Global Economic Trends in the Shipping and Terminal Industries

Drewry Shipping Consultants Ltd
Aegir Port Property Consultants

AAPA Joint Public Relations & Maritime Economic Development Seminar
Galveston Texas
5 April 2005

Drewry

TOPICS

- Economic factors:
  - ✓GDP growth
  - ✓The China factor
- Container shipping:
  - ✓Analysis by trade lane
  - ✓The order book
  - ✓Ship size growth
- Container ports:
  - ✓Regional analysis of congestion, utilisation & capacity
  - ✓Supply chain issues
  - ✓Terminal ownership
- Conclusions

TOPICS

- Economic factors:

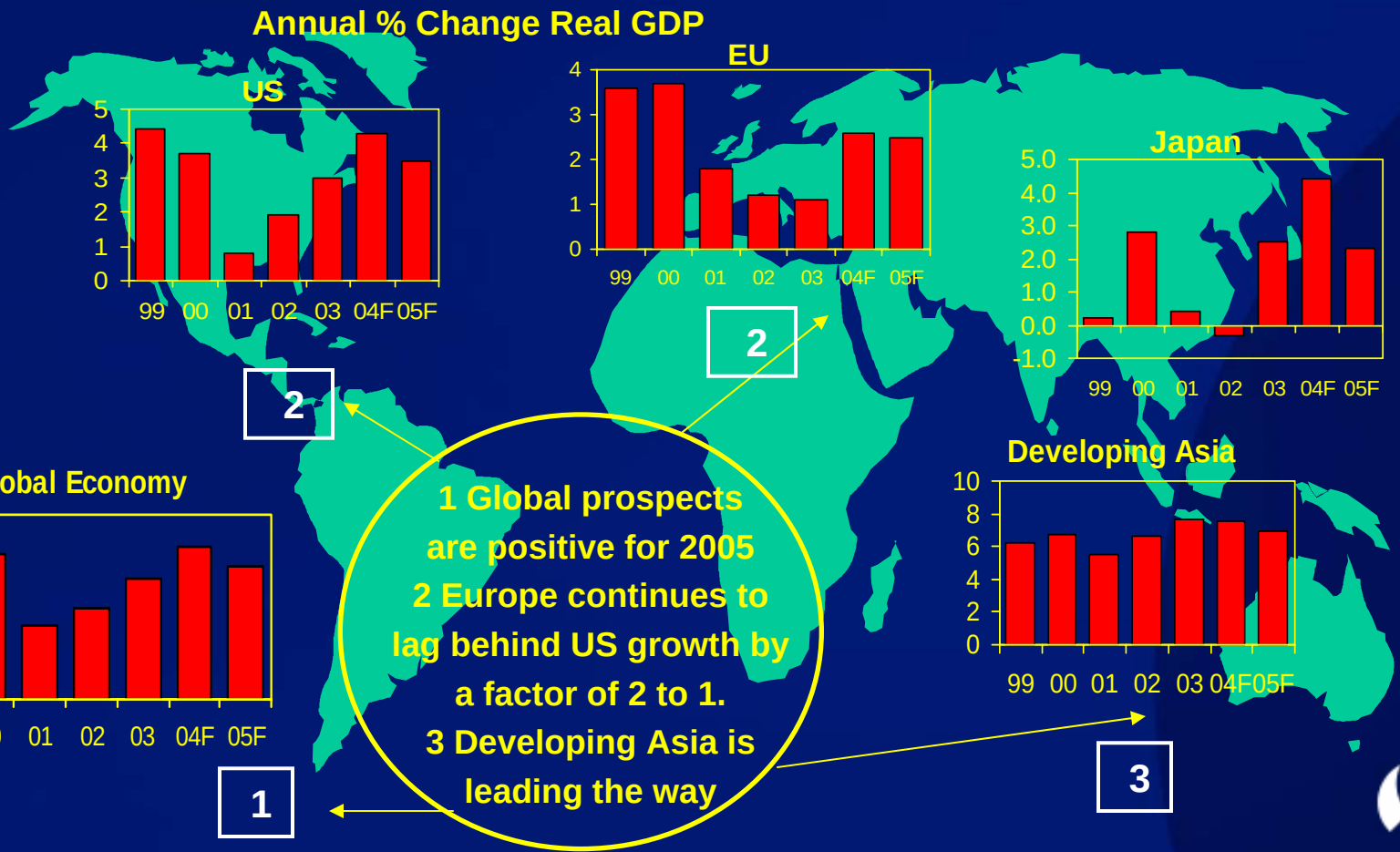
✓GDP growth

✓The China factor

Drewry

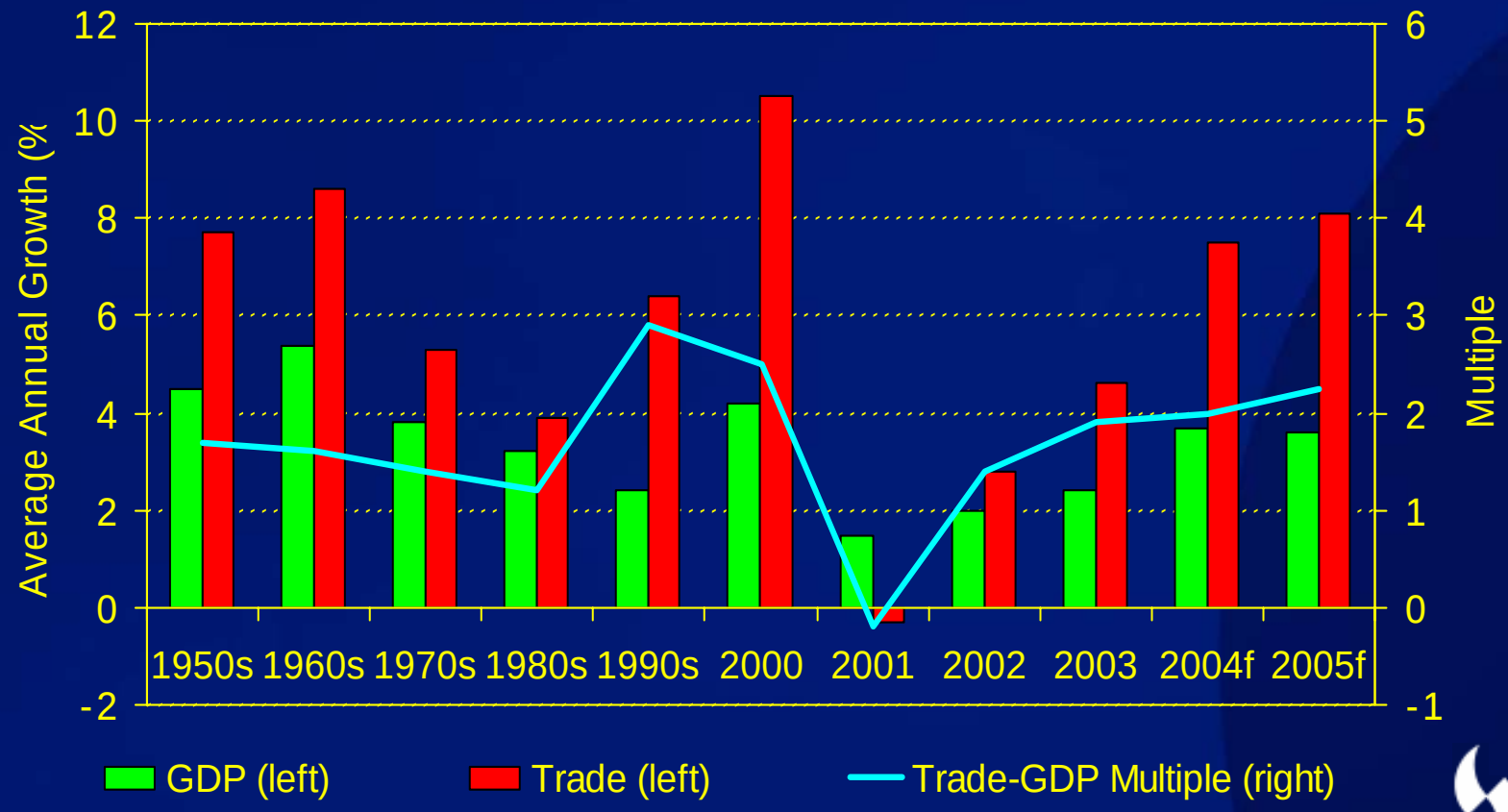
Drewry

2004/05 – strong years for the global economy …



Drewry

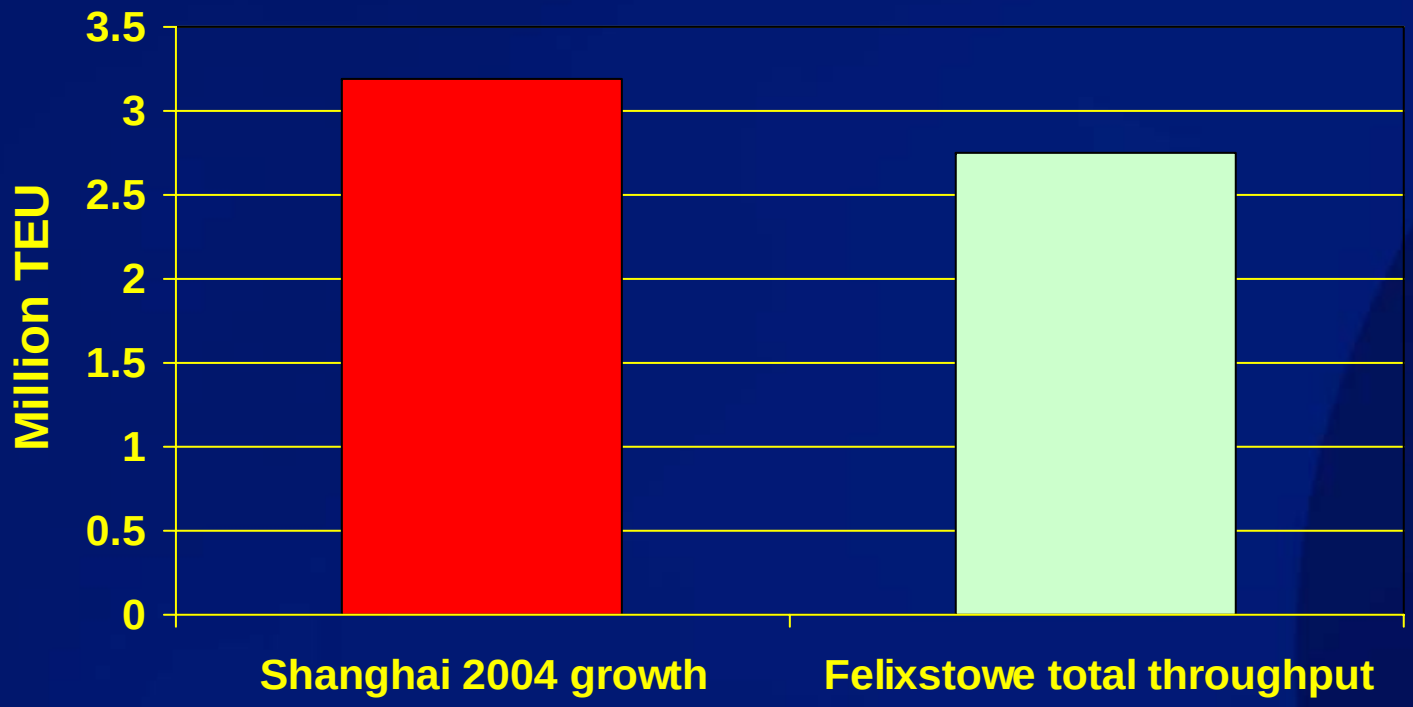
Growth in GDP and trade growth



The China factor

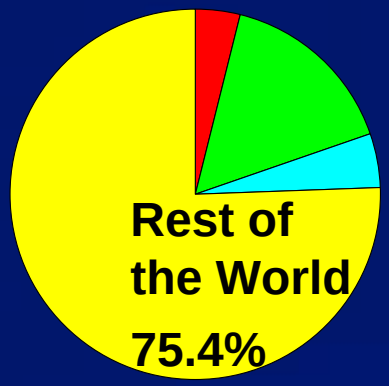
Drewry

The China factor

