Cycle Drivers In The Shipping Markets

Autumn 2003
Agenda

• Historical Overview
• Analysis by Market
• Summary
Cycles Across Market Sectors (1 Year TC Rates)

- Panamax Bulker (69,000 dwt)
- Aframax Tanker (98,000 dwt)
- Geared Containership (1500 TEU)
Performance Over Cycles


Strong Markets

Weak Markets

% p.a.

Bulker
Tanker
Feeder
What Drives The Cycle?

- Fleet Utilization Rate Is Key
- Fleet Utilization Rate = Dwt Demand/Fleet Size
- Fleet Size Easy To Measure
- Dwt Demand More Difficult
  - Closely Related To Tonne-Mile Demand
  - Fleet Productivity Also Plays A Role
Key Cycle Drivers, Part 1

- **Trade Demand**
  - Linked To Economic Activity
    - Booms Often Followed By Busts
  - Other Exogenous Factors
    - OPEC Policies In The Early 1980s
    - Japanese Nuclear Power Problems In 2002
    - Emergence Of China As Manufacturing Hub In 2003
    - Shift From Long-Haul Middle East Oil To Short-Haul Russian Supplies Likely In 2004
Key Cycle Drivers, Part 2

- Fleet Developments
  - Over-Ordering A Perpetual Problem
    - Delivery Lag Of 2-3 Years Results In Delayed Feedback
  - Scrapping Helps Balance Market
    - Low Freight Rates Lead To Increased Activity
    - Regulations Also Have Impact
World Economic Growth

- **Early 80s:** Global Recession
- **1991-92:** OECD Recession
- **1997-98:** Asian Crisis
- **2003:** Chinese Boom
### Global GDP/Trade Link

<table>
<thead>
<tr>
<th></th>
<th>1990-2002</th>
<th>2003 (Thru Sept)</th>
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<tbody>
<tr>
<td>Economic Growth</td>
<td>3.1%</td>
<td>3.1%</td>
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<tr>
<td>Oil Trade</td>
<td>2.8%</td>
<td>4.1%</td>
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<tr>
<td>Dry Bulk Trade</td>
<td>2.7%</td>
<td>5.1%</td>
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<tr>
<td>Container Trade</td>
<td>6.5%</td>
<td>10.5%</td>
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China Becomes Global Manufacturing Hub

- Takes In Large Amounts Of Raw Materials
  - Oil, Iron Ore, Steel Imports Soar

- Adds Cheap Labor

- Churns Out Huge Volume Of Finished Goods
  - Exports Up 34% In First Half Of 2003 (In $)

- Shipping Demand Skyrockets
  - Bulkers & Tankers Boosted By Import Activity
  - Containership Market Driven By Exports
China Spurs Shipping Boom:
Growth From 02Q1-03Q1

- Dry Bulk Import Growth: China 38%, Rest of World 2%
- Oil Import Growth: China 50%, Rest of World 3%
- Container Export Growth: China 40%, Rest of World 9%
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  – Bulker
  – Containership
• Summary
Tanker Market Cycles

- Post Iranian Revolution Era: High Oil Prices
- 1990: Tanker Orderbook Exceeds 15% of Fleet
- End 1997: Orderbook Exceeds 15% of Fleet
- 1999: OPEC cutbacks
- End 1985: OPEC Expands Output, Oil Prices Tumble
Tanker Demand

1980-1986 (8%) annual decline
1986-1993 7% annual growth
1993-2000 2% annual growth
Tanker Demand By Importing Region

- North America: 30%
- OECD Europe: 19%
- Developing Asia: 27%
- Japan: 15%
- Other: 9%
- Japan: 15%
- North America: 30%
- Developing Asia: 27%
- OECD Europe: 19%
- Other: 9%
Rates and Orderbook

![Graph showing Aframax TC Rate and Orderbook / Fleet Ratio over time]

- Aframax TC Rate
- Orderbook / Fleet Ratio (right axis)

USD/Day vs. Years (1980-2000)

Ratios (0% to 21%)

- 0%
- 3%
- 6%
- 9%
- 12%
- 15%
- 18%
- 21%
Scrapping Adjusts To Rates

The graph shows the relationship between Aframax TC rates and scrapping rates as a percentage of the fleet over the years from 1980 to 2000. The horizontal axis represents the years, while the vertical axis measures USD per day for Aframax TC rates and scrapping rates as a percentage of the fleet. The graph indicates fluctuations in both metrics over the period.
Summary: Tanker Cycles

