

Marine insurance: The foundation of the global maritime transport industry

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ABSTRACT

Maritime insurance serves as a cornerstone of the global shipping industry, ensuring financial stability and sustainable development in the face of unpredictable risks. This study analyzes two principal forms of maritime insurance—Hull and Machinery (H&M) insurance and Cargo insurance—highlighting their essential roles in safeguarding vessels, machinery, and cargo value against losses caused by accidents, natural disasters, and unforeseen maritime incidents. Drawing on international practices such as the Institute Cargo Clauses (ICC) and notable case studies including the MOL Comfort and Ever Given incidents, the paper demonstrates the indispensable function of insurance in global supply chain continuity and risk management. In the Vietnamese context, while the legal framework has been gradually aligned with international standards, significant challenges remain regarding limited market capacity, reliance on international reinsurance, and low participation rates among exporters. The paper concludes with recommendations to enhance Vietnam's marine insurance market to support sustainable maritime trade development.

Keywords: *Maritime insurance, Hull and Machinery (H&M), Cargo insurance, Risk management, Vietnam.*

I. INTRODUCTION

As the world's economy gets bigger, more and more countries and regions are doing business with each other. This has made the need to move goods across borders stronger than ever. To meet this growing demand, the freight transport industry has expanded quickly, and maritime shipping is the most important part of it. It's the main way that goods are moved around the world, and there's not much else that can do it as well.

Even though maritime shipping is very important for global trade, it also brings a lot of risks.

Things like big storms, accidents, and technical issues can happen during a sea journey, and these can cost millions or even billions of dollars. Because of this, marine insurance is more than just a way to make money back—it's a crucial support system that helps shipping companies stay in business and grow in a steady way. It helps protect valuable assets, reduces worries about money, and helps manage legal problems when unexpected things happen.

Marine insurance usually comes in two main forms: Hull and Machinery (H&M) Insurance and Cargo Insurance. H&M Insurance covers the ship and its equipment from damage caused by accidents, fires, or other dangers at sea. Cargo Insurance, on the other hand, helps protect the value of the goods being shipped. If the goods are lost, broken, or destroyed during transport, this insurance helps the owners get money to replace them. For shipping companies, having a complete insurance plan is important for building trust with customers and making sure the global supply chain continues to work well.

CONTENT

1. Hull and machinery insurance

Major shipping companies operate large groups of ships, so any problem with one ship can cause big financial problems. Hull and Machinery (H&M) Insurance is a key way these companies protect their money. It helps cover the cost of damaged or lost ships, their equipment, and other important parts, especially if the damage is due to common dangers like hitting another ship, running aground, or sinking. It also covers fire and explosions that might happen from the cargo or the ship itself. In some cases, it can help with costs from emergency actions, like throwing cargo overboard to save the ship. This idea is based on General Average, where all involved in the journey share the loss to protect their shared investment.

H&M Insurance is not just a simple agreement. It is a smart way to manage risks. The author created this system using web-based technology. The development was done with Visual Studio Code, the data was stored in a MySQL database, the framework used was CodeIgniter, and the system was deployed using XAMPP.

The cost of an H&M insurance policy depends on several factors. These include how old the ship is, how well it is maintained, its history of accidents, the areas it travels through, and the skill level of the crew. For example, an older ship that travels in risky areas like the Somali piracy zone will have much higher insurance

costs than a newer, better-equipped ship that travels in safer areas. However, some risks are not covered by H&M insurance. These include risks like war, civil unrest, or intentional actions by the shipowners.

Real-life events show how important H&M insurance is. The 2013 sinking of the MOL Comfort, a large container ship that could carry 8,110 TEU, was one of the biggest H&M insurance losses ever. This incident led to millions of dollars in compensation and was a big lesson for the industry. It showed how crucial hull insurance is for protecting valuable ships. It also led to more careful checks of safety standards for building large container ships. The event reminded everyone that even modern ships can be at risk, and that insurance helps minimize the financial damage for big shipping companies.