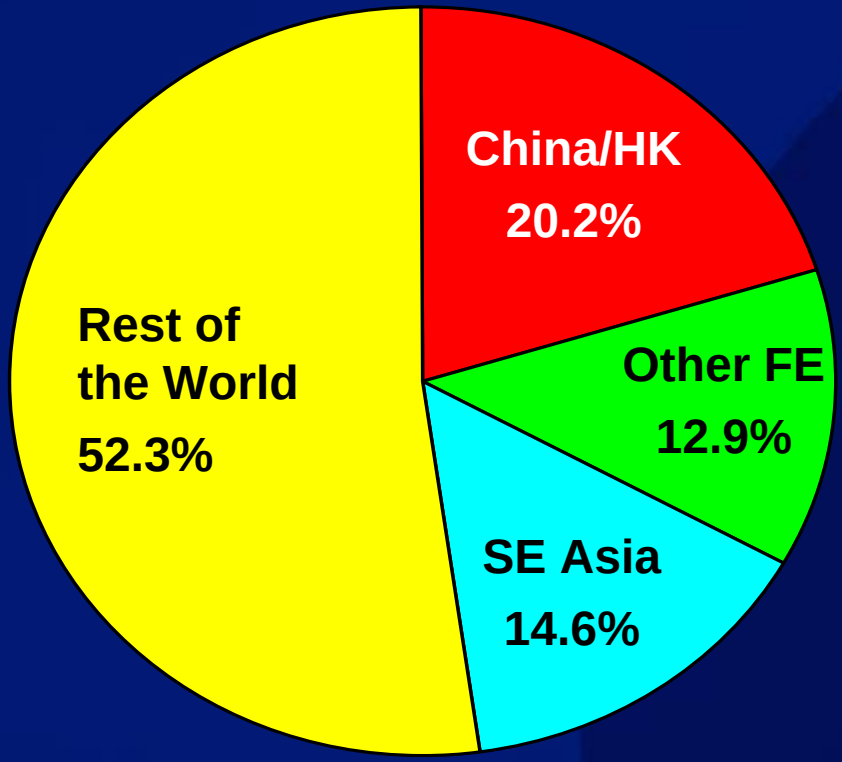


Drewry

Container port volumes - The shift to the east



1980 = 38.8 mill teu



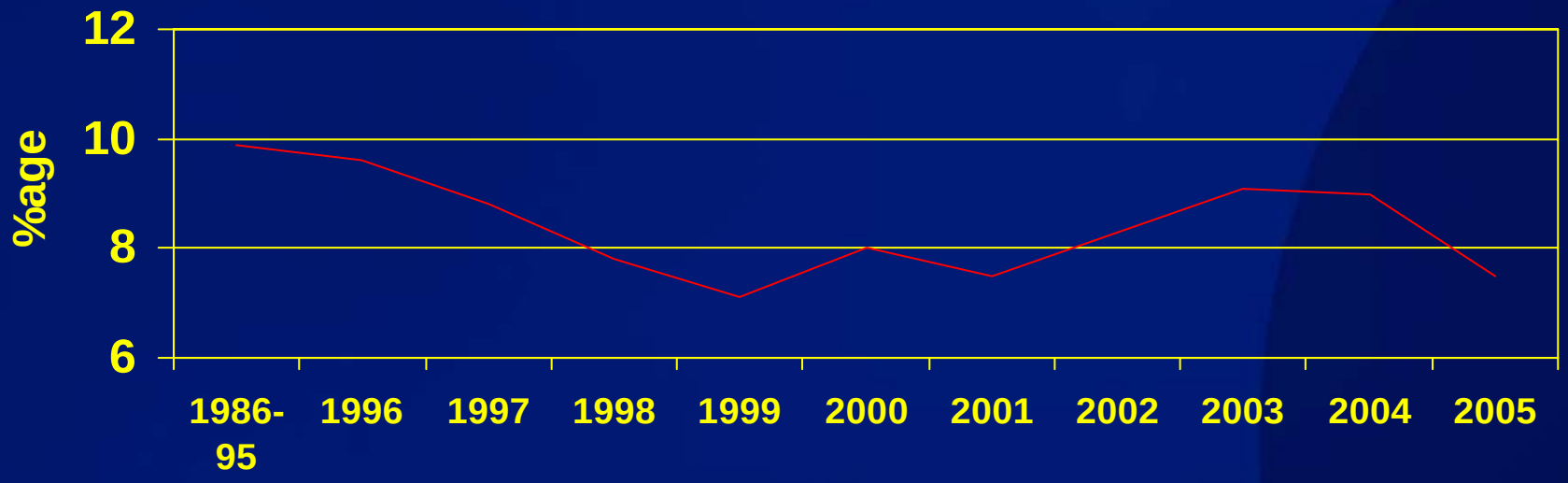
2003 = 311.7 mill teu

Follow the cargo!

	Mid 1995	Mid 2004
Transpacific		
Major strings per week	41	71
Strings calling Mainland PRC	None	66
Weekly Mainland PRC port calls	None	124
Europe-Far East		
Major strings per week	20.5	30
Strings calling Mainland PRC	None	24
Weekly Mainland PRC port calls	None	69

