

Long Term Trends in Shipbuilding

HVB Press Conference

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Topics Covered

Introduction	p1
Background to Shipbuilding Investment	p1
The Current Orderbook	p3
The Product Mix	p3
Regional Shipowner Activity	p5
The German Shipowner Market	p6
Regional Shipyard Activity	p7
German Shipbuilder Market	p8
Shipbuilding Price Development	p10
Market Outlook	p10
Methodology behind data	p12

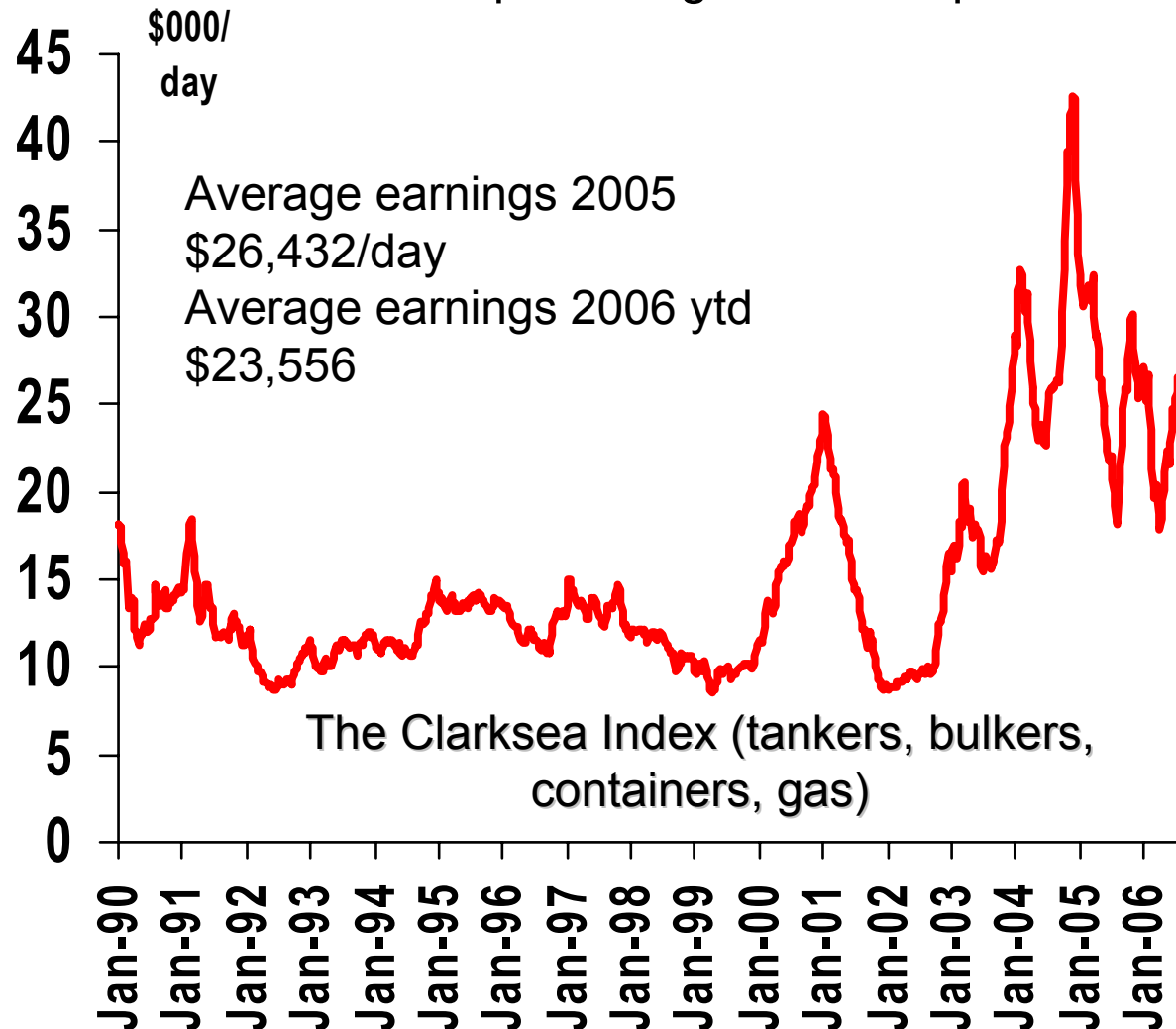
Introduction

- In the last two decades of Shipbuilding's long history, over supply, closures & poor profitability have dominated.
- Fast forward to 2006 and the shipbuilding industry is enjoying its biggest and longest boom on record.
- The orderbook has a current contract value of \$264 billion!
- This is the investment that is at the heart of the shipbuilding business – shipyards, marine equipment, financiers, class societies and brokers all after their slice.

