

Global Marine Insurance Report 2019

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Contents:

Global marine insurance market

P&I

Offshore energy

Cargo

Hull

Detentions

Fires on container vessels

Additional data for download:
- Marine premiums by line of business by country
- Loss ratios triangulations Hull, Cargo, Energy
(<https://iumi.com/statistics>)

15 - 18 SEPTEMBER
TORONTO 🇨🇦 2019



Please note & Disclaimer

Figures reflect the 2019 state of reporting and will change retrospectively.
Some figures are estimates.

For comparison of years, compare the updated premiums and loss ratio!
(download from www.iumi.com)

All information given is of informational and non-binding character.

Figures related to the marine market's performance reflect market averages.
They do not disclose single company' or local markets' results. As with all averages,
individual underwriting units may out- or underperform compared to the average.

IUMI's aim is to provide information as available and raise consciousness for the
importance of a fact-based evaluation of the risk exposure covered – and inspire
everyone to do their own critical evaluation of real and seeming facts.



Global marine insurance market

P&I

Offshore energy

Cargo

Hull

Detentions

Fires on Container vessels

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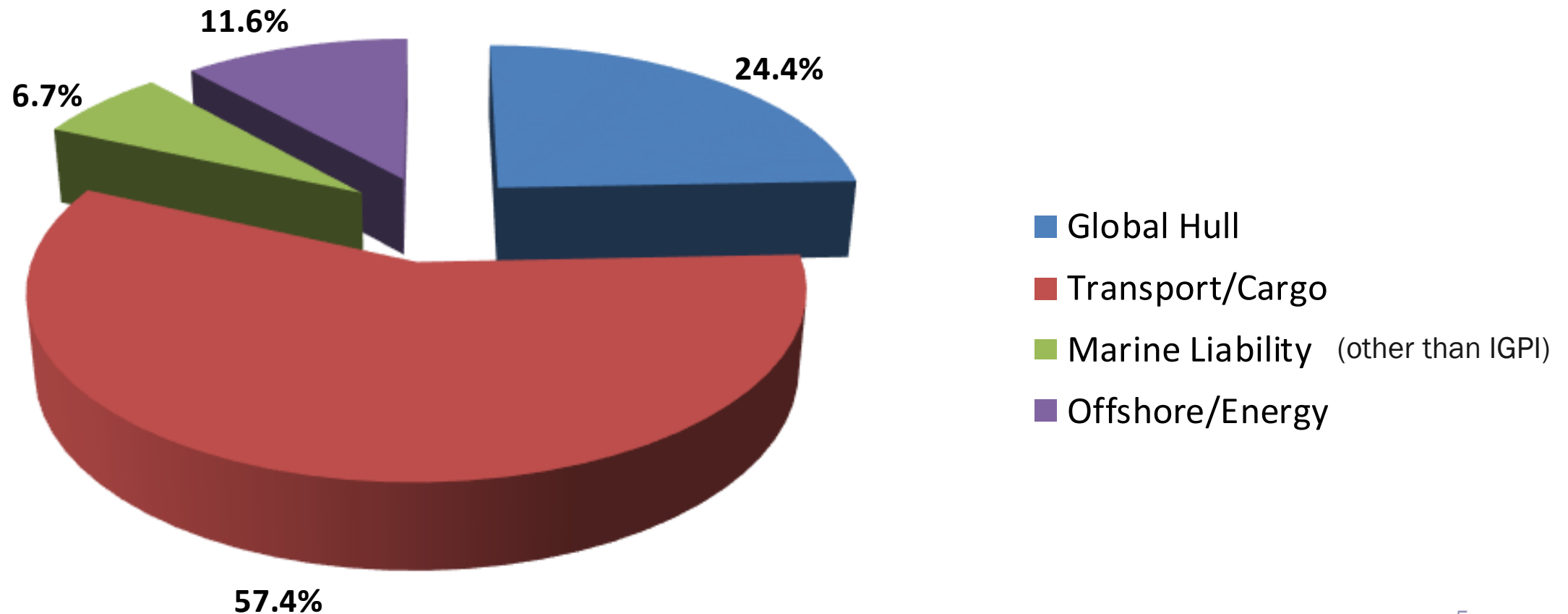


Marine Premiums 2018

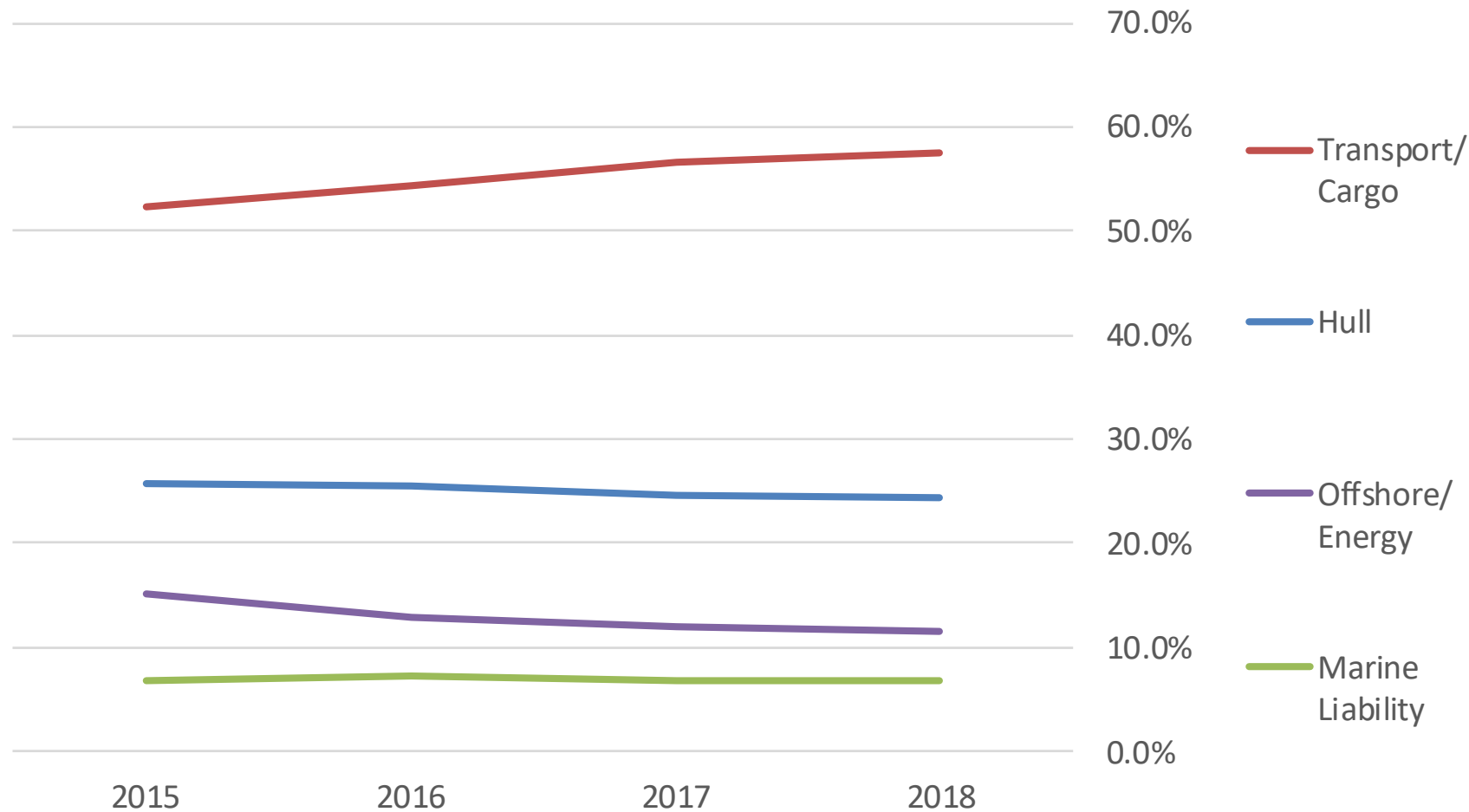
by line of business

Total estimate 2018: 28.9 USD billion / Change 2017 to 2018: +1%

NB: Exchange rate effects!



Premium shares 2015-18

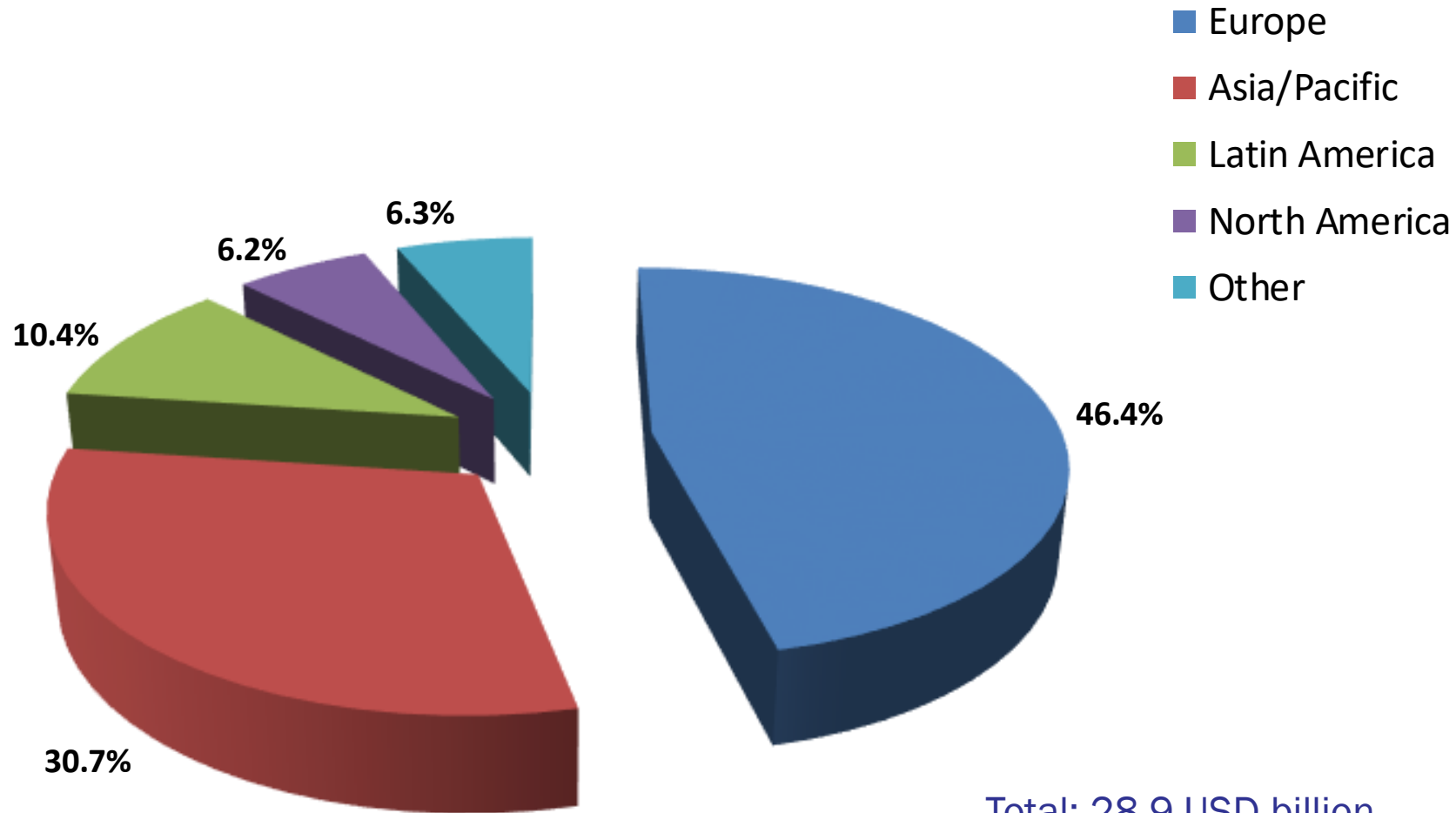


Share of cargo premium increased.

Combination of various effects. Increase in world trade volume, market conditions and exchange rate influences.

Marine Premiums 2018

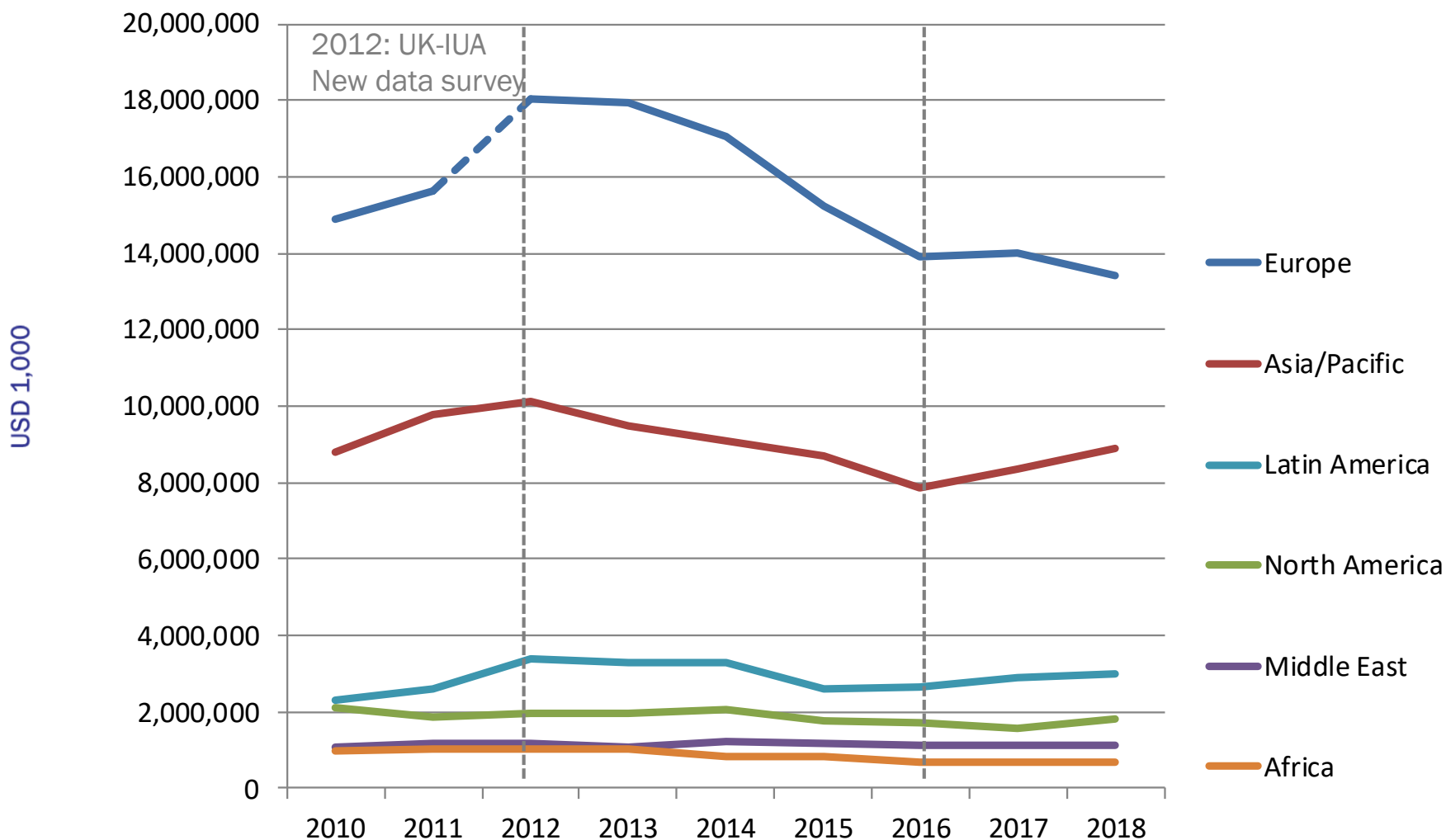
by region



Total: 28.9 USD billion

Premium by region 2010-18

Data as of 2019



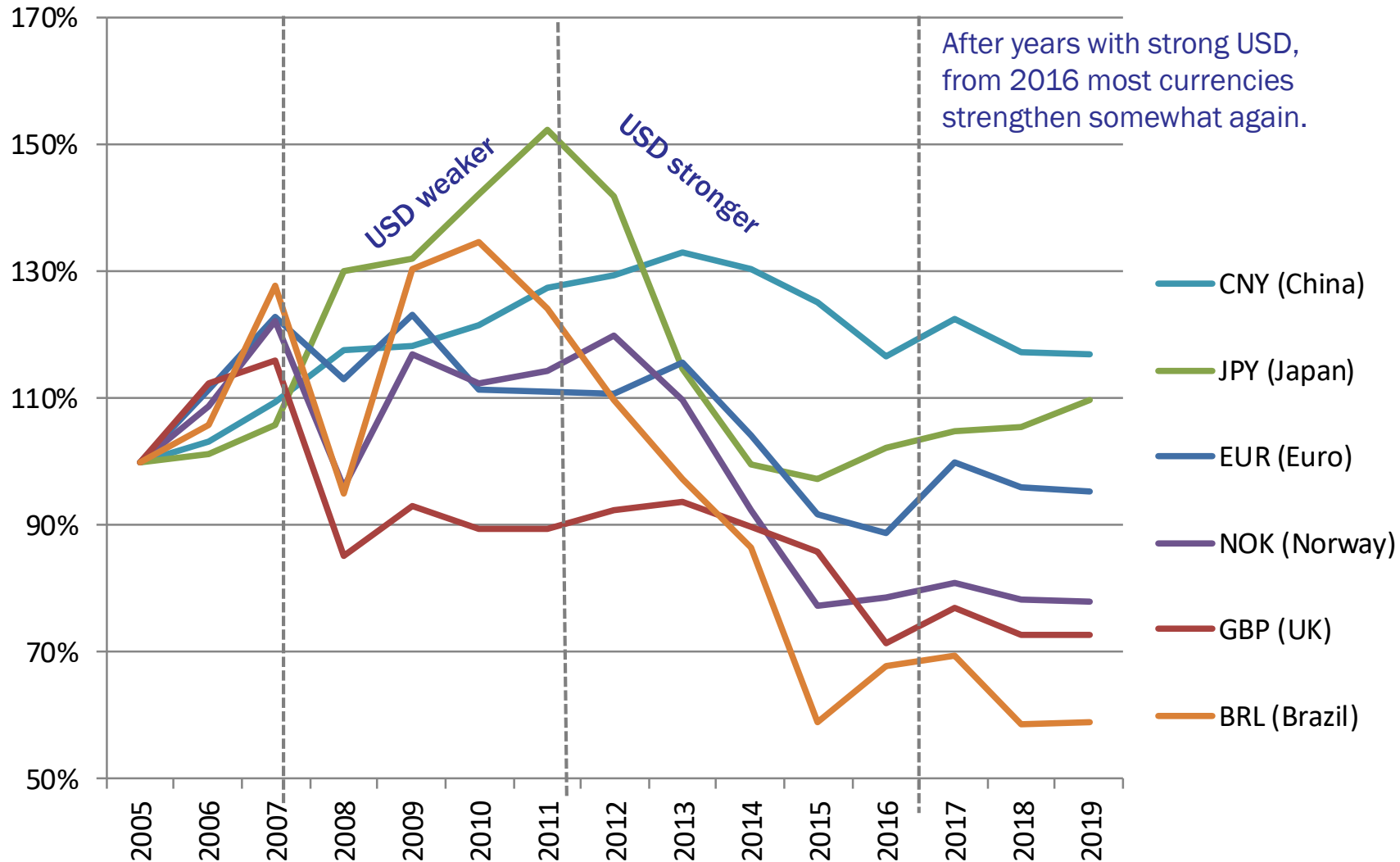
Europe share decreasing – Asia increasing.