The China effect

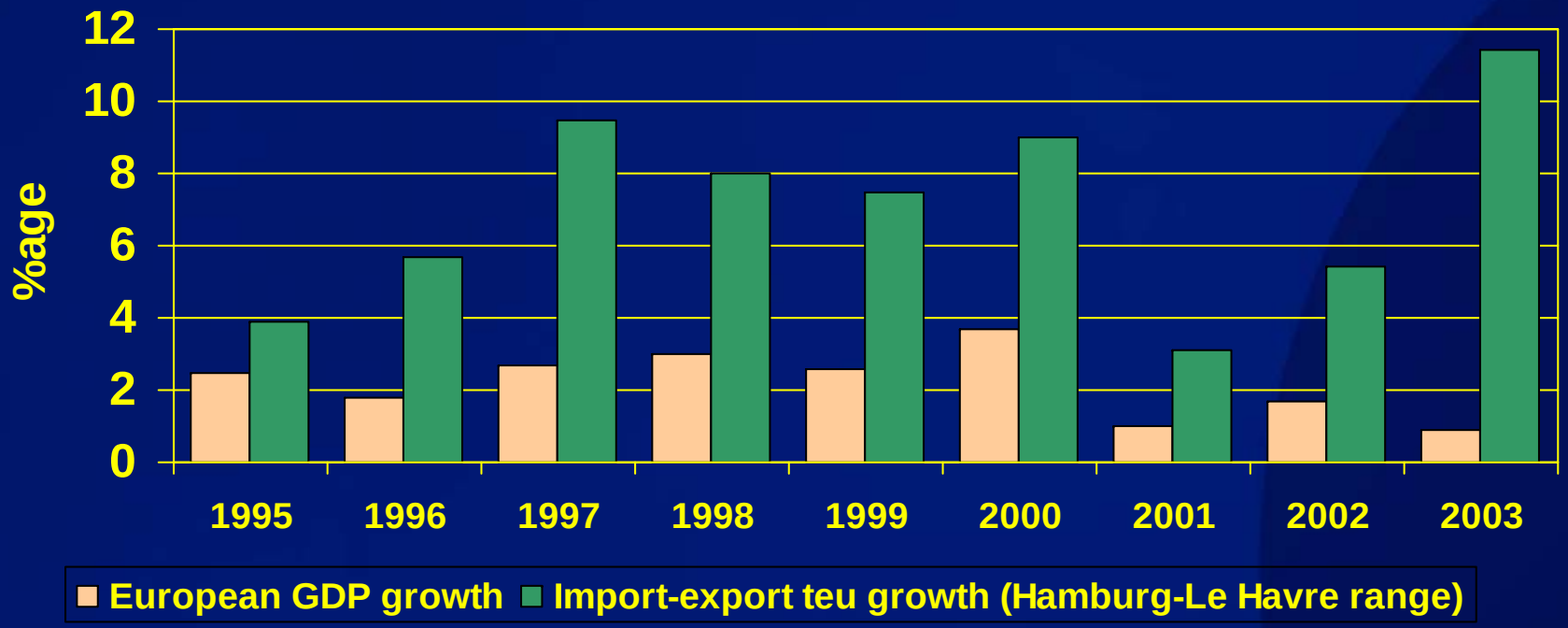
Chinese real GDP growth



Source: IMF

Drewry

The China effect



The China factor

- Exceptional growth in volumes
- For there to be winners there must be losers
- Exceptional container growth cannot continue forever

TOPICS

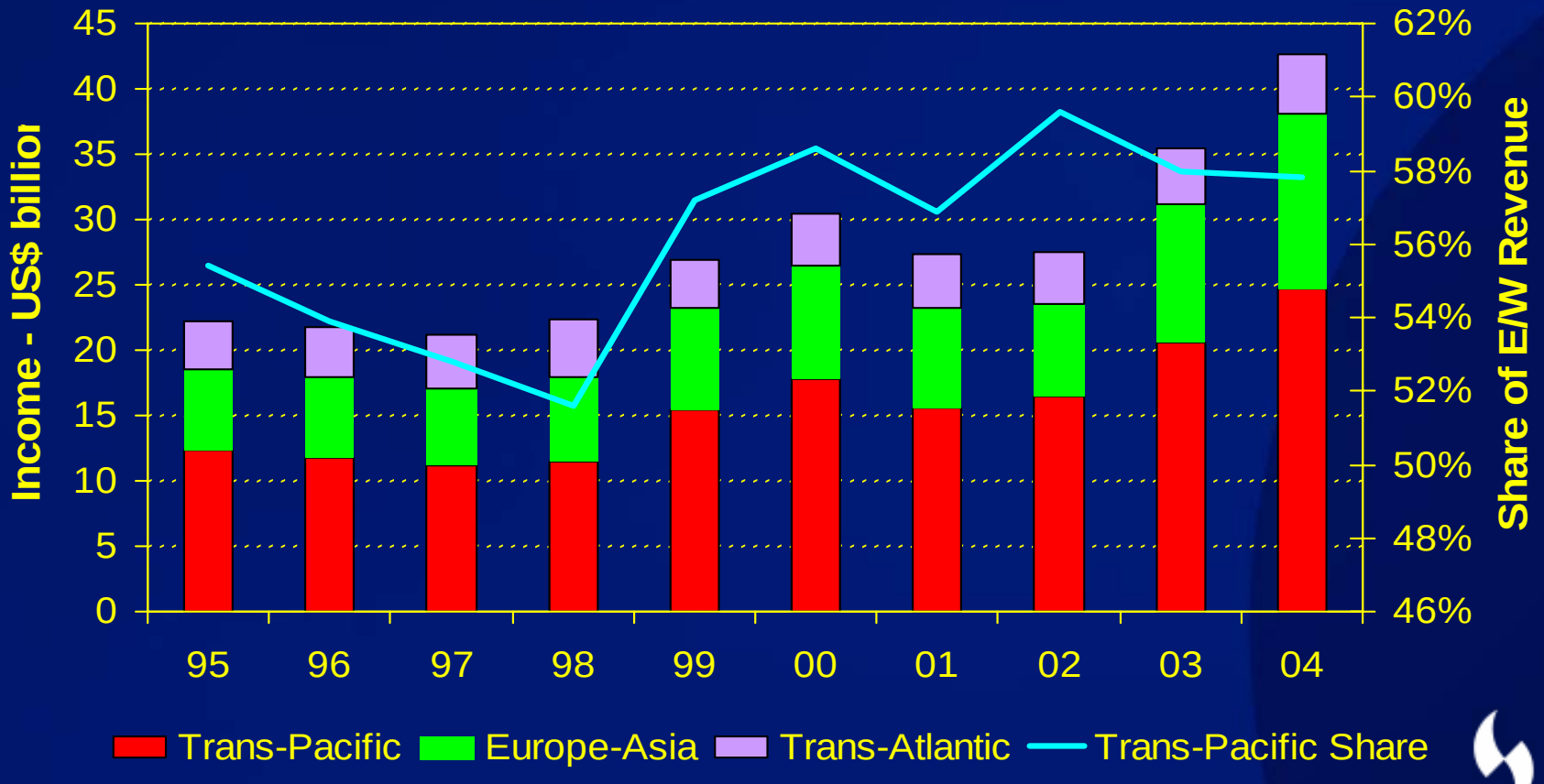
- Container shipping:
  - ✓Analysis by trade lane
  - ✓The order book
  - ✓Ship size growth

Traffic growth on the head-haul legs, 2003-06

	2003	2004	2005	2006
Asia - N.America	9.9%	14.3%	12.0%	10.0%
Asia - N.Europe	17.5%	16.5%	16.4%	13.5%
N.Europe – N.America	1.2%	3.1%	1.5%	2.5%
Head-haul aggregate	**10.8%**	**13.5%**	**12.1%**	**9.9%**

