

# ANNUAL REPORT 2021

*The Nordic Association of Marine Insurers*



Cefor

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# Cefor in brief...

*The Nordic Association of Marine Insurers (Cefor) represents marine insurers in the Nordic countries.*

The members of Cefor engage in:

- hull and machinery insurance (ocean and coastal)
- protection and indemnity insurance
- cargo insurance
- loss of hire insurance
- war risks insurance
- offshore energy insurance
- offshore liability insurance
- legal defence insurance
- builders' risks insurance
- ship repairers' liability insurance
- charterers' liability insurance
- mortgagee interest

Our objective is to further enhance the lead Nordic marine insurance market, promote our members' common interests on key issues for the marine insurance industry, and contribute to a sustainable ocean industry.

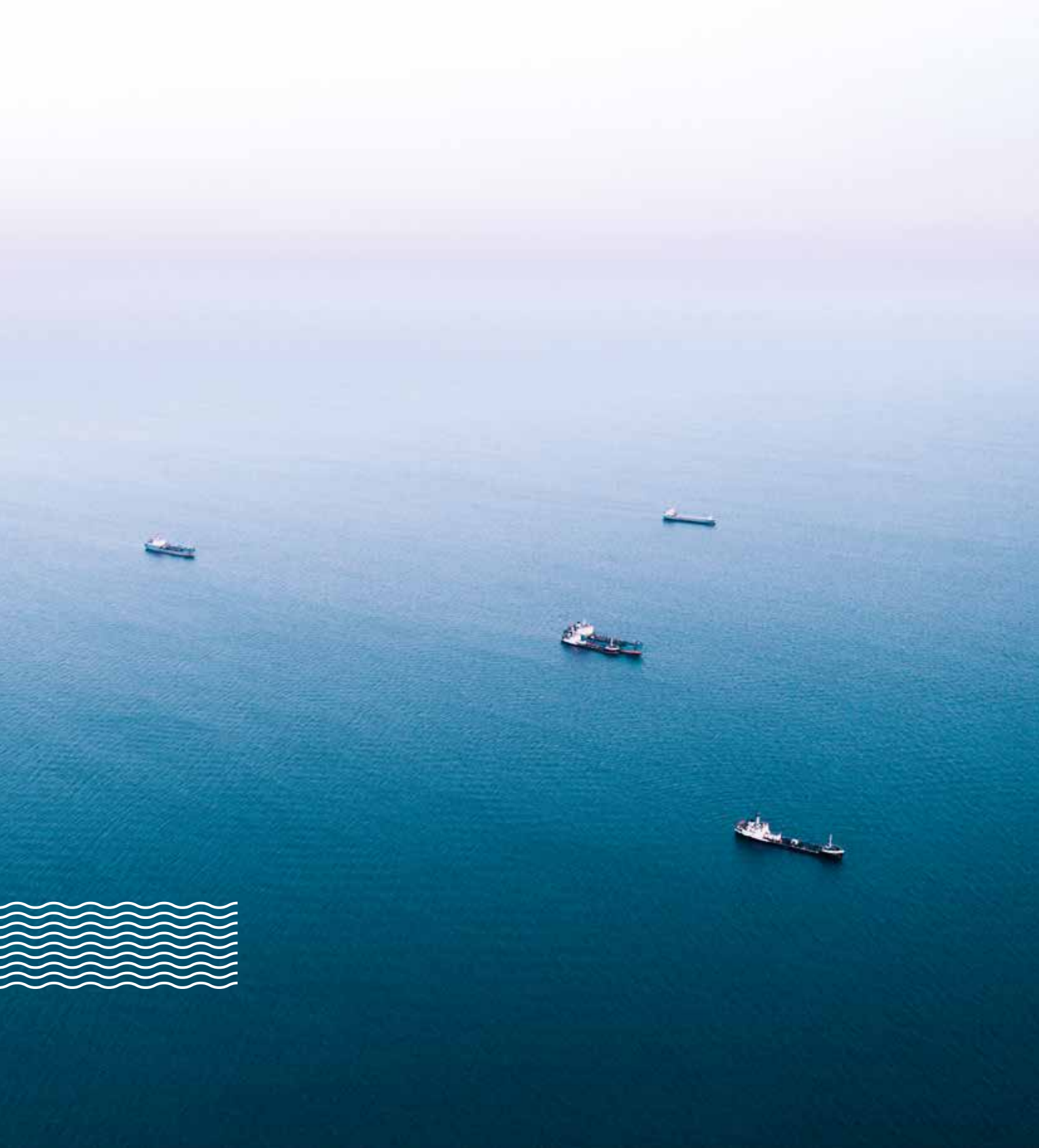
Our mission is to serve the interests of our Nordic members by promoting quality marine insurance and knowledge sharing through:

- agreed all risks insurance conditions
- comprehensive statistics
- a common public voice
- competence building

To this end, the Association endeavours to:

1. Facilitate continuous evolution of competitive Nordic marine insurance conditions in collaboration with customers, brokers, legal experts, trade associations and other relevant parties.
2. Provide appropriate statistics from the Nordic Marine Insurance Statistics (NoMIS) database to support the activities of the individual members and the general objectives of the Association.
3. Influence the framework conditions within which the industry operates.
4. Contribute to the provision of educational programmes, ensuring adequate competence development and expertise among our members.

The Association does not engage in independent economic activity, nor does it promote practices that could be detrimental to competition in any way.



# THE 2021 CEFOR YEAR IN REVIEW

# The 2021 Cefor year in review

*Preparations for Version 2023 of the Nordic Marine Insurance Plan were a priority in the reporting year. Cefor presented its proposals for amendments to the Plan's Standing Revision Committee in late May 2021, after which deliberations with owners commenced, to provide for a fair and balanced update of the conditions. The new version will be published in October 2022.*

*An important step towards improved firefighting capabilities on board container vessels was made in October 2021 when the International Maritime Organization (IMO) agreed to develop amendments to the rules. As a leading provider of statistics, Cefor has prepared several special focus analyses of claims data to substantiate the need for such amendments, including two in the reporting year.*

*The Cefor Academy's one-year education programme resumed in 2021 with a combination of digital and classroom sessions. Overall, the Association's activity level remained high despite the coronavirus pandemic.*

## **Modern and up-to-date insurance conditions**

### **Version 2023 revision in progress**

Based on the all risks principle, the Nordic Marine Insurance Plan ('the Plan') is recognised as a fair and balanced set of conditions for protecting shipowners' interests through a comprehensive and coordinated solution for all standard non-P&I marine and offshore insurances.

The Plan is tailor-made for the well-known Nordic claims handling model. Many clients around the world favour

this service model because of the active support and cooperation a Nordic claims leader offers to shipowners.

The Plan is regularly updated to offer clarity and certainty. All amendments are drafted and agreed by a committee with strong representation from Nordic shipowners, often supported by their Nordic brokers. This ensures a fair and balanced approach, focusing on the practical needs of the insured and avoiding any gaps in cover.

Version 2019 is the latest version of the Plan, and the next will be Version 2023. Discussions on possible new amendments to further strengthen contract certainty and secure a practical and efficient system took place

within Cefor and jointly with the owners throughout the reporting year. All proposals for the next version were submitted to the Plan's Standing Revision Committee before 1 June 2021, and deliberations are still ongoing between the signatories to this agreed document. Version 2023 will be published on 3 October 2022 and take effect from 1 January 2023.

The Plan is published on [nordicplan.org](http://nordicplan.org), with the latest version uploaded to the Nordic Plan App for smartphones and tablets. Translations into four Nordic languages, printed versions, guidance notes, and an introductory brochure are also available. A comparison between the Plan and the Institute Time Clauses – Hulls (ITCH 83) is published on the Cefor website<sup>1</sup>.

## Leading provider of statistics

Cefor and its members are constantly striving to further enhance the quality of the comprehensive and up-to-date ocean and coastal hull data compiled in the Nordic Marine Insurance Statistics (NoMIS) database.

Extensive NoMIS reports for ocean and coastal hull claims and portfolio trends are published bi-annually on the Cefor website. Based on data at year-end 2020, these included two special analyses in the reporting year. One illustrated the parallel downward trend in claims frequency and average vessel speed for certain vessel types. The other focused on fire trends in general and on container vessels in particular, and was also updated with data up to 30 June 2021. The trends were further explained by Cefor's Analyst/Actuary in a webinar in April 2021, with a particular focus on identifying the impact of Covid-19. The NoMIS hull claims and portfolio trends as of December 2021 are presented in a separate section starting on page 19.

To maintain the high level of data quality, all NoMIS members perform annual checks on their own reported data.

Cefor also plays a vital role on the Facts and Figures Committee of the International Union of Marine

Insurance (IUMI). This includes Astrid Seltmann's responsibility for compiling data, with the 'Global Marine Insurance Report' presented at the 2021 IUMI Seoul Online Conference in September.

## Building competence

The marine insurance industry is highly specialised. Relevant, practical learning is offered by and for the industry through Cefor. The administration plays a vital role in delivering high-quality marine insurance training, which is in high demand from the industry. Course contents are designed in cooperation with the Association's members, who contribute lecturers, examiners and other know-how to make this training the most highly rated of its kind in the Nordic region.

## One-year programme in high demand

The comprehensive Nordic Marine Insurance Education Programme is designed to give students a good general understanding of all relevant aspects of marine insurance. The part-time Cefor Academy programme is an integral part of the training for marine insurance professionals in the Nordic market. On completion, a certificate is issued to document the student's understanding of relevant terms and conditions as well as the basic principles behind them. Experts from Cefor member companies and Norwegian law firms serve as lecturers during the six sessions that take place in three Scandinavian countries.

The programme, which was paused in 2020 due to the coronavirus pandemic, resumed in August 2021 with a record number of 32 new students and several applicants wait-listed. Of the three sessions that were held in the 2021-2022 programme, one was held digitally and two in a classroom format. With the continued uncertainty surrounding the coronavirus, recording equipment was acquired and digital backup plans were made to secure that this and future programmes can continue as scheduled regardless of the pandemic.

<sup>1</sup> <https://ceforno/clauses/comparison/>

## Webinars

In 2021, the Cefor forums arranged several webinars for members of the Association. Topics ranged from guidance on the practical handling of casualties, to dual fuel engines and low-sulphur fuels, floating offshore fish farms, digital twins and battery technology.

The 2020 hull trends were presented by Cefor Analyst/Actuary Astrid Seltmann in a well-attended public webinar mid-April 2021.

## Influencing framework conditions

The overall objective of Cefor's framework-related activities is to promote legislation and industrial policies that are conducive to a sustainable and prosperous Nordic marine insurance market.

To maintain their position as a leading marine insurance market, Nordic marine insurers need predictable framework conditions. Marine insurers compete in a global market, and it is essential for our members that framework conditions are comparable with those of their foreign competitors.

To operate efficiently and provide a level playing field, international marine insurance and shipping industries depend on a global regulatory framework. Cefor is a strong supporter of international regulation of what is essentially a global industry, as opposed to regional or domestic regulation.

At an international level, most of the industry-related issues are dealt with through Cefor's membership of the International Union of Marine Insurance (IUMI). A list of current issues from IUMI's Policy Forum, chaired by Cefor's Managing Director, is regularly updated and published by IUMI and on the Cefor website<sup>2</sup>.

The following were some of the most important issues for Cefor in the reporting year:

### *Fires on container vessels*

The prevention and mitigation of fire incidents on container vessels continues to be a main priority for the marine insurance industry. In February 2020, IUMI co-sponsored a proposal for a new output at the International Maritime Organization (IMO) to review SOLAS<sup>3</sup> Chapter II-2. Cefor data was used to support the paper, with two additional updates provided in the reporting year. These confirmed the worrying trend in such fires and showed that the risk of fires in the cargo area increases with the size of the vessel. The latter is of particular concern given the increasing size of container vessels and the growing number of them in the world fleet.

The IMO Maritime Safety Committee (MSC) agreed in October 2021 to include in the bi-annual agenda of the Sub-Committee on Ship Systems and Equipment (SSE) for 2022-23 an output on 'Development of amendments to SOLAS chapter II-2 and the FSS Code<sup>4</sup> concerning detection and control of fires in cargo holds and on the cargo deck of containerships'. The amendments will apply to new vessels and will enhance provisions for early detection and effective control of fires in containerised cargoes stowed on and below deck on container vessels. If adopted before 1 July 2026, the amendments will enter into force on 1 January 2028.

Cefor participated in a group of experts formed by IUMI to draw up a road map for amending SOLAS. Based on input from this group, six flag states, IUMI, BIMCO and IACS<sup>5</sup> submitted a paper in November 2021, with a proposed outline and initial assessment of gaps and regulations for consideration by SSE 8 in February/March 2022.

### *Low-pressure fuel systems*

In 2020, IACS and IUMI formed a correspondence group, chaired by Sverre Andersen of the Norwegian Hull Club, with technical experts from the membership of both associations, to consider possible measures to reduce the risk of fires from low-pressure fuel systems and to mitigate the consequences. The report from the correspondence group was presented in May 2021, with

<sup>2</sup> <https://cefor.no/industry-policy/iumi-policy-agenda/>

<sup>3</sup> International Convention for the Safety of Life at Sea

<sup>4</sup> International Code for Fire Safety Systems

<sup>5</sup> International Association of Classification Societies

hot spots, use of thermography, and proper installation of insulation among the preventive measures identified. Cefor members are continuing to monitor the incidents that are still arising from low-pressure fuel systems, and will engage with IACS on possible follow-up actions from the report.

### *Insurance Distribution Directive – Norway*

Directive (EU) 2016/97 — the Insurance Distribution Directive (IDD) — governs how insurance products are designed and distributed in the European Union. The IDD entered into force on 1 October 2018, and has been transposed into national law in the EU Member States. Under the European Economic Area (EEA) Agreement, the IDD also has to be implemented in Norwegian law, and the legislation was adopted in December 2021.

The IDD includes an obligation on insurers to provide 15 hours of relevant continued professional development (CPD) for all employees involved in the distribution of insurance products. In preparation for the more detailed regulation, Cefor met with the Financial Supervisory Authority of Norway in October 2021 and responded to a public consultation in December. The new regulation, effective from 1 January 2022, limits providers of the mandatory annual 15 hours of CPD to pre-approved education institutes and trade associations. Cefor has initiated a process to apply for such approval.

Pending the Norwegian transposition of the IDD, Denmark announced in June 2021 that insurance distribution directly from Norwegian brokers and insurance companies would cease with almost immediate effect. For those affected, a procedure was put in place to expedite applications for approval of a legal entity in Denmark through which insurance could be distributed.

### *Autonomous vessels*

In May 2021, the IMO Maritime Safety Committee (MSC) completed a regulatory scoping exercise to establish the need to amend the regulatory framework to enable the safe, secure and environmental operation of maritime autonomous surface ships (MASS) within the existing IMO instruments. As a follow-up, MSC

agreed in October 2021 to develop a roadmap for development of a goal-based instrument for MASS (e.g. a MASS Code) with a target completion year of 2025. The Code may be made mandatory by amending an existing IMO convention such as SOLAS, with 1 January 2028 as the earliest implementation date. A similar exercise was completed by the Legal Committee (LEG) in July 2021, and an initiative has now been made to establish a joint working group with also the Facilitation Committee (FAL) involved to progress the work.

Cefor welcomes this holistic approach, and remains committed to the development of a regulatory regime for unmanned vessels.

### *Decarbonisation*

In April 2018, the International Maritime Organization (IMO) adopted an initial strategy on the reduction of greenhouse gas (GHG) emissions from vessels with a commitment to phasing GHG emissions out as soon as possible. This includes reducing CO<sub>2</sub> emissions per transport work (carbon intensity) by at least 40% by 2030 and reducing total annual GHG emissions by at least 50% by 2050. Discussions are now ongoing to develop the medium and long-term measures for greenhouse gas reductions, including potential market-based measures and preparation of the GHG strategy review that is due in 2023.

Cefor applauds the goal of decarbonising shipping. To support the owners in their transition to new and greener fuels, it is the job of marine insurers to ensure that all associated risks are fully understood and managed. Environmentally friendly fuels carry their own risks: ammonia is both toxic and corrosive, and hydrogen has a wide flammability range and ignites easily. In 2021, Cefor facilitated knowledge-sharing between our Nordic members and owners, class, engine manufacturers and other experts on these new fuels. The Association also focused on the need to develop standards and regulations for the alternative fuels to protect crew, the oceans and property. See also the Cefor sustainability report, starting on p. 11.

Member States submitted the first proposals to address the safety requirements for the use of alternative fuels to the IMO in 2021. In September, the Sub-Committee on Carriage of Cargoes and Containers (CCC) started work on guidelines on the safety of vessels using hydrogen as fuel under the International Code for Ships using Gases or Other Low-flashpoint Fuels (IGF Code). A proposal for a new output on the development of non-mandatory guidelines for safety of vessels using ammonia as fuel will be considered in April 2022.

### *Arctic sailings*

The Polar Code entered into force 1 January 2017. No similar regulation is in place for non-SOLAS vessels operating in polar waters, but the IMO is currently considering such an instrument. This is strongly supported by Cefor. As this is a matter of urgency, guidelines were approved for fishing vessels and pleasure yachts in May 2021.

In June 2021, the IMO approved a ban on the use of heavy fuel oil in the Arctic region from 1 July 2024 (1 July 2029 for vessels with double hull and vessels flying the flag of a state with an Arctic coastline and operating in its waters). For Norwegian waters, a ban on heavy fuel oil in the Svalbard territorial waters was agreed in 2021 and the law came into force on 1 January 2022. For certain vessels transporting goods to/from Longyearbyen and Barentsburg, the ban will take effect from 2024.

### *Floating repair docks*

In recent years, insurers have noticed an increased number of incidents involving floating repair docks. With almost no regulation or administrative supervision of these units, both maintenance and overall quality are considered to be at a low point. In November 2021, Cefor raised these concerns in a meeting with the Norwegian Ministry of Trade and Fisheries and the Norwegian Maritime Authority, which are considering whether and how these units might be regulated.

### *Anti-money laundering - Norway*

In March 2020, Cefor responded to a public consultation on the transposition of the EU's 5<sup>th</sup> Anti-Money Laundering Directive in Norway. For an international

industry such as marine insurance, it is imperative to maintain competitive regulation similar to other European countries. This consideration was taken into account when the new Norwegian Anti-Money Laundering Regulation was published in May 2021. The new Regulation took effect from 1 July 2021.

## **Cefor forums**

A considerable part of Cefor's activities takes place within the nine member forums listed on p. 67. While each forum has its own area of responsibility and focus, additional value is generated from cross-forum consultation and coordination. Sustainability, with a reference to selected UN Sustainable Development Goals, was incorporated into the Common Forum Mandate in October 2021 to reflect how this has become one of the main objectives of all forums.

Facilitated by digital meeting tools, the forums remained very active in the reporting year.

To ensure compliance with all relevant competition law regulations within all Cefor forums, working groups and the Board, the Association's Competition Law Statement and Guidelines are regularly discussed and communicated to all appointed officials.

# The Cefor Marine Insurance Market 2021

## Market shares, all sectors

Gross premium income, direct insurance 2021: USD 2 221.7 million

USD 1 = EUR 0.8460	EUR mill.	USD mill.	%
<b>Hull</b>	<b>951.1</b>	<b>1 124.2</b>	<b>50.6 %</b>
<b>P&amp;I</b>	<b>823.7</b>	<b>973.7</b>	<b>43.8 %</b>
<b>Offshore energy</b>	<b>88.2</b>	<b>104.3</b>	<b>4.7 %</b>
<b>Cargo</b>	<b>16.5</b>	<b>19.5</b>	<b>0.9 %</b>
<b>Total</b>	<b>1 879.5</b>	<b>2 221.7</b>	<b>100 %</b>
<b>Hull<sup>1</sup></b>			
Gard	333.6	394.3	35.1 %
Norwegian Hull Club	242.4	286.6	25.5 %
Skuld	82.1	97.1	8.6 %
The Swedish Club	65.7	77.6	6.9 %
Alandia	62.7	74.1	6.6 %
DNK (war risks)	34.6	41.0	3.6 %
If	33.1	39.1	3.5 %
Gjensidige <sup>2</sup>	24.7	29.2	2.6 %
Codan	21.8	25.8	2.3 %
HDI Global Specialty SE	19.7	23.3	2.1 %
Betri Trygging	12.1	14.3	1.3 %
Fender Marine	8.9	10.6	0.9 %
Møretrygd	5.6	6.6	0.6 %
Tromstrygd	3.9	4.6	0.4 %
<b>Total</b>	<b>951.1</b>	<b>1 124.2</b>	<b>100 %</b>
<b>Offshore energy</b>			
Gard	36.9	43.6	41.8 %
Norwegian Hull Club	34.5	40.8	39.1 %
Skuld	9.3	11.0	10.5 %
DNK (war risks)	4.7	5.5	5.3 %
The Swedish Club	2.8	3.3	3.2 %
<b>Total</b>	<b>88.2</b>	<b>104.3</b>	<b>100 %</b>
<b>P&amp;I</b>			
Gard	450.8	532.9	54.7 %
Skuld	262.2	309.9	31.8 %
The Swedish Club	88.6	104.7	10.8 %
Norwegian Hull Club <sup>3</sup>	12.5	14.8	1.5 %
Alandia	6.3	7.5	0.8 %
other Cefor members <sup>4</sup>	2.9	3.4	0.3 %
DNK (war risks) <sup>5</sup>	0.4	0.5	0.05 %
<b>Total</b>	<b>823.7</b>	<b>973.7</b>	<b>100 %</b>
<b>Cargo<sup>6</sup></b>			
	<b>16.5</b>	<b>19.5</b>	

<sup>1</sup> Hull, hull interest, freight interest, loss of hire, builders' risks, fishing (catch & gear)

<sup>2</sup> Includes coastal marine clubs

<sup>3</sup> Charterer's Liability

<sup>4</sup> Codan, Fender Marine, Gjensidige, If, Møretrygd, Tromstrygd

<sup>5</sup> Cruise vessels only; for other vessel types, P&I coverage is included in hull war premium

<sup>6</sup> Norwegian income Cefor members only



CONTRIBUTING TO A  
SUSTAINABLE  
OCEAN INDUSTRY

# Contributing to a sustainable ocean industry

*Cefor's purpose is to represent its members' common interests in the field of marine insurance, and contribute to a sustainable ocean industry. Through this statement, Cefor has made a clear commitment to work together with our members and other stakeholders to facilitate and promote sustainable developments within the ocean industries for the benefit of the global community.*

Sustainability, whether related to environmental, social or governance issues, is one of the strongest drivers for change in today's society, and influences consumer behaviour, governments and businesses alike. Marine insurance is no exception to this for a number of reasons.

