The Chemical Tankers Market

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Different types of chemicals

Raw materials	Oil and gas		Minerals	Agriculture
Intermediate products and fuel	Clean petroleums products (CPP)	Organic chemicals, e.g. methanol, xylene, styrene	Inorganic chemicals, e.g. acids and caustic soda	Vegetable oil and animal fat and/or petrochemicals
	Gasoline, jetfuel, naphta, etc	Specialty chemicals: Plastic converters, fibres	Coatings, adhesive	Detergents, edible oils, spirits/wine Bio fuel
Finished products	Textiles, packaging, electrical, automotive, building materials, etc, etc			Home use and personal care, green energy

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Chemicals Logistics Chain

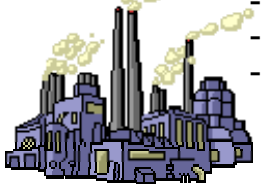
Raw

- Coasters
- Barges
- Rail
- Trucks
- Pipeline

Tank Terminal

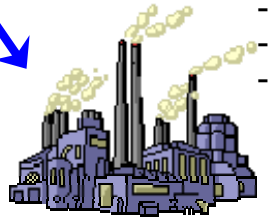
Chemical Tankers

Tank Terminal



Iso-container

Consumer



- Coasters
- Barges
- Rail
- Trucks
- Pipeline

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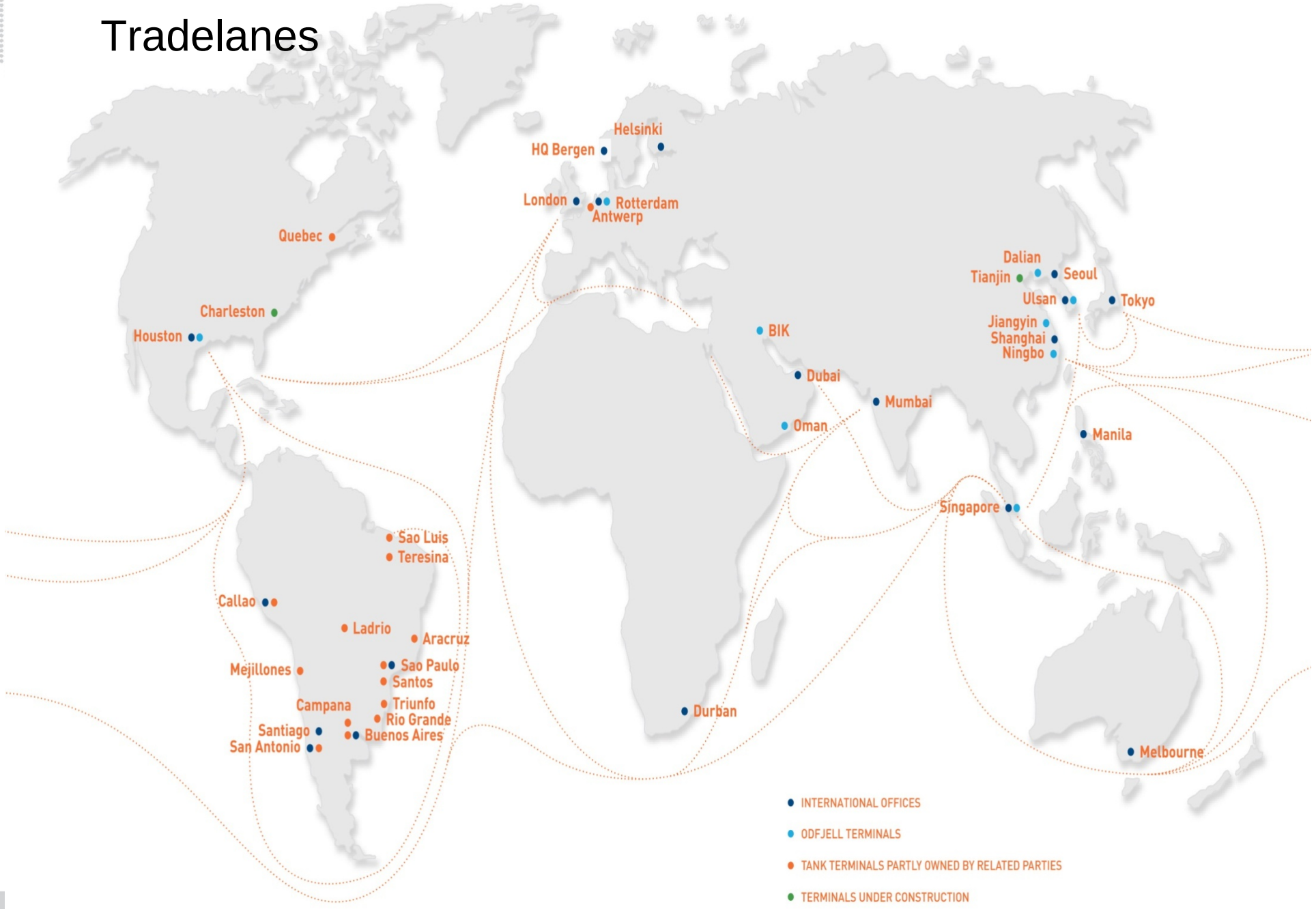
Customers