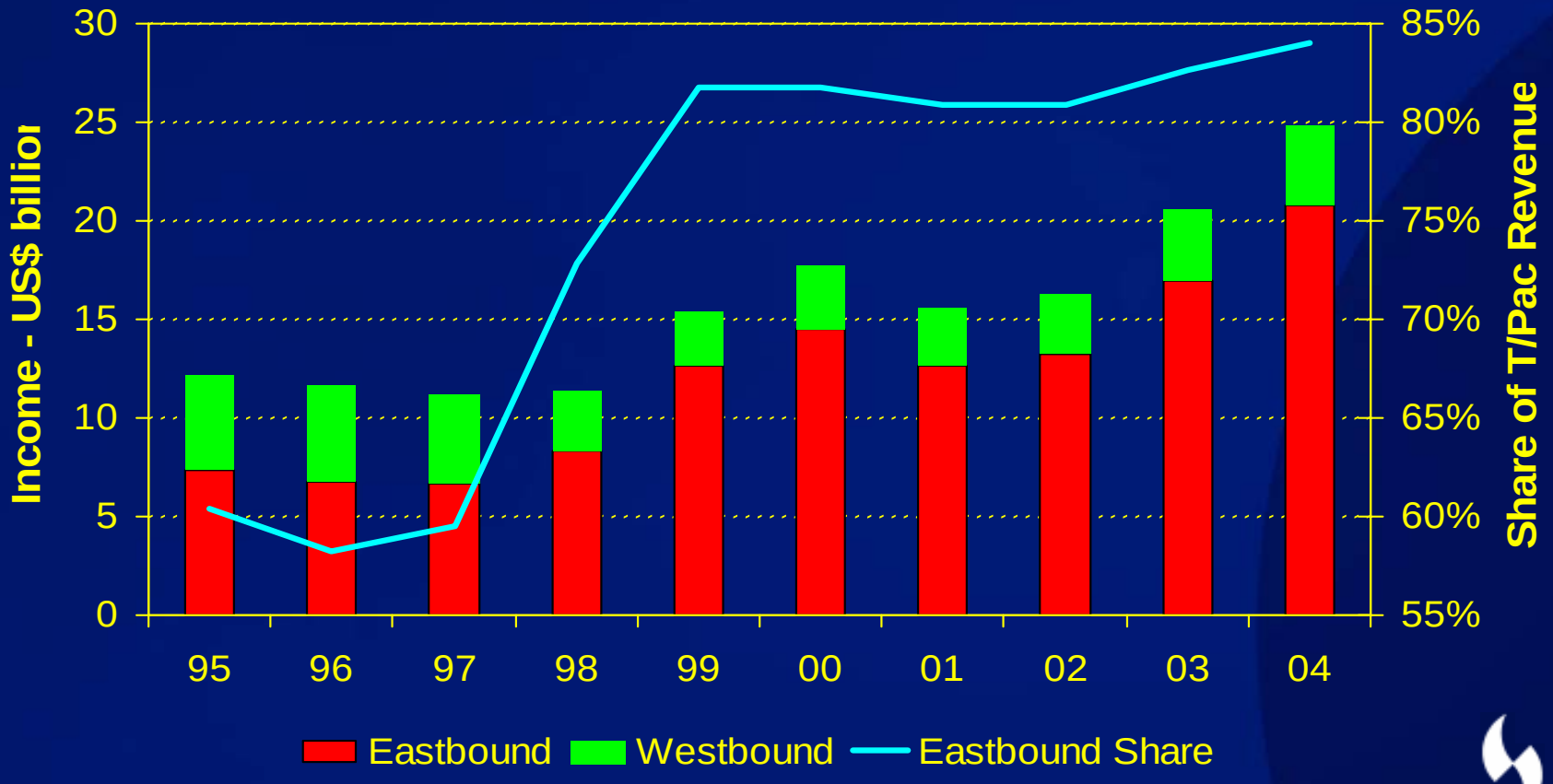
Drewry

Transpacific income - keeping carriers afloat



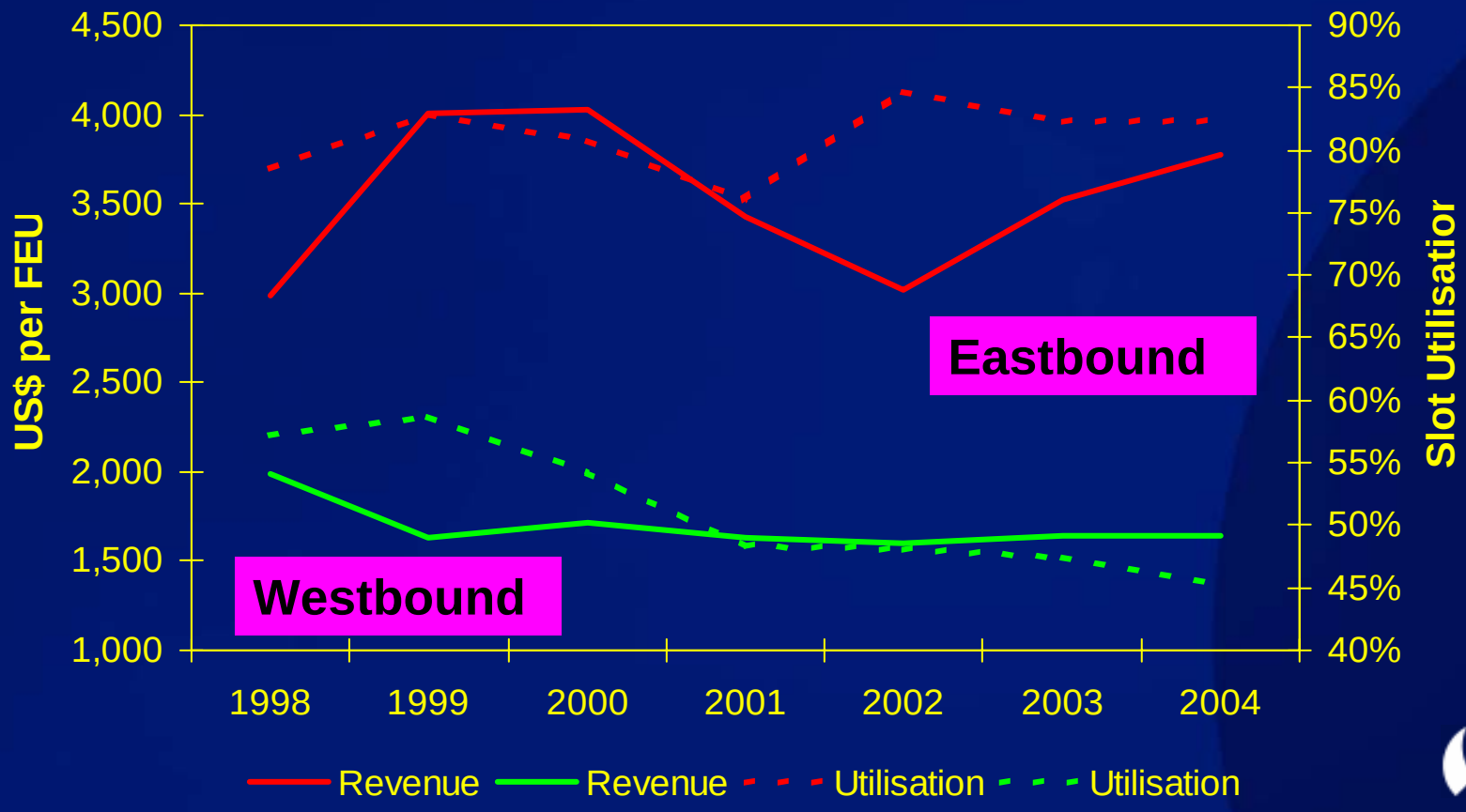
Drewry

Make that "Eastbound Trans-Pacific income - keeping carriers afloat!"



