

Global Marine Insurance Report

Astrid Seltmann

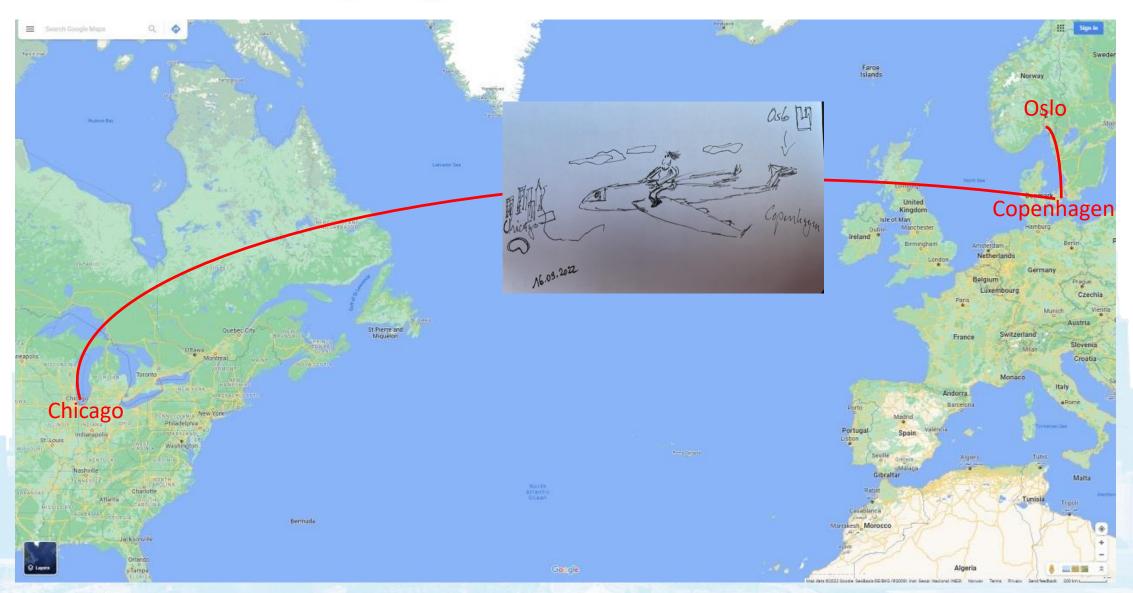
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IUVI2022 CHICAGO SEPTEMBER 18-21



Chicago, finally!







Chicago, finally!





Contents

- Issues 2022: What occupies us this year?
- Global marine insurance market
- P&I
- Offshore energy
- Cargo
- Hull
- Special issues
- *The 2022 oracle*

Marine insurance figures as of 2021, with some trends into 1st half year 2022.



Issues 2022

- Ukraine war (sanctions/what (not) covered, claims, energy prices,...)
 (NB: war risk insurance not part of this presentation)
- Inflation (values, cargo, energy/fuel, claims,...)
- Pandemic (post-pandemic effects, new waves/viruses)
- ESG / sustainability / emission reduction
- Fires
- Nat-cat (2022: Draughts/wildfires across whole northern hemisphere, floods)



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Please note & Disclaimer

Figures reflect the **2022 state of reporting**. Figures include <u>estimates</u> for a number of countries. Data for previous years often <u>adjusted retrospectively</u>.

Data is reported to the degree possible according to the agreed IUMI definitions (see here) but may not be consistent across countries.

For **comparison between years**, use the <u>updated premium and loss ratio data</u> as of 2022!¹⁾ Comparing this year's presentation to last year's presentation may lead to wrong conclusions as it ignores the retrospective update of figures.

Focus is on **identifying market** <u>trends</u>. Absolute figures are subject to error margins (reporting backlog, retrospective adjustments, wrong in-/exclusion of portfolios...).

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 units' results. As with all averages, individual units may out- or underperform compared to the average.

IUMI aims 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 critically evaluate real and seeming facts!

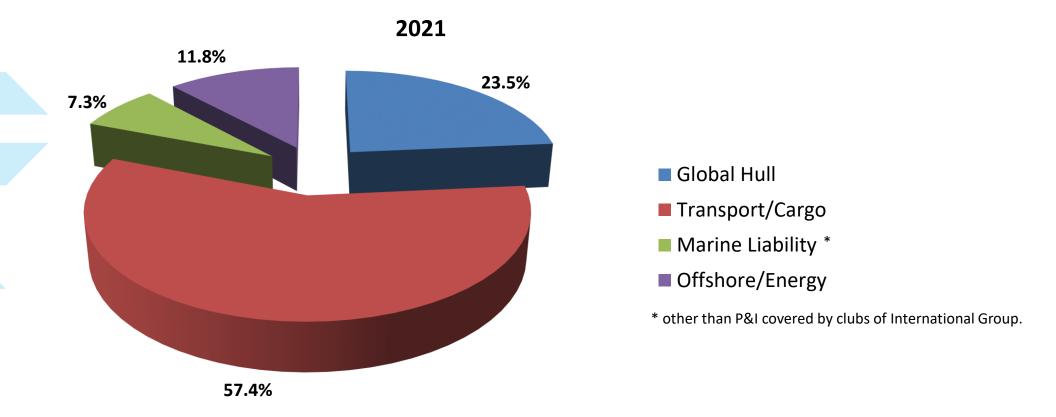
¹⁾ for IUMI members at https://iumi.com/statistics/iumi-member-statistics



Marine premiums 2021 – by line of business

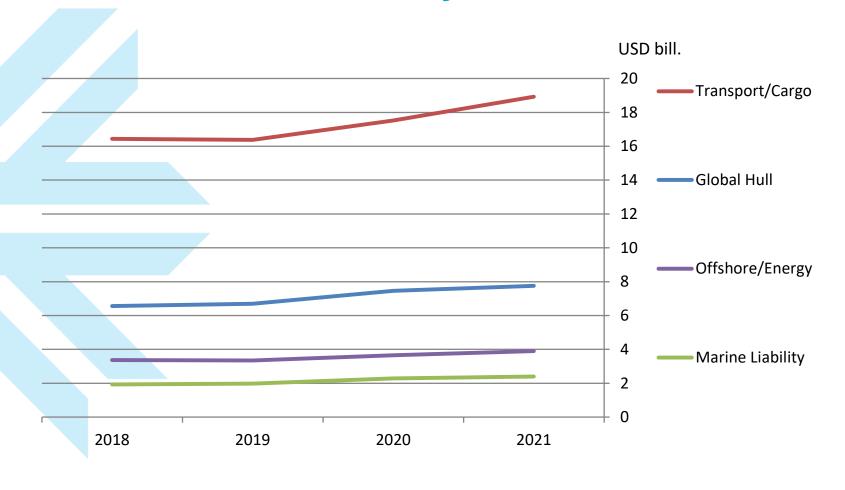
Total estimate 2021: 33.0 USD billion / Change 2020 -> 2021: 6.7%

NB: Exchange rate effects





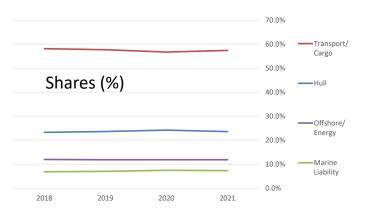
Premiums & shares by line 2018-2021



Increase in premiums since 2020.

NB: Absolute premiums reflect a combination of (insured) trade volume/values and rates per unit.

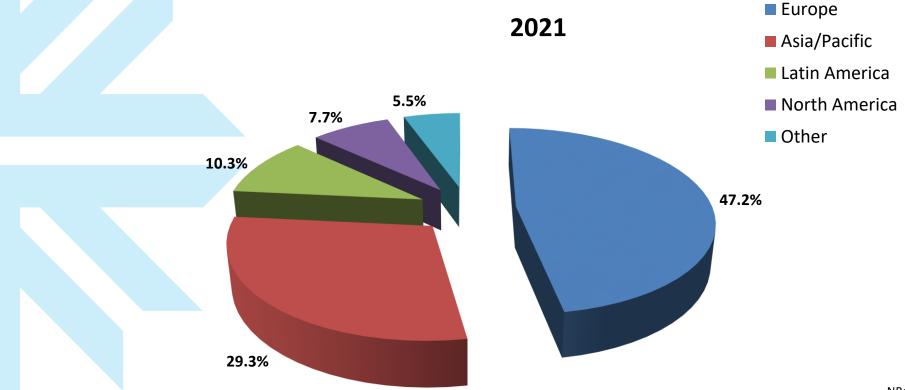
Combination of various effects (world trade volume/values, market conditions, exchange rates).





Marine premiums 2021 – by region

Total: 33.0 USD billion

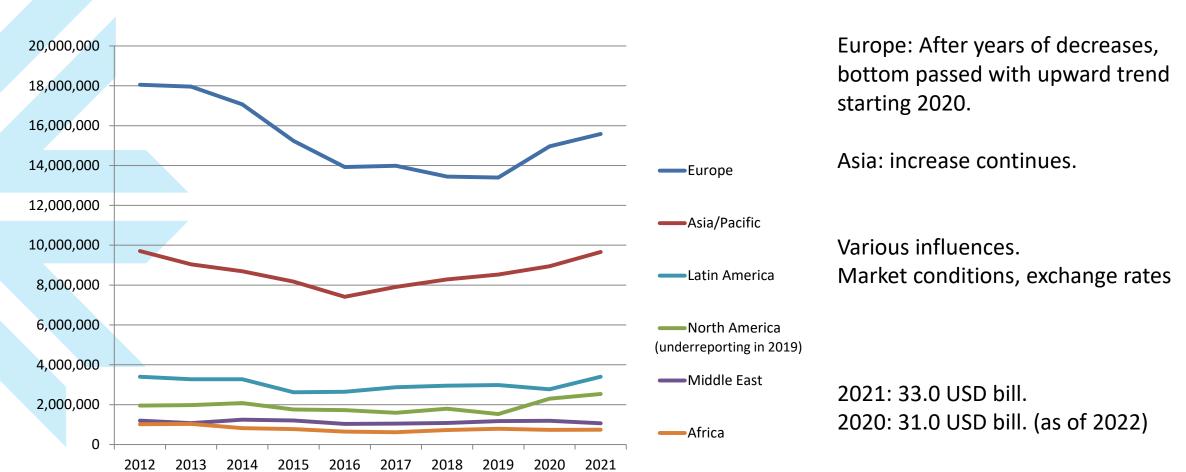


NB: Some figures changed retrospectively, graph not directly comparable with previous presentations.