Another notable case is the MSC Napoli incident in 2007. In January 2007, the MSC Napoli, a container ship traveling from Belgium to Portugal, faced a severe storm in the English Channel. The vessel suffered significant damage, leading the crew to abandon the ship. It was subsequently towed to the southern coast of England to prevent it from sinking. Although most of the cargo was salvaged, the incident resulted in substantial losses and complex claims. The vessel itself was severely damaged by the storm, but the costs of repair and total hull compensation were covered by its hull insurance policy. This case highlights that even the world's largest shipping companies are not immune to maritime risks. Insurance in such cases not only serves as a means of indemnification but also plays a crucial role in comprehensive risk management strategies, helping companies withstand unexpected events.

In Vietnam, H&M insurance is slowly developing but remains limited in scope compared to international markets. Common challenges include damage assessment and determining the causes of loss, especially in complex incidents such as engine failures due to maintenance errors or natural wear and tear. Additionally, Vietnamese shipowners often opt to purchase reinsurance from international firms due to the high value of vessels and associated risks. In the maritime insurance sector, international reinsurers act as professional entities that take on part of the risks and liabilities from primary insurers (the initial marine insurers) in exchange for a share of the premiums, thereby sharing the financial burden in the event of a maritime loss.

This practice helps domestic marine insurers manage financial risks, particularly when facing catastrophic losses or high-value policies. Large vessels, container ships, or crude oil tankers can be valued at tens to hundreds of millions of USD, while the financial capacity and reserve funds of many Vietnamese insurers are relatively limited. Should a single total loss occur, it could lead to bankruptcy. Therefore, domestic insurers typically transfer most of the liabilities to the international reinsurance market. International reinsurers not only share financial burdens but also provide expertise in risk management, surveying services, and access to loss databases that are unavailable to Vietnamese insurers. In H&M contracts, domestic insurers often function as "fronting companies," signing directly with shipowners but promptly transferring the majority of the risks to international reinsurers. Some of the world's leading reinsurers include Lloyd's of London (UK), Swiss Re (Switzerland), Munich Re (Germany), Hannover Re (Germany), and SCOR (France).

From the analysis above, it's clear that as the maritime industry moves towards more automated ships and different types of fuel, H&M insurance will keep changing. They will add new rules that cover things like cyber threats and environmental issues. This shows that H&M insurance remains an important part of keeping the global shipping industry safe and sustainable.

2. Cargo Insurance

Cargo insurance is just as important as insurance for the ship itself and its equipment.

It helps protect all the people who send goods by sea, whether they are small businesses or big companies. Every year, huge amounts of goods are shipped across the world's oceans, and cargo insurance helps cover the costs if something goes wrong, like a ship sinking, catching fire, or getting damaged. It's not just a requirement in many international trade deals, but also a smart way for businesses to manage risks and avoid big financial losses during transport.

Cargo insurance isn't just a simple product; it's made up of many detailed rules and conditions.

There are standard insurance terms, like the Institute Cargo Clauses (ICC), which are used by insurance companies in London. These ICC conditions come in three main types: ICC (A), ICC (B), and ICC (C). Each one offers a different level of protection. ICC (C) only covers major events like a shipwreck or fire. ICC (B) also covers some natural disasters, like tsunamis, and damage from water getting in. ICC (A) is the most complete form and covers almost all risks, except those that are specifically excluded in the insurance contract.

One important part of cargo insurance is how losses are dealt with.

A loss can either be total, meaning the whole shipment is ruined, or partial, where only part of it is damaged. The insurance rules explain how much money should be paid in each case. A good example is the principle of General Average, which is a rule from old times that is still used today. This rule says that if a ship's captain has to throw some cargo overboard to save the ship and the rest of the goods, all the cargo owners must share the cost of the loss equally.

In such circumstances, cargo insurance covers the portion of losses borne by each cargo owner.

In today's global world, problems with cargo insurance have gotten more complicated. A big example is the 2021 Ever Given incident, where the ship got stuck in the Suez Canal. This caused thousands of containers to be stuck for several days, leading to a lot of insurance claims. Insurance companies had to pay for cargo that was damaged because of the delays. Also, there were even bigger issues because the supply chain was disrupted. This event showed how important it is to have strong and flexible cargo insurance policies that can handle big, unexpected problems.

