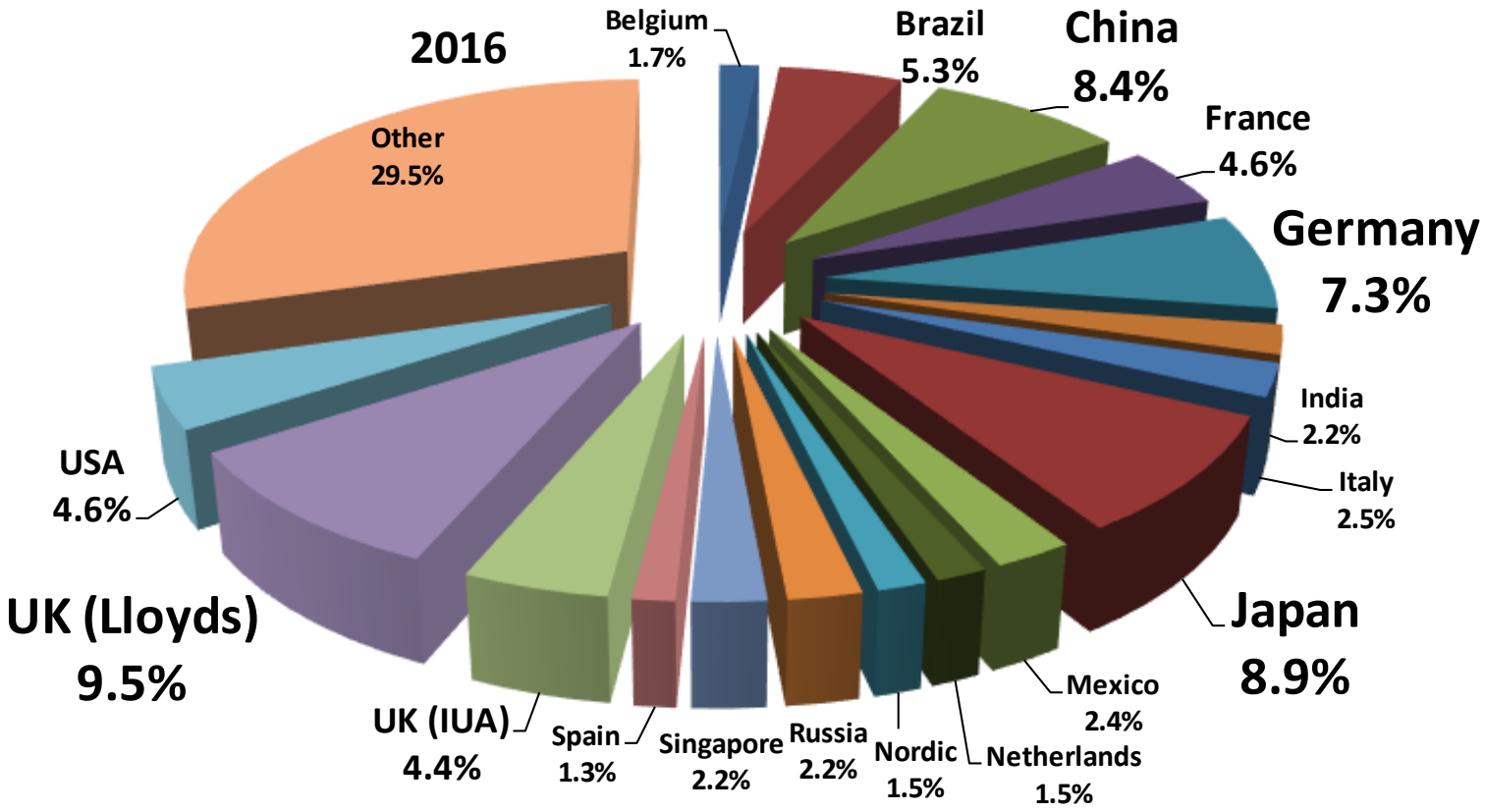
Total estimate: 15.0 USD billion / Change 2015 to 2016: -6%

Exchange rate effects strongest on cargo premium.



Cargo Premium 2016 - by markets

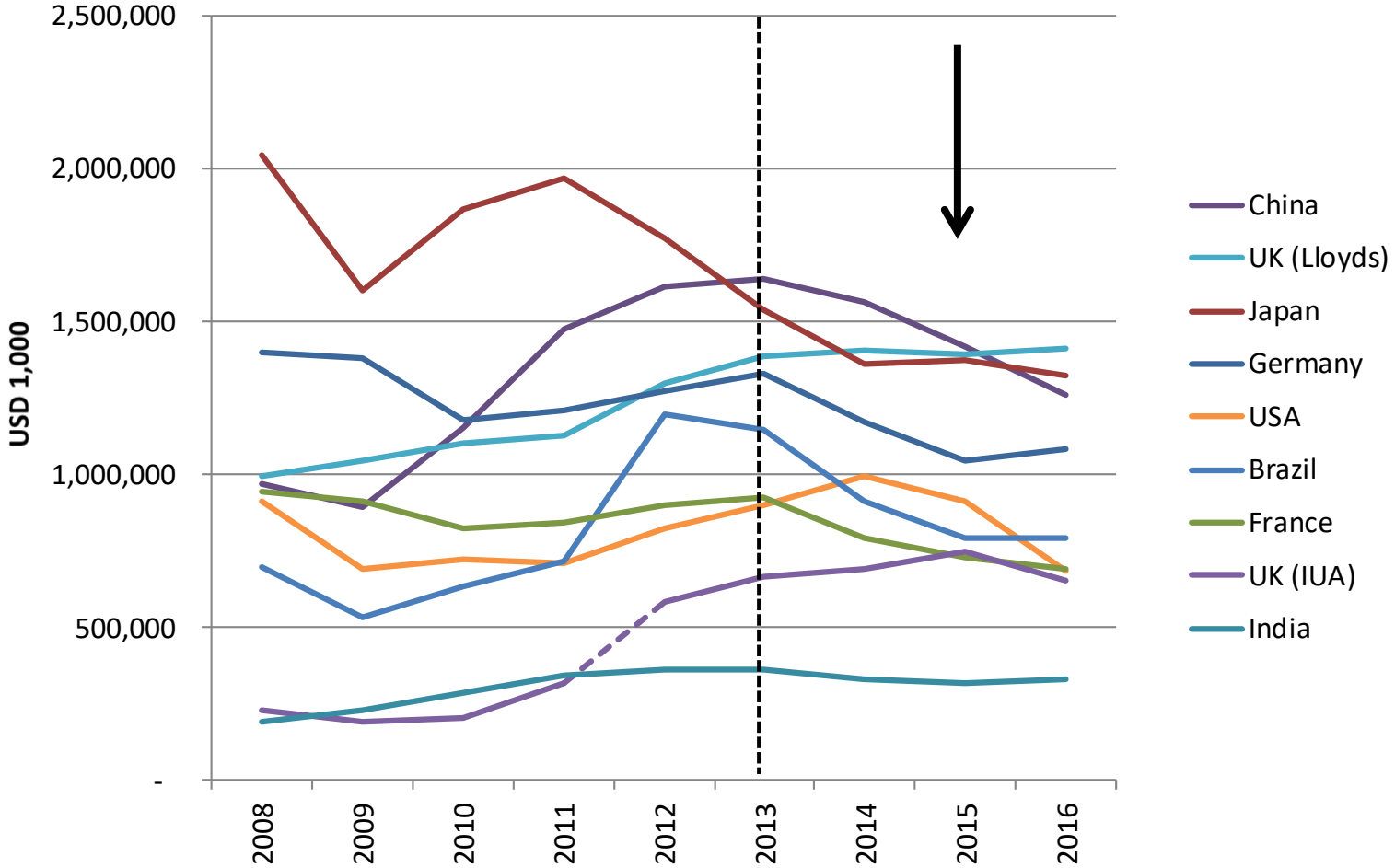
Total estimate: 15.0 USD billion



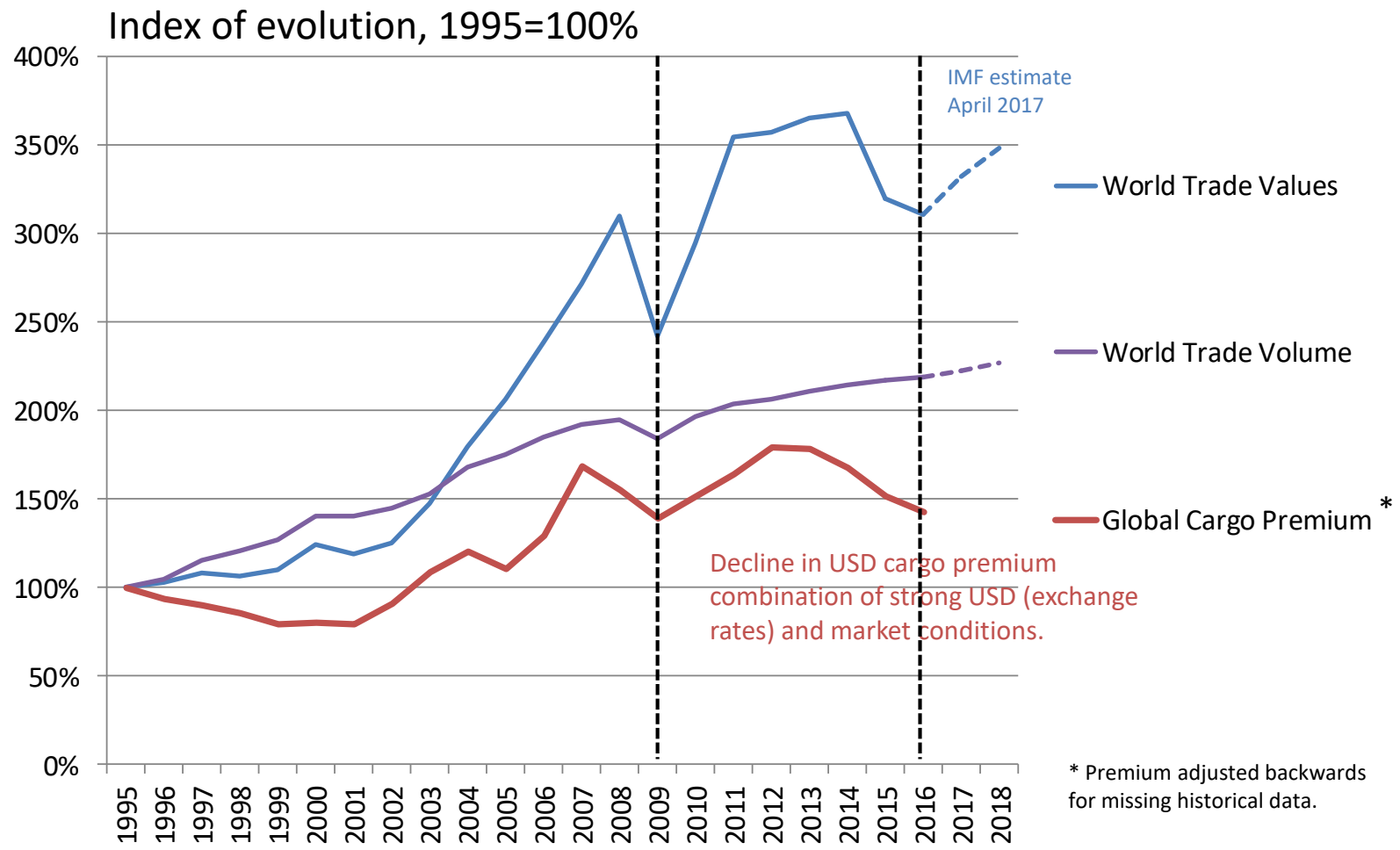
Cargo Premium 2008-2016

Selected markets

2014-15: strong USD «reduces» income of most countries.
Difficult to identify real market development.
2016 different influences.



