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**To : The President of the Stock Exchange of Thailand**

**Subject : Submitting the Annual Review 2017 of Precious Shipping Public Company Limited**

### **ANNUAL REVIEW**

While 2016 will be remembered as the bottom of the long dry bulk shipping recession that started with Lehman Brothers going bankrupt in September 2008, 2017 will be remembered as the beginning of the long-awaited recovery. It would appear that we have finally turned the corner and have started a secular recovery that should last for the next few years provided ship owners don't shoot the nascent recovery in the foot by ordering additional ships from the ship yards that are desperate for new business.

**There are two issues that drive the Baltic Dry Index (BDI).** One is (over) supply of ships with which we have been struggling for quite a while but this excess has narrowed significantly, as has been explained herein. The other matter is of course the demand side. The macroeconomic situation looks far healthier than it has for over a decade with a synchronized recovery clearly visible in every major economy in the world. The Federal Reserve has already started to raise interest rates and is likely to continue this trend with 3 to 4 more raises during 2018, as the economic picture emerging not least because of the expansionary policies that President Trump has already enacted, looks quite robust. This tells us that the US, the largest economy in the world, is faring well enough for their central bank to push interest rates off the floor. With the current low oil prices, and the prospects that this low-oil-price environment will continue for some time into the future, consumers should find they have more spare change in their pockets to spend. Trump's stated Trillion Dollar infrastructure refurbishment plan should add fuel to the demand fire emanating from the largest economy in the world. This will drive the US economy and should help to suck in a lot of cement, steel and other manufactured goods from China and the rest of Asia. This will help drive trade flows in a more positive direction.

The **BDI** started the year at 953 points and then drifted gently downwards till it hit its low of the year of 685 points on the 14<sup>th</sup> of February 2017. The BDI then moved, almost in a straight line, all the way

to 1,296 points on the 13<sup>th</sup> of April before gently drifting down to the mid 800 levels. It then treaded water till the end of July when it had reached 946 points. Traditionally, as you know, the summer months of June, July and August are the weakest months of the years, but similar to 2016 the weak seasonality did not show up at all in 2017. Thereafter the BDI moved up in an almost uninterrupted fashion till it hit the high point of the year at 1,743 points on the 12<sup>th</sup> of December before gently drifting down till it closed out the year at 1,366 points on the 22<sup>nd</sup> of December 2017.

**New orders for ships** are hovering near all time lows with the forward order book to existing fleet ratio as of end 2017 being 9.3%, the second lowest since the turn of this century. The average order book to existing fleet ratio for the last 18 years, including the very low figure of 9.3% for end 2017, has been 29.7%. Seen from that perspective, **the present order book to fleet ratio does look very disarming**. Please bear in mind that all existing orders are being delayed and pushed back due to financial pressure either on the buyers or at the ship yard level. All of this has helped reduce the pressure from the Supply side of the equation, and as a result, negative sentiment had started to disappear from the market by the middle of 2016.

The freight market is the prime mover that **drives ships to the recycling yards**. The lower the freight market the greater the number of ships ending up at the recycling yards. 2016 is a perfect example of this logic. Q1 was a disaster in terms of the market with the BDI touching a new historic low every day before finally bottoming out at 290 points on the 10<sup>th</sup> of February. The Q1 total for recycled ships, as a consequence, was 14.22m DWT, but as Q2 rates started to improve, recycling took a sort of back seat with 'just' 8.52m DWT reaching the recyclers yards. This was followed by a very poor showing of 3.24 MDWT in Q3 with a marginally improved 3.76 MDWT in Q4 resulting in total recycled ship figures to reach 29.74 MDWT in 2016. New ships from the yards totaled 48.25 MDWT and hence net supply of ships in the dry bulk space grew from 771.9 MDWT at the start of the year by +2.4% to 790.41 MDWT by the end of 2016. With the BDI improving, recycling slowed down even further in 2017, with just 15.16 MDWT of ships being recycled. Though new ship deliveries slowed down by almost 10 MDWT to 38.28 MDWT, net supply grew to 813.53 MDWT or +2.93% by the end of 2017. But despite this growth in the supply side in 2016 and 2017 (above 5% net growth for the two years combined), the time charter rates have risen to semi-reasonable levels by the end of 2017. **This suggests that supply demand balance is very close.**

**Demand has certainly been stronger** than what anyone had anticipated at the start of 2017 with

many analysts suggesting that we have had demand growth in ton-mile terms of around 4.5/4.7%. China has been the stellar performer, and this has helped to drive time charter rates higher as the year has progressed. Having said that, the Chinese government finally took the bull by the horns on pollution prevention and mandated production cuts in 4 provinces (31 northern cities) for steel making (50%), cement manufacturing (50%) and Aluminum production (30%) from mid November 2017 to mid March 2018. One of the unintended consequences of this action was that about 400 to 500 ships have been caught up in congestion at various Australian and Chinese ports (unaffected by the mandatory reduction in manufacturing capacity). To add fuel to the 'congestion' fire, East Kalimantan ports have another 100 odd ships waiting to load coal cargoes, some since October 2017, due to heavy rains that have disrupted the supply chain of coal logistics. However with the turn of the year, the January impact of many more ships being delivered from shipyards in the first month of the year as compared to any other month of the year, kicked in. At the same time, supply of iron ore from Brazil started to slow down due to their 'wet' season which traditionally makes the Q1 iron ore exports from Brazil the smallest quarterly exports in any year. Combined with the onset of Chinese New Year weakening demand being further exacerbated with the new Chinese government anti-pollution measures of restricted steel, cement and aluminum manufacture in 4 provinces during the winter months, the BDI will follow the traditional seasonality script of a sharp decline, starting in the last week of December and ending about a week after Chinese New Year. This decline would normally be followed by a sharp upturn in rates thereafter making a traditional V shape movement. With the new directives on restricted manufacturing in key industries in 4 provinces in 2018 being extended to 14 provinces from 2019 through to 2021, it would appear that the BDI in all future years will reach a peak in mid October followed by a decline till end February before the V shaped recovery manifests itself in a straight line all the way to mid October. Welcome to the new seasonality of the BDI via decree courtesy the Chinese government and their restrictive manufacturing directives from mid November of each year in 14 provinces to mid March of the following year.

**Historically**, prior to the turn of this century, **demand in dry bulk was estimated** at about 120 basis points over world GDP numbers. Then along came China, during the first decade of this century, taking the crown as the manufacturing capital of the world and the measurement of dry bulk demand became 2 to 3 times world GDP numbers. Post Lehman Brothers collapse this measure dropped to about 1.1 times world GDP numbers with suggestions, during 2016, that dry bulk demand might actually become less than 1.1 with world GDP growth numbers. The death of this traditional measure, of dry bulk demand being a multiple or at least 120 basis points higher than world GDP growth numbers, however

was greatly exaggerated. In 2017 the measure reverted back to the traditional rule of thumb of about 120 basis points above world GDP numbers.

On the **supply side**, things look distinctly better with expected net supply increasing at about 1% during 2018 and again 1% during 2019 whilst demand should be growing at between 4.0% and 4.5%, very similar to the demand growth seen in 2017, when supply grew by 2.9%. **This favourable gap between expected demand growth and expected supply growth in 2018 and 2019 should make for an increasingly robust secular recovery.** As supply and demand balance is very close, this recovery could be **characterized by extreme volatility** as any small change in demand or supply would have a disproportionate impact on the BDI.