Q: Where has newbuild investment come from? A: Ship Earnings

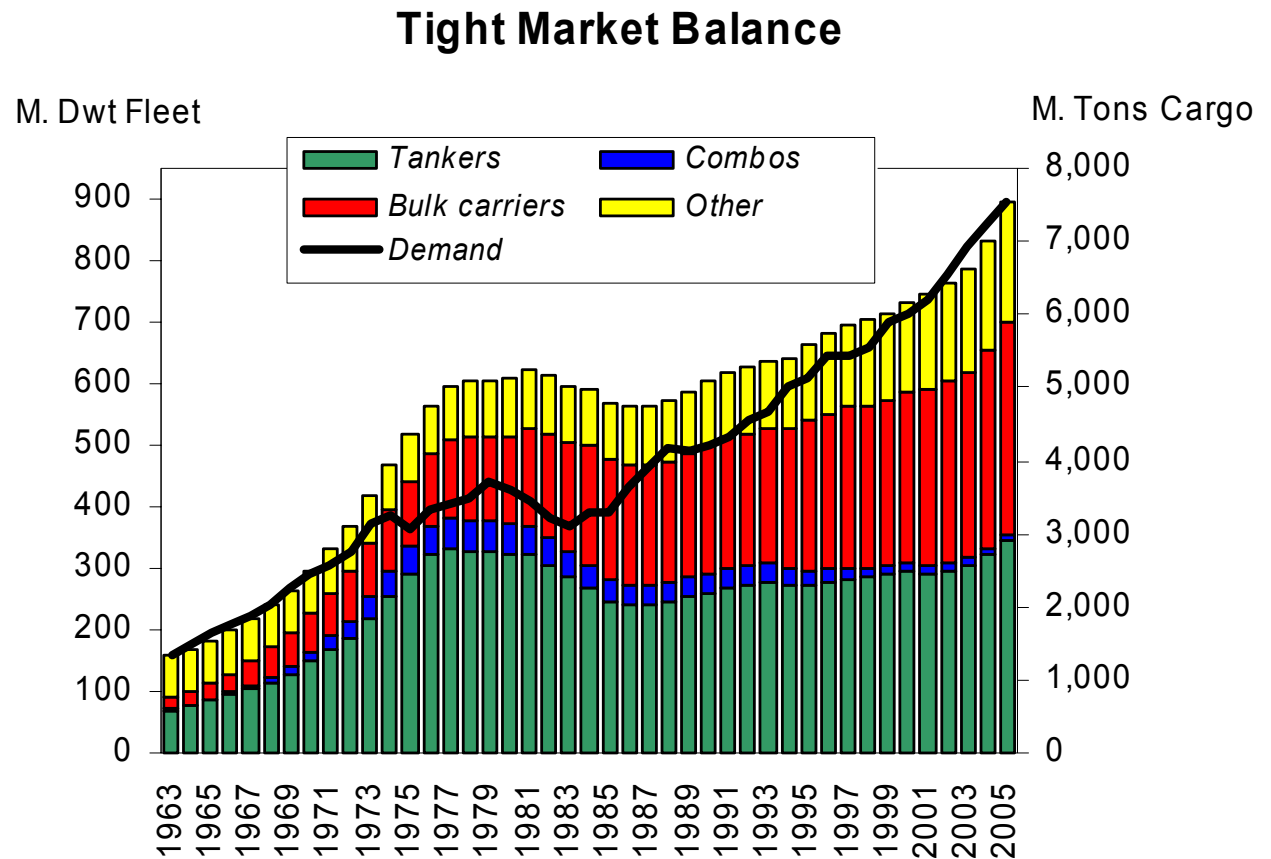
Ship Earnings 1990- Sep 2006

- The Clarksea Index averaged \$12,000/day in the 1990s.
- In November 2004, it surged to a new peak of \$42,700/day.
- After dipping in the Spring of 2006, it was the strongest August on record.
- 15th Sep 06:
\$26,942



Why have freight rates been so high?

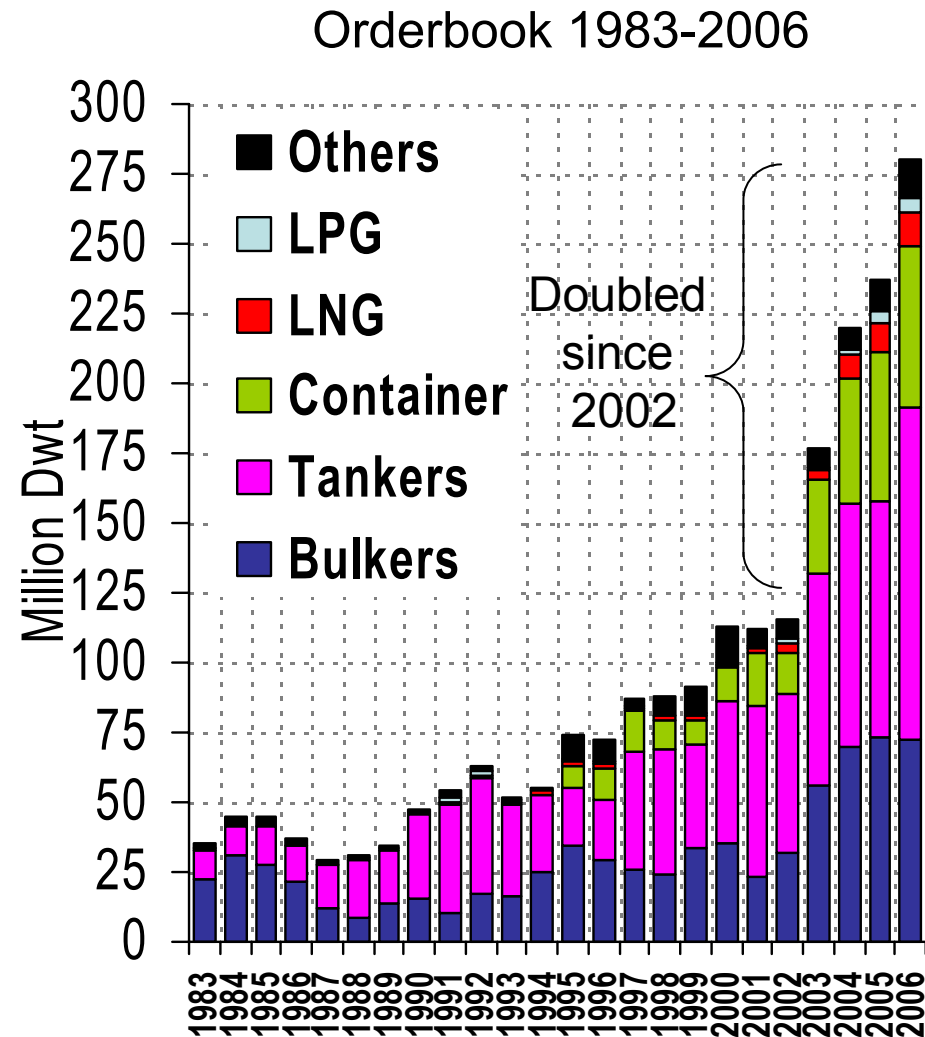
- Underlying balance is tighter
- Markets are more responsive to various factors which have “primed” the market
- Surging world economy, China, tanker phase out
- “Wild Cards”
- Net Result – higher earnings, more bullish sentiment, more newbuild investment



