
Response to ACCC's Discussion Paper on Ocean Liner Shipping

Prepared at the request of the World Shipping Council

Contents

1	Introduction	3
2	Australia – market developments	4
2.1	Introduction	4
2.2	Demand	4
2.3	Pricing.....	5
2.4	Connectivity index	6
2.5	Evolving global market structure	7
2.6	Conclusion.....	8
3	Services and cooperation on the Australia – Asia trade	9
3.1	Introduction.....	9
3.2	Development of liner shipping services between Australia and Asia.....	9
3.2.1	2014-2019 Comparison based on Drewry	9
3.2.2	Recent service developments.....	10
3.2.3	Capacity shares	10
3.2.4	Slot agreements.....	12
3.3	The benefits of cooperation between carriers	12
4	Conclusions	14
A	Annex	16
A.1	Carriers active on the Australia – Asia trade	16
A.2	Overview of services July 2014 vs. July 2019 based on Drewry	17
A.3	Overview of services based on Alphaliner (January 2020)	19
B	Impact of consortia on service quality: stylised example	22
B.1	Stylized example	22

1 Introduction

The ACCC published the Discussion Paper on a Proposed Class Exemption for Ocean Liner Shipping on 3 December 2019. In line with the 2015 Competition Policy Review (the Harper Review), ACCC intends to replace current competition law exemptions for liner shipping, as included in Part X of the Competition and Consumer Act 2010, with a block (class) exemption for liner shipping agreements that meet a minimum standard of pro-competitive features.

The Purpose of the Discussion Paper is to seek information from relevant stakeholders on the elements that should be part of the class exemption that the ACCC is considering. More specifically the ACCC seeks views on:

- Which aspects of Part X are in the public interest and could be included in a class exemption and why, and
- Which aspects of Part X are detrimental to competition and should not be included in a class exemption and why.

The World Shipping Council (WSC) is a trade association representing the liner shipping sector. The members of the WSC represent 90% of global liner vessel capacity. The WSC has asked RBB Economics to provide its response to the Discussion Paper and is an annex to WSC's response.

RBB Economics is a consulting firm specialising in competition economics. RBB is active on a global basis and has offices in Europe, South Africa and in Australia. RBB has broad experience in the liner shipping sector.

Reports of RBB have been submitted to the European Commission as part of the WSC's response to the Commission's recent consultation on the EU Consortia Block Exemption Regulation for cooperation agreements in the liner shipping sector.

The consultation of the European Commission touches upon similar issues as the ACCC's Discussion Paper. Based on the input received during the consultation, DG Competition of the European Commission published a Staff Working Document in November 2019 which speaks in favour of keeping the Consortia Block Exemption Regulation in place.¹

The remainder of this report is structured as follows: in Section 2 we discuss general market developments and statistics relating to the Australian market, in Section 3 we look at the Australia – Asia trade more specifically and illustrate the relevance of cooperation between carriers on service quality, including with a stylized example which we then seek to apply to Australia – Asia. We draw conclusions in Section 4 of this report.

¹ https://ec.europa.eu/competition/consultations/2018_consortia/1_en_dts_evaluation.pdf

2 Australia – market developments

2.1 Introduction

Ocean liner shipping services connect Australian importers and exporters to other markets through fixed and regular schedules for the shipment of containers between ports.

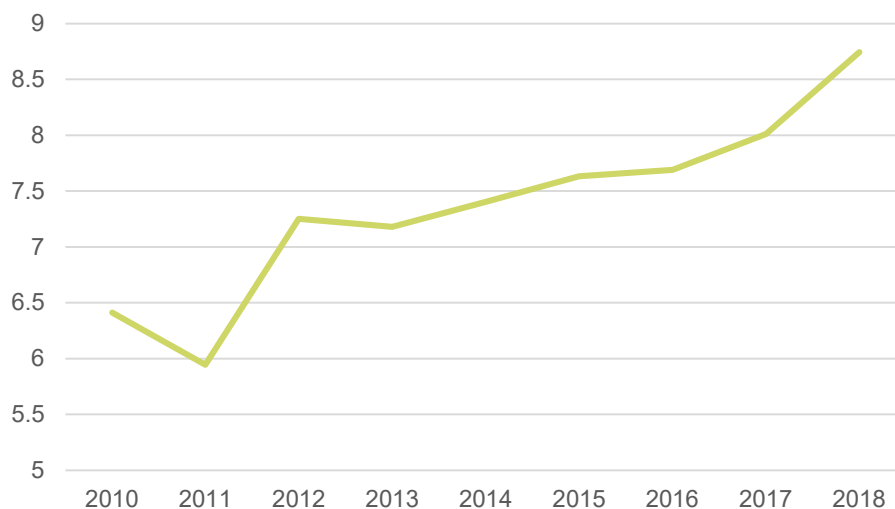
The relevance of shipping more generally for the Australian economy is highlighted in the ACCC's Discussion Paper. It states that exports shipped have a combined value of \$ 218.9 billion, whilst imports shipped accounted for a value of \$ 201.8 billion in 2015-2016. Whilst similar statistics are not available for container shipping separately, it can be safely assumed that ocean liner shipping accounts for a significant share of these values.

In this Section we discuss the development of demand, prices and connectivity over time. In addition, we discuss global developments in market structure as these also have an impact on the supply of services relevant for Australia.

2.2 Demand

Between 2010 and 2018 the annual throughput of containers in Australian ports has increased with an average of over 3% per year. The total number of containers shipped increased from 6.4 to 8.7 million TEU², or over 36% in this period. The growth in the volume of containers arriving at and departing from Australia shows the relevance of containerised trade for imports and exports.