First, it directly affects the risks that our members insure. Climate change leads to more severe storms and flooding, which in turn increase the frequency and severity of claims. But sustainability is also about our responsibility to deliver services that support the fight against this global threat, to comply with international law and prevent illicit activities such as corruption and bribery, to protect the lives and health of seafarers, and to ensure decent working conditions. Moreover, environmental, social and governance (ESG) issues are becoming increasingly important to shareholders and employees, and are a prerequisite for recruiting future talents. And finally, the energy transition and the shift towards greener shipping represent new opportunities to expand product lines for renewables and meet clients' changing needs.

Cefor and its Nordic marine insurance members have a key role in contributing to a sustainable ocean industry.

## The role of marine insurers

Cefor members engage on a daily basis in environmental, social and governance (ESG) issues through loss prevention activities, supportive claims handling, risk selection, and Know Your Client (KYC) programmes. At the heart of this lies the key role of marine insurers in understanding and managing risks, and offering assistance and financial protection when disaster strikes. For clients, it is a risk management tool. The role of financial authorities is to secure solvent companies with the aim of providing adequate protection to policyholders and beneficiaries. Regulators are responsible for setting standards to ensure safety at sea, prevent pollution, and prevent illegal activities such as corruption, money laundering and breaches of sanctions.

Prevention will always be better than cure, and much effort is invested in learning from past behaviour. Drawing knowledge from a large amount of accumulated data, our members are well placed to offer advice on how to prevent incidents and thereby reduce the risk of pollution, injury to crew and damage to property. This is done through targeted conferences, webinars, loss prevention circulars, exercises and dialogue with clients.

In the event of an incident, Nordic marine insurers offer extensive support through what is widely known as the 'Nordic claims handling model'. Through experience from multiple incidents around the globe, our members have tailored their organisations to react quickly and appropriately to various casualty scenarios and thus prevent an incident from escalating further. A network of internal and external experts are on hand to assist with their specialised knowledge, and financial resources are made available both during and after an incident to protect those who have been affected.

Sustainability is also increasingly being incorporated into risk assessment and selection procedures. Safety has always been at the heart of underwriting, but this increased focus means that dialogue between owners and their insurers will expand to take in their climate footprint and crew welfare, to name just two. Individual companies will vary in their risk appetite. We have already seen examples of insurers who will not cover the transport of coal or are taking a firmer stance on the recycling of vessels. The worst performers within a segment might also find themselves in the spotlight with the growing awareness of sustainability.

Know-Your-Client procedures have become an integral part of the business of marine insurance. The individual insurer has an obligation to perform its own due diligence to ensure compliance with national and international laws. By refusing financial cover for any illicit activities, marine insurers provide a strong incentive for a level playing field and compliance with relevant laws.

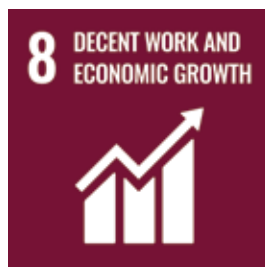
## The role of Cefor

Cefor is committed to promoting a sustainable ocean industry. To this end, we are raising awareness at all levels of the Association, and sustainability has been incorporated into Cefor's purpose, vision and mission statement.

The important work of our members is supplemented through joint action and the three main roles Cefor can take on:

- **Influencing;**  
among its members, and in discussions with owners, manufacturers, surveyors, salvors, brokers, classification societies and not least regulators.
- **Facilitation;**  
by creating meeting places, and by enabling new and greener technologies, solutions and choices through the drafting of clauses and guidelines.
- **Knowledge sharing;**  
through the use of statistics, training courses and seminars, sharing best practice and information, and dialogue with external partners in order to better understand and manage the new risks.

In light of Cefor's four main focus areas; conditions, statistics, education and framework conditions, the following five United Nations (UN) Sustainable Development Goals<sup>1</sup> (SDGs) have been identified as particularly relevant to the Association:



<sup>1</sup> <https://www.un.org/sustainabledevelopment/sustainable-development-goals/>

Sustainability is a main focus of all nine Cefor member forums, and is incorporated into their respective activities. This was also reflected in a revised Common Forum Mandate in October 2021, and new Terms of Reference for the Technical Forum in August 2021. The environmental footprint from Cefor meetings has also been reduced by extensive use of digital platforms.

Inspired by the launch of the Poseidon Principles in June 2019 and the Sea Cargo Charter in October 2020, the '**Poseidon Principles for Marine Insurance**' (PPMI) were developed in the reporting year and launched on 15 December 2021. Cefor has been a part of the drafting group and is one of the founding Associate Members of the PPMI. As an association, we support the transparency offered by the Principles to foster dialogue towards a common goal of a decarbonised shipping industry. While members of Cefor are always free to enter into any business-related agreements, Cefor's role is to support, facilitate and share knowledge of the Principles and ensure that they remain relevant over time. Gard and the Norwegian Hull Club were among the founding Signatories to the PPMI. Gard also participated in the drafting group with multiple stakeholders from the industry.

The Poseidon Principles for Marine Insurance are a global framework for assessing and reporting on the climate alignment of insurers' hull and machinery portfolios. They enable the insurance sector to implement transparency and establish a common global baseline to quantitatively assess and disclose the climate alignment of the portfolios. For Signatories, the Principles will apply to all business activities that cover H&M for vessels with an established Poseidon Principles trajectory whereby the carbon intensity can be measured with IMO Data Collection System (DCS) data. The four principles of assessment, accountability, enforcement, and transparency serve as an important tool to support responsible decision-making, reporting and monitoring of progress over time.

The PPMI are consistent with the policies and ambitions of the International Maritime Organization (IMO), including its ambition to reduce the total annual

greenhouse gas (GHG) emissions from shipping by at least 50% by 2050 compared to 2008. They also aim to align with the Paris Agreement over time, by providing a second trajectory towards a 100% reduction by mid-century. The Principles may be amended or replaced to reflect changes in applicable law or regulation or new or amended mandatory requirements from the IMO.

Cefor is a supporting organisation to the '**Getting to Zero Coalition**', a partnership between the Global Maritime Forum, the Friends of Ocean Action and the World Economic Forum. More than 150 companies within the maritime, energy, infrastructure and finance sectors, supported by key governments and intergovernmental organisations, are currently part of this alliance. The Coalition aims to accelerate the decarbonisation of maritime shipping by developing and deploying commercially viable zero-emission deep sea vessels by 2030. In 2021, the Coalition moved into phase 2 of the initiative, which focuses on developing solutions and the enabling environment. Collaboration across the maritime sector and its full value chain was further enhanced through workshops in the reporting year. A further priority was the development of a coalition transition strategy.

In April 2020, Cefor acceded to the '**Principles for Sustainable Insurance**' (PSI), promoted by the United Nations Environment Programme (UNEP) Finance Initiative (FI), as a supporting institution. Transparency will become increasingly important for risk selection as a growing number of marine insurers focus on their portfolio from a sustainability perspective also.

By acceding to the PSI, insurers commit to:

1. Embed ESG issues relevant to their insurance business in their decision-making.
2. Work together with clients and business partners to raise awareness of ESG issues, manage risk and develop solutions.
3. Work together with governments, regulators and other key stakeholders to promote widespread action across society on ESG issues.
4. Demonstrate accountability and transparency in

regularly disclosing publicly their progress in implementing the Principles.

A guidance document for non-life insurance is available from the UNEP FI to support the companies in managing ESG risks in their risk assessment and underwriting, and also raise awareness of the potential benefits of integrating ESG into their business model.

Collaboration with regulators and other stakeholders is one of the obligations under the PSI. Cefor works on behalf of its members on a number of sustainability-related issues, particularly with the International Maritime Organization (IMO) and classification societies (See summary table on the next pages).

The legally binding international treaty on climate change adopted in 2015 – the Paris Agreement – set a goal of limiting global warming and achieving a climate-neutral world by mid-century. Shipping followed suit in 2018 when the United Nations International Maritime Organization (IMO) adopted a strategy with a target of reducing annual greenhouse gas emissions (GHG) from vessels by 50% by 2050 compared to 2008. A measure demanding energy efficiency requirements on existing vessels will take effect from 2023, while carbon intensity targets will be mandatory from 2026. Medium and long-term measures are currently under discussion, and the strategy will be reviewed in 2023.

Insurance companies have a choice between being left behind or continuing to support their clients in the push for more sustainable solutions. Cefor and its members have made a clear commitment to the latter.

As vessels become greener, new risks are introduced. Environmentally friendly fuels carry their own risks. Ammonia is both toxic and corrosive, and hydrogen has a wide flammability range and ignites easily. These new fuel types are also largely untested, and the insurance industry has no history or loss records to help it assess the potential risks involved. Our members are dedicated to supporting shipowners in their transition to low or zero carbon fuels safely and with

all associated risks fully understood and managed. To ensure a safe transition to more environmentally friendly solutions, Cefor is playing a role in identifying the safety gaps in dialogue with class, owners, manufacturers and regulators. Several meetings and webinars were facilitated in 2021 to increase knowledge about the risks and how to mitigate them.

Just as importantly, we have also engaged with other stakeholders and in discussions with class and regulators – particularly the IMO - on new or amended regulations, standards and guidelines that might prove necessary.

New opportunities may arise from the transfer of cargo from land to more environmentally friendly transport by sea. And with energy companies moving from hydrocarbons to renewable energy sources such as offshore floating wind, discussions have already begun on standardising insurance solutions to facilitate the further expansion of these units.

Responsible underwriting is not only related to the safety and environment. Compliance plays an increasingly important role within the marine insurance industry, and considerable emphasis is placed on establishing proper due diligence procedures to detect any illicit activities. To increase regulatory compliance, Cefor has focused among other things on the sharing of best practice to prevent fraud, kick-backs, corruption, bribery, money laundering and breaches of sanctions. A Cefor 'know your customer form' has been developed to standardise the minimum requirements in a common template.

Nordic marine insurers are taking a more pro-active interest in sustainability and incorporating this across all business areas from investment strategies to underwriting, loss prevention, claims handling, and business development. From Cefor, we are committed to supporting these efforts towards a more sustainable ocean industry.

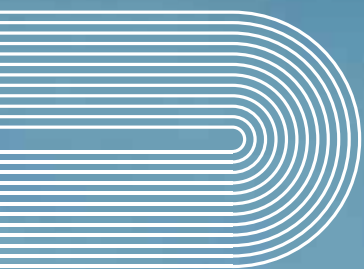
## Sustainability focus within Cefor – an overview

Issue	Actions	UN SDG Relevance
<b>Safety &amp; Environment</b>		
<b>Arctic sailings</b>	<ul style="list-style-type: none"> <li>• Nordic Plan – trading areas and safety regulations</li> <li>• Cefor Arctic shipping checklist</li> <li>• Support regulatory work for non-SOLAS vessels at IMO</li> <li>• Support ban on heavy fuel oil adopted by the IMO</li> </ul>	8, 13, 14, 17
<b>Low and zero carbon fuels</b>	<ul style="list-style-type: none"> <li>• Facilitate meetings and webinars to understand the risks and how to mitigate them</li> <li>• Raise awareness and share knowledge of the risks</li> <li>• Encourage the development of safety standards, class rules and regulations for greener fuels, including proposals to be developed for hydrogen and ammonia at the IMO</li> <li>• Memo on experience with MARPOL 2020 low sulphur regulation issued in April 2021</li> <li>• Collect and monitor claims data related to fuels</li> </ul>	8, 13, 14, 17
<b>Offshore floating wind units</b>	<ul style="list-style-type: none"> <li>• Understand the risks and how to manage them by facilitating meetings, webinars and sharing of knowledge/best practice</li> <li>• Develop necessary insurance conditions through an expert working group and in dialogue with owners</li> <li>• Seek amendment of regulation that prohibits insurance cover from Norwegian providers for the entire construction period (4-year rule)</li> </ul>	8, 13, 14, 17
<b>Sustainable claims handling</b>	<ul style="list-style-type: none"> <li>• Consider possible options in dialogue with owners</li> <li>• Increase knowledge and raise awareness on sustainable recycling of damaged goods</li> </ul>	8, 13, 14
<b>Recycling of vessels</b>	<ul style="list-style-type: none"> <li>• Share knowledge of regulations by facilitating meetings and webinars and incorporate this into Cefor Academy training</li> <li>• Support ratification of Hong Kong Convention</li> </ul>	8, 13, 14, 16
<b>Plastic litter</b>	<ul style="list-style-type: none"> <li>• Support IMO initiative to develop action plan against plastic litter</li> <li>• Support the inclusion of plastic pellets in the IMDG Code</li> <li>• Raise awareness and consider loss prevention actions</li> <li>• Raise awareness and support actions to improve lashing and prevent loss of containers</li> </ul>	14
<b>Fires on container vessels</b>	<ul style="list-style-type: none"> <li>• Participate in IMO discussions on improved detection and firefighting capabilities relating to fires starting in the cargo</li> <li>• Engage as appropriate in EMSA study to support the IMO discussions</li> <li>• Analysis of claims data to support and inform of the challenges</li> </ul>	8, 14, 17
<b>Fires low pressure fuel systems</b>	<ul style="list-style-type: none"> <li>• Monitor and present data on anonymised cases</li> <li>• Raise awareness in various meetings with owners and class</li> <li>• Participated in joint working group between IACS-IUMI and engage in follow-up discussions</li> <li>• Encourage amendments of SOLAS</li> </ul>	8, 14, 17
<b>Fires on RoRo vessels</b>	<ul style="list-style-type: none"> <li>• Support ongoing IMO work</li> <li>• Encourage the development of standards, rules and regulations for transport and charging of electric vehicles on board vessels and engage in discussions on best practice to understand and mitigate the risks</li> <li>• Support proposal for a new output on Alternative Fuelled Vehicles at IMO</li> <li>• Analysis of claims data to identify the challenges and support ongoing initiatives</li> <li>• Engage in Lash Fire project</li> </ul>	8, 14, 17

<b>Autonomous vessels</b>	<ul style="list-style-type: none"> <li>• Support the use of MASS to transfer goods from land to sea in a safe manner</li> <li>• Understand the risks and how to mitigate them by facilitating meetings, webinars and sharing of best knowledge</li> <li>• Revise insurance conditions if necessary</li> <li>• Support the development of a mandatory MASS Code at the IMO</li> </ul>	8, 13, 14,
<b>Theft prevention</b>	<ul style="list-style-type: none"> <li>• Safety recommendations for safe parking of trucks, securing of cargo and driver</li> <li>• Support collaboration across borders to prevent cargo theft</li> <li>• Raise awareness on working conditions for drivers</li> </ul>	8
<b>Places of refuge</b>	<ul style="list-style-type: none"> <li>• Support ongoing revision of the IMO guidelines for places of refuge</li> </ul>	8, 14
<b>Working conditions on fishing vessels</b>	<ul style="list-style-type: none"> <li>• Participate in HSE working group with Norwegian authorities</li> <li>• Raise awareness and offer advice on safety related matters</li> </ul>	8
<b>Crew wellbeing</b>	<ul style="list-style-type: none"> <li>• Signatory to the Neptune Declaration on seafarer wellbeing and crew change during the Covid-19 pandemic</li> <li>• Signatory to the Gulf of Guinea Declaration on suppression of piracy</li> </ul>	8
<b>Floating repair docks</b>	<ul style="list-style-type: none"> <li>• Raise awareness of the poor condition of these docks and the need for supervision and regulation in dialogue with Norwegian authorities</li> </ul>	8, 14
<b>Floating offshore fish farms</b>	<ul style="list-style-type: none"> <li>• Share knowledge of the risks; facilitate meetings and webinars</li> <li>• Monitor and provide input to the development of safety standards, rules and regulations</li> </ul>	8, 14
<b>Compliance</b>		
<b>Illegal, Unreported and Unregulated (IUU) fishing</b>	<ul style="list-style-type: none"> <li>• Raise awareness and share knowledge; incl. Oceana and UN FI PSI guidelines</li> <li>• Participate in IUU working group facilitated by Oceana</li> </ul>	14
<b>Financial crime and Know Your Client</b>	<ul style="list-style-type: none"> <li>• Knowledge sharing on financial crime (money laundering, corruption, bribery, kick-backs, fraud, cyber) and best practice on how to prevent this</li> <li>• Cefor KYC form</li> <li>• Ad-hoc partnership with the Maritime Anti-Corruption Network (MACN)</li> <li>• Consider possible guidelines and promote industry standards on non-discriminatory laws and policies for sustainable development</li> <li>• Training through webinars and Cefor Academy</li> <li>• Support IMO anti-corruption guidelines</li> </ul>	16
<b>Sanctions</b>	<ul style="list-style-type: none"> <li>• Ensure compliance through exchange of best practice and training</li> <li>• Inform of developments</li> </ul>	

## The Association

<b>Collaboration</b>	<ul style="list-style-type: none"> <li>Supporting organisation to Getting-to-Zero Coalition from September 2019</li> <li>Supporting organisation to UNEP FI Principles for Sustainable Insurance from April 2020</li> <li>Affiliate member of Poseidon Principles for Marine Insurance from December 2021</li> <li>Nine Cefor member forums used to exchange best practice and collective actions. Sustainability included among the main objectives in 2021</li> <li>Engage with stakeholders through memberships and meetings; including but not limited to class societies, regulatory authorities, owners, manufacturers, adjusters and legal experts</li> </ul>	17
<b>Clauses</b>	<ul style="list-style-type: none"> <li>Keep standard model clauses up to date with ESG developments</li> <li>Nordic Plan Version 2023 to be published 3 October 2022</li> <li>Working Group considering offshore floating wind insurance conditions</li> </ul>	8, 13, 14, 16, 17
<b>Statistics</b>	<ul style="list-style-type: none"> <li>Enhance the quality of the Nordic Marine Insurance Statistics (NoMIS) database and use this to reduce incidents based on detected claims trends</li> <li>Special focus analysis on relevant issues to raise awareness, inform and support discussions with other stakeholders</li> </ul>	8, 13, 14
<b>Framework conditions</b>	<ul style="list-style-type: none"> <li>Inform and engage with class and regulators on identified safety gaps</li> <li>Participate in consultations on matters relating to sustainability that affects the marine insurance industry</li> <li>Collaborate with relevant stakeholders on the green transition and safety in shipping</li> </ul>	8, 13, 14, 16, 17
<b>Education</b>	<ul style="list-style-type: none"> <li>Sustainability included in the Cefor Academy programme</li> <li>Organise webinars on current issues relating to sustainability</li> <li>Offer training on compliance related matters</li> </ul>	8, 13, 14
<b>People</b>	<ul style="list-style-type: none"> <li>Diversification / gender equality: <ul style="list-style-type: none"> <li>- 22% women on the Board</li> <li>- 3 women (75%) and one man (25%) in the Administration</li> <li>- More women encouraged to participate in forum activities</li> <li>- 50/50 share of male/female students in education programmes</li> </ul> </li> <li>Insurance arrangements for staff and participants in Cefor meetings.</li> <li>No reported injuries in 2021</li> <li>First-aid course (staff) planned for Q2 2022</li> </ul>	8
<b>Travel and meetings</b>	<ul style="list-style-type: none"> <li>Carbon offsetting on all business related flights by staff</li> <li>Increased use of digital tools for Cefor meetings to reduce the environmental impact from travels</li> </ul>	13
<b>Office building</b>	<ul style="list-style-type: none"> <li>Rental in certified 'Miljøfyrtårn' (eco-friendly) building</li> <li>Recycling and power switch-off procedures</li> <li>Fire safety procedures and drills</li> <li>Heart starter device available</li> </ul>	8, 13
<b>Printed productions</b>	<ul style="list-style-type: none"> <li>Digital archive only</li> <li>Websites (Cefor and Nordic Plan), Nordic Plan App and LinkedIn used as primary sources of information externally and to the membership</li> <li>Annual Report and Nordic Plan brochure only available online</li> <li>Use of environmentally certified printer</li> </ul>	8, 13



# THE NORDIC MARINE INSURANCE STATISTICS (NOMIS) 2021



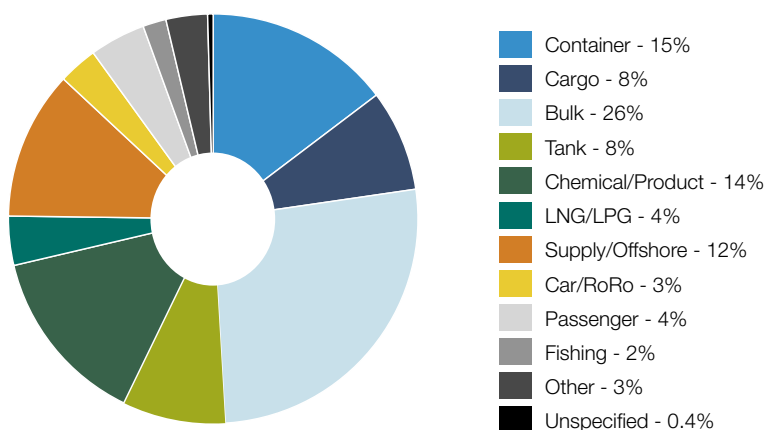
# OCEAN HULL TRENDS

# Ocean Hull trends

The main trends in the ocean hull portfolio were:

- Surprisingly benign claims development despite the limited effect of the pandemic on vessel activity (except for a few segments), an ageing world fleet (page 31/32), soaring inflation (page 37), a sharp drop in the number of port state control inspections, and initial fears of more machinery claims due to the IMO 2020 sulphur cap.
- There is one exception to the above: Fires. These continue to have a strong impact, especially in the container and car/RoRo segments (see article on page 40).
- Container vessels
  - o Value increases on renewal reflect strong demand
  - o Activity almost back to pre-Covid levels but issues with supply chains
  - o Major loss impact stronger than in other vessel segments, particularly fires

## I. Breakdown of the number of ocean hull<sup>1</sup> vessels by type, year of exposure 2021



Recent years have seen a number of challenges and disruptions to global trade and the shipping market.