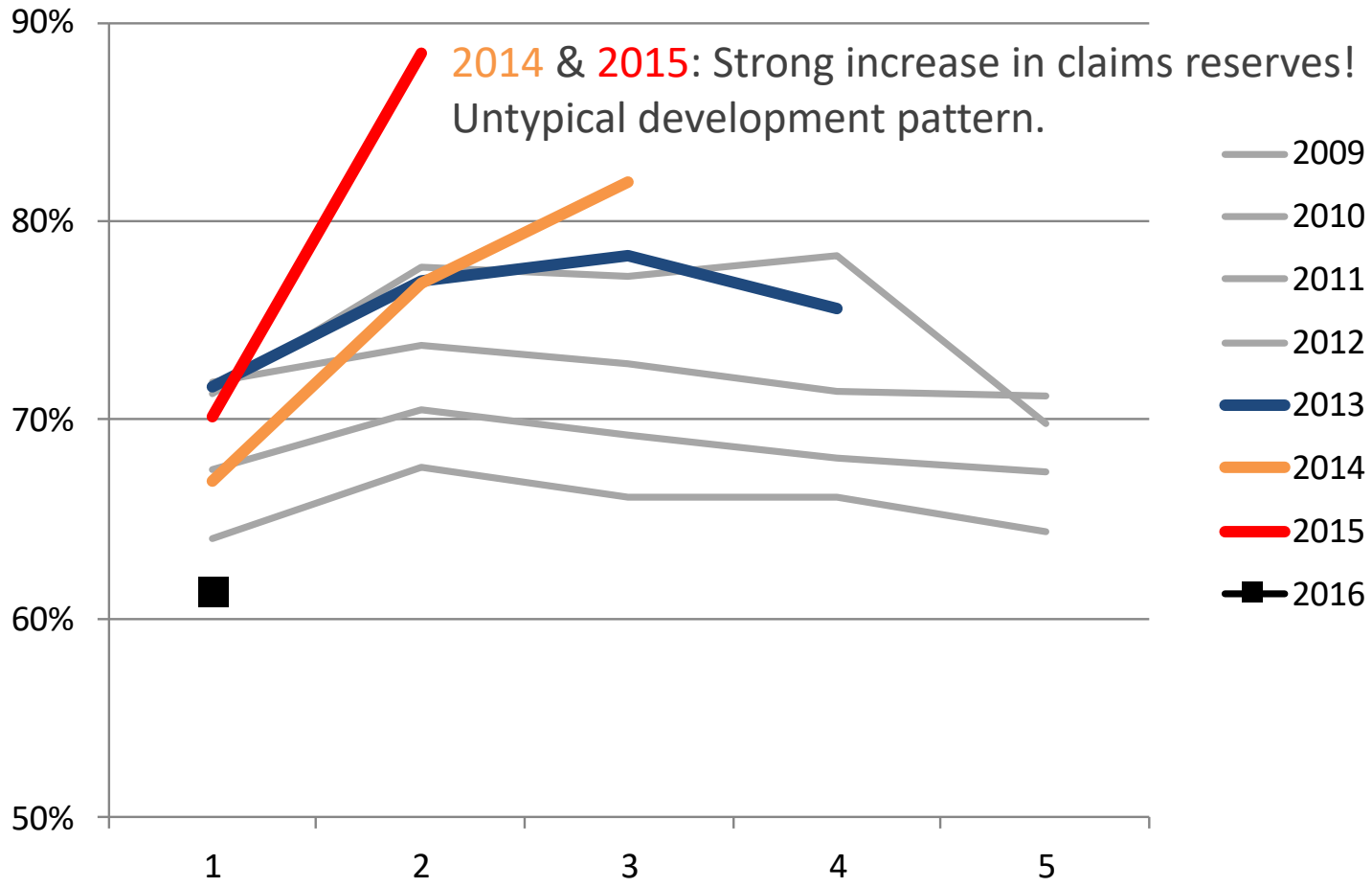
Cargo Premium versus World Trade Values & Exports



* Premium adjusted backwards for missing historical data.

Gross* loss ratios
Cargo Europe (& partly US) **

Underwriting years 1996 to 2016, as reported at 1, 2, 3, 4, 5 years

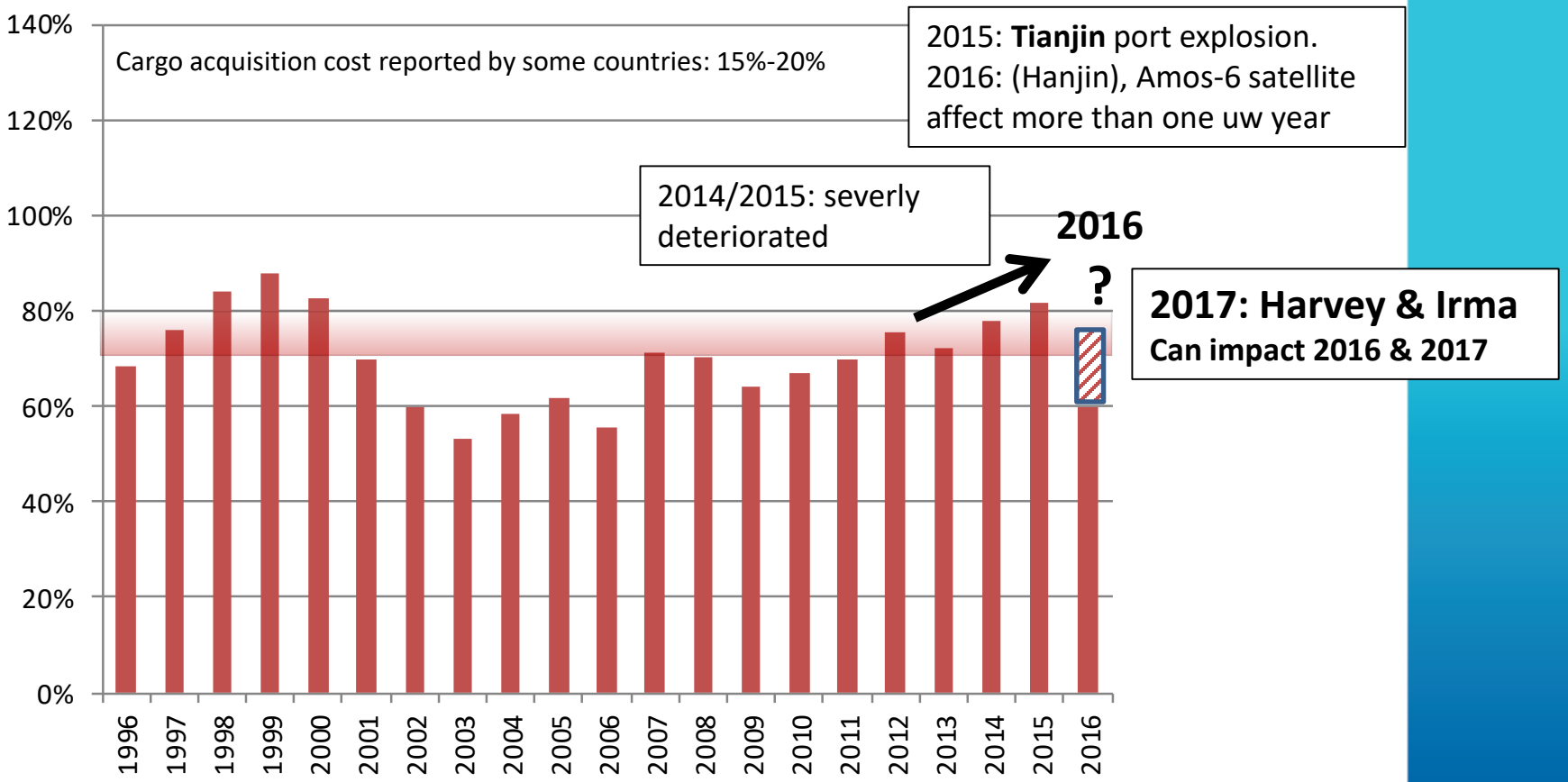


*Technical break even: gross loss ratio does not exceed 100% minus the expense ratio (acquisition cost, capital cost, management expenses)

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

Ultimate Gross* loss ratios Cargo Europe (& partly US)**

Underwriting years 1996 to 2016



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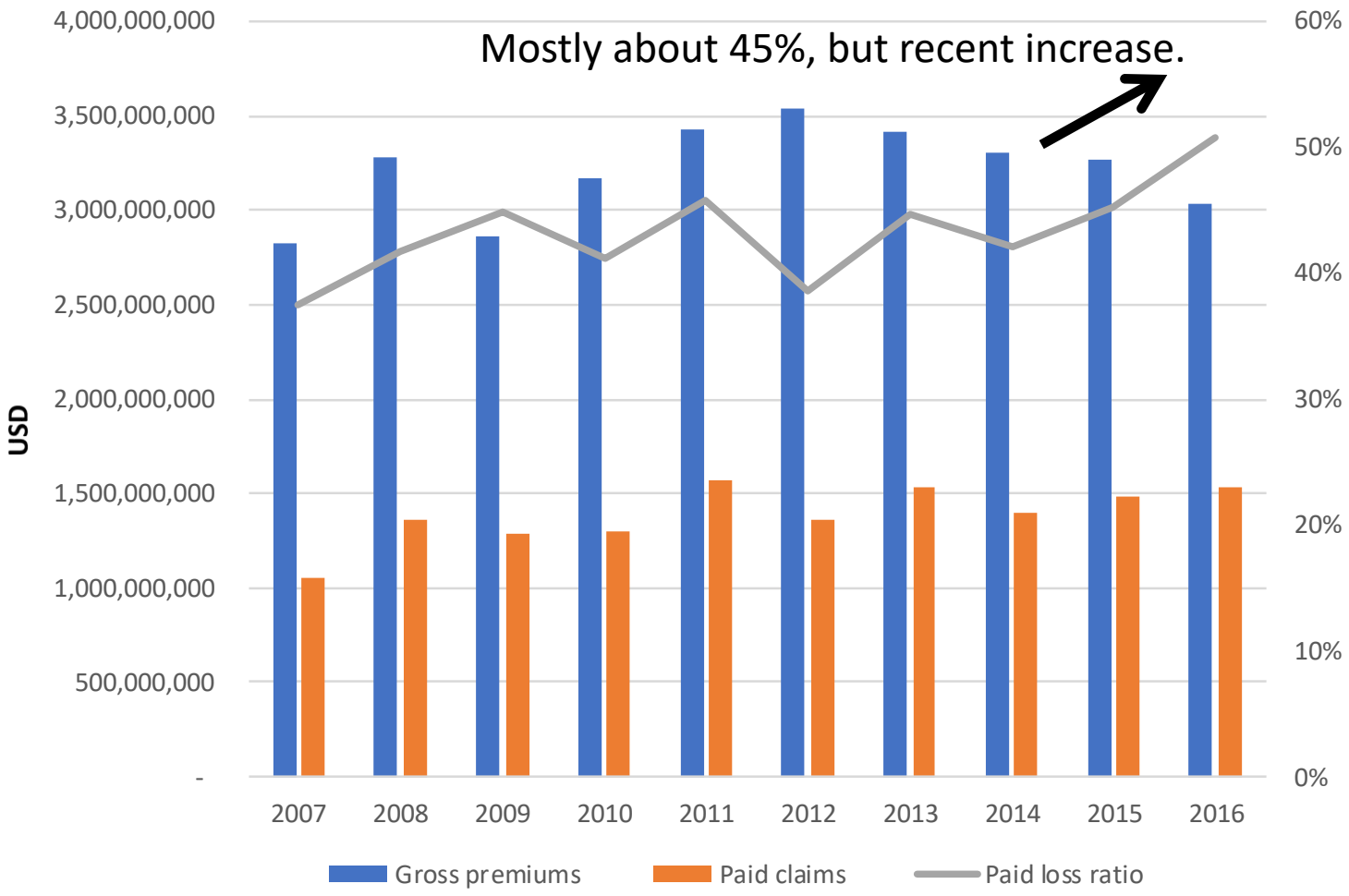
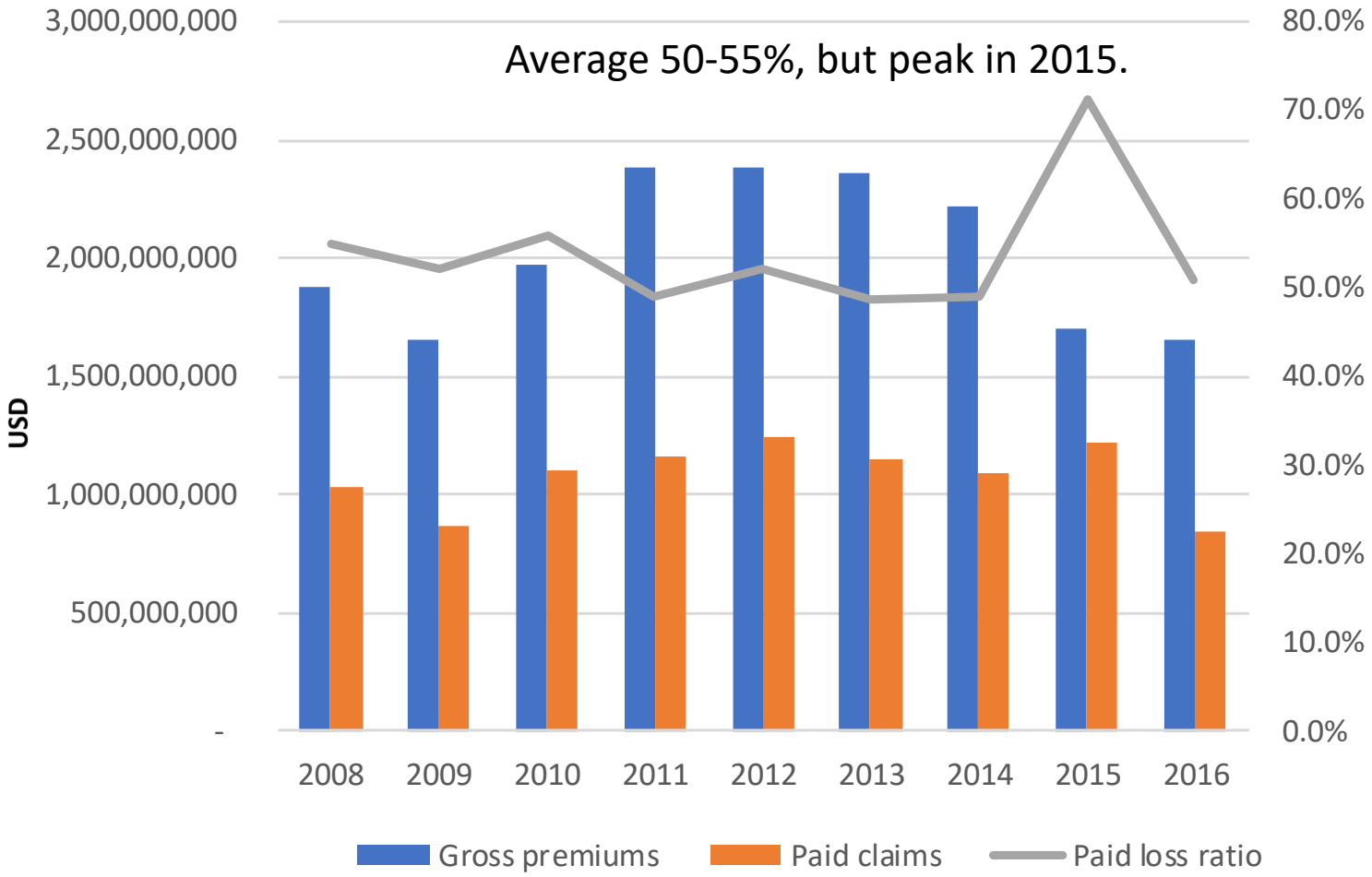
Gross loss ratios accounting year Cargo Asia* - Gross premiums & **paid** claims



* China, Japan, Hong Kong

Gross loss ratios accounting year Cargo Latin America* - Gross premiums & **paid** claims



*Figures included from: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Ecuador, Guatemala, Honduras, Mexico, Panama, Paraguay, Peru, Venezuela.

