



The Role of the Chemical Tanker in Everyday Life



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BLT Chembulk Group*

*CMA Luncheon
Stamford, CT
January 27, 2011*

Today's Agenda

- Introduction to BLT Chembulk Group
- Chemical Tanker Industry: An Overview
- 50 Years – A Brief History of Chemical Parcel Tanker Trade
- The Role of the Chemical Tanker in *Everyday Life*
- Chemical Tanker Trade
 - Where it is today
 - Where it is going

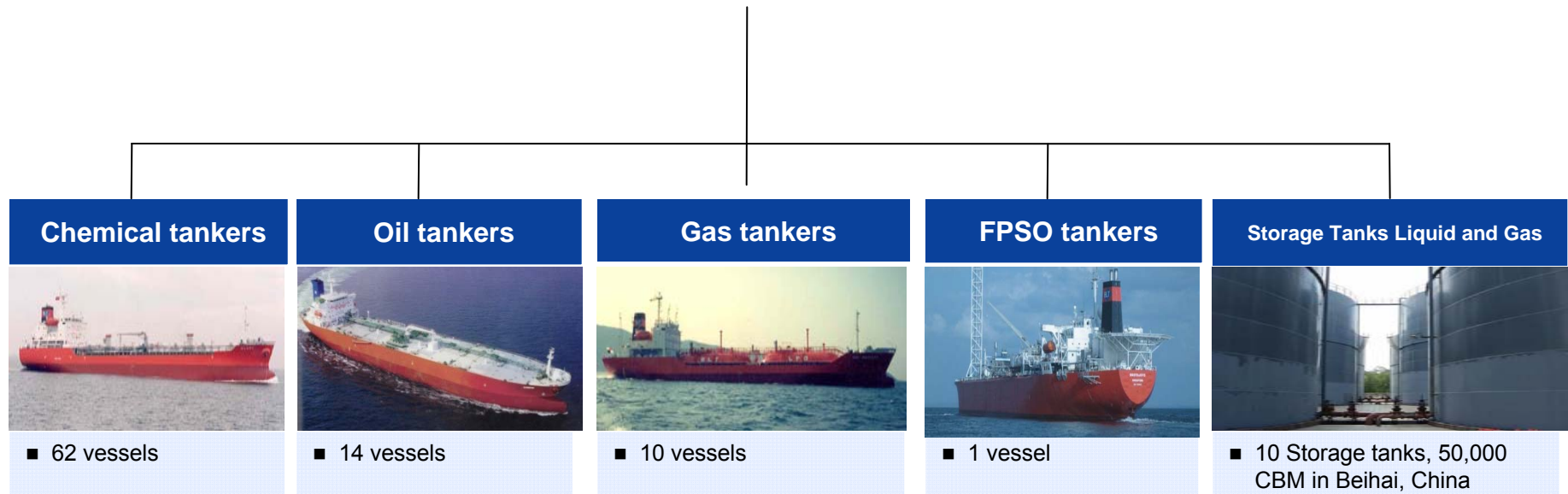


BLT Group Business Pillars

Focus on five (5) business pillars :

87 tankers

(65 owned + 11 time-chartered + 11 bareboat-chartered with purchase option)



The BLT Chembulk Group

- **1981:** PT Berlian Laju Tanker Tbk (BLT) of Jakarta Indonesia is founded by Hadi Surya, current Chairman of the Board
- **December 2007:** BLT acquires Chembulk Tankers LLC thereby making it a global chemical tanker operator, the 5th largest
- **Dec 2007 – Oct 2010:** BLT's four chemical tanker business units operate autonomously. They are:
 - *Berlian Laju Chemical Tankers, Jakarta*
 - *Banya Laju Shipping, Jakarta*
 - *Gold Bridge Shipping, Hong Kong*
 - *Chembulk Tankers, Connecticut USA*
- **November 2010:** BLT Chembulk Group is formed consolidating BLT's four chemical tanker business units into a single commercial management organization with a fleet of 62 chemical tankers
- **Headquarters:** Southport, CT USA
- **Offices:** Jakarta, Singapore, Dubai, Hong Kong, Shanghai, Bangkok, Europe, Brazil and representatives in Houston and Korea





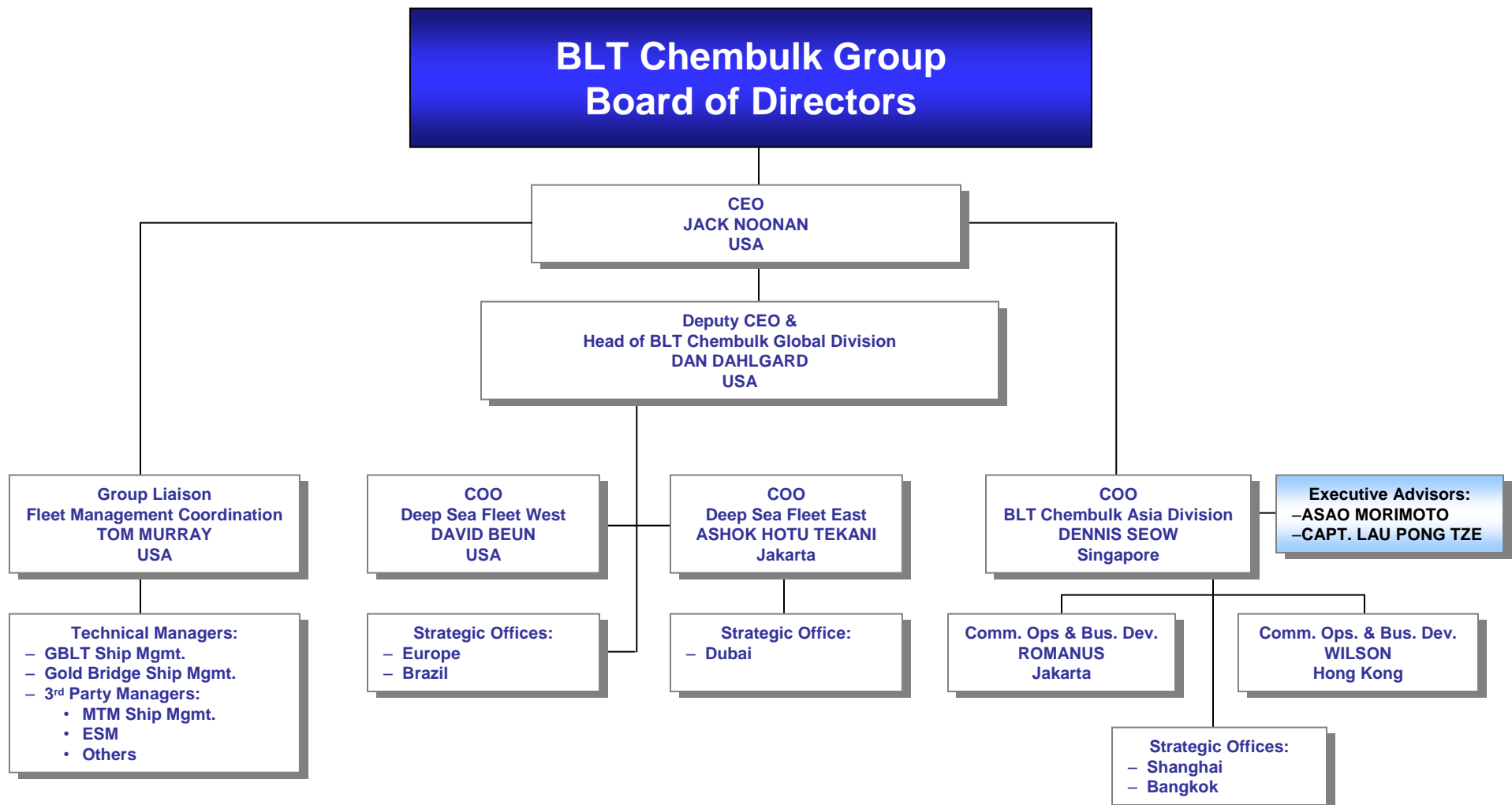
***Commercial Management, Chartering & Voyage Operations,
Marketing, Strategy***



