MR Tanker Market Outlook

01 October 2013



Makai Marine Advisors LLC

Contents

- Product Tanker Supply
- Product Tanker Market Outlook
- Product Tanker Scenario Analysis
- MR Tanker Supply
- MR Tanker Market Outlook
- MR Scenario Analysis

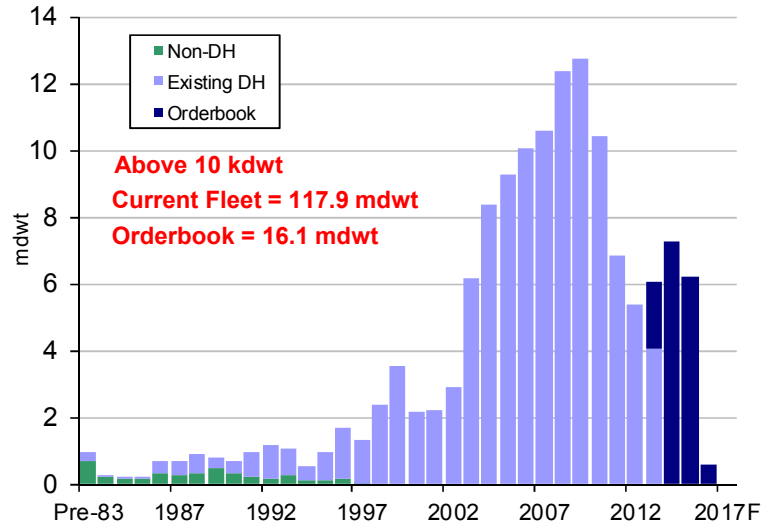
Key Observations

Clean tanker investment hypothesis still intact	• Constructive refining environment and product imbalances continue to support product tanker investment hypothesis • Refinery geographic displacement hypothesis still intact, with new Pacific Basin capacity prompting Atlantic Basin refinery rationalisation
Structural mid-distillate imbalances key driver	• Growing structural mid-distillate deficit in Europe, from refinery rationalisation, is a key element to demand growth • Sourcing from new Mideast & Indian capacity to add tonne-mile demand
Ordering pause providing slowing fleet growth	• Clean sector ordering pause starting in 2008 is now flowing through orderbook and slowing supply growth • Clean operating fleet growth falling to 2.9% in 2013, vs 5.6% demand rise
Ordering capping upside, but outlook still positive	• Recent ordering levels are capping forecast earnings and asset price peaks in 2016-18 timeframe • Near-term fleet utilisations could still rise towards 90% level under moderate demand and robust ordering assumptions
Low asset prices offer significant upside	• Although real secondhand MR tanker prices have bounced off historic lows, still remain in bottom decile of 1992-2013 real prices • Sustained earnings improvement could provide strong asset price response
Current low utilisations limit downside risks	• Current clean fleet utilisations only 3-4 ppt above historical floors • Spot, period and vessel price interrelationships suggest that vessel prices unlikely to fall significantly lower, even in tepid demand environment

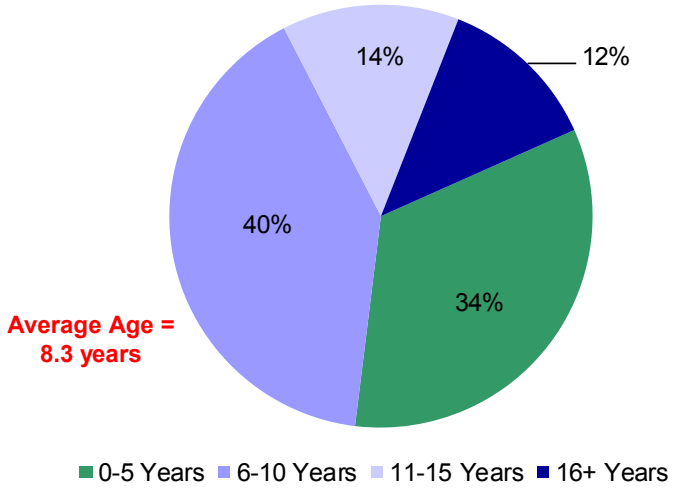
Product Tanker Supply

Product tanker deliveries finally slowing, but fleet is young, with limited demolition candidates in near term

Clean Tanker Age Profile, 31 August 2013



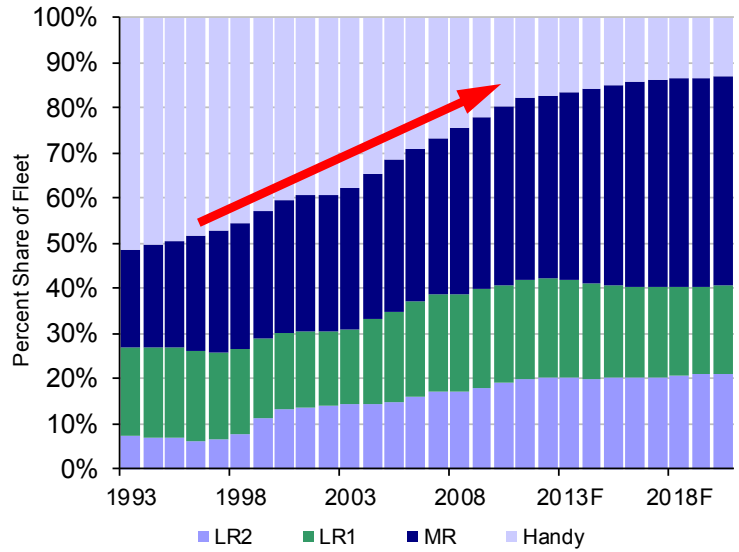
Clean Tanker Age Groups, Percent



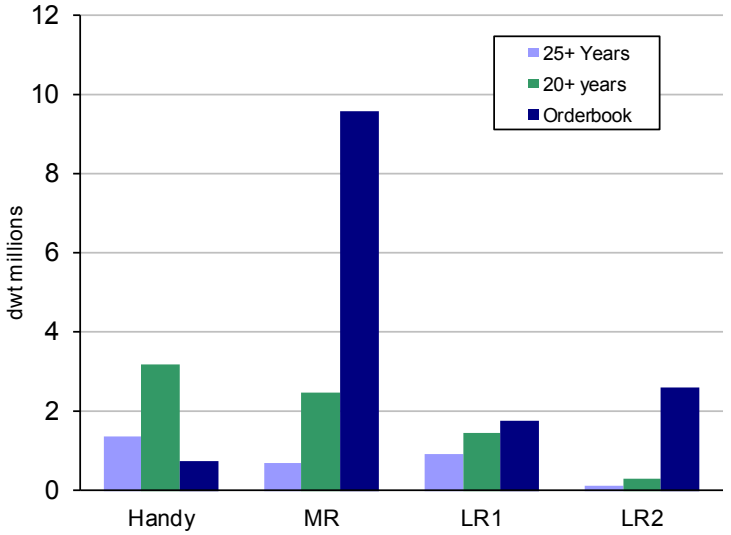
- Annual deliveries of 10-12 mdwt of clean tonnage prior to financial crisis and during recession led to 12-15% fleet growth, overwhelming demand and punishing sector earnings
- Slower deliveries will allow supply growth to slow and for utilisations to improve in near term
- Majority of today's product tankers did not appear until 2003, so 74% of fleet is ten years or younger
- With only 11% of the fleet 16 years or older, limited demolition candidates available to provide supply relief should rates drop again
- Sector performance then reliant on ordering behaviour and demand to remain in balance

Once the dominant product tanker class, Handysize fleet has ceded share to MRs and LRs

Vessel Shares of Clean Fleet, Percent of dwt



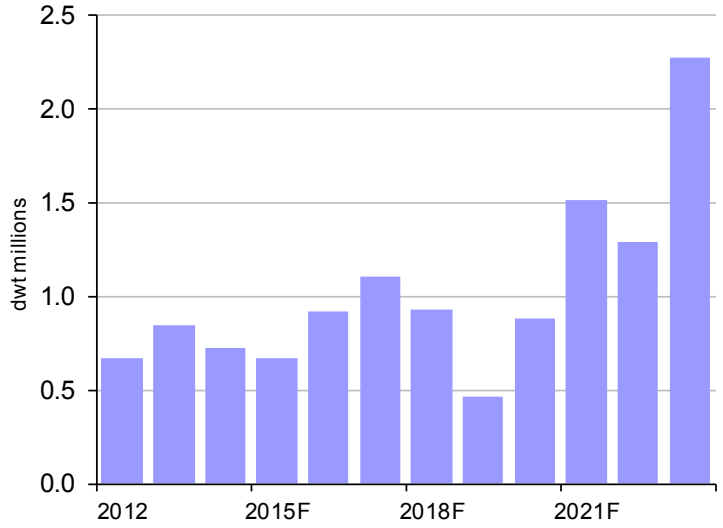
Clean Tanker Orderbook vs Older Tonnage



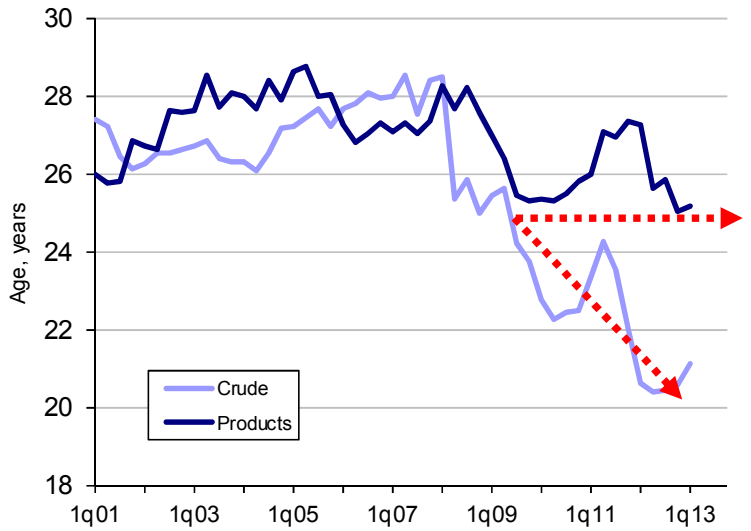
- During the 1990s, Handysizes (27-42 kdwt) represented 50% of the clean fleet in dwt terms, and carried 60-70% of product volumes, due to short voyage distances
- Rapid growth of MR fleet (42-60 kdwt) displaced Handies as workhorse of clean sector, while LRs also gained market share, as longer-haul routes emerged
- Youth of MR and LR2 fleets provides fewer demo candidates relative to orderbook
- Handy sector looks set to shrink further, with few orders and older tonnage, while LR1 fleet growth to remain muted on continued demolition

Youth of clean tanker fleet and optimism over market outlook is limiting clean demolition to 25-year olds or later

Timing of 25th Anniversary



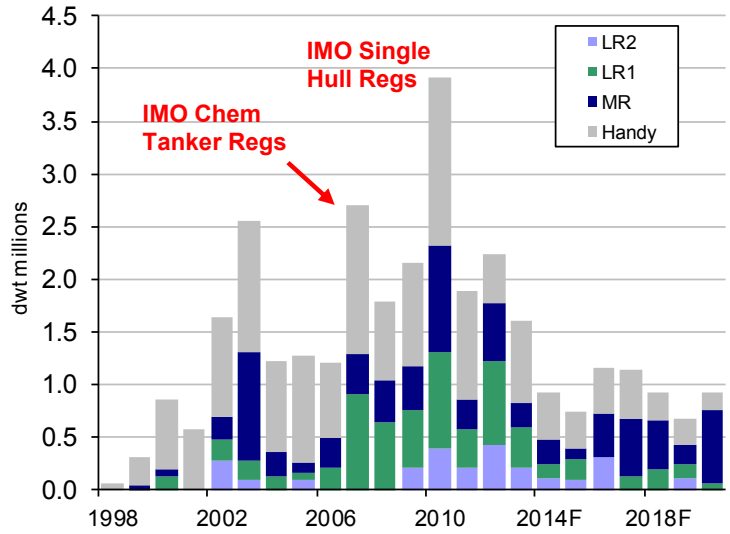
Average Age at Demolition, years



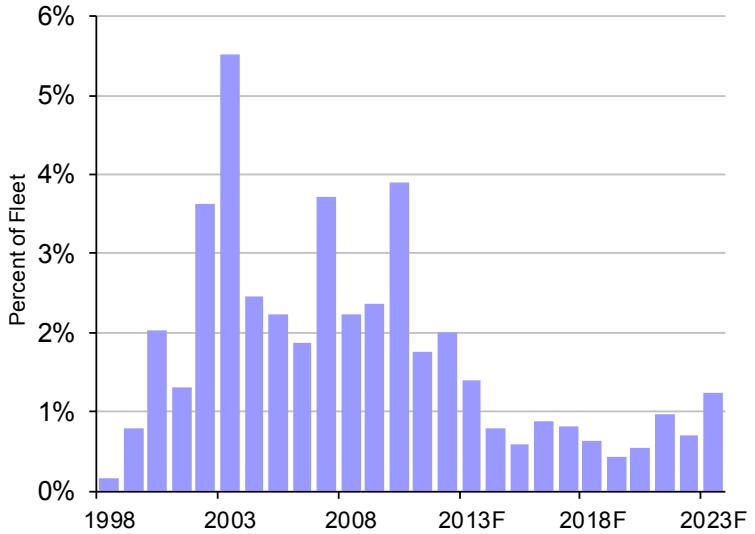
- Given age profile of clean fleet, potential for demolition will not pick up until the 2020's
- Until then, demo at 25-year anniversary limits removals to only 0.5-1.0% of the fleet annually
- Low clean earnings brought product tanker demo ages down to 25 years, but younger scrapping remains infrequent on more optimistic market outlook
- Meanwhile, dirty tanker demolition ages dropping to 20 years or below on sustained earnings malaise, weaker outlook and tighter vetting

Following LR purge in 2012, Handies should again lead clean tanker removals over medium term

Clean Removals by Sector, mdwt



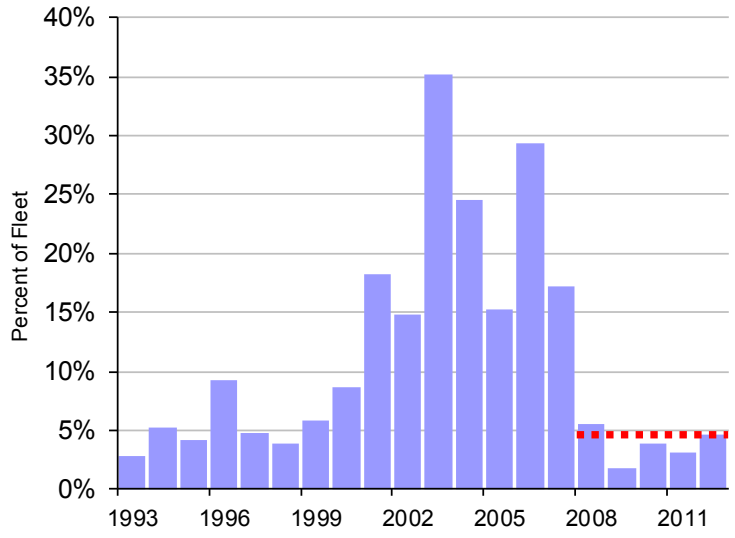
Clean Removals as Percent of Fleet



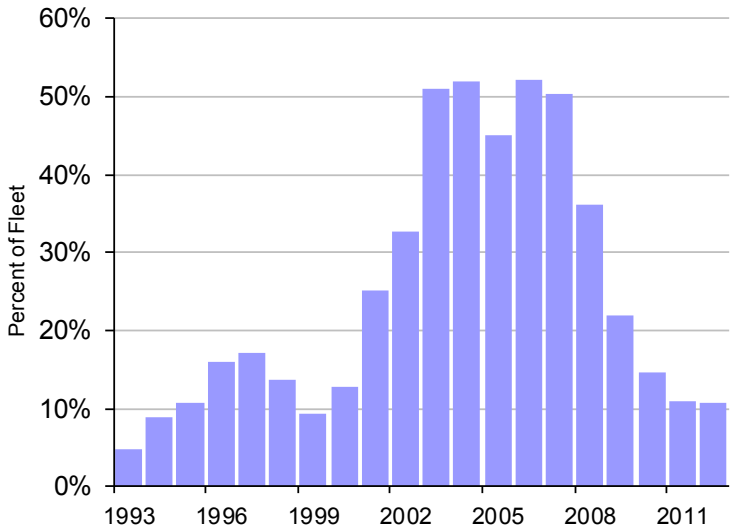
- Handies have led clean tanker removals during the past decade, as the sector has ceded share to MRs
- Demolition pace accelerated in 2007, as MARPOL Annex II regs excluded single-hull and non-IMO vessels from vegoil and certain easy chemical trades, affecting 40-50 million tonnes of annual trade
- Given age of Handy fleet, sector should continue to lead clean demolition, until 1990s built MRs start to head to the breakers, under 25-year demo
- Tighter vetting standards and the cost of mandated ballast water management systems represent threats to older clean tonnage and potential for earlier demo ages
- Demo at 20 years would raise near-term removal prospects to 2.0-2.5 mdwt per year, or 2% of fleet

Ordering collapse in 2008 set the stage for sharp slowdown in product tanker supply growth

Clean Tanker Orders as Percent of Fleet



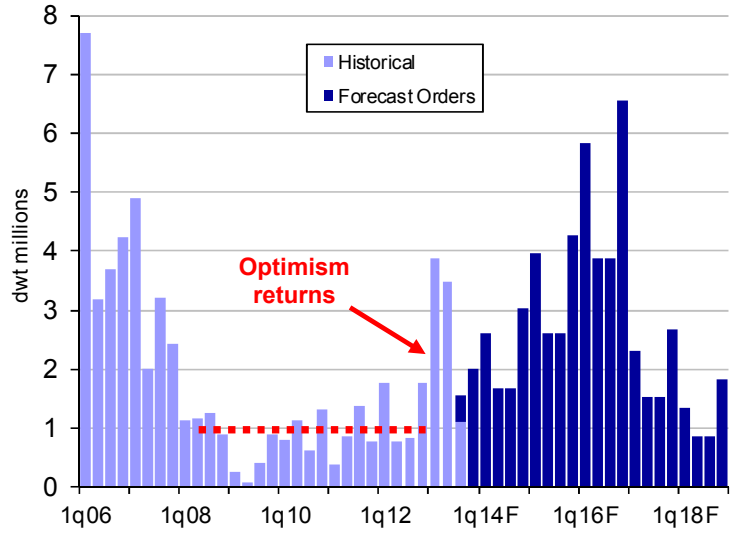
Clean Orderbook as Percent of Fleet



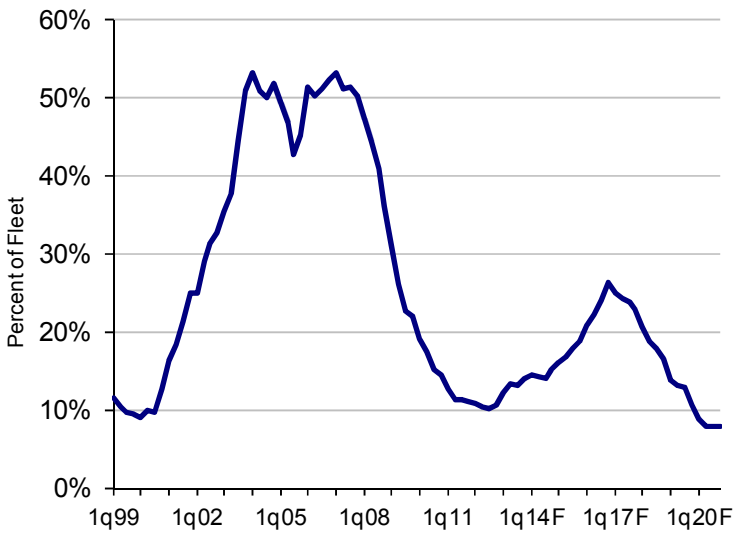
- After annual clean tanker ordering averaged 26% of the fleet during 2003-06, ordering slowed in 2007, and then collapsed in 2008, despite high earnings in 2008
- Ordering only averaged 3.3% of the fleet during earnings malaise of 2009-12
- Pause in ordering and heavy product tanker deliveries allowed the clean orderbook to plunge from 50.2% in 2007 to 10.7% by the end of 2012

Following four-year ordering drought, improving outlook and eco-design enthusiasm rekindling newbuilding activity