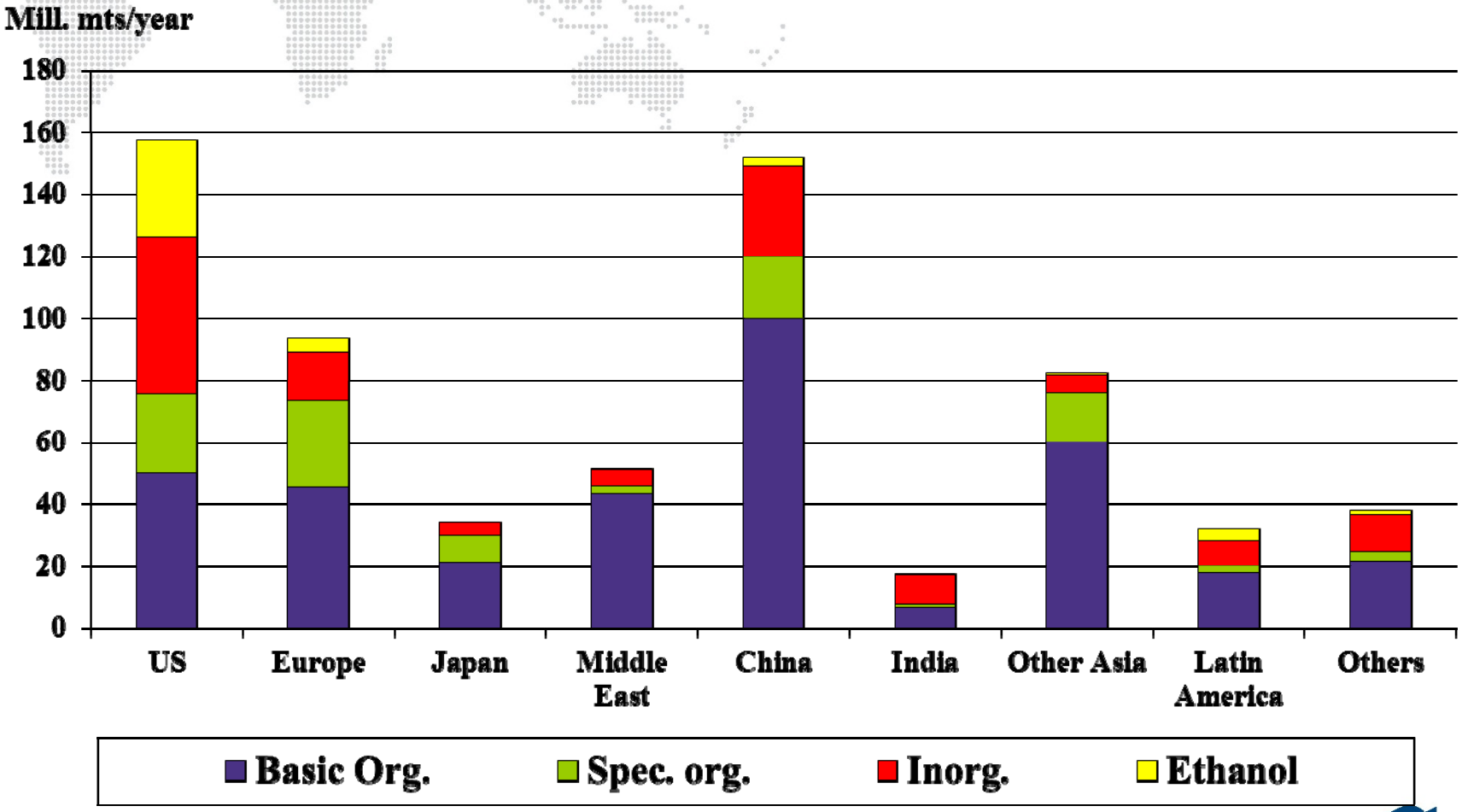
VOEST-ALPINE
STAHL AG
BR
PETROBRAS
Celanese
DOW
vinmar
international, ltd.
NYNAS
Kolmar
Georgia Gulf
sabic
ALCOTRA
Vitol
BASF
Chevron
Bayer
BAYER
Rhodia
HELM
bp
EASTMAN
EXXON
OxyChem
HUNTSMAN
ICI
CARGILL
ORICA
Shell
sasol
reaching new frontiers
LYONDELL
DUPONT
INEOS
Statoil
SK corporation
BRENNTAG
Stinnes Logistics
FOSKOR
ODFJELL

Tradelanes


Helsinki
HQ Bergen
London
Rotterdam
Antwerp
Quebec
Charleston
Houston
Dalian
Tianjin
Seoul
Ulsan
Tokyo
Jiangyin
Shanghai
Ningbo
BIK
Dubai
Mumbai
Oman
Manila
Singapore
Sao Luis
Teresina
Callao
Ladrio
Aracruz
Mejillones
Sao Paulo
Santos
Campana
Triunfo
Rio Grande
Santiago
Buenos Aires
San Antonio
Durban
Melbourne
INTERNATIONAL OFFICES
ODFJELL TERMINALS
TANK TERMINALS PARTLY OWNED BY RELATED PARTIES
TERMINALS UNDER CONSTRUCTION

Chemical Production Capacity

Current capacity of 50 chemicals



Source: ICIS, Odfjell

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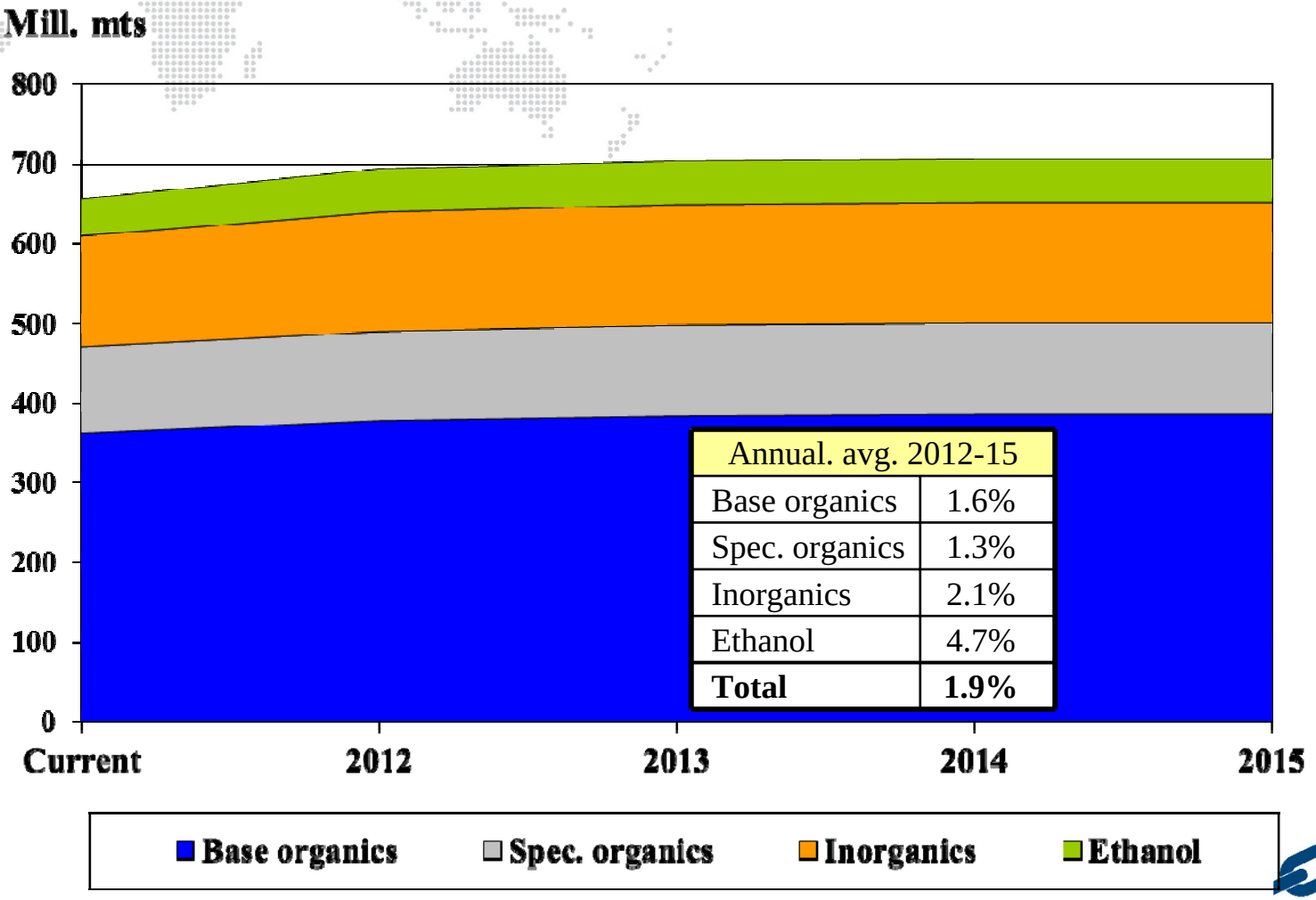
Production capacity growth 2012-2015