These in turn influence statistical trends, not least the predictability of developments going forward.

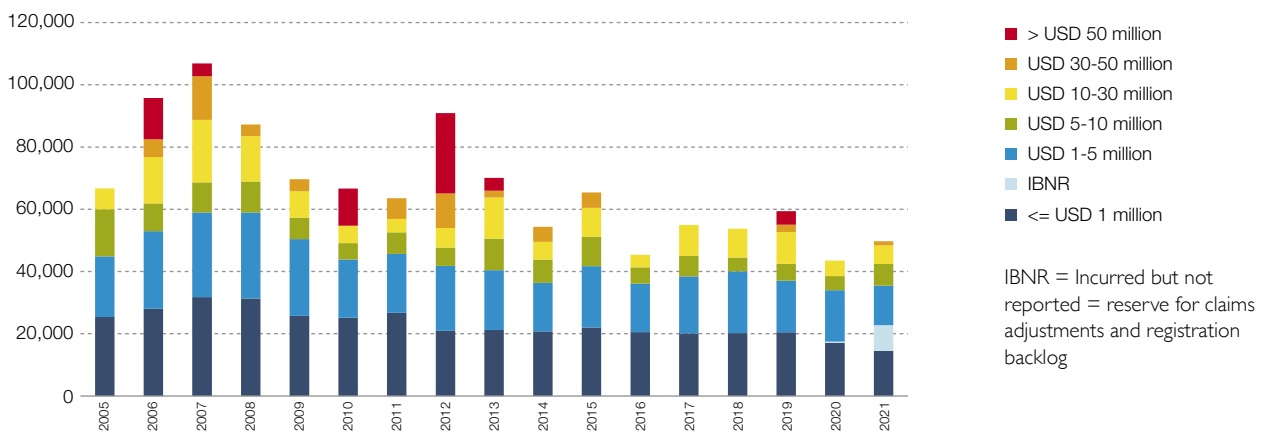
<sup>1</sup> For the purpose of these statistics, 'Ocean hull' includes all vessels with a valid IMO number.

Low oil prices have been affecting the supply/offshore sector for some years. 2021 saw the oil price rallying, but as there is typically a longer time lag between the rise in oil prices and increased activity in the offshore market, 2021 still showed a further drop in the average value of supply/offshore vessels.

In 2020, the Covid-19 pandemic caused disruptions to global trade, supply chains and the shipping market in general. These were largely reversed in 2021 but the industry faced challenges in ports and from the

blocking of the Suez Canal following an incident in March 2021, along with general supply chain issues. Container vessels were in strong demand throughout 2021 as trade caught up. This is reflected in an average 30% increase in vessel value on renewals. Nevertheless, container vessel activity levels remained somewhat below 2019 levels, which may be down to the challenges mentioned above, with port backlogs caused by too many vessels calling at the same time, quarantine rules in ports, the blocking of the Suez Canal or a lack of containers in various places.

## 2. Claim per vessel (USD) by claim size, by accident year



### Claim cost per vessel returning to pre-Covid level but still moderate

As graph 2 shows, the claim cost per vessel was historically low in 2020. It has been increasing again in 2021 to approach pre-Covid levels, but it remains at a moderate level.

The three years 2016-2018 were extraordinarily benign in the sense that no claims above USD 30 million were reported. This had never previously happened in any three-year period since 1996. From a statistical point of view and based on previous claims experience, we are

extremely unlikely to experience another three-year period with such a low major claims impact.

Claims returned to a more average expected level in 2019, but the effect of the Covid-19 pandemic on activity levels in some vessel segments led to a record low claims impact in 2020. 2021 saw a return to more normal activity and claims levels, but claims impact still remained moderate through the year, except for fires which are analysed in a separate article on page 40. In 2021, there was only one claim exceeding USD 30 million, and 10 claims in the range from USD 10 to 20 million.

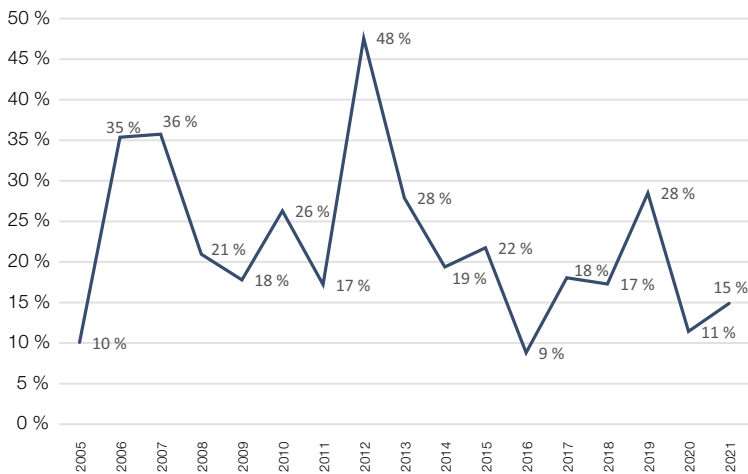
Among all historically recorded claims in excess of USD 30 million in the NoMIS database, around a third are partial losses. This means that as many as two-thirds of the most expensive claims are total losses.

Later in this article we show how certain characteristics of the world fleet with an impact on claims trends, such as a vessel's age and size or its value, have changed

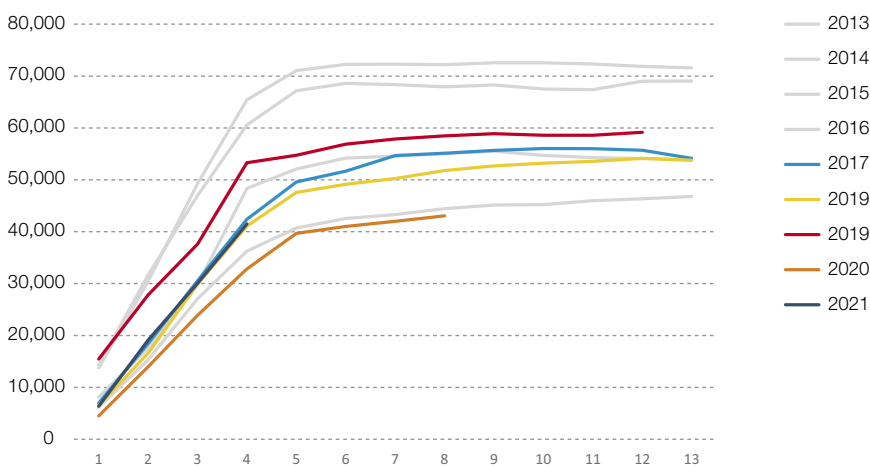
over time. These trends in the world fleet are equally reflected in the NoMIS portfolio.

Graph 3 illustrates the impact of large claims, with the cost of claims above USD 10 million expressed as a percentage of the total claims cost. The graph clearly shows that the impact of large losses in 2020 was extraordinary low and increased only slightly in 2021.

### 3. Claims in excess of USD 10 million as % of the total claim cost, by accident year



### 4. Claim cost per vessel (USD), quarterly accumulated development, by accident year



When we look at the development of the claim cost per vessel by quarter for the last ten calendar years, the year 2020 shows the lowest level, matched only

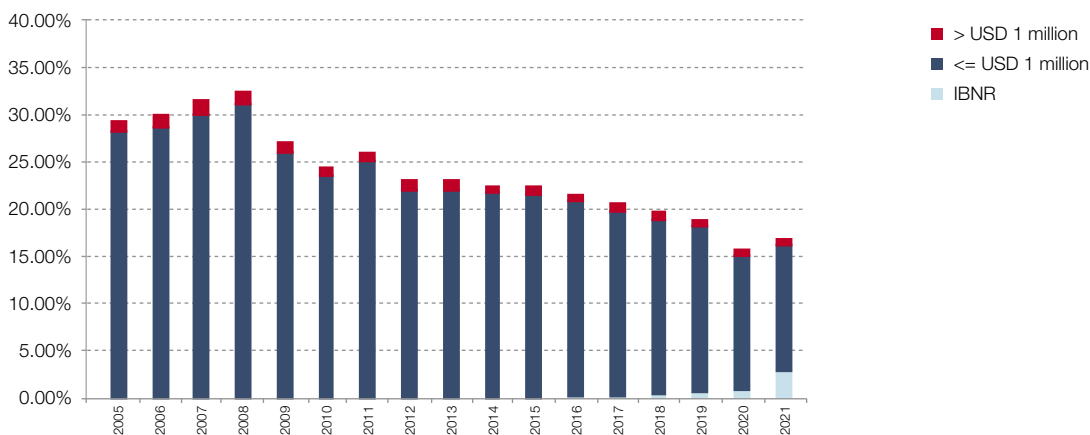
by 2016 with an extremely low major claims impact. 2021 starts at about the same level as the years 2017/2018.

## Overall claims frequency: returning to pre-Covid levels but differing strongly by segment

The claims frequency has gradually decreased over the last decade, as can be seen in graph 5. Several factors impact the claims frequency. The most

relevant are the level of insurance deductibles, the cost of repairs, vessel activity, new technology and other changes in the underlying risk. But the most important drivers for decreasing claim frequency seem to be the focus on loss prevention and improved regulatory standards.

### 5. Claim cost per vessel (USD), quarterly accumulated development, by accident year

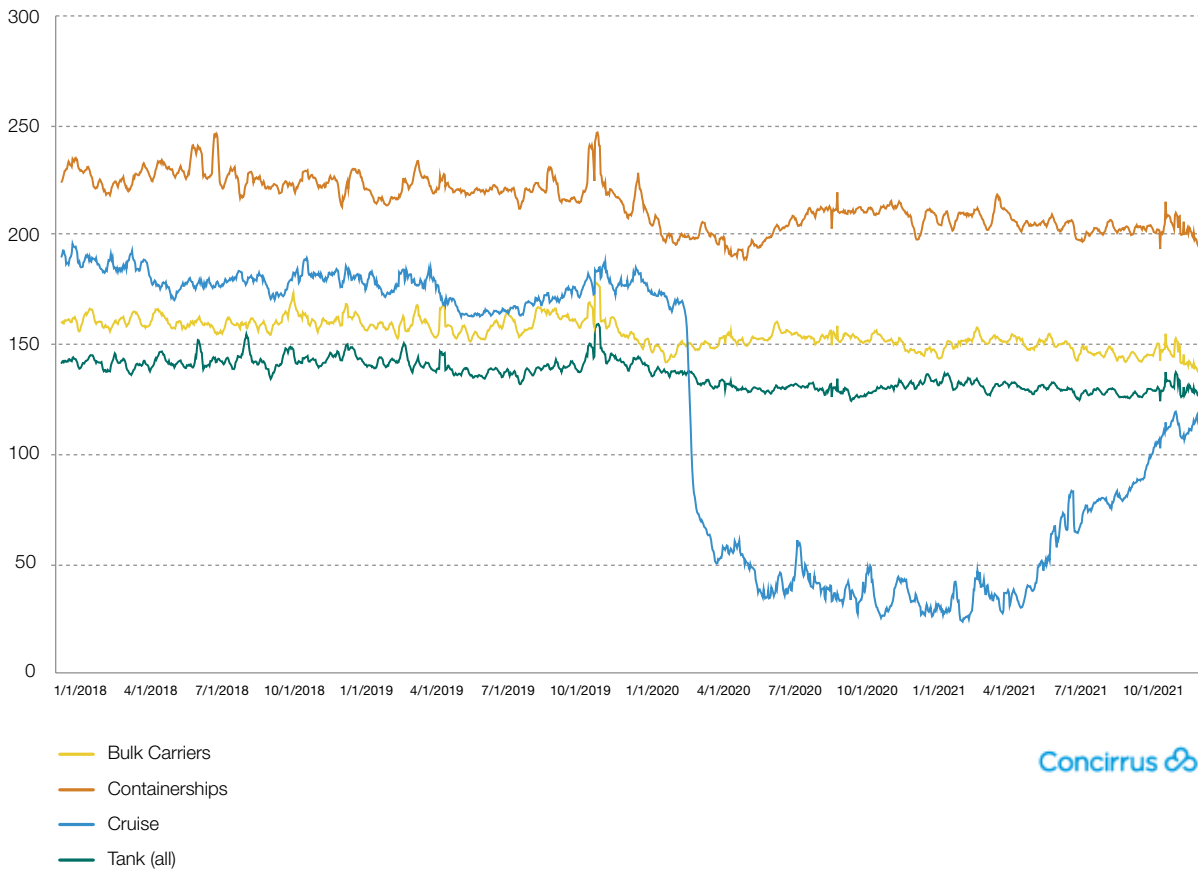


In 2020, the frequency of claims was exceptionally low compared to previous years. This has to be seen in the light of the global pandemic which led to reduced activity for parts of the world fleet. Graph 5 shows clearly that the reduction in activity differed across major vessel segments (special thanks to Concirrus for providing the vessel activity data). The pandemic particularly affected cruise vessels which showed a big drop in activity in 2020 and have only slowly recovered towards pre-Covid activity levels during 2021, with some uncertainty whether the upswing will continue into 2022.

The container vessel segment also showed somewhat reduced activity shortly after the outbreak of the

pandemic in 2020, but activity returned to more normal levels from the second half of the year. Rather remarkably, however, even though container vessels were in high demand in 2021, as reflected for example by the increase in container vessel values on renewals (see graph 19 on page 34), activity levels for the container segment in 2021 were still slightly below 2019 activity levels. Possible explanations could be supply chain issues through 2021, such as vessel backlogs in major ports, the blocking of the Suez Canal, quarantine requirements in major ports leading to delays in loading and unloading vessels, or a lack of containers.

## 6. Average daily mileage, Bulk, Container, Cruise, Tanker (all types)<sup>2</sup>



A comparison of vessel activity with NoMIS claims frequency trends (graphs 7 and 8) indicates that there is some correlation between the level of vessel activity and the claims frequency, but the effect differs by vessel segment. In 2020, for some segments, the claims frequency dropped more than the level of activity.

In 2021, container, car/RoRo and tanker vessels all showed an increase in claims frequency, while all other segments had a stable to downward trend. The increase in the claims frequency for container vessels is even more remarkable given that container vessel activity levels in 2021 stayed below 2018/2019 levels.

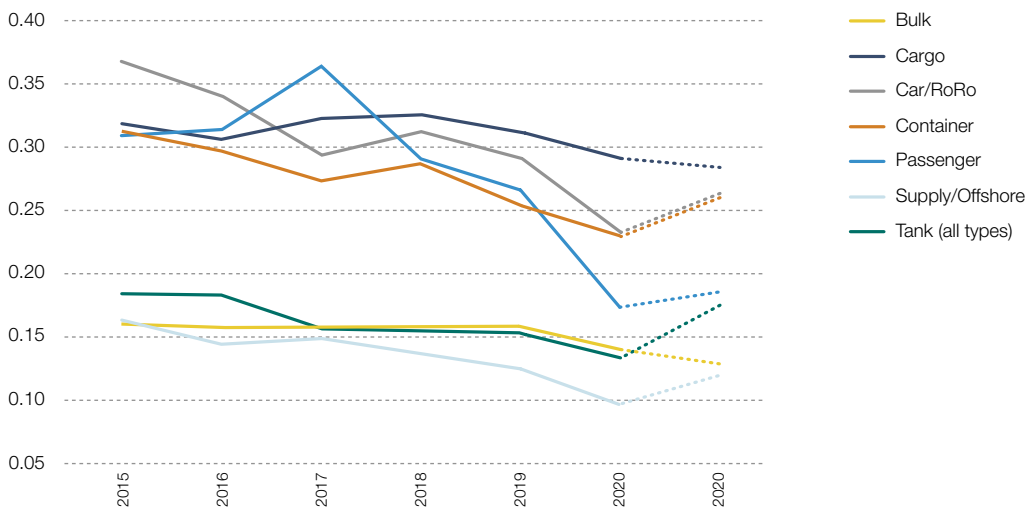
Comparing vessel activity in terms of daily mileage by year to the frequency of claims above USD 500,000, we find that:

The activity of container, bulk and tank vessels was on average reduced 5-8% in both 2020 and 2021 compared to 2019.

The frequency of claims above USD 500,000 for bulk and tank vessels dropped much more (21-44%) but this was not true for container vessels. In the container segment, the frequency of claims above USD 500,000 showed an increase of 26% in 2020 and dropped to 7% below the 2019 level in 2021.

<sup>2</sup> Average daily mileage includes times when the vessel was in port or otherwise stationary. A few anomalies around certain dates are due to irregularities in the supply of AIS data.

## 7. Claims frequency by vessel type, all claims, including IBNR, by accident year

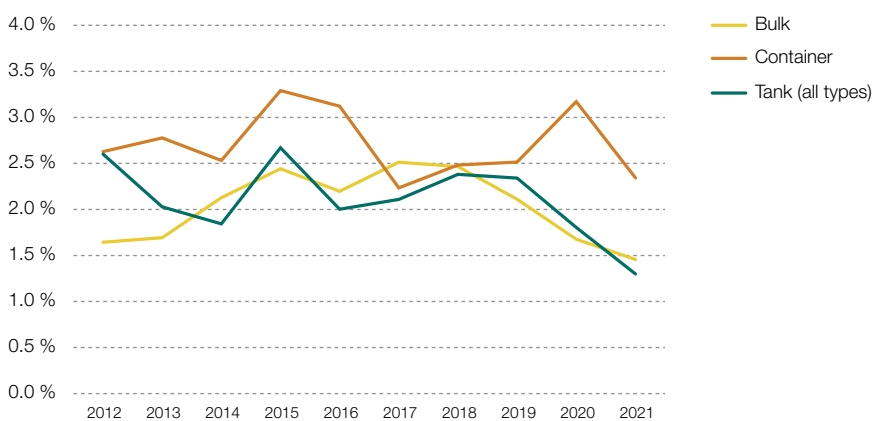


### Claims > USD 500,000: bigger drop in frequency than for smaller claims but not for container vessels

The relative drop in claims in excess of USD 500,000 is much bigger than the decrease in the frequency of smaller claims. Late notification of claims in excess of USD 500,000 varies considerably from year to year. Even though large claims are usually notified quickly, the claim estimates could increase from below to above

USD 500,000 in later years. One might speculate that delays in repairs since 2020 are making claim estimates more uncertain, so there is a risk that some of the claims below USD 500,000 could be under-reserved. However, this does not explain why container vessels display a very different pattern than the other vessel types. A worrying trend is the large number of fires on container vessels among these claims (see fire trend article on page 40).

