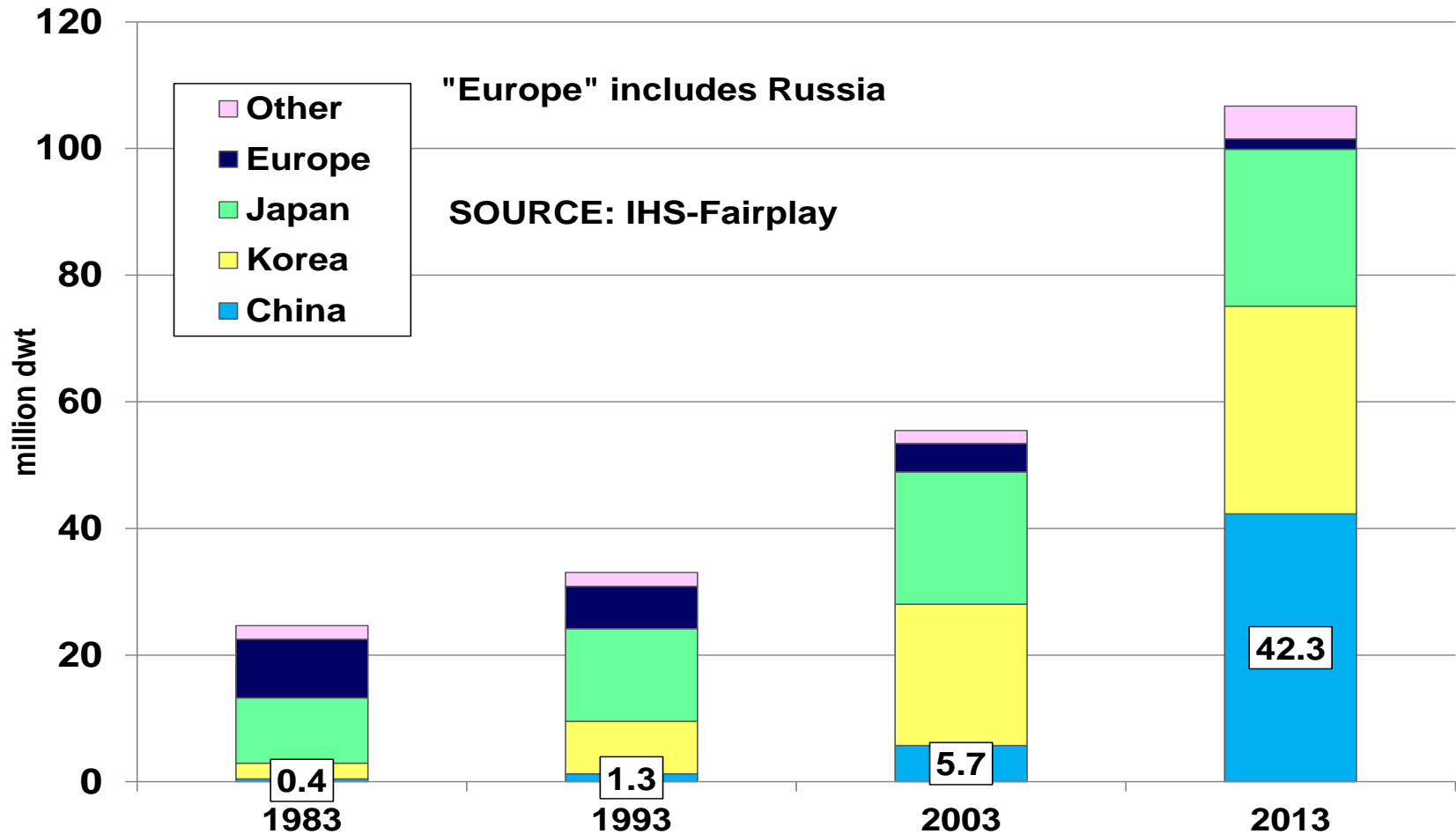


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# **Demand, Supply & Capacity in the Shipbuilding Industry**

