

MARITIME LOGISTICS PROFESSIONAL

May/June | Volume 8, Issue 3

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Container Ports

*Balancing Growth with
Market Pressures*



BOXSHIP VALUATIONS
SIZE DOES MATTER

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– Inna Kuznetsova,
President and COO, INTTRA

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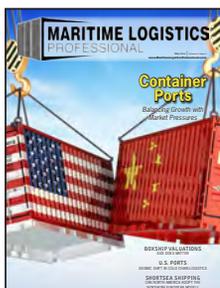


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ON THE COVER

Even as dozens of North American ports report record TEU throughput and project still more future growth, the specter of a trade war casts a pall over the global container trades. Our coverage of this remarkable story begins on page 28.

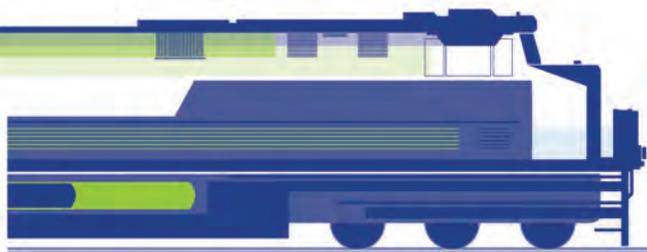
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18 Southern Ports are getting with The Program ...

The In-transit cold treatment program, that is!

By Rick Eyerdam

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Overcapacity, Fleet Supply, Weakened Earnings, Consolidation – and now – fears of trade wars fuel further uncertainties for an already unsteady boxship climate.

By Barry Parker

36 Boxship Bargains: Where you sit determines where you stand in the market

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Improving charter rates are driving up second values while struggling freight rates indicate a broader slowdown could be at hand.

By James Frew



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Editor's Note

In the midst of what most analysts would describe as a robust and expanding regional economy, it is also arguably the perfect time for our Container Ports edition. Maybe that's a bit of serendipity, but it could also be that we're prescient about what to cover and when to do it. Whatever the case, there is much to cover, discuss, and analyze.

In 2017, 17 of the top 20 U.S. boxports showed robust year-on-year growth, with many experiencing similar gains this year. That kind of performance has some gateways projecting further growth and still others investing in infrastructure to prepare for what comes next. At the same time, containership operators that serve these ports are navigating choppy waters. Overcapacity, onerous regulatory pressures and now, the threat of a trade war looms over all of it – ashore and afloat. Here to sort it all out is Barry Parker's report, starting on page 28.

Amidst all the uncertainty, there are still more variables to the complicated intermodal equation, some of which impact market share for a dozen U.S. ports. One such event is the USDA sponsored In-Transit Cold Treatment Pilot program which now includes 11 deep southern ports that have been accepted into The Program. In a nutshell, these ports, previously prohibited from receiving fresh fruit from South America, can now do so. Produce cargoes that at one time had to discharge north of the 'Mason Dixon' line, now have many more choices. That also means fewer trucks on the road, reduced traffic congestion, a more efficient supply chain and markedly less air pollution. Rick Eyerdam's report begins on page 18.

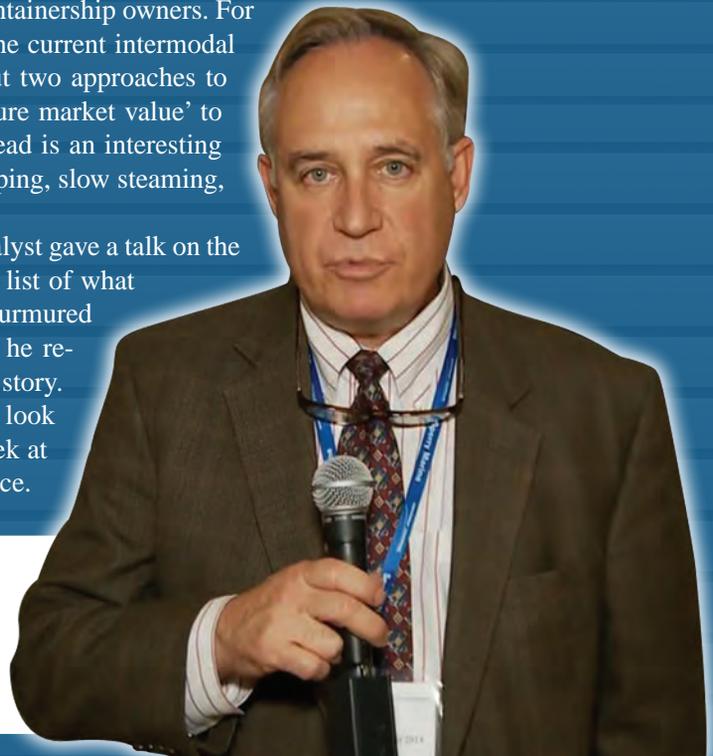
Separately, it wasn't too long ago that the offshore energy support sector entered its deepest recession in a few decades. When that happened, the valuations of OSV tonnage changed dramatically, further altering the playing field for operators already in peril from lack of work. That same metric is now in play for containership owners. For that reason, there may be no more interesting aspect of the current intermodal equation today. In this edition, we bring you not one, but two approaches to the thorny issue. In particular, VesselsValue's use of 'future market value' to assess the expected shift in market value in the years ahead is an interesting take on a sector that routinely ponders the merits of scrapping, slow steaming, newbuilds, freight rates, and a dozen other variables.

At a Hong Kong logistics conference in late 2016, an analyst gave a talk on the state of the global boxship markets. He rattled off a long list of what was happening, and listeners nodded their heads and murmured their assent as if to say, "We know." After five minutes, he revealed that he had been reading from a ten-year old news story. That got a laugh – but he had made his point. When we look ahead for what comes next, it is also prudent to take a peek at what might be in our choppy wake. I think that's good advice.

*Course
Correction*



Joseph Keefe, Editor | keefe@marinelink.com





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The 2020 Sulfur Cap – Growing

By Kathy Metcalf

At the stroke of midnight on 1 January 2018, the global shipping industry will be expected to comply with the IMO agreed upon 0.5% sulfur cap for bunker fuels with few waivers available. For vessels which have installed scrubbers, higher sulfur fuels may continue to be used. IMO's recent agreement on the ban of carriage of non-compliant fuel assures that cheating will not be allowed providing that port states integrate this ban into their respective port state control inspection programs.

All that said, it is important to recognize that the global shipping industry is fully committed to successful implementation of the global cap recognizing the significant environmental benefits from the global use of low sulfur fuel and in spite of the expected significant increase in cost for compliant fuels.

So, what are global shipping's biggest worries?

Availability of compliant fuel worldwide is a significant concern which will continue at least for a few months after the 1 January 2020 implementation date and until such time as availability of compliant fuels are known in specific ports. Even with the anticipated availability in major maritime ports, the need for trans-shipment of compliant fuels to other ports globally will be need to be evaluated.

Availability of compatible fuels is another concerning issue given that there is no global fuel standard which covers the expected and numerous blends which are likely to be produced worldwide. While the IMO sulfur cap addresses establishes the 0.5% sulfur content, it does not address compatibility issues associated with the expected multiple combinations of components which will make up these blends and how these

blends may compromise the safe working order of existing marine engines perhaps to the extreme result of total loss of power on a vessel.

Recognizing there is no legal provisions for a transitional period, while yet recognizing the complexity of this global transition to low sulfur fuels, **there is a need for port state control officials to exercise a pragmatic and realistic approach to enforce compliance during the initial few months following 1 January 2020.** Similar to the program put in place by the US government during implementation of the 1% and 0.1% sulfur emissions control area (ECA) requirements, the adoption of some mechanism that allows a vessel inbound with non-compliant fuel to report this fact, provide evidence that best efforts have been made to purchase compliant fuel and that compliant fuel was not available in the vessel's previous ports of call. One caveat to this program which is also applied in the US ECA fuel requirement enforcement program, is that it would only be permitted during the early months after 1 January 2020 and would not be endless in time nor able to be abused on a regular basis by vessels and/or shipowners.

Given these concerns, **what's next and how will industry make the contributions necessary to inform IMO member state decisions on these issues?** The Chamber of Shipping of America as a founding member of the International Chamber of Shipping (ICS) is providing input on these issues which are collectively being discussed by a number of international trade associations including ICS, BIMCO, INTERCARGO, INTERTANKO and the World Shipping Council. Supporting a timely and effective implementation of the 2020 global sulfur cap, these organizations have submitted a number of



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Pains or Mass Hysteria?



submissions to an IMO meeting to be held in July 2018 to address many of these implementation issues. Submissions from industry include papers on a standardized format for a ship specific implementation plan, safety implications associated with 2020 fuels, a draft standard for reporting fuel oil non-availability, requirements for sampling points and verification and control mechanisms.

As ICS Chairman Esben Poulsson stated, noting industry's full support for a smooth and timely implementation of the global cap, "Unless a number of serious issues are satisfactorily addressed by governments within the next few months, the smooth flow of maritime trade could be dangerously impeded." Mr. Poulsson went on to state that we "need to understand that ships will need to start purchasing compliant fuels several

months in advance of 1 January 2020 ... but at the moment, no one knows what types of fuel will be available or at what price, specification or in what quantity. Unless everyone gets to grips with this quickly we could be faced with an unholy mess with ships and cargo being stuck in port."

The Author **Kathy J. Metcalf**

is President & CEO at the Chamber of Shipping of America. Kathy graduated from the U.S. Merchant Marine Academy in 1978 with a Bachelor of Science degree in Marine Transportation and Nautical Sciences. A leader even back then, she was a part of the first co-educational graduating class at Kings Point. Upon graduation, she sailed for five years as a deck officer on crude oil and product tankers with Gulf Oil Corporation and Sun Company.

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How Growth Can Benefit

By Thomas Jelenić



You might call 2017 a banner year for California ports. San Pedro Bay, home to the nation's leading twin ports of Los Angeles and Long Beach exceeded their pre-recession peaks. Collectively, San Pedro Bay was up 7.2% from its 2006 peak. It took a decade to get there and while you wouldn't want that sort of annualized growth going forward, it did arguably mark the end of San Pedro Bay's recession dip. More importantly, growth looks to continue in 2018. As of the end of May, year to date container volumes are 3.7% higher over the same period in 2017. Unfortunately, that growth masks two weaknesses in San Pedro Bay.

First, a lot of the headlines that a person reads about record monthly volumes at one San Pedro Bay port often come at the expense of its neighbor. In May, the Port of Long Beach posted its best May ever, reporting 6% growth over the previous May. The Port of Los Angeles, which had a strong 2017, has not fared as well this year. Los Angeles' volumes were down 3.4% over the prior May. The sloshing of cargo back and forth between the twin ports does no one any good. It also creates a distraction when examining where these ports stand against other North American gateways. And that brings us to the second issue: market share.

Despite the growth last year and continued growth this year, market share for San Pedro Bay and California ports generally continues to slide, with other gateways capturing market share. Ports from Prince Rupert to Savannah all have their targets set on San Pedro Bay's share of discretionary cargo. While San Pedro Bay grew 7% from 2006 to 2017, the Port of Savannah grew 87% over the same time period. And before I am accused of using a much smaller port with greater potential for growth for comparison, it should be noted that New York/New Jersey grew 32% over that same time period.

Why does this matter? Well beyond the obvious foregone economic opportunities of jobs, tax revenue, increased regional economic activity, there are environmental consequences as well. The State of California has chosen to lead the nation in the reduction of greenhouse gases (GHGs). One of California's premises is that greening the economy will create jobs and increase investment within the state.

In its effort to slash GHG emissions, California policymakers have placed the maritime industry at the tip of the spear. Marine terminals are expected to eliminate all of their GHG

the Environment



emissions by 2030, a full 20 years ahead of California's expectations for other industries at a cost estimated of up to \$35 billion. So, in the minds of California's policymakers it was not sufficient that the state was already leading the nation and the world on the issue – it felt that the maritime industry must be pushed further, harder, quicker and at greater cost.

But there is a risk in this boldness. An analysis prepared by Starcrest Consulting Group shows that diverting cargo from California ports to Gulf Coast and East Coast ports will increase GHG emissions on average 22%. Naturally, you would expect California policymakers eager to show that their environmental goals will create the green economy they claim would be wary of something like cargo diversion that would both undermine environmental progress and harm the economy. You would expect it, but you would be wrong. And in so many ways.

One of the competitive advantages that San Pedro Bay possesses is the nearly two billion square feet of industrial space in Southern California that can be used for logistics. That industrial space allows close access from the ports to transloading, cross-docking, and distribution activities. No other gateway can match the scale of Southern California facilities. So, naturally the State of California is adopting policies that will ensure that those logistics activities will remain competitive and support the one in three jobs related to goods movement in the State. Of course not.

Instead, the South Coast Air Quality Management District just gave the go ahead to develop regulations that will hold railyard operators and warehouse operators in Southern California responsible for the third-party trucks that call their facilities or potentially face financial penalties when they are unable to control the decisions of other companies.

But, wait, regulation is something you expect from government, right? It is not like California is investing in those other North American gateways. But it is. CalPERS, California's behemoth public employee pension fund, is an owner of Centerpoint Properties, a logistics developer investing in east coast gateways, methodically chipping away at Southern California's competitive advantage.

California's policies continue to obstruct progress in other ways. The Southern California International Gateway is a proposed near-dock railyard that would speed port cargo

to inland destinations, improving San Pedro Bay's competitiveness. If built, it would even be a net environmental gain: reducing total emissions, reducing truck trips, and reducing congestion. Yet, after more than a decade, it still cannot receive its entitlements to build. While I write this, I learned that Prince Rupert announced the expansion of their facility from 1.2 million TEU to 1.8 million TEU with construction beginning in 12 months. This announcement comes even before their latest expansion is open. In angst I shouted, "Where is the EIR? Where is the appeal of the project? Where are the unending CEQA lawsuits?"

It would be understandable if California had chosen to be bold and lead the world in battling climate change and matched that boldness with actions that supported California's industries during the transition. But California's industries are at competitive risk because no one is following California's lead. In fact, the Canadian province of Ontario just announced that it is leaving the cap-and-trade system established by California, leaving Quebec as the only other participant.

Instead, California has taken action to invest in competing gateways, apply draconian regulation to the backbone of the supply chain, and prevent environmentally beneficial projects from moving forward. As a result, California's ports and San Pedro Bay, in particular, will need to deploy every resource to improve efficiency and productivity in the face of an indifferent State. Hopefully, the collective maritime industry will have the innovation to pull off growth in the Golden State.

The Author Thomas A. Jelenić

is Vice President for Pacific Merchant Shipping Association (PMSA). Mr. Jelenić works with policy makers, regulators, industry leaders and other entities to help ensure that sound science and industry issues are part of the discussion as California continues to call for the increased use of zero and near-zero emissions equipment at California's ports and throughout the goods movement industry. Jelenić has two decades of maritime industry experience, including more than 14 years in environmental and planning positions at the Port of Long Beach, the nation's second busiest seaport, and senior management roles in private consulting and logistics development.

Inna Kuznetsova,

The 130 senior-level shipping executives at the third annual Technology Summit at Hamburg in April 24 were told that the industry was moving from innovation into action. Give us an example of how they could do just that?

The industry today is embracing technology at a higher speed than ever, which results in growing pressure on small IT departments and innovation teams to participate in multiple new initiatives. It is even harder to do with a lack of common standards when the new systems, networks and groups duplicate efforts and cannot exchange data freely. We believe the industry may achieve more efficient results by joining efforts to define such standards and develop some common form of IP to benefit everyone and serve as a foundation for individual projects going forward. It is a way to develop differentiation without re-inventing security or data exchange protocols many times.

There are examples of similar, highly successful initiatives in other industries. The Linux initiative, for example, came about through the collaborative efforts of IT companies that resulted in what is now a widely used operating system deployed by companies across the globe for mission-critical applications.

INTTRA has great experience leading joint initiatives in the ocean container shipping industry, and we anticipate doing more in the future when appropriate. Let's take a look at a recent past initiative for an example. The shipping industry came together over the VGM initiative started by INTTRA two years ago. In 2016, when the IMO announced an amendment to SOLAS, it initially seemed like a relatively simple change: SOLAS VGM required that no container will be cleared for loading onto a ship until the shipper or its designee provides a verified weight to the carrier. In reality, it created havoc across the industry as carriers were concerned about the potential impact on their businesses. To address this, INTTRA called for joint efforts with multiple participants and industry leaders. We established regular meetings with key players to develop common standards to share the correct information, as well as organized around the stated preference to file VGMs digitally. As a result, two years later, the overwhelming majority of VGMs are filed electronically. Due to the common standards developed by the group, it's easy to achieve interoperability between multiple carriers and multiple freight forwarders and avoid waste in terms of costs and the inability of systems to understand each other. Looking forward, INTTRA expects to share more ideas and lead more initiatives to help the industry move beyond digitalization into the intelligent supply chain.

