



# MR Tanker Market Summary & Outlook

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# MR Sector Issues/Concerns

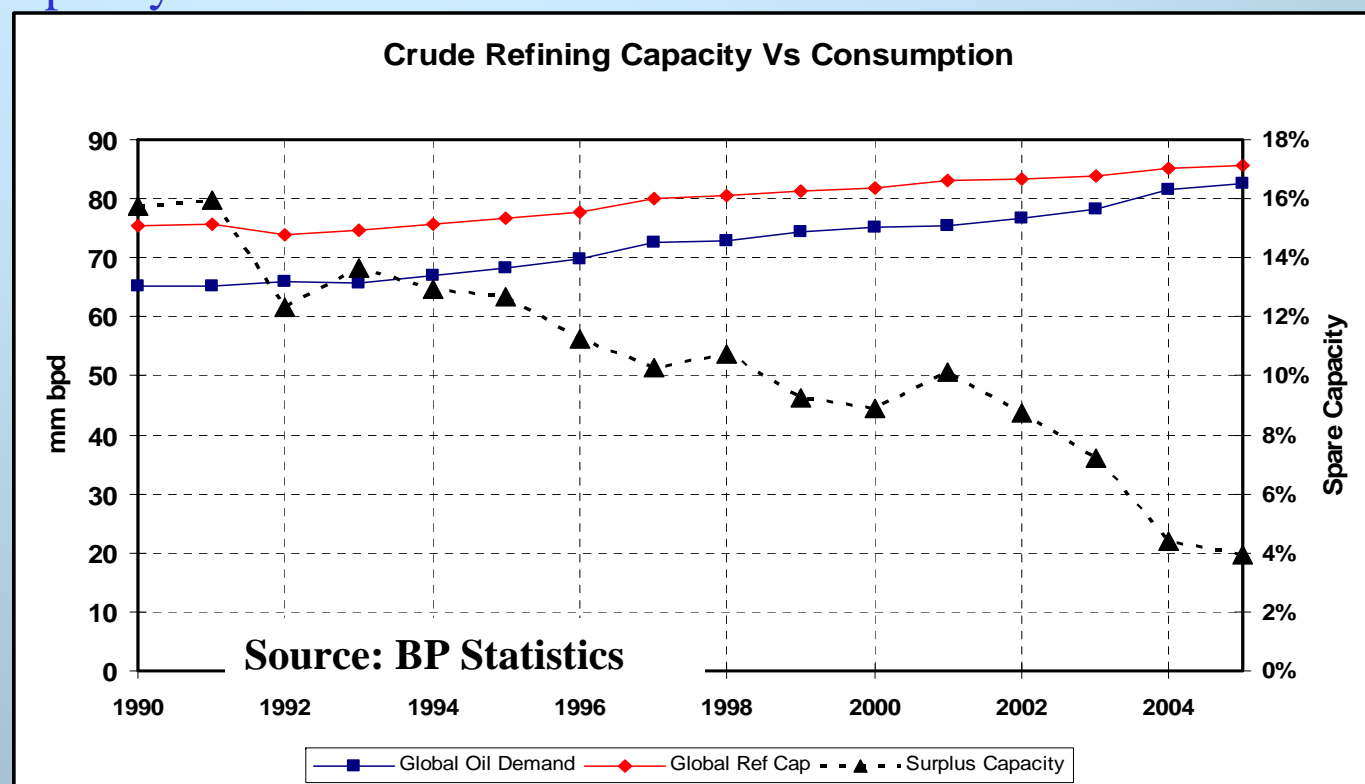
## ◆ Near-Term

- ◆ State of spare refining capacity (“dearness of refined products”) and projected oil demand growth
- ◆ OPEC production cuts – market psychology impact
- ◆ Vessel supply growth
- ◆ Vegoil issues
  - ◆ Conversion of older tonnage – how many and how soon
  - ◆ Previously utilized fleet is old – approx. 130 Non –Chemical MR’s → abt 120 pre ’90 blt The avg age of this portion will be 26+ as of Jan ’07
- ◆ Winter season dynamics going forward
  - ◆ Inventories in Atlantic Basin – interplay of oil supply with overall tanker market -- impact of OPEC cuts
  - ◆ Lack of “typical winter weather early in season” in Atlantic Basin – North America & Europe
    - ◆ Foreshadowing summer issues – weak spring melt – low river levels in Europe → sub optimal use of nuclear plants → power requirements to be met from alternative energy sources (?? fuel oil → Pmx/MR’s to be impacted ??)
- ◆ Orderbook & Phase-outs
- ◆ 2009+ → Impact of Refinery Expansion (AG/India)