Various influences. Market conditions, exchange rates. In 2017, a number of currencies strengthened against USD after some years of a strong USD.

2018: 28.9 USD bill.
2017: 28.6 USD bill.

USD Exchange rates 2005-18

Index 2000=100%, against selected currencies, as of Dec. each year (2019 as of July)



USD premium amounts in this report influenced by exchange rates!

Premium trends may be different in local currency, especially for cargo.



Global marine insurance market

P&I

Offshore energy

Cargo

Hull

Detentions

Fires on Container vessels

15 - 18 SEPTEMBER
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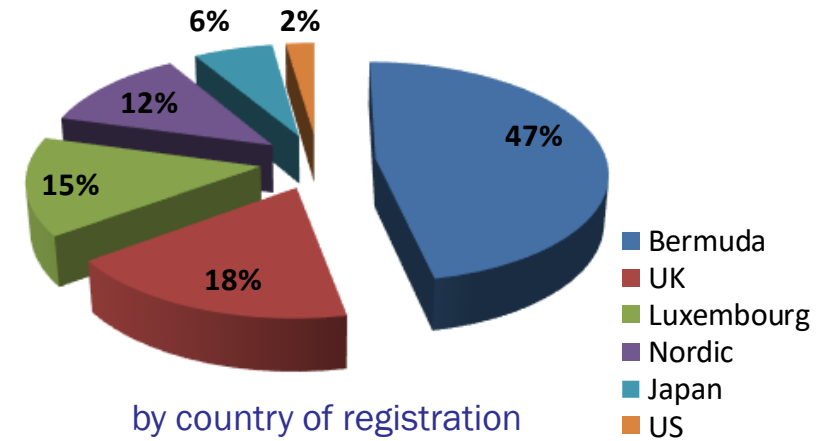
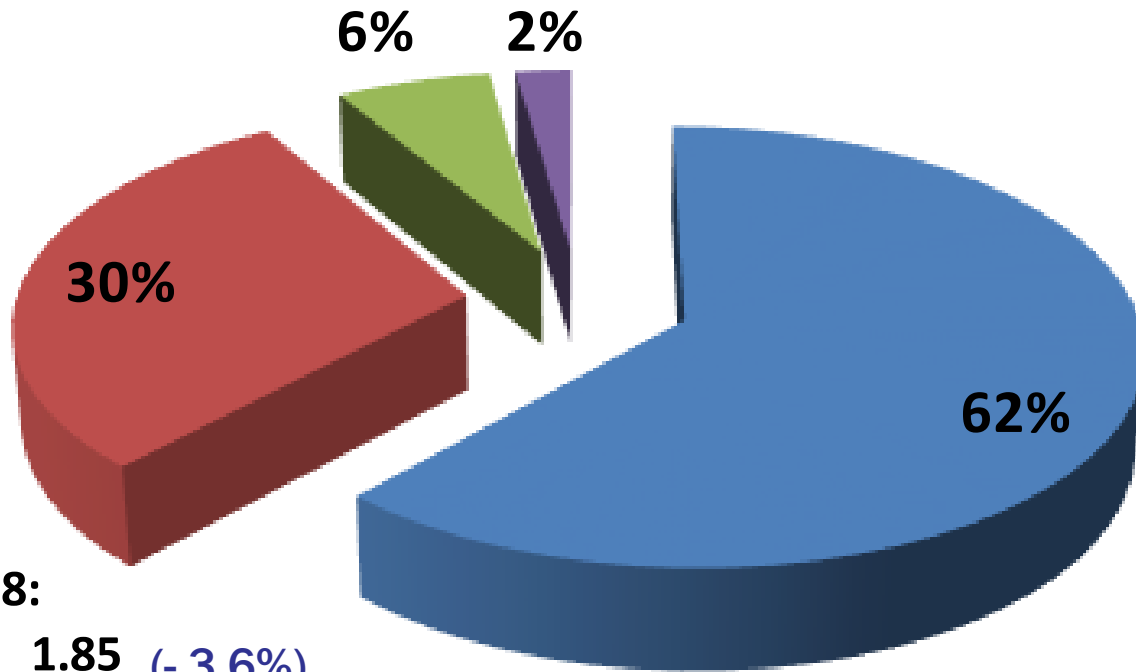


P&I International Group – Income

Gross Calls (premium) 2018 – Operational location





Source: International Group of P&I Clubs

P&I premiums down for 4th year in a row



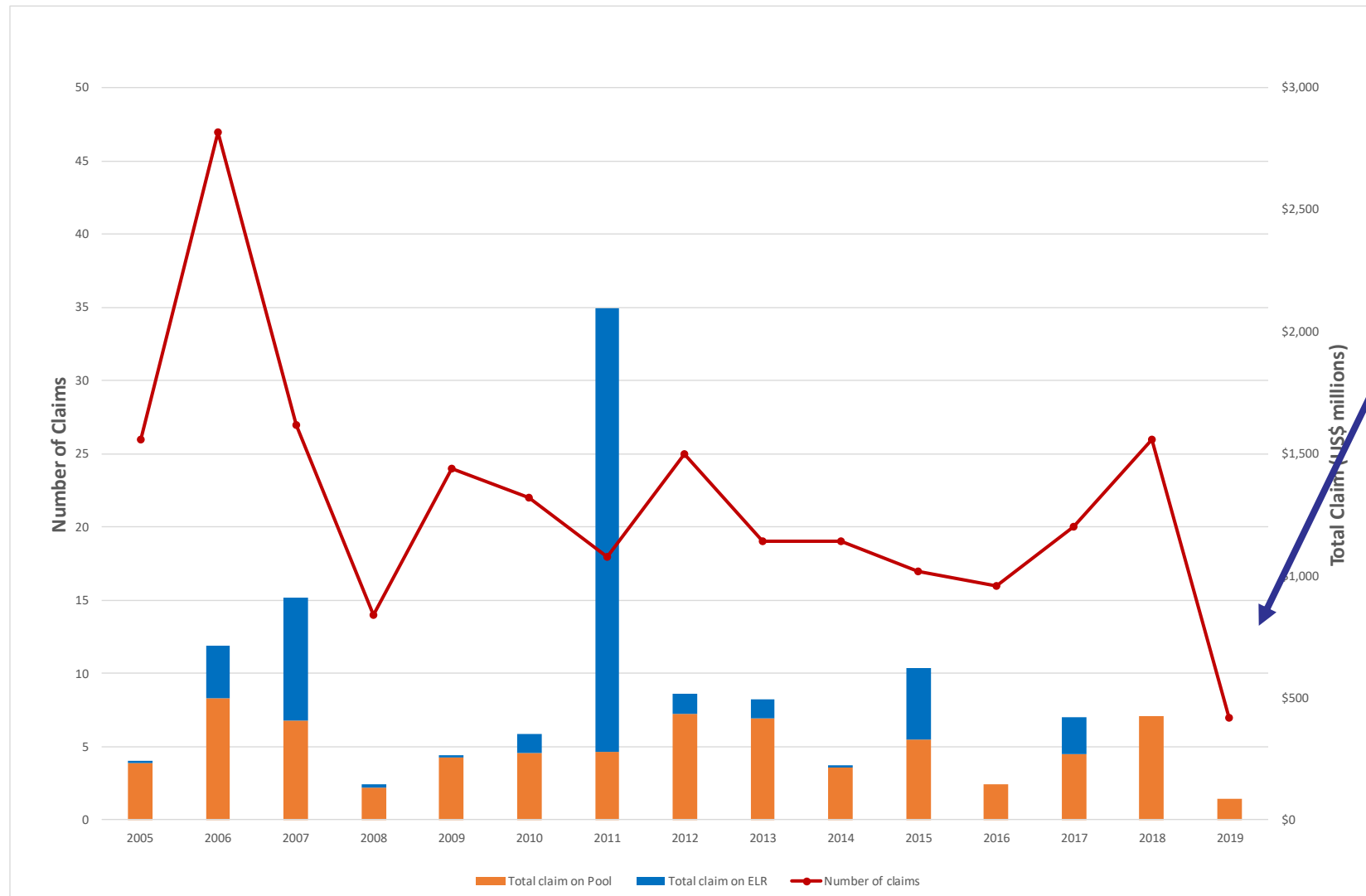
Calls 2018:

UK:	1.85	(- 3.6%)
Nordic:	0.87	(- 3.5%)
Japan:	0.19	(- 5.8%)
<u>US:</u>	<u>0.07</u>	<u>(- 4.5%)</u>
Total:	3.00	(USD billion) (- 3.7%)

-  UK
-  Nordic
-  Japan
-  US

P&I – Pool claims by policy year

Source: International Group of P&I Clubs, Graph updated 22 Aug. 2019



End 2018/ 1Q 2019:
A number of severe
casualties end period
of low major claims
impact.

Not yet fully reported.

P&I is a complex
business with high
liabilities!

More information at
www.igpandi.org



Global marine insurance market

P&I

Offshore energy

Cargo

Hull

Detentions

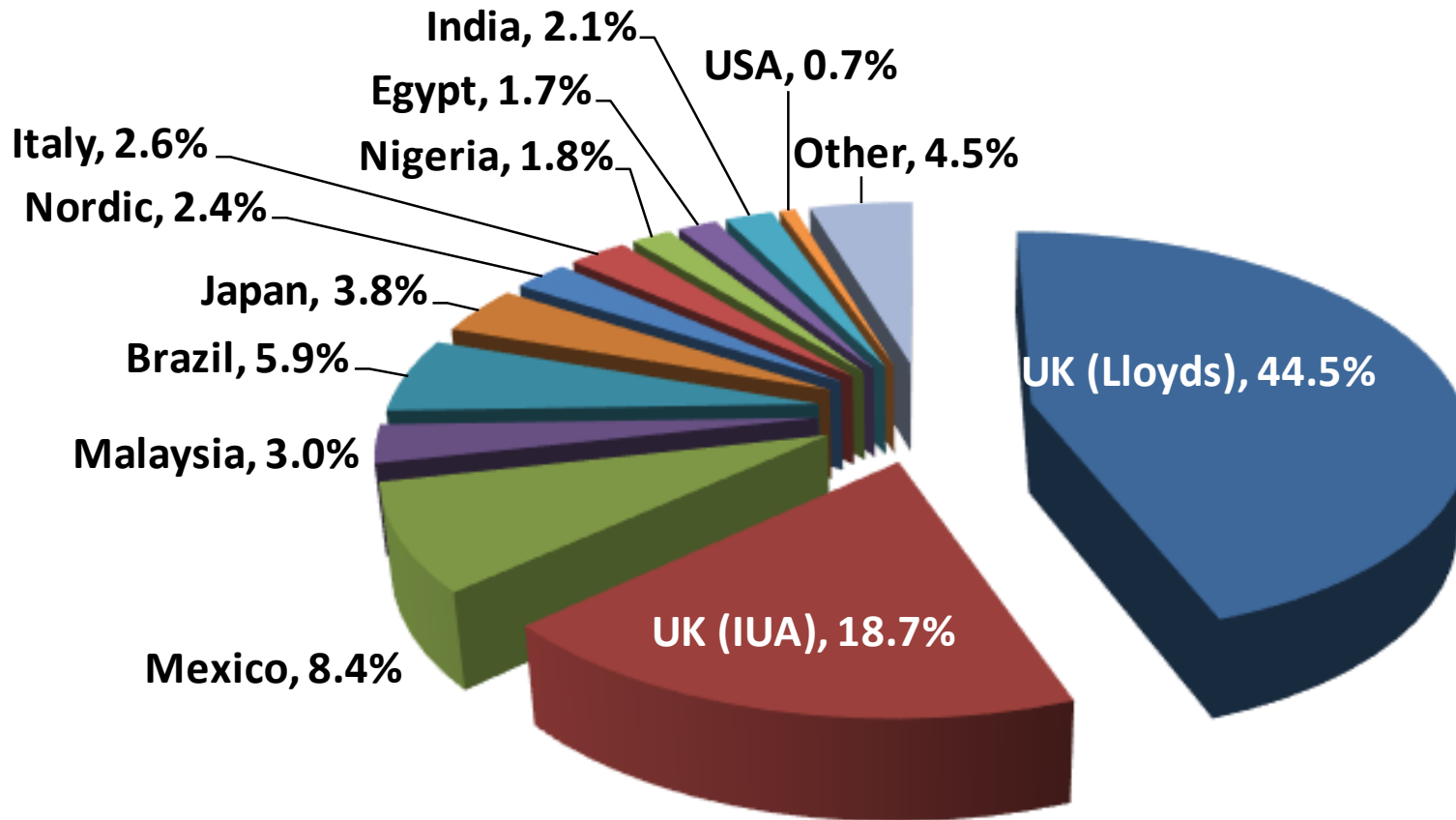
Fires on Container vessels

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Offshore Energy Premiums 2018

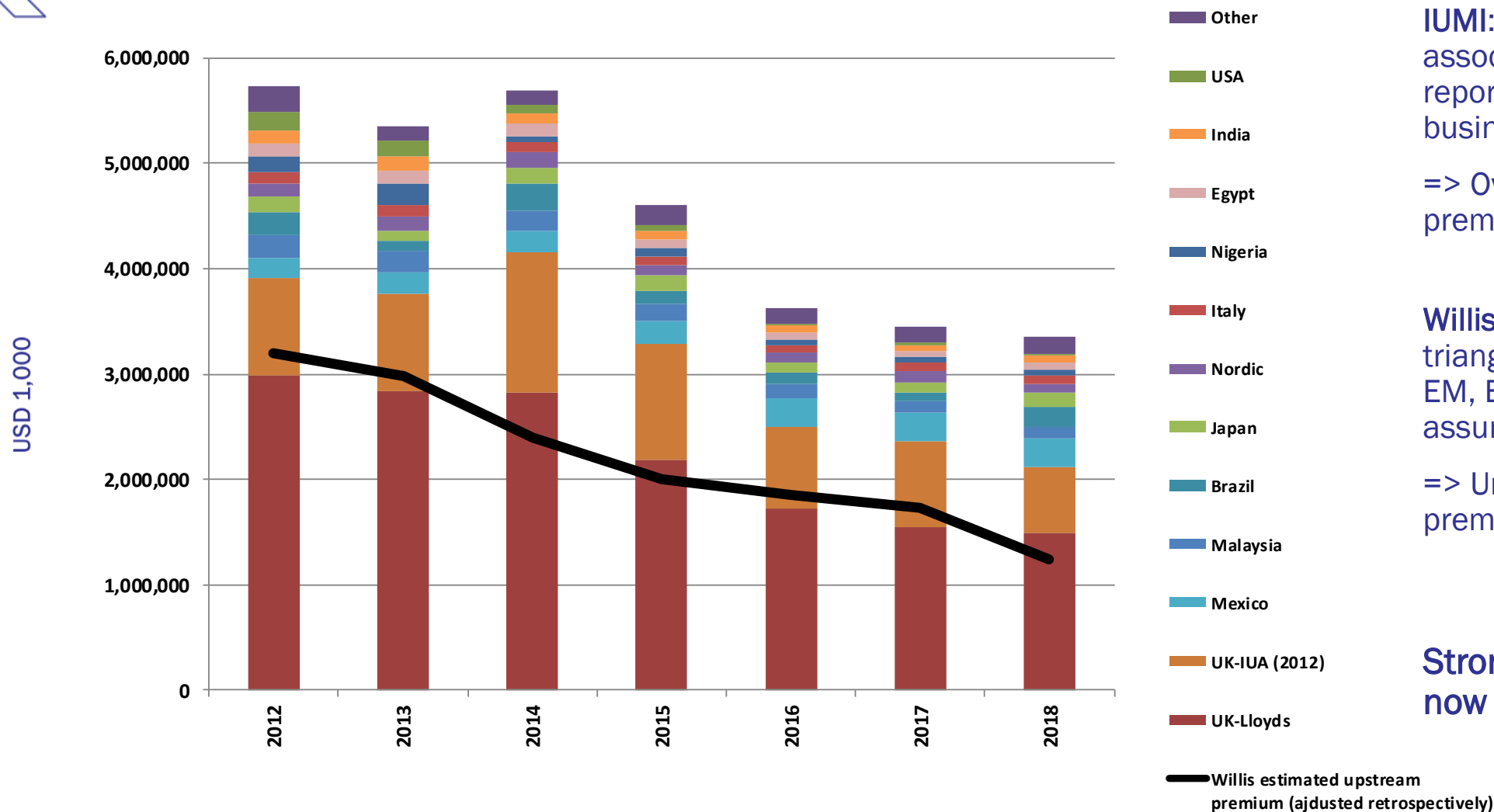
Total estimated: 3.4 USD billion / Change 2017 to 2018: -3%



Kazakhstan and some other countries: no data available.

Offshore Energy Premium 2012-18

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Kazakhstan and some other countries: no data available.

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

=> Overestimation of global premium.