# Ship completions by region



# Overview

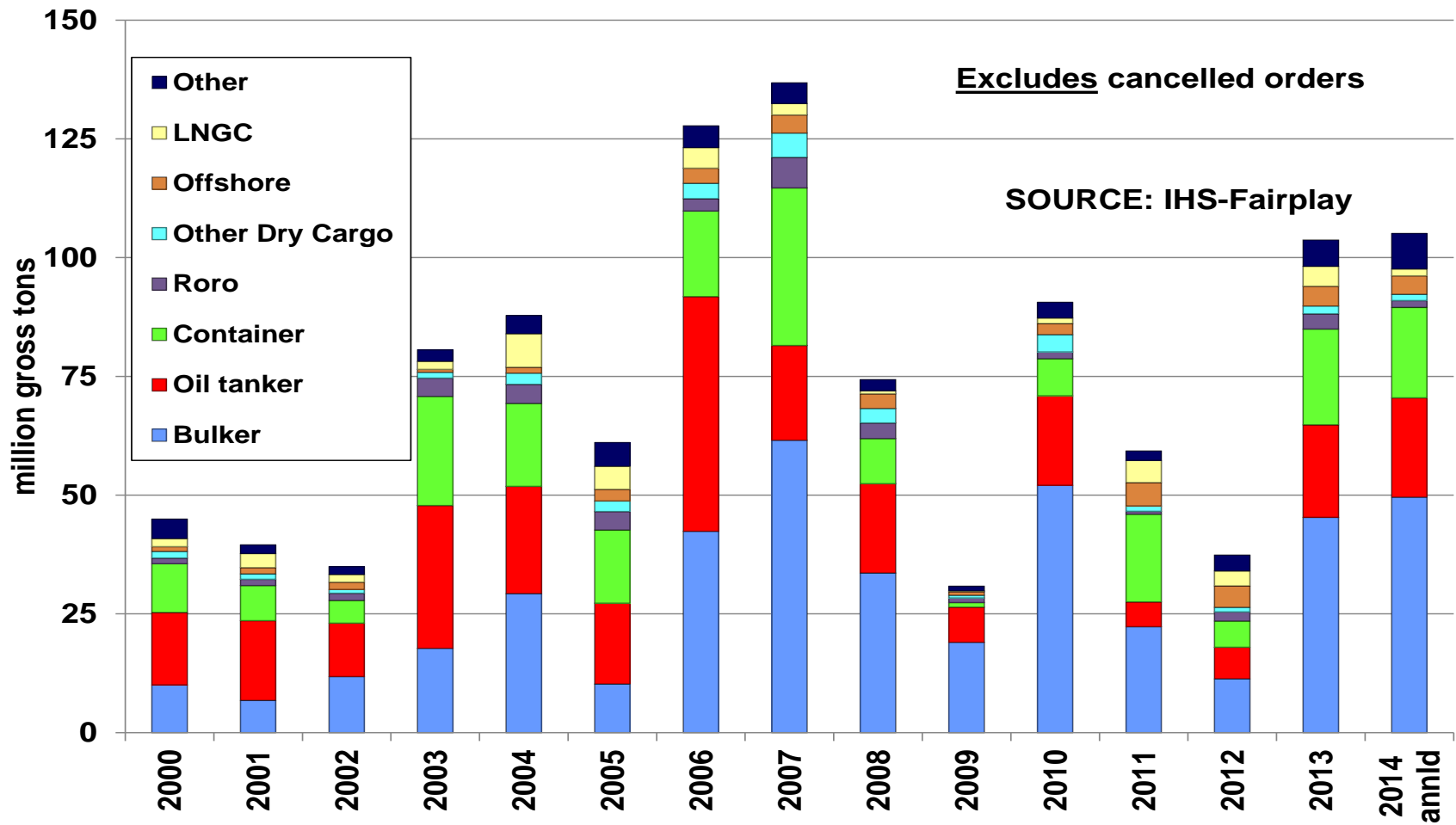
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- **Global shipyard capacity surged in previous decade, to an estimated 51.6 million cgt in 2010 \***
- **Growth reflected firm demand in all sectors & huge investment in capacity, especially by China**
- **Far softer freight markets from late 2008 led to order cancellations & collapse in new contracting**
- **Asia now world's dominant shipbuilding region**



*\* Source: OECD C/WP6(2011)13, November 2011*    June 2014

# Newbuilding ordering by ship type \*



# Recent developments in shipyard capacity

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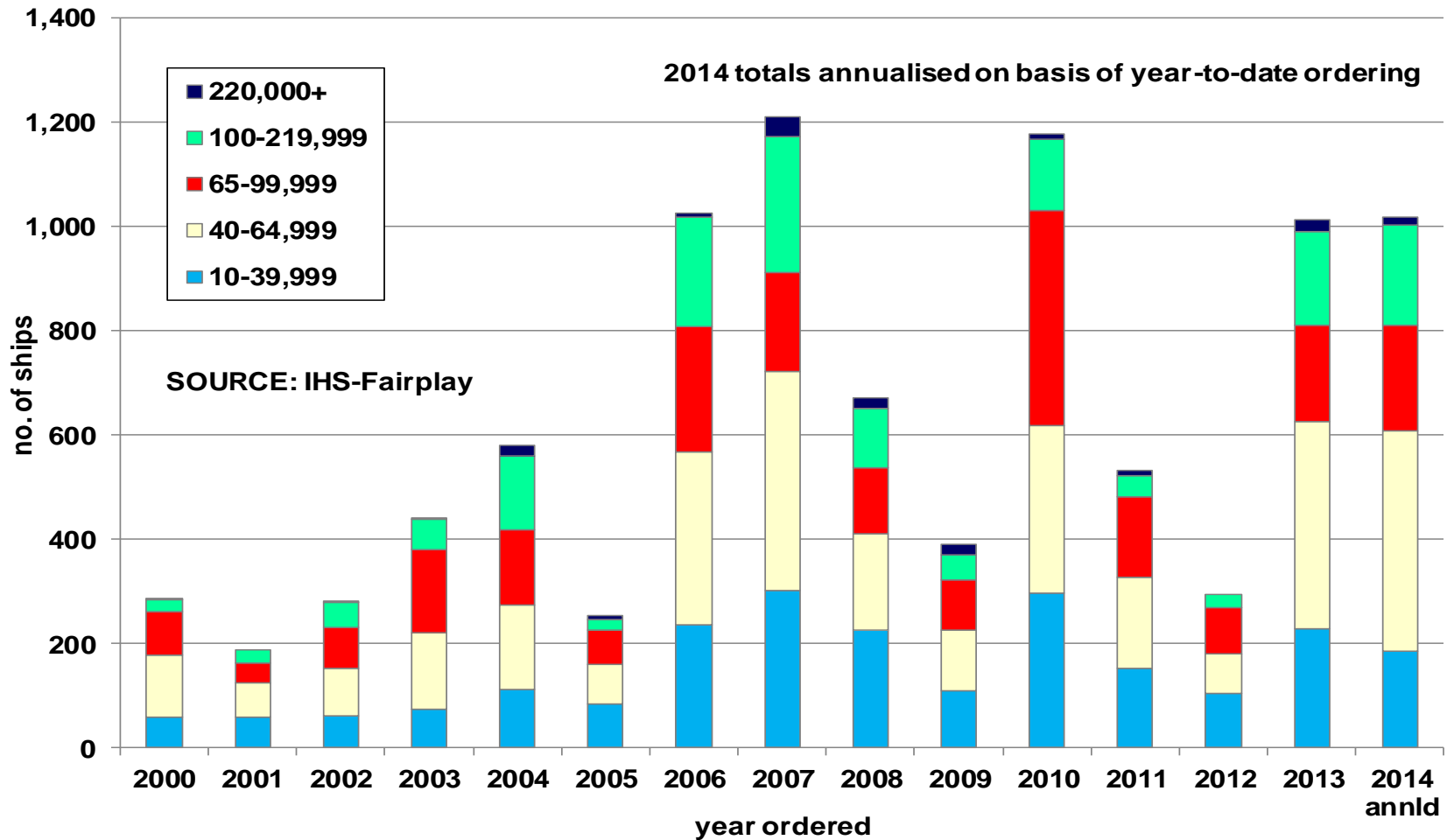
- Global capacity very sensitive to levels of tonnage demand & can alter radically, *even at short notice*
- Steep falls in ordering from late 2008 onwards led to much capacity being taken out of use, *but not permanently decommissioned*
- Strong revival in ordering interest in 2013 & 2014 to date has seemingly led to reactivation of some capacity that had been surplus to requirements

