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STEEL AND TRANSPORT: ISSUES AND OUTLOOK

Note by SSY

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STEEL AND TRANSPORT: ISSUES AND OUTLOOK

Preface

1. This report examines the evolution of seaborne transportation costs for steelmaking raw materials (iron ore and coking coal) and finished steel products on principal shipping routes since the start of 2007. The report builds on SSY's previous steel and transport reports for the OECD, published at the end of 2004 and in early 2006. The past two years have seen freight rates rise to new record levels which eclipsed the previous highs set in 2004/05, before seeing an unprecedented slump as the effects of economic turmoil and recession start to bite. Markets have remained extremely volatile and in assessing the reasons for the volatility, the report includes an analysis of the supply and demand fundamentals along with an assessment of the outlook for 2009 and 2010.

Introduction

2. At the time of SSY's previous report on steel and transport to the OECD at the end of the 1q06, freight rates had come under negative pressure after rallying towards the end of 2005. However, demand growth prospects appeared positive for the remainder of 2006 and this forecast proved justified, with rates picking up from mid-year, eventually peaking towards the end of 2007 at new all-time highs far above the previous peaks. This was followed by a decline in rates of around 50% between mid-October 2007 and the end of January 2008, although this owed more to short-term disruptions in available cargo supply at key load areas rather than any fundamental weakening in demand. Once these logistical issues were overcome, rates rallied again, peaking at new record levels by the end of May.

3. A slowdown in chartering through the summer combined with an acceleration in fleet growth to cause freight rates to ease downwards. A key factor was the arrival of the Chinese Olympics in August, which led to a decline in China's industrial output as concerns over air quality led to the widespread enforced closure of factories in the Beijing area. Widespread expectations of a post-Olympics rebound in industrial activity proved mistaken. The severe downturn in the global economy, exacerbated by turmoil in the world's financial markets, has led to a collapse in steel demand which has pushed the dry bulk market to its lowest levels for 10 years.

4. Financial turmoil has also had the effect of disrupting the flow of trade as credit issues have hampered the chartering of vessels. The collapse of Lehman Brothers and subsequent banking paralysis has severely impeded the chartering activities of those buyers dependent on letters of credit.

5. Port congestion has also remained a key source of freight rate volatility, with periods of strong demand over the past two years seeing substantial volumes of available tonnage tied up as vessels are forced to queue at key load and discharge facilities. Over the past two years this has mainly affected the Capesize¹ sector, although a tightening in availability at the larger end of the size ranges has a knock-on

¹ 'Capesize' vessels are the largest size range for dry bulk vessels with capacity of upwards of 100,000 dwt. These vessels are employed on the mineral trades, with the main cargoes carried being iron ore and coal. Typical modern Capesize vessels have capacity of 150-190,000 dwt although the largest ships (of which there are relatively few) are above 300,000 dwt. These tend to be employed on dedicated iron ore trades.