INTTRA is the largest neutral network, software and information provider for the ocean shipping industry. First,

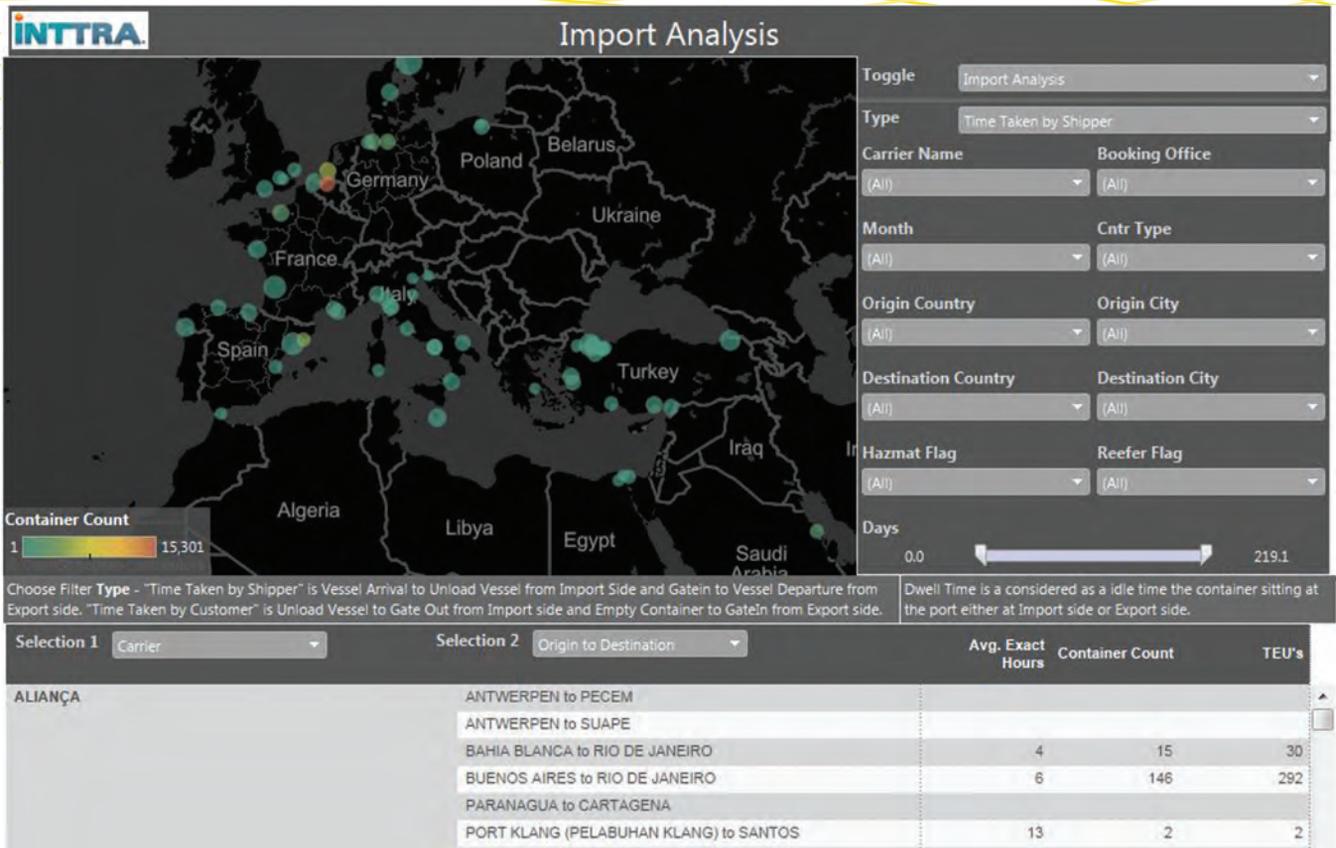


Inna Kuznetsova is President and Chief Operating Officer of INTTRA, leading sales, service delivery, marketing, strategic alliances, product management, IT infrastructure and software development. Before joining INTTRA in early 2015 Inna was the Chief Commercial Officer at CEVA Logistics and prior to that spent 19 years at IBM, where in her last role she was the Vice-President, Marketing & Sales Enablement for IBM Systems Software. Inna holds PhD. in Mathematics from Moscow State University, Russia, and MBA from Columbia Business School.

INTTRA was founded in 2001 as a joint venture between CMA-CGM, Hamburg Sud, Hapag-Lloyd, Maersk Line, MSC, and UASC to create a standard electronic booking system for the ocean freight industry. Neutral from the start, INTTRA has grown into the largest ocean shipping network in the world with over 30,000 active shippers across more than 200 countries, over 60 carriers and NVOCCs, and more than 150 integrations with transportation management and port system software partners. According to INTTRA, as many as one out of every four ocean containers shipped globally is booked through the INTTRA Platform.

MLPro sat down with Inna in June to discuss the results and interactions emanating from the third annual Technology Summit at Hamburg in late April. Here's what she had to say:

President and COO, INTTRA



how much of the industry is leveraging technology effectively and secondly, how is INTTRA helping to advance the digital transformation of the ocean freight industry?

We have seen a great acceleration in digitalization across the shipping industry the last few years. INTTRA's consistent double-digit growth is a good illustration: while some of our customers come from other electronic venues, many of them move from manual to digital booking process. Yet, half of the industry is still using the manual booking process and has a long journey ahead to embrace technology.

We also see progress driven by industry leaders who have digitalized their basic processes and are now entering the next stage by connecting various data sources. Once you can get data pooled, you can apply business analytics and a variety of tools to move closer to an intelligent supply chain – one that is well visible, responsive, predictive and flexible.

INTTRA today provides a number of products for companies at different stages of their digital transformation. We help our customers to digitalize their processes in booking and shipping instructions, as well as other areas such as VGM and access to Ocean Schedules. For those who have reached

that point, we offer our suite of Dashboard products to help improve operational excellence. In addition, we also offer powerful data-driven products both from INTTRA and Avantida helping carriers with their container utilization, as well as shippers in planning better routes and locations.

Your survey, unveiled at the conference, said that 53% are focused on blockchain. But, what exactly is blockchain – and what can blockchain do for industry?

Blockchain is a digital distributed ledger that is generating wide interest across the industry, with multiple proof of concepts and pilots being tested. That said; we've yet to see a broad commercial implementation of a blockchain in shipping. There are clear advantages in the easy connecting of participants and data sources using blockchain, but there are also potential pitfalls. For one, a company needs to enable its IT system so that it's ready for blockchain. This is a particularly sensitive area of concern for organizations with smaller IT departments as they could be faced with the daunting task of participating in multiple networks from different carriers and ports, each with their own blockchain projects. That can

INSIGHTS

be a challenge. There is a clear need for a connection through a network that would allow participants to link ones and get access to many, as well as a case for standards in security.

Also, there is still some work to be done in the industry to identify projects that can benefit from a blockchain implementation as opposed to ones that can be implemented using existing means and done so in a cheaper fashion. There's no doubt the interest is there; it's something we will continue to explore for the benefit of our customers.

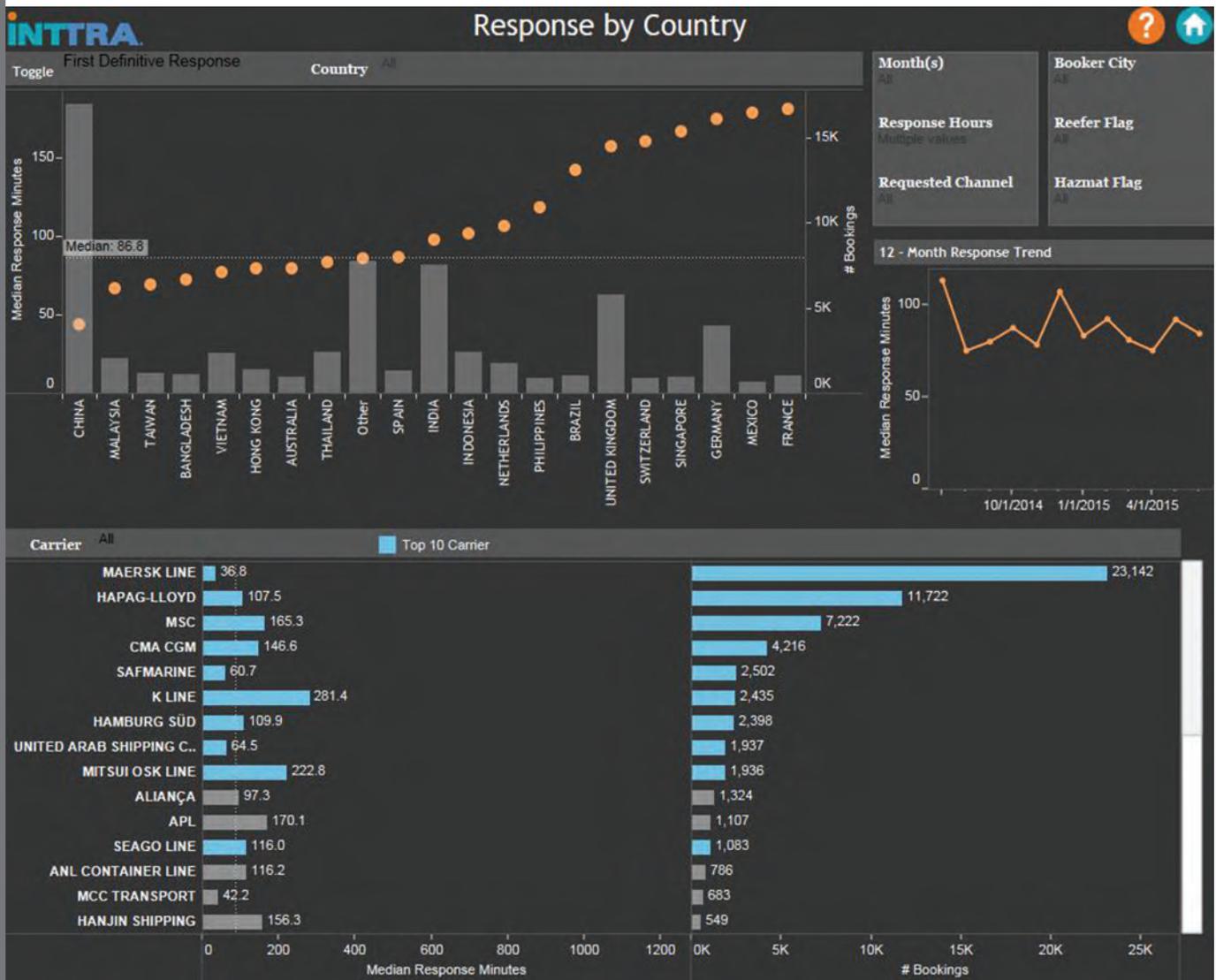
Just 51% of responders said that they were working to improve reporting and analytics. This would suggest that almost half of shipping firms think their analytics are sufficient. Would you agree?

Not quite. To be able to use analytics effectively, you need all your data, shipments and container moves in a system. With half the industry still manual, it lacks access to all the

information to feed into the analytics tools.

If the biggest container shipping challenges for BCOs and Freight Forwarders include managing demurrage and detention, in-transit visibility, managing rates and rate changes, and managing bill of lading and other shipping docs, are these all tasks that can be made easier through the use of a 'neutral network' such as INTRA? A lot of that involves proprietary data – how do you keep it generic and confidential at the same time?

INTTRA provides the secure environment for the information kept within each of the forms exchanged through our network between carriers and shippers. Only the owners authorized to access the shipping instructions or bill of lading can do that, yet the form itself could be standardized. This way we achieve the standardization of the documents, while keeping the specific information in the documents secure.





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SOUTHERN CONTAINER PORTS

Southern Ports are getting with The Program ...

The In-transit cold treatment program, that is!

By Rick Eyerdam

The dimensions of The Program are remarkable. The Reefer Shipping Market and Forecast 2017/18 produced by Drewry calculated that 79 percent of perishable cargo moved in refrigerated containers in 2016 and only 21 percent on reefer ships. By 2021, reefer containers will carry 85 percent of perishable products, while reefer cargo will reach 134 million tons, Drewry study predicts.

One reason for the growth of reefer cargo in containers is the remarkable expansion of the USDA sponsored In-Transit Cold Treatment Pilot program. With the addition of Port Canaveral, the Port of Virginia and Port of New Orleans in 2017, there are now 11 ports in the Deep South that have been accepted into The Program.

All of these ports are now able, for the first time, to accept, offload and distribute blueberries, citrus, and grapes from Peru; blueberries and grapes from Uruguay, and blueberries, apples, and pears from Argentina. This is produce that has no pesticide treatment other than near-freezing cold treatment at sea in containers for at least 14 days to prevent fruit flies from maturing. That's because both the Florida Commissioner of Agriculture and the US Department of Agriculture's Animal and Plant Health Inspection Service (APHIS) take fruit fly interdiction very seriously. Fruit flies can be devastating.

Fruit Flies 101

According to APHIS, "Fruit flies in the family Tephritidae are among the most destructive, feared and well-publicized pests of fruits and vegetables around the world." Tephritidae fruit flies spend their larval stages feeding and growing in more than 400 host plants. Introduction of these pest species into the United States causes economic losses from destruction and spoiling of host commodities by larvae, costs associated with implementing control measures, and loss of mar-

ket share due to restrictions on shipment of host commodities. The extensive damage and wide host range of Tephritidae fruit flies become obstacles to agricultural diversification and trade when pest fruit fly species become established in these areas.

In case you were wondering, Tephritidae is divided into several subfamilies: Blepharoneurinae (5 genera, 34 species); Dacinae (41 genera, 1066 species); Phyalmiinae (95 genera, 331 species); Tachiniscinae (8 genera, 18 species); Tephritinae (211 genera, 1859 species); Trypetinae (118 genera, 1012 species) and Chaetostomella cylindrical. All of that is a mouthful. It's also quite important.

To prevent any chance of fruit fly invasion and until the In-Transit Treatment Cold Treatment Pilot Program began in 2013; this produce and all others shipped to the U.S from South America were prohibited by APHIS from being offloading south of the Mason/Dixon line. Previously, most called at the Delaware River and especially the Port of Philadelphia. Then, the fruit laden containers were transferred to trucks for the long journey south past Atlanta and Memphis all that way down through Florida.

New Ports, New Possibilities = Happy Port Executives

"This designation for Port Canaveral is good news for logistics and supply chain managers importing agricultural products to meet the high-demand Central Florida consumer market. With this new designation and the port's close proximity by land and sea to this high-demand market, transit time of produce and other cold-treated commodities can be dramatically reduced to save time, money, and resources," said Port CEO Captain John Murray. "Bottom line, these time-sensitive shipments will no longer need to enter ports such as Philadelphia and New York only to be shipped back down to Florida. That means, lower container costs, fewer trucks on the highways, and better and fresher products in the marketplace for consumers."

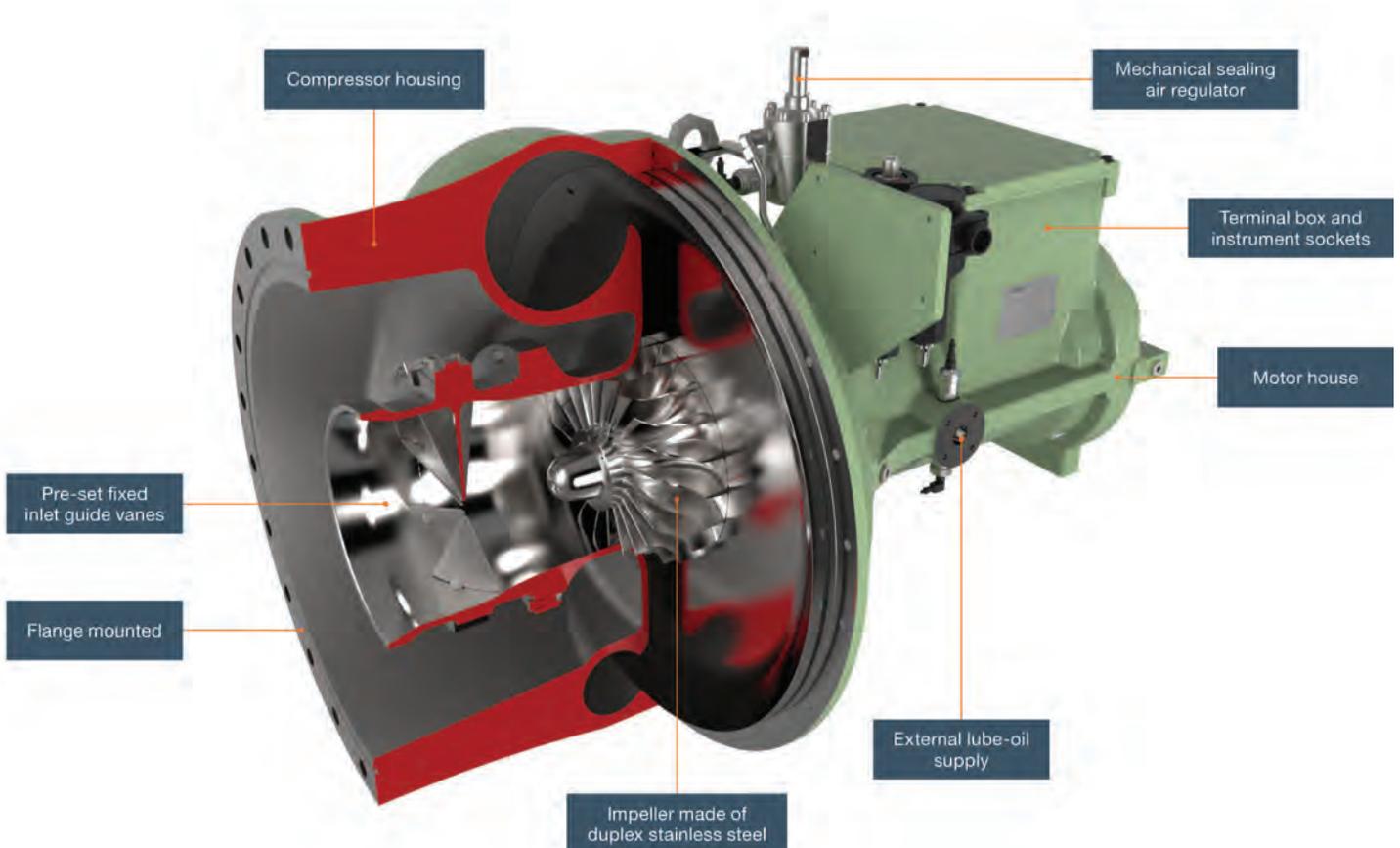
John F. Reinhart, CEO and executive director of the Virginia Port Authority, agrees. "This designation is important for logistics and supply chain managers importing agricultural products because it means shorter total transit times from ori-



Credit: USDA

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Container Ports

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– Captain John Murray, CEO,
Port Canaveral



gin to market,” he said, continuing, “This helps to diversify our cargo mix. It opens the door for new cargo and provides an important service for owners and shippers of perishables. This helps to support our strategic growth plan and further establishes The Port of Virginia as a global gateway.”