## 8. Frequency of claims > USD 500,000 for bulk, container and tanker (all types) segment



## Claims by type of casualty

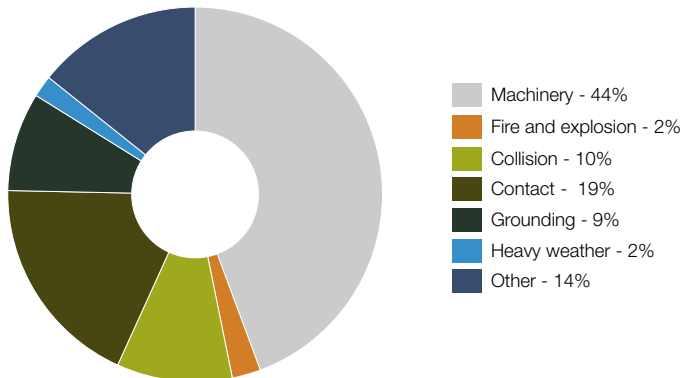
In terms of frequency, machinery claims are the most frequent individual claim type and account for 44% of all claims. All nautical-related claims combined (grounding, collision and contact) account for 38% of the total number of claims, with contact claims representing the largest number of occurrences.

In terms of cost, the breakdown among claim types

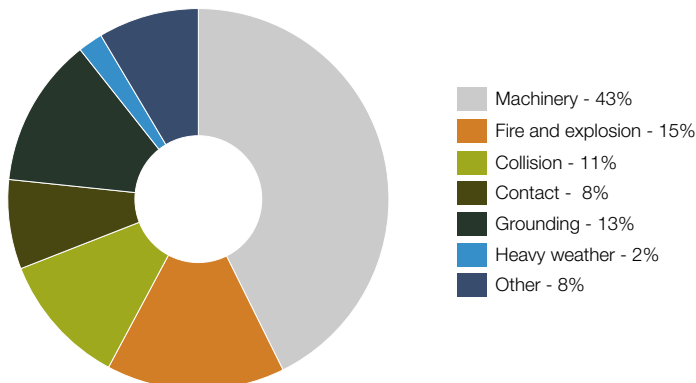
is more volatile. As machinery-related claims include many low-cost claims, their relative impact on the cost is lower. Fire/explosions and groundings represent infrequent but often very costly claims.

A matter of particular concern is that the frequency of fires has not shown the same reduction as other types of casualties which is analysed in more detail in the fire analysis on page 40.

### 9. Breakdown of total number of claims by type of claim, 2017-2021



### 10. Breakdown of total claim cost by type of claim, 2017-2021



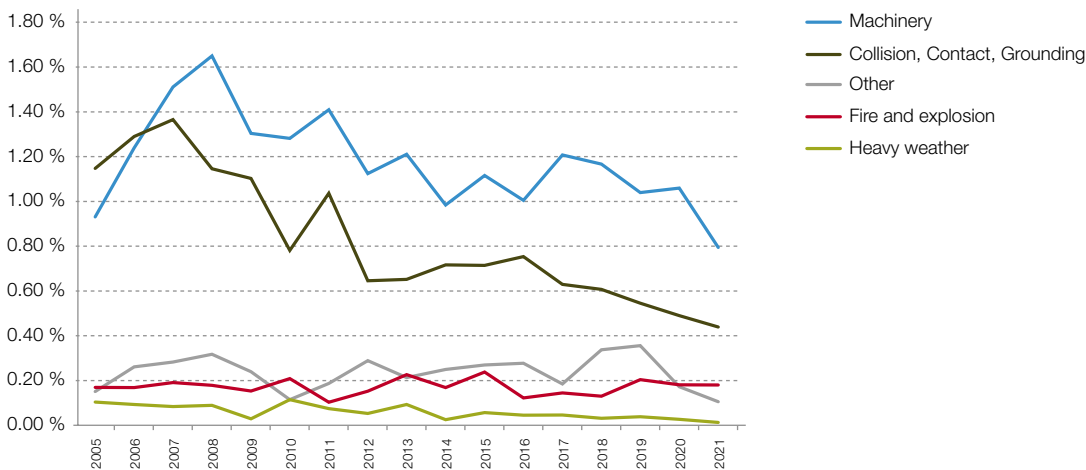
## Drop in machinery and navigation-related claims > USD 500,000 continues

There has been a significant drop in the frequency of navigation-related claims in excess of USD 500,000 in the years since 2007. Machinery claims in excess of USD 500,000 have shown the same downward trend since 2008, although their frequency has remained higher than that of navigation-related claims. While the frequency of navigation-related claims exceeding USD 500,000 has come down to a level which is lower than in the years preceding the 2008 financial crisis, this is not the case for machinery claims<sup>3</sup>. The IMO 2020 sulphur limit does not seem to have led to any noticeable increase in the frequency and severity of machinery claims. As there is currently a

lot of technological development underway aimed at reducing not only sulphur but also other types of emissions, including alternative propulsion systems and fuels, Cefor will closely monitor the trends going forward under both technical and statistical aspects.

Although the frequency of fire/explosion claims in general is much lower than machinery and navigational-related claims, it is also more volatile. The frequency of fire/explosion claims in excess of USD 500,000 has not displayed the same downward trend as other claim types, and even increased from 2019. This is a serious concern to the industry, especially with regard to fires on container and car/RoRo vessels. Cefor has issued regular fire trend analyses<sup>4</sup> with an extensive update on the issue on page 40 in this report.

### 11. Frequency of claims > USD 500,000 by type of claim, by accident year



<sup>3</sup> See Technical Forum Memo No.9 'Post-IMO 2020 experiences': <https://cefor.no/industry-policy/cefor-memos/>  
<sup>4</sup> <https://cefor.no/statistics/analysis-with-special-focus/>

## Total loss frequency stays at very low level

The frequency of total losses is volatile but has shown a long-term positive trend. Since 2010, the total loss frequency has stabilised at historically low levels of around 0.05% to 0.10%. In 2021, there were three

total losses exceeding USD 10 million, with one over USD 30 million and the two others slightly over USD 20 million. The overall total loss frequency in 2021 was 0.05% (graph 12, right axis). Excluding total losses, the frequency of partial claims is expected to end at 17% for 2021 (graph 12, left axis). This is some increase on 2020 but still below pre-Covid levels.

### 12. Long-term frequency of partial and total claims, by accident year

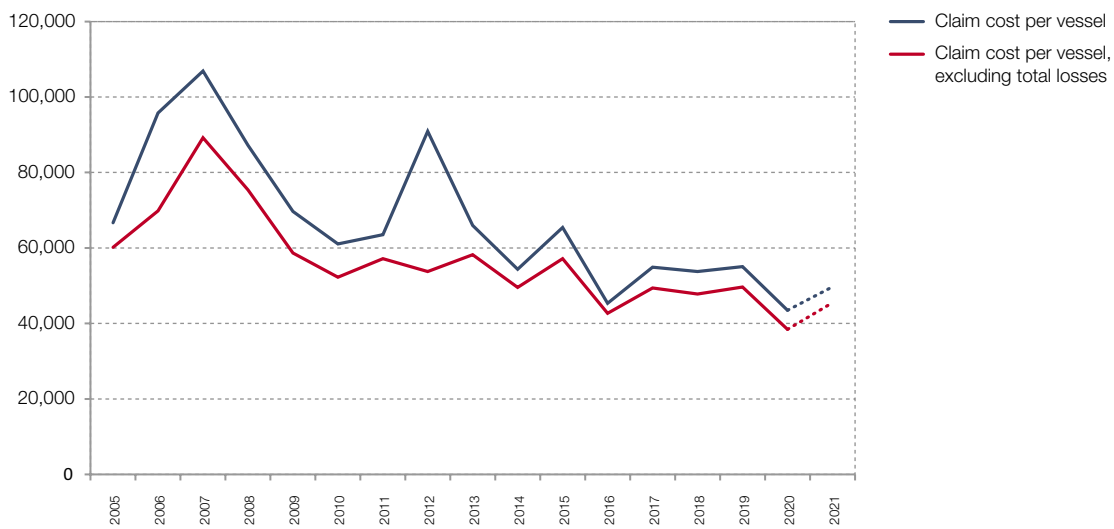


## Slight increase in claim cost per vessel from very low level

Graph 13 shows the development of the claim cost per vessel both for all claims including total losses, and for partial claims alone. A slight increase in the

claim cost per vessel in 2019 was followed by a big drop in 2020 related to various effects of Covid-19. 2021 has seen some increase in claim cost compared to the exceptionally low levels in 2020, but the level is still moderate.

13. Ultimate partial and total claim per vessel (USD), by accident year

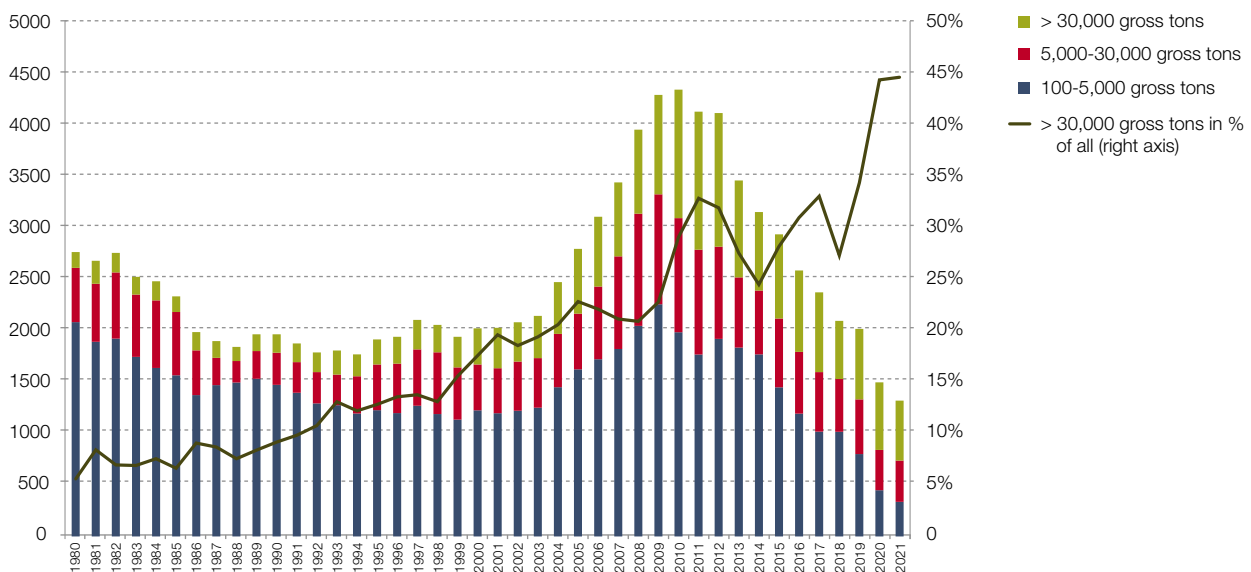


## Shipbuilding activity

After ten years with decreasing numbers of newbuilds delivered each year (graph 14), the situation was expected to turn in 2020. Deliveries of LNG carriers were expected to increase the size of the existing LNG fleet, and many bulk carriers were under construction. New deliveries of container vessels were projected to add 10% more capacity to total TEU during 2020.

The arrival of Covid-19 caused major disruption to some vessel segments, and so also affected newbuild and scrapping activity. Due to the long-term nature of contracting vessels, the full impact on newbuild numbers will only be visible with a time lag, while some of the impact on scrapping could already be seen in 2020, including a number of older cruise vessels being sent for scrapping after the collapse of the cruise market. Ship activity returned to more normal levels in 2021 for most segments except cruise vessels, but the effect on shipbuilding will only take effect after a certain time lag.

### 14. World fleet: deliveries by year of build, by intervals of vessel size



Source: Lloyd's List Intelligence "World Fleet Update", vessels with IMO-no., all vessel statuses, as of January 2022.

## World fleet trends reflected in the NoMIS portfolio

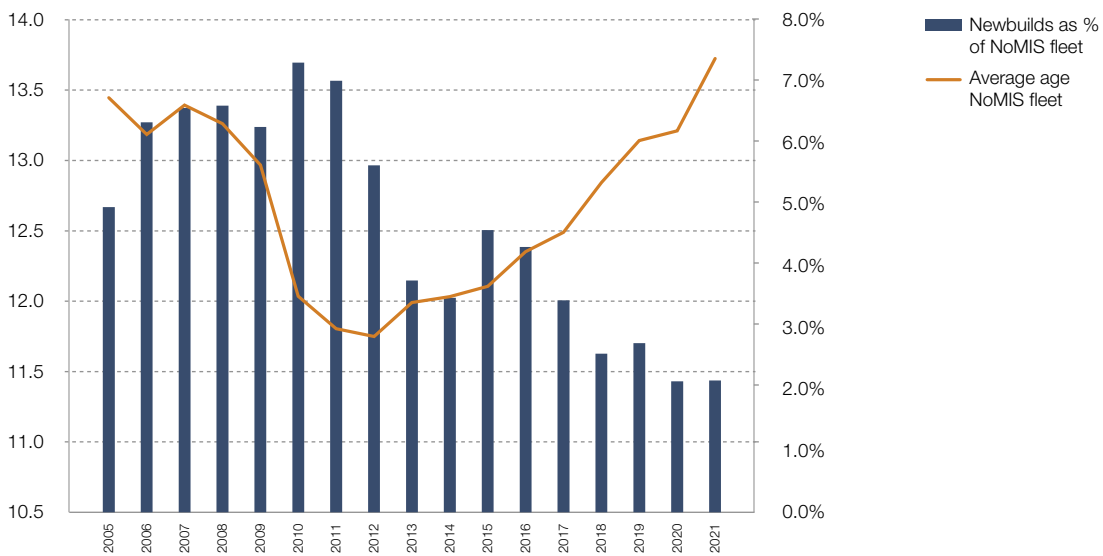
Prior to the financial crisis in 2008, an increasing number of newbuilt vessels were entering the NoMIS portfolio. The outlook for seaborne trade was bright, and capital was pouring into the market. The influx of

newbuilds continued to affect the NoMIS portfolio even after the shipping boom. From 2001 to 2012, the average vessel age decreased from 14.1 to 11.8 years (graph 15). In strong correlation with this, the average insured value was constantly increasing, eventually peaking in 2010 (graph 17).

Since then, the situation has reversed. The average age in the NoMIS portfolio has increased continuously in line with the ageing of the world fleet, reaching 13.7 years in 2021. At the same time, the influx of newer and more modern vessels into the NoMIS portfolio

has slowed down, and the share of newbuilt vessels in the NoMIS portfolio has decreased substantially (graph 15). The NoMIS portfolio thus reflects the same trends as the world fleet.

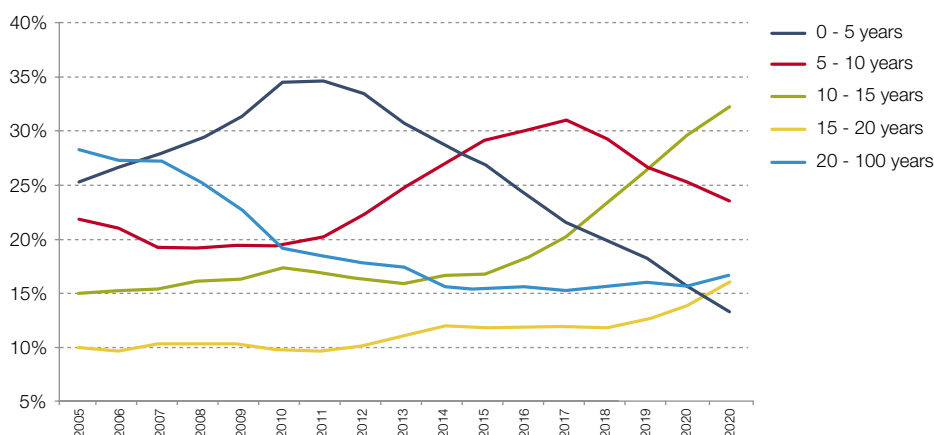
### 15. Average age and newbuilds as % of NoMIS fleet, by underwriting year



Another way of illustrating the changing age distribution in the NoMIS fleet is graph 16. The share of vessels less than five years old started to drop steadily from 2011. From 2017, the 5-10 year age

group also started to reduce, while the 10-15 year age group has increased substantially and in 2019 surpassed the 5-10 year group as the largest vessel age group in the NoMIS database.

### 16. Age distribution of NoMIS fleet, by underwriting year

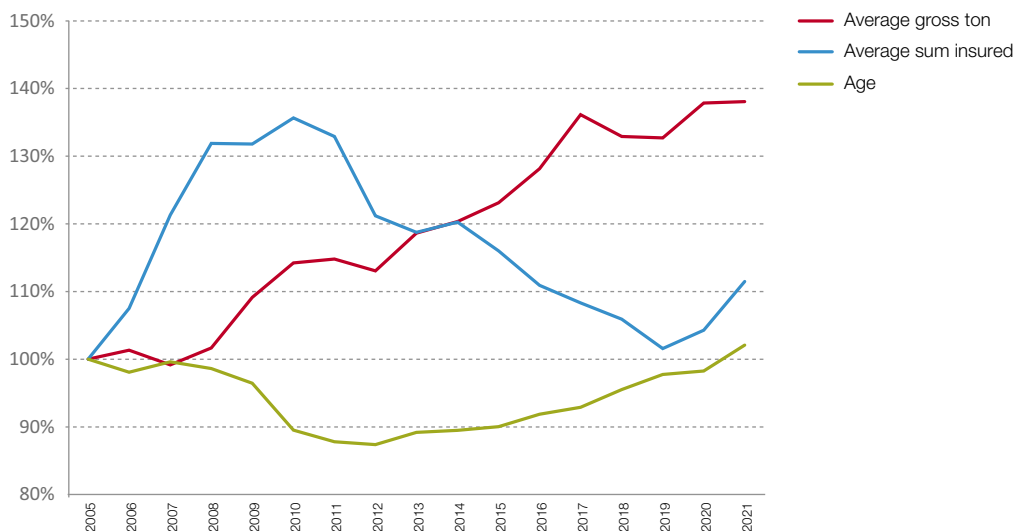


## Mismatch between average vessel size and vessel value

Indexing the key variables of sum insured, age and gross tonnage (graph 17) shows that the average size of vessels has steadily increased over time, with some variations in recent years. The slight reduction in the years 2018 and 2019 should be seen in conjunction with the reduced number of newbuilt vessels entering the world fleet, as it was the newbuilt vessels with ever increasing individual vessel sizes that were driving up the average vessel size in the fleet. From 2019, the newbuild process seems to have gained some traction again with average vessel sizes on the rise once more.

The most remarkable feature in graph xx has been the increasing mismatch between the development in the average insured vessel value and the average vessel size in the years from 2010 to 2019. One would normally assume a correlation between a vessel's size and its value, but from 2010 to 2019 these two parameters moved in opposite directions. From 2020 this trend turned, with average insured values rising again. The index in graph 17 includes both new built and renewed vessels. A comparison with graph 18 reveals that the small increase in the average values in 2020 was due to the influx of newbuilt high-value vessels, while the situation in 2021 is different with value increases for both new and renewed vessels. The main driver for this has been the strong demand for container vessels.

17. Index average insured vessel value, gross ton, age  
New & renewed business, 2005 = 100%, by underwriting year



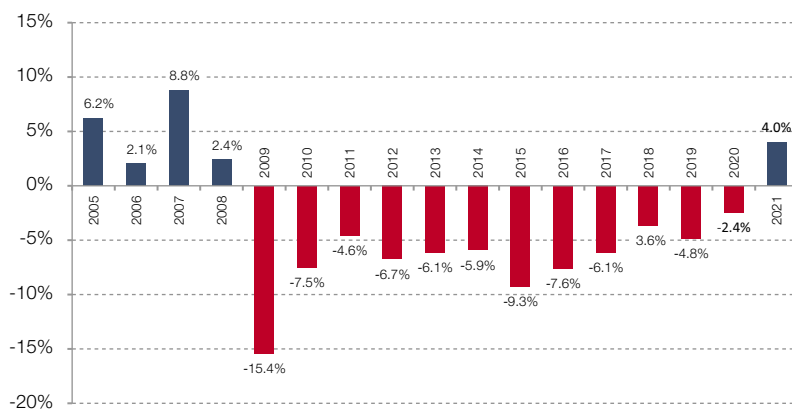
## Value changes on 2021 renewals differ strongly – record increases for container vessels

Graph 18 shows the change in insured values for renewed vessels. Newbuilds and other new entries are excluded, which means that the same vessels are compared from one year to the next. The graph shows that the decrease in insured values on renewed vessels gained traction again in the last two

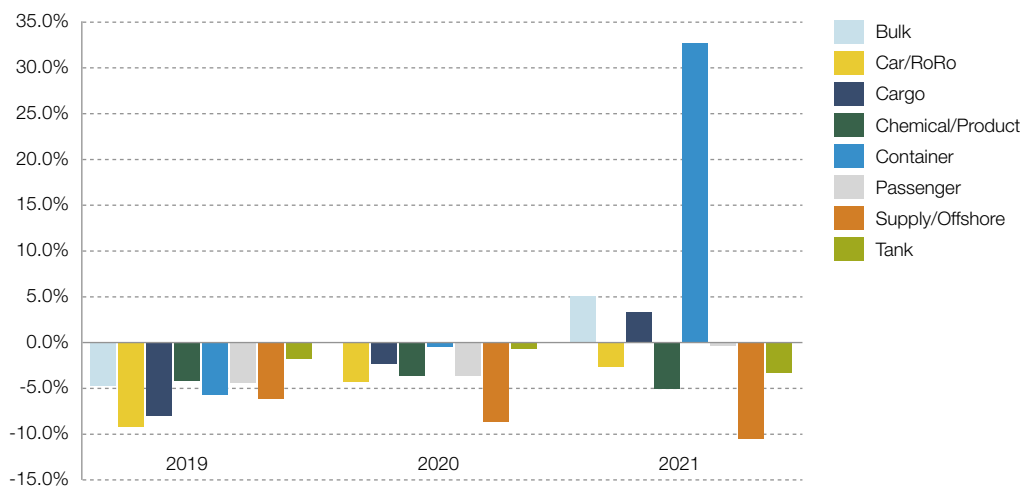
years. The main drivers for the increase in average vessel values in 2021 are container vessels and to some degree also bulk carriers. The market remained unfavourable for supply/offshore vessels, which on average saw a further 10.5% drop in values in 2021.

