



2019

HULL TRENDS as at 30 June 2019

The Nordic Association of Marine Insurers

Executive Summary

Claims and Portfolio trends per 30 June 2019

- **Total losses**

The frequency of total losses continues to stay low also in 2019. While it is too early to conclude for the whole year 2019, the total loss frequency has since 2010 stabilized at low levels, with some oscillation between 0.05% and 0.10%. This level was reached after a continuous reduction in the years prior to 2010.
- **Major losses**

The 3-year period 2016 to 2018 experienced a record-low major claims impact, being the only 3-year period since 2003 without any claims exceeding USD 30 million. This does not continue into 2019. By 30 June, seven losses exceeding USD 10 million were reported, one of these not only exceeding USD 30 million, but even USD 50 million. This compares to four (six) claims exceeding USD 10 million in the first half of 2018 (2017). The largest loss in 2019 may turn out to be the largest single loss since 2012.
- **Claim cost per vessel**

Excluding total losses, the claim cost per vessel stayed at the same low level in the first six months of 2019 as in the preceding three years, and thus continues to be lower than in the years 2004 to 2015.

Including total losses, the picture is different. Especially due to one large single loss, the overall claim cost per vessel increased substantially in the first half of 2019.
- **Claims frequency**

Since 2012, the overall claims frequency has been quite stable around 22%, coming even somewhat further down in 2018. In 2019, the claims frequency has risen again compared to 2018, but not exceeding the 22% level.
- **Insured values**

Vessels renewed in the period January to June 2019 showed an average reduction in the insured values of 4.1%. This compares to a drop of 3.2% in the whole year 2018, 6% in 2017 and 7.6% in 2016. The improvement in 2017 and 2018 was influenced by some recovery of the bulker market, followed by some renewed activity in the supply/offshore market. The average value of the whole portfolio (including new business) is influenced by the inflow of high-value newbuilt vessels. At the same time, in recent years there has been an increasing mismatch between the average vessel sizes compared to the average insured values.
- **Portfolio: Number of vessels and share of world fleet**

Vessels with IMO-number: 291,921 vessel years since 1985
(2018: 17,707 vessels in all, 2019: 11,510 vessels renewed as of 30 June).
NoMIS statistics reflect roughly 31% of the total world fleet of vessels above 1,000 gross tons, and 50% of vessels above 10,000 gross ton.
- **Fires on container vessels**

An increasing concern are fires on container vessels starting in the cargo (container) area. In the first quarter of 2019 an unusual number of such fires incurred.

1. Claim cost per vessel

Claim cost divided by number of insured vessels

Major loss impact turning back to normal after three benign years

The number and impact of major and total losses were record-low in the 3-year period 2016 to 2018. In 2019, as of 30 June already seven losses exceeding USD 10 million were reported, the largest in the range of losses over USD 50 million. This indicates that the recent trend of benign major claims impact may be broken. For comparison, there were seven losses exceeding USD 10 million in the whole year 2018 (two exceeding USD 20 million) and ten in 2017 (three exceeding USD 20 million). There was no claim exceeding USD 30 million in the 3-year period 2016 to 2018.

Else some of the severe casualties that occurred at the end of 2018 and during the first quarter of 2019 mainly had impact on the costs of P&I insurers, which are not reflected by the statistics presented in this report.

Repair cost still stable at low level

Excluding total losses, the claim cost per vessel stayed at a similarly low level in the first half of 2019 as in the preceding three years (graph 1). Thus, for the fourth year in a row, the claim cost per vessel of partial losses has been lower than the preceding 11-year period 2004 to 2015.

Claim cost per vessel driven up in 2019 by total loss impact

The picture is different when total losses are included. The claim cost per vessel, including total losses, shows a steep upward trend compared to the previous years. While the frequency of total losses remained low also in 2019 (see text and graphs from page 7), their impact on the cost increased. In the first six months of 2019, the overall claim cost per vessel strongly increased. However, this was mainly driven by one single loss in the over USD 50 million range. In general, the cost per vessel for claims below USD 5 million has been quite stable since 2013 (graph 2). Variations in the overall cost per vessel were mainly caused by the (non-)occurrence of claims exceeding USD 10 million.

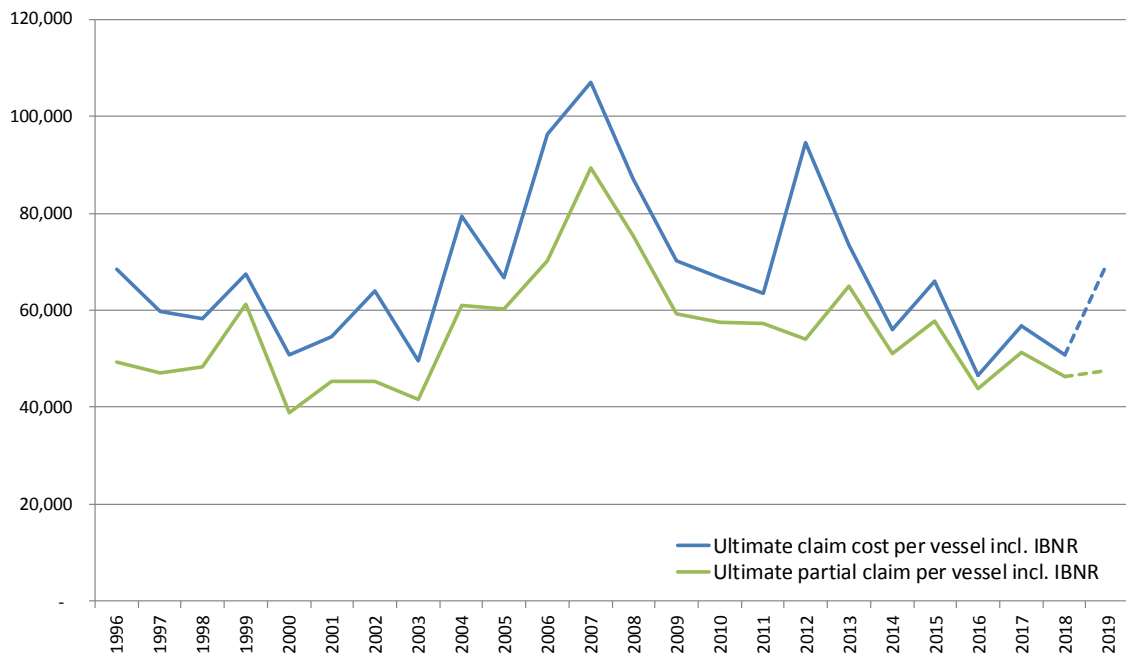
Exchange rate impact

Compared to the Euro and other currencies, the US dollar gained much strength between 2013 and 2016. As repair cost is influenced by other currencies than USD, a strong US dollar will, all else being equal, imply a reduced claim cost measured in USD. Since 2017, European and other currencies strengthened somewhat compared to the USD (graph 3), but this small increase does not seem to have had much impact on the claims cost in these years.

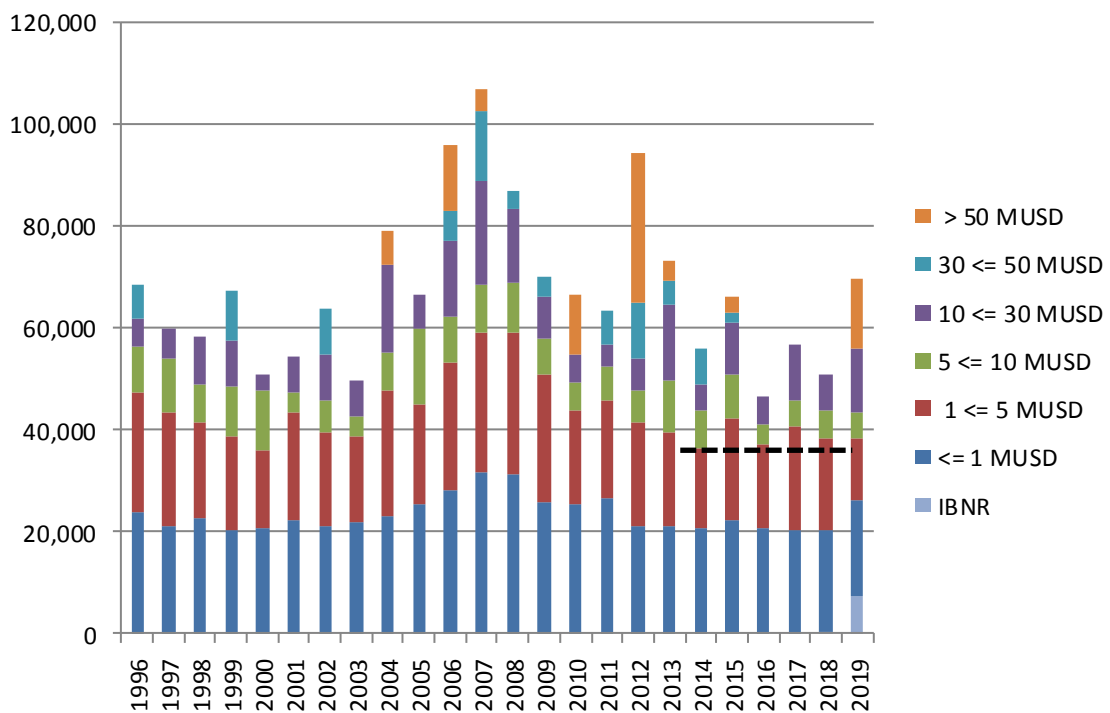
Fires on container vessels

An increasing concern are fires on container vessels, especially those caused by cargo. We have therefore dedicated section 6. to this issue.