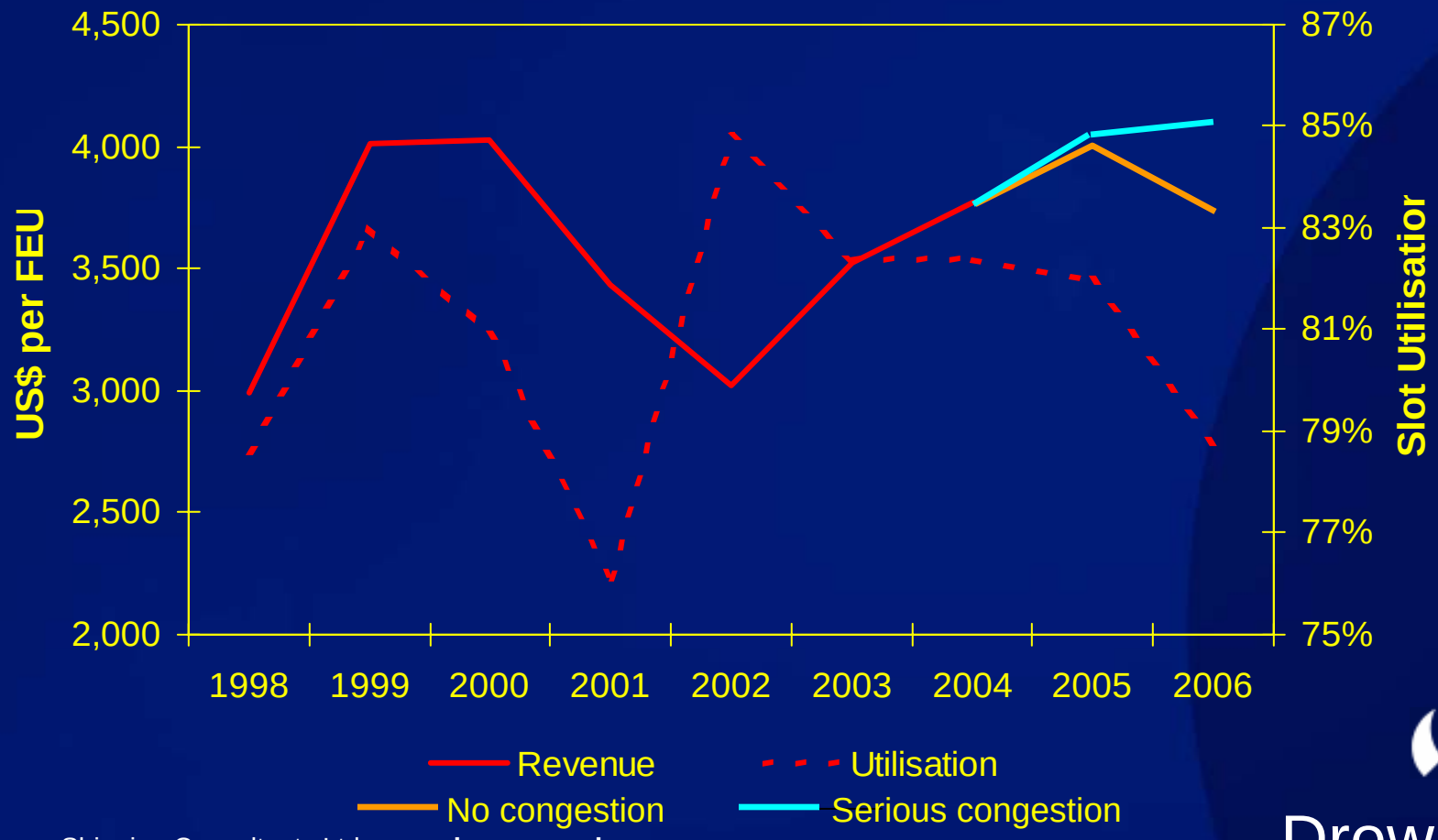
Drewry

Transpacific average unit rates



Drewry

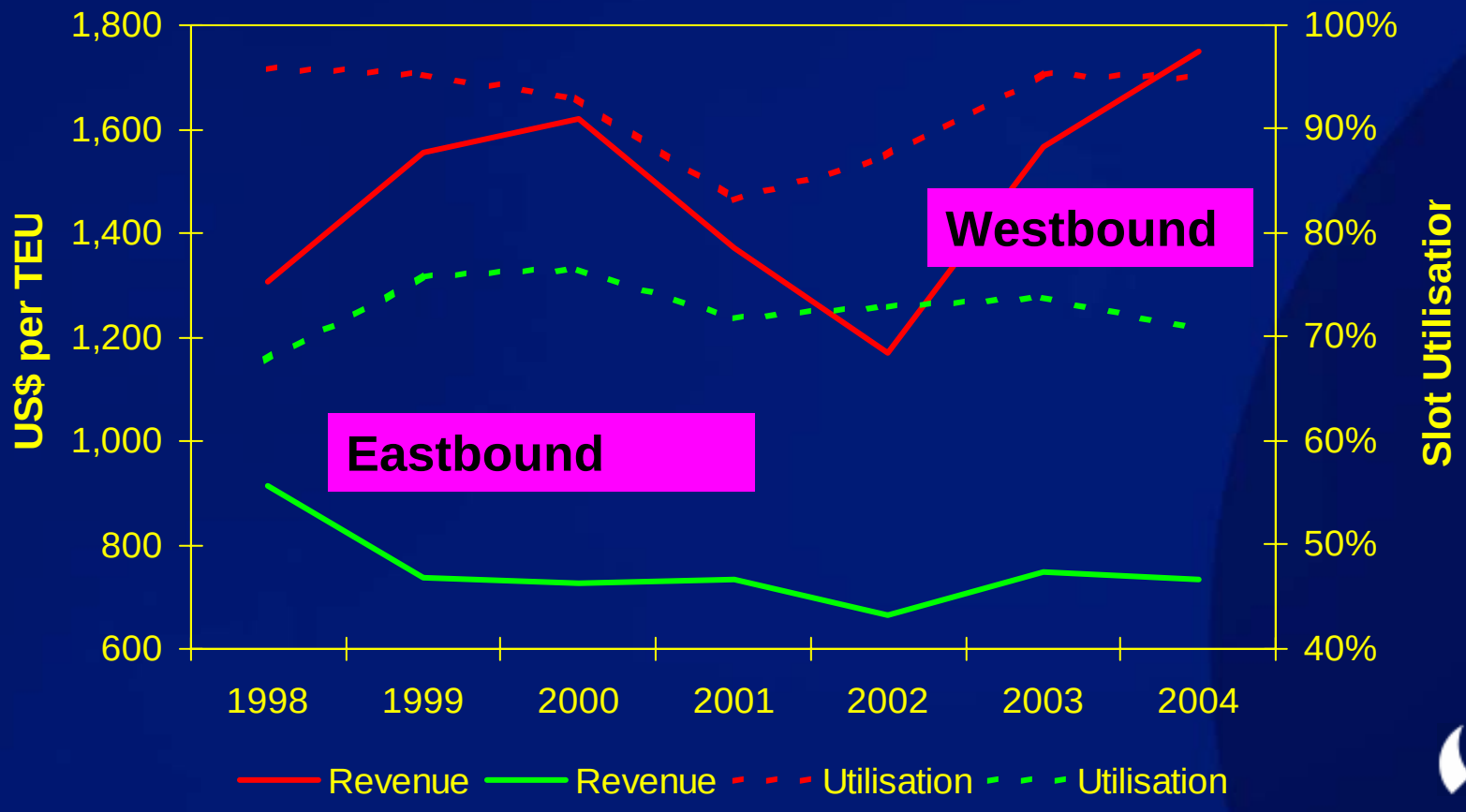
Forecast Trans-Pacific unit rates - eastbound