Cargo Key points

- USD premium influenced by combination of market conditions and exchange rates (strong USD).
- Market change and results differ by region.
- 2014 & 2015 Results severely deteriorated (Tianjin). Uncertain how 2016 will develop (Amos-6, Harvey, Irma).
- Risk of even larger event claims: Climate (NatCat) & Increasing value accumulation on single sites
- Premiums represent increasingly stock exposure rather than transit exposure
- Despite some increase in trade, changing economic and political environment adds to uncertainty.

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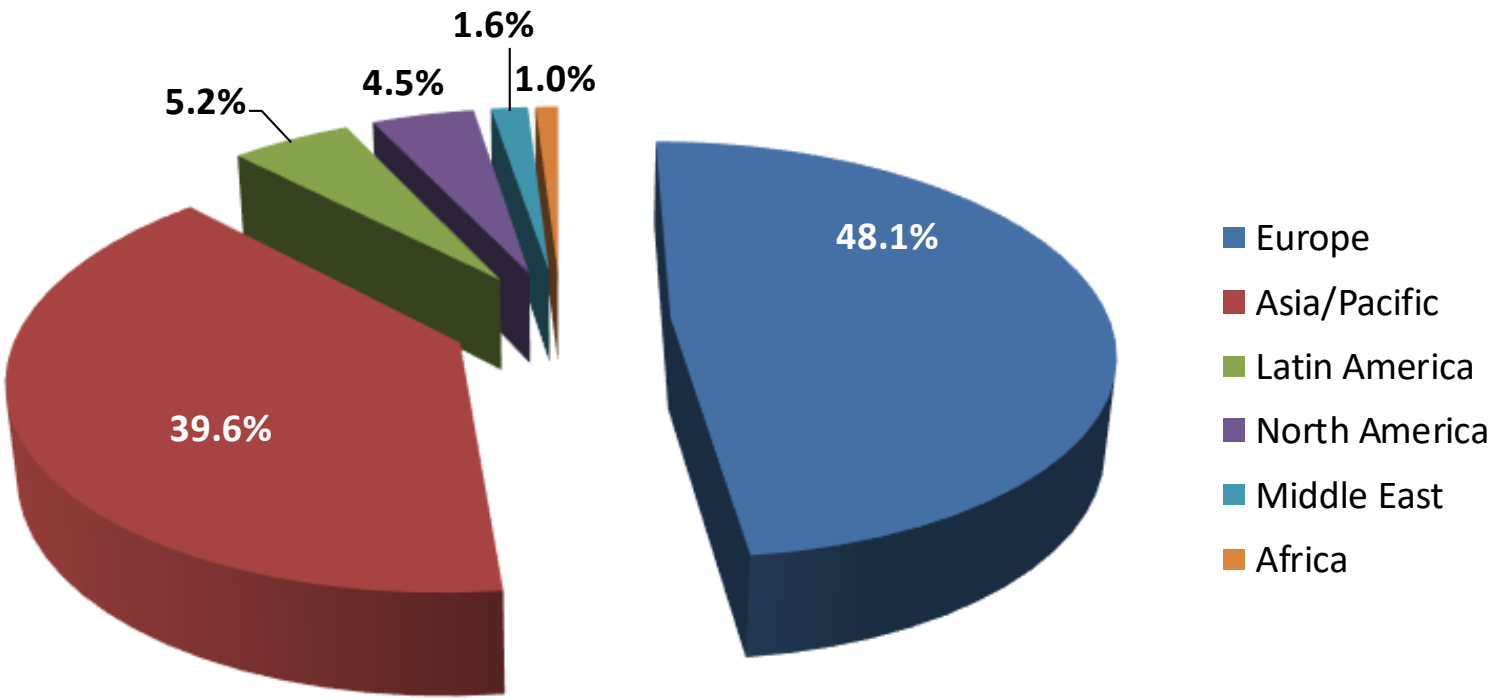
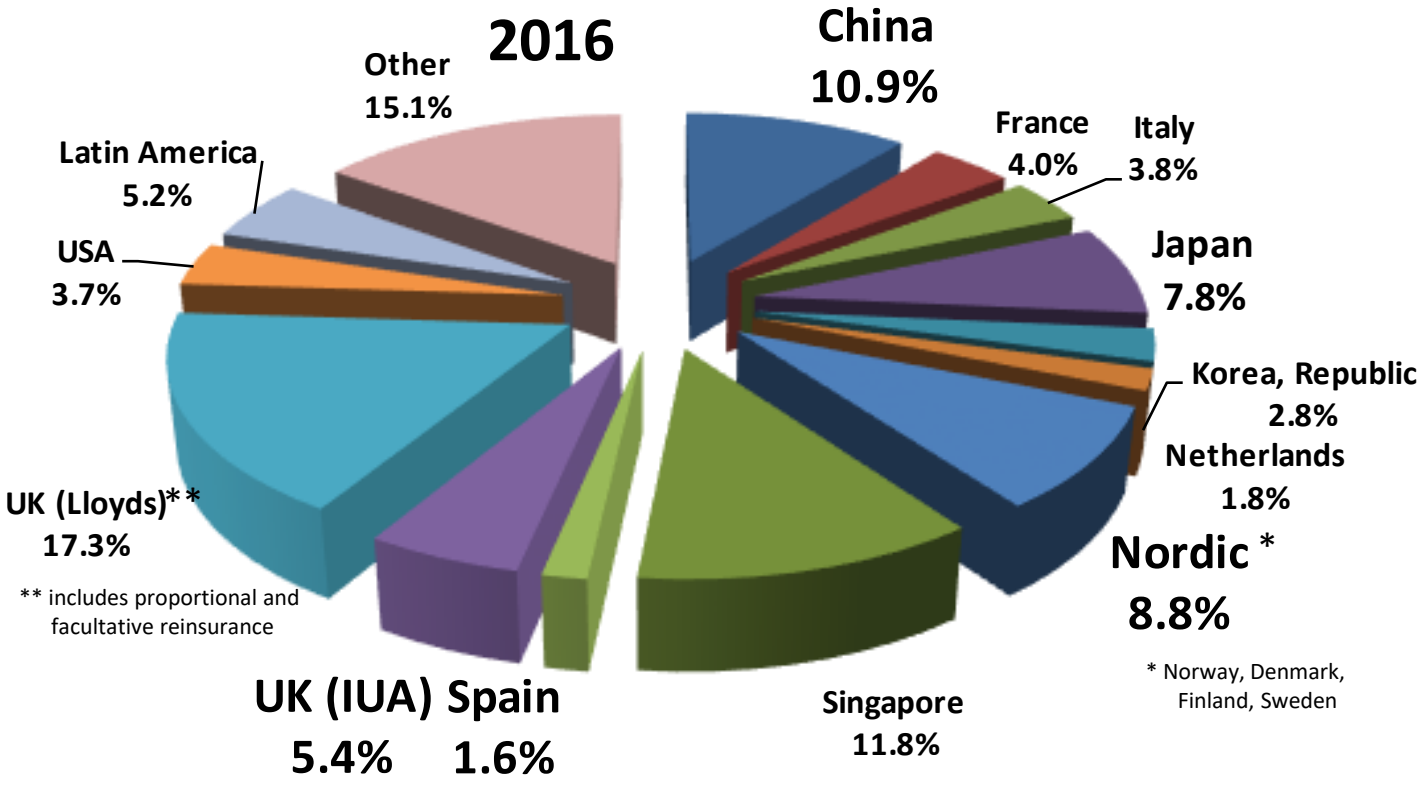
Hull Premium 2016 – by region

Total estimate: 7 USD billion / Change 2015 to 2016: -10%



Hull Premium 2016 – by markets

Total estimate 2016: USD 7 billion



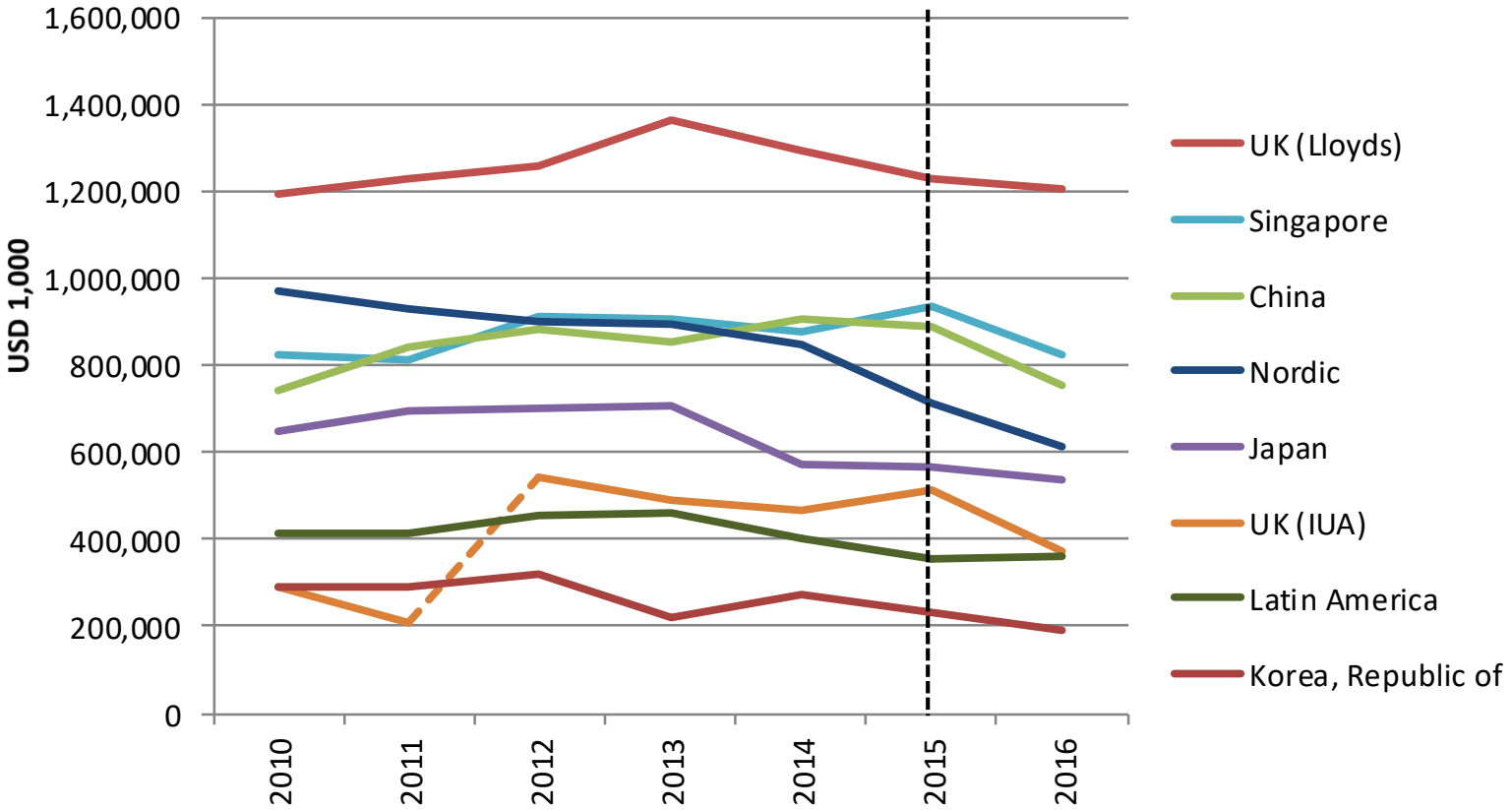
** includes proportional and facultative reinsurance