1: Ultimate partial and total claim cost per vessel (USD), by date of loss¹

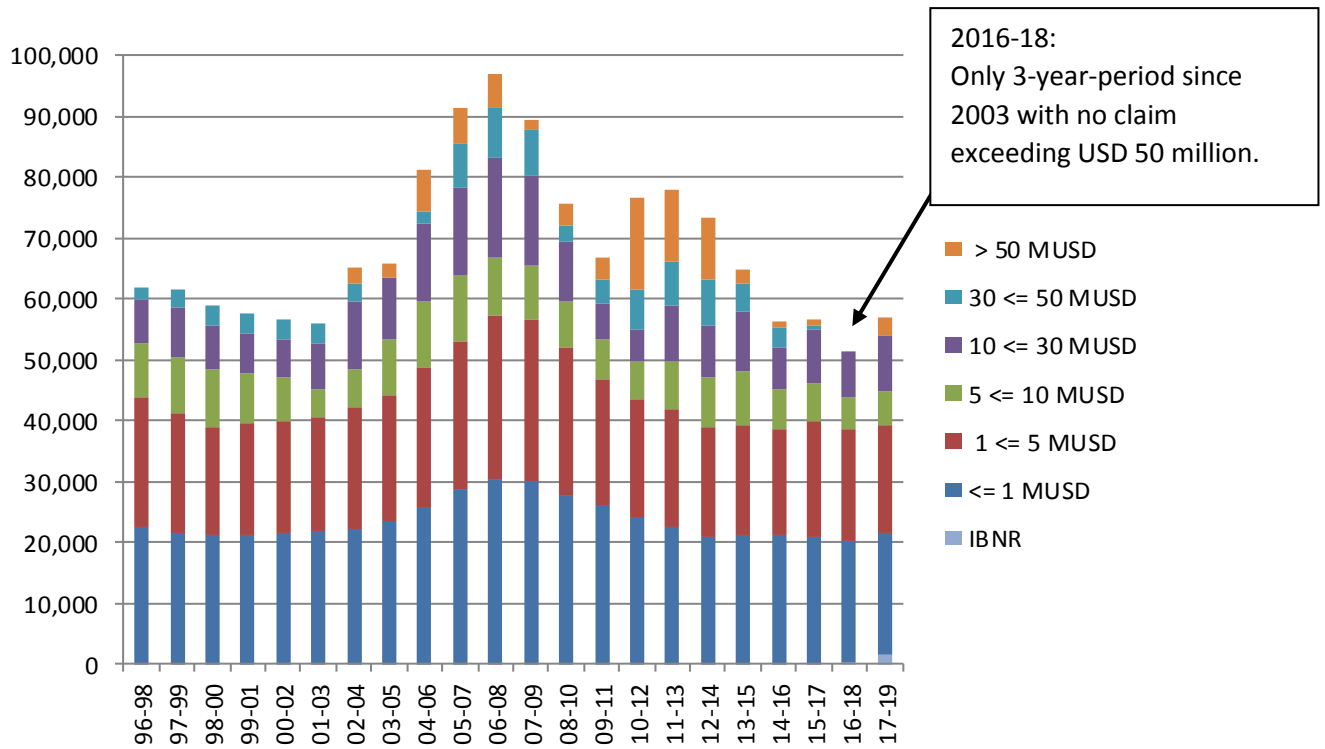


2.a: Claim per vessel by intervals of claim cost, by date of loss (USD)

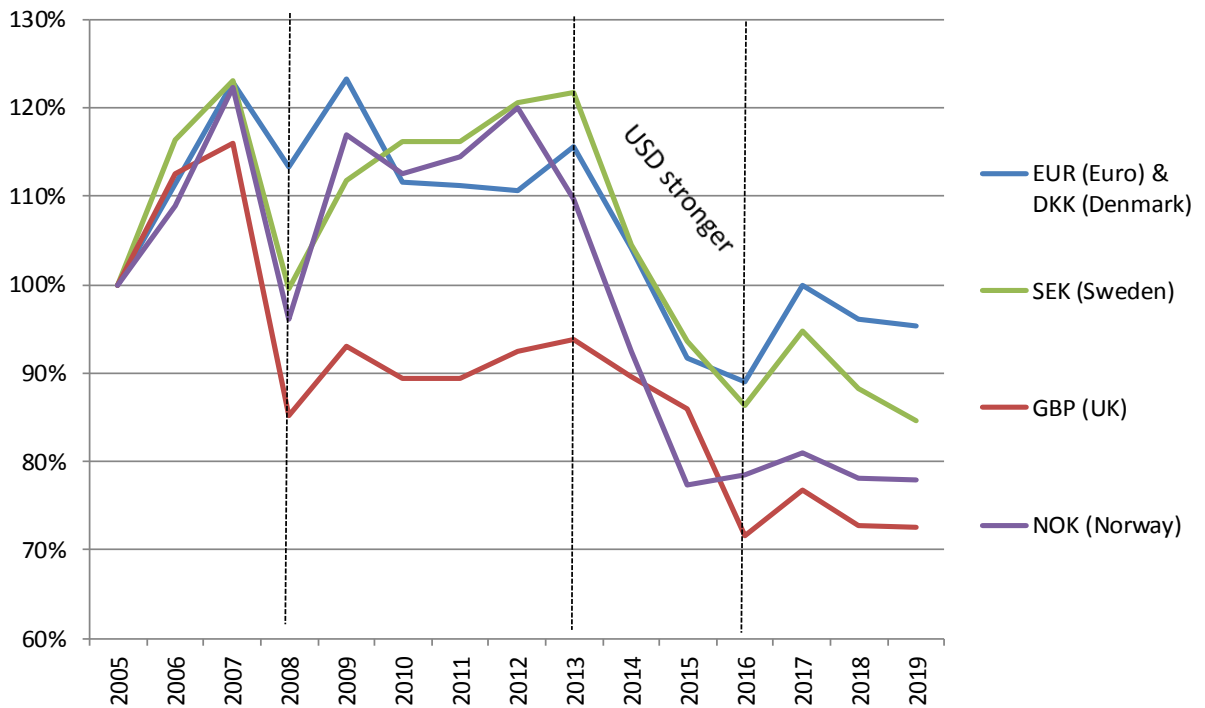


¹ IBNR = Incurred But Not Reported = reserve for claims adjustment and registration backlog.

