



## **MDS Transmodal Container Shipping Bulletin**

**May 2017**

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Appendix A: ‘Deployed’ and ‘Allocated’ Capacity

About MDS Transmodal

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## INTRODUCTION

MDS Transmodal is an independent consultancy specialising particularly in freight transport economics including shipping, ports, road and rail, logistics and distribution. We believe access to comprehensive and accurate data are the basis for good consultancy. For this purpose, we have developed and continue to maintain global trade and unit load shipping databases which we use to develop analyses for our clients. We have also built a series of integrated transport and financial models to examine strategic issues and undertake competition analyses.

Based upon these in-house databases, we now produce quarterly bulletins showing an overview of performance in the container shipping industry for the current quarter compared with the most recent. This bulletin shows our estimated and forecast/projected demand, supply, utilisation levels, profitability and market shares by major operator. More detailed bespoke analyses are available.

For this edition, we show our forecasts for the second quarter of 2017 based upon data available at the beginning of May 2017, which combines actual trade data up to and including 2016Q4 for all countries, 2017Q1 data for Argentina, Brazil, Chile, China, Hong Kong, Japan, Norway, South Africa, South Korea and Switzerland, with our forecasts for all other countries.

The richness and intertwining of our models can also be explored through our web application, the Box Trade Analyser (BTA), which acts as a gateway to our trade data, container supply data and outputs from financial modelling of the global container industry. The BTA is freely accessible for two weeks after the release of the Bulletin. Link: <http://www.boxtradeanalyser.com>.

## 1. DEMAND

Based upon the most recent trade data available at the beginning of May, we project that in the second quarter of 2017 global trade of Non-Unitised cargo could exceed a level of 2.7 billion tonnes, reflecting a growth of approximately 4% compared to the same quarter last year and a growth of 0.3% compared to the previous three months. The commodity group anticipated to experience the biggest growth in percentage terms during the second quarter of 2017 compared to the same quarter of 2016 is 'Coal', which is expected to see a growth of more than 9%. On the other hand, 'Metals' is the commodity group for we expect the biggest decline in percentage terms during the same period, down by some 6%.

Our results are summarised in Table 1.

**Table 1: Global international trade, recent and forecast, mTonnes**

	2016Q2	2016Q3	2016Q4	2017Q1 (e)	2017Q2 (f)
Agricultural	189	196	189	194	193
Metals	12	11	11	11	11
Oils & fats	20	21	23	22	22
Chemicals	148	147	150	152	153
Ores	449	475	461	468	472
Forest products	102	98	100	99	102
Energy:					
- Coal	302	326	337	327	331
- Oil & gas	997	1,025	1,039	1,069	1,059
Other	443	438	411	418	427
<b>Total Non-Unitised</b>	<b>2,663</b>	<b>2,737</b>	<b>2,722</b>	<b>2,760</b>	<b>2,769</b>
<b>Unitised</b>	<b>600</b>	<b>583</b>	<b>601</b>	<b>598</b>	<b>610</b>
<b>TOTAL Tonnes</b>	<b>3,263</b>	<b>3,320</b>	<b>3,324</b>	<b>3,358</b>	<b>3,379</b>

Source: MDS Transmodal, World Cargo Database May 2017 (e) = estimates; (f) = forecast

Translating the unitised cargo into TEU, we anticipate a growth of approximately 1.3% between 2016Q2 and 2017Q2, almost reaching a level of 70m TEU, with maritime flows expected to increase at a faster rate than overland & ro-ro traffic. Similar trends derive comparing 2017Q2 to 2017Q1, as shown in the following table.

**Table 2: Global international trade, mTEU**

	2016Q2	2016Q3	2016Q4	2017Q1 (e)	2017Q2 (f)
Maritime containers	35.1	35.2	35.5	35.0	35.8
Other (overland & ro-ro)	33.9	32.0	34.5	33.6	34.1
<b>TOTAL TEU</b>	<b>69.0</b>	<b>67.2</b>	<b>70.0</b>	<b>68.6</b>	<b>69.9</b>

Source: MDS Transmodal, World Cargo Database May 2017 (e) = estimates; (f) = forecast

Drilling down our analysis to the commodity level and comparing our projection for 2017Q2 with the same quarter of 2016, Table 3 shows that ‘Electrical Machinery’, up from some 3.1m TEU to 3.3m TEU (+5.4%), is the commodity group for which we anticipate the highest growth in absolute terms during this period.

**Table 3: Top 10 SITC at 2-digit level, mTEU (ranked by volume 2017Q2)**

	2016Q2	2017Q2 (f)	% change
Mineral Manufactures	5.46	5.55	1.7%
Vegetables & Fruit, Nuts	3.86	3.99	3.3%
Miscellaneous Manufactures	3.65	3.69	1.0%
Electrical Machinery	3.14	3.31	5.4%
Road Vehicles	2.66	2.55	-4.1%
Rubber Manufactures	2.50	2.50	0.2%
Textiles & Made-Up Articles	2.42	2.31	-4.8%
Furniture	2.24	2.29	2.3%
Metal Manufactures - Other	2.24	2.20	-2.1%
Cereals & Cereal Preparations	1.92	2.06	7.4%
Other	38.92	39.47	1.4%
<b>Grand Total</b>	<b>69.0</b>	<b>69.9</b>	<b>1.3%</b>

Source: MDS Transmodal, World Cargo Database May 2017 (f) = forecast

Analysing the commodity group ‘Electrical Machinery’ at 5-digit level, we estimate that this increase is spread amongst the commodities, with the main commodity to increase at the fastest rate being ‘Electric accumulators (storage batteries)’ and ‘Electrical ignition or starting equipment of a kind used for spark-ignition or compression-ignition internal combustion engines’, up by approximately 8% and 35% respectively. These two SITC5D are anticipated to account for circa 21% of the total traffic of ‘Electrical Machinery’ moved worldwide in 2017Q2.

Table 4 shows the major five exporting countries of ‘Electrical Machinery’ in 2017Q2 compared to 2016Q2.

**Table 4: Top 5 exporting countries of ‘Mineral Manufactures’ in 2017Q2 compared to 2016Q2, mTEU (ranked by volume 2017Q2)**

	2016Q2	2017Q2 (f)	% change
China	0.86	0.90	4.1%
Germany	0.24	0.23	-5.4%
USA	0.16	0.17	8.8%
India	0.15	0.22	48.5%
Japan	0.14	0.15	4.3%
Other	1.58	1.64	3.5%
<b>Grand Total</b>	<b>3.14</b>	<b>3.31</b>	<b>5.4%</b>

Source: MDS Transmodal, World Cargo Database May 2017 (f) = forecast

Similar analyses for any other commodities are available on request.