* Norway, Denmark, Finland, Sweden

Hull Premium 2010-2016

Selected markets

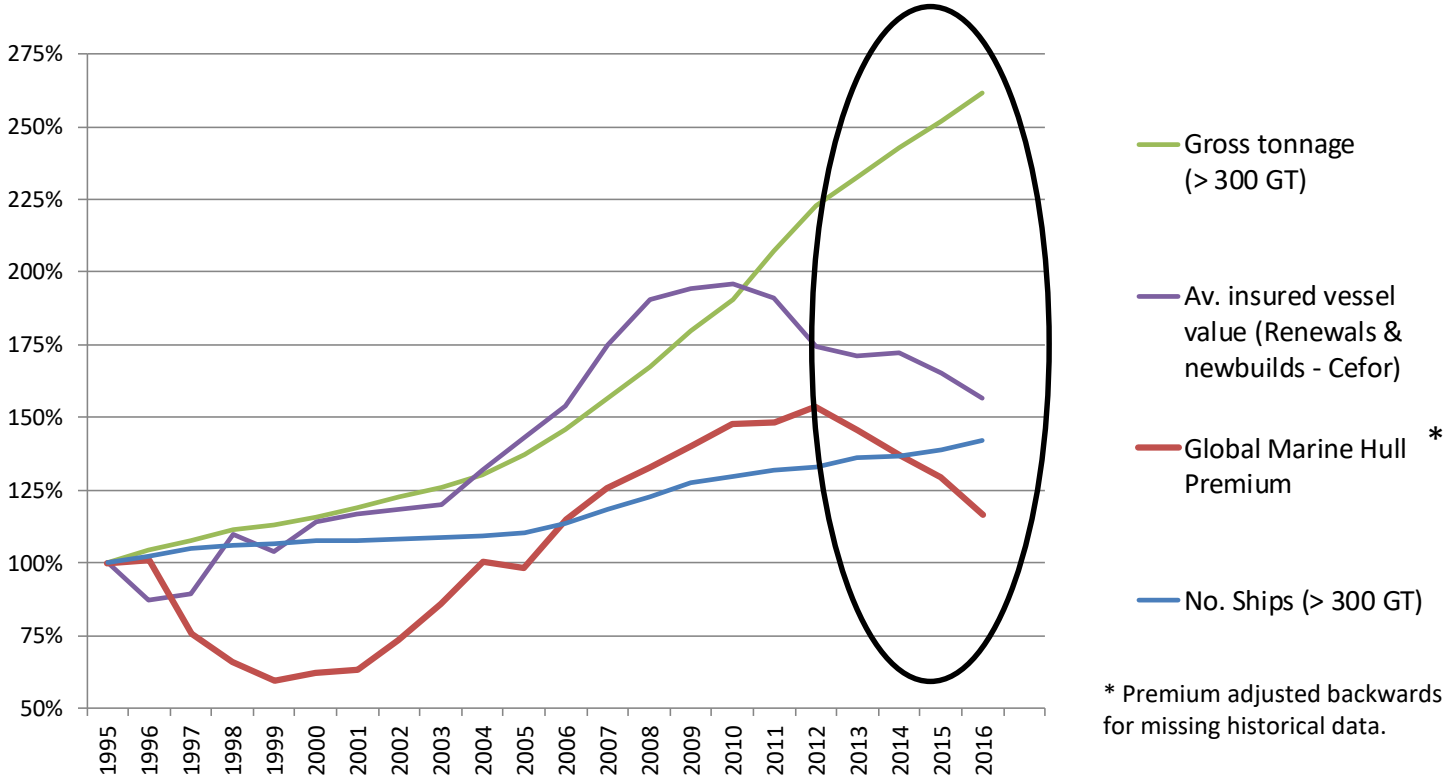
Hull premium reduced in most markets from 2015 to 2016.



Hull Premium / World Fleet

Index of evolution, 1995 = 100%

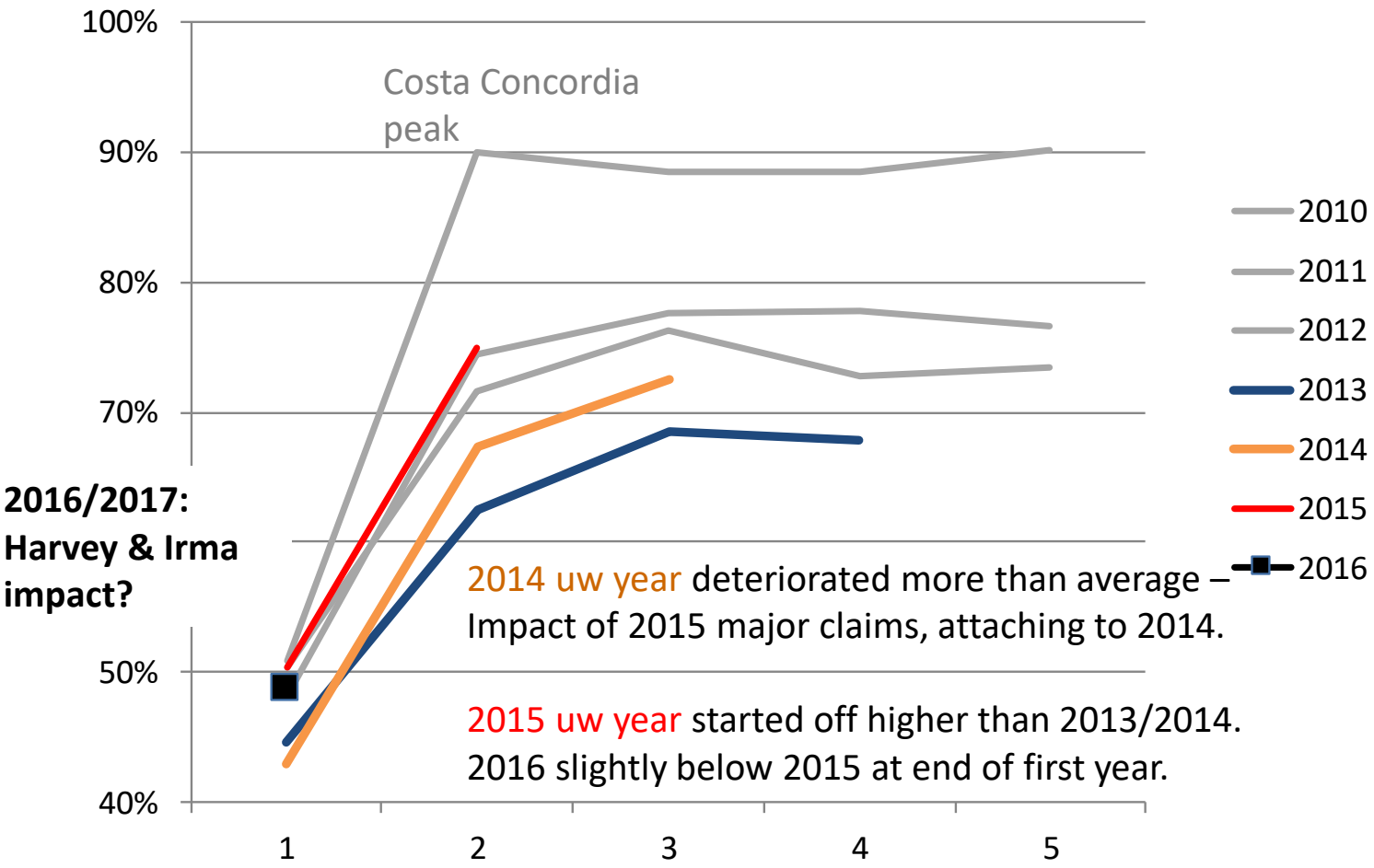
World fleet continues to grow, especially in tonnage.
Hull premium deteriorates in line with average ship values.
Mismatch between fleet growth and income level.



* Premium adjusted backwards for missing historical data.

Gross* loss ratios
Hull Europe** (& partly US)

Underwriting years 2010 to 2016, as reported at 1, 2, 3, 4, 5 years



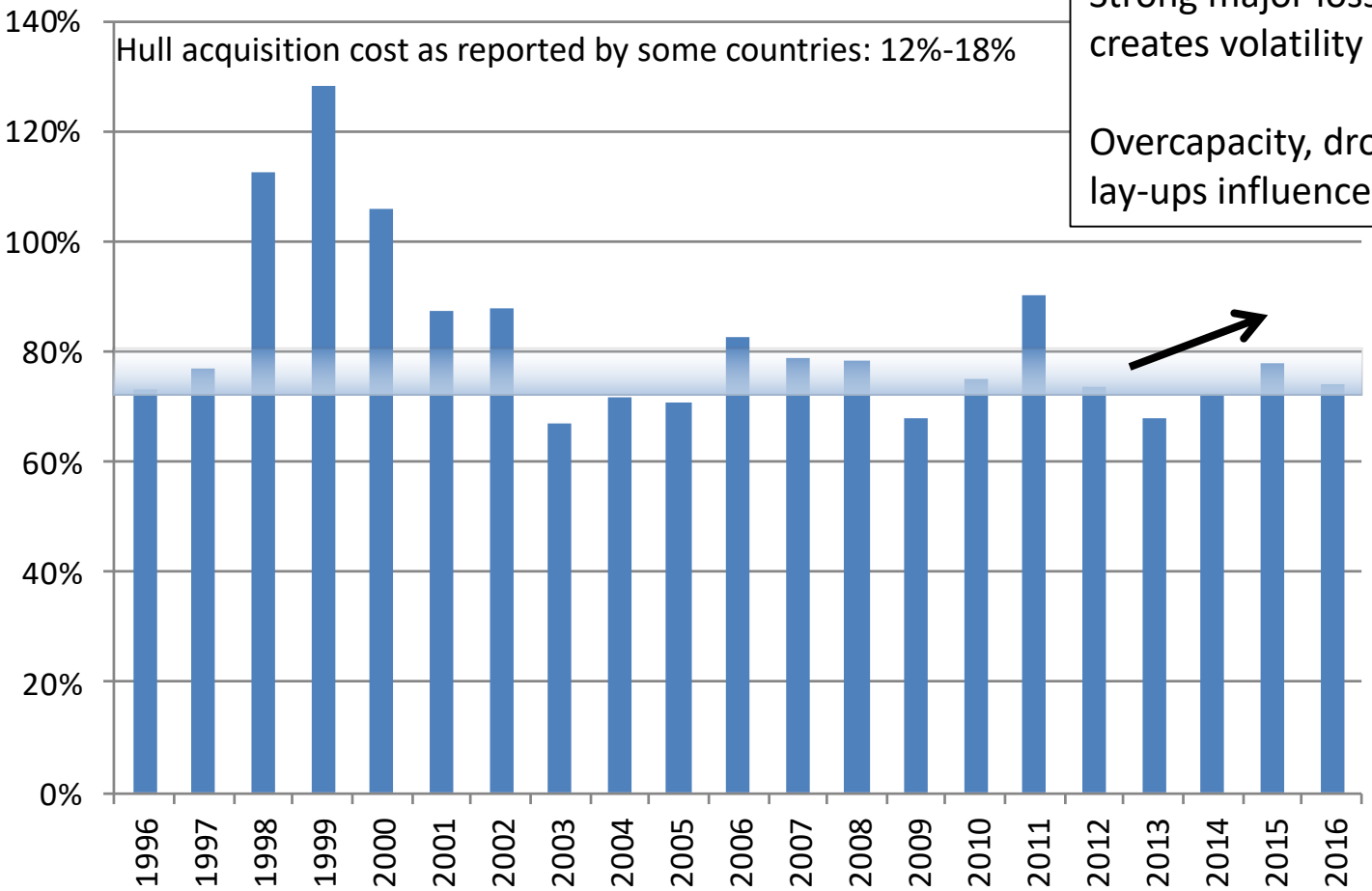
2016/2017: Harvey & Irma impact?

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

** Data included from: Belgium, France, Germany, Italy, Nordic (Cefor), UK, USA

Ultimate Gross* loss ratios Hull Europe** (& partly US)

Underwriting years 1996 to 2016



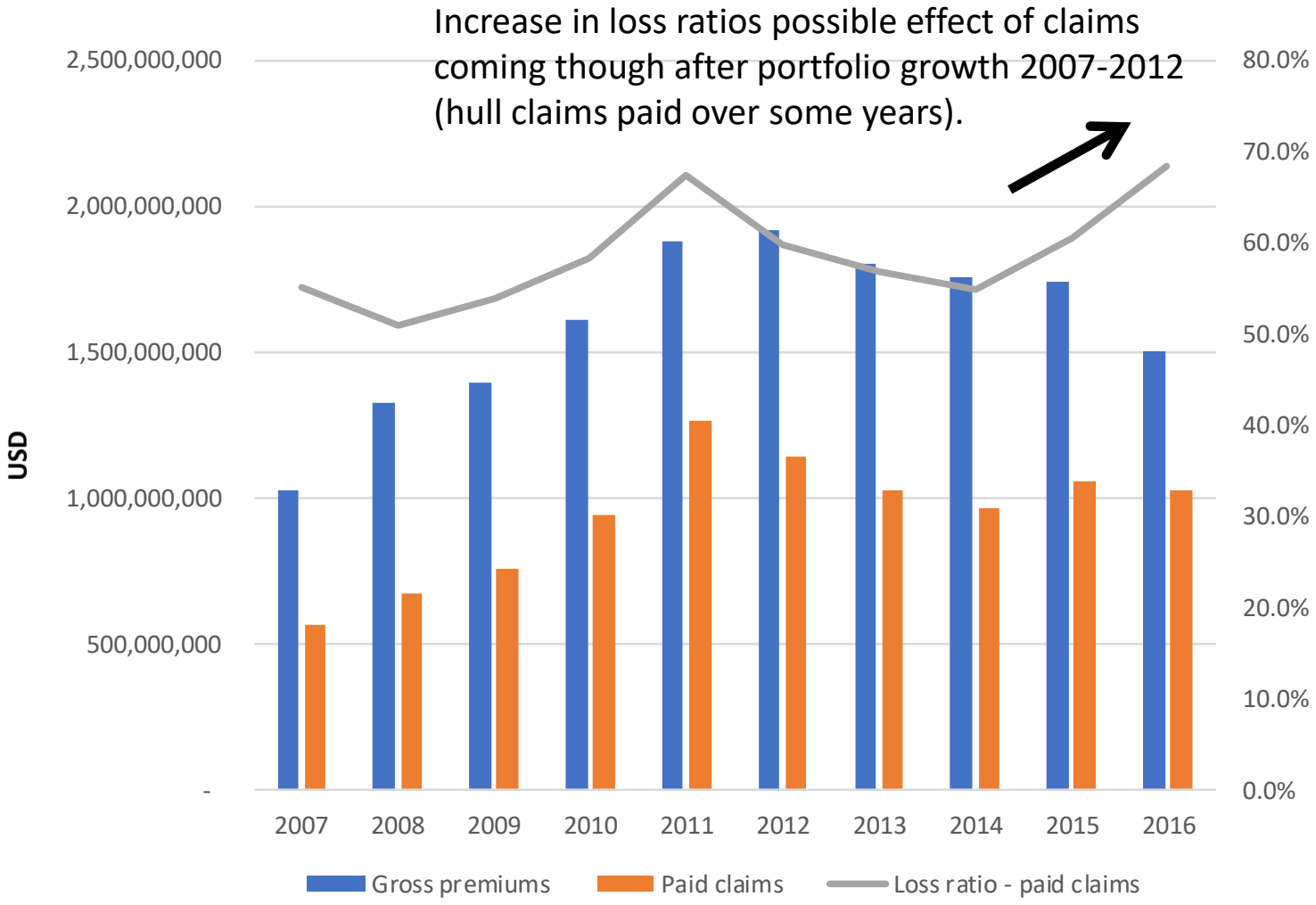
Strong major loss impact in certain years creates volatility in results.