Source: Clarkson Research Services

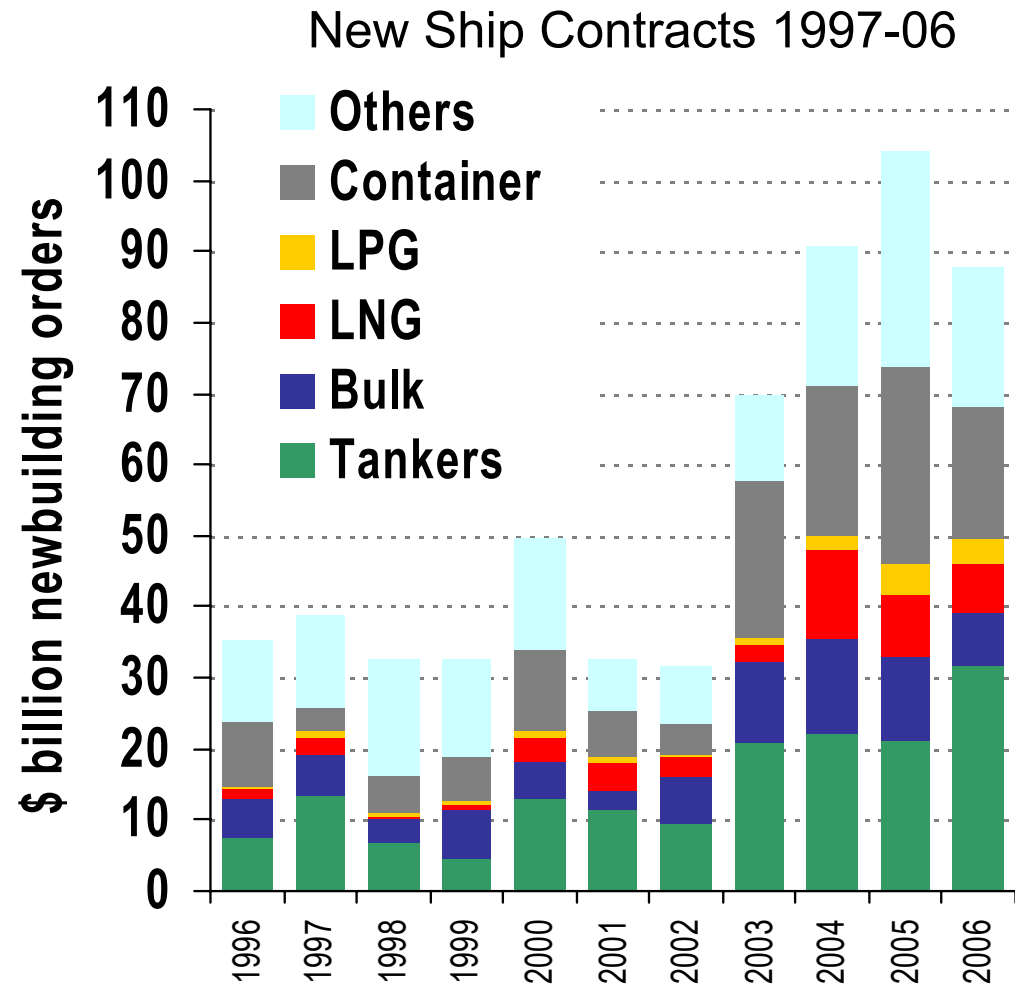
World Orderbook tops 280 m dwt

- Since 2002 the orderbook has jumped from 115.5m dwt to 280.0m dwt
- Orderbook is now 28.4% of the fleet, historically very high
- Biggest increase in 2005 in LNG, LPG & containers



Newbuilding Contracts Concluded

- Until 2003 investment was running at just over \$30 billion a year
- In 2004 \$91 billion of new ships ordered
- In 2005 \$104.1 billion of new contracts and another \$88.0 billion in the first eight months of 2006
- About half of this investment goes to Marine Equipment Suppliers



Product Mix of Builders

- After three years of containerships being the biggest investor, in 2006 it is tankers.
- The four “pistons” of the market have all been strong
- Small ships and “others” came later in the boom.

Top Ship Types on Orderbook (Ranked by \$m Investment)

Rank	Ship Type	Nos	cgt	Investment (\$m)
1	Post Panamax Containerships >4,000 TEU	288	16,529,022	28,335
2	Liquid Natural Gas Carriers	141	11,872,569	28,232
3	Handy Products Tankers (10 - 60,000 dwt tonnes)	493	8,763,343	18,707
4	Panamax Containerships >3,000 TEU	304	9,278,306	18,187
5	VLCC Tankers (200,000 + dwt tonnes)	146	6,841,874	15,781
6	Cruise Vessels	30	3,890,661	14,837
7	Offshore Vessels	305	2,454,112	11,541
8	Aframax Tankers (80-120,000 dwt tonnes)	192	5,125,596	11,111
9	Handy Chemical Tankers (10 - 60,000 dwt tonnes)	364	4,330,578	10,186
10	Capesize Bulkers (100,000 + dwt tonnes)	145	4,427,511	9,051
11	Handy Containerships 1-2,000 TEU	303	3,809,290	8,555
12	Pure Car Carrier > 5,000 dwt	151	4,586,727	8,264
13	Sub-Panamax Containerships 2-3,000 TEU	183	3,896,928	8,242
14	Panamax Bulkers (60-100,000 dwt tonnes)	234	4,539,715	7,980
15	Handymax Bulkers (40-60,000 dwt tonnes)	245	4,010,024	7,141
16	Panamax Tankers (60-80,000 dwt tonnes)	139	3,107,035	6,624
17	Miscellaneous Vessels	29	895,792	5,681
18	Very Large LPG Carrier (60,000 + cu. m.)	60	1,934,100	5,073
19	Handysize Bulkers (10-40,000 dwt tonnes)	217	2,375,221	4,826
20	Multi-Purpose > 5,000 dwt	285	2,491,475	4,761
	Others	1,132	12,209,259	30,763
	Total	5,386	117,369,138	263,880

Source: Clarksons World Shipyard Monitor & Other Research.

Data applies to vessels >2,000 GT

Regional Ship Owner Activity

- The orderbook of 5,836 vessels is shared between 770 owners from 61 countries.
- 57 companies have orderbooks over \$1 billion.
- Japan and Germany top orderbook investment with \$36.9bn and \$33.5bn respectively.

The Top Investors by Owner Country (World Orderbook by \$m investment)

Rank	Owner Country	Nos	cgt	Investment (\$m)
1	Japan	644	18,289,842	36,859
2	Germany	963	17,089,474	33,489
3	United States	126	6,490,643	21,415
4	Greece	430	8,929,594	18,784
5	Norway	317	5,650,834	16,925
6	Denmark	246	6,059,898	12,423
7	China P.R.	211	5,589,316	12,072
8	Italy	174	4,672,183	11,088
9	South Korea	130	3,133,033	6,662
10	Hong Kong	130	3,038,969	5,976
	Others	2,015	38,425,352	88,186
	Total	5,386	117,369,138	263,880

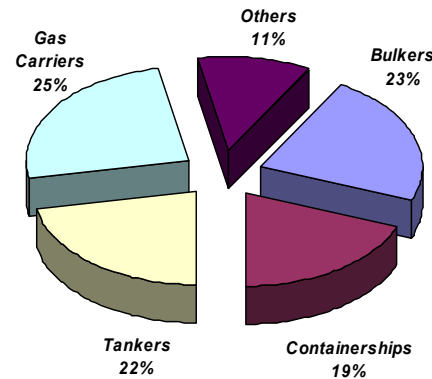
Source: Clarkson Research 1st August 2006.