Analysing our forecasts for global trade by importing country, we anticipate mixed fortunes for the top 10 countries during the second quarter of 2017 as compared to the same quarter last year, with China anticipated to see its imports up by more than 7% (from 4m TEU to 4.3m TEU) and Germany expected to see its imports down by 5.5% as shown in Table 5.

**Table 5: Top 10 importing countries, mTEU (ranked by volume 2017Q2)**

	2016Q2	2017Q2 (f)	% change
USA	9.48	9.79	3.3%
Germany	4.65	4.40	-5.5%
China	3.99	4.28	7.2%
France	2.75	2.65	-3.6%
United Kingdom	2.38	2.38	0.0%
Netherlands	2.37	2.30	-3.0%
Italy	2.04	2.01	-1.3%
Canada	2.12	1.99	-6.1%
Japan	1.50	1.52	1.8%
Spain	1.60	1.50	-6.2%
Other	36.13	37.09	2.6%
<b>Grand Total</b>	<b>69.0</b>	<b>69.9</b>	<b>1.3%</b>

Source: MDS Transmodal, World Cargo Database May 2017 (f) = forecast

A detailed breakdown for China imports is shown below.

**Table 6: Major commodities imported into China, '000s TEU (ranked by volume 2017Q2)**

Top 5 SITC 2D	Top 3 SITC 5D	2016Q2	2017Q2 (f)	% change
Pulp & Waste Paper Total	Unbleached kraft paper or paperboard or of corrugated paper or paperboard.	259.6	284.0	9%
	Paper or paperboard made mainly of mechanical pulp (e.g., newspapers, journals and similar printed matter)	76.5	82.9	8%
	Chemical wood pulp, soda or sulphate, other than dissolving grades, semi-bleached or bleached	81.5	77.8	-4%
	All others	172.9	181.8	5%
<b>Pulp &amp; Waste Paper Total</b>		<b>590.4</b>	<b>626.4</b>	<b>6%</b>
Cork & Wood	Wood of non-coniferous species, in the rough (whether or not stripped of bark or sapwood) or roughly squared, but not treated with paint, stains or other preservatives of the following tropical woods:	47.8	181.8	281%
	Wood of coniferous species, in the rough (whether or not stripped of bark or sapwood) or roughly squared, but not treated with paint, stains or other preservatives.	168.0	135.7	-19%
	Wood of coniferous species, sawn or chipped lengthwise, sliced or peeled, whether or not planed, sanded or end-jointed, of a thickness exceeding 6 mm	123.1	106.4	-14%
	All others	146.4	118.8	-19%
<b>Cork &amp; Wood Total</b>		<b>485.3</b>	<b>542.7</b>	<b>12%</b>
	Waste, parings and scrap, of Plastics; other	66.6	73.9	11%

Top 5 SITC 2D	Top 3 SITC 5D	2016Q2	2017Q2 (f)	% change
Plastics in primary forms	Ethylene-vinyl acetate copolymers	14.2	59.9	321%
	Polypropylene	44.3	53.7	21%
	All others	176.6	163.8	-7%
<b>Plastics in primary forms Total</b>		<b>301.7</b>	<b>351.3</b>	<b>16%</b>
Vegetables & Fruit, Nuts	Manioc (cassava)	167.5	164.9	-2%
	Sugar beet, fresh or dried, whether or not ground	17.2	25.2	47%
	Other fresh fruit	23.0	25.2	9%
	All others	62.9	56.2	-11%
<b>Vegetables &amp; Fruit, Nuts Total</b>		<b>270.5</b>	<b>271.5</b>	<b>0%</b>
Ores & Scrap	Copper waste and scrap	47.7	55.0	15%
	Aluminium ores and concentrates	48.3	50.9	5%
	Copper ores and concentrates	18.4	16.3	-12%
	All others	46.1	61.3	33%
<b>Ores &amp; Scrap Total</b>		<b>160.5</b>	<b>183.5</b>	<b>14%</b>
All others		2,183.5	2,305.7	6%
<b>Grand Total</b>		<b>3,992.0</b>	<b>4,281.2</b>	<b>7%</b>

Source: MDS Transmodal, World Cargo Database May 2017 (f) = forecast

## 2. SUPPLY

In this chapter, we analyse the key points at which supply and demand can be measured at a global level, namely services passing through the Suez Canal and crossing the Atlantic and the Pacific. Based on our latest data, we expect the load factors to improve compared to last year only for the services passing through Suez whereas those crossing the Atlantic and the Pacific are expected to see a deterioration.

The results of our analysis are shown in the following sections.

### 2.A Supply – deployed capacity

The global annual capacity deployed on services in 2017Q2 is estimated to have increased by some 4% compared to the estimated capacity in 2016, now estimated to have exceeded a level of 175m TEU. The number of deployed container vessels has gone down from 4,966 in 2016Q2 to 4,799 in 2017Q2. With the expansion of the Panama Canal, not surprisingly the group of ships which experienced the biggest decrease (around 7% compared to last year) is those of less than 5,000TEU.

Extending the analysis back to 2007, we see that the number of ships scheduled to be deployed in 2017Q2 is lower than in 2007Q2 with, however, the capacity deployed increased by more than 50%.

**Table 7: Deployed capacity (mTEU) and number of vessels by ship size**

	Ship size (TEU)	2007Q2	2016Q2	2017Q2 (f)
<b>Deployed Capacity (TEU)</b>	<5,000	92.5	104.4	103.8
	5,000-7,499	15.5	21.4	22.2
	7,500-9,999	7.9	23.1	24.1
	10,000-12,499	0.6	3.4	8.7
	12,500-14,999	0.0	11.2	10.0
	15,000+	0.0	4.5	6.4
<b>Total Deployed Capacity (mTEU)</b>		<b>116.4</b>	<b>168.0</b>	<b>175.2</b>
<b>No of vessels</b>	<5,000	4,426	3,746	3,481
	5,000-7,499	330	474	488
	7,500-9,999	154	467	470
	10,000-12,499	8	48	130
	12,500-14,999	0	174	149
	15,000+	0	57	81
<b>Total No of vessels</b>		<b>4,918</b>	<b>4,966</b>	<b>4,799</b>

Source: MDS Transmodal, Container Business Model, May 2017 (f) = forecast



Based on the ships on order at the time of this analysis, and not taking into account those that will be scrapped, we project that by 2020 the global fleet capacity could grow by almost 17% with capacity deployed in ships of 15,000 TEU or more expected to double during the next few years.