It should be remembered that, under stable market conditions, one would expect to see some reduction in the insured value on renewal because of the ageing factor.

18. Average annual change in insured values on renewed vessels



19. Average annual change in insured values on renewed vessels, by vessel segment

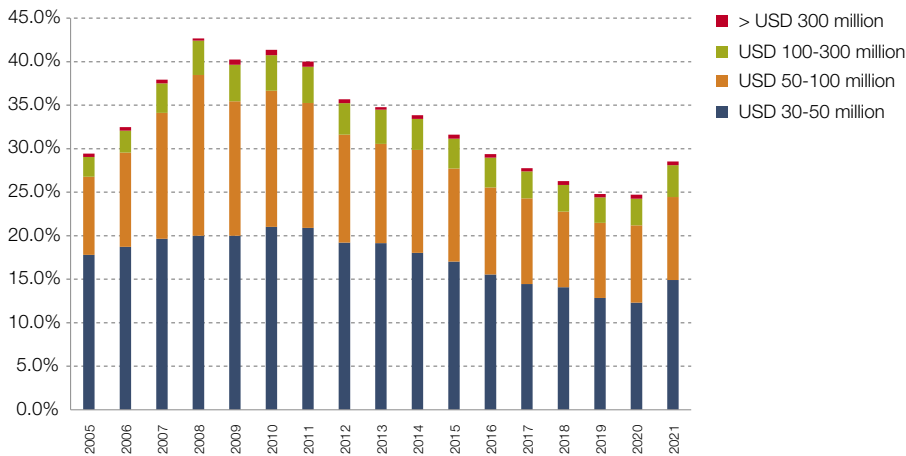


Graphs 20 and 21 illustrate the share and number of high-value vessels in the NoMIS database. The relative share of such vessels in the NoMIS portfolio decreased from 2010 to 2019 but increased substantially again in 2021 (graph 20). The absolute number has shown a continuous increase since 2016, with a bigger increase in 2021 (graph 21). With the cruise market still to return to pre-Covid activity levels, a major part of the increase in high-

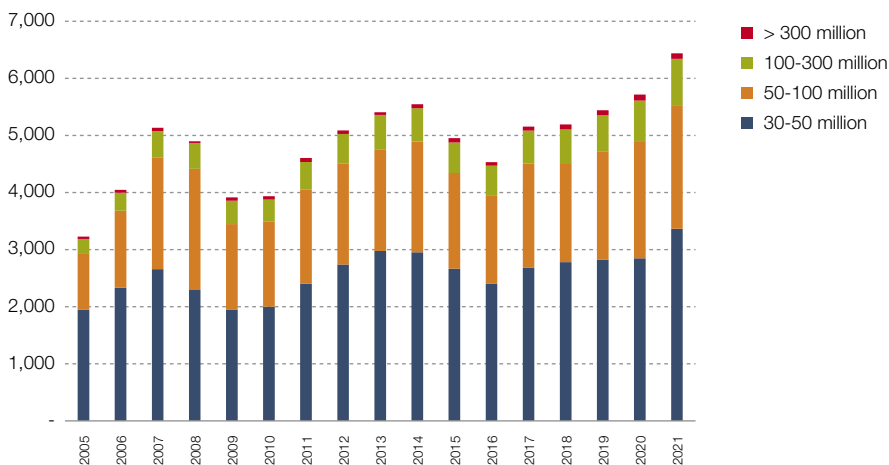
value vessels can be attributed to newbuilt container vessels and to strong increases in average values on renewal of such vessels.

As explained in the section on trends in claim cost, the number of high-value vessels affects the probability of incurring claims in the range above USD 30 million, as only high-value vessels can have claims in that range.

## 20. Percentage of vessels in the portfolio with values exceeding USD 30 million



## 21. Number of reported vessels with values exceeding USD 30 million

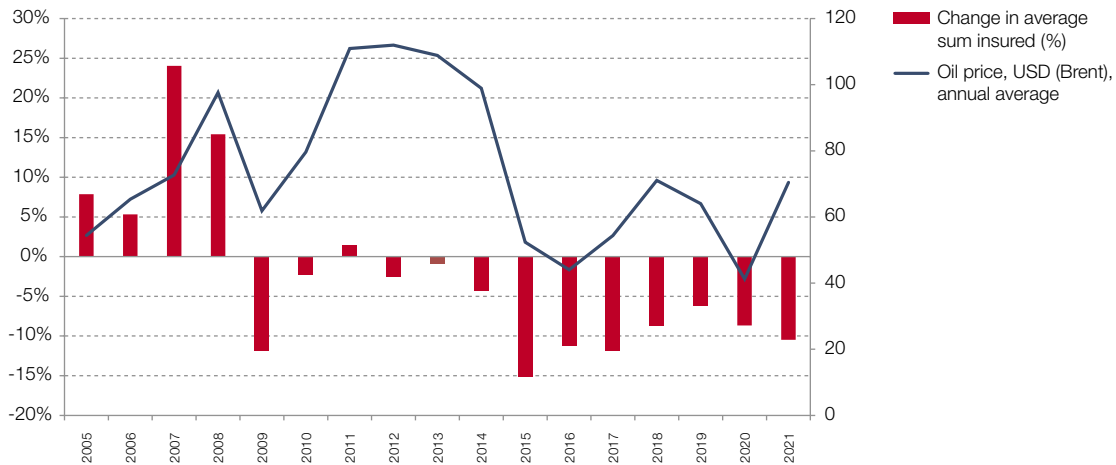


## Offshore still under price pressure

For the supply/offshore segment, the downward trend continued with a further 10.5% fall in insured values in 2021. On average, the value of a supply/offshore vessel today is substantially down from a few years ago. When the oil price started to rally from 2016 to 2018, this upswing had only a marginal effect on the supply/offshore market before the oil price started to fall again from 2018. On a month by

month basis, since the second half of 2019 and into 2020, there were a number of fluctuations and even an all-time low in the first part of 2020. This was followed by a slight recovery and a strong upward trend through 2021. There is typically a time lag of up to 18 months before an upswing in oil prices leads to increased activity in the offshore sector; so it remains to be seen whether the recent upswing will last long enough to give rise to new projects.

### 22. Change in average sum insured (supply/offshore) on renewal & oil price (Brent)<sup>5</sup>



<sup>5</sup> World Bank Commodity Price Data: <https://www.worldbank.org/en/research/commodity-markets>



# INFLATION

# Inflation

In the years leading up to the 2008 financial crisis, marine insurers experienced strong claims inflation. In later years, claims deflation may have been more prevalent than inflation. Insurers and reinsurers are now fearing a return of claims inflation following the 2021 hike in general inflation, vessel values and steel prices. The deductibles make it hard to separate severity trends (such as inflation) from frequency trends. If a gross claim of USD 250,000 increases by 10% to USD 275,000, the net claim in excess of a USD 200,000 deductible will increase from USD 50,000 to 75,000 – i.e. 50%. More generally, all claims that were previously above the deductible will increase more than the underlying inflation. In addition, more claims will exceed the deductible,

increasing the total claim cost further but pushing the average claim size down. In a period of inflation, the aggregated net claims will thus increase more than the gross claims if the deductible is unchanged. The effect on a specific portfolio depends on the deductibles, risk characteristics and random variation. The table below illustrates the effects based on claims in the 2020 calendar year in the NoMIS portfolio. As we have no information on claims below the deductible, the net claims were first re-calculated with an increased deductible of USD 500,000. It is then possible to assess the effect of adjusting all gross claims by a fixed factor:

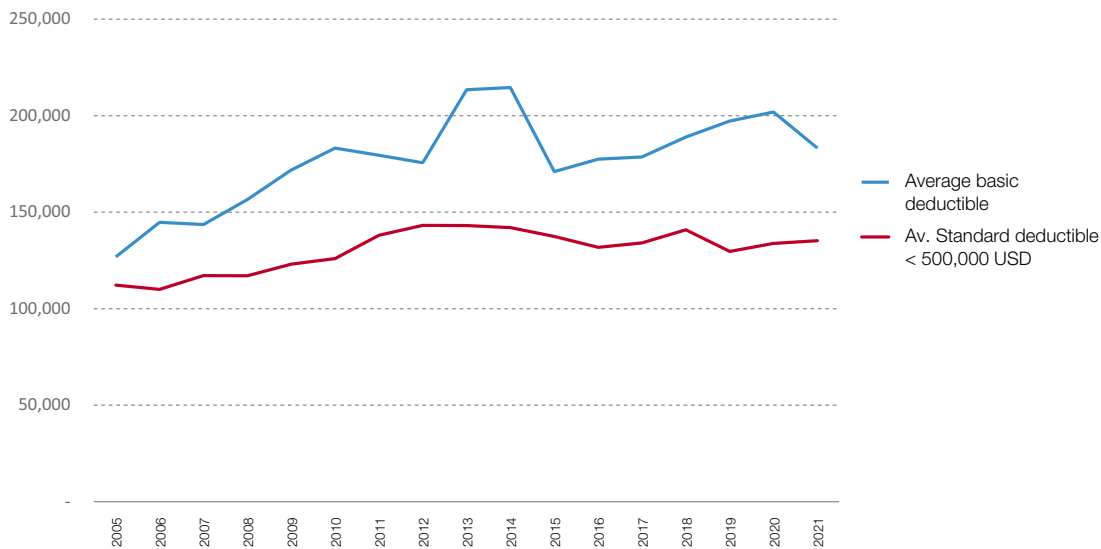
<b>Inflation</b>	-20%	-15%	-10%	-5%	0%	5%	10%	15%	20%
<b>Net claim cost</b>	-28%	-22%	-15%	-7%	0%	7%	15%	23%	30%
<b>Claim count</b>	-25%	-16%	-11%	-6%	0%	5%	10%	15%	20%
<b>Average net claim</b>	-5%	-6%	-4%	-1%	0%	3%	5%	7%	8%

With this set of data, 10% inflation would result in a 15% increase in net claims, a 10% increase in number of claims and a 5% increase in average claims. Other portfolios are likely to give different results, so the above should not be regarded as a best estimate of the impact of inflation.

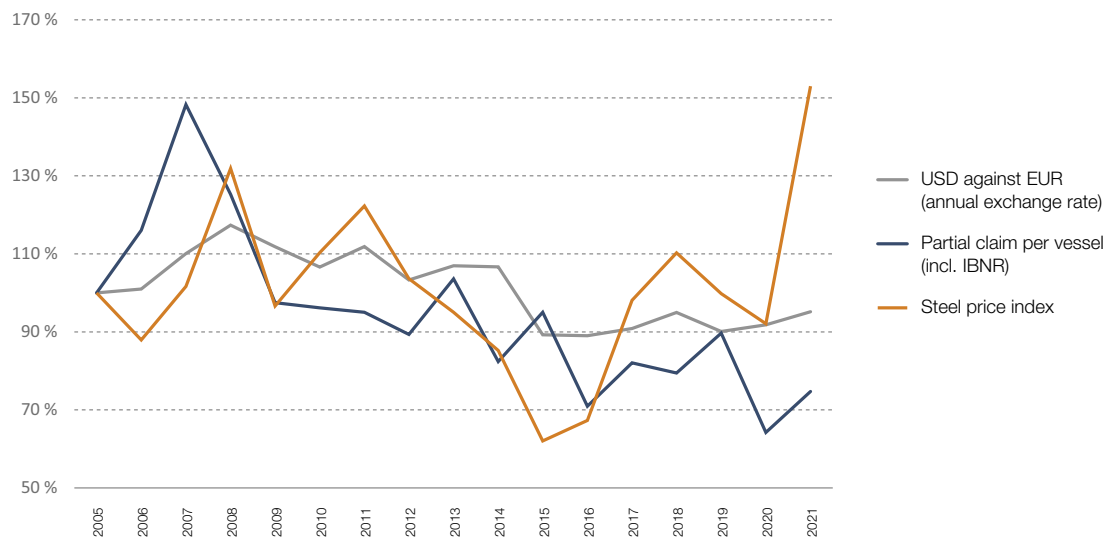
In 2021, both general inflation and inflation in materials used in repairs has shown strong growth.

However, so far this has not been observed in claims data, as the claim frequency is still low. Insured values show a strong increase in some segments, but deductibles have not followed the same pattern over time. It remains to be seen whether this results in increased claim costs going forward, or whether it may be offset by the favourable claims trend observed in past years.

### 23. Average basic deductible (USD), by underwriting year



### 24. Inflation drivers - Partial claim per vessel (USD) versus steel price & exchange rate USD-EUR, Index 2005 = 100%, by accident year



Graph 24 indicates some correlation between partial claims cost (excluding total losses), steel prices and exchange rates against the USD. Exchange rates against the USD may impact claims costs in the sense that a large share of hull insurance in the ocean hull segment is written in USD, while most vessel repairs are carried out in Europe or Asia and paid for in currencies other than USD.

As explained above, the sharp increase in steel prices in 2021 has not yet led to increased claims costs in the NoMIS portfolio but may be an indication of future claim cost inflation.



# FIRES – STILL BURNING

# Fires – still burning

For a number of years, Cefor has been publishing analyses<sup>1</sup> of fire trends on vessels, with a particular focus on container and car/RoRo vessels. Several initiatives<sup>2</sup> have since been launched to reduce the fire risk on board such vessels. While the claims frequency for most types of casualties has shown a downward trend, this has not been the case for fires. Fires have continued to have a big impact in 2021, too. The analysis below shows that the largest impact on fire frequency and cost continues to originate from container and car/RoRo vessels.

## The context in 2021: Big drop in claims frequency continues, but fires still an issue

Graph 25 shows that the claims frequency for all types of claims in excess of USD 500,000 decreased continuously from the peak in 2007/2008. In 2020 and 2021, there was a significant further drop which has to be viewed against the conditions in the shipping market, including effects of the Covid-19 pandemic (see Cefor trend analyses issued in 2021<sup>3</sup>).

For fire/explosion claims there is no similar trend. While the occurrence of fire/explosion claims generally has much higher volatility, graph 25 also shows that the frequency of fires has oscillated around the same average level. The year 2021 does not show any trend change in the frequency of fires. In contrast to other types of casualties, it stays at about the same level as in 2019 and 2020, confirming that fires behave differently from other types of casualty. A particularly worrying trend is the increase in the frequency of fires over USD 500,000 on container-carrying vessels (graph 27).

Graphs 25 and 26 include all types of fires. To improve loss prevention, it is relevant to distinguish between engine room fires and fires starting in the cargo area of a vessel.

Although the fire/explosion frequency is low in percentage terms compared to other claim types, the cost of such claims is typically high and therefore affects the overall annual claim cost (see article on ocean hull trends, p. 20).

<sup>1</sup> <https://ceforno/statistics/analysis-with-special-focus/>

<sup>2</sup> Recent initiatives:

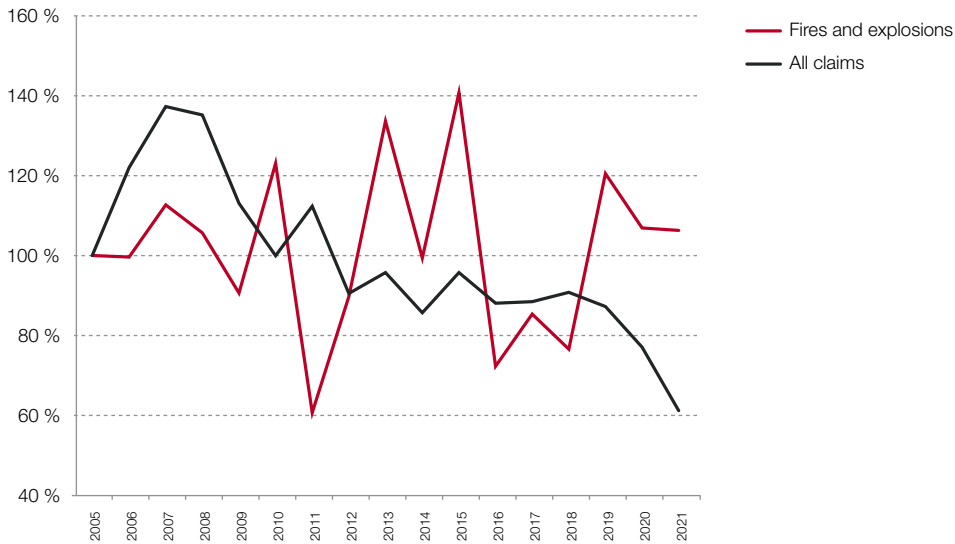
1) International Maritime Organisation (IMO), ongoing work by Subcommittee on Ship Systems and Equipment (SSE) to improve fire protection: <https://www.imo.org/en/OurWork/Safety/Pages/FireProtection-default.aspx> <https://www.imo.org/en/MediaCentre/MeetingSummaries/Pages/SSE-Default.aspx>

2) LASH FIRE: Research project aiming to reduce the risk of fires onboard RoRo vessels <https://lashfire.eu/>

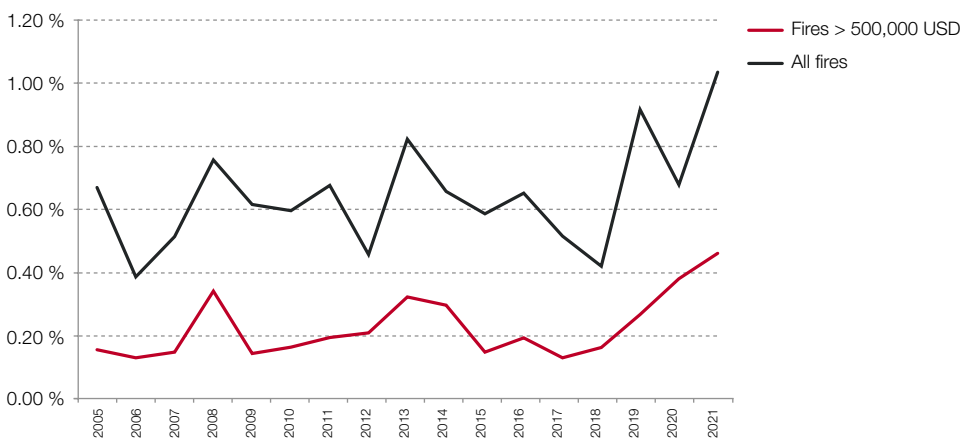
3) EMSA/OP/17/2021: Study for investigating cost efficient measures for reducing the risk from cargo fires on container vessels (CARGOSAFE)

<sup>3</sup> Cefor hull claims trend analyses: <https://ceforno/statistics/nomis/2020/nomis---as-of-december-2020/> and <https://ceforno/statistics/nomis/2021/2021-cefor-june-hull-trends-report/>

25. Frequency of claims > USD 500,000, all claims versus fires/explosions, Index 2005 = 100%, all vessel types, by accident year



26. Frequency of fires on container vessels<sup>4</sup>, by accident year



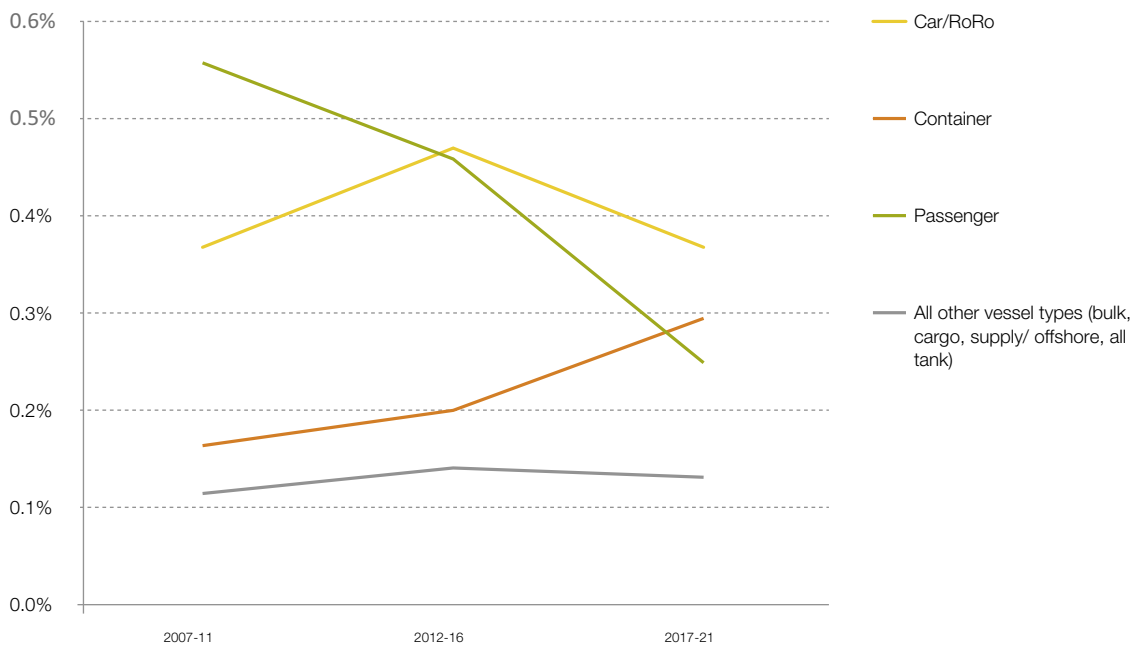
<sup>4</sup> Includes all types of container-carrying vessels (fully cellular container vessels and combination carriers such as RoRo with container-carrying capacity)

## Highest fire risk on large container vessels and medium-size car carriers

Graph 27 shows that the highest fire frequency can be observed on passenger, car/RoRo and container vessels. For container vessels, the frequency of fires has shown a rising trend. This is particularly true for

fires with a cost of more than USD 500,000. The incidence of these expensive fires also remains high for car/RoRo vessels, while there has been some improvement for passenger vessels. The recent improvement for passenger vessels may be related to enforced inactivity over a long period because of the Covid-19 pandemic.