Data applies to vessels >2,000 GT

Regional Activity

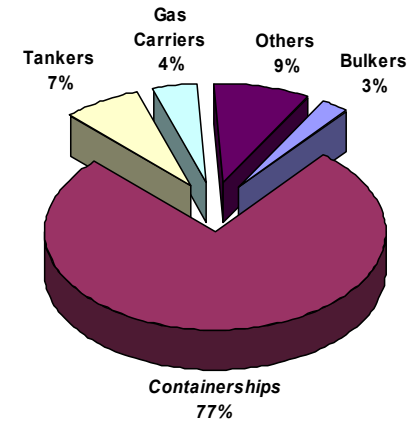
- The 4 major investors in cargo shipping (we have ignored the US because of Cruise investment) have different investment portfolios.
- Japanese investment portfolio mixed while Germans dominated by containerships (77%), Greek by tankers (53%) and Norwegian by others (56% - including offshore and PCC).

Japanese Owned Orderbook Investment by Vessel Type (\$36.9bn)



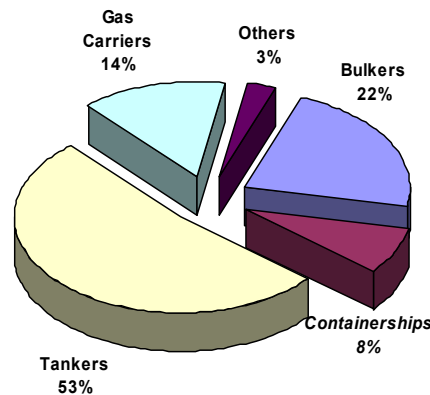
Source: Clarkson Research Services

German Owned Orderbook Investment by Vessel Type (\$33.5bn)



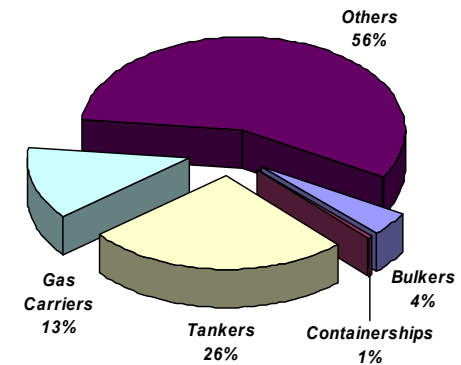
Source: Clarkson Research Services

Greek Owned Orderbook Investment by Vessel Type (\$18.8bn)



Source: Clarkson Research Services

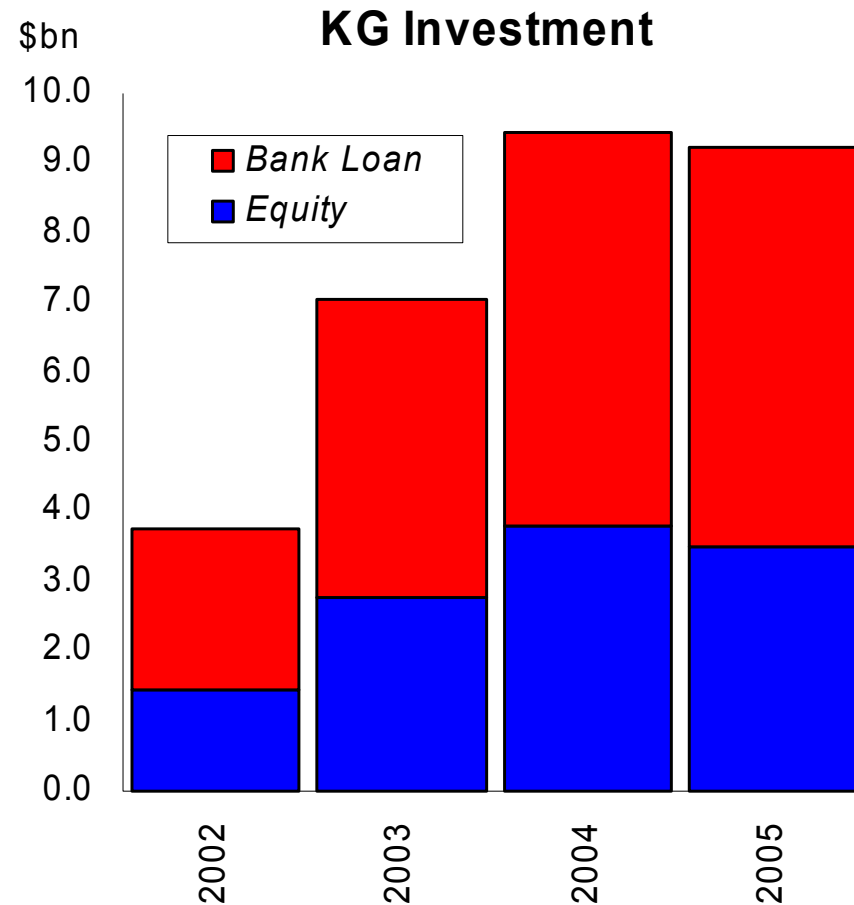
Norwegian Owned Orderbook Investment by Vessel Type (\$16.9bn)