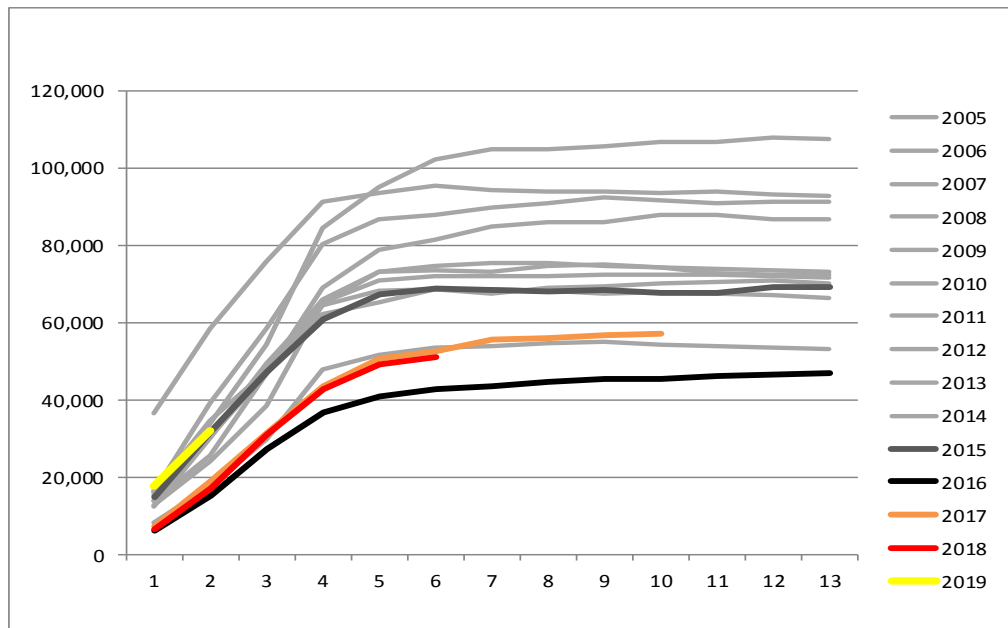
2.b: Claim per vessel by intervals of claim cost, by date of loss (USD) 3-year-average



3: Exchange rate Euro and Nordic currencies against USD, as of June 2019

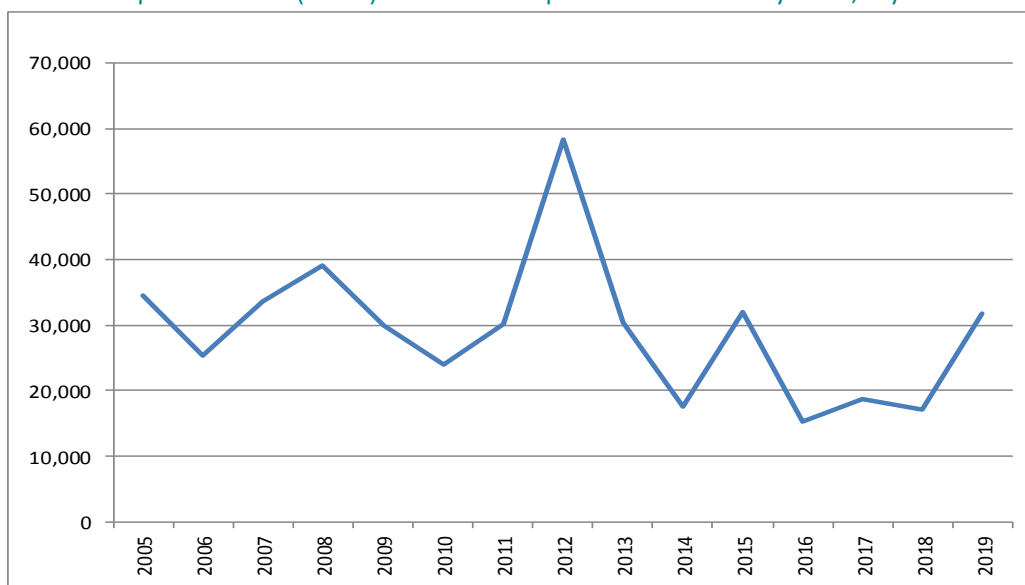


4: Claim per vessel (USD) – accumulated quarterly development², by date of loss



The quarter ladder statistics compile the accumulated development of claims originating from a certain accident year³ by quarter. This makes it possible to directly compare the development of each accident year as of each quarter. These statistics show that the accident years 2016 to 2018 all started at a similarly low level. 2016 turned out to produce the lowest claim cost per vessel ever. 2017 was impacted by the occurrence of two major claims exceeding USD 20 million, leading to some deterioration of the ultimate claim cost per vessel. 2018 developed very similar to 2017. In 2019, the claim cost per vessel started at a higher level, similar to 2015, due to the impact of more claims exceeding USD 10 million and especially one claim exceeding USD 50 million.

5: Claim per vessel (USD) as of 2nd quarter of each year², by date of loss



² In graphs 4 and 5 the annual exposure is used, i.e. the total number of vessels expected to be underwritten in the respective year. Therefore, the claim cost per vessel by the end of the 2nd quarter is half as high as in the other graphs that visualize the expected ultimate results per year.

³ Accident year, or 'date of loss perspective' = Claims are grouped by the year in which the accident occurred (as opposed to grouping claims by the underwriting year, i.e. the inception year of the insurance coverage).

2. Claims frequency

No. of claims divided by the number of insured vessels

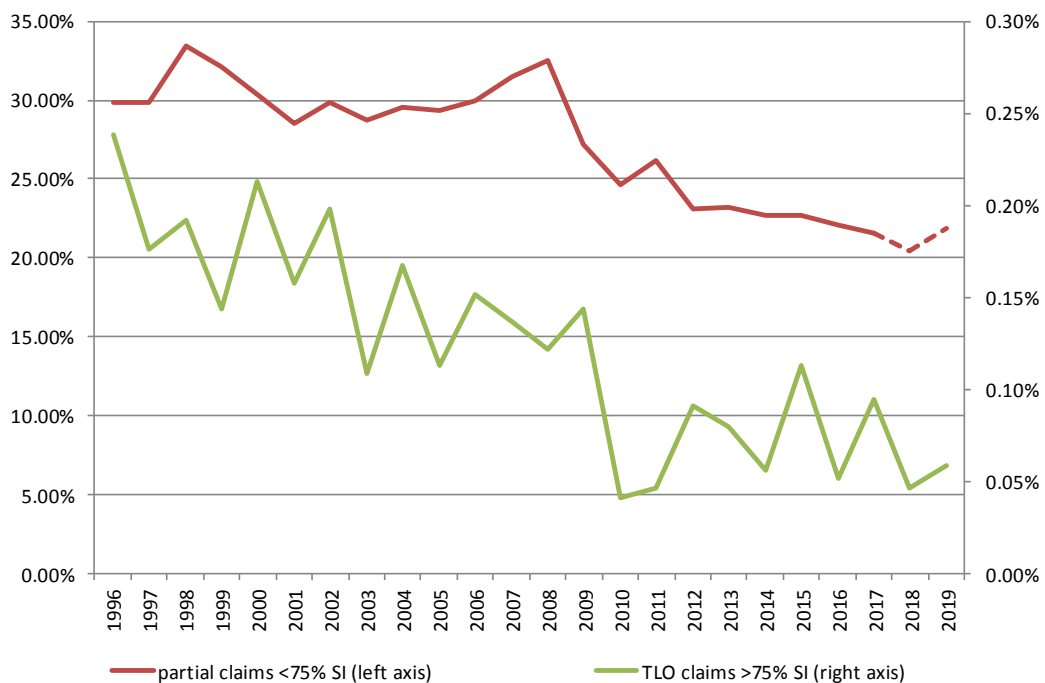
Slight increase in claims frequency, but total loss frequency stays low

Based on the number of claims reported in the first six months, the claims frequency increased somewhat in 2019 as compared to 2018. However, in a long-trend perspective, it continues at the 22% level at which the frequency stabilized after decreasing in the years prior to 2012.

The long-term positive trend for total losses came to a halt in 2010 and has since fluctuated at a low level somewhere between 0.05% and 0.10% (graph 6). The first half of 2019 continued this trend, and the frequency of total losses remained low.

One needs to keep in mind that several factors influence the claims frequency. Actual improvements such as better loss prevention play of course an important role. On the other hand, the claims frequency also tends to be lower during periods of reduced vessel activity such as was the case in recent years, especially in the supply/offshore sector. From the insurance perspective also deductibles play a role, as claims below the deductible usually are not reported to insurers.