# The Decline of Spare Capacity

- ◆ **2004** surges in oil demand strained spare capacity for both producing and refining – **this laid the foundation for the current concern in this area**
  - ◆ Following 2 years of reduced OPEC/AG production in 2001 and 2002, demand increased in '03/'04 – OPEC production increased approx 5 mm bpd in 2 yrs – impacting spare capacity

- ◆ Since 1990 two 3-yr periods of strong demand growth
- ◆ 1995-1997 demand growth surge began when spare capacity was about 12% -- by '97 it was still over 10% .
- ◆ 2003 to '05 saw spare capacity go from 9% beg '03 to 4% end '05

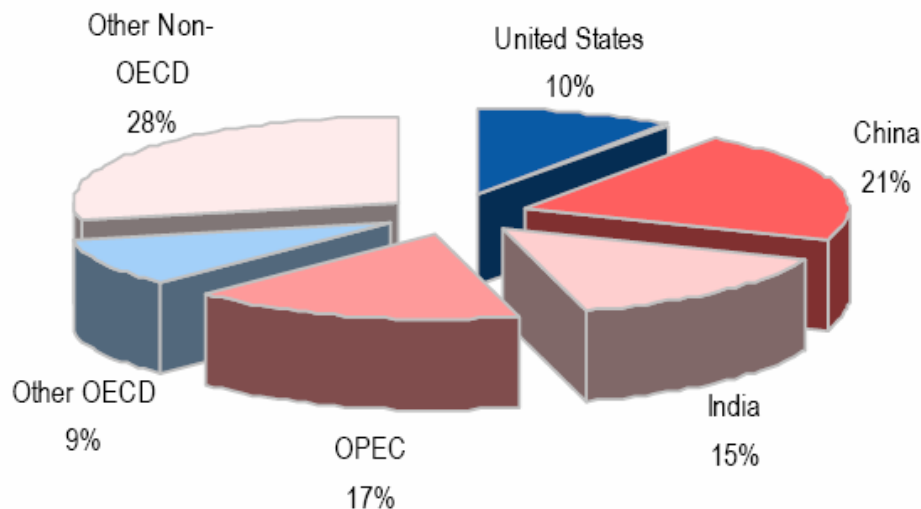


# Future Refined Product Capacity Growth

## Additional Refinery Capacity

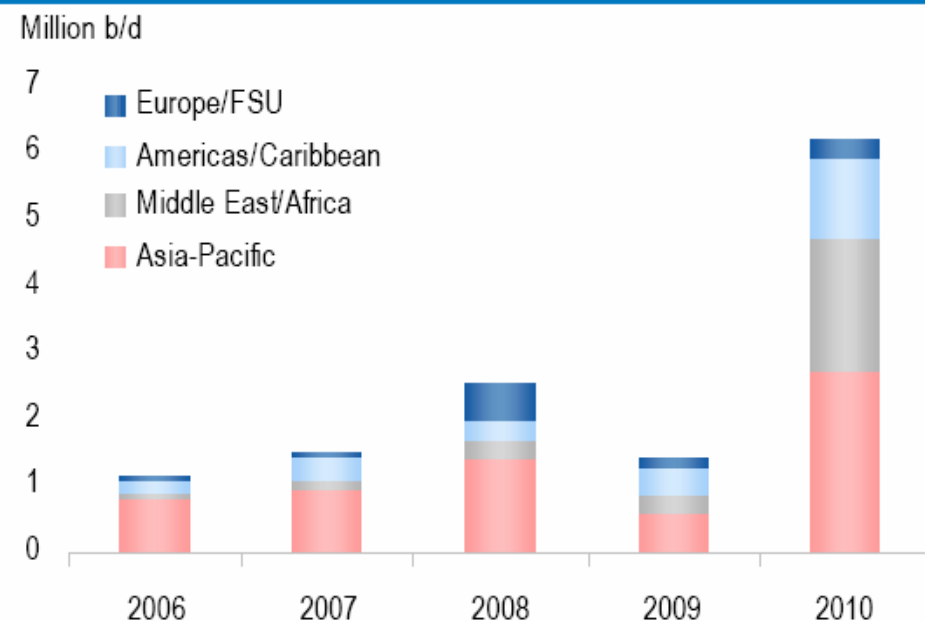
- ◆ Additional Atlantic basin capacity has come from and will likely continue to come from the expansion of existing facilities -
- ◆ Environmental and legal issues in the west resulting in additional refineries being planned/built/expanded closer to crude source – see chart below for refinery capacity growth by region
- ◆ By decades end total additions are estimated to be approximately 12 mm bpd\*

### Projected Capacity Additions by Country/Region

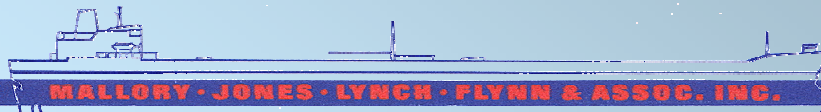


Distillation capacity only. Measures % of total refining capacity growth from 2006-2010 by country and region. Source: JPMorgan Energy Strategy, IIR, OGI, media, govnt and company reports.