Clean Tanker Ordering, Quarterly, mdwt



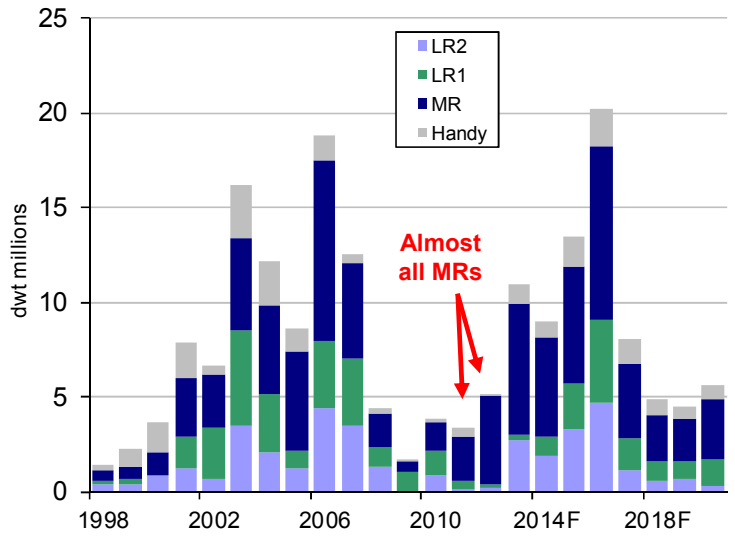
Clean Orderbook as Percent of Fleet



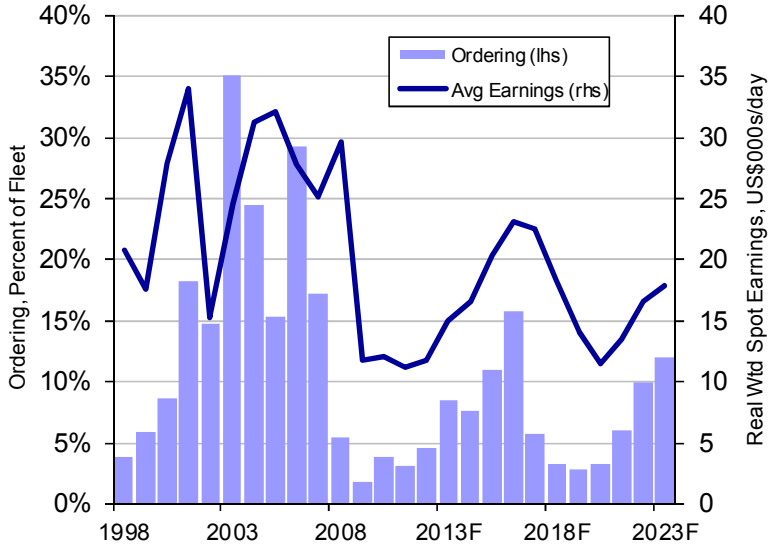
- Improving clean tanker outlook, private equity demand and re-opening of capital markets sparked an ordering surge in 2013, led by contracting for 88 eco-design MRs, offering 15% fuel savings
- Year-to-date ordering has hit 7.2 mdwt through August, or 6.3% of fleet
- Ordering should accelerate during 2014-16, as earnings improve, before rapid fleet growth sparks next downturn and ordering pause
- Given larger size of clean fleet, renewed annual ordering of 15-20 mdwt would push orderbook to 25% of the fleet, well below the 2000s excesses

MRs should again dominate clean ordering during next wave, which would remain below 2000s levels in percent terms

Annual Clean Ordering by Sector, mdwt



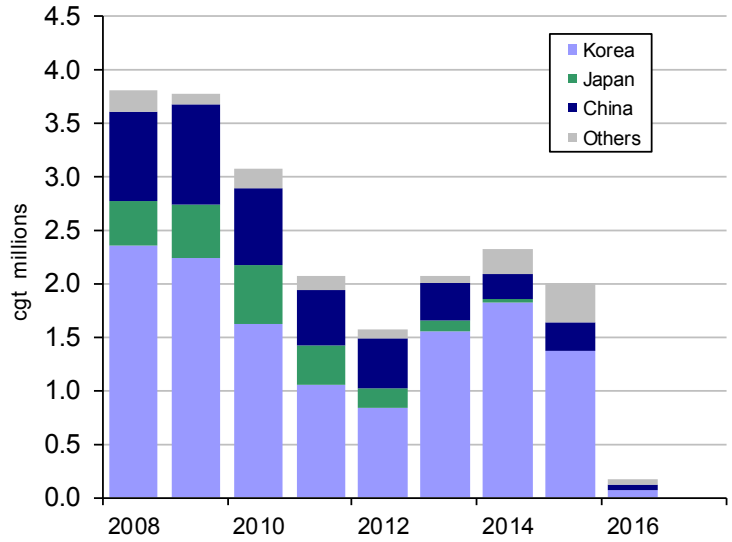
Clean Ordering vs Real Earnings



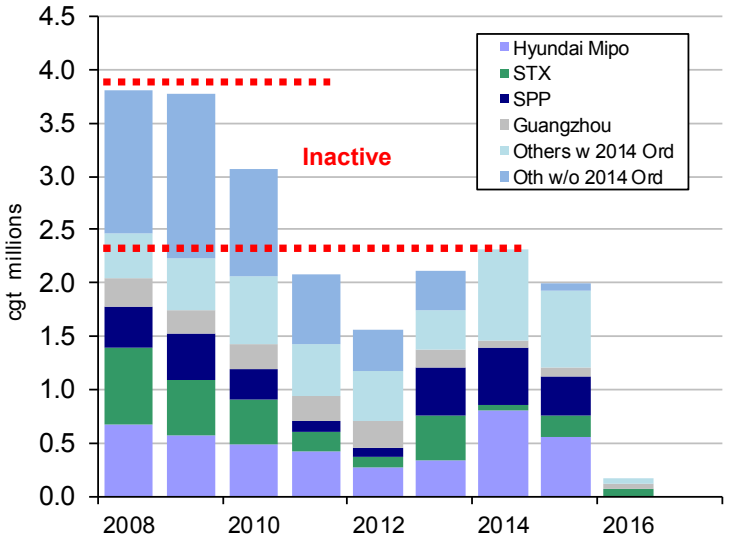
- The 2003-06 clean ordering frenzy excluded Handies, but witnessed balanced ordering across MRs and LRs, although MRs led with a 43% share
- MRs dominated clean ordering during 2011-12, with an 82% share in dwt terms, as sustained low LR earnings dented investor enthusiasm
- Ordering should peak in 2016, as earnings hit a crescendo, then ebb and flow with freight rates
- MRs should continue to dominate ordering, but low LR orderbooks and long-haul trades will eventually encourage a return to these sectors

Korea continues to dominate, but disappearance of junior yards has limited clean ordering at this point of cycle

Scheduled Clean Deliveries by Yard Country



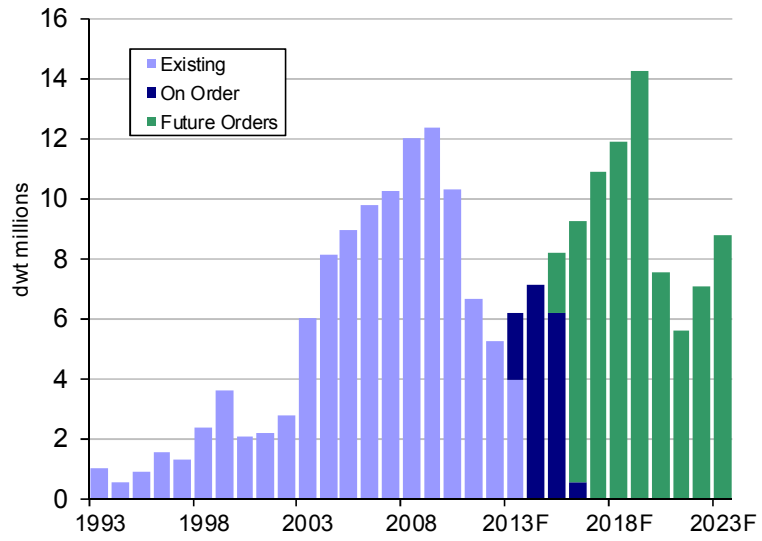
Scheduled Clean Deliveries by Shipyard



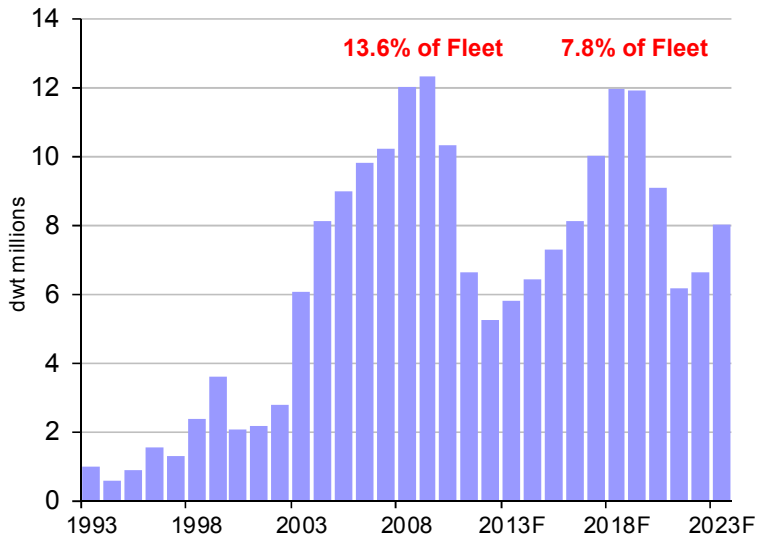
- Korean yards account for 70% of the clean orderbook in compensated gross tonnes (cgt), a measure of shipyard activity and capacity that allows comparison across vessel sizes and types
- Hyundai Mipo remains the leader in clean tonnage, with steady output, but STX and SPP have re-emerged in recent MR ordering boom
- Deliveries during 2008-09 peaked at 4 mcgt (~12 mdwt), but yard capacity may not be as large a threat, since 1.5 mcgt of capacity during boom period (largely greenfield) not participating currently
- Junior yards should re-emerge later in cycle, when ordering becomes frothy again

Ordering forecast would suggest record deliveries in 2019, but cancellation and delays would suppress

Actual & Scheduled Deliveries



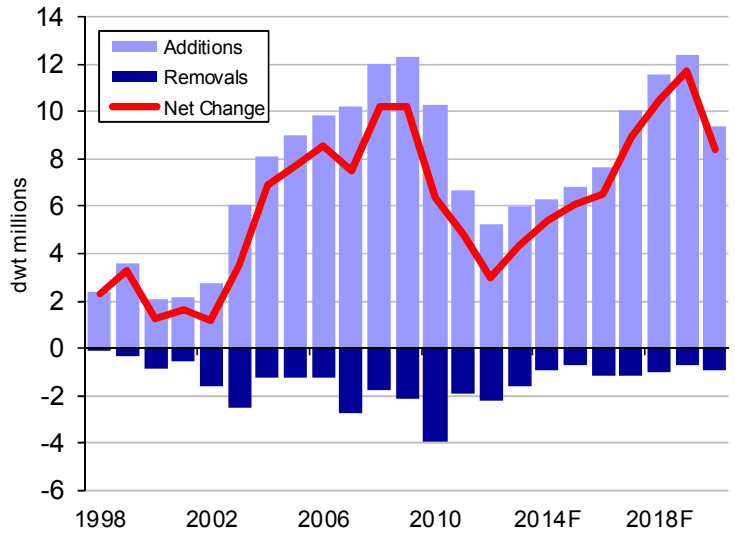
Deliveries Adjusted for Slippage, mdwt



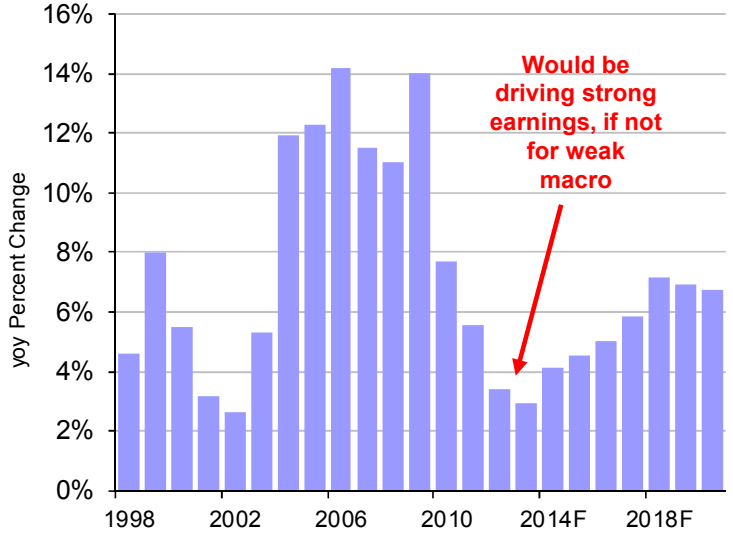
- Near-term ordering should fill remaining 2h15 berth capacity to similar 7 mdwt levels as 2014
- Question then becomes whether additional yard capacity becomes available and whether owners will again order from second-tier yards, in another frenzy for available slots
- Base case ordering would suggest *scheduled* deliveries of 14 mdwt in 2019, due to 2016 ordering peak
- Historical 20% slippage, including 6% cancellation of 2016-19 scheduled deliveries, would imply that actual deliveries only reach 12 mdwt in 2018-19, before easing

Limited demolition leaves ordering behaviour and yard performance as key drivers of clean fleet growth

Clean Net Fleet Changes, mdwt



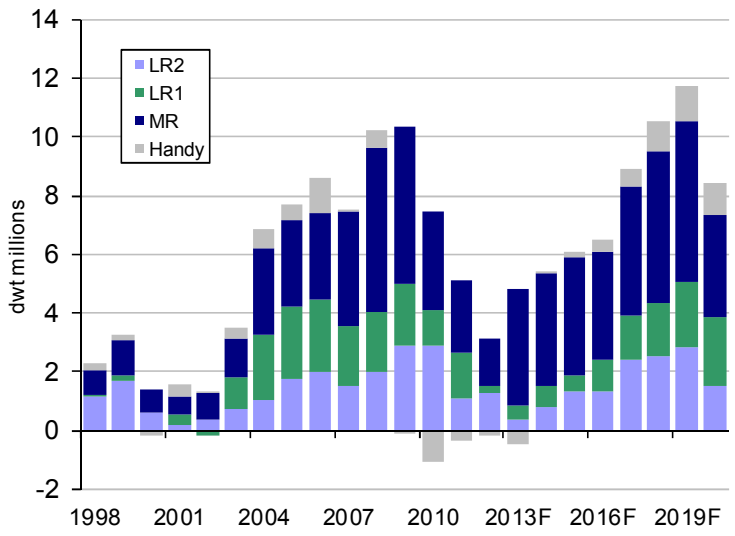
Clean Fleet Growth, Average Basis



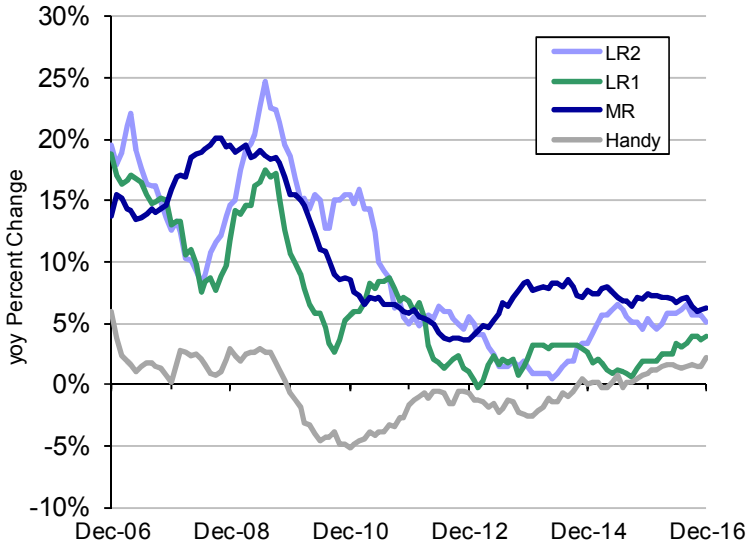
- After declining to 3 mdwt in 2012, clean tanker fleet growth set for moderate expansion during 2014-16, then acceleration through 2018, on renewed ordering
- Young fleet and lack of demolition candidates implies that ordering discipline -- or lack of it -- will determine clean tanker prospects after 2015
- Although forecast net fleet growth would reach 12 mdwt in 2019, peak growth would only hit 7% of the fleet, or half of levels during the 2000s, given rapid expansion of fleet

MRs likely to lead clean fleet growth through 2015, until renewed LR ordering prompts higher 2016-19 deliveries

Net Fleet Changes by Sector, mdwt



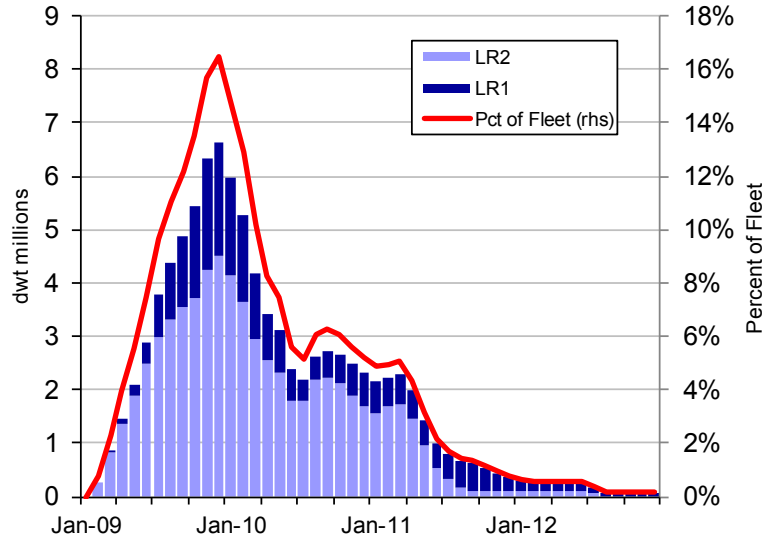
Clean Fleet Growth by Sector



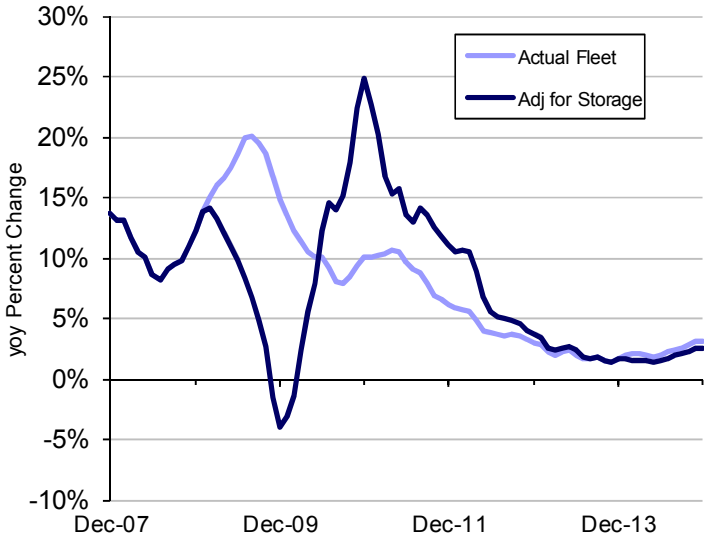
- Dominance of eco-design MRs in 2012-13 clean ordering suggests that MRs will drive product tanker fleet growth for next several years
- Should LR ordering pick up on slowing fleet growth and small orderbooks, LR growth would accelerate during 2016
- Handysize fleet should continue to shrink in near term, with continued share losses to MRs

Massive product storage in late-2009 tied up 16% of LR fleet, allowing operating fleet to shrink during recession