Figure 1: Development of container throughput in Australian ports (million TEUs)



Source: UNCTAD³

² A TEU is a twenty-foot equivalent container unit. Most containers are 40 feet in length equating to two TEU.
³ <https://unctadstat.unctad.org/wds/TableViewer/tableView.aspx?ReportId=13321>

2.3 Pricing

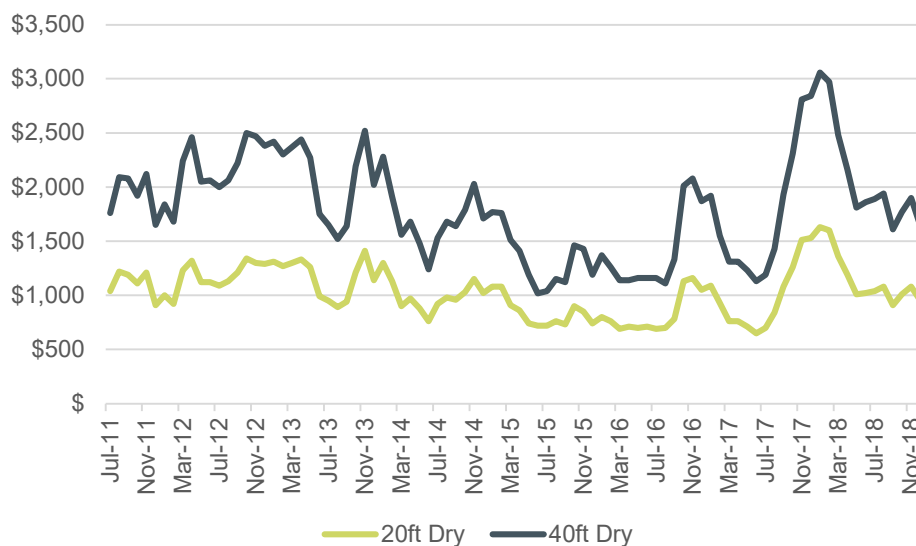
Prices for container shipping are driven by the balance of demand and supply, i.e. shortages of capacity will typically result in price increases, overcapacity typically results in price decreases.

There are, generally speaking, two types of pricing in the industry: longer-term contract rates and shorter-term spot rates. Contract rates are prices agreed between carriers and their customers, which are negotiated and confidential. Spot rates are by nature more volatile as these respond to short-term demand and supply developments. Contract rates and spot rates are related however as longer-term contracted rates will reflect the general development of spot rates over time. Therefore, the longer-term development of (public) spot rates provides a good proxy for the direction of (confidential) contract rates.

The graph below shows the development of spot rates between Shanghai and Melbourne between July 2011 (the start date of the dataset made available to us) and the end of 2018.

It is evident from the graph that spot rates at the end of 2018 are essentially at the same level as in July 2011 in nominal terms. If one accounts for inflation this implies that real rates have in fact decreased between 2011 and 2018.

Figure 2: Development of spot container freight rates: Shanghai to Melbourne



Source: Drewry Shipping Consultants Limited

2.4 Connectivity index

UNCTAD's Liner Shipping Connectivity Index (LSCI) shows the integration level of countries to global liner shipping networks. The LSCI is composed of five components: (1) the number of ships, (2) the total container-carrying capacity of the ships, (3) the maximum vessel size, (4) the number of services and (5) the number of companies that deploy container ships on services from and to a country's ports.⁴ The higher the score on UNCTAD's index, the higher is the integration of a given country to liner shipping networks.

The graph below shows the development of Australia's score on this index between 2006 and 2019. Australia's score on the index has been increasing over time and is higher in 2019 than it was in 2014.