Other port executives, from Florida stretching all the way to New Orleans, were equally effusive. “This Program is really growing,” said Jean Elie, Port Everglade’s Business Development Division Assistant Division Director. “Our first shipment was grapes from Peru and was carried by Hamburg Sud. Now, MSC Shipping and Maersk are calling here with produce sent under the In-transit Cold Treatment Program.”

“Participating in this pilot is a significant gain and highlights Port NOLA’s ongoing commitment to developing new business,” said Brandy D. Christian, Port of New Orleans President and CEO. “This program gives current and future port shippers additional options to transport refrigerated cargo, while reducing transit time from origin to the consumer.”

“Peru is planning to increase its blueberry production while also continuing to supply growing U.S. demand for avocados, grapes, mango and asparagus,” says Nelly Yunta, vice president of Customized Brokers, the logistics arm at Crowley, the Jacksonville, Fla.-based steamship line and logistics provider.

Yunta, a leader in the creation of The Program, is now looking to expand. “Central America will continue to be an important supplier of fresh fruits and vegetables for the U.S. as well,” she said. “So Crowley is investing in new equipment and additional sailings and will continue to provide full logistics services including ocean, customs clearance, warehousing and trucking in the region to serve the increasing trend.”

Port Everglades, for one, aims to be a big part of that Central American push. “The pilot program is now completed and no longer a pilot program,” according to Ellen Kennedy, Port Everglades Business Development Assistant Division Director/

Communications. “Now we are adding a new Ocean-To-Air Perishables Program, first with Guatemala.”

Customized Brokers, the logistics arm of Crowley and Miami International Airport recently received approval from the U.S. Department of Agriculture and U.S. Customs and Border Protection (CBP) to coordinate ocean shipments of produce from Guatemala in Central America to Port Everglades, and then on to cargo planes at MIA for a flight to their final destination in Europe and Asia. CBP granted approval for expedited processing of the ocean-to-air shipments in addition to the waving of Customs duties.

A cargo 10 tons of peas, for example, were safely packaged to easily transfer from an ocean container to air cargo containers while maintaining freshness. After the ocean container was off-loaded at Crowley’s terminal at Port Everglades, it was trucked south to MIA and transferred into air cargo containers and placed on a Centurion Cargo flight bound for Amsterdam the evening of February 2, Kennedy explained.

The Program Evolves

Things have evolved quite a lot since 2010. The concept for the pilot program was formalized in January 2012, spearheaded by the Florida Perishable Trades Coalition, a nonprofit association developed to increase trade in perishable products through Florida’s airports and seaports. That Coalition is based at Lee Sandler’s law firm in Miami; Sandler, Travis & Rosenberg and managed by Tiffany Martinez.

Sandler recalls, “There were quite a few little pockets of interest in cold shipment, some from companies that no longer exist, frankly. My personal involvement is that quite a few of them were people who I had consulted with at different times. And we always saw that there was a federal regulation that prevented the products from coming into Florida ports. But the state of Florida was the strong arm that you would have

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Container Ports

to deal with in order to get the feds to understand that the rule could be changed. A number of people we were talking to understood that, and a lot did not.”

“People were sort of bumping into each other with different strategies and different interests,” Sandler recalls. “The key moment was when the Port of Miami pulled together the various interests and we sat down and had a roundtable discussion about how to proceed and that was really the beginning of the coalition.”

Martinez recalls, “This had been going on at least 20 years; on and off. The real headway was made in 2011 when Port Mi-

ami started getting people together and then in 2012, Crowley Maritime; Customized Brokers, Crowley Maritime’s Miami-based subsidiary; Seaboard Marine; and PortMiami, Flagler Logistics and some other brokers formed The Coalition and put together a white paper to submit to the Florida agriculture folks.

Elie, from Port Everglades, said that in the beginning Florida’s Agriculture Commissioner agreed to grapes and blueberries from Peru. Port Everglades welcomed global ocean carrier Hamburg Süd’s first shipment of imported Peruvian grapes on Friday, November 29, 2013, while the first direct shipment



Credit: Port of Wilmington

of Peruvian blueberries arrived at PortMiami in March 2014.

These first deliveries, as with all subsequent shipments, required inspections at every step from harvest to pre-cooling to containerization in specially designed reefers which today must have an array of monitoring devices to assure that crops are kept uniformly cold and constantly monitored aboard ship. This detailed information must be reported to APHIS and to the destination US port. These initial shipments were checked in Panama to make sure everything was cool. And if a problem was detected in Panama the container or containers could

either be sent north to Philadelphia or returned, Elie recalled.

In-Transit Treatment Program at a Glance

Among the dozens of regulation required for the In-Transit Cold Treatment Program, these four items stand out in particular:

- *All material, labor, and equipment for cold treatment performed on a vessel must be provided by the vessel or vessel agent. An official authorized by APHIS monitors, manages, and advises in order to ensure that the treatment procedures are followed.*
- *Refrigeration must be completed in the container, compartment, or room in which it is begun.*
- *Fruit that may be cold treated must be safeguarded to prevent cross-contamination or mixing with other infested fruit.*
- *Fruit intended for in-transit cold treatment must be pre-cooled to no more than the highest temperature of the treatment schedule under which the fruit will be treated prior to beginning treatment. The in-transit treatment enclosure may not be used for precooling unless an official authorized by APHIS approves the loading of the fruit in the treatment enclosure as adequate to allow for fruit pulp temperatures to be taken prior to beginning treatment. If the fruit is pre-cooled outside the treatment enclosure, an official authorized by APHIS will take pulp temperatures manually from a sample of the fruit as the fruit is loaded for in-transit cold treatment to verify that precooling was completed. If the pulp temperatures for the sample are 0.28 °C (0.5 °F) or more above the highest temperature of the treatment schedule under which the fruit will be treated, the pallet from which the sample was taken will be rejected and returned for additional precooling until the fruit reaches the highest temperature of the treatment schedule under which the fruit will be treated. If fruit is pre-cooled in the treatment enclosure, or if treatment is conducted at a cold treatment facility in the United States, the fruit must be pre-cooled to the highest temperature of the treatment schedule under which the fruit will be treated, as verified by an official authorized by APHIS, prior to beginning treatment.*
- *The federal regulations for cold treatment are dozens of sections long and can be found at 7 CFR 305.6*
- *The fees collected by the carrier from the consignee are: December 28, 2017 to December 27, 2018, \$142.00 per container; December 28, 2018 to December 27, 2019, \$190.00 per container; and December 28, 2019 onward, \$237.00 per container.*

Timelines, Deadlines & Progress, too

The Program is, as Port Everglades' Ellen Kennedy says, now fully mature, and it is growing. Port Everglades welcomed its first shipment of imported Peruvian grapes in November 2013, while the first direct shipment of Peruvian blue-



An aerial view of the growing port of Wilmington, NC. Wilmington is aggressively expanding its reefer cargo market penetration, leveraging a local \$12 billion in agriculture production.



Participating in this pilot is a significant gain and highlights Port NOLA's ongoing commitment to developing new business. This program gives current and future port shippers additional options to transport refrigerated cargo, while reducing transit time from origin to the consumer.

– Brandy D. Christian, President and CEO,
Port of New Orleans

berries arrived at PortMiami in March 2014. Elsewhere, and in September 2014, the port of Savannah, Georgia, and the Florida ports were permitted to import a longer list of produce by USDA including cold-treated citrus fruit, grapes, and blueberries from Peru; citrus and blueberries from Chile; and grapes from Brazil.

Separately, Port Tampa Bay, Port Manatee, and the port of Jacksonville, all in Florida, joined the program in 2015. South Carolina's Port of Charleston was cleared for participation in 2016. In May of 2017 the Port of New Orleans joined the program and the Port of Virginia joined in October 2017 while Port Canaveral joined in December 2017.

There is more work to be done. To that end, Florida's ports have yet to be certified for Phase II, according to Martinez but approval from the Florida Department of Agriculture is expected within a months. Nevertheless, and on Dec. 1, 2017, North Carolina's Port of Wilmington became the first South Atlantic port to implement Phase II of The Program, allowing completion of the 14-day cold-treatment process at the port. The Port of Wilmington, also looking to leverage the multi-billion dollar agricultural belt that exists just 100 miles from its front gates, recently hosted a well-attended 'Cold Chain' Summit, and has big plans in this regard.

"Phase II opens up a totally new dimension for our port and an option for importers to complete treatment after discharge, which is unique in the South/Mid-Atlantic, and only available at the Port of Wilmington at this time," explains Hans Bean, vice president of trade and development at North Carolina Ports. "The Port of Wilmington has almost 300 plugs on terminal and the capacity to add more. In addition to its reefer capacity, the port also is home to a 101,000-square-foot on-terminal refrigerated warehouse, one of only a few in-port cold storage facilities in the country," he said.

Shipments of fruit arriving at the ports of Gulfport, MS, and Corpus Christi, TX, for cold treatment must meet special conditions including: "Blacklights or sticky paper must be used within the cold treatment facility, and other trapping methods, including Jackson/methyl eugenol and McPhail traps, must be used within the 4 square miles surrounding the cold treatment facility at the maritime port of Gulfport, MS, and within the 5 square miles surrounding the cold treatment facility at the maritime port of Corpus Christi, TX." Wilmington is not required to meet these conditions.

Southern Ports are indeed getting with The Program – the In-transit cold treatment program, that is. And, this trend is changing many longstanding, traditional supply chain practices along the way. Lower retail prices, produced by a reduction in regional trucking and interstate congestion, are among the key benefits. It's a 'win-win' for most ports, an exploding southern consumer population base, and for the liner companies, as well.



The Author Rick Eyerdam

is a Miami-based, national award-winning journalist and editor. He is a former editor of Florida Shipper Magazine and has served as an adjunct professor of communications at Florida International University. Eyerdam graduated from Florida State University with a double major in English Literature and Government. His articles have appeared in myriad maritime publications.

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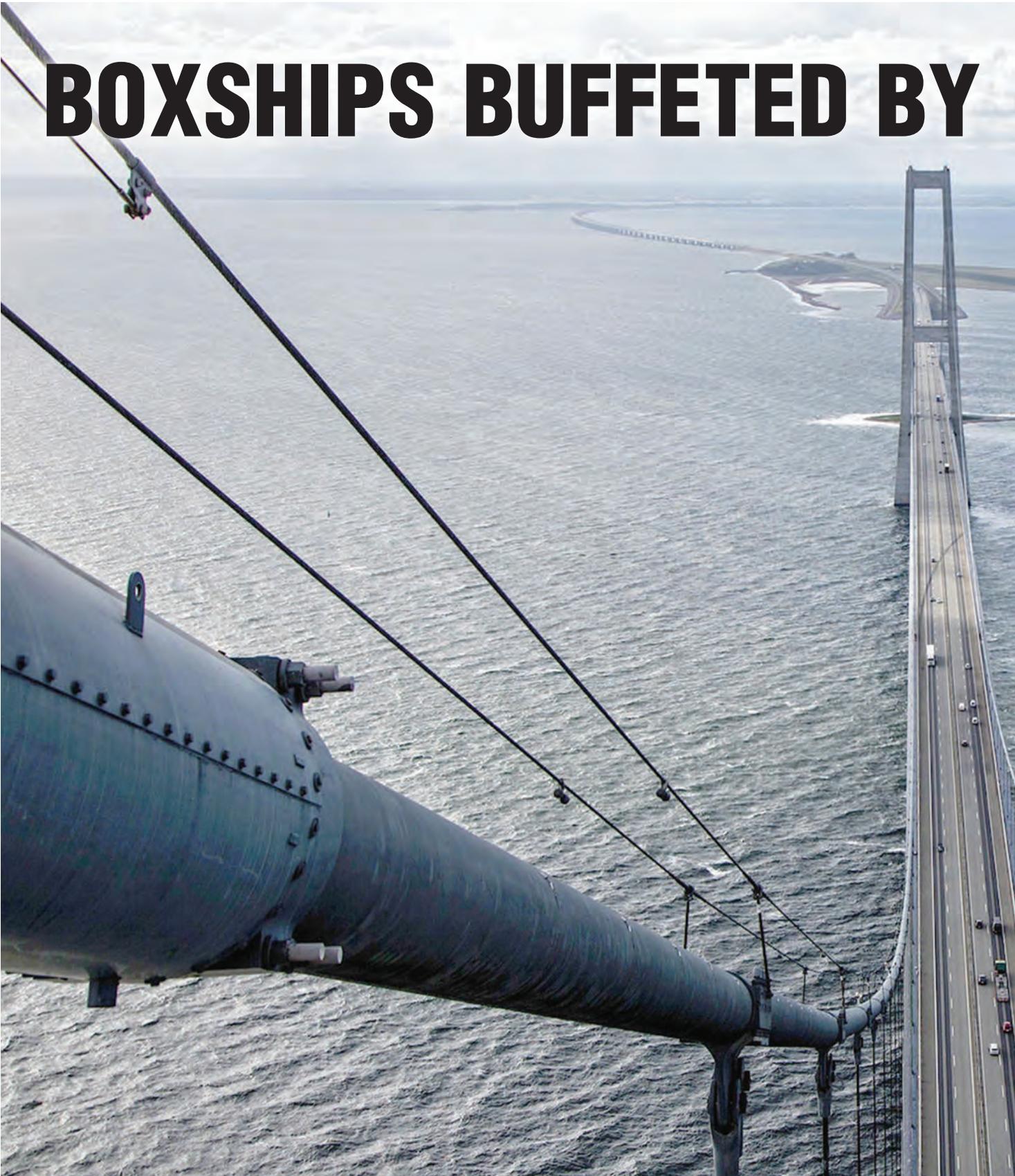
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COMPETING CALAMITIES

*Overcapacity, Fleet Supply, Weakened Earnings, Consolidation – and now – fears of trade wars fuel further uncertainties for an already unsteady box-ship climate. **MLPro**'s Barry Parker digs in to get to the bottom of all of it.*



Global Container Shipping

The report season for 2018 Q1 corporate results saw an “earnings miss” (reported earnings below consensus forecasts of analysts) for the bellwether of listed container equities, A.P. Moller (APM), with its largest portfolio holding being Maersk Line. In a media telephone interview, APM CEO Soren Skou, said, “...in our main business, the ocean segment, we are not making money.” Indeed, figures accompanying APM’s Q1 report showed a slight decline in average laden \$/FFE (40’ equivalent) on East / West routes, calculating back to \$1,796, compared to the year earlier figure of \$1,813.

The business tends towards overcapacity – in recent years, the big players have focused on “economies of scale” – effectively bringing about a race to the bottom as larger vessels have been ordered. The result has been weakened earnings, as shown in FIGURE 1. To that end, the tone has now changed.

On APM’s mid May earnings call (detailing Q1 results), Mr. Skou’s Lieutenant, Maersk Line COO Soren Toft, told listeners, “On capacity, let me also say that in 2015, Maersk Line ordered a total of 27 vessels, 20 of them were large vessels. They’ve by and large been delivered. And ... we have no plans of ordering any ships for at least the next 12 months. Equally with the initiatives we are putting in place, we believe we can keep the present capacity unchanged for the next 18 months, even erring towards a slightly lower capacity in the next couple of quarters, as we implement the Hamburg Süd synergies.”

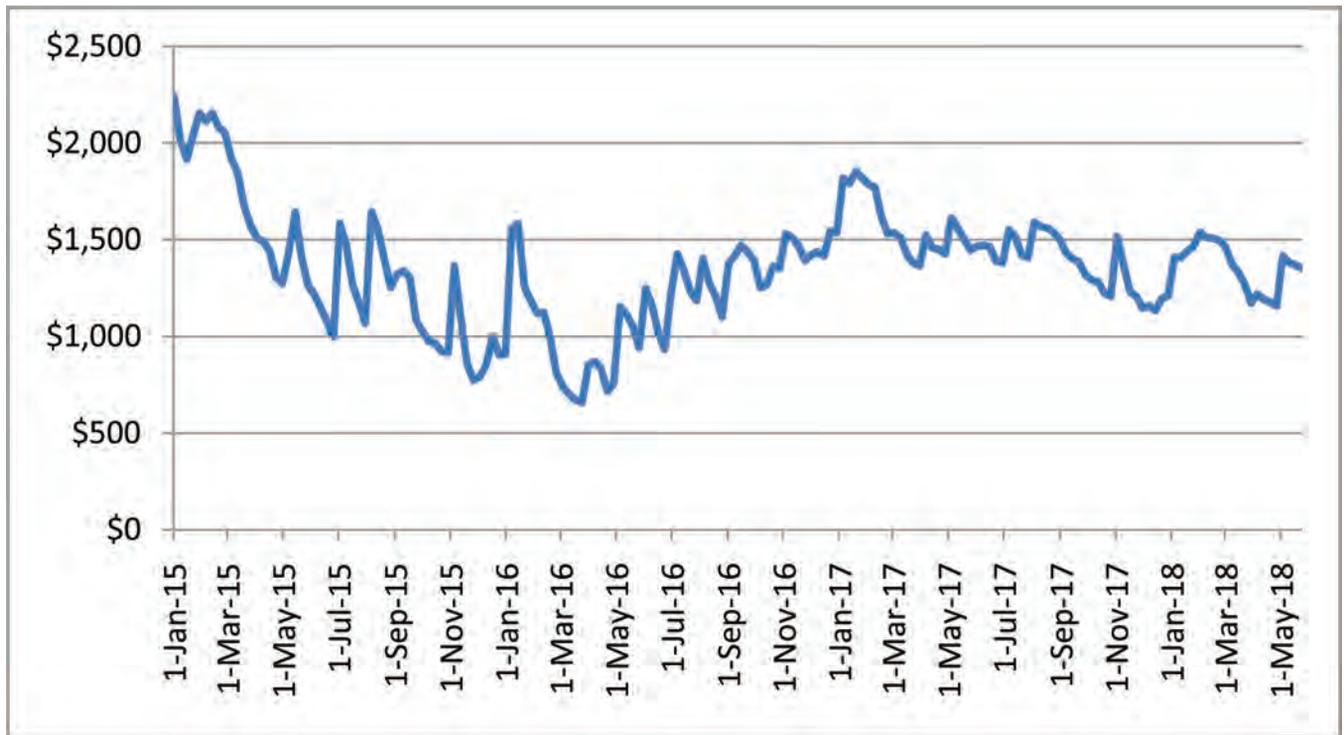
OVERSUPPLY

Fleet supply continues to be a vexing problem. A February 2018 analysis by Baltic and International Maritime Council (BIMCO) offered, “The containership fleet has already expanded by 1.2% in the first month of 2018 – equal to the entire fleet expansion of 2016 ... A flurry of new ships has been delivered in January. Not since July 2010 has such a massive inflow of capacity taken place in one month – 254,173 TEU. This includes plenty of feeder ships, but also five ultra-large 20,000+ TEU ships.” And, the strategies for dealing with oversupply are seemingly far from uniform.

