Shipping ECA finance

Full year 2015

In this issue:

- Cruise ships: European ECAs step up to back their ship yards
- LNG tankers: Big orders could soften charter rates
- Shipping bucks trend by receiving more ECA support in 2015

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Welcome to our first ECA specialist sector report. This is the first of a series of reports from TXF Data that will examine different asset classes and their behaviour.

In this issue we will analyse a number of key ECA markets in the shipping industry. We hope that we give a useful insight of the risks and opportunities in the markets that we are exploring in this report.

All of the data referenced in this report is taken from the extensive database generated by tagmydeals - the innovative free online social platform where financial professionals can register their achievements in closing complex deal structures, and connect with peers and clients for marketing and international business development. Register for free today!

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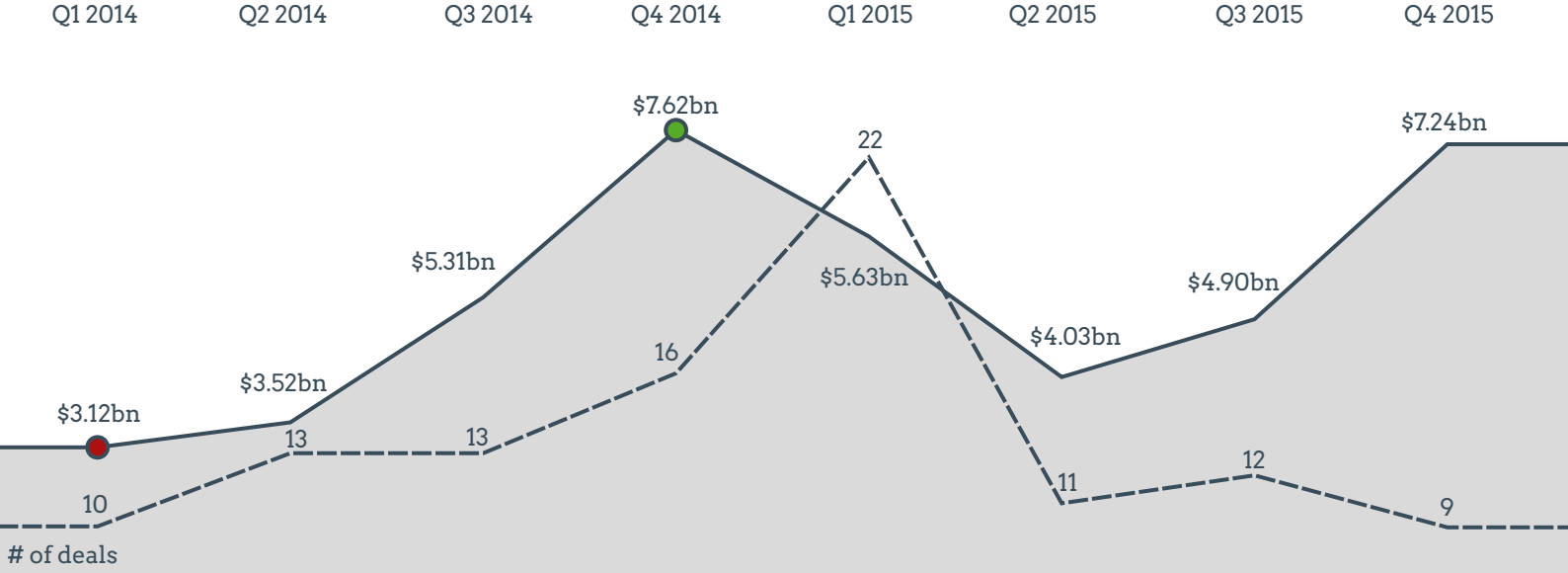
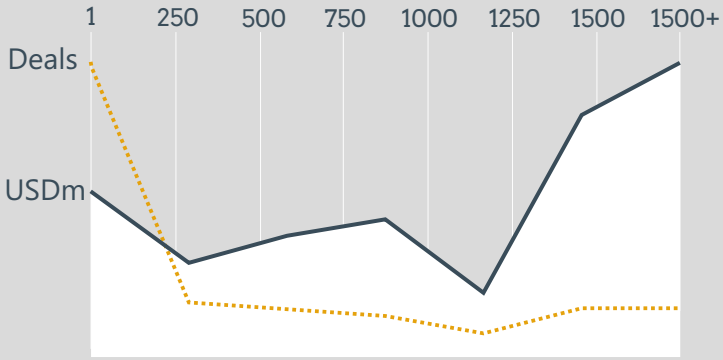
Market at a glance

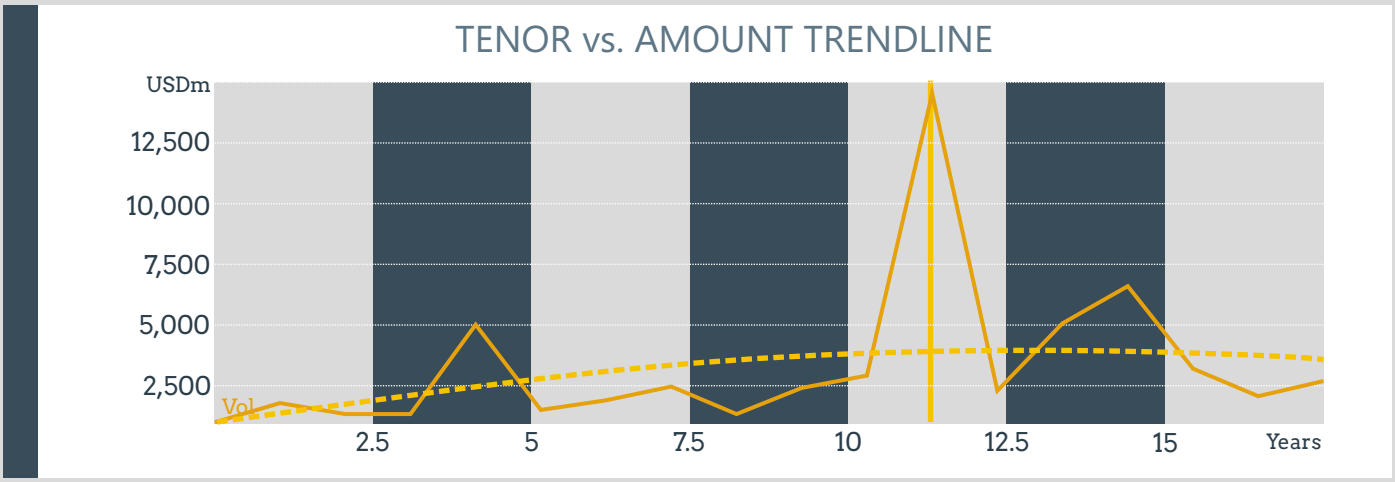
	Total amount	No of deals	Top vessel type	Avg tenor
2015	USD 21.82bn	54	Cruise ships	11.6 years



Deals by volume

Breakdown by volume range			
Range (USDm)	USDm	No	% of vol
1-250	3,141.5	34	14.4%
251-500	1,322.8	4	6.1%
501-750	2,293.8	4	10.5%
751-1000	2,671.8	3	12.2%
1000-1250	1,056.4	1	4.8%
1251-1500	5,103.8	4	23.4%
>1500	6,226.4	4	28.5%