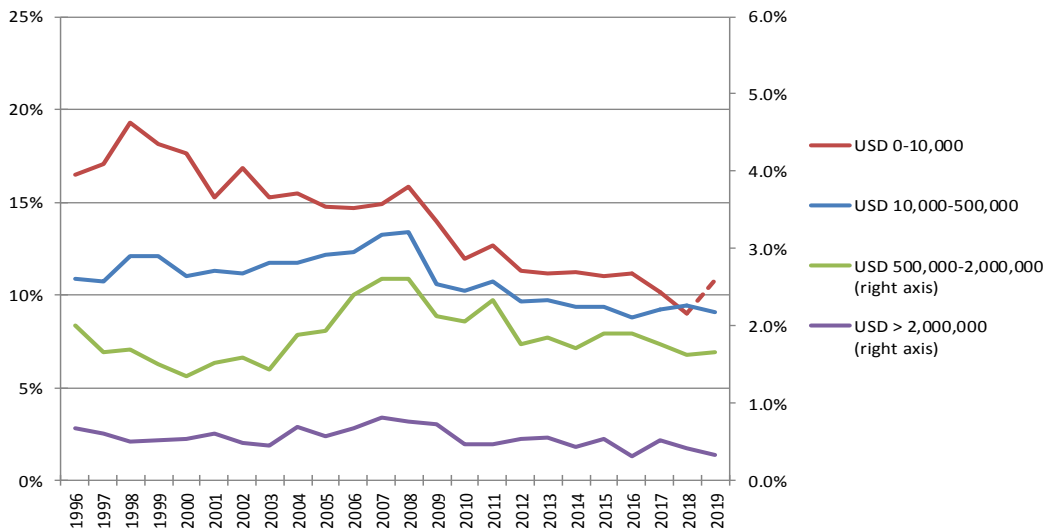
6: Claims frequency, by date of loss



MAJOR CLAIMS FREQUENCY

The risk exposure continues to be high with the inflow of new-built high-value vessels. While very large losses are not possible without very large insured values, the occurrence of major losses is often due to special circumstances rather than rationally identifiable causes alone.

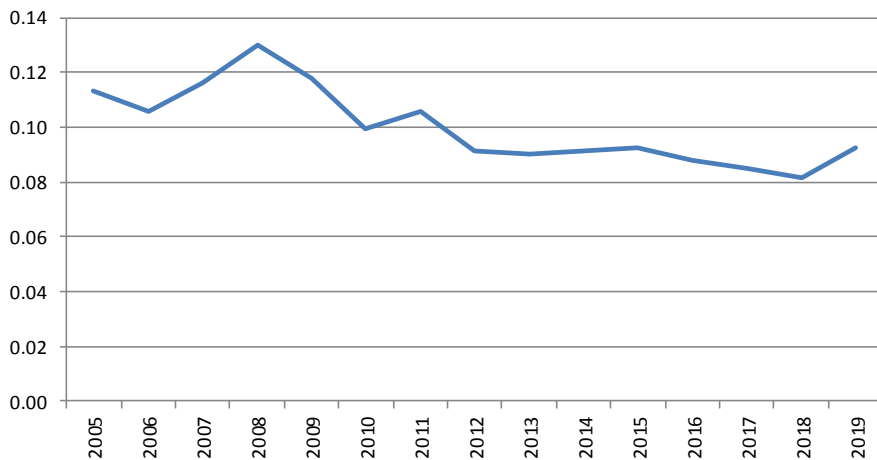
7: Claims frequency – by intervals of claim cost, by date of loss



Quarterly ladder statistics

The claims frequency as registered per 2nd quarter of each year has been quite stable since 2012, with an even further decrease from 2016 to 2018. The frequency increased somewhat in the first half of 2019, but not exceeding the level from 2012 to 2015 and may rather reflect a normalization of the frequency.

8: Claims frequency as reported as of 2nd quarter of each year⁴, by date of loss



⁴ The annual exposure is used, i.e. the total number of vessels expected to be underwritten in the respective year. Therefore, the claim cost per vessel by the end of the 2nd quarter is half as high as in the other graphs that visualize the expected ultimate results per year.

3. Vessel values and size development

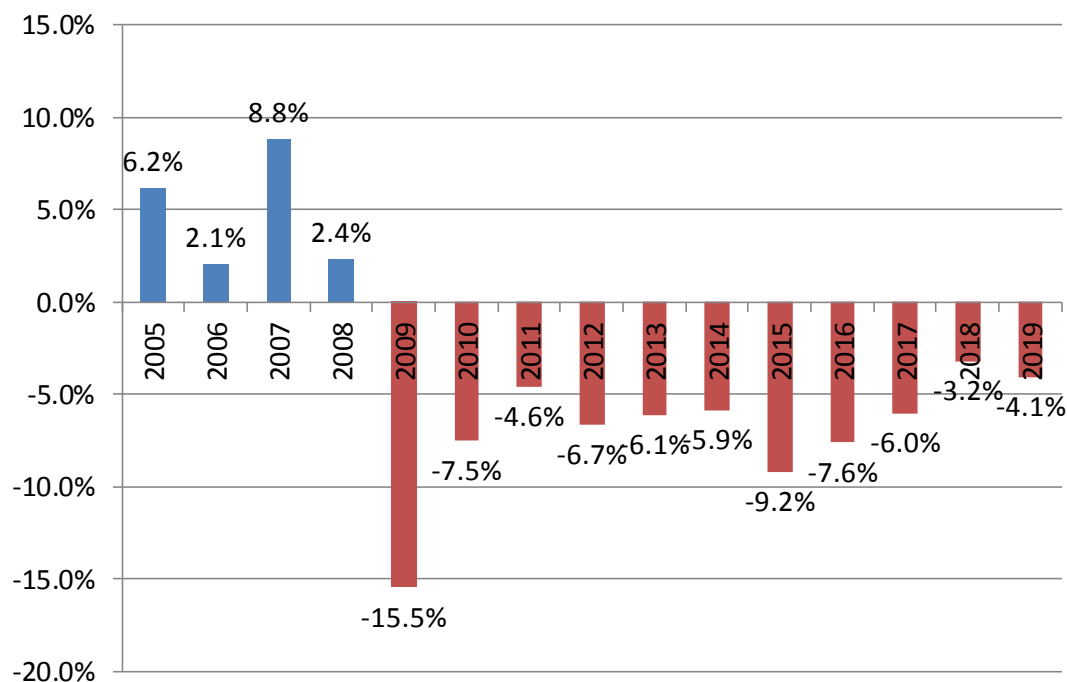
Change of values on renewal

For vessels renewed in the first six months of 2019, the value reduction compared to the insured period was 4.1%. This is somewhat higher than the overall 3.2% reduction in 2018, but still less than the average value reduction in the preceding years.

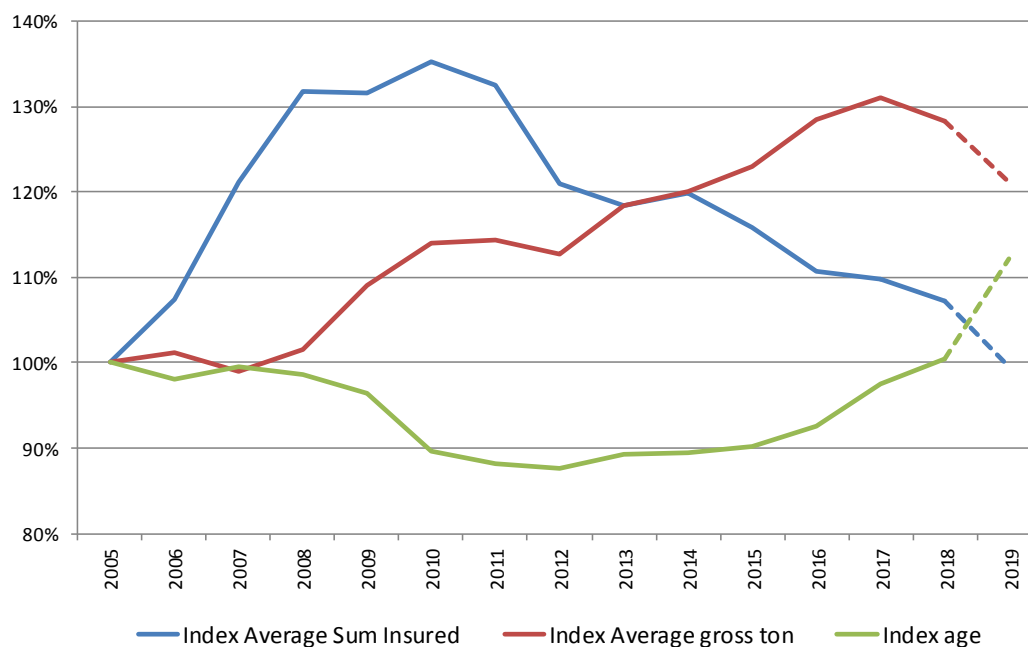
After the substantial drop in insured values on renewals in the last quarter of 2008 and in 2009 in connection with the financial crisis, the annual reduction stabilized between 4% and 7% in the years 2011 to 2014. After this period followed a new acceleration in the average reduction from 2015, which was especially triggered by two-digit value reductions on bulk and supply/offshore vessels. The bulk market recovered somewhat in 2017, while the supply/offshore market kept under the influence of the low oil price level and only started recovering slowly after some increase in the oil price. A number of uncertainties both with regard to the offshore market as well as world economy in general may still impact the further development.