- Structural Changes Instrumental in Shaping the Cycles:
  - Single Commodity Increases Potential For Volatility
  - OPEC/non-OPEC Split An Important Factor
- Orderbook Provides Early Warning Signals
- Scrapping as an Adjustment Mechanism
  - Regulatory Changes Also Affect Scrapping
Tanker Market Outlook

• Orderbook Currently at 24% of the Fleet
  – Deliveries Likely to Be Very High Thru 2006
• Europe Accelerates Ban On Single-Hulls
  – IMO Likely To Follow Suit
  – High Scrapping As A Result
• Fleet Likely to Grow by 2.5%/Year thru ‘05
• Can Demand Match this Pace?
  – Not Likely, Due To Rising Short-Haul Supplies
  – But China Is A Wild Card
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Dry Bulk Market Cycles

1983-1984: Surge in Ordering

1986-1989: Strong Economic Growth/Limited Ordering

1995: Dry Bulk Orderbook at 13% of Fleet Capacity

1998: Asian Crisis
Dry Bulk Trade

1980-1998
2% average annual growth

OECD Recession
Low Soviet Grain Imports
OECD Recession, Collapse of Russian Grain Imports
Strong Asian Imports
Asian Crisis

Tonne-Miles (billion)


Dry Bulk Tonne-Miles — Trend 1980-1999
Dry Bulk Demand By Importing Region

- Developing Asia: 30%
- Japan: 22%
- OECD Europe: 26%
- North America: 5%
- Other: 17%
Dry Bulk Demand By Commodity

- **Steel-Related**: 39%
- **Steel Products**: 8%
- **Steam Coal**: 18%
- **Grain**: 15%
- **Other**: 20%
Ordering Behavior

Panamax TC Rate vs. Orderbook / Fleet Ratio (right axis)
Summary: Dry Bulk Cycles

- Demand Forecasts Challenging Despite Steady Long-Term Trend:
  - Industrial Commodities (Steel Generates ~50% Of Demand)
  - Energy Related Commodities (Steam Coal)
  - Grains and Foods

- Ordering Instrumental in Shaping the Cycles:
  - Ordering Anticipates Demand Growth
Dry Bulk Market Outlook

- Orderbook Currently At 14% Of Fleet Size
- Fleet Growth Projected to Average 3%/Year thru 2005
- Trade Demand Projected To Grow More Slowly
- China Is The Key
  - Slower Growth In Steel Production Expected
  - But Lots Of Upside Potential
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Containership Market Cycles

1980-1986: Limited Fleet Growth

1986-1990: Fleet Growth Outpaces Demand by 2:1 Ratio

1990-1995: Decline in Trade Barriers / Orderly Fleet Expansion

1995-1998: Surge of Fleet Capacity

1999-2000: Limited Fleet Expansion

TC Rate, Geared 1000 TEU Containership
Containership Trade (TEUs)

1980-2000
7.2% average annual growth

Total Trade (left axis, TEUs)
1980-2000 Trend
Annual Volatility (right axis)
Container Demand By Region

- Developing Asia: 25%
- Europe: 23%
- North America: 23%
- Japan: 8%
- Other: 21%
Ordering Behavior

USD/Day

TC Rate, Geared 1000 TEU Feeder   Orderbook / Fleet Ratio (right axis)
Scraping remains Insignificant

Total Deliveries, Cellular Fleet
Total Scrapping, Cellular Fleet
Containership Cycles: Summary

- Structural Changes Play Key Role:
  - Trade Deregulation and Globalization
  - Technology (Information Systems, Large Ships, Terminals, Infrastructure)
  - Reshaping of Liner Industry (Deregulation/OSRA)
- Ordering Instrumental in Shaping the Cycles
- Scrapping Has Had Very Limited Impact
Containership Charter Market Outlook

- Orderbook Has Risen To 30% Of Fleet Size
- Fleet Growth Projected to Average 9%/Year during next 2 Years
- Demand Projected To Grow By Only 7.5%/Year
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Summary: Key Factors To Watch

• Global Economic Growth
  – Is Chinese Economy Overheating?

• Structural Changes
  – Will Protectionism Reverse Trade Gains?
  – OPEC vs. Russian Oil

• Always Pay Attention To Orderbook
  – Quite High Right Now
  – Scrapping Will Respond To Rates/Regulations
Looking Ahead: Marsoft Outlook As Of 03Q4

Panamax Bulker
Aframax Tanker
1500 TEU Containership