Annual. avg. 2012-15	
Base organics	1.6%
Spec. organics	1.3%
Inorganics	2.1%
Ethanol	4.7%
Total	**1.9%**

Source: ICIS, Odfjell

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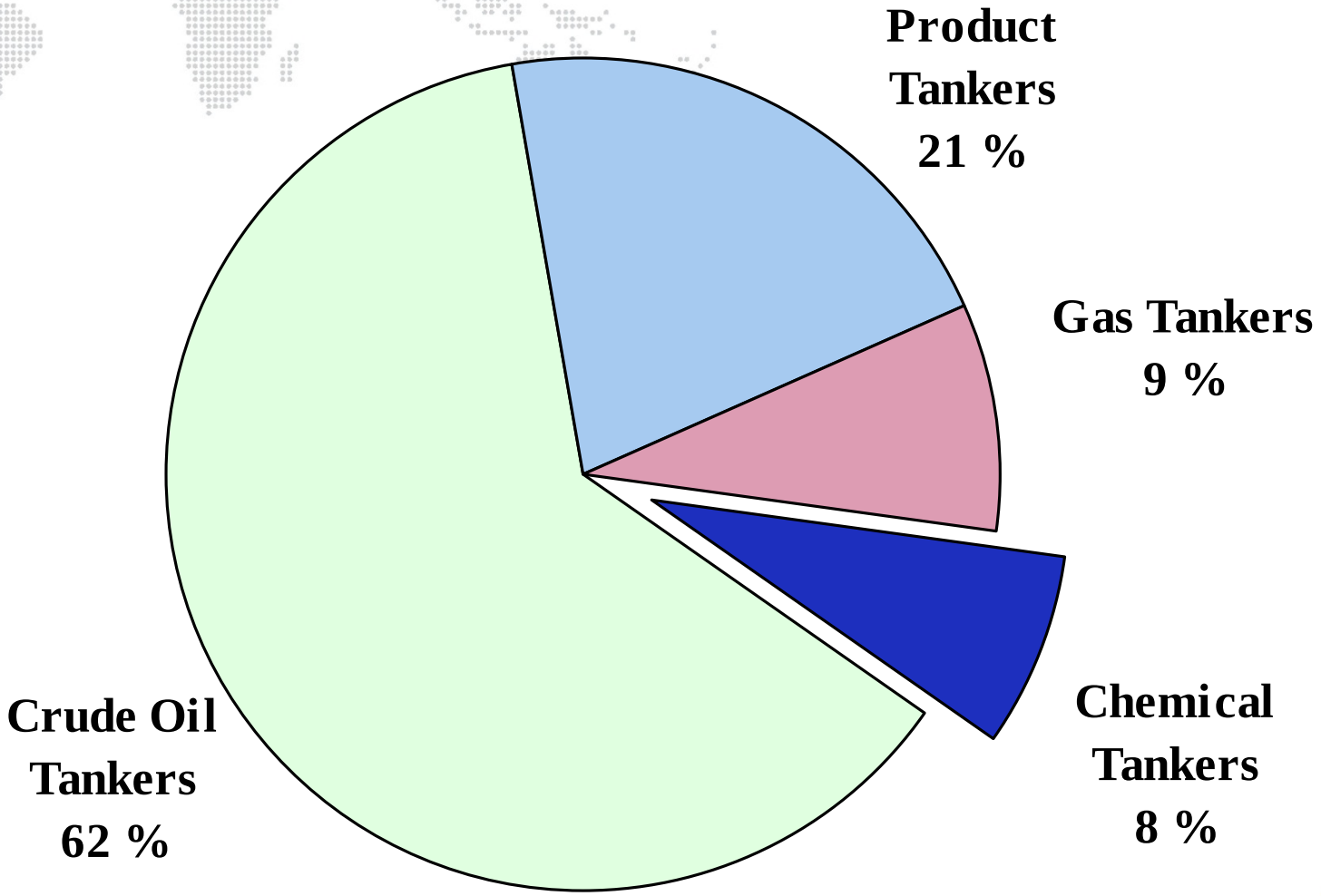
Tanker market



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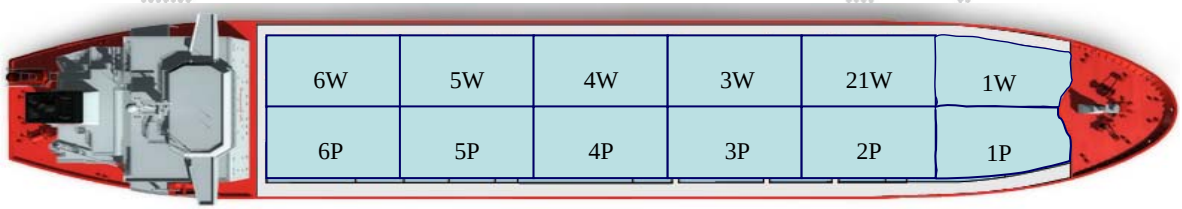
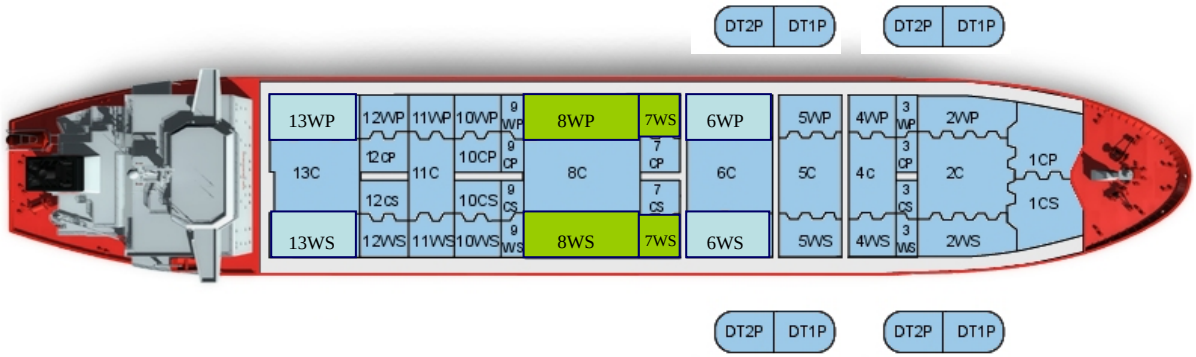
Chemical Tankers vs. Oil/Product Tankers

Oil/Product Tankers



- Few tanks/segregations
- Usually one type of coating
- Narrow range of products (mostly uniform) like CPP or vegoils.