**Table 8: Fleet capacity (TEU)**

	Ship size (TEU)	Current (2017Q2 (f))	Additional Fleet capacity (TEU) by 2020
<b>Deployed Capacity (TEU)</b>	<5,000	8.6	0.5
	5,000-7,499	3.5	0.1
	7,500-9,999	4.3	0.2
	10,000-12,499	1.0	0.5
	12,500-14,999	2.5	0.9
	15,000+	1.3	1.3
<b>Total Deployed Capacity (mTEU)</b>		<b>21.1</b>	<b>3.5</b>
<b>No of vessels</b>	<5,000	5,735	261
	5,000-7,499	582	14
	7,500-9,999	491	25
	10,000-12,499	93	45
	12,500-14,999	187	65
	15,000+	71	64
<b>Total No of vessels</b>		<b>7,159</b>	<b>474</b>

Source: MDS Transmodal, Container Business Model, May 2017 (f) = forecast

The following tables (Tables 9-11) summarise the capacity deployed on the major three routes (i.e. Gulf & ISC - Far East, Far East - North America and Europe & Med - Gulf & ISC - Far East) in 2017Q2 compared to the same quarter last year and to 2007Q2.

Table 9 shows that capacity deployed on the Gulf & ISC - Far East trade lane grew by 6.5% compared to 2016 (the increase mainly driven by the expansion in ships of less than 5,000 TEU) and by 120% compared to 2007 (increase mainly driven by the expansion in ships of 5,000-7,499 TEU).

**Table 9: Deployed capacity (mTEU) on the Gulf & ISC - Far East**

Ship size (TEU)	2007Q2	2016Q2	2017Q2 (f)
<5,000	6.2	5.1	5.9
5,000-7,499	0.6	5.1	3.6
7,500-9,999	0.0	3.2	3.2
12,500-14,999	0.0	0.7	0.0
10,000-12,499	0.0	0.0	2.3
<b>Grand Total</b>	<b>6.8</b>	<b>14.0</b>	<b>14.9</b>

Source: MDS Transmodal, Container Business Model, May 2017 (f) = forecast

On the Far East - North America trade lane we report an increase in the region of 10% in 2017Q2 compared to the same quarter of last year and to last quarter, with ships smaller than 10,000 TEU gradually replaced by bigger ships as described in table 10.

**Table 10: Deployed capacity (mTEU) on the Far East - North America**

Ship size (TEU)	2007Q2	2016Q2	2017Q2 (f)
<5,000	5.2	1.6	1.5
5,000-7,499	6.9	4.0	5.4
7,500-9,999	1.3	6.3	4.9
10,000-12,499	0.0	1.2	2.2
12,500-14,999	0.0	0.0	0.7
<b>Grand Total</b>	<b>13.3</b>	<b>13.2</b>	<b>14.7</b>

Source: MDS Transmodal, Container Business Model, May 2017 (f) = forecast

On the Europe & Med - Gulf & ISC - Far East trade lane we estimate an overall increase of more than 13% between 2016Q2 and 2017Q2 with a rapid expansion in ships bigger than 15,000 TEU at the expense of smaller ships, which have been cascading to other routes. These results are shown in Table 11.

**Table 11: Deployed capacity (mTEU) on the Europe & Med - Gulf & ISC - Far East**

Ship size (TEU)	2007Q2	2016Q2	2017Q2 (f)
<5,000	1.4	0.4	0.0
5,000-7,499	2.8	0.0	0.3
7,500-9,999	2.6	1.4	1.4
10,000-12,499	0.0	1.1	1.2
12,500-14,999	0.0	6.4	5.0
15,000+	0.0	0.8	3.5
<b>Grand Total</b>	<b>6.8</b>	<b>10.1</b>	<b>11.4</b>

Source: MDS Transmodal, Container Business Model, May 2017 (f) = forecast

## 2.B Supply – allocated capacity and utilisation

The key points at which supply (allocated capacity as described in Appendix A) and demand can be measured at a global level are on services passing through the Suez Canal and crossing the Atlantic and the Pacific respectively.

Table 12 shows that comparing the second quarter of 2017 with the same quarter of 2016 we project an improvement in the utilisation level for the services passing through the Suez Canal while for those crossing the Pacific and the Atlantic we expect a contraction.

For the services passing through the Suez Canal, we project supply to decline by 1.5% in 2017Q2 compared to 2016Q2 whereas we expect demand to remain substantially flat during the same period.

For the services crossing the Atlantic our projection for the second quarter of 2017 is for supply to grow by approximately 11% versus demand expected to grow by 1% compared to the same quarter of 2016.

For the second quarter of 2017 we project Transpacific utilisation to reach a level of 62%, which means it will decrease compared to 2016Q2 (down by two percentage points). This result is driven by demand growing at a slower rate than supply.

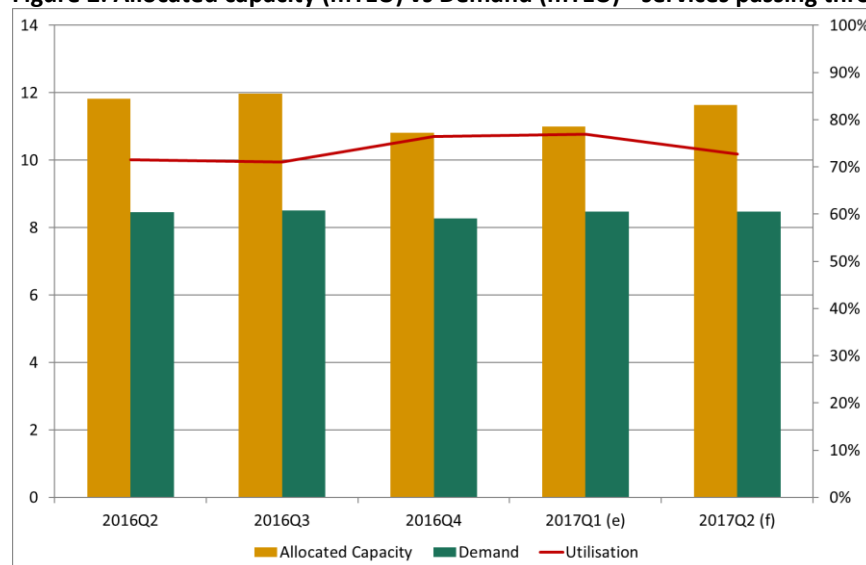
The overall results of our analysis are summarised in Table 12 and Figures 2-4.