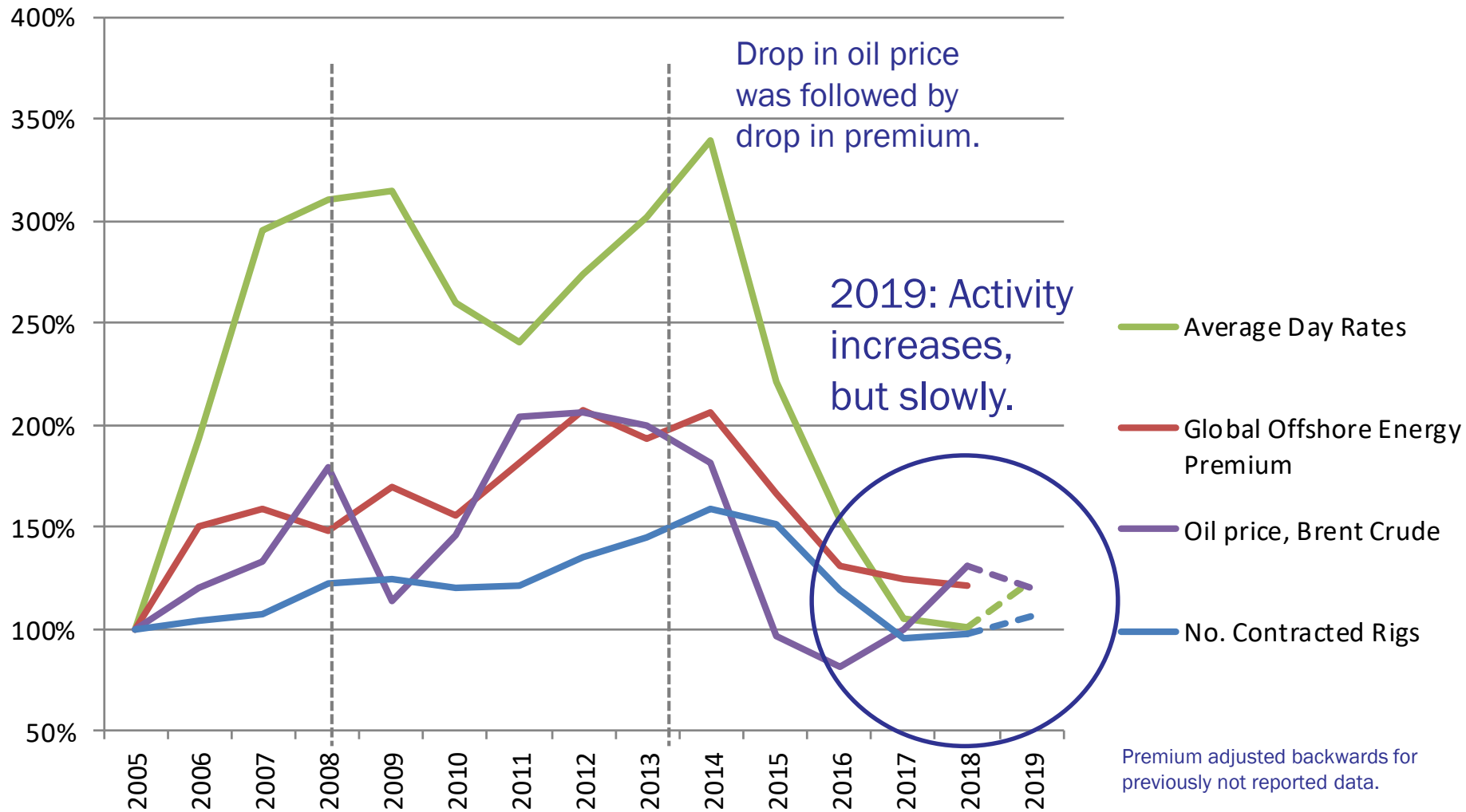
Willis approach: Lloyds premium triangulation (risk codes EC, EN, EM, EY, EZ). Grossed up to 100% by assuming Lloyd's represents 70%.

=> Underestimation of global premium

Strong decrease from 2014, now flattening out.

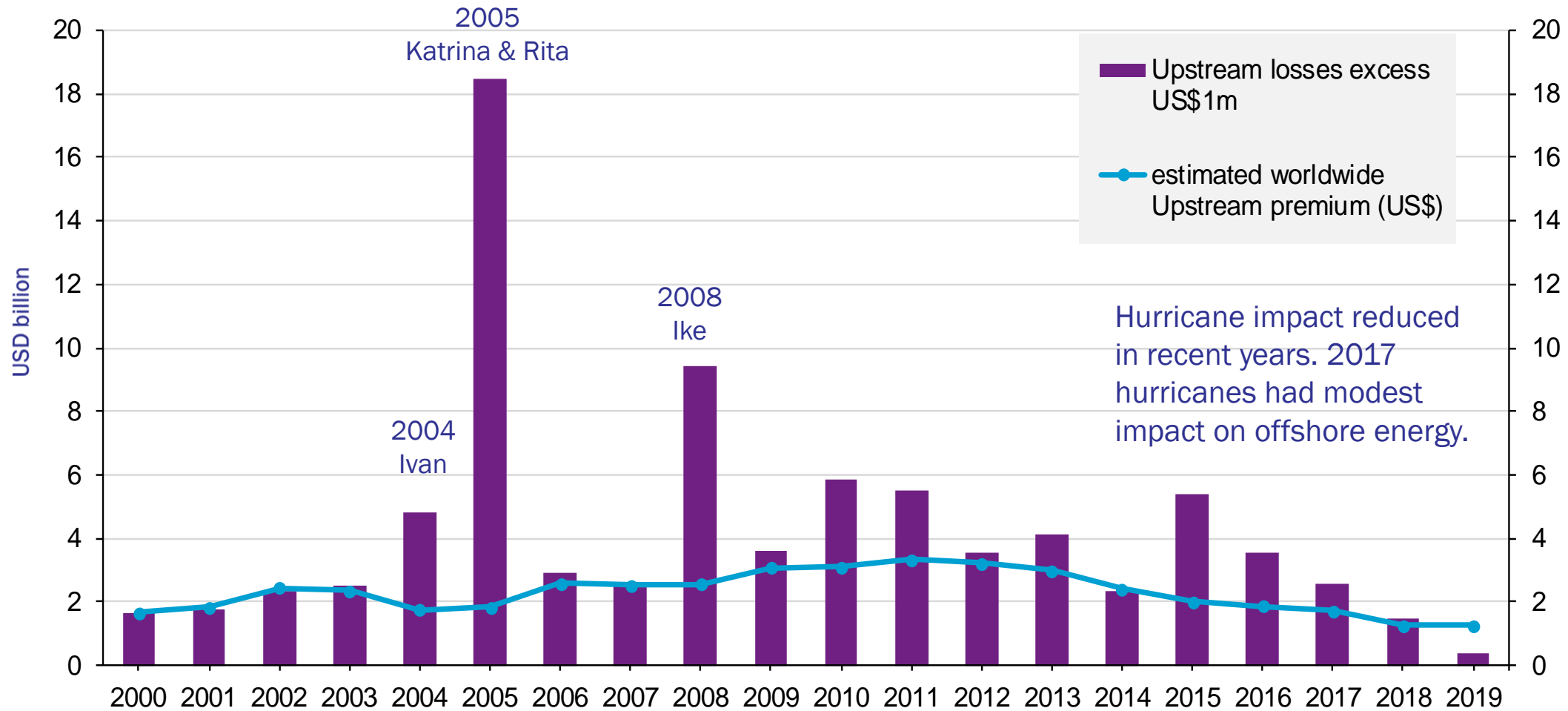
Offshore energy premium

Energy mobiles, day rates, oil price (as of Aug. 2019)



WELD Upstream Energy losses versus estimated upstream premium

Losses > USD 1 million, 2000-2018. Source & Graph: Willis Towers Watson.

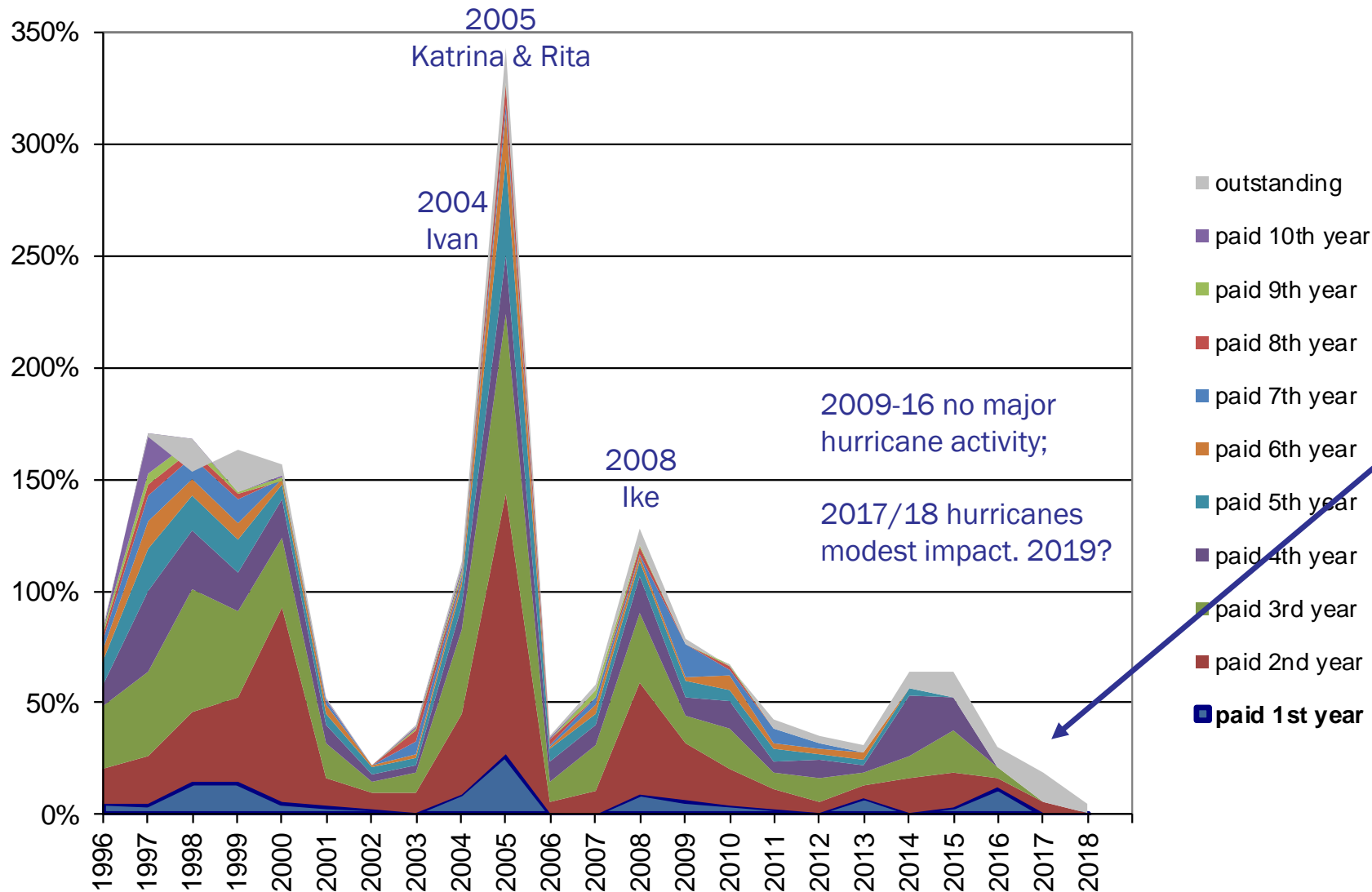


Offshore Energy Gross Loss Ratios

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Underwriting years 1996-2018 / incl. liability / data from UK, Nordic, some US/ as of Dec. 2018



Youngest underwriting years still develop, will deteriorate over time.



Offshore Energy Key points

- Strong drop in premiums followed oil price reduction, but flattening out.
- High-profile losses of recent years little impact on market.
- Weather impact reduced since 2009. Hurricanes back in 2017 & 2018, but little impact. 2019?
- Oil price recovering since 2016, with some variation. Uncertain future (trade war).
- Downturn in activity started to reverse, but slowly. Historically 18 months time lag between improved oil price and authorisation for expenditure.

- More risk retained -> Mismatch between capacity and insurable objects.
- Risks and claims potential arising from unit reactivation an issue.



Global marine insurance market

P&I

Offshore energy

Cargo

Hull

Detentions

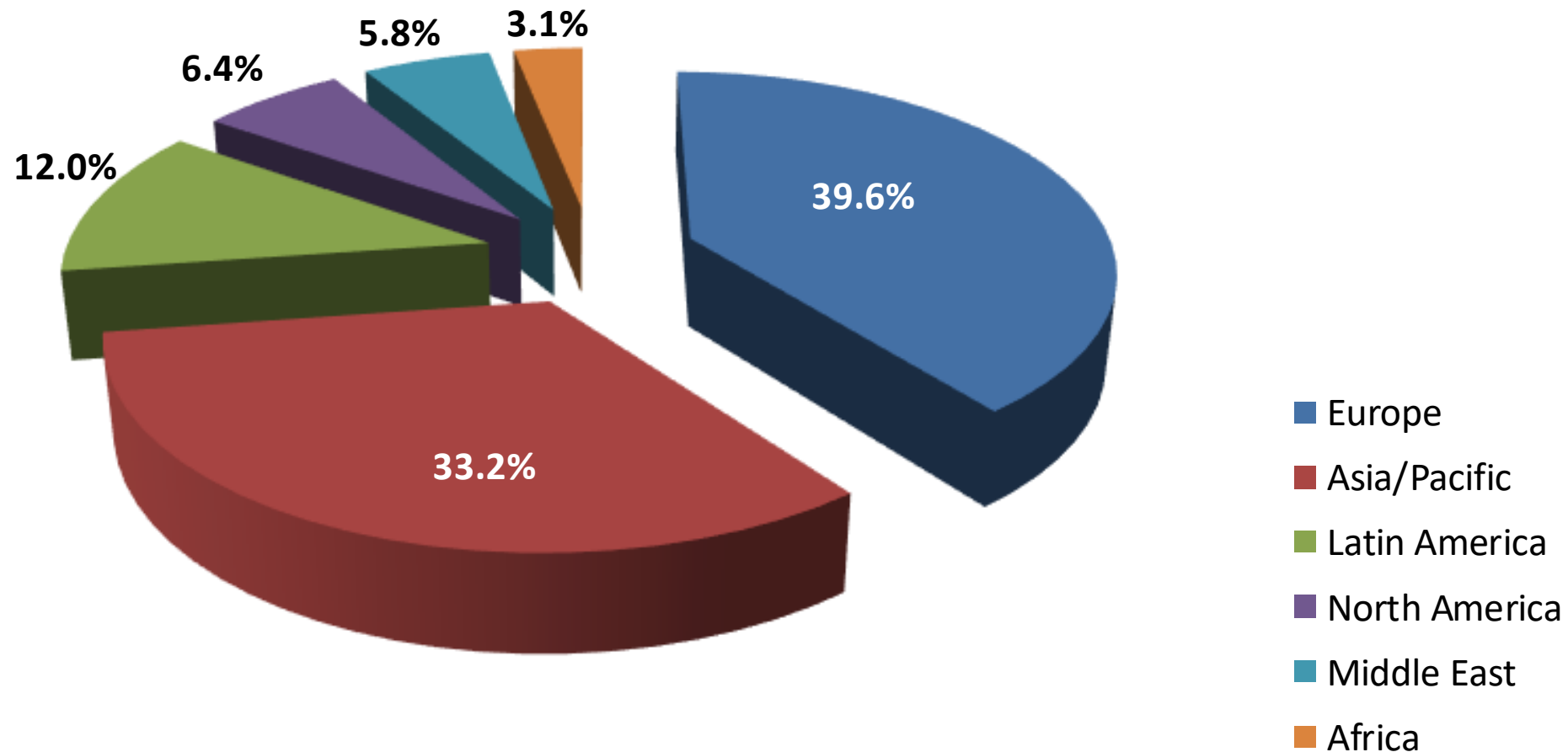
Fires on Container vessels

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Cargo Premiums 2018 – by region

Total estimate: 16.6 USD billion / Change 2017 to 2018: +2.5%
Exchange rate effects strongest on cargo premium.