One major response to oversupply during the past two years had been consolidation, with many business combinations occurring. After the dust settled, Maersk (which is still absorbing Hamburg-Süd) continues to rank at the top of the leader boards. Late May figures from Alphaliner show the Copenhagen-based giant as controlling more than 4.1 TEU of tonnage (of this, 55% owned, and 45% on charter), just under 19% of the overall market.

Mediterranean Shipping Corp comes in next, controlling 3.3 million TEU, slightly less than 15% of the total fleet, followed by CMA-CGM (which acquired Neptune Orient Lines in 2016) with 1.97 million TEU (11.6% of the overall fleet). But CMA CGM wasn’t done yet. As *MLPro* went to print, CMA CGM Group announced an agreement between CMA CGM and Container Finance whereby the container shipping and

The World Container Index (a composite of rates on 40’ boxes on major routes)



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Overall demand growth is expected to be lower than in 2017, but still high enough to potentially improve the fundamental market balance. BIMCO forecasts demand to grow by 4.0-4.5% against a fleet growth of 3.9% in 2018. The IMF... significantly lifted expected GDP growth in advanced economies for 2018 and 2019... generally good for container shipping demand.

– Peter Sand, BIMCO Lead Analyst

logistics business Containerships (and Container Finance's holdings in Multi-Link Terminals Ltd and CD Holding Oy) will become part of CMA CGM. The Finnish firm specializes in the intra-European market and will presumably strengthen CMA CGM's penetration there. Of course, the transaction remains subject to regulatory approval.

A beefier COSCO, which had absorbed CSCL (1.974m TEU, 8.9%), ranks fourth, followed by Hapag Lloyd (which acquired United Arab Shipping Company) with 1.6 m TEU, or 7.3% share of the total. The Ocean Network Express (ONE), formed after three Japanese carriers joined forces – and launched in April 2018, comprises 1.56 m TEU of controlled capacity, or 7% of the total. One transaction in the works, but not yet concluded, will see COSCO acquiring Orient Overseas Container Lines (OOCL), creating a carrier of approximately 2.6 m TEU, if the deal comes to fruition.

Each business combination has the potential to force a realignment of existing alliances, where groups of carriers are able to jointly market their capacity. Xeneta, offering a repository of freight rates (and tools for comparing them) serves many stakeholders, and noted recently in a company blog, “We are all seeing fewer carriers and bigger ships, making less-frequent calls at fewer ports, which can disrupt supply chains and cargo flow. However, the industry is still in uncharted waters.”

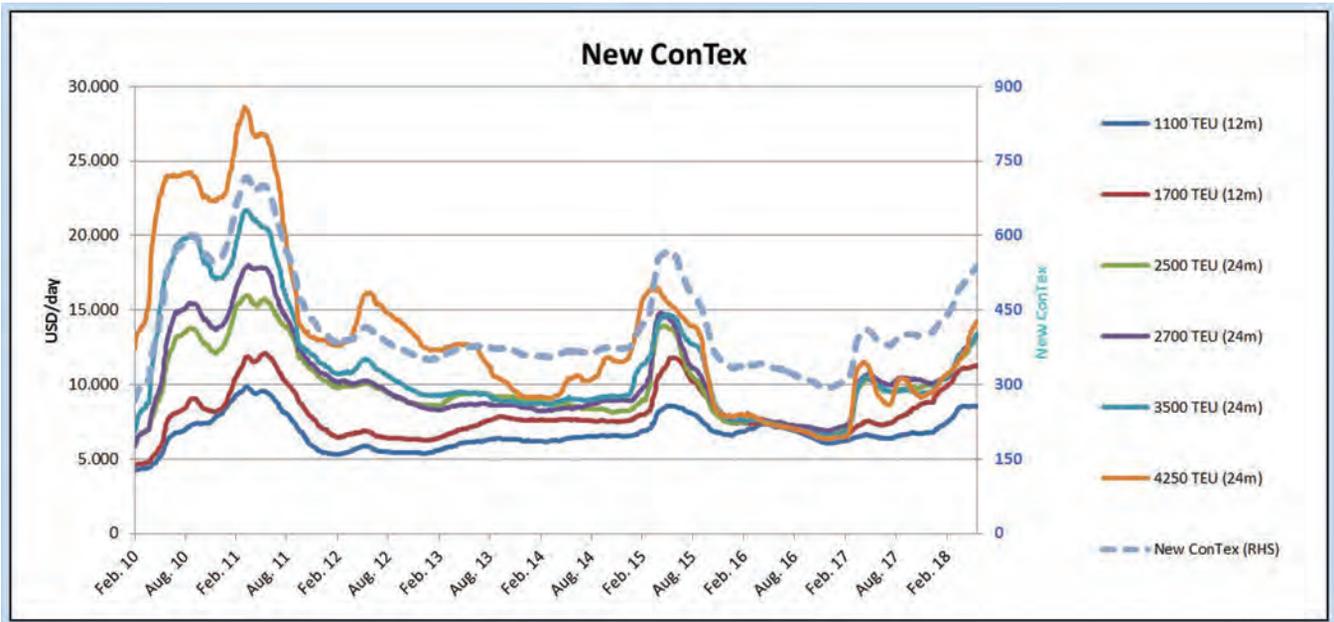
In another related effort to combat the plethora of extra tonnage, some carriers were seeking to delay deliveries of megaships. In early 2018, both COSCO and Yang Ming pushed back newbuild deliveries, originally scheduled for 2018, out into 2019. On the other hand, South Korean carrier Hyundai Merchant Marine (HMM) trumpeted upcoming plans to order as many as 20 vessels, including 12 of 20,000 TEU capacity. It is Maersk, however, that is often considered the business bellwether. The emphasis of its COO, Mr. Toft, on holding the line on supply is

borne out by Alphaliner's analysis, which shows the shipping giant's orderbook of 12 ships totaling 105,288 TEU, a mere 2.5% of its existing controlled fleet, well below industry average.

Not everyone is worried about overcapacity. Analysts at Drewry Shipping, which produces the World Container Index, wrote in late April that “Fears of overcapacity are overhyped,” adding, “Deferrals mean that new containership deliveries in 2018 will not damage the supply-demand balance. More ships are needed to keep up with demand projections.” BIMCO is also looking for steadiness in 2018, with Lead Analyst Peter Sand saying: “Overall demand growth is expected to be lower than in 2017, but still high enough to potentially improve the fundamental market balance. BIMCO forecasts demand to grow by 4.0-4.5% against a fleet growth of 3.9% in 2018. The IMF ... significantly lifted expected GDP growth in advanced economies for 2018 and 2019... generally good for container shipping demand.” BIMCO highlighted growth in cargo moving from Asia through the Panama Canal, saying, “2018 is likely to be the year where many container line networks calling the US East Coast will become fully up-scaled by deploying ultra large container ships.”

TRADE WARS: FACT OR FICTION?

As if the cost of fuel, the looming IMO 2020 deadline, overcapacity fears and low freight rates weren't enough to worry about, lurking in the background is the specter of politically induced slowdowns in trade. The opening salvos in what could be a trade war affected neobulk commodities – steel, aluminum, and bulk grains – notably U.S. sorghums bound for China. So far, though fears about slowdowns in the box trades have been widespread, impacts on containerized trades have not (yet) materialized. That said, and as *MLPro* goes to print for this edition, the saber rattling from all sides – the United



States, the EU and China – is getting louder.

For his part, BIMCO’s Peter Sand has insisted that the impending trade war “...is all about the eastbound trans-Pacific trade lane.” In mid May, the U.S. toned down its rhetoric, suggesting that it would look for a rapprochement with China, rather than turning the China to West Coast U.S. trades into a war zone, with widespread tariff increases. By mid June, the U.S. had changed its tune, in line with the rising summer temperatures. It remains to be seen what will really happen. Data from MDS Transmodal, a UK-based consultant, shows that 18.6 million TEUs moved from the Far East to North America overall in 2017.

Separately, U.S. sanctions against Russia and now Iran are back in the news. Consultants from Drewry, writing in their Container Insight Weekly, commented that: “Should negotiations fail to resolve the matter, all non-US countries will be faced with a thorny dilemma: how to continue trading with Iran without catching heat from America? The threat of so-called ‘secondary sanctions’, whereby the US punishes foreign firms for doing business with Iran, will inevitably see companies acquiesce to the demands of the biggest market. That’s already happening.

In mid-May, Reuters reported that Shipping group A.P. Moller-Maersk was the latest in a growing roster of firms preparing to exit Iran. That leaves many stakeholders to wonder whether the EU can keep the nuclear deal with Tehran both alive and relevant. That’s because Maersk’s decision follows similar moves by other such heavyweights as French oil major Total and MSC, the world’s largest biggest container shipping company.

Reuters also reported that Maersk Chief Executive Soren Skou said, “With the sanctions the Americans are to impose, you can’t do business in Iran if you also have business in the U.S., and we have that on a large scale.” Indeed, this is now as much about business as it is about politics – or global security.

After all, much of the global supply chain is holding its breath to see what happens next.

To that end, and in terms of the bigger sanctions picture, Drewry noted, “Previous trading restrictions have meant that neither Russia nor Iran has lived up to its billing on the container market. A return to the trade wilderness through greater sanctions (deserved or not) will only increase the likelihood of that untapped container potential going to waste.”

HORSES FOR COURSES & OTHER VARIABLES

Container shipping is not homogenous; it breaks down into multiple subsectors. What is clear is that smaller vessels, which include ships in North-South trades and regional feeders, have seen more market traction than their larger brethren. The graph charting composite of time charter hires for smaller vessels, provided by the Hamburg Shipowners’ Association (www.vhss.de) shows the volatility over time, as well as recent improvements. Indeed, according to APM’s 2018 Q1 report, rates paid by shippers in the “intra-regional” trades improved dramatically over the comparable 2017 period, rising 21% to \$1,433 per 40 foot equivalent.

In the short term, the carriers are attempting to claw back increased fuel costs, with Maersk, CMA-CGM and MSC are all implementing surcharges. Longer term, as all shipping sectors grapple with the advent of restriction on sulfur in fuel (and with longer term efforts to limit the industry’s greenhouse gas emissions), the container sector is responding. HMM’s putative order will see vessels fueled by LNG, or, alternatively by “scrubbers” (which would enable cheaper fuel, with a high sulfur content, to be consumed). CMA-CGM has announced that nine 22,000 behemoths on order will consume LNG fuel-supplied through a ten-year strategic agreement with oil major Total, beginning in 2020.

Global Container Shipping



Credit: CMA CGM

On the tech side of the business, so-called ‘digitization’ is impacting the container sector, more so than others. “Blockchain” technology – whatever that is – viewed by some pundits as the tidal wave and great enabler in simplifying supply chains, is waiting somewhere in the wings. Maersk took an early lead here, launching a project in conjunction with IBM. In the meantime, CMA-CGM, whose APL subsidiary has joined a consortium, which includes consultants Accenture, is hard at work on a competing effort.

Still, digital efforts are moving ahead. In APM’s mid May Q1 results, Soren Skou explained: “... we see significant customer uptake in the digital offerings and moving through digital transactions online, and that will over time, result both in lower costs and also in our ability to sell more products on our online platform.” He emphasized that point by revealing, “60% of all bookings, 84% of all quotes, \$1.3 million worth of business every hour is currently transacted on maerskline.com.”

Online platforms and marketplaces go hand-in-hand with the changing nature of the business, where deregulation in the 2000’s has led to a volatile marketplace dogged by old business practices. INTTRA, by now a familiar online booking platform developed by the carriers in the early 2000’s, is now seeking to add value by getting into the backend of the business by streamlining the management of contracts dogged by old style paperwork and the inefficiencies that go with it.

Separately, NYSHEX, a newer online marketplace presently concentrating its efforts in the trans-Pacific trades, has sought to streamline rate quotations, and has added financial guarantees to drive performance of contracts extending out as far as six months into the future. Still another freight procurement

platform, FREIGHTOS, another holder of freight rate data used widely by logistics providers and cargo owners, hopes to bring transparency to the scrum. It has now announced collaboration with the venerable Baltic Exchange (best known for the Baltic Dry Index and its offshoots) to create a suite of container rate indices, based on anonymized data within its system.

THE MORE THINGS CHANGE ...

At a Hong Kong logistics conference in late 2016, an Alphaliner analyst got up and gave a talk on the current state of the global boxship markets. As he rattled off a long list of what was happening in the sector, listeners nodded their heads and murmured their assent as if to say, “We know.” After five minutes, though, he revealed that he had really been reading from a ten-year old news story. That got a laugh – but he had made his point.

As the containership markets face familiar challenges, though, it also faces the headwinds of ballast water treatment costs, surging fuel costs, falling rates, possible trade wars and IMO 2020 deadlines. The route out of murky waters won’t be any easier this time, especially with the additional burden of countless other pressures looming. Technology no doubt will be a part of the solution. But, in the end, avoiding the mistakes of the past will be just as important.

The Author



Barry Parker

Parker of bdp1 Consulting Ltd provides strategic and tactical support, including analytics and communications, to businesses across the maritime spectrum. The company can be found online at www.conconnect.com



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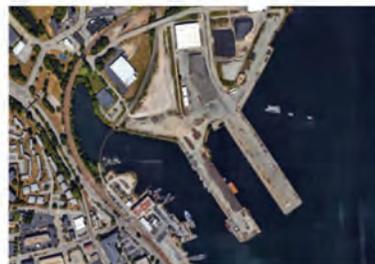
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Boxship Bargains: Where you sit determines where you stand in the market.

Many variables cloud containership vessel valuation calculations today. That said, and according to VesselsValue.com, there are always opportunities at hand for intrepid market participants.

By Court Smith

Uncertainty has plagued the container markets over the past several years. German owners have been fleeing the space during this time as domestic investors have lost their taste for market exposure after a dismal decade. Large carriers are clamoring for market share and are refusing to exercise order discipline, pushing the TEU capacity of the global fleet ever higher with larger ships. But as with any shipping market, there are always bright spots and niches that intelligent owners can exploit.

There is a significant difference between the asset value prospects for smaller ships and, for example, ULCVs. The market for smaller ships is liquid and well established and this makes assessing valuation trends more reliable. There are far fewer transactions in the ULCV space and the size and specification of the ships continues to change. Smaller ships appear to have hit their low point and asset values have started to recover. The outlook for the largest vessels is unclear as the market remains illiquid.

PONDERING PANAMAX

Panamax sized vessels saw a significant dip at the start of 2016, as asset values plunged to the lowest reported on record. Prices recovered as bargain hunters snapped up many of the units sold by banks or those offered at auction and realized a significant return in spite of the continued depressed state of the market. Most of the ships which have exchanged hands have been around for eight to ten years. This suggests that many of the buyers foresaw higher earnings from further trading on the ships; however a closer look shows that this was just one of the possible options for the buyers.

The number of transactions reported in the market has started to slow after a record year in 2017. The number of ships

being sold at auction or bank sales has also fallen as asset values, at the same time, have started to climb upwards. This indicates that lenders have been less willing to capitulate, and true bargains are scarcer. Buyers during the darkest periods of the market appear to have gotten the best deals, proving that strong stomached investors still can return significant value in even the most depressed shipping segments.

The value of a representative ten-year-old vessel is shown below, along with its value to a recycling yard based on its lightweight tonnage. The vessel has been equal to its scrap price for more than a year and a half. However, rise in steel price has caused the ship to appreciate by \$3.3mn dollars based on the value of its raw materials alone.

ACTUAL VALUE OF A TEN YEAR OLD PANAMAX





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Containership Valuations

But the appreciation of values has another supporting factor, rising time charter numbers are being reported by ConTex. The Benchmark number for a 3,500 TEU ship was quoted at \$6,500/day at the start of 2017. It is now above \$13,000 as tonnage has grown scarcer due to a high level of recycling over the past several years. If this higher rate environment persists, asset values will begin to reflect this reality.