Legal, Finance/Accounting, G&A, Human Resources, Technical Management of Vessels

BLT Chembulk Group

Commercial Organization



BLT Chembulk Group Fleet

62 ships ~ 1 Million DWT

Global Division:

30 ships – all stainless – average age 5.5 yrs

- 7 x 32K DWT *plus 1*
- 3 x 25K DWT *plus 1*
- 19 x 19K DWT *plus 1*
- 1 x 17K DWT

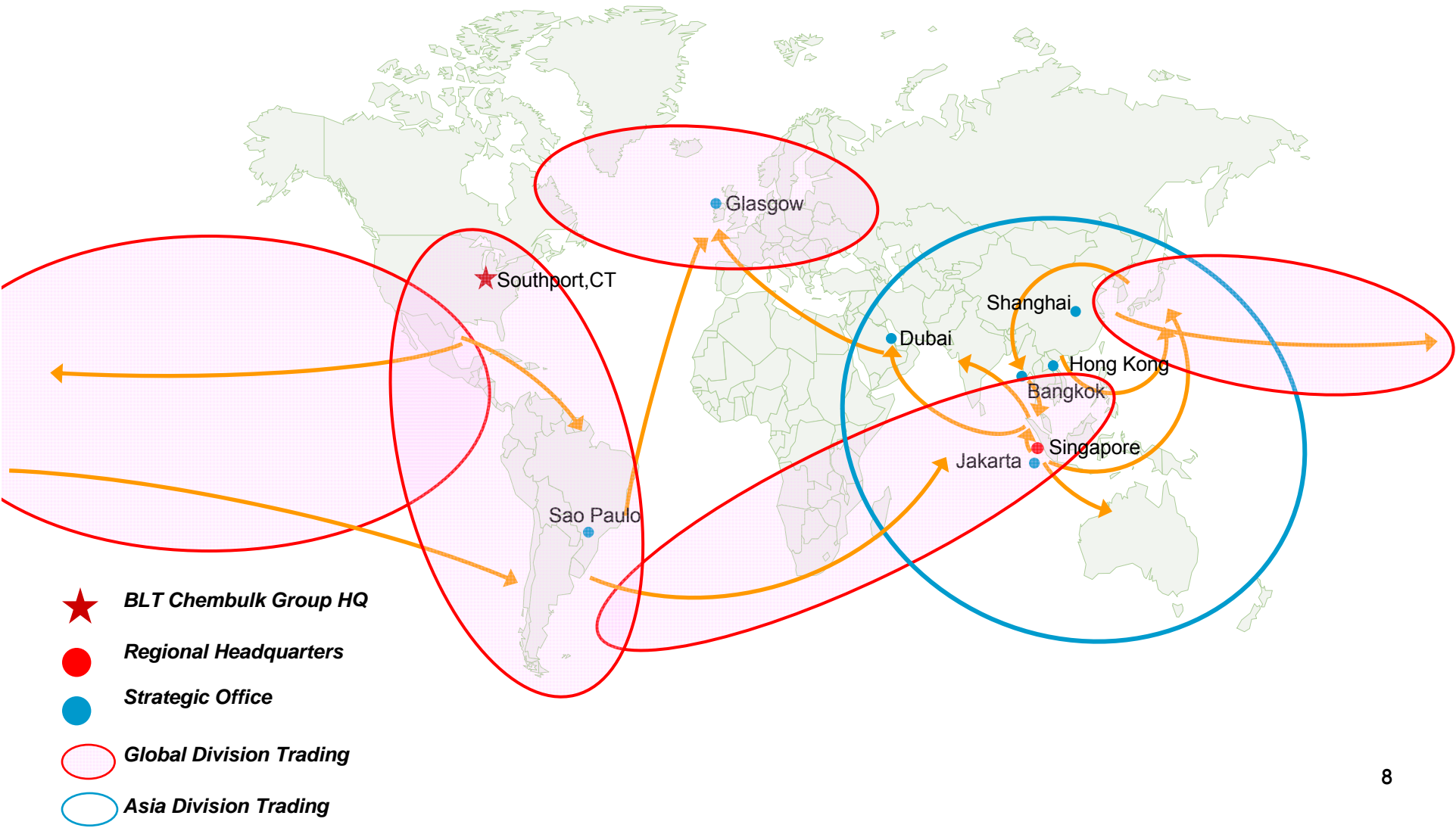
Asia Division:

32 ships – 24 stainless / 8 coated – average age 12.5 yrs

- 9 x 11-14K DWT
- 9 x 7-10K DWT
- 8 x 5-6K DWT
- 6 x 3-4K DWT

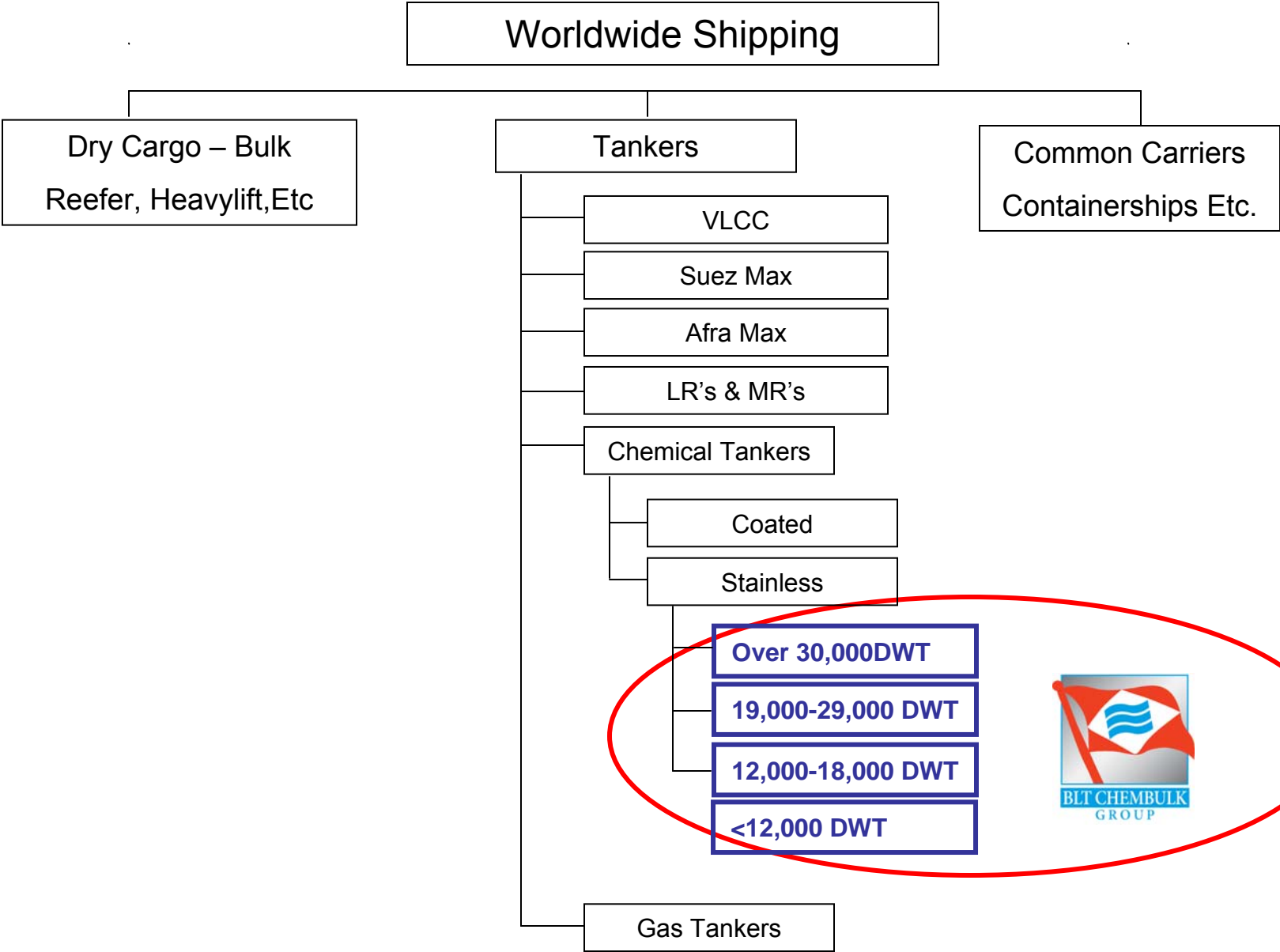
Fleet Renewal
4 x 12K DWT

Worldwide Trading Routes



Chemical Tanker Trade: An Overview

Chemical Tankers in the Shipping World



The Liquid Cargo Market

Crude Oil

- Low Value Cargo
- High Volume
- Lowest PMT Freight Rate
- 70,000 – 315,000+ DWT
- VLCCs
- Suez Max
- Aframax
- LR 1 / LR2
- Single grade cargo
- Trade is one directional
- One load to one discharge

Clean Products

- Higher Value
- Lower Volume
- Medium PMT Freight Rate
- 35,000 – 52,000 DWT
- MR 2
- MR 1
- Multiple grades
- Gasoline, diesel, jet fuel, distillates
- Trade is one directional

Chemicals, etc.



- Highest Value Cargo
- Lowest Volume
- Highest PMT Freight Rate
- 6,000 – 40,000 DWT
- "Drug Store"
- Semi-sophisticated
- Commodity Chem/Vegetable Oil Carrier
- Parcel trade
- Numerous grades
- Chemicals, acids, lubes, vegetable oil
- Multiple charterers & ports
- Multi-directional trade

Chemical Tankers

- Ships are sophisticated:
 - Highly segregated cargo systems (pumps and pipelines)
 - Typically individual cargo system for each cargo tank
 - Numerous tanks that are stainless steel or coated
 - Double / double

MT CHEMBULK SAVANNAH

1P 1213	1S 1201
2P 654	2S 667
3P 1308	3S 1307
4P 936	4S 937
5P 1721	5S 1722
6P 635	6S 621
7P 1921	7S 1920
8P 844	8S 831
9P 1330	9S 1328
10P 1880	10S 1889
11P 698	10S 687
12P 554	12S 565

Flag: Singapore
Class. Society: DNV
 (Tanker, Oils Flashpoint below 60C and Chemicals, Type II&III (ESP) MNS*)

Double Hull / SBT
Type: IMO II/III
Built: January 2002

Prin. Dimensions:
 SDWT: 24,405 mt
 SSWD: 10.62m
 LOA: 153.2m
 Beam: 25.03m

Cubic Capacity: 27,369 CBM

Cargo Pumps:
 24 x 250 m³/h Deepwell

Segregations:
 24 Tanks / 24 Grades
Tank Coating: Stainless Steel
 SUS 316L

Heating System:
 Stainless Steel Coils
 90 Deg. Centigrade

Chemical Tanker Ownership

The global owning sector is an oligopoly.

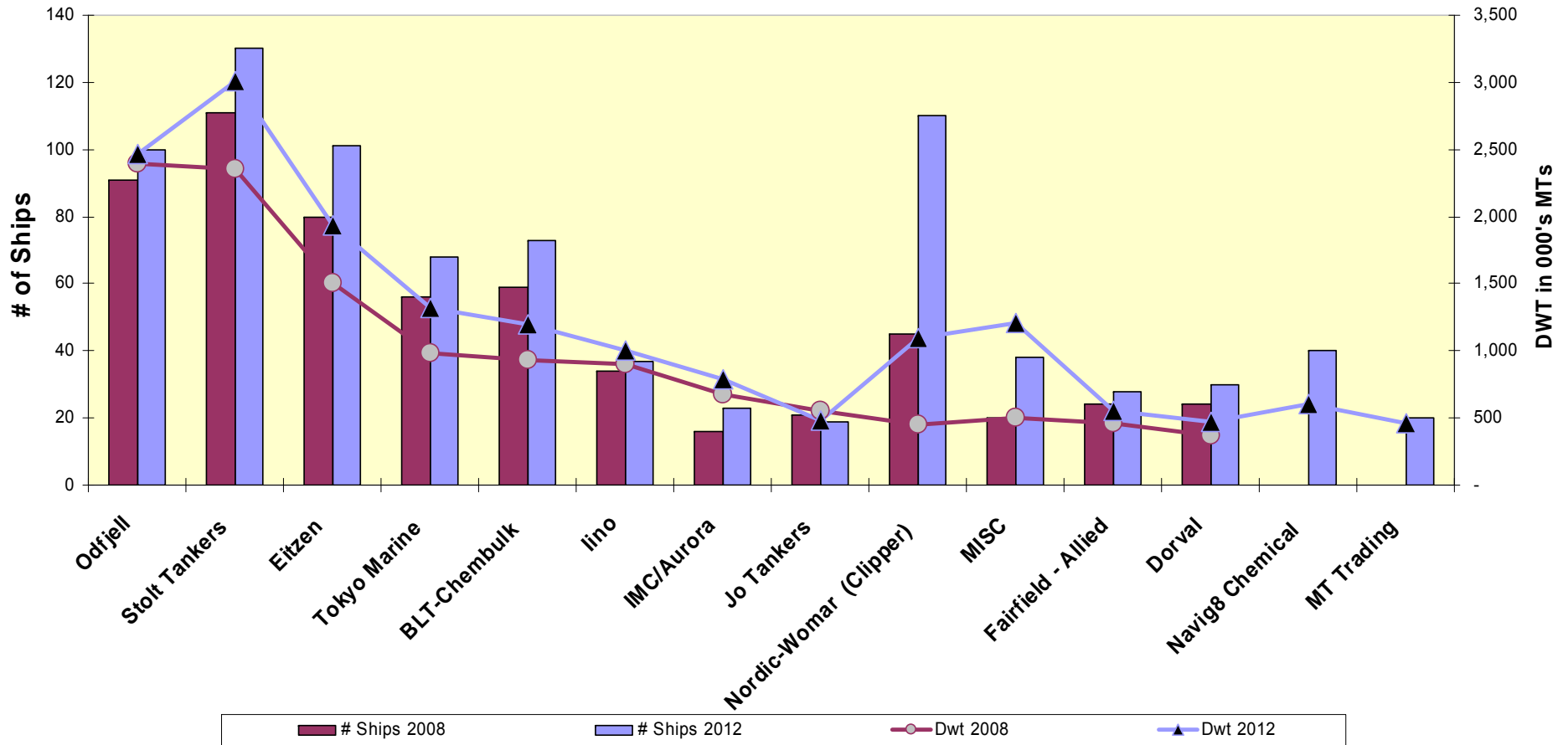
As depicted on the following graph:

- In 2008 the three largest owners operate ~52% of the total deadweight (~45% in 2012)
- ~85% of the total global deadweight is operated by just twelve companies (14 companies in 2012)
- The balance is mostly comprised of numerous smaller owners operating regionally; many in Asia