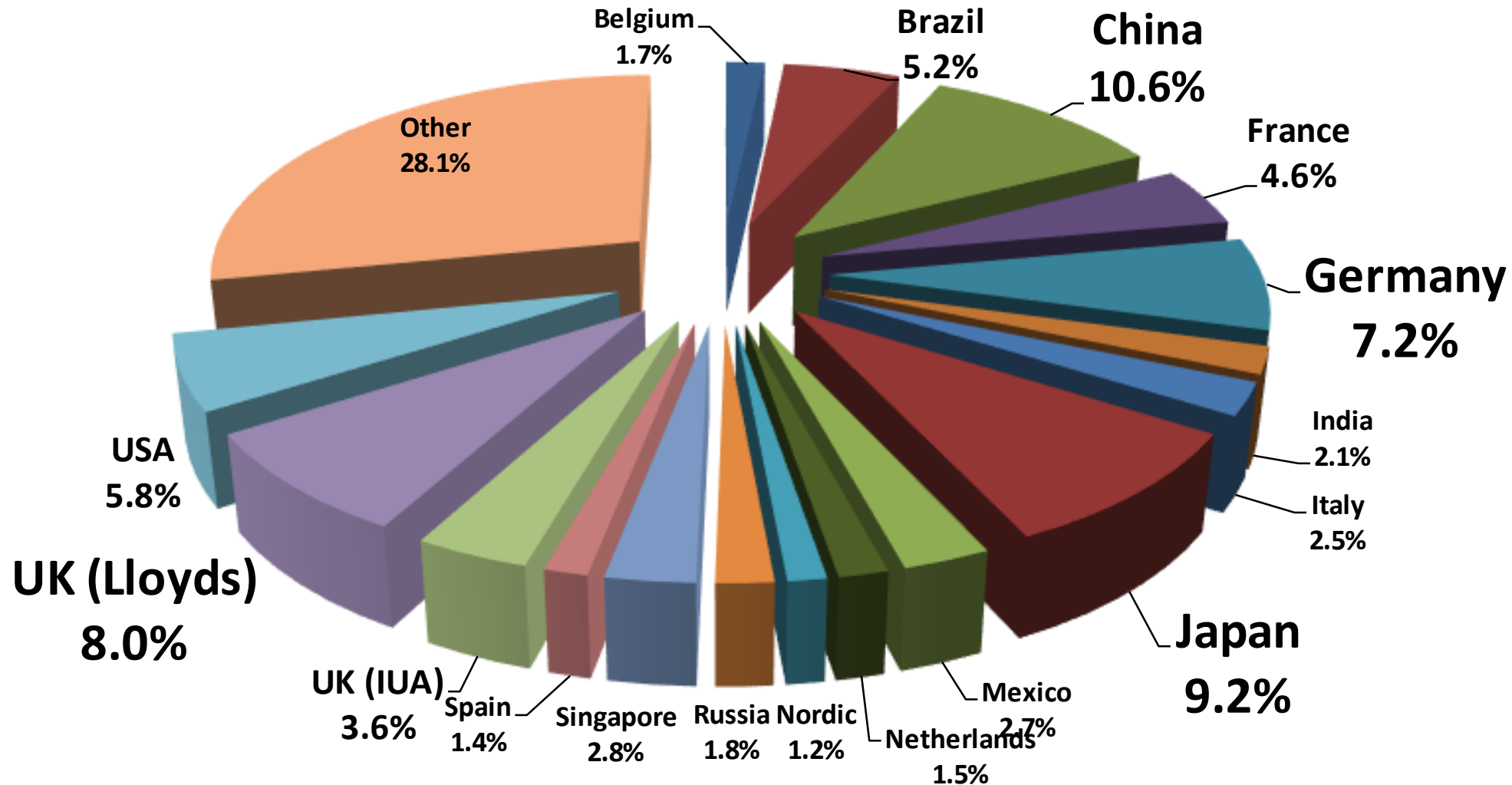


Cargo Premium 2018 – by markets

15 - 18 SEPTEMBER
TORONTO 2019

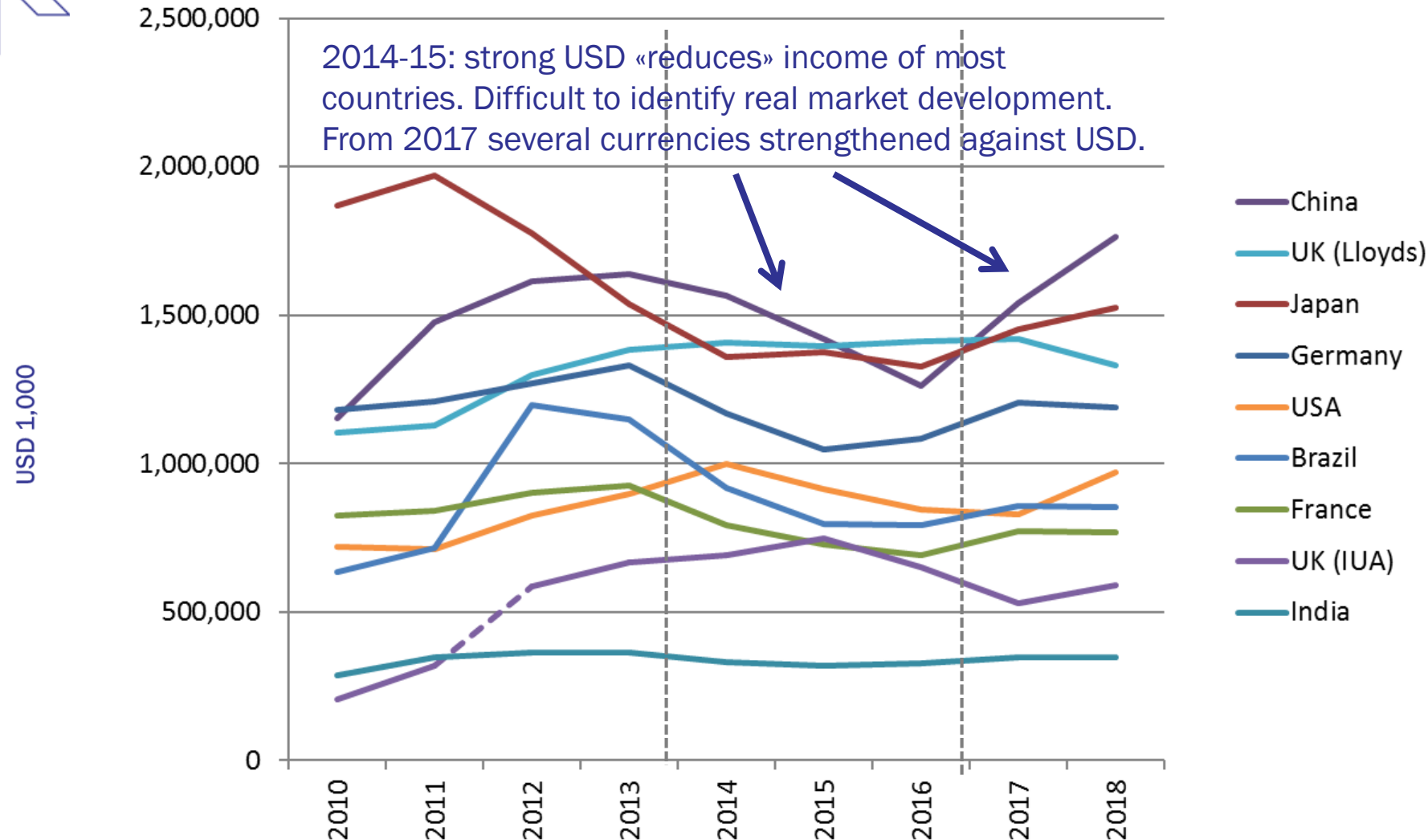


Total estimate: 16.6 USD billion



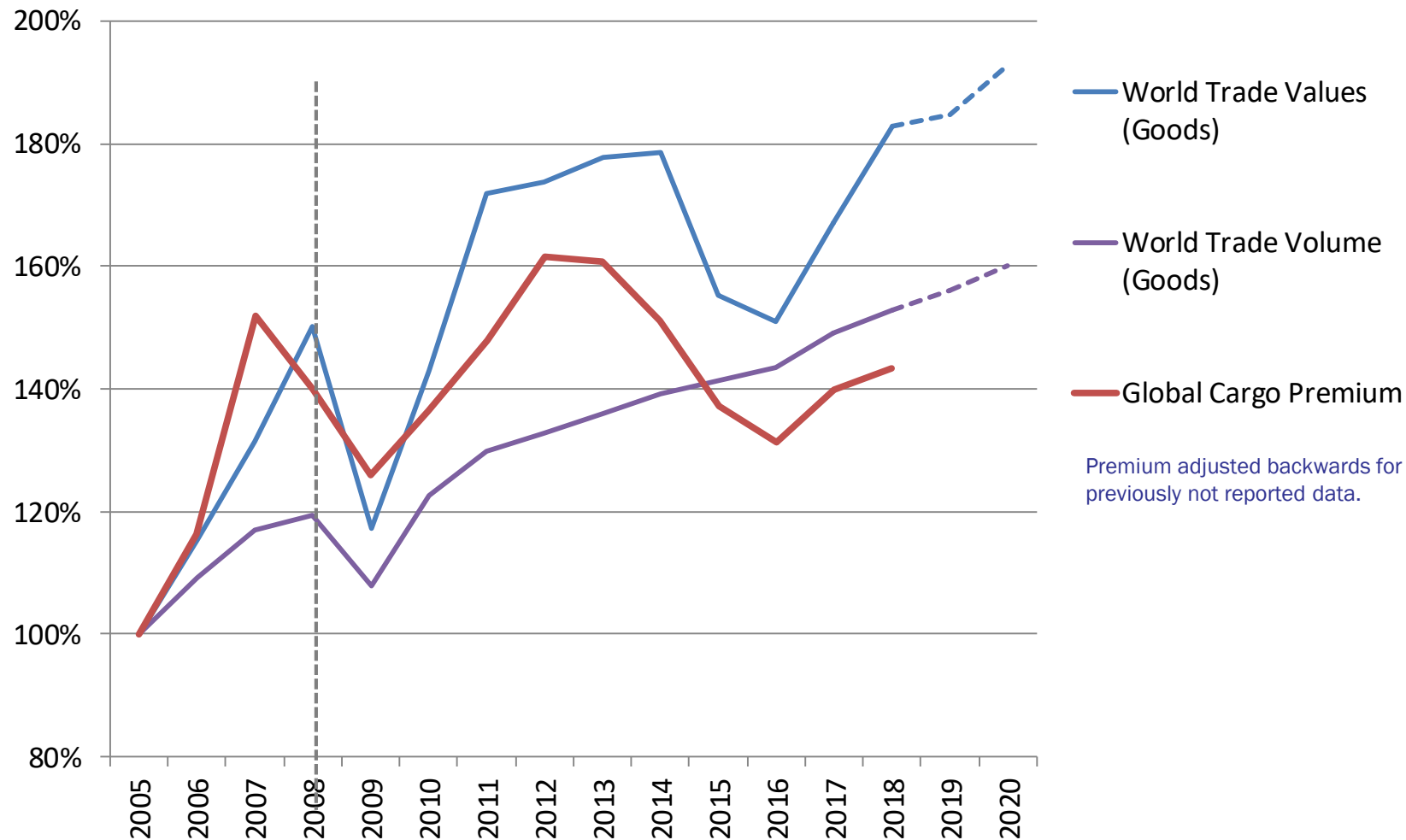
Cargo Premium 2010-18

Selected markets



Cargo Premium versus World Trade Values & Volume

Index of evolution, 2005=100%



Evolution of world trade values and cargo premium seem to correspond, but cargo premium lacks behind world trade values growth.

Exchange rate influences on premium.

Extended risk covers and the increasing risk of event losses (risk accumulation) need to be taken into account in pricing.

Cargo - Loss ratios

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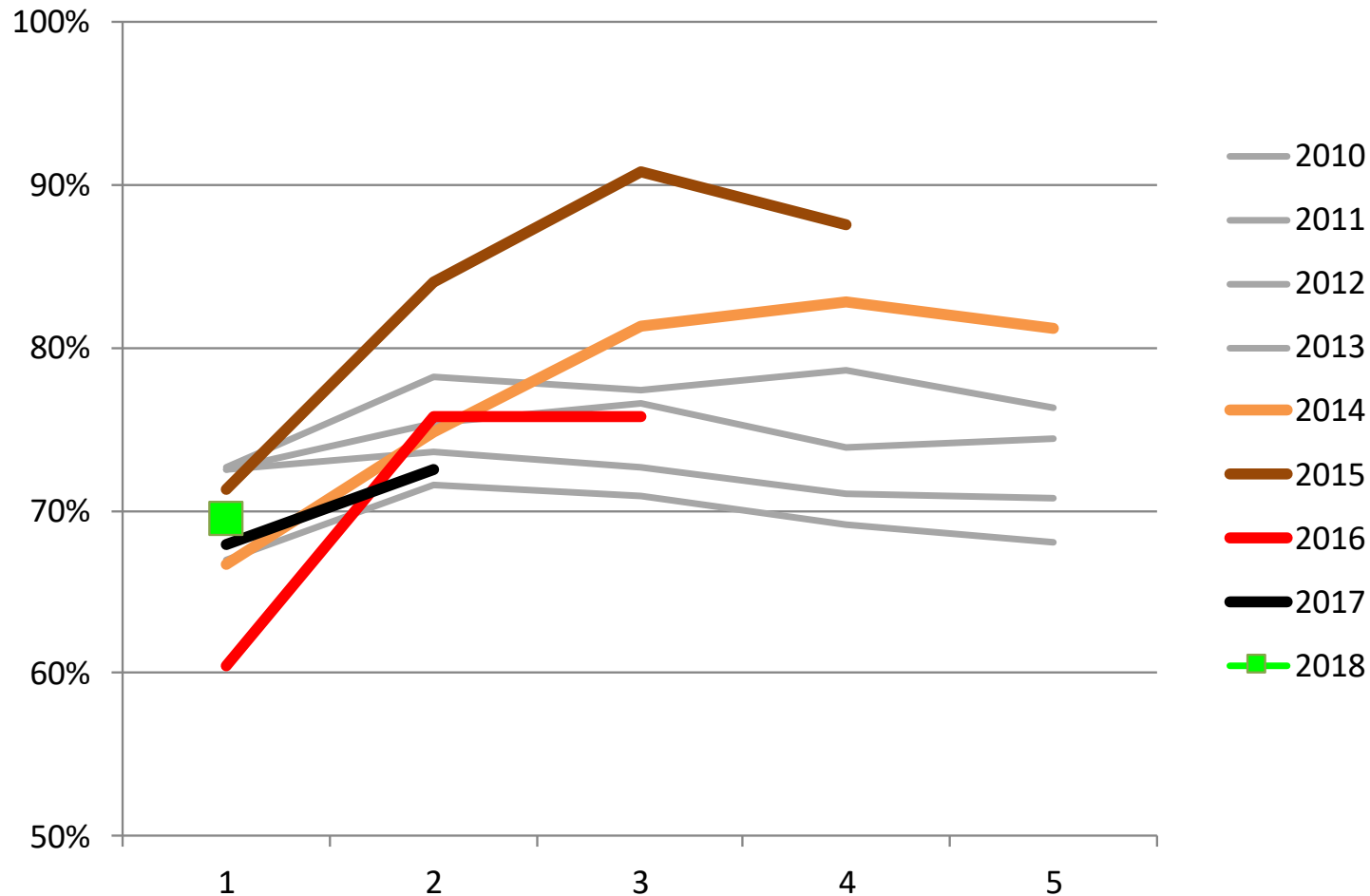


Foto: Astrid Seltmann

Cod is great!

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

Underwriting years 2010 to 2018, as reported at 1, 2, 3, 4, 5 years, Gross premiums, paid+outstanding claims



2014, 2015, 2016:
Each year extraordinary increase in loss ratios. Change in typical pattern. The new normal?

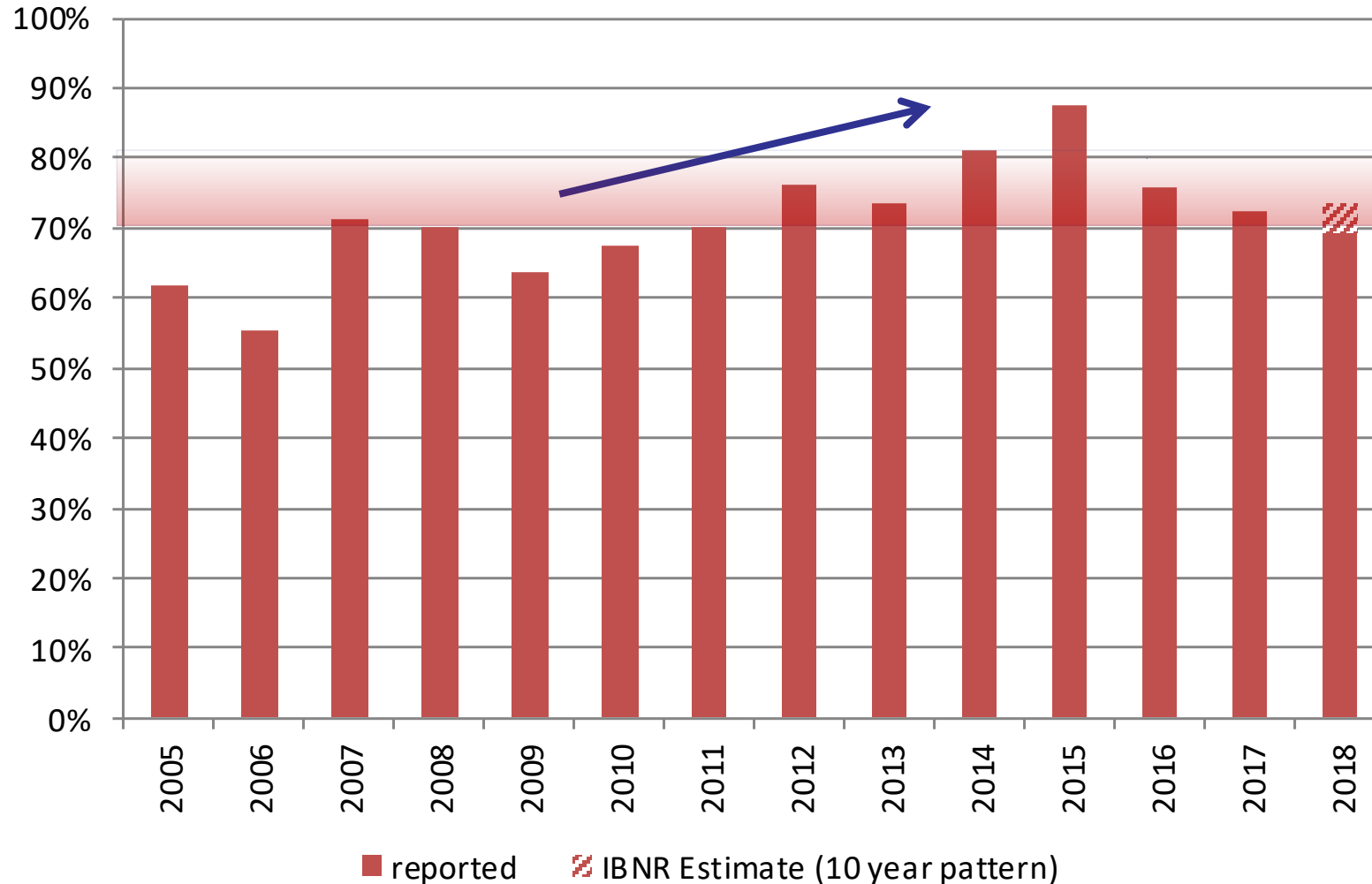
2018 starts at near 70%.
With a 'normal' pattern (grey lines), 2018 would end around 70%.
With recent pattern, 2018 may end near or above 80%.

*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, UK, USA

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

Underwriting years 2005 to 2018, gross premiums, paid+outstanding claims



Recent years strong impact by outlier & Nat-cat event losses:

- 2015: Tianjin port explosions
- 2016: Hanjin, Amos-6 satellite
- 2017: Hurricanes / Nat Cat
- 2018: Mærsk Honam / Hurricanes (2017/18 little US data: loss ratios may not reflect full hurricane impact)

Affect more than one uw year.

Increasing expenses a concern.

* 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, some US data

Gross loss ratios accounting year

Cargo Asia*, Gross premiums, paid claims



Stable 40-45% until 2014.

From 2015 loss ratios increasing.

Probable impact by Tianjin port explosions & Nat Cat.