# Why the recent revival in fresh ordering?

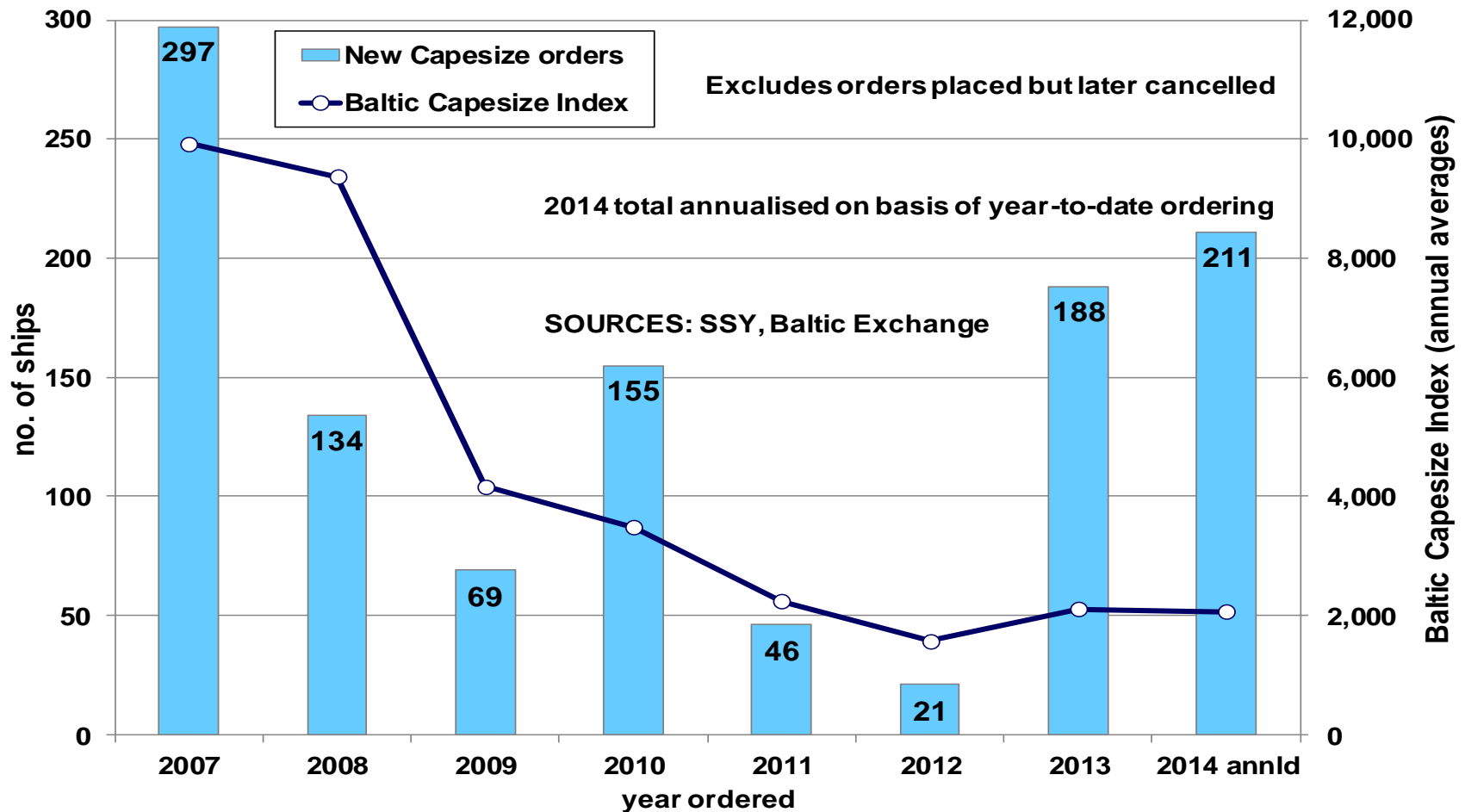
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- Sustained ordering now taking place, especially of large bulkers, *despite lack of freight market upturn*
- Many owners have placed orders in anticipation of expected higher tonnage demand
- Shipping attracting new funding sources,\* due to its high gearing to global economic activity
- Access to finance fuelling current ordering surge
- Yards marketing cost-saving “eco-type” designs