The Panamax fleet on the water is aging as the vessel segment was perceived to be fading away into obsolescence, or so it would seem. Many of these ships trade in the same regions served by smaller ships. Panamax vessels tend to operate on longer haul runs. Many ports require the smaller ships due to infrastructure limitations, particularly draft. However, infrastructure improvements are continuing around the globe. VLCC tankers are now making test calls into Houston, a market dominated by Aframax units with a quarter of the capacity. This suggests that waterway users around the world may be able to make use of enhancements intended for other vessel types. Dredging of channels to deeper drafts may encourage terminal operators to enhance their yard capacity and cranes.

“Buyers during the darkest periods of the market appear to have gotten the best deals, proving that strong stomached investors still can return significant value in even the most depressed shipping segments.”

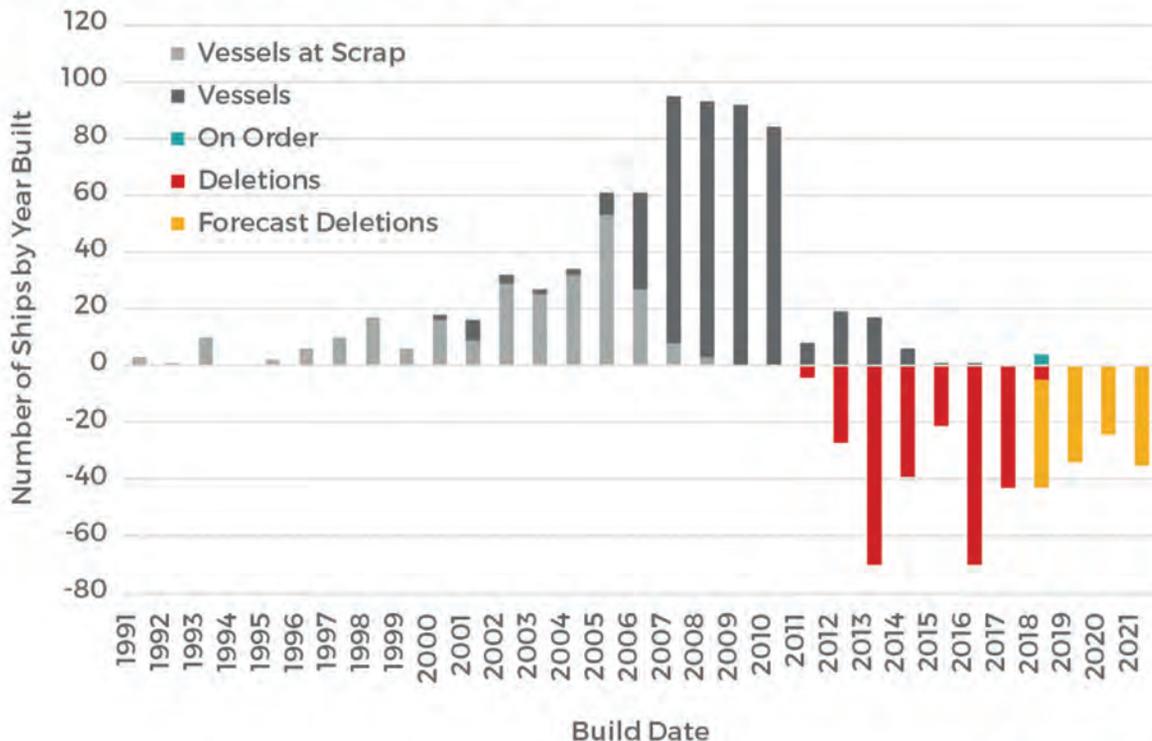
OVERSUPPLY

Oversupply of ships remains the primary headwind to the containership markets. If there is a significant amount of excess tonnage in the ULCV market, the economic advantages of the larger units and a hub and spoke arrangement for feeding smaller locations may not be as pronounced. Smaller

ships, fully loaded, may be more economical on some runs plagued by excess ships. The cost of multiple port calls for a larger vessel may negate some of the cost advantages even if a ship is optimally loaded.

The cost of new build ships appears to be rising upwards as yards around the world continue to cut back on capacity and lay off employees and contractors. Steel plate has gotten more expensive as China scaled back its steel production in an effort to reduce pollution. On the demand front from owners, many are having difficulty in procuring financing amid bitterly low rates for carriers. State subsidies appear to be distorting the market, limiting the opportunities for smaller and independent owners. Almost all ships on order are being built in China, Japan, and South Korea and are fairly well split between all three locations.

PANAMAX FLEET PROFILE



VESSELSVALUE'S VISION

VesselsValue uses a future market value to assess the expected shift in market value in the years ahead. Future Market Values are forecasts of the future market values of vessels until the end of their economic life, in this case 25 years old for a Panamax container ship. This is a fundamental based forecast from the current quarter to four years into the future. The forecasts are updated quarterly and are based on detailed analysis by ViaMar of the Tanker, Bulker, Container and LPG sectors and related underlying markets. These include Macroeconomy, Industrial Activity, Fixed Assets Investments, Energy Prices, Commodities, Consumer, Shipbuilding and Tonnage Supply, International Trade, and other variables.

A look at an 11-year-old Panamax vessel with a 4,500 TEU capacity helps illustrate the potential for significant upside that owners could realize in asset value. Even if demolition values slide downwards as is projected, the price of the asset should continue to rise based on the market outlook published by ViaMar. A ship of this vintage should remain in service through the next shipping cycle, pushing its current valuation north of the current sentiment which has it equal to its recycling price at the current time.

The outlook for ULCV valuations is less clear as this class of vessels encompasses a wide range of TEU capacities and only a handful of sale and purchase transactions. Given the large number of vessels delivering into the fleet, it appears that the replacement value of these ships will weigh heavily into an as-

essment of their worth. The fleet of active ships stands at 243 vessels, with another 107 set to deliver over the next four years. Expectations of global GDP growth may have to be dialed back over the next several years as trade restrictions inhibit economic growth in OECD countries in particular. The consolidation of commercial control may help to optimize route coverage as alliances continue to lock up larger swaths of tonnage. The sector remains ripe for M&A, but many appear to be waiting on the sidelines until the market digests the swath of ULCV orders.

There will never be certainty in the shipping markets, but there are always opportunities at hand for intrepid market participants.

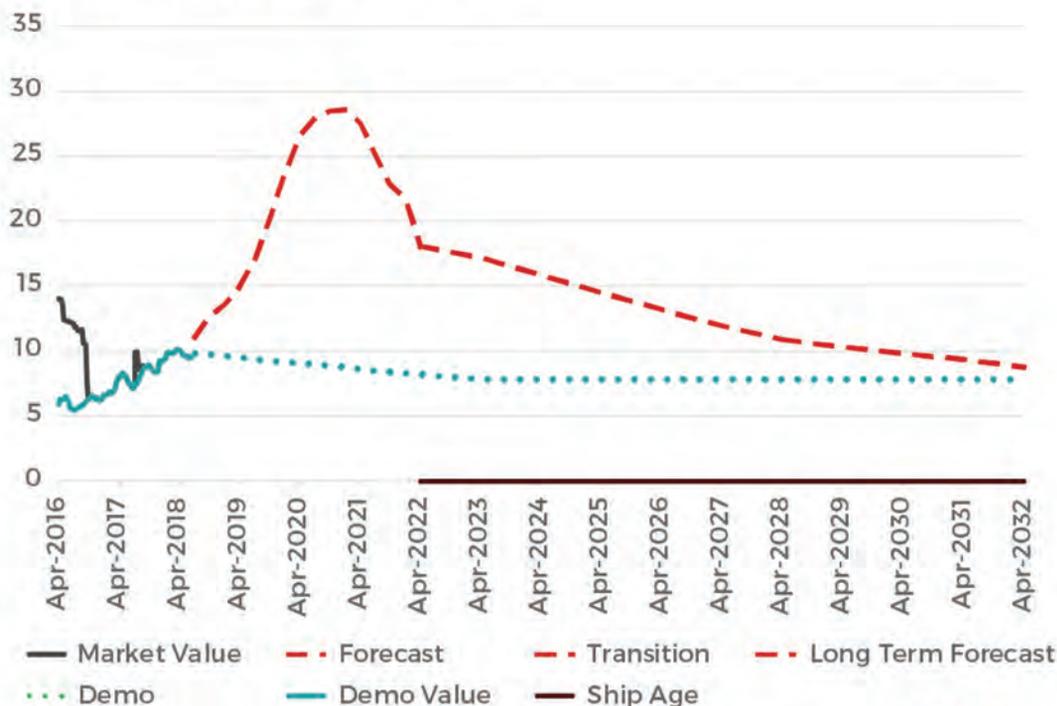
The Author



Court Smith

is a data and analytics professional who has worked as a ship broker and as the head of research at several brokerage shops covering all types of commercial vessels, and at a media analysis firm. He started his career in the US Coast Guard as a Casualty Investigator and was licensed as both a US 3rd Mate and 3rd Engineer, Unlimited tonnage. Court graduated from the US Merchant Marine Academy in 2000 and earned his MBA from Oxford University (Hertford College) in 2010. He finished the Command and Staff Graduate Diploma program from the U.S. Naval War College in 2009, and earned a Masters degree in Human Resource Management from Webster University in 2005. www.vesselsvalue.com

FORECAST MARKET VALUE





Credit: Kalmar

Driving Efficiently Towards Zero Emissions

As the Port of Long Beach Starts Year-long Freight and electric vehicle (EV) testing, Kalmar's newest workhorse – the Kalmar Ottawa Electric terminal tractor, T2E – will be doing some of the heavy lifting.

By Tom Ewing

As California presses on with state-wide transportation electrification (TE), new equipment is starting to bring new, greener muscle to California's heavy freight and equipment sectors, ready to replace old school dirty diesel machines. This turnover, critical to the state's environmental and energy policies, won't be inexpensive. Nevertheless, the world's 5th largest economy's (California) continued success will increasingly depend on capabilities from new kinds of efficient, yet considerably cleaner workhorses.

California's ports are central concerns for state air quality regulators. This is particularly true right now at the Ports of Long Beach and Los Angeles. It is also true that ports contribute just a fraction of the golden state's overall air pollution load, but for neighboring communities, ports present some unique emission control challenges. First, in metropolitan regions, there's not much buffer between a Port's industrial-scale operations and local neighborhoods. Second, ports necessarily exist adjacent to an almost endless number of mobile and stationary pollution sources, some which may operate

24/7. Diesel emissions are a big concern – especially when transiting to and from the port to inland drayage concentrations, warehouses and other facilities.

Kalmar's Newest all-electric terminal tractor to the Rescue

Out in front of these policies, Kalmar's newest green eco-friendly all-electric terminal tractor extends this possibility into the short run drayage model outside the gates. As southern California and Ports of Los Angeles and Long Beach look towards the goal of zero emissions by 2030, Kalmar is there to provide a solution that just might fit the bill, especially where local sentiments are now pondering the inclusion of outside warehousing in the port's environmental signature. These so-called 'incidental emissions' are now very much in play.

In a nutshell, Kalmar, part of Cargotec, is introducing an electric version of its popular Kalmar Ottawa T2 terminal tractor. The Kalmar Ottawa Electric Terminal Tractor is designed for trailer-handling operations in dispersed warehouses, con-

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“



We have used our decades of knowledge and experience in delivering reliable, cost-efficient terminal tractors to create a solution that will benefit our customers' bottom line and improve their productivity, while enhancing their sustainability credentials at the same time.

– Gina Lopez,
Vice President of Terminal Tractors for Kalmar

tainer terminals and other applications where short-distance highway travel is required. It features the latest in battery technology, a fully electric powertrain that produces zero emissions at source and a comfortable driving environment. For California ports, the timing couldn't be better.

With trucks, some ports seek to disperse emissions with idle bans in designated areas. In some ways it's like squeezing a balloon. A local Oakland citizen recently commented at a public meeting: "Because of increased enforcement at the Port, trucks are idling all throughout West Oakland." A similar comment came from Fontana, just northeast of LA: "We need to figure out how to manage the increasing number of trucks and warehouses in our neighborhoods." That solution is now at hand.

New Challenge: Environmental Issues Beyond the Port

To fine-tune but expand their controls, CA regulators are considering new policy and tech-based solutions. Upcoming policy initiatives could include expanded "Indirect Source Rules" (ISRs) which seek to reduce emissions vehicles associated with a facility rather than the facility itself. In CA, ISRs have a long history, for example, within the San Joaquin Valley. New ISRs could present as facility-wide "emission targets" or allowable emissions "per unit of cargo."

Officials also want policies with more direct impact on equipment. Ideas include:

- A mandate that manufacturers produce a portion of sales as zero emission;
- New fees – "gate rates" – for heavy-duty diesel trucks entering port terminals and a rebate for zero-emissions trucks or trucks with "zero-emission operations;"
- Establishing a phase-in schedule for zero-emission drayage trucks;
- More stringent requirements for current and new freight and passenger vessels; and,

- A "hybrid approach" affecting both equipment and facilities.

Thunder on the Horizon

With heavy equipment, big-time changes are advancing quickly. In May, Kalmar Mobile Equipment, for example, announced an electric power version of its Kalmar Ottawa T2 terminal tractor, equipment well-known in port facilities. The big difference, the important difference, is that this new tractor is built to work beyond the port's boundaries, fitting right into the ISR approach that decreasing a facility's environmental footprint sometimes has to include the vehicles serving it.

According to Kalmar, part of Cargotec, the electric tractor is designed for trailer-handling operations in dispersed warehouses, container terminals "and other applications where short-distance highway travel is required." It's a fully electric zero-emission powertrain. Power is from Kalmar's latest lithium-ion battery technology and features an on-board inverter charger that allows the machine to be "opportunity charged" during working breaks. A battery monitoring system displays charge status and indicates when recharge is required.

Compared to a diesel-powered tractor the T2E generates less noise, vibrations and heat – and importantly no fumes. A T2E tractor driver would not have to deal with no-idle zones in Oakland's port. Oakland residents would not have to tolerate emissions transferred from the Port to their neighborhood.

Gina Lopez is Vice President of Terminal Tractors for Kalmar. Lopez told *MLPro* in June that the T2E tractor is "market ready" but "additional testing and validation will be performed to expand the options available and the operating climates over the next 6 months."

More specifically, she was asked about "short distance highway travel" and the metrics associated with that, e.g., load characterizations and distance traveled. She said that battery capacity is based on operational hours and need. Notably, the



This project is another example of the goods movement industry, equipment builders, utilities and public agencies stepping up to reach for the goal of zero emissions.

– Mario Cordero,
Port of Long Beach Executive Director



T2E can run between 6 and 26 hours on a single charge. Lopez said that most industrial/commercial facilities likely have sufficient service to power up at least one T2E sized truck. However, as fleets expand, facility-based charging infrastructure could certainly require service upgrades.

Predictably, EVs have higher upfront costs compared to traditional diesels. Lopez estimated a higher cost differential for the electric yard tractor of about twice the diesel price. Generally, with electrics, operating costs are lower, although admittedly operating cost comparisons with diesel can be tricky, directly linked, of course, to local electricity costs versus diesel. Still, Lopez says that “a typical customer would reduce their energy costs by 85-90%.”

Regarding maintenance, Lopez said with the electric tractor there’s no longer a need to change the oil or transmission fluid. Hydraulic fluid does not need to be changed for at least the first 2.5 years of service, depending on operating cycles. Coolant fluid maintenance lasts 5 years vs. one year with a diesel engine. The electric tractor has a single 12V battery versus two in a diesel and battery life expectancy is longer because it isn’t needed to start the engine.

Moving the ‘TE’ Needle: Powerful, Electric Green Trucks with Range

Responding to regulatory pressures and further improving the port’s well-known environmental policies, the Port of Long Beach is starting a freight/drayage electrification project to provide real-world testing for this sector of equipment and the management and infrastructure required to maintain a heavy-duty work scale. The POLB freight electrification project, funded mostly by a \$9.7 million grant from the California Energy Commission, will be the nation’s largest for zero-emissions cranes and other seaport cargo-handling equipment. It will test 25 zero- or near zero-emission vehicles for one year.

The work includes converting nine diesel-electric rubber-tire gantry cranes into fully electric equipment at one termi-

nal, purchasing 12 battery-electric yard tractors for two more terminals, and the conversion of four LNG trucks into plug-in hybrid-electric trucks for a drayage trucking firm. “This project is another example of the goods movement industry, equipment builders, utilities and public agencies stepping up to reach for the goal of zero emissions,” said Mario Cordero, Port of Long Beach Executive Director.

Heather Tomley is the Port of Long Beach EV project manager. She explained that a lot of up front work needs to be done prior to actual vehicle testing, meaning the one-year clock for EV evaluation hasn’t started yet. Build-out for new and expanded electric service infrastructure has to be completed first, Tomley said. One service challenge, for example, is to match the ability to refuel propane/diesel equipment where it’s being used – relatively easy with a fuel truck or portable tank. That’s much harder to do when electricity is the fuel, yet continuous operation is a basic work metric.

Tomley said actual vehicle testing will likely start in the second quarter of 2019, although her team is trying to expedite this schedule. For this project “real world” service means two shifts, lifting and moving every type of cargo, from pillows to rolled steel. “We ultimately want to find equipment that works as well as the equipment we have today,” Tomley said. In the end, the freight EVs will need to demonstrate an equitable match up, across the board, with their traditional fossil fuel counterparts. And, says Tomley, Kalmar is one of the participants with EV equipment. “They are working with us on a couple demo grant efforts, using the new electric tractors.”

The Port of Long Beach and Port of Los Angeles offer seed money to foster the development of new freight equipment and projects, at least if it’s related to air-quality. The funding is part of the ports’ Technology Advancement Program, or TAP. TAP was created by the San Pedro Bay (Long Beach and LA) Ports Clean Air Action Plan (CAAP), adopted in 2006. So far, the Ports have distributed over \$21 million in funds to advance

Container Equipment



Credit: POLB

the commercial availability of technology that will help lower air pollution emissions from ships, trucks, harbor craft, cargo handling equipment and rail locomotives serving the Ports.