**Table 12: Utilisation level by major routes (sum of both directions)**

	2016Q2	2016Q3	2016Q4	2017Q1 (e)	2017Q2 (f)
Suez	71%	71%	76%	77%	73%
Transatlantic	63%	61%	62%	62%	57%
Transpacific	64%	66%	67%	62%	62%

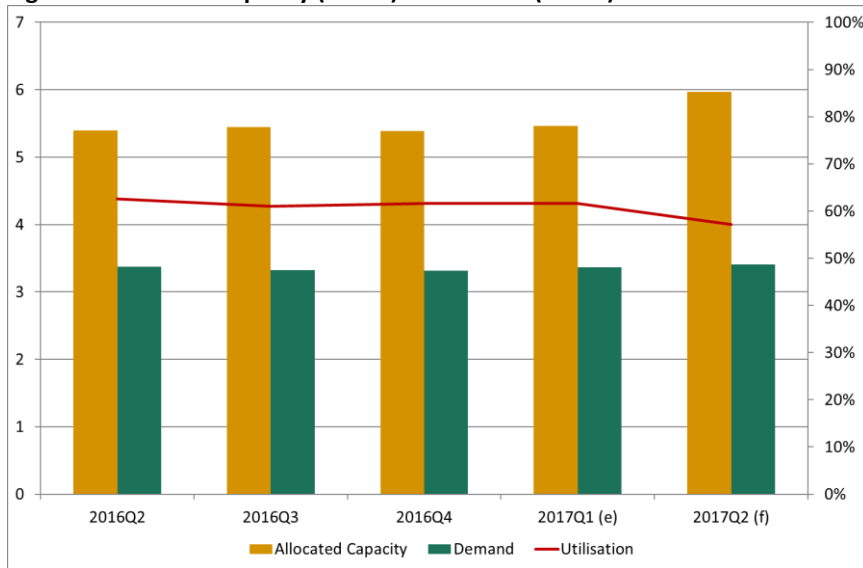
Source: MDS Transmodal, Container Business Model, May 2017 (e) = estimates; (f) = forecast

**Figure 2: Allocated capacity (mTEU) vs Demand (mTEU) - services passing through the Suez Canal**



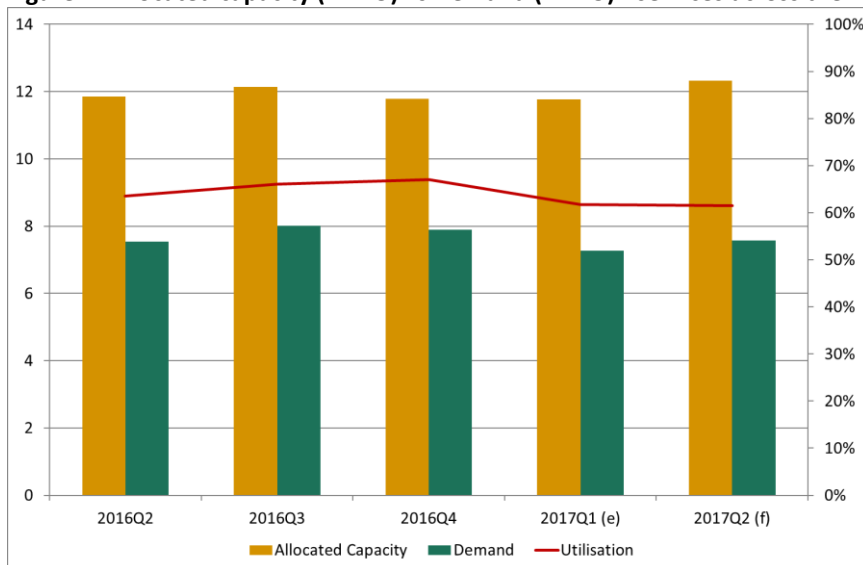
Source: MDS Transmodal, Container Business Model, May 2017 (e) = estimates; (f) = forecast

**Figure 3: Allocated capacity (mTEU) vs Demand (mTEU) - services across the Atlantic**



Source: MDS Transmodal, Container Business Model, May 2017 (e) = estimates; (f) = forecast

**Figure 4: Allocated capacity (mTEU) vs Demand (mTEU) - services across the Pacific**



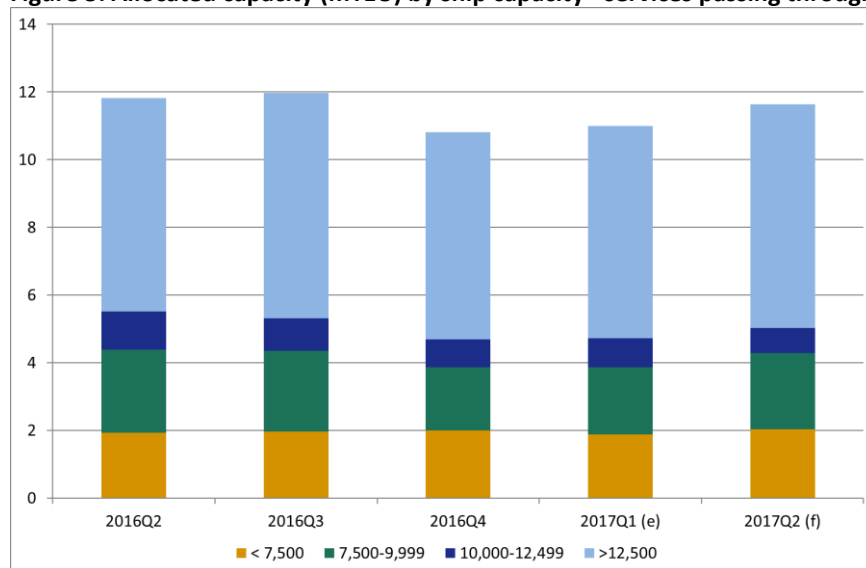
Source: MDS Transmodal, Container Business Model, May 2017 (e) = estimates; (f) = forecast

For each of these three markets, in the following three sections we analyse the allocated capacity by class of ship and by shipping line. Given the changes in alliances and other events affecting the container shipping industry, we show the market shares for the individual carriers without grouping them into alliances.