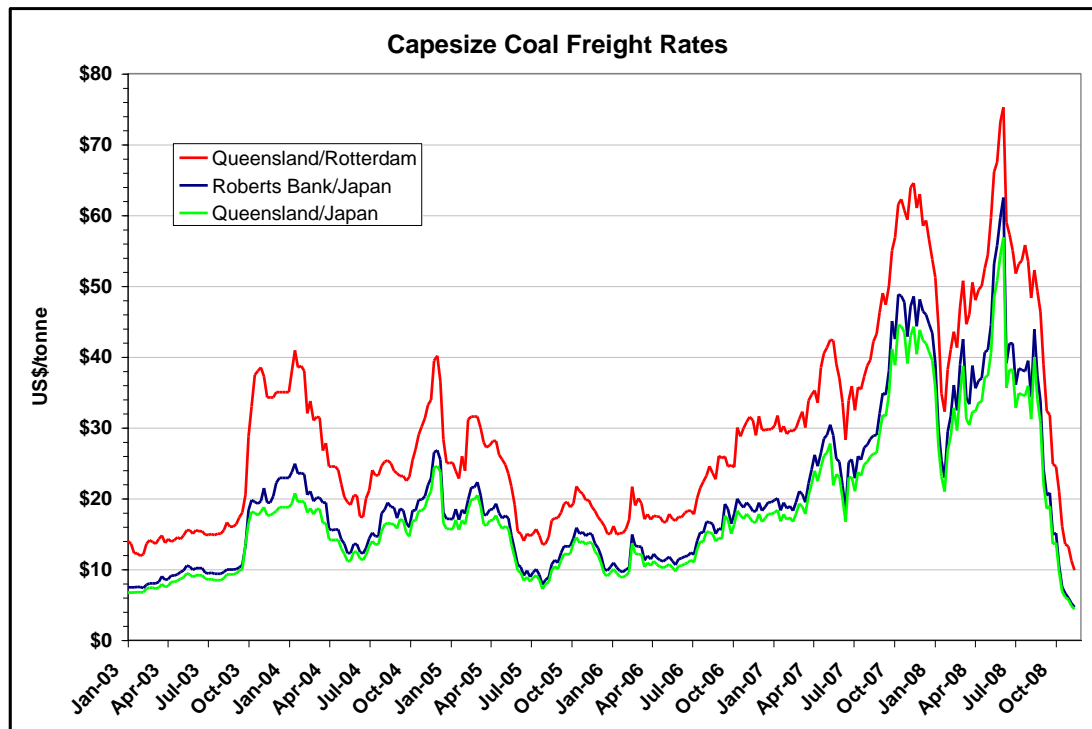
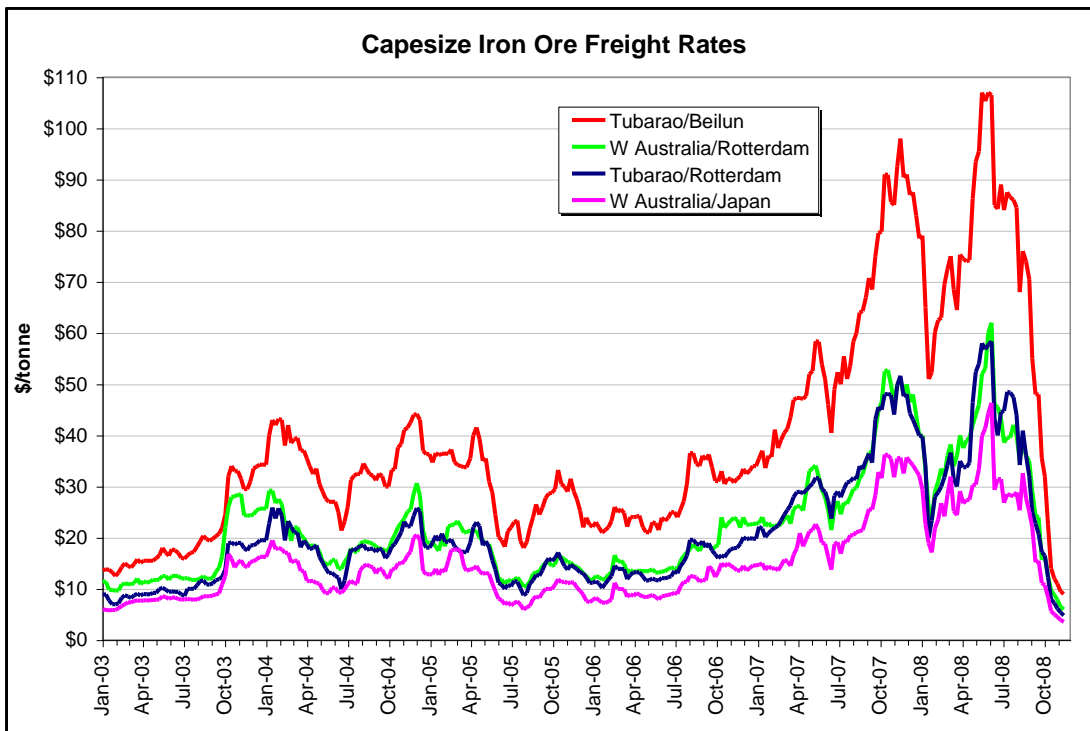
effect across the entire dry bulk fleet. The main areas that have been affected by port congestion have been Australia, Brazil and China. At the peak of the market in the second quarter of 2008, some 120 Capesize vessels, representing over 15% of the global fleet, were waiting to berth at ports in these countries. By early November that had fallen to just 51 ships, or 6% of the fleet, helping to loosen the overall tonnage balance.

6. The cost of dollar per ton cargo shipments has also been affected by falling world oil prices through the impact on bunker fuel costs. At Rotterdam the price of HFO soared to around USD 730/t in mid-July 2008 from USD 470/t at the beginning of the year and USD 250/t at the start of 2007. However, latest declines in oil prices have caused Rotterdam bunkers to plummet to close to USD 200/t by mid-November.

7. The effect of the development of freight market levels on the cost of transporting steelmaking raw materials can be seen in the accompanying charts. In the case of iron ore, Capesize spot freight rates from the Brazilian port of Tubarao to Beilun in China have averaged USD 60.20/tonne in 2007 and USD 66.40/t in the year to date. Since peaking at an all-time high of USD 107/t at the end of May 2008, this rate had fallen to USD 9.00/t by mid-November, its lowest level since September 2002.

8. Freight costs for coking coal have moved in a similar fashion. Capesize spot freight rates from Queensland, Australia to the Dutch port of Rotterdam have averaged USD 42.60/t in 2007 and USD 44.20/t in the year to date. The all-time record of USD 75.30/t achieved at the end of May 2008 has been followed by a slump to USD 9.90/t by mid-November, also the lowest level since September 2002.

9. The widening in freight differentials between fronthaul (*i.e.* Atlantic to Pacific) and backhaul (Pacific to Atlantic) trades remains a feature of the Capesize market. Brazil/Japan iron ore spot rates traded at an average premium to West Australia/Rotterdam of USD 10.00/t in 2006, USD 25.30/t in 2007 and USD 32.30/t in 2008 to date. When expressed in percentage terms, the differential averaged 62% in 2006, 75% in 2007 and 91% in 2008. The imbalance of mineral cargo flows between the two oceans has continued to grow, with fronthaul volumes expanding through Brazil's iron ore exports to Far East Asia. Meanwhile, Australian iron ore exports are increasingly targeted at this region at the expense of Europe, while for most of the past two years, shipments of Australian steam coal have been priced out of the European market. SSY estimate that the outflow of iron ore and coal cargoes from the Atlantic to the Pacific will exceed the inflow by over 100 Mt in 2008 compared to 93 Mt in 2007 and 70 Mt in 2006.