### Projected Distillation Capacity Additions by Region



Source: JPMorgan Energy Strategy, IIR, OGI, media, govnt and company reports.



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# Historic Oil Demand Growth

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	YTD 11/06	YTD 10/06	YTD 8/06
World	0.57%	0.89%	0.64%	0.27%	0.19%	3.34%	3.23%	2.46%	0.59%	1.58%	0.23%	1.06%	0.70%	1.93%	4.37%	1.88%	0.74%	0.89%	0.93%	0.71%

|----- 0.51% p.a. -----| |----- 2.92% p.a. -----| |----- 0.82% p.a. -----| |----- 2.65% p.a. -----|

- ◆ Since 1990 global demand growth has grown an average of 1.5% (1.6% since '97) but arrived at this point in a 5-3-5-3 pattern (5 yrs slow growth, 3 yrs rapid, 5 slow 3 rapid -- ?? entering slow period?).
- ◆ Additionally, when growth rate expands -- heavily Non-OECD driven
- ◆ Commentary – last valid 2006 data in August ?? – Katrina impact – implies potential demand data issues until March/April of this year

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	YTD 11/06	YTD 10/06	YTD 8/06
World	0.57%	0.89%	0.64%	0.27%	0.19%	3.34%	3.23%	2.46%	0.59%	1.58%	0.23%	1.06%	0.70%	1.93%	4.37%	1.88%	0.74%	0.89%	0.93%	0.71%

|----- 0.51% p.a. -----| |----- 2.92% p.a. -----| |----- 0.82% p.a. -----| |----- 2.65% p.a. -----|

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	YTD 11/06	YTD 10/06	YTD 8/06
Non-OECD	0.62%	0.85%	(2.68)%	(0.28)%	(4.27)%	8.11%	4.44%	3.62%	1.15%	0.69%	0.34%	2.73%	1.86%	2.88%	8.99%	3.81%	2.80%	2.85%	2.96%	2.92%

|----- (1.18)% p.a. -----| |----- 5.12% p.a. -----| |----- 1.32% p.a. -----| |----- 4.97% p.a. -----|

- ◆ Full year '06 information\* indicates demand fell in OECD (though less than prelim estimates) Non-OECD growth similar to '05 – Through 8/06 – OECD (400k+) bpd & Non-OECD 1 mm+ bpd – by Yr. end Katrina impact reduced OECD demand drop to (325k) bpd while Non-OECD up 950k bpd
- \* Basis Energy Intelligence Group (EIG)
  - ◆ U.S., W. Europe & Japan all down a combined 210k+ bpd & China up 400k bpd & India 100k bpd
- ◆ Continued Non-OECD growth requires continued shield from world mkt prices – this requires OECD to continue to buy Non-OECD products – Global eco. growth



# Demand And Inventories

## End 2006 Picture/Early 2007

- ◆ Oil demand growth slowing in face of rising prices
  - ◆ Easing demand felt most in developed world
  - ◆ Inventories robust throughout year assisted by Contango Pricing– in U.S. and Europe – product stks easing until yr end, but mild winter early winter proceeds to reverse trend
  - ◆ OPEC announced production cuts – (A) 1.2 mm bpd as of Nov. 1 – pragmatically wait for December #'s to gain true picture of compliance – prelim info that cuts abt 100k bpd over target (B) subsequent 500k bpd cut commencing Feb 1 – **“stocks to return to avg levels”**
- ◆ **Mid/late Spring '07?? – OPEC Compliance appears to be about 75% as of Jan. '07**
- ◆ **Seasonal rebound in refining margins late winter into spring**
- ◆ IEA proj. demand growth ended 2006 on the decline but outlook has recovered somewhat – March #'s - 1% '06/1.8% '07 (about 850k/1.5mm bpd)
  - ◆ Caution should be paid to fact that following a February increase to above #'s IEA has eased Q1 estimates, but balanced them by raising Q4 projections
    - ◆ Projections for 2007 from other industry forecasters are somewhat softer -- the Energy Intelligence Group is projecting demand growth of 1.4%/1.2 mm bpd – note this is also an increase vs. earlier projections
- ◆ **Major question remains - After inventories tighten and OPEC cuts end will additional oil be demanded or will spare capacity begin to increase**