## 2.B.1 Services passing through the Suez Canal

In 2017Q2 the capacity allocated on the services passing through the Suez Canal is projected to decline by some 2% compared to 2016Q2 and to increase by circa 6% compared to 2017Q1. We anticipate that between 2016Q2 and 2017Q2 ships of at least 12,500 TEU could experience a growth of some 5% while ships with a size of 7,500-9,999TEU could see a reduction of some 8%.

**Figure 5: Allocated capacity (mTEU) by ship capacity - services passing through the Suez Canal**



Source: MDS Transmodal, Container Business Model, May 2017 (e) = estimates; (f) = forecast

Looking at the major shipping lines operating on these services we estimate that the top 10 operators account for approximately 91% of the total capacity allocated on these routes. This percentage has increased compared to both 2016Q2 and 2017Q1.

As shown in the following table, the 2M Alliance’s members play a dominant role on these services, with Maersk and MSC both offering approximately 20% of the total capacity in 2017Q2. However, while MSC is projected to see an increase of some 7.6% between 2016Q2 and 2017Q2, Maersk is expected to remain substantially flat. Similarly, comparing 2017 to the previous three months, MSC is expected to increase its capacity at a faster rate than Maersk.

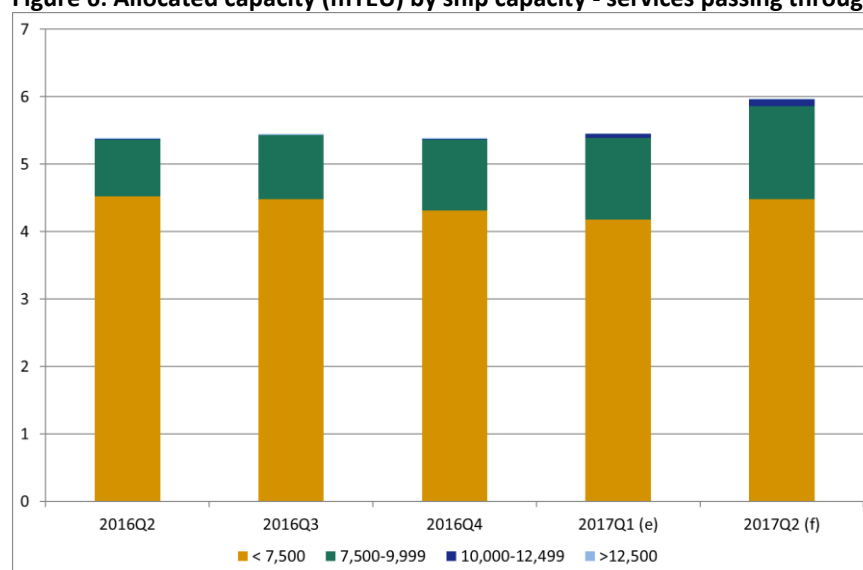
**Table 13: Market share by alliance and their members - services passing through the Suez Canal**

Top 10 Operators	2017Q2 (f)	2017Q1	2016Q2	Allocated capacity % change	
				2017Q2 vs 2016Q2	2017Q2 vs 2017Q1
MSC	21%	20%	20%	7.6%	10.6%
Maersk Line	18%	19%	18%	0.2%	2.3%
CMA-CGM	10%	10%	11%	-3.4%	8.6%
Cosco & CSCL*	9%	10%	10%	-6.6%	3.5%
UASC	7%	7%	7%	5.3%	11.8%
Evergreen	6%	6%	6%	10.3%	12.1%
Hapag-Lloyd	6%	5%	5%	27.9%	41.9%
Yang Ming	5%	4%	3%	39.8%	19.0%
NYK	4%	3%	2%	114.4%	55.1%
NOL	3%	2%	3%	-5.2%	34.4%
All others	9%	15%	17%	-45.4%	-31.4%
<b>Grand Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>-1.5%</b>	<b>5.8%</b>

\*merged from 2016Q3; Source: MDS Transmodal, Container Business Model, May 2017 (f) = forecast

## 2.B.2 Services passing across the Atlantic

In 2017Q2 the capacity allocated on the services passing through the Atlantic is projected to increase by 11% compared to 2016Q2 and by 9% compared to 2017Q1. Analysing the allocated capacity by class of ship, we anticipate that between 2016Q2 and 2017Q2 ships of at least 10,000 TEU could increase by more than 4 times. These ships, however, are estimated to account for less than 1% of the total allocated capacity in 2017Q2 with the relevant class of ship for these routes expected to remain those of less of 7,500TEU, projected to account for 75% of the total capacity (down from 84% in 2016Q2 and from 77% in 2017Q1).

**Figure 6: Allocated capacity (mTEU) by ship capacity - services passing through the Atlantic**

Source: MDS Transmodal, Container Business Model, May 2017 (e) = estimates; (f) = forecast

With a combined market share of circa 47%, we project the 2M Alliance's members will retain their strong position on the Atlantic routes (27% for MSC and 20% for Maersk Line), widening the gap between them and the other lines. Double-digit market shares are also anticipated for CMA-CGM (11%) and Hapag-Lloyd (10%).

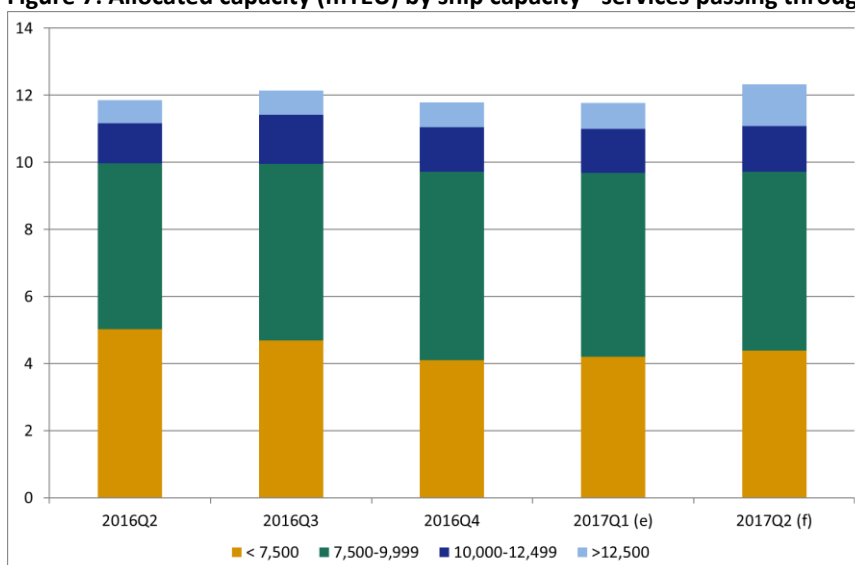
**Table 14: Market share by alliance and their members - services passing across the Atlantic**