# Bulker ordering by ship size & year



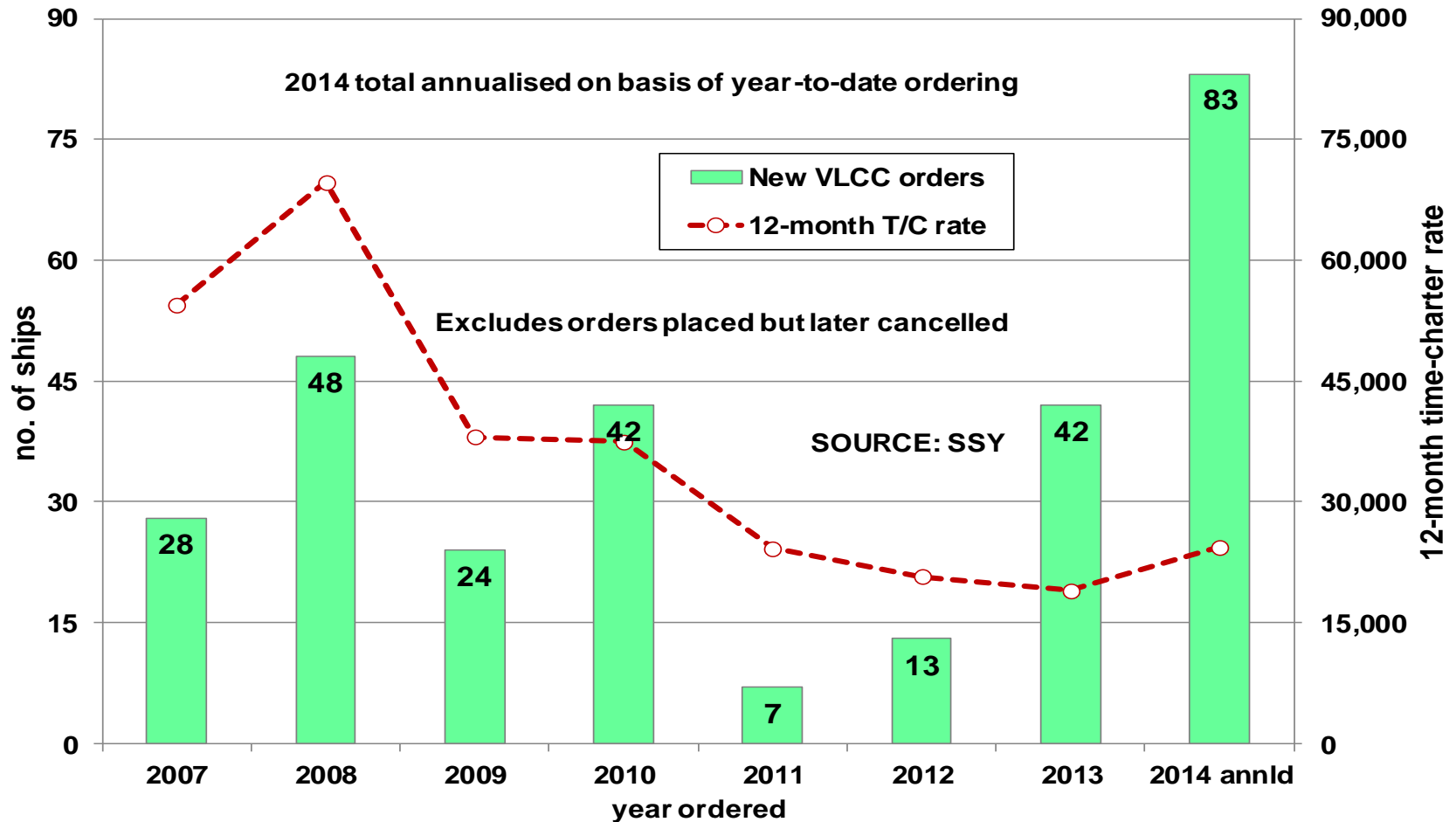
# Capesize bulker ordering & BCI \*



\* *BCI = Baltic Exchange Capesize Index* June 2014



# VLCC ordering & 12-month T/C rates



# Capacity by geographical region (1)

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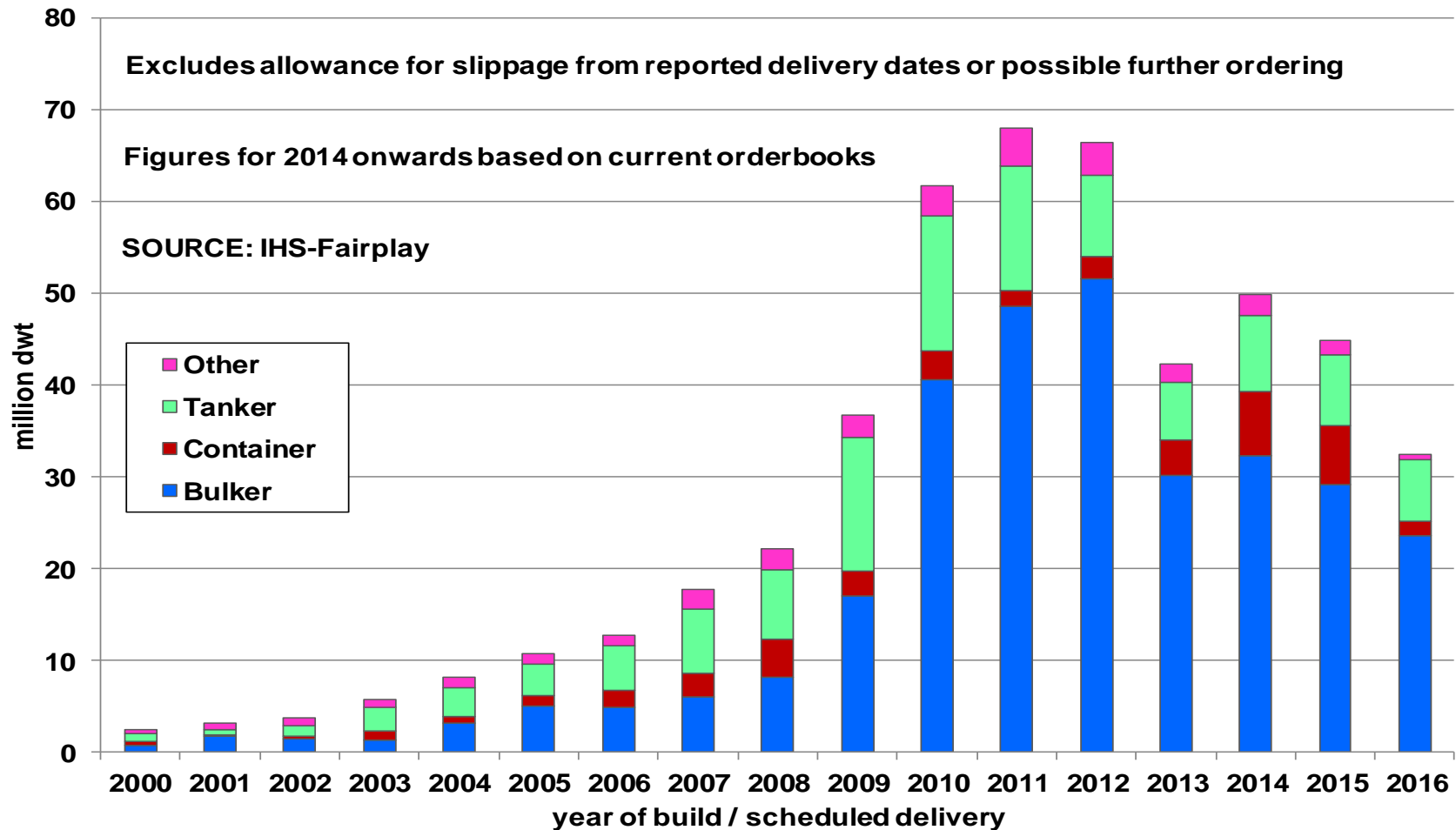
- **China, Korea & Japan together accounted for 93.6% of all new tonnage delivered in 2013 \***
- *China's relative share of total new deliveries up from 10.3% in 2003 to 39.7% in 2013*
- **Europe's share of global deliveries down to just 1.6% in dwt terms last year, but its yards now mainly focus on higher-value tonnage types**

# Capacity by geographical region (2)

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- **Developing nations winning greater share of total ship completions, due to lower production costs**