Naturally, businesses are keeping close eye on these incentive programs and the new technology becoming available. The Harbor Trucking Association (HTA) is a coalition of Los Angeles, Long Beach and Oakland intermodal carriers. HTA is a trade group that works transportation and logistics stakeholders and policy makers. Its goal is to “sustain emission reductions, provide a dialog for intermodal truck efficiency, and to return cargo and jobs to California ports.”

Weston LaBar is HTA’s executive director. He supports the demo projects starting at POLB and a second one already underway at LA. In addition, the financial incentives and grant programs are critical for smoothing out what can still be a rough business case with EV equipment.

“The demo projects are good,” LaBar commented, “because you get to see if the equipment lives up to expectations in a commercial operation. It’s one thing to drive a truck from point A to point B, or use a piece of equipment for one shift, but that doesn’t answer longer term questions about overall performance within commercial operations.”

The Green Port: Long Beach

As usual, the aptly nicknamed Port of Long Beach finds itself on the leading edge of local environmental reforms. Importantly, the POLB project is one of a series of projects being

undertaken by Southern California Edison to gain insights on just what those large-scale grid upgrades might need to be.

Beyond the obvious reduction in local emissions, as well as helping operators to reduce costs, the Kalmar Ottawa Electric Terminal Tractor also offers a number of benefits for drivers that improve the driving experience. The electric powertrain offers smoother acceleration and more power at the top end compared to a diesel-powered machine, enabling drivers to feel more in control. It also generates less noise, vibrations and heat – and importantly no fumes – making the cabin a much healthier and more comfortable working environment.

Kalmar’s Lopez adds, “We have used our decades of knowledge and experience in delivering reliable, cost-efficient terminal tractors to create a solution that will benefit our customers’ bottom line and improve their productivity, while enhancing their sustainability credentials at the same time.”

In the Port of Long Beach, next steps and resources will soon be evaluated in a broader context. If this equipment works as expected, it likely will get the power it needs. And, with Carotec’s Kalmar equipment in the mix, it probably will.

The Author



Tom Ewing

is a freelance writer specializing in energy, environmental and related regulatory issues.

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Container Freight and Charter Markets and Their Impact on Secondhand Valuations

Improving charter rates are driving up second values while struggling freight rates indicate a broader slowdown could be at hand.

By James Frew

The container shipping markets continue to emit contradictory signals. In its Q1 report, MSI opened an overview of containership earnings and prices with a comparison of freight and charter markets, and noted an ominous divergence in their fortunes. As in 2011 and 2015, charter rates were marching upward at the same time that freight markets stagnated. Our concern was that, just as in 2011 and 2015, this trend would precede a downturn in charter earnings.

In the intervening period this divergence has widened further. While the speed of charter market increases has slowed recently, the gains made in the interim have been impressive. Freight markets, meanwhile, remain lackluster and most major liner companies have announced losses in their Q1 2018 financial results.

Reconciling a changing Market

On the face of it, the different paths of these two markets is tricky to reconcile. We ask, 'why do liner companies pay increasing amounts to hire vessels when they can only run them at a loss?' However, there are some factors at play which imply that this is not quite as contradictory as it appears.

First, one major factor behind liner company losses is the increase in the fuel price, which has yet to be fully passed on

to customers but which will not deter liner companies from launching new services.

Secondly, liner companies may choose to counter losses by seeking to increase market share rather than cut capacity, which if anything would imply greater demand for charter market tonnage.

The tone of any review of freight rates is inevitably set against the backdrop of profitability. While liner company results for 2017 were firmly in the black, Q1 2018 has been a lot more mixed, with industry bellwethers such as Hapag Lloyd (a loss of EUR 34.3 Mn) and CMA CGM (down \$77 Mn) demonstrating that the industry remains under pressure.

This pressure has not been distributed equally. A recent divergence across freight markets shows that north-south trades saw plummeting rates over Q1 and have seen limited recovery, while mainlane trades experienced a similar plunge before recovering their ground. The most striking element is instead the extent to which intra-Asian freight rates have broadly held their ground amidst the gyrations of the longer-haul trades, suffering a minor slump in Q1 before recovering the entirety of the lost ground by April.

In part this is likely reflective of the strength in intra-Asian

volumes, but it may also reflect the fact that intra-Asian liner companies have been more effective in passing the increase in fuel prices on to their clients.

The charter market meanwhile has continued its renaissance since the turn of the year, with MSI's indicator for a Panamax vessel having picked up from below \$8,000/day at the end of 2017 to sit at above \$12,000/day by May. This improvement has been across the board, but once again those assets which act as the marginal capacity suppliers to the industry – namely the old Panamax and Post-Panamax tonnage – have seen the greatest upside.

The evolution of earnings for old Panamax and Post-Panamax class assets against the wider charter market is tracked by the MSI T/C index (which is weighted by the number of fixtures in each vessel class) showing their role as marginal suppliers of capacity – and thus seeing the greatest upsides and downsides in earnings.

Typically rates for larger vessels do exaggerate the movements of the wider charter markets, with the two spikes in the differential between >3,900 TEU earnings and the overall T/C Index markets seen in April and September 2017 reflective of a broader pick up in the charter market.

Overall though, we believe that the signals from the freight markets imply that the charter markets will come under some pressure, particularly in Q4. The MSI Base Case is that there is limited further upside to charter rates over Q3, before Q4 sees a retrenchment in earnings.

Nevertheless, the risks are increasingly weighted to the downside, both from the current divergence in freight and charter rates together with the risk of a downturn in trade growth. Chart 1 plots the divergence between freight and charter rates, using the Howe Robinson Container Index to map charter rates against the Shanghai Containerized Freight Index.

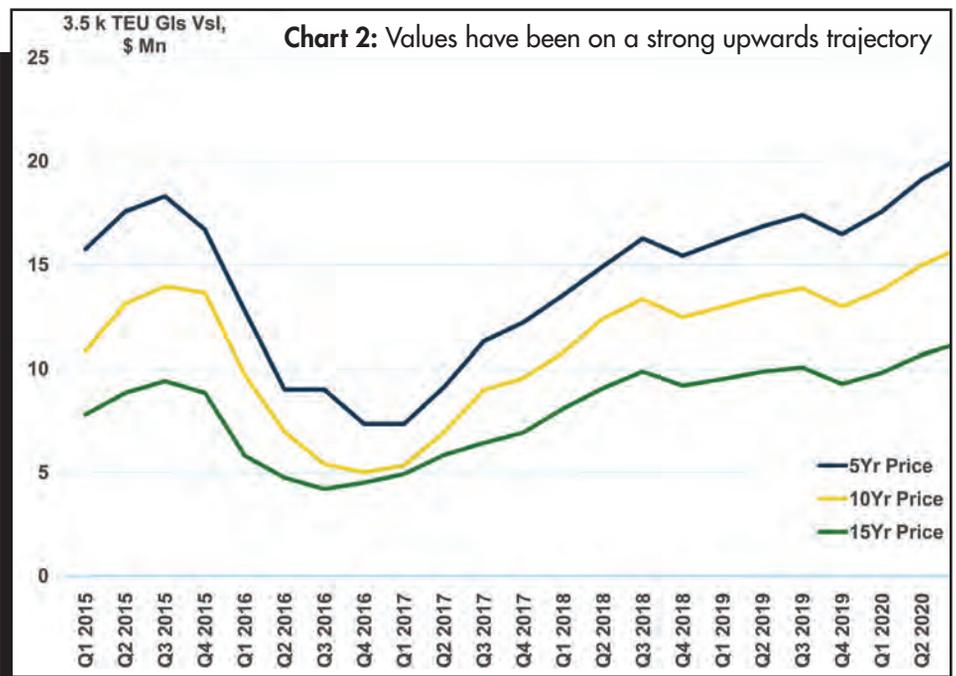
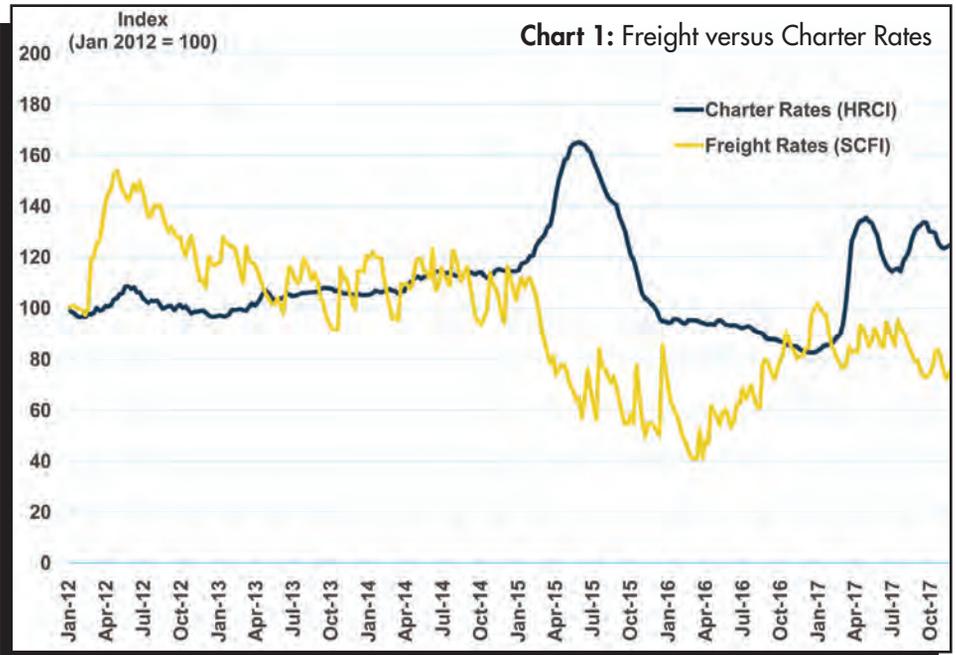
Secondhand Prices

The recovery in containership earnings has inevitably provided a strong

fillip to second-hand prices, and as Chart 2 shows, values have been on a strong upwards trajectory since the end of 2016 (with the strengthening scrap price serving to push up older vessel prices even as more modern ships remained marooned in Q1 before following a recovering earnings profile).

Last quarter, we underlined how we believed that the recovery which had

taken place was driven by fundamentals, and the increase in activity in the sale and purchase market was reflective of those same improved fundamentals rather than in itself engendering the price increases. As the chart shows, we feel that the price recovery is reaching close to its near-term limits, with 2019 representing a year of consolidation before 2020 sees prices kick on further upwards.



Container Shipping: Finance

It is worth trying to untangle something of what is underlying this price stabilization. MSI traditionally has seen second-hand vessel prices as being influenced by four factors: newbuilding prices, scrap prices, earnings and depreciation.

Life expectancy is to a large extent a function of the earnings environment and challenging to quantify, but since the global financial crisis of 10 years ago it has been rare that newbuilding prices, scrap prices and earnings have combined to give a sustained boost to asset values.

The brief surges in earnings in 2011 and 2015 were at least partly undercut by falling newbuilding prices, while the newbuilding price and earnings rally in 2015 was partially offset by falling scrap prices.

However, the scale of the earnings recovery in 2017 was sufficient to overcome stable newbuilding prices, while 2018 offers the rare prospect of solid fundamentals underpinning all three drivers of asset values.

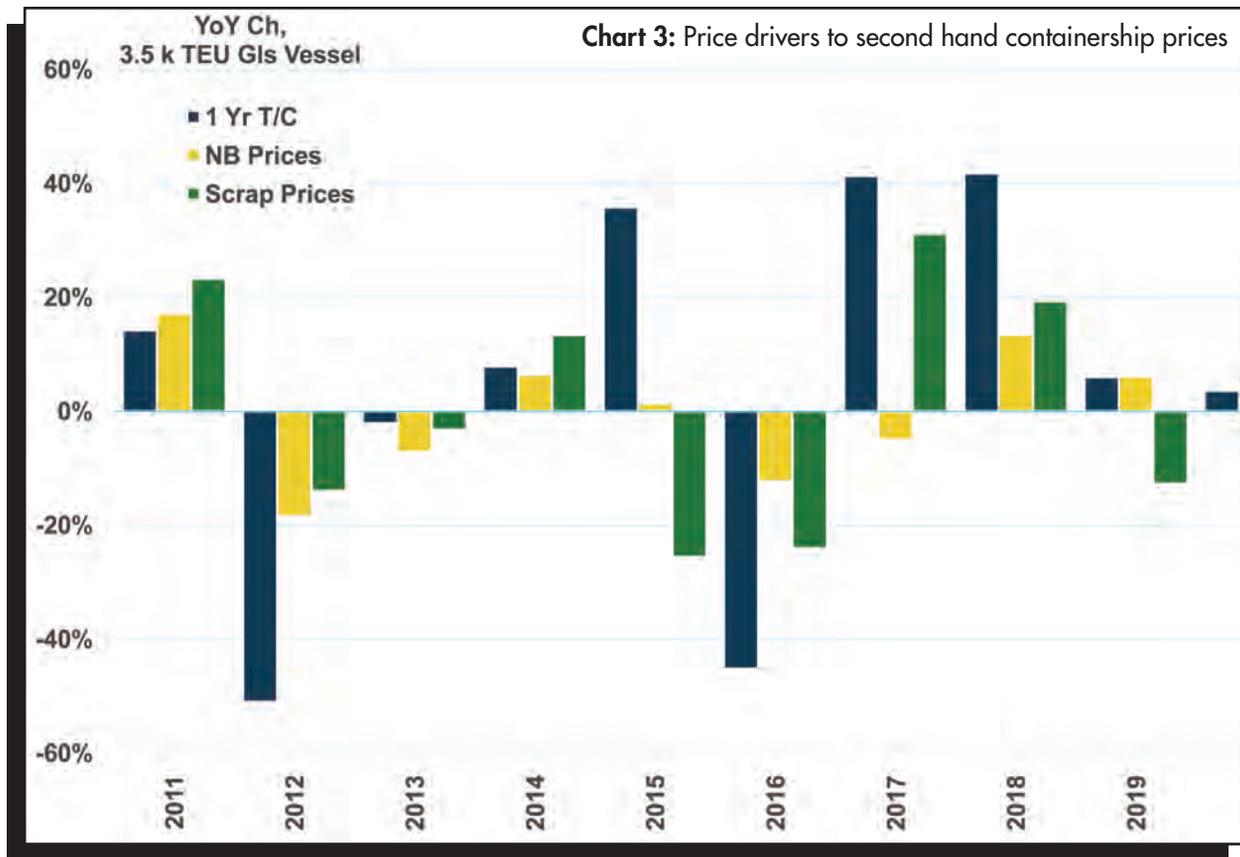
Looking forward into 2019 and 2020, the interplay becomes more complex. In essence, we believe that container-ship prices have risen sharply, with sentiment and acquisitive buyers snapping up distressed assets at a speed which has

meant that rather than lagging the fundamentals, prices have stayed strictly in line with where the market recovery suggests they should be.

Chart 4 attempts to demonstrate this, plotting the NPV of vessel cash flows over a 10 year period (based on current charter rates, OpEx and a 10% discount rate – if anything, this is an overestimate as OpEx will increase and earnings decline as the vessel ages).

There are two interesting points to be drawn out of this chart. The first is that both the Panamax and the Handysize containership are priced below where the net present value of the cash flows over the next 10 years would suggest they should be. The 6,600 TEU vessel is priced within spitting distance of this theoretical value, whilst the 8,500 TEU vessel meanwhile rests slightly above this level but not egregiously so.

It should not be surprising then, that the Panamax is priced below the theoretical value for a “buy and hold” investor given there is so much uncertainty surrounding their life expectancy, whereas for the 1,700 TEU vessel we actually regard the disconnect as something of a buying signal. The 8,500 TEU does present a greater risk, particularly given



the limited liquidity in the market hindering price transparency. Taking the price discrepancy at face value however, we would posit that buyers are in part paying an ‘illiquidity premium’ while at the same time also hoping for greater upside on the earnings.

The second point relates more to the future outlook. The fact that second-hand prices and underlying values are generally aligned implies that, given earnings will broadly move sideways for the next 18 months, it will be challenging for asset values to make much further headway over that period.

This is where the other element of the pricing jigsaw comes in, in the form of newbuilding prices. Although earnings growth through 2019 will be muted - and in our view that will suppress further heavy investments in the sector as well as asset value appreciation – the fundamentals around asset pricing will continue to move upwards, dictated by the newbuilding price.

