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8 February 2017

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

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

### **ANNUAL REVIEW**

2016 will go down in history as the worst year ever for Dry Bulk shipping. The annual average BDI at 673 was 42 points or about 6% lower than the lowest annual average in history of 715 points reached in 1986.

**The truly unthinkable happened to Dry Bulk shipping** - the BDI plunged to a new absolute low of 290 points in February 2016. Other unthinkable and major events that defined 2016 were Brexit (June), Hanjin's receivership (August), Ballast Water Management became law (September), maximum 0.5% sulphur content in all fuel burnt on ships becomes law in 2020 (October), Trump winning the US Presidential elections (November), Demonetization in India (November) and, sadly, the Russian Ambassador to Turkey being shot and killed on live TV (December).

**The Baltic Dry Index** started the year at 473 points and then hit a new all time low of 290 points on the 10<sup>th</sup> of February 2016. The BDI then improved all the way up to 703 points by the end of April. It then struggled and slowly lost ground till it reached 580 points on the 21<sup>st</sup> of June. Traditionally, as you know, the summer months of June, July and August are the weakest months of the years, but not this year. The market surprised us by moving up to 748 points by 18<sup>th</sup> of July. The BDI continued to tread water till the end of August, where after it continued to gain strength till we touched a new annual high of 1,257 points on the 18<sup>th</sup> of November, traditionally the strongest time of the year. The BDI then gently drifted downwards till it closed out the year at 961 points on the 23<sup>rd</sup> of December.

New orders for ships are hovering near all time lows. 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, the negative sentiment had started to disappear from the market by the middle of 2016.

The freight market is the single largest driver of ships to the scrap yards. The lower the freight market the greater the number of ships ending up at the scrap yards. 2016 is an ideal example of this logic. Q1 was a disaster in terms of the market with the BDI touching a new historic low every day before bottoming out at 290 points in February. The Q1 total for scrapped ships was 13.83m DWT, but as Q2 rates started to improve, scrapping took a sort of back seat with 'just' 8.68m DWT reaching the breakers yards. This was followed by a very poor showing of 2.8 MDWT in Q3 with an improved 3.43 MDWT in Q4 resulting in net supply of ships in the dry bulk space growing from 771.9 MDWT at the start of the year to an even higher number of 790.41 MDWT by the end of the year. But despite this growth in the supply side, the time charter rates during the year have risen from the ashes, just like Phoenix, to semi-reasonable levels by the end of the year. **This suggests that supply demand balance is not that far away.**

Demand has certainly been stronger than what anyone had anticipated at the start of 2016. China has been the stellar performer, and this has helped to drive time charter rates higher as the year has progressed. Having said that, if, and it is a big if, Chinese policy that has recently been reversed on the number of days Coal mines can work back to 330 days is changed once again to the 'new' policy of 276 working days in a year, then, and only then, will Coal imports into China continue to surprise on the upside during 2017 as it did so helpfully in 2016. However, for the early part of 2017 the current reversal of this policy to the original 330 working days would increase domestic supply of coal and thereby reduce the requirement of coal imports till such time as policy is again, hopefully, changed back to the 'new' policy of 276 working days for Coal mines. This could result in lower coal imports into China in Q1 2017.

Then you have the onset of Chinese New Year with its traditional slowing down of demand coinciding with the January impact, when all delayed new building ships from October to December 2016 are delivered in January 2017, increasing the supply side significantly, and you could have the makings of the perfect storm for the BDI. We hope that the expected rate decline by these three factors - lowering of coal imports, Chinese New Year slowdown in demand and the January impact of additional ships entering the market - doesn't take the BDI back to the horrid levels that we experienced in the first two months of 2016.

Overall, 2017 will be similar to 2016 with a lower Q1 followed by improvements during the rest of the year PROVIDED ship owners scrap their older tonnage throughout 2017 as quickly, and in as large numbers, as they did in H1 2016. If scrapping doesn't get off

the back burner, then we may experience pain, not just in Q1, but during the whole of 2017. Only a sustained increase in demand coupled with marginal growth in supply would result in a sustainable improvement in the freight market and the BDI.

**There are two issues that drive the BDI.** One is (over) supply of ships with which we have been struggling for quite a while. If ship scrapping during 2017 exceeds the levels achieved during 2012 (36 MDWT) then we have some chance of finally coming to grips with this issue. The other matter is of course the demand side. There is no doubt that overall world macroeconomic situation is one that remains quite patchy and confusing and does not inspire too much confidence to justify a significant increase in trade flows during 2017. However, the Federal Reserve has already raised interest rates by 25 bps and intends to raise it by a further 75 bps during 2017 especially as the economic picture emerging, not least because of the expansionary policies that incumbent President Trump has already indicated, looks quite robust. Fortune magazine captured it best by stating ‘but there is no getting away from the fact that, after a decade of fretting about downside risks to the economy, the Federal Reserve now sees the balance of risks firmly in the other direction.’ 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 very 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 much 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 is what 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.

**Regulatory impacts** should see many more ships heading for the scrap yard in 2018. With the Ballast Water Management (BWM) convention coming into force on the 8th of September 2017, all existing ships will have to retrofit a BWM system in place by their next dry-dock after the 8th September 2017 deadline. Any ship that is older than 15 years of age would then become a Scrapping candidate when its next dry-dock comes due after the effective date as the cost benefit to retrofit an expensive, and as yet largely untried system, would be too great a risk to run, especially when 15 year old ships are valued at scrap levels. It will make the 'to scrap' decision easier. At the start of this year, 114.94 MDWT or 14.54% of the existing dry bulk fleet are over 15 years of age and face a choice to either install an expensive BWM system after 8<sup>th</sup> September 2017 or become a likely scrap candidate.