**Regulatory impacts** should see many more ships heading for the scrap yard in 2018, 2019 and 2020. With the Ballast Water Management (BWM) convention coming into force on the 8th of September 2019, after the two year grace period granted by the IMO, all existing ships will have to retrofit a BWM system in place by their next special survey after the 8th September 2019 deadline. Any ship that is older than 15 years of age would then become a potential scrapping candidate when its next 5 year special survey cycle comes due after the effective date. The cost benefit to retrofit an expensive BWM system would be too great a risk to run, especially when 15 year old ships are valued around scrap levels. **It will make the 'scrapping' decision easier.**

The IMO decided on the 27<sup>th</sup> October 2016 to implement a global 0.5% limit on the sulphur content of fuel from 1<sup>st</sup> January 2020. We believe the impact on global shipping markets will be significant as it will have consequences for scrapping; the spread between conventional bunker fuel and distillates; and vessel speeds. First a very short explanation of the new regulation: Sulphur Dioxide (SO<sub>x</sub>) is a harmful pollutant that is emitted when fuels with Sulphur content are combusted. Hence SO<sub>x</sub> emissions are sought to be reduced by reducing the Sulphur content of the fuel used in ships and land based industries. Current regulations allow vessels at sea to use fuels with sulphur content up to 3.5%. New regulations, starting 1 January 2020, lowers this limit to maximum 0.5%. And then all vessels would either 1) change fuel to "diesel" which is now ~USD200/ton more expensive than normal bunker fuel or 2) continue to use normal bunker fuel but clean the exhaust. The latter is done with scrubbers. **(DNB Markets)**

Growth in the scrubber-fitted fleet looks set to accelerate, with the proportion of new contracts for scrubber-equipped vessels increasing from roughly 1% in the period 2012-15 to around 5% in 2017. Despite the trend, this remains a small proportion of total ordering (which has itself been limited), with

many owners appearing to adopt a 'wait and see' policy. Although scrubbers can eventually reduce costs by allowing vessels to burn cheaper fuel, high installation costs mean that owners installing equipment today face a long payback period. There also remains uncertainty over how the refining industry will meet the growing need for low sulphur fuels, leading owners to remain cautious. While growth in the scrubber-equipped fleet has begun to pick up, this has largely been confined to sectors in which vessels spend more time in Emission Control Areas. Although high costs and uncertainty mean that scrubber-fitted vessels still make up a low percentage of new contracts, this proportion is increasing. With the 2020 sulphur cap fast approaching, owners still face an important decision on whether scrubbers are the right option for their vessels. **(Clarksons)**

**Shipping banks** finally ended their "pretend and extend" strategy and forced borrowers to repair their balance sheets with recapitalization and new cash raisings through other sources. They (banks) have also more or less completed their own "repair" work by restructuring/recapitalizing themselves which they were somewhat forced to do by their respective regulators. Thereafter, while some of them have "closed shop" for shipping loans, many of the shipping banks do remain "open" but with a markedly different strategy of going after quality rather than quantity. In other words, they would now lend only to their strongest clients and not to any or everyone who would come to them with a ship or a newbuilding contract with a mere 10-20% as his (owner's) equity as was the way it was done until it all came crashing down. So now at least until the recent wounds remain fresh and unhealed, we can say goodbye to the old traditional bank and hello to the new improved selective bank. Moreover, the message to us from these banks is that not only will they be selective in deciding who will borrow from them, they will also be "sensible" (a polite way of saying "tough and stringent") in terms of the level of leverage they offer and the price thereof. So to conclude, the small ship-owner without a strong balance sheet and limited means in terms of the cash equity he has to put-up will now have to look somewhere else for financing his ship because his known and traditional Shipping Bank is probably not even going to give him the proverbial time of the day.

The situation at the **ship building yards** has become untenable and quite a few of them have simply closed shop, including state-owned shipyards in China, something that was simply inconceivable in the past. Those shipyards that have managed to survive have reduced their existing capacity via consolidation; some have gone back to ship repairing; others have converted to 'green' recyclers; and many have simply changed over to some other business.

The Chairman of Yangzijiang Shipbuilding in China commented that **China has about 60 operational shipyards and he expects up to 40 of them to close in the next 3-5 years** due to lack of orders. Some of these yards currently have as few as one vessel on order. **(Compass Maritime)**

**Oil Prices and its impact on slow steaming:** Lower bunker prices in theory should result in a reduction of slow steaming but only if the daily time charter rates are strong enough. Once the 0.5% sulphur ruling hits the market on 1<sup>st</sup> January 2020, the cost of 'clean' bunker oil will more than double (as compared to the cost of 'dirty' heavy fuel oil) for ship owners who do not opt to fix an expensive and untried 'scrubber' system to 'clean' the exhaust gasses from the excessive particulate matter and high Sulphur content resulting from burning 'dirty' heavy fuel oil. That should make slow steaming the norm even if time charter rates were to improve significantly. There are analysts who calculate that this doubling in cost of oil could result in the supply side of ships in the world fleet shrinking by ~10%. That would certainly tilt the supply demand equation firmly in the ship owner's favour.

**Recycling** in 2012 had a stellar all time record of 35.97 MDWT dry bulk ships being recycled. However, 2013 and 2014 recycling came in at a disappointing 21.39 and 16.72 MDWT respectively. 2015 was a far better year with a total of 32.09 MDWT being recycled but was obviously not good enough as the BDI plunged to a fresh all time low of 290 points on the 10<sup>th</sup> February 2016. In 2016 we saw 29.74 MDWT of ships being recycled reaffirming the inverse relationship with the BDI. In 2017 recycling again reached a disappointingly low figure of just 15.16 MDWT. Recycling rates are dependent on two main variables: the freight market (primary mover) and the price of scrap (secondary mover) and have little or no connection with other variables like lower or higher prices of oil.

In the next four years time i.e. by the end of 2021, approximately 23.8% (193.70 MDWT) of the existing world fleet would be over 15 years of age and some part of this lot of older ships should head to the recyclers yards due to the upcoming expensive regulatory environment, the direction of the BDI and scrap prices.

With respect to the approximately 9.3% DWT of new ships (75.30 MDWT) scheduled to be delivered to the end of 2021, the lack of funding coupled with delays in deliveries at ship yards would subject them to a degree of slippage (it was 33.7% in 2017) which would react inversely to the strength of the BDI i.e. the stronger the BDI the lower the slippage and vice versa.

**Slippage** is the difference between the DWT of new ships on order at shipyards at the beginning of the year and the actual deliveries of DWT of new ships at the end of the same year. Slippage came in

at 33.7% in 2017 which is well below the annual average of about 39% for the preceding 5 years. As a result the net increase in supply for 2017 was 23.12 MDWT with a yearend number of 813.53 MDWT. This amounted to a 2.9% net increase in the World Dry Bulk fleet, higher than the figures achieved in the last 2 years.

**Future Supply:** The Supply Side numbers are finally showing light at the end of the proverbial tunnel. A total of 468 dry bulk ships or 38.28 MDWT entered the supply side during 2017. At the same time, scrapping this year has come to 15.16 MDWT with 37 (6.88 MDWT) Capes, 35 (2.57 MDWT) Panamaxs, 14 (0.95 MDWT) Ultras/Supras, 78 (3.42 MDWT) Handymaxes and 61 (1.34 MDWT) Handy sizes being recycled. This has resulted in the global dry bulk fleet strength, at the start of 2018, reaching 813.53 MDWT. 2018 and 2019 have 34.43/25.94 MDWT of brand new ships scheduled for delivery. If we assume annual recycling of 15 MDWT (it was 15.16 for 2017) and apply a 35% slippage (it was 33.7% in 2017) in expected annual deliveries, 2018 ends with a world fleet of 820.91 MDWT for a growth rate of 0.91 % over the year. Under the same assumptions, 2019 ends with 830.60 MDWT for a growth rate of 1.18% over the end-year total of 2018. The tsunami of newbuilding deliveries has finally come to an end!

The question is **how will owners react to the market conditions during 2018 to 2020?** At PSL we have always believed in pre-empting compliance issues. As a result we have been selling our older ships for recycling (15 ships recycled in 2015 - 2016, and 2 older ships sold for further trading in 2016 - 2017) We don't know of any other ship owner who has taken such drastic action by recycling almost 33% of their existing fleet. If the markets remain reasonably strong as anticipated, then scrapping will slow down, however due to the very low forward order book net increase in supply in 2018 and 2019 would be approximately 1% per annum whilst demand is scheduled to grow at around 4.0% to 4.5% per annum. If that happens and 'forced' scrapping takes off due to the regulatory pressures in 2019 and 2020, we could have a few very interesting years ahead!

The dry bulk markets propensity to surprise, therefore, seems to be alive, and well! We were quietly optimistic this time last year about the prospects for 2017. We are similarly more sanguine about the prospects for the rest of 2018 and beyond. This is due to the gap between expected supply growth and expected demand growth over the next few years combined with regulatory pressure on the supply side that should send many more ships to the scrap yards than what we have used in forecasting the net growth in supply numbers.

It is now almost 9 years since the dry bulk markets have been in a crisis. Even the scriptures

forecast a maximum of 7 years of 'famine' so hopefully we have seen the last of the 'lean' years.

**Demand** front: the large clouds of uncertainty have given way to a **synchronized growth movement in almost every country in the world envisaging a secular recovery** for the dry bulk markets over the next few years.