Global Owners by Deadweight & Number of Ships

12 Owners - 581 ships totaling 12.1M DWT in 2008

14 Owners - 817 ships totaling 16.6M DWT in 2012



Chemical Tanker Industry
A Brief History: 1959-2010

The Beginning: 1959 - 1970

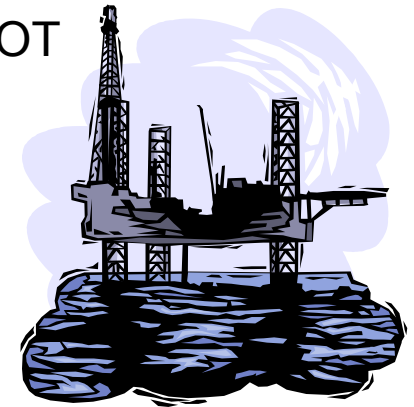
- Young industry – born in 1959 – approximately 50 years
- First chemical tankers were modified product tankers
 - Additional tanks, pumprooms & pipelines
 - Providing for more grades, smaller quantities
- Earliest trade – vegoils and tallow from Great Lakes to Europe
- Alternative to drums and deep-tanks of general cargo ships
 - Improved economies of scale
- Stolt-Nielsen and Odfjell in the vanguard
- Transatlantic eastbound (USG to NWE) is benchmark tradelane
 - Chemical producer, commodity chemical focused



The 1970's: Development Decade

First “purpose built” chemical tankers delivered:

- Significantly increased cargo segregation and integrity
 - Individual “per tank” cargo systems
 - Cofferdams and double-bottoms
 - Improved tank coatings and stainless steel
 - Beginning of true “drug store” trade
- Proto-typical size: 20-30K DWT
- Rise of commodity trader business (*Phillip Bothers, Sogo Shosha*)
- Transpacific westbound (USG to North Asia) becomes benchmark trade
- Significant newbuilding programs by majors – Stolt, Odfjell, JOT
- Volatile decade for chemical tanker owners
 - Market boom 1973-74 due to inelastic supply
 - Market collapse in 1975 following first oil price shock
 - 2nd oil price shock in 1979 brings about major recovery



The 1980's: Transition

- Late 70's strong market spurs new owner entry – primarily Japanese
- Further fleet expansion by majors
- 30-40K DWT becomes proto-typical size for deep-sea chemical tanker
- Emergence of smaller (6-9,000 DWT) ships for short-sea trade – “*A lot of them!*”
- Significant vessel deliveries in early 80's coupled with cyclical chemical downturn severely dampens market.
- Numerous bankruptcies among newcomers – and resulting rationalization
 - 2nd hand ownership and rise of the time-charter operator
- Cyclical upswing, owner rationalization in 2nd half of 80's stabilizes market
- Legislative and regulatory requirements have commercial impact
 - Last-cargo (FOSFA, NIOP) and environmental (MARPOL) restrictions



The 1990's: Maturity

- Gulf War 1990-91 market spike and subsequent trough
- OPA 90 – increased regulatory compliance and quality control
- *Asian Tigers*: Industrial growth in Thailand, Taiwan, So. Korea, etc.
 - New chemical production creates new intra-regional trade routes
 - Impacts established deep-sea markets, reduces ton-mile demand
- Mergers and consolidation trend begins – reducing market participants
 - BPAmoco, ExxonMobil, Dow-UCC, Odfjell & Seachem Tankers
- Mid 90's majors' fleet renewal
 - Fully stainless steel
 - Double/double construction
- Depressed market as decade ends
 - Surplus tonnage
 - Change in trading patterns
 - Asian currency crisis



21st Century: The 00's – Challenges

- Maritime incidents (*Erika*, *Ievoli Sun*, *Prestige*, *Bow Mariner*) result in stricter compliance and regulatory landscape
 - Rise of oil majors vetting organizations
 - Return to integrated ownership (commercial & technical)
- Anti-trust / DOJ events – mixed impact
 - Accusations against major owners casts pall over industry
 - Major charterers shift away from single supplier practice
 - Increased opportunities for Independents and Niche-market shipowners
 - Greater competitive marketplace established
- Capital markets influence – greater fiscal discipline
- Global economic meltdown, oversupply = chemical tanker market downturn
- Rationalization *again* – as decade concludes

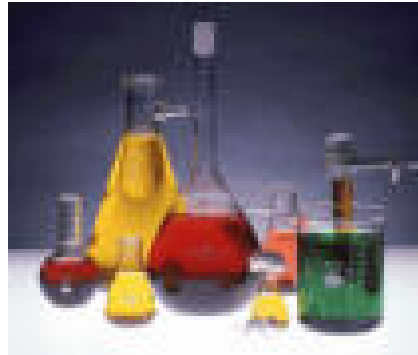


*The Role of the Chemical Tanker
in Everyday Life*

Chemical Tanker Cargoes



Tallow



Chemicals



Lube Oils



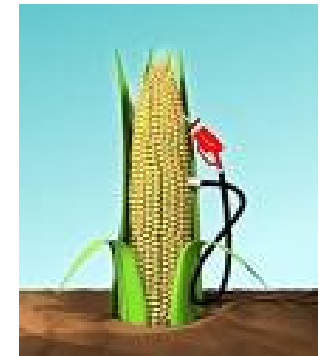
VegOils



CPP



Molasses



Chemical Tankers Clientele

Multinational Chemical Producers:



International Oil Majors & National Oil Companies:



PETROBRAS



Commodity Traders, Grain Houses & Agricultural Concerns:



Morgan Stanley



TRAFIGURA



Chemicals: What WE remember, *maybe*?

Periodic Table of Elements

1A	1																	0	
	1	H	IIA															2	
	2	3	4									5	6	7	8	9	10		
		Li	Be									B	C	N	O	F	Ne		
	3	11	12	III B	IV B	V B	VIB	VII B	VIII	VII	IB	IB	13	14	15	16	17	18	
		Na	Mg										Al	Si	P	S	Cl	Ar	
	4	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
		K	Ca	Sc	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Se	Br	Kr
	5	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54
		Rb	Sr	Y	Zr	Nb	Mo	Tc	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te	I	Xe
	6	55	56	57	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86
		Cs	Ba	*La	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn
	7	87	88	89	104	105	106	107	108	109	110								
		Fr	Ra	+Ac	Rf	Ha	106	107	108	109	110								

* Lanthanide Series

58	59	60	61	62	63	64	65	66	67	68	69	70	71
Ce	Pr	Nd	Pm	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu

+ Actinide Series

90	91	92	93	94	95	96	97	98	99	100	101	102	103
Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr

Legend - click to find out more...

H - gas

Li - solid

Br - liquid

Tc - synthetic



Non-Metals



Transition Metals



Rare Earth Metals



Halogens



Alkali Metals



Alkali Earth Metals



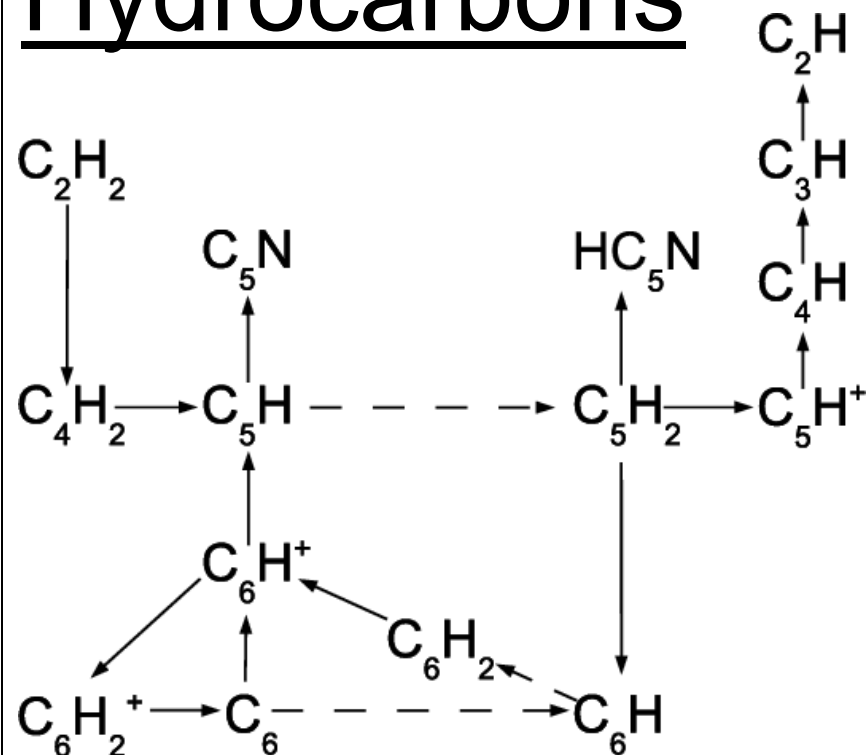
Other Metals



Inert Elements

Chemicals: Or maybe YOU remember *this*?