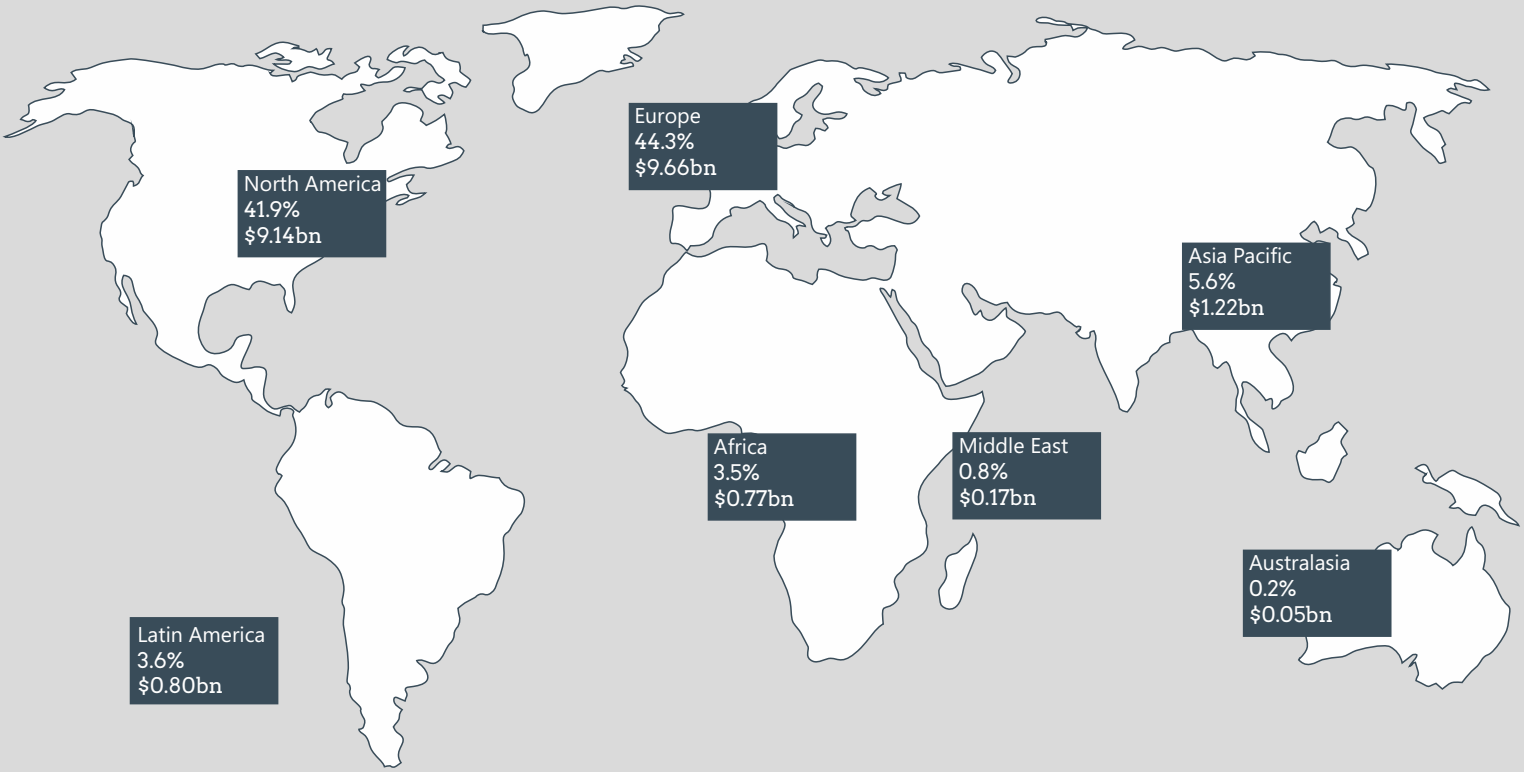




Find the methodology at: www.txfdata.com/methodology

Shipping ECA finance full year 2015
Market at a glance

Top Region	Amount	No of deals
Europe	$9.66bn	24



Lenders and guarantors

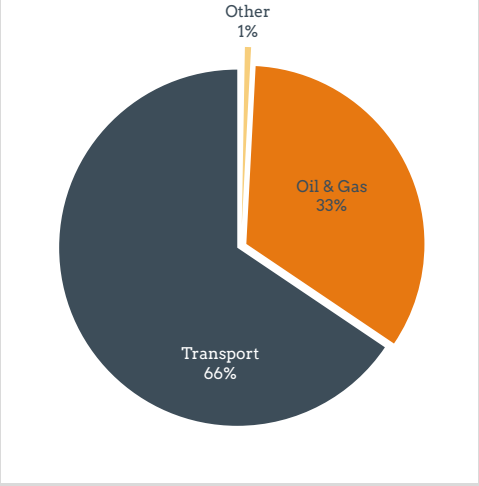
The shipping market remains an active market for export credit agencies. Shipping accounted for nearly a third of all ECA deals in 2015 (around 27% of the total ECA market). Shipping was also the only industrial sector to keep similar volumes for ECA supported deals in both 2014 and 2015. Most of the deals were for the acquisition of vessels, but it also registered a few deals for other shipping related equipment, such as containers.

In terms of regions, there was a big concentration of deals in 2015 for European and North American borrowers. Both these regions are atypical markets for ECA deals in general, but the commercial risk associated with some of these assets makes ECA guarantees popular for shipping.

The shipping sector, in terms of the designated use of the ships, has been split into three industries for this report: transport, oil & gas and other. Transport - including cruise ships, container ships, and bulk carrier vessels outside the oil & gas industry- was the dominant shipping sub-sector last year (accounting for 66% of all deals). However, ECAs also backed more than double the amount of ships to serve the oil and gas industry in 2015 compared to 2014 as the market corrected itself after a significant reduction in capacity between 2009 to 2014. Last year the market was again demanding additional capacity, especially for tankers.

Find the methodology at: www.txfdata.com/methodology

Deals by sector

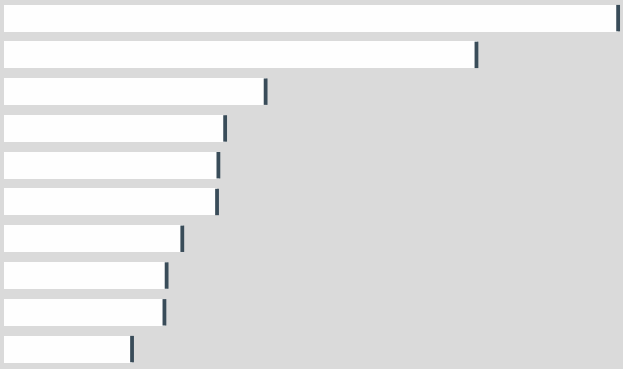


Borrowers and ship types

Cruise lines and LNG transport companies were some of the biggest borrowers in 2015 . Carnival and Royal Caribbean topped the market closing multiple deals in 2015. It is likely that we will see activity from them in 2016, as we detail in the cruise ship article in this report. We also saw some activity in the construction vessel industry coming from the Nordic ECAs (GIEK, 6 ships) and although it was not very representative in terms of overall volume, there is a market for those interested in financing small ships (around $30m worth) on a bilateral basis.
There was a remarkable drop of dry bulk carriers during 2015. Last year we registered just two deals worth $189m, while in 2014 this type of ship accounted for $2bn and 14 ships.

Top borrowers

	Vol ($m)	No of deals
Carnival plc	3,649.7	3
Royal Caribbean Cruises	2,799.8	2
SBM Offshore	1,550.0	1
GasLog	1,310.0	1
MSC Mediterranean Shipping	1,272.4	1
Tartaruga	1,262.0	1
Tui Cruises	1,056.4	1
Gener8	963.7	1
Seadrill	950.0	1
Dorian LPG	758.1	1



Deals by type of ship

	2015		2014	
	No of deals	Vol ($m)	No of deals	Vol ($m)
Cruise ship	8	9,071	13	8,149
Offshore	18	5,096	9	4,833
Gas tankers	10	3,771	4	2,079
Oil tankers	4	964	-	-
Container carriers	2	540	-	-
Chemical tankers	2	510	-	-
Ferries	3	212	-	-
Dry bulk	2	189	14	2,026
Other	8	1,462	12	2,496

Find the methodology at: www.txfdata.com/methodology

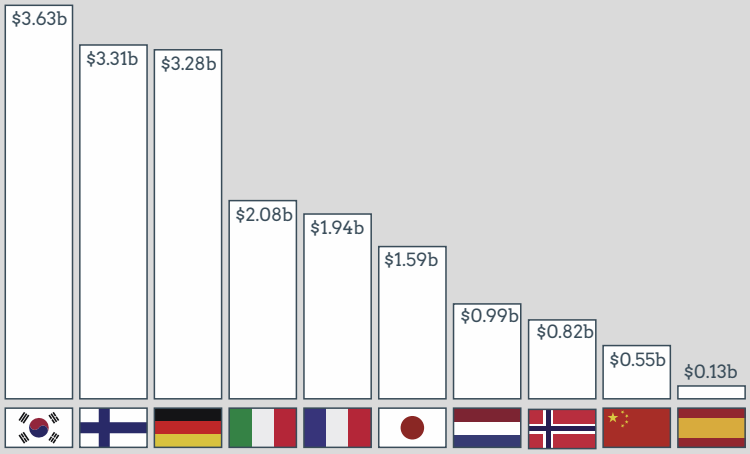
Shipping ECA finance full year 2015
Market at a glance

Lenders and guarantors

Many European ECAs have dramatically increased their shipping portfolio (Netherlands: +400%, Italy: +268%, Finland: 139%). This represents an interesting switch within the industry which was historically dominated by very active Asian ECAs keen to back their domestic ship yards. However, South Korea continued to offer the most support through its ECAs with $3.6 billion worth of deals, and increased the level of support by almost 30% compared to 2014. Japan ECAs, in contrast, backed 14% less shipping deals during 2015.

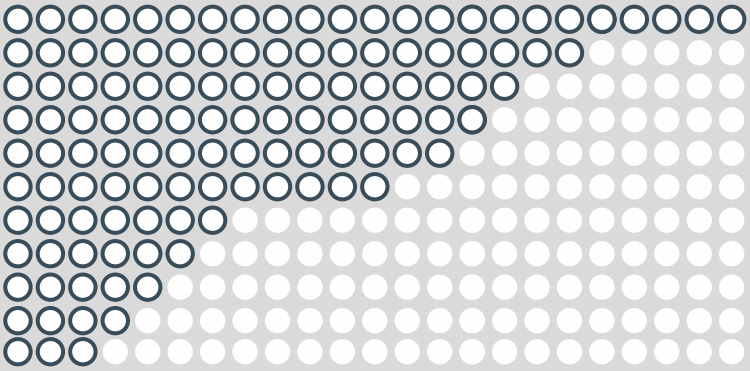
Euler Hermes was the only ECA among the top five that registered less activity in shipping during 2015 (30% less according to our records), and it is also interesting that in Korea, Kexim grew by almost 300% while K-sure saw 30% less activity last year.