LRs in Floating Storage, mdwt



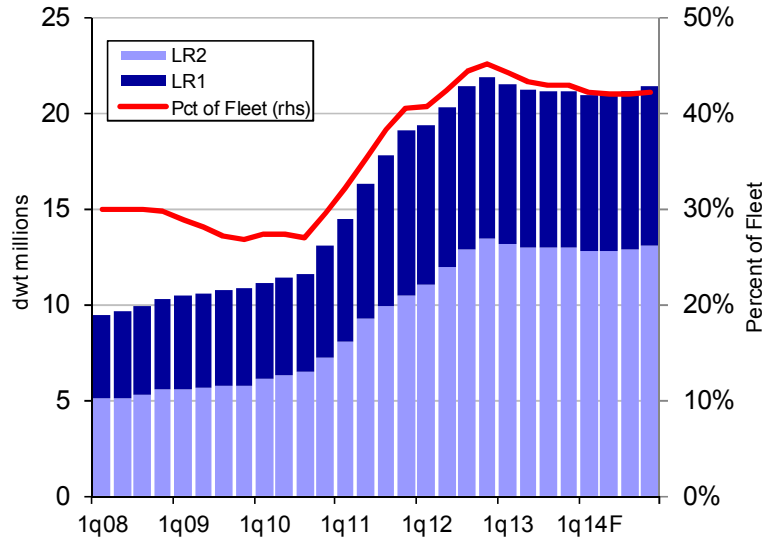
LR2/LR1 Fleet Growth Adj for Storage



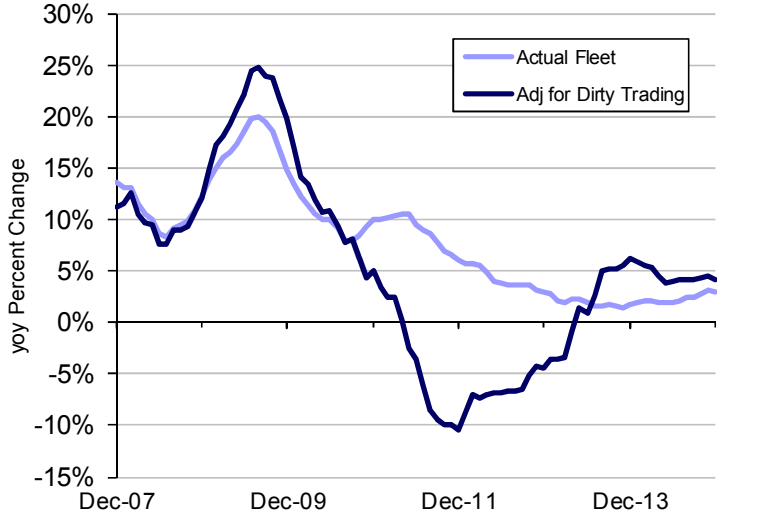
- As many as 43 LR2s and 30 LR1s were engaged in clean product storage during 2009-11
- Storage charters absorbed as much as 16% of the combined LR2/LR1 fleets
- This provided a 4% yoy decline in those fleets during late-2009, when demand was 15-20% lower yoy, on collapsing industrial production and naphtha import flows
- Return of this tonnage from storage trade added to the 10% growth in underlying fleet, boosting effective growth to 25% yoy

Following storage trade, weak LR environment and strong dirty rates encouraged more LRs into dirty trade

LRs Trading Dirty, mdwt



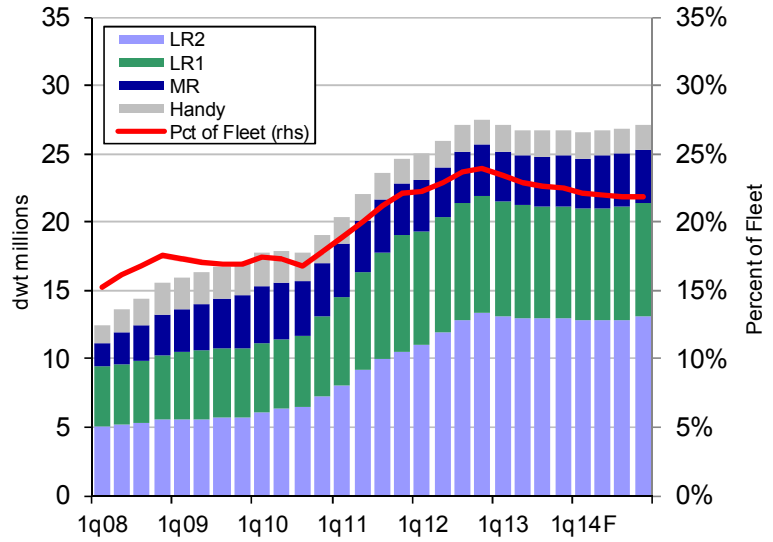
LR2/LR1 Fleet Growth Adj for Dirty Trading



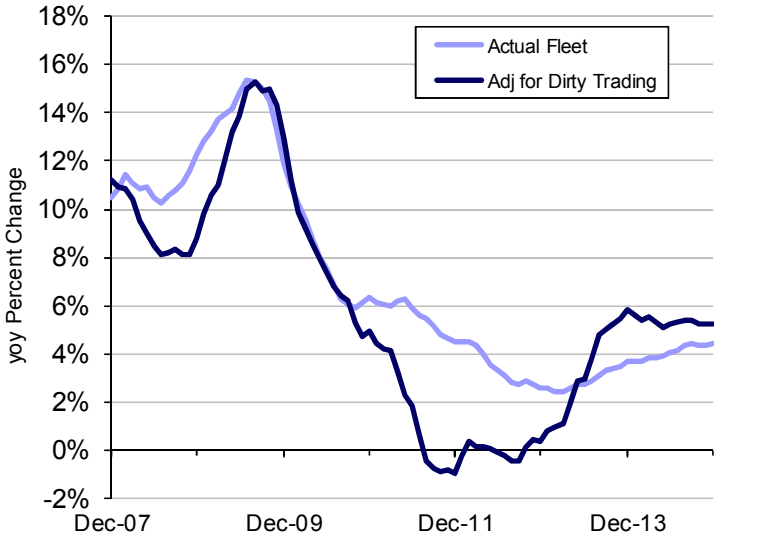
- Weak LR spot earnings and strong dirty Aframax and Panamax encouraged owners to shift as much as 15% of the combined LR fleet into dirty trading
- Return of floating storage vessels added pressure to the market, so shift to dirty trade was a necessary offset to maintain equilibrium
- Recent spikes in LR earnings enticed some owners back to the clean markets…
- …but explicit costs and off hire time from cleaning vessels, as well as reduced earnings on first three clean cargoes, make decision less clear
- Many LRs likely to remain in dirty trades

MRs and Handies are not major participants in dirty trade, but contributed to decline in operating fleet growth

Clean Tankers Trading Dirty, mdwt



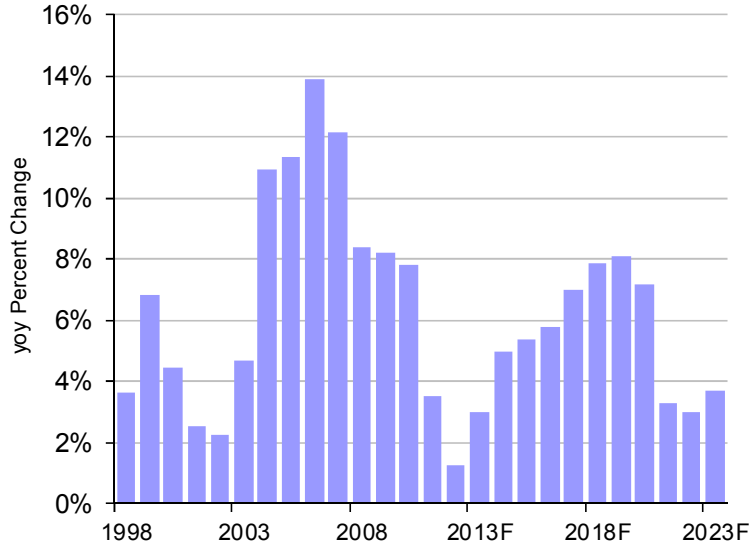
Clean Fleet Growth Adj for Dirty Trading



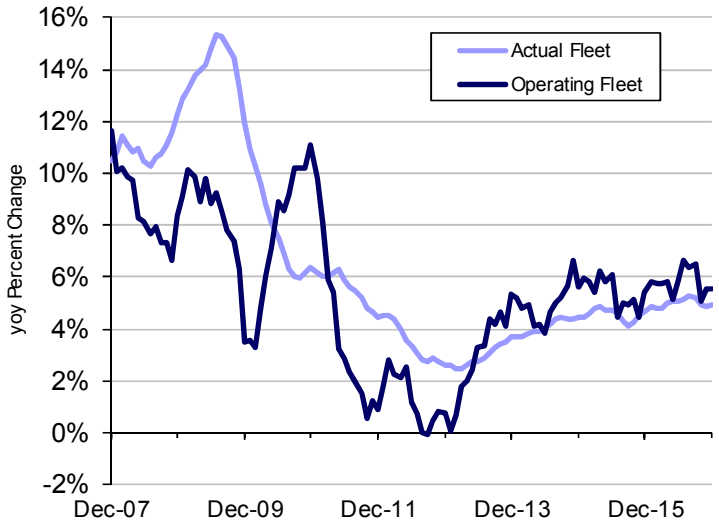
- MRs and Handies do participate in dirty trading of short-haul fuel oil and VGO parcels, but effect is not as pronounced as with LRs
- Overall, 5% of the clean fleet shifted to dirty trade during recession and period of slow demand
- Modest return of LRs to clean trade should provide a noticeable bounce in operating fleet growth

Combined effects of storage & dirty trading has allowed clean fleet growth to remain low during period of macro weakness

Clean Tanker Operating Fleet Growth



Underlying vs Operating Fleet Growth



- Although underlying product tanker fleet growth averaged 4.5% during 2011-12, the effects of dirty trading and other offsets have cut operating fleet growth to 1.8% during the same period
- This has allowed product tankers to maintain utilisations and earnings during period of economic softness, when trade flows have slowed
- Depending upon number of LRs returning to clean trade, product tanker operating fleet growth poised to rebound during latter part of 2013

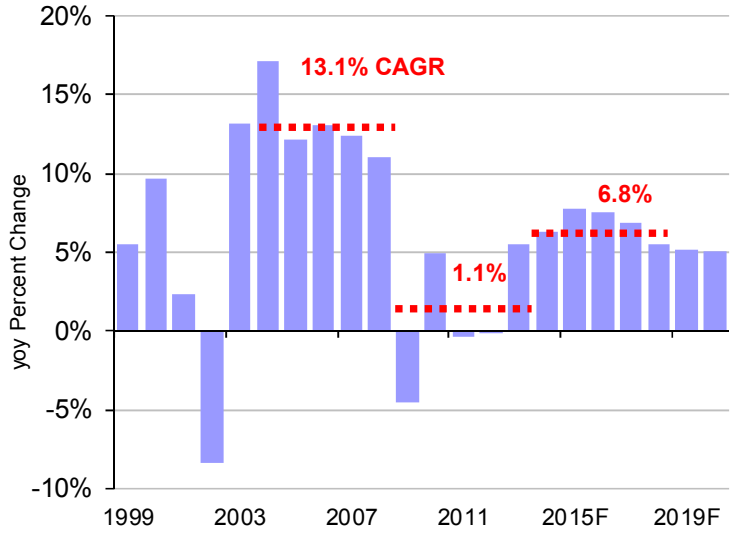
Conclusions -- Product Tanker Supply

- Young product tanker fleet offers little opportunity for demolition to limit supply
- Sector performance entirely reliant upon ordering discipline relative to demand
- Still, with ordering animal spirits now unleashed, amid eco-MR passion, annual ordering must remain within 10-15% of fleet to keep market downside contained
- Disappearance of junior yards that boosted supply in 2008-09 is helping to keep ordering in check, as owners fill 2015 slots in quality yards
  - Supply outlook depends upon whether owners will again order from second-tier yards, in another frenzy for available slots
- Miserable LR earnings relative to dirty prompted large shift in LRs to trading dirty
  - Shift of 15% of LR2/LR1 fleet represented 5% of clean fleet and kept utilisations from falling further during slow demand periods
  - Potential return of LRs to clean trade remains upside dampener, but costs of cleaning tanks and switching likely to keep most LRs in dirty trades
- Underlying clean fleet growth to average 5.3% during 2013-18, but modest decline in dirty trading would provide operating fleet growth of 5.4%

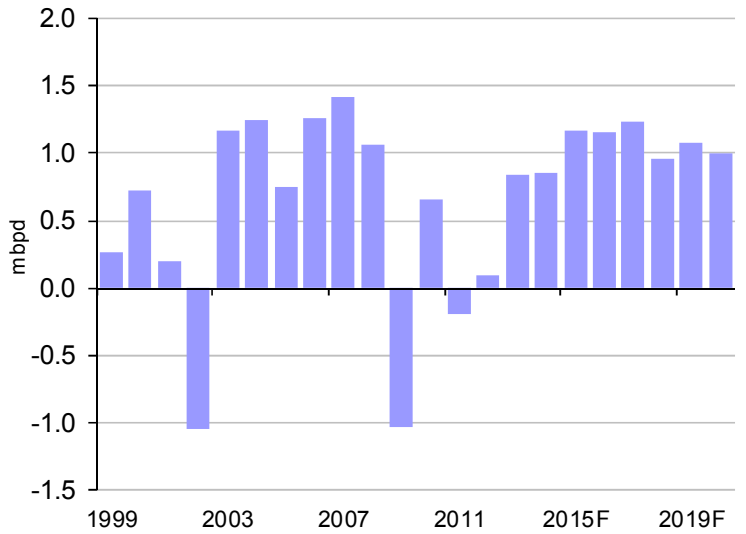
Product Tanker Market Outlook

Following spectacular growth on stressed refining system and longer-haul routes, clean demand hit by tepid macro situation

Clean Tanker Tonne-mile Growth



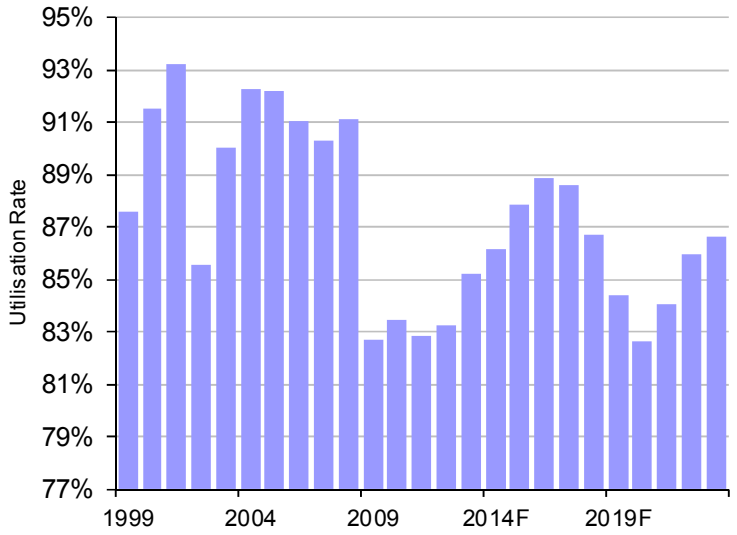
Clean Tanker Trade Growth, mbpd



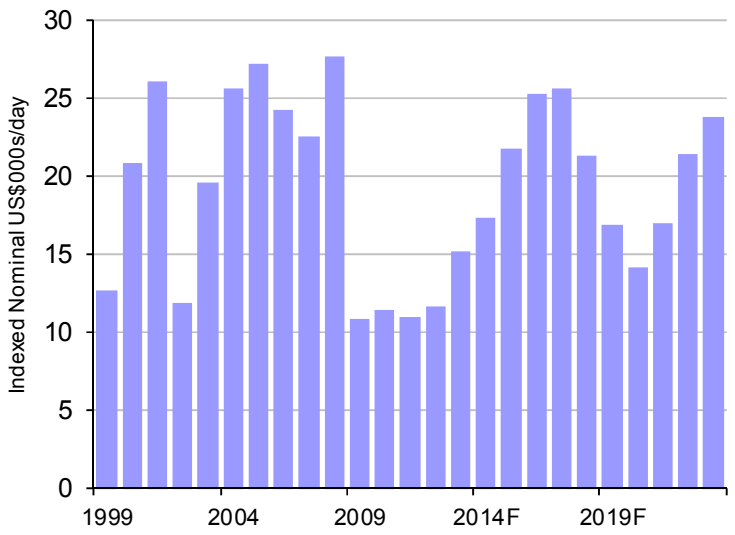
- Clean tanker tonne-mile demand grew at 13.1% average pace during 2003-08, as rapid demand growth and tighter product specs drove requirements for longer-haul product movements
  - Global refining system was under severe stress, running at high utilisations
- Subsequent refining capacity growth and weaker demand providing more relaxed refining environment and less need for longer-haul product flows
- Continued OECD refinery rationalisation and stronger demand growth should resume need for longer-haul product flows from Pacific Basin into the Atlantic, supporting 6-7% demand growth

Improving clean tanker demand should allow utilisations to recover and push earnings higher, before next wave of supply

Product Tanker Fleet Utilisations



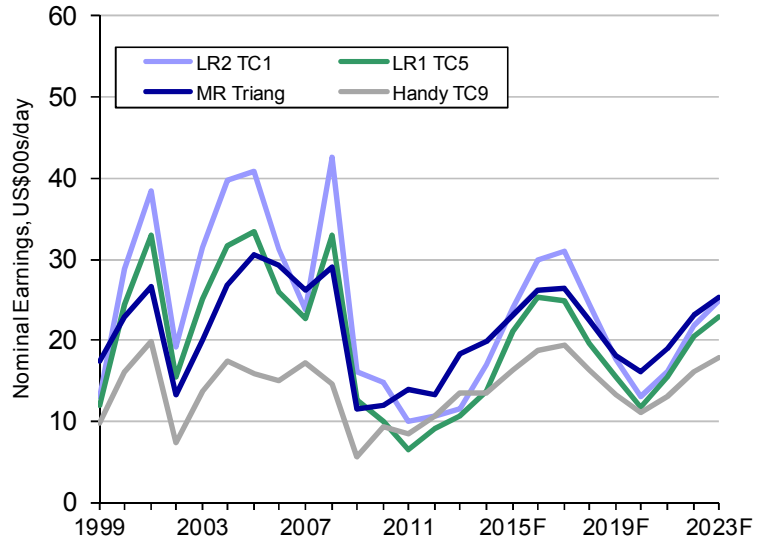
Product Tanker Spot TCE Earnings



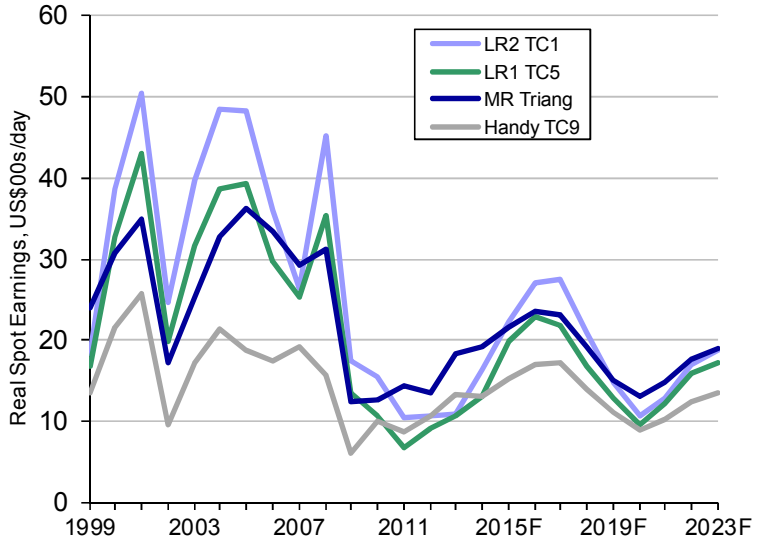
- With tepid macro environment, product tanker demand growth insufficient to provide large gains in fleet utilisations, given rebound in operating fleet growth
- Earnings should improve modestly in 2014, but substantial gains unlikely until demand accelerates on recovering demand and refinery expansions in 2015
- Under base case, product tanker earnings peak in 2017, before next wave of supply sends utilisations back to previous cycle lows in 2020

Nominal spot earnings poised to rebound on demand jump and modest supply, but would remain subdued in real terms