Chemical Tankers



- Many tanks and segregations
- Different tank sizes
- Different tank coatings
- Can handle many different cargoes simultaneously
- Parcel trading

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Definitions of chemical tankers

Deep-sea: 13,000 dwt and above

Regional: 3 – 12,999 dwt

Core fleet: Core vessel capacity

* IMO 2 capacity (fully or centre section)
* Average tank size 3,000 cbm (min. 6 tanks)

Commercially controlled by chemical tanker operator

Or ≥ 50% stainless steel tank capacity (= “Core stainless fleet”)

Swing fleet: Core vessel capacity but <u>not</u> controlled by core operator or other chemical tanker type controlled by core operator

Dedic. fleet: Chemical tanker controlled by chemical/oil company

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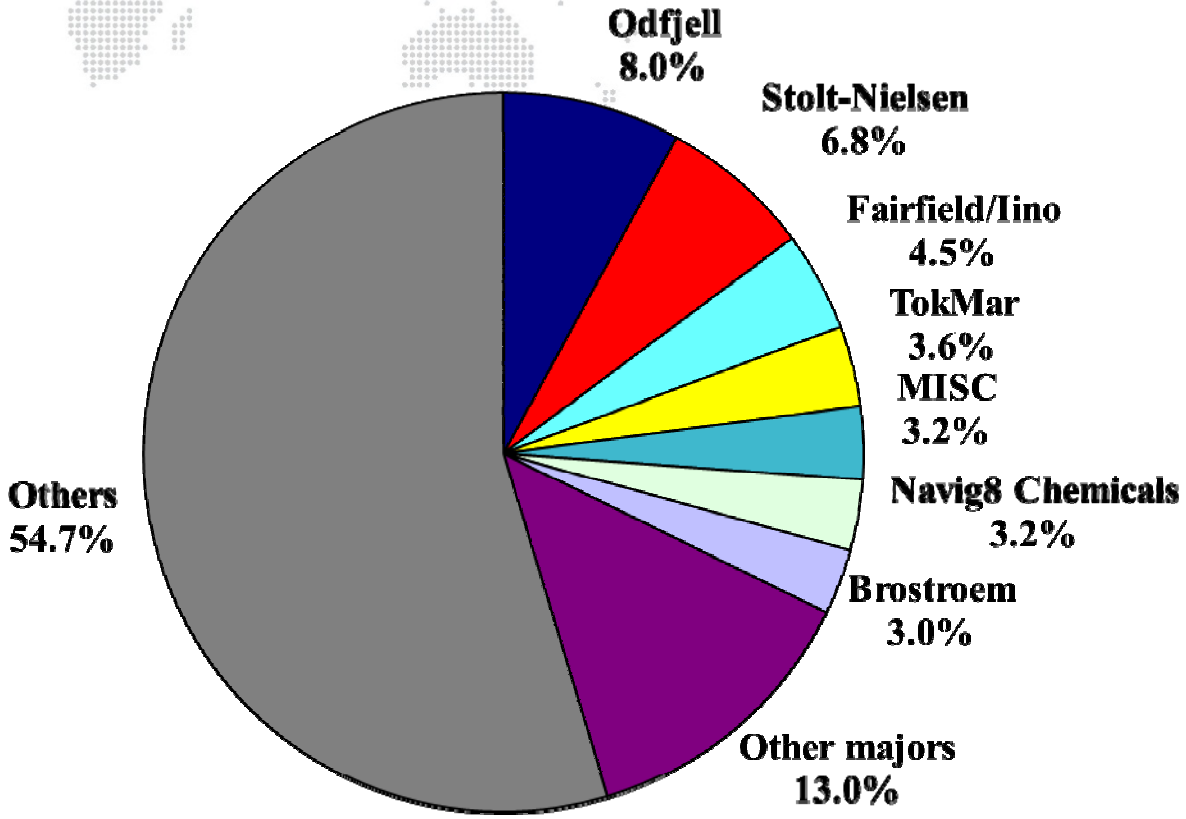
Fleet Distribution end 2012Q2

All deep-sea fleet (in DWT)



Total fleet:	1,184 units	30,322' Dwt

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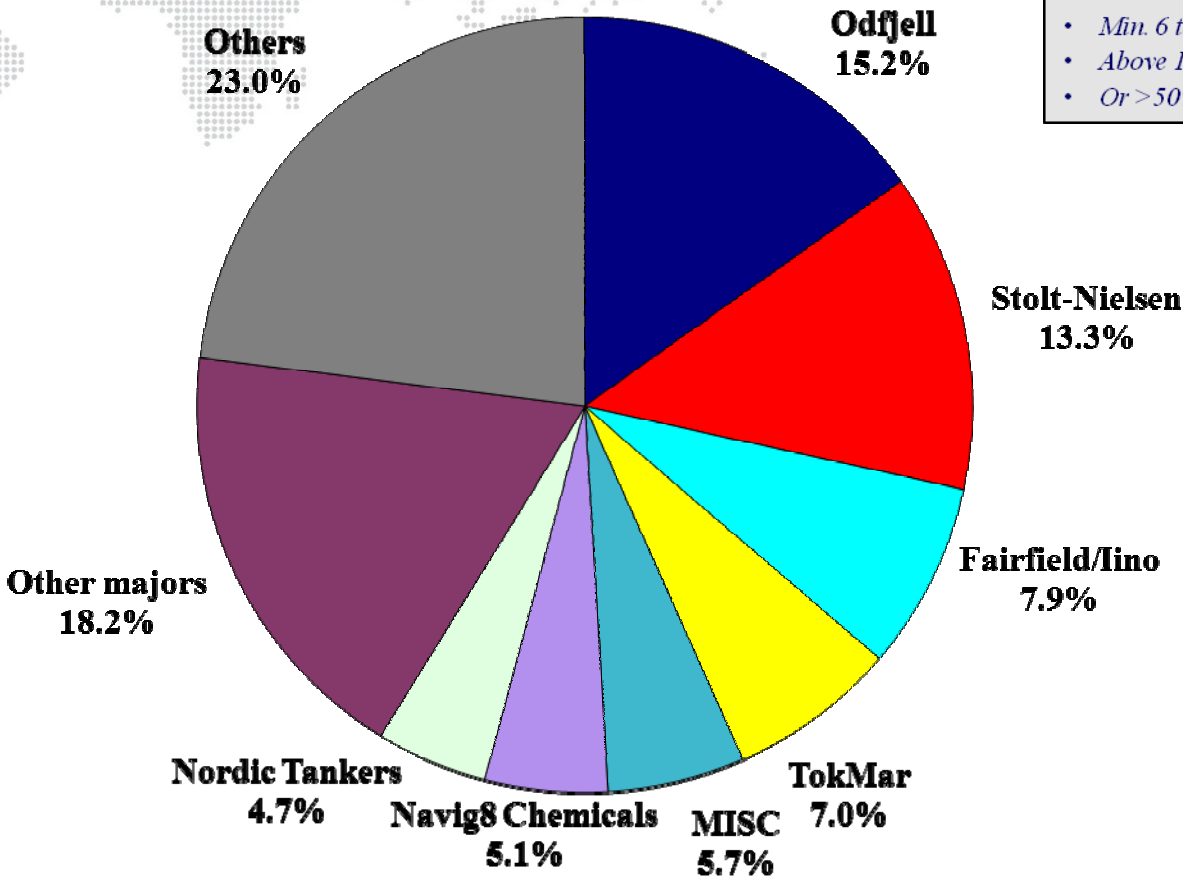
Source: Odfjell

Chemical fleet - Owners

Core deep-sea fleet 2Q2012 (in DWT)

Core fleet deep sea:
- *IMO 2 capacity (fully or centre section)*
- *Min. 6 tanks*
- *Above 13.000mt dwt*
- *Or >50% stainless steel*