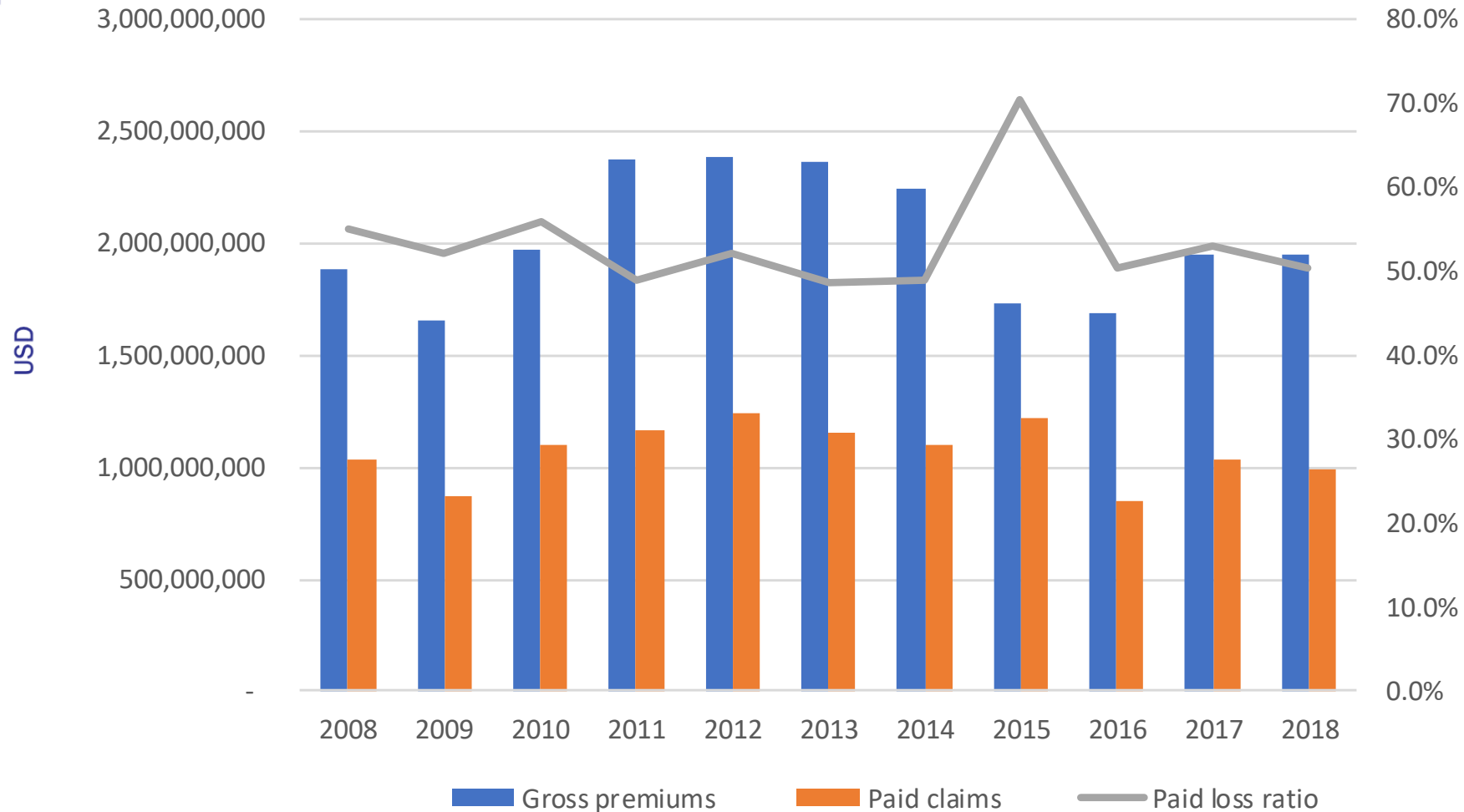
* China, Japan, Hong Kong

Singapore not included, because only incurred (paid+outstanding) claims figures available, for other countries only 'paid'.

Gross loss ratios accounting year

Cargo Latin America*, Gross premiums, paid claims

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Stable around average 50-55%.

Peak in 2015 related to major claim impact in one country.

*Figures included from:
Argentina, Bolivia, Brazil, Chile, Colombia,
Costa Rica (from 2010), D. Republic (from 17),
Ecuador, El Salvador (from 14), Guatemala,
Honduras, Mexico, Panama, Paraguay (from 14),
Peru, Venezuela (until 14).

Cargo Key points

- 2014-2016: Strong impact from large event losses (Nat Cat and outlier losses), but also attritional losses on the rise.
- 2017/18: NatCat impact (Hurricanes, Mexico earthquake, Bangladesh flooding & other Nat Cat), 2018 Mærsk Honam.
- **Risk of large event losses (Nat Cat and man-made) substantially increased. Increasing value accumulation on single sites/vessels .**
- **Fires on container vessels** in cargo area an increasing concern (1Q 2019).
- Covered risks represent increasingly stock exposure rather than transit exposure.
- Trade growth accelerating, but change in economical and political frame conditions and ongoing trade war makes prognoses uncertain.
- USD premium influenced by combination of market conditions and exchange rates.
- Market trends and results can differ substantially by region/unit.



Global marine insurance market

P&I

Offshore energy

Cargo

Hull

Detentions

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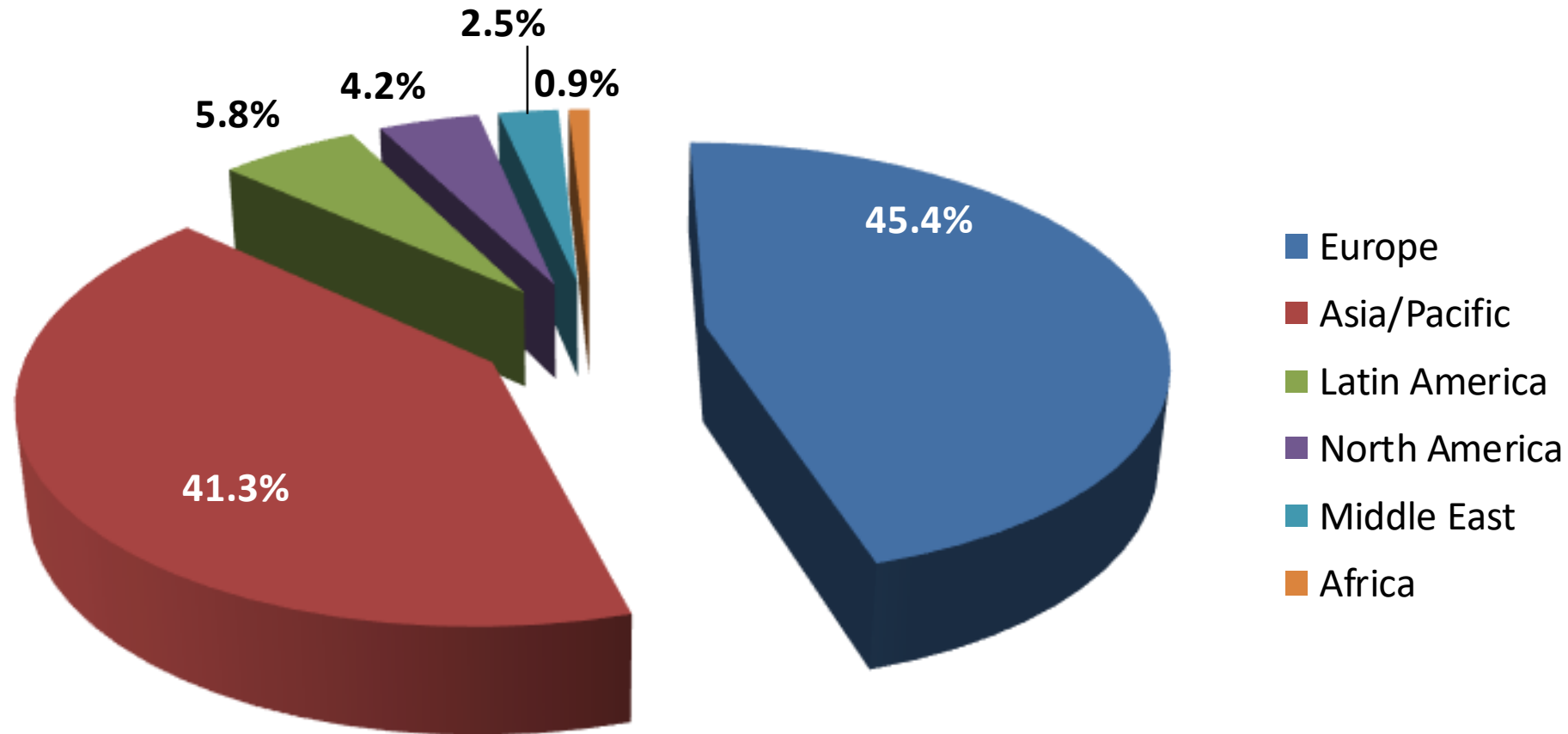
15 - 18 SEPTEMBER
TORONTO 🇨🇦 2019





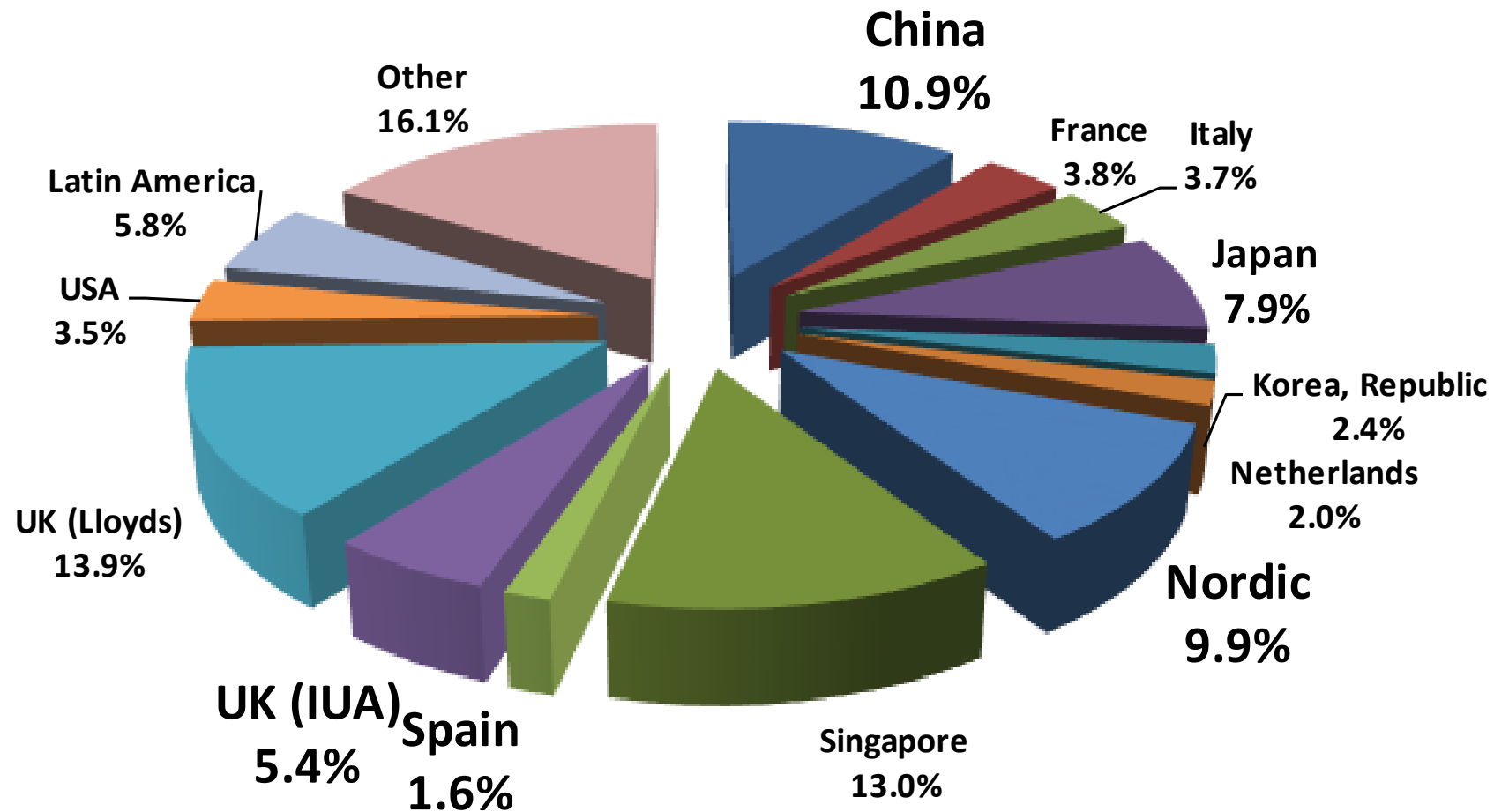
Hull Premium 2018 – by region

Total estimate: 7.0 USD billion / Change 2017 to 2018: 0% (but world fleet continued to grow)



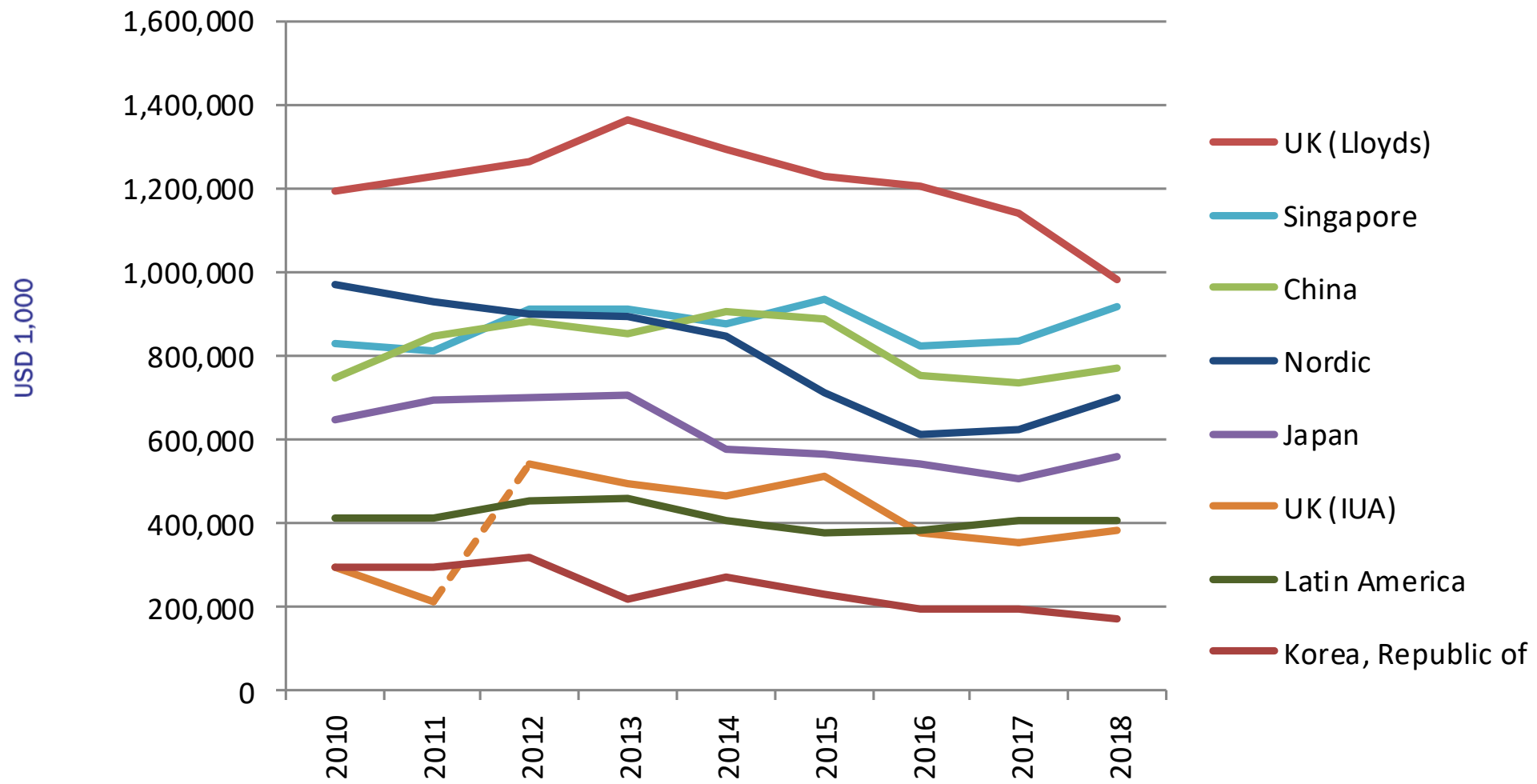
Hull Premium 2018 – by markets

Total estimate 2018: USD 7.0 billion



Hull Premium 2010-18

Selected markets



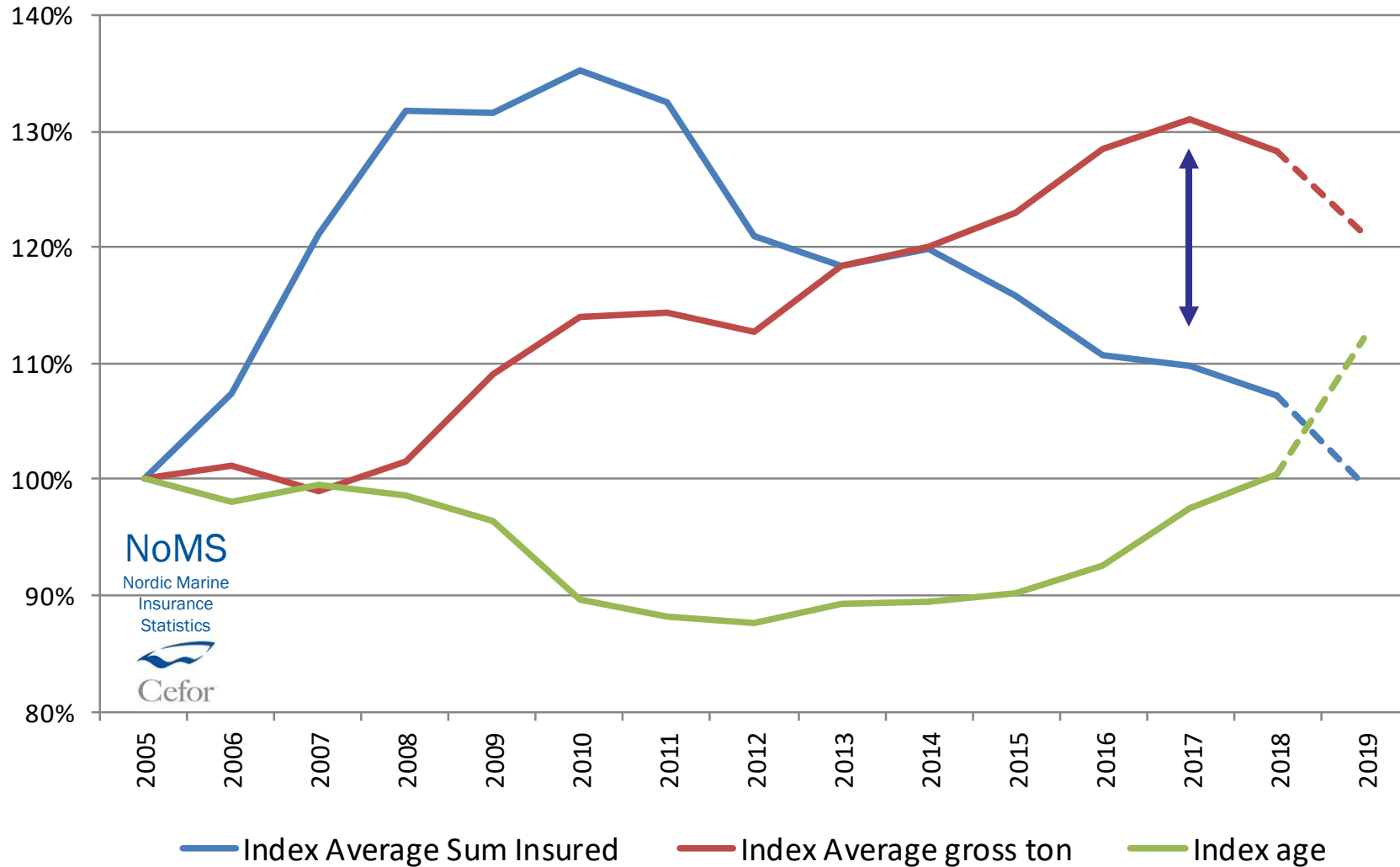
Hull – Portfolio trends



Oslo Riviera –
Swimming
with the
whales...