Nominal Spot Earnings by Sector



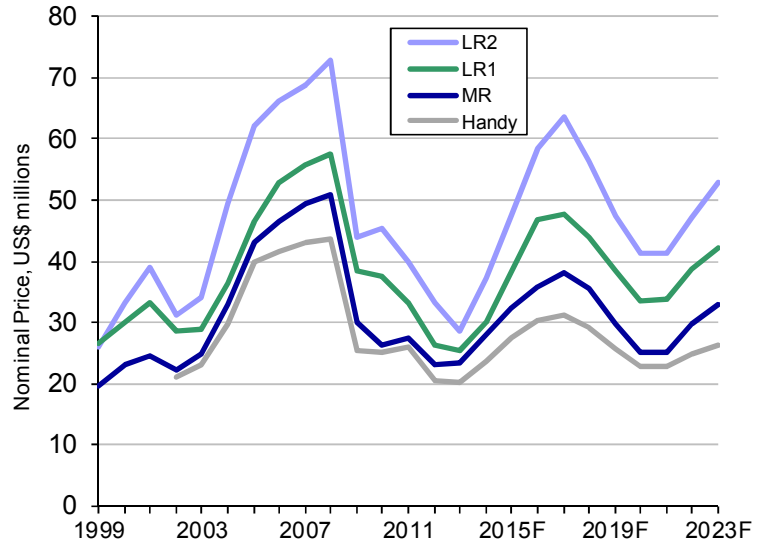
Real Spot Earnings by Sector



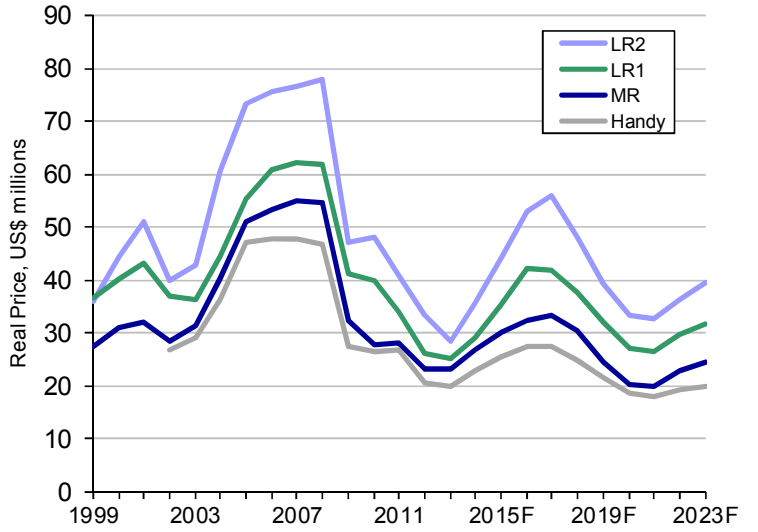
- Continued weak macro environment and secular oversupply of tonnage has altered cyclical pattern for clean tanker sector and other shipping markets
- Excessive supply will continue to affect markets during this decade, with the next cyclical peak expected around 2017 to be more muted in real terms
- Although average nominal earnings across the product tanker fleet would rebound by 110% trough-to-peak, real spot earnings would remain 30% below previous peak in 2008
- MR earnings are an index of triangulated Atlantic and Pacific routes, versus 50% laden/ballast routes for the other sectors, so compare favourably with traditional 55k AG-Japan (TC5) route for LR1s

Similarly, nominal product tanker prices respond smartly to improved rate environment, but real prices less spectacular

Nominal 5-yr Old Product Tanker Prices



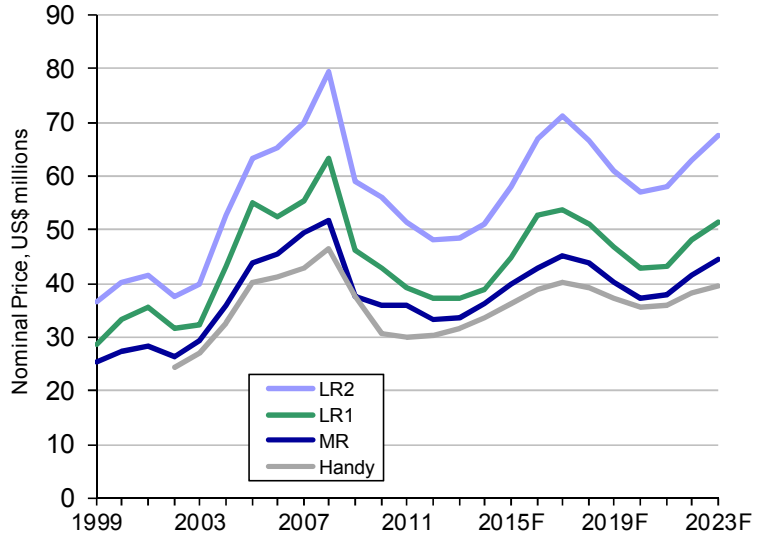
Real 5-yr Old Product Tanker Prices



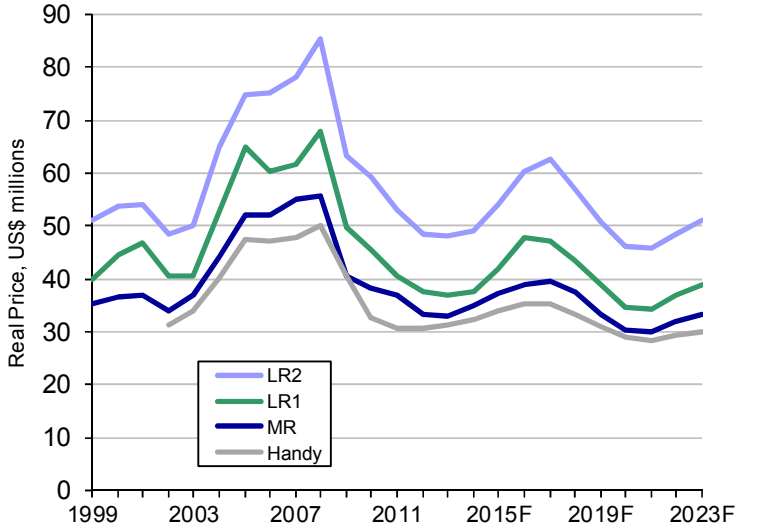
- Current weak macro environment is delaying recovery in sector utilisations and rates, while fleet growth rebounds from recent ordering
- Near-term rate action to keep medium-term period rates from moving significantly higher, which are the key determinant for secondhand vessel pricing
- Still, average 5-year old product tanker prices could rise by 69% trough-to-peak by 2017
- LR2s, with greater operational leverage between period rates and operating costs, would generate the largest jump in cash flows and surge in secondhand prices

Although nominal newbuilding prices likely to move higher, excess shipyard capacity ensures flat-to-declining real prices

Nominal Newbuilding Product Tanker Prices



Real Newbuilding Product Tanker Prices



- Nominal newbuilding prices only fell 37% from their 2008 peaks, versus 56% for 5-year old vessels, on average, given yards' unwillingness to contract at lower prices during recession
- Yards cite thin margins on current pricing, but includes fully-loaded fixed capital costs, which yards should not be recouping in an industry implicitly running at 70% utilisations
  - Still, yards maintained pricing discipline during recession, given size of their forward orderbooks
- Consequently, upside in newbuilding prices is lower, at approximately 33% trough to peak, versus 69% for 5-year old prices, that will respond more aggressively to rebound in spot and period rates
- In real terms, newbuilding prices in 2017-18 to remain 30% below 2008 peaks

Conclusions -- Product Tanker Outlook

- More relaxed refining environment provided less need for longer-haul product flows, depressing clean tonne-mile demand during 2011-12
- Nadir in clean supply growth prompted rebound in earnings during early-2013, but also start of stronger supply/demand dynamics for 2014-17
- With refinery overcapacity, clean product trade flow and tonne-mile demand set to grow at much slower percentage pace than boom years of 2003-08
  - Absolute volume growth of 1 mbpd and tonne-mile demand gains at similar levels
- Utilisations and earnings set to respond strongly, but peaks unlikely to rival boom years
- In real terms, next market peak in 2016-17 would remain well below previous sector highs

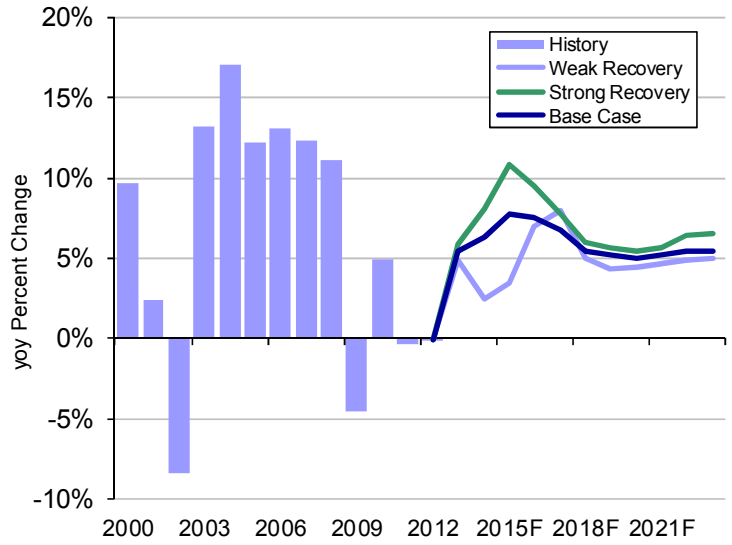
Product Tanker Scenario Analysis

Market scenarios highlight volatility surrounding tanker sector ordering behaviour and performance

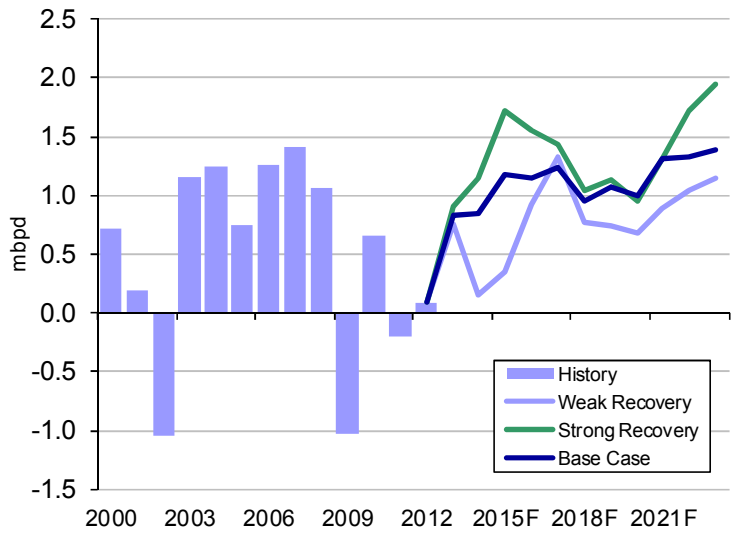
- **Base Case --** Assumes global product demand close to IEA forecasts, leading to annual tonne-mile demand growth of 6.3% during 2013-18
  - Equivalent to annual trade growth of 950 kbpd
  - Peak ordering response in 2016 limited to 13% of fleet
  - Utilisations and earnings remain balanced over next cycles
- **Strong Recovery --** Assumes stronger rebound in oil demand and product trade, in which tonne-mile demand growth averages 8.0% during 2013-18
  - Provides annual trade growth of 1.2 mbpd over period
  - Real earnings and vessel prices approach 2008 highs
  - Ordering also peaks in 2016, but higher earnings generate orders worth 16% of fleet
  - Higher orders lead to more spectacular earnings collapse in 2018-21
- **Weak Recovery --** Continued deleveraging and economic weakness in Europe leads to weaker trade flows and only 4.6% average tonne-mile growth during 2013-18
  - Average annual trade flow growth of only 700 kbpd during period
  - Weak earnings environment causes ordering to collapse during 2014
  - Ordering halt leads to next rate surge in 2016-19, as supply again slows and demand recovers, providing a two-year lag to other scenarios

All three scenarios feature recovery from four years of weak trade flows and tonne-mile demand

Clean Tonne-mile Demand Growth Cases



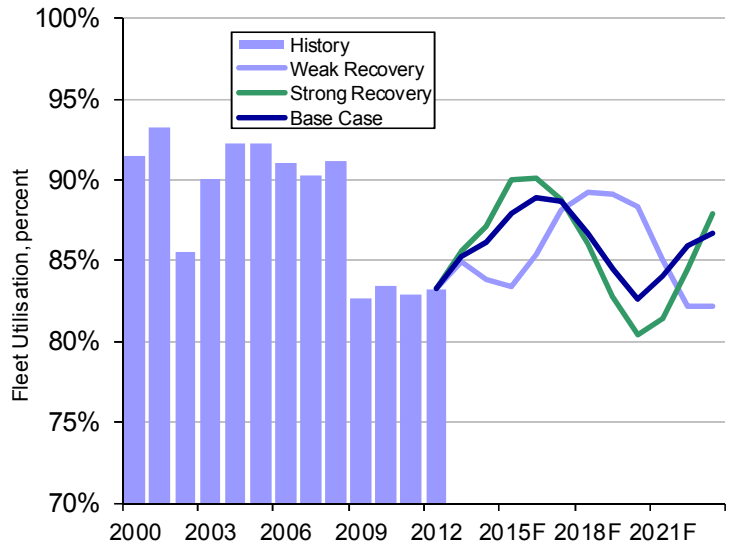
Clean Trade Volume Growth Cases, mbpd



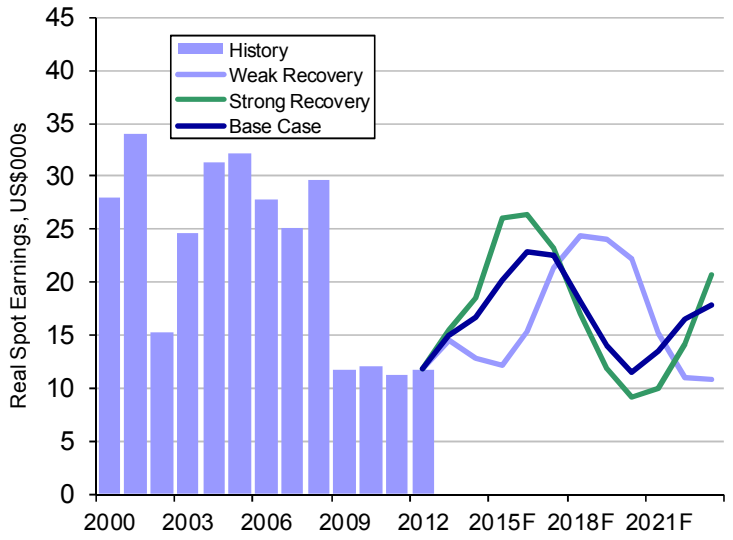
- During rapid demand growth of 2003-08, annual trade flow growth averaged 1.1 mbpd and tonne-mile demand expanded at 13.1% pace, far faster than underlying oil demand and crude run growth
- Base case features 6.3% tonne-mile demand growth during 2013-18, slowing to 5.3% in 2018-23
- Weak recovery case includes only 230 kbpd of volume growth in 2013, followed by 620 kbpd in 2014, providing only 4.6% average tonne-mile growth during 2013-18
- Strong recovery case provides sharper rebound in oil demand and trade flows, providing 8.0% tonne-mile growth in 2013-18, before slowing to 6.0% in 2018-23

Different demand scenarios provide varied cyclical patterns, based upon ordering responses

Clean Fleet Utilisation Cases



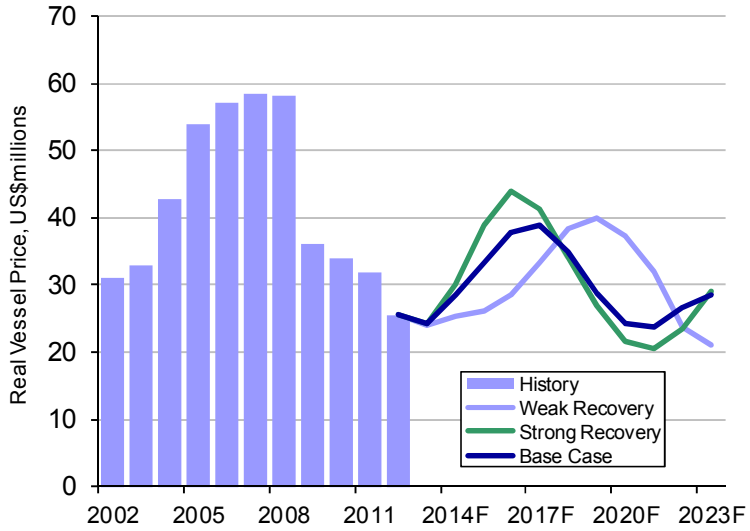
Clean Tanker Real Spot Earnings Cases



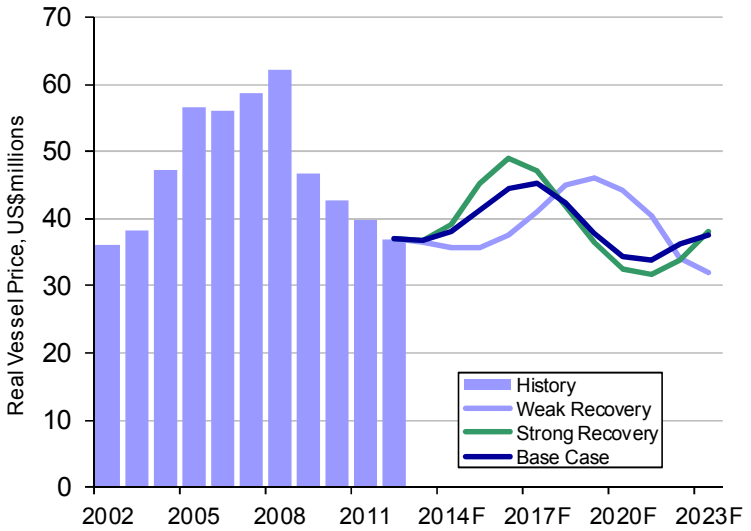
- Base case provides a balanced cyclical pattern centred around 85% utilisation over next decade
- Real spot earnings vary between previous cyclical lows and more modest cycle highs
- More rapid demand in strong recovery case boosts utilisations back to low-90s seen during 2003-08 boom period, and so real earnings return to those levels -- nominal earnings would be 40% higher
- Weak recovery case sends utilisations back to previous lows and real rates to new lows, as tepid demand cannot overcome rebound in operating fleet growth
- Collapse in ordering, from earnings malaise, sets up next market rally, when supply slows again and demand finally recovers meaningfully

Rate scenarios prompt price volatility in secondhand prices, but real newbuilding prices remain muted

Real 5-yr Old Vessel Price Cases



Real Newbuilding Vessel Price Cases

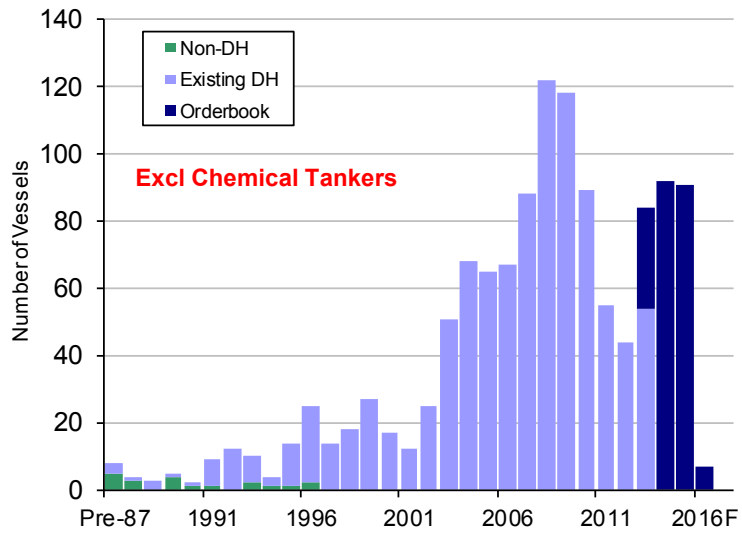


- Although real spot rates return to previous market peaks in strong case, earnings are not sustained long enough to allow period rates to rise and support same level of real 5-year old prices
- Real newbuilding prices do not move as significantly, given limited decline in newbuilding prices during recession
- Both base and weak recovery cases provide decline in real newbuilding prices, given persistent shipyard overcapacity over cycle
- Even strong recovery case returns real newbuilding prices to previous cycle lows

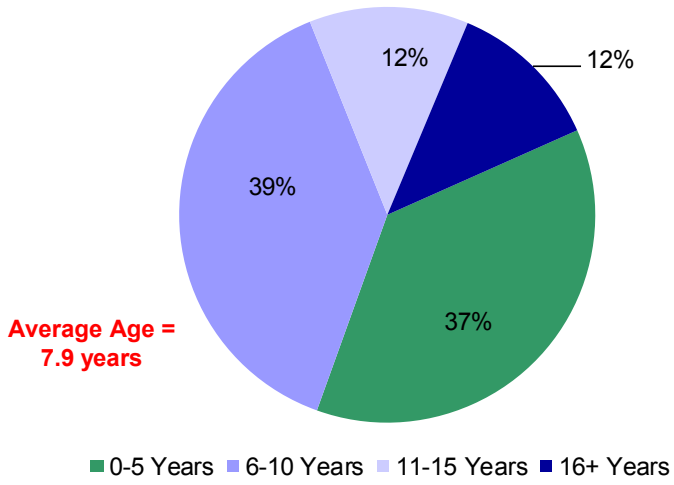
MR Tanker Supply

MR product tanker deliveries slowed during 2011-12, but scheduled deliveries rebounding in 2013-15