Premium (USD) by region 2012-2021

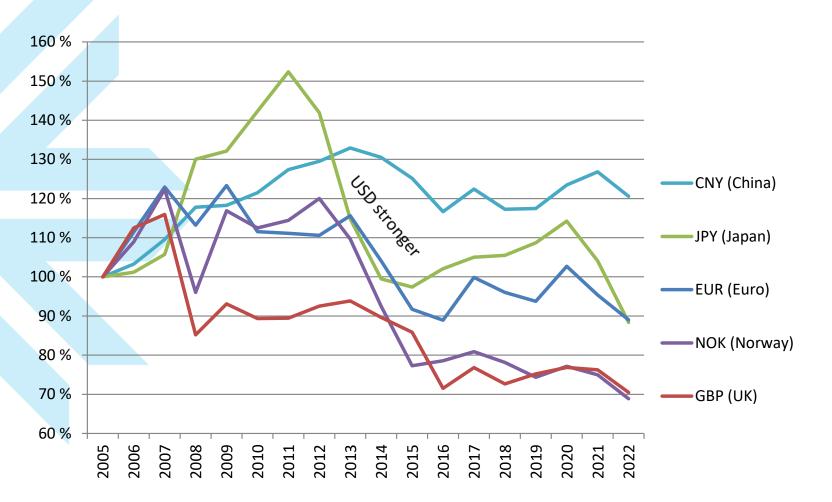
as of 2022





USD Exchange rates 2005-2022

Index 2005=100%, against selected currencies, as of December each year (2022 as of June)



Statistics in USD influenced by exchange rates.

Diverse developments between currencies.

Premium trends may differ in local currency, particularly for cargo.



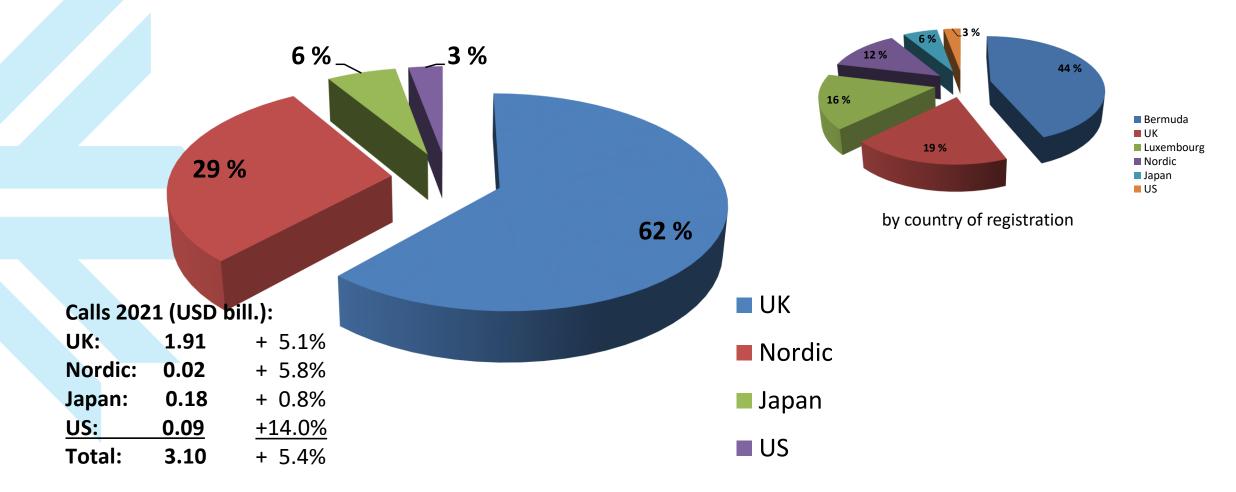
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P&I International Group – Income

Gross calls 2021 (premiums) – by operational location, Source: Int. Group of P&I Clubs

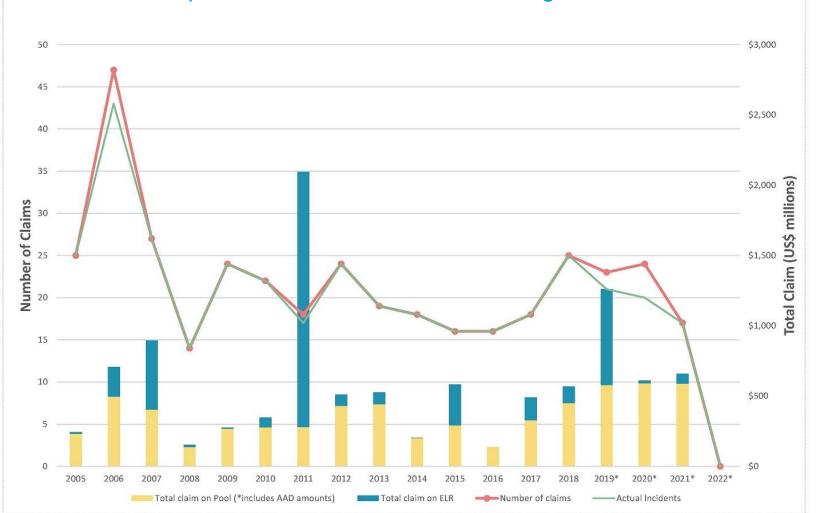






P&I Pool claims by policy year

Source: Int. Group of P&I Clubs, Claims as of 5 August 2022



In 2019, a number of severe casualties ends period of low major claims impact.

2021 reported claims doubled.

COVID-19 impact stronger than on other lines (crew, passengers).

2022 status per 5 August. Claims will still develop.

Ukraine war: Sanctions prevent renewal of many coverages into 2022/23 renewal period.

P&I complex business with high liabilities.

More information at www.igpandi.org



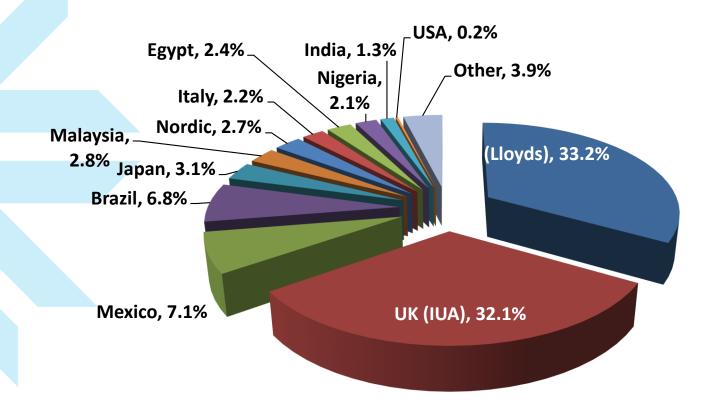
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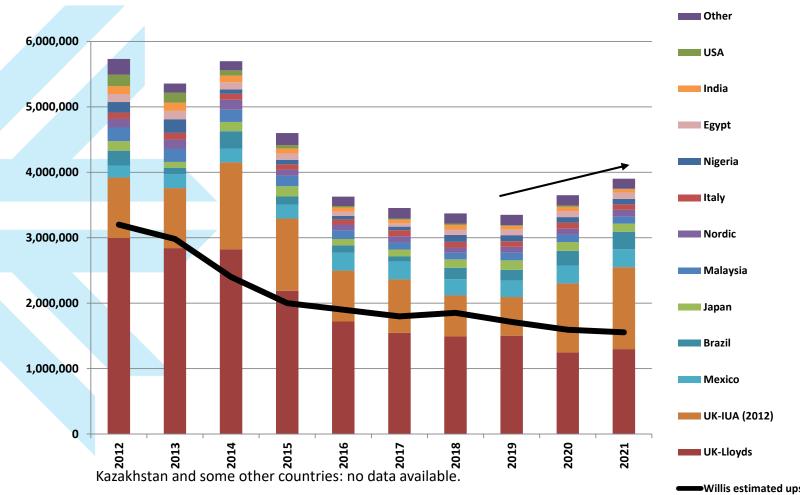
Offshore energy premium 2021

Total estimate: 3.9 USD billion / Change 2020->2021: 6.9%





Offshore energy premium 2012-2021: bottom passed



Premium started to rise again, bottom after decrease from 2014 seems reached in 2019.

Correlated with oil price.

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

=> Some overestimation of global premium.

Willis: Derived from Lloyds triangulation. Calculation of global premium assumes that Lloyd's represents 70% of market over time. Recent reduction in Lloyds market share not taken into account.

⇒ Underestimation of global premium. Trend not robust against changes in Lloyds market share.