A further factor anticipated to suppress asset values in 2019 is the uncertainty surrounding the introduction of the 2020 sulphur cap. 2020 will see these concerns resolved, and even

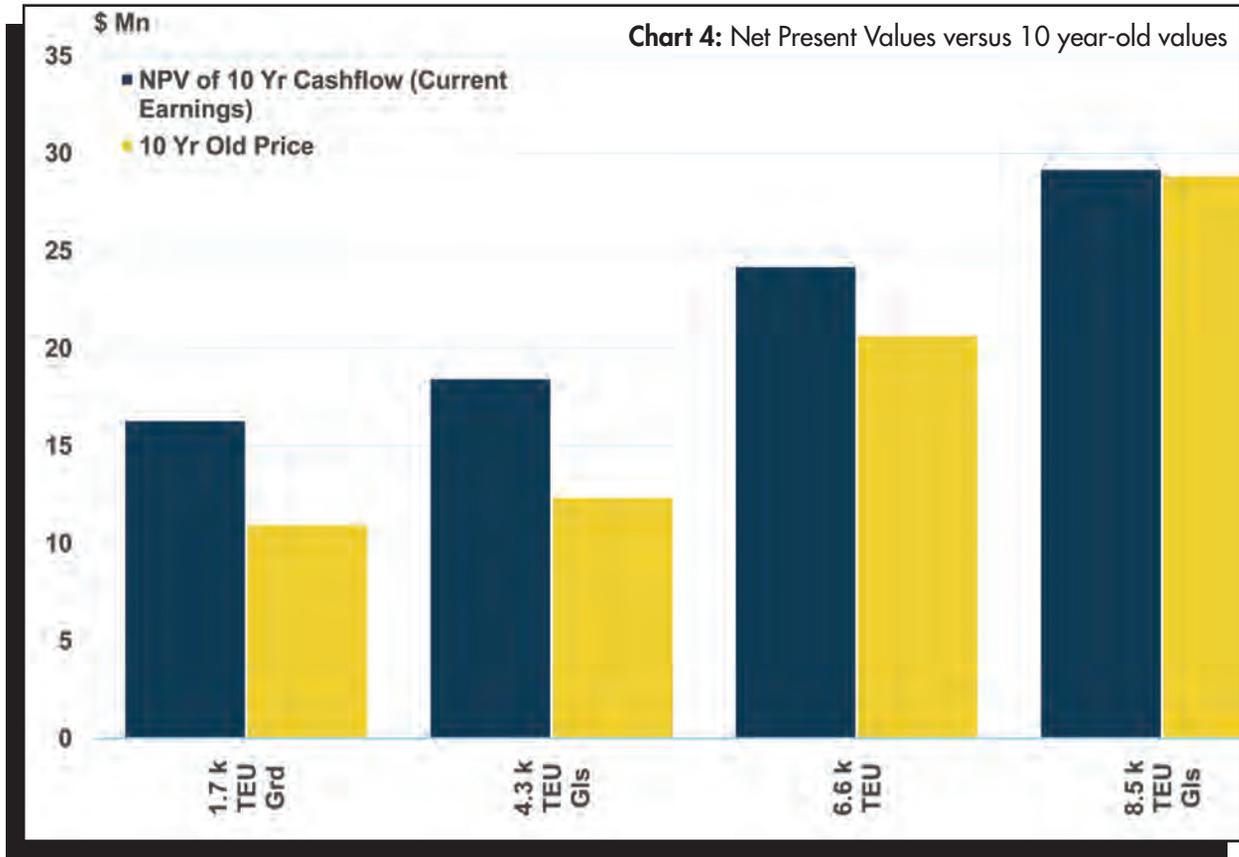
though earnings growth will remain steady rather than exciting, we expect to see prices adjust further upwards in response to the improved fundamentals.

The Author

James Frew



is Director of Consultancy at MSI. He has been covering the containership markets since 2007 and joined MSI in 2010. He regularly undertakes bespoke consultancy and research projects for clients in the containership sector, for a range of liner companies, tonnage providers, equipment lessors, financiers and lawyers. Prior to joining MSI, James studied for an MSc in International Trade, Finance and Development at Barcelona Graduate School of Economics. Previously he worked as an analyst at Clarksons Research, and has undergraduate qualifications in History and Economics, respectively from Oxford University and Birkbeck College, London.



CONTAINERSHIPS & CONTAINER PORTS:

It's no secret that ports have become an indicator for overall market changes. That bit of wisdom comes from Descartes Datamyne, a global trade database of up-to-date import-export information. As it turns out, 'they're spot on.' That's because as shipment volumes and commodities are a critical telling point for industry developments, monitoring port volume trends becomes a critical, if not the key variable for businesses looking to gauge potential changes in demand, track competitor activity and identify suppliers.

In its recently issued 2018 U.S. Ports Report, Descartes Datamyne offers an in-depth annual look of the top 20 U.S. ocean ports by import volume. That volume is measured

in Twenty-foot Equivalent Units (TEU) – the international standard measure of containerized cargo. According to the report, the top ports handled nearly 98% of U.S. import volume in 2017.

The U.S. ports data in this report was meticulously gathered from bills of lading (BoLs) that document inbound ocean shipments and filed with U.S. Customs Automated Commercial Environment (ACE). TEU volumes reported are derived from bills of lading, as released by U.S. Customs, excluding empty containers and shipments with freight remaining on board (FROB). The value of imports is as reported by U.S. Census.

Separately, The Alphaliner TOP 100 provides a constantly updated ranking of the 100 largest container/liner operators as well as global capacity figures taking into account the fleets of virtually all container operators worldwide. In a nutshell, Alphaliner is a tool for liner operators, tonnage providers, marketing research teams, competition analysts, fleet managers, shipbrokers, shipping investors and port authorities. The online solution bills itself as a unique one-stop-shop, with all relevant information, provided anytime, anywhere. It's hard to argue with that.

The two yardsticks – Alphaliner and Descartes Datamyne – together provide a pretty good snapshot of what's happening in our ports and in the blue water trades that make them

Alphaliner's Global Boxship Fleet ... by the numbers

5,267: number of fully cellular ships
6,133: number of active ships
139,055: Regional Capacity of Trans-Atlantic tonnage (TEU)
400,017: Regional Capacity of East-Europe (TEU)
472,583: Regional Capacity of Trans-Pacific (TEU)
21,886,213: TEU total of fully cellular ships
22,297,085: Total TEU of global fleet
272,292,704: total DWT tonnage of global fleet

(*) source: Alphaliner (June 25th)

The world's Top 10 containership operators ... at a glance

Operator	Total TEU	PCT Global TEU	TEU on Order	Ships on Order (#)
APM-Maersk	4,087,341	18.3	101,682	11
Mediterranean Shipping	3,287,833	14.7	332,052	18
CMA CGM Group	2,602,051	11.7	243,541	17
COSCO Shipping	2,028,430	9.1	334,683	16.5
Hapag-Lloyd	1,607,816	7.2	***	***
Ocean Network Express	1,581,469	7.1	84,000	6
Evergreen Line	1,111,594	5.0	456,660	41
OOCL	688,977	3.1	***	***
Yang Ming Marine Transport	631,614	2.8	213,000	25
Hyundai MM	413,840	1.9	388,000	20

(*) source: Alphaliner (June 25th)

A YARDSTICK FOR THE ECONOMY

relevant. And, each piece of data by itself sometimes needs a little explanation.

For example, the Port of Tacoma, after showing a strong 8.9 percent increase in import volume in 2016, fell 15.9 percent in 2017. This drop in Tacoma is offset by a 17.8 percent increase in volume by its sister port in the Northwest Seaport Alliance, the Port of Seattle. According to Descartes, since merging in 2015, the two ports have collectively seen an increase in volume by 10.9 percent.

The Port of Philadelphia, which didn't even crack the top 10, nevertheless saw the largest increase in year-over-year import volume among the top U.S. ports. Driven in part by a both \$300 million expansion and the completion of the deepening of the Delaware River channel, the import volume into Philadelphia increased 21.9 percent in 2017. According to Descartes Datamyne, the large influx of imports can be also be attributed to new shipping services being provided at the port, including the new five carrier alliance of "K" Line, Mitsui OSK Lines, Nippon Yusen Kaisha (NYK), Yang Ming Marine

Transport, and Hapag-Lloyd.

Separately, and in 2015, the Port of Miami completed an expansion of its Biscayne Bay and the Port of Miami Tunnel Project. It doesn't always follow that a major expansion immediately results in a seismic gain in traffic. The port has yet to see the first major benefits of that expansion, with import volumes, again according to Descartes Datamyne, remaining stagnant at 430,000 TEUs in 2017 after only a moderate 2.3 percent gain in 2016.

Yet another reliable yardstick which takes different tack on port performance is Fitch Ratings, which just released its latest U.S. Ports Peer Review. Indeed, says Fitch, the next 12 months could bring about more rating changes for some U.S. ports after an unusually active year of rating movement for the sector.

According to Fitch Ratings, there is potential for rating adjustments in the next review cycle due largely to factors idiosyncratic with select ports, though some broader market developments could play a factor as well. Fitch insists that



(*) source: Descartes

trade policy and recent tariffs are areas that will no doubt have an impact on select U.S. ports in the coming months. In fact, commodity exposure and tariff concerns were in part why Fitch kept its Rating Outlook for the Port of Alabama at Negative following its last rating review.

Fitch has also launched its 2018 update to the interactive peer study for standalone U.S. port credits, the Fitch Analytical Comparative Tool, or FACT concurrently with release of today's peer review. FACT uses an interactive interface to easily review and compare key credit metrics that underpin Fitch's analysis of U.S. ports, allowing users to select subsets of Fitch's rated ports for comparison. The interactive FACT

tool contains key financial information for Fitch-rated standalone port issuers in the U.S., graphical plotting function for annual and median performance and a radar chart that indicates key risk levels. The tool allows selection of medians by rating category as well as by market size. The database now includes six years of data, providing a more comprehensive base for historical trend analysis.

The international containership sector, the liner alliances that have recently emerged and reshuffled, together with the ports they serve, all combine to provide reliable economic indicators. These barometers will no doubt become even more important in the potentially turbulent months ahead.

Top 10 U.S. Ports by TEU Ocean Imports 2017

Rank	Port	2017 TEU	2016 TEU	% TEU Change	2017 Value (\$)	2016 Value	% Value change
1	Los Angeles	4,676,839	4,529,944	3.14	250,342,104,160	240,853,202,220	3.94
2	Long Beach	3,809,418	3,430,794	9.94	66,173,355,146	55,571,495,815	19.08
3	NY, NY	3,342,028	3,159,963	5.45	165,229,277,523	156,707,019,597	14.27
4	Savannah, GA	1,866,419	1,669,365	10.56	64,324,438,856	59,263,763,789	8.52
5	Norfolk, VA	1,239,561	1,160,247	6.40	64,244,702,895	56,416,150,185	13.88
6	Houston, TX	1,066,351	887,665	16.76	59,838,277,029	49,763,257,282	20.25
7	Charleston, SC	950,930	887,682	6.65	47,116,189,181	46,050,082,331	2.32
8	Oakland, CA	880,821	860,195	2.34	46,053,101,948	44,170,773,449	4.26
9	Tacoma, WA	822,211	950,332	- 5.58	40,522,155,131	43,773,762,429	- 7.43
10	Seattle, WA	624,567	513,479	17.79	38,210,599,053	35,919,618,827	6.38

(*) Source: Descartes Datamyne

Descartes Datamyne is the world's largest searchable trade database covering the global commerce of 230 markets across 5 continents. www.descartes.com.

Alphaliner harbors a wealth of information. Content is constantly updated and expanded. www.alphaliner.com
 The Fitch Analytical Comparative Tool, or FACT, uses an interactive interface to easily review and compare key credit metrics that underpin Fitch's analysis of U.S. ports. www.fitchratings.com

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The Long View on Shortsea Shipping

YilPort Oslo provides a unique Shortsea shipping model from the other side of the big pond. Are there lessons here for North American ports and terminals?

By William Stoichevski

“Wine, bananas and building materials” are what YilPort terminal director, Bjorn Engelsen, a 26-year Oslo-ports veteran, and Port of Oslo director and CEO, Ingvar M. Mathisen, say are the signs of prosperity. Those wares are what are filling containers to Oslo these days, although pricy capital and consumer goods now signal that Norway’s economic expansion and Norwegians’ world-beating buying power are for real.

The number of container vessels calling on container terminal YilPort Oslo has been on the increase, of late. In 2018, they’re up from nine to 11 vessels per week, and ships of from 2,000 to 20,000 DWT have helped lift the container count year-on-year by 21 percent between January and April. Between January and March 2018, YilPort saw 179 boxships unload goods for shipping lines and their customers. All parties are keen to expedite orders from the terminal by truck and train to waiting, well-capitalized customers and ordinary citizens.

“Yes, this is a solid increase in the number of vessels calling Oslo from start-up (in February 2015) until today,” says Engelsen, who got his start in logistics straight out of the

military, when someone recommended him as a port clerk. When YilPort started up, however, the container market for large and small vessels was weak. Talk of shortsea shipping was new. Now, shortsea shipping — or, the moving of cargoes “door-to-door” within Europe at the expense of other means of transport, especially trucks — is what Oslo is banking on.

In 2014, the Oslo Port Authority’s international tender yielded a winning bid from terminal operator, the Yildirim Group, owned by the Yıldırım Brothers Robert Yuksel, Ali Riza and Mehmet (who recently passed away). Over the next

Alphaliner's Global Boxship Fleet ... by the numbers

Shipping lines: 7	Expected volume for 2018: 225 000 TEU	Volume 2017: 206,000 TEU
STS Cranes: 4	Present Terminal Capacity: 300,000 TEU	Automated gate: Navis N4
Port Calls per Week: 11	Future Terminal Capacity: 400,000 TEU	Languages: English, Spanish, Turkish
Limiting Draft: 12 meters	Truck Turnaround Time: 15 minutes	Gate volume: 500 trucks daily



Credit: Yngvar M. Mathisen

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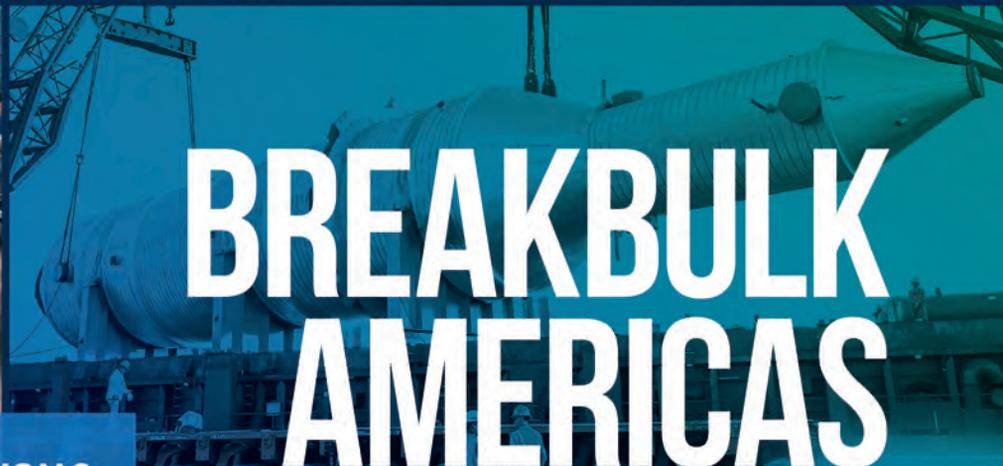


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Credit: Port of Oslo/Time Poppe



Ingvar M. Mathisen, Port of Oslo CEO

three years, Viasea, Maersk and DFDS added new routes to Oslo. Now, another shipping line is said to be close to a new deal that would further bolster YilDirim's Oslo business and cheer regional headquarters in Stockholm.

Renewal

To meet rising demand — and to attract more traffic — the “landlord,” the Port of Oslo, has helped facilitate infrastructure renewal to maximize value on the patch of southeast-Oslo real estate occupied by YilPort. Engelsen says there's room for growth, especially from overseas: “We are on the feeder route to and from Gdynia, Hamburg, Rotterdam, Klaipeda, Moerdijk, Bremerhaven, Antwerpen (and) Immingham. We don't know exact (North American) numbers, but bananas (for one) account for (5 percent or more) of container volume, as do wines, so although we often think of the China-Asia-Europe trade in relation to containers, (transatlantic) volumes are substantial.”

YilPort's terminal capacity stands at about 300,000 TEU, but planning has envisioned 400,000 TEU at Norway's largest port. The key to growth, port interests agree, is new tech geared toward making shortsea shipping pay dividends for clients and the business. The only constraint is that ship sizes at Oslo are limited by a 12-meter draft at Drobak, partway down Oslofjord. But, YilPort's 660-meter container quay is equipped with four STS cranes, each 16 meters wide. Container vessels visiting Oslo are typically 500 to 2000 TEU, or 800 TEU on average: “YilPort Oslo is the only container terminal in Norway with the infrastructure and superstructure to handle vessels up to Panamax class,” says Engelsen.

R/C RTGs

Pursuing shortsea shipping isn't cheap, Mathisen says. “The investment of 2 billion kroner in YilPort is big. While we invested in other parts of Oslo, with YilPort we have something ahead of the curve in making the transition to being more competitive, with professional service and the operation itself.”

YilPort has invested in remote-controlled RTG cranes for box moves and automatic gates for the trucks that come and go. In all, eight RTGs are to become remotely operated from

a desk at the terminal. The cranes were bought in 2014 with eventual automation in mind, but who does crane retrofits?

“YilPort in cooperation with Kalmar hopes to be the first or among the first to achieve this,” Engelsen says that by going remote will also extend gate opening hours at “substantially lower cost,” as night pay is trimmed away and one crane driver learns to control several cranes: “In the first phase, avoiding the physical shift of crane driver from crane to crane. In later stages, we will introduce the possibility of various automated positioning moves while crane drivers focus on the handling of the container when there is an interface with a person or machine. The goal for 2018 is to have completed proof of concept. The end goal is fully automated RTG operations.”

Shortsea Metrics

Once fully automated, and even now, Oslo intends to move people's freight at record speed while tapping a creeping, shortsea “movement” aimed at getting trucks off the roads.

Engelsen, Mathisen and the shortsea lines see inter-European shipping as a whole value-chain in-waiting. For now, there are new container types; new vessels; cranes; automation and finance. Ramped up, it could end truck driver shortages and queues of tractor-trailers on narrow European highways. Mathisen, a hired expert from Narvik, has had a long career in logistics, and served as a consultant in the Middle East and North America. Oslo hired him to develop trade links that foster shortsea shipping after the port's earlier focus on real estate and the bottom line.

“Historically, the port was measured by the number of containers, by tonnes, by passenger numbers and on the bottom line. That's changing a bit now. It's more top line than bottom line, but the market is very favorable right now,” says Mathisen, adding, “We feel we're in a good spot to take advantage of what we see changing in the market, like the shortsea shipping segment in Norway. It isn't just Norway, but Oslo, at last, has the lead in a segment poised for growth.”