- **Governments of such countries have actively encouraged investment in new yard capacity**
- **Further migration of shipbuilding activity to low-cost locations still likely in next 15 years – *even though excess yard capacity is expected to persist***

# China: new ship completions by year



# Benefits of shipbuilding to emerging nations

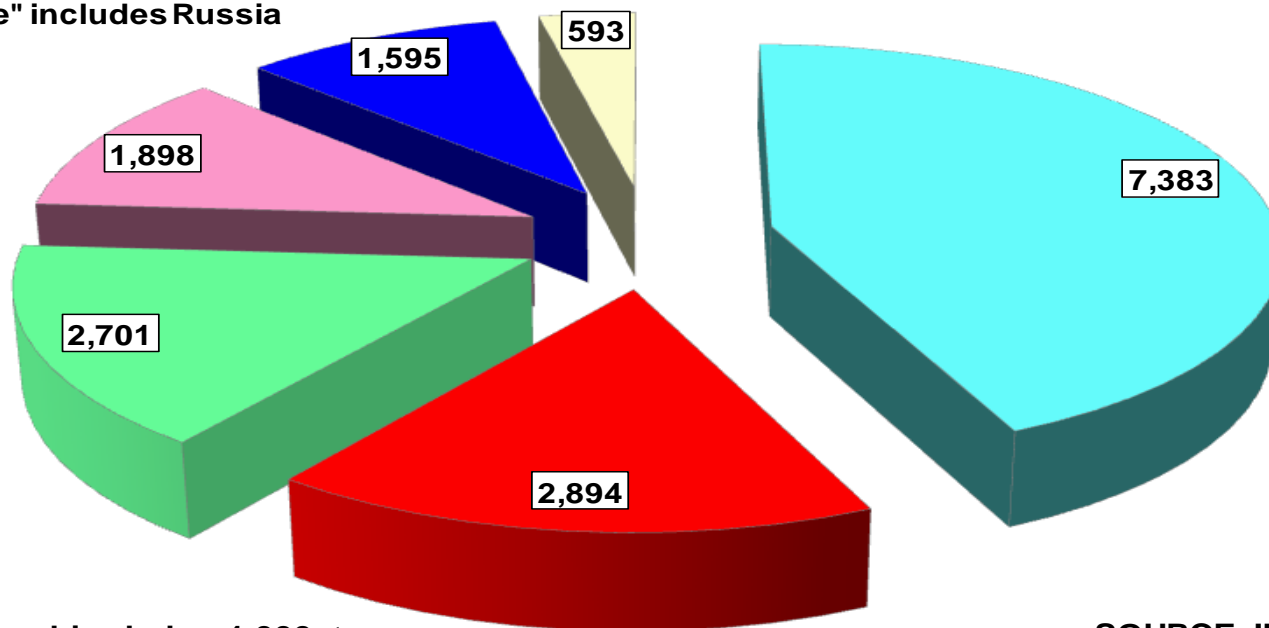
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- **Boosts employment & can generate substantial hard-currency earnings**
- **Increases demand for home-produced steel & ships' equipment, adding to employment in those sectors**
- **Can be used as an instrument of regional policy**
- **Makes it easier for domestic owners to increase or modernize their fleets**
- **Possible prestige of orders won from foreign owners**