Willis estimated upstream premium (assumption Lloyds reflects 70%)



Average oil price per month (USD/bbl)

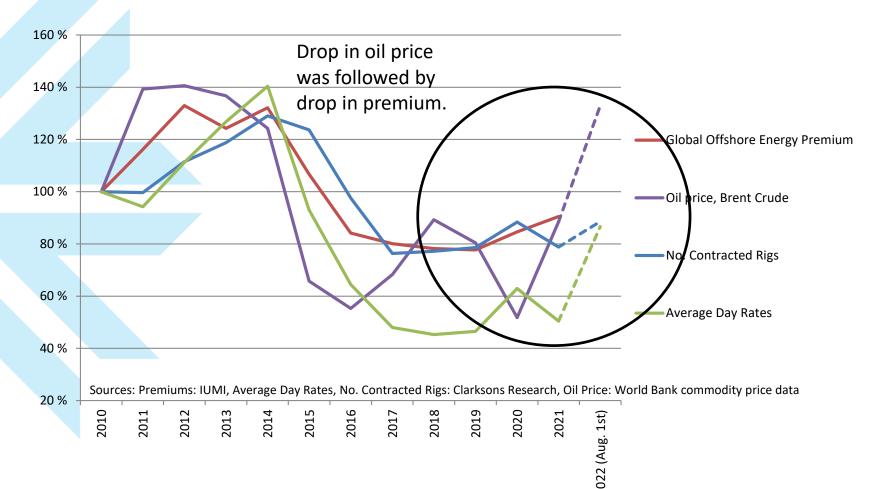
World bank commodity price data, January 2005-July 2022





Energy premium versus mobiles, day rates, oil price

Index 2005=100% (mobiles, day rates, oil price as of July 2022)

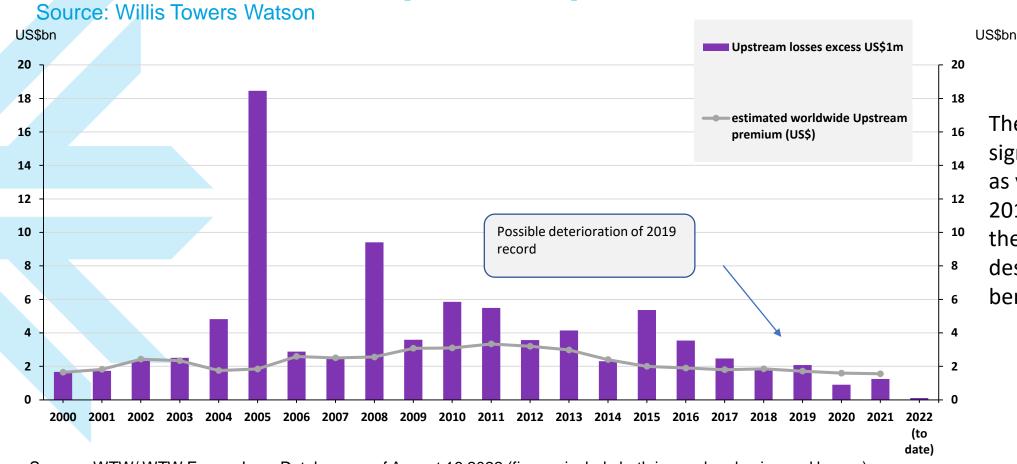


Oil price increasing since 2021.
In 2022 upswing in offshore activity (more rigs active & day rates increasing).

More activity generates usually more premium volume.



WELD Upstream Energy losses 2000-2022 (excess of US\$1m) versus estimated Upstream premium income



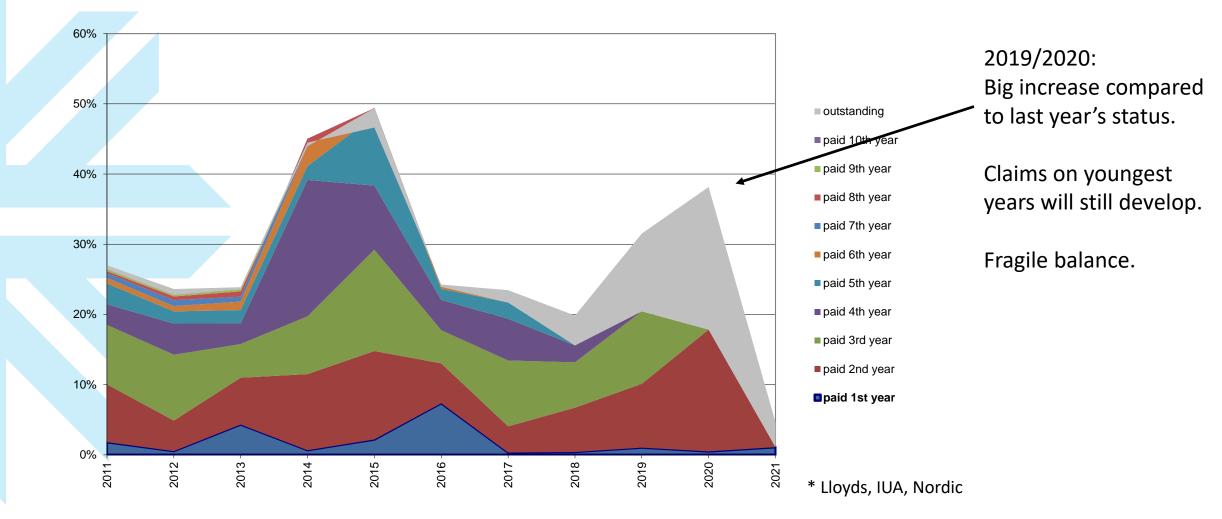
The shadow of a significant incurred but as yet unquantified 2019 loss hangs over the market, despite the recent benign loss record.

Source: WTW/ WTW Energy Loss Database as of August 16 2022 (figures include both insured and uninsured losses)



Offshore energy gross loss ratios – Europe*

Underwriting years 2011-2021, incl. liability, as of Dec. 2021, paid & outstanding as reported





Offshore energy – Summary

- COVID-19 temporarily reduced demand for oil but strong recovery from 2021.
- Ukraina war driving up energy prices.
- Activity catching up in 2022. Will the upswing last?
- Historically 18 months time lag between improved oil price and authorisation for expenditure.
- More risk retained in recent years. Insurance capacity not equally reduced.
- Premiums: bottom passed, some increase since 2021 (but market capacity also on the rise again).
- Claims: recent years benign claims environment, but does it give the real picture?
 Increasing backlog in claims reporting, yet unquantified loss in 2019.
 Hurricane impact was reduced, but 2022 potential of becoming an active hurricane season.
- Fragile balance recent years between reduced premiums and modest claims impact.
- Risks/claims arising from unit reactivation may become bigger issue from 2022.

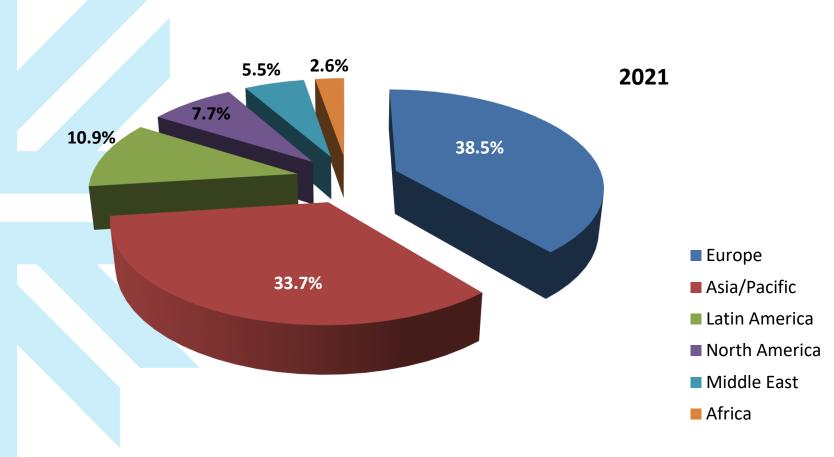


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Cargo premiums 2021 – by region



Total estimate: 18.9 USD billion Change 2020 -> 2021: 8.0%

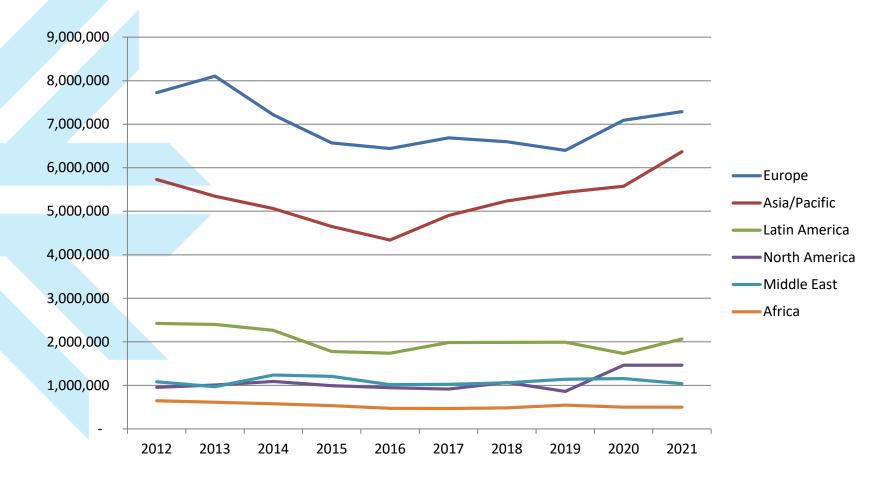
Increases in both 2021 and 2022.

Exchange rate effects strongest on cargo premium.

NB: Some figures changed retrospectively, graph not directly comparable with previous presentations.



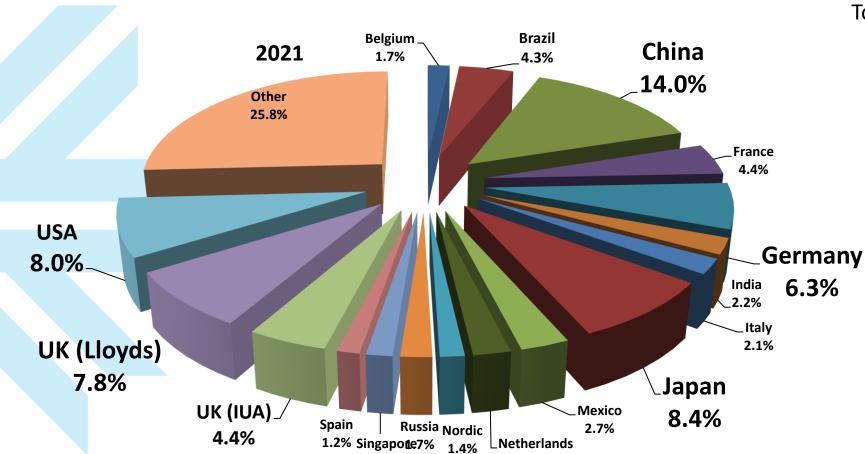
Cargo premium – by region



Strongest growth in Asia, but what about 2022 and beyond?