Clean MR Tanker Age Profile, 31 August 2013



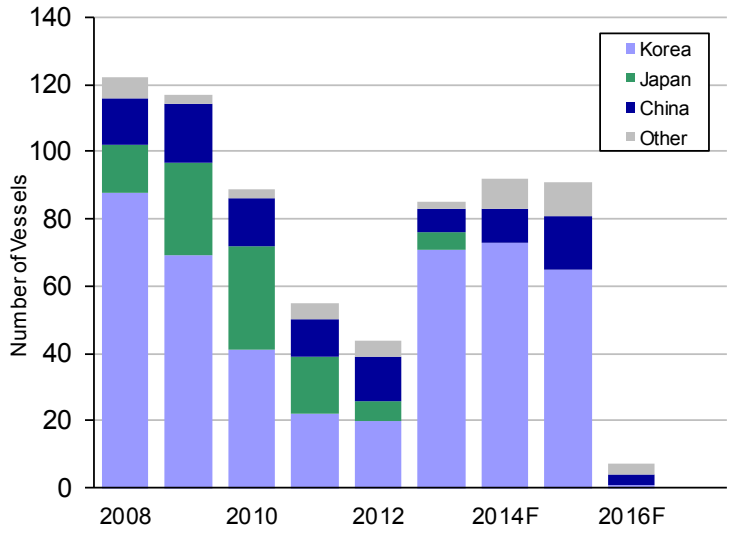
Clean MR Tanker Age Groups, Percent



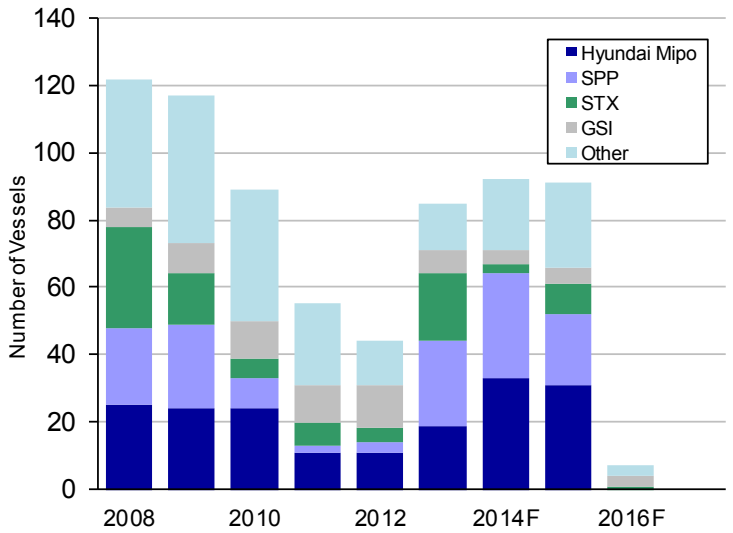
- Current fleet = 1,026 vessels
- Orderbook = 220 vessels (22.4% in dwt terms)
- Average MR deliveries of 10 per month during 2008-09, with capacity to move additional 120-150 kbpd per month, overwhelmed the market and sent rates crashing lower
- Slower deliveries in 2011-12 eased supply and allowed utilisations to recover
- Scheduled deliveries for 2014-15, with approximately 90 vessels each, set to boost supply growth, but improving demand to maintain utilisations and rates

Korea dominates MR construction, as Japan remains cost uncompetitive and as Chinese yards remain marginal players

Scheduled MR Deliveries by Yard Country



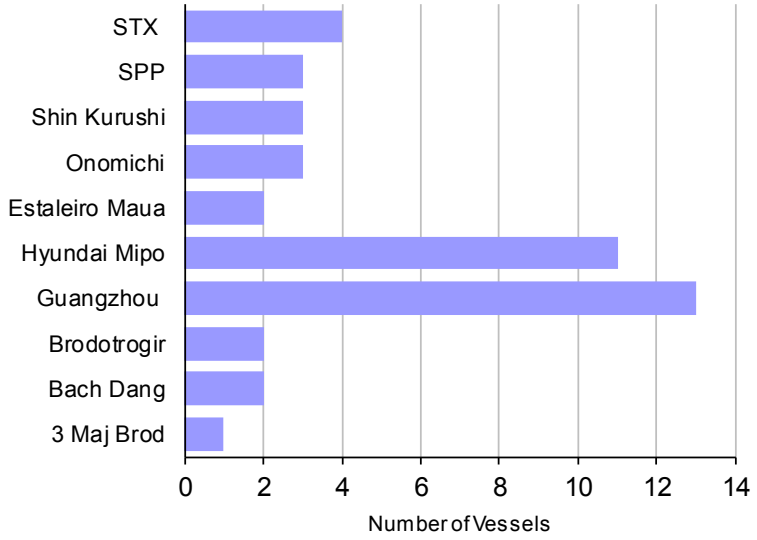
Scheduled MR Deliveries by Shipyard



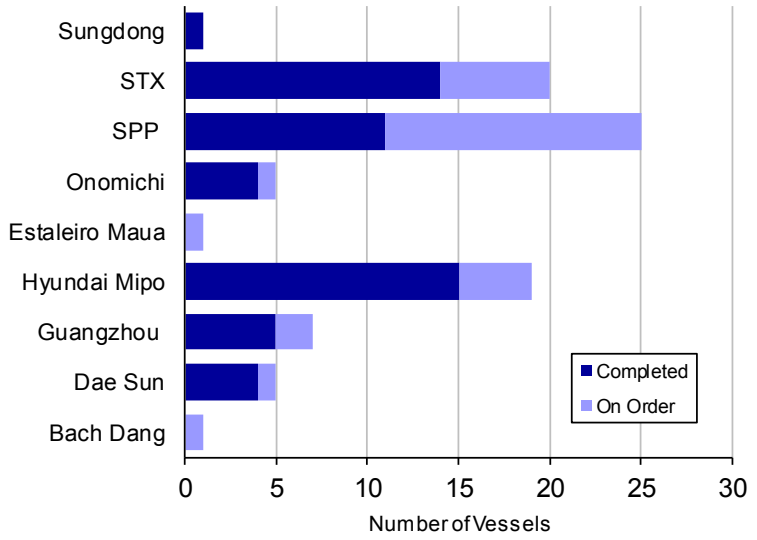
- Korean yards account for 72% of the current MR orderbook
- Hyundai Mipo seen boosting output in 2014, but SSP and STX showing large gains in orders
- With STX Dalian in financial distress, Guangzhou (GSI) only viable Chinese yard in MR market, with orders from Lauritzen, Stena, Trafigura and Tankers Inc.
- Other MR deliveries for 2014-16 include current 16 vessels on order at Hyundai Vinashin
- Maximum historical output at major yards suggests capacity for 90-100 MRs per year, without any participation from marginal yards

Aggressive marketing at SPP and STX has boosted share of recent MR ordering

MR 2012 Newbuilding Deliveries, by Yard



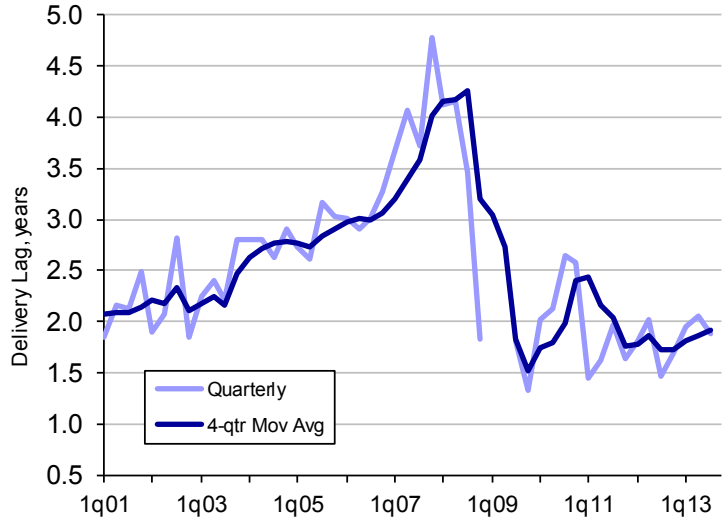
MR 2013 Delivery Status, by Yard



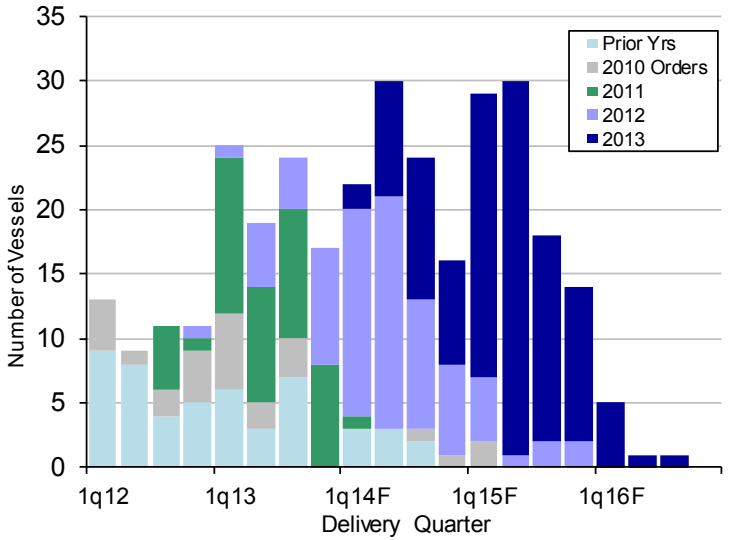
- During year of low deliveries, with only 44 vessels, Hyundai Mipo and GSI dominated 2012 MR output
- With the 2013 orderbook jumping to 84 scheduled deliveries, aggressive marketing by SPP has allowed it to surpass Mipo contracted deliveries
- Through August 2013, Mipo and troubled STX ahead of rateable pace for 2013 deliveries, while SPP output to date is consistent with its heavier 2h13 schedule of deliveries

With shipyard forward orderbooks and capacity utilisation at cyclical lows, now shorter lags between ordering and delivery

MR Delivery Lag, Years



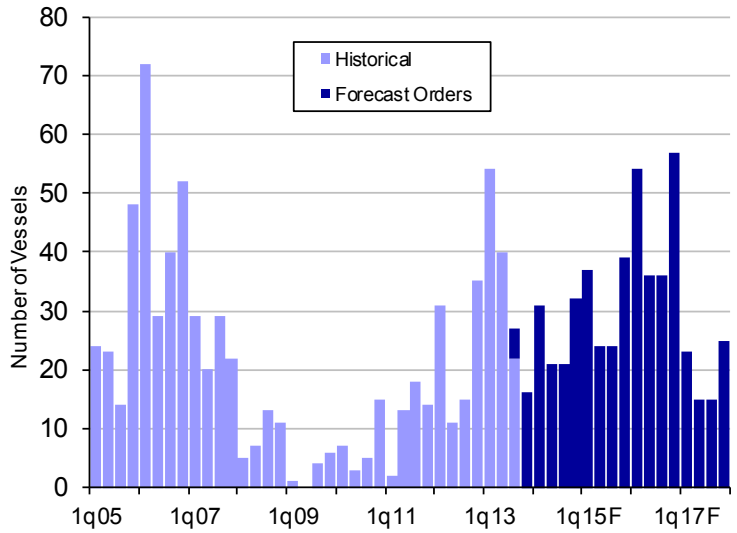
MR Quarterly Deliveries by Order Year



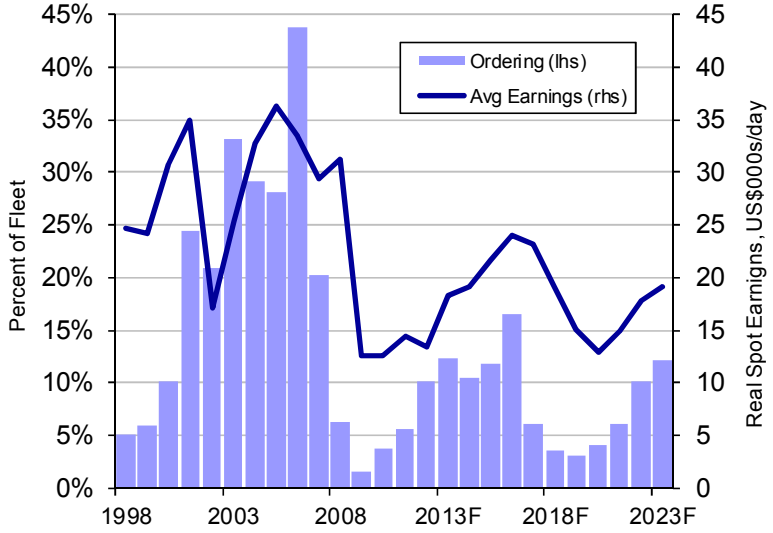
- During 2006-07, observed lag between contract signing and vessel delivery widened to over four years:
  - Expanding forward orderbooks at yards pushed contracted timing of deliveries further out
  - New, start-up yards experienced delays in delivery
  - Miserable earnings environment led owners to seek delays in delivery
- By 2009, MR ordering drought allowed owners to order tonnage with delivery lags of 18 months
- During 2013, delivery lags have returned to 24 months, as owners filled up 2h14 and then 2015 slots
- Forecast calls for delivery lags to expand to three years, as ordering froth returns

MR ordering has surged during past year, as sector has become focus of investors and charterers

Clean MR Ordering, Quarterly



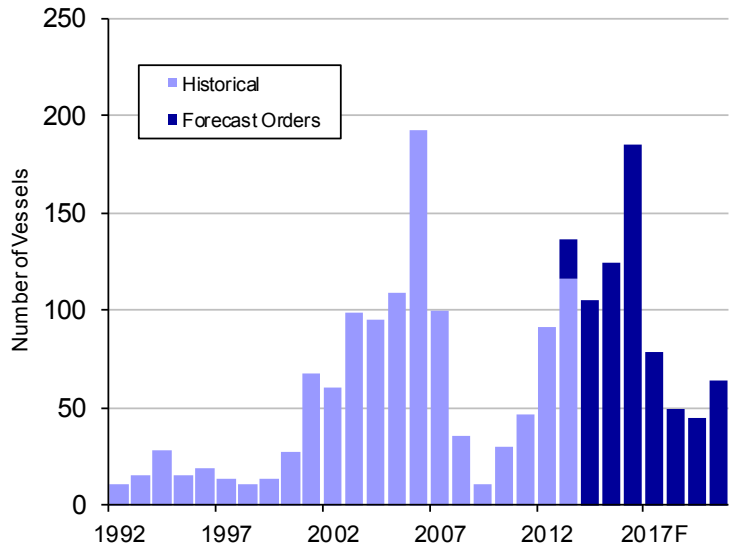
MR Ordering vs Real Earnings



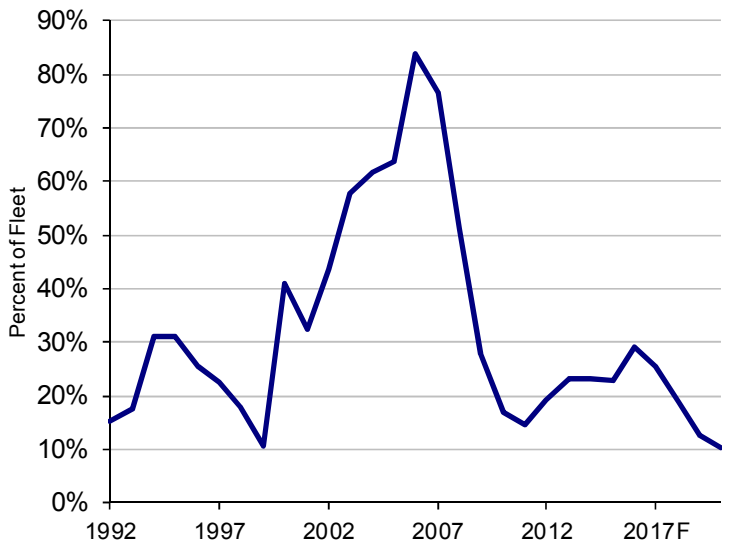
- Market has witnessed 88 MR orders during 2013, led by Scorpio's 20 vessels and Shell's "Project Silver" 20-unit follow-on order with Sinokor, after first ten MRs in late-2012
- Scale of orders to date and softer earnings in mid-2013 should slow ordering pace for remainder of 2013, but contracting should continue to rise during 2014-16
- To maintain balanced market, annual ordering should not rise above 15% of the fleet during the next boom, well below the levels of 2003-06

Peak MR ordering in 2016 would not eclipse 2006, while orderbook would remain well below excesses of 2003-06

Annual MR Ordering, Number of Vessels



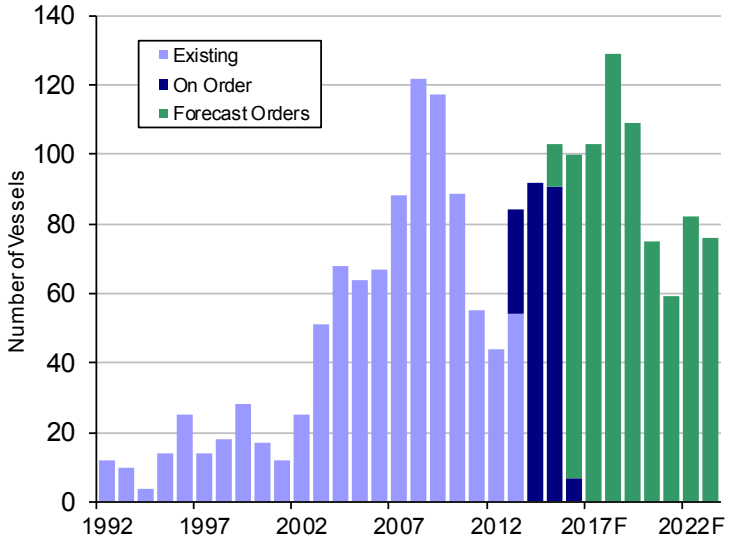
MR Orderbook as Percent of Fleet



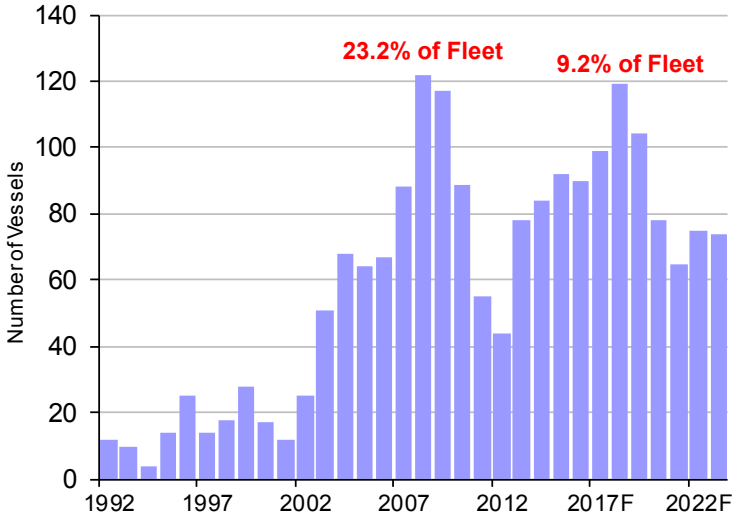
- After aggressive start to 2013 ordering, MR contracting should slow, on weaker rate environment
- Ordering enthusiasm would resume in 2014, however, on improved earnings and peak in 2016, with close to 200 vessels, as junior yards enter the fray
- Orderbook as percent of fleet would remain below 30%
- Weaker rates from next wave of supply would bring collapse in ordering in 2017

Renewed ordering would bring scheduled deliveries back to 2008-09 peaks, but lower in percent of fleet terms

Actual & Scheduled MR Deliveries



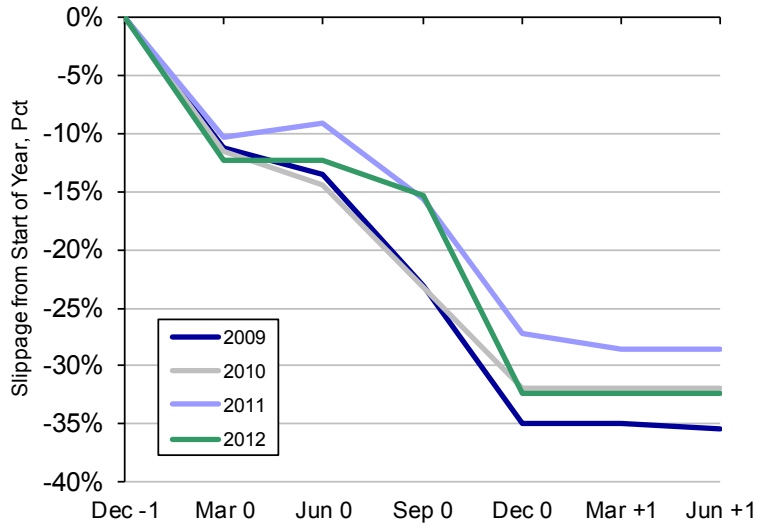
MR Deliveries Adjusted for Slippage



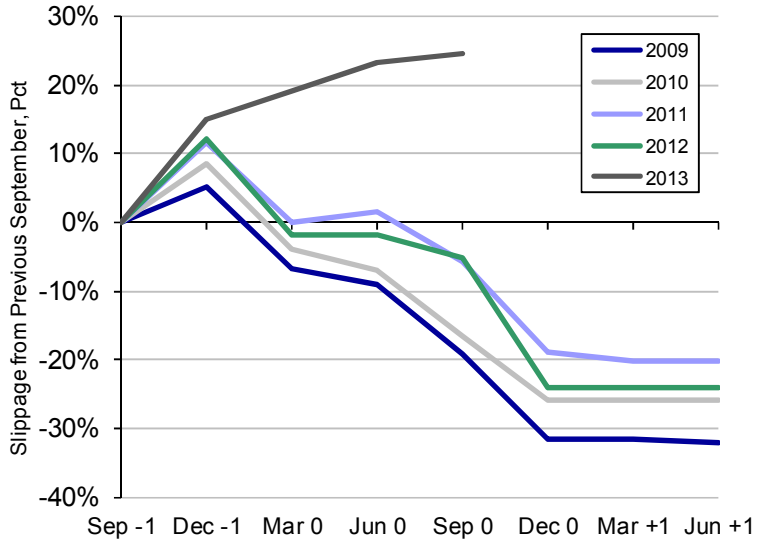
- Near-term ordering could take a few late-2014 slots, but focus primarily on filling remaining 2015 berths
- Reduced ordering conviction from lower rates during 2013 would result in slightly-lower 2015-16 scheduled deliveries, before approaching record highs in 2017-19
- Historical 20-25% slippage, including 5% cancellation of 2016-19 scheduled deliveries, would imply that actual deliveries reach 120 vessels during peak
- With larger MR fleet, 2019 adjusted deliveries would only represent 9.2% of fleet

