MT2002 Shipping Economics- Nov/Dec'17

This paper required a lot of external general knowledge as seen from Q2 and Q4. The paper was more challenging as compared to previous years with major focus on tramp shipping. These are just guidelines and answers which I have written during the exam, if you have more to add, feel free to do so! ☺

1a)

This question wants general brief description on the freight market, second hand ship sale and purchase market as well as new building. You should mention 1) Brief description of what the market is about 2) Cashflow of the market 3) At which point is the market at its optimal

Ans:

Freight market: Shipowners contract to carry cargo for an agreed price per tonne. Inflow of cash to shipowner and outflow of cash by the shipper. Freight prices are the highest and prospering during the 'peak' period and lowest at 'recession' period.
S&P: This is the market for purchasing and selling ships. Inflow and outflow of cash to shipowners themselves. During the peak period, price of ships increases and less shipowners are willing to sell their ships as they want to optimize this period to make more profit. Recession → more ships are sold and at a very low price. **New building market:** Inflow of cash to shipbuiders and outflow of cash from shipowners. Peak period & recovery → more ship orders are requested by shipowners while during recession → less ships requested to be build.

1b)

For this question, note that it is focusing on 'second hand ship prices'. Also, it is important to apply concepts taught in 'shipping economics'. Mark allocation is 16, thus, we need at least 4-5 well elaborated factors with the application of models and concepts learned from the course.

Ans:

1) Freight rate: Freight rate and ship prices are directly proportional. When freight rate increases, ship prices increases as well. Thus, during the recovery or peak stage where freight rates are continuously rising, price of the ship increases as well.
2) Age of the ship: The older the ship, it incurs higher operative cost and it is less efficient, thus, the ship is listed on the market at a lower price too.
3) Future expectations: If there are predictions that the future market outlook is positive, with freight rate rising and expected economic growth, demand for second hand ships increases so as to be able to maximize growth

opportunities in the near future since waiting for a new build ship may be too long due to a time lag. Hence, if demand for the ships increases, price of the ship increases as well.

4) World demand: With economic growth and more cargo demanded from different parts of the world, shippers will need to charter more ships in order to meet their customer's demands. Thus, on the shipowner's side, he will demand more ships → price of second hand ship increases.
5) Supply of vessels: If supply of vessels are currently low, basic economic function of supply and demand shows that the price of vessels will increase. Moreover, if there is an oversupply of vessels, the price of vessels will decrease. (can draw the model out)

2)

This question requires A LOT of background information and general knowledge. You will need to analyse both the dry bulk and tanker market and match it up with relevant information in today's context which also means you need to analyze the strength and growth opportunities of today's economy to conclude on whether expanding your fleet is a good idea or not. Moreover, the parameters are set within the TRANSPACIFIC market.

Ans:

2017 Tanker market outlook: There is an overcapacity of tankers along with decreasing earnings in the past few years. Eventhough demand is getting stronger, the rate at which ships are built in light of the 2015 growth in earnings has outweighed that of the growth in demand. **Hence, in light of this piece of news, it is not a wise decision to expand the tanker fleet.**
https://www.bimco.org/news/market_analysis/2017/20170828_tankersmoo_2017-03

2017 Dry bulk market outlook: China's imports, particularly of coal and iron ore, grew tremendously in 2017, and the second half of the year has been profitable for several bulk owners and operators. Moreover, China's economic activity largely inflicts changes upon the BDI. With growing demand, freight indexes also increases. Hence, it is possibly profit making for large shipowning companies. **Hence, it is a wise decision to expand the dry bulk fleet.**
https://worldmaritimenews.com/archives/238769/bimco-dry-bulk-demand-to-outstrip-supply-in-2018/

Factor 1:

Transpacific market → Asia to America. What are the major economic impacts here in recent years? One prominent event is the One Belt, One Road initiative started by China. China has pumped in $40bn USD to improve infrastructure and efficiency along the transpacific belt to facilitate comprehensive development and better flow of traffic; more materials are required, energy as well etc → demand for dry bulk within transpacific region increases. https://www.mckinsey.com/industries/capital-projects-and-infrastructure/our-insights/one-belt-and-one-road-connecting-china-and-the-world

Factor 2:
Time lag: Building a ship requires a long time, if a new ship is build based on today's economy, chances are, when it arrives 3 years later, another stage would have commenced, different from what it was today. Therefore, if owner wants to expand its fleet, can make use of the S & P market instead to capture the market at that instant.

