



Insight

Mega Container Ships

The International Chamber of Shipping states that about 90% of the world's trade is carried out by the international shipping industry. The UK handled 115 million tonnes of freight in the first quarter of this year alone¹.



Container ships have grown bigger, better and faster over the last decade and are becoming more technically sophisticated. This is largely due to the creation of the shipping container itself, which allows transporting cargo to be more efficient, and often gives economies of scale.

Larger container ships create cost savings and the introduction of some of the world's largest container ships earlier this year has meant that cargo capacity has increased around the world.

OOCL Hong Kong, which has recently eclipsed MOL Triumph to be the world's largest container ship, has a cargo carrying capacity of over 20,000 TEU (twenty foot equivalent unit). And it doesn't stop there – another 10 ships, topping 20,000 TEU are on order and scheduled for delivery by the end of this year.

TEU means Twenty-Foot Equivalent Unit. It's used to measure a ship's cargo carrying capacity. The dimensions of one TEU are equal to that of a standard 20 foot shipping container. Two TEUs are equal to one FEU (Forty-Foot-Equivalent Unit).

SHI, a company which manufactures mega-ships, currently holds the record for the world's largest container ship order, which it had set only one month previously when it delivered MOL Triumph. These vessels are equipped with the latest technology – from special paint that reduces friction in water to sustainable technologies which provide more efficient fuel consumption.

But with cargo capacity having increased by 80% over the past 10 years – are there risks from putting all your eggs in one basket?

¹ UK Port Freight statistics: Jan to March 2017

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The International Union of Marine Insurance (IUMI) has reported that the frequency of major vessel casualties has risen again in 2016 for the second consecutive year, having experienced a decline until 2015. In contrast to this, they reported that total vessel losses have mainly continued on a downward trend (from 2000 onwards), but although many markets have reported a reduction in claims frequency, the average claims cost has risen.

Cargo

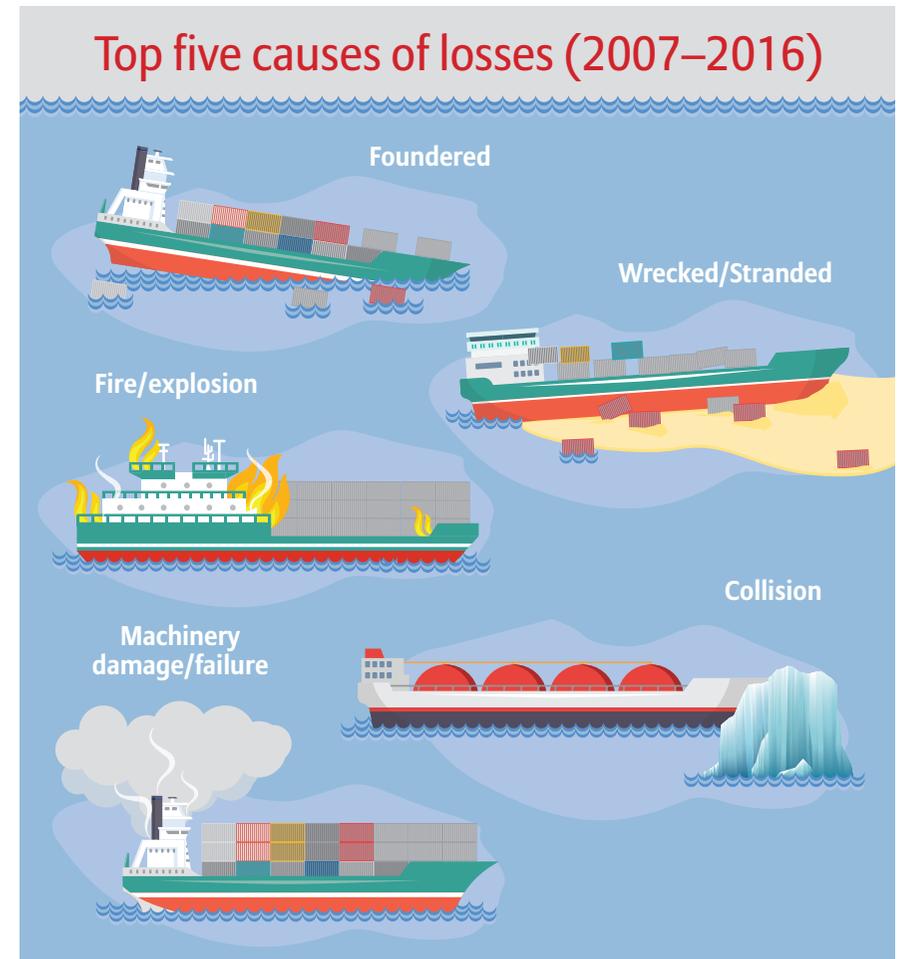
With the potential cargo on these larger container ships estimated at values of around \$985m² – this presents a significant risk to underwriters. With each mega-ship that is launched, the loss potential increases. Shippers transporting their goods on one vessel, instead of across multiple vessels, is one example of a risk that is now more frequently revived.