Overcapacity, dropping vessel values and lay-ups influence income negatively.

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

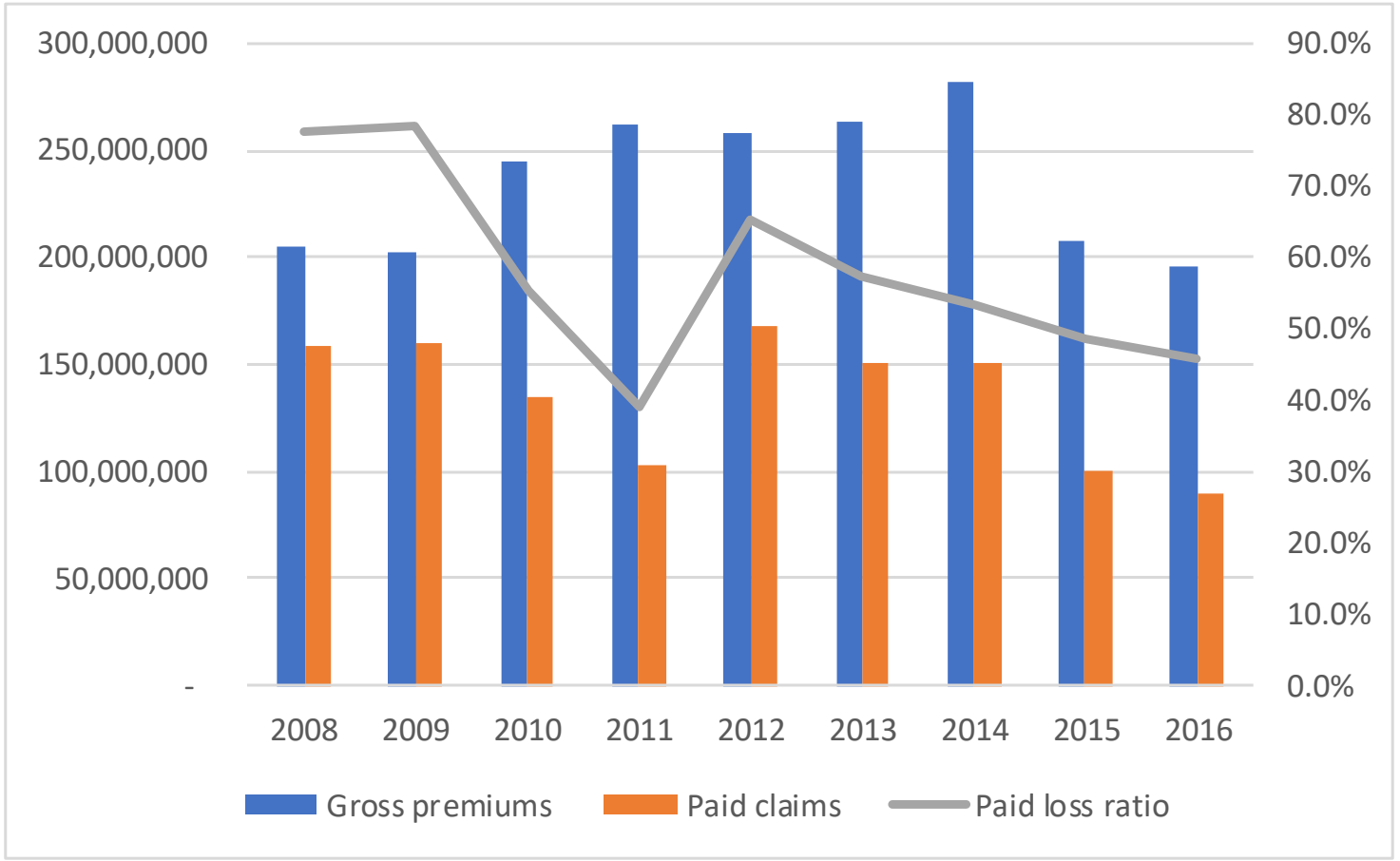
** Data included from: Belgium, France, Germany, Italy, Nordic (Cefor), Spain (until 2007), UK, USA

Gross loss ratios accounting year Hull Asia* - Gross premiums & **paid** claims



* China, Japan, Hong Kong.

Gross loss ratios accounting year Hull Latin America* - Gross premiums & **paid** claims



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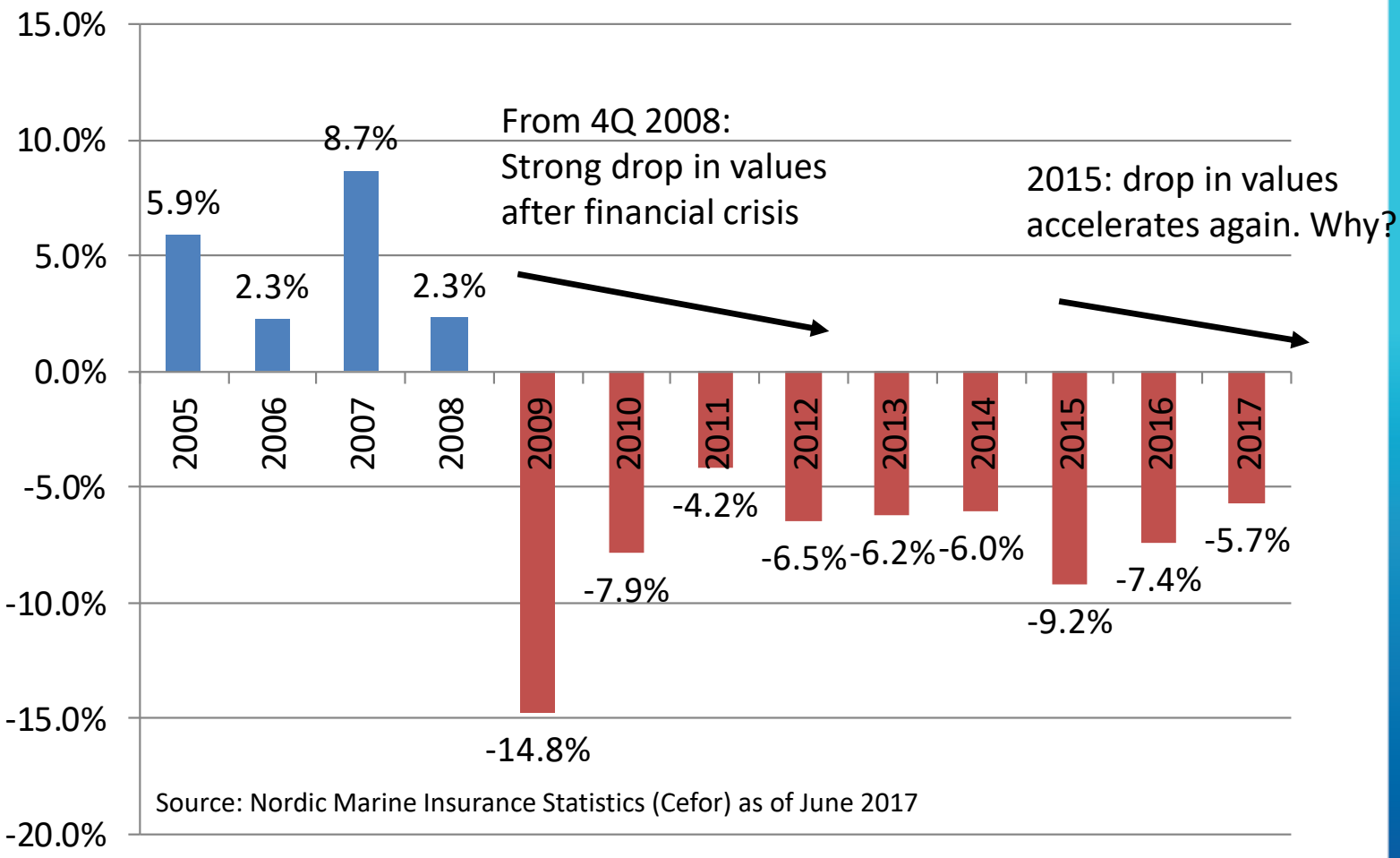
- **Hull** – **Focus**:
  - Portfolio & Claims trends
  - ‘Serious’ versus ‘major’ casualties
- **Offshore Energy** – Market & results

Hull **Portfolio** trends

Change in values on renewal

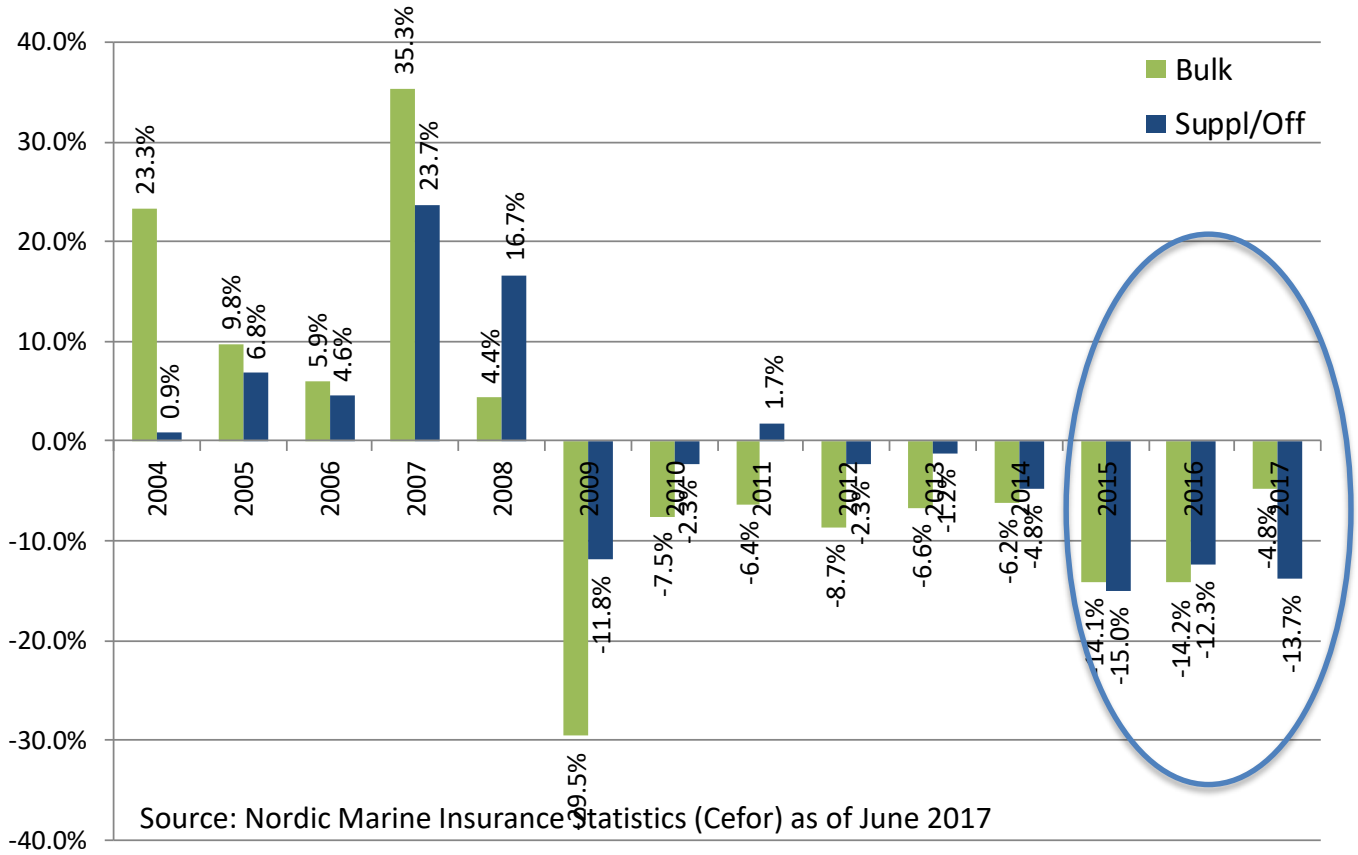
= vessel value on renewal / vessel value previous uw year (same vessels in both years)