Slippage statistics are not what they appear, given data revision processes of fleet data providers

MR Slippage from Previous December



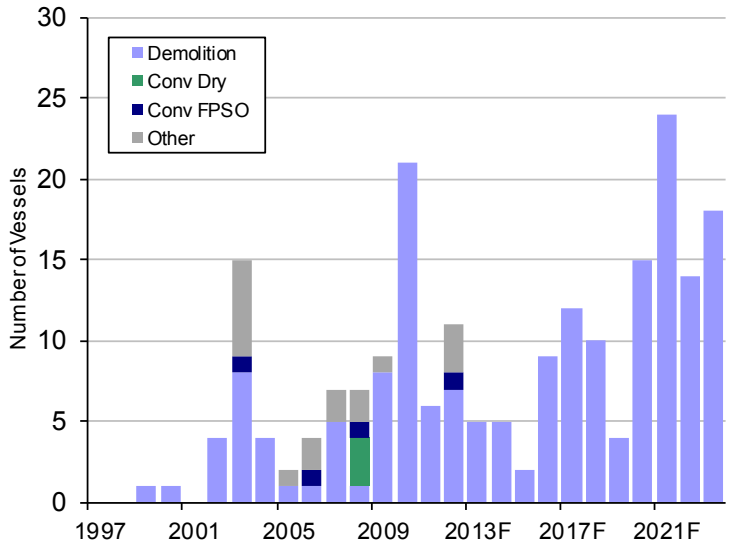
MR Slippage from Previous September



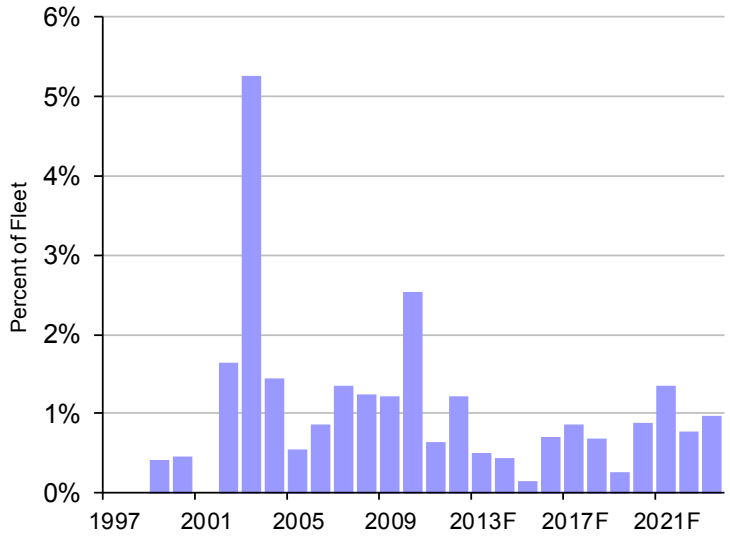
- Owners will cite impressive slippage numbers from orderbooks at start of year, but overstates reality
- Fleet data providers will automatically push ships not delivered in current year into the following year for their year-end orderbook statistics, boosting figures in December by 9.4% on average
- Subsequent downward revisions during first quarter of the following year have averaged 11.4%
- Relative to end-year orderbooks, MR “slippage” has averaged 32.1% during 2009-12, but relative to previous September orderbooks, slippage was 25.7%
- Slippage for 2013 may be problematic, since delay in recording 4q12 orders for 4q13 delivery and new, unreported deliveries continued to boost 2013 orderbook by 23% since September 2012

Youth of MR fleet suggests limited demolition potential during remainder of decade

MR Removals by Type, Number



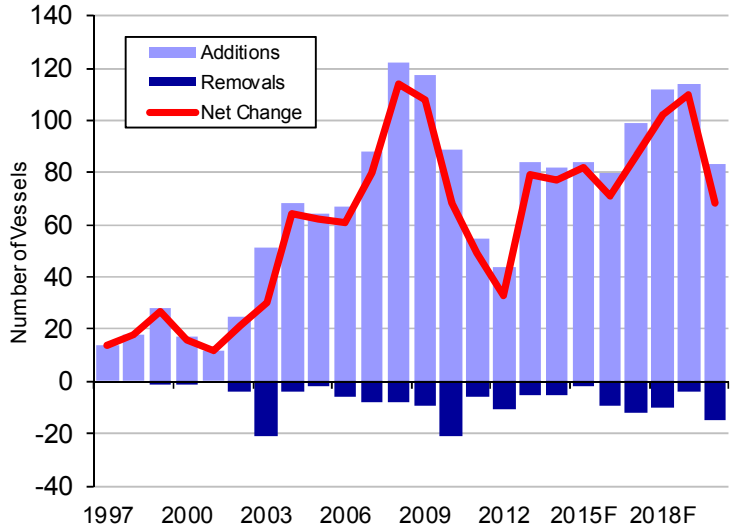
MR Removals as Percent of Fleet



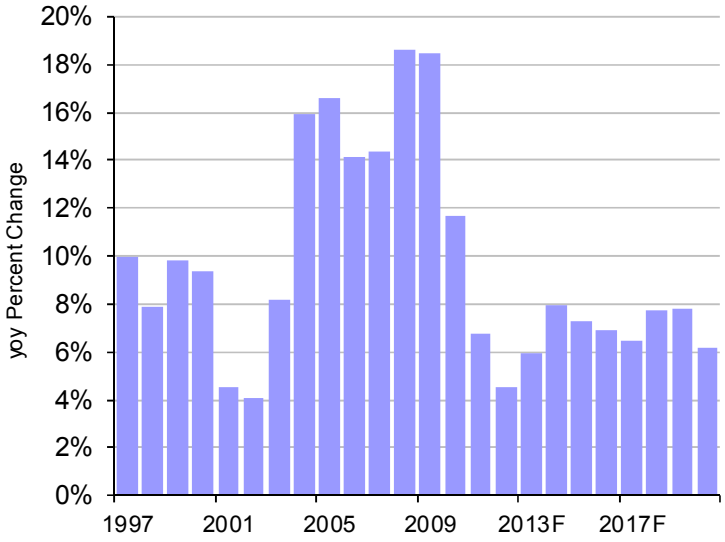
- With demolition only occurring at mandated 25-year anniversary, young MR fleet has few near-term demolition candidates
- Scrapping at 25 years would remove only eight MRs per year, or 0.6% of the fleet during 2014-18
- Tighter vetting standards and the cost of mandated ballast water management systems represent threats to older MR tonnage and potential for earlier demo ages
- Demolition at 20 years would raise near-term removal prospects to 20 MRs per year, or 1.7% of fleet, during 2014-18

Ordering activity dominates MR net fleet growth, as demolition and other removals remain modest

MR Net Fleet Changes, Number



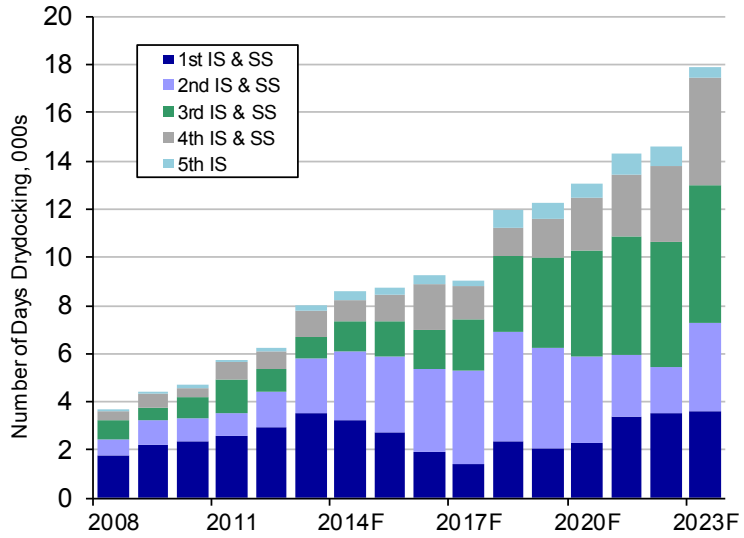
MR Fleet Growth, Average Basis



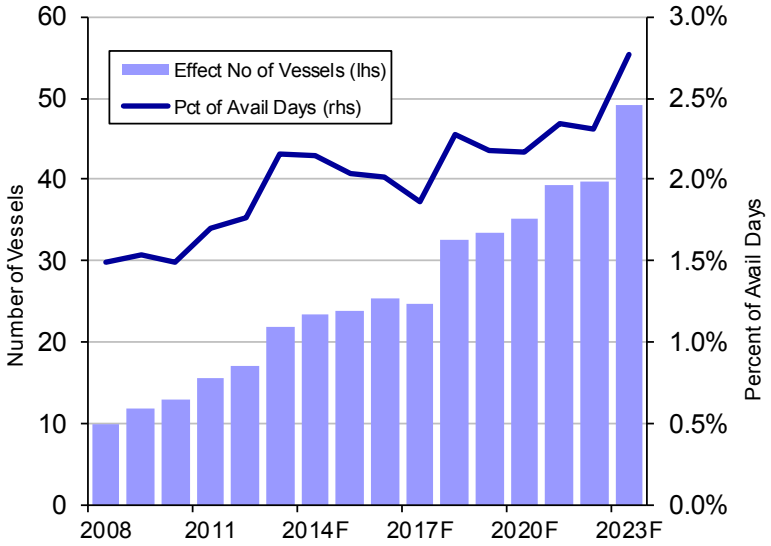
- Following the excesses of the 2000s, MR net fleet growth touched 33 vessels in 2012, or 4.5% annual growth on an average fleet basis (3.6% on Dec/Dec basis)
- MR growth set to rebound to 72 vessels in 2013, or 5.5% yoy on average basis
- Although forecast MR fleet growth would approach previous highs of 120 vessels, percentage growth would never exceed 8%, given size of fleet
- Demolition and other removals have minimal effect on MR fleet growth

MR fleet is young, but *is* getting older, with drydocking and special/intermediate survey off hire time increasing

MR Offhire Days from Surveys



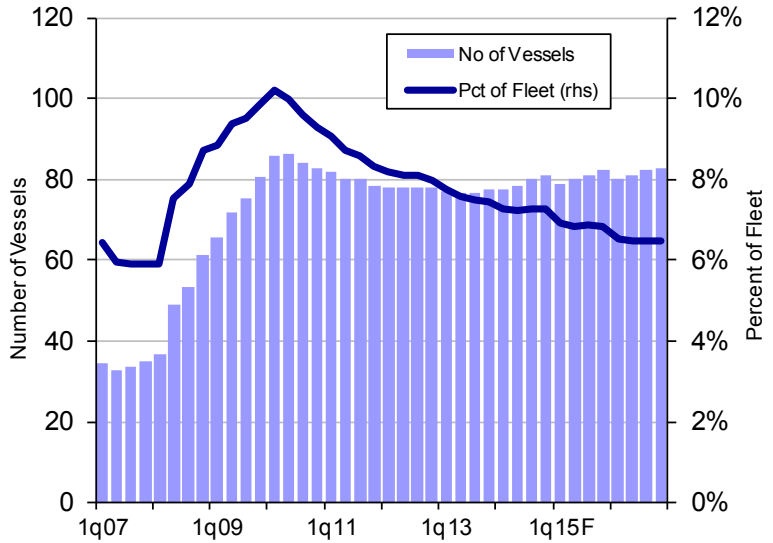
MRs Effectively Removed from Operating Fleet



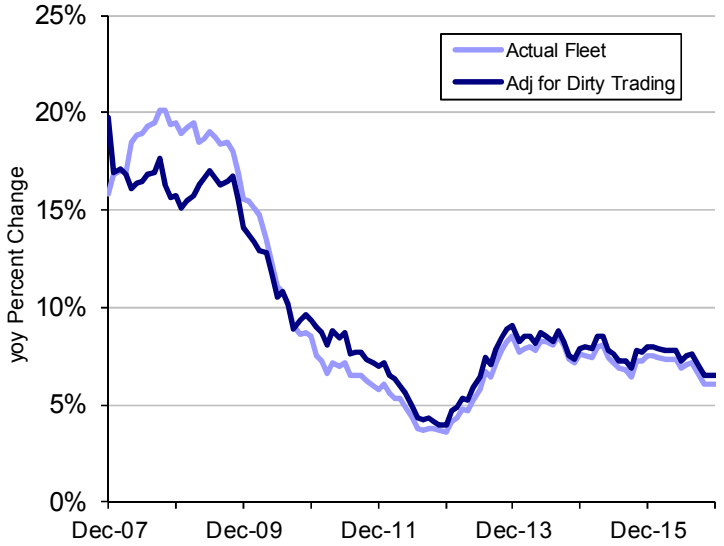
- With the MR fleet emerging in 2003, early vessels now approaching 2nd special survey, with more meaningful drydocking and off hire time
- Effective loss of tonnage from operating fleet will increase from 1.6% in 2008-12 to 2.3% for 2014-18
- Utilisation impact of extra 0.7% of fleet in drydock worth about $1,000/day in spot earnings
- Vessels aging towards 3rd special survey and longer off hire times will remove relatively more tonnage later in decade

Clean MRs in dirty trade have only modest effect on operating fleet growth

Clean MRs Trading Dirty



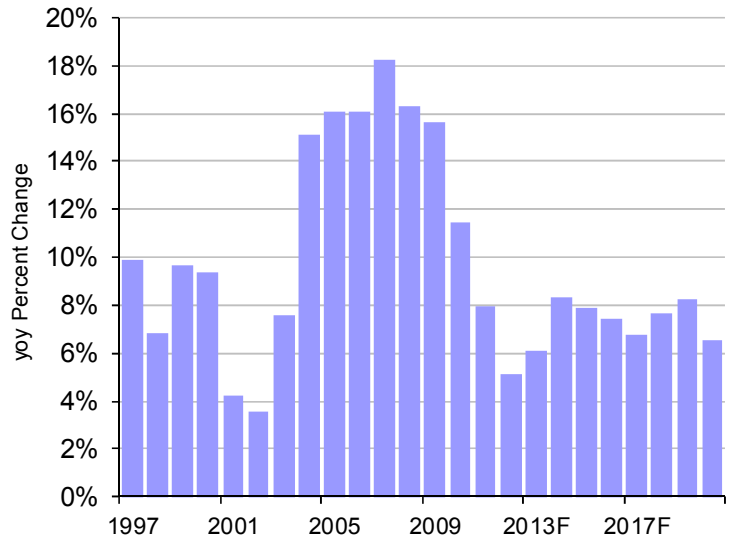
MR Fleet Growth Adj for Dirty Trading



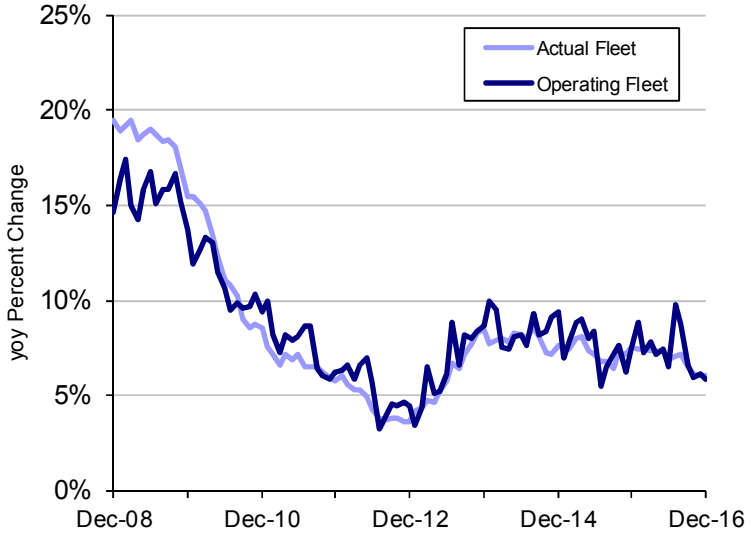
- MRs do participate in dirty trading of short-haul fuel oil and VGO parcels -- particularly in the Black Sea/Med region, but effect is not as pronounced as with LRs
- Overall, 4% of the clean MR fleet shifted to dirty trade during recession and period of slow demand, but improving clean markets attracted some tonnage back, boosting operating fleet growth
- These specialised trades can provide attractive employment for MRs, so with explicit cleaning costs and offhire time to return vessels to clean trade, numbers in dirty trades to remain static
- Stable number of clean MRs in dirty trade to provide minute shift in operating fleet growth

Combined effects of drydocking and dirty trading has only minor impact on MR operating fleet growth

MR Operating Fleet Growth



Underlying vs Operating Fleet Growth



- Operating fleet growth for 2012 fell to only 5.1%, versus 4.5% underlying, as dirty trading MRs returned to clean markets when rates recovered
- MR operating fleet growth to average 7.8% per annum during 2013-18, slightly outpacing underlying fleet growth of 7.5% pa, due to slight decline in percentage of MR fleet trading dirty
- Seasonality of drydocking by owners provides peaks and troughs in operating fleet growth around the central trend, but these shifts can influence balance of charter markets

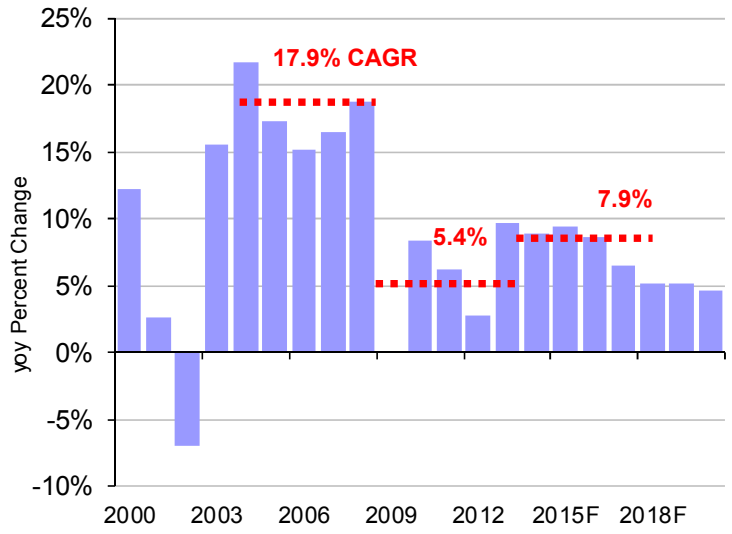
Conclusions -- MR Tanker Supply

- Given youth of MR fleet, demolition unlikely to exceed 1% of fleet until 2020s
- Sector has attracted 80% of all clean ordering during past 12 months, with intense focus on eco-newbuildings offering 15% fuel savings
- Disappearance of junior yards that boosted supply in 2008-09 is helping to keep ordering in check, as owners fill 2015 slots in quality yards, limiting scheduled deliveries to 90 per year
  - Previous behavioural patterns suggest that annual ordering would hit 200 at market peak, leading to 120-vessel delivery years
- Dirty trading not a significant factor for MR fleet, but aging fleet to see higher offhire days for surveys and drydocking
- With slippage, operating fleet growth would average 7.4% during 2013-18, higher than overall clean operating fleet growth of 6.3%
- Sector continues to attract capital, given better trading flexibility and greater liquidity in S&P and period markets, as well as eco-ship potential