Top ten countries by ECA supported deals*				
		USDm	%	
1	South Korea	3,603.5	19.6%	↑
2	Finland	3,313.9	18.0%	↑
3	Germany	3,279.4	17.8%	↓
4	Italy	2,079.1	11.3%	↑
5	France	1,937.6	10.5%	↑
6	Japan	1,592.6	8.7%	↓
7	Netherlands	991.1	5.4%	↑
8	Norway	824.9	4.5%	↓
9	China	556.8	2.6%	↓
10	Spain	134.6	0.7%	↑

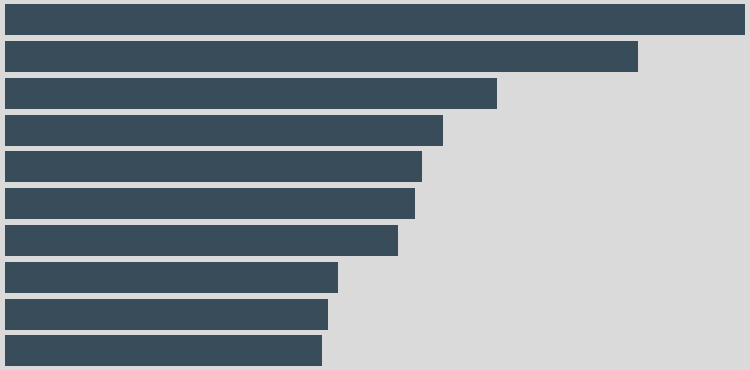


*Supported by ECAs and DFIs

Top ten ECAs in shipping				
		USDm	%	
1	Euler Hermes	3,279.4	17.8%	↓
2	Finnvera	2,561.4	13.9%	↑
3	KEXIM	2,338.5	12.7%	↑
4	SACE	2,079.1	11.3%	↑
5	COFACE	1,937.6	10.5%	↑
6	K-sure	1,233.4	6.7%	↓
7	Atradius	991.1	5.4%	↑
8	JBIC	929.3	5.1%	↑
9	Finnish Export Credit	752.5	4.1%	↓
10	GIEK	629.3	3.3%	↑



Top ten banks in the ECA shipping market				
		USDm	%	
1	KfW IPEX	1,818.3	5.3%	↓
2	Citi	1,626.6	4.8%	↑
3	BNP Paribas	1,258.3	3.7%	↓
4	SMBC	1,120.6	3.3%	↑
5	Banco Santander	1,065.2	3.1%	↑
6	Societe Generale	1,049.7	3.1%	↑
7	MUFG	969.0	2.8%	↑
8	HSBC	825.9	2.4%	↑
9	Credit Agricole	811.5	2.4%	↑
10	ABN AMRO	682.5	2.0%	↓



Find the methodology at: www.txfdata.com/methodology

The parameter performed better/worse than in the previous period ↑ ↓

Cruise Ship Market

Key risks
The market for big cruise ships is very limited with only 10 - 12 deliveries per year and these are concentrated in Europe. Most of the industry is concentrated in just three big cruise groups, resulting in a great concentration of risk.

The ships are financed by European ECAs, and the borrowers are generally either American or European. Potential lenders need to have appetite for euro- denominated deals.

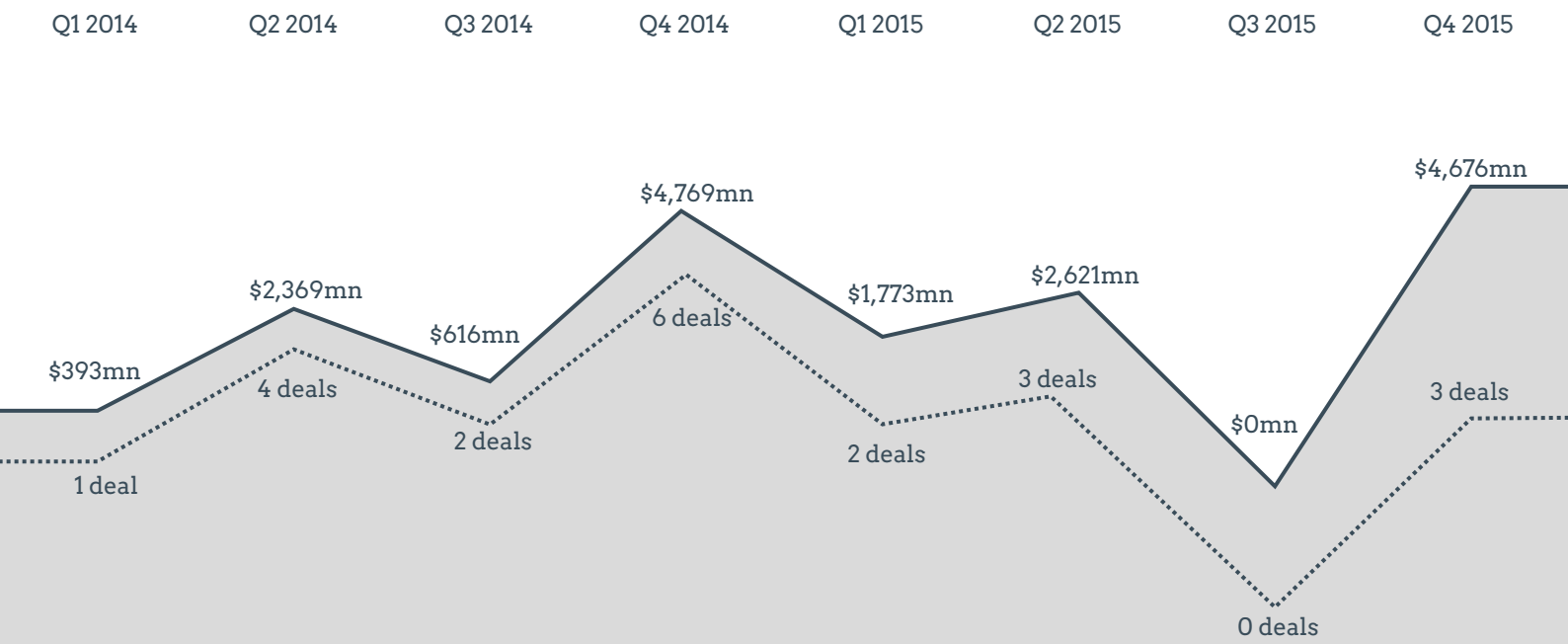
The cruise ship market has been a steady and attractive one for ECA-backed debt. However, it is possible the sector could attract alternative sources of liquidity which could impact the potential margins in the sector.

Key opportunities
Cruise ship owners are perennial users of ECA debt and are familiar with ECA solutions - making it easy for lenders to approach them for new deals.

Most ECA debt for cruise ships has been focused on funding the delivery of new builds, however there is a clear potential for ECAs to also guarantee ship refurbishments - which occur regularly and are capital intensive.

Cruise ships have boasted strong traffic growth (avg. 4.6% per annum in the last four years) and high occupancy rates- even during the recent global recession.

Shipping ECA finance full year 2015
Cruise ship market

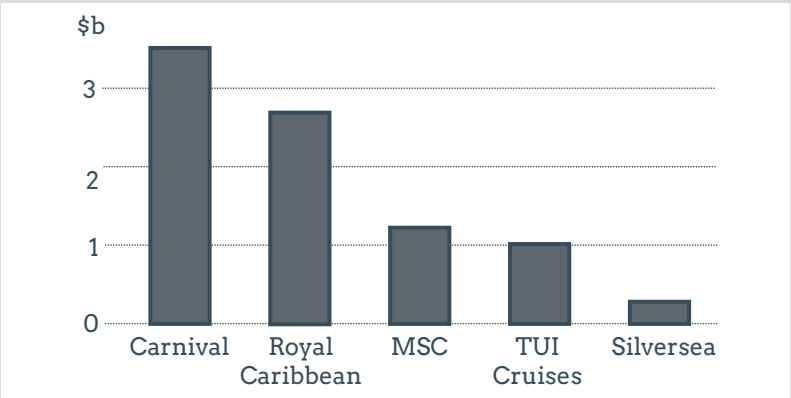


Cruise ships were the most popular ship class in 2015, accounting for $9.1 billion in 2015, 11% more than the figures registered in 2014. This market, or at least the ECA side of it, is still very niche. It consists of a few manufacturers in Europe selling ships to a handful of companies mainly in North America and Europe. We saw 72% of total debt going to US cruise lines, while the remaining 28% went to their European counterparts.

Cruise market top borrowers & exporters

Top borrowers for cruise ships

		2015 ($m)	2014 ($m)
1	Carnival	3,649.7	245.1
2	Royal Caribbean	2,799.8	873.4
3	MSC Cruises	1,272.4	1,522.7
4	TUI Cruises	1,056.4	1,468.5
5	Silversea	293.0	-
6	Norwegian Cruise	-	1,769.8
7	Viking River	-	1,106.4
8	Chinese Dream	-	817.4
9	Compagnie Du Ponant	-	108.6



Top exporters for cruise ships

		2015 ($m)	2014 ($m)
1	Meyer Werft	3,171.4	3,460.7
2	Meyer Turku	2,561.4	380.0
3	Fincantieri	2,079.1	565.0
4	STX	1,259.4	1,522.7

Shipping ECA finance full year 2015
Cruise ship market

Deals denominated in euros comprised a relatively high proportion of the market in 2015, probably caused by the fact that all the main manufacturers using ECA finance are based in Europe. More than two thirds of the finance in 2015 went to US-based cruise lines, although there was a dramatic change with respect to the 2014 figures (almost 80% of the deals were denominated in euros).

In terms of ECA support, the growth came from a shift in market share between some of the European ECAs: Coface and Euler Hermes went down by 17% and 30% respectively, whereas Finnvera and Sace grew exponentially. In short, these European ECAs now have a similar market share for shipping.

Pricing of deals is not generally disclosed, however Royal Caribbean reported in its financial statements a 12 year, 95% Euler Hermes covered shipping deal with a margin of Libor +130bp. This figure is roughly in line with expectations according to our discussions with various market sources.