10. Seaborne transport costs for finished steel products have moved in a similar pattern to those for raw materials, as shown by the following examples of annual average freight rates for shipping steel coils:

Baltic/Black Sea - basis 30,000-tonne lots

2006 -	USD 59.00/tonne
2007 -	USD 76.00/tonne
2008 -	USD 110.00/tonne

Baltic-Continent / US Gulf - basis 10,000-tonne lots

2006 -	USD 63.00/tonne
2007 -	USD 80.00/tonne
2008 -	USD 105.00/tonne

Black Sea / US Gulf - basis 10,000-tonne lots

2006 -	USD 60.00/tonne
2007 -	USD 75.00/tonne
2008 -	USD 115.00/tonne

Demand: Current Situation/Recent Developments

11. Trade in the three major dry bulk cargoes² rose by an estimated 6.5% in 2007 following growth of 7% in 2006. SSY estimates a further slowdown, to 5.5% for 2008. While this represented another strong performance, most of the growth has been concentrated in the first half of 2008. The turnaround in the world's economic fortunes has been dramatic, with United States industrial production declining from a year-on-year growth rate of 2.3% in January to -4.5% in September. Eurozone growth has slumped from 3.9% as recently as April to negative growth since June, while Japan's industrial output growth fell from 2.4% in July to -6.9% in August. China's economy has also slowed, with year-on-year industrial output growth of 8.2% in October down from 17.8% in March, representing the lowest rate of growth since January 2004.

12. In addition to the near-term problems created by credit issues mentioned above, rapid falls in commodity prices, particularly those for steel, have encouraged commodity buyers to delay their purchasing and rely more heavily on de-stocking. International and Chinese steel prices have shown steep declines in recent months, as the chart below illustrates³. The previous downturn in world steel prices occurred in 2005, which led to rapid cuts in output by the major steel mills in order to support prices. The mills have once again reacted by slashing output, in some cases by over 30%, which has impacted on seaborne trade in iron ore, coking coal and steel.

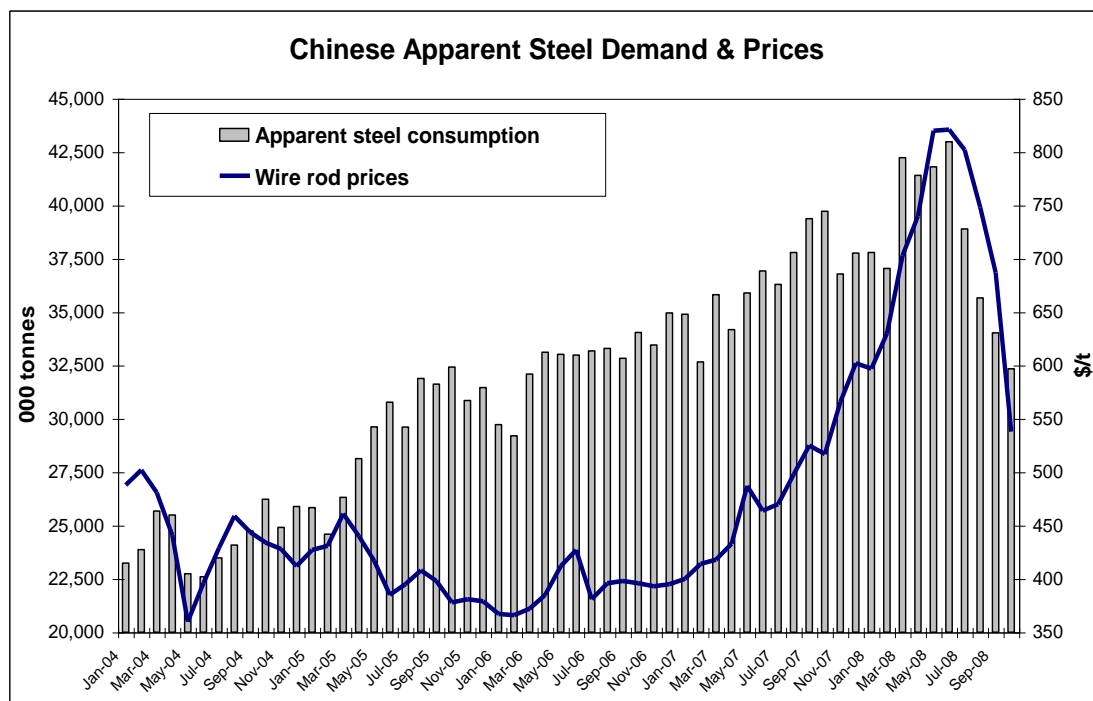
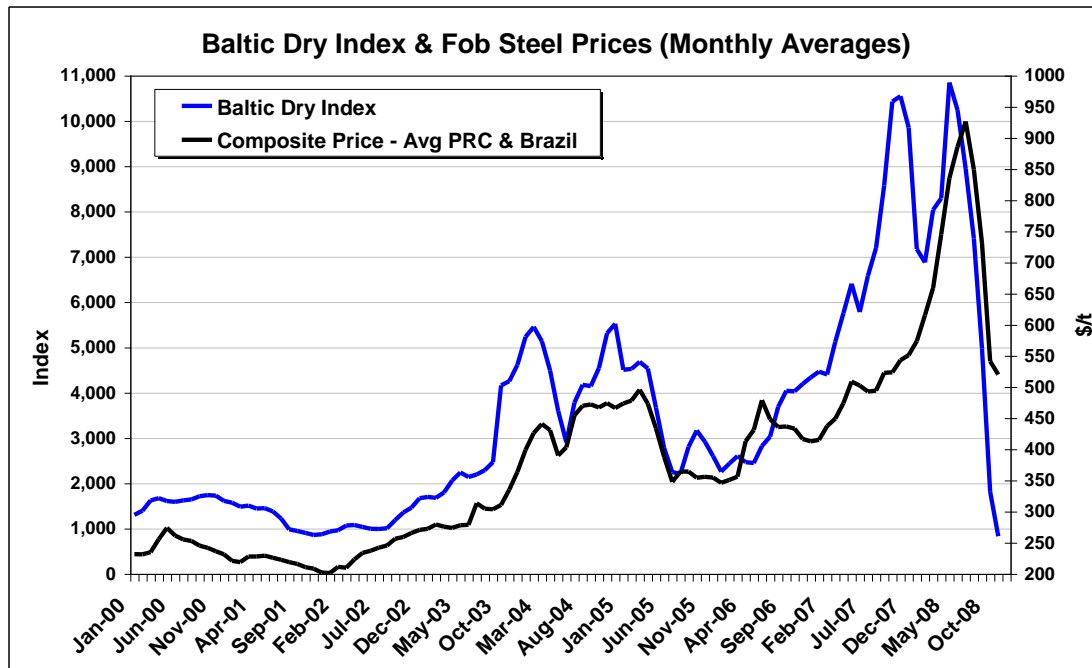
13. As explained in SSY's previous reports to the OECD, China has emerged in recent years as the single most important driver of dry bulk trade volumes. In 2007 the country's iron ore imports rose by 58 Mt over 2006 to total a record 384 Mt, representing almost 50% of global seaborne iron ore trade. As the chart below shows, China's apparent steel demand has been in decline since peaking in June, and in October hit its lowest level since March 2006. Monthly iron ore imports hit a record 43 Mt in April but subsequent months have seen lower imports as stockpiles at the country's ports have remained high, standing close to 75 Mt in November compared to 45 Mt at the start of the year. Exports on the key Capesize iron ore routes from Brazil and Australia have been impacted, as well as those from India, with the latter being to the detriment of Panamax⁴ and Handymax⁵ vessel demand.