Top 10 Operators	2017Q2 (f)	2017Q1	2016Q2	Allocated capacity % change	
				2017Q2 vs 2016Q2	2017Q2 vs 2017Q1
MSC	27%	27%	24%	23.5%	10.2%
Maersk Line	20%	21%	22%	0.1%	7.6%
CMA-CGM	11%	11%	12%	3.8%	9.0%
Hapag-Lloyd	10%	13%	12%	-9.7%	-17.8%
Hamburg-Sud	6%	7%	6%	0.0%	-12.4%
NYK	2%	1%	1%	284.1%	93.7%
OOCL	2%	1%	2%	-2.3%	196.3%
K-Line	2%	0%	1%	278.0%	346.1%
Yang Ming	2%	1%	1%	218.8%	277.4%
Grimaldi Lines	2%	2%	2%	1.1%	3.2%
All others	16%	16%	17%	6.1%	9.5%
<b>Grand Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>10.7%</b>	<b>9.3%</b>

Source: MDS Transmodal, Container Business Model, May 2017 (f) = forecast

### 2.B.3 Services passing across the Pacific

For the second quarter of 2017, we project that the level of capacity allocated on the services passing through the Pacific could increase by 4% compared to the same quarter last year and increase by 5% compared to the previous three months, with ships of at least 12,500TEU expected to increase by some 80% compared to 2016Q2. This class of ship is now projected to account for some 10% of the total capacity (2017Q2), up from a share of 6% estimated last year.

**Figure 7: Allocated capacity (mTEU) by ship capacity - services passing through the Pacific**

Source: MDS Transmodal, Container Business Model, May 2017 (e) = estimates; (f) = forecast

Analysing the shipping lines operating on these routes, we expect Maersk to lead the group, with a market share of 16%. Compared to 2016Q2, we estimate that Maersk could report an increase of some 42% in 2017Q2. Scrolling down to list of the major 10 shipping lines in 2017Q2, we project Cosco & CSCL\* and Evergreen to follow Maersk with a market share of 11% and 9% respectively as shown in the following table.

**Table 15: Market share by alliance and their members - services across through the Pacific**

Top 10 Operators	2017Q2 (f)	2017Q1	2016Q2	Allocated capacity % change	
				2017Q2 vs 2016Q2	2017Q2 vs 2017Q1
Maersk Line	16%	17%	12%	41.8%	1.4%
Cosco & CSCL*	11%	13%	13%	-9.3%	-10.0%
Evergreen	9%	9%	9%	5.1%	-3.0%
CMA-CGM	8%	7%	8%	3.8%	28.4%
MOL	6%	5%	4%	43.5%	20.0%
Hapag-Lloyd	6%	5%	5%	23.9%	27.4%
MSC	6%	5%	7%	-13.9%	6.9%
OOCL	5%	4%	4%	41.3%	38.5%
K-Line	5%	5%	5%	-7.9%	3.5%
NOL	4%	6%	4%	7.2%	-31.7%
All others	24%	24%	30%	-14.7%	7.1%
<b>Grand Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>3.9%</b>	<b>4.6%</b>

\*merged from 2016Q3; Source: MDS Transmodal, Container Business Model, May 2017 (f) = forecast