Generally, under unchanged market conditions, a certain reduction in the insured value of a vessel, compared to the previous insurance period, is expected due to the aging factor.

9: Average annual change in insured values on renewed vessels



10: Index of evolution of average gross ton, age and insured values (renewed and new vessels)



While the average size of vessels in the Cefor portfolio has been constantly increasing in the past ten years in line with ever larger vessels entering the world fleet, this development has not been reflected by the average insured value. On the contrary, the average insured value in the portfolio has shown an adverse development in the years after the 2008 financial crisis and until today.

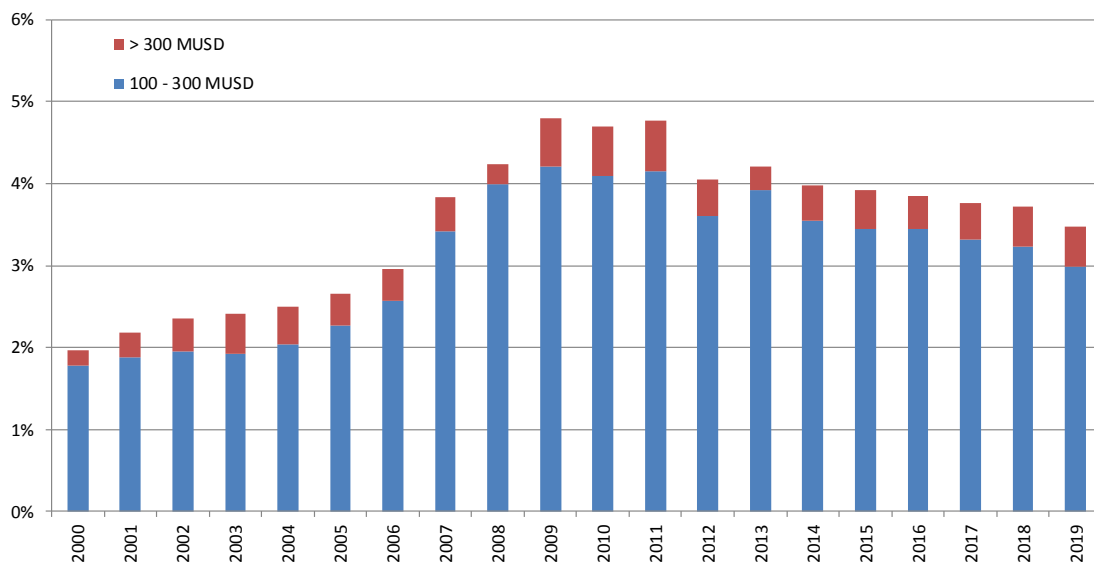
The change in insured values may impact insurance results in various ways. On the one hand, when the insured value is reduced, the potential cost of a total loss of a vessel is also reduced. On the other hand, it may increase the probability of a constructive total loss which incurs when the assumed repair cost exceeds a certain percent of the insured value. In addition a value reduction is one of several factors which may influence the income side.

4. Major losses – Exposure and impact on total cost

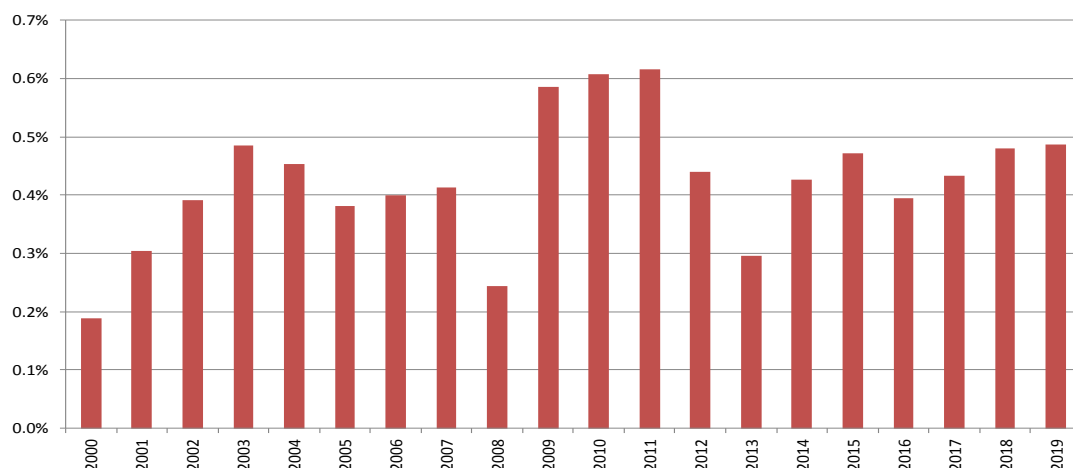
Portfolio share of high-value vessels

The inflow of high-value vessels continues despite value reductions on renewed vessels. In the NoMIS portfolio, the share of vessels with values exceeding USD 100 million has been relatively stable close to 4% in recent years, while the share of vessels with values exceeding 300,000 gross ton started to rise again from 2016. Expensive vessels are a prerequisite for expensive claims, especially when it comes to total losses. Thus with an increase in the values of the largest vessels follows also the potential risk of new record losses.

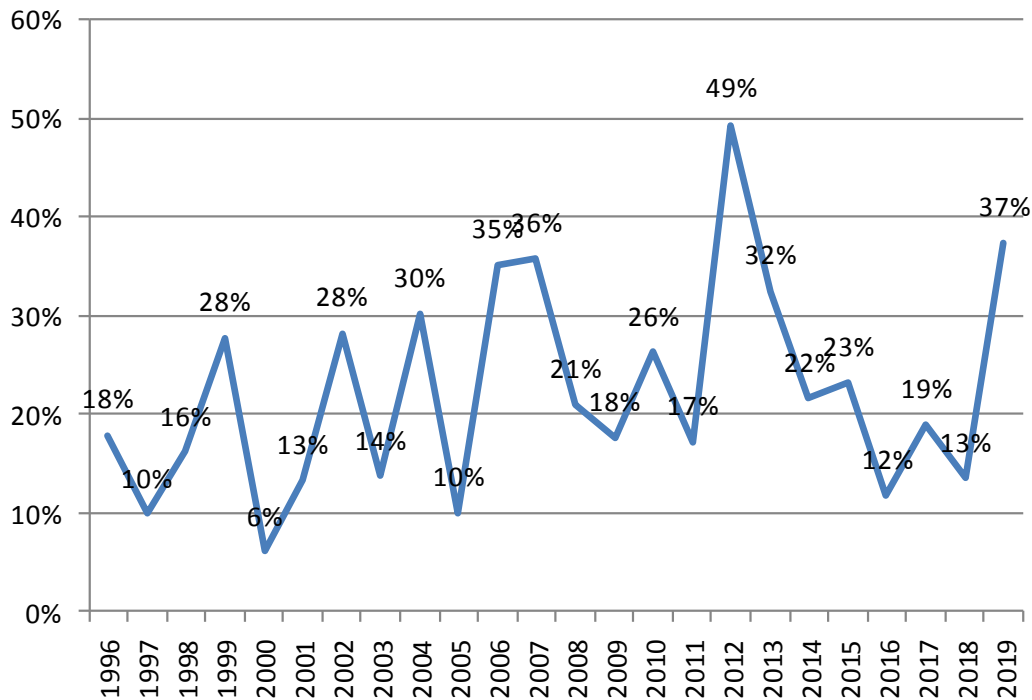
11.a: Portfolio share of ships with values exceeding USD 100 million



11.b: Portfolio share of ships with values exceeding USD 300 million



12: Claims in excess of USD 10 million as % of total claim costs



While major losses represented an increasing share of the total claims in the years until 2015, this trend did not continue in the years 2014 to 2018. In the 3-year period 2016 to 2018, the contribution of losses exceeding USD 10 million to the overall claims cost kept below 20%.

In the first half of 2019, the number of claims in excess of USD 10 million increased again and accordingly their contribution to the overall claims cost.

Although there are annual fluctuations and individual benign years, with increasing exposure to high-value vessels the underlying risk of expensive losses needs to be monitored.