**China**, the main driver of dry bulk trade, surprised markets with a stronger than expected 6.9% GDP growth in 2017. Despite positive GDP growth, China is continually striving to improve air quality, especially during the winter months, and has temporarily reduced steel (50%), cement (50%) and aluminum (30%) output in 31 northern cities in 4 provinces between mid November 2017 and mid March 2018. In spite of these production cuts, China continues to surprise on the upside with strong imports. China imported 1,075.3 MMT of iron ore during 2017, a 4.9% increase when compared to 2016. China also imported 271.2 MMT of coal in 2017, up 6.1% when compared to 2016. With the targeted economic growth rate of 6.5% of 2018 set by the CCP's planning body, robust demand for commodities and other raw materials looks set to continue into 2018.

The **USA** ended 2017 on strong economic ground, reporting GDP growth of 2.3% in 2017 despite turbulent weather and increases in interest rates. Furthermore, the unemployment rate, 4.1%, has fallen to the lowest level in 17 years. The impact of President Donald Trump's expansionary policies such as tax reform and a potential infrastructure spending bill look to further strengthen the economic outlook for the world's largest economy. The above will most likely prompt the Federal Reserve to continue on its Quantitative Tightening path of raising interest rates and balance sheet normalization to prevent the economy from overheating. Continued strong export volumes of cotton, wheat, corn and soybeans, combined with potential imports of other raw materials for infrastructure development could potentially benefit dry bulk shipping.

The **EU** is the second largest economy in the world after the USA and one of the largest exporting blocs in the world. After sluggish growth over the last decade, the EU is forecast to report 2.4% economic growth in 2017, making 2017 one of the best economic performances in a decade. According to the European Commission, economic confidence across the 19 Euro zone countries is at its highest in 17 years. Furthermore, the unemployment rate is at its lowest levels since 2009 and the Euro has appreciated relative to the US Dollar. With the economy recovering and currency appreciating, the ECB is beginning the gradual process of reducing its bond purchases, signaling an end to easy monetary policy. As economic growth continues in 2018, demand for commodities to produce finished goods

across the Euro zone will increase, thereby increasing the demand for shipping.

**Japan**, the second largest dry bulk player in the world, has seen the longest streak of positive economic growth, 7 consecutive quarters, since 1994. Prime Minister Abe's use of a mix of aggressive monetary policy, government spending and structural reforms has greatly contributed to Japan's positive economic performance. Since taking office in 2012, Abenomics has assisted the economy in growing by USD 494 billion, slowed the buildup of debt to approximately 240% of GDP, and reduced the unemployment rate to 2.8%. Tax cuts announced in December 2017 will provide additional momentum to Japan's economic progress by increasing spending on capital goods, and boosting consumer spending. Furthermore, strong global demand for Japanese goods will spur demand for raw materials, hence boosting demand for shipping.

**India** has continued to report strong GDP growth numbers in 2017 despite tremors caused by the government's demonetization and GST initiatives. Should growth trends continue, India is forecast to become the 5th largest economy by the end of 2018. The new market orientated government coming off a fresh round of election wins will seek to boost spending on infrastructure to appease voters before the next election cycle. Additionally, India has consistently reported strong coal import volumes. Draft restricted and inefficient ports combined with a boost in coal imports and infrastructure spending, demand for shipping, in particular smaller size segments, should increase.

**The one industrial sign that could point to a higher level of demand** is the 'One Belt One Road' silk route or the Belt and Road Initiative (BRI), Chinese Premier Xi Jinping's visionary foreign and economic policy initiative, that could potentially lead to higher levels of demand for dry bulk shipping. Under development is a planned network of overland road and rail routes, oil and natural gas pipelines, ports and other infrastructure projects that will stretch from Xi'an in central China, through Central Asia, and reach as far as Moscow, Rotterdam, London, Venice and Piraeus. In 2016, approximately USD 250b of OBOR projects have been either committed/started/completed. The program is arguably one of the largest infrastructure development plans in modern history and would require significantly larger movements of iron ore, coal, limestone, coke, wood and other minerals like nickel ore, alumina etcetera than what are being shipped presently and that would benefit the dry bulk markets tremendously.

Summary of OBOR facts:

- The monetary size of OBOR is anywhere between USD 1.2 and 20.0 trillion!

- It covers 65 countries, 3 continents and 4.4 billion people.
- It is 12 times larger than the Marshall Plan, in today's inflation adjusted Dollars.
- Funding will come from (1) the Asia Infrastructure Investment Bank. (2) Silk Road Fund. (3) New Development Bank or the BRICS Bank. (4) China Development Bank.

China's key strategic aims of OBOR are as follows:

- Development of China's under developed western regions, including the restless region of Xinjiang.
- Utilize China's excess capacity in steel (30% excess capacity) and cement (40% excess capacity) manufacturing.
- Exporting Chinese rail and other technologies overseas.
- Shifting labour intensive industries from the expensive land/high labour cost coastal areas to lower cost inland areas.
- Geopolitical influence at a time when the USA appears to be withdrawing from Asia.
- Reduce dependency on the straits of Malacca through the Port of Gwadar in Pakistan.

To keep things in perspective with regards to PSL, we would like to highlight the annual net profit/loss over the past few years.

Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>Av. BDI</b>	7,065	6,390	2,617	2,758	1,549	920	1,206	1,105	719	673	1,145
<b>Net Profit (loss) \$m</b>	125.1	148.1	88.1	35.5	23.6	4.5	17.5	(2.5)	(69.41)	(75.61)	(3.76)
<b>Av. No. of Ships</b>	44.97	44.12	32.79	21.39	21.91	30.44	38.93	41.66	45.46	40.29	36.02
<b>Net Profit (loss)/Ship \$m</b>	2.78	3.36	2.69	1.66	1.08	0.15	0.45	(0.06)	(1.53)	(1.88)	(0.10)

During 2015 to 2017 we managed to keep costs under tight control; raised about USD 65 million from our shareholders via a rights offering in early 2015; raised about USD 100 million from a bullet repayment, 5 year maturity, unsecured bond in January 2016; raised additional USD 55 million from a bullet repayment, 3.5 year maturity, unsecured bond in December 2016; pre-paid a lot of our secured loans coming due in 2018 and 2019; and sold our older and inefficient ships to raise further cash (15 ships recycled in 2015 - 2016 and 2 older ships sold in 2016 - 2017 for further trading).

## **AWARDS AND ACCOLADES:**

PSL won the Public Debt Deal of the Year for 2016 from Marine Money! Our '3.59 Billion Baht Unsecured Unsubordinated Bonds' transaction was adjudged the Public Debt Deal of the Year 'for the wisdom to raise funds as soon as possible, and for this tremendous achievement given the unprecedented shipping market conditions and investor outlook towards the shipping industry in general at the time'.

At the 10th Seatrade Maritime Awards Asia 2017, Precious Shipping was adjudged finalist in 2 award categories: 'Ship Owner/Operator', and 'Deal of the Year' awards, and Great Circle Shipping Agency ("GCSA"), our wholly owned ship-management subsidiary, was adjudged finalist for the 'Ship Manager' award. At the Lloyd's List Asia Pacific Awards 2017, we were adjudged finalist for the 'Class NK Dry Bulk Operator of the Year' award, and GCSA was adjudged finalist for the 'Ship Manager of the Year' award. At the International Bulk Journal's IBJ Awards 2017, we were adjudged finalist for the 'Bulk Ship Operator of the Year' award, and our cement carrier, APINYA NAREE, was adjudged finalist for the 'Bulk Ship of the Year' award. We were also adjudged as the Third Best in "Industrials Sector" category for Investor Relations Awards at the IR Magazine Awards – South East Asia 2017.