Figure 3: LSCI Australia 2006-2019



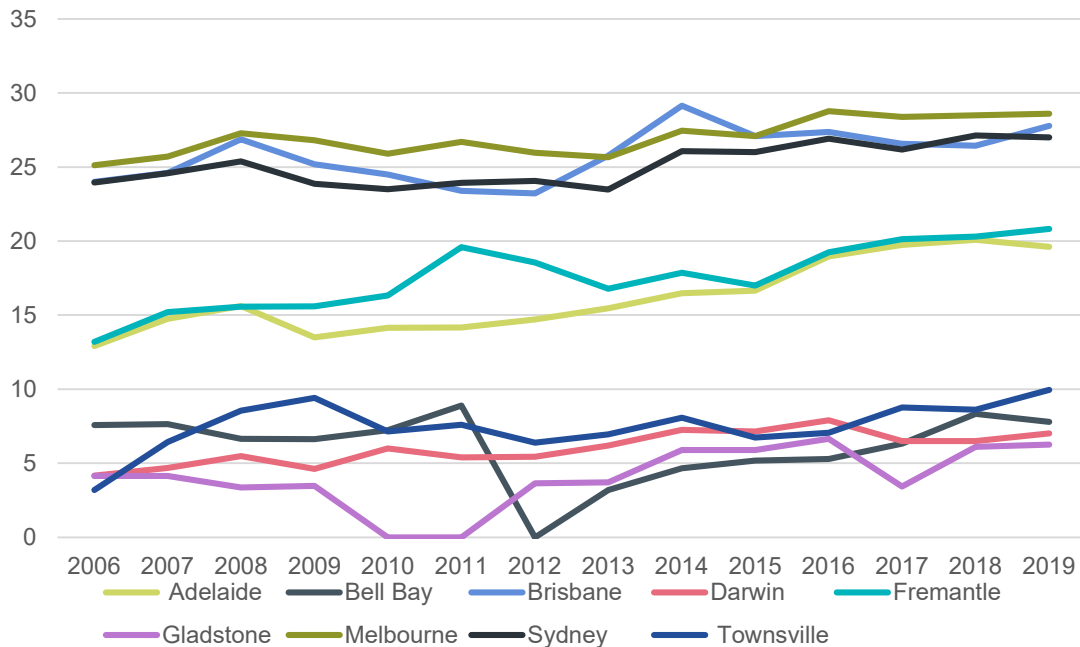
Source: UNCTAD⁵

In addition, the graph below shows the development of the index for each of the Australian ports that jointly handle the vast majority of Australia's container throughput. It shows that the development of the index is not only positive for Australia as a country, but also for the individual container ports: the index values increase, i.e. the integration of Australia and the individual ports in international shipping networks has improved over time, including in the past 5 years.

⁴ The index is calculated with respect to the country that has the highest value for each component. A country's value is divided by the maximum value of that component in 2004. When all five components are calculated, the average of these is calculated and divided by the maximum average for 2004 and multiplied by 100. Accordingly, the index level is 100 for the country with the highest averages in 2004.

⁵ <https://unctadstat.unctad.org/wds/TableView/tableView.aspx?ReportId=92>

Figure 4: LSCI of Australian Ports



Source: UNCTAD

2.5 Evolving global market structure

The liner shipping sector has experienced a period of significant changes in market structure in the past couple of years. Mergers and acquisitions in particular have resulted in consolidation and a reduction in the number of individual suppliers that are active in the market, including in the number of carriers that offer services connecting Australia with other parts of the world.

Notable recent events include:

- The acquisition of Marine Express Lines (MELL) by PIL (2015)⁶;
- The acquisition of CSCL by COSCO (2015);
- The acquisition of APL-NOL by CMA CGM (2016)⁷;
- The acquisition of the United Arab Shipping Company (UASC) by Hapag Lloyd (2016);
- The market exit of Hanjin Shipping as a result of its bankruptcy (2016);
- The acquisition of Hamburg Sud by Maersk (2017)⁸;

⁶ PIL now includes the following carriers ("brands"): PIL and MELL

⁷ CMA CGM now includes the following carriers ("brands"): CMA CGM, ANL and APL.

⁸ Maersk now includes the following carriers ("brands"): Maersk, Hamburg Sud and Safmarine

- The formation of the ONE joint venture combining the containerised services of NYK, MOL and K Line (2017);
- The acquisition of OOCL by COSCO (2017)⁹.

Another relevant development in the sector has been the carriers' participation in larger consortia (alliances) on the main East-West trade lanes, including e.g. Asia-Europe. The consortium members pool vessels to offer a joint service, whilst remaining commercially independent (i.e. each of the consortium members sell their share of the joint capacity on a service independently to their customers).

The large alliances currently on the main East-West trades are 2M (Maersk and MSC), the Ocean Alliance (CMA CGM/APL, COSCO/OOCL and Evergreen) and The Alliance (Hapag Lloyd, ONE and Yang Ming).

The development of these consortia is of indirect relevance to Australia. Australia is not part of the main East-West trades, but a large share of the containers shipped to and from Australia will be transhipped in ports in Asia to the relevant East-West services by these alliances.

2.6 Conclusion

The development of containers shipped, prices and connectivity all indicate that the liner shipping sector is competitive and has served the Australian economy well.

- The sector has accommodated continued growth in Australia's containerised trade over time as evidenced by the increase in containers shipped.
- This trade growth has not resulted in higher prices, showing that operators in the market compete and have added capacity where there was growing demand for services.
- It has also resulted in improved services as shown by the increased connectivity of Australia and Australia's container ports.
- Stable (in nominal terms) to decreasing prices (in real terms) in a growing market with improved connectivity evidences an efficiently functioning and competitive market. This hence also strongly indicates that changes in the global market structure through consolidation and the formation of East-West alliances have not resulted in a reduction of competition and/or the emergence of market power.

In the next section we will focus on the Australia – Asia trade and in particular on cooperation between carriers on this trade.

⁹ COSCO now includes the following carriers ("brands"): COSCO, CSCL and OOCL.

3 Services and cooperation on the Australia – Asia trade

3.1 Introduction

As explained in the Discussion Paper, Asia is not only an important trade region for Australia, but ports in Asia are also an important hub for containers with Australia as their origin or destination, as these ports provide a link to the main East-West trades to Europe and North America.

We therefore focus in this Section and the remainder of this report on the Australia-Asia trade to assess the development of the market and cooperation between carriers on this trade lane.

3.2 Development of liner shipping services between Australia and Asia

3.2.1 2014-2019 Comparison based on Drewry

The table below compares liner shipping services that connect Australia and Asia between July 2014 and July 2019. We have only included services with port calls in both Australia and Asia. The information used for this overview has been obtained from Drewry Shipping Consultants.

Table 1: Development of services between Australia and Asia

	2014	2019
No. of carriers (group level) ¹⁰	22	13
No. of services (most of them weekly) ¹¹	Total	Total
	24	24
	Offered by single operator	10
	Offered through VSA cooperation ¹²	14
Average capacity of vessels deployed ¹³	4,119 TEU	4,736 TEU
Total number of vessels deployed	151	149
Number of port calls Australia	78	78
Number of port calls North Asia, South East Asia and Greater China	91	97

Source: Drewry Shipping Consultants Limited

It is evident from this table that whilst the number of carriers has decreased as a result of mergers, acquisitions and bankruptcies, service levels have remained stable between 2014 and 2019. The

¹⁰ A detailed overview is included in Annex A.