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 2020. We believe the impact on global shipping markets will be significant, indeed, 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 industry. Current regulations allow vessels at sea to use fuels with sulphur content upto 3.5%. New regulations, starting 1 January 2020, lowers this to 0.5%. And then all vessels would either 1) change fuel to “diesel” which now is ~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. Those cost USD3m/piece (this quote we have seen for a 10MW engine, typical for Supramax/Panamax, probably somewhat more expensive for a Capesize). On a stand-alone basis, assuming a Capesize to consume 40 tons of bunker per day and spend, say, 310 days at sea, will give savings of USD2.5m/year which makes an USD3m investment look like a very good deal. But will you invest that in a 15 year old vessel? Probably not. If you don’t you would face the prospect of having daily bunker expenses increase from USD12,000/day (fuel price of USD300/ton) to USD19,000/day (“diesel” price of USD500/ton) which on a stand-alone basis will make the owner even more prone to scrap the vessel. Next, to the current spread of ~USD200/ton between Annex VI compliant and non-compliant fuel: In 2020 marine bunker demand is estimated to be ~320 MMT/year out of which almost 100 MMT/year will be covered from already compliant fuel-production, LNG and scrubbers. But there is still ~200 MMT/year left which needs to be converted. And assuming density of 6.35 barrel/ton this yields 3.5m bpd of switch from heavy fuel oil to the distillate pool. And what will happen with the current spread of USD200/ton in such a scenario? We believe it will widen. And with more expensive fuel, the speed of all vessels should come down. In sum, **new regulations will accelerate scrapping and reduce speed, which from a spot rate perspective should be very positive.** (DNB Markets)

The question is **how will owners react to the market conditions during 2017?** At PSL we have always believed in pre-empting compliance issues. As a result over the last 12 months we have sold 13 ships. We don’t know of any other ship owner who has taken such drastic action. If the markets remain reasonably strong, then scrapping will slow down and that won’t be good. If markets are bad, scrapping will be reasonably good in 2017. If that happens and ‘forced’ scrapping takes off due to the regulatory impact in 2018, 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 quite bearish this time last year about the prospects for 2016, we are similarly bearish about the prospects for Q1 2017, but more sanguine about the prospects for the rest of the year and beyond so we hope to be ‘pleasantly surprised’ with results that defy current expectations.

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.

**Shipping banks** that contributed to the current debacle with ‘easy loans’, during the boom years prior to and including 2008, allowing ship owners to over-order/buy ships with little equity and no forward contract coverage, have for the most part taken big hits and where possible have sold their existing loan books at cents to the dollar. Restructuring, inside or outside the bankruptcy courts, has happened in quite a few cases and others are in negotiation. As a result many traditional shipping banks have sold their loans in specifically targeted companies. Others have reduced their shipping loan portfolio via a bulk sale to others or have simply exited this business all together and have retired or disbanded their shipping teams. All these actions have resulted in losses so banks are loath to lend any more funds to our industry. Ship finance is, therefore, not getting easier.

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. China and South Korea are home to many ship building yards that have been reported in the shipping press as having closed down or being in deep financial distress including the ‘big 3’ yards in South Korea who have reported staggering losses approaching billions of dollars during 2015 and with similar/larger losses in 2016.

Depending on your perspective, an overall 71% drop in ordering (total orders also hit a 35 year record low) is either cause for optimism or for further gloom! In fact, **only 113 yards took orders** (for vessels 1,000+ GT) in the year, compared to 345 in 2013, with tanker orders down 83% and bulkers down 46%. (Clarksons)

**Shipyards are likely to remain under pressure** during 2017, with Chinese shipyards now facing the added challenge of higher steel prices. However, this is good news for shipowners, as the lower orders aid the shipping market in its rebalancing act from the current vessel oversupply. (Banchemo Costa)

Analyst Chong Hui Ru of broker Banchemo Costa stated that we have already seen news this year of Chinese shipyards going bankrupt, with **estimates that half to three-quarters of the shipyards that China had in the peak years may have, or will be closed.** (TradeWinds)

**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. At current daily time charter rates no one will speed up their ships. In fact every charterer still insists on getting the ships ‘eco’ speed and they instruct Masters to prosecute voyages at these ‘eco’ speeds. Once the 0.5% sulphur ruling hits the market on 1<sup>st</sup> January 2020, the cost of oil will more than double 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 heavy fuel oil. That should make slow steaming the norm even if time charter rates were to improve significantly. There are people who calculate that this doubling in cost of oil could result in the supply side of ships in the world fleet shrinking by ~10% (see the paragraphs under Regulatory Impact). That would certainly tilt the supply demand equation firmly in the ship owner’s favour.

**Scrapping** in 2012 had a stellar all time record of 35.97 MDWT dry bulk ships being scrapped. However, 2013 and 2014 scrapping 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 scrapped 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. Of the 29.74 MDWT of ships scrapped in 2016 77.4% of the total was accounted for in the first half of the year. As freight rates improved during the second half of the year scrapping took a back seat and we had just 22.6% of the total. Scrapping rates are dependent on two main variables: the freight market (primary mover) and the price of scrap (secondary mover) and have no connection with lower or higher oil prices. The latest scrap price at below USD 300 per steel ton of scrapped dry bulk ships is probably at the trough and industry expectations are that scrap prices should not go down any further from this point. If scrap prices remain where they are, and the freight markets stays as low as it currently is, we expect more ships to be scrapped in 2017. Basically, in a poor rate

environment, where charterers are spoiled for choice of ships, they will not fix an older ship as they generally consume more oil, are more expensive to insure for their cargoes, their customers don't want shipment in older ships and younger ships are available at almost the same rates as the older ships. Therefore, older ships don't get employed in a low rate environment and cost their owners even to keep idle. Hence in a low rate environment, with no hope for employment, most owners of older ships would examine the scrapping option more closely, and with the threat of a fall in scrap prices, the decision making becomes easier. And the extremely costly regulatory burden that is just around the corner should tilt the decision to scrapping ships in a bigger way.