Cargo premiums 2021 – by markets



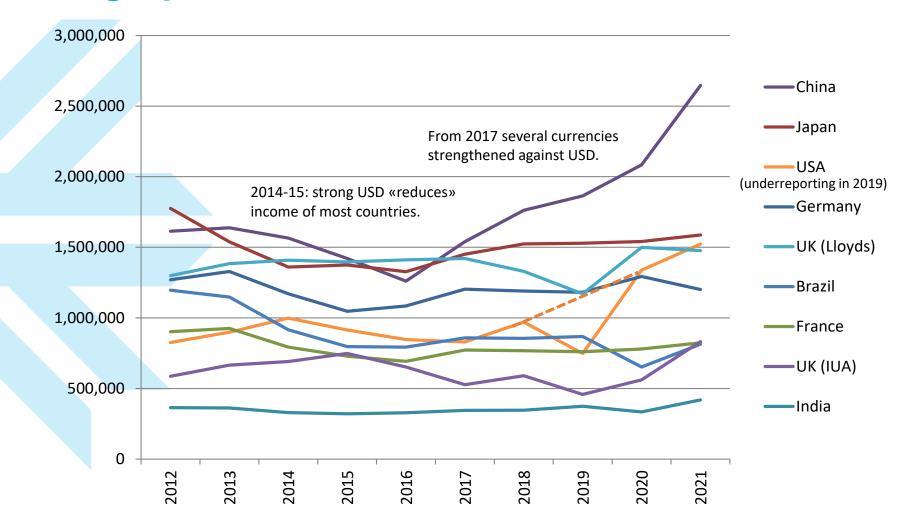
1.4%

2.1%

Total estimate: 18.9 USD billion



Cargo premiums 2012-21 – Selected markets



China growth accelerating in 2021 – but uncertainty going forward?

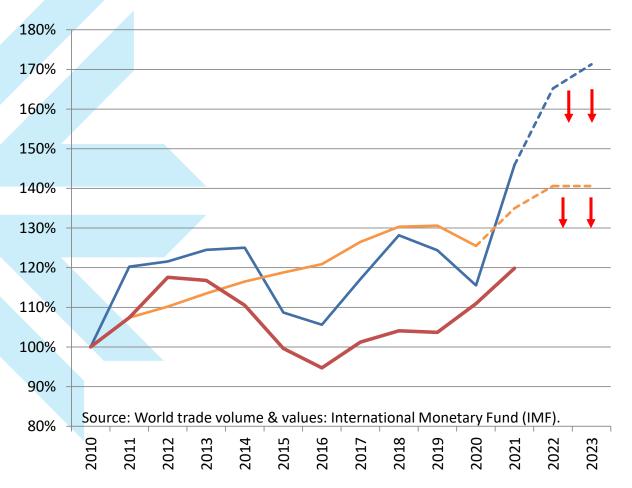
Strong growth USA, more moderate growth other regions (NB: exchange rate impact with stronger USD).

Various influences.
Global trade major driver.
Differing market conditions,
Exchange rate effects.



Cargo premium versus World trade values & volume

Index 2005=100%



World Trade Volume (Goods) -IMf April 2022

—Global Cargo Premium



COVID-19 caused short-term reduction in world trade, followed by strong recovery.

Cargo premium follows world trade values. Lagged behind 2017-19 but upswing since 2020.

Extended risk covers & increasing risk of event losses (accumulation) need to be taken into account.

IMF update July 2022*: "Outlook gloomy and more uncertain": Trade estimates adjusted downwards.

*https://www.imf.org/en/Publications/WEO/Issues/2022/07/26/world-economic-outlook-update-july-2022





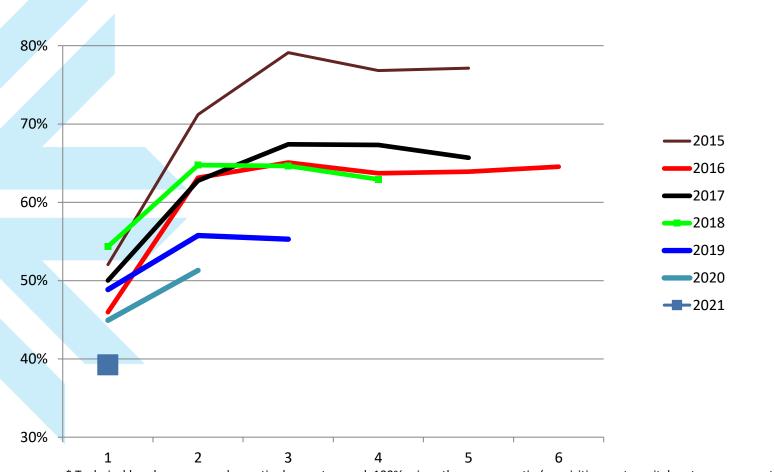
Cargo loss ratios





Cargo – Gross* loss ratios underwriting year – Europe**

Underwriting years 2011-21, as reported at 1,2,3,4,5 years, Gross premiums, paid+outstanding claims



2015, 2016:

Steeper increase than average pattern (increase in losses second year).

2017 - 2019:

Return to more 'normal' (=flatter) development pattern.

2020 starts at a low level.2021 starts at very low level.

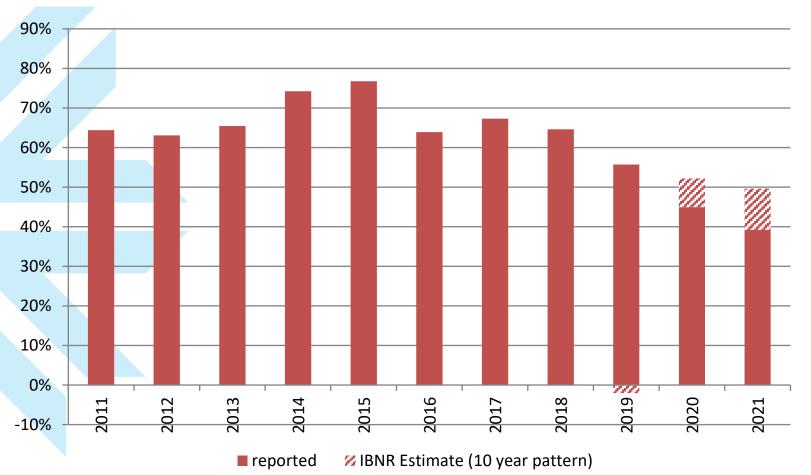
Lasting improvement, or only intermedate relief due to pandemic effects (reduced trade/activity in periods, supply chain issues etc.)?

^{*} 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



Cargo – Ultimate gross* loss ratios uw year – Europe**



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

After years with heavy event impact, concern about increasing expenses, loss ratios improve since 2019.

Outlier & Nat-cat event losses:

2015: Tianjin port explosions

2016: Hanjin, Amos-6 satellite

2017: Hurricanes / Nat Cat

2018: Mærsk Honam / Hurricanes

2019: Fires, Golden Ray capsize

2020: Nashville Tornados

2021: X-Press Pearl, Ever Given (GA),

Hurricane Ida

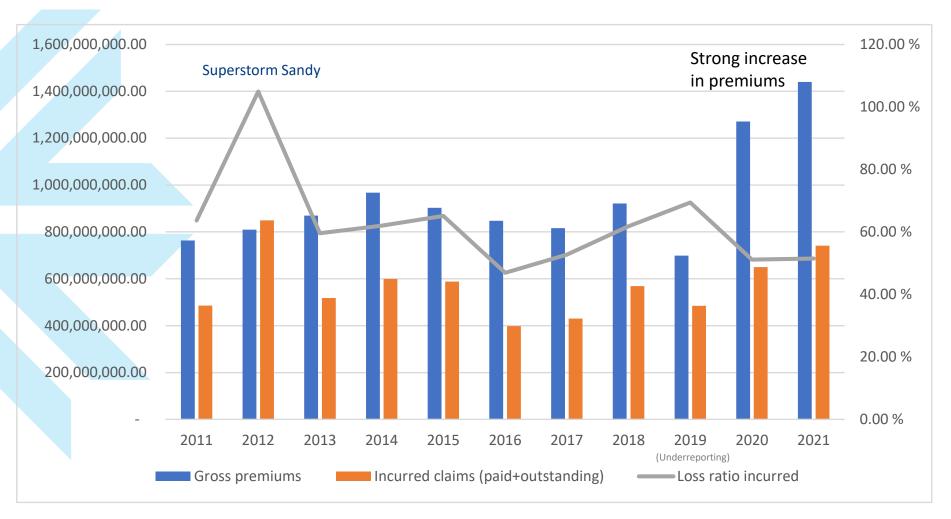
2022: Wildfires/draughts (Europe, USA, China), Pakistan floods, fires (Felicity Ace), active hurricane season? War?

^{**}Data included from: Belgium, France, Germany, Netherlands, Italy, UK



Cargo – Gross loss ratios accounting year – US

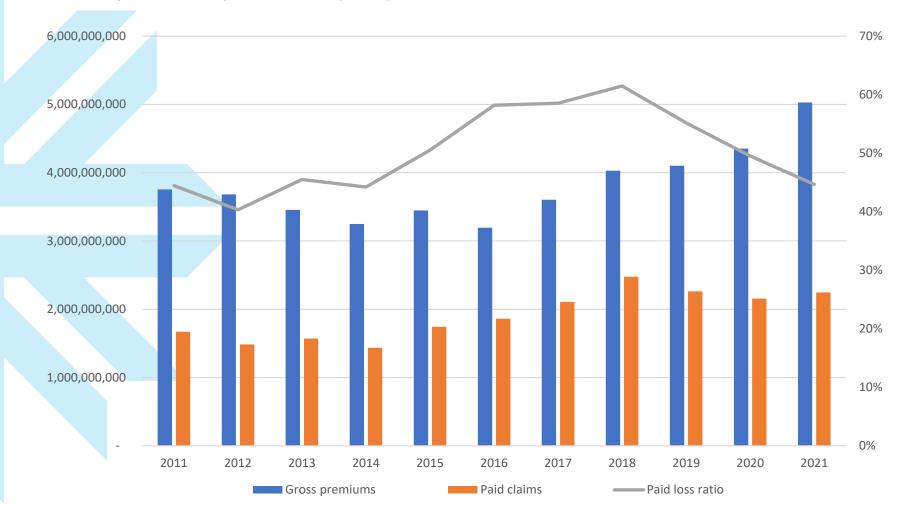
Gross premiums, incurred claims





Cargo – Loss ratios accounting year – Asia*

Gross premiums, paid claims (USD)



Stable 40-45% until 2014.