## Vessel Supply - MR

- ◆ MR's are often thought of as one tanker sector – what this encompasses though varies depending upon ones perspective
  - ◆ Major directories include all vessels 10 to 60,000 dwt - 2006 began with nearly 1,350 of what are classified as “Handy tankers” in this size range. It is about 1,450 as 2007 began – this excludes specialty and IMO 1&2 chemical vessels that combine for over 900 tankers – “specialty” broken out as other on subsequent slides
  - ◆ Many of the tankers can also have the capability to service different markets
  - ◆ In order to be relevant to the user, information for this size range needs to be classified into sectors that are broken into size and type ranges

# MR Tanker Supply

## Projected Jan. '07 & Dec. '06 Orderbook

Summary 10 to 30k Dwt Tankers Fleet				Summary 30 to 60k Dwt Tankers Fleet					
	1/07	Δ Since 1/06			1/07	Δ Since 1/06			
Non IMO 1 or 2	495	(9)			Non IMO 1 or 2	1,069	84		
Excl. Other	430	(9)			Excl. Other	987	84		
	300		195			428		551	90
	<u>10 to 20k</u>		<u>20 to 30k</u>	<u>Totals</u>		<u>30 to 40k</u>		<u>40 to 50k</u>	<u>50 to 60k</u>
Products	88		104	192	Products	140		307	52
IMO 3	49		24	73	IMO 3	180		184	14
Tankers	122		43	165	Tankers	62		31	17
Other*	41		24	65	Other*	46		29	7
<b>Orderbook - 2/07</b>	45		3	48	<b>Orderbook - 2/07</b>	86		229	169
(Product & IMO 3)					(Product & IMO 3)				
IMO 1 & 2	451		103	554	IMO 1 & 2	157		124	2
<b>Orderbook - 2/07</b>	308		30	338	<b>Orderbook - 2/07</b>	34		58	0

\* Consists of Replenishment Methanol, Juice, Corrosive and other Specialty Tankers

### Quick Stats

- ◆ Non Specialty (excl. chemicals & other) – 2/3 30 to 60k/1/3 10 to 30k
  - ◆ Orderbook 10 to 30k → incl. 25 '06 deliveries is approximately 25% of PPC/IMO 3
- ◆ IMO 1 & 2 – 2/3 10 to 30k/1/3 30 to 60k – orderbook 70% 10 to 20k/ about 25% 30 to 60k



# MR Tanker Supply

## Age Profile By Tanker Type

### Summary 10 to 30k Dwt Tankers Fleet By Age Range And Tanker Type

	1/07	Δ Since 1/06																		
Non IMO 1 or 2	495	(9)																		
Excl. Other	430	(9)																		
	<b>Products</b>			<b>IMO 3</b>			<b>Tankers</b>			<b>Other</b>			<b>IMO 1 &amp; 2</b>							
	<b>192</b>			<b>73</b>			<b>165</b>			<b>65</b>			<b>554</b>							
	88	104		49	24		122	43		41	24		451	103						
	<b>10 to 20k</b>	<b>20 to 30k</b>		<b>10 to 20k</b>	<b>20 to 30k</b>		<b>10 to 20k</b>	<b>20 to 30k</b>		<b>10 to 20k</b>	<b>20 to 30k</b>		<b>10 to 20k</b>	<b>20 to 30k</b>						
>25	23	11	34	9	1	10	67	29	96	14	6	20	>25	13	12	25				
21 - 25	19	52	71	19	7	26	21	10	31	11	4	15	21 - 25	45	30	75				
16 - 20	4	30	34	6	4	10	9	2	11	2	3	5	16 - 20	27	8	35				
11 - 15	19	9	28	3	2	5	11	2	13	7	8	15	11 - 15	54	4	58				
6 - 10	8	0	8	3	1	4	9	0	9	4	3	7	6 - 10	122	16	138				
1 - 5	15	2	17	9	9	18	5	0	5	3	0	3	1 - 5	190	33	223				
Orderbook - 2/07																				
<b>Total - 48</b>	<b>45</b>	<b>3</b>											<b>Total - 338</b>	<b>308</b>	<b>30</b>					
2007	33	2	35										2007	153	8	161				
2008	9	1	10										2008	100	13	113				
2009	3	0	3										2009	48	8	56				
2010	0	0	0										2010	7	1	8				
2011	0	0	0										2011	0	0	0				

Other Tankers Consist of Replenishment Methanol, Juice, Corrosive and other Specialty Tankers

\* Product and IMO 3 orderbooks are combined

- ◆ 20-30k dwt portion likely to have void developing – nearly 2/3 of the approx.175 non specialty 20-30k dwt vessels are over 20 years of age with 3 on order.
  - ◆ About 135 vessels are 25-30k dwt – void from older portion to be filled by 35 to 40k orderbook ??
- ◆ The chemical fleet is heavily concentrated in the smaller sizes and young -- over half the fleet is 10-20k dwt & about 550 of the 850+ IMO 1/2 fleet is under 10 yrs of age (see slide after next for rest of fleet detail – 30 to 60k dwt)
  - ◆ The smaller dwt will be growing dramatically -- near 50% of 10-20k fleet is on order, but demand growth for segment to be longer haul – vegoil related