# New orders by country of build, 2007-2014 \*



"Europe" includes Russia



Excludes ships below 1,000gt

SOURCE: IHS-Fairplay

Figures denote number of ships ordered

Excludes orders placed but subsequently cancelled

# Capacity by geographical region: outlook

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- **OECD-based yards mainly limited to building high-specification, high-value complex tonnage**
- **Lower-cost nations set to diversify into building higher-value ship types by 2028, at expense of shipbuilders in North America, Europe & Japan**
- **Some scope for OECD-based yards to set up joint ventures in low-cost developing economies**

# Factors affecting global shipyard capacity

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- **World economic activity & seaborne trade flows**
- **Newbuilding demand & profile of new vessel completions by ship type \***
- **Contract prices & ship construction costs**
- **Government policy (local & national)**
- **Staffing levels, work practices, changes in yard productivity & alterations to existing facilities**



*\* Depends on owners' future expectations  
plus ship finance availability & cost*

June 2014

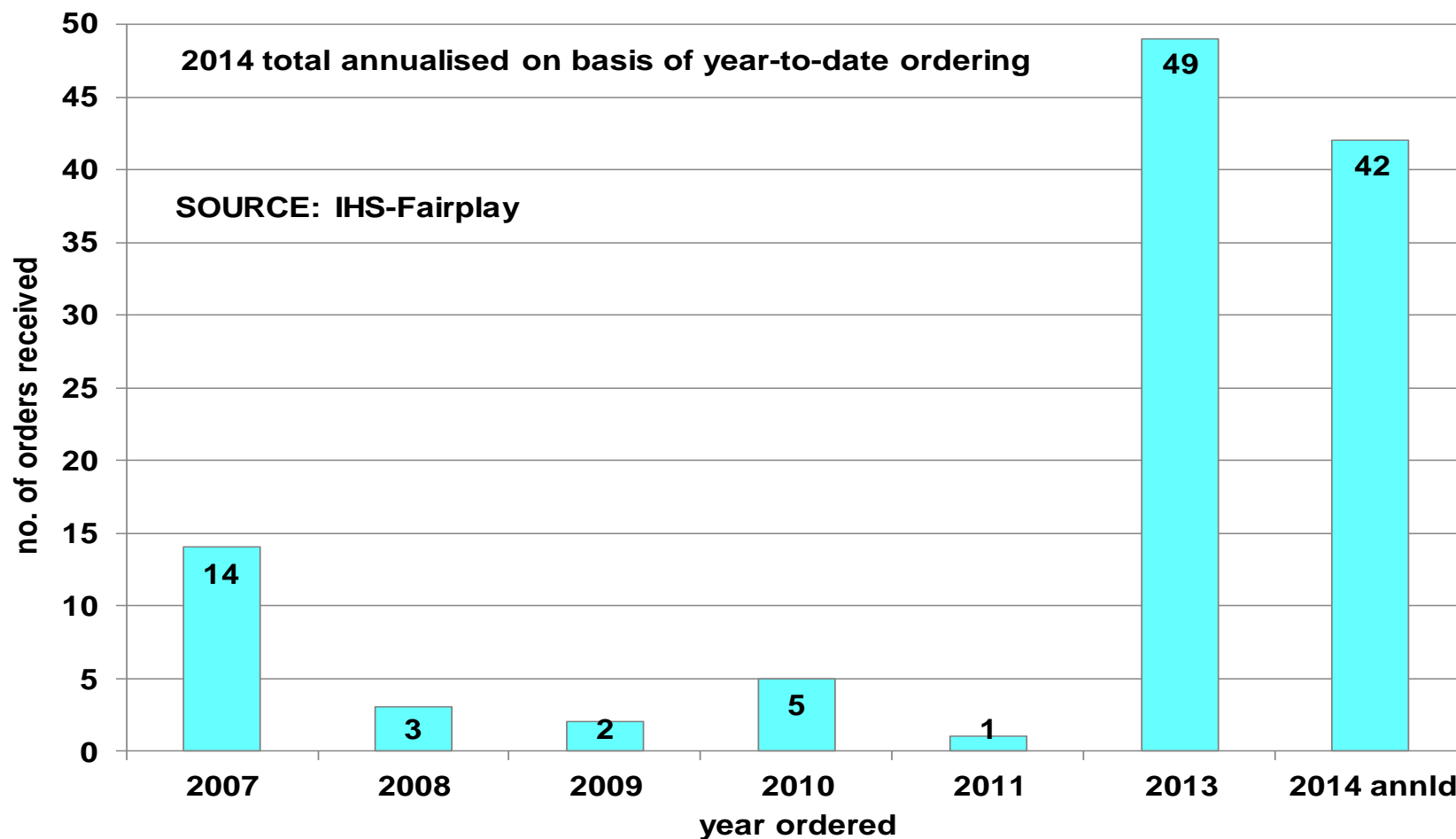


# Problems measuring shipyard capacity (1)

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- Capacity is demand-sensitive & can alter greatly, *even at short notice*, reflecting trading conditions: global ship completions *very* variable over time
- New equipment or different work practices can add to a yard's productivity \*
- Output also depends on total staffing levels & working patterns (i.e. no. of shifts worked)