Source: Clarkson Research Services

German Ship Owner Activity

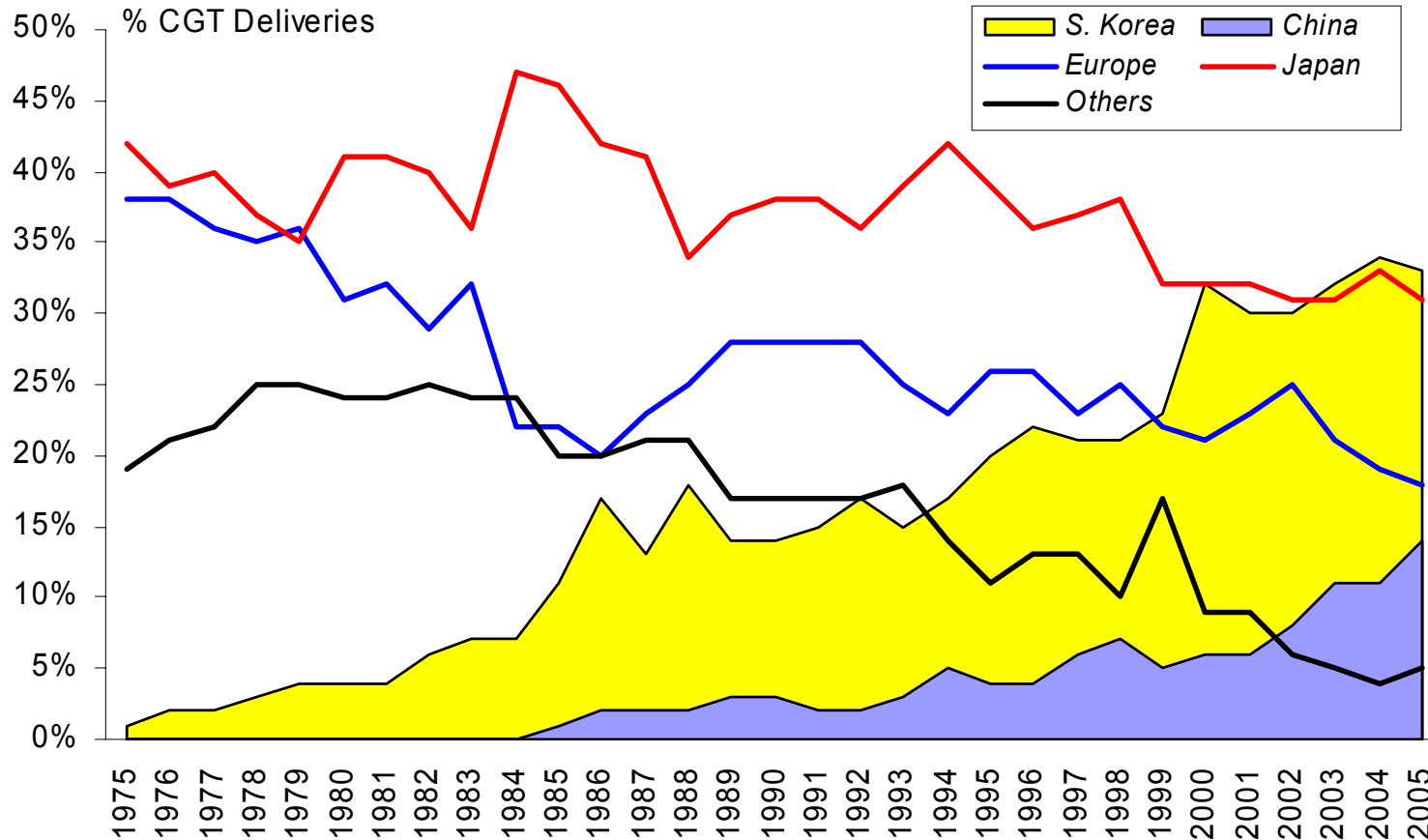
- German owners have been the second largest investors in the shipbuilding orderbook.
- Expansion of investment in Germany has been driven by ability of owners to access funds available from individual private investors through the use of KG finance.



Source: Clarksons KG Shipping & Finance 2006

World Shipbuilding: Shares of Deliveries

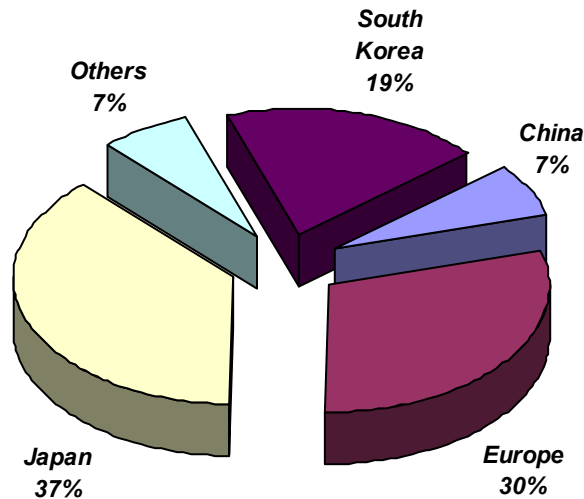
Global Shipbuilding "Capacity" Shares



Source: Clarkson Research Services

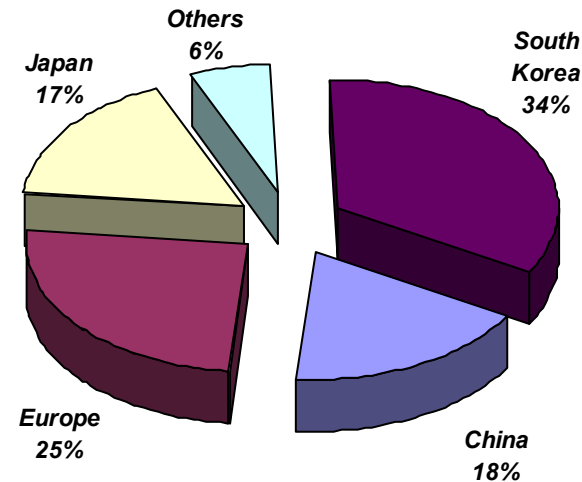
Regional Shipyard Activity

Global Investment by Builder
Region 1996 (\$34.1bn)



Source: Clarkson Research Services

Global Investment by Builder
Region 2005 (\$100.8bn)



Source: Clarkson Research Services

- In 1996 investment was predominantly in Japan (36%) and Europe (30%)
- By 2005 the leaders are Korea (34%) and Europe (25%).