Average gross ton, age & vessel values

Index, 2005 = 100%

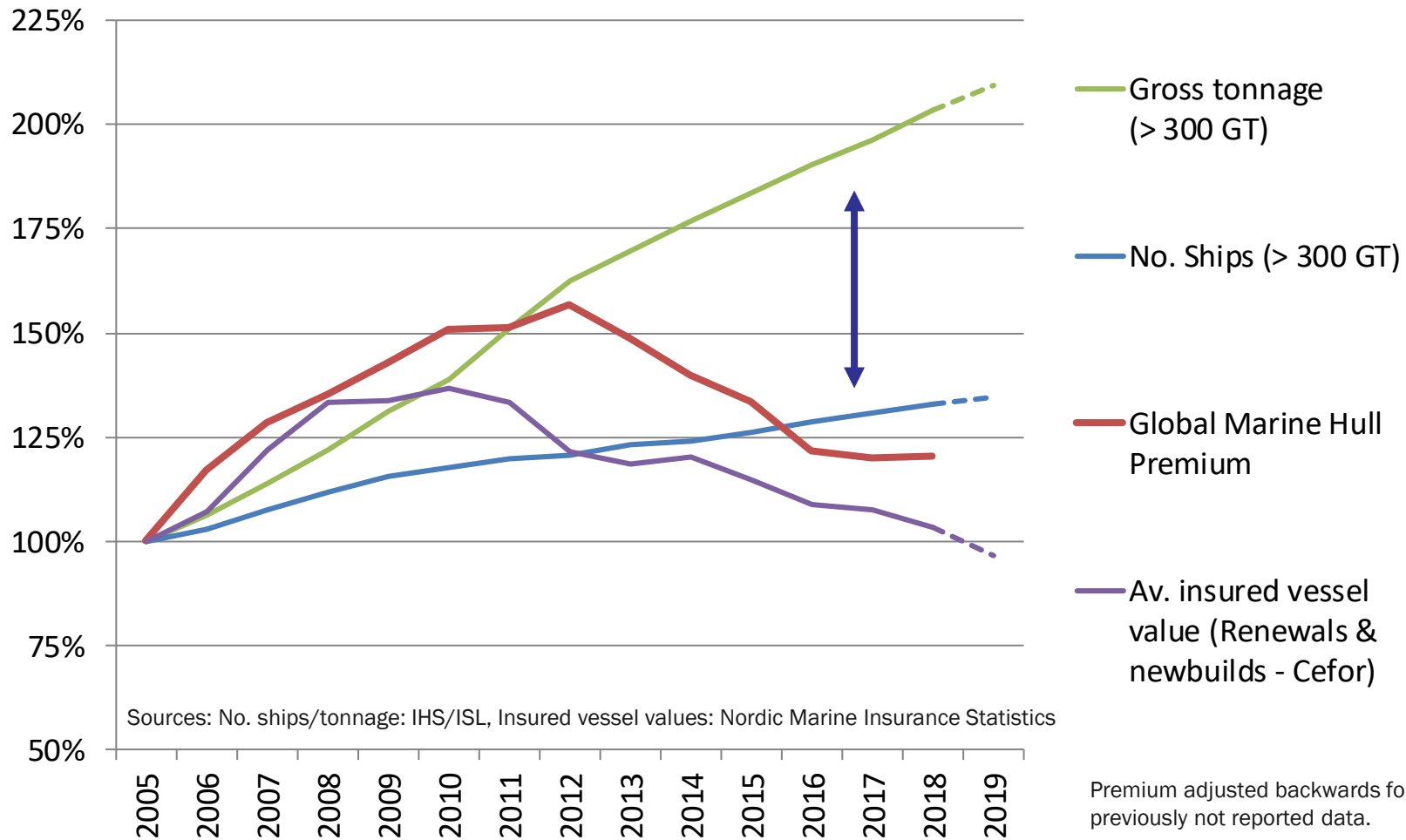


From 2014 increasing gap between average vessel sizes and insured values.

Average vessel age increasing due to aging of world fleet (less newbuilds).

Hull Premium versus World Fleet

Index of evolution, 2005 = 100%



World fleet continues to grow, especially in tonnage.

Hull premium deteriorated in line with ship values.

Increasing mismatch between fleet/vessel growth and income.

2019 signs of change, enough to reestablish balance?

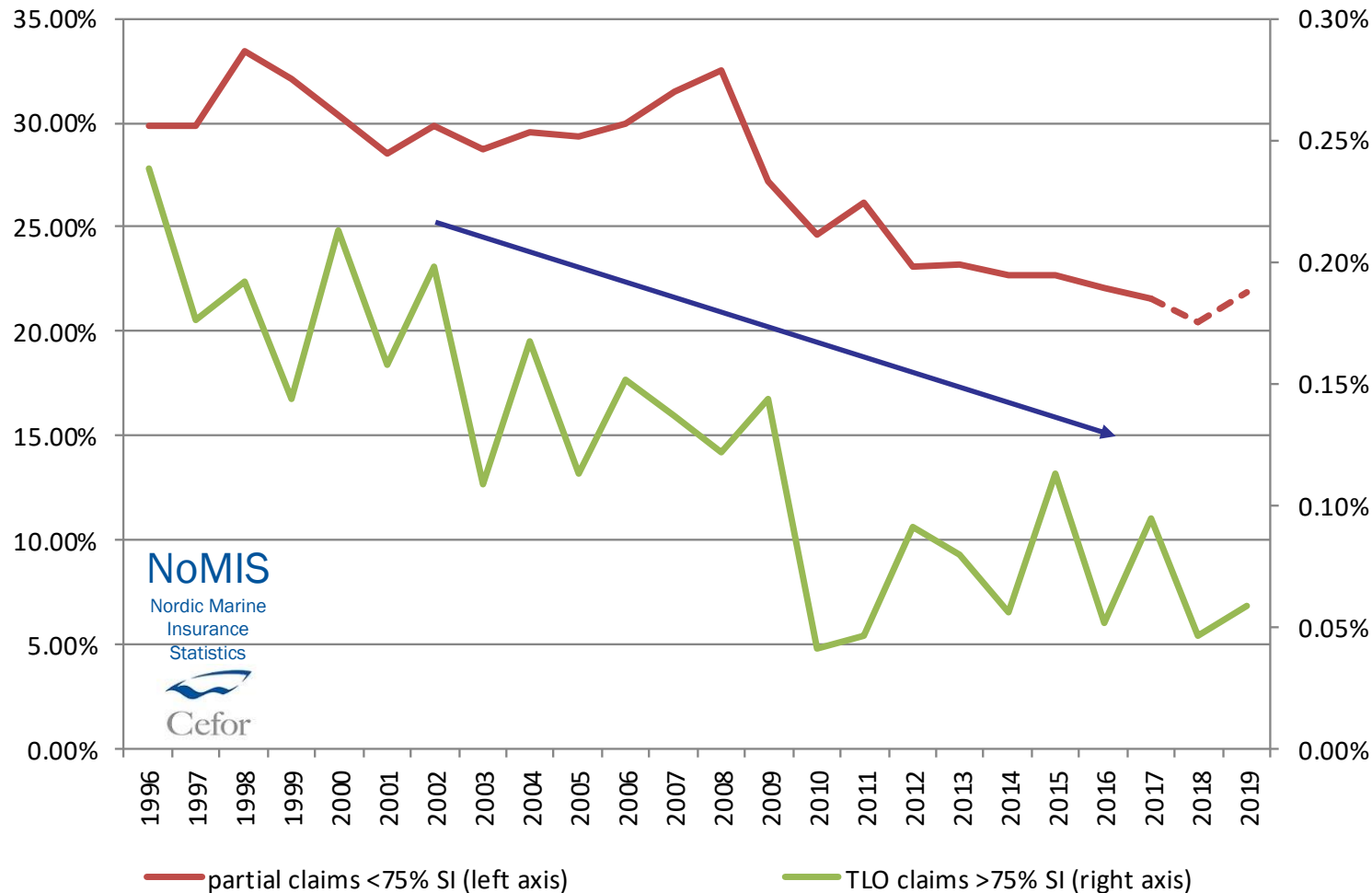
Hull – Claims trends



Foto: Astrid Seltmann

Beware of
hidden risks!

Claims frequency

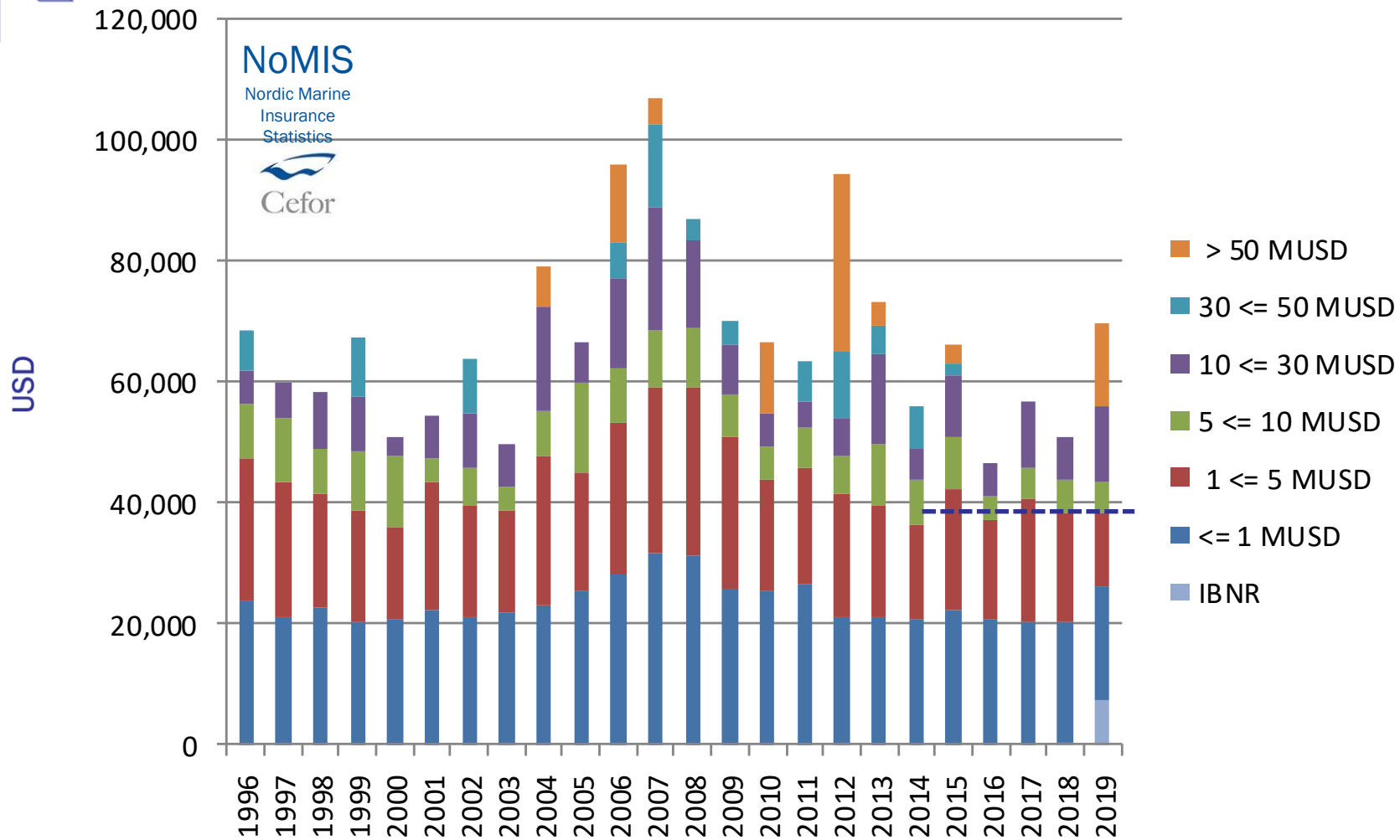


Claims frequency (all claims)
Long-term downward trend, stabilizing around 22%.
Some increase in 2019, but not exceeding this level.

Total losses
Long-term positive trend.
Stabilizing at low level
0.05% - 0.1%.

Claim cost per vessel*

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



Major losses

- Unusually few 2016-18, return in 2019 (H&M).
- Increasing **volatility** by (non-) occurrence of costly losses.
- Increasing **risk of major losses** with unprecedented cost (increasing vessel sizes, risk accumulation, new risks & trading areas).

Claims < USD 10 million

Cost per vessel quite stable in recent years.

For more H&M hull trends check <https://cefor.no/statistics/nomis/>

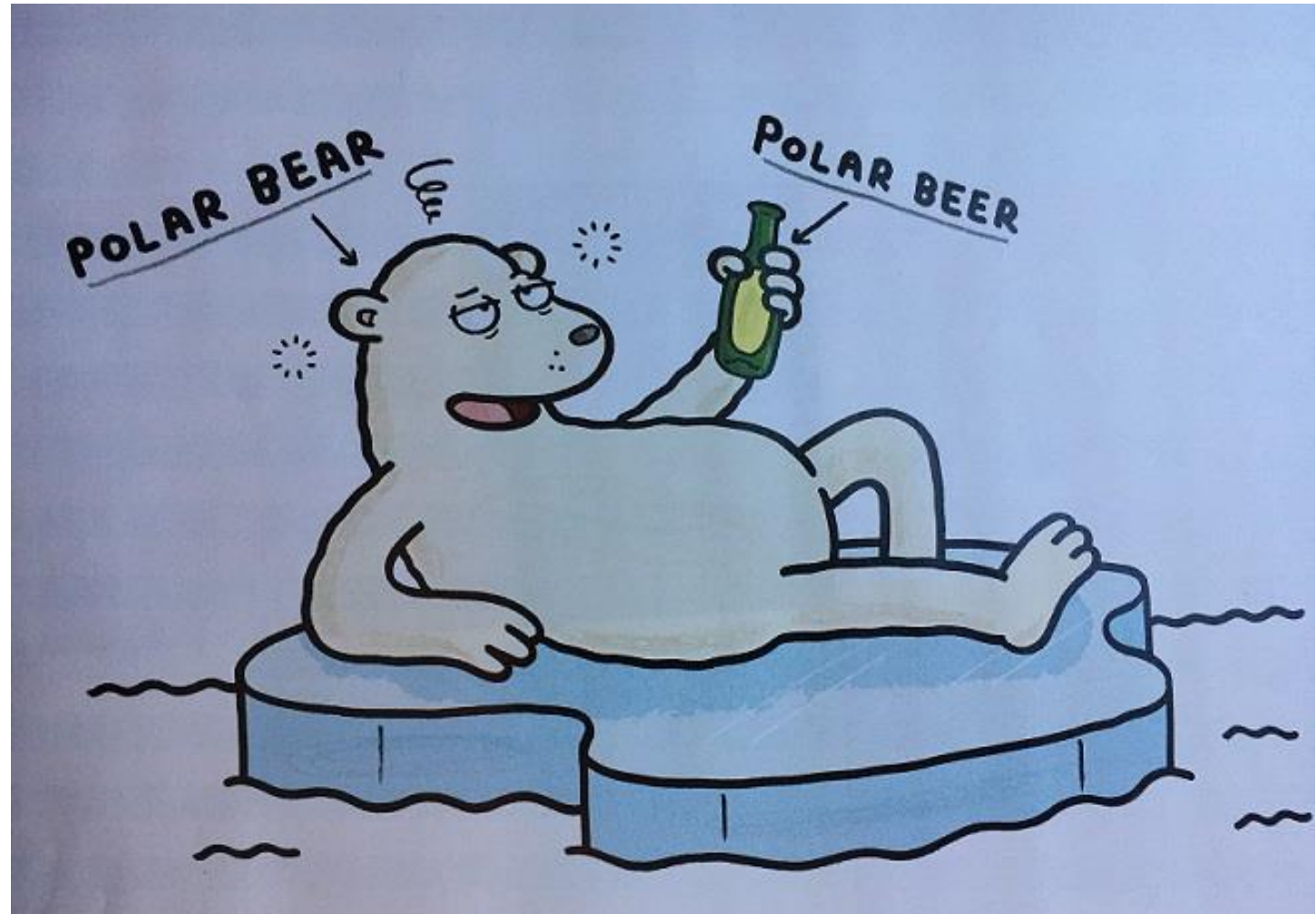
* Figures do include total losses and represent H&M insurance. Builder's risk not included (i.e. 2018 Lürssen fire)

Hull – Loss ratios



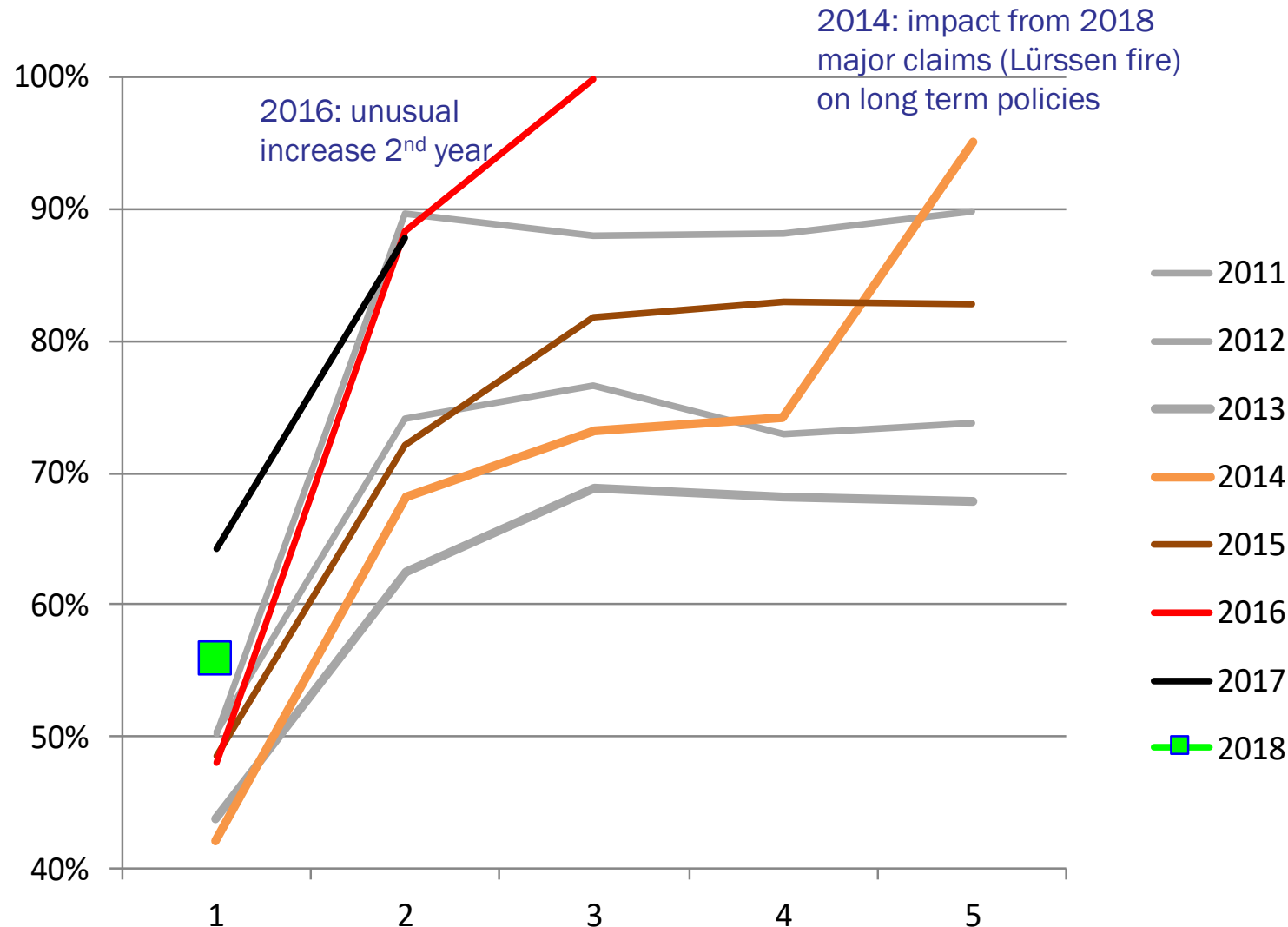
Strange statistical correlation?