Hydrocarbons



- *Bunsen burners*
- *Multi-syllabic, difficult to pronounce nomenclature*
- *Di-Chloro blah blah*
- *Tri-Flouro blah blah blah*
- *Ethyl-Hexyl-Phenyl stuff*
- *Antidisestablishmentarianism*

1978 Rutgers University Bumper Sticker:
Honk if you passed Organic Chemistry!

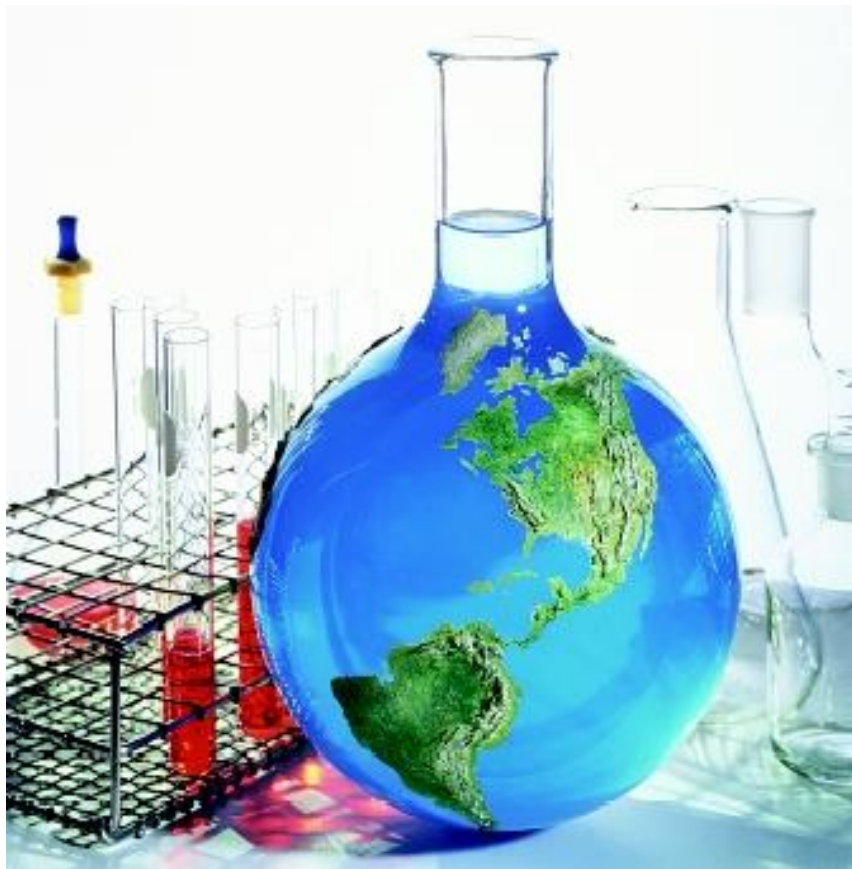
Chemicals – What *THEY* Think Now



So, we chemical tanker operators are perceived to be some of the *Bad Guys!*

But ...THEY'RE WRONG!

The world would be different without chemicals

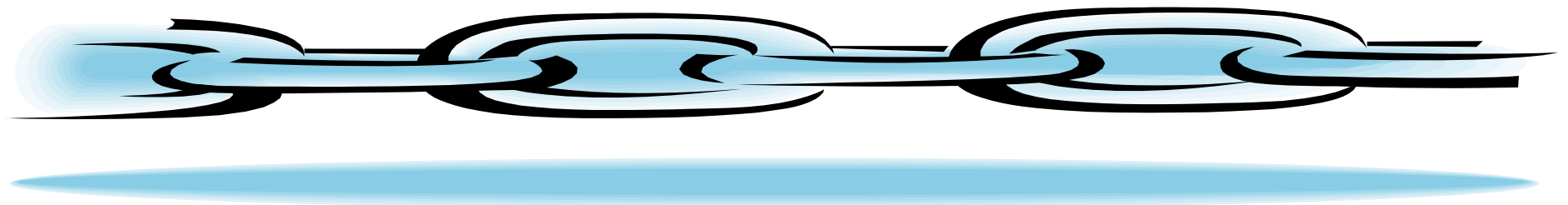
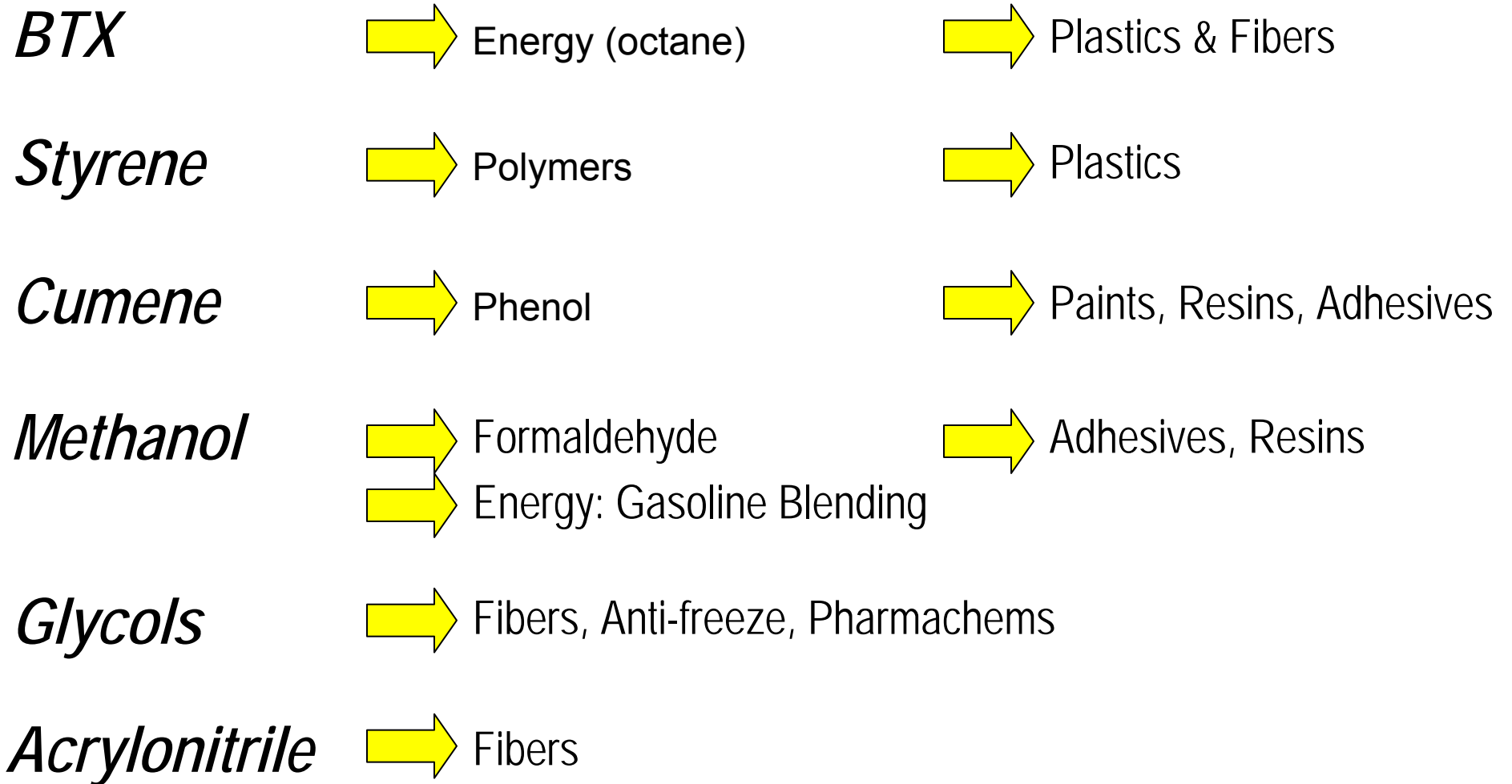