Currency breakdown in the ECA market

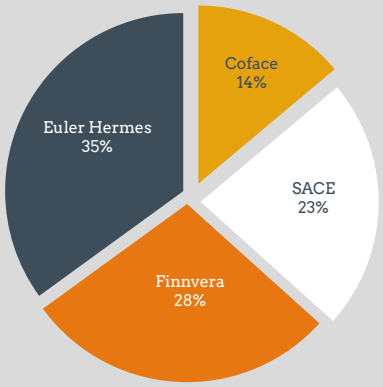
Top currencies

		2015 ($m)	2014 ($m)
1	US Dollar	4,861.2	1,643.8
2	EUR	4,253.1	6,505.0

Top ECAs in the Cruise market

ECAs by volume

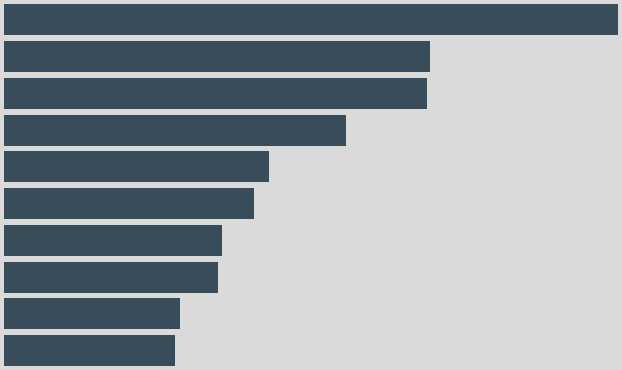
		2015 ($m)	2014 ($m)
1	Euler Hermes	3,171.4	4,567.0
2	Finnvera	2,561.4	924.3
3	SACE	2,079.1	565.0
4	COFACE	1,259.4	1,522.7



Cruise sector market lenders

Top Lenders by volume

Pos	Name	No of deals	Vol (USDm)	Share (%)
1	KfW IPEX	4	1,285.9	8.1%
2	BNP Paribas	6	890.6	5.6%
3	Citi	2	884.5	5.6%
4	Banco Santander	4	715.5	4.5%
5	Societe Generale	3	522.2	3.3%
6	UniCredit	3	455.9	2.9%
7	HSBC	2	447.9	2.8%
8	SMBC	2	367.8	2.3%
9	Commerzbank	2	356.1	2.2%
10	DZ Bank	2	311.1	2.0%



Order books

Cruise ship orders by yard						
Yard	**2016**	**2017**	**2018**	**2019**	**2020**	**Total**
Fincantieri	5	5	5	3	5	23
Meyer	2	2	1	4	2	11
STX France	1	1	2	2	2	8
Meyer Turku	1	1	1	2	1	6
VARD	-	-	2	2	-	4
Mitsubishi	1	1	-	-	-	2
Lloyd Werft	-	-	1	1	-	2
Uljanik Group	-	-	1	-	-	1
Brodosplit	-	1	-	-	-	1
Total	**10**	**11**	**13**	**14**	**10**	**58**

Source of the order book: www.cruiseindustrynews.com, wikipedia, cruise line statements

Cruise vessel orders by customer							
Used ECA*	**Cruise line**	**2016**	**2017**	**2018**	**2019**	**2020**	**Total**
Yes	MSC Cruises	-	2	1	2	1	6
Yes	Viking Ocean	1	2	1	-	-	5
Yes	Royal Caribbean	1	-	1	1	1	4
Yes	AIDA Cruises	1	1	-	1	1	4
No	TUI Cruises[1]	1	1	1	1	-	4
No	Costa Cruises	-	-	-	2	2	4
Yes	Ponant	-	-	2	2	-	4
No	Norwegian Cruise	-	1	1	1	-	3
No	Princess	-	1	-	1	1	3
No	Regent	1	-	-	-	1	2
No	Celebrity		3	1	-	1	2
No	Holland America	1	-	1	-	-	2
Yes	Carnival	1	-	1	-	-	2

1 TUI Cruises is a joint venture between TUI and Royal Caribbean
Source of the order book: www.cruiseindustrynews.com, wikipedia, cruise line statements
*Previous users of ECA debt since 2012. Source: www.tagmydeals.com

Cruise ships represent good opportunities for potential ECA lenders. ECAs tend to back the bigger builds of more than 100,000 gross tonnes. At the end of 2015 there were 60 such ships being operated globally, however there are orders for 40 additional ships to be built by 2020. According to our research, seven cruise ships were delivered in 2015, which tallies with the number of expected deliveries of big cruise ships for the next few years.

ECA debt likely to be preferred method of financing

According to our research half of the cruise lines with orders coming to the market in the next four years have used ECA finance before -including the top four by number of orders.

Ship manufacturers, Fincantieri, Meyer, STX, are also no strangers to ECA financiers and are linked to deals every year. The only thing that could displace the ECAs from this market is increased appetite from alternative liquidity sources.

Could ECAs back refurbishment programmes?

Ship refurbishment programmes are a potential market for ECA debt. Cruise ships have an estimated life span of around 30 years, but need several interior refurbishments during their useful life. As an example, MSC Cruises announced a deal some years ago with Fincantieri to refurbish four ships built just in 2003-2004 in a transaction worth €200 million. A good indication of the potential of this market is that 30% of the cruise ships over 100,000 gross tonnes are over 10 years old.

Shipping ECA finance full year 2015
Cruise ship market

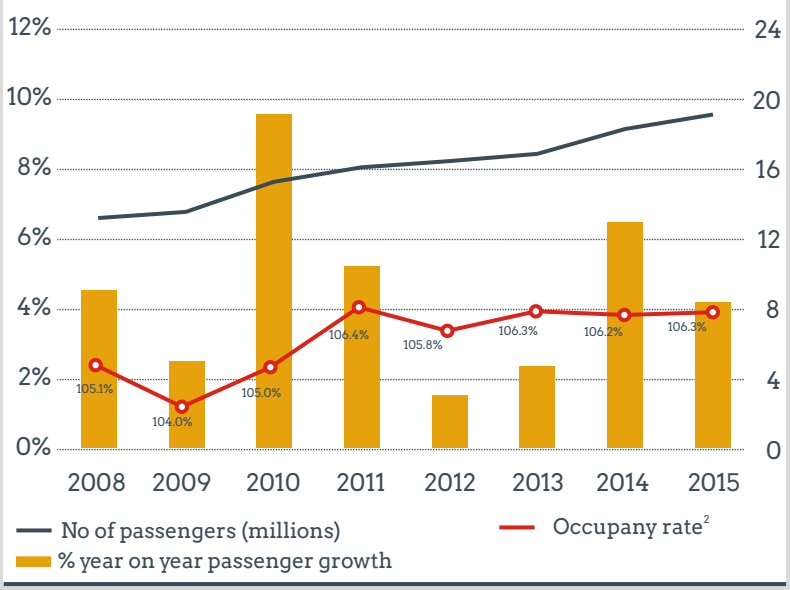
Demand for cruises

The cruise sector has been a consistent growth industry over the last eight years. Demand for these sorts of holidays has not been diminished by either the financial crisis or the recession.

Since 2008 the three main cruise groups[1] have recorded a year-on-year increase of 4.6% on average. In addition, the occupancy rates[2] have consistently exceeded 100% and cruises, operated by the big three firms, rarely have empty cabins.

The only major consideration in terms of risk would be the concentration of ownership. If there was a default on any of the three big players, there would be a very significant impact in the market, including remarketing potential and valuation of the assets.

Aggregated key stats from the main cruise lines[1]



[1]Carnival group, Royal Caribbean Group and Norwegian Group. We estimate that they could represent around 75-80% of the market.
[2]Occupancy is the result of the available passenger cruise days (days of cruise multiplied by the number of cabins, based on the assumption that all the cabins are double) divided by passenger cruise days (number of passengers multiplied by the number of nights). Occupancy rate can exceed 100% if cabins are occupied by more than two people (i.e. a family).

Conclusions

Key risks

The market for big cruise ships is very limited with only 10 - 12 deliveries per year and these are concentrated in Europe. Most of the industry is concentrated in just three big cruise groups, resulting in a great concentration of risk.

The ships are financed by European ECAs, and the borrowers are generally either American or European. Potential lenders need to have appetite for euro- denominated deals.

The cruise ship market has been a steady and attractive one for ECA-backed debt. However, it is possible the sector could attract alternative sources of liquidity which could impact the potential margins in the sector.

Key opportunities

Cruise ship owners are perennial users of ECA debt and are familiar with ECA solutions - making it easy for lenders to approach them for new deals.

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Cruise ships have boasted strong traffic growth (avg. 4.6% per annum in the last four years) and high occupancy rates- even during the recent global recession.

LNG market

Key risks
If transport capacity matches the rise in liquefaction capacity, it will inevitably result in a soft market for LNG transport. The construction of new liquefaction capacity has shown no correlation with the global trade or demand for transport. A soft market could incentivise owners to hold onto cheaper old ships until rates return.

A larger amount of spot sales contracts brings more volatility to LNG transport charter rates, making revenues for charterers more unpredictable.

Different types of deals in the market will have very different risk profiles depending on the borrower, contracts in place, and routes etc. A thorough analysis of each specific case will be crucial to close a good deal. All long-term transport deals can be impacted by indirect political risk that has to be considered for each deal.