# Chengxi Shipyard: new bulker orders by year



# Problems measuring shipyard capacity (2)

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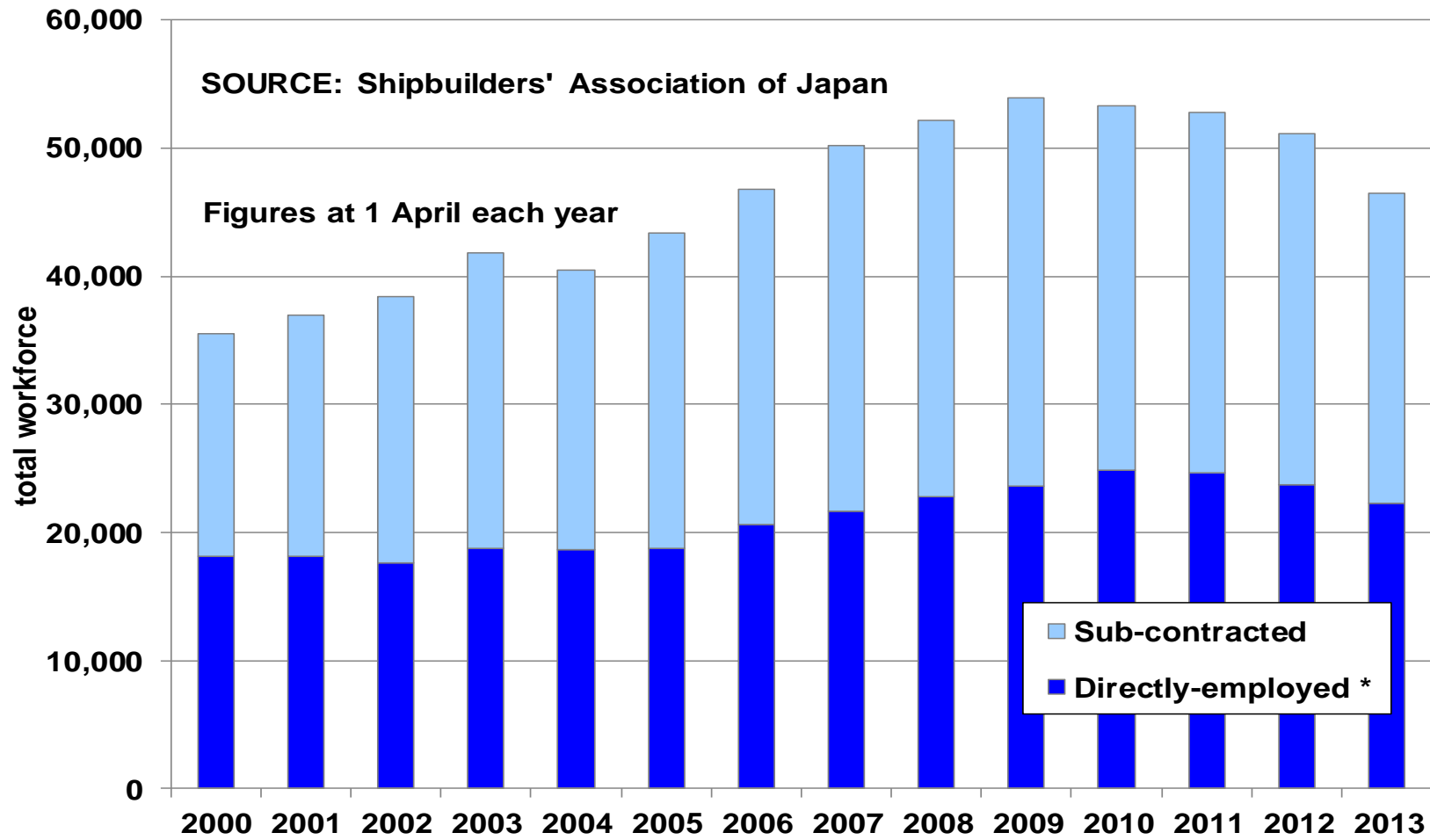
- Overall capacity can also depend on government policy, which may alter over time
- If demand is weak, some yards may temporarily switch to repairs, conversions, demolition or to building products other than ships \*
- *Yards that have been mothballed/put to other uses can rapidly resume shipbuilding if demand rises*

# Risk factors in forecasting future capacity

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- **Dramatic shocks to the global economy**
- **Severe dislocations to normal cargo trade flows *arising from unpredictable events* (e.g. wars, political disputes or natural disasters)**
- **Large changes to product demand caused by major shifts in government policies \***
- **Serious vessel casualties that lead to radical changes in existing maritime regulations**