German Shipyards

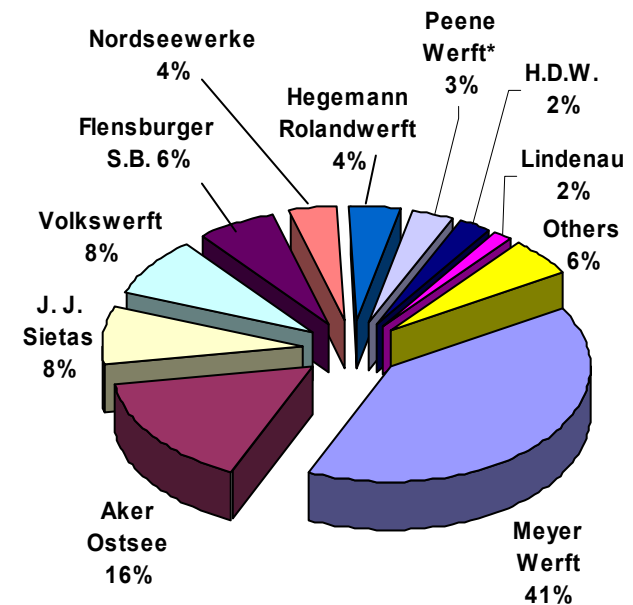
Orderbook at German Yards (by CGT)

Rank	Yard	Nos	Cgt
1	Meyer Werft	18	1,147,478
2	Aker Ostsee	38	665,853
3	J. J. Sietas	41	429,499
4	Volkswerft	16	385,320
5	Flensburger S.B	12	237,581
6	Nordseewerke	9	222,940
7	Hegemann Rolandwerft*	23	203,818
8	Peene Werft*	13	176,117
9	H.D.W.	6	131,957
10	Lindenau	5	98,235
	Others	29	282,195
Total		210	3,980,991

Source: Clarkson Research 1st August 2006. Data applies to vessels >2,000 GT

*Part of Hegemann Group

Investment at German Yards
(Current Orderbook - \$11.6bn)

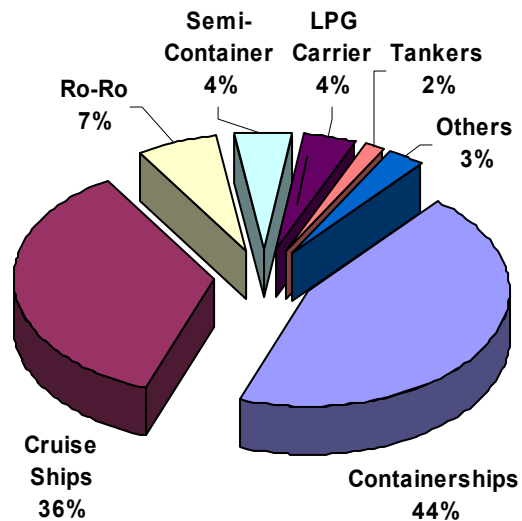


Source: Clarkson Research Services

Note: Excludes Military, Small Ships and Super yachts

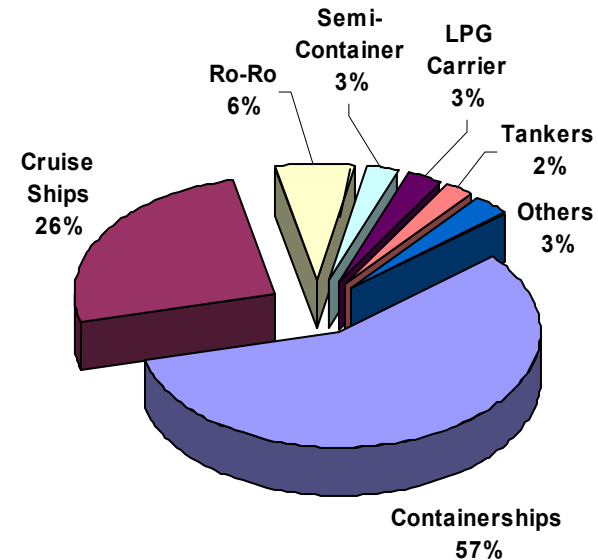
German Shipyard Activity

German Orderbook by
Investment (\$11.6bn)



Source: Clarkson Research Services

German Orderbook by
Tonnage (3.98m CGT)



Source: Clarkson Research Services

- Recovery in Europe came later than the Far East. Three years of solid investment.
- In 2002, German yards took \$978m, in 2003 \$2 billion and in 2005 \$7.7 billion.

Reported Newbuilding Prices

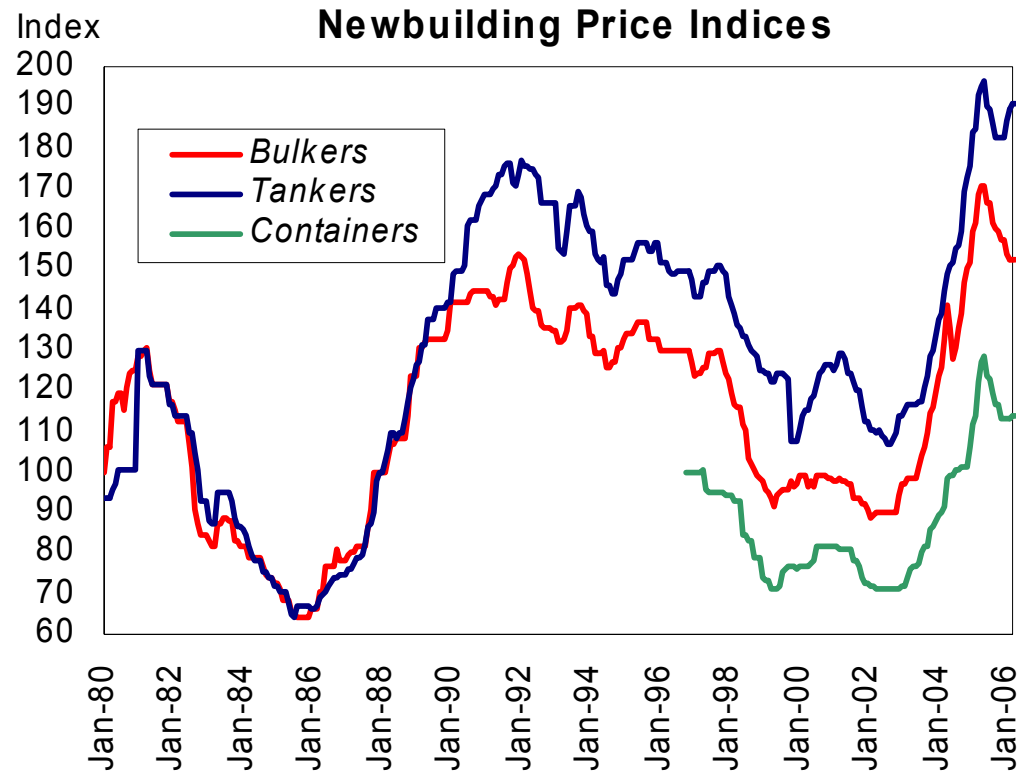
Bulk Vessel Prices...		Price \$ million, end:								Price Trend Against a		
		1998	1999	2000	2001	2002	2003	2004	2005	2006*	Year Ago Is...	
VLCC	300,000 dwt	72.50	69.00	76.50	70.00	63.50	77.00	110.00	120.00	126.00	STEADY...	1.2%
Suezmax	150,000 dwt	44.00	42.50	52.50	46.50	43.75	51.50	71.00	71.00	79.00	FIRMER...	5.3%
Aframax	110,000 dwt	34.50	33.00	41.50	36.00	34.75	41.50	59.00	58.50	64.00	FIRMER...	5.8%
Panamax	70,000 dwt		31.00	36.00	32.00	31.25	37.50	48.00	50.00	54.00	FIRMER...	5.9%
Handy	47,000 dwt	26.00	26.00	29.50	26.25	27.00	31.50	40.00	43.00	46.50	FIRMER...	5.7%
Capesize	170,000 dwt	33.00	35.00	40.50	36.00	36.25	48.00	64.00	59.00	62.00	STEADY...	0.0%
Panamax	75,000 dwt	20.00	22.00	22.50	20.50	21.50	27.00	36.00	36.00	37.00	SOFTER...	-3.9%
Handymax	51,000 dwt	18.00	20.00	20.50	18.50	19.00	24.00	30.00	30.50	32.00	SOFTER...	-5.9%
Handysize	30,000 dwt	14.25	15.50	15.00	14.50	15.00	18.00	23.50	25.50	27.00	STEADY...	1.9%
Price Index		111	107	114	108	106	119	150	162	165.8	STEADY...	0.0%
% change			-4%	7%	-5%	-3%	12%	26%	8%	3%		