In the next four years time i.e. by the end of 2020, approximately 23.2% (183.30 MDWT) of the existing world fleet that would be over 15 years of age and should head for the breakers yards due to the upcoming expensive regulatory environment, the direction of the BDI and scrap prices.

With respect to the approximately 10.8% by DWT of new ships (85.22 MDWT) scheduled to be delivered to the end of 2020, the lack of funding coupled with delays in deliveries at ship yards would subject them to a very high degree of slippage (it was 47.5% in 2016), higher than the average of 35% over the 2010 to 2014 period.

**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 in 2015 came in at 46.03% and at 47.5% in 2016 both of which were well above the average of about 35% for the preceding 5 years. As a result, the net increase in supply for 2016 was 18.51 MDWT with a yearend number of 790.41 MDWT. This amounted to a 2.4% net increase in the World Dry Bulk fleet, one of the smallest percentage increases in the past 10 years!

**Future Supply:** With slippage and scrapping demonstrating such volatility, the net increase in DWT of ships in future years will remain difficult to predict with any real accuracy. We think that slippage and scrapping will retain their unpredictability and will fluctuate inversely with the strength of the BDI. If we assume annual slippage at 50% (it was 47.5% in 2016) and scrapping at 30 MDWT (it was 29.74 MDWT in 2016), then net change in the Dry Bulk Sector would be -0.14% or -1.14 MDWT to 789.27 MDWT at the start of 2018. Applying the same assumptions we get fleet growth of -6.98 MDWT or -0.88% to 783.42 MDWT by the start of 2019.

On the **demand front**, the large clouds of uncertainty still loom ominously on the

horizon. **China**, the big mainstay of the dry bulk markets, has struggled with GDP growth at an anemic, at least for China, 6.7% in 2016. China's economy, in the current 5 year plan that started in 2016, is supposed to grow at an average rate of not less than 6.5%. China is trying to stimulate its domestic economy and curb its dependence on its export markets. In terms of actual imports for 2016, China surprised the markets by increasing iron ore imports to 1,024.71 MMT (+7.5% y-o-y) becoming the first time in human history that any one country has imported more than one billion tons of any one commodity in any one calendar year! China's coal imports at 255.67 MMT (up 25.2% y-o-y) were the real pleasant surprise that the dry bulk market had been yearning for. Chinese steel exports at 108.99 MMT has marginally decreased by 3% over the 2015 figure of 112.41 MMT. All this has taken place whilst the headlines were screaming 'China is slowing down!'

Economic growth is beginning to take a firm hold in the **USA**, the largest market in the world, where the Federal Reserve has already raised interest rates by 25 bps and intends to raise it by a further 75 bps during 2017 especially as the economic picture emerging, not least because of the expansionary policies that incumbent President Trump has already indicated, looks quite robust. Trump's stated Trillion Dollar infrastructure refurbishment plan should add fuel to the demand fire emanating from the largest economy in the world. This is what 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 **EU** is the second largest economy in the world after the USA and one of the largest exporting blocs in the world. Their economy has disappointed to such an extent that the EU Central Bank is still continuing with their QE program. As a result the Euro has fallen versus the USD and there is talk that it could head to parity or below. This combination of QE and a falling currency could be the ingredients that finally spark the moribund EU economy into life. Their propensity to export must not be underestimated as Germany used to be one of the largest exporters in the world not too long ago. If they manage to grow their economy they will need more bulk imports to convert to semi-finished and finished products that would need to be shipped out requiring the services of our industry.

**Japan**, the second largest dry bulk player in the world, continues to struggle. However, Nuclear power remains shuttered so more coal is being imported. Japanese companies have made windfall profits, thanks to the Yen depreciating from 75 to 120+ to the Dollar, and will likely reinvest in Japan as well as all their manufacturing plants in Asia/around the world

requiring more dry bulk imports.

**India**, with its weaker currency and new market oriented government could become a large player in the Dry Bulk market. India is characterized with smaller, shallower drafted and inefficient ports which would result in massive congestion should import/export volumes climb appreciably. A consequent reduction in effective supply of smaller ships would result fairly quickly. This would push the geared handy to ultra sectors in the right direction. India is the world's third largest consumer of steel. Considerable home-grown demand will be generated as the government invests heavily in road, commercial and residential construction. Various reports suggest that Power, Coal and New & Renewable Energy would be given a USD 250 billion boost under the current Indian government, the hope for shipping being that coal imports into India will keep increasing.

**The one industrial sign that could point to a higher level of demand** especially for bulk ships is the 'One Belt One Road' silk route that the Chinese leader Xi Jinping has promoted. Under development is a planned network of overland road and rail routes, oil and natural gas pipelines, 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. This will do quite a few things not just for China but for the rest of the world.

- The monetary size of OBOR is anywhere between USD 1.4 and 21.0 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, at the minimum spend or 180 times at the maximum spend level!
- Funding will come from (1) the Asia Infrastructure Investment Bank which already has USD 40b in capital and commitments up to USD 100b from its 57 member countries. (2) Silk Road Fund of USD 40b. (3) New Development Bank or the BRICS Bank of USD 100b. (4) China Development Bank of USD 900b.
- Actual projects to date: (1) PWC February '16 report confirms that USD 250b of OBOR projects have been either committed/started/completed. (2) China Merchant Holdings has committed to build 10 ports in Russia, West Africa and South East Asia. (3) Power China has built 182 MW in Pakistan, 24 MW in Vietnam and 60 MW in Thailand. (4) The Bangladesh-China-India-Myanmar economic corridor has been completed. (5) Hydroelectric power plant in Belarus. (6) Ports in Pakistan (Gwadar), Myanmar, Bangladesh and Sri Lanka. (7) China-Pakistan-Economic-Corridor of USD

46b completed. (8) China-Belarus Industrial park. (9) 33 projects signed up in Kazakhstan from mining to oil to energy.

