

# The Contango Conundrum

Marine insurers are becoming increasingly concerned about the issue of “contango” and its potential to affect bulk carrying vessels, most notably oil tankers. However, it is a term that many in the maritime industry could be excused for never having heard of before, seeing as it is one that is more readily understood in the commodity futures markets.



## BOARD DISCUSSION

### Spotlight on shipowners’ and traders’ liabilities

Potential damage to hull and machinery following long period of idleness.

Contamination, shortage, and other loss or damage to cargo all major concerns.

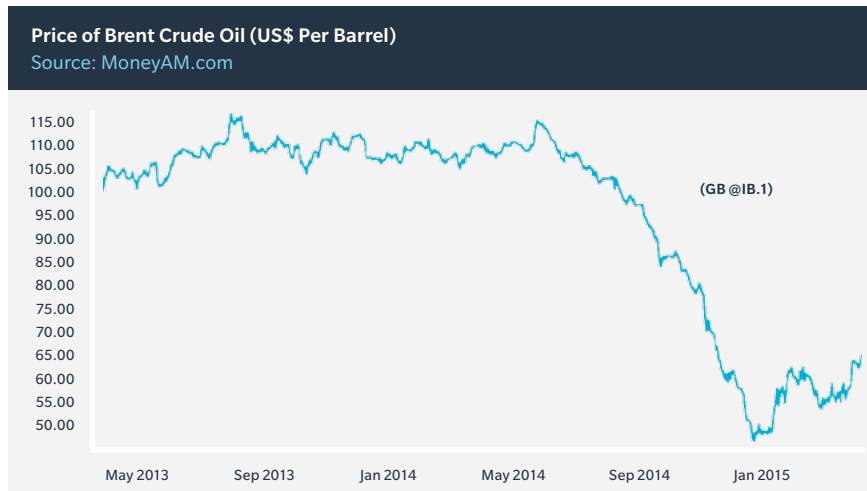
Could oil traders ever be found liable in the event of a major oil spill offshore?

## WHAT IS CONTANGO?

People buy futures contracts when the expectation is that the future open market, or “spot” price, will be higher at the time of delivery than the price that was agreed under the futures contract, thereby enabling a profit to be made by that investor when the goods are then sold on. (Of course, there is always a risk that market prices at delivery time will be unexpectedly lower than the contractually agreed purchase price. The seller may then be effectively locked into the agreed purchase price, regardless of the actual market or spot price at the time of delivery, unless protected by a “stop loss” or similar clause).

A gradual, long-term increase in prices is the normal way of markets and, in this state, a market is said to be in a state of “backwardation.” However, prices don’t always rise and there is no guarantee that the future spot price will be higher at the time of delivery. When a market has unexpectedly weakened, to the point that the market price for that commodity is lower on delivery than it was when the price was agreed within futures contracts, the market is said to be “in contango.”

## THE IMPACT ON THE MARITIME WORLD



Crude oil is a commodity that is widely traded on the global futures markets. In January 2015, we saw the price of Brent crude oil plummet to below US\$50, having been around US\$100 just a few months earlier.

Investors and/or traders and/or their financiers who had bought “long” suddenly found their market to be in contango. When the delivery date arrived, they had to accept that, if they then tried to sell the oil they had purchased, they would have to realize a substantial loss as the spot price was considerably lower. Therefore, rather than sell it immediately, oil traders opted to keep possession and wait for the oil price to rise again, before then selling the oil on. There are, however, the following problems with this approach:

- **Problem 1** – Where do traders keep the oil in the meantime?
- **Problem 2** – If purchasing the oil under the futures contract requires the trader to obtain financing from banks or other institutions, are those financiers aware of the risks associated with the long-term storage of crude oil at sea?

One of the attractions of a futures contract is that until the delivery date, the buyer is not in possession of the commodity, and so does not have to worry about storing it. However, once that delivery date arrives, it becomes their property and will remain so until the oil is sold on to others.