Further, as explained in more detail in the Cefor Annual Report 2017, even in years with very moderate major claims impact, the costliest 1% of all claims account for almost 30% of the total claims cost.

5. Average claim cost by type

Total cost divided by number of claims

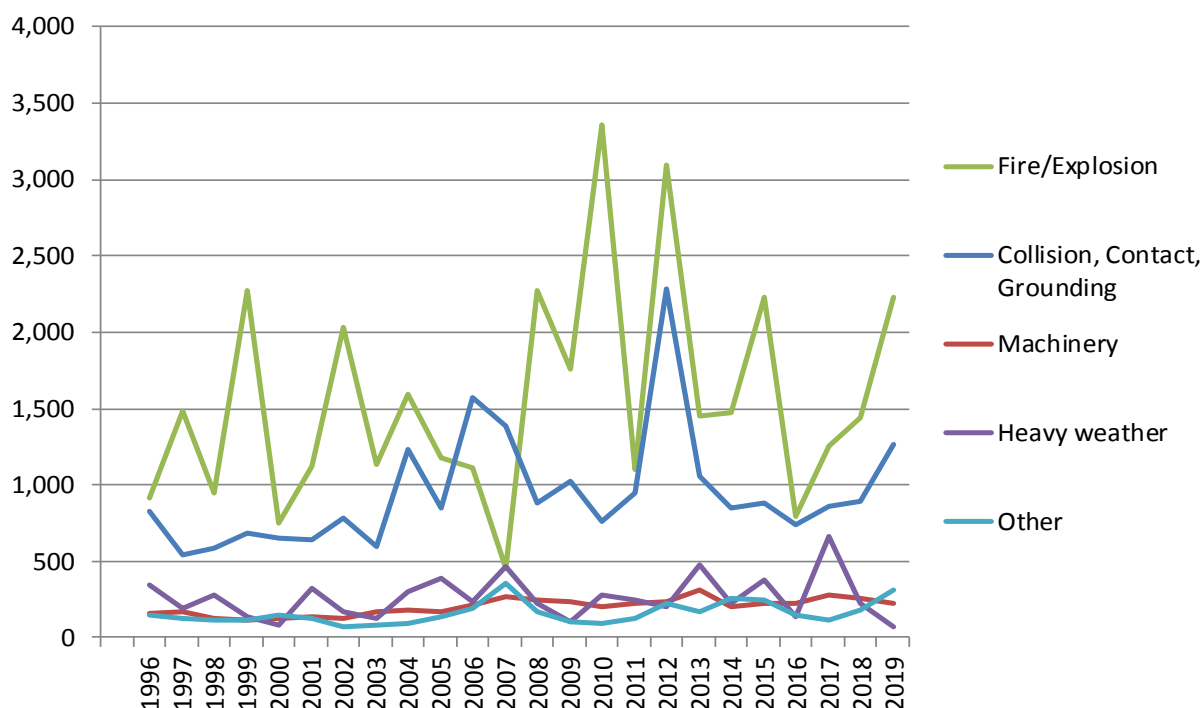
Impact of fire/explosion back in 2019 after quiet years

The average cost of fire/explosion claims was high between 2008 and 2015 but had only a moderate impact in the years 2016-2018. In each of these years, there were two fire/explosion claims exceeding USD 10 million, but none exceeding USD 30 million. In the first six months of 2019, there were already four fire/explosion claims with a cost of more than USD 10 million.

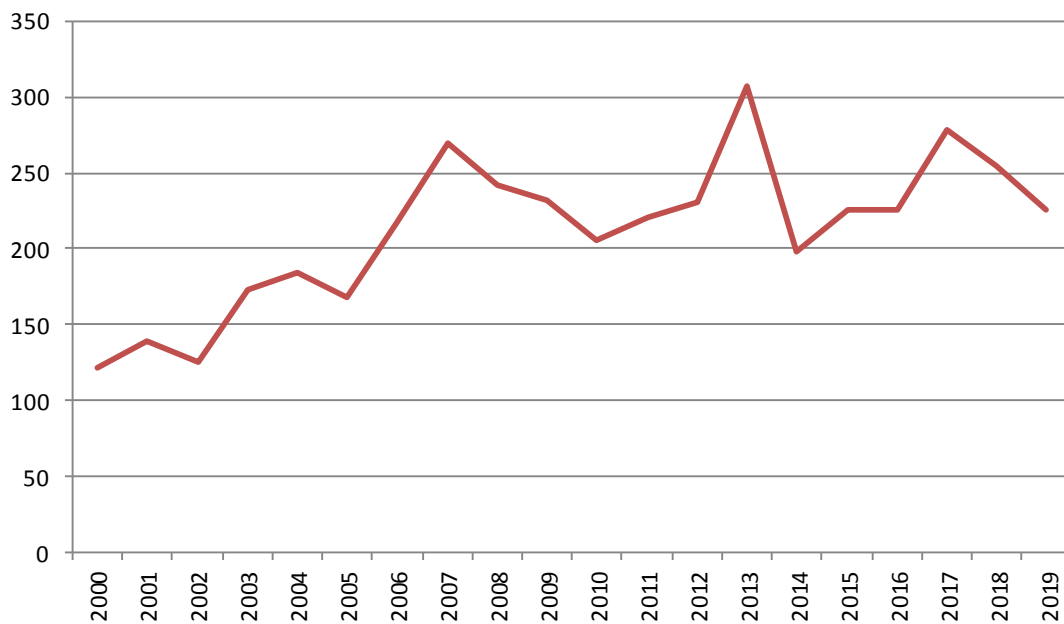
Given the volatile nature of these usually costly events, the potential for costly fire/explosion claims needs to be evaluated in the context of an increasing number of high-value vessels. Another concern is false declaration of goods and fire-fighting capabilities on large container vessels (see section 6.).

The cost of nautical-related claims (collision, contact, grounding) has been at a relatively stable and moderate level since 2014 but increased again in the first half of 2019. This was mainly due to two collisions with a cost exceeding USD 20 million. One of these is even in the range of losses exceeding USD 50 million and may turn out to become the costliest single loss registered in the NoMIS database since Costa Concordia in 2012.

13.a.: Average claim cost (USD 1,000) – all types of casualties



13.b.: Average claim cost (USD 1,000) – machinery claims



The average cost of machinery claims showed an upwards trend until 2016. Since then it has oscillated somewhat around 250,000 USD. A peak in 2013 was mainly due to the impact of two extraordinary costly machinery claims in that year.

Machinery claims exceeding USD 5 million have occurred each year since 2011. Also claims exceeding USD 10 million are no longer an exception in this claim category, occurring in four out of the last ten years. Especially on cruise vessels, machinery claims may turn out quite costly.

In 2019, as of 30 June four machinery claims exceeding USD 5 million were reported, but none exceeding USD 10 million.