¹¹ A detailed overview is included in Annex A.

¹² This excludes slot agreements, as these are not recorded by Drewry.

¹³ These are calculated by multiplying the number of active vessels deployed for each service and average capacity divided by the total number of vessels deployed on all services combined as reported by Drewry.

number of services remained the same at 24, the number of vessels remained virtually the same, whilst the number of port calls was stable for Australia and increased in Asia.

At the same time, the average capacity of the vessels employed on the services increased from 4,119 TEU to 4,736 TEU, an increase of 15%, enabling the annual growth of container throughput as depicted in Figure 1.¹⁴

In addition, the number of services offered by a single operator has remained stable as well showing the majority of services continues to be offered through cooperation between carrier, despite consolidation in the sector. However, the consolidation and cooperation between carriers has not resulted in a reduction in service levels and, as shown in Section 2, is highly unlikely to have resulted in a reduction of competition.

3.2.2 Recent service developments

Whilst Drewry Shipping Consultant data allows for a comparison of services over time, Alphaliner, another data provider specialising in container shipping, provides a continuously updated and more detailed snapshot of services provided, including the operators of the vessels employed in each service, which allows for the calculation of capacity shares. In addition, Alphaliner data also includes relevant information on slot agreements, which is a less integrated type of cooperation as compared to consortia.

Annex A includes an overview of the current services provided on the Australia – Asia trade based on Alphaliner data. To a large degree this information is aligned with the services included in Drewry, though since July 2019 there have been two important changes: the services provided by CMA CGM and MSC have changed as a result of a new cooperation between these carriers¹⁵, and Maersk has rearranged its services resulting in improved service levels¹⁶. In addition, there are continuous changes to capacities deployed on individual services in response to fluctuations in demand (including seasonal fluctuations).¹⁷

3.2.3 Capacity shares

As Alphaliner also reports the operator (i.e. carrier) for the vessels deployed on each of the services included in its overview, this also allows for the calculation of capacity shares of the carriers.

In order to estimate capacity shares we have calculated the share of capacity contribution of each of the consortia members for each service, multiplied this with the average weekly capacity for the

¹⁴ As mentioned in the discussion paper, the Australia liner trades have relatively low volumes as compared to the main East-West trades, resulting in a comparatively low average size of vessels deployed. The very large vessels with capacity of well over 10,000 TEU which are typically deployed on the Asia-Europe trade by the large alliances appear too large for the Australia – Asia trade.

¹⁵ <https://splash247.com/msc-and-cma-cgm-join-forces-down-under/>

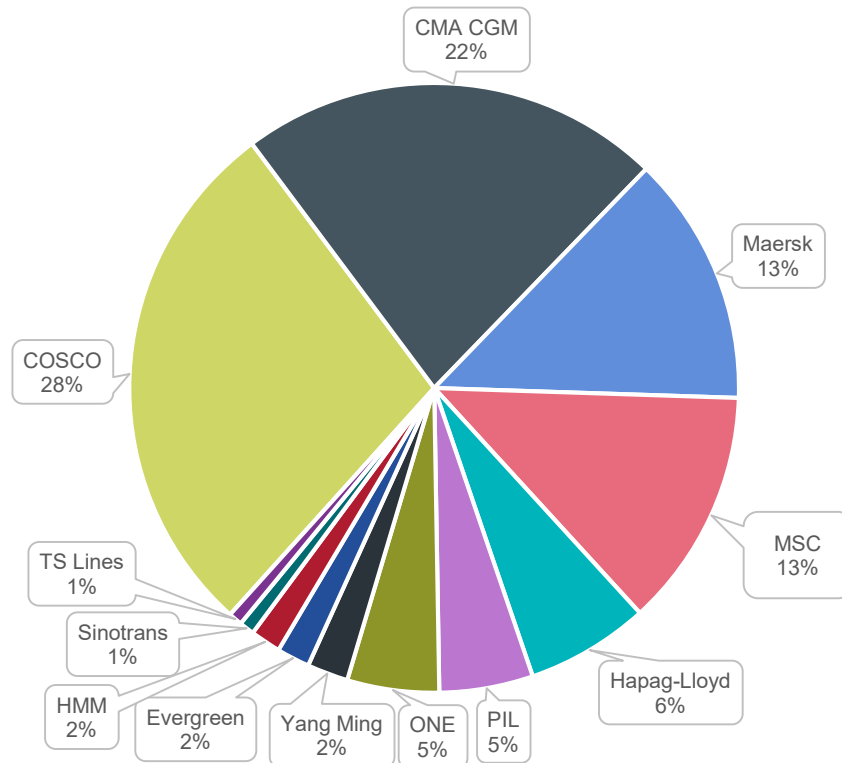
¹⁶ <https://www.acfservices.net.au/index.php/maersk-is-introducing-changes-to-oceania-shipping-network/>

¹⁷ This is also why, for the comparison between 2014 and 2019 we have compared service levels in the same month of the year (i.e. July).

service as provided by Alphaliner and then summed the individual carriers' contribution to the total weekly capacity on the Australia – Asia trade. For example, if carriers A and B contribute 3 vessels of the same size to a service with an average weekly capacity of 5,000 TEU, A and B are allocated 2,500 of weekly capacity for that service. In a similar way we calculate the capacity contribution of A and B and other carriers to other services and then calculate each carrier's share of total capacity deployed on the Australia – Asia trade.