It is no coincidence that, at times when crude oil prices fall, maritime freight prices for the carriage of oil also often fall. This is due to there being a glut of oil on the international markets (as indeed was the case in 2014), which depresses oil freight rates. Oil tanker operators often find it difficult to obtain good charters for their vessels at exactly the time when oil traders are looking for somewhere to keep their newly delivered (or about to be delivered) oil. Not for the first time, we have a situation where there are two willing partners in what becomes a maritime contango marriage of convenience. Oil traders charter idle oil tankers to store their oil and shipowners find a cheap way of employing their tankers, simply anchoring the vessels and offering these otherwise idle ships to be used as floating storage units.

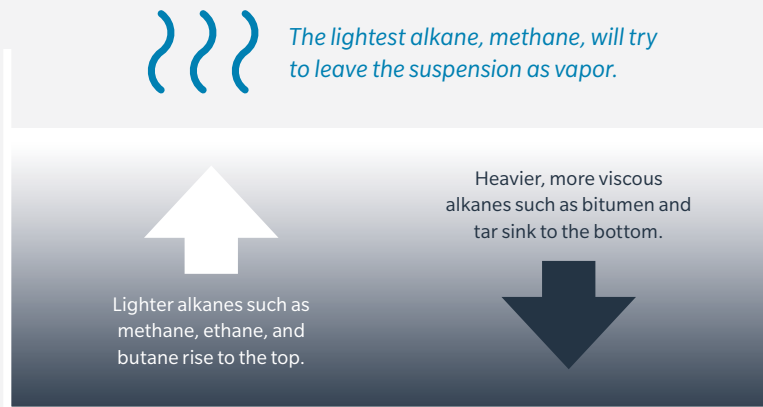
## INSURERS ARE INCREASINGLY CONCERNED WITH THE “CONTANGO MARRIAGE OF CONVENIENCE” BETWEEN OIL TRADERS AND OIL TANKER OWNERS

### MARINE CARGO INSURANCE

Crude oil is not a liquid — it is a suspension of numerous hydrocarbon compounds, among other things. If stored for long periods of time, undisturbed crude oil will begin to settle. The heavier hydrocarbons (such as bitumen) sink and coalesce at the bottom, while the lighter hydrocarbons (such as methane and ethane) rise to the top and, if permitted, escape the crude oil altogether as vapor. As such, the crude oil starts to degrade. This can lead to both quality claims as well as shortage claims due to excessive sediment (or sludge) forming at the bottom of the cargo, which becomes unpumpable, leading to residues remaining on board (ROB) issues.

Oil tankers used as storage units are exposed to the climatic conditions where they are anchored. In many locations, there can be considerable variations between daytime and nighttime temperatures, which may lead to a loss of cargo due to venting (the release of gases into the atmosphere). This may well lead to cargo “shortages,” as the volume of the cargo on board is slowly reduced due to this constant temperature change. The longer the oil is in storage on the vessel, the greater the possible loss from this cause.

Long-term settling of oil cargoes can result in degradation and increased viscosity at the base.



Crude oil is a suspension. If the lighter compounds are allowed to escape, then, to maintain the balance of the suspension, small quantities of the heaviest compounds will also leave the suspension to compensate, so that the remaining compounds maintain a suspended balance. The heaviest compounds can then coat the lining of storage tanks with thick sticky residues that are very similar in nature to the tarmac used to make roads.

The mixing or “blending” of cargoes at sea is not permitted under the International Convention for the Safety of Life at Sea (SOLAS), but such mixing may occur accidentally, leading to claims of the cargo being “off-spec” when it is eventually discharged.

With current international concerns over the origin of oil cargoes, resulting from international sanctions, any blending that occurs will make it increasingly difficult to prove that a cargo’s origin remains legal, especially in areas of the world where sanctioned oil cargoes may be present. If any ship-to-ship transfers of the cargo occur, this risk of blending and of contamination only increases each time.

## TRADERS AND THEIR FINANCIERS

While it may widely be true that liability following a pollution

event at sea would fall on the vessel operator (often strictly so, as, for example, under the Civil Liability Convention [CLC]), under some jurisdictions, it is by no means certain that such clear-cut responsibility on the vessel operator would always be applied. This is especially true in countries like the US, where the laws on responsibility for marine oil spillage are somewhat different. If a major oil spill were to occur from a vessel engaged in this oil-storage activity, oil traders and/or their financiers who are seen to be the owners of the oil might not escape legal action and could at least incur defense costs, maybe even an actual liability in some jurisdictions. It is therefore not surprising that increasing numbers of traders and their financing banks are seeking oil traders’ liability insurance cover.