² Iron ore, coal and grains.

³ The composite price indicator represents an average of spot prices for Chinese wire rod steel and Latin American slab. The Baltic Dry Index is a composite index of spot freight rates and usually moves in a similar fashion to steel prices.

⁴ 'Panamax' vessels range in capacity from 60,000 to 100,000 dwt.

14. The sudden collapse in dry bulk freight rates, with earnings levels offering little or no premium to operating costs, has led some shipowners to take their vessels off the market by putting them into lay-up and wait for an upturn, or even sell older ships for demolition.



⁵ 'Handymax' vessels range in capacity from 40,000 to 60,000 dwt.

Demand Outlook

15. In the current macroeconomic environment, with major uncertainties about the future strength of the world economy, demand forecasts are tentative and subject to material revision. Latest IMF projections show expectations for world GDP to decline from almost 4% in 2008 to just 2.2% in 2009. The developed economies face an even harder landing, with US GDP projected to contract by 0.7% in 2009, the EU area 0.5% and Japan 0.2%. By contrast, the Chinese economy is now expected to grow by 7.5% in 2009.

16. The negative outlook for the mature economies in 2009 implies that the dry bulk market will be even more heavily dependent on Chinese growth next year. Recent weeks have seen the PRC authorities take measures to ease bank lending, including cutting interest rates, alongside the announcement of an unprecedented USD 596 billion fiscal stimulus package. The government's pledge includes spending on construction of railways, roads and airports and is aimed at sustaining economic growth through 2010 as the authorities switch to a 'relatively loose' monetary policy.

17. In an effort to support the domestic steel industry, China has also confirmed that it will scrap export duties on hot rolled coil, plate, large sections, some narrow strip and a range of other steel products from the start of December. This follows attempts by the authorities to moderate steel exports, which peaked at 69 Mt last year, which boosted vessel demand for the transport of both raw materials and finished steel products. For 2008 on an annualised basis, steel exports stood at 65 Mt by the end of October. Despite the latest tax cuts, exports are likely to fall again in 2009 given the expected weakness in international demand.

18. Assuming some stabilisation in steel prices following the current period of de-stocking, we remain confident that China's long-term trend of urbanisation and industrialisation (see chart below) will continue. Our base case assumes some rebound in Chinese apparent steel demand in the second half of 2009, which would then lead to a pick-up in the country's iron ore import activity. For the year as a whole we forecast a rise of around 20-25 Mt in imports, with the growth concentrated in the latter months of the year, leading to an acceleration in demand growth in 2010. This assumes no major switch to the use of domestic iron ore supplies, which are of lower quality than imported ores and act as an extra pressure on the country's rail network.

19. With the other major steel-producing regions unlikely to add to their iron ore import demand next year, the leading exporting countries of Australia and Brazil are dependent on China to boost their shipments. Growth in Australia's exports is forecast at around 18 Mt for 2009, with Brazil forecast to ship an additional 10 Mt. This will be chiefly to the benefit of Capesize vessel demand. Indian exports, which have collapsed since peaking in the first half of 2008, currently represent the cheapest source of supply although expectations for a decline in Australian and Brazilian contract prices for fiscal 2009 should benefit these producers.

20. Led by Australia, iron ore mining companies have substantial plans for investment in new export capacity in the next few years. A report from Unctad's Trust Fund Project on Iron Ore in mid-2008 listed 600+ Mt/year of capacity to enter service between 2008 and 2010, of which they considered 336 Mt to be 'certain', with the majority concentrated in Australia and Latin America.

21. The risks to these forecasts are, however, exacerbated by the current depressed state of the steel and iron ore markets. The deep cuts in production implemented by major steel producers across the world have been accompanied by cuts in iron ore mining. Major miners in both Australia and Brazil have cut output and announced some delays to future investments. Nevertheless we are confident that available export capacity will be sufficient to meet any rebound in steel production.