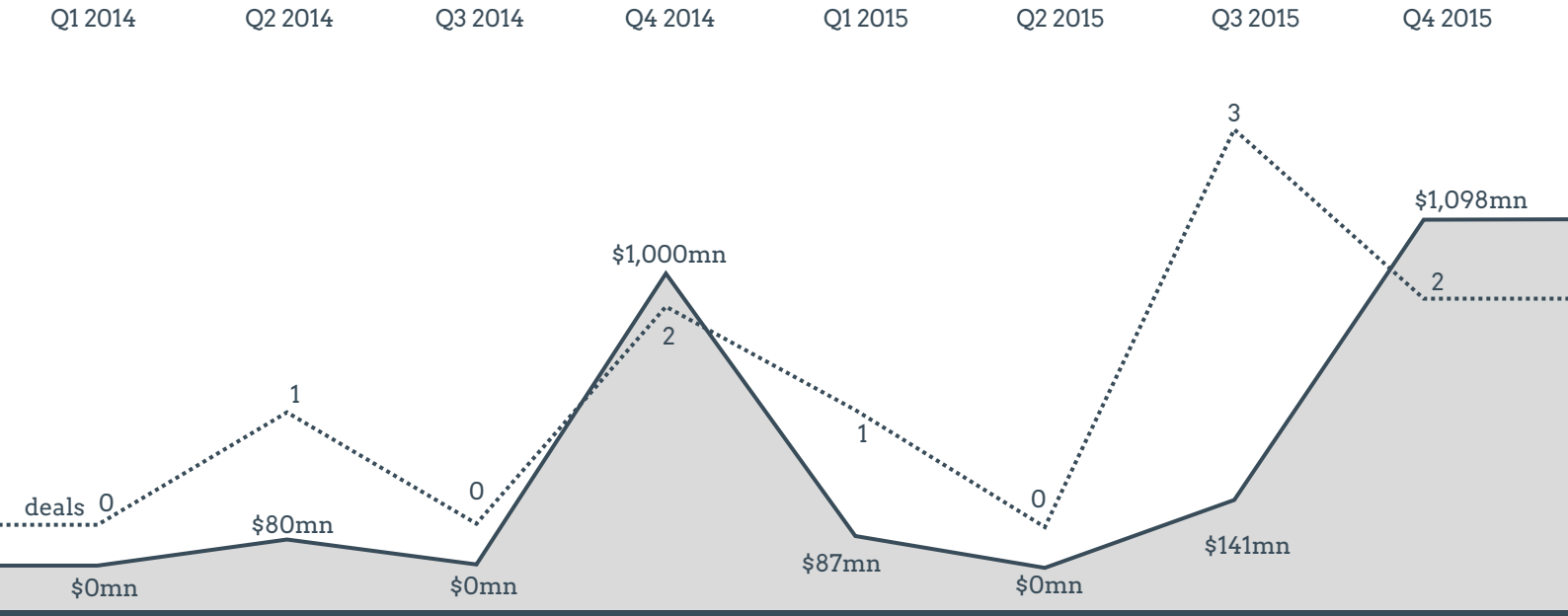
Key opportunities
ECA insurance is not the only way to protect loans against losses in the event of a default. It is clear that there is no such thing as a bad corporate, there are only bad deals. The problem is that in order to make a relatively safe deal with tier 2 corporates it is necessary to reduce the LTV and tenor dramatically. However, lowering these terms gives the ECA products a competitive edge.

The fact is that big ECA names are willing to support ship yards, and have been a consistent support in an extremely competitive manufacturing landscape.

Japan is a big player in the LNG market, and the Japanese ECAs have programmes that support imports in the country if they contribute to the national development. It is anticipated that JBIC or Nexi will work with other ECAs - most likely from South Korea, given its ship yards' current order book.

Shipping ECA finance full year 2015
LNG market

LNG Ships

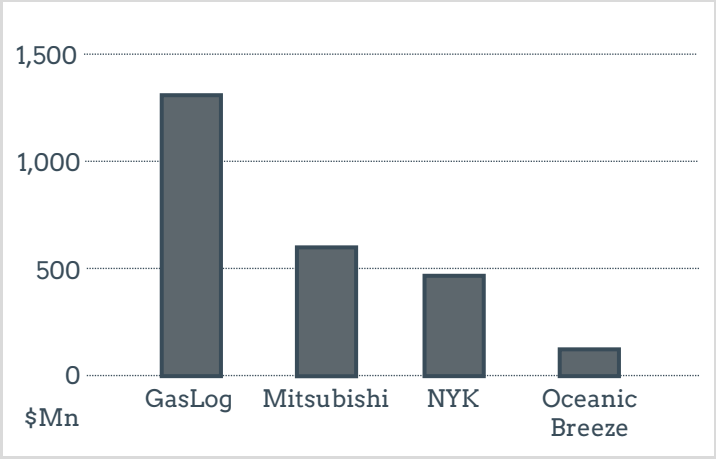


LNG tankers are a growing market within the ECA shipping market. We have seen a slow and steady increase in the size and number of deals in this market during 2015, and this is expected to keep growing. This market is dominated by the Korean ship yards, whose only competition is from China and Japan.

Top borrowers & exporters

Top borrowers for LNG ships

		2015 ($m)	2014 ($m)
1	GasLog	1,310.0	-
2	Mitsubishi	601.1	-
3	NYK	468.0	131.2
4	Oceanic Breeze	125.0	-
5	Maran Gas	-	1,336.0
6	Hoegh LNG	-	412.0



Top exporters for LNG ships

		2015 ($m)	2014 ($m)
1	Samsung	850.7	-
2	Hyundai	247.5	80.0
3	Mitsubishi	135.4	131.2
4	Kawasaki	93.3	91.9
5	Daewoo	-	908.5

LNG Shipping market review

There was a significant rise in the number of Japanese yen-denominated shipping deals in 2015 partly because of the Diamond LNG deals , where borrowers, lenders and the ECA were located in Japan and it made sense for them to use the local currency.

JBIC was the single most active ECA, however both Korean ECAs were responsible for more than 60% of all deals, making South Korea the most active country in supporting exports of LNG tankers. Asian banks dominated the lending market in this area, with SMBC, MUFG and SMTB active lenders for LNG tankers.

Currency breakdown in the LNG market

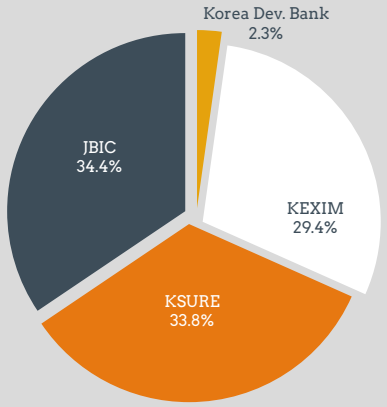
Top currencies

		2015 ($m)	2014 ($m)
1	US Dollar	1,435.0	1,416.0
2	Japanese YEN	1,068.2	131.3

Top ECAs in the LNG vessel market

Active ECAs in the LNG market

		2015 ($m)	2014 ($m)
1	JBIC	476.3	91.6
2	K-sure	412.0	908.5
3	KEXIM	407.0	-
4	Korea Dev. Bank	31.7	-

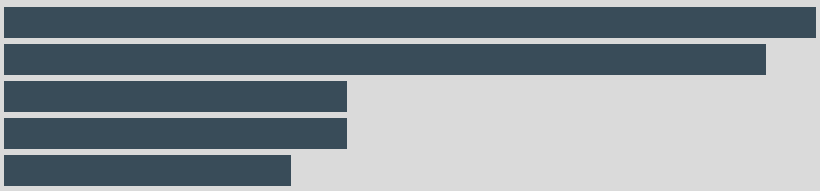


LNG shipping market lenders

Top Lenders by volume

Pos	Name	Vol (USDm)	Share (%)
1	MUFG	299.6	9.3%
2	SMBC	280.6	8.7%
3	SMTB	117.9	3.7%
4	OCBC Bank	117.9	3.7%
5	Other*	91.8	2.8%

* Bank of America Merrill Lynch (BAML), BNP Paribas, Citi, Crédit Agricole, Credit Suisse, HSBC, ING Bank, KfW IPEX-Bank, Nordea, Oversea-Chinese Banking Corporation (OCBC), Société Générale



Shipping ECA finance full year 2015
LNG market

Introduction: a volatile market

With six deals worth $2.5 billion, the LNG shipping market was the second most popular asset class for the ECA shipping market. ECAs are funding more and more of these deliveries: in 2014, 11 ships were financed by ECA debt; while in 2015, 16 ships were funded using ECAs.

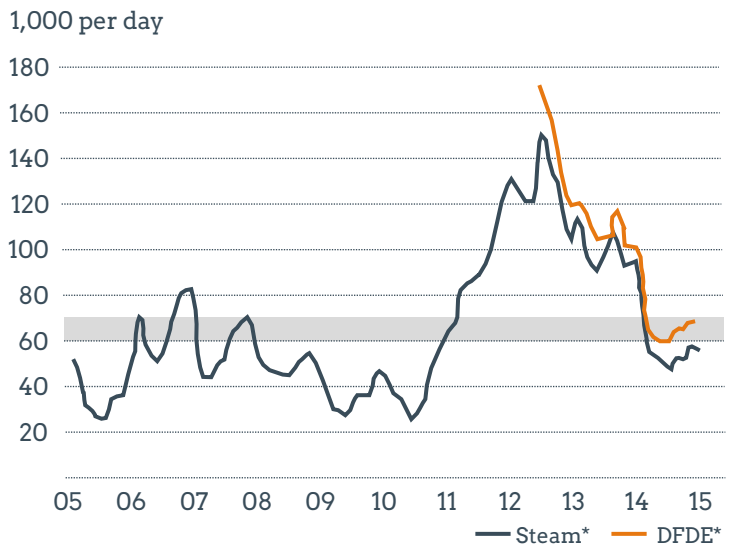
The LNG market has suffered volatile freight rates. After the post-Fukushima spike of demand for gas in Japan, the market reported freight rates over $140k per day. This later plummeted to around $50k in mid-2015 partly due to additional capacity chasing returns. With an estimated break-even point located between $60k to $70k, it is hard for investors to accurately predict the preservation of residual value of the assets.

Could this volatility incentivise the use of ECAs in the LNG market even further? It depends of course on how comfortable lenders are with the risk of the collateral, but also with the underlying risk of the ECAs involved.

The LNG order books for the various ship yards suggest that a significant percetnage of future deliveries will rely on ECA support.