Source: Nordic Marine Insurance Statistics (Cefor) as of June 2017

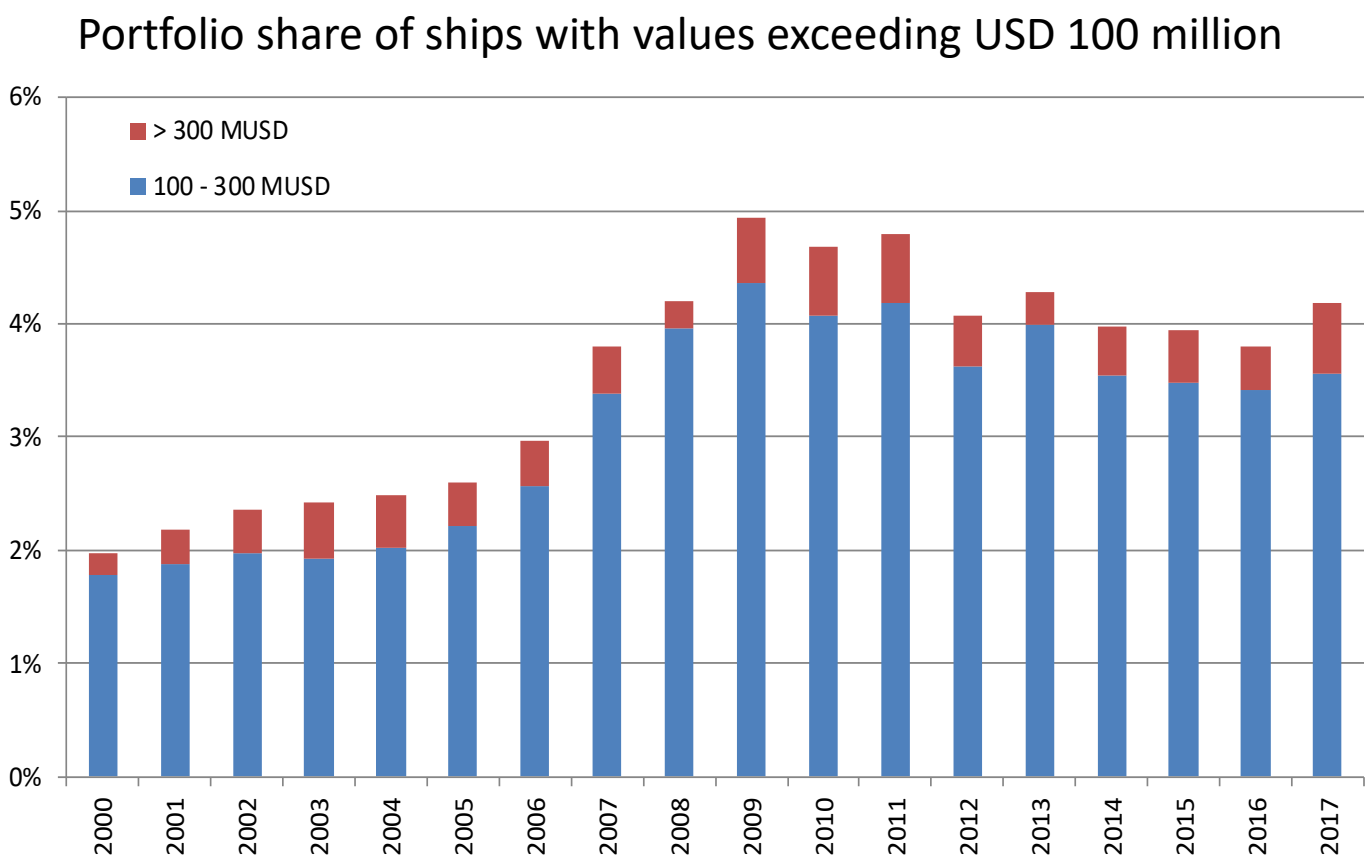
Bulk & Supply/Offshore values

Supply/Offshore vessels drop ~14% in value for 3rd consecutive year.
Bulk recovers in 2017 after 2 years of 2-digit drop in values.



Source: Nordic Marine Insurance Statistics (Cefor) as of June 2017

Inflow of high-value vessels continues



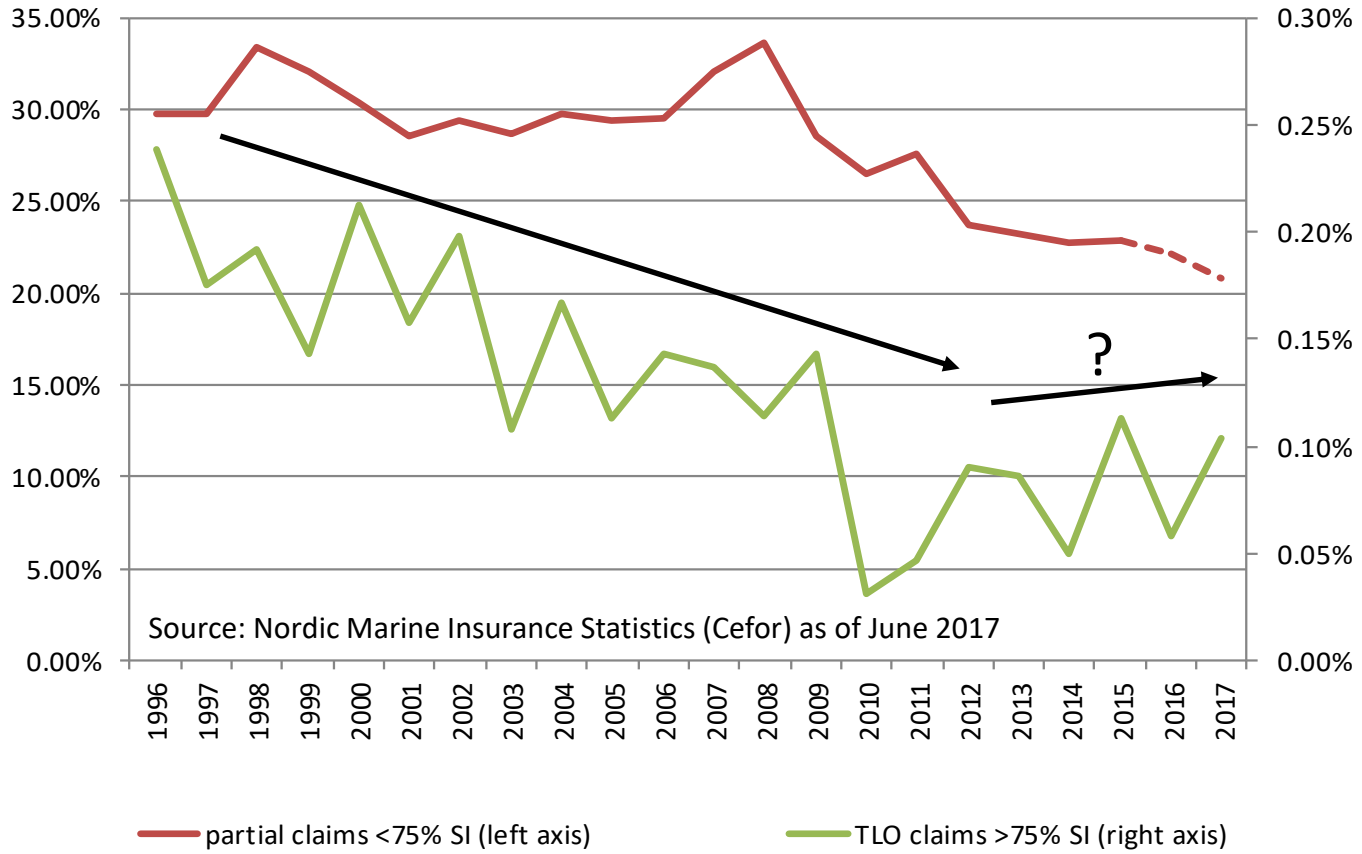
Source: Nordic Marine Insurance Statistics (Cefor) as of June 2017

Hull **claims** trends

Claims frequency as of June 2017

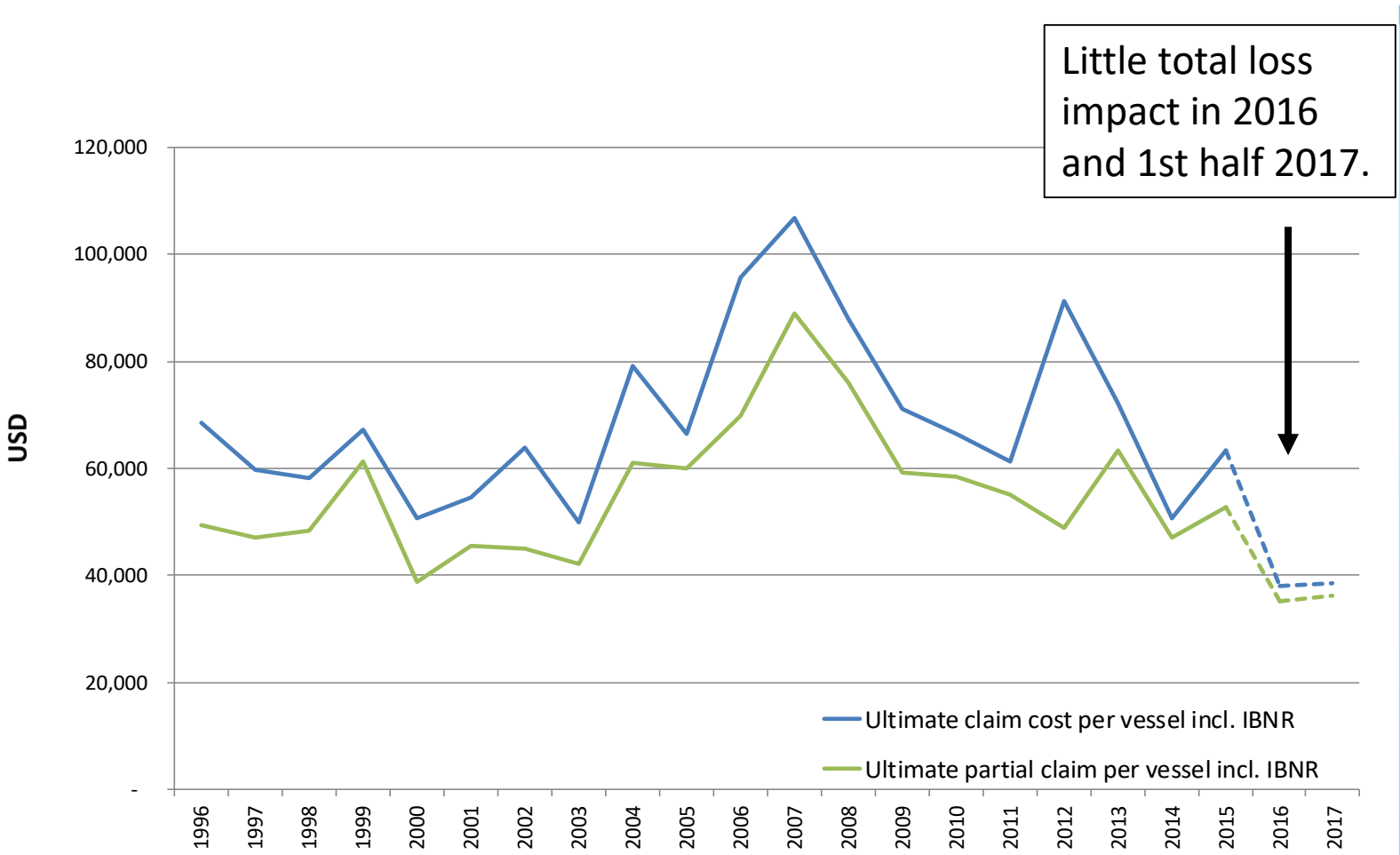
All claims: Stable to downwards trend.

Total losses: Long-term positive trend. Recent fluctuation around 0.1%.
Dropping ship values increase probability of constructive total losses.