Drewry

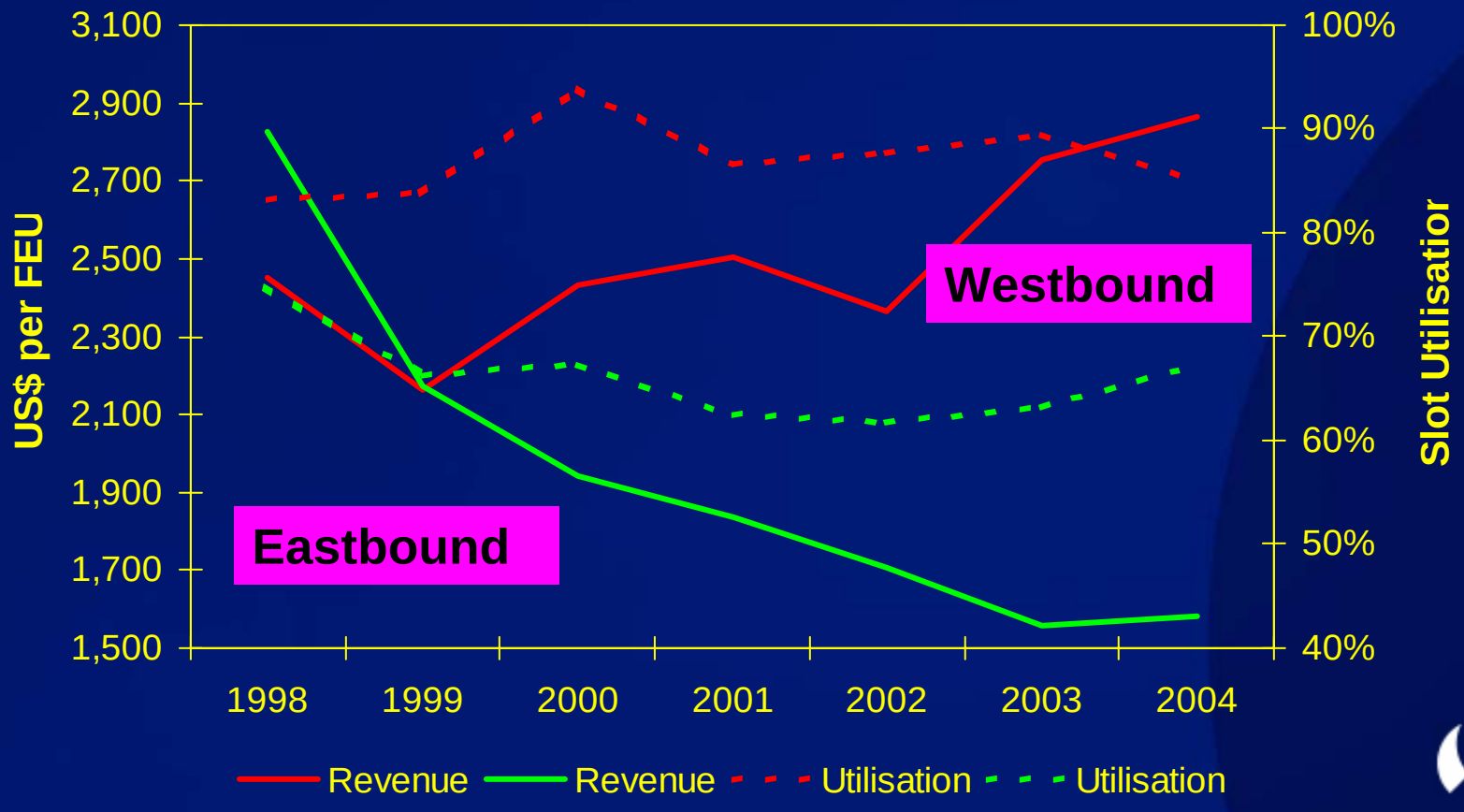
Drewry

Europe/Far East/Europe average unit rates



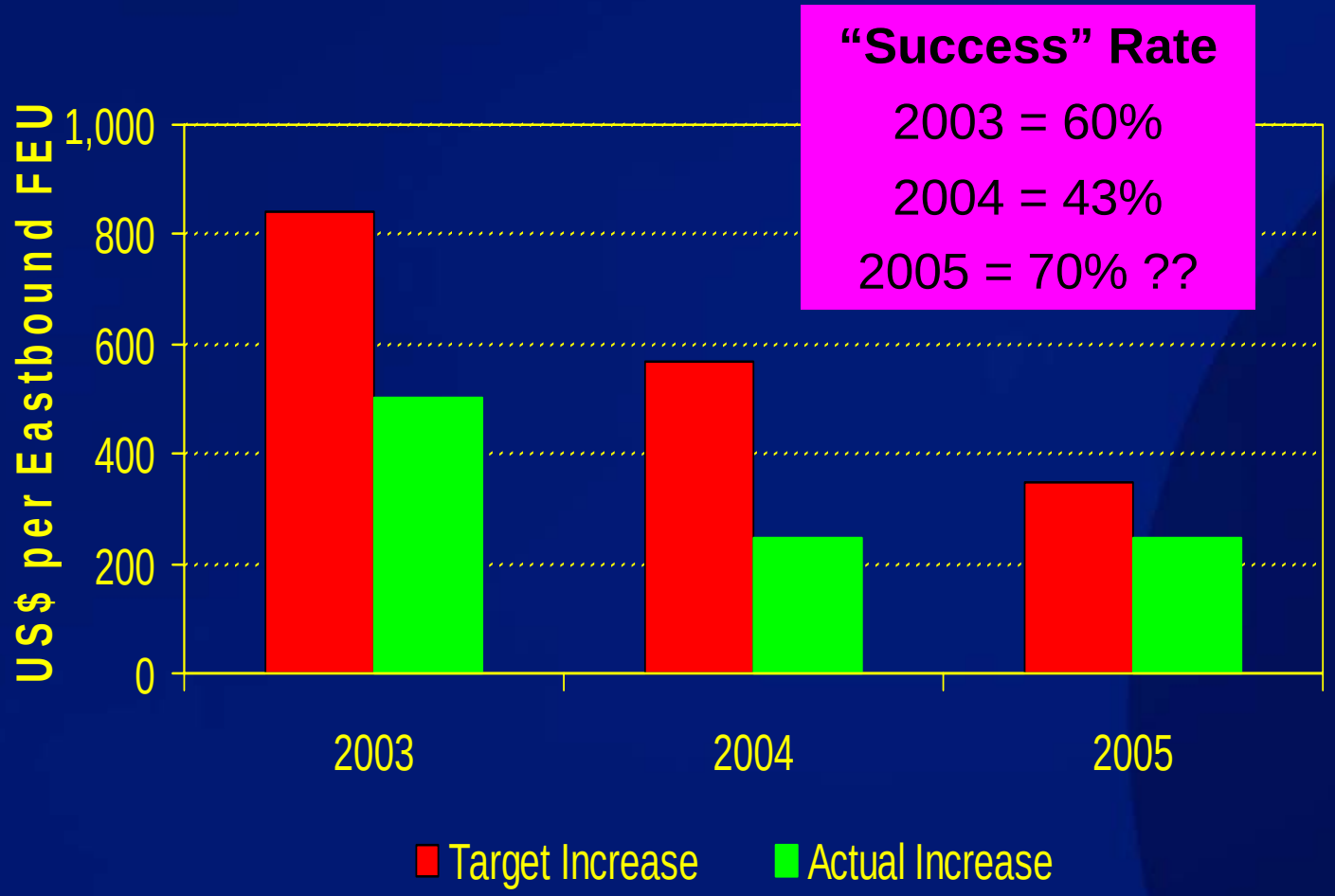