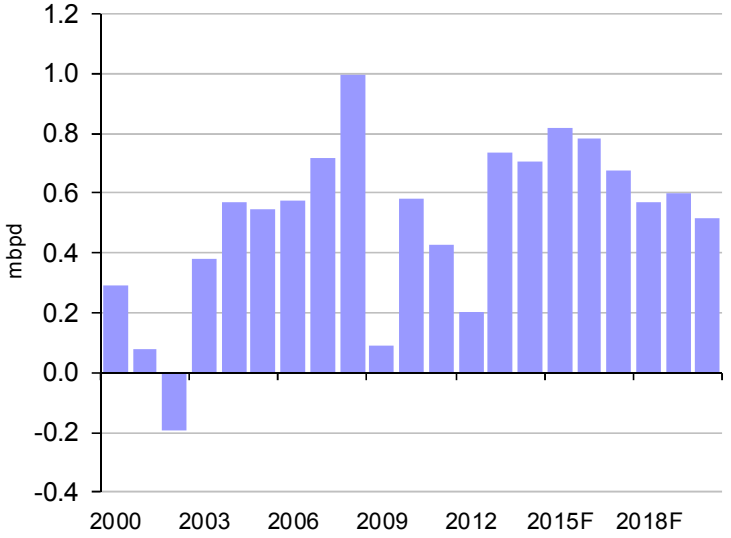
MR Tanker Outlook

Rapid expansion of MR fleet has required market share gains from other sectors, leading to higher tonne-mile growth

Clean MR Tonne-mile Growth



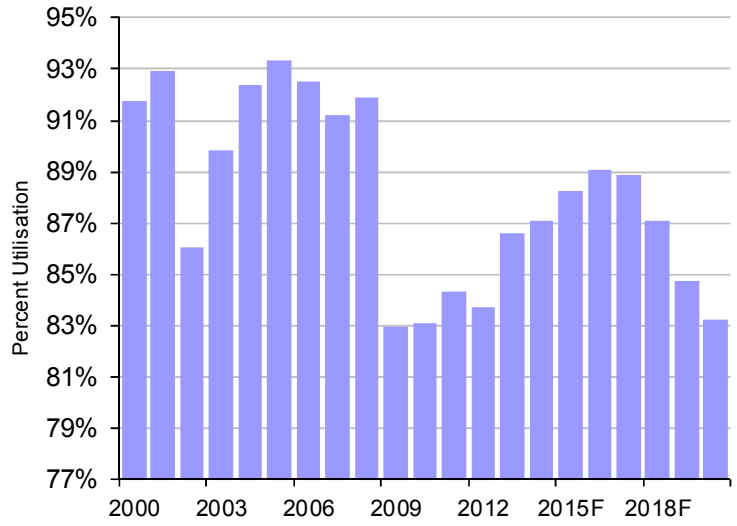
Clean MR Trade Growth, mbpd



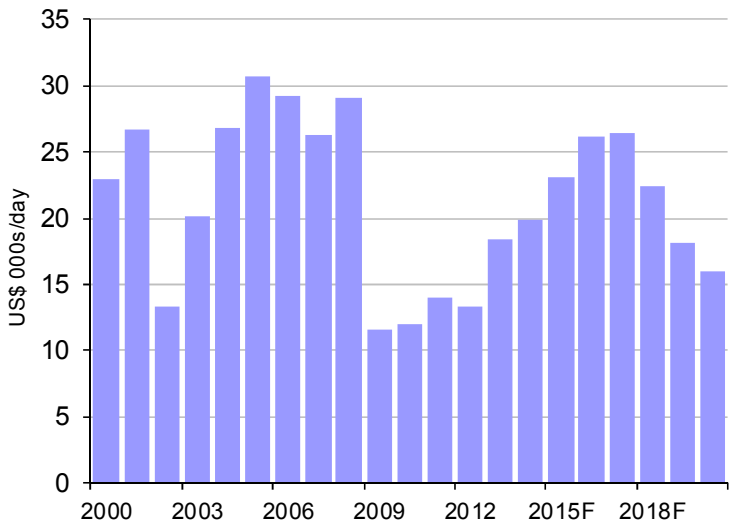
- Clean MR tonne-mile demand grew at 17.9% average pace during 2003-08, as the global refining system struggled with rapid demand growth and tighter product specs
- Recent refining capacity growth and tepid demand providing more relaxed refining environment and less need for longer-haul product flows
- Continued OECD refinery rationalisation and stronger demand growth should resume need for longer-haul product flows from Pacific Basin into the Atlantic, supporting 7-9% demand growth for MRs

Following years of stagnant utilisations and rates, MR market should see start of meaningful recovery in 2014

MR Fleet Utilisation, Percent



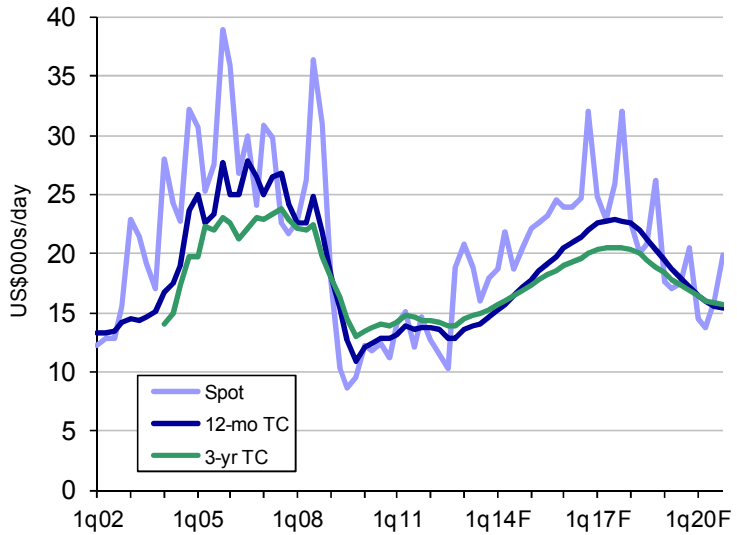
MR Average Spot TCE Earnings



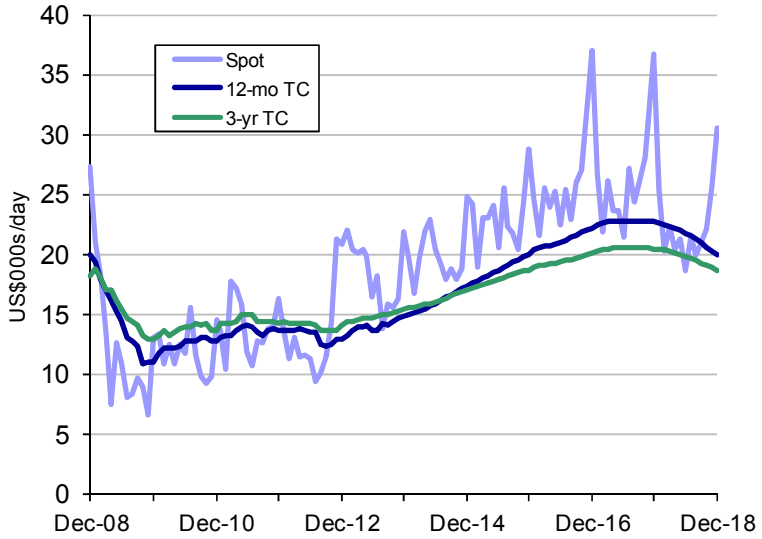
- Although 2011 provided some relief from the challenging earnings levels of 2009-10, utilisations have remained mired in 83-84% range, providing little rate excitement for owners
- Current macro weakness and uncertainty have dampened demand growth, so that resurgent supply should continue to suppress utilisations through 2013
- Meaningful recovery would begin in 2014, with rate recovery more noticeable in 2016 and beyond
- Earnings would peak in 2016-17, before next wave of supply pushed utilisations and rates lower

Late-2012 spike in MR rates was more about seasonals and lower supply, but medium-term supply/demand improving

MR Spot & Period Rates, Quarterly



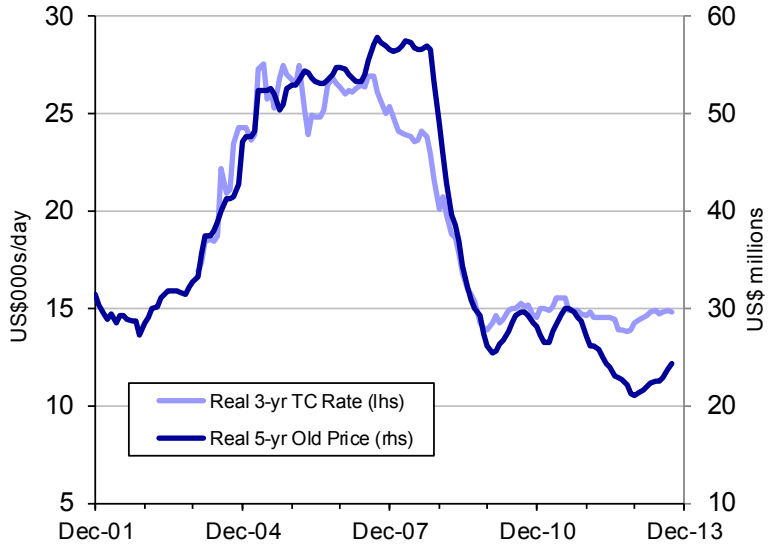
MR Spot & Period Rates, Monthly



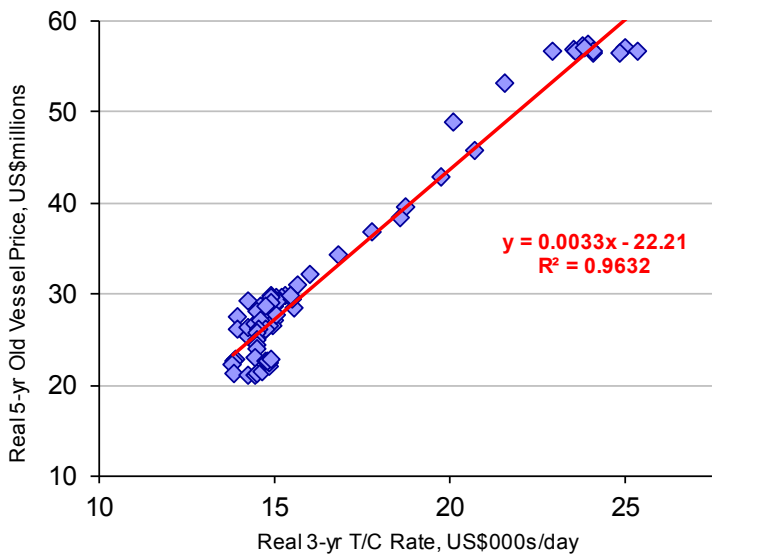
- MR operating fleet shrank at 0.9% annualised pace during 3q12, first such decline in nine years, on slowing deliveries and higher removals
- This slowing of fleet growth set stage for dramatic rebound in triangulated earnings to $20,000/day during 4q12 and 1q13, when pronounced seasonals boosted demand
- Sharp rise in mid-2013 operating fleet growth, following delivery of 25 MRs during 1q13, followed by another 19 in 2q13, ultimately pressured MR earnings in late-summer
- Steady macro environment and strong winter seasonals should provide 4q13 rebound in rates

MR secondhand vessel prices much lower than suggested by historical relationship to period rates

Real 5-yr MR Prices vs 3-yr Period Rates



Real 5-yr MR Prices vs 3-yr Period Regression

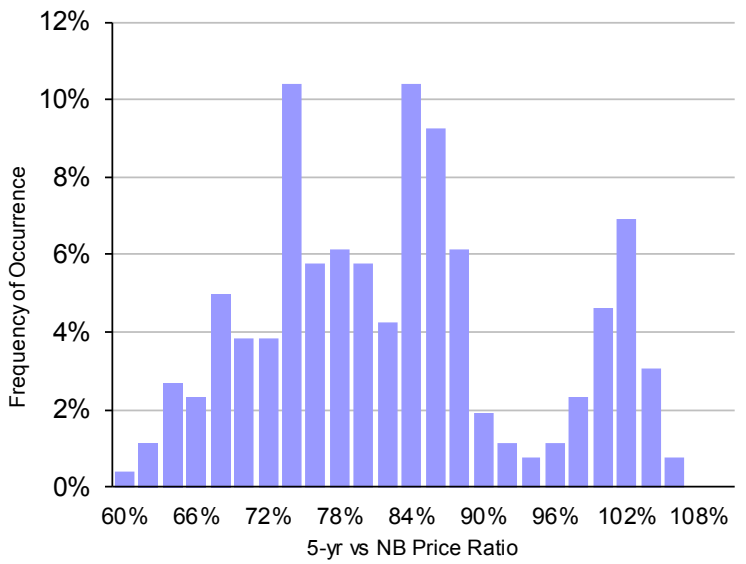


- Traditionally, secondhand vessel prices are strongly correlated to medium-term period rates (3-5 years), given cash flow support provided to valuations
- MR 5-year valuations have deviated from 3-yr period rates that remained stable above $13,500/day
- Reflects owners' unwillingness to accept 3-year charters below operating expenses plus cash financing costs, as well as strong period activity by charterers keen to fix tonnage at attractive rates
- Also reflects "non-eco" status of 5-yr old MRs, so trading at discount to period market increasingly influenced by new eco-MR fixtures seeing a premium for charterers' fuel savings

With 5-year old MR valuations out of line with period market, now trading at historically-low discount to newbuilding prices

MR 5-year vs NB Price Ratio

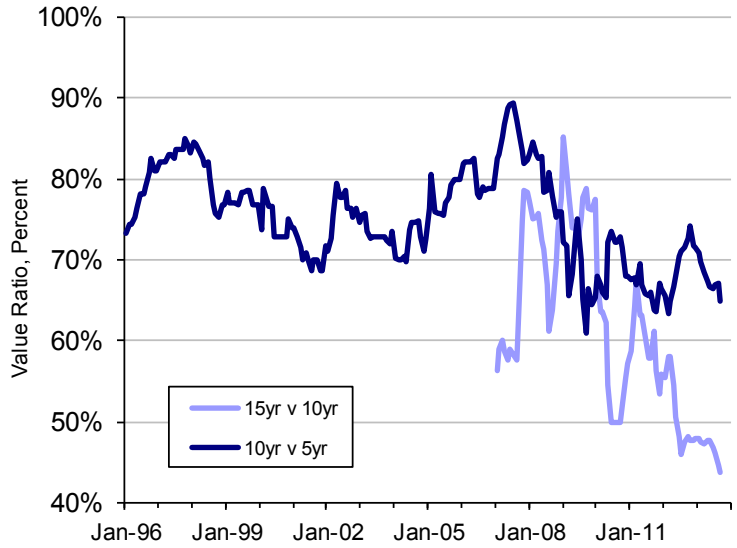
Distribution of 5-yr to NB Ratio 1992-2013



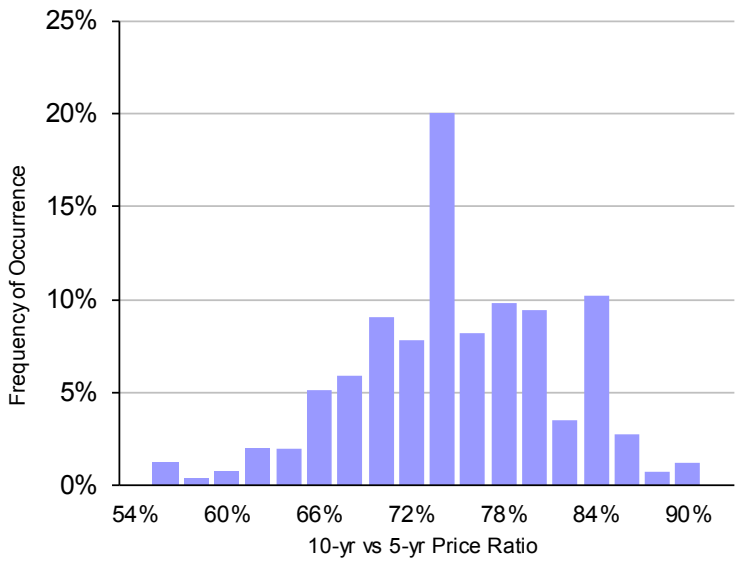
- Non-eco discount of current 5-year old MRs more evident relative to newbuilding prices, which reflect new eco-designs with improved engines, larger propellers and hull form improvements
- Ratio of 5-yrs to NBs now in bottom decile of 1992-2013 distribution and well below 82% median
- Recent downdraft in ratio started in 2012, when volume of eco-MR ordering accelerated

Although clean tankers not experiencing the severe age discrimination of dirty sector, older MR valuations have sagged

MR Secondhand Price Ratios



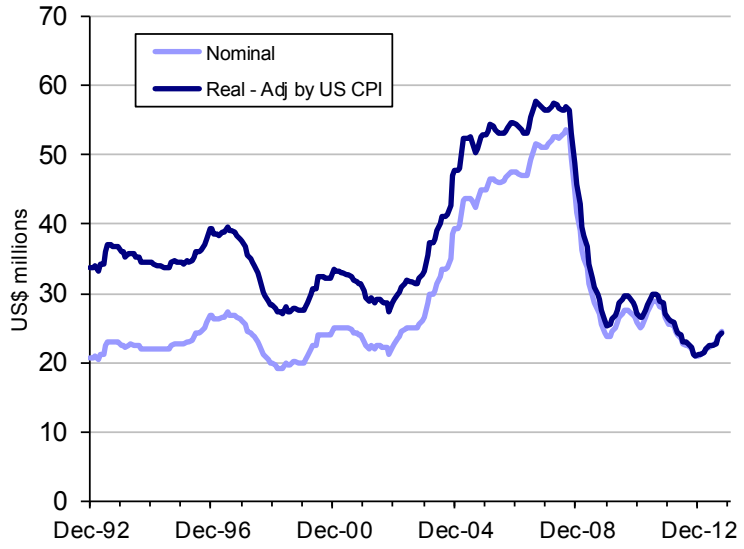
Distribution of 5-yr to 10-yr Ratio 1992-2013



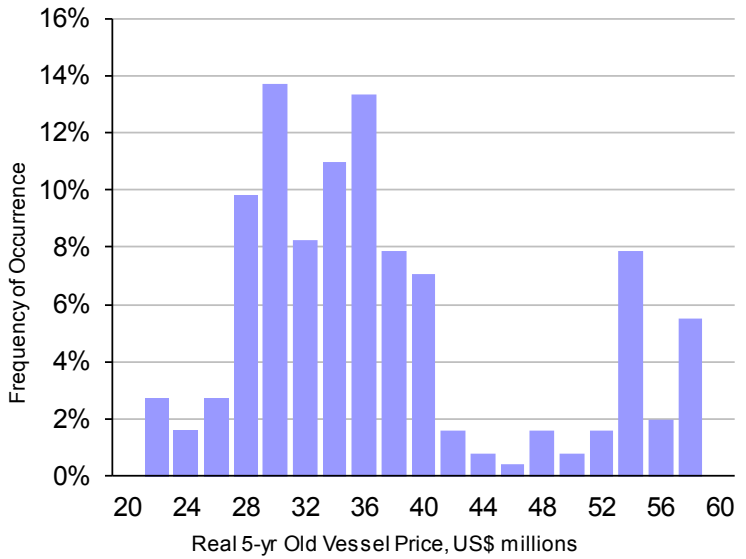
- More optimistic market outlook for the clean sector has allowed 10-year valuations to avoid the 40% plus discounts to 5-years seen in the dirty market
- Trading near 70% of 5-years, 10-year old MRs are within a standard deviation of the 74.0% mean witnessed over the past 20 years, since both ages are non-eco
- Market recovery should see 5-to-10 ratio return to 80% level, on increased buying interest during strong market, providing potential support for current 5-year vessels during next four years
- Given oversupply and youth of MR market, 15-year vessels suffering similar discounts to 10-years as seen in the dirty market, as vessels are becoming untenable under tighter vetting standards

Real 5-year old MR prices now trading at 20-year historic lows, as oversupply continues to weigh