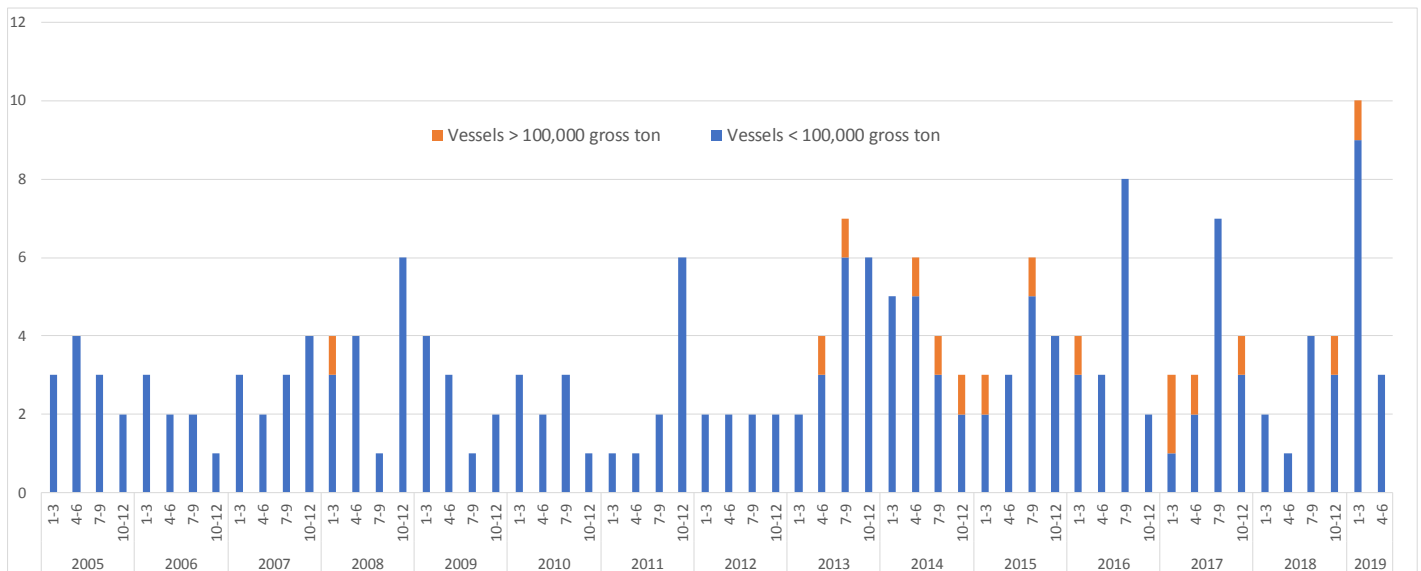
6. Fires on container vessels⁵

Surge in 1st quarter 2019 fires a concern

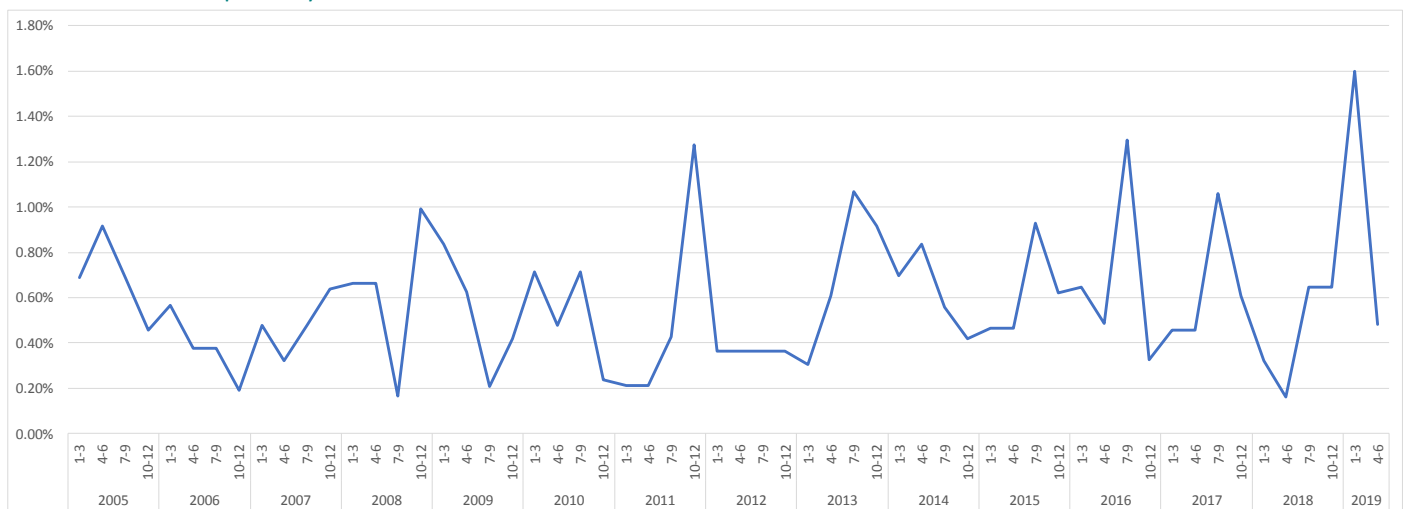
Marine insurers are increasingly concerned about fires on container vessels, and especially those starting in containers onboard. Contrary to fires in the engine room, those starting in the cargo area of a container vessel have proven to be challenging to detect and extinguish. The location of the fire may be difficult to reach and fire-fighting capabilities on deck are restricted and often insufficient to prevent the fire from spreading and causing a serious threat to the crew and more severe damage to cargo and the vessel itself.

In the first quarter of 2019, an unusual high number of such fires occurred on container vessels. An increasing number of fires incurs on vessels over 100,000 gross ton, where the potential damage to cargo and crew is even larger if such fires cannot be extinguished before spreading to other areas.

14.a: Fires on container vessels – Number of occurrences in NoMIS database



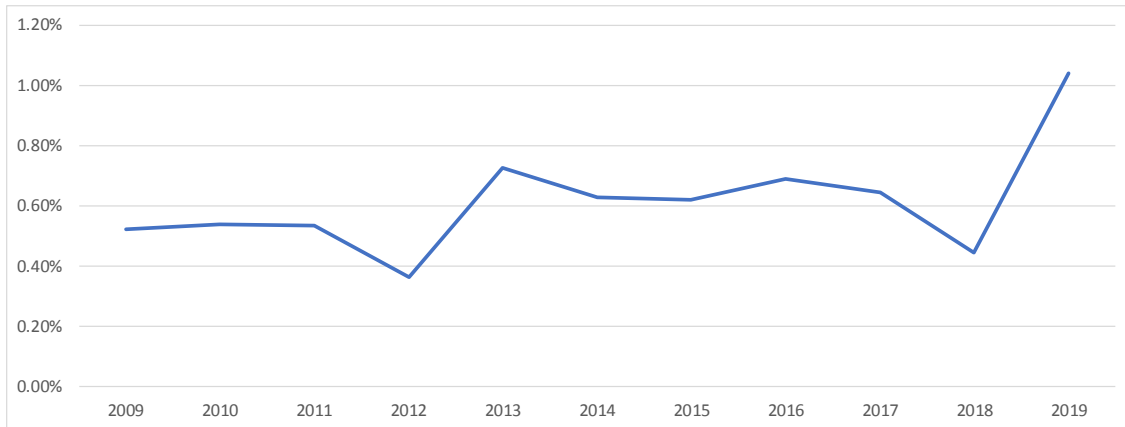
14.b: Frequency of fires on container vessels



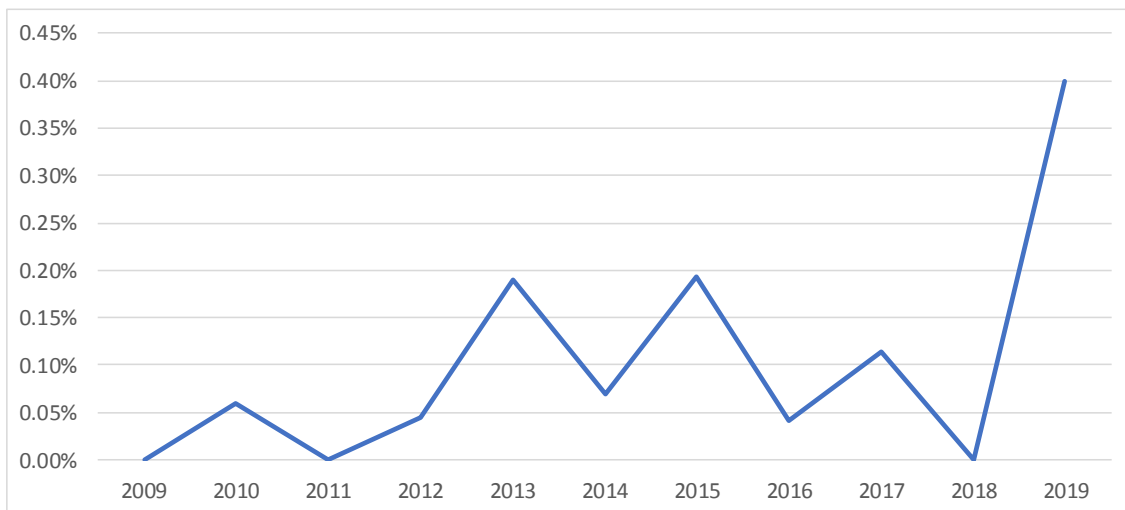
⁵ 'Container vessels' include for the purpose of this study also Car/RoRo vessels with container carrying capacity (

Graphs 15.a and b. show the frequency of all fires/explosions on container vessels compared to the frequency of fires starting in the cargo area. Graph 15.c. shows the frequency of such fires on container vessels over 50,000 gross ton. The first quarter of 2019 saw a substantial increase in the frequency of fires starting in containers especially on larger vessels (14.b .and 14.c.)