Drewry

Transatlantic average unit rates



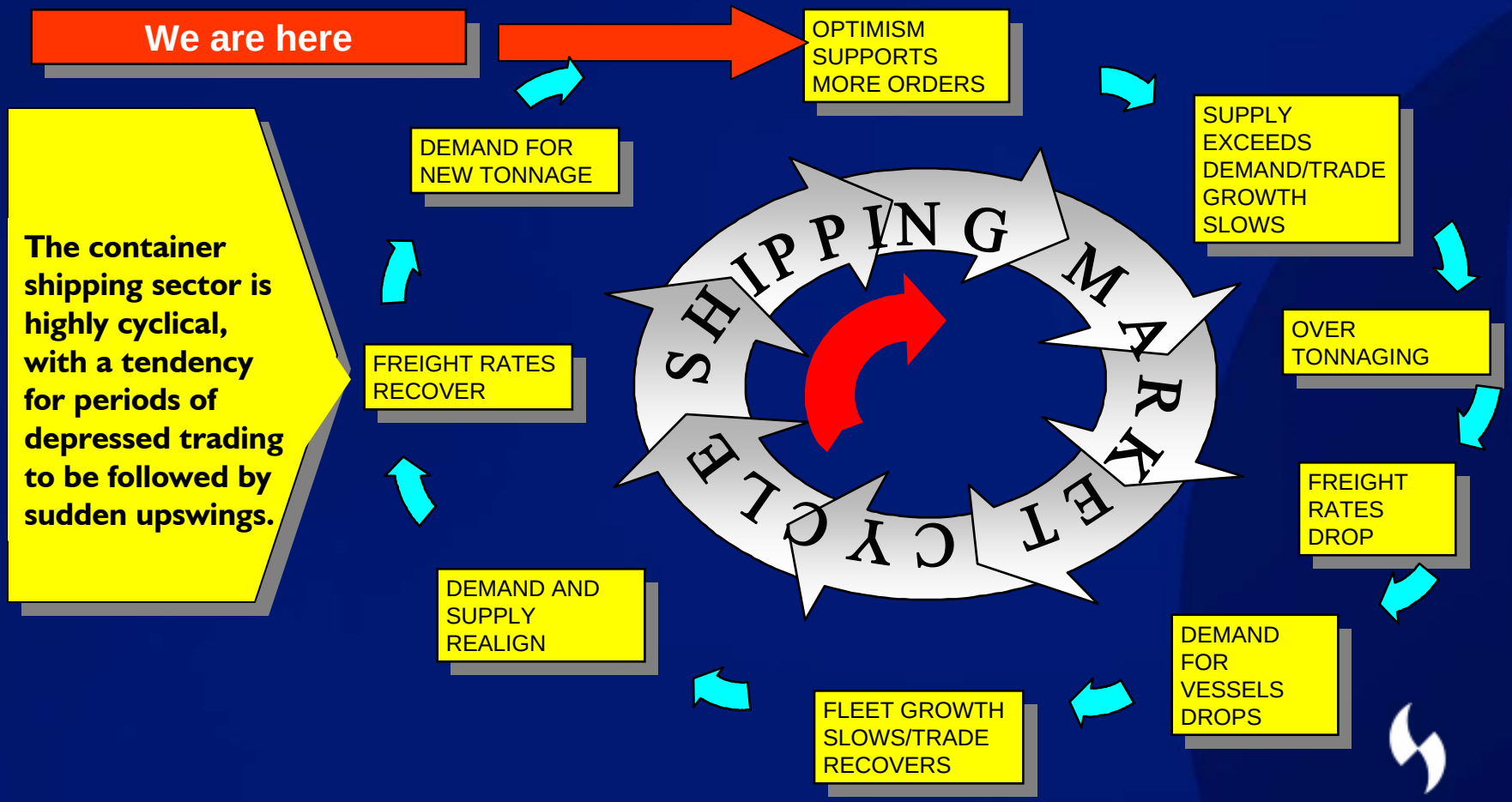
Drewry

You can't always get what you want!