Real vs Nominal 5-year MR Prices



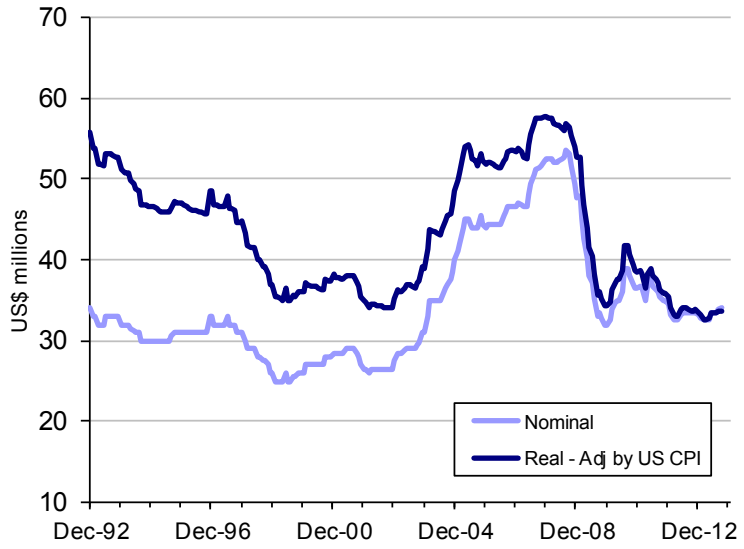
Distribution of Real 5-year MR Prices



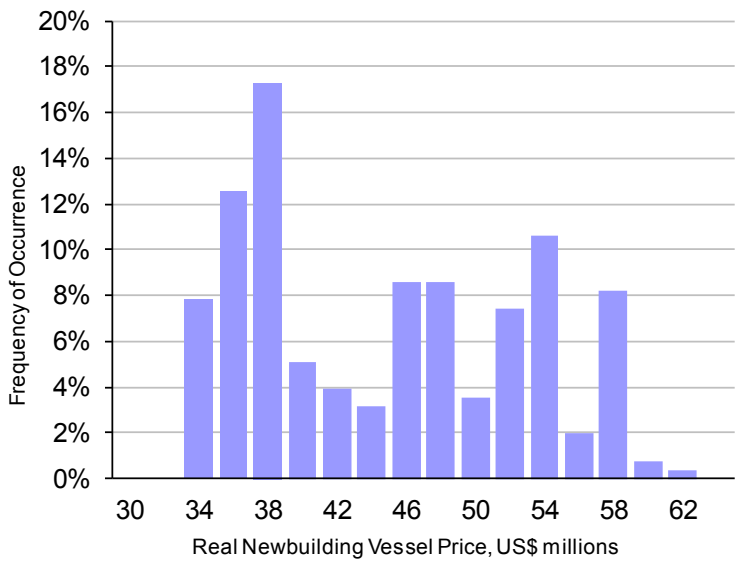
- Although 5-year old MR prices have staged minor bounce off $21 million level, real prices still sitting near 20-year lows, when adjusted by headline US CPI
- Vessels delivered during peak years of 2008-09, when 120 units arrived each year, now turning five years old, providing a surplus of tonnage at this age
- 5-year old MR prices have traded between $26 million and $40 million more than 70% of the time

Similarly, real MR newbuilding prices also trading at 20-year lows, given surplus shipyard capacity

Real vs Nominal Newbuilding MR Prices



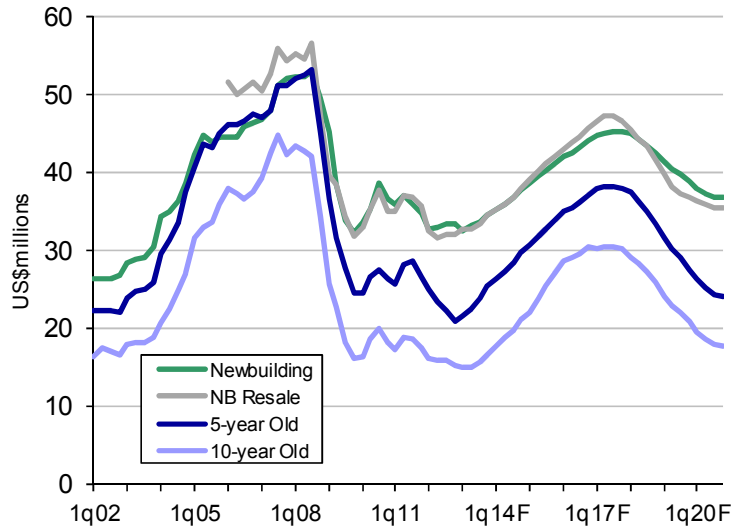
Distribution of Real Newbuilding MR Prices



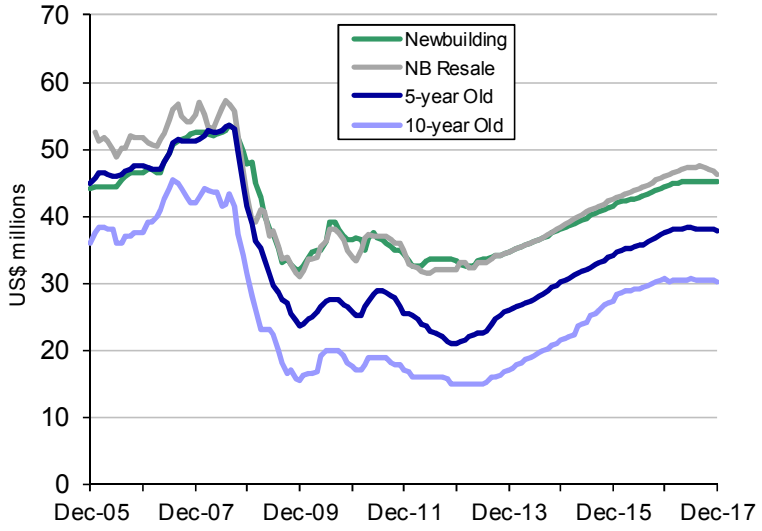
- MR newbuilding prices of $32-33 million at major Korean yards now at 20-year lows, when adjusted by headline US CPI
- Given this is current pricing for eco-design, 50 kdwt IMO3 vessels, versus 46 kdwt pump room design in earlier pricing history, hedonic methods would suggest that current prices are extremely cheap
- Real MR newbuilding prices have exhibited more dispersion than 5-years, but real prices have traded between $32 million and $46 million about 50% of the time

MR vessel prices crept higher during 2013, but should accelerate on improving outlook and rising period rates

MR Vessel Prices, Quarterly



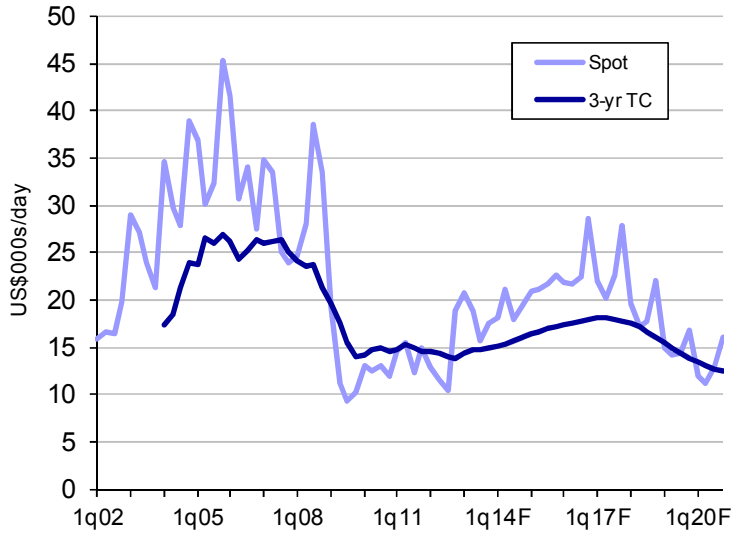
MR Vessel Prices, Monthly



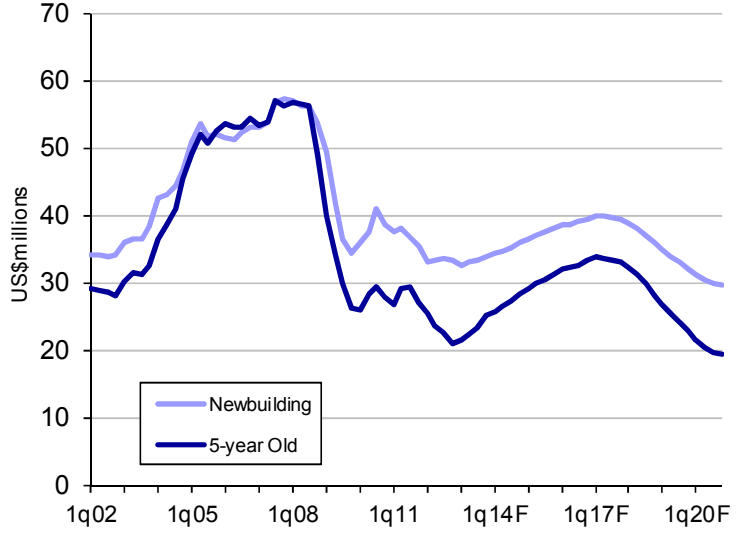
- Stable period rates kept improvements in MR prices modest during 2013, while market assessed macro environment and Chinese oil demand growth
- Expected recovery in MR spot rates should bring period rates higher, allowing secondhand prices to start to accelerate in 2015-16
- Market recovery likely to allow 5-year valuations to return to historical correlations with period rates
- Ten-year MR prices should improve later in market recovery, as relative valuations to newer tonnage return to historical averages

In real terms, MR tanker recovery would be less spectacular and well below the 2003-08 peaks

Real MR Tanker Earnings



Real MR Tanker Prices



- Although nominal MR earnings and asset prices would show a strong response to improving fleet utilisation, real results would be less impressive
- Combination of enthusiastic ordering of eco-designs and a more relaxed refining environment would ensure that the next product tanker rally remains relatively subdued
- Ordering has capped the upside and could usher another market downturn around 2020

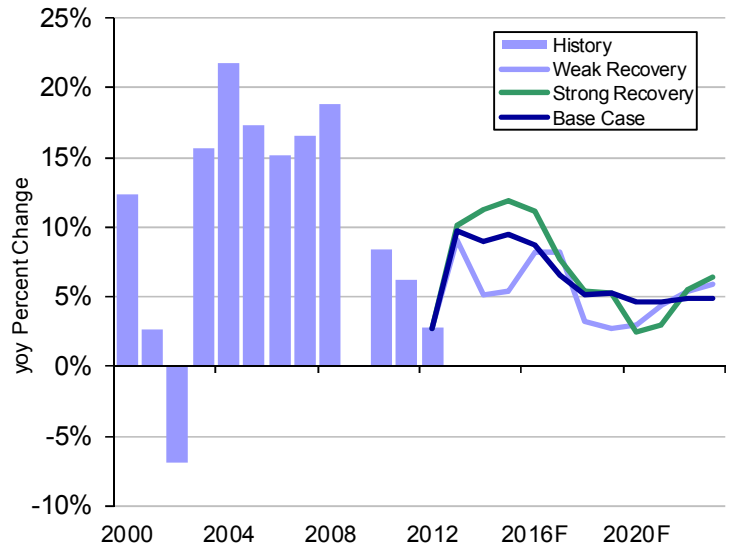
Conclusions -- MR Tanker Outlook

- Being less dependent on long-haul trades and arbitrages, MR tanker demand growth has remained higher than remainder of clean fleet
- Recent 5-year old MR prices have remained below levels suggested by period rates
  - Owner reluctance to fixing longer-term at levels below opex plus finance costs
  - Non-eco 5-year olds trading at discount to period deals influenced by new eco-MRs
- Forecast MR tonne-mile growth of 7.9% during 2013-18 to outpace overall demand growth of 6.8%, as MR fleet expands faster and captures greater share
- MR utilisations should approach 90% at market peak, sending annual spot earnings above $25,000/day, with much higher seasonal spikes
- Period rates and asset prices should respond accordingly, with 5-year secondhand values nearing $40 million at the peak
- In real terms, however, the forecast recovery in MR earnings and prices would be relatively subdued and well below 2003-08 peaks, as ordering is capping upside

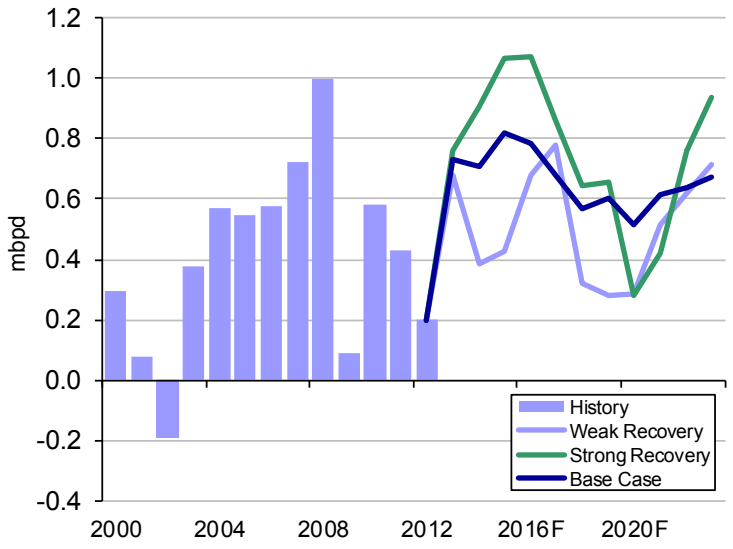
MR Tanker
Scenario Analysis

Three product tanker demand scenarios provide faster MR demand growth, as sector continues to capture share

MR Tonne-mile Demand Growth Cases



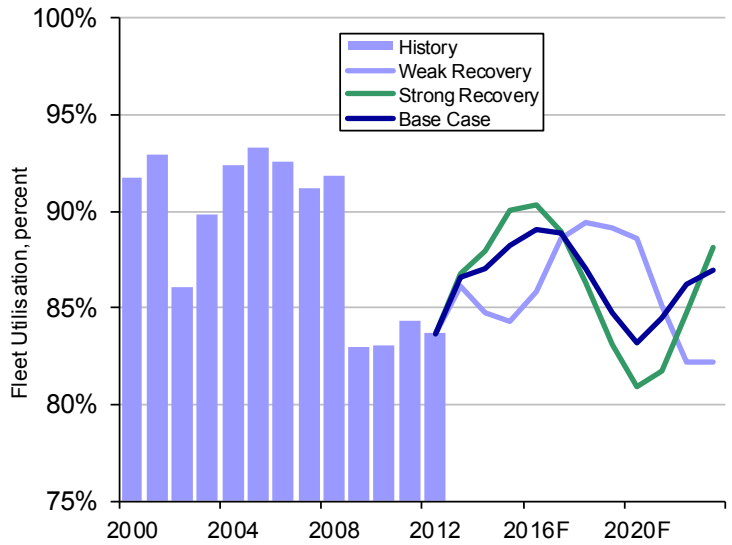
MR Trade Volume Growth Cases, mbpd



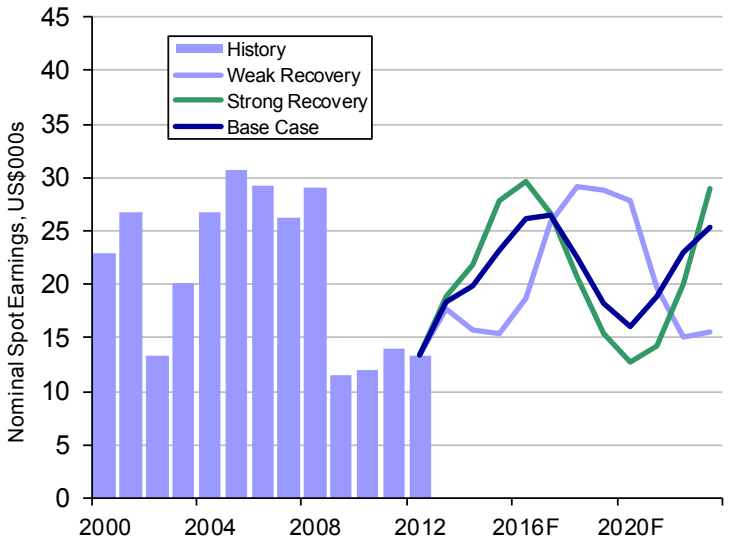
- During rapid growth of 2003-08, annual MR trade flow growth averaged 600 kbpd, accounting for 58% of total clean sector trade growth, while tonne-mile demand expanded at 17.9% pace
- Base case features 7.9% tonne-mile demand growth during 2013-18, as MRs continue to capture share, with trade growth averaging 700 kbpd each year
- Weak recovery case includes only 500 kbpd of average volume growth during 2013-18, providing only 6% tonne-mile growth over period
- Strong recovery case provides sharper rebound in oil demand and trade flows, providing 10% tonne-mile growth and 800 kbpd of average annual trade growth during 2013-18

Different MR demand scenarios provide varied cyclical patterns, based upon ordering responses

MR Fleet Utilisation Cases



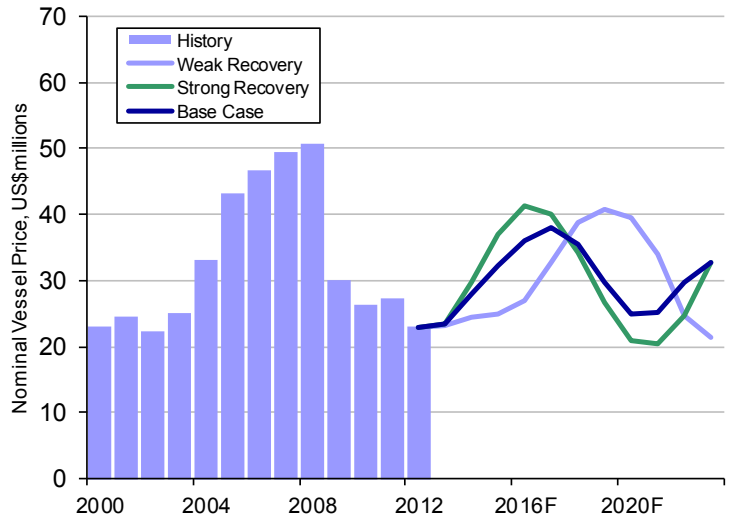
MR Nominal Spot Earnings Cases



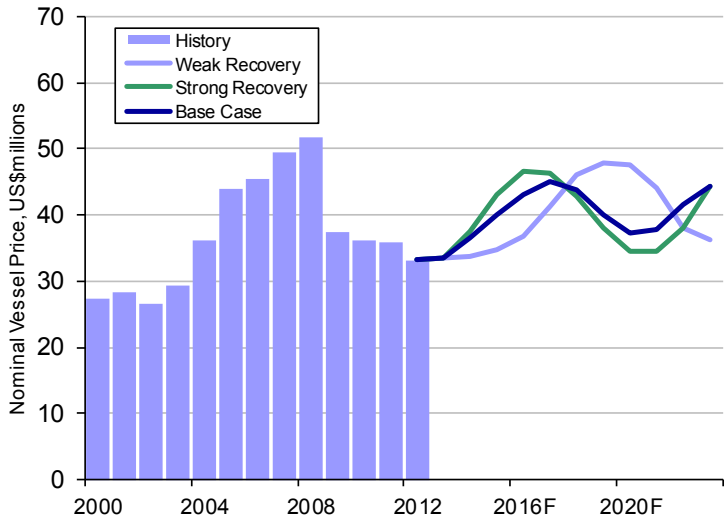
- Base case for MRs similar to overall clean results, with balanced cyclical pattern centred around 85% utilisation over next decade
- More rapid demand in strong recovery case boosts utilisations back to low-90s seen during 2003-08 boom period, and nominal earnings surge to $35,000/day
- Weak recovery case sends utilisations sharply lower and nominal earnings back to $10,000/day, as supply from renewed ordering overwhelms tepid demand
- Collapse in ordering, from earnings malaise, sets up next market rally above $25,000/day, when supply slows again and demand finally recovers meaningfully

Rate scenarios prompt price volatility in secondhand prices, but real newbuilding prices remain muted

Nominal 5-yr Old MR Vessel Price Cases



Nominal Newbuilding MR Vessel Price Cases



- Although nominal spot rates exceed previous market peaks in strong case, earnings are not sustained long enough to allow period rates to rise and push 5-year old prices above $50 million previous highs
- Nominal newbuilding prices do not move as significantly, given limited decline in newbuilding prices during recession, but base case provides NB prices above $40 million
- Weak recovery case generates declines in nominal 5-year and newbuilding prices through 2014, with 16% and 9% potential downsides, respectively

Summary

- Constructive refining environment and product imbalances continue to support product tanker investment hypothesis
- Growing structural mid-distillate deficit in Europe, from refinery rationalisation, is a key element to demand growth
- Clean sector ordering pause starting in 2008 is now flowing through orderbook and reducing supply, allowing a recovery in rates
- Lack of enthusiasm for LRs has limited ordering, but greater flexibility of MRs and promise of eco-designs have prompted strong ordering response by investors
- Although pace of clean ordering is capping market upside, improving demand should support a broad recovery in earnings and asset prices
- In real terms, however, the forecast recovery in clean earnings and prices would be moderate and well below 2003-08 peaks, due to ordering levels

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Contact Information

Makai Marine Advisors LLC
5200 Martel Avenue
Dallas, Texas 75206

US Mobile +1 914 218 7579
UK Mobile +44 7976 738 794
info@makaimarine.com

www.makaimarine.com

Twitter: @MakaiMarine