Other Vessel Prices...		Price \$ million, end:								Price Trend Against a		
		1998	1999	2000	2001	2002	2003	2004	2005	2006*	Year Ago Is...	
LNG	147,000 m ³	190.00	165.00	172.50	165.00	150.00	155.00	185.00	205.00	220.00	FIRMER...	7.3%
LPG	78,000 m ³	58.00	56.00	60.00	60.00	58.00	63.00	82.50	90.00	92.00	STEADY...	1.1%
Container	725 teu		14.00	14.00	13.00	13.00	17.50	19.50	20.50	20.50	WEAKER...	-8.9%
Container	1,000 teu		17.50	18.00	15.50	15.50	18.50	22.50	23.00	23.50	WEAKER...	-9.6%
Container	1,700 teu		23.00	25.00	21.50	21.00	25.50	35.00	36.00	37.00	WEAKER...	-11.9%
Container	2,000 teu		28.00	31.50	28.00	27.00	30.50	37.00	40.00	40.50	SOFTER...	-8.0%
Container	2,750 teu		33.00	37.50	31.00	29.50	37.00	46.50	48.50	50.50	STEADY...	-2.9%
Container	3,500 teu		38.00	41.50	36.00	33.00	42.50	53.00	52.50	57.00	SOFTER...	-3.4%
Container	4,600 teu						56.50	71.00	67.50	72.00	SOFTER...	-6.5%
Container	6,200 teu						71.00	91.00	89.00	100.00	FIRMER...	3.1%
Ro-Ro	1,2-1,300 Lm			20.00	19.00	18.50	22.00	33.00	32.87	35.39	FIRMER...	4.8%
Ro-Ro	2,3-2,700 Lm			33.00	31.00	31.00	33.00	46.00	48.26	51.82	FIRMER...	4.8%

Source: Clarksons World Shipyard Monitor. * Year-to-date Figure as of 1st Aug 2006.

Newbuilding Still Firm

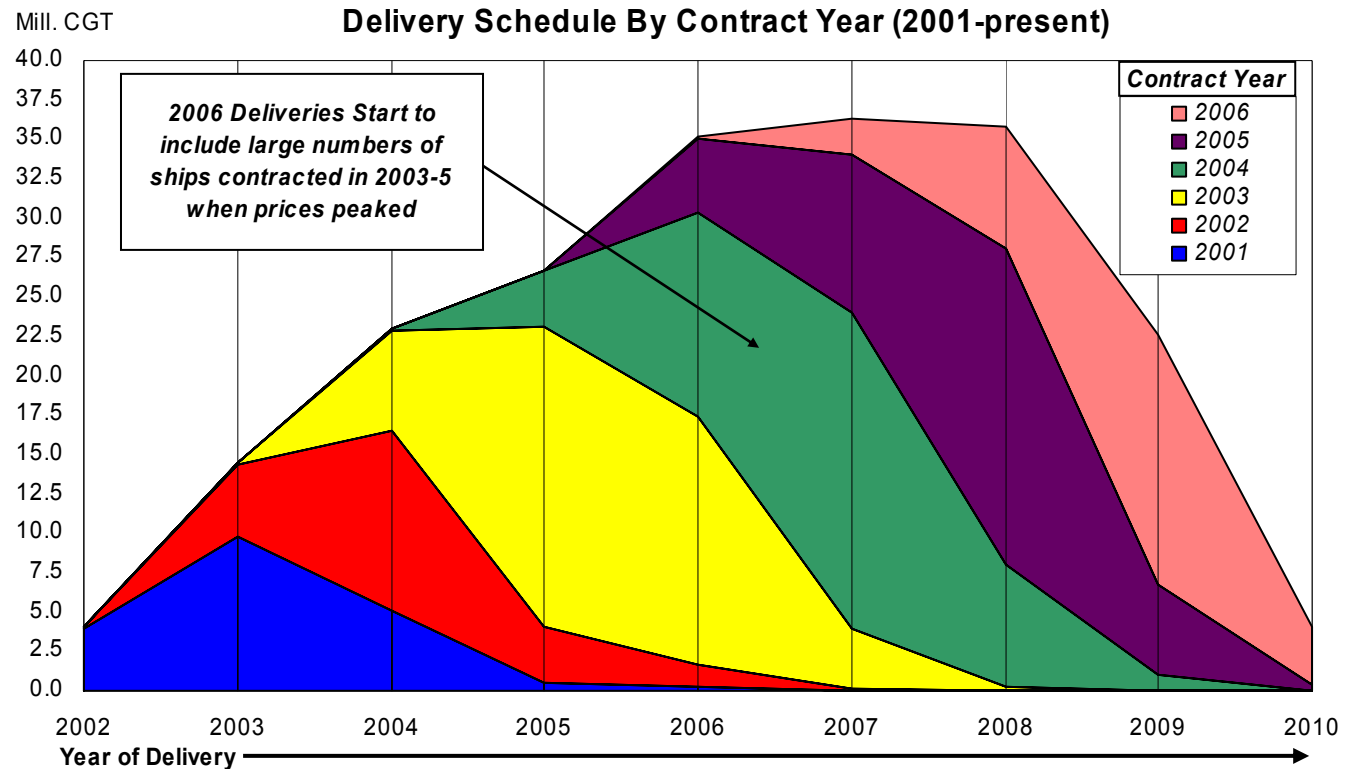
- Aframax tanker peaked at \$53m in 1990, but new price fell to \$33m in Dec 1999 and today it costs \$65m
- Some ships cost twice what they did four years ago