Increase 2015-18. Probable impact by Tianjin port explosions & Nat Cat. losses.

Improving from 2019.

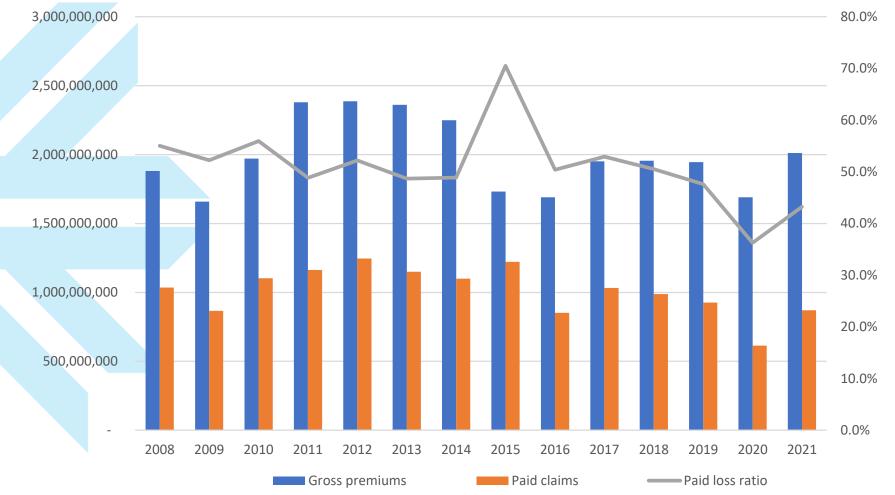
* China, Japan, Hong Kong, India from 2015.

Singapore not included (incurred figures available but cannot be split), China, Japan, Hong Kong only paid available.



Cargo – Loss ratios accounting year – Latin America*

Gross premiums, paid claims (USD)



Mostly stable around average 50-55%.

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

2020: underreporting of claims in two countries.

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).

^{*}Figures included from:



Cargo – Summary

As of 2021:

- Improved results across markets main driver upswing in trade (insurable volume) in combination with still somewhat reduced activity due to supply chain issues (claims impact)
- COVID-19: drop in trade growth, then strong recovery. Increase in cargo premiums.

Persisting challenges:

- Fires
- Misdeclared cargo
- Increased value accumulation on single sites (ports, vessels).
- Increase in severe weather conditions (wind/wave force, floods, wildfires/draughts)
- Increased risk of large event losses (both Nat-cat and man made)
- Geopolitical tensions

2022 Outlook uncertain

- War, new pandemic waves, climate change, supply chain bottlenecks, chip crisis...
- Return to pre-Covid activity and increasing Nat-cat risk likely to increase claims impact.

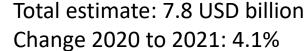


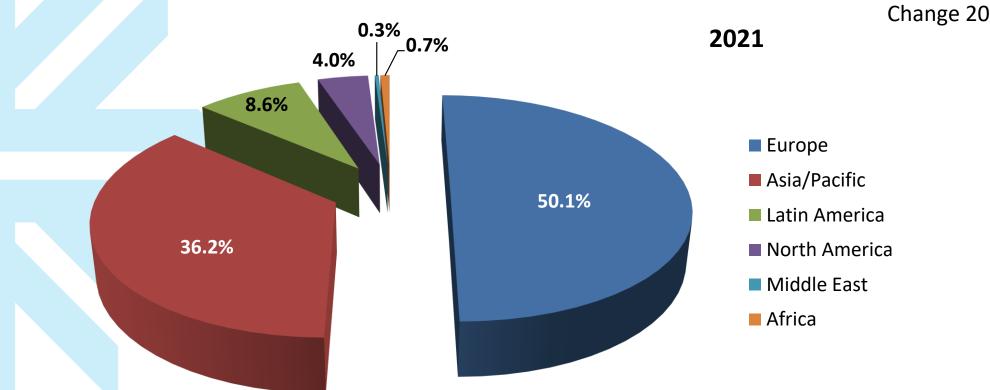
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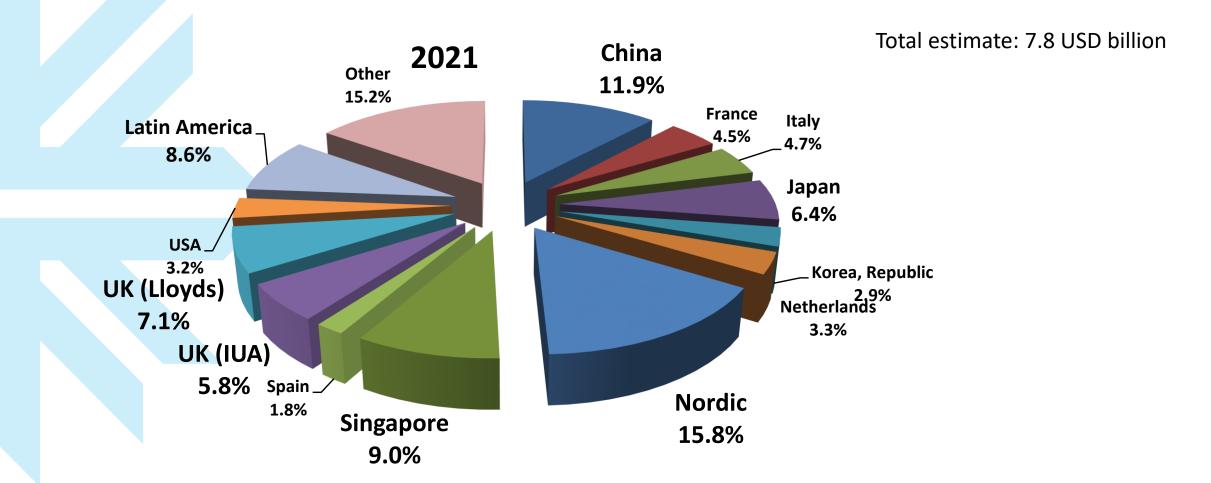
Hull premiums 2021 – by region





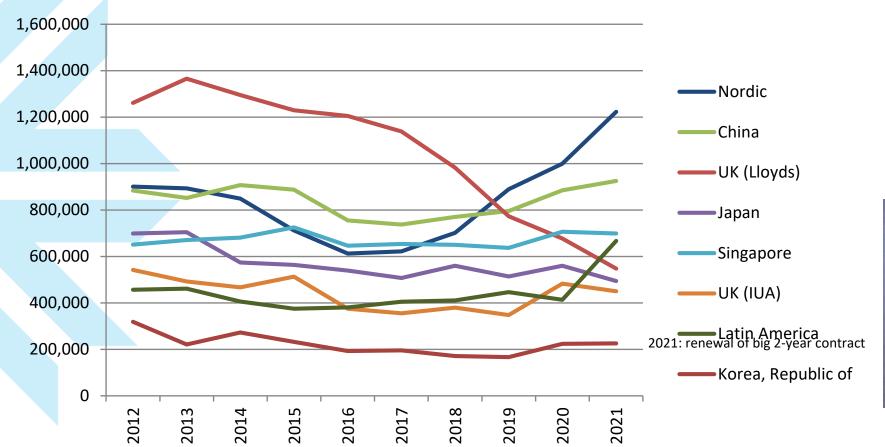


Hull premium 2021 – by markets



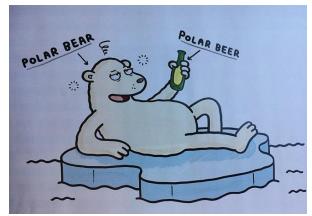


Hull premium 2012-2021 – Selected markets



No comment.

Cheers!





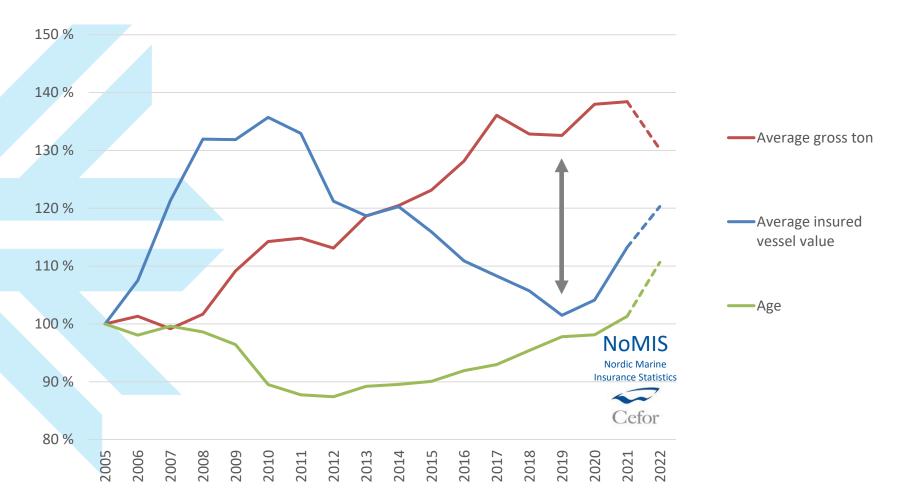


Hull **Portfolio** trends





Average gross ton, age & vessel values



Until 2019 increasing gap between average vessel size and insured value.

Insured values on the rise (driven by container vessels). Gap started to reduce.