- The political turmoil and poverty in the areas within OBOR will probably reduce.
- China's benefits: (1) Utilize the approximate 30% idle steel mill capacity for OBOR projects. (2) Utilize the approximate 40% idle Cement plant capacity for OBOR projects. (3) No unemployment issues would be there in both these industries. (4) Shift labour intensive sunset industries from the expensive land/high labour cost coastal areas to low land cost, low labour cost inland areas giving these industries a new lease on life via well connected infrastructure to their major markets. (5) Transition from a fixed asset investment led economy to a consumption led model smoothly. (6) China would be independent from the potential choke point of the Malacca Straits. (7) Gain Diplomatic capital in 65 countries, 3 continents and 4.4 billion people. (8) USA has been conducting 'Regime Change' wars, declared or covert, in 20 countries, and Economic and other sanctions, where wars don't work, in Russia and Iran. USA's pivot towards Asia has increased tensions in countries bordering the South China Sea. China is removing this threat with a win-win, peaceful, OBOR solution, whilst securing free passage for its raw materials/finished goods!

All the above activities would require 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.

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	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<b>Av. BDI</b>	3,180	7,065	6,390	2,617	2,758	1,549	920	1,206	1,105	719	673
<b>Net Profit (loss) \$m</b>	92.6	125.1	148.1	88.1	35.5	23.6	4.5	17.5	(2.5)	(69.41)	(75.61)
<b>Av. No. of Ships</b>	54.00	44.97	44.12	32.79	21.39	21.91	30.44	38.93	41.66	45.46	40.29
<b>Net Profit (loss)/Ship \$m</b>	1.72	2.78	3.36	2.69	1.66	1.08	0.15	0.45	(0.06)	(1.53)	(1.88)

Our results for 2016 must be viewed against the average BDI for the year of 673 points, being the lowest annual average in BDI history, 42 points or 6% lower than the lowest ever in 1986 of 715 points. Whilst most of our peers were seeking protection under Chapter 11 or undergoing restructuring of some sort or the other, 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 2017 and 2018; and sold our older and inefficient ships to raise further cash (3 ships sold in 2015; 13 ships sold in 2016 and one more older ship to be sold in 2017).

#### **AWARDS AND ACCOLADES:**

Precious Shipping won the ‘ASIA BEST EMPLOYER BRAND AWARD’ at the Asia Best Employer Brand Awards, 7<sup>th</sup> edition, 2016. We were nominated for the “Best Investor Relations Award” at the SET Awards 2016. We were classified as one of the companies with “Excellent” Corporate Governance for seven consecutive years from 2010 to 2016, by Thailand’s National CG Committee. We were the finalists for ‘The ClassNK Dry Bulk Operator of the Year’ at the Lloyd’s List Asia Awards 2016. We were also the finalists for ‘The Bulk Ship Operator of the Year’ award at the IBJ Awards 2016.

#### **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 3,791.79 million [2015: Baht 4,263.92 million] and the Company incurred a Net Loss of Baht 2,664.90 million [2015: Baht 2,425.78 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 [2015: Baht 1,124.02 million]. The Shareholders’ Equity of the Company is Baht 13,632.57 million [2015: Baht 16,486.17 million] and the Total Assets of the Company have marginally decreased during the year to Baht 32,316.03 million [2015: Baht 32,457.82 million]. During the year, the Company took delivery of 4 ships, sold 13 older ships and issued 2 tranches of Thai Baht debentures.

During the year, the Company incurred Baht 2,710.27 million [2015: Baht 2,398.75 million] as Net Loss before Exchange Gain of Baht 45.43 million [2015: Exchange Loss of

Baht 25.37 million] and Income Tax of Baht 0.06 million [2015: Baht 1.66 million]. In terms of the Earnings, the Company's vessels achieved an average time-charter equivalent earnings of USD 6,476 per day per vessel as compared to USD 6,266 per day per vessel in year 2015. The Net Vessel Operating Income (net of voyage disbursements and bunker consumption) in absolute terms was lower than that of the previous year, due to the lower average number of vessels operated in year 2016 (40 vessels) as compared to that in year 2015 (45 vessels). Absolute vessel running expenses (Opex), decreased by about 11%, due to a decrease in average number of vessels operated in 2016 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 reduced to an average of 4.78 days per vessel, because of the younger fleet with the average age of 5.8 years in 2016.

We conducted an "in-house" exercise again this year to determine Total Return to Shareholders, which was calculated for the 23 years that we have been operating as a listed entity. Based on the closing share price as on Friday the 16 September 2016 of Baht 5.85 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 23 years, you would have 9.31 times your initial investment. This return does not assume any re-investment of the dividends into shares or any interest on the dividends received.

#### **FLEET REJUVENATION:**

At the start of 2017, our fleet had 36 ships in the water (7 Ultras, 9 Supras and 20 Handy sizes) with an aggregate capacity of 1,541,244 DWT. This worked out to an average 42,812 DWT per ship, and an average age of about 5.8 years. We sold 13 older ships during 2016, plan to dispose of another 1 older ship in 2017, and will take delivery of 2 more ships from Sanfu shipyard by the end of Q1 2018. After delivery of the last vessel, we would have 37 ships in the water with an average age of just 7.1 years and an average size of 44,615 DWT by the end of 2018.