Increasing number of underwriters closing their marine book (?)



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

Underwriting years 2010 to 2017, as reported at 1, 2, 3, 4, 5 years, gross premiums, paid+outstanding claims



2014 & 16:
What actuaries hate:
Deviate from typical pattern.
Unusual increase in severity.

2016 to 2018:
Few major losses, but in some
markets strong impact by 2017
hurricane yacht damage.

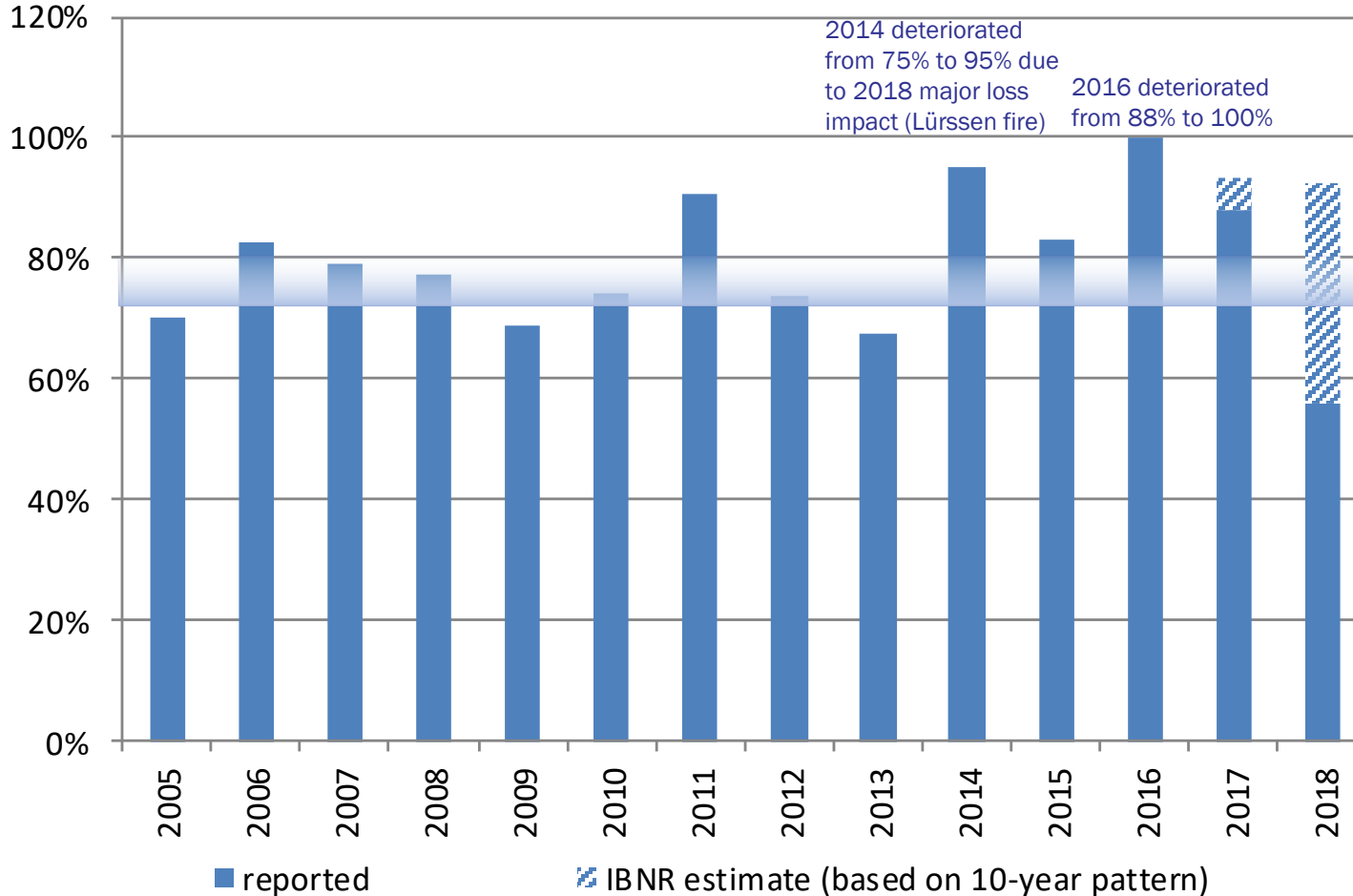
Attritional losses increasingly
eroded hull premium (after a
constant decrease in premiums
relative to the risk, see p. 37).

* 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** (& some US)

Underwriting years 2005 to 2018, gross premiums, paid+outstanding claims



2014-18: Unsustainable level.

Overcapacity, dropping vessel values and reduced activity influenced income negatively.

Yacht damage (hurricanes) impacted 2016/17.

Few major claims, but attritional losses erode (reduced) income.

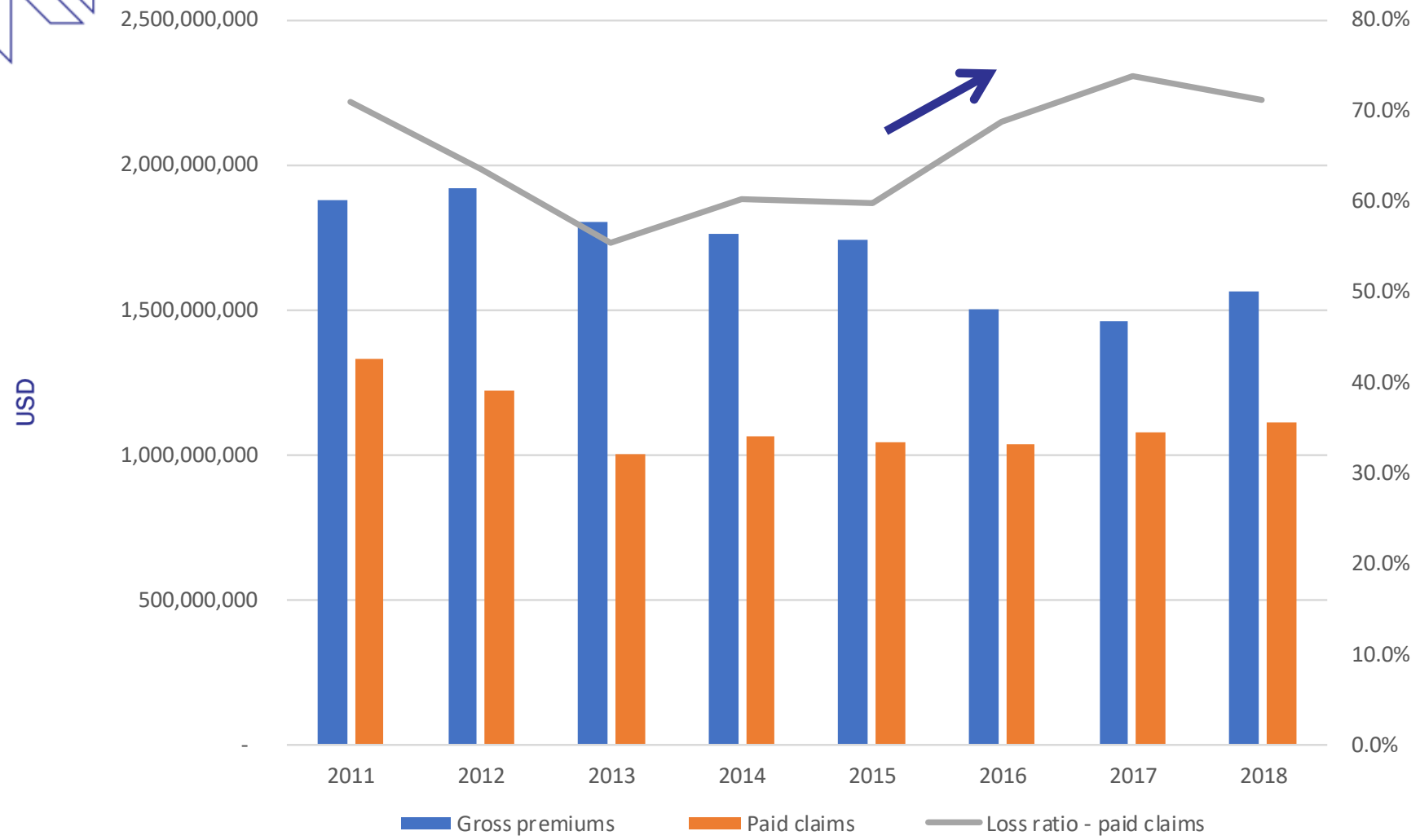
What to expect for 2019 ?

- Income recovering (from unsustainable level!)
- Major losses return (cost).
- Result = ?

*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, some US data

Gross loss ratios accounting year Hull Asia*, Gross premiums, paid claims



Loss ratios increase 2015-17. Stable annual claims cost opposed to income reduction.

Some relation to previous portfolio growth possible (accounting year: claims attaching to uw year paid over several acc.).

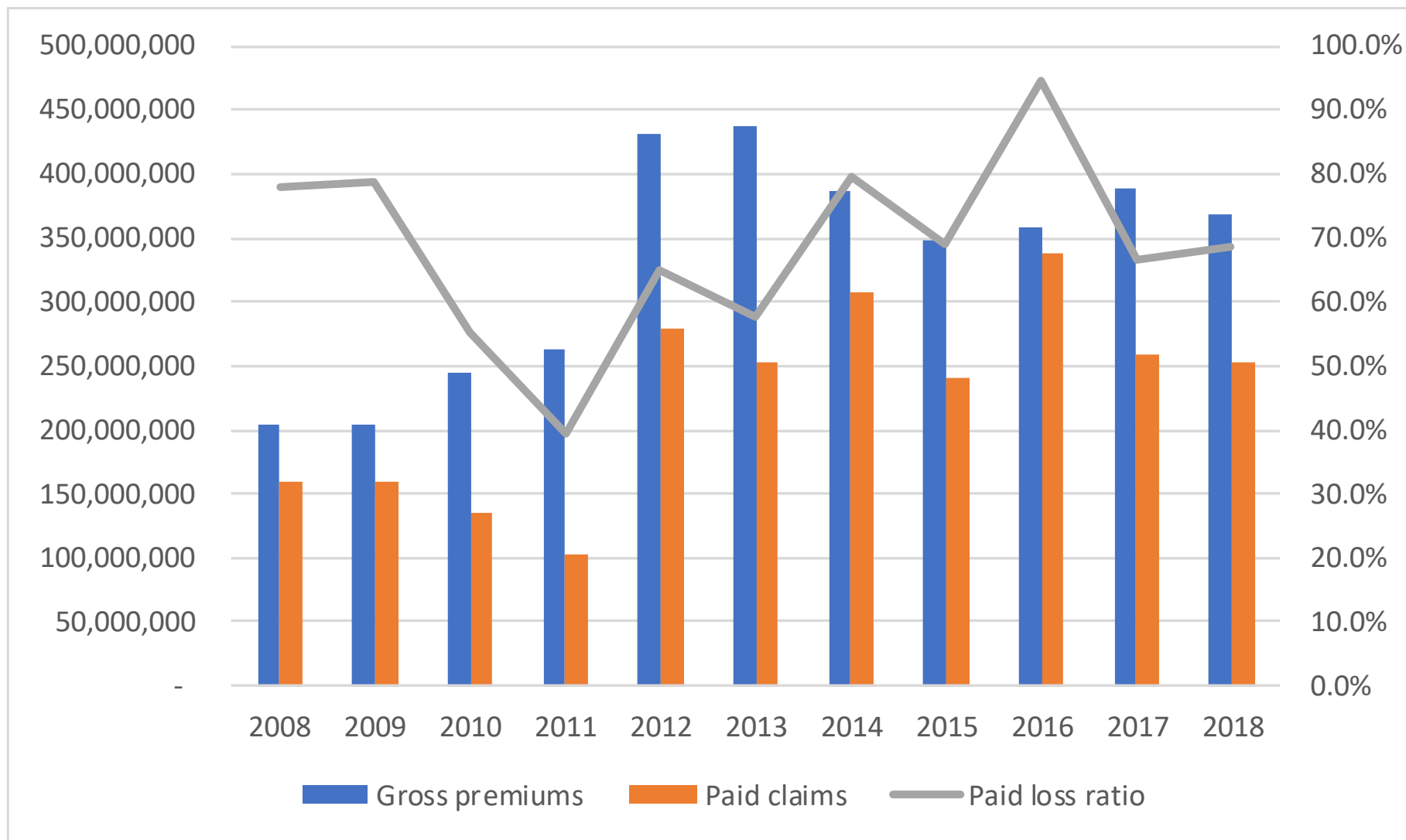
* China, Japan, Hong Kong

Singapore not included, because only incurred (paid+outstanding) claims figures available, for other countries only 'paid'.

Gross loss ratios accounting year

Hull Latin America*, Gross premiums, paid claims

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TORONTO 2019



NB: includes data from more countries compared to 2018 presentation.

*Figures in graph include: Argentina, Bolivia, Brazil, Chile (from 2012), Colombia, Costa Rica (from 10), D. Republic (from 17), Ecuador, Guatemala, Honduras (08-16), Mexico (from 12), Panama (from 10), Paraguay (14-16), Peru, Venezuela (until 14).



Hull Key points

Exposure

- Until 2018 increasing gap between fleet & vessel size as opposed to vessel values & income.
- Higher single-risk exposure (with inherent risk of unprecedented major claims).

Claims (other than yachts)

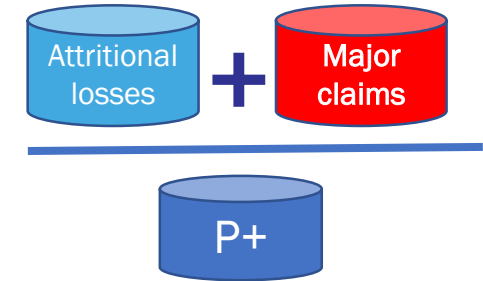
- Claims frequency and cost per vessel: Stable at moderate level.
- Total losses: long-term downward trend. Came to a halt with fluctuation below 0.1%.
- Major losses:
 - Return in 2019 after unusually little impact 2016-2018 (except 2018 Lürssen fire impact on builder's risk).
 - Higher volatility steered by their (non-) occurrence.

Results

- 2016-18: Few major claims, attritional losses represented an increasing share of the total cost.
- 2014-18 impacted by special events (2017 hurricane yacht damage, single casualties in 2018/2019 attaching to previous year's policies).
- Income did not suffice to cover expected cost (attritional losses), no buffer for major losses.
- 2019 sees rising premiums, but also return of major losses.

A simple equation - Repetition

Loss ratio = Claims cost (C) / Premium (P)



Risk premium = Expected claims cost (for partial and major losses).

Premium (P+) = Risk premium + Loading for expenses + Profit margin

Situation in 2019

- Major claims impact ‘back to normal’ after three years of little impact.
- Hull premiums rising (but from unsustainable level!)
- Combined impact on results = ?