22. This year's rises in steel output have helped to raise seaborne coking coal trade by an estimated 9 Mt, a slowdown from the 17 Mt growth seen in 2007. The slower rate of growth was partly due to disruptions to supply in the first quarter of 2008 as Queensland exports were hit by flooding. The weaker outlook for steel demand in 2009 implies a further slowdown, with growth currently estimated at just 4 Mt. Assuming a rebound in demand, trade is projected to accelerate by 20 Mt in 2010, with most of the growth in exports likely to come from the Australia. This is set to be supported by major expansion projects currently underway. Major markets for coking coal demand growth in the coming years are China, India and Brazil, fuelled by continued expansion in blast furnace steel production.

23. Steam coal demand has also been hit by the credit crunch and the resulting downturn in economic activity. Spot prices for steam coal from the South African export port of Richards Bay have fallen from the record level of almost USD 180/t in July to less than USD 80/t in mid-November, the lowest level for a year. SSY estimates growth in seaborne steam coal trade of around 14 Mt in 2008, down from over 23 Mt in 2007. The estimated rise of 20 Mt in 2009, and a further 30+ Mt in 2010, is dependent upon the continued higher import requirements of China, India, Taiwan and S Korea as well as to a lesser extent, Germany and Italy.

24. As with coking coal, Australia is set to remain the key focus of export growth for steam coal. Domestic requirements and infrastructure restraints have disrupted shipments from South Africa, Russia and Vietnam this year while Indonesia is not expected to sustain the high pace of export growth seen in recent years due to investments in new power station capacity. Rising domestic demand is expected to cause China to develop into a net importer of coal in the coming years, which should benefit vessel employment as Asian buyers of Chinese coal turn to more distant sources of supply.

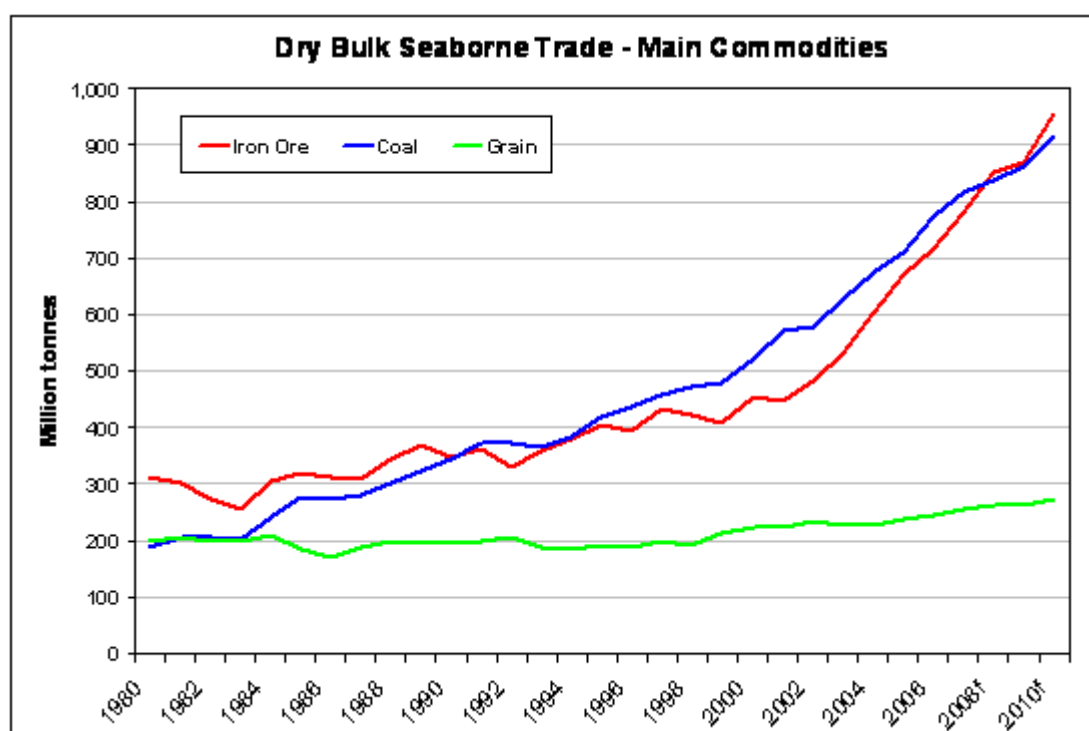
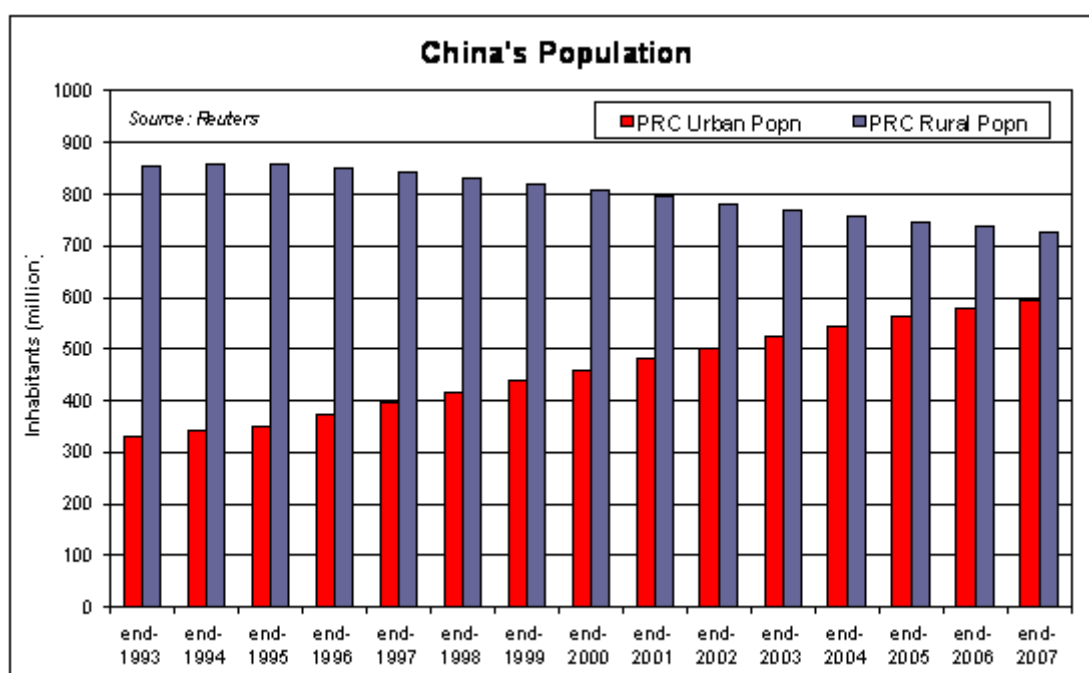
25. Trade in grain, the third major dry bulk commodity, is a less significant driver of vessel demand compared to iron ore and coal in pure volume terms (see chart below) as well as its relatively lower levels of dynamism. However, grain demand can act as an important seasonal driver of Panamax and Handymax demand, with the key trade in recent years being the rising soya exports from Latin America to China. For 2008, combined seaborne trade of soya, wheat and coarse grains is expected to grow by around 9 Mt, slowing to growth of around 5 Mt in 2009, largely due to lower United States export supplies. Beyond 2009, we expect seaborne grain trade volumes to trend higher but at a much slower pace than either iron ore or coal (*i.e.* 8-10 Mt/year).