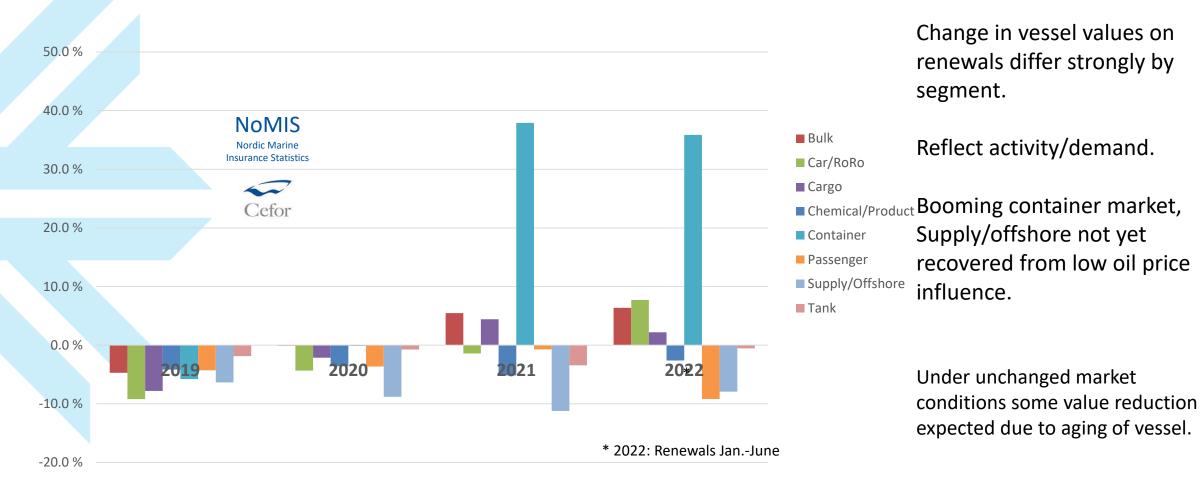
Will development continue?

Average fleet age continues to increase (less new builds in recent years).



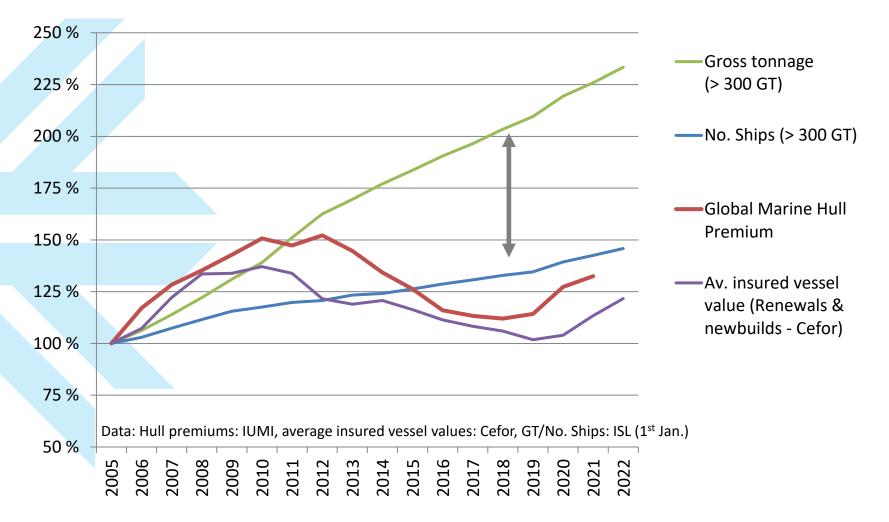
Change in insured values on renewal 2019-2022*

Index, 2006 = 100%





Hull premium versus world fleet



World fleet growth continues.

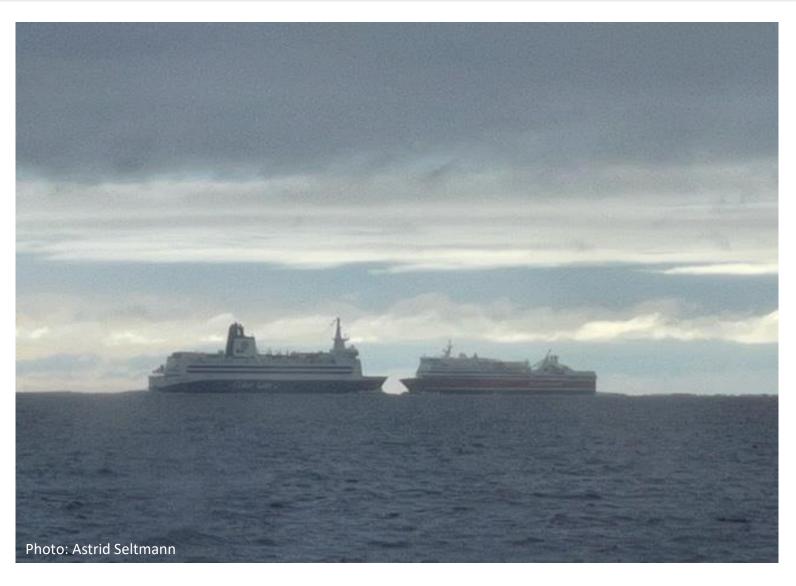
Downward trend in hull premium and vessel values started to reverse in 2020.

Upward trend in values driven by strong demand for particularly container vessels.



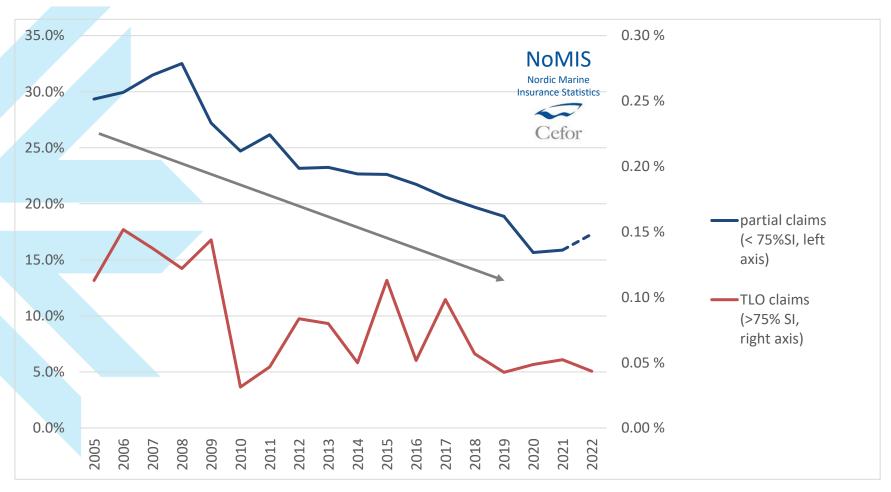


Hull **Claims** trends





Hull – Claims frequency (H&M)



Overall claims frequency

Long-term downward trend. Increase 2022 expected after extraordinary drop in 2020 due to COVID-19 (reduced activity in some segments).

Still very moderate level.

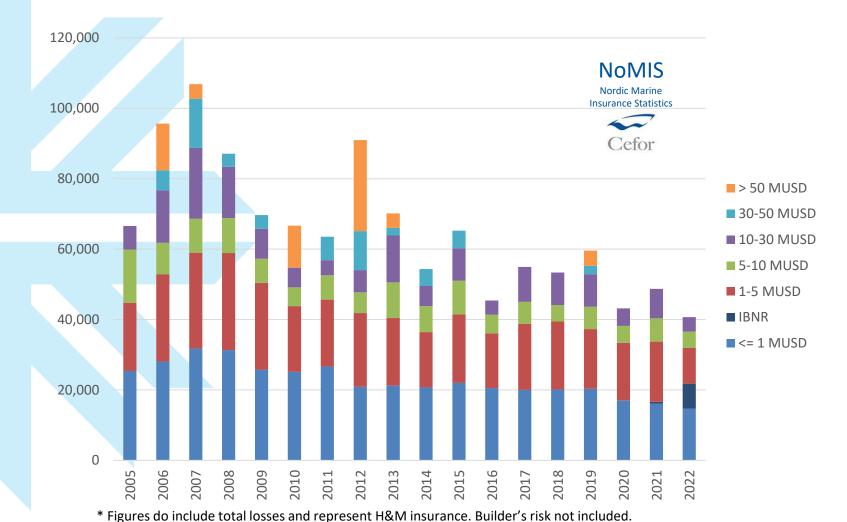
Total loss frequency

Long-term downward trend. Since 2019 very low level around 0.05%.





Claim cost per vessel (USD) at modest level



Major losses: Low recent impact.

Despite activity returning to pre-Covid levels, still moderate claims trends (still supply chain issues).

Read more about hull trends? Cefor Annual Report 2021 & Cefor Hull Trends per June 2022 (graphs p. 41, 42, 45, 46)

https://cefor.no/statistics/news/2022-june-hull-trends/

https://cefor.no/statistics/nomis/2021/nomis-as-of-31-

december-2021/





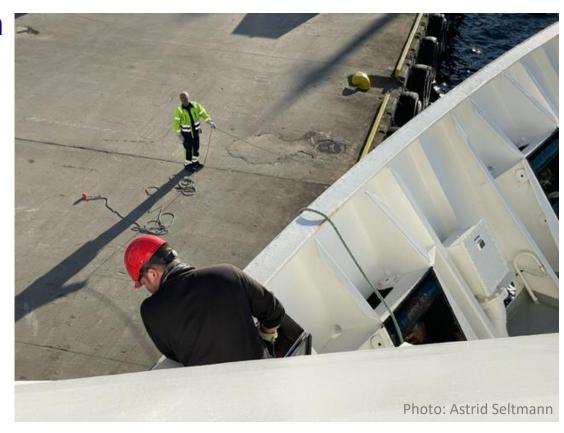
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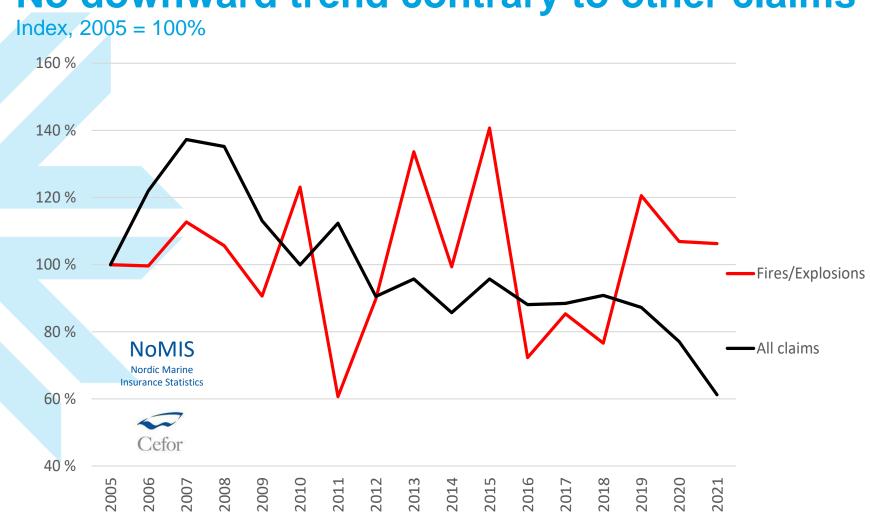
Special issues