So, we chemical tanker operators are actually some of the *Good Guys!*

The Cycle of Life

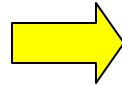


China Imported Petrochemical Chain

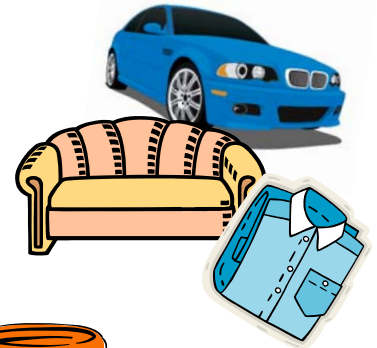


China Chemical Production & Export Chain

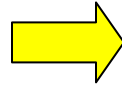
Plastics & Fibers



Automotive production
Everyday consumer goods
Furniture
Clothing



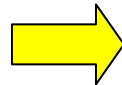
Resins & Adhesives



Housing materials
Manufacture of Plywood
Paints



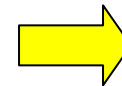
Pharmachems



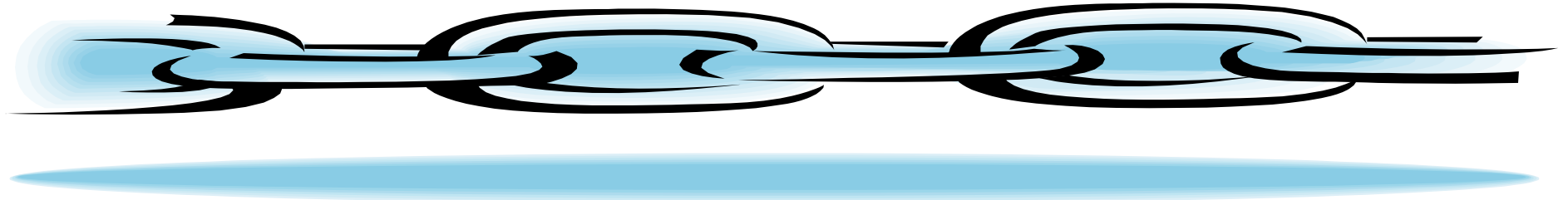
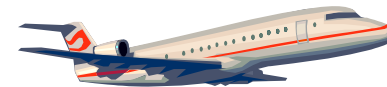
Pharmaceuticals
Health & Beauty Aids



Caustic Soda



Aluminum
Paper



South American Import Chain

Acetyls

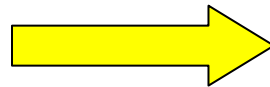
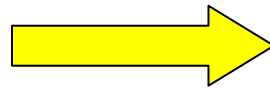
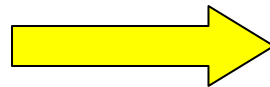
Styrene

Acrylates

Glycols

Lubricating Oils

Inorganic Acid

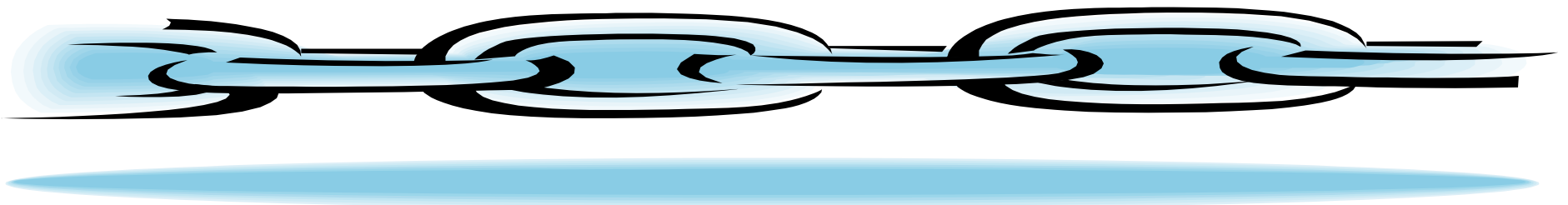
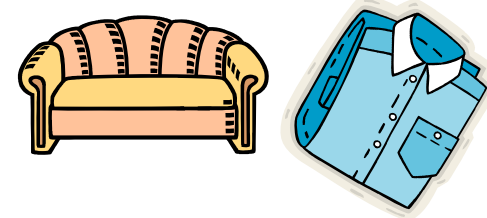
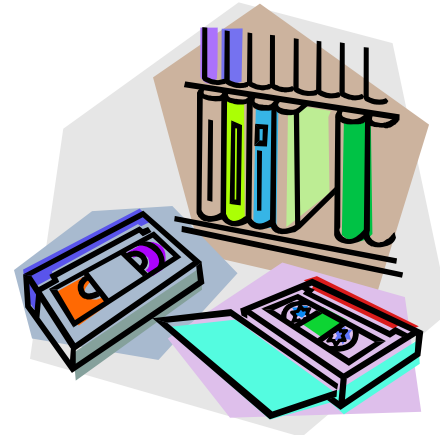


Plastics

Fibers

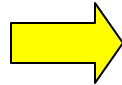
Industrial & Automotive

Fertilizer

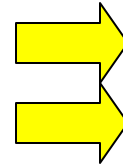


South American Exports Chain

Ethanol



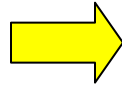
ETBE
Alcohol



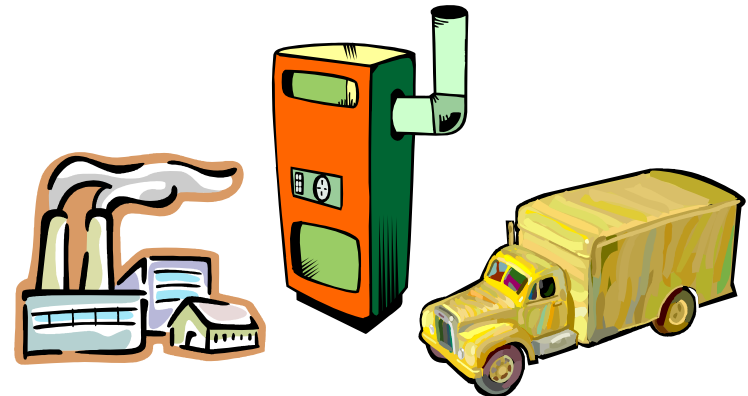
Auto fuel Oxygenate
Foodstuffs



Biodiesel



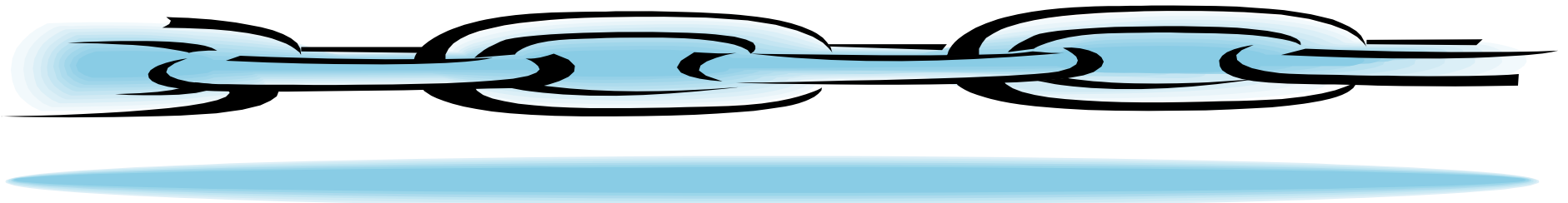
Industrial Fuel
Transportation
Home Heating Oil



BTX



Energy (octane, gasoline blending)



**Bringing a world of
products to you**
to make the world you live in more livable.



Plastics, fuels, fabrics building supplies - all made from transported chemicals.