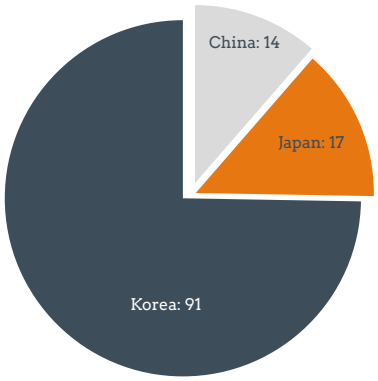
At the start of 2016 South Korea had 75% of the global LNG ship order book distributed between Daewoo, Hyundai and Samsung, followed by Japan (14%) and China (11% of the order book).

Short term rates for LNG carriers



*Source: The Platou Report 2015

LNG vessel order book by country



Source: 1,2

LNG metrics by the end of 2015 (mtpa)

Source: 1,2,3

In order to fully understand the challenges that LNG transport will face over the next few years, it is very important to take in account the influence of certain metrics. This report will analyse each of these metrics[1] in turn to understand the potential impact on the LNG tanker market. These key metrics include :

- the LNG liquefaction capacity as the physical ceiling of the transport market.
- the volume of total sales contracts as a more realistic approximation of the real ceiling of the market,
- the global LNG trade as the real demand for LNG transport,
- and finally the LNG fleet capacity to move this supply.

[1]The gasification capacity is not considered in the report because it so much larger than current supply of LNG so it is unlikely to constitute a bottle neck that will impact LNG transport.

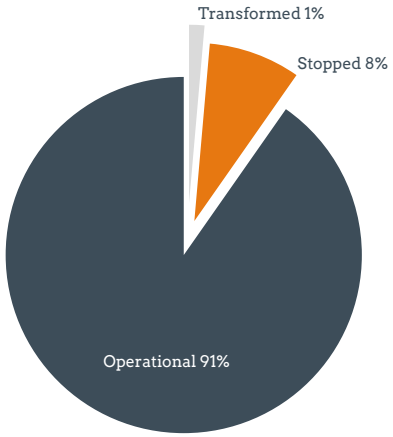
Liquefaction capacity set to boom

LNG capacity is set to increase by 35% over the next four years. There are a number of ongoing projects that will ramp the capacity up considerably in the next few years by 102.5mtpa, mainly due to projects in the US and Australia.

In 2015 production capacity increased to a record breaking 316.7mtpa. However, 27.3mtpa of capacity went offline in 2015 when LNG trains in Angola, Egypt, Libya and Yemen ceased production. In addition the Arun LNG facility in Indonesia was transformed into a storage plant.

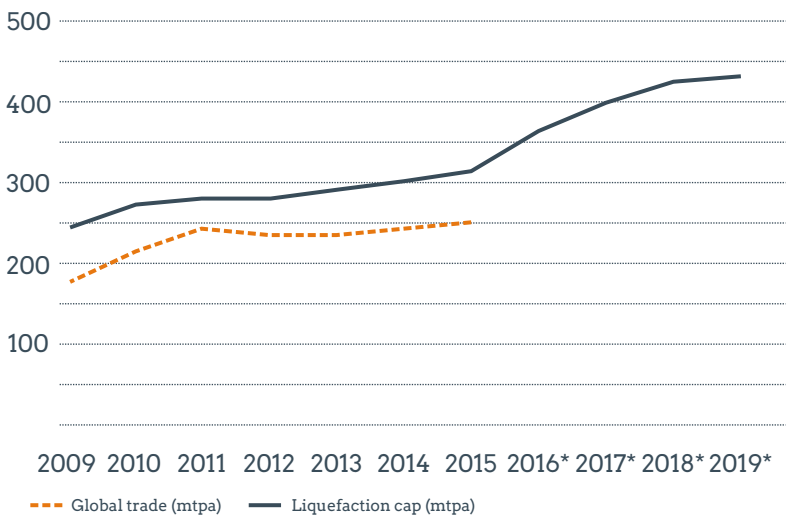
LNG capacity is set to increase by 102.5mtpa, mainly in the US and Australia. However, it is unlikely that global demand for LNG will match this pace. What should concern potential investors is if the number of LNG tanker orders significantly increase to match LNG capacity. If this happens then its is likely charter rates will collapse. Investors need to pay attention to the amount of LNG tanker orders.

LNG trains by status



Source: 1,2

Expected liquefaction capacity increase



Year	Global trade (mtpa)	Liquefaction cap (mtpa)
2009	179.4	245.7
2010	217.3	269.6
2011	241.5	278.7
2012	237.7	282.6
2013	236.8	290.7
2014	241.1	301.0
2015	245.2	316.7
2016*		367.7
2017*		399.7
2018*		423.1
2019*		433.1

*estimated (considering no fleet retirements)

Source: 1,2

Sales contracts

Sales contracts are purchase commitments mostly from gas companies to buy a certain production of LNG from a specific facility. Sales contracts provide an accurate insight into potential LNG transport needs. However, there are some differences between the total volume of contracts and the total volume of trades because buyers do not always purchase all the committed production.

There was a total of 263.7mtpa in active contracts by the end of 2015, representing 83% of the liquefaction capacity. New liquefaction facilities which are set to come online from 2016-2019 only received 79 mtpa in commitments (77% of the new capacity). This suggests that new capacity could outstrip demand.

The signed contracts give us a good idea of where the LNG will be imported in the coming years, as well as making it easier to identify the main regional risks that could challenge the transport for LNG. By the end of 2015, Japan accumulated 25% of the market, followed by China (17.2%) and the United Kingdom (13%). In terms of contracts for new facilities Japan secured 34% of the production, followed by the United Kingdom (13%) and Spain (12%)

Potential LNG import future risks

The existing sales contracts could be affected by several potential factors all of which could have a knock-on effect on the demand for the global LNG fleet:

- Japan is returning to 'back to normal' and again embracing nuclear power. This together with a diversification of the power generation portfolio, could decrease the demand for LNG in the next few years. Media reports suggest that Japan could be exploring a potential gas pipeline with Russian gas fields in Siberia, but technical and diplomatic issues make this unlikely to happen in the near future.

- The slowdown of China's economy could also impact LNG imports. Despite having a 17% market share of all existing contracts, Chinese firms agreed less than 8% of the sales contracts for the new liquefaction plants. Other countries have taken stronger positions on the new plants (Japan: 34%, UK: 13%, Spain: 12%)

- The sales contracts for the UK market represent the last of the three countries with double digit market share. Natural gas in the UK is mostly earmarked for domestic use (37% approx) and to a lesser extent power generation (29% approx.). A warm winter could be a bigger threat to future sales contracts than any other factor.

Top countries by sales contracts. 2015

	Contracts (mtpa)	% of the market
Japan	66.1	25.1%
China	45.5	17.2%
United Kingdom	33.9	12.8%
Korea	24.6	9.3%
Netherlands	16.7	6.3%
Spain	14.4	5.5%
France	12.9	4.9%
Italy	11.7	4.4%
Taiwan	7.6	2.9%
India	7.5	2.8%

Source: 2,3

Top countries by sales contracts for upcoming trains

	Contracts (mtpa)	% of the market
Japan	27.2	34.4%
United Kingdom	10.4	13.2%
Spain	9.5	12.1%
China	6.3	7.9%
India	5.6	7.1%
France	4.8	6.0%
Korea	4.5	5.7%
n.d.*	3.0	3.8%
Taiwan	1.8	2.2%
Indonesia	1.5	1.9%

*not disclosed

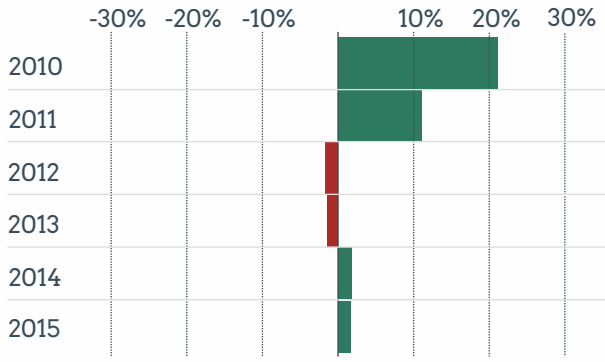
Source: 1

LNG trade and potential export risks

The global trade of LNG has suffered some volatility in recent years, going from two-digit growth in 2010/11 to an unprecedented decrease in LNG trade in 2012 and 2013, and then back to very small growth in 2014 and 2015. All of this proves that the market is very reactive to issues not just in importing countries (see above), but also in exporting countries (e.g. Libya, Russia and Algeria).

More liquefaction capacity together with the sustained low price of transport could stimulate demand, but it is hard to imagine that it will be big enough to match the additional liquefaction capacity coming to the market in the next few years. In short, early signs suggest LNG capacity looks set to exceed future LNG trade.

LNG trade as a % of the previous year



Source: 2,3

Potential LNG import future risks

Spot and short-term contracts now account for almost a third of the total LNG trade over the last few years. Barring significant changes to either global supply or demand it makes little sense for LNG buyers to lock all their acquisitions through long-term contracts to ensure supply.

For LNG transport this makes it increasingly difficult to anticipate routes and demand, as 30% of the global trade is still up for grabs in any year.