- Very large vessels / value accumulation
- Loss of containers
- Pandemic effects
- Climate change effects
- ESG / sustainability / emission goals
- War impact
- Fires
- Inflation



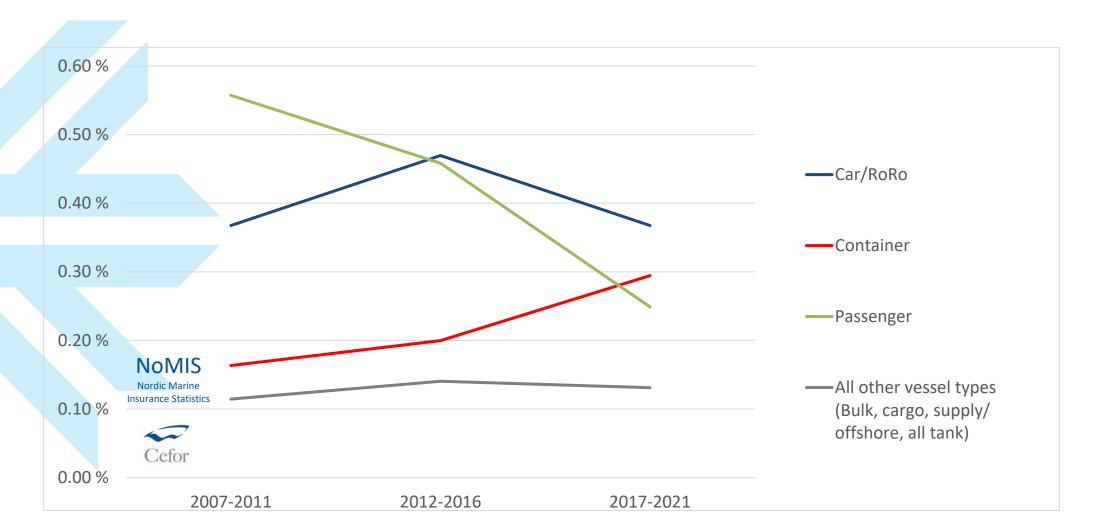


Fire frequency (all vessel types) as per end 2021: No downward trend contrary to other claims



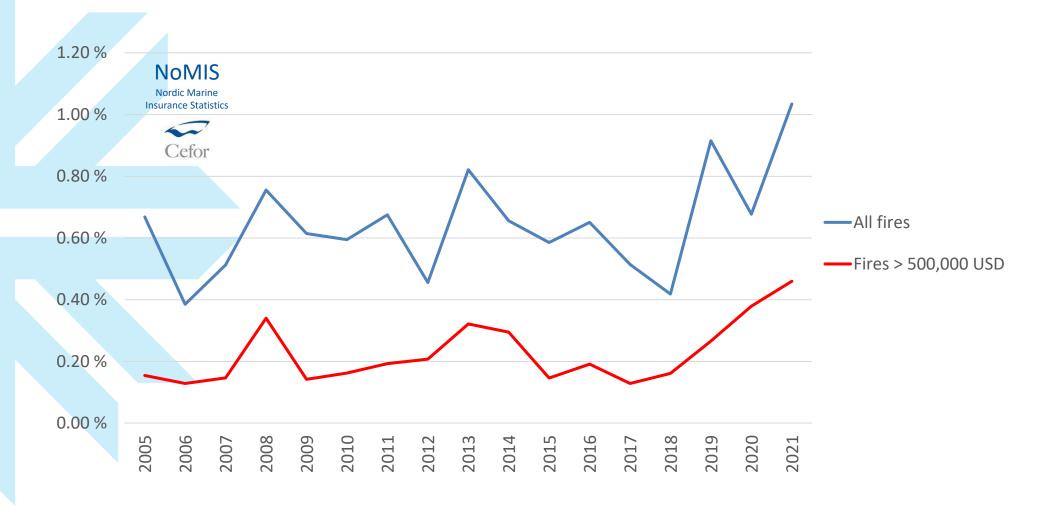


Highest fire frequency on Car/RoRo and Container



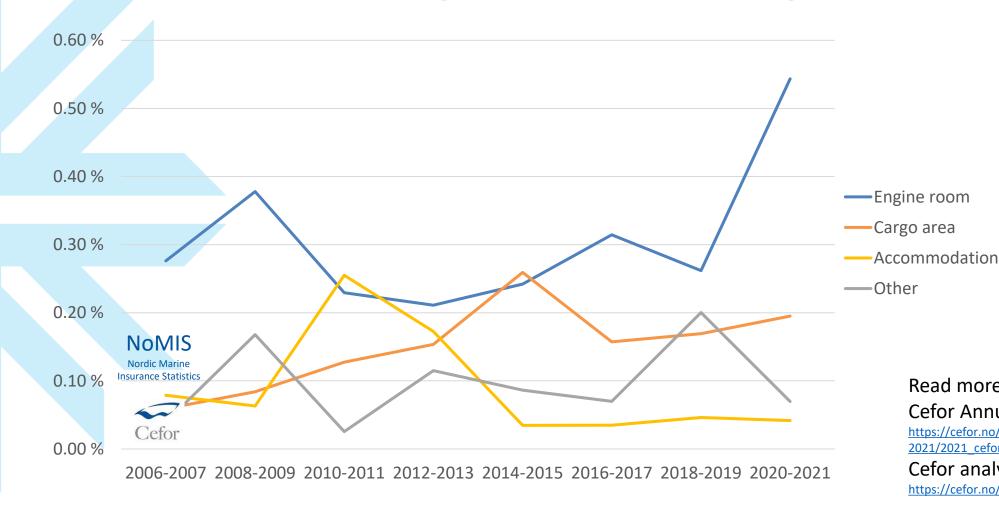


Fire frequency on container vessels: upward trend





Container fire frequency by location: Upward trend for engine room and cargo fires





Read more about fire trends? Cefor Annual Report 2021:

https://cefor.no/globalassets/documents/statistics/nomis/2021/2021 cefor annual report final lowr.pdf

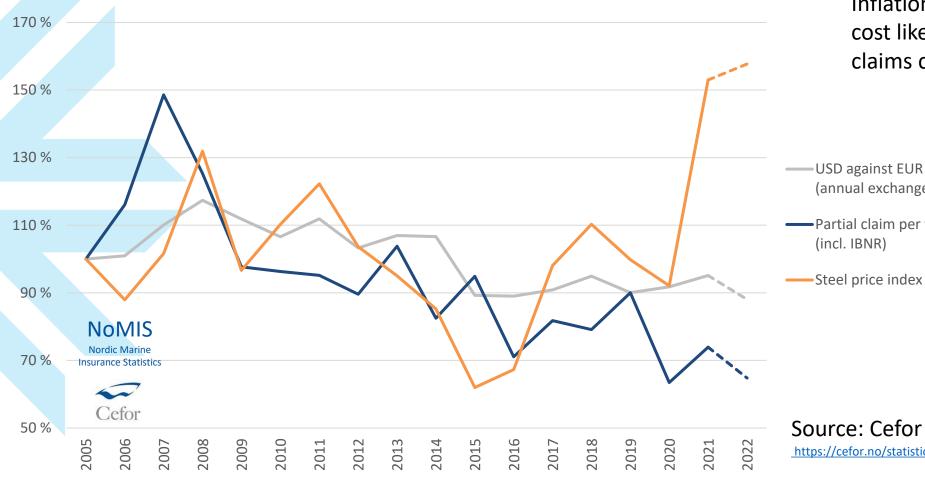
Cefor analyses with special focus:

https://cefor.no/statistics/analysis-with-special-focus/



Inflation expectations – one aspect

Partial claim cost per vessel versus steel price and exchange rate



Inflation in materials or labour cost likely to influence hull claims costs going forward.

(annual exchange rate)

Partial claim per vessel

(incl. IBNR)

Steel price index

Source: Cefor Hull Trends per June 2022

https://cefor.no/statistics/nomis/2021/nomis-as-of-31-december-2021/





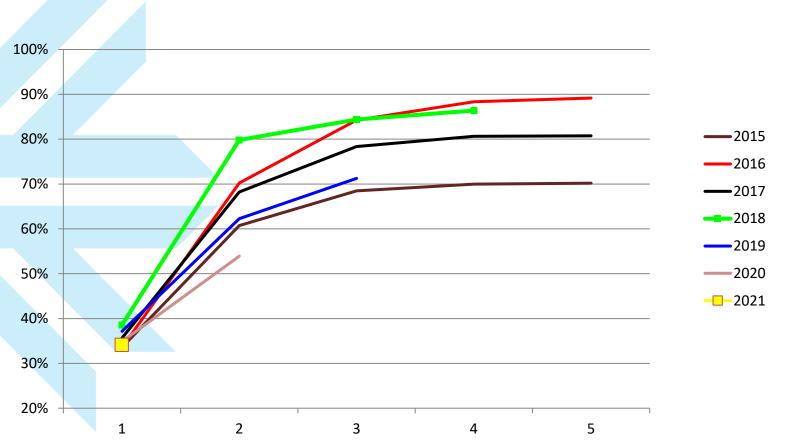
Hull Loss ratios





Hull – Gross* Loss ratios underwriting year – Europe

Underwriting years 2011-22, as reported at 1,2,3,4,5 years, gross premiums, paid+outstanding claims



2020 starts at similar level as 2019. 2019 return to flatter development (combination of reduced claims and increasing premiums).

2018: Impact of 2019 major losses (fires, other) against eroded premium base.

2016 to 2018: Few major losses, but 2017 impacted by hurricane yacht damage. Change in loss ratio pattern, strong increase 2nd year.