## MARINE HULL INSURANCE

The evidence from earlier economic downturns and shipping slumps in the 1970s and 1980s, where large numbers of unemployed tankers were often moored together for many months (sometimes years), is that considerable problems were encountered when those vessels were finally reactivated. In such instances, damage occurred both to the hull (due to the excessive fouling and degradation of the hull) and the machinery (never designed for long periods of idleness) of the ships in question. Both main engines and auxiliaries often developed problems that only became apparent when those vessels had started to work again.

Cargoes of oil, carried for long periods of time, can also cause considerable harm to the steel of the tanks they are carried in. Some of the naturally occurring constituents of crude oil, such as hydrogen sulphide, can be particularly harmful, as their corrosive effects, over long and sustained periods, can additionally cause damage to all the pipes and pumps they come into contact with. The proportion of hydrogen sulphide within the stored crude oil varies considerably, depending on where it was drilled. While in most places it is a relatively low percentage (between 2%-4%), oil and gas extracted from wells in Kazakhstan, for example, is known to be considerably more “sour,” with a much higher hydrogen sulphide content (sometimes in excess of 10%).

The buildup of cargo “sludge” at the bottom of cargo tanks sustained during long periods of offshore oil storage use, can cause issues when tankers are then reactivated for normal use, necessitating

considerable and expensive cleaning. Hull underwriters learned during previous shipping downturns that crude oil washing (COW) operations and inert gas systems (IGS) are vulnerable to failure after long periods of inactivity, and the need for extensive tank cleaning can actually cause damage to the tanks themselves.

As mentioned previously, temperature changes in and around the vessel may either lead to vacuums in the tanks or, conversely, pressure buildup. Unless strict adherence to approved venting procedures is undertaken, the risk of explosion will be increased, as external air mixing with the fumes from the cargo could result in a highly explosive cocktail.

One of the more traditionally understood risks to hull involves the ship-to-ship transfer of stored oil between tankers. Such operations, having two or more vessels very close to each other, increase the possibility of collision, with a consequential increase in the risk of damage to the insured vessel's hull and a possible liability to the other vessel (assuming primary collision liability is insured under the hull policy). The mooring arrangements of a long-term lay-up of a tanker with cargo on board is also another area

of concern, as periodical weather and sea states may expose the vessel to unusual strains on its anchoring systems. Should the vessel go adrift, then the perils occasioned by long periods of inactivity of its machinery may cause additional problems. Where storage vessels are anchored is another important factor, as quiet locations that might pose reduced collision risk may also suffer from a lack of nearby adequate salvage and rescue services.

## PROTECTION AND INDEMNITY (P&I)

Employing tankers as floating storage units would usually represent a material change in information and so the P&I Club ought to be promptly advised of any such plans.

Underwriters could take the view that this is a material change in information and may, under the Rules, seek to impose new premiums, terms or deductibles. There may also be risk management concerns and conversations would need to be had with the Club along these lines. In extremis, the Club managers could cancel the entry.

On the face of it, the reduction in voyages might make the P&I risk appear reduced. To some extent, this argument is persuasive but there are other aspects to consider.

Liability to cargo interests due to shortage would be a major concern and the exposure would only increase with the length of the storage period. As well as the potential liability, fines may be imposed on the vessel operator, under some jurisdictions, for cargo shortage. Possible liability for contamination of the cargo is another risk that shipowners (and their P&I clubs) might have to face. Pollution liability poses a constant threat for laden tankers, and the long-term use of vessels as oil-storage vehicles can only increase the risk of a pollution event occurring or resulting from other events (such as a collision or breaking adrift in bad weather and grounding). If ship-to-ship transfers are involved, then the pollution liability risks increase further.

Long-term employment of oil tankers as floating storage units may also lead to disputes under the charterparty such that FD&D cover, if purchased, may also need to be utilized.

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