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.

### **HIGHLIGHTS OF 2016:**

**The Baltic Dry Index (BDI)** started the year at 473 points and then hit a new all time low of 290 points on the 10<sup>th</sup> of February 2016. The BDI continued to gain strength till we touched a new annual high of 1,257 points on the 18<sup>th</sup> of November, traditionally the strongest time of the year. The BDI then gently drifted downwards till it closed out the year at 961 points on the 23<sup>rd</sup> of December.

As a result most shipping companies found their share values tanking to almost all time lows at the start of the year before touching annual highs towards the end of the year.

The BDI average for 2016 was 673 points the lowest annual average in BDI history, 42 points below the lowest levels ever reached in 1,986 of 715 points. To give this some perspective, the long term average for the BDI (1985 – 2003) prior to the recent Bull Run was 1,358 points; including the Bull Run period (1985 – 2010) was 2,133 points; and during the Bull Run (2004 – 2010) was 4,265 points.

The year 2016 was characterized by Brazil steadily gaining lost ground over its arch rivals the Australian iron ore exporters. Of the 1,024.71 MMT of iron ore imported into China during 2016, Australia supplied 640.14 MMT (annual increase of 32.5 MMT or 5.35% over the 607.64 MMT in 2015) with Brazil supplying 214.86 MMT (annual increase of 23.1 MMT or 12.05% over the 191.76 MMT in 2015). Please keep in mind that the **Brazilian ton-mile is about 3.5 times more intensive than the Australian ton-mile.**

**The Supply Side** numbers are finally showing light at the end of the proverbial tunnel. A total of 626 dry bulk ships or 48.25 MDWT entered the supply side during 2016. At the

same time, scrapping this year has come to 29.74 MDWT with 83 (14.13 MDWT) Capes, 79 (5.79 MDWT) Panamaxs, 34 (2.33 MDWT) Ultras/Supras, 128 (5.32 MDWT) Handymaxes and 90 (2.17 MDWT) Handy sizes being scrapped. This has resulted in the global dry bulk fleet strength, at the start of 2017, reaching 790.41 MDWT. 2017 and 2018 have 57.72/19.47 MDWT of brand new ships scheduled for delivery. If we assume annual scrapping of 30 MDWT (it was 29.74 for 2016) and apply a 50% slippage (it was 47.5% in 2016) in expected annual deliveries, 2017 ends with a world fleet of 789.27 MDWT for a growth rate of -0.14 % over the year. Under the same assumptions, 2018 ends with 783.43 MDWT for a growth rate of -0.74% over the end-year total of 2017. The tsunami of newbuilding deliveries has finally come to an end!

The effect of the **Global Financial Crisis** is finally dissipating with the major economies starting on an upward economic growth pattern. As highlighted in earlier parts of this report, the **USA** has taken the decisive step of raising interest rates as the Federal Reserve feels confident that the US economy is well enough to stand on its own two feet.

The largest economies within the **EU** block are exhibiting mixed economic growth rates. As a result the EU Central Bank has continued with its QE program. This has resulted in the Euro falling sharply versus the USD and there is talk that the Euro could head to parity or below. This combination of QE and a falling currency could be the ingredients that finally spark the moribund EU economy into life. The EU is the second largest economy in the world, just a bit smaller than the massive US economy, and an extremely large exporter. Positive growth rates in the EU block would have a substantial impact on the dry bulk markets with large quantities of raw materials being shipped in and semi-finished/finished goods being shipped out.

**Japan**, the ‘sick man’ of the OECD has had mixed success in managing their economy. With the yen depreciating from 75 to about 120 to the USD acting as a ‘get out of jail free’ card, most Japanese corporate have been making record profits, which will be ploughed back into capital assets not just in Japan but including other countries where they have manufacturing units. This should have a multiplier effect with even greater demand for dry bulk commodities to feed the ever growing and hungry manufacturing facilities at Japanese units all over the world. Coal imports into Japan have increased as a result of the Japanese population’s distaste for all things Nuclear following the Fukushima reactor melt-down post the Tsunami in March 2011.

**India**, the country that always flatters to deceive, may yet prove its support for the Dry

Bulk markets, under its new market-oriented government, as more and more coal fired port based Power Plants come on stream.

**China** has struggled with GDP growth figures averaging 6.7% for 2016. However, China's economy over the next 5 years is expected to grow at not less than 6.5% per annum.

China's Iron Ore imports were 1,024.71 MMT in 2016 or 7.5% higher than the 953.37 MMT in 2015. Future import figures are contingent on import pricing parity versus domestic production and transportation costs. Provisional Chinese steel production for 2016 reached a figure of about 806.68 MMT or about 0.8% higher than the figure of 800.53 MMT in 2015. China imported 255.67 MMT of coal in 2016 which was 25.2% higher than the 204.18 MMT imported in 2015. If, and it is a big if, Chinese policy that has recently been reversed on the number of days Coal mines can work back to 330 days is changed once again to the 'new' policy of 276 working days in a year, only then, will Coal imports into China continue to surprise on the upside during 2017 as it did so helpfully in 2016. However, for the early part of 2017 the current reversal of this policy to the original 330 working days would increase domestic supply of coal and thereby reduce the requirement of coal imports till such time as policy is again, hopefully, changed back to the 'new' policy of 276 working days for Coal mines. This would result in lower coal imports into China in Q1 2017. Coal imports are contingent on government policy and import pricing parity versus domestic coal production/transportation costs. In a country that currently produces and consumes some 3,900 MMT of Coal per annum even a small change in China's coal imports could have a dramatic impact on the Dry Bulk freight markets.