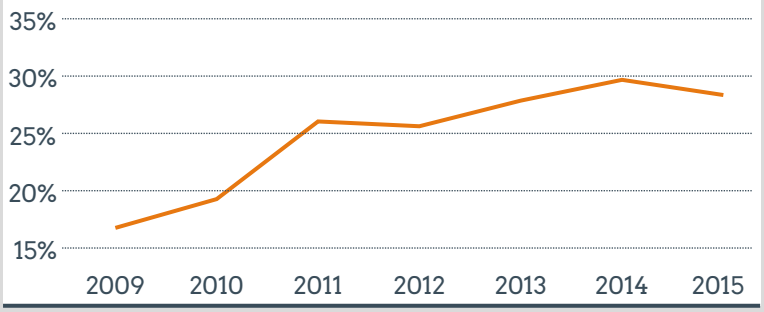
If this trend continues then the transport market will have to become more dynamic and competitive. It is likely that the average charter rates will be more volatile as a direct consequence of a constantly variable market in which deals could originate from anywhere.

Global trade vs. spot & short-term contracts

	Global trade	Spot & short term	%
2009	179.4	29.3	16.3%
2010	217.3	41.1	18.9%
2011	241.5	61.2	25.4%
2012	237.7	59.2	24.9%
2013	236.8	65.0	27.4%
2014	241.1	69.6	28.9%
2015	245.2	68.4	27.9%

Source: 3

Spot & short-term contracts by %



Potential customer situations in the LNG market by ownership and revenue model

Potential LNG lenders should be aware that within the LNG shipping sector different deals have very different risk profiles. To help explain this dynamic we have identified the four most common scenarios and highlighted the different risk profiles involved looking at the types of ship owners and the LNG contracts in the market.

Ship owned by a LNG buyer/supplier

This is probably the safest possible scenario for a lender, because the buyer will prioritise the use of their own ships regardless of the supply for transport. At the moment only BP has six orders for LNG tankers according to our research. For the LNG suppliers the case is slightly different: It would make sense for them to try to combine both the supply and transport through their own ships to potential customers to create a competitive edge. Nigeria LNG (2 ships) and Petronas (5 ships) are examples of LNG producers with pending orders for LNG ships.

Ship owned by a charterer and tied with a project with special needs

A good example is the Yamal LNG project. The transport of the LNG in this project will require 15 ice-breaking class ships, so there will not be competition on those routes. In this case it is in the best interests of both parties to close a long-term deal. Yamal LNG actually issued a tender and a selection of different companies will operate those vessels on a long-term contract basis. So far Teekay and MOL have ordered eight ships to Daewoo for this project. (six for Teekay and two for MOL). However, one cause for concern is that the Russian-based project could fall foul of sanctions.

Ship owned by a charterer and tied to a long term contract

Having a long-term transport contract connected to an asset allows the charterer to offer an additional layer of security to the lenders. This would even enable lenders to offer project finance structures, making the revenue model of the financing stable and relatively safe for investment.

Ship owned by a charterer not linked to specific project or operating on spot

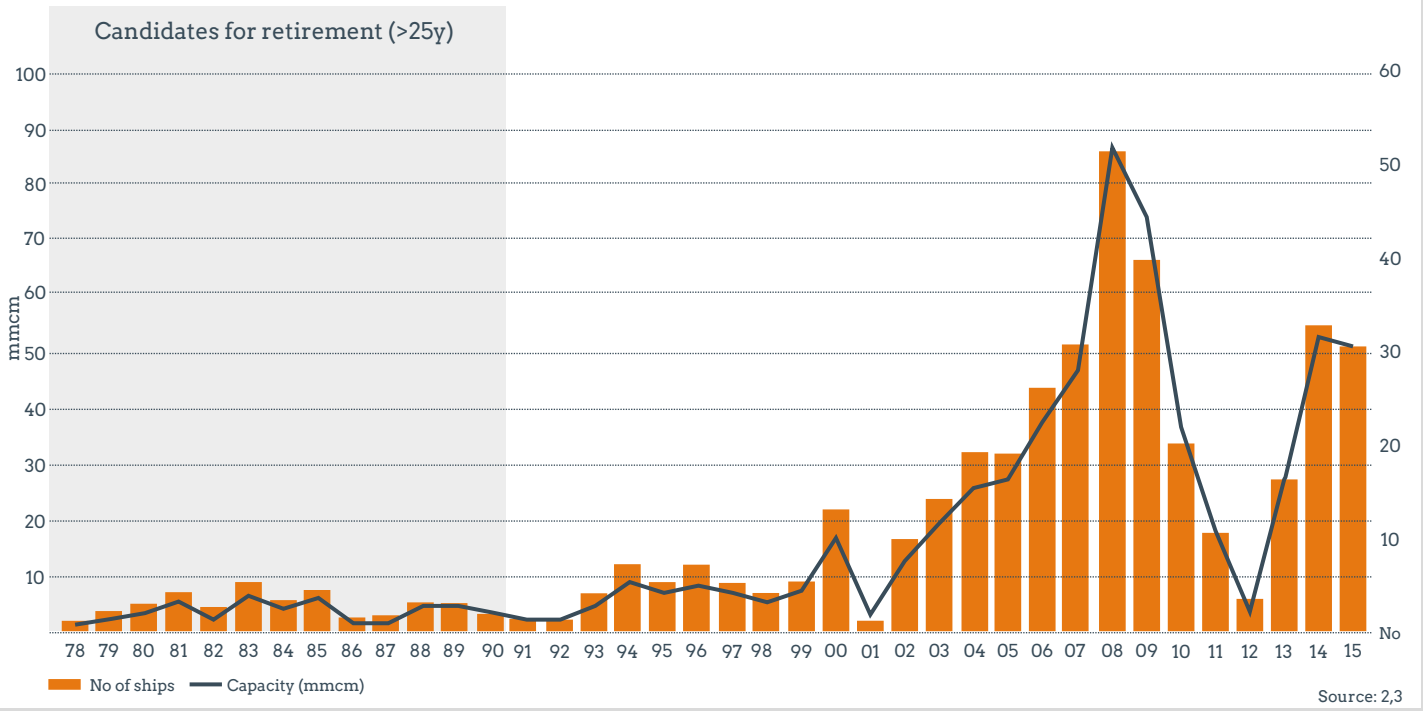
This is the scenario where uncertainty plays the biggest role. If there is an eventual default in a secured loan of a ship operating on short-term contracts , chances are that the reason of that default is a lack of demand for transport. This will impact the residual value of the asset and the remarketing potential, so it would be important for lenders to hedge these risks properly.

Fleet status - young tankers

The LNG fleet is relatively young. The average vessel age is 11 years, with 68% 10 years old or less. There are also 33 ships over 25 years of age, which are candidates to be replaced in the next few years by new builds.

The LNG fleet consisted of 408 ships at the end of 2015, and there were an additional 125 ships on order according to our research. This new builds represent an increase of capacity of roughly 30% in the next four years.

LNG fleet by age



Source: 2,3

The total capacity of the fleet by the end of 2015 was around 62mmcm. and at the end of 2015, there will be a large amount of new builds coming into the market over the next few years, that could put some extra pressure in the charter rates if the global trade does not ramp up accordingly.

This potential oversupply of vessels could also affect not only residual values of the current fleet, but also the sale price of new builds for two reasons:

When charter rates and the fuel prices are low, it makes sense chartering old ships with little or no finance attached because it gives the charterer the ability to be more competitive on price. That makes new builds less desirable and the lack of retirements puts even more pressure on the price of new builds.

If financing for tankers becomes constrained, lenders typically ask for bigger margins or lower LTVs. To make new ships attractive to borrowers ship yards may be forced to lower prices for new builds.

Expected fleet increase

Year	Increase of capacity*	Total expected capacity*	%
2016	7.94	70.72	+12.6%
2017	5.80	76.52	+8.2%
2018	5.54	82.07	+7.2%
2019	1.91	83.97	+2.3%
2020	0.17	84.15	+0.2%

*in million M3, considering no fleet retirements

Source: 1,2

Orders for LNG vessels by yard

Yard	2016	2017	2018	2019	2020	Total
Daewoo	14	11	21	6	1	53
Hyundai	13	7	-	2	-	22
Samsung	10	4	5	-	-	19
Hundong-Zhonghua	4	4	2	1	-	11
Kawasaki	4	2	-	-	-	6
Japan Marine	-	3	2	-	-	5
Mitsubishi	1	1	2	-	-	4
Dalian	-	-	-	2	-	2
Imabari	-	2	-	-	-	2
Xiamen	-	1	-	-	-	1
Total	**46**	**35**	**32**	**11**	**1**	**125**

Source: 1,2

Orders for LNG vessels by customer

Used ECA*	Yard	2016	2017	2018	2019	2020	Total
Yes	Teekay	2	5	7	5	1	20
Yes	Maran Gas Maritime	11	-	1	-	-	12
No	China Shipping Group	3	3	2	-	-	8
Yes	GasLog	4	4	-	-	-	8
No	MOL	1	2	4	1	-	8
No	Mitsui & Co	-	2	5	-	-	7
Yes	Sovcomflot	1	2	3	-	-	6
No	BP	-	-	4	2	-	6
No	BW	1	1	2	1	-	5
No	Petronas	2	3	-	-	-	5
Yes	NYK	1	2	1	-	-	4
No	Chevron	2	-	-	-	-	2
Yes	Hoegh	1	1	-	-	-	2

*Previous users of ECA debt since 2012. Source: www.tagmydeals.com

Source: 1,2

Order books: enter the ECAs

A quick look at the LNG tanker order book reveals names familiar for those in the ECA finance market. Teekay, Maran Gas, NYK and GasLog are all firms that have done deals with ECA backing.

ECA lenders will be particularly interested in long-term transport contracts tied with Japanese energy companies as these deals are eligible for support from the Japanese ECAs under the import loans programme. We saw a few examples of this last year in the Diamond LNG deals, where JBIC participated on the deal even though Korea's Hyundai built the ships.