## **FINANCIAL HIGHLIGHTS (THAI BAHT TERMS) AND REVIEW OF THE YEAR:**

In terms of operations, during the year under review, the Total Revenues of the Company were Baht 4,394.63 million (2016: Baht 3,791.79 million) and the Company incurred a Net Loss of Baht 129.48 million, including gains on sales of vessel and equipment and interest on unsecured corporate loans and other expenses per Settlement Agreements with Sanfu shipyard totaling Baht 80.36 million (2016: Baht 2,664.90 million, including loss on sale of vessels, impairment loss on certain vessels and one-time write-off of deferred upfront fees totaling Baht 1,429.10 million). The Shareholders' Equity of the Company is Baht 12,335.49 million (2016: Baht 13,659.05 million) and the Total Assets of the Company have decreased during the year to Baht 28,833.24 million (2016: Baht 32,316.03 million). The decrease in Total Assets is mainly on account of the decrease in cash and cash equivalent as the Company repaid all of the unsecured corporate loans to Sanfu as per Settlement Agreements. It is also to be noted that Total Assets in Thai Baht (Presentation Currency) as restated from U.S. Dollars (Functional Currency) was lower due to the appreciation of the Thai Baht against the U.S Dollar as at the end of year 2017 as

compared to that at the end of year 2016. During the year, the Company took delivery of 1 ship, sold 1 older ship and thereby has completed the Company's fleet rejuvenation plan.

During the year, the Company incurred Baht 116.98 million (2016: Baht 2,710.27 million) as Net Loss before Exchange Loss of Baht 12.31 million (2016: Exchange Gain of Baht 45.43 million) and Income Tax of Baht 0.19 million (2016: Baht 0.06 million). In terms of the Earnings, as a consequence of the market improvement in 2017 from the severely prolonged weakness in the dry bulk shipping sector, the Company's vessels achieved an average time-charter equivalent earnings of USD 9,486 per day per vessel as compared to USD 6,476 per day per vessel in 2016. Moreover, the Net Vessel Operating Income was earned from an average of 36 vessels during 2017 as against an average of 40 vessels in 2016. The Net Vessel Operating Income (net of voyage disbursements and bunker consumption) in absolute terms was 25% higher than that of the previous year. Absolute vessel running expenses (Opex), decreased by about 17%, due to a decrease in average number of vessels operated in 2017 and a decrease in average vessel running cost per day per vessel (Average Opex per Day) as compared to the previous year. The technical downtime was increased to an average of 8.67 days per vessel (with the average age of 6.3 years in 2017), as 13 vessels were due for dry-docking and special survey during the year.

We conducted an "in-house" exercise again this year to determine Total Return to Shareholders, which was calculated for the 24 years that we have been operating as a listed entity. Based on the closing share price as on Friday the 16 September 2017 of Baht 11.30 per share (we started trading on the SET on the 16 September 1993) and assuming you had subscribed at the IPO, then, at the end of 24 years, you would have 13.15 times your initial investment. This return does not assume any re-investment of the dividends into shares or any interest on the dividends received.

## **OUR FLEET:**

At the end of 2017, our fleet consisted of 36 ships in the water (8 Ultras, 9 Supras and 19 Handy sizes) with an aggregate capacity of 1,585,805 DWT. This worked out to an average 44,050 DWT per ship, and an average age of about 6.3 years.

In a highly capital intensive business with very high leverage characterized by unpredictable and wildly swinging cycles, the timing of the purchase of ships is possibly the single most important decision that has to be made.

### **Update on disputes with Sainty Marine Shipyard:**

All 12 ships ordered with Sainty Marine were delayed and not delivered within the maximum period allowed under the relevant Shipbuilding Contracts for these ships. Therefore, the Company exercised its contractual right and cancelled all the 12 relevant shipbuilding contracts. The Company received the refunds of the instalments paid along with the interest thereon from the refund guarantor for 3 out of the 12 cancelled shipbuilding contracts. There are no more outstanding orders with Sainty Marine now. Arbitration proceedings have been commenced for 11 shipbuilding contracts including the 2 ships delivered to us in 2014 in respect of which, we have initiated arbitration to recover our Warranty claims.

### **Update on arbitration with Sanfu shipyard:**

The dispute with Sanfu under the two amicable settlement agreements in respect of two shipbuilding contracts was resolved in October 2017 by way of arbitration in London, wherein the arbitration tribunal adjudicated that the Company is not entitled to damages for breach of the contracts or Specifications by reason of the vessel's fuel oil consumption. As a result, the Company repaid the aggregate unsecured corporate loans of USD 32 million to Sanfu. The interest of USD 2.63 million and the legal costs (capped at USD 750,000) will be due for payment to Sanfu within 3 October 2018.

**The Time Charter Equivalent (TCE)** earnings of our Fleet during 2017 averaged USD 9,486 per day per ship. In terms of daily average Operating Expenses (Opex), we were marginally lower than our target of USD 4,500 per day per ship reaching a figure of USD 4,355 per day per ship.

**Market Segmentation/Benchmarking:** During 2017, the Baltic Handy Size Index averaged 523 points derived from the average Time Charter (TC) rate of USD 7,637. Compared to that, our Handies earned USD 9,812 outperforming the BHSI TC rate by 28.48%. Further, the Baltic Supramax Index (BSI) averaged 844 points derived from the average TC rate of USD 9,165. Compared to that, our Supramaxes earned USD 8,269, underperforming the BSI TC rate by 9.78%. Our Ultramaxs earned USD 10,091 and outperformed the BSI TC rate by 10.10% (as there is no special index for the Ultras we have compared them with the BSI). Our target has been to outperform both the indexes.

### **THE INDUSTRY OUTLOOK:**

A more 'normal' supply of new ships is expected for the next few years.

**The Cape sector (90,000+ DWT: 1,992 ships of 351.67 MDWT at the start of 2018):** 170 ships of 43.09 MDWT or 12.3 % of the existing DWT are scheduled for delivery up to end of 2021. In this sector, 365 ships of 67.05 MDWT or 19.1 % will be over 15 years of age by end of 2021 and some or all of them are likely to be scrapped during 2018 to 2021.

**The Panamax sector (70 – 90,000 DWT: 2141 ships of 168.92 MDWT at the start of 2018):** 189 ships of 15.54 MDWT or 9.2 % of the existing DWT are to be delivered up to the end of 2021. In this sector, 690 ships of 52.39 MDWT or 31.0 % of the fleet will be over 15 years of age by end of 2021, and some or all of them are likely to be scrapped during 2018 to 2021.

**The Ultramax sector (60 – 70,000 DWT: 807 ships of 50.77 MDWT at the start of 2018):** 139 ships of 8.74 MDWT or 17.2 % of the existing DWT are scheduled for delivery up to the end of 2021. In this sector, 64 ships of 4.34 MDWT or 8.5 % will be over 15 years of age by end of 2021, and some or all of them are likely to be scrapped during 2018 to 2021.

**The Supramax sector (40 – 60,000 DWT: 2685 ships of 142.95 MDWT at the start of 2018):** 31 ships of 1.60 MDWT or 1.1 % of the existing DWT are scheduled for delivery up to the end of 2021. In this sector, 857 ships of 42.50 MDWT or 29.7 % will be over 15 years of age by end of 2021, and some or all of them are likely to be scrapped during 2018 to 2021.

**The Handymax sector (30 – 40,000 DWT: 1726 ships of 60.61 MDWT at the start of 2018):** 144 ships of 5.34 MDWT or 8.8 % of the existing DWT are scheduled for delivery up to the end of 2021. In this sector, 270 ships of 9.19 MDWT or 15.2 % will be over 15 years of age by end of 2021, and some or all of them are likely to be scrapped during 2018 to 2021.

**The Handysize sector (10 – 30,000 DWT: 1859 ships of 38.61 MDWT at the start of 2018):** 46 ships of 0.99 MDWT or 2.6 % of the existing DWT are scheduled for delivery up to the end of 2021. In this sector, 848 ships of 18.24 MDWT or 47.2 % will be over 15 years of age by 2021, and some or all of them are likely to be scrapped during 2018 to 2021.

When reading the above numbers please keep in mind that Slippage was 33.7% in 2017. Slippage averaged around 39% over the recent past and fluctuates inversely with the BDI and availability of finance.

Our **Competitive Position** based on our existing 36 ships-in-the-water makes us one of the larger players in the market. With the ownership structure being extremely fragmented, we are recognized

as an established brand name with clients wanting to do business with us first before they take their custom to any of the other smaller, and potentially weaker, players.

Additionally, our rejuvenated fleet consisting of younger, larger, better geared and more economical vessels purchased at historically low price levels will enhance our competitive position for years to come.

## **THE ISSUES FACING OUR INDUSTRY:**

Most Dry Bulk shipping companies will continue to face challenging market conditions. The Companies that survive, however, will be those companies that are able to:

- Cut operational costs to the very bone without compromising safety.
- Sell non-core or older assets and raise cash.
- Call in more funds from their shareholders.
- Raise funds from alternate sources like bonds, leases etcetera as bank funding may not be available.