***BLT Chembulk Group -
The Industry's Preferred Global Ocean Carrier
of Specialized Liquid Bulk Cargoes.***



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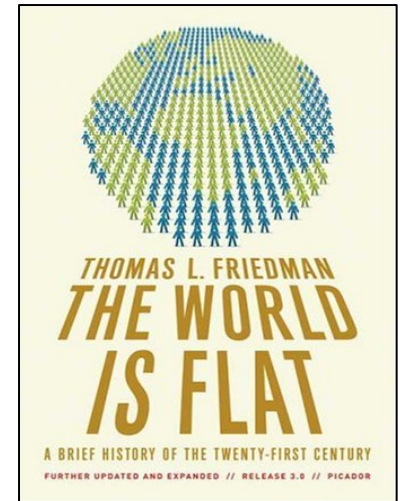
The Chemical Tanker Trade
Where are we today ?
Where are we going ?

Supply vs. Demand Paradigm

- Tonnage Supply vs. Demand for Freight:

- Supply:

- IMO II classification of vessels ↑
 - Vessel and operator quality control ↑
 - Significant new order book ↓



- Demand: *The World is Flat* – Thomas L. Friedman

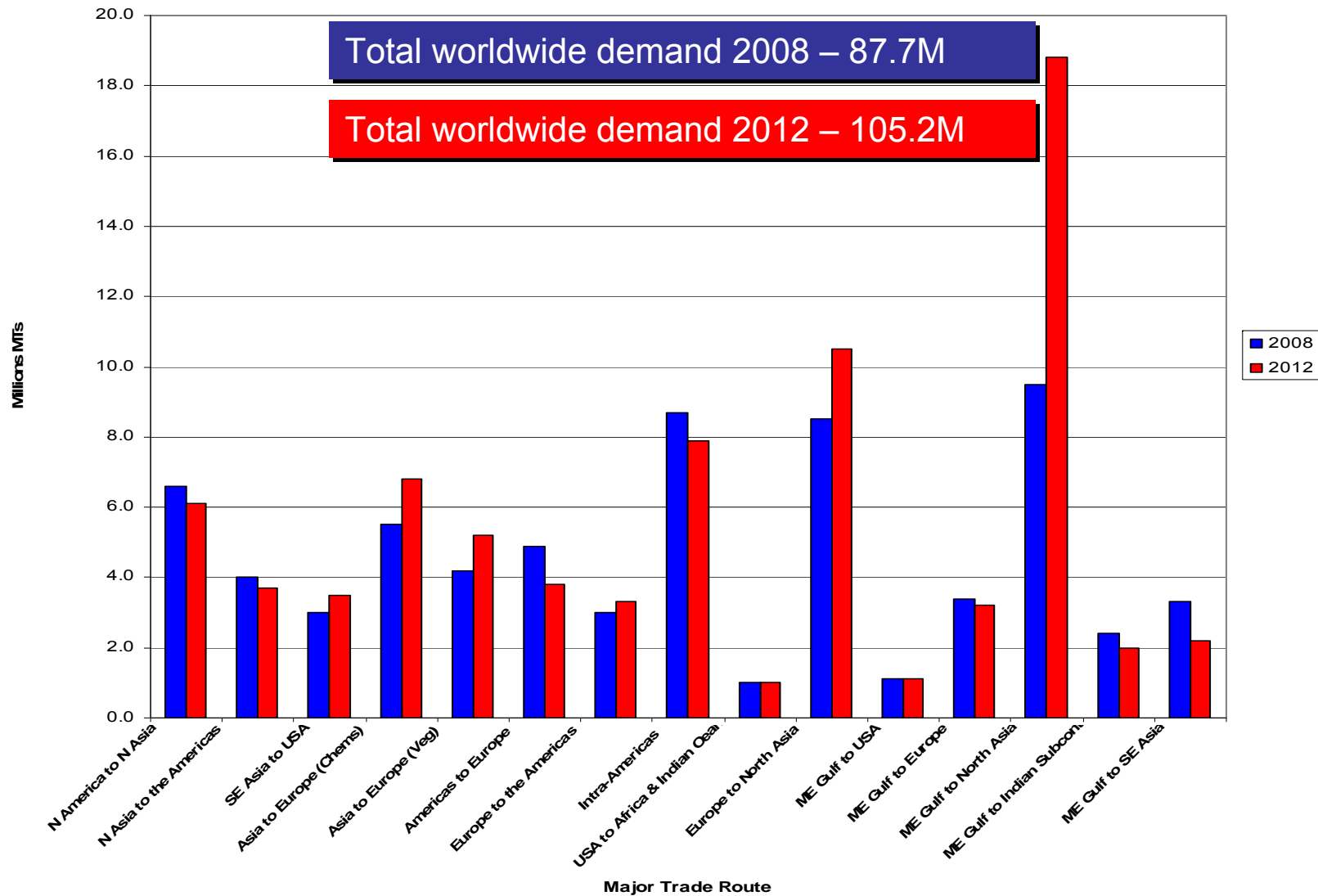
- World-flattening events create a global market place ↑
 - **Going Green** – ethanol and biodiesel ↑
 - Economic volatility in developed economies ↓

Where are we now?

- 2008 global economic meltdown dampened demand
- Coupled with Owners' aggressive newbuilding orderbook, it led to oversupply of tonnage
- *But* - most new tonnage has already been delivered or factored into market psyche
- Rationalization via pools (*Nordic-Womar, Navig8*) and deals (*Stolt-JOT ship-swap, Stolt-Dorval vessel acquisition*)
- Shifting tradelanes are beginning to alter ton-mile demand and DWT-days utilization
- Chemical business: recovery in 2010 is shifting into expansion mode in 2011
- In 2011 China will overtake the USA as the largest market for chemicals in both production and consumption