Another big case was the Maersk Honam fire in 2018. In March 2018, the Maersk Honam, a container ship operated by Maersk Line, was carrying over 7,800 containers from Singapore to Egypt. It caught fire in the Indian Ocean and burned for several days. This destroyed or damaged thousands of containers, and many cargo owners around the world, including businesses in Vietnam, lost a lot of money. Their goods were either not delivered or damaged. At that time, Maersk had insurance to cover the ship's damage, while the cargo owners had ICC-based insurance to get money back for their losses. Because the shipowner declared General Average, all cargo owners, even those who didn't directly lose anything, had to pay for the salvage costs. Without insurance, they would have had to pay for that themselves, but with insurance, the cost was covered by the insurance company.

Also, the cargo insurance industry is changing to deal with new risks like cybercrime and fraud.

Now, insurance companies offer extra policies to help cargo owners deal with these risks, including losses from stolen information or fake transactions. In the future, better tracking technology and data analysis will let insurers and cargo owners watch shipments more closely, which should lower risks and help keep insurance costs lower. Cargo insurance is becoming more than just a way to get money back in case of loss—it's also becoming a helpful partner for businesses, helping them feel more confident in the global market, protecting them from surprises, and keeping the supply chain running smoothly.

In Vietnam, as international trade grows, ships are the main way to move goods, making up over 80% of the country's import and export volume. Because of this, cargo insurance in maritime transport has become a key legal and financial tool for businesses to handle and share risks. However, the current system, created by a Vietnamese author using web-based technology, has both good and bad parts, and needs more analysis and improvements.

From a legal point of view, Vietnam has been building a set of rules that control cargo insurance in maritime transport. Important legal documents include the Maritime Code of 2015, the Law on Insurance Business of 2022, the Commercial Law of 2005, and various decrees and circulars. These laws mostly follow international standards by including basic ideas like honesty, making good faith, having a stake in the goods, excluding certain risks, and setting time limits. These rules give businesses a clear legal base to deal with and sign cargo insurance contracts. This helps protect the rights of those who own cargo and supports the growth of the local marine insurance market.

Even though there are these legal rules, there are still problems in practice. The share of cargo that is insured in Vietnam is still not very high. Many exporters let their foreign partners buy insurance under CIF or CIP terms. This means insurance money goes abroad, which lowers the income of local insurance companies and makes it harder for Vietnamese cargo owners to negotiate or protect themselves when things go wrong.

Local insurance companies also face problems with money, people, and technology.

For expensive cargo or shipments on risky international routes, Vietnamese insurers often pass almost all the risk to international reinsurers. This means local companies often just collect money without real control over the market. Also, services for checking losses aren't good or consistent, which causes delays in paying claims or disagreements about what caused the damage and how serious it was.

Another big issue is that many import and export companies don't understand the law well.

A lot of businesses buy insurance without fully knowing what it covers. This leads to confusion or unfair expectations. When problems happen, many claims don't have the right papers or don't follow proper steps, leading to a lot of rejected claims. This hurts trust in the local insurance market. Cargo insurance in Vietnam's maritime transport has improved a lot, but it still hasn't reached its full potential. Vietnam has a long coastline of 3,260 km and good conditions for maritime growth, but its insurance market hasn't fully tapped into that potential. This shows that there is a need to improve the legal system, build up the skills of local insurance companies, make claims and survey services more professional, and raise awareness among businesses about the importance of insurance. Only by fixing these issues can cargo insurance work properly to protect goods, make trade more stable, and help Vietnam's maritime transport grow in a way that is good for the long-term, especially as the country becomes more connected with the world.

Marine Insurance – Future Vision and Sustainable Development

Marine insurance keeps changing to keep up with the changes in the shipping industry. As ships get bigger, technology becomes more advanced, and shipping routes become more varied, new risks keep appearing.

Besides old dangers like storms or accidents, today's maritime sector also deals with cybercrime, climate change, and stricter environmental rules.

Big shipping companies are using technology to deal with these risks, and insurers are creating new types of insurance to meet these needs. For example, marine insurance now covers cyber risks, helping to protect navigation systems and important data on ships. Environmental protection is also a big part of marine insurance, as companies can face big fines for pollution.

For large shipping companies, working closely with insurers helps them deal with current problems and also plan for the future. By sharing information about risks and data, they can create better, more sustainable solutions, cut down on accidents, and keep people, goods, and the environment safe. In this way, marine insurance is more than just a financial tool—it becomes a key partner that helps the shipping industry grow in a strong and sustainable way in a more complex world.

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