Total fleet:	630 units	15,583' Dwt

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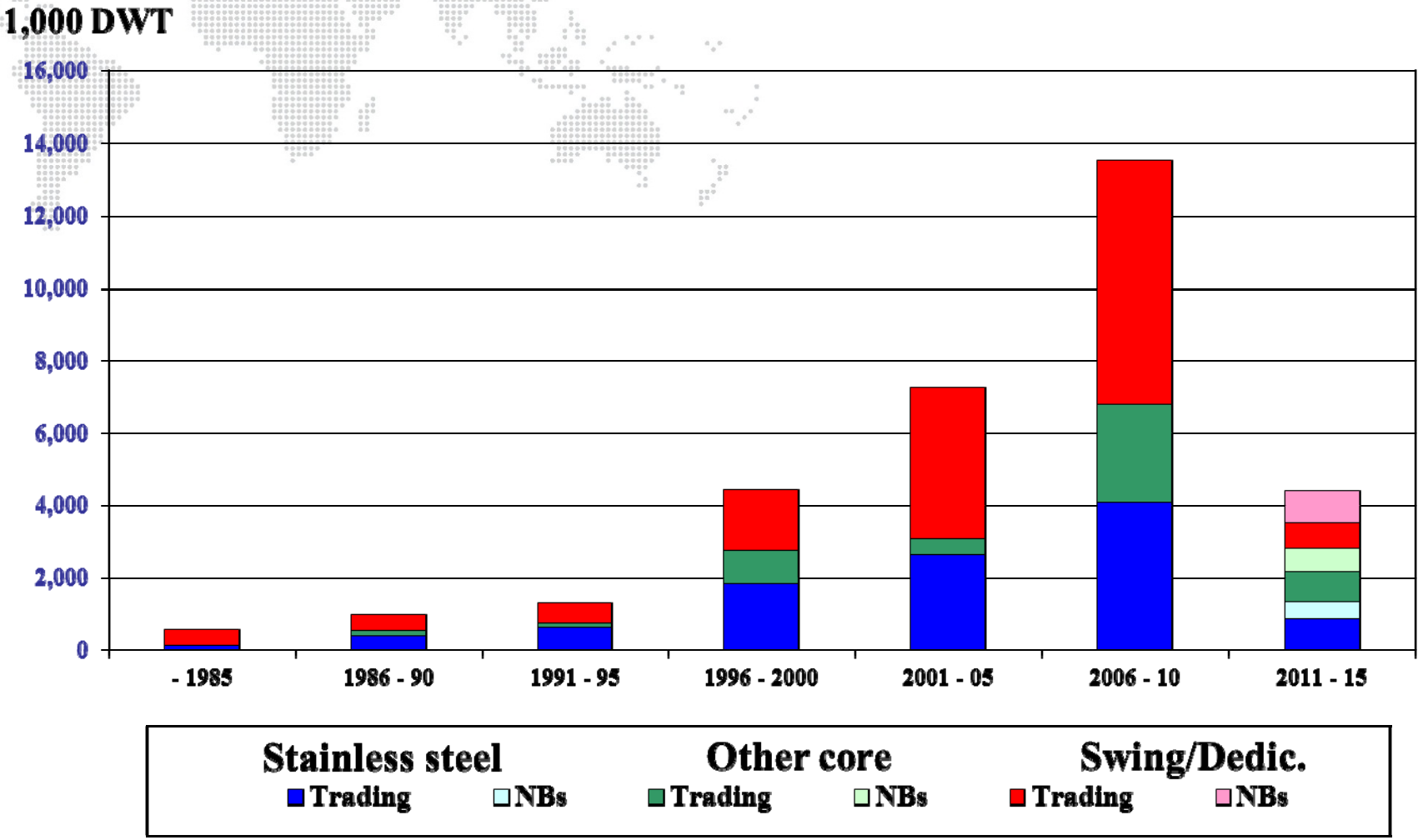
Source: Odfjell

Age structure deep sea fleet

Current fleet and orderbook



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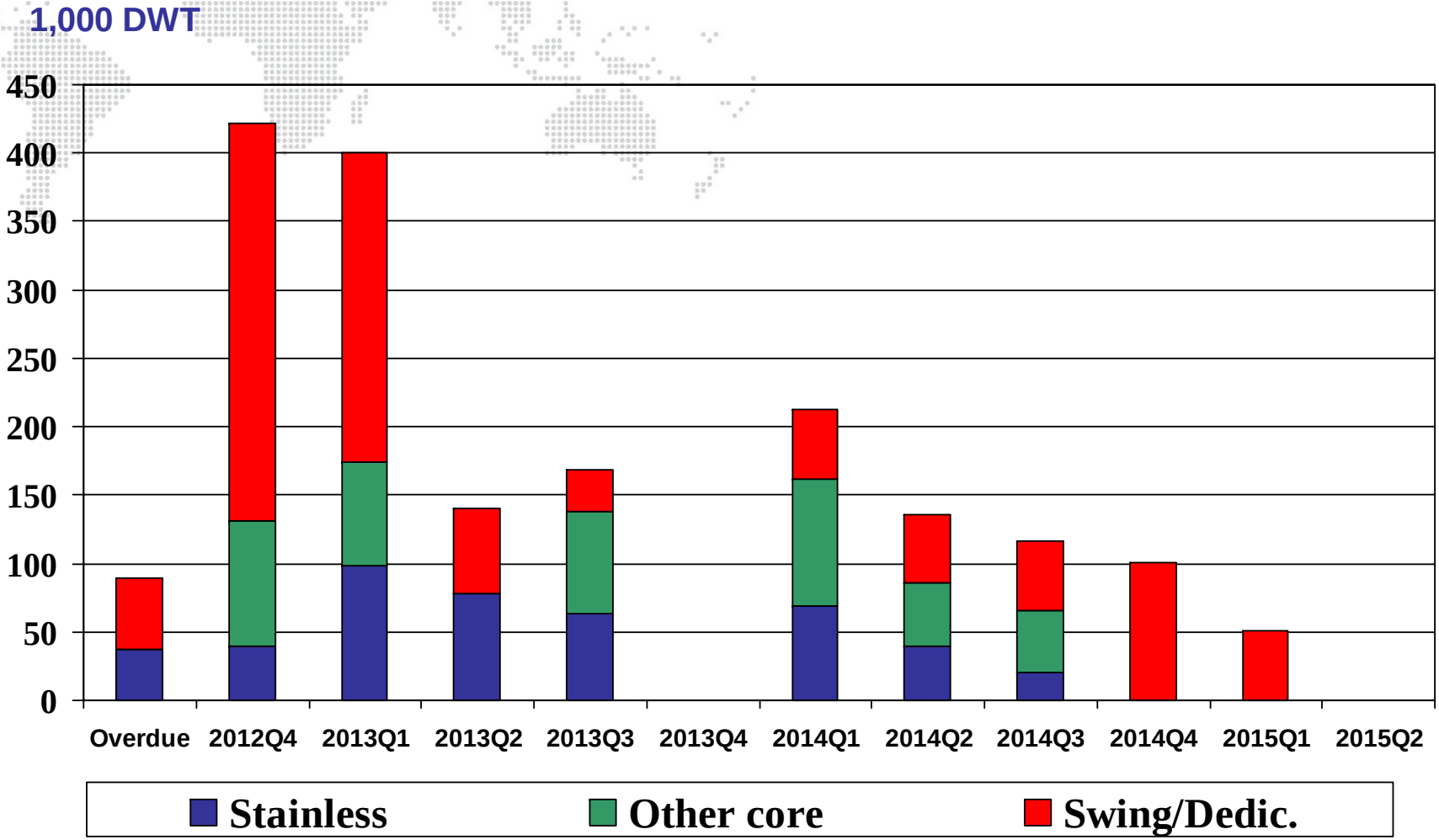
Source: Odfjell