# MR Tanker Supply

## Age Profile By Tanker Type

### 10 to 30 MR Fleet Profiled By Percentile

Summary of 10 to 30k Dwt Tankers Fleet By Percentile							Summary of 10 to 30k Dwt IMO 1 & 2 Fleet By Percentile			
Non - Chemical or Specialty Tankers							IMO 1 & 2			
Basis Product & IMO 3 Only				Basis Product, IMO 3 & Tankers						
	10 to 20k	20 to 30k		10 to 20k	20 to 30k		10 to 20k	20 to 30k		
>25	23%	9%	5%	38%	24%	14%	>25	3%	12%	5%
21 - 25	28%	46%	11%	23%	40%	13%	21 - 25	10%	29%	14%
16 - 20	7%	27%	5%	7%	21%	6%	16 - 20	6%	8%	6%
11 - 15	16%	9%	4%	13%	8%	5%	11 - 15	12%	4%	10%
6 - 10	8%	1%	1%	8%	1%	2%	6 - 10	27%	16%	25%
1 - 5	18%	9%	4%	11%	6%	4%	1 - 5	42%	32%	40%
Orderbook - 2/07	33%	2%	18%	17%	2%	11%	Orderbook - 2/07	68%	29%	61%
2007	24%	2%	13%	13%	1%	8%	2007	34%	8%	29%
2008	7%	1%	4%	3%	1%	2%	2008	22%	13%	20%
2009	2%	0%	1%	1%	0%	1%	2009	11%	8%	10%
2010	0%	0%	0%	0%	0%	0%	2010	2%	1%	1%
2011	0%	0%	0%	0%	0%	0%	2011	0%	0%	0%

# MR Tanker Supply

## Age Profile By Tanker Type

### Summary 30 to 60k Dwt Tankers Fleet By Age Range And Tanker Type

		1/07	Δ Since 1/06																
Non IMO 1 or 2		1,069	84																
Excl. Other		987	84																
				<u>Products</u>				<u>IMO 3</u>				<u>Tankers</u>				<u>Other</u>			
				<b>499</b>				<b>378</b>				<b>110</b>				<b>82</b>			
				<b>140      307      52</b>				<b>180      184      14</b>				<b>62      31      17</b>				<b>46      29      7</b>			
				<b><u>30 to 40k</u>   <u>40 to 50k</u>   <u>50 to 60k</u></b>				<b><u>30 to 40k</u>   <u>40 to 50k</u>   <u>50 to 60k</u></b>				<b><u>30 to 40k</u>   <u>40 to 50k</u>   <u>50 to 60k</u></b>				<b><u>30 to 40k</u>   <u>40 to 50k</u>   <u>50 to 60k</u></b>			
>25	34	6	4	<b>44</b>	2	1	0	<b>3</b>	31	3	6	<b>40</b>	15	2	1	<b>18</b>			
21 - 25	30	26	11	<b>67</b>	2	17	4	<b>23</b>	3	13	8	<b>24</b>	6	1	6	<b>13</b>			
16 - 20	25	37	0	<b>62</b>	0	8	2	<b>10</b>	9	6	1	<b>16</b>	6	11	0	<b>17</b>			
11 - 15	13	49	1	<b>63</b>	6	19	0	<b>25</b>	18	8	2	<b>28</b>	11	1	0	<b>12</b>			
6 - 10	13	48	0	<b>61</b>	50	37	0	<b>87</b>	1	1	0	<b>2</b>	7	7	0	<b>14</b>			
1 - 5	25	141	36	<b>202</b>	120	102	8	<b>230</b>	0	0	0	<b>0</b>	1	7	0	<b>8</b>			
Orderbook - 2/07																			
<b>Total - 484</b>				<b>86</b>	<b>229</b>	<b>169</b>	Other Tankers Consist of Replenishment Methanol, Juice, Corrosive and other Specialty Tankers												
2007	41	75	30	<b>146</b>															
2008	31	79	59	<b>169</b>															
2009	8	57	57	<b>122</b>															
2010	6	18	23	<b>47</b>															
2011	0	0	0	<b>0</b>															