Power Partnership

Mathisen confirms he's heard of the trained truck driver shortages of between 20,000 and 50,000 in Northern Europe.



“We are on the feeder route to and from Gdynia, Hamburg, Rotterdam, Klaipeda, Moerdijk, Bremerhaven, Antwerpen (and) Immingham. We don’t know exact (North American) numbers, but bananas (for one) account for (5 percent or more) of container volume, as do wines, so although we often think of the China-Asia-Europe trade in relation to containers, (transatlantic) volumes are substantial.”

– Bjorn Engelsen, YilPort Oslo Terminal Director

And while North American numbers weren’t immediately available, that pain echoes what has long been a weak point in the U.S. intermodal equation – truck driver turnover. Short-sea shipping eliminates that bottleneck to trade growth and its corresponding dearth of “green” truck transport.

“We see increased interest in bringing containers to Oslo directly,” Mathisen says, a partial reference to a deal in February that yielded yet another container line. Finland’s Containerships and Norway’s Viasea agreed to start “the best shortsea solution between Norway, Poland and the Baltic countries” — a growing, high-volume trade route — with LNG-powered vessels and trucks. The two, dedicated shortsea operators see Oslo as “a new region.” YilPort will link Containerships’ Baltic trade and Viasea’s UK-Norway business.

Containerships and Viasea say their offering will be cheaper than road transport. Engelsen says it ought to be more reliable and regular, as well. As Norway’s container market grows from its 770,000 TEU in 2017, so too is Oslo’s share of it expected to grow beyond the 28 percent it now wields.

Some of the growth has come as YilPort’s seven shipping lines began supplanting 20-foot and 40-ft container sizes with newer 45-foot containers. Prior to the Viasea Baltic line start in April 2018, the container turnover accounted for by 45-footers grew from 18 percent to 28 percent between 2012 and first-quarter 2018.

But Engelsen, in a written response to *MLPro* queries, said that trend started before shortsea services began in earnest. “Traditional feeder lines with core business in carrying deep sea containers have been instrumental in ... growing a short sea market in synergy with serving the deep-sea trade.”

“What Viasea (Moerdijk), DFDS (Hamburg/Immingham), Tschudi Line (now Unifeeder) and the latest Viasea (Klaipeda/Gdynia) introduce are dedicated services entirely geared towards shortsea cargoes,” he wrote, adding that the cargoes depart and arrive on schedules “adapted to the specific demand (service requirement) at point of delivery, not to the priorities of a deep-sea terminal or the mother ship/shipping line. Cargo lead times are typically short and part of a just-in-time production and distribution process that’s helped by truck-in,

truck-out times at YilPort of under 15 minutes.

So, what’s the future of YilPort and shortsea shipping? “What Viasea and other dedicated shortsea services may turn into is difficult to predict. The shortsea container market is still in its infancy, the quality still limited in terms of geographical coverage, regularity and frequency, and the shortsea product is still not adequately differentiated along the whole chain. What is certain, however, is that intra-European trade by far surpasses deep sea trade,” Engelsen says.

Fees Cut

Engelsen says Oslo’s shortsea moved cargos are up 50 percent since 2012, and that freight was previously trucked. In fact, he says, “It is reasonable to estimate that a total of 25,000 transports have been transferred from road to sea.” As for the benefits of those in need of transport, he points to fruit importer, Bama, which started out by importing 500 units (of 45-foot containers).

“We believe the real potential (for Bama) is well over 10,000 loads. The demands on the shipping line, terminals at both ends, and haulers to adapt to the capacities and specific production line needs specified by the customer is far stricter than the typical deep-sea cargo.

“In shortsea, it is the quality — flexibility, frequency, and on-time — of the inter-European truck supply chain that you compete against. If the shortsea product can match this quality, then price matters. Shortsea delivers on price today, but still can and must continue to improve on the quality.”

For now, YilPort will end 2018 at over 225,000 TEU. Already this year, they’re up seven percent over last year.

The goal is 50 percent more cargo by 2030. To that end, Oslo’s fees for cargoes and containers from Europe have been cut — in half.



The Author

William Stoichevski

arrived in Norway in 1999 to lead a media campaign for Norwegian green group Bellona. He later served as regional feature writer for the Associated Press in Oslo. In 2003, he left the AP to begin building, overseeing and writing for a number of print and electronic energy-industry publications in the Norwegian capital.

The Global 0.50% Sulfur Cap: 30 months and counting down ...



Credit: EXXON

Industry frets about the coming deadline. Shipping desperately wants to be ready, but will global shore-based infrastructure and refining capacity match the demand that is sure to come? And ... are regulators listening to industry's concerns?

By Tom Ewing

In early June, the U.S. Coast Guard (USCG) and U.S. Environmental Protection Agency (EPA) held a public workshop in Washington to help the agencies prepare for the January 1, 2020 deadline for worldwide implementation of very low sulfur marine fuel that meets the new 0.50% sulfur cap as set forth by the International Maritime Organization (IMO).

More specifically, the workshop was part of a larger process to prepare for a July “intersessional working group meeting” of the IMO’s Marine Environment Protection Committee (MEPC). That intersessional work will advance to the MEPC’s 73rd session in October. Wayne Lundy, Senior USCG Marine Engineer, moderated the June workshop, along with the EPA’s Chris Laroo. Lundy said that agency staff, in preparation for the MEPC meeting, want solutions that are mindful and watchful of US maritime shippers’ concerns and priorities.

In advance of the meeting, the USCG and EPA listed seven broad discussion topics:

- *Plans and procedures to ensure readiness by January 1, 2020.*
- *Safety and machinery impacts associated with blended fuels.*

- *Reporting when fuel is unavailable. CG/EPA wanted comments on a proposal to create a “Fuel Oil Non-Availability Reporting” (FONAR) system.*
- *Compliance and verification, particularly regarding “bunker delivery notes.”*
- *Methods and procedures that port States might adopt to facilitate a level playing field. (Emphasis added.)*
- *Ditto for flag States facilitating a level playing field. (Emphasis added.)*
- *Guidance for implementation and a level playing field.*

Stakeholders & Sticking Points

A total of 36 people attended with a few more dialing in via telephone. Fifteen were from various government agencies, including, EPA, Coast Guard and MARAD. Non-governmental attendees included representatives from maritime and shipping groups, such as Intertanko, the World Shipping Council and from petroleum-based trade groups and individual attorneys and consultants attending on behalf of clients.



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REGULATORY WATCH

Despite the advance outline of issues, the workshop discussion never gelled around that framework. In the end, it proved difficult to nail down a concise set of recommendations or list of priorities. The initial discussion was dominated by a concern raised by Washington attorney Barry Hartman, with K&L Gates. For his part, Hartman said that the most pressing topic for his clients is whether low sulfur fuel will even be available, at global distribution, by January 2020.

Hartman's concerns were seconded by other stakeholders, including Bryan Wood-Thomas, VP, World Shipping Council who insists, "... from our perspective it's inevitable that there won't be fuel." Yes, that could be temporary, he added, but it presents a set of conditions that need attention, now.

In a discussion after the meeting Hartman maintained that noncompliance means that "ships could be detained, people could face massive penalties and criminal prosecution. It is incumbent on the government to provide guidance and instruction to the industry; hopefully the US will be a leader at the July meetings."

Supply and Quality

Regarding supply, there is some related precedence. An ultra-low sulfur fuel (0.1%) is already in use but, important-

ly, that use is limited to certain "Emission Control Areas" (ECAs), which include North America and the US Caribbean Sea. Beyond these designated areas the sulfur limit is much higher, 35,000ppm (3.5%).

Now comes the big reduction: from 35,000ppm to 5,000ppm – the new 0.5% fuel. This presents a much different supply picture. Recall that ultra-low fuel is required just within ECAs (within five miles of a country's coastline) and just for a portion of a ship's journey. Because of this more limited demand, supplies of ultra-low fuel are generally now considered adequate. Starting in January 2020 demand for the new 0.5% fuel will be worldwide, and well beyond the limited territory and operations of ECAs. The question remains: Will there be enough?

IMO says "yes," a conclusion based on a July 2016 study entitled, Assessment of fuel oil availability – final report. Actually, in a summary, IMO writes that the "refinery sector has the capability to supply sufficient quantities of marine fuels with a sulfur content of 0.50% m/m or less and with a sulfur content of 0.10% m/m or less to meet demand for these products, while also meeting demand for non-marine fuels."

IMO also writes that new blends, at first, are likely to cost more than the "heavy fuel oil" bunkers (fuel) used by the majority of ships today. Echoing that vague projection, another



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workshop attendee commented that low-sulfur fuels will shift demand for high quality petroleum stocks, skewing overall supplies to such an extent that fuel prices across the board will start to rise.

In its Voyager newsletter in January ExxonMobil writes that it will supply 0.5% fuels in ports “in Northwest Europe, the Mediterranean and Singapore. Additional locations will be announced ahead of the January 1, 2020 deadline.” ExxonMobil writes that its “fuels will include residual and distillate grades” and that the company is “at a very advanced stage in the development of these fuels, therefore making us well positioned ahead of the IMO’s 2020 implementation date.”

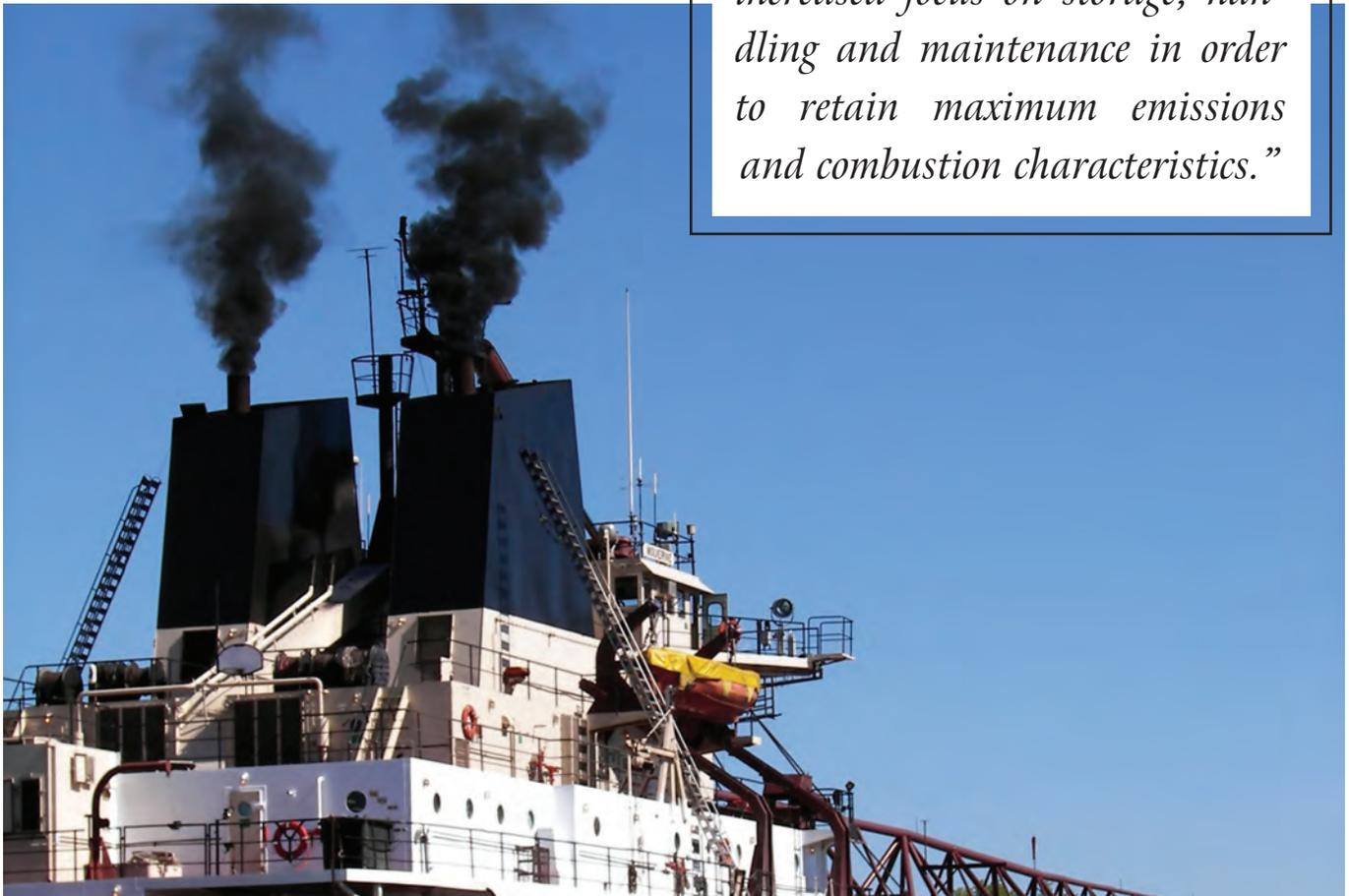
The foregoing ExxonMobil optimism sounds like a smooth pathway, but the bigger picture is far more complex, presenting many challenges, not just with production, but across the board, including handling, storage and shipboard logistics.

The Big Picture

Luca Volta is Marine Fuels Venture Manager with ExxonMobil. Volta was asked to expand on the 0.5% supply issue. He compared the upcoming fuel switch, with just a bit of exaggeration, to the move from coal to liquids. One major set of issues will come from fuel blending, or, perhaps more likely,

“

Luca Volta is Marine Fuels Venture Manager with ExxonMobil. Volta was asked to expand on the 0.5% supply issue. He compared the upcoming fuel switch, with just a bit of exaggeration, to the move from coal to liquids. One major set of issues will come from fuel blending, or, perhaps more likely, requirements for fuel segregation. Volta described the 0.5% fuels as products that will require increased focus on storage, handling and maintenance in order to retain maximum emissions and combustion characteristics.”



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requirements for fuel segregation. Volta described the 0.5% fuels as products that will require increased focus on storage, handling and maintenance in order to retain maximum emissions and combustion characteristics.

Volta noted that there are over 600 refineries in the world. The 0.5% fuel from each will have singular characteristics, he said. It's possible that residues will be incompatible, requiring at least some testing if fuels are likely to be mixed. More significantly, mixing could require tank and line cleaning and segregating fuels from different suppliers. Volta said that ExxonMobil will have supplies for customers, although volumes will vary around the world. He said his company will work with shippers who might be interested in lining up supplies in advance and held ready in various ports.

Addressing the three critical issues of segregation, quality and availability, it is possible that the screws tighten further if the IMO, at the October MEPC meeting, decides to approve amendments that would "prohibit the carriage of non-compliant fuel oil on board a ship." Naturally, the prospect of a "carriage ban" was a top concern among workshop participants, at least from the private sector.

It was the view of both the EPA and USCG that compliant fuel would indeed be available on schedule, hence the workshop's focus on implementation, not fuel supply and possible, related subsequent problems. The workshop discussion did move to other areas but, again, progress on specific ideas and consensus got bogged down. Discussion covered many topics, from operational safety linked to fuel blending to varying degrees of enforcement among global port officials.

As discussion moved away from fuel availability, Coast Guard and EPA officials reemphasized the Workshop's original goal – to understand industry's positions and concerns in advance of the July intersessional.

Industry Pushes Back

At that same meeting, industry stakeholders, led by WSC's Wood-Thomas and Intertanko's Joseph Angelo, asked federal regulators Lundy and Laroo a counter question: what's the government's position on implementation? We don't have one, was the answer. "We did not submit a paper" for the July intersessional meeting, Lundy said, "But maybe we could redo something. And we could follow up with a draft position."

Wood-Thomas and Angelo then pressed US officials to get up to speed on industry's concerns. They pointed out that WSC and Intertanko have worked with other industry trade groups to develop a set of top issues and suggested solutions regarding implementation and to present that work to the MEPC.

For example, Angelo referenced an industry paper presenting a "draft standard for reporting on fuel oil non-availability." Another paper addressed an approach for ships to "develop

written implementation plans and to adopt a practical and pragmatic approach when verifying compliance" with new fuel requirements. Importantly, these weren't just industry ideas, Angelo said. Panama, for example, signed on to the first paper, while Panama and Norway were co-signers for the compliance paper.

In fact, Intertanko and industry partners have submitted five papers dealing with implementation. Angelo asked whether the USCG and/or EPA had read those position papers. They had not. Angelo left paper copies with the workshop leaders and asked the Coast Guard and EPA staff to review and support this compendium of work.

Another top Workshop concern was assuring a level playing field. The IMO, after all, can make rules, but enforcement is up to individual states (countries) and ports. Companies that cheat and continue to use non-compliant fuel will benefit economically compared to companies following the rules – obviously an untenable situation and a fatal flaw in a program established for environmental benefits. This concern led to lengthy discussions on possible solutions, from the use of bunker delivery notes to port officials developing fuel verification options. Another suggestion was to employ new handheld devices that can detect a fuel's chemical profile.

Everyone agreed these were top concerns. However, as with the discussions on other issues, there was no resolution among Workshop participants on best next steps for a level playing field or the use of bunker delivery notes or the range of other topics that could make implementation very difficult.

Summing Up, Looking Ahead

At the close of the Workshop Lundy and Laroo said that participants' comments and information will be used to develop a foundational document for the July intersessional. New documents will be posted to the public docket website: go to www.regulations.gov and type USCG-2018-0488 in the search window. Lundy plans another workshop later in the summer to report on the July intersessional, providing another chance to prepare for the critical MEPC meeting in October. Based on what happened in June, that additional workshop is arguably critical to what happens next – especially when it comes to what happens on this side of the pond. What is crystal clear is that there is much work to be done in the interim. Stay tuned.



The Author Tom Ewing

is a freelance writer specializing in energy, environmental and related regulatory issues.

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