Source: Clarksons Shipping Intelligence Weekly

Yards starting to deliver vessels signed at firm prices

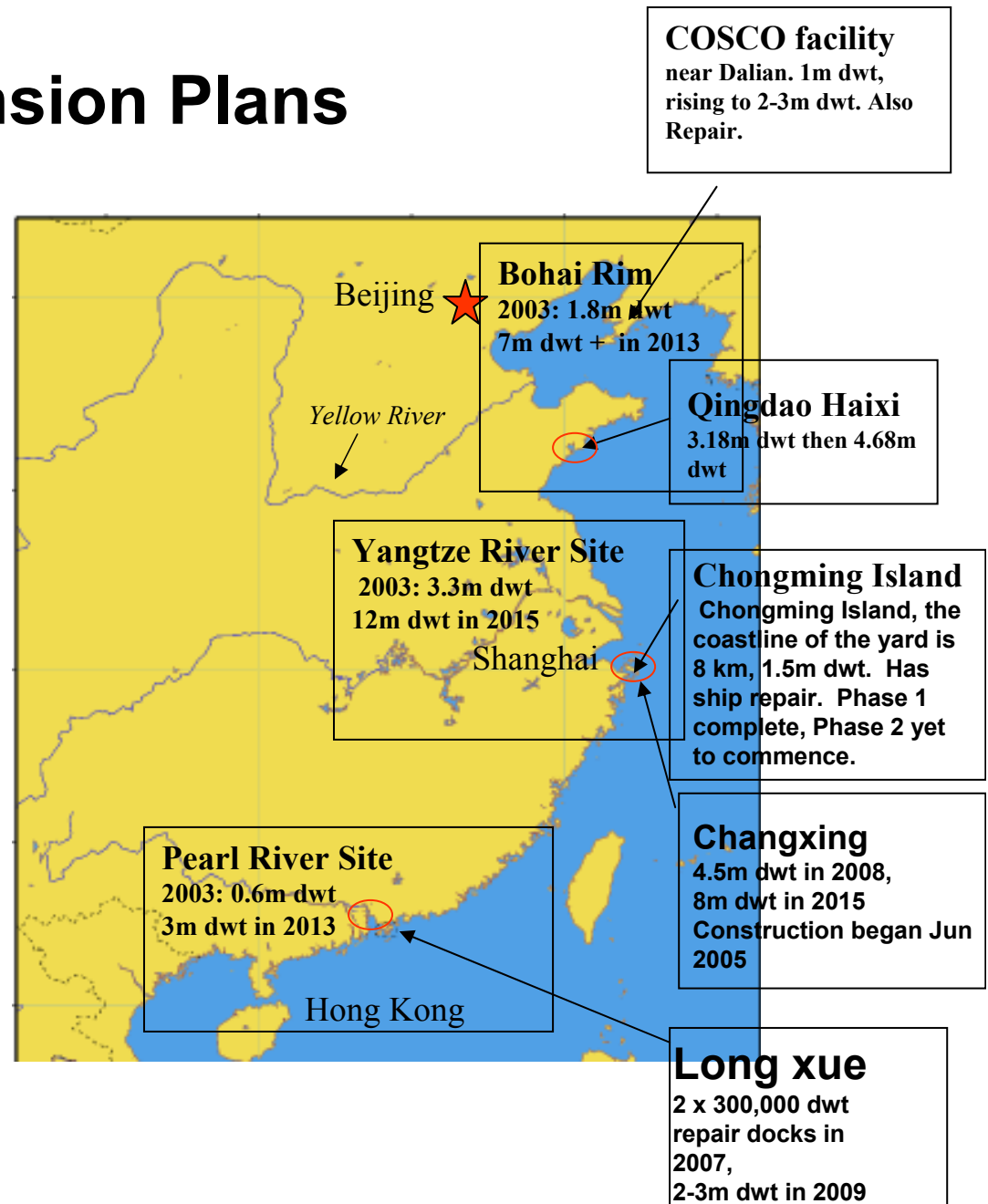
- The chart shows deliveries in m.CGT by the year in which the ships were contracted
- For the future years deliveries are based on the orderbook
- Note that the high priced contracts placed in 2004/5 start to be delivered later in 2006
- So 2007 should be profitable for shipyards



Source: Clarkson Research Services

Shipbuilding Expansion Plans

- The Draft Development Policy for China's Shipbuilding Industry targets being the worlds largest builder by 2020.
- We have identified 22 greenfield expansion plans and 10 expansion plans to existing yards
- Only 7 are currently marketing.
- Expansion in Korea
- Expansion in other emerging nations



Outlook

- Shipbuilding capacity is growing
- Outlook for freight rates is increasingly uncertain – the delivery of lots of new ships will cause supply pressure
- Demand has been growing very strongly as the world economy has surged – is this sustainable?
- Full production for 3.5 years. Starting to deliver ships taken at high prices and if rising costs can be managed, profits are on the cards.

Note About Data

- Sources include various Clarkson Research Publications: World Shipyard Monitor, Shipping Intelligence Weekly, China Intelligence Monthly, KG Shipping and Finance, LNG Trade & Transport.
- Vessels above 2,000t.

Global Fleet & Orderbook

Ship Type	Fleet		Orderbook	
	No	CGT	No	CGT
Tankers	6,262	107,127,029	1,398	30,328,681
Bulkers	6,278	99,376,315	841	15,352,472
Containerships	3,749	76,028,634	1,276	35,080,563
Gas Carriers	882	23,617,054	331	15,286,271
Others	14,984	187,103,846	1,540	21,321,151
Total >2,000 GT	32,155	493,252,877	5,386	117,369,138
<i>Below 2,000 GT</i>	<i>42,943</i>	<i>70,355,731</i>	<i>958</i>	<i>2,159,602</i>
Grand Total	75,098	563,608,608	6,344	119,528,739

Source: Clarkson Research 1st August 2006