				<u>IMO 1 &amp; 2</u>												
				<b>283</b>												
				<b>157      124      2</b>												
				<b><u>30 to 40k</u>   <u>40 to 50k</u>   <u>50 to 60k</u></b>												
>25	22	1	0	<b>23</b>	22	1	0	<b>23</b>	22	1	0	<b>23</b>	22	1	0	<b>23</b>
21 - 25	20	17	11	<b>48</b>	20	17	11	<b>48</b>	20	17	11	<b>48</b>	20	17	11	<b>48</b>
16 - 20	18	25	0	<b>43</b>	18	25	0	<b>43</b>	18	25	0	<b>43</b>	18	25	0	<b>43</b>
11 - 15	13	49	1	<b>63</b>	13	49	1	<b>63</b>	13	49	1	<b>63</b>	13	49	1	<b>63</b>
6 - 10	13	48	0	<b>61</b>	13	48	0	<b>61</b>	13	48	0	<b>61</b>	13	48	0	<b>61</b>
1 - 5	25	141	36	<b>202</b>	25	141	36	<b>202</b>	25	141	36	<b>202</b>	25	141	36	<b>202</b>

\* Product and IMO 3 orderbooks are combined

- ◆ Over 250 non-chemical or specialty deliveries in last 5 yrs 40-50k (specifically 45/50k).
  - ◆ Near 250 more on order, but void noted in 25-30 to pull 30-40k, which in turn will pull 40 to 50k -- note age of 30-40k portion
  - ◆ Orderbook likely to provide pressure, but not as strong as some fear
- ◆ Non product portion of sector largely ignored.
- ◆ Negligible increase in long-haul portion of IMO 2 fleet for new vegoil transport delivering during year

<u>IMO 1 &amp; 2</u>					
	283				
	157	124	2		
	<u>30 to 40k</u>	<u>40 to 50k</u>	<u>50 to 60k</u>		
>25	28	1	0		29
21 - 25	27	7	0		34
16 - 20	4	15	0		19
11 - 15	18	11	0		29
6 - 10	34	29	0		63
1 - 5	46	61	2		109
Orderbook - 2/07					
<b>Total - 92</b>	<b>34</b>	<b>58</b>	<b>0</b>		
2007	6	15	0		21
2008	9	14	0		23
2009	10	19	0		29
2010	8	9	0		17
2011	1	1	0		2



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# MR Tanker Supply Age Profile By Tanker Type

## 30 to 60 MR Fleet Profiled By Percentile

### Summary of 30 to 60k Dwt Tankers Fleet By Percentile

#### Non - Chemical or Specialty Tankers

	<u>Basis Product &amp; IMO 3 Only</u>					<u>Basis Product, IMO 3 &amp; Tankers</u>			
	<u>30 to 40k</u>	<u>40 to 50k</u>	<u>50 to 60k</u>			<u>30 to 40k</u>	<u>40 to 50k</u>	<u>50 to 60k</u>	
>25	11%	1%	6%	5%	18%	2%	12%	9%	
21 - 25	10%	9%	23%	10%	9%	11%	28%	12%	
16 - 20	8%	9%	3%	8%	9%	10%	4%	9%	
11 - 15	6%	14%	2%	10%	10%	15%	4%	12%	
6 - 10	20%	17%	0%	17%	17%	16%	0%	15%	
1 - 5	45%	49%	67%	49%	38%	47%	53%	44%	
Orderbook - 2/07	27%	47%	256%	55%	23%	44%	204%	49%	
2007	13%	15%	45%	17%	11%	14%	36%	15%	
2008	10%	16%	89%	19%	8%	15%	71%	17%	
2009	3%	12%	86%	14%	2%	11%	69%	12%	
2010	2%	4%	35%	5%	2%	3%	28%	5%	
2011	0%	0%	0%	0%	0%	0%	0%	0%	

### Summary of 30 to 60k Dwt IMO 1 & 2 Fleet By Percentile

	<u>IMO 1 &amp; 2</u>			
	<u>30 to 40k</u>	<u>40 to 50k</u>	<u>50 to 60k</u>	
>25	18%	1%	0%	10%
21 - 25	17%	6%	0%	12%
16 - 20	3%	12%	0%	7%
11 - 15	11%	9%	0%	10%
6 - 10	22%	23%	0%	22%
1 - 5	29%	49%	0%	39%
Orderbook - 2/07	22%	47%	0%	33%
2007	4%	12%	0%	7%
2008	6%	11%	0%	8%
2009	6%	15%	0%	10%
2010	5%	7%	0%	6%
2011	1%	1%	0%	1%

# Sector Issues/Concerns

## Orderbook & Phase-outs

- ◆ Near 225 25 to 40k dwt vessels to phase-out by 2010 – Only 97 on order
- ◆ Comprises
  - ◆ Three-fourths of 25-30k
  - ◆ Four out of ten of the 30 – 35k
  - ◆ About a third of the 35-40k
- ◆ Scenario different for 40-50k and 50-60k ranges → 25-40k to absorb larger dwt NB's?