Based on this we arrive at the following distribution of capacity shares for the Australian – Asia trade based on vessel capacity deployed by each carrier. Note that these capacity shares are not necessarily equal to market shares based on the volume of containers shipped or sales: the allocation of capacity to sell in the market within a consortium may be different from the exact capacity contributed by each of the carriers, and part of the capacity contributed may be taken up by other carriers through slot charter agreements (carriers may buy or exchange slots from each other to be able to offer services to customers on services where they do not contribute vessels).

Figure 5: Capacity shares Australia – Asia January 2020



Source: RBB calculations based on Alphaliner data

Unsurprisingly, the largest carriers globally also have a significant presence on the Asia – Australia trade. At the same time there are 8 carriers with a capacity share of 5% or less.

3.2.4 Slot agreements

As indicated, Drewry only reports more structural cooperation between carriers through consortia. However, on the Australia Asia trade there are many services on which carriers other than the consortium partners are present as a result of buying or exchanging slots.

As indicated in Table 6 in the Annex, there are only 5 services without slot agreements. This indicates that the number of services on which some type of cooperation between carriers takes place is much larger than indicated in Table 1, and the number of services operating without any type of cooperation is much smaller.¹⁸

3.3 The benefits of cooperation between carriers

Consortia and other cooperation agreements result in benefits to customers as cooperation between carriers (a) allows for the generation of efficiencies through using larger vessels whilst at the same time allowing for more services with a regular frequency and, importantly, (b) it allows shipping lines to offer services also where they would not have the scale to offer such services on their own.

Both points are also relevant for the Australia-Asia trade, and highly likely to be applicable also for all other trades to and from Australia.

- First, we have seen that the average size of vessels deployed on the services has increased whilst maintaining the same number of total services.
- Second, there are quite a few smaller carriers active on the Australia-Asia trade that have low market shares, but are able to maintain current service levels as a result of cooperation with other carriers.

The continued presence of smaller carriers is (also) relevant with a view to the importance of the transshipment of containers to and from Australia in Asian hub ports: cooperation not only allows the smaller carriers to offer services on the Asia – Australia trade. Because they are able to offer the Australia-Asia leg, they can also offer services to and from other parts of the world to Australian customers (with transshipment in Asia).

In the context of the ACCC's review it is, in view of the above, also highly relevant to carefully consider the counterfactual of offering a class exemption for operational cooperation to the liner shipping sector: i.e. what would be the impact on service quality and choices available for customers if Australia moved from the current regime in which the carriers cooperate in offering services to customers to one without consortia?

¹⁸ As indicated a like-for-like comparison between Drewry and Alphaliner is not possible due to differences in definitions and differences over time.

If consortia were not present in the Australian trades, each of the members of a consortium would need to decide whether to operate services independently. However, offering services independently could result in the need to reduce the size of vessels used and/or the frequency of services offered. . This not only reduces the service quality but could also result in the service not being competitive as the costs per container will increase with decreasing vessel size.

Additionally, in the absence of consortia, smaller carriers might simply decide to cease offering services at all, hence resulting in market exits and a reduction in the number of service options for shippers. This is also true for slot agreements: the very reason for slot agreements is that these are typically concluded to offer services that a carrier is not able to offer independently.

The counterfactual of a class exemption may hence well be a decrease in the number of carriers offering services in Australia and a reduction in service quality as carriers will likely need to reduce their service frequencies to be able to fill up their vessels. In Annex B of this report we develop a stylised example demonstrating the likely adverse effects of a market structure that did not support operational cooperation between carriers.

4 Conclusions

One of the key questions in the context of ACCC's review is why shipping lines cooperate in consortia or otherwise in the provision of shipping services and whether such cooperation is in the interest of customers.

We have established in this report that carriers cooperate in consortia and through slot agreements on the large majority of services provided on the important Australia – Asia trade. We have also established that the available indicators strongly suggest that through this cooperation, the sector has served the Australian economy well and is competitive.

In the absence of evidence to the contrary, this suggests that cooperation between carriers has not resulted in a reduction of competition and may well have provided and continues to provide benefits to Australian customers.

Indeed, this would be in line with the preliminary conclusion of the European Commission in relation to its evaluation of the costs and benefits of the Consortia Block Exemption Regulation that applies to cooperation agreements in relation to container shipping services with port calls in the European Union:

"(...) cooperation in consortia remains prevalent. Arguments that the high concentration level in the industry harms customers remain unsubstantiated as competition in the industry seems to function well, transferring a fair share of cost savings to customers in the form of lower prices and keeping the quality of services stable. In the circumstances the consortia Block Exemption Regulation remains relevant, facilitating types of cooperation that generate efficiency gains and benefit customers."¹⁹

In its assessment it would be useful if the ACCC would carefully consider counterfactual scenarios in which cooperation would no longer exist.

Such counterfactual scenario does not exist in reality as the industry has a long history of cooperation, not only in Australia but globally. However, on the basis of simple logic it can be demonstrated that the likely effects of no cooperation between carriers will include (i) a deterioration of the quality of services provided to Australian customers and/or higher prices and (ii) further market concentration through the market exit of smaller players that lack sufficient scale to offer services independently.

¹⁹ Commission Staff Working Document – Evaluation of the Commission Regulation (EC) No 906/2009 of 28 September 2009 on the application of the Treaty to certain categories of agreements, decisions and concerted practices between liner shipping companies (consortia), 20 November 2019.