Factor 3:
Instead of expanding, can form shipping pools/ alliances. A Pool Charter is essentially a Time Charter with a floating charter rate. When the ship enters the Pool, its distribution key is agreed and this determines its share of earnings. Benefits and advantages of shipping pool: Ability to undertake CoA, diversification and risk spreading, EOS, secure cash flow even when vessels are unemployed. Living in this age of uncertainty and volatility, this would be a better idea. (list example of shipping pools and how they function)

Factor 4:
Instead of expanding, shipowner can use spot rate to seize the higher freight rates in the dry bulk market and charter the ship out using the higher rate to maximize their earnings. A balance of both is the best.

Factor 5:
Analysis of future outlook for both markets are very important as well. As a shipping economist, you must be far sighted, hence, purchase of new vessels cannot only be done just to seize the current market; must ensure that future outlook is bright as well, otherwise, there is huge capital cost incurred and potential losses in the future. Best is to strike a balance in all aspects – type of contracts (Spot, LT etc) and using the type of charter rate (spot or future forward rate), shipping pools → consolidation of cargo to maximize earnings.

3a)

Ans:

Nature of liner shipping: Oligopoly, fixed routes, specific vessels allocated and used, tight schedules to meet.

High capital cost is due to

1) Inability to meet demand in other new areas since liner shipping is often prescheduled and routinely operated around the same area using the same shipping routes, therefore, there is a need to build more ships as they cannot re-route ships to the high demand areas.

2) Since the ships are pre assigned and fixed, some ships are less than container load, thus, not maximizing its full capacity which it is supposed/ can carry.

3b)

Ans:

Private fund → Comes from earnings of remaining fleet of vessels, family, friends.

Bank loan → We are looking at the corporate loan. For large shipping companies, they prefer to borrow as a large company as it is more convenient for them this way.

Loan syndication → Large amount of loan is split into small packages and distributed around many banks, sharing the loan among a syndication of several banks. Advantage is to spread the risk with other banks and allow banks without expertise to appraise shipping loans and participate in the business.

Shipyard credit scheme → Provided to help with financing new ship, similar to financing 2nd hand ship except that capital cost is even higher and finance is needed before the ship is built. Credit analysis normally includes an assessment list with debt, cashflow, equity, management's expertise and integrity etc.

<u>Pre-delivery finance</u>: Down payment is needed for shipyard to purchase materials and pay salary. If pre delivery credit is arranged, purchaser makes first payment by own fund, while bank pays the remaining stages.

<u>Post-delivery finance:</u> Drawn on the delivery of the ship, government will offer a credit to attract ship owners in the form of government guarantee, interest rate subsidy or moratorium. Eg. Credit bank of Japan, KEXIM Bank in South Korea.

4)

This question is tricky, there are 2 parts to this question. The first part is 'describing the freight rate pricing in tramp shipping'. The other part is 'comment on the saying that 'baltic dry index' is not necessarily a reliable indicator of economic growth'.

Ans:

1st part: Explain the mechanism of freight rate pricing, that is, the model of demand and supply of commodities. Tramp shipping → perfect competition model, all players in the market know each others' prices, hence, low price setting ability. Price is determined by demand for commodities vs supply of vessels.

2nd part: True to an extent

BDI provides an assessment of the price of moving raw materials, eg. Iron ore, grains and coal, etc which function as the inputs to production of intermediate or finished goods, such as concrete, electricity, steel, food, etc. A good indicator of future global economic growth. BDI is extremely sensitive towards demand changes as supply changes are generally tight and inelastic. Marginal increases in demand can push the index high quickly vice versa.
Hence, even if there is only a slight increase in demand, the increase in BDI will be amplified due to the sensitivity of the BDI towards demand changes.

Moreover, BDI only takes into account dry bulk, not liquid bulk. Oil is a key commodity in many aspects of different industries, hence, the price of bunker is not taken into account if you use the BDI. (can further elaborate on how important oil is and its roles in several industries → link this with demand and supply model)

Port congestion: Even though there could be high demand for dry bulk and materials, the BDI does not take into account port congestion, which has adverse impact on economic growth. Port congestion slows down the berthing process of ships, causing a time lag of the arrival of dry bulk and goods. Eg. Philippines:
https://www.reuters.com/article/us-philippines-economy-port/philippine-port-congestion-is-hurting-the-economy-aquino-idUSKBN0H30O420140908

BDI places largest focus on Capesize and not the other smaller sized bulk carriers. BDI is calculated by the average of the other Baltic indexes, with Capesize (being the largest carrier), inflicting the greatest impact on BDI calculations. Hence, Capesize has greater 'influence' over this index as compared to handysize, handymax and panamax. This is NOT a good gauge.

BDI only takes into consideration the 22 major shipping routes in the world, NOT ALL shipping routes in the world. There are so many more shipping routes which are not covered, hence, we cannot say that it is entirely a reliable indicator.

There are other factors as well, do google search them and read up on it. Always remember that for 25 marks questions, we require at least 5 well elaborated points.
All the best for finals!

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