Current deep-sea orderbook by delivery date



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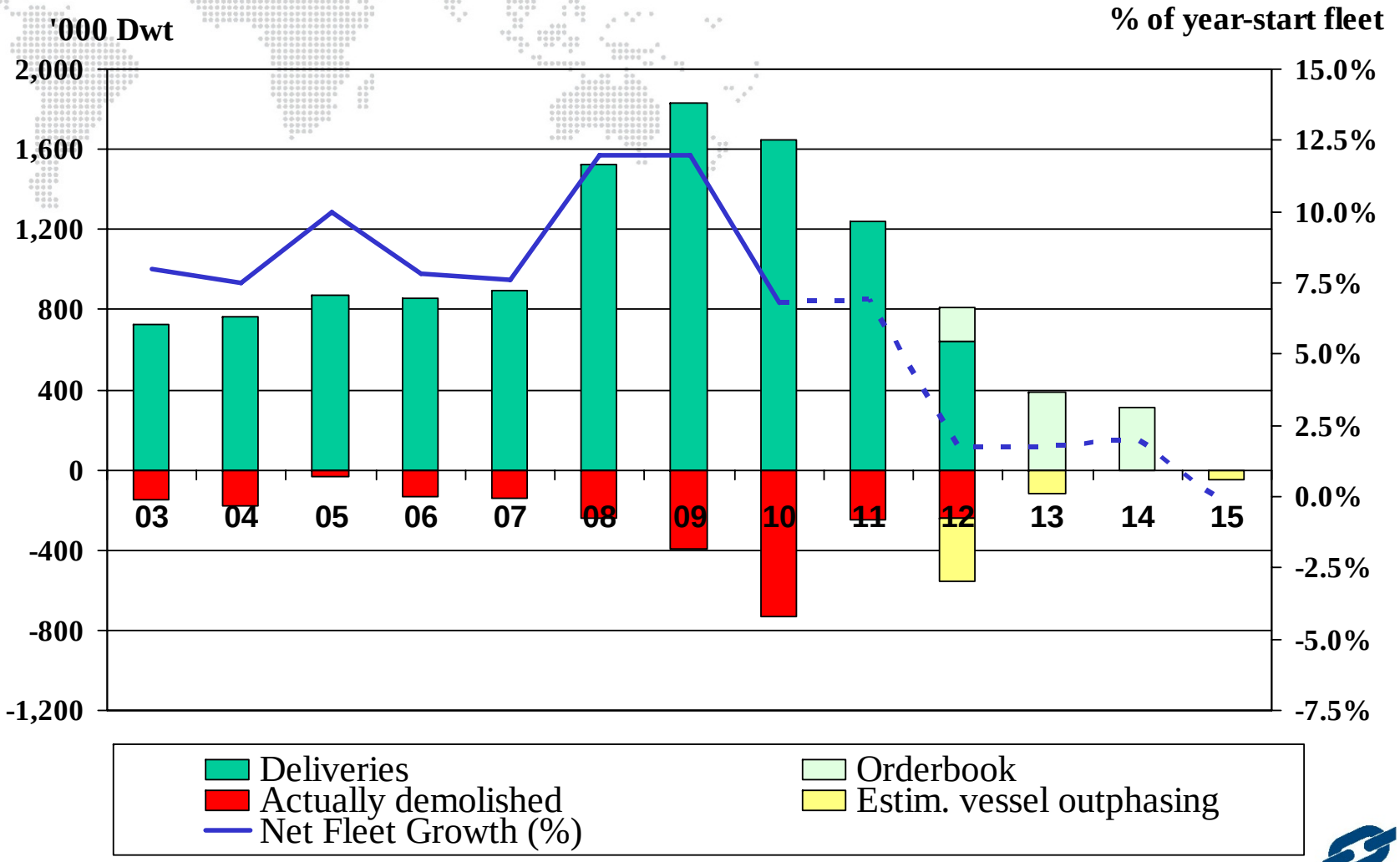
Core Chemical Deep-sea Fleet 2003-2015

Orderbook and estimated demolition per October 4th 2012



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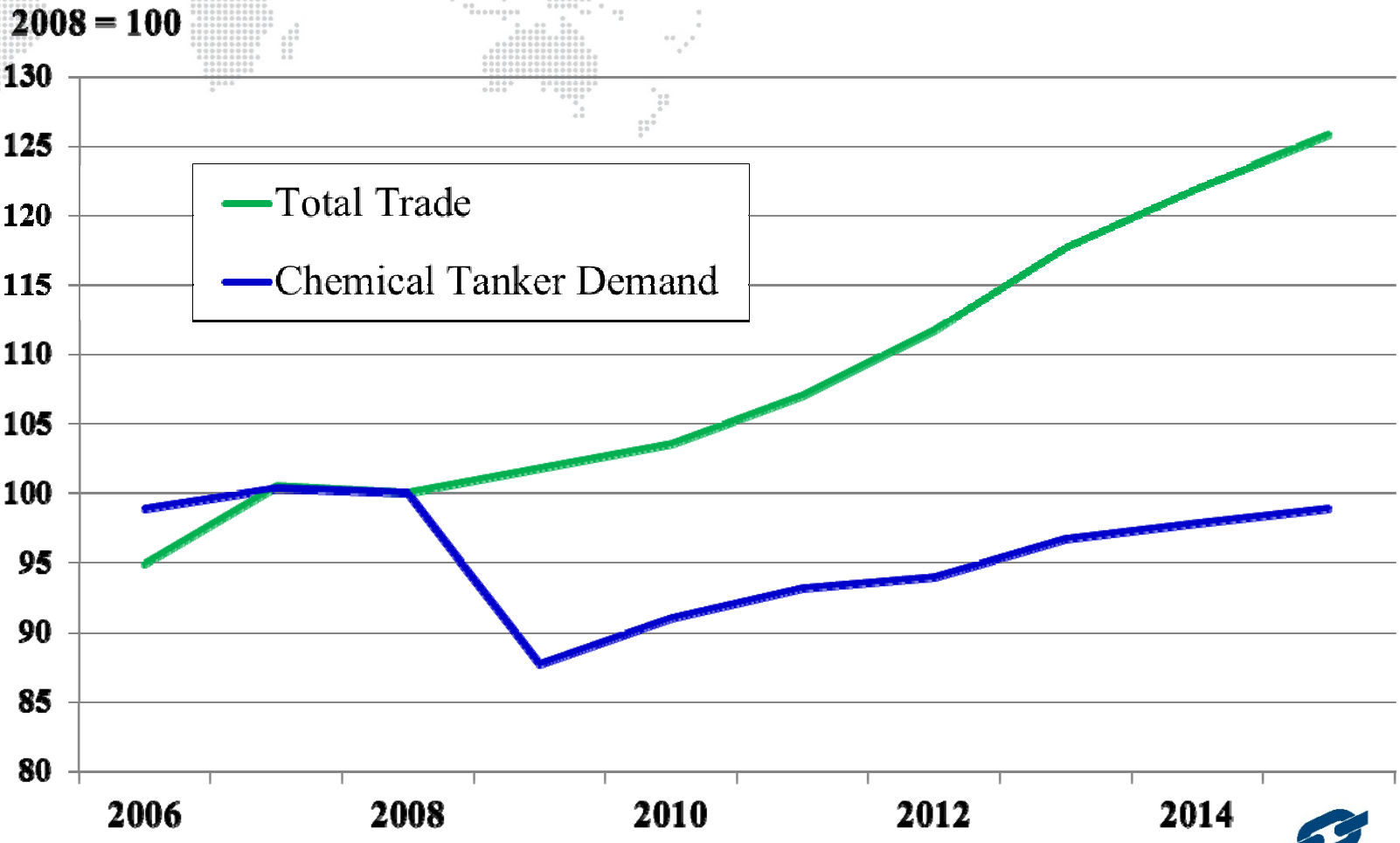
Source: Odfjell