**The Time Charter Equivalent (TCE)** earnings of our Fleet during 2016 averaged USD 6,476 per day per ship. In terms of daily average Operating Expenses (Opex), we were marginally lower than our target of USD 4,600 per day per ship reaching a figure of USD 4,503 per day per ship.

**Market Segmentation/Benchmarking:** During 2016, the Baltic Handy Size Index averaged 360 points derived from the average Time Charter (TC) rate of USD 5,214. Compared to that, our Handies earned USD 6,847 outperforming the BHSI TC rate by 31.32%. Further, the Baltic Supramax Index (BSI) averaged 596 points derived from the average TC rate of USD 6,236. Compared to that, our Supramaxes earned USD 5,865, underperforming the BSI TC rate by 5.95%.

## **THE INDUSTRY OUTLOOK:**

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

**The Cape sector (90,000+ DWT: 1,954 ships of 343.3 MDWT at the start of 2017):** 171 ships of 41.19 MDWT or 12 % of the existing DWT are scheduled for delivery up to end of 2020. In this sector, 292 ships of 54.39 MDWT or 15.8 % will be over 15 years of age by end of 2020 and some or all of them are likely to be scrapped during 2017 to 2020.

**The Panamax sector (70 – 90,000 DWT: 2068 ships of 162.66 MDWT at the start of 2017):** 182 ships of 14.92 MDWT or 9.2 % of the existing DWT are to be delivered up to the end of 2020. In this sector, 532 ships of 39.81 MDWT or 24.5 % of the fleet will be over 15 years of age by end of 2020, and some or all of them are likely to be scrapped during 2017 to 2020.

**The Ultramax sector (60 – 70,000 DWT: 679 ships of 42.84 MDWT at the start of 2017):** 250 ships of 15.65 MDWT or 36.5 % of the existing DWT are scheduled for delivery up to the end of 2020. In this sector, 75 ships of 5.09 MDWT or 11.9 % will be over 15 years of age by end of 2020, and some or all of them are likely to be scrapped during 2017 to 2020.

**The Supramax sector (40 – 60,000 DWT: 2720 ships of 144.31 MDWT at the start of 2017):** 65 ships of 3.44 MDWT or 2.4 % of the existing DWT are scheduled for delivery up to the end of 2020. In this sector, 740 ships of 35.64 MDWT or 24.7 % will be over 15 years of age by end of 2020, and some or all of them are likely to be scrapped during 2017 to 2020.

**The Handymax sector (30 – 40,000 DWT: 1650 ships of 57.72 MDWT at the start of 2017):** 253 ships of 9.43 MDWT or 16.3 % of the existing DWT are scheduled for delivery up to the end of 2020. In this sector, 222 ships of 7.61 MDWT or 13.2 % will be over 15 years of age by end of 2020, and some or all of them are likely to be scrapped during 2017 to 2020.

**The Handysize sector (10 – 30,000 DWT: 1896 ships of 39.58 MDWT at the start of 2017):** 29 ships of 0.59 MDWT or 1.5 % of the existing DWT are scheduled for delivery up to the end of 2020. In this sector, 797 ships of 17.62 MDWT or 44.5 % will be over 15 years of age by 2020, and some or all of them are likely to be scrapped during 2017 to 2020.

When reading the above numbers please keep in mind that Slippage was 47.5% in 2016 and averaged about 35% 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 (as of date) plus the 2 ships on order expected to be delivered by Q1 2018, 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 plan to rejuvenate our fleet with younger, larger, better geared and more economical vessels from the market at historically low levels will enhance our competitive position for years to come.

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

Most Dry Bulk shipping companies, especially the smaller and non-listed ones, will simply give up as they will not be able to weather the current challenging market conditions. The survivors, 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 (3 ships sold in 2015 and 13 ships sold in 2016) and will continue and complete that process (another 1 older ship to go) before the end of 2017. We have already raised about USD 65 million by way of Equity from our Shareholders by doing a Rights Issue in 2015. We have further raised approximately USD 100 million in the form of 5 year maturity, non-amortizing, bullet-repayment, unsecured bonds in January 2016 and raised approximately USD 55 million in the form of 3.5 year maturity, non-amortizing, bullet-repayment, unsecured bonds in December 2016.

**Operating Costs** of our Company continued steady in 2016. Most components have remained at their previous levels. Crew wages however were revised upwards and are expected to increase further in the years to come for us as well as the Industry. The

requirement for experienced senior personnel continues to remain a serious issue. Technological advancements on board modern ships both in navigation systems and machinery operations demand highly trained officers which only serves to exacerbate the situation. 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 total free reserves of the Protection & Indemnity (“P&I”) insurers (‘P&I Clubs’) belonging to the International Group of P&I Clubs is fast approaching US\$ 5 billion; many of them are also witnessing low levels of claims. 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 2016 was marginally 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.

2016 saw a further drop in Fuel prices but a shift of focus to the use of ultra low sulphur fuel to comply with new onerous regulations for the protection of the environment.