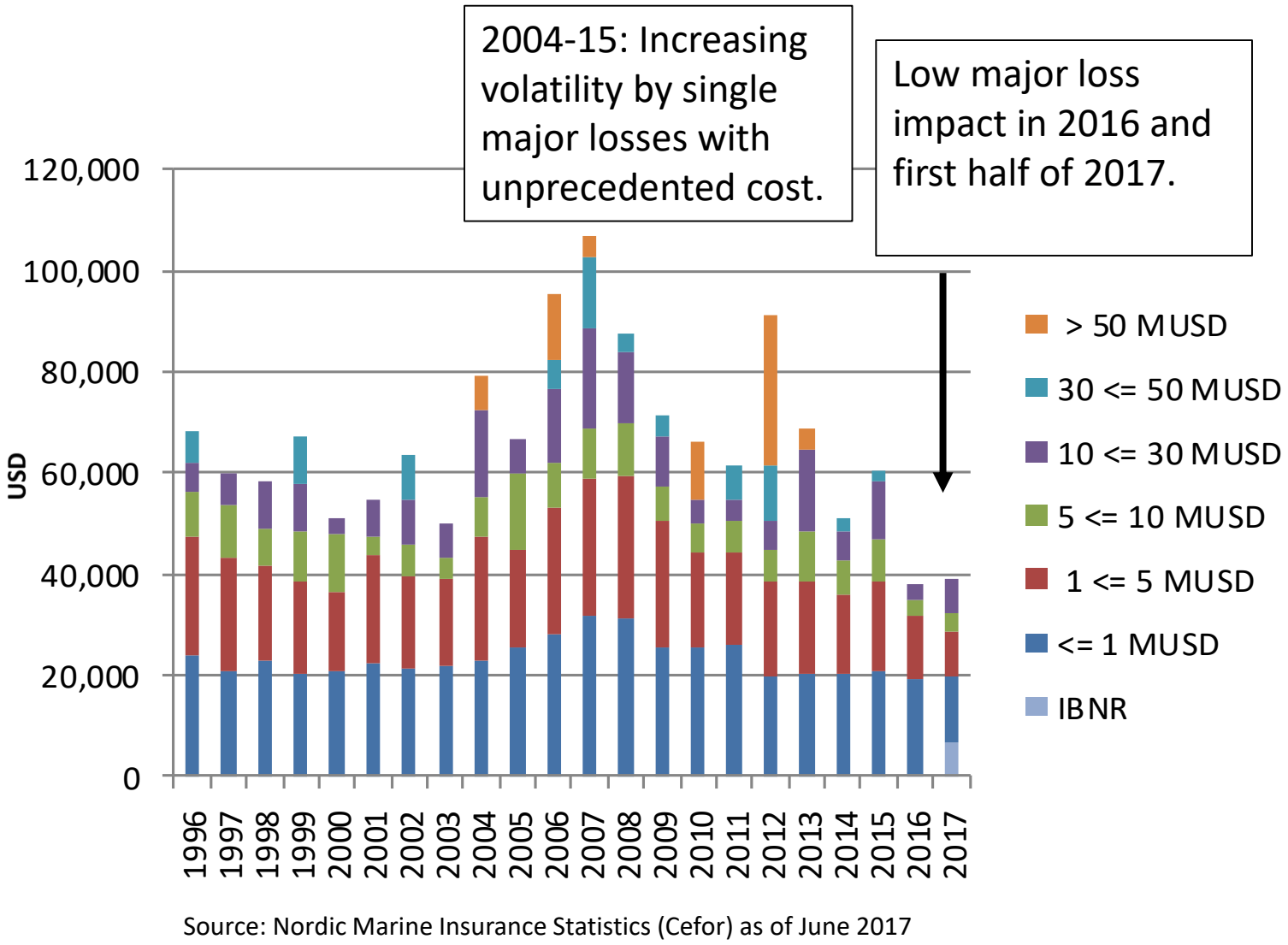
Claim cost per vessel

Total and partial claims, by accident year, in USD



Claim cost per vessel

in bands of claim cost, by accident year, in USD



Source: Nordic Marine Insurance Statistics (Cefor) as of June 2017

‘Serious’ versus ‘major’ casualties

An excursion into terminology

‘**Major** claims’ (=extraordinary costly claims) strongly impact marine insurers results.

Marine bodies such as IMO and providers of maritime data (LLI, IHS, Clarkson,…) categorize casualties as ‘**serious**’ / ‘non-serious’*.

‘Serious’ is related to the nature of the event.

Causality:

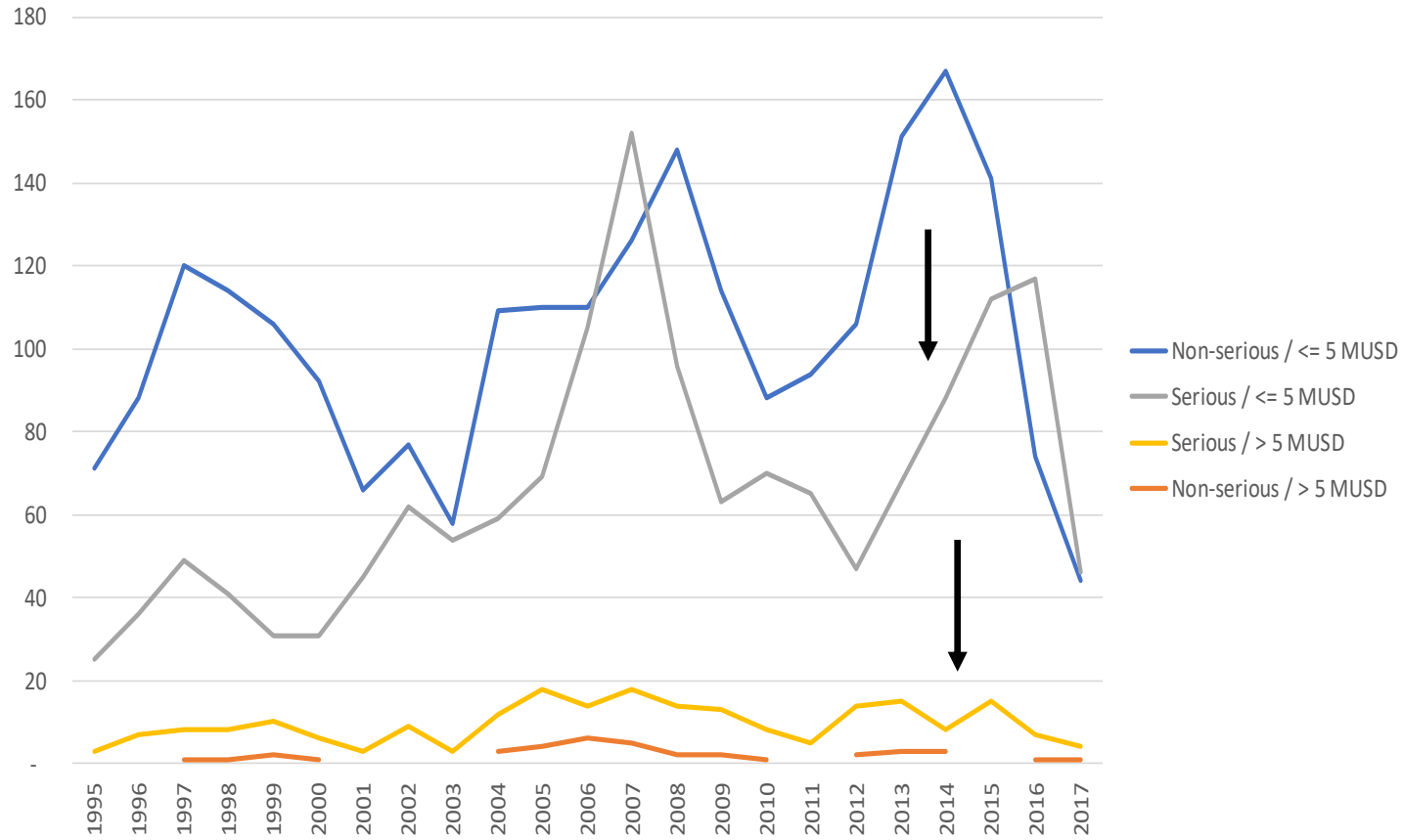
Major losses usually result from serious casualties.

But the majority of serious casualties is not costly.

* Complete definitions (IMO, LLI) at end of presentation.

Number of serious/non-serious casualties above/below 5 USD mill.

Strong increase in serious casualties 2012-16, but no increase in major losses.
Less than 40% of serious casualties had a cost exceeding USD 1 million,
13% a cost exceeding USD 5 million, and 6% a cost exceeding USD 10 million.



Sources: Lloyd's List Intelligence and Nordic Marine Insurance Statistics (Cefor) as of June 2017

Hull Key points

Exposure

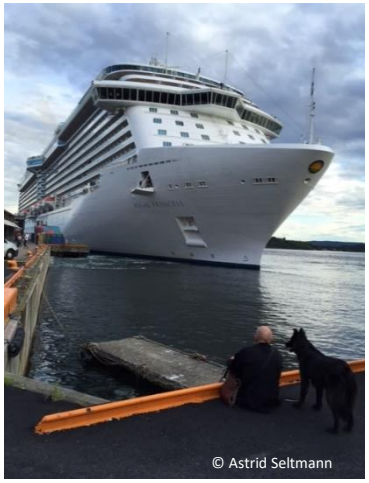
- **Values** Supply/offshore v. drop ~14% for 3rd year.
  Bulk v. show some recovery in 2017.
  Inflow of high-value vessels continues.
- **Premiums** deteriorate in line with values (or inactivity), while fleet continues to grow.
- **Increasing single-risk exposure**.

Claims

- **Claim cost per vessel:** Stable to downward trend.
- **Total losses**: long-term downward trend, but came to a halt with recent fluctuation around 0.1%.
- **Major losses**: Strong impact in 2015, few in 2016.
  Volatility in recent results mainly driven by major losses.

For **Sustainability** all risk aspects must be taken into account!
Current income levels do not cater for major losses.

Issues to monitor



High-value risks

Oil price, fuel quality

Changes in regulation (liabilities)

Fire on RoRo & Container vessels

Arctic risks

New technology

Internet of things/complex technologies

Navigation

Human factor/
Qualification

Climate change

Value accumulation

Cyber risk

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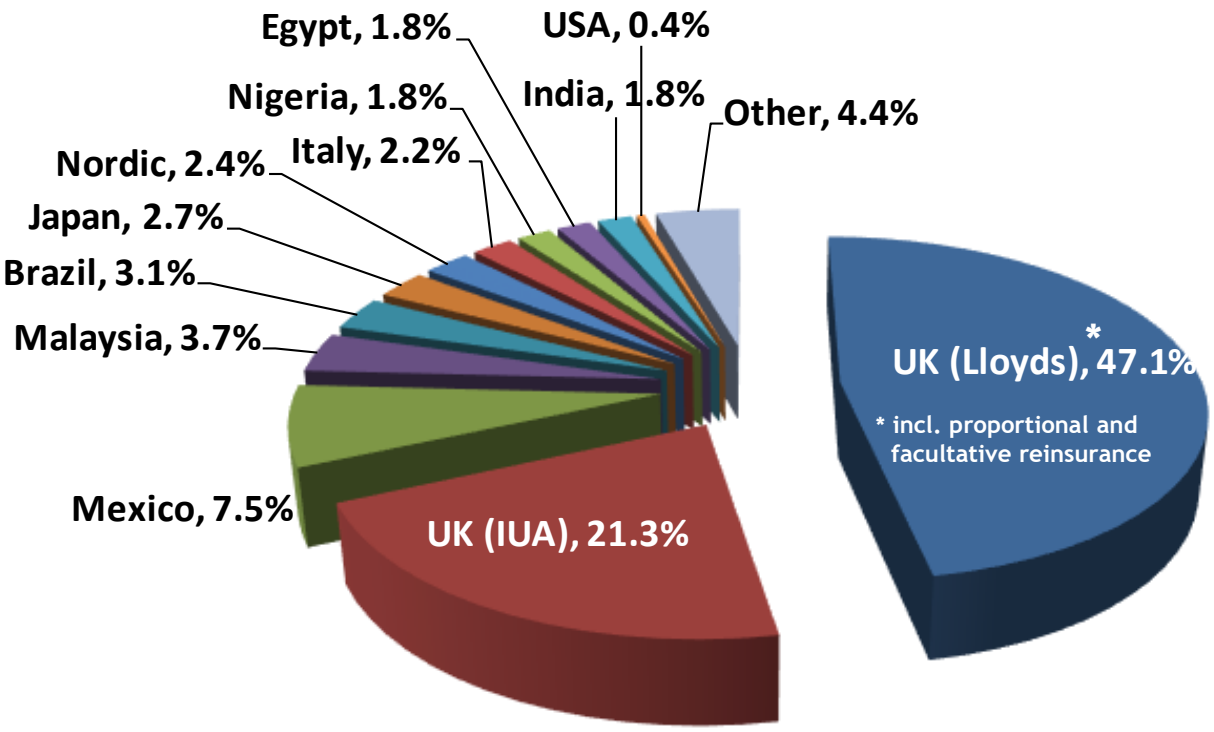
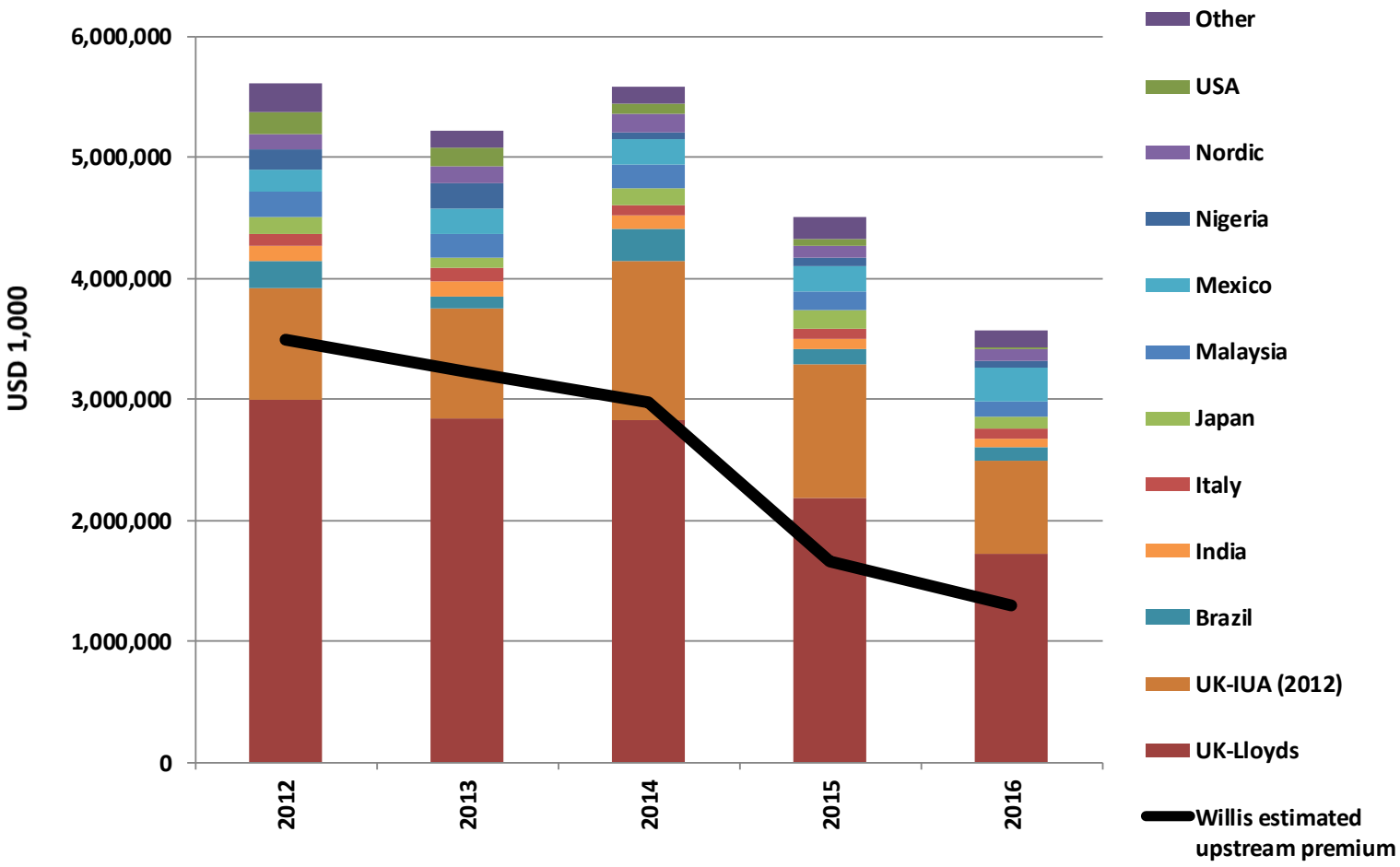
Offshore Energy Premium 2016