Higher concentration of risk means that not only is a total loss considered but also the effects which a partial loss will have. For instance if there is an issue with a container, the ship will need to be unloaded. With only some ports able to accommodate these large vessels, where does this happen and how much will it cost?

Fires on container ships this size are an increasing concern. The International Cargo Handling Association estimates that more than a third of boxes containing dangerous goods are marked incorrectly. Finding, locating and containing a fire on a large vessel is extremely difficult and cargo manifests need to be accurate and up-to-date in order for the crew to understand how best to deal with the fire.

MSC Flamina, which carried a cargo of around \$115 million, suffered a fire in 2012.

² International Union of Maritime Insurance Press Release



Source: ACGS

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Structural integrity on these larger vessels means stability across rough seas is a concern – especially in response to a number of losses in recent years. In 2013, MOL Comfort, which was carrying 8,000 containers, sank at sea after breaking in two with its structure being brought into question. And then there is the question of how to salvage such a large container ship.

Salvaging cargo is expensive and will have its difficulties because of the lack of specialised salvage equipment available to remove the large vessels. Few ship yards are built capable to repair such large vessels and as they are few and far between, there will be a hefty cost associated with bringing these ships to the larger yards. These vessels are limited to deep water ports which may increase the risk factor with regards to concentration of risk as well as testing port capacities and crane restrictions.

As the explosion at Tianjin port in 2015 demonstrated, the risk isn't just limited to losses at sea. The worth of the total cargo estimated to be on board the 754 ships damaged in the disaster is more than \$53 billion.

Ben Woodman, Speciality Lines Senior Underwriter, Allianz, comments, "Insureds should understand the risk of accumulation and it is vital that they have the correct cover in place to ensure they are fully covered."



How a \$4bn loss scenario could occur

The increasing size of vessels has raised fears about the potential for higher losses if a major casualty does occur, particularly one involving two large vessels, such as a cruise ship and a container ship, for example. There are many factors to consider when evaluating the potential cost from such an incident.

Below, we consider a worst case scenario casualty involving a collision, followed by grounding of both vessels and pollution, in an environmentally-sensitive location. In this scenario both vessels are then deemed constructive total losses. The potential exposure could be:



This does not take into account potential limitation funds and any cross liability calculation action and possible offset.

Source: Allianz Global Corporate & Speciality

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Considering the number of orders for ships currently under construction for delivery this year – is it inevitable that the size of container ships will continue to grow over the coming years? They would need to be sufficiently larger to realise cost reductions, but companies need to consider the loss potential from using these vessels. Marine insurers must understand the growing complexity as emerging risks face the industry.

More information on Allianz Complete Cargo can be found on our **Allianz eBroker** site.

How they measure up

- OOCL Hong Kong – 399.87 metres long. Carrying capacity of 21,413 TEU
- Madrid Maersk – 399 metres long. Carrying capacity of 20,568 TEU
- MOL Triumph – 400 metres long. Carrying capacity of 20,170 TEU
- MSC Diana – 399.99 metres long. Carrying capacity of 19,462 TEU
- MSC Ingy – 399.990 metres long. Carrying capacity of 19,462 TEU

Source: <http://www.marineinsight.com/know-more/10-worlds-biggest-container-ships-2017/>