Among several other requirements, engine exhaust emission standards are also controlled by the MARPOL regulations. Caribbean Emission Control Area (ECA) became mandatory from 01 January 2014. The emission standards applicable will be the same as those for the North American, North sea and Baltic ECA, i.e. vessels were allowed to use only Low Sulphur Fuel Oil (LSFO) with maximum 1% sulphur content during the first phase from January 2014 until January 2015. The second phase began in January 2015, when vessels in all ECAs must use fuel with a maximum sulphur content of 0.1%. Due to non availability of suitable fuel worldwide, ships will need to burn Low Sulphur Marine Gas oil (MGO) which is much more expensive than heavy fuel oil being used now. Use of MGO in Main Engine is also a very big challenge technically as engines and fuel oil systems are not designed for its use on existing vessels. Technological challenges of the future will include operation of dual fuel engines (LNG/Fuel oil), as emission control laws become more strict. To deal with the sulphur content limits we have focused mainly on the new vessels. These vessels are fitted with ‘chiller units’ which serve to cool and thereby increase the viscosity of the low sulphur (0.1% max) gas oils being used by the engines in the ECA regions. Further, before the global cap of 0.5% Sulphur content is implemented for the use of marine fuels, we intend to deal with SO<sub>x</sub> emission limits by installing Exhaust Gas Cleaning Scrubbers on

these new vessels.

More countries are insisting on stringent ballast water management practices on board ships. The Ballast Water Management Convention enters into force on 8 September 2017. All new vessels with keel 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 IOPP (International Oil Pollution Prevention) certificate after 8 September 2017. Ballast water on board needs to be treated to remove micro organism and mud etc. to achieve minimum standards specified by IMO. However the Environmental Standards Division of the US Coast Guard (USCG) has stipulated a slightly different schedule for compliance in the case of new building vessels and existing vessels. For most of the previous year they were considering further delayed implementation by granting extensions on the basis that they had not fully approved any treatment plant. However towards the end of the year the USCG approved three Ballast Water Management Systems and more are expected to follow this year. Accordingly, the USCG are now granting 5 year extensions for vessels with original compliance dates in 2018 (scheduled for dry docking in 2018) only if an AMS or Alternate Management System (Ballast Water Treatment system approved by IMO but pending approval from USCG) is fitted. All new building vessels of the company (keels laid after 1 Dec 2013) are being equipped with ballast water treatment plants which are accepted by the USCG as AMS. It is expected that these AMS on the company vessels will obtain USCG approval later this year.

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. Many flag states, including Thailand, has ratified the MLC convention on 7 June 2016. And MLC 2006 will enter 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

Thai flagged vessels will now be replaced with a Marine Labour Certificate. This is a welcome development as the uncertainty in smooth trading of Thai flagged vessels worldwide, due to the risk of the SOC not being acceptable in some countries, has now been removed.

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. A further certificate will be required for liabilities for contractual claims arising from seafarer personal injury, disability or death. 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. The recent Paris agreement on climate changes and Green House Gas emissions did not make specific reference to the maritime industry. However, 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 likely to be 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 will be implemented by 2018 for all vessels operating in the EU region. 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 CO2 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 CO2 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. 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. 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 14001:2004 certification from Class NK of Japan. The ISO 14001:2004 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.

**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 has certain basic (but important) equipment such as a turbocharger and a purifier for practical training to accompany class-room theoretical courses. These will augment the Bridge Simulator (which is essentially for Deck Officers) and enable the Training Centre to address the requirements of both Deck and Engine officers & crew. Considering the fact that the new vessels acquired (and on order) 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. Most of the vessels in the fleet are already equipped with ECDIS. For existing vessels, ECDIS will become mandatory from 2018. ECDIS requires special generic training as well as specific training for each manufacturer’s equipment. Navigating officers using ECDIS need to be suitably trained and certified before they can use it as a primary means for navigation.

With every other technical advance in navigation, such as radar, AIS and GPS, officers have had to adapt to new navigational aids in place of the traditional means of navigation. Likewise, the mandatory use of ECDIS and competency in the use of electronic charts in place of the traditional paper charts has been one of the most challenging of recent developments. ECDIS has to work and officers have to know how to work it. Any operational error could have disastrous consequence.

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.

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 onboard, which can be monitored and controlled from shore based stations. Although this concept seems unrealistic at present, if and when such development takes place, it will drastically change the present model of shipping operations.

**Cyber Risks:** Information technology has changed our world like never before, and has fuelled unprecedented productivity and efficiency, in business, government and our personal lives. Shipping is no exception, but lags behind other land-based industries in adopting Information and Communication Technology (“ICT”) in ship operations and management.

In the shipping industry, ICT is being progressively integrated into operational and business processes resulting in considerable improvements in safety, efficiency and profitability. Shipping companies now use sophisticated and personalized software. Besides communications and navigation, it enables shipowners to place sensors on key equipment onboard ships to optimize operations, by improving efficiency and cutting down wastage, by closely monitoring fuel usage, speed, and other factors in real time.

E-navigation, an IMO-led initiative, will further accelerate shipping’s embrace of ICT and the ‘internet of things’ by enabling sharing of information relating to navigation, routing, weather, tides, cargo loading, carriage, stowage and discharging in real time between ships and between ship and the shore office.

In the absence of appropriate protection and loss prevention measures, the increased reliance on technology for even the most basic operations can leave the industry exposed to ‘cyber-attack’, i.e. an offensive manoeuvre that targets IT systems, computer networks and personal computer devices in order to compromise, destroy or access company and ship systems and data.

Cyber security threats in present times have increased in variety, frequency and sophistication — from a Trojan USB stick that introduces malware aimed at acquiring sensitive commercial information or an email with detailed vessel itineraries sent to a large group of unknown people or the full-scale subverting of a company’s IT system or the potential compromising of Automatic Identification System (AIS) and Electronic Chart

Display and Information System (ECDIS) systems on board ships. The number of potential risk scenarios is significant and keeps growing. Fraudsters employ whatever hacking technology works, often tailored to specific targets of opportunity.