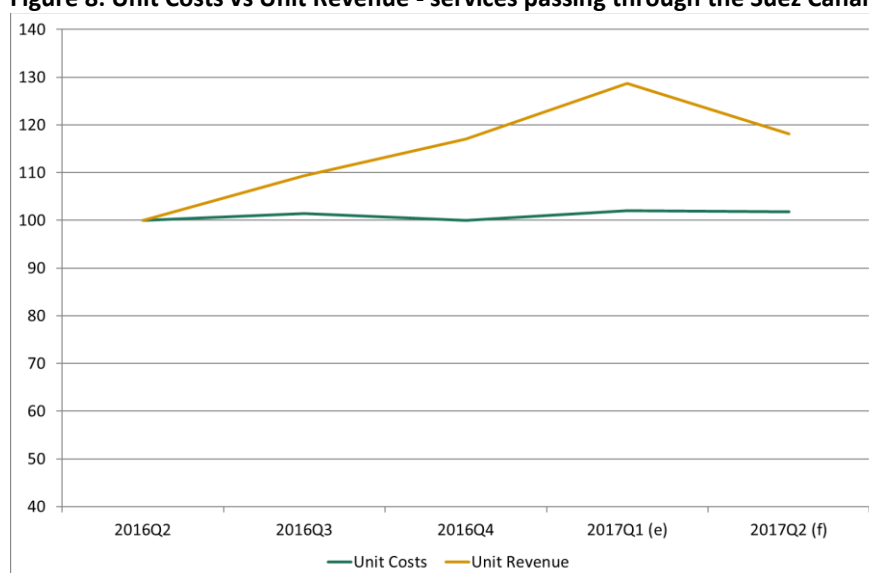
### 3. PROFITABILITY

#### 3.B.1 Services passing through the Suez Canal

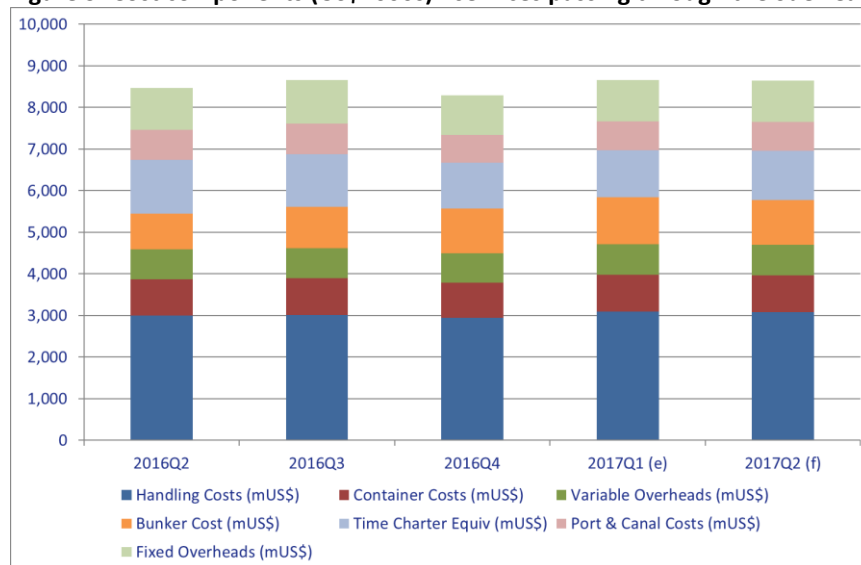
Based upon the data available at the beginning of May, for the services passing through the Suez Canal we project that in 2017Q2 unit costs could go up by 2% compared to the same quarter of last year while we project them to remain stable compared to the last three months. Unit revenue is expected to increase by 18% compared to last year but down by 8% compared to last quarter.

The following figures show the results of our analysis with Figure 9 illustrating our estimated costs by component.

**Figure 8: Unit Costs vs Unit Revenue - services passing through the Suez Canal**



Source: MDS Transmodal, Container Business Model, May 2017 (e) = estimates; (f) = forecast

**Figure 9: Cost components (US\$ '000s) - services passing through the Suez Canal**

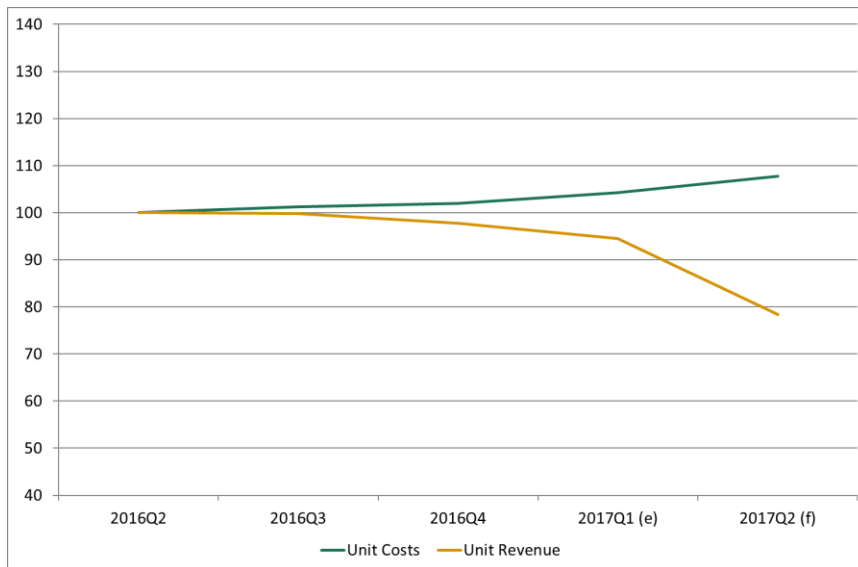
Source: MDS Transmodal, Container Business Model, May 2017 (e) = estimates; (f) = forecast

### 3.B.2 Services passing across the Atlantic

For the services passing across the Atlantic, we project that unit revenues could see a decline in the region of eleven percentage points during the second quarter of 2017 compared to both the previous three months and to the same quarter of 2016. The decline in unit revenue is expected to be accompanied by an increase in unit costs, which would translate into a deterioration in the profitability for this trade lane.

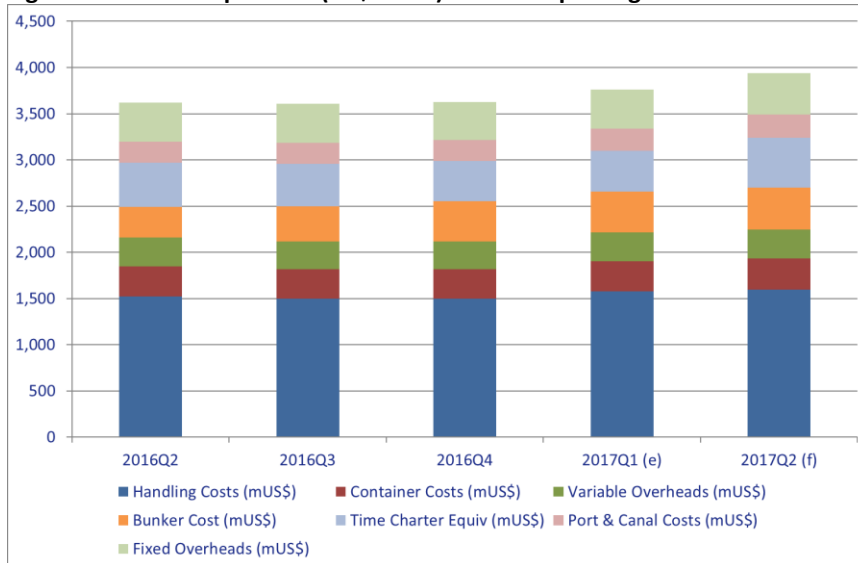
The following figures show the results of this analysis with Figure 11, illustrating our estimated costs by component, showing bunker costs increased by some 37% in 2017Q2 compared to the same quarter of 2016 and now estimated to account for some 12% of the overall costs projected for 2017Q2.