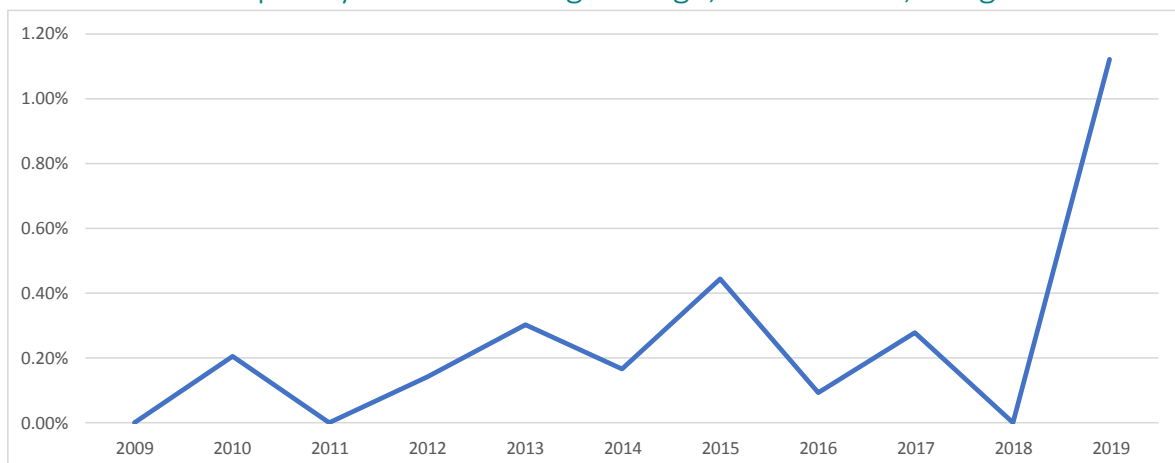
15.a: Claims frequency – All fire/explosions claims on container vessels



15.b: Claims frequency – Fires starting in cargo

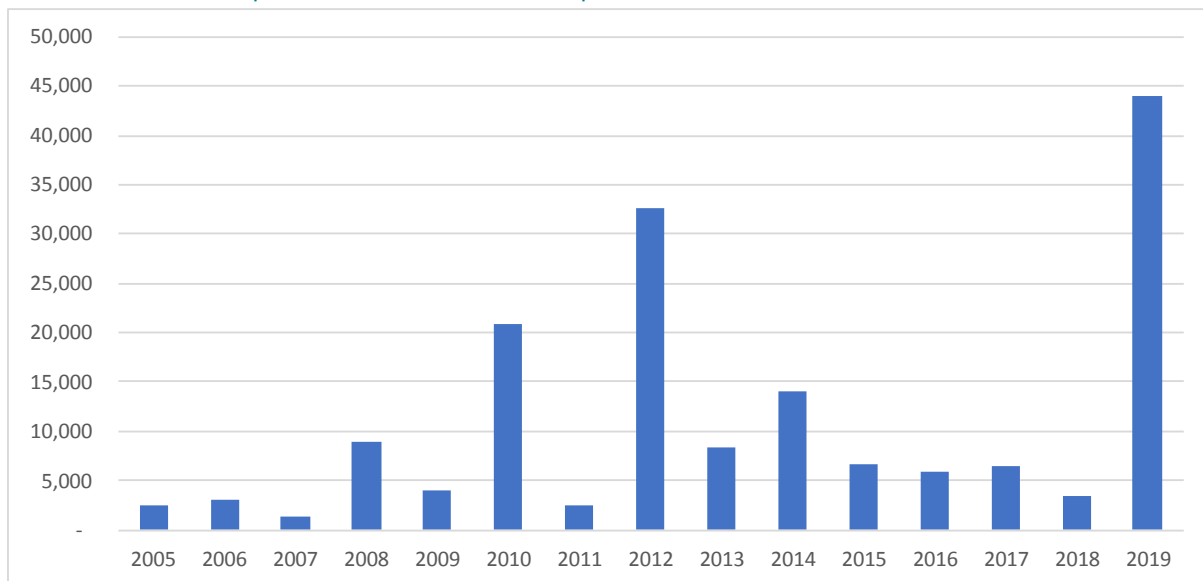


15.c.: Claims frequency – Fires starting in cargo, vessels > 50,000 gt

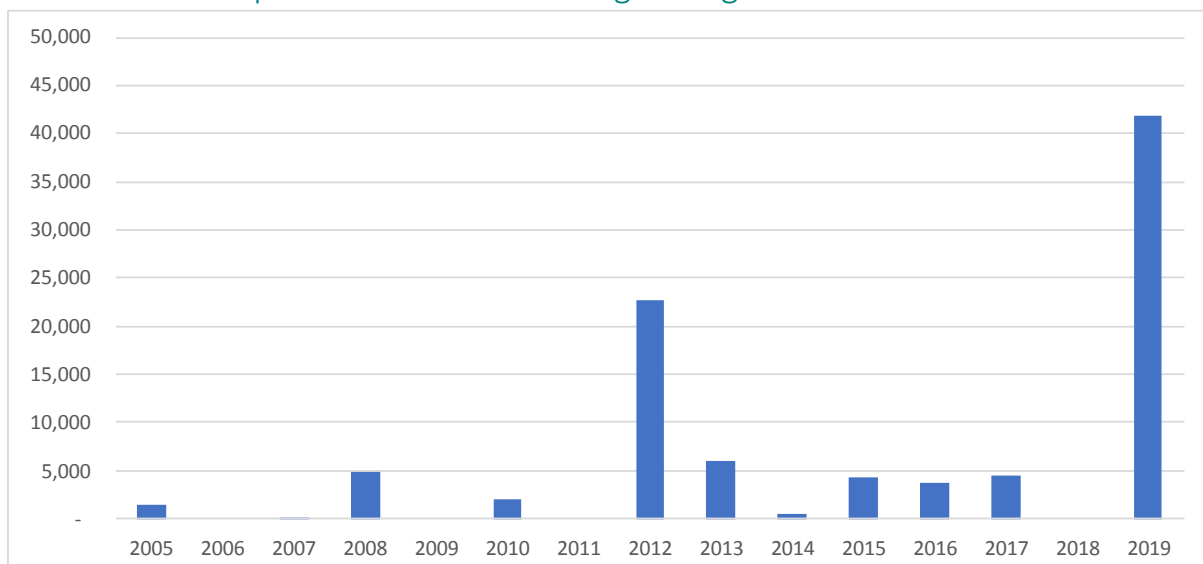


Fires starting in the cargo area of a container vessel which cannot be extinguished quickly before spreading also may represent a high cost to shipowners and accordingly their insurers. Graph 16 shows the claim cost per vessel for fires which started in the cargo area of the container vessel. One should be aware that costs other than covered under the standard Hull and Machinery policies are not captured in the NoMIS database and thus not in the statistics presented here. Additional costs, especially for damage to the cargo onboard may be high and affect many parties. When comparing graph 16.a to 16.b it should be noted that the major share of the cost of fire/explosion claims on container vessels since 2012 originates from fires starting in the cargo area. A serious concern in that context is the misdeclaration of goods, as this may lead to that e.g. containers which should not be exposed to heat are stored in unsuited places.

16.a: Claim cost per vessel – All fire/explosion claims



16.b: Claim cost per vessel – Fires starting in cargo area



Nordic Marine Insurance Statistics (NoMIS)

Data in this report & other NoMIS statistics

The statistics in this report reflect data reported by Cefor members into the Nordic Marine Insurance Statistics database as of 30 June 2019. The report has been prepared by the Cefor Statistics Forum.

If not indicated otherwise, claims are grouped by date of loss, i.e. calendar year in which the claims incurred (= accident year).

Figures reflect 100% of each vessel and resulting claims insured under a Hull & Machinery coverage, regardless of the share underwritten by one or more Nordic insurers.

2019 claims (cost, numbers) reflect the status as reported per 30 June, including an estimate of incurred but not reported claims. For comparability to previous years, 2019 claims – i.e. claims reported within the first half year – are related to 2019 portfolio data for half a year. In the two “quarterly development” graphs (p. 5) the annual exposure is used – and the claim cost per vessel by 2nd quarter of each year therefore is half as high as in the other graphs showing the expected ultimate results per year.

Further information is available on the Cefor website at www.cefor.no/statistics



Annual Report 2018:
Update on the Cefor market & activities
and NoMIS trends as of December 2018.



The 2018 NoMIS Reports for Ocean and Coastal Hull claims trends with breakdown by age group, size group, vessel types, insured value layers and other key figures, plus exposure curves.

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