Ships nowadays regularly use Global Navigation Satellite System (GNSS) and ECDIS combined with Automatic Information System (AIS) transponders. An attack on Global Positioning Satellites (GPS) systems could threaten a vessel not knowing their precise location at sea or while manoeuvring in port. Recently the USCG has issued a Safety Alert about disruptions in the GPS system due to loss of signal and how some ships while navigating within congested waters had to rely on alternate means of position fixing until the signal was resumed. These types of events highlight the potential detrimental impact to navigation caused by GPS interference or jamming and the importance in understanding how a vessel's equipment could be impacted. The heavy reliance on GNSS navigation and its vulnerability to malicious attack by cyber criminals has brought to fore the importance of re-learning celestial navigation as a back-up measure for mariners.

At PSL we have reviewed and found 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, we are 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 recorded two attacks last year by pirates in the Gulf of Aden, though fortunately no attempt was made to board the vessels.

The presence of international Navies and their patrolling the high risk areas, and the use of armed security guards on board, have 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 three reported 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, targeted vessels usually 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.

## **JOINT VENTURES:**

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

- **Southern LPG Pvt Ltd. (SLPG):** The process of closing down this entity is complete.
- **International Seaports (Haldia) Pvt Ltd:** This is now our only operational 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 3.02 million, which works out to about 148% of our original Investment made in years 2002-2003.

## **IN CONCLUSION:**

**Demand:** The environment for 2017 is going to be characterized by extreme volatility. Downside risks for 2017 will include, amongst others, Geopolitical tensions; China economically slowing down; China importing lower quantities of Coal and Iron Ore; BRICS, other than India, economically slowing down; The Euro zone economically stagnating; 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 2017 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 1.4 to 21 trillion; China importing more Iron Ore as they shift to higher grades of Steel production requiring better quality imported Iron Ore; China importing more Coal to reduce atmospheric 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 poor markets; Higher slippage rates due to poor markets; Higher scrapping rates due to poor markets; 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 Euro zone and Japan helping them to export their economies out of trouble. The ban imposed on Nickel and Alumina ores from Indonesia which robbed 2014 of a lot of cargoes has finally been reversed. We will have to see if China will switch from their existing suppliers back to their original supplier, Indonesia, and if so, it would negatively impact Panamax ships whilst positively impacting Ultras/Supras that have traditionally carried these cargoes from Indonesia. Time will tell if 2017 ends up being a pleasant surprise or be the source of more pain for the hapless dry bulk ship owners.

**Supply:** Under the current freight market conditions, approximately 20.3% (160.16 MDWT) of the existing world fleet that would be over 15 years of age during 2017 through to end of 2020 and should head for the breakers yards due to the upcoming expensive regulatory requirements and the current poor freight market.

With respect to the approximately 10.8% by DWT of new ships (85.22 MDWT) scheduled to be delivered to the end of 2020, the lack of funding coupled with delays in

deliveries at ship yards would subject them to a very high degree of slippage (it was 47.5% in 2016), higher than the average of 35% over the 2010 to 2014 period.

**Financing:** The year 2016 could be described for Shipping Companies (and their Banks) as the year of “Repair”. While the Banks started putting the lid on their “pretend and extend” policy they had adopted until 2015 by pulling the plug on many of their “non-performing” loans to “repair” their toxic Shipping Loan Books, Shipping Companies attempted to repair their capital structure by reducing leverage and/or raising equity which had been eroded by a number of consecutive years of losses and asset impairments. Apart from the need to repair their overleveraged capital structure, in order to make ends meet, practically all the Shipping Companies at least in our sector also had to frantically look for ways and means to repair their liquidity position by raising new cash to bolster their liquidity which had been virtually wiped out in the brutal market environment. The results of these repair efforts were rather mixed. While some of the companies managed this quite successfully by adopting one or more methods like new equity raising, issuance of bonds, new loans from Banks or sale of non-core assets, many companies failed in this regard and as we had feared, their failure resulted in many of them going into bankruptcy or at least some sort of financial restructuring which, in most cases almost totally wiped out their existing shareholders’ equity. The numbers that have come out in terms of financing in the industry exemplify the challenges and difficulties which led to those failures. The bank loans route yielded about USD 33 billion in the first nine months of 2016 as against about USD 49 billion raised in the same period of 2015. The full year bank borrowings of 2016 are estimated to be about USD 43 billion which would be a drop of about 39% as compared to the almost USD 70 billion raised through this source in 2015! Despite this big drop, this would still be 76% of the industry’s total financing done in 2016 which shows how much of a challenge it was to raise new cash through other means. When just over USD 6 billion was raised from the Corporate Bonds market in 2015 (the lowest ever since 2008), we thought we had reached a bottom for funds raised through this source in the current cycle. However, that was not to be as can be seen from the mere USD 4 billion raised through this source in 2016. Funds raised through the equity capital market route in 2016 (about USD 5.5 billion) were about 30% higher than that in 2015 (about USD 4.2 billion). However, the mere fact that about 30% more was raised from the equity market in 2016 than in 2015 should not be seen as an indicator of any buoyancy in the equity markets, but more as an indicator of desperate times which forced shipping companies to accept just about any price and terms as long as something was available through this route which served a dual-repair purpose of improving

both, their cash position as well as their capital structure, albeit in most cases, to the detriment of their existing shareholders whose equity was, to put it mildly, severely eroded.. All in all, perhaps the most challenging year in terms of financing in recent times if not the worst ever! (Source of all figures in this para: Marine Money).

Despite the slight uptick seen recently (late 2016/early 2017) in the freight market, we are not hopeful that 2017 would be any better for financing. Given that the Banks have by no means completed their “repair” exercise yet, Shipping Companies would probably continue to face the same challenges they faced in 2016 and consequently would have to look as intensively and as desperately for the “repair” routes as they did in 2016. So, expect more defaults, more restructurings and in the worst case, more bankruptcies. As the old adage goes, only the fittest will survive!

**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