<b>Total to be phased-out</b>	<b>32</b>	<b>102</b>	<b>47</b>	<b>67</b>
<b>Of CPP/IMO 3 &amp; Uncoated</b>	2.3%	7.5%	3.5%	4.9%
<b>Of Dwt Range</b>	86.5%	77.9%	39.5%	28.0%
	----- 134 -----	----- 114 -----		
	----- 79.8% -----	----- 31.8% -----		
	<b>20 to 25k</b>	<b>25 to 30k</b>	<b>30 to 35k</b>	<b>35 to 40k</b>
2005	21	11	12	15
2006	1	2	8	2
2007	2	5	10	13
2008	4	20	1	5
2009	1	10	3	7
2010	3	54	13	25
<b>Orderbook - 2/07</b>				
<b>Total on Order</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>86</b>
2007	1	1	0	41
2008	1	0	0	31
2009	0	0	0	8
2010	0	0	0	6
2011	0	0	0	0

<b>Total to be phased-out</b>	<b>35</b>	<b>26</b>
<b>Of CPP/IMO 3 &amp; Uncoated</b>	2.6%	1.9%
<b>Of Dwt Range</b>	20.7%	7.8%
	----- 61 -----	
	----- 12.2% -----	
	<b>40 to 45k</b>	<b>45 to 50k</b>
2005	0	0
2006	2	0
2007	6	2
2008	8	10
2009	6	0
2010	13	14
<b>Orderbook - 2/07</b>		
<b>Total on Order</b>	<b>30</b>	<b>199</b>
2007	12	63
2008	12	67
2009	6	51
2010	0	18
2011	0	0

<b>Total to be phased-out</b>	<b>13</b>	<b>19</b>
<b>Of CPP/IMO 3 &amp; Uncoated</b>	1.0%	1.4%
<b>Of Dwt Range</b>	22.0%	86.4%
	----- 32 -----	
	----- 39.5% -----	
	<b>50 to 55k</b>	<b>55 to 60k</b>
2005	2	2
2006	0	0
2007	1	5
2008	4	4
2009	1	4
2010	5	4
<b>Orderbook - 12/06</b>		
<b>Total on Order</b>	<b>169</b>	<b>0</b>
2007	30	0
2008	59	0
2009	57	0
2010	23	0
2011	0	0



# Sector Issues/Concerns

## 2009+ → Impact of “Export” Refinery Expansion (AG & India)

- ◆ Atlantic Basin any incremental growth much longer-haul
- ◆ Pacific Basin benchmark route is Spore/Japan growth – incremental growth in distance not that large, growth in demand to come from China imports

Refiner	Country	Estimated Completion	Capacity Addition [kbd]
Reliance Industries	India	2008	540
Egyptian General Petroleum Corp.	Egypt	2009	130
Oil & Natural Gas Corp.	India	2010	150
Kuwait National Petroleum Corp.	Kuwait	2010	615
Saudi Aramco	Saudi Arabia	2010/11	400
Saudi Aramco	Saudi Arabia	2010/11	400
Abu Dhabi's IPIC	UAE	n/a	500
Hindustan Petroleum	India	n/a	300
Petrobras	Brazil	2014	500

Source: JPMorgan Energy Strategy, IIR, OGI, media, gov't, and company reports.

Disch Region	Exisitng Route	Approx Delivery	New Route Lifting From India	From AG
N. Amer.	CBS/USAC	20 to 25k bpd	6 to 7k bpd	7 to 9k bpd
	UKC/USAC	12 to 15k bpd		
		38 - 42k Lift	38 - 42k Lift	38 - 42k Lift
Euro	X-Med	45 to 57k bpd	7 to 9k bpd	7 to 8k bpd
	USG/UKC	9 to 11k bpd		
		38 - 42k Lift	38 - 42k Lift	38 - 42k Lift
Asia	Spore/Jpn	9 to 11k bpd	8 to 11k bpd	7 to 9k bpd
		38 - 42k Lift	38 - 42k Lift	38 - 42k Lift

- ◆ Increased deliveries of Pmx and Aframax coated vessels to provide competition

# Indian Refinery Expansion

- ◆ Refining capacity is projected to expand by nearly 2 mm bpd → It isn't just Reliance ...

India's Refinery Expansion				
Company	Location	Existing	New	Completion
Indian Oil	Panipat	240	60	2007-08
Hindustan	Mumbai	110	44	2007-08
Hindustan	Vizag	150	17	2007-08
Essar	Vadinar	210	70	2007-08
Indian Oil	Chennai	210	20	2008-09
Reliance	Jamnagar	660	580	2008-09
Indian Oil	Haldia	120	30	2009-10
Bharat	Bina	0	120	2009-10
Bharat	Kochi	150	40	2009-10
Mangalore	Mangalore	194	106	2009-10
Hindustan	Vizag	150	133	2010-11
Hindustan	Bhatinda	0	180	2010-11
Indian Oil	Paradip	0	300	2011-12
<b>Total</b>			<b>1,840</b>	
'000 b/d.				