At PSL we continue to be one of, if not, the lowest cost operator in the world in the geared ship segment (Handy to Ultras). We have been selling our older ships (15 ships recycled in 2015 – 2016 , and 2 older ships sold in 2016 - 2017 for further trading). We have already raised about USD 65 million by way of Equity from our Shareholders by doing a Rights Issue in 2015. We have also raised approximately USD 100 million in the form of 5 year maturity, non-amortizing, bullet-repayment, unsecured bonds in January 2016 and raised another approximately USD 55 million in the form of 3.5 year maturity, non-amortizing, bullet-repayment, unsecured bonds in December 2016. We therefore feel that we are prepared to face the future with confidence.

**Operating Costs** of our Company reduced in 2017 on the back of savings from optimization notably in crewing and a younger fleet. Crew wages were maintained and not revised upwards. At the same time in view of the younger age of the fleet, on account of the disposal of most of the older vessels, manning levels were reduced with greater emphasis being placed on the standards of training for the senior personnel required to operate our technologically advanced modern fleet. Insurance costs were under control, because of favorable claims record of the Company's fleet and also because the insurers are financially strong. In particular, the Protection & Indemnity ("P&I") insurers ('P&I Clubs') belonging to the International Group of P&I Clubs experienced another benign claims year and better investment

returns This has enabled the Clubs to be supportive of their shipowner members in these times of depressed freight-market.

For all the reasons cited above, our average operating costs per day per ship for 2017 were lower than in the previous year; whilst we do not have figures for the industry norm, we expect we would have done better than others based on past experience.

**International Maritime Organization (IMO) conventions** are constantly updated to match demands for enhanced steps to protect the environment.

Among several other requirements, engine exhaust emission standards are also controlled by the MARPOL regulations. Apart from the existing Emission control areas that require ships to burn fuels which contain no more than 0.1% sulphur, another new regulation is expected to enter into force from Jan 2020 when there will be a global cap of 0.5% on the sulphur content of marine fuel. This is even more challenging due to the uncertainty of availability of compliant fuel. The other option, being fitment of scrubber units on vessels, is both technically and financially challenging for the ship owners. While burning high sulphur content fuel, a scrubber can remove the excess sulphur from the exhaust gases. More countries are insisting on stringent ballast water management practices on board ships. The Ballast Water Management Convention entered into force on 8 September 2017. From this date onwards, all vessels are required to carry a Ballast Water Management certificate. All new vessels with keels laid from this date, are required to be fitted with IMO approved ballast treatment plants. All existing vessels are required to retrofit such plants in a phased manner along with surveys associated with first renewal of the IOPP (International Oil Pollution Prevention) certificate after 8 September 2019. All IMO approved treatment plants presently in the market have not yet met the stringent USCG approval requirements. There is a separate US Coast Guard schedule for BWTS installation, but this was relaxed because the US Coast Guard had not granted approval to any BWMS till December 2015. However by end of December 2017 about six BWTS have been granted approval by the coast guard. Vessels scheduled to drydock after January 2018 may not be granted extension by USCG as they expect that the owners can fit one of the USCG approved systems by that time. Further, systems certified by the USCG as Alternate Management System (AMS) for use on vessels, would have to be replaced with USCG approved systems, if the AMS does not obtain their approval within the specified grace period. It is expected that the AMS fitted on our company vessels will obtain USCG approval within this period. As a result of initiatives from the International Labor Organization (ILO), working and living conditions of crewmembers on board are receiving increased importance. In order to formalize this and ensure uniform compliance, (ILO) has adopted the Maritime Labour Convention 2006 (MLC 2006). A Maritime Labour Certificate (MLC) and a Declaration of Maritime Labour Compliance (DMLC) will be required on board to ensure

compliance with the Convention for all ships above 500 tons in international trade. These certificates are to be obtained from the Flag state and their recognized organizations after thorough verification and surveys on board each vessel. The MLC 2006 has attained the required number of member state ratifications in August 2012. All ships were required to meet the compliance requirement and have valid certificate for compliance with MLC convention before 20 August 2013. Thailand ratified the MLC convention on 7 June 2016 and as a result MLC 2006 entered into force for Thai flagged vessels from 7 June 2017. The Statement of Compliance (SOC) with MLC 2006 which was being issued till date on our Thai flagged vessels is now being replaced with a Marine Labour Certificate. This is a welcome development and facilitates smooth trading of Thai flagged vessels worldwide, as it eliminates the risk of the SOC not being acceptable in some countries.

Singapore has ratified the MLC convention. Hence the Company's vessels flying the Singapore flag vessels are fully compliant with the MLC requirements.

In April 2014, the International Labour Organization (ILO) agreed several amendments to the MLC to implement the principles agreed back in 2009 by the joint IMO/ILO financial security working group. These amendments have entered into force on 18 January 2017. Ships that are subject to the MLC are now required to display certificates issued by an insurer or other financial security provider confirming that insurance or other financial security is in place for the cost and expense of crew repatriation, as well as up to four months contractually entitled arrears of wages and entitlements following abandonment (Regulation 2.5) A further certificate will be required for liabilities for contractual claims arising from seafarer personal injury, disability or death. (Regulation 4.2). P+I Clubs of the respective vessels have provided such certificates for all ships in our fleet.

Focus on the environment is becoming even more important. It is no longer just fashionable to say we are "Going Green"; organizations world-over are being pushed by their stakeholders to become more environment-conscious, guided by compliance with the newer regulations. It is expected that the IMO along with the ICS will take a pro-active role to put in place regulations which will apply to shipping on a global scale. One of these is the mandatory reporting of CO2 emissions (measured in grammes/tonne-mile) on voyages, similar to the European Union MRV rules (Monitoring, Reporting, Verification of CO2 emissions) – which has been implemented from Jan 2018 for all vessels operating in the EU region. In similar lines IMO require all vessels to implement the fuel consumption data collection system (DSC) from Jan 2019. This requires vessels to report annual fuel oil consumption worldwide to IMO through the flag administration. The regulation also requires the existing Shipboard Energy Efficiency Management plans (SEEMP) to be updated and certified by the flag authority or a recognized organization. Global shipping is committed to reducing the CO2 emission by about 20% by 2020 as compared to the values in 2005.

These regulations will in turn phase out several older, less efficient vessels. We have taken the initiative to prepare in advance for these regulations by monitoring and data collection of CO<sub>2</sub> emissions on all vessels in the fleet. The vessels are also operated always with clean hulls (by using efficient anti fouling paints and also by hull cleaning when necessary) as this increases efficiency (thereby reducing carbon emission). More importantly, the new acquisitions for the fleet have been selected primarily on their 'Eco' operation characteristics. 'Eco' operation will be possible with larger cargo hauls on vessels with very fuel efficient engines, and optimised use of waste heat from the engines. We have aimed to achieve this with new vessels having fuel efficient engines and reduced waste heat (even the exhaust gases from the auxiliary engines is diverted through the boiler to use the available heat). The new vessels with larger cargo carrying capacity are expected to operate with low CO<sub>2</sub> emissions especially (as world trade improves) with more regular fully laden voyages. Besides, there are specific IMO Conventions and regulations mandated by individual countries, to control the emission of Sulphur dioxide, Nitrogen oxides, Halons and CFCs from our ships which contribute to Green House Gases (GHG). These regulations are expected to become more stringent in the coming years. In addition, certain states in the USA are likely to require ships calling their ports to use shore power which is greener than the power generated on board ships. 'Bonnet' technology is another concept, presently available only in certain ports, which can receive the exhaust gas from ships for treatment before discharging into the atmosphere. Further, the so-called "Tony de Brum" declaration, signed on December 12, 2017, by 35 states, including UK, France, Denmark, Germany, Canada, the Marshall Islands, Chile and New Zealand, requires that shipping should adopt a cap on CO<sub>2</sub>, with the ambition of reaching zero emissions towards the mid-century. The declaration also welcomed IMO's efforts to formalize a strategy in April 2018, for GHGs reduction in shipping. This is due to be revised again in 2023. These measures are still evolving and there will likely be operational problems; besides, these will most likely result in additional expenses for the ship owners/operators.