27. Fire/explosion frequency by vessel type<sup>5</sup>, claims > USD 500,000, by accident year



<sup>5</sup> In this graph, 'Car/RoRo' includes RoRo with container-carrying capacity, while 'Container' reflects fully cellular container vessels.

## Upward trend in fire frequency on container vessels

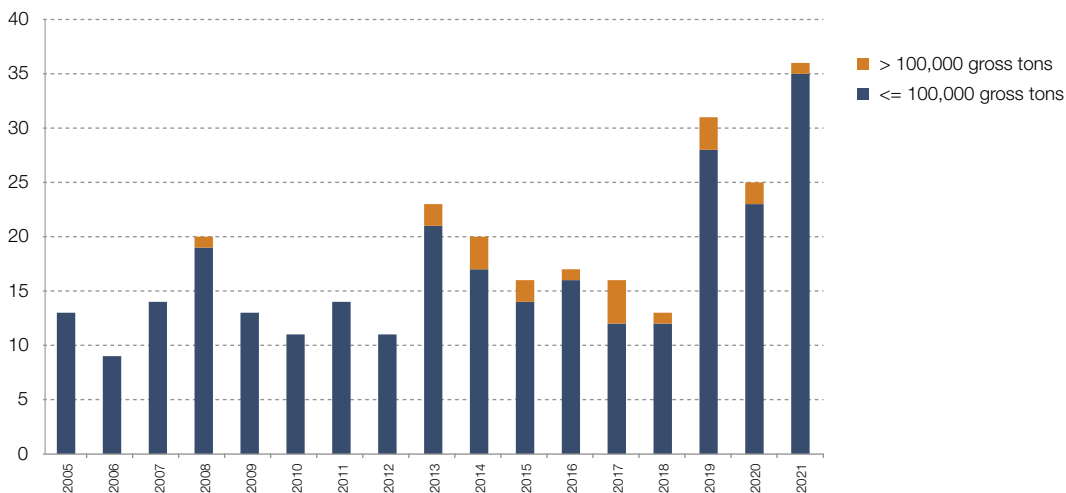
The following statistics cover all types of container-carrying vessels. These include both fully cellular container vessels and combination carriers such as RoRo vessels with container-carrying capacity. They do not include any vessel types which are not designed for carrying containers.

In the first quarter of 2019, an unusually large number of fires on container vessels was recorded. In

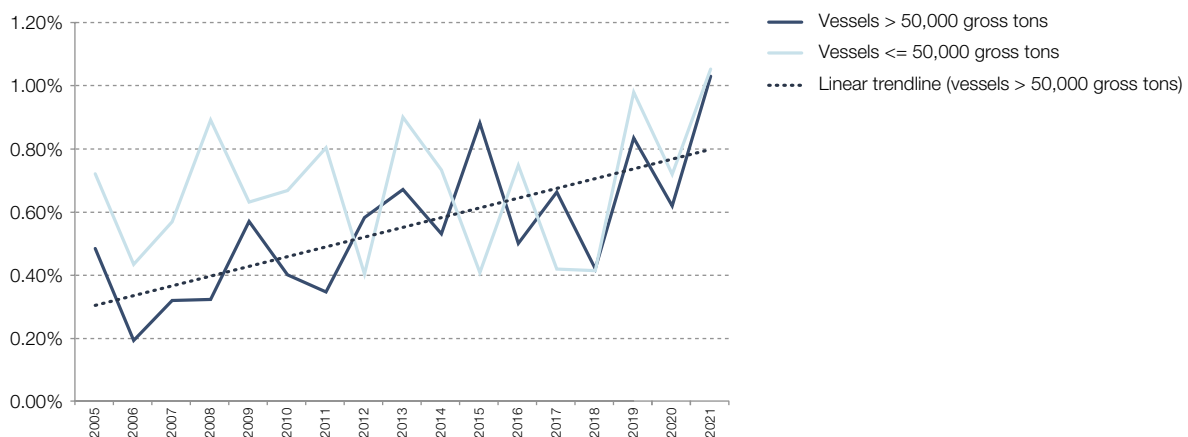
2020, the number was slightly reduced, but was still above the average for the years before 2019. In 2021, the statistics are showing a further increase.

An increase in the absolute number of reported claims as shown in graph 28 needs to be interpreted in the light of changes in the underlying portfolio. Analysing the fires in relation to the container fleet, reflected by the claims frequency and the claim cost per vessel, this confirms an actual upward trend in the frequency of fires on container vessels, particularly on large ones.

28. Fires on container vessels – Number of occurrences by vessel size, by accident year



29. Frequency of fires on container vessels by size of vessel, by accident year



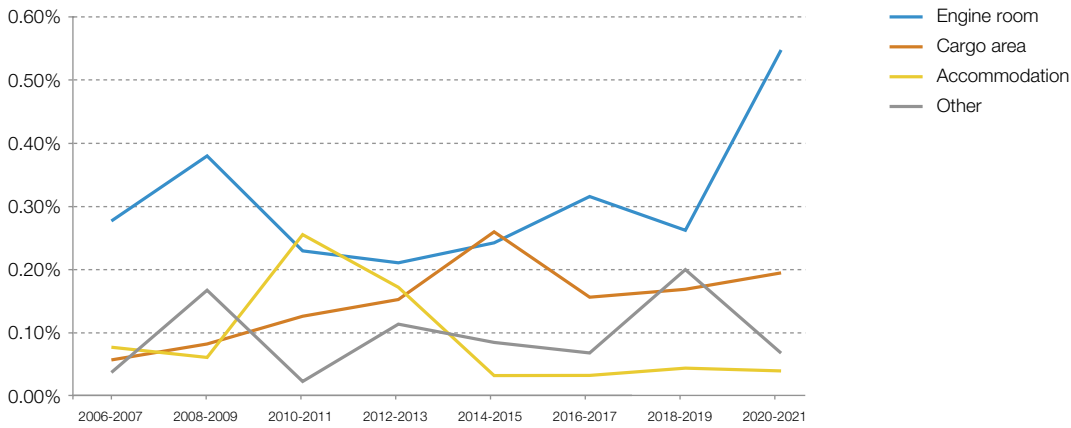
Graph 29 compares the frequency of all fires/explosions on container vessels of less than 50,000 gross tonnes (Panamax) to those above 50,000 gross tonnes. In terms of container-carrying capacity, 50,000 gross tonnes translate into approx. 4,500 TEU. In graph 29, the number of reported claims is related to the number of insured vessels of that size in the NoMIS portfolio. For the larger vessels, there has been a clear trend towards more fires over the last fifteen years. From the trendline one can deduce that over the whole period from 2005 to 2021 the frequency of fires on vessels over 50,000 gross tonnes has increased by a factor of 2.6. In 2021, the fire frequency on smaller vessels also showed a slight increase. A small reduction in the frequency in 2020 does not break the general upward trend and is within the range of normal fluctuation.

Of particular concern is the continuous increase in the frequency of fires on vessels over a certain size, where the potential for injury to crew members and damage to cargo is especially great if the fire cannot be extinguished before it spreads to other areas.

A statistically obvious explanation why the fire frequency in the container and RoRo segments increases with vessel size is related to the amount of transported cargo. With a given probability of a fire starting in any one container, the probability of a fire starting in at least one of the containers will grow in almost direct proportion to the number of containers. The larger the number of containers on board, the higher the probability that at least one of the containers could contain something that self-ignites and causes a fire. Moreover, the larger the vessel, the more severe the consequences of the worst-case fire scenario on this vessel will be.



### 30. Frequency of fires on container vessels, by type of fire, by accident year



Graph 30 shows that, while the years 2020 and 2021 were heavily impacted by engine room fires, fires in the cargo area of container vessels have also shown a steady increase in recent years. From a trendline perspective, flattening out individual years' deviations, one can observe an increase by a factor of about 2.4 over the whole period 2005 to 2021. As explained

above, this increase needs to be seen in the light of an increase in vessel sizes, which in turn increase the probability of fires in the cargo area and makes them more difficult to extinguish. Unlike fires in the engine room, fires starting in the cargo area are challenging to detect and extinguish.



## Claim cost per vessel

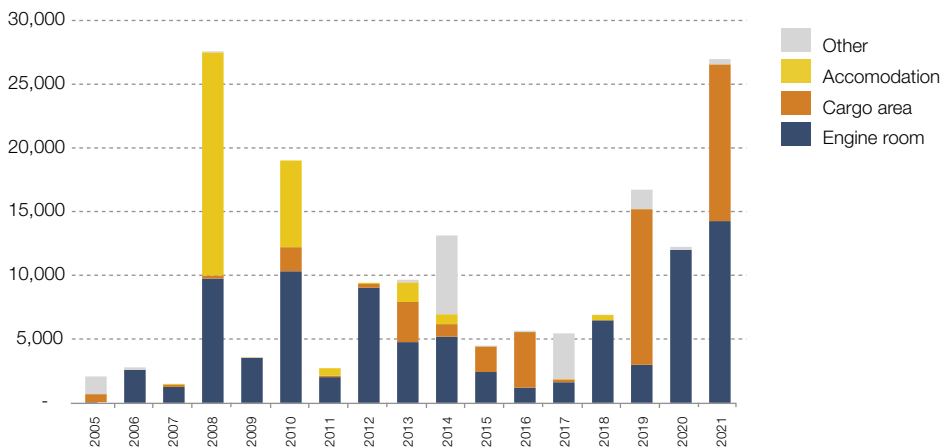
Fires often represent a high cost to shipowners and hence to their insurers. The statistics in this analysis reflect claims incurred under the vessels' standard hull and machinery policies as reported into the NoMIS database, i.e. the costs of physical damage to the vessels. In some cases, very high additional costs may result from injury to crew, interruption to business and environmental damage. These costs are not included in the statistics presented here but would typically be covered by the vessels' loss of hire and P&I insurers.

Graph 31 shows the claim cost per vessel for fires. A large share of the cost of fire/explosion claims

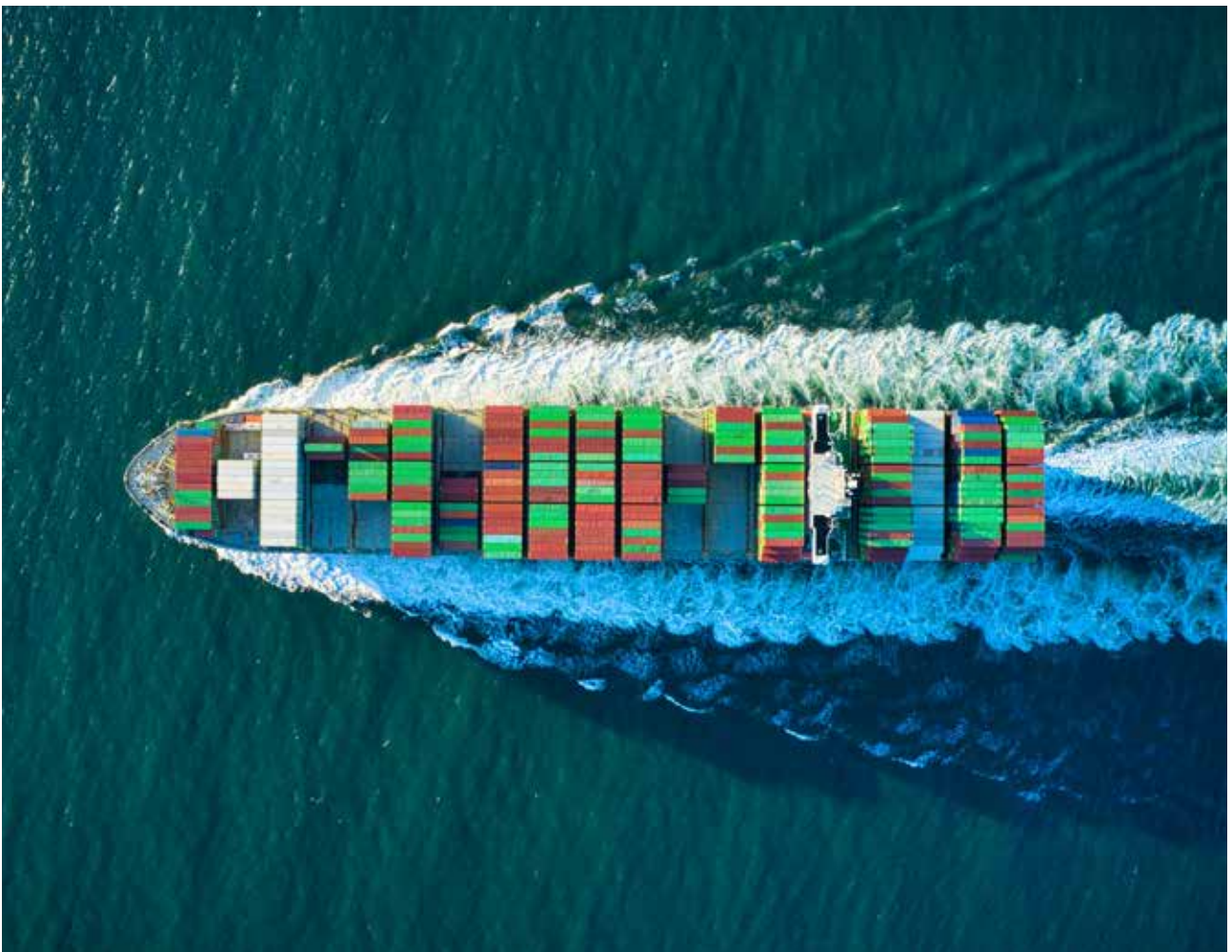
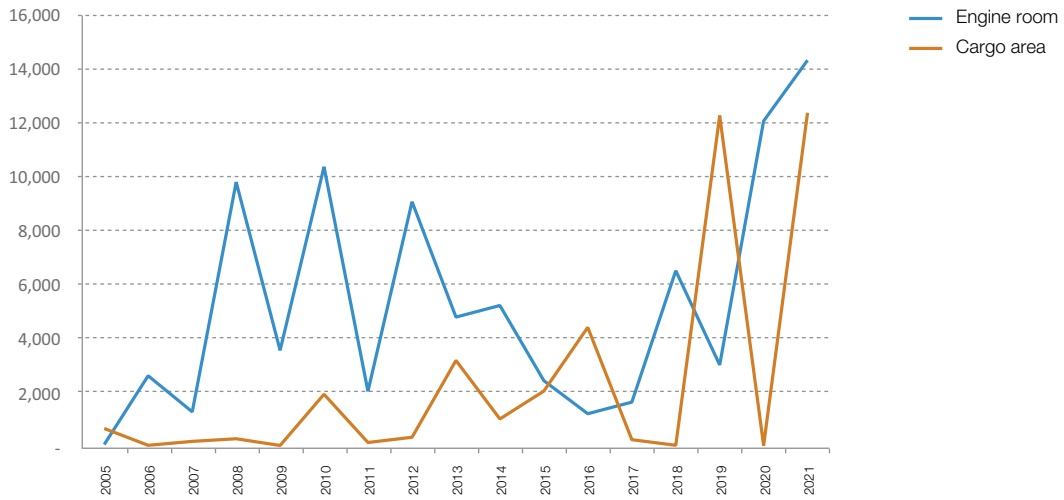
on container vessels since 2012 originated from fires starting in the cargo area. Among the concerns are the risk associated with incorrect packaging, misdeclared and undeclared dangerous goods, which are all regarded as significant contributing factors. The misdeclaration of goods might for example lead to containers which should not be exposed to heat being stored in unsuitable places where the contents could self-ignite.

In 2020 and 2021, engine room fires were especially prevalent. For engine room fires too, the probability is higher on larger vessels that such fires may result in higher costs, as large vessels have more equipment in the engine room, for example more auxiliary engines.

31. Claim cost per vessel (USD) – Fires on container vessels by location of fire, by accident year



32. Claim cost per vessel (USD) – Engine room fires versus fires in cargo area on container vessels, by accident year





# COASTAL AND FISHING VESSEL TRENDS

# Coastal and fishing vessel trends

The main trends in the coastal hull portfolio 2021 were:

- A downward trend in claim cost following increases from 2015-2018
- Major claims impact substantially reduced in 2020 and 2021
- Claims frequency remaining stable with a further reduction in larger losses

The coastal hull statistics are important for trend analyses of coastal vessels, particularly of small craft and fishing vessels in Nordic waters.

For statistical purposes, the 'coastal' portfolio includes all types of fishing vessel regardless of size, and all other vessels up to 5,000 gross tonnes or up to 15 metres in length, with one exception: supply/offshore vessels are not included in this segment, as they are analysed as part of the ocean hull statistics.

## Portfolio characteristics

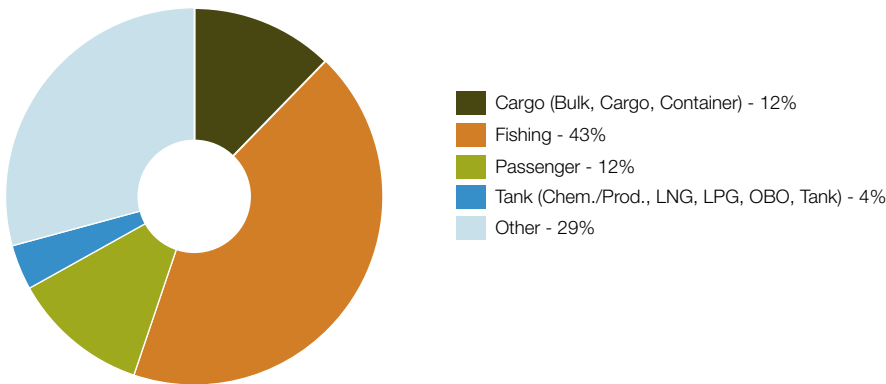
The number of vessels reported per year is five times as high in 2021 compared to 1996. The portfolio experienced a substantial boost in 2010 when the complete portfolio of minor coastal tonnage covered

by the Norwegian coastal mutual clubs was included. The annual number of vessels reported passed 10,000 in 2010 and has been well over 13,000 since 2018. Over the underwriting years 1995 to 2020, a total of 215,937 vessel-years (2005-2021: 187,012) and 36,330 claims (2005-2021: 27,916) were registered.

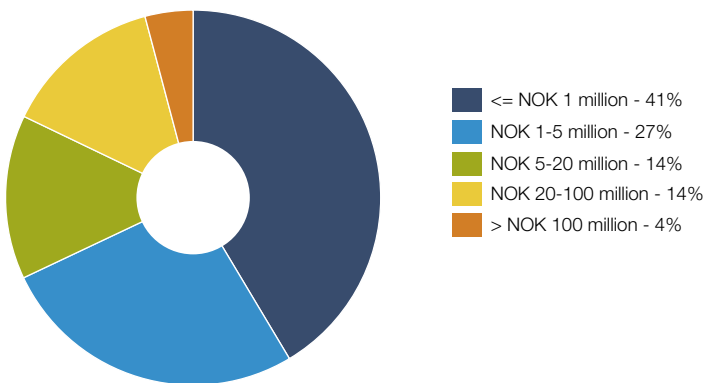
Near half of the vessels in the coastal portfolio have values below NOK 1 million, and 70% under NOK 5 million (graph 34). Most of these are fishing vessels covered by Norwegian coastal mutual clubs, representing 43% of the total coastal segment (graph 33) and an even bigger share of the low-value vessels in 2021.

The bulk of the coastal segment originates from Gjensidige, If, Codan and Alandia, but all the other NoMIS members also contribute to this portfolio.