Total estimated: 3.6 USD billion /
Change 2015 to 2016: **-21%** (2014 to 2015: **-20%)** !



Kazakhstan and some other countries: no data available.

Offshore Energy Premium 2012 – 2016



Kazakhstan and some other countries: no data available.

Offshore Energy Premium – IUMI versus Willis estimates

- IUMI:
  - Premiums reported by national associations.
  - Some double-reporting due to global nature of business.

  => Overestimation of actual global premium.

- Willis approach:
  - Based on Lloyds premium (risk codes EC, EN, EM, EY, EZ).
  - Grossed up to 100% by assuming Lloyd's represents 70%.

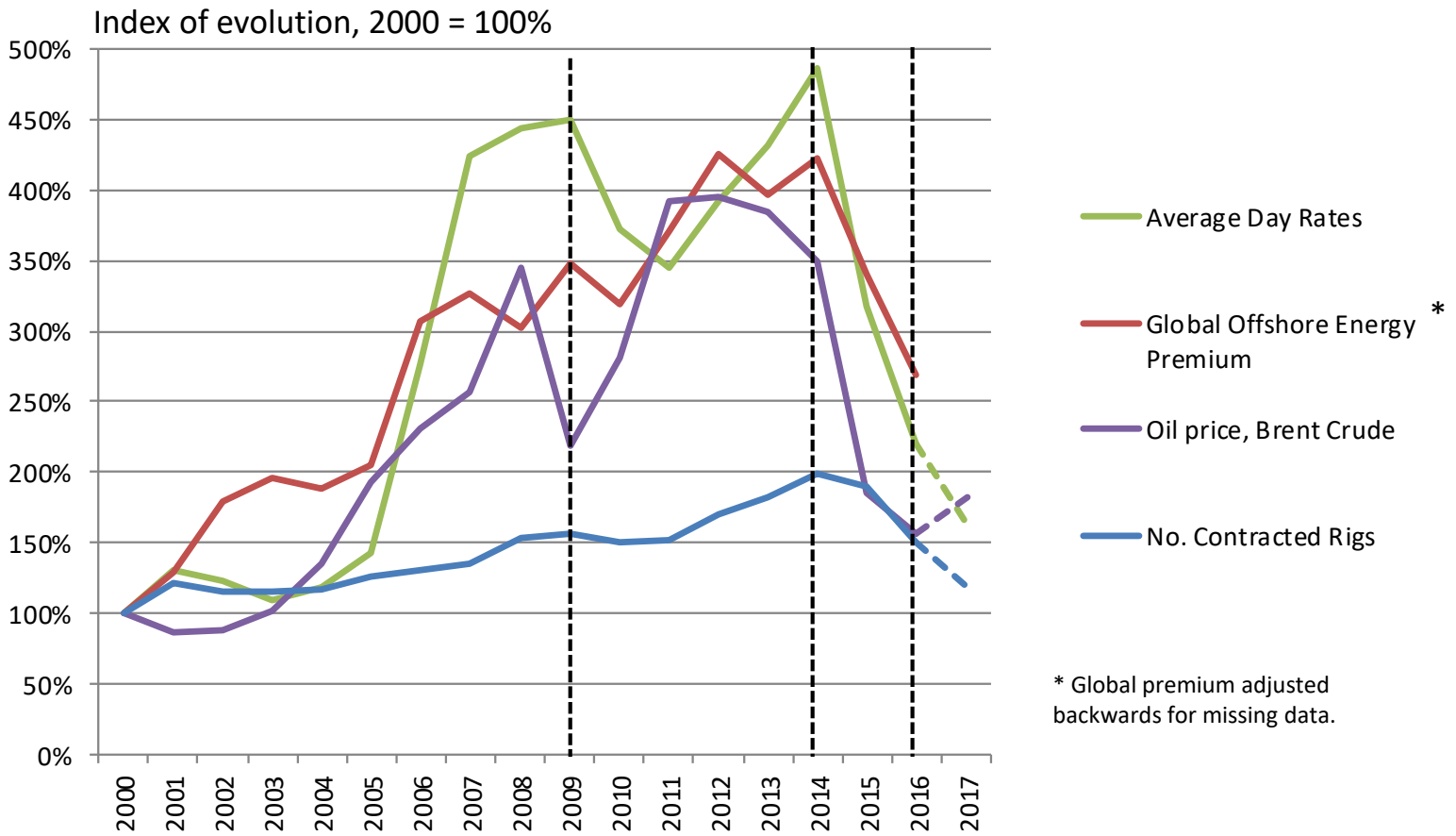
  => Underestimation of actual global premium

- **The good news: Both show the same trend!**

- **The bad news: the trend is downwards!**

Offshore energy premium

Energy mobiles, day rates, oil price

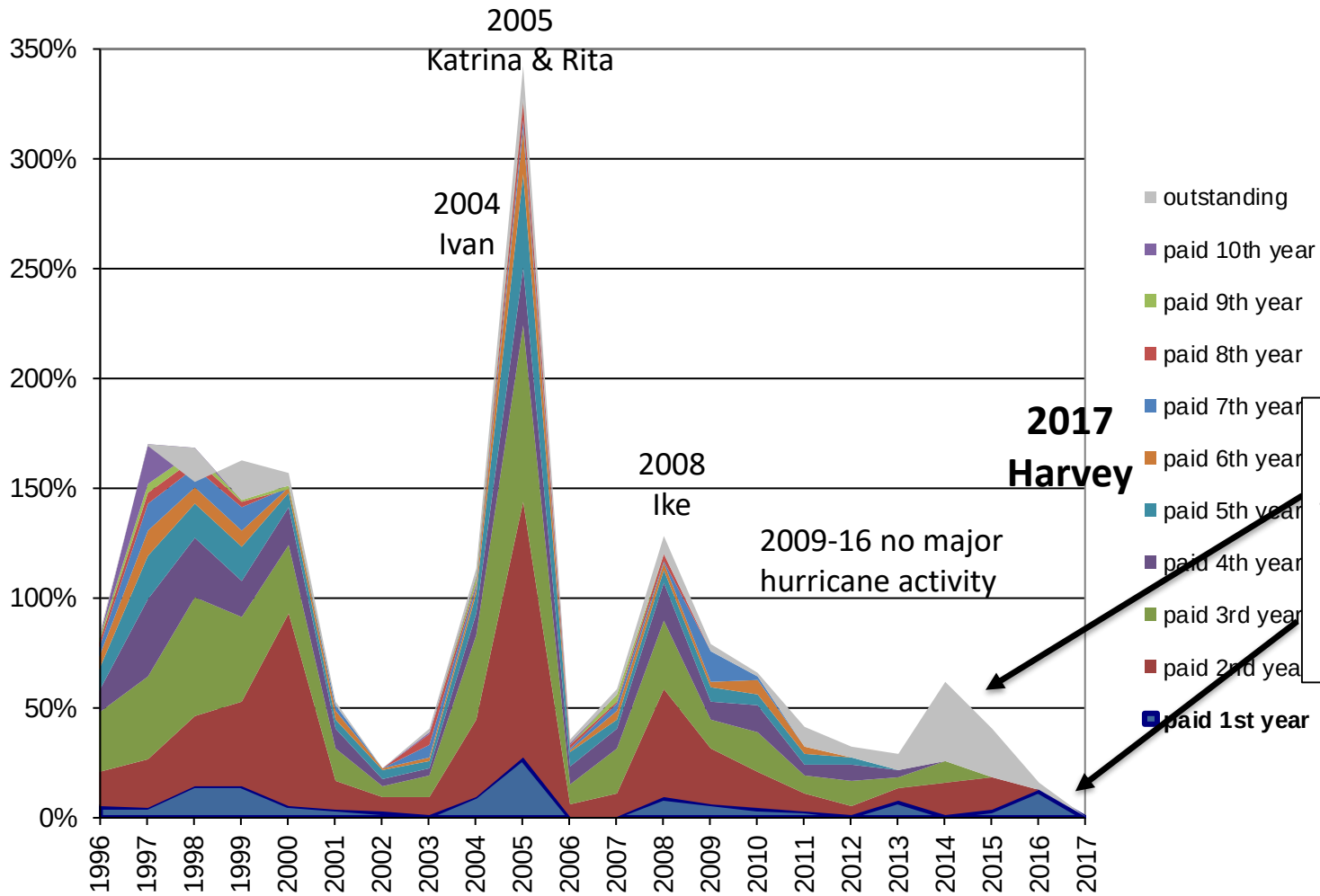


* Global premium adjusted backwards for missing data.

Sources: Av. day rates, No. rigs: Clarkson Research; Oil price: World Bank Commodity price data

Offshore Energy – Loss Ratios

Underwriting years 1996 to 2016 / incl. liability / data from UK, Nordic, US



Reporting status as of December 2016

2014-2016 still develop, expected to deteriorate further.

2017 Harvey/Irma impact!

Offshore Energy Key points

- Downturn in activity / projects suspended.
- More risk retained -> Mismatch between capacity and insurable objects.
- Substantial drop in premiums 2015 and 2016.
- High-profile losses (recent years still develop):
  - 2015: 7 > 100 USD million
  - 2016: 4 > 400 USD million (1 > 1 USD bn)
- Weather little impact 2009-2016. **Hurricanes back in 2017 (Harvey, Irma).**
- Oil price recovering, but at low level. The new normal?

Outlook 2017

- Overall income reduction.
- Major losses
  - Moderate recent impact, but can reoccur any time (2017: Harvey, Irma!)
  - Drive volatility of results. Current income levels do not cater for major losses.
  - Increasing risk exposure (high-value single risks, risk accumulation) may lead to even more costly single major losses.
- Market environment
  - Moderate trade growth, some oil price recovery, but still at low levels.
  - Climate change/NatCat losses.
  - Political and economic uncertainty.

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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 calender 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 occuring 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 occuring 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 occured 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.

Definitions of ‘serious’ casualties

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IMO (International Maritime Organisation)

«**Very serious casualties**» are casualties to ships which involve total loss of the ship, loss of life, or severe pollution, the definition of which, as agreed by the Marine Environment Protection Committee at its thirty-seventh session, is as follows:

«**Serious casualties**» are casualties to ships which do not qualify as «very serious casualties» and whci involve a fire, explosion, collision, grounding, contact, heavy weather damage, ice damage, hull cracking, or suspected hull defect, ect., resulting in:

- immobilization of main engines, extensive accommodation damage, severe structural damage, such as penetration of the hull nder water, etc., rendering the ship unfit to proceed, or
- Pllution (regardless of quantity), and/or
- A breakdown necessitating towage or shore assistance.

«**Less serious casualties**» are casualties to ship which do not qualify as very serious casualties or serious casualties and for the purpose of recording useful infomration also include marine incidents which themselves include «hazardous incidents» and «near misses».

Lloyds List Intelligence (LLI)

defines «**serious casualties**» as follows:

Sinkings, groundings where hull damae has been reported, structural damage rendering the vessel unseaworthy, i.e. penetration of hull under the waterline, significan spillage of oil, severe fires causing damage, vessels towed into port, collisions where damage is reported, incident causing nay significant delay.