A class exemption that would allow for useful operational cooperation between carriers can hence be considered in the public interest. Moreover, if the ACCC would adopt such class exemption, this would be in line with similar type regimes around the world including e.g. in Europe and Singapore, which would have the additional benefit of regulatory alignment in an industry that is by definition international in scope.

A Annex

A.1 Carriers active on the Australia – Asia trade

The table below provides an overview of the independent carriers (at group level) active on the Australia – Asia trade.

Table 2: Overview of carriers active on the Australia – Asia trade

2014	2019
COSCO	COSCO
CSCL	(now part of COSCO)
OOCL	(now part of COSCO)
CMA CGM (including ANL)	CMA CGM
APL	(now part of CMA CGM)
Maersk	Maersk
Hamburg Sud	(now part of Maersk)
MSC	MSC
Hapag Lloyd	Hapag Lloyd
UASC	(now part of Hapag Lloyd)
PIL	PIL
Marina Express Line	(now part of PIL)
K Line	ONE
MOL	(now part of ONE)
NYK	(now part of ONE)
Yang Ming	Yang Ming
Evergreen	Evergreen
HMM	HMM
Sinotrans (Sinolines)	Sinotrans (Sinolines)
TS Lines	TS Lines
RCL	no longer active
Hanjin	no longer active

2014	2019
	AAL

Source: RBB assessment based on Drewry Shipping Consultants

A.2 Overview of services July 2014 vs. July 2019 based on Drewry

Table 3: Overview of services Australia – Asia July 2014

2014				
Carriers/Alliance	Service Name	FREQ. (DAYS)	NO. ACTIVE SHIPS	ACTIVE SHIPS AVE. TEU)
n/a	AAA Bight loop	7	4	4,624
n/a	AAA Torres loop	7	5	4,408
ANL/CSCL/OOCL	AANA/AUS2-East Orient/AEA2	7	5	4,316
n/a	AAX	7	5	5,009
Mariana Express Lines	ANA service	14	4	2,344
NYK/MOL/K Line/Evergreen/OOCL	ANA2/AU2/ESACO/NEAX/AEA3	7	5	4,566
CSCL/OOCL	AUS1-Mandarin/AEA1	7	4	4,747
CSCL/Hapag-Lloyd/Hyundai M.M./UASC/RCL/Hanjin/K Line/OOCL	AUS3-Orient/SAL/SAL/AAC1/RSA/AUS/ESACO-S/ASA	7	5	4,488
Maersk Line	Boomerang (SEA loop)	7	11	4,678
Maersk Line/MSC	Boomerang (Northern loop/New Wallaby loop)	7	11	4,678
MSC	Capricorn service	7	6	3,387
Evergreen/Yang Ming/PIL/Sinotrans	CAT/CAT/STA/CAT	7	6	4,278
Hanjin/TS Lines/Yang Ming/Sinotrans	CKA	7	6	4,300
PIL	CTP service	7	10	1,640
Cosco/Hamburg Süd/MOL/NYK	JKN/ANZL/CNZ/NZJ	7	6	4,099
ANL/APL/Hanjin	KIX/NAX/AAZ	7	6	2,826
MSC	New Falcon service	7	13	4,691
CMA CGM/Hapag-Lloyd	New Nemo/EAX	7	13	4,289

2014				
Maersk	Northern Star	7	4	2,940
PIL/MOL/NYK/OOCL	NZS/NZX	7	6	4,348
Cosco/ANL	SAS	7	5	5,594
Hamburg Süd/APL/ HMM/Hapag-Lloyd	Southern loop/CAS/ FA2/AAS	7	4	5,297
Maersk	Southern Star	7	5	4,258
K Line	WASCO	14	2	1,708

Source: Drewry Shipping Consultants

Table 4: Overview of services Australia – Asia July 2019

2019				
Carriers/Alliance	Service Name	FREQ. (DAYS)	NO. ACTIVE SHIPS	ACTIVE SHIPS AVE. TEU)
HMM/Evergreen/CMA CGM	A1X/CAE/CA6	7	4	3,631
OOCL/ANL/COSCO	A3C	7	5	5,861
COSCON/OOCL	A3S	7	5	5,706
OOCL/PIL	AAA1/AA1	7	5	4,447
OOCL/PIL	AAA2/AA2	7	4	4,384
COSCO/APL/CMA CGM/OOCL/ANL	AANA/A3N/AEA2	7	6	5,303
CMA CGM	AAX	7	5	5,472
MEL/PIL	ANA	14	3	1,808
MEL/PIL	ANA	14	3	1,808
CMA CGM/ANL/OOCL/COSCON/PIL	ANZ/ANS/CNS	7	7	4,368
ONE/COSCON/Maersk/Safmarine	ANZL/JKN/NZJ	7	6	4,355
AAL	Australia East Coast	27	3	1,734
MSC	Australia Express	7	15	6,714
Maersk/ONE/MSC	Boomerang/AUS	7	12	5,011
Maersk/ONE/MSC	Boomerang/AUS	7	12	5,011
MSC	Capricorn	7	6	3,515
Yang Ming/Evergreen/TS Line/Sinolines	CAT/STA	7	5	3,558

2019				
Evergreen/Yang Ming/ONE/CMA CGM/Hapag-Lloyd	NEAX/NAX/AUJ	7	5	3,867
MSC	New Kiwi Express	7	5	2,796
CMA CGM/Hapag-Lloyd	NEWMO/EAX	7	14	6,706
COSCO/PIL/OOCL/CMA CGM	NZS/KIX	7	6	4,655
OOCL/Hapag-Lloyd/COSCO	SAL/ASA	7	5	4,412
Hamburg-Sud/Maersk	Southern Star	7	6	3,515
ONE	WAU	7	2	1,708