33. Breakdown of the number of vessels in the coastal segment by type, year of exposure 2021



34. Breakdown of the number of coastal vessels by sum insured band, year of exposure 2021

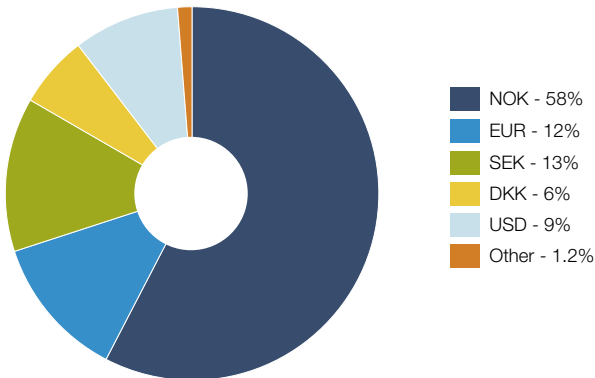


The coastal segment differs substantially in its characteristics from the ocean hull portfolio. While the ocean hull portfolio is characterised by vessels of all types, flags, sizes and global trading areas, the coastal segment consists largely of Nordic and particularly Norwegian small craft. This captures the majority of Norwegian fishing vessels.

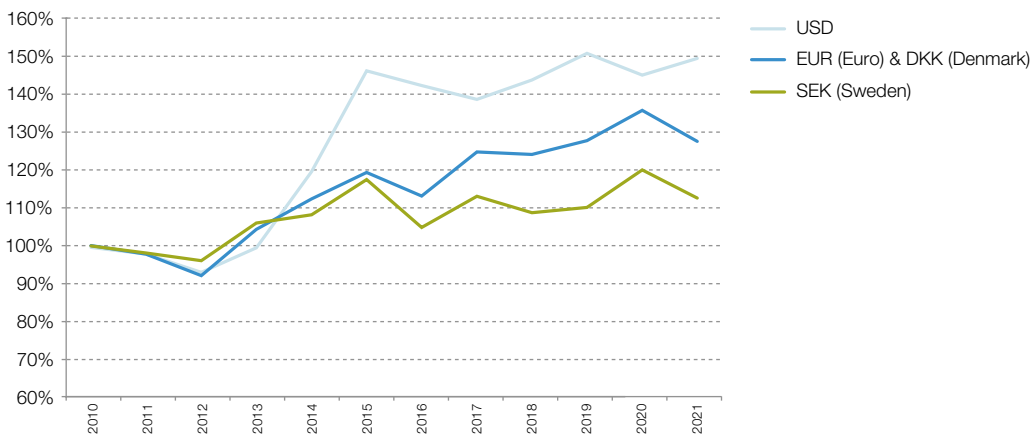
To avoid distortions from exchange rate variations

and to give a realistic picture of the actual claims trends for this portfolio, all figures/graphs for the coastal segment are shown in Norwegian kroner (NOK) instead of USD. Not only is there a wide variation in the exchange rate between NOK and USD, but the exchange rates between the Danish/Euro and Swedish currencies and the Norwegian krone have become less correlated in recent years (graph 36).

### 35. Breakdown of the number of coastal vessels by currency, underwriting years 2017-2021



### 36. Index of exchange rates for DKK/EUR, SEK and USD against NOK



### Claims by type of casualty – concerns about floating plastic litter

A large number of 'high frequency - low severity' contact claims is typical for the coastal fleet. This is mainly due to the strong representation from fishing vessels exposed to claims directly or indirectly caused by their fishing gear. However, despite representing 36% of all claims (45% for fishing vessels), contact claims account for just 12% of the total claims cost (9% for fishing vessels).

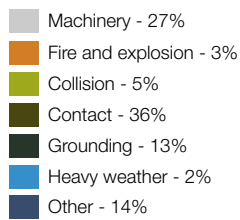
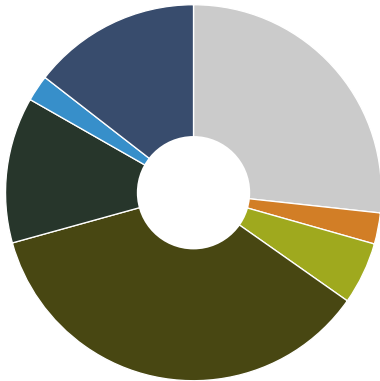
A matter of particular concern is an increasing number of claims arising from contact with plastic

litter floating in the sea, which gets into the propeller, for example, or causes other damage to the vessel.

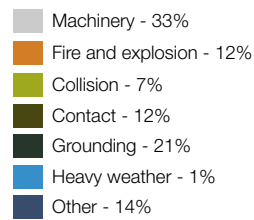
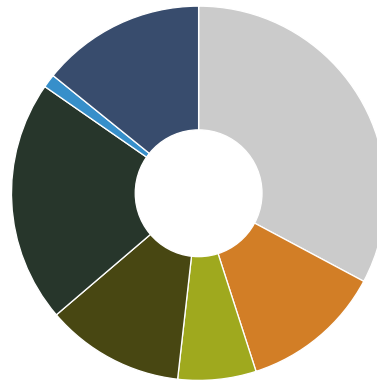
Machinery claims account for 27% of all claims in terms of numbers, but a higher share (33%) of the total claims cost. This is mainly due to the high share of contact claims mentioned above, which have far less impact on the cost. Groundings and fire/explosion claims usually follow the same pattern as the ocean hull fleet, with a relatively low frequency and a higher share of the cost (all coastal: 16% of all claims / 33% of the cost, fishing vessels: 13% / 40%).

## Coastal portfolio: Breakdown of claims by type of casualty, by date of loss

37a. Numbers (%), 2017-2021, by date of loss

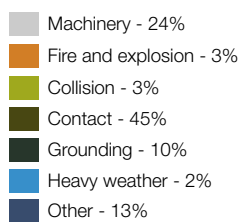
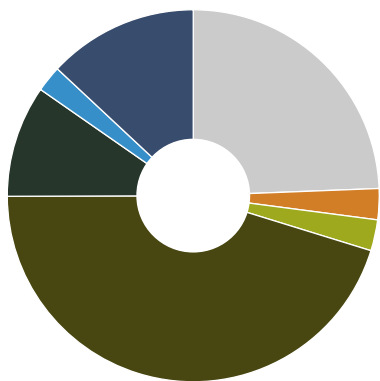


37b. Cost (%), 2017-2021, by date of loss

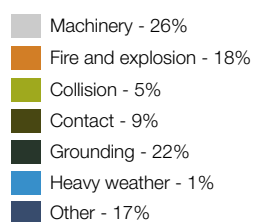
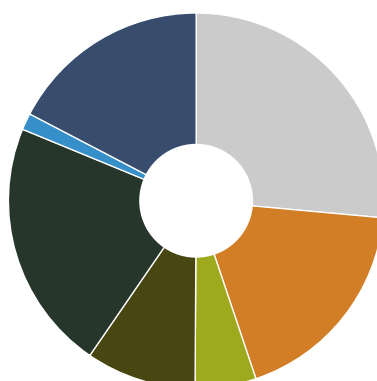


## Fishing vessels: Breakdown of claims by type of casualty, by date of loss

38a. Numbers (%), 2017-2021, by date of loss



38b. Cost (%), 2017-2021, by date of loss



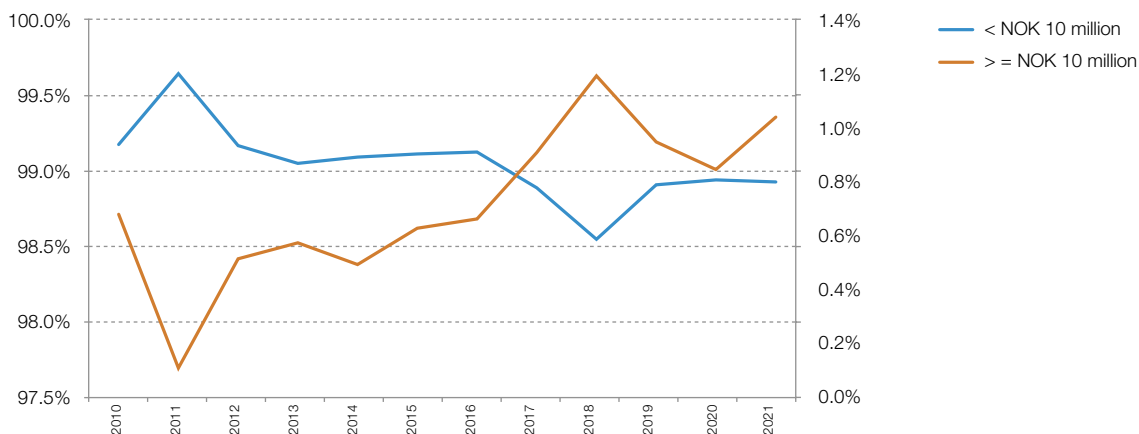
## Major and special loss events in the coastal portfolio

The typical claim in the coastal portfolio does not exceed NOK 20 million and only very rarely NOK 50 million. Over the years since 2010, only 0.26% of all reported claims exceeded NOK 20 million. The most notable exceptions were one exceptionally costly grounding in 2014 resulting in a claim for about NOK 300 million, two claims exceeding NOK 100 million in 2016, and the grounding of the fishing vessel

Northguider in Arctic waters in 2018. The largest claim in the years 2019 to 2021 was NOK 60.5 million. No other claim exceeded NOK 50 million. On average, six claims per year exceeded NOK 20 million in this three-year period.

Graph 39 shows the share of claims in excess of NOK 10 million. The share of larger claims was on the rise from 2011 to 2018 but has since come down again somewhat to around 10% of all claims.

39. Claims exceeding NOK 10 million as a % of all claims, by accident year



## Claims frequency – stable with further downward trend mainly for higher value vessels

The overall claims frequency for the coastal segment has been showing a long-term positive trend. Since 2015 it has kept below 14%. In 2020, the claims frequency showed a small extraordinary dip similar to the ocean hull portfolio, but the effect of Covid-19 on the coastal portfolio was much less.

In 2021, the claims frequency returned to stable pre-Covid levels. A relatively low claims frequency is typical for smaller tonnage (see graph 47 and the extensive coastal hull statistics at [cefor.no/statistics](http://cefor.no/statistics)).

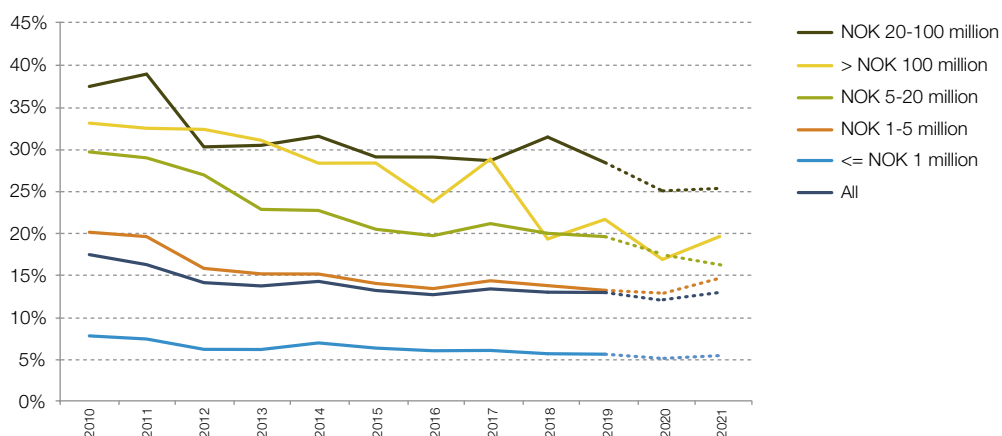
The claims frequency for vessels with values below NOK 5 million is generally lower and more stable than for vessels with higher values. This stability is partly due to the large number of vessels in this lower value band.

For vessels with values above NOK 5 million, the downward trend continued. This is most visible for the vessels with the highest values in this segment, exceeding NOK 100 million, which had substantially fewer claims in the last three years. It is reasonable to assume that the further reduction in this high value band may be related to similar effects as those outlined in the ocean hull article on p. 20

In general, with comparably few vessels in this band, the claims frequency will naturally show a higher volatility in the large value bands than the lower value bands which represent the bulk of the typical coastal vessels.

Generally speaking, several factors tend to affect claims frequency, including deductibles, weather conditions, economic conditions and portfolio-related factors such as vessel types and sizes.

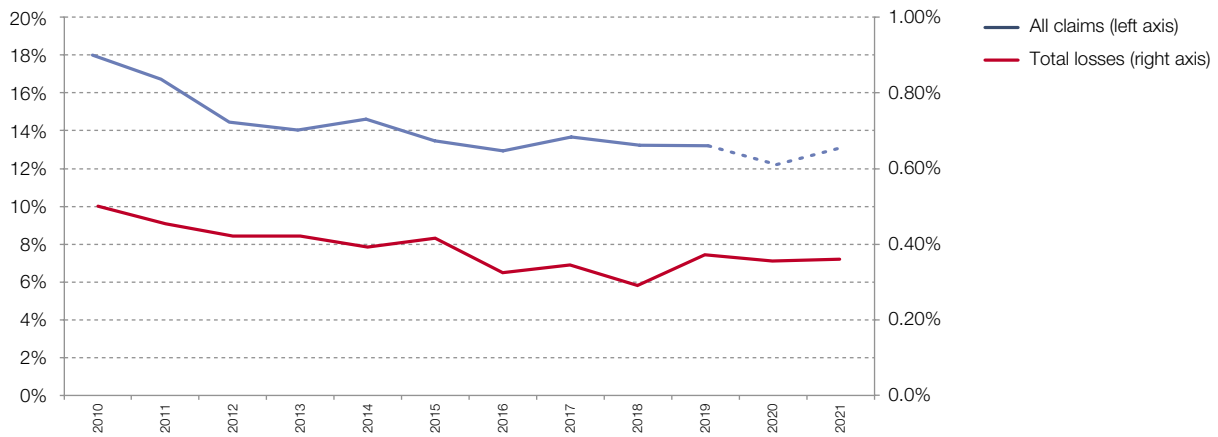
### 40. Claims frequency per sum insured band, incl. IBNR, by accident year



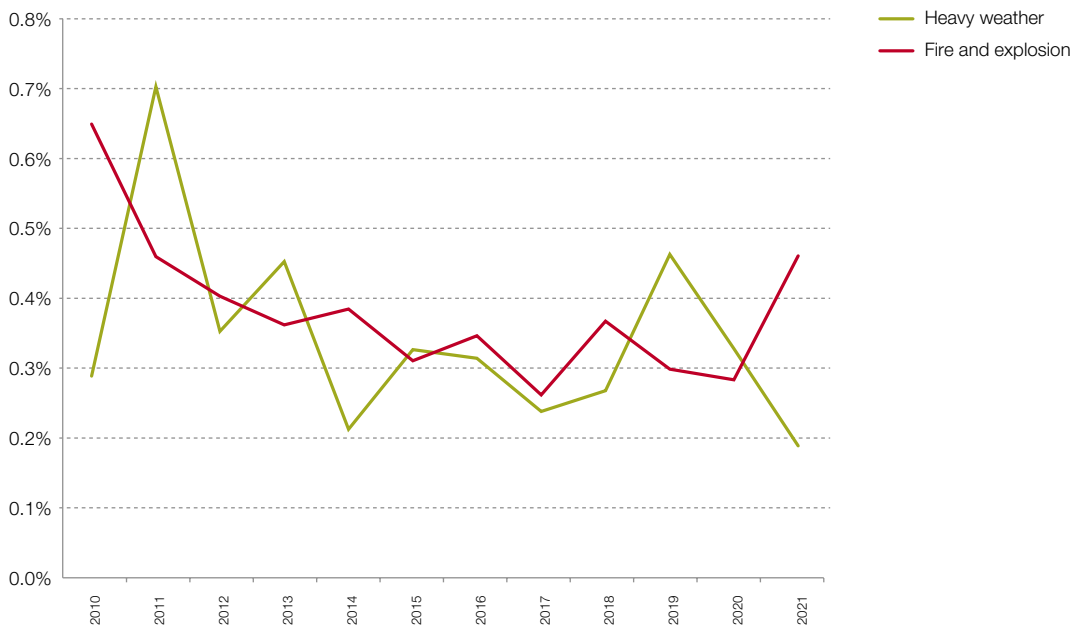
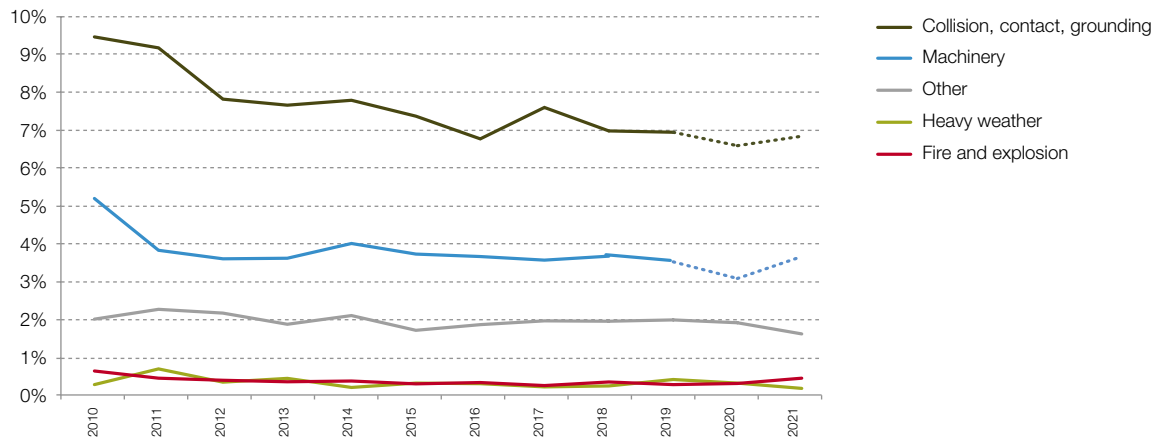
One characteristic of the coastal portfolio is a substantially higher total loss frequency than for the ocean fleet. Another feature is that the frequency of total losses in the coastal segment is more stable than in the ocean hull segment, although it displayed a

moderate downward trend between 2010 and when it reached its lowest level to date at slightly over 0.35% in 2016. With the exception of 2019, which showed a small spike, the total loss frequency has remained at this low level (graph 41).

#### 41. Overall and total loss frequency, incl. IBNR, by accident year



#### 42a & 42b. Claims frequency by type of casualty, by accident year



The claims frequency by type of casualty has been quite stable in recent years for most types, with the

exception of fires which showed a small upward trend in 2021 in the coastal portfolio also.

## Claim cost – decreasing again after increase 2015-2018

The decreasing claims frequency also had a positive impact on the overall claim cost per vessel. From 2015 to 2018 the claim cost per vessel had been on the rise but this trend seems to have reversed again in the most recent years although the level remains higher than in the years prior to 2016.

Although isolated costly claims can occur, most of them special grounding or fire casualties, such very

expensive claims are not typical for the coastal segment. Excluding claims in excess of NOK 80 million, the partial and total claim cost per vessel remained relatively stable from 2012 to 2016, then showed an increase in the years until 2019 when the upward trend was broken (graph 43, dotted lines).

In 2021, there were two claims exceeding USD 20 million but none exceeding USD 50 million. The most costly claims in 2021 were a fire on a fishing vessel and a contact claim on a RoRo vessel.

43. Coastal portfolio: Ultimate partial and total claim cost per vessel (NOK), by accident year



The claim cost per vessel for fishing vessels seems to be returning to the long-term average level in 2021 after a steady increase in the years 2014 to 2019 and the exceptional impact of the grounding of the Northguider in 2018.

The claims frequency for fishing vessels typically shows a clear increase during the months from February to April, which are the high season for fishing, especially in Northern Norway.