To formalize the Company's commitment towards preserving and conserving environment and to reduce carbon footprint, the Company has obtained ISO 14001: 2015 certification from Class NK of Japan. The ISO 14001:2015 provides a framework for a holistic and strategic approach to the Company's environmental policy, plans and actions, and will demonstrate that the Company is an environmentally responsible organization. PSL vessels have implemented "Ship Energy Efficiency Management Plan" (SEEMP) required by MARPOL Annex VI regulations from January 2013. Vessels have also fully implemented the more stringent garbage disposal regulations required by MARPOL Annex V which came into force from January 2013. With effect from 31 December 2020, EU Regulation on Ship Recycling will be applicable to foreign ships in EU waters. Ships are to comply with Inventory of Hazardous Material (IHM). Implementation of this requirement is expected to be time consuming and expensive.

The Safety of Life at Sea (SOLAS) convention may also have several amendments in the future. This is being driven by one of the worst maritime disasters in US history - the loss of the US-flagged ro-ro vessel El Faro and its 33 crew, which sank in the Bahamas in October 2015 while trying to navigate through Hurricane Joaquin. The detailed USCG investigation report, published in September 2017, highlighted several errors, mainly by the Master, and includes 36 recommendations on safety and seeks several amendments in the SOLAS convention, as mentioned above.

With the melting of the polar ice cap due to global warming, and the consequent increase in navigability through the northern route, on 1 January 2017, the IMO has adopted the Polar Code and related amendments in 2014 - 2015 to make it mandatory under both the International Convention for the Safety of Life at Sea (SOLAS) and the International Convention for the Prevention of Pollution from Ships (MARPOL). The code's focus is on the safety of ships, seafarers and passengers who are on board the vessels in the harsh polar environment and also on the regulations to prevent discharge of Oil, Noxious liquid substances in bulk, Sewage and Garbage. It is expected that regulations which require the use of low sulphur Fuel oil are also likely to follow.

**Maritime Training Center:** As previously reported, the Company set up a full-fledged Maritime Training Center at its Head Office in Bangkok in March 2008. The PSL Training Center includes a state-of-the-art Bridge Navigation Simulator for training of maritime personnel. Vessel-type specific Bridge Navigation Simulator recreates the actual maneuvering characteristics of the ship and its bridge controls as it enters a specific major port and provides ideal conditions in which to train Officers in hands-on practices for effective bridge teamwork and competence in ship-handling and navigation. This is a significant step taken by the Company to train and equip its Officers and Crew to take better care of themselves and their ships, all with a view to ensuring safety of the crew, cargo and the ship by preventing accidents, thus also helping to preserve the environment. In the current scenario of a worldwide shortage of trained personnel, and the rapid promotions that is a natural result of such a shortage, this is a major step to provide specialized training that would otherwise have been acquired 'on the job'.

The International Convention on Standards of Training, Certification and Watch-keeping for Seafarers, 1978, which establishes the basic requirements for seafarers was revised in 1995 and again in June 2010 in a conference in Manila, major amendments, known as the Manila amendments, brought about more stringent requirements keeping in mind the need for global standards of competency for seafarers. The Manila amendments have entered into force on 1 January 2017. The PSL training and

fleet department had been making preparations in advance so that by the date of enforcement all vessels had seafarers with the required training and certificates on board our ships.

**Maritime Resource Management (MRM):** MRM is a training program for ship's officers, engineers, pilots and shore-based personnel. The aim is to increase knowledge about human capabilities and limitations and to reinforce positive attitudes towards safety and teamwork. MRM is generally accepted to be one of the most efficient means of improving crew cooperation and minimizing the risk of accidents caused by human errors as well as failures in effective teamwork and resource management. The MRM course is authorized and licensed by The Swedish Club, a member of the International Group of P&I Clubs, and one of the few insurers providing Hull as well as P&I insurance covers. Apart from the MRM courses, the PSL Training Center has classrooms, Video-Based Training (VBT) and Computer based training (CBT) for the ship staff. Courses include MRM, Bridge Team Management (BTM), Bridge Team Competency (BTC), Officer Of the Watch (OOW), Chief Mate Course (CMC), Command Course (Command), Shipboard Safety Course (SSC), Maritime Professional Briefing (MPB), Maritime English training (divided into 5 course levels) programs for safety and efficient ship operations of deck and engine departments. The Training Center also conducts lectures on VTS (Vessel Traffic Separation) & SMCP (Standard Marine Communication Phrases) within the BTM and MRM courses, with the aim of developing our officers' communication skills in communicating with a VTS officer using standard maritime phrases in various simulations. The courses are upgraded regularly and provide a solid foundation to the Company's training activities and enable our Officers and Engineers to keep abreast of the latest developments in ship operations.

To meet the needs of trained engineers to serve on the new vessels fitted with new generation Main Engines from MAN Diesel & Turbo and Wartsila, the PSL Training Center liaises very closely with the Technical Department and the engine manufacturers to continuously upgrade the training courses which were first introduced even before the vessels were actually delivered. Other training courses which the engineers go through before joining the ships are "Engine Room Management and Competency Enhancement" - "EMC" for Senior Engineers, and "Engineer on Watch" - "EOW" for Junior Engineers., courses on "stern tube sealing systems" and "ships' cargo gears with special focus on hydraulic", and "Shipboard Safety. The PSL Training Center also augments class room theoretical courses with practical training, wherever possible. Considering the fact that the new vessels acquired (are fitted with more fuel efficient modern engines using advanced electronic controls and technology, the Company's senior engineers, Electrical Officers and shore-based Technical Superintendents are put through the engine-maker's specific training courses designed to better understand the operation and for effective trouble-

shooting. Junior engineers are in turn trained at the Company's Training Center and by trickle-down method on board ships.

The use of "Electronic Chart Display and Information System" (ECDIS) has become mandatory for new ships built from July 2013. All the vessels in the fleet are equipped with ECDIS with the on board software updated to the latest version. ECDIS requires special generic training as well as specific training for each manufacturer's equipment

PSL is committed to ensure that navigating officers working on board vessels fitted with ECDIS are fully conversant with the equipment prior joining the vessel. Officers are given generic ECDIS training at approved institutes. They are also required to undergo maker specific familiarization training by the ECDIS manufacturer. Realizing the fact that certification alone does not make an officer fully familiar and confident to use ECDIS, PSL Training Centre has equipped itself and developed ECDIS training course. After attending approved ECDIS training course, officers are required to undergo further ECDIS familiarization course at our in-house facility.

The training department also keeps abreast of imparting awareness to Officers on the risks due to increased incidents of the liquefaction of cargoes, such as iron ore fines, coal, manganese ore fines, and nickel ore. More than a hundred seafarers have lost their lives over the past eight years on vessels which have capsized and sank due to the liquefaction of such cargoes. The latest cargo entry in the list of solid bulk cargoes susceptible to liquefaction that can cause catastrophic results is "bauxite". When subjected to sufficient dynamic loading, very wet fine-grained bauxites go through a process of slumping and dynamic separation, with the upward expulsion of water/slurry. This may result in free surface effect of liquid sloshing about which could significantly affect the vessel's stability, leading to the risk of the ship capsizing. In response, the International Maritime Organization's (IMO's) Sub-Committee on Carriage of Cargoes and Containers issued new guidance on the carriage of bauxite, requesting adequate safety precautions to be taken when carrying this cargo.

There are already conceptual designs on small crafts that try to eliminate or minimize the human effort onboard ships. Some experts in automation visualize that in the next twenty years or so, ships may be totally un-manned with automated equipment using sensors, smart digital systems and other technologies, which can be monitored and controlled from shore based stations, completely removing the element of "Human Error" on board. Although the concept of such Autonomous vessels appeared unrealistic initially, bold steps were made in this direction in 2017, both in the industry and regulators. In May 2017, Yara and Kongsberg, introduced the concept of the autonomous Yara Birkeland container vessel due to be launched this year and commence operations by 2020. In October Rolls-Royce partnered with Google and introduced Augmented Reality software as part of their remote operation

solutions for autonomous vessels. At the same time, in line with these developments in autonomous shipping, IMO's Maritime Safety Committee has also agreed to start to map out a new international legal framework for the safe operation of autonomous ships, as not having any human in charge of a vessel brings into many legal issues to work on. However, it has been said that "Most accidents are down to human error, but what we never measure is how many accidents are avoided because of human intervention. Take humans off ships and you are entering an unknown realm. Stakeholders in shipping need to keep abreast of these developments to ensure the most beneficial application of the technology."