Source: Drewry Shipping Consultants

A.3 Overview of services based on Alphaliner (January 2020)

Table 5: Overview of Australia – Asia services – Alphaliner January 2020²⁰

Service	Partners	Svc Code	Ships Deployed
Hapag-Lloyd / OOCL / COSCO - SE Asia Australia Container service (SAL / ASAL / JAX) (KL : ESACO-S) (PIL : AA3)	Hapag-Lloyd / OOCL / COSCO / slots : PIL	Hapag-Lloyd / OOCL / COSCO - SE Asia Australia Container service	5 x 4 000 / 4 600 teu
CMA CGM / ANL / OOCL / COSCO / PIL - Asia-New Zealand Express (ANZEX / CNS / NZN / ANS) (APL : NZ2)	CMA CGM / ANL / OOCL / COSCO / PIL / slots : APL / Hapag-Lloyd / on FE-Auckland : PDL	ANZEX	7 x 4 000 / 4 500 teu
Asia Australia Consortium (A3) - Far East-Australia 'Southern Express' service (A3S) (PIL : SAS)	ANL (CMA CGM) / COSCO / OOCL / slots : PIL	A3S	5 x 5 500 / 5 800 teu
Asia Australia Consortium (A3) - Far East-Australia 'Central Express' service (A3C) (PIL : SAC)	ANL (CMA CGM) / COSCO / OOCL / slots : PIL	A3C	6 x 8 000 teu
COSCO / ONE / Hamburg Süd - Japan-China-NZ service	COSCO / ONE / Hamburg Süd / slots : Maersk / OOCL / For Pacific conn. : Matson > COSCO : JKN > ONE : NZJ > Hamburg Süd : ANZL > Maersk : JNZCS > OOCL : JKN		6 x 3 800 / 5 000 teu
Mariana Express Lines (MELL) / PIL - Asia-North Australia service (ANA / SPI)	Mariana Express Lines (PIL) / PIL / slots : on HK-N. Aust : PDL		3 x 1 800 teu

²⁰ The number of services included in this table is smaller (20) than the number of services included in Table 5 above based on Drewry. The service provided by AAL is not included in Alphaliner. For other services Drewry may record separate parts of the service, e.g. the North Asia leg and the South East Asia leg separately, where Alphaliner considers this one service.

Service	Partners	Svc Code	Ships Deployed
Asia Australia Consortium (A3) - Far East-Australia 'Northern Express' service (A3N)	ANL (CMA CGM) / COSCO / OOCL / CCA : Swire	A3N	6 x 4 800 / 5 700 teu
Asia Australia Alliance 'Triple A' - Australian Express Service (AAA 2)	OOCL / PIL / COSCO / slots : Yang Ming	AAA 2	5 x 4 100 / 4 500 teu
Asia Australia Alliance 'Triple A' - Australian Express Service (AAA 1)	OOCL / PIL / slots : COSCO / Yang Ming	AAA 1	5 x 4 200 / 4 500 teu
PIL / OOCL / APL / ANL / COSCO - SE Asia-ANZ joint service (NZZ / NZX / NZS / KIX / NZE)	PIL / OOCL / APL / ANL / COSCO / slots : CMA CGM / on Sgp-NZ sthbd : PDL	NZZ	6 x 4 300 / 5 000 teu
Evergreen / Yang Ming / Sinotrans / TS Lines - China-Australia-Taiwan service / Sino-Taiwan-Australia service (CAT / STA) (ONE : CAT) (APL : CA2)	Evergreen / Yang Ming / Sinotrans / TSL / slots : APL / PIL / on S. China-Twn-Aust : Hapag-Lloyd	CAT	6 x 4 200 / 5 000 teu
MSC - SE Asia-ANZ 'New Capricorn' service	MSC	MSC - New Capricorn	6 x 3 400 / 3 500 teu
ONE - West Australia Relay service (Fremantle Express) (WAU)	ONE		2 x 1 700 teu
MSC / CMA CGM - Australia Express / NEMO (Australia-Asia leg)	MSC / CMA CGM	MSC / CMA CGM - Australia Express / NEMO	14 x 8 000 / 9 500 teu
MSC - SE Asia-ANZ 'New Kiwi Express' service	MSC	MSC - New Kiwi Express	6 x 3 400 / 3 600 teu
Maersk - SE Asia-New Zealand relay service (Southern Star) (ONE : NZ1)	Maersk Line / slots : ONE	Maersk - New Zealand relay service (Southern Star)	7 x 5 900 teu
Hapag-Lloyd / Evergreen / ANL / HMM - North East Asia-Australia Express	Hapag-Lloyd / Evergreen / ANL (CMA CGM) / HMM / slots : ONE > Hapag-Lloyd : NAX > Evergreen : CAE > ANL : CA6 > HMM : A1X > ONE : AUE	North East Asia-Australia Express	6 x 4 200 / 5 000 teu
Maersk / ONE - East Asia-Australia service (Dragon / AUN) (MSC : Wallaby)	Maersk / ONE / slots : MSC / Hamburg Süd	Boomerang	7 x 5 000 / 7 000 teu
Hapag-Lloyd / ANL / Maersk / ONE - SE Asia Australia service 2	Hapag-Lloyd / ANL (CMA CGM) / Maersk / ONE / slots : Hamburg Süd > Hapag-Lloyd : S2A > ANL : AAX2 > Maersk : Komodo > ONE : AU2 > Hamburg Süd : AUSE2		6 x 5 700 teu