#### 44. Fishing vessels: Ultimate partial and total claim cost per vessel (NOK), by accident year

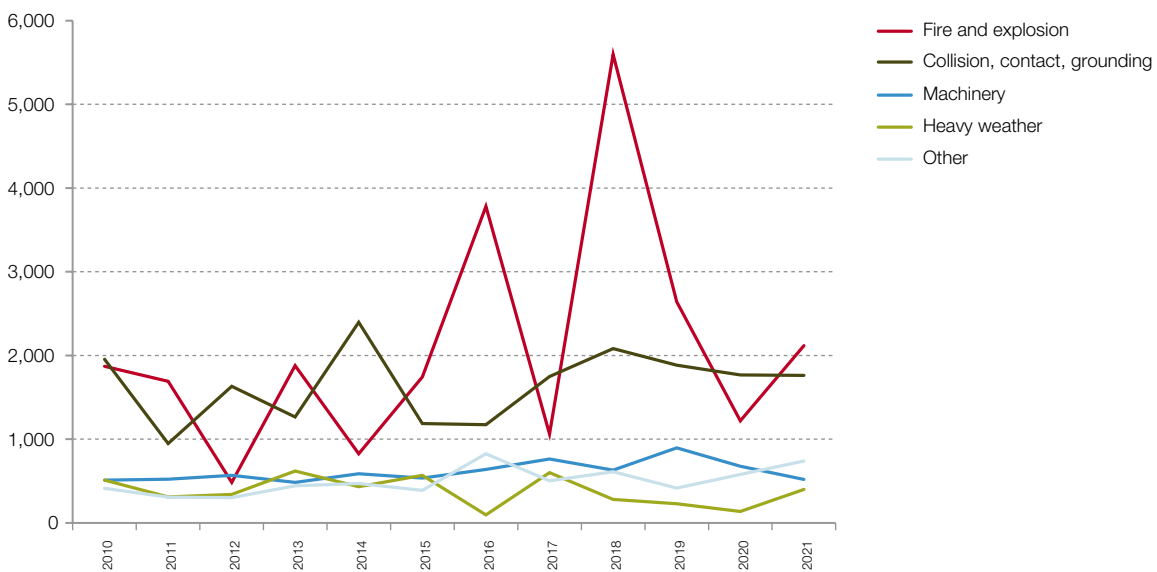


#### Average claim cost by type of casualty

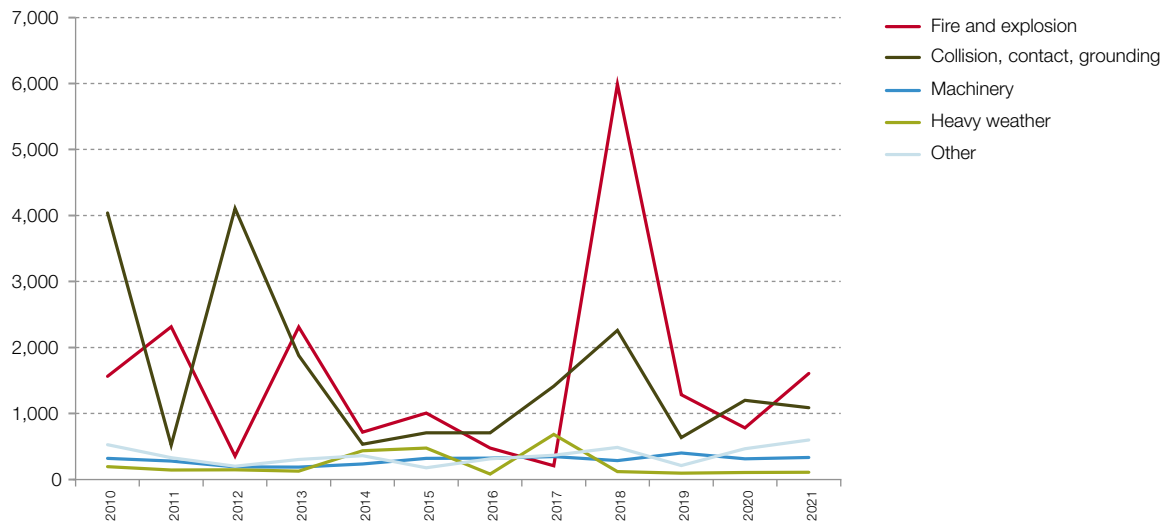
The average cost per type of casualty is far more volatile than the claim cost per vessel. Major claims, particularly fires/explosions and nautical-related

claims such as groundings and collisions, can cause a wide variation in the average claim cost from year to year. Since 2010, 40% of all claims in excess of NOK 50 million were fires, with a rising trend in the years since 2016.

#### 45. Coastal portfolio: average claim cost per type of casualty (NOK 1,000), by accident year



#### 46. Fishing vessels: average claim cost per type of casualty (NOK 1,000), by accident year



The average cost of machinery damage for fishing vessels is less than half the average cost for the coastal portfolio as a whole. However, the impact

of collisions and groundings on the average cost is greater in the fishing vessel fleet than for the total coastal portfolio.



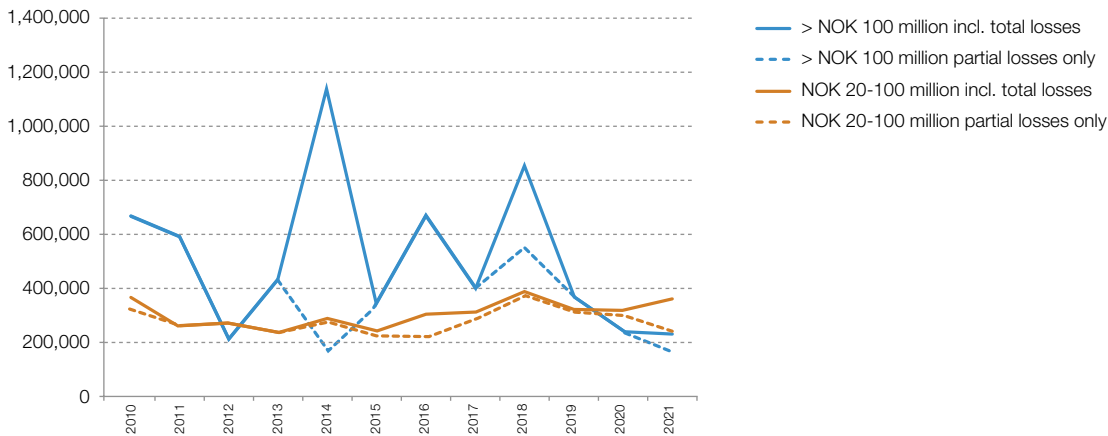
## Claims cost dependent on vessel values

Claims trends need to be interpreted in relation to the characteristics of the underlying portfolio. To illustrate this, graphs 47 and 48 show the partial claim cost per vessel split into sum insured bands. For vessels with insured values below NOK 5 million, the average repair cost has been relatively stable over time. For vessels with higher insured values, the cost per vessel is far more volatile, particularly when total

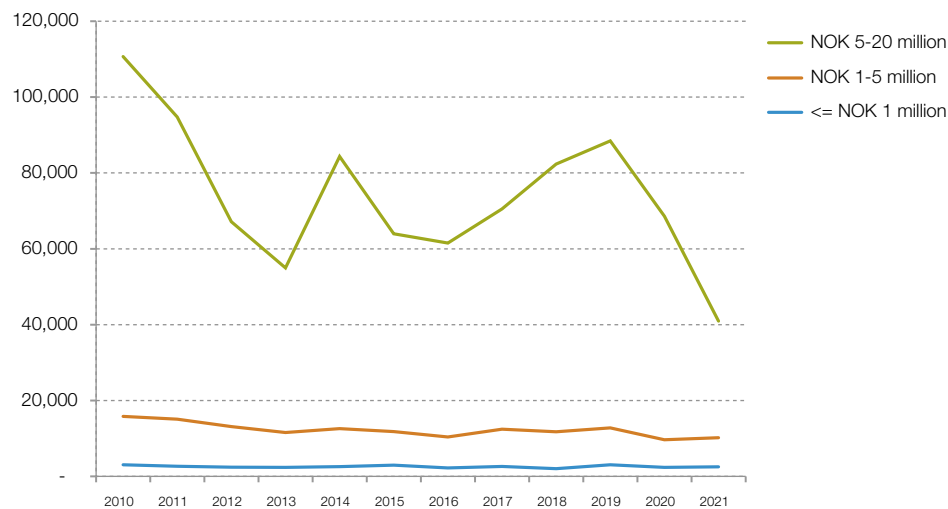
losses are included in the claim cost. With relatively few high-value vessels in the coastal portfolio, single exceptionally costly claims have a big impact on the total claim cost per vessel in the year that they occur.

For vessels with insured values between NOK 5 and 100 million, the partial claim cost per vessel was on the rise in the years 2016 to 2019 but came down again in 2020, with a further decrease to a record-low level in 2021.

47. Claim cost per vessel per sum insured band (NOK), by accident year



48. Partial claim cost per vessel per sum insured band (NOK), by accident year



For more detailed coastal hull statistics, including breakdowns of claims trends by age group, vessel type, size group and other characteristics, see [cefor.no/statistics/nomis/](https://cefor.no/statistics/nomis/)



# THE NOMIS PORTFOLIO

# The NoMIS portfolio

Since 1985, leading members of Cefor have been compiling and analysing statistical information relevant to their hull and machinery insurance portfolio. Since the introduction of electronic reporting from the 1995 underwriting year, the number of vessels reported each year has increased substantially from 5,800 in 1995 to 36,000 in 2021. These numbers include both lead and follower business for ocean and coastal hull. The ocean hull portfolio constitutes a representative sample of the world fleet, comprising vessels of all types and all global trading areas. The coastal hull portfolio mainly represents vessels in Nordic coastal waters. The electronically reported portfolio and claims data are compiled in the Nordic Marine Insurance Statistics (NoMIS) database and form the basis for all Cefor hull statistics and analyses as published in this report and on the Cefor website.

By the end of 2021, the NoMIS database covered 335,621 vessel-years and 79,191 claims for vessels with a registered IMO number for the years 1995 to 2021. Including small coastal vessels, the totals were 557,141 registered vessel-years and 102,281 claims.

## Statistical relevance

The statistical relevance of the NoMIS database has increased substantially over time. In 2013, the annual reported number of vessels with an IMO number

passed 15,000 for the first time, with a further boost since 2017. For the 2021 underwriting year alone, 22,500 vessels were reported (36,000 including small coastal vessels).

Along with coverage data (vessel identities, insured values, deductibles), a substantial claims database has been built up, capturing the type of claim, geographic data and other claims features relevant for analysis. The number of reported claims has increased in parallel with the number of reported vessels, with an average of 3,500 to 3,800 claims per year for vessels with an IMO number. In 2020 and 2021, the number of reported claims was somewhat reduced despite a further increase in the number of insured vessels. This reduction not only reflects some expected backlog in claims reporting, but also needs to be seen in the context of somewhat reduced vessel activity and other influencing factors due to Covid-19 pandemic disruptions.

Of all reported claims, claims above USD 250,000 represent between 17% and 22% of all claims per year and between 600 and 800 claims per year in absolute number in the NoMIS portfolio.

Based on this comprehensive data, the Cefor Statistics Forum is constantly striving to improve the analysis of hull trends as presented in other articles in this report.

## Cefor coverage of world fleet

A comparison of the currently covered 'Cefor fleet' with the world merchant fleet shows the following market participation:

### Percentage of world merchant fleet reported by Cefor members<sup>1</sup>: (vessels with registered IMO number):

	Year of build	Gross Tonnage 1,000-3,999	4,000-6,999	7,000-10,000	>10,000	Grand Total
<b>Cefor share</b>	2016 - 2021	20.2%	23.5%	24.3%	46.6%	38.8%
	2011 - 2015	25.9%	33.6%	30.4%	51.4%	42.9%
	2006 - 2010	30.8%	38.2%	45.7%	60.0%	48.8%
	2001 - 2005	28.6%	31.7%	38.1%	54.6%	44.3%
	1996 - 2000	24.0%	22.5%	22.4%	31.6%	26.9%
	1991 - 1995	12.2%	12.0%	17.2%	20.0%	14.3%
	<1991 or unknown	4.1%	5.4%	6.8%	10.8%	5.2%
<b>World Fleet</b>	2016 - 2021	1,533	727	515	6,008	8,783
	2011 - 2015	2,845	1,128	570	7,737	12,280
	2006 - 2010	3,320	1,404	1,253	7,043	13,020
	2001 - 2005	1,761	625	415	3,679	6,480
	1996 - 2000	1,597	792	330	2,038	4,757
	1991 - 1995	1,760	516	238	704	3,218
	<1991 or unknown	8,554	1,826	618	1,346	12,344
<b>Total Cefor share</b>		<b>16.5%</b>	<b>23.1%</b>	<b>30.1%</b>	<b>48.9%</b>	<b>33.3%</b>
<b>Total World Fleet</b>		<b>21,370</b>	<b>7,018</b>	<b>3,939</b>	<b>28,555</b>	<b>60,882</b>

The table shows that Cefor member's coverage of the world fleet is highest for the largest vessels built after 2000. NoMIS members write shares in 49% of the 28,555 vessels of more than 10,000 gross tonnes in the world fleet and up to 60% of vessels of that size built after 2000.

Cefor members also write a significant portfolio of Mobile Offshore Units. These are not included in the NoMIS database. The members participate in about half of the world fleet of Mobile Offshore Drilling units.

<sup>1</sup> Calculated as the number of vessels partly or wholly covered by Cefor members in underwriting years 2020 and 2021, divided by the total number of vessels with a registered IMO number in the world fleet. World fleet numbers according to Lloyd's List Intelligence 'World Fleet Update' as of January 2022.

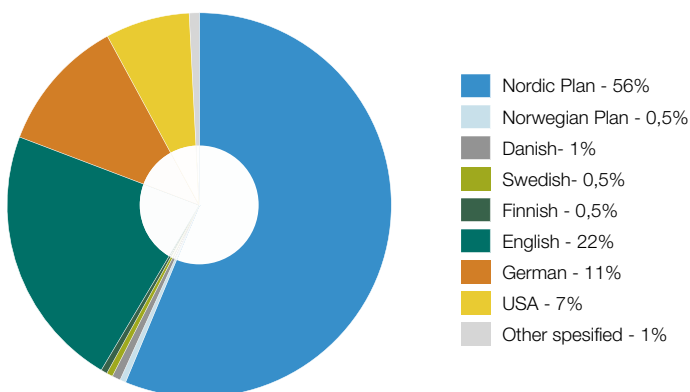
## Portfolio characteristics – types of insurance conditions

Since its introduction in 2013, the Nordic Marine Insurance Plan has received massive support. In 2019, the latest version was launched with new updates as part of a continuous evolution<sup>2</sup>. The next version will be published in October 2022 to take effect from 2023. For the Cefor ocean fleet, the Plan represents the most widely used insurance conditions for vessels with a Nordic claims lead (graph 49).

In 2021, 58.5% of claims lead business was covered on Nordic conditions (56% Nordic Plan, the remainder on local conditions in Denmark, Finland, Norway and Sweden). Of the remainder, 22% is insured on English, 11% on German, and 7% on US conditions.

In the follower market, the spread is much wider. The bulk of the follower business is insured on English conditions (44%), followed by 19% on German conditions, 14% on Nordic conditions and 7% on US conditions.

### 49. Ocean Hull portfolio: Breakdown by type of insurance conditions Business with Nordic claims lead, underwriting year 2021

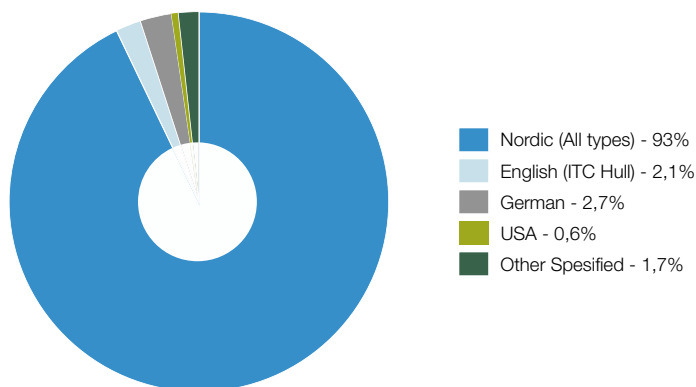


For the coastal fleet, the picture is very different. A major part of the coastal fleet consists of fishing vessels and local ferries in Nordic waters. Accordingly, over 90% of the coastal fleet is insured on Nordic

terms (Nordic Plan and national insurance conditions for small craft). A large proportion of the coastal fleet is claims lead business, as smaller tonnage often is 100% insured with one insurer.

<sup>2</sup> See information here: <https://cefor.no/clauses/nordic-plan/>

## 50. Coastal hull portfolio: Breakdown by type of insurance conditions All business, underwriting year 2021



### Data

The article on p. 20 concerning ocean hull trends is based on vessels with an IMO number. The coastal hull trends (article p. 49) are derived from vessels defined as fishing vessels and any other type of vessel up to 5,000 gross tonnes or 15 metres in length, with the exception of supply/offshore vessels, which are analysed as part of the ocean hull statistics.

**100% shares:** All figures are adjusted to 100% of the vessel to provide as objective a picture of the claims trends as possible. The figures are thus independent of the share underwritten by any single insurer or the combined Nordic market share for the vessel.

**Date-of-loss perspective (accident year):** Unless otherwise indicated, all claims graphs reflect the date-of-loss perspective, i.e. claims are grouped by the year in which the loss occurred (also called the

'accident year'), as opposed to grouping claims by the underwriting year. The date-of-loss perspective provides a more up-to-date picture of recent claims trends and more exact estimation of the ultimate expected claims amount for the latest year.

**IBNR<sup>3</sup>** adjustments thus represent only the expected adjustment of outstanding claims reserves for claims incurred by 31 December, and not any additional reserves for claims that will be incurred in 2022 but relate to previous underwriting years.

**Exchange rates:** All figures in this report have been converted to USD, except for the coastal segment (article p. 49), in which figures have been converted to NOK. Paid claims have been converted into USD (NOK) at the exchange rate in the month of payment. Outstanding claims reserves have been converted at the December 2021 exchange rate.

<sup>3</sup> IBNR = Incurred But Not Reported = reserve for claims adjustments and registration backlog.

## NoMIS and the Cefor Statistics Forum

Nordic Marine Insurance Statistics (NoMIS) as presented in this report comprise data from:

Cefor member	Joined NoMIS in:	Data included for underwriting years:
Alandia	2012	2005 – 2021
Bluewater Insurance	2004	2005 – 2008 (run-off)
Codan	2005	2005 – 2021
Gard	Co-founder of NoMIS (then as Storebrand, Vesta)	2005 – 2021
Gjensidige – coastal	2009	2005 – 2021
If	2008	2005 – 2021
NEMI	2004	2005 – 2009 (run-off)
Norwegian Hull Club	2003	2005 – 2021
Skuld	2016	2011 – 2021
The Swedish Club	2006	2005 – 2021
Tryg	2009	2005 – 2008 (run-off)

Cefor members report data for the entire commercial fleet underwritten by their Nordic and foreign offices.

### Further statistics:

In addition to this report, detailed statistics for ocean and coastal hull are available from the Cefor website, with breakdowns of claims trends by vessel type, age group, size group and many other characteristics. Annually updated exposure curves for ocean hull business as well as half-yearly hull trend updates are also published here: [cefor.no/statistics/nomis/](https://cefor.no/statistics/nomis/)

Cefor also issues special analyses related to topics of current interest. Recent analyses illustrate claims trends for fires on container vessels and on car/RoRo vessels, the role of detentions as an indicator of future

casualties, and how a change in a vessel's owner or flag impacts the claims frequency. An overview of all issues can be found here:

[cefor.no/statistics/analysis-with-special-focus/](https://cefor.no/statistics/analysis-with-special-focus/)

### Statistics Forum 2021:

Otto Rendedal, Skuld (Chair)  
Kjersti Bruborg, Gard (Deputy chair)  
Jonas Svartström, Alandia  
Mikkel Gardner Andersen, Codan  
Tobias Abrahamsen, Gjensidige  
Anders Öhland, If  
Christian Irgens, Norwegian Hull Club  
Anders Hultman, The Swedish Club  
Astrid Seltmann (Cefor Analyst & Forum Secretary)

# Organisation & Members

As of 31 December 2021

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Director, Alandia

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Insurance Director, Den Norske  
Krigsforsikring for Skib

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*Niklas Sonnenschein*  
Legal Director

*Astrid Seltmann*  
Analyst / Actuary

*Hilde Spro*  
Office Manager

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**Cargo Forum** *Chair: Per Robert Olsen, Fender Marine*

The Forum discusses general market issues relating to cargo insurance during transport and storage.

**Claims Forum** *Chair: Mattias Ljunggren, If*

The Forum discusses major, interesting or complex casualties and rulings that are public knowledge, and claims issues of general interest to the members.

**Coastal and Fishing Vessels Forum** *Chair: Tore Høisæther, Fender Marine*

The Forum discusses general matters relating to insurance for coastal and fishing vessels.

**Compliance Forum** *Chair: Thor Magnus Berg, Gard*

The Forum discusses issues relating to regulatory compliance and best practice guidelines.

**Offshore Energy Forum** *Chair: Georg Nygaard, Norwegian Hull Club*

The Forum discusses general matters relating to hull, loss-of-hire, builders' risks and P&I insurance for mobile offshore units and specialised offshore vessels.

**Plan Revision Forum** *Chair: Sveinung Måkestad, Gard*

The Forum discusses and recommends changes to the Nordic Marine Insurance Plan on behalf of Cefor, and gives advice regarding marine clauses and their wording.

**Statistics Forum** *Chair: Otto Rendedal, Skuld*

The Forum is responsible for the Nordic Marine Insurance Statistics (NoMIS). For more information, see article on page 61.

**Technical Forum** *Chair: Steinar Sivertsen, Norwegian Hull Club*

The Forum discusses technical and operational issues and matters of general interest to the members, and publishes proposals and expert recommendations where appropriate.

**Underwriting Risk Forum** *Chair: Sondre Arnesen, Norwegian Hull Club*

The Forum works to enhance the knowledge and understanding of existing and emerging risks affecting the shipping and offshore energy industries.

## Members

- Alandia
- Codan
- Den Norske Krigsforsikring for Skib (The Norwegian Shipowners' Mutual War Risks Insurance Association)
- Fender Marine
- Gard
- Gjensidige

- HDI Global Specialty – Sverige filial
- If
- Møretrygd
- Nordisk Skibsrederforening (Nordisk Defence Club)
- Norwegian Hull Club
- Skuld
- The Swedish Club (Sveriges Ångfartygs Assurans Förening)
- Tromsrygd

## Associated member

- Betri Trygging