# Japan: shipbuilding employment \*



# Projected future yard capacity by 2028 (1)

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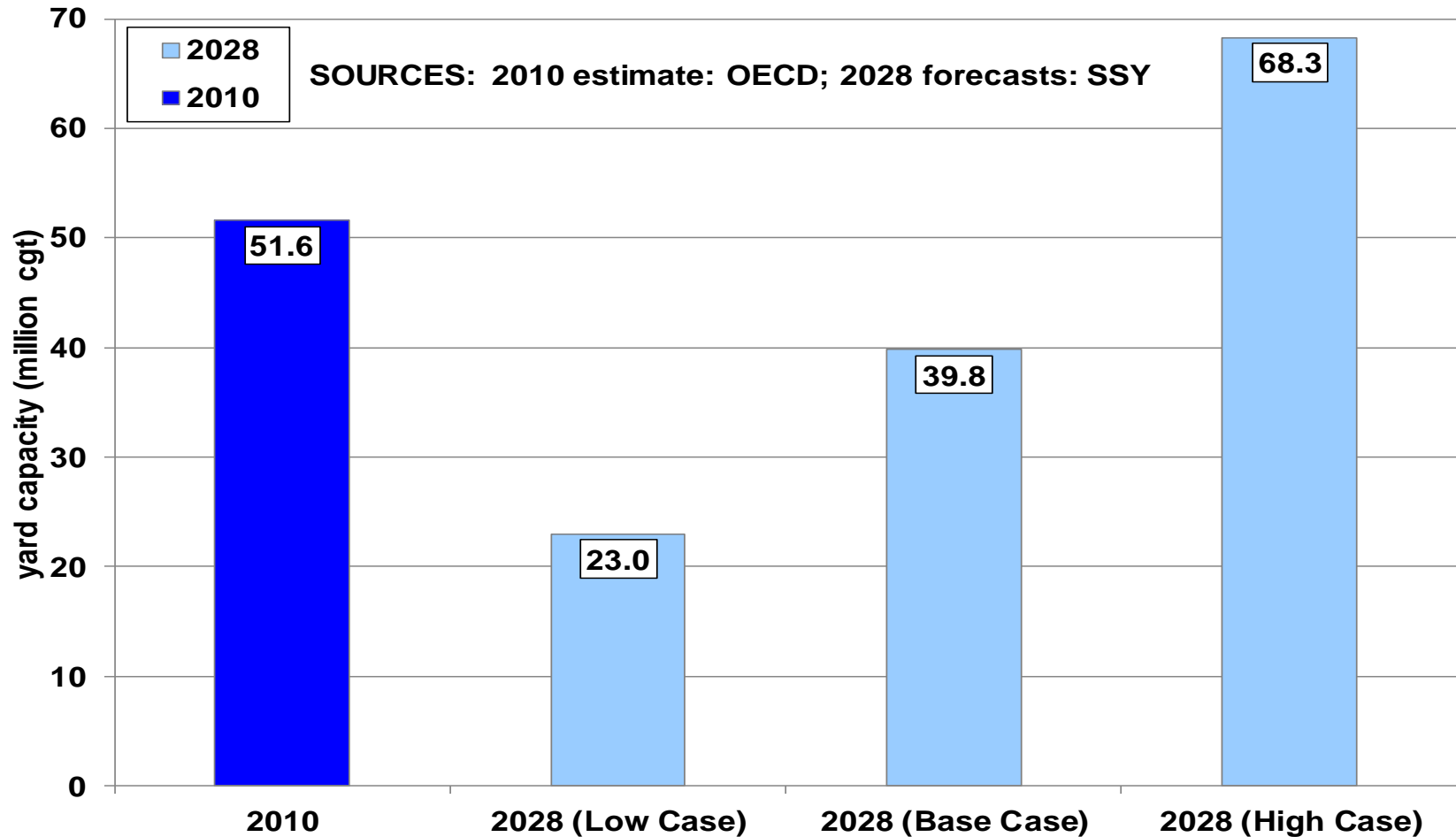
- Actual capacity likely to be closely linked to total demand (i.e. volumes of new ordering)
- No certainty that capacity will grow smoothly over time: *some recently-reactivated yards could be at risk by 2016 if orders falter again*
- Rise in seaborne trade & world fleet unlikely to match rapid growth of 2003-2008 inclusive, when China's raw material imports surged

# Projected future yard capacity by 2028 (2)

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- **Some scope for ordering & yard capacity to be boosted if vessels scrapped at earlier ages**
- **Threat of slower trade growth if further shocks to global economy ensue before 2028**
- **SSY Base Case implies that growth in world trade & global fleet could mean that 2028 call on shipyard capacity may total just 39.8mcgt, *or almost 23% below levels attained in 2010***

# Global shipyard capacity, 2010 & 2028





# Summary & conclusions (1)

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- **Large disparities exist in relative costs of new ship construction in respective countries**
- **Shipyard capacity migrates over time to developing nations that can build vessels at lower prices**
- **Governments of newly-industrialising economies have strong incentive to promote shipbuilding for the employment & hard currency that it generates**
- **OECD governments have less incentive to support shipbuilding as no longer as large an employer**

# Summary & conclusions (2)

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- **Few technical obstacles exist to building simple ship types (e.g. bulkers or container ships), so easy for new yards in emerging nations to enter such sectors**
- **Joint ventures with established builders in mature industrial nations give yards in emerging economies access to expertise to build more complex tonnage**
- **Such joint ventures can allow OECD-based builders to remain active in some sectors, even if their home-based yards can no longer compete on price**

# Summary & conclusions (3)

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- Demand for complex ship types relatively limited, *with far smaller numbers of new orders placed*, compared to contracting of simpler tonnage types
- Some buyers of complex ships are price sensitive, so if option exists to have such tonnage built in lower-cost nations, such owners may do so
- Yards in emerging nations initially likely to quote very low prices for complex tonnage to help them to establish market share

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