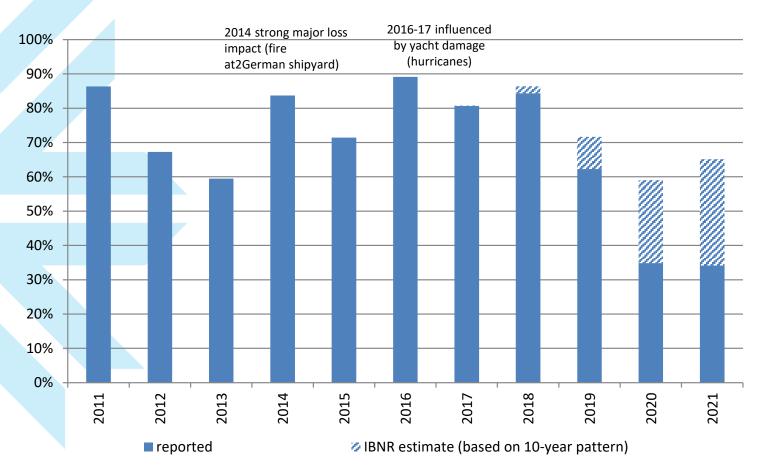
^{*} Technical break even: gross loss ratio does not exceed 100% minus the expense ratio (acquisition cost, capital cost, management expenses)

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



Hull – Ultimate gross* loss ratios – Europe

Underwriting years 2011-21, gross premiums, paid+outstanding claims (USD)



Improvement since 2019 after years of unsustainable results.

2020 (and 2021?) pandemic effects: Extraordinary low claims impact due to reduced shipping activity / supply chain issues in periods.

Some increase in 2021 as expected but still moderate.

2022 and beyond diffult to predict due to disruptions in market environment. Return to full shipping activity and inflation increase probability of upward trend in claims frequency and cost.

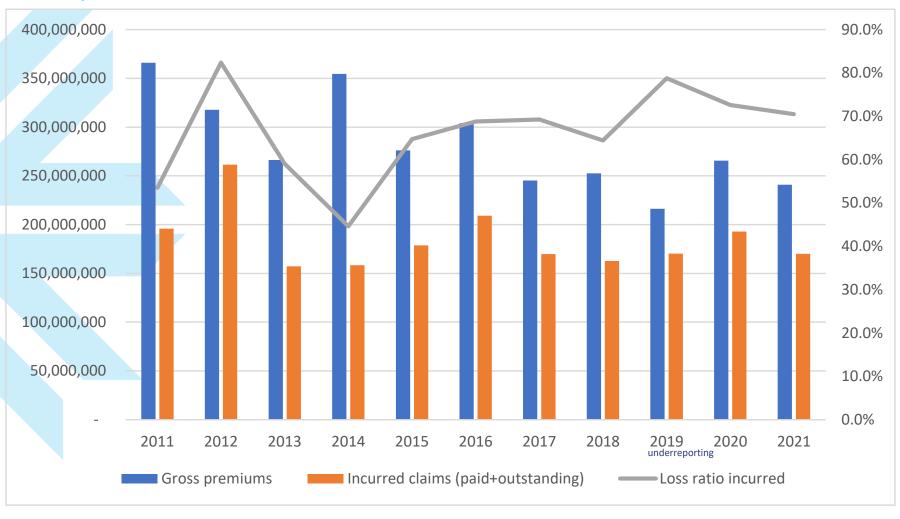
^{*}Technical break even: gross loss ratio does not exceed 100% minus the expense ratio (acquisition cost, capital cost, management expenses)

^{**} Data included from: Belgium, France, Germany, Italy, Nordic (Cefor), UK, some US data



Hull – Gross loss ratios accounting year – US

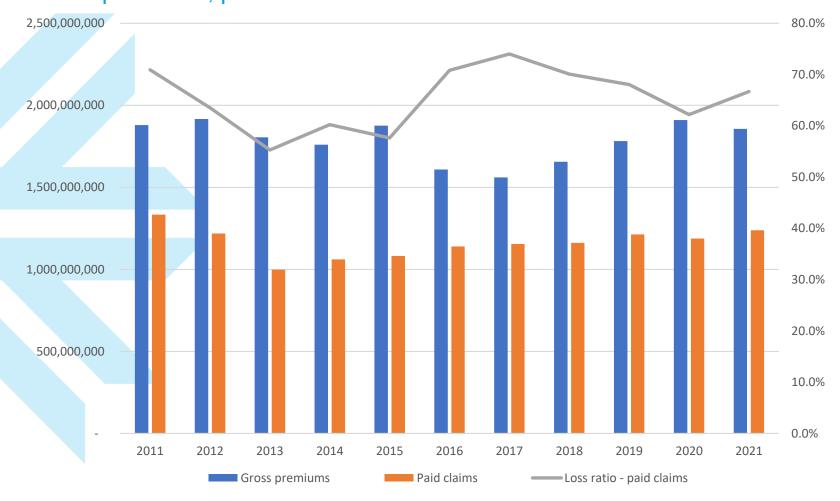
Gross premiums, incurred claims





Hull – Gross loss ratios accounting year – Asia*

Gross premiums, paid claims



* China, Japan, Hong Kong, India from 2015.

Singapore not included. Incurred figures available but cannot be split, for China, Japan, Hong Kong only paid available.

After an increase 2015-2017, loss ratios improve sligthly.

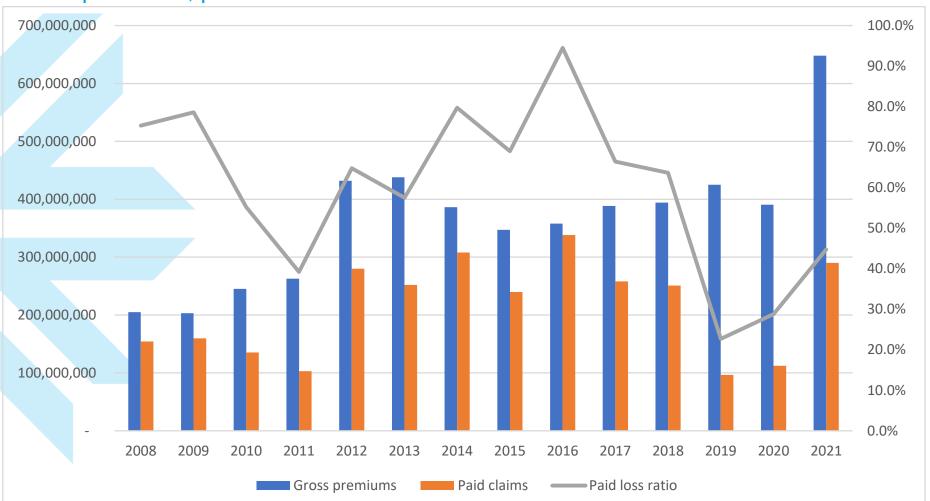
Paid claims relatively stable, mainly changes in premium influencing loss ratios.

NB: accounting year: claims attaching to uw year are paid over several accounting years.



Hull – Gross* loss ratios accounting year – Latin America

Gross premiums, paid claims



NB: 2019/2020: Low claims due to claims releases from previous years.

2021: Increase due to one 2-year renewal.

^{*}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 – Summary

Exposure

- Premium development passed bottom with recent upward trend.
- Gap between fleet growth and premiums/values starting to reduce.
- Big value increases in some segments (container) reflect demand. Supply/offshore not yet recovered.
- High-value segments (container, cruise) back in business.

Claims

- Claims frequency and cost show recent increase but still at very moderate levels into first half year 2022.
- Total loss frequency: long-term positive trend continues.
- Major loss impact low in recent years into 2022. Exception were fires.



Hull – Summary

Results

Improved since 2019 due to combination of rising premiums and low claims impact.

2022 Outlook

- Return to full shipping activity, value increases, inflation, new designs, propulsion and fuels types likely to impact claims trends going forward.
- Risk of expensive total losses increases with increase in vessel values across portfolio
 - High-value segments container & cruise back in business
 - Big increases in container values
 - Trend toward bigger vessels continues
- Claims frequency correlates with vessel activity.



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The 2022 Oracle



War, inflation, pandemics, climate, ... Combined effect???







The Chicago Oracle **Temple**







2022 Outlook

- Global trade: Optimistic post-pandemic outlook adjusted downward after outbreak of war.
- Pandemic: New COVID-19 waves / new viruses?
- Cyber risk: increases with digitalisation / cyber war?
- Nat-cat/Climate change: gaining traction in 2022: Wind/wave force, floods, Arctic, 2022 draughts/wildfires.
- Oil/Energy prices: increasing activity in offshore segment but contributes to inflation (fuel prices).
- Emissions/ESG goals: positive for environment, but new technology/fuels mean new risks (fires, machinery).
- **Geopolitical tensions** (Ukraine war, sanctions, China-US trade war,...)
- Value accumulations (storage, vessels)
- Inflation







Reality – Complex issues to monitor



High-value risks Oil price, fuel quality

Human factor/ Qualification

> Climate change/ Increase in Nat-cat

Changes in regulation (liabilities)

Fires on RoRo & Container vessels

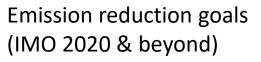
Arctic risks

Value accumulation

New technology

Cyber risk





Navigation









2022 Oracle – What may it mean for marine insurance?

- Claims impact can be expected to rise due to
 - Vessel activity returning to pre-Covid levels
 - Higher vessel values = higher total loss cost (if total losses)
 - Inflation driving up repair costs
 - New risks induce new types of claims experience needs to be built up (alternative fuels or propulsion, autonomous vessels,...)
 - Fleet aging
 - Increasing Nat-cat impact
- Recent positive results may attract more capacity again
- Uncertainty

(trade, inflation, sanctions, emissions, new risks, climate,...)







Thank you!

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Technical terms

<u>Gross premium</u> = 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.

<u>Written premium</u> = 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.

<u>Outstanding claims reserve</u> = 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.

<u>IBNR</u> = "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

<u>Underwriting year basis</u> = 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 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.