* Outphasing 30 years (Europe built) and 25 years (Asian built)

Chemical Tanker Demand 2006 - 2015

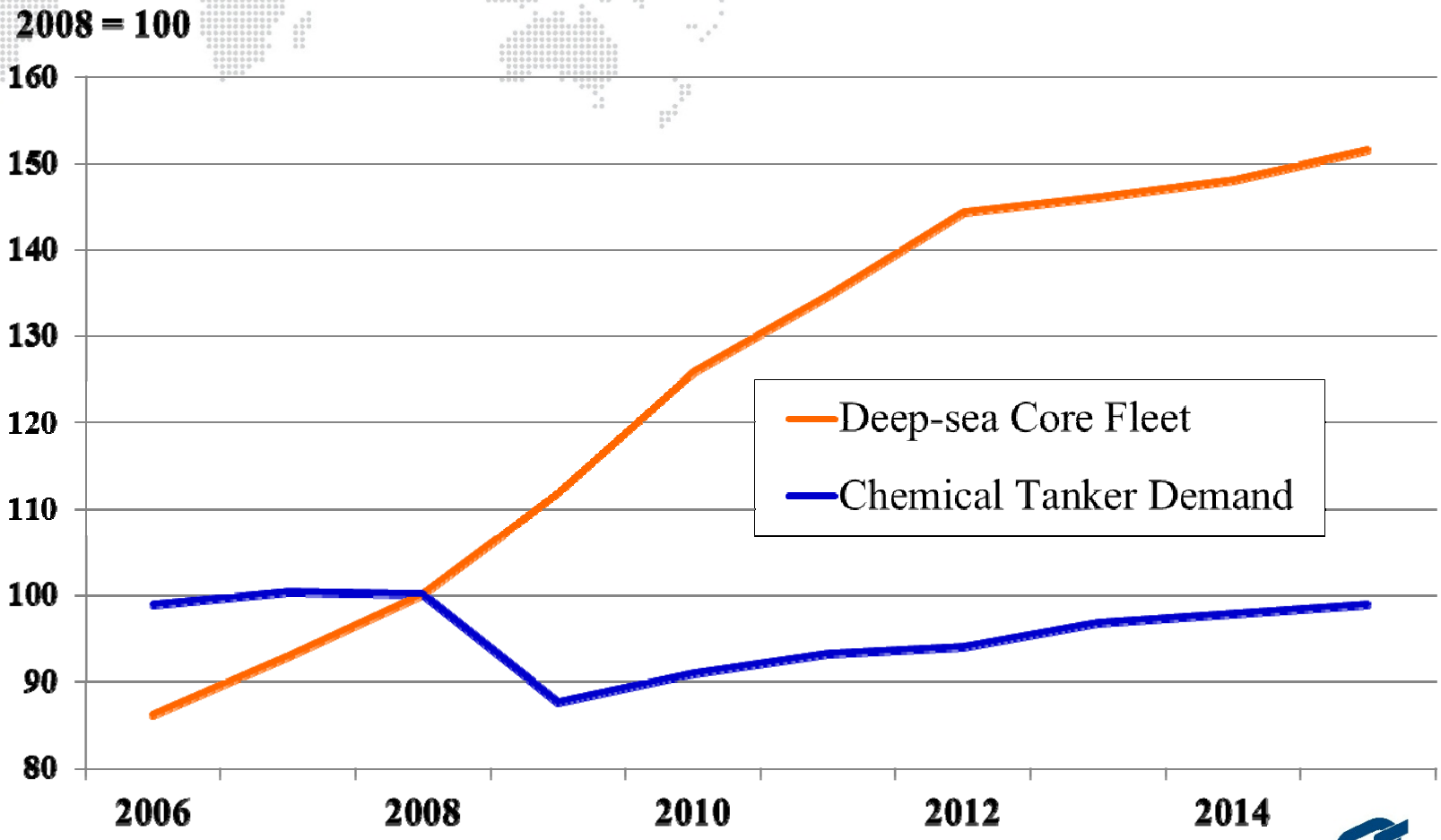
Relative Development



Sources: Drewry Maritime Research, 2012

Chemical Tanker Supply Demand 2006 - 2015

Relative Development 2006 - 2015



Sources: Drewry Maritime Research, 2012 and Odfjell

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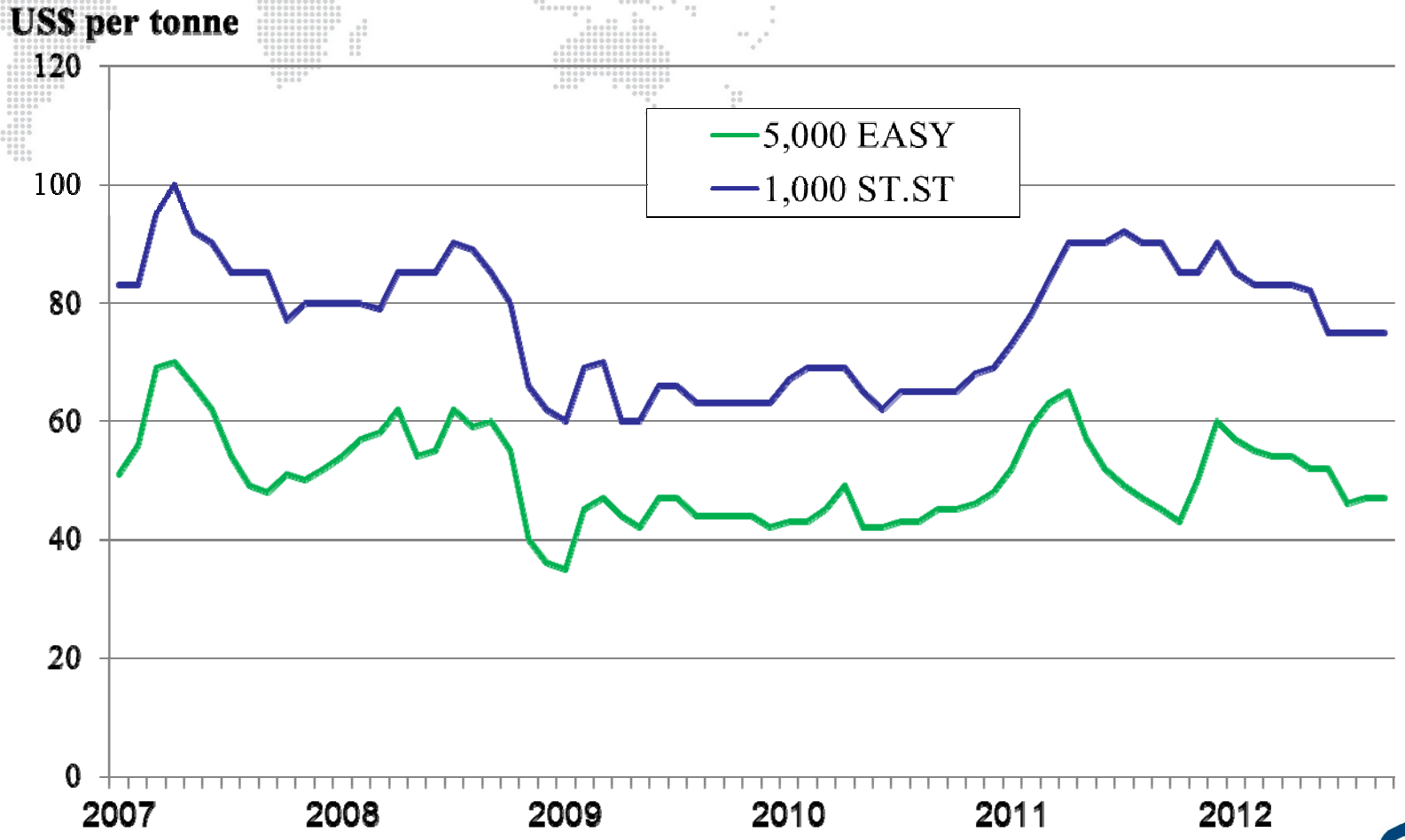
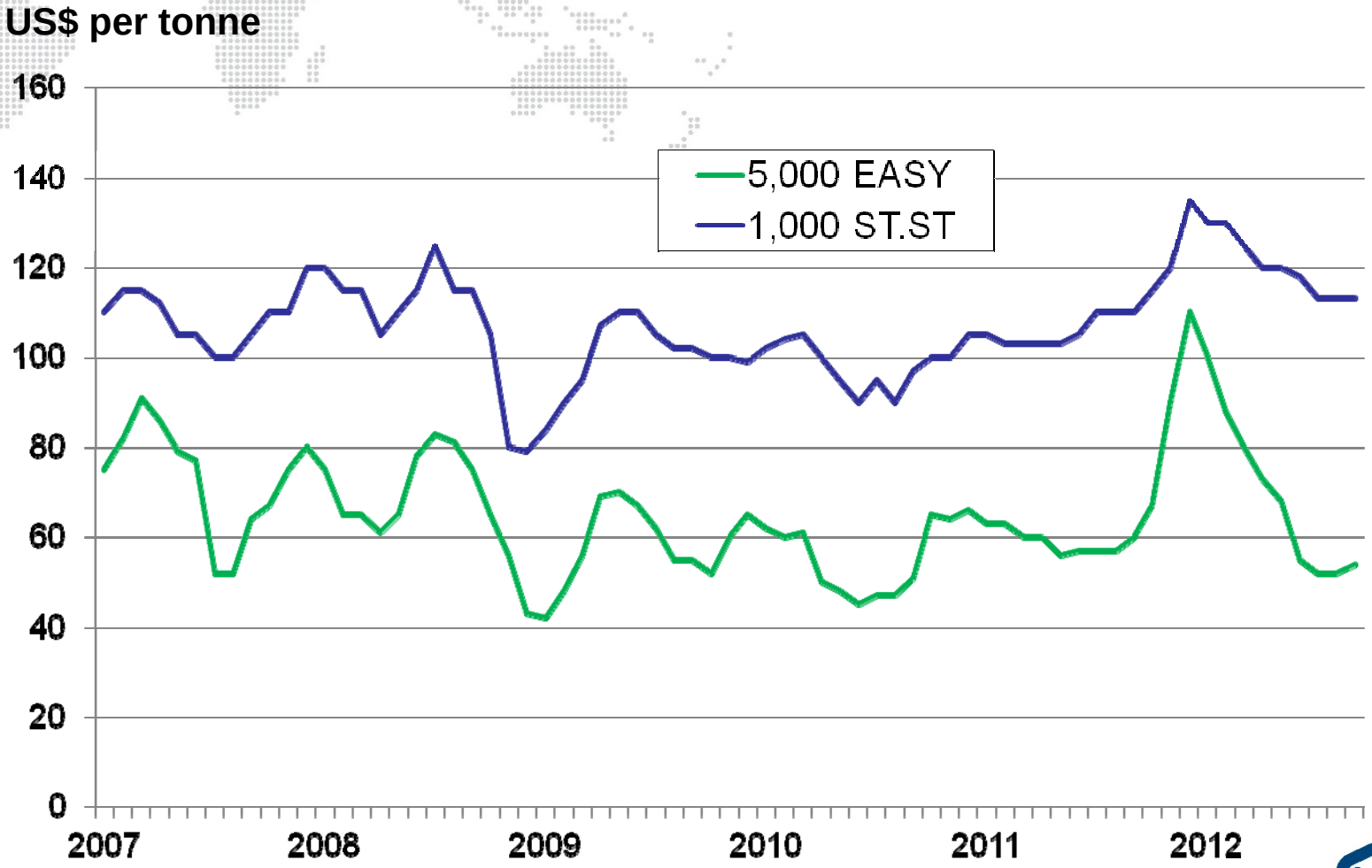
Houston/Rotterdam 2007-2012



Source: Quincannon

Houston/Far East 2007-2012



Source: Quincannon

Outlook

- Vessel supply situation:
  - Reduced newbuilding
  - Healthy demolition
  - No sophisticated stainless ships on order (with more then 30 tanks)
- World economic development
  - Strong momentum in the US due to shale gas development
  - European market remains slow due to economic downturn
  - Iran conflict keeps oil market in tension
  - Interesting development in China and other Asian markets
- Local/regional supply and demand
  - Short-term arbitrage opportunities
  - New plants
  - Closure of plants

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Particular Concerns and Challenges

- Current earning levels are not sustainable.
- Unstable political conditions
  - Iran sanctions
  - Middle East instability
- New fuel requirements.
- Increased inefficiency, more than 40 % of time in port.
- Vetting and inspections.
- Age restrictions.
- New environmental requirements.
- Piracy – Gulf of Aden/Indian Ocean, West Africa

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Thank you for your attention

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