**Figure 10: Unit Costs vs Unit Revenue - services passing across the Atlantic**



Source: MDS Transmodal, Container Business Model, May 2017 (e) = estimates; (f) = forecast

**Figure 11: Cost components (US\$ '000s) - services passing across the Atlantic**



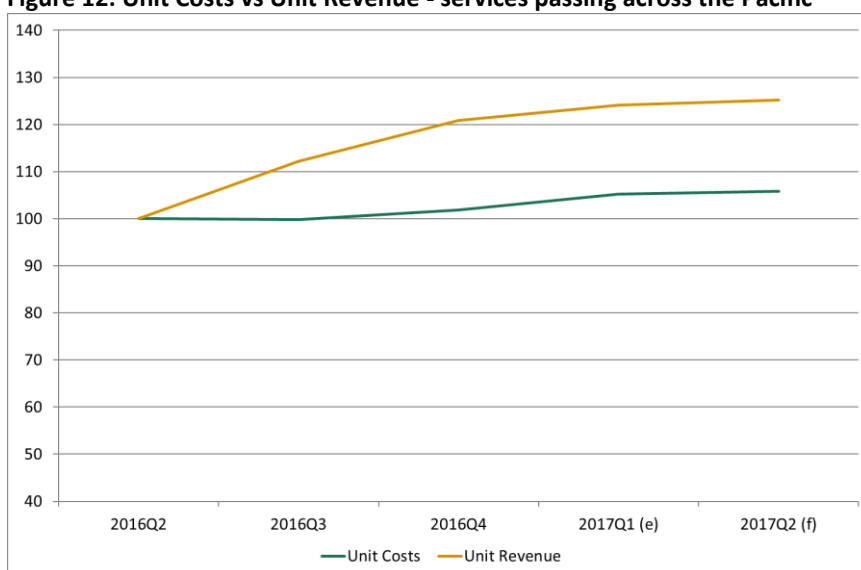
Source: MDS Transmodal, Container Business Model, May 2017 (e) = estimates; (f) = forecast

### 3.B.3 Services passing across the Pacific

For the services passing through the Pacific, we project unit revenues to improve in 2017Q2 compared to both last quarter and to last year. This increase, accompanied by unit costs being expected to increase at a lower rate, could translate into an improvement in the profitability for the services on these routes.

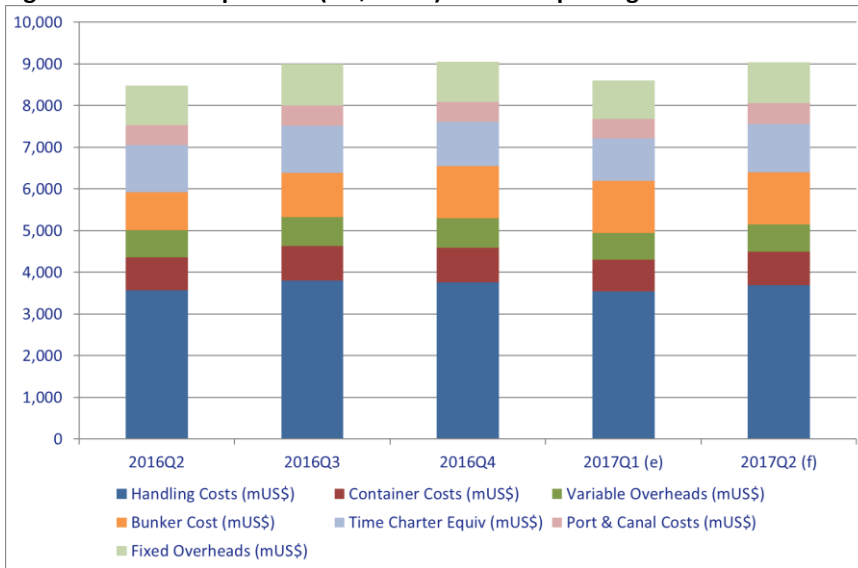
The results of our analysis are shown in the following two figures with Figure 13, the unit costs by cost component, showing bunker costs could increase by approximately 38% in 2017Q2 compared to 2016Q2.

**Figure 12: Unit Costs vs Unit Revenue - services passing across the Pacific**



Source: MDS Transmodal, Container Business Model, May 2017 (e) = estimates; (f) = forecast

**Figure 13: Cost components (US\$ '000s) - services passing across the Pacific**



Source: MDS Transmodal, Container Business Model, May 2017 (e) = estimates; (f) = forecast

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## Appendix A: 'Deployed' and 'Allocated' Capacity

We offer two measures of capacity, termed 'deployed' and 'allocated'. Deployed capacity is simply the nominal capacity of the vessel between any two ports/countries/regions called in on its service. With this measure, there arises the issue of double-counting: a 5,000 TEU vessel leaving Asia for Europe calling in the Middle East would offer 5,000 TEU deployed capacity from Asia to Europe, 5,000 TEU from Asia to the Middle East and 5,000 TEU from the Middle East to Europe.

To avoid this double-counting we have developed the 'allocated' capacity measure whereby the nominal TEU capacity of the vessel is allocated to the region to region routes that are connected by the vessel's service. This allocation is done using a formula that considers both the distance and the amount of unitised trade between the regions so that vessels on longer voyages are assumed to be more likely to carry a higher proportion of longer distance cargo, regardless of the intermediate ports of call. We believe that this reflects shipping line behaviour. Currently we perform this analysis on a global network broken down into 19 regions that match shipping and trade regions, (e.g. Asia is split into 5 regions; 3 covering China, North Asia and South East Asia) and we intend to disaggregate this further in the future.

There are additional controls in this modelling that ensure that the longer haul is only favoured where it makes economic sense. For example, a westbound round-the-world service would not carry traffic from America to Europe, and traffic solely within one of the 19 regions would only be carried by services that similarly only operate within that one region.

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## About MDS Transmodal

MDS Transmodal is a consultancy founded in 1983, which provides analysis and advice on strategic, commercial and economic issues mainly related to freight transport and logistics. The consultancy has completed hundreds of projects involving research for, and providing advice to, private and public sector clients worldwide. In the container shipping sector, the consultancy works for shippers, shipping lines, port and terminal operators, trade associations and financial institutions, providing the following main services:

- Container trade forecasts at a global, national and trade lane level.
- Monitoring of global container shipping supply, the supply-demand balance and global container port demand.
- Modelling of the revenues, costs and profitability of the global container shipping industry as a whole and at a trade lane level.
- Market and feasibility studies, business cases and business plans for container terminals and related port infrastructure throughout the world.
- Assessment of the container shipping market, competition and market share analyses.
- Commercial due diligence services for buyers or vendors of container terminals.

High level analysis of global containerized trade, global container shipping supply and the supply-demand balance is published each month in Containerisation International. Our forecasts and analyses on the most topical issues of the global container shipping sector are covered in Lloyds List and trade data has also been used by the BBC when it was tracking an individual container around the world.

We crosscheck the outcomes of our financial model to the financial performances reported by the major shipping lines. For 2015, for instance, aligned to what is reported by the industry for 2015FY, we estimate a global mean revenue rate of approximately \$1,100/TEU with a total turnover estimated to equate to some \$158bn (up by less than 1%).

### For more information

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