Service	Partners	Svc Code	Ships Deployed
Hapag-Lloyd / ANL / Maersk / ONE - SE Asia Australia service 1	Hapag-Lloyd / ANL (CMA CGM) / Maersk / ONE / slots : Hamburg Süd > Hapag-Lloyd : SEA > ANL : AAX1 > Maersk : Cobra > ONE : AU1 > Hamburg Süd : AUSE1		7 x 8 500 teu

Source: *Alphaliner*

B Impact of consortia on service quality: stylised example

B.1 Stylized example

B.1.1 Introduction

This Annex presents a stylised approach that is used to analyse the potential impact on the quality of service in the absence of consortia. We show that moving from the current market structure with consortia to a market structure without consortia would result in a severe reduction in the quality of service offered. The flip side of this is that consortia contribute to the level of services provided when compared to a counterfactual in which firms would not be allowed to cooperate.

B.1.2 Assumptions

We assume that there are four carriers (A, B, C & D) that each have a 25% market share which is evenly distributed across all four ports that serve the industry. The carriers are paired up in two consortia (AB & CD), each with a combined market share of 50%. Furthermore, the shipping companies' activities are limited to the services provided in their respective consortia.

This model economy has two countries, X and Y, that trade with one another via their respective ports - X_1 ; X_2 and Y_1 ; Y_2 . Each port has a weekly demand of 8,000 TEU which implies that 16,000 TEUs need to be shipped from country X to country Y and vice versa. Port demand is evenly served by the four carriers so that 25% of demand in X_1 is served by carrier A, another 25% is served by carrier B and so on.

Sailing time between the two countries is 14 days in either direction and for each possible port pair. Put differently, the sailing times from X_1 to Y_1 and from X_1 to Y_2 are the same. Sailing between the ports in each country takes 3 days. Therefore, a round trip calling at all four ports takes 34 days.

Carriers can choose between three types of vessels that vary in their capacity and the associated costs per TEU: Small (2,000 TEUs), Medium (4,000 TEUs) and Large (8,000 TEUs) vessels.

Vessels with a higher capacity operate with increased efficiency with respect to bunker consumption which also allows for reduced CO₂ emissions per TEU.

However, ships need to be filled to full capacity in order to achieve optimum cost efficiencies. Furthermore, reductions in variable costs are assumed to be passed on to clients (and as a result - end consumers) in the form of lower shipping rates.

B.1.3 Consortia are in place

AB and CD serve the demand in the most cost-efficient manner by deploying 5 vessels that make a "round trip" calling at all four ports to allow for a weekly service. This allows for clients to be

charged lower rates than otherwise possible. Each carrier contributes 2 or 3 large vessels to the consortium of which it is a member.

The “round trip” service is assumed to be launched for the very first time at port X_1 where an 8,000 TEU vessel is situated and filled half-way with 4,000 TEU worth of cargo – 2,000 TEUs from each VSA member. Three days later, the same vessel reaches port X_2 where another 4,000 TEUs of cargo are loaded onto it in the same manner so that it reaches full capacity.

Thereafter, the ship is deployed to port Y_2 where half of its cargo is unloaded and replaced with 4,000 TEUs of new cargo that needs to reach country X. This makes up for half of the total transit time. In the next string of the service, the vessel heads to port Y_1 where the other half of cargo shipped from country X is replaced with another 4,000 TEUs that are to be shipped to country X. This adds another three days to the aggregate transit time. Finally, all 8,000 TEUs of new cargo is shipped to port X_1 where half of it is replaced with new containers.

B.1.4 Consortia are not in place

This section discusses possible scenarios and developments in the case that the simplified shipping industry described above faces a dismantling of consortia.

In the absence of consortia, each carrier would be left with 2 or 3 vessels which it is unable to fill up to full capacity at the same rate as under its respective consortium. It would be very costly to replace them with smaller vessels.

Arguably the most important decision that would have to be made by carriers is whether to continue operations with the vessels they already have at their disposal or go through the lengthy and costly process of changing the composition of their fleet.

One option is for carriers to reduce service frequency so that their vessels are filled to full capacity instead of operating at significant overcapacity. In our example, this implies on average another week at week at every port (more for the carrier which contributed three vessels, less for the carrier that contributed two vessels) and amounts to a 28 day increase in the total transit time of the “round trip” service.

Another option is for the consortium members to merge if they are not allowed to operate services jointly.

Both scenarios are likely to produce outcomes in which customers are worse off. In a consolidation scenario, the market structure moves from 4 to 2 firms, reducing competition (as A and B and C and D compete with each other despite being part of the same consortium). In a scenario in which the four firms continue to compete with each other independently, transit times would go up dramatically in order to avoid running a highly inefficient service.

A third option for carriers would be to switch to smaller vessels. However, this would result in significant costs as the carrier first needs to dispose of the larger vessels and buy or charter the smaller vessels. More importantly, (variable) costs per TEU shipped would also increase significantly due to the smaller vessel size, resulting in upward pressure on pricing (and increased CO₂ emissions).

In addition, if the parties to one consortia merge, the carriers operating the same service with less frequency or with much smaller vessels independently, i.e. with lower service levels and/or higher prices, will be at a competitive disadvantage. This may deter those carriers to try it alone, and provides a big incentive to also merge (or leave the market).