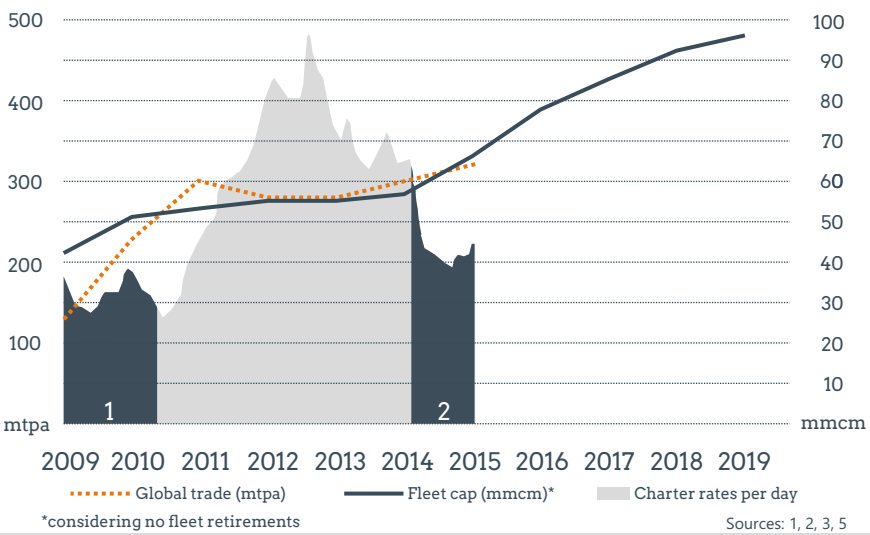
A multi-ECA deal is not be out of the question either; there are no direct precedents on this, but the Development Bank of Japan has partnered up with other ECAs before on deals (Teekay FPSO in Feb 2014, and Seajacks Offshore wind vessel in Feb 2015. See tagmydeals for more info).

New builds expected to hit charter rates

Combining current global trade, charter rates, and present and future fleet capacity paints a worrying picture.

Historically when the global fleet capacity reached a certain ratio in relation to global trade (areas 1 and 2 in the chart), charter rates immediately started to soften until LNG trade increased significantly more than fleet capacity.

More ships are set to be delivered but global trade is not expected to match this supply. Unless there is a huge increase in global trade, charter rates look set to sink to the levels experienced in 2009/2010, when average charter rates were between $35k to $50k.



*considering no fleet retirements

Sources: 1, 2, 3, 5

Conclusions

Key risks

If transport capacity matches the rise in liquefaction capacity, it will inevitably result in a soft market for LNG transport. The construction of new liquefaction capacity has shown no correlation with the global trade or demand for transport. A soft market could incentivise owners to hold onto cheaper old ships until rates return.

A larger amount of spot sales contracts brings more volatility to LNG transport charter rates, making revenues for charterers more unpredictable.

Different types of deals in the market will have very different risk profiles depending on the borrower, contracts in place, and routes etc. A thorough analysis of each specific case will be crucial to close a good deal. All long-term transport deals can be impacted by indirect political risk that has to be considered for each deal.

Key opportunities

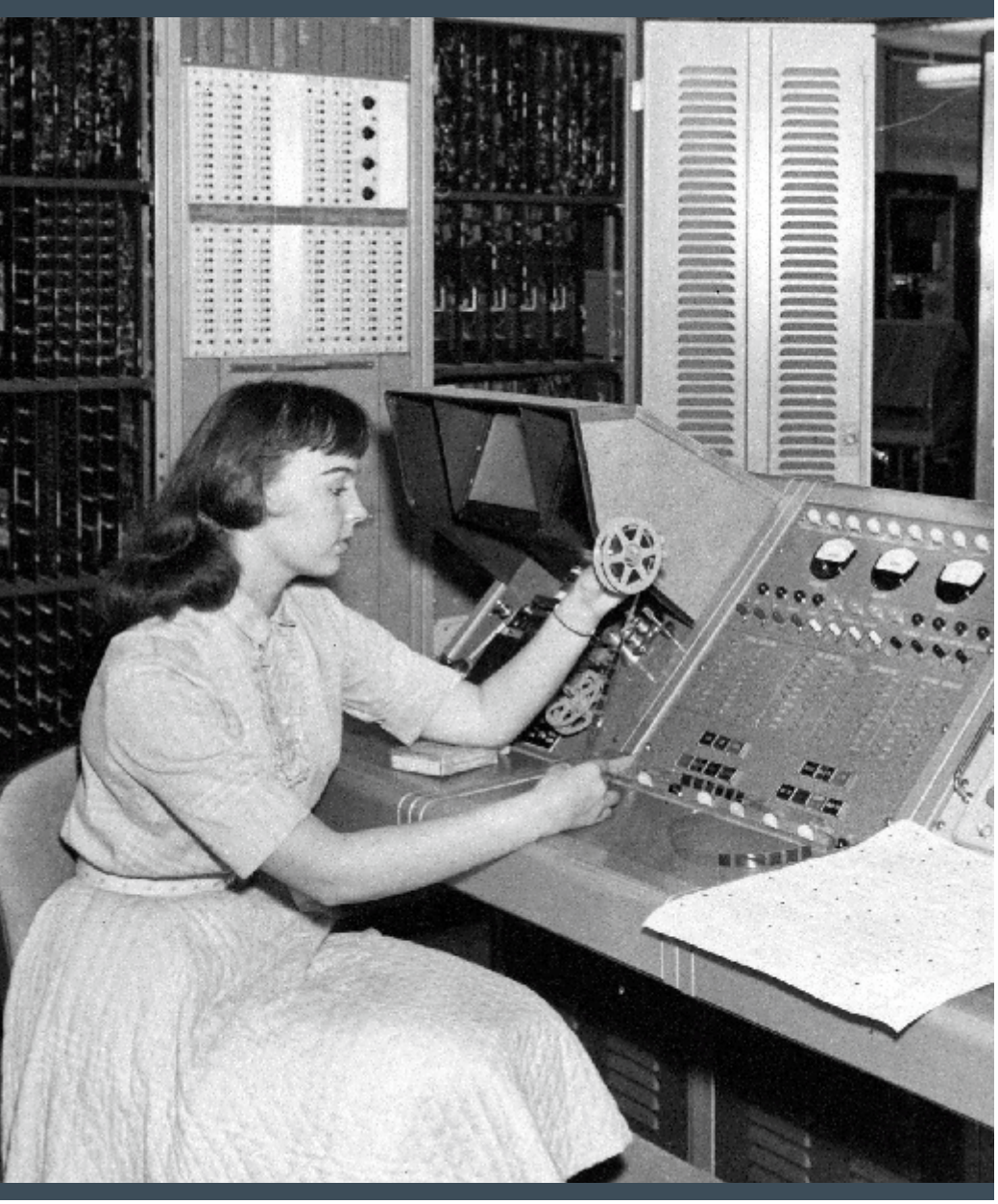
ECA insurance is not the only way to protect loans against losses in the event of a default. It is clear that there is no such thing as a bad corporate, there are only bad deals. The problem is that in order to make a relatively safe deal with tier 2 corporates it is necessary to reduce the LTV and tenor dramatically. However, lowering these terms gives the ECA products a competitive edge.

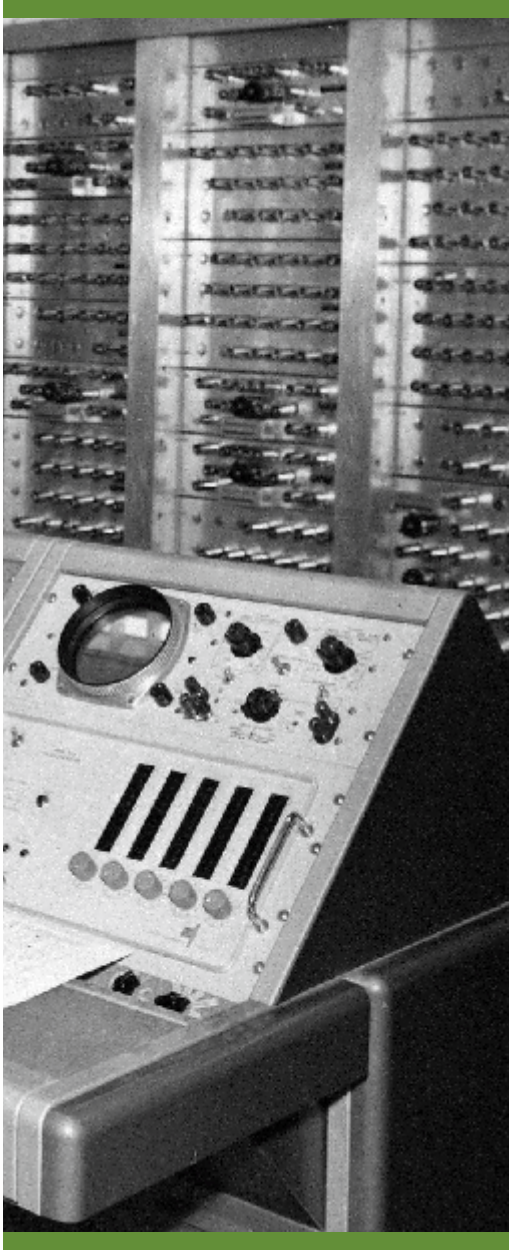
The fact is that big ECA names are willing to support ship yards, and have been a consistent support in an extremely competitive manufacturing landscape.

Japan is a big player in the LNG market, and the Japanese ECAs have programmes that support imports in the country if they contribute to the national development. It is anticipated that JBIC or Nexi will work with other ECAs - most likely from South Korea, given its ship yards' current order book.

Sources:

1. Own research
2. International Gas Union annual reports
3. International Group of Liquified Gas Importers annual report
4. www.tagmydeals.com
5. The Platou Report 2015





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