Summary

26. From 6.4% 2007, annual growth in total dry bulk trade is estimated to have slowed to less than 5% in 2008, with most of the growth concentrated in the first half of 2008. For 2009, the more negative economic outlook implies a sharp slowdown in growth to less than 2%. This rests on China's ability to maintain its lead role as a generator of import demand through some recovery in its steel market.

27. In 2010 there is the prospect of a rebound in demand growth rates provided China's growth is supported by renewed strength in other countries. Clearly the longer the current credit-related issues and cuts in steel and iron ore production persist, the greater the risk of a weaker demand performance deeper into 2009.

28. The accompanying chart shows the long-term development of growth in the major cargoes, along with our estimates for the next two years and shows that, while there is likely to be some moderation in the pace of expansion, growth in iron ore and coal is still expected. By contrast, the contribution from grain is relatively modest in pure volume terms although it remains an important seasonal factor for Panamax and Handymax ship demand, particularly during the second quarter peak in Latin American exports and the fourth quarter rise in United States export activity.



Fleet Supply

29. Following delays to newbuilding deliveries, 2008 is likely to see a similar level of newbuilding arrivals to 2007 and 2006. Capesize arrivals are expected to be the lowest for three years, at a projected 8.95 Mdw, while forecast Panamax deliveries of 6.85 Mdw would be noticeably short of the total for 2006 (8.6 Mdw). In contrast, deliveries in the Handymax sector are set to reach a record 6.32 Mdw, while at 2.9 Mdw, Handysize deliveries are forecast to see the highest annual additions since the mid-1980s.

30. However, net fleet growth in 2008 has been boosted by the emergence of the tanker-to-bulker conversion projects, which, according to SSY's projections, will add 7.87 MdwT to the dry bulk carrier fleet in 2008. The inspiration for the current wave of conversions was the IMO's phase-out deadline for single-hulled tankers by 2010. Consequently, 32 tankers comprising 5.3 MdwT of capacity have entered the dry bulk fleet to date.

31. However, the collapse of the spot freight market combined with higher vessel earnings for oil tankers will deter further investment in such projects. SSY's expectation is that the fourth quarter of 2008 will witness the greatest number of completed tanker conversions, of around 2.65 MdwT. Subsequently, conversions in the whole of 2009 are currently thought to total just 4.13 MdwT, with weak trading conditions halting all further projects. Alternatives to ex-bulker conversion include converting to double hull, continued trading as oil tankers to and from countries that choose not to enforce the double-hull rules and even demolition.

32. In light of the vastly altered global financial environment, the onset of a very weak freight market and the prospect of recession affecting a wide range of leading economies, attention is focused on the impact of the record orderbook for 2009 and 2010. The orderbook currently stands at 286.5 MdwT, which represents a massive jump from the end-2006 total of around 81 MdwT. The biggest gain has occurred in the Capesize segment, where there is now more capacity on order (145.8 MdwT) than in the existing fleet. Some 55.9 MdwT is scheduled to enter the fleet in 2010 alone.

33. With such a large increase in scheduled deliveries over the next few years, the ability of shipyards to acquire sufficient steel plate, engines, cranes etc on a timely basis is being questioned. Furthermore, competition for such components – as well as skilled labour – has been intensified with sizeable orderbooks for oil tankers, gas carriers and containerships. The credit crunch and the resulting interruption to the normal flow of finance is creating fresh doubts over the funding of vessels and new yards.