### **Cyber Risks and Cyber Attacks:**

The topic that is here to stay! In June, the shipping industry was made starkly aware of its vulnerability to hacking and the associated implications for safety when the container line shipping giants Maersk line fell victim to a coordinated international cyberattack caused by a so-called NotPetya ransomware. It was stated that this ransomware was hidden in a document used to file tax returns in Ukraine. This caused the shutdown of Maersk's IT systems across its business and cost them up to USD300 million as per estimate provided later. The surprising part was this happened to a company like Maersk that used an IBM block chain technology platform to digitalise trade, and also took steps to place their marine insurance on a block chain platform, which is one of the latest emerging technologies in the industry.

Few months later in October, we saw 2 more issues related to cyber security - BW Group, one of the largest shipping companies in the world, revealed that it too had been targeted by computer hackers, and Critical cyber-security vulnerabilities affecting shipboard communication platform AmosConnect, by Stratos Global, were also revealed by the cyber-security research firm IOActive.

Based on above cases, a point needs to be stressed is that, as modern and technologically advanced newer ships become increasingly connected and software-dependent on their day to day systems, cyber security will emerge as a key area requiring attention to control operational and safety risks on board these ships, while also emerging as a major issue to be tackled by shipping companies during their board meetings worldwide.

Cyber risk is seen as an area where the threads in the global risk environment come together and the scale and sophistication of risks is expected to grow. This is further fuelled in part by geopolitical trends - more state sponsored attacks could add to those cyber-attacks that are financially motivated. Cyber exposure is growing in companies due to the rapid increase of interconnected devices, which is

ever increasing due to increase in emerging technologies use on-board ships and the use of artificial Intelligence.

Even though the cyber risk has become more visible today, it is still under resourced in the amount of effort being put into mitigation the risks associated with it, even though attacks can be very costly, if occurred. It's said to be above the scale of natural catastrophes and yet the infrastructure the industry has in place against it is smaller in scale.

Cyber breaches recorded by businesses have almost doubled in five years and according to the 2018 risk outlook, the financial costs of cyber-attacks are on the rise.

The prime focus of our industry will now be in our ability to respond to these ever increasing Cyber-attacks.

At PSL we constantly review and maintain our findings that:

- Our present systems incorporated in Office environment and on board ships are “robust” enough and we have not come across any case of Cyber Crime as of date.
- We have a system of Firewall checks in Office and have permitted limited white-listed websites access on-board ships through Inmarsat Satellite internet system. That minimises, if not completely eliminates, the risk due to Cyber-attacks onboard ships.
- With regard to the most discussed topic on ship cyber-attack related references to AIS, ECDIS and Vessel Data Recorders (VDR) which are integrated as part of the Integrated Bridge System (IBS), our system setup on-board ensures that no data from these equipment is available or transmitted directly online as we do not allow a 24 hour online option for our fleet.
- Nevertheless, in order to reduce vulnerability to both cyber accidents and cyber-attacks, and to ensure safe and efficient operations of our fleet, as part of constant reviewing and addressing cyber security:
- at all levels of the company – from senior management ashore to the crew on-board, as an inherent part of the safety and security culture onboard each vessel;
- in company policies – by considering how to align cyber risks with the existing security and safety risk management requirements contained in the ISPS and ISM Codes; and
- in relevant onboard procedures – by including new related requirements in in-house

training programs, day to day operations of the vessel and maintenance of critical cyber systems, if any, that may exist onboard.

**The Scourge of Piracy**, continues to be a concern notwithstanding the fact that the number of reported incidents have reduced considerably. The International Maritime Bureau reports that 2017 witnessed the least number of incidents of piracy and armed robbery against ships since 1995. Three small crafts which went too close to Somali coast were hijacked. All our ships sail at least 250 NM away from the Somali coast and are strictly advised to follow BMP4 guidelines, and also have armed guards while transiting the Gulf of Aden, all these measures helped prevent any attacks against our vessels.

The presence of international Navies and their patrolling the high risk areas, and the use of armed security guards on board, have also succeeded in making piracy for the Somalis less lucrative.

Apart from the Somali pirates and their attacks in the Arabian Sea/Indian Ocean, Nigeria and its offshore oil installations in the Gulf of Guinea continues to be vulnerable to pirate attacks, with thirty three actual and attempted hijacking incidents in the year 2016 being reported at regular intervals. The primary difference between the two is that Nigeria has an elected Government with clear policies to deter piracy in its waters and that helps localize the menace and also control/handle it.

Attacks in the South East Asia region appeared on the increase, especially in Indonesia and Philippines, the targeted vessels usually being smaller oil tankers with their cargo as the primary aim of the pirates. PSL has taken an active role in reporting to the IFC (Information Fusion Centre) a centre for monitoring the movement of all vessels in South East Asian waters. The IFC is based in the Singapore Naval Base and relays information to all regional Marine Coastguard units and has been effective in tackling piracy in the region.

### **What to expect in 2018 from the technological advances in the years 2017-2018:**

While 2017 was a year where one saw various acceleration in the digital transformation of the maritime industry with an ever increasing focus on digitalisation and new technologies, different technologies like Blockchain, Augmented Reality, Autonomous Vessels, Drones, Deep Learning, Artificial Intelligence, Internet of Things, Virtual Reality, Robotics and Wearable Technologies (“Cyborg Crew”) will have a major impact on the maritime industry in 2018 as well as have prolonged ramifications for its future. The majority of these technologies is already in use in other industries and just need a trigger for

them to be adopted in maritime industry.

## **Blockchain – the new revolution in shipping?**

Traditionally regarded as conservative and resistant to change, the shipping industry has usually been among the slowest to implement new standards and technological improvements. However, in a positive deviation, more shipping players are seeking to harness blockchain technology, although it appears to remain in the trialing stage at present.

## **What is blockchain technology about?**

The blockchain is typically described as an open, distributed, digital ledger, which can be programmed to record financial transactions or other valuable information. Information held on a blockchain exists as a shared database that is continuously reconciled across a network of computers. As changes are made, a public log is kept of what was changed, when and how. Compared to data stored in a single location, records kept on a blockchain are thus public and easily verifiable, since there is no centralized database that can be corrupted, and its data is easily accessible through the internet.

## **How can blockchain technology benefit the shipping industry?**

In 2014, Maersk found that just a simple shipment of refrigerated goods from East Africa to Europe goes through nearly 30 people and organisations, including more than 200 different communications among them. IBM estimated the related document processing and administrative costs to be up to one-fifth of the actual physical transportation costs. Furthermore, the paperwork could also be susceptible to delays, misplacement, and fraudulent alterations, which could cause further problems and mounting costs.

Blockchain technology could counteract these issues by allowing for faster processing times and updates; greater accuracy through automation; increased transparency due to its public log and ease of access; increased security; and lower costs by reducing or even eliminating paper documentation and administration.

However, in order for its benefits to be harnessed, the blockchain technology will likely have to overcome some hurdles, including adapting it to the contractual terms unique to shipping, dealing with the issue of flexibility required when contractual terms are still being negotiated, as well as collaboration and adoption by all parties in the supply chain.

## **Examples of current applications in shipping**

In June 2017, IBM and Maersk announced their partnership to use blockchain technology to help transform the global supply chain. The solution will help to manage and track the paper trail of their shipping containers moving across the world, protecting the supply chain from human error, unwanted and wasteful delays, as well as cyber threats. The importance of cyber security has been increasing, especially after Maersk made the headlines last year as one of the victims of a global ransomware attack, which caused outages at its computer systems across the world and cost the company \$300 million in lost profits in 3Q 2017.

In September 2017, Ernst & Young announced plans to launch the first blockchain platform for marine insurance, alongside Microsoft, A.P Moller-Maersk and others. The distributed ledger will be used to capture information about shipments, risk and liability, help firms comply with insurance regulations, and ensure transparency across an interconnected network of clients, brokers, insurers and other third parties.

In December 2017, Mitsui OSK Lines (MOL) teamed up with IBM Japan and other firms for a demonstration test to see how effectively blockchain technology can be implemented in cross-border trade operations. Apart from MOL, a total of five firms are participating in this test, namely Sumitomo Mitsui Financial Group, Sumitomo Mitsui Banking Corporation, The Japan Research Institute Limited, Mitsui & Co, Mitsui Sumitomo Insurance Company and IBM Japan.