Chemical Tanker Demand by Tradelane

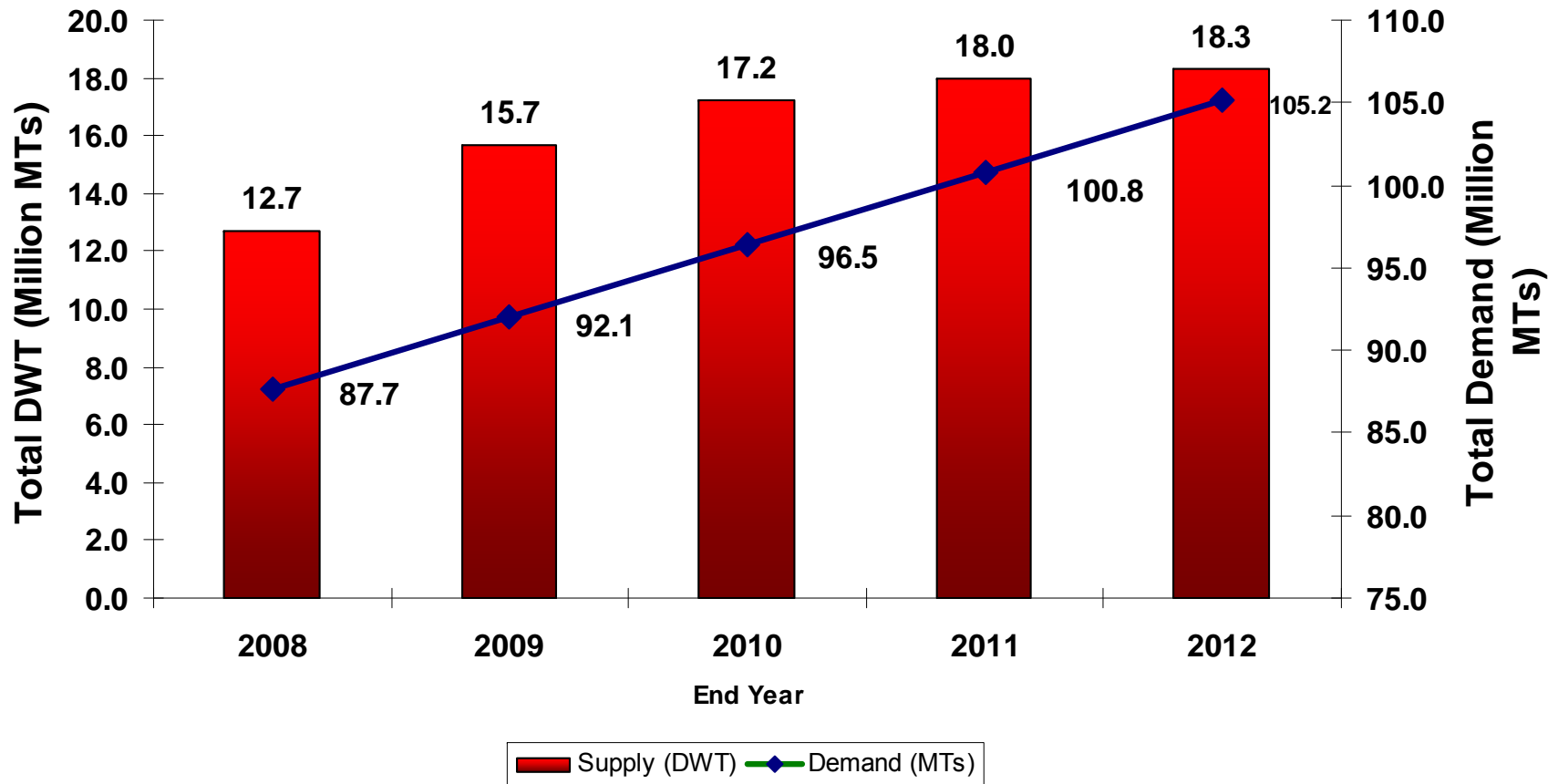
(In millions of metric tons)



Source: Richardson Lawrie Associates

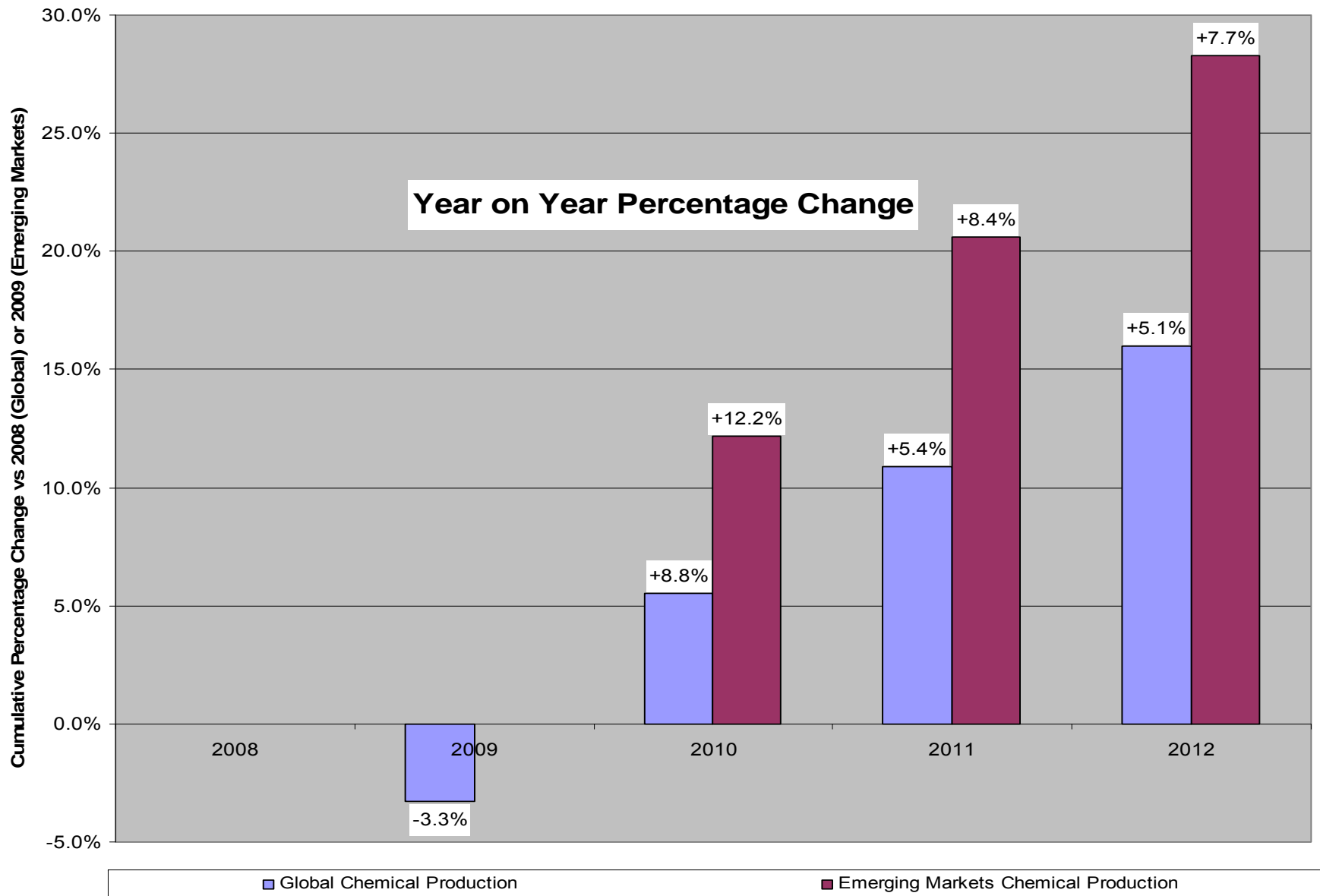
Global Chemical Tanker Supply vs. Demand

2008-2012



Where are we going ?

Chemical Production Growth 2008-2012



Where are we going?

- Middle East chemical production expansion projects
- Chemical sector is a cyclical business – ACC sees a potential “supercycle” in certain products and regions
- Economic recovery, driven by emerging markets and tight chemical supply/demand balances, will boost profitability
- The *BRIC* factor – Brazil, Russia, India & China – are the primary growth economies
- Korea, Taiwan & Singapore also show promise
- 2012 → tonnage supply steady – *or-* declining due to age related vessel removal

Outlook for the global chemical sector is positive.
Are we headed for a longer and stronger peak?

Acknowledgements

Sources for the data presented herein include:

- *American Chemistry Council*
- *Clarksons*
- *Eastport Maritime*
- *Quincannon Associates*
- *Richardson Lawrie Associates*
- *Simpson, Spence & Young*
- *Sound Tanker Chartering*

Thank you for your time today!