34. While obtaining an accurate picture of future postponements and cancellations is impossible, by identifying yards with previous experience of delivering dry bulk carriers against those who are "new entrants" to bulker newbuilding, some idea of potential difficulties may emerge. SSY's analysis shows that Handysizes have the greatest share of orders at yards with no experience of building this size of bulker (around 70%). By comparison, just 30% Capesizes are being constructed at yards which are "new entrants" to dry bulk carrier building.

35. Chinese and South Korean yards account for the vast majority of the growth in the dry bulk carrier orderbook. Around 47 MdwT of scheduled bulker orders in 2010 are at yards in China compared with around 11 MdwT this year. More than 30 MdwT are on order at Korean yards for 2010 delivery as opposed to a mere 2 MdwT in 2008. In contrast, orders at Japanese yards have remained relatively steady, accounting for almost 15 MdwT of scheduled deliveries this year and rising gradually to 17 MdwT by 2010.

36. In contrast to previous years, the transformation in freight market conditions has made a revival in scrapping imminent. In the whole of 2007 less than 1 MdwT of fleet capacity was sold to the breakers' yards. The first nine months of 2008 also saw low levels of demolition activity, however, October saw a dramatic reversal of this trend with 0.7 MdwT sold for scrap (the highest monthly total since 2001/02).

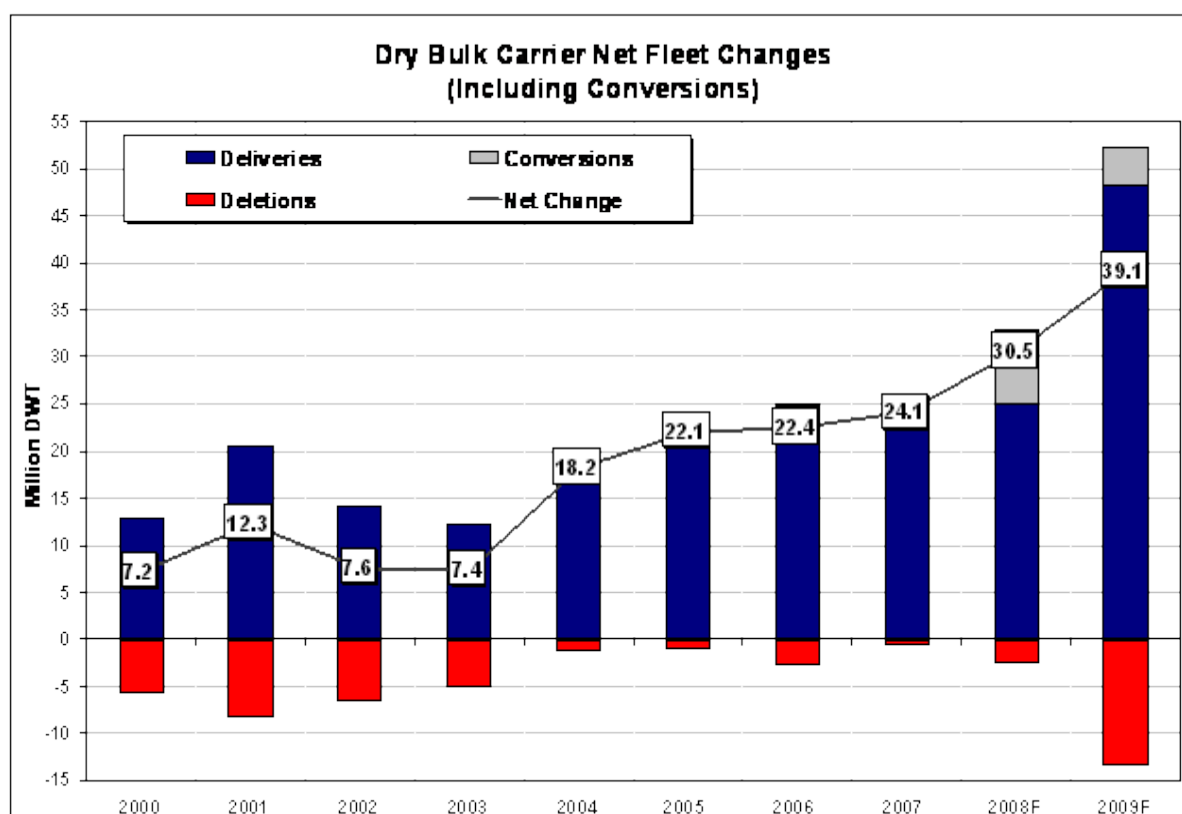
37. With vessel earnings around or below operating costs, the main limitations to demolition activity in the near term centre on three factors: (i) buyers' difficulties in obtaining letters of credit, (ii) plummeting steel scrap prices, which deterred buyers from committing themselves to acquiring scrap metal, and (iii) available demolition capacity.

38. Minimal scrapping during the freight market's "boom" years of 2003-08 (averaging 1.25 Mdw per year) has created a substantial "demolition pool" of ageing vessels. The Handysize sector has the largest amount of 25+ year old tonnage. Some 30 Mdw out of 77 Mdw (or 39%) of tonnage in this size range was built before 1984. For those charterers in the steel trades that cannot utilise the larger units, due to either port capacity constraints and/or cargo stem sizes, the ageing of this sector can only intensify their difficulties in securing modern tonnage.

39. Crucially, the Capesize segment, which, due to a record orderbook and tanker-to-bulker conversions, faces the greatest danger of oversupply, also has a smaller "demolition pool". Around 27 Mdw is at least 25 years old, representing only 19% of the Capesize fleet. The developments of the last few months have prompted SSY to raise its demolition forecast for 2009 to 13.22 Mdw.