← Source: PIW 1/8/07

# Coated Pmx/Afra Sectors

**Afra PPC By Year Built**

<1988	26	<1998	63
1988	8	1998	9
1989	5	1999	12
1990	6	2000	6
1991	4	2001	3
1992	2	2002	6
1993	0	2003	9
1994	2	2004	10
1995	0	2005	10
1996	4	2006	13
1997	6		
<b>'88-'97</b>	<b>37</b>	<b>'98-'06</b>	<b>78</b>
		<b>On order:</b>	<b>56</b>
		(as of 2/07)	
		2007	8
		2008	11
		2009	26
		2010	11

**Pmx PPC By Year Built**

<1988	33	<1998	51
1988	1	1998	1
1989	1	1999	4
1990	3	2000	2
1991	3	2001	3
1992	2	2002	1
1993	4	2003	15
1994	1	2004	29
1995	2	2005	25
1996	1	2006	31
1997	0		
<b>'88-'97</b>	<b>18</b>	<b>'97-'06</b>	<b>111</b>
		<b>On order:</b>	<b>109</b>
		(as of 2/07)	
		2007	47
		2008	25
		2009	34
		2010	3

- ◆ Note: Coated aframax on order are approaching the number that are over 10 years of age – primary competition from Pmx – degree to be determined by logistics – storage, port issues, cargo stems etc..

# Tanker Sector Outlook

## MR – Near-Term

- ◆ Influx of new tonnage remains a concern – 2007 is the middle year of a 3yr period that will deliver nearly 450 vessels in the key 35 to 55k range – this will need to be balanced by:
  - ◆ The new IMO regs concerning vegoils provide the potential to exert counteracting pressures
  - ◆ Preliminary information is anecdotal, but experiencing 25% - 50% increase in voyage charter rates -- Indo/Rotterdam (\$26k to \$32k Dec to Jan) and Argentina/China (low \$40's/MT to \$62.50/MT → December to January change)
  - ◆ Growth in demand thru increased actual growth, import growth, logistic inefficiencies such as contango pricing or other bottlenecks ...
  - ◆ New Spec changes for motor diesel in the U.S impacting logistical efficiency. ...
- ◆ U.S. spec changes that reduce sulfur content limits from 500 ppm to 15 ppm – as the concern has arisen from pipeline contamination as it will from last cargo increasing cleaning issues – reducing effective supply
- ◆ Regarding the new IMO regs they will/have begun to recreate the vegoil fleet
  - ◆ Has consisted of oldest element of MR fleet – in 2004 was 150+ vessels mostly 30-45k dwt vessels -- 85% of which were old product carriers – avg vessel built 1981 – the age of these vessel will average 26 when new rules are implemented (only 8 blt after 1990)
- ◆ Preliminary information relating to OPEC cutbacks indicate that inventories in the OECD have dropped significantly providing the potential for upside to rates due to U.S. driving season and Q 4 seasonal increase in global demand

# Tanker Sector Outlook

## MR – Beyond Near-Term

- ◆ The outcome for this sector will be the result of counteracting drivers – increased demand vs. increased supply
  - ◆ Increased demand coming from export oriented refineries being built near crude sources in AG & India – 5+ mm bpd capacity targeted for completion by decades end in these regions
- ◆ The orderbook is large and this issue is often raised by pundits, but what isn't discussed is...
  - ◆ It will take over 3 vessels carrying product from an AG or Indian refinery to equate to 1 vessel from a Caribbean refinery in providing imports to the USAC
- ◆ Tempering supply growth is the fact that a large percentage of fleet will be impacted by IMO mandated phase-outs
  - ◆ Basis Product Carriers, IMO 3 and uncoated vessels – there were approx 1,340 vessels as of Jan'06 and we project 1,450+ as of Jan. '07 --- 10 to 60k dwt
  - ◆ About 450 or about 31% of Jan. '07 fleet is S/H and about 150 or about 10% are D/B or D/S – more than 4 in 10 will therefore face IMO phase-out issues (but 40% of the approx 450 S/H vessels are sub 30k).
    - ◆ For 30-60k → about 160 or 10% S/H and 110 are D/B or D/S – 25% Non-D/D
  - ◆ Excluding the non-coated vessels the total vessels will fall to about 1,175 and the pct's to 18%/11% or 3 in 10 of the MR fleet (covering 10-60k fleet).