Government bodies, especially those in Europe, are also showing interest in blockchain technology, with the Danish maritime Authority implementing a new blockchain-powered pilot scheme for vessel registrations. Other port authorities such as the Port of Rotterdam and Port of Antwerp have also begun work on their own blockchain-powered management platforms. (**Banchero Costa**)

## **JOINT VENTURES:**

The status of our joint-venture investments is as follows:

- **International Seaports (Haldia) Pvt Ltd:** This is now our only investment in Ports in the Haldia Dock Complex (about 22.4% of the total capital) under our port projects investments. This JV continues to operate very well and we have to-date received total dividends of USD 3.47 million, which works out to about 170% of our original Investment made in years 2002-2003.

## IN CONCLUSION:

**Demand:** The environment for 2018 to 2020 is going to be characterized by volatility. **Downside risks** for 2018 to 2020 will include, amongst others, Geopolitical tensions; China importing lower quantities of Coal and Iron Ore; Protectionism increasing; Surplus vessel supply not being absorbed fast enough; and excess Shipyard capacity holding the promise of more ships to come. But it is not all gloom and doom. The **upside potential** for 2018 to 2020 consists of, amongst others, the 'One-Belt-One-Road' that China proposes to build linking some 65 countries from Asia/China to Europe at an expected cost between USD 1.2 to 20 trillion; China importing more Iron Ore as they combat pollution and shift to higher grades of Steel production requiring better quality imported Iron Ore; China importing more Coal to reduce pollution, to reduce the terrifyingly high annual death toll at Coal mines invariably accompanied by protests from the relatives of those that have perished; Slower ordering at shipyards due to challenging markets; Higher slippage rates due to challenging markets; Higher scrapping rates due to challenging markets and regulatory pressure; The US economy continuing to outperform expectations; Low oil prices leading to greater World economic growth rates; Low oil prices helping to reduce commodity prices resulting in more cargoes being shipped; and weaker currencies in the Euro zone and Japan helping them to export their economies out of trouble. Time will tell if 2018 to 2020 ends up being a pleasant surprise or the source of more pain for the dry bulk ship owners.

**Supply:** Under the current conditions, approximately **23.8% (193.70 MDWT) of the existing world fleet would be over 15 years of age** during 2018 through to end of 2021. These ships would **come under tremendous financial pressure** due to the upcoming expensive regulatory requirements. Depending on how challenging the freight markets turn out to be in the period 2018 to 2021 many of these ships would be forced to take the difficult decision to **head to the recycling yards** in Asia.

With respect to the approximately **9.3% by DWT of new ships (75.30 MDWT)** scheduled to be delivered to the end of 2021, the lack of funding coupled with delays in deliveries at ship yards would subject them to a **degree of slippage** (it was 33.7% in 2017), that would **help slow down their arrivals** into the freight market.

**Financing:** As we predicted last year, while there was an uptick in the freight market in 2017, the situation on the ship-financing front continued to be depressed. Capital remained ever so scarce in 2017 as Shipping Banks ended their "pretend and extend" policy and became more selective on whom to lend and how much to lend resulting in shipowners looking at alternative sources of finance. As a result, there was a mad scramble for whatever limited capital was available from the alternative sources of finance other than the traditional bank financing. The Chinese leasing firms which had entered the

shipfinancing market just recently, continued to remain active and contributed USD 12 billion on the financing front which was nearly the same as what they had contributed in year 2016. However, it may be noted that the entire USD 12 billion should not be considered as incremental capital for the shipping industry because many of the leasing firms in turn themselves depend on traditional ship finance from shipping banks, both, Chinese as well as European, who lent a fair amount to the leasing firms which lending would otherwise perhaps have gone to shipowners. The private equity investor who had contributed capital in a big way to the shipping industry in the recent past, particularly in the period between years 2011-14, continued to remain on the sidelines. The share of private equity capital for the shipping industry in 2017 was a mere USD 1,302 million which compares poorly from say, year 2013 when the private equity investor poured in almost USD 7,500 million or over 5 times than what came in 2017. Public Equity as a source of capital to the shipping industry fared slightly better by raising USD 4,792 million in 2017 as compared to 4,562 million in 2016. However, as borne out by the fact that most of this equity raising was as follow-on offerings of existing companies and hardly anything (near zero) as an IPO, the increase from this source should not be misunderstood as reflecting buoyancy in the public equity markets, and as we said in the previous year, this should just be considered as an indicator of the continuing desperation of existing shipping companies to raise much needed cash by any means and at any cost, even if it came at the cost of diluting or in some cases entirely eroding their existing shareholders' equity. The biggest savior as a source of capital for the shipping industry in 2017 was the Bond market. As compared to USD 4,611 million in 2015 and USD 4,541 in 2016, the shipping industry raised a sizeable USD 8,147 million from the Bond market in 2017. This constitutes nearly 60% of the total capital raised by the shipping industry through the Bonds, Public and Private Equity markets. The Norwegian Bond market showed great buoyancy where USD 3,172 million was raised in 2017 as compared to just USD 1,138 million in 2016. This is all the more striking when one looks at the capital raised from the US Bond market in 2017 which was just USD 3,145 million as compared to almost USD 4,000 million in 2016 or a whopping USD 20,458 million in 2013! While 2017 was not otherwise great in terms of availability of capital for the shipping industry, were it not for the Norwegian Bond market, the industry would have been in absolute dire straits in terms of availability of capital. All in all, year 2017 turned out to be equally challenging as year 2016 year in this respect if not more. (Source of all figures in this para: Marine Money).

As such, similar to the point at which we were in early 2017, while there is some optimism for the year ahead (2018) in the freight market, we remain pessimistic in terms of the availability of financing in

2018, which perhaps may not be such a bad thing as this difficulty in finding cheap capital does manage to restrict new supply by keeping a lid on newbuilding orders by overoptimistic shipowners which would otherwise be seen following better freight markets with financing being readily available. So, to conclude, in terms of the year ahead, while the fittest may have survived, it is only the super-fit who would flourish.

**And finally;** to end on a more optimistic note we reproduce below the latest remarks from Davos on the global economic front by Allan Murray, the Editor of Fortune CEO Newsletter.

*"I've been attending the World Economic Forum in Davos for more than two decades, and I can't recall a time when the meeting ended with attendees as optimistic about the economic outlook as last week. Their reasons:*

- *The global economy is enjoying unusual synchronicity, with every major region expanding at the same time. Even The New York Times elevated this theme to its front page this weekend.*
- *With unemployment low and inflation dormant, we face the possibility of several years of "high pressure" growth, in which wages and other rewards to workers will rise, after a decade of anemia. The unusual bonuses paid by some companies to workers in the wake of the tax bill are partly an acknowledgement of that trend.*
- *Trump's hard line "America First" trade agenda was retrofitted at Davos into a more reasonable "America First, but not America alone." It remains to be seen what that means in practice—as The Wall Street Journal's Greg Ip wrote this weekend—but the cooler rhetoric has reduced fears of a trade fiasco.*
- *The rapid advance of technology—and, in particular, the increasing ability to take proliferating pools of digital data and turn them into useful intelligence (AI)—carries the promise of a sea change in business productivity, as well as potential solutions to a host of difficult social problems. U.K. Chancellor Philip Hammond said in Davos that AI could "double the rate of economic growth in advanced economies by 2035."*
- *A new generation of global business leaders are rethinking their companies' obligations to society—a healthy development fueled by rising populism, declining trust, failing governments, and a generation of workers who want to know their employers are doing good in the world.*
- *As for the U.S., it ranks as the most attractive location in the world to invest, after losing that honor to China earlier in the decade, and the new tax law makes that even more true.*

*None of that is to minimize the geopolitical threats facing the world. Nor is it to ignore the huge challenge of preparing the global workforce for the new technology world.*

*Still, it's worth savoring the moment. All may not be right with the world. But all is not bad. Indeed, the main negative economic sentiment heard in Davos was that with all the good news, complacency may set*

*in. As Larry Summers wrote last week—in a column that compared the current economy to the 1990s and to 2006—“The only thing we have to fear is the lack of fear itself.”*

**Concluding Remark:** Considering all the above, we are taking advantage of the opportunities that are present in the market. We hope to deliver to all our stakeholders the promise of this potential. This will in no small measure be due to the very dedicated and hardworking professionals that make up the office, as well as, the floating staff at PSL.

Please be informed accordingly.

Yours sincerely,  
Precious Shipping Public Company Limited

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Khalid Moinuddin Hashim  
Managing Director

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Khushroo Kali Wadia  
Director