40. As a result of these considerations, SSY forecasts net fleet change in 2008 at +30.45 Mdw compared with +24.06 Mdw last year. In 2009 we anticipate net growth of 39.13 Mdw. Another substantial rise in fleet growth is expected for 2010 although the potential for cancellations and delays is even greater.

41. A feature of the Capesize orderbook is the growing number of VLOCs (Very Large Ore Carriers of 300+ kdw). While 170,000-199,999 dwt vessels still account for the majority of the Capesize orderbook (97.2 Mdw), a significant number of 300,000+ dwt VLOCs (21.6 Mdw) are also on order. Due to port restrictions these ships will primarily trade between Brazil and China, with some tonnage employed from South Africa's Saldanha Bay to ports in East Asia.



42. Elsewhere, the emergence of Post-Panamaxes (85-99 kdw vessels) and Kamsarmaxes (82-83 kdw vessels) mean that 72% of ordered vessels in the Panamax size range have a capacity of 80,000+ dwt. The Handymax orderbook is now dominated by Supramax designs of 50,000+ dwt.

Dry Bulk Carrier Fleet by Size/Age (Million Dwt):

As at End-October 2008

Built/Dwt	10-39,999	40-59,999	60-99,999	100,000+	Total
Pre-1984	30.3	7.1	17.6	10.0	65.1
1984-88	16.7	11.1	9.8	16.7	54.2
1989-93	3.6	4.8	8.7	23.2	40.4
1994-98	9.5	16.7	22.0	26.5	74.7
1999-03	7.6	16.9	24.4	23.9	72.7
2004-08	9.2	23.8	33.9	43.1	110.0
Total Fleet	77.0	80.4	116.3	143.4	417.1
On Order	27.2	54.0	59.6	145.8	286.5
% of Fleet	35.3%	67.2%	51.2%	101.7%	68.7%
% of 20+ Yr Fleet	57.9%	296.7%	217.5%	546.1%	240.2%

Market Outlook

43. Record growth in total dry bulk trade of over 170 Mt, or over 6%, in 2007 led to record freight rate levels towards the end of the year and again in the second quarter of 2008 as demand overwhelmed available fleet supply and created high levels of port congestion. The sharp slowdown in the second half of 2008 has caused a crash in rates which has been unprecedented in both speed and magnitude.

44. An assumed easing in credit conditions in the coming months and a second half of 2009 improvement in global steel markets may support a revival in trade volumes and therefore see freight rates lifted from their current depressed levels. However, the projected acceleration in the rate of fleet growth means that the potential for a rally in rates is restricted.

45. Increased demolition should begin to tighten tonnage balances at the older end of the fleet, which would be especially significant for the Handysize sector. Cancellations to newbuilding deliveries in the coming years should help to reduce the size of the orderbook but at this stage it is impossible to predict exact numbers with any degree of certainty. The SSY base case is for substantial rises in fleet growth, from 7.1% in 2008 to 8.4% in 2009, with a further rise in growth in 2010. Despite our relatively confident outlook for demand growth rebounding to over 6% in 2010 after a slowdown to less than 2% in 2009, a prolonged period of fleet growth outpacing rises in demand looks assured.

46. Current long-term period rates and derivatives prices imply market expectations of relatively low freight levels in the next two years. Current one-year period time charter rates for Capesize tonnage of just below USD 20,000/day are at a premium to the current spot market while 5-year rates of USD 25,000/day imply some expectation of recovery from the current depressed levels. Freight Forward Agreement (FFA) prices are more bearish, with 2009 currently priced just above USD 18,000/day and calendar year 2010 higher, at around USD 22,000/day.

Implications

47. Charterers in the steel-related bulk trades have witnessed a sharp turnaround in freight costs over the past few months, with the latest slump providing some relief in an extremely challenging economic

environment. While there is a temptation in the short term to rely heavily on spot market freight, this may be an opportune time to secure at least a portion of freight market coverage for a longer period. While current period rates stand at a premium to the spot market, recent Capesize deals for one year have included a discount for the first period. Current period rate levels also represent a huge discount to the recent spot market highs, with the potential downside to these rates far outweighed by the potential upside risk of pure spot market exposure. With daily hire costs for a modern Capesize vessel having ranged from USD 3,500 to over USD 230,000 during the past few months, long-term charters can be very attractive for those companies looking to secure their future freight costs.

48. Current five-year rates may prove expensive in the near term if the market continues to be subdued. However, our expectations for (i) a rebound in demand growth beyond 2009 and (ii) increased scrapping of older vessels, imply that there remains the potential for some rebound in freight costs into the next decade. Locking in tonnage for five years guards against being hit by potential spikes in freight rates later in the period. Current ten-year rates of less than USD 30,000/day compare with the average for the past 10 years of USD 48,700/day. Locking in Handysize tonnage with period charters may prove an attractive option for those charterers concerned over their ability to secure modern tonnage in this ageing sector.

49. The freight futures market has grown in volume and liquidity since our last report to the OECD. The total value of dry bulk FFA (forward freight agreement) transactions is forecast to grow from an estimated USD 107 billion in 2007 to close to USD 130 billion in 2008. The speed of the latest crash in rates has raised concerns over counter-party risk and led to increased use of cleared trades as a safeguard. Recent levels of cleared dry bulk trades are estimated to have risen to as much as 85% of the market. One actively traded FFA route is Tubarao/Beilun, offering a paper hedge to those involved in the fronthaul iron ore trades.

50. Those companies active in seaborne trade of finished steel products also now have access to a Handysize futures market. The Baltic Exchange Handysize Index offers another tool for reducing charterer exposure to fluctuating freight costs.