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Fires on Container vessels

15 - 18 SEPTEMBER
TORONTO 🍁 2019



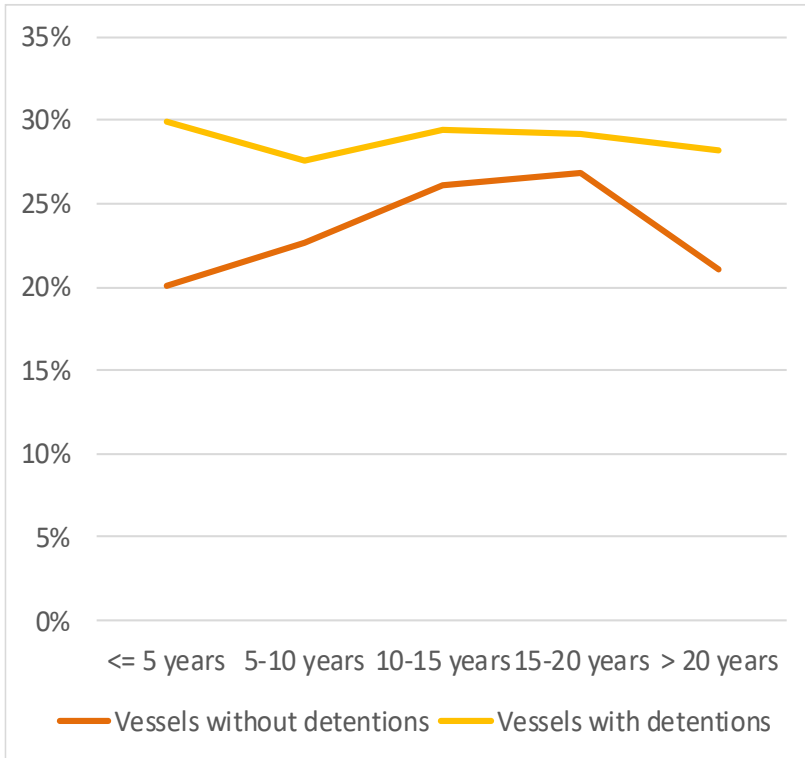
Detentions – Indicator of casualties



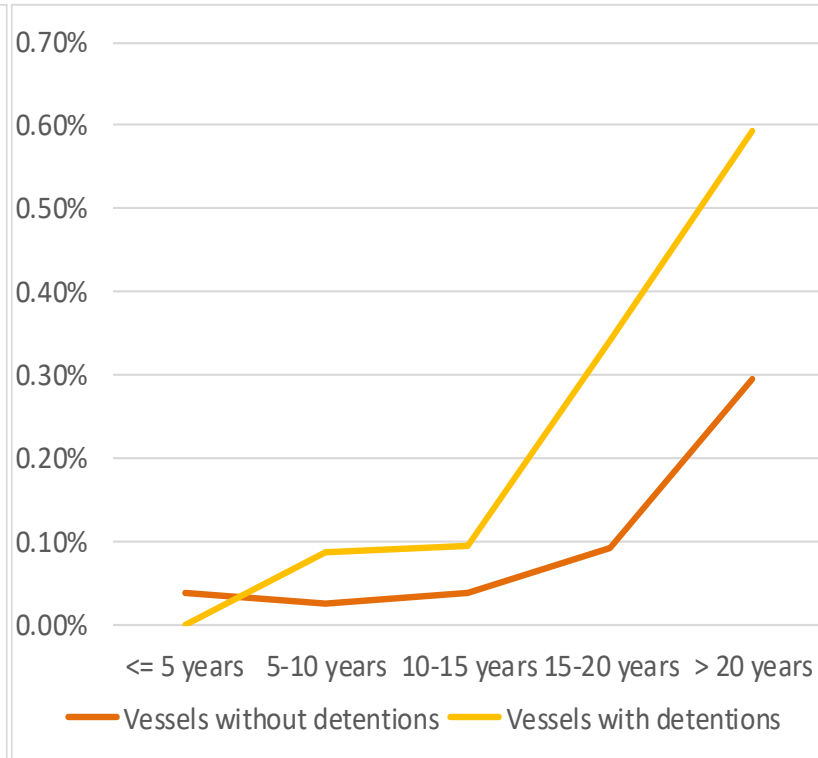
Foto: Astrid Seltmann

Claims frequency & cost of vessels with/without detentions prior to casualty

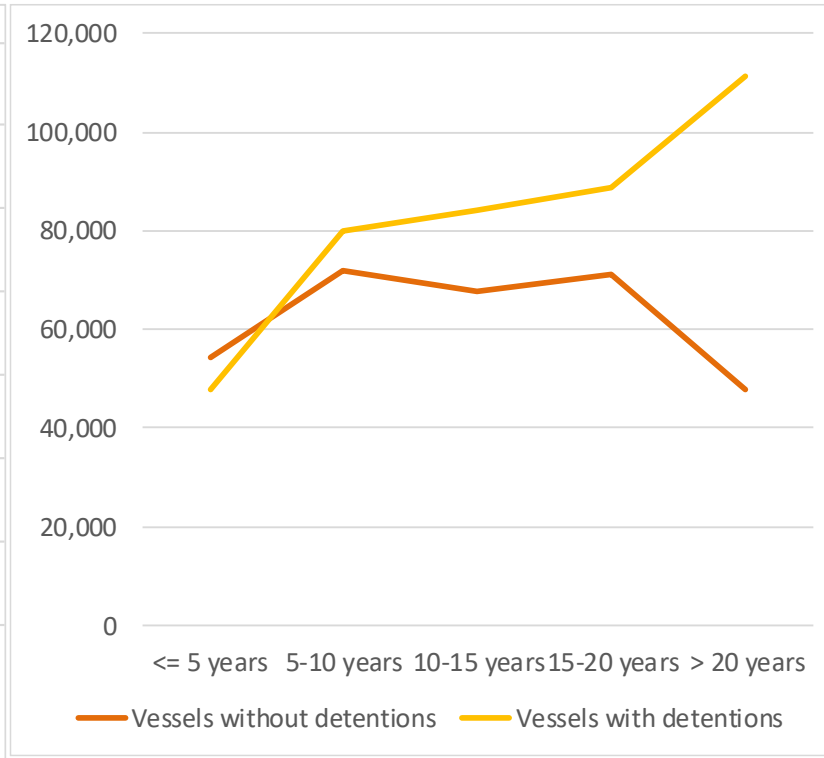
Claims frequency (all claims)



Total loss frequency



Claim cost per vessel



Claims frequency: Higher for vessels with detentions in a 3-year period prior to a casualty, across all age groups.
Total loss frequency, Claim cost per vessel: Higher for vessels with detentions except newbuilds. Gap increases with age.

Fires on Container vessels

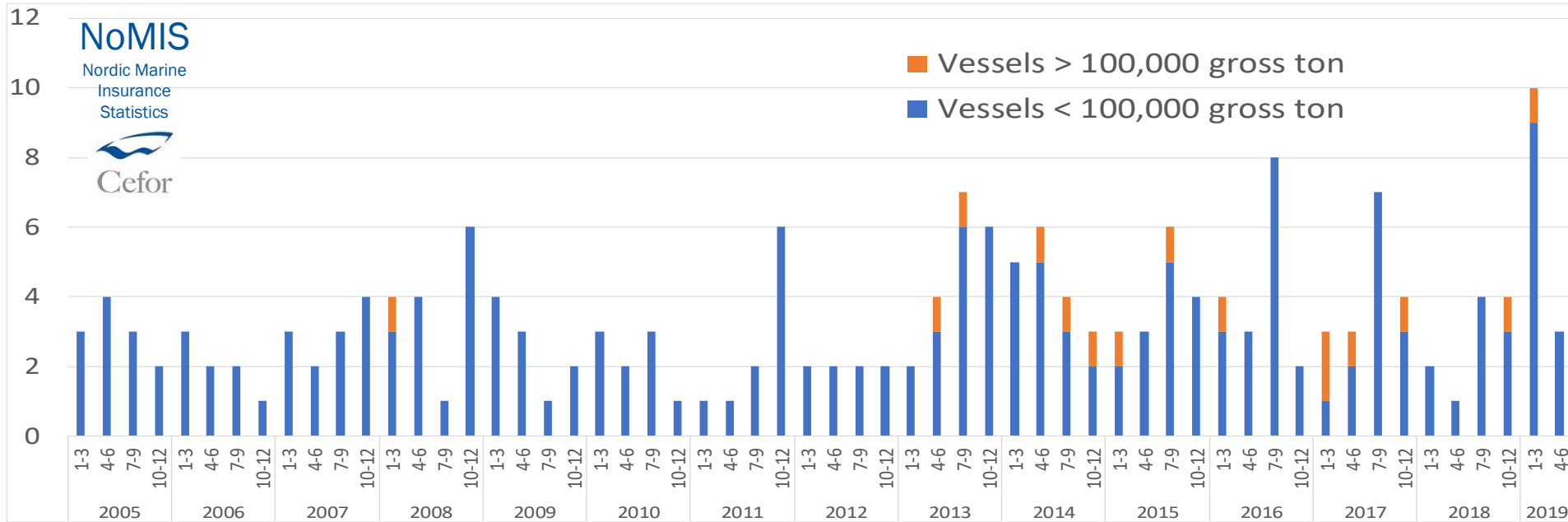


Foto: Astrid Seltmann

Only the evening sky on fire here!

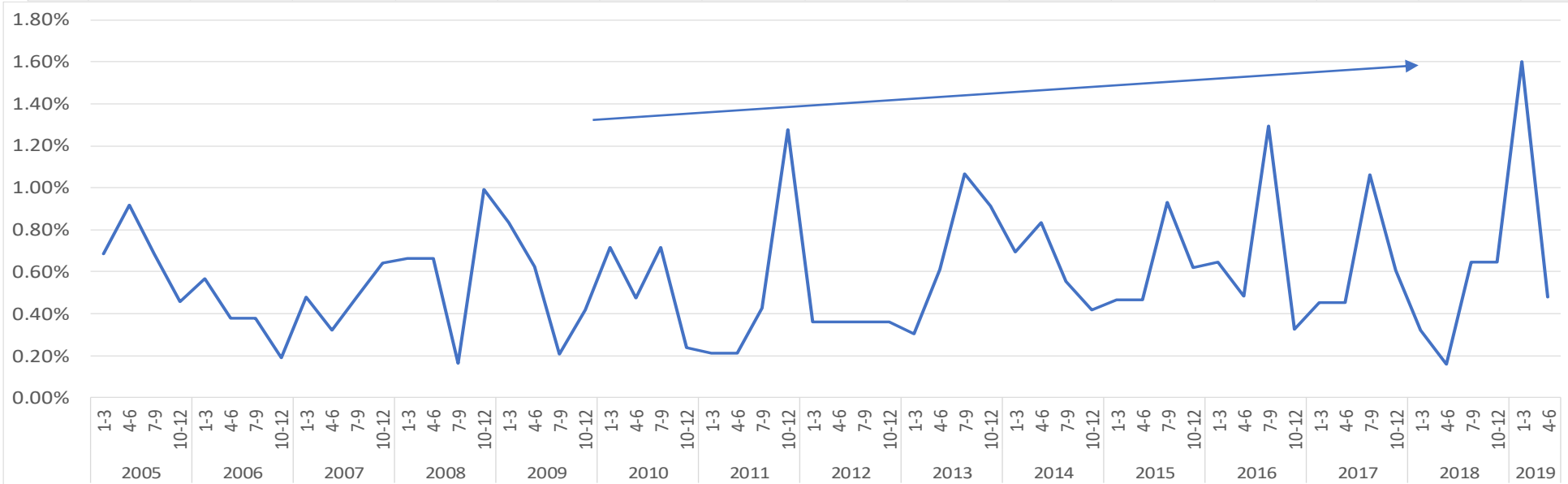
Fires on container vessels* – Numbers & Frequency (by quarter, NoMIS database)

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Increasing number of fires on large container vessels.

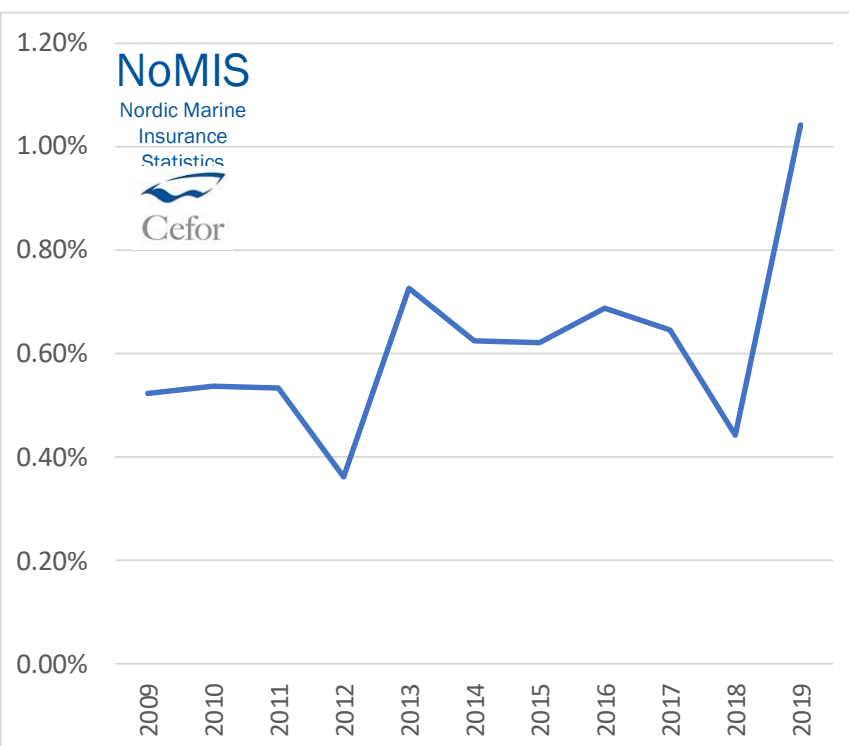
Fire fighting challenging when fire starts in cargo area.



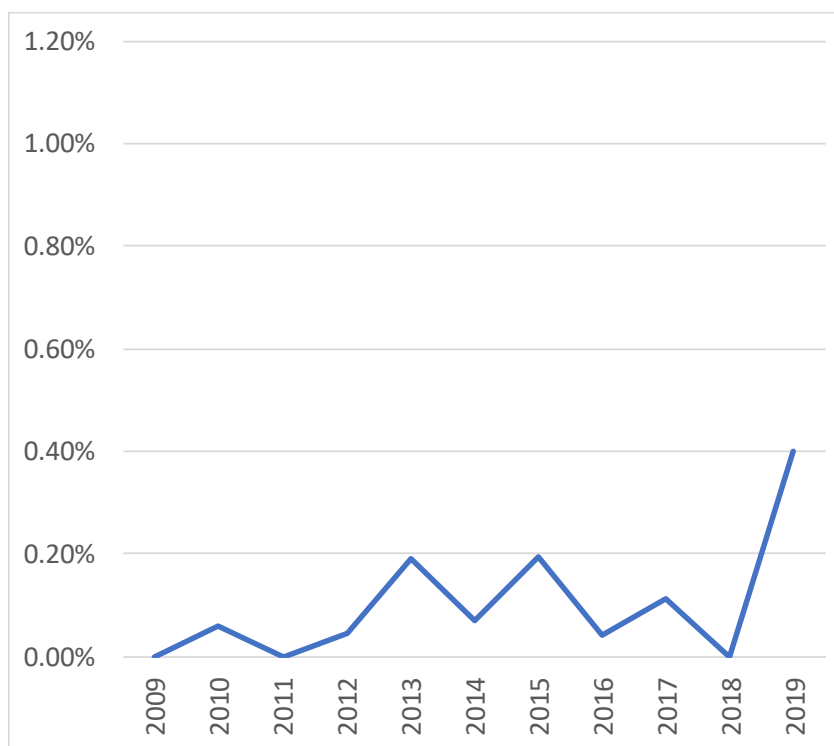
* Including RoRo with container carrying capacity

Fire frequency on container* vessels

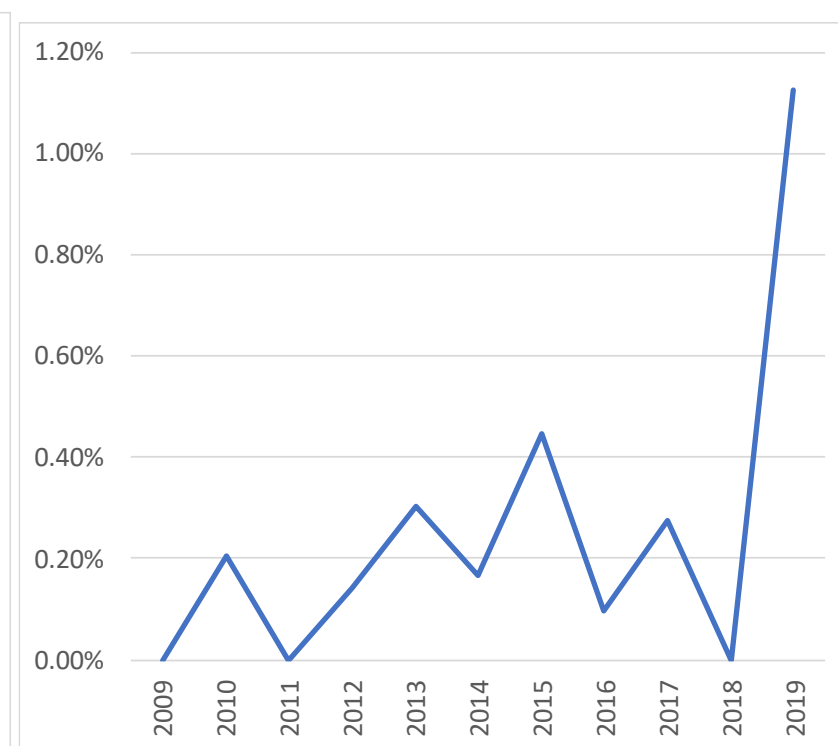
Frequency – all fire/ explosion claims



Frequency – Fires starting in cargo area** All sizes



Frequency – Fires starting in cargo area* Vessels > 50,000 gt



* Including RoRo with container carrying capacity

** by linking NoMIS data to vessels specified in

https://iumi.com/news/news/iumi-presentation-at-imo-maritime-safety-committee_1559731776

About one third of these claims could be identified in the Cefor NoMIS database.



Take-away points

- Trade growth accelerating, but political and economic uncertainty prevails.
- Cargo results impacted by recent years' unprecedented event losses (man-made & Nat-cat).
- Climate change / Nat-Cat losses / (unknown) accumulation (on land and at sea) / new risks.
- End 2018/1Q 2019 major loss incidents end period of benign claims impact in several lines.
- Offshore market starts to recover, but slowly. Risks following reactivation of units an issue.
- Hull: Bottom may be reached and premiums on the rise, but major losses also back.
- For sustainability balance necessary between income and expected cost (for attritional + major losses + expenses).

- Detentions are an indicator of the potential risk of future claims.
- Fires on container vessels starting in cargo area a concern.

Issues to monitor



High-value risks

Oil price, fuel quality

Changes in regulation (liabilities)

Human factor/
Qualification

Climate change

Fire on RoRo & Container vessels



Value accumulation

Arctic risks

New technology

Cyber risk

Internet of things/complex technologies

Navigation





Thank you!

ASTRID SELTMANN

Analyst/Actuary
The Nordic Association of Marine Insurers (Cefor)
astrid.seltmann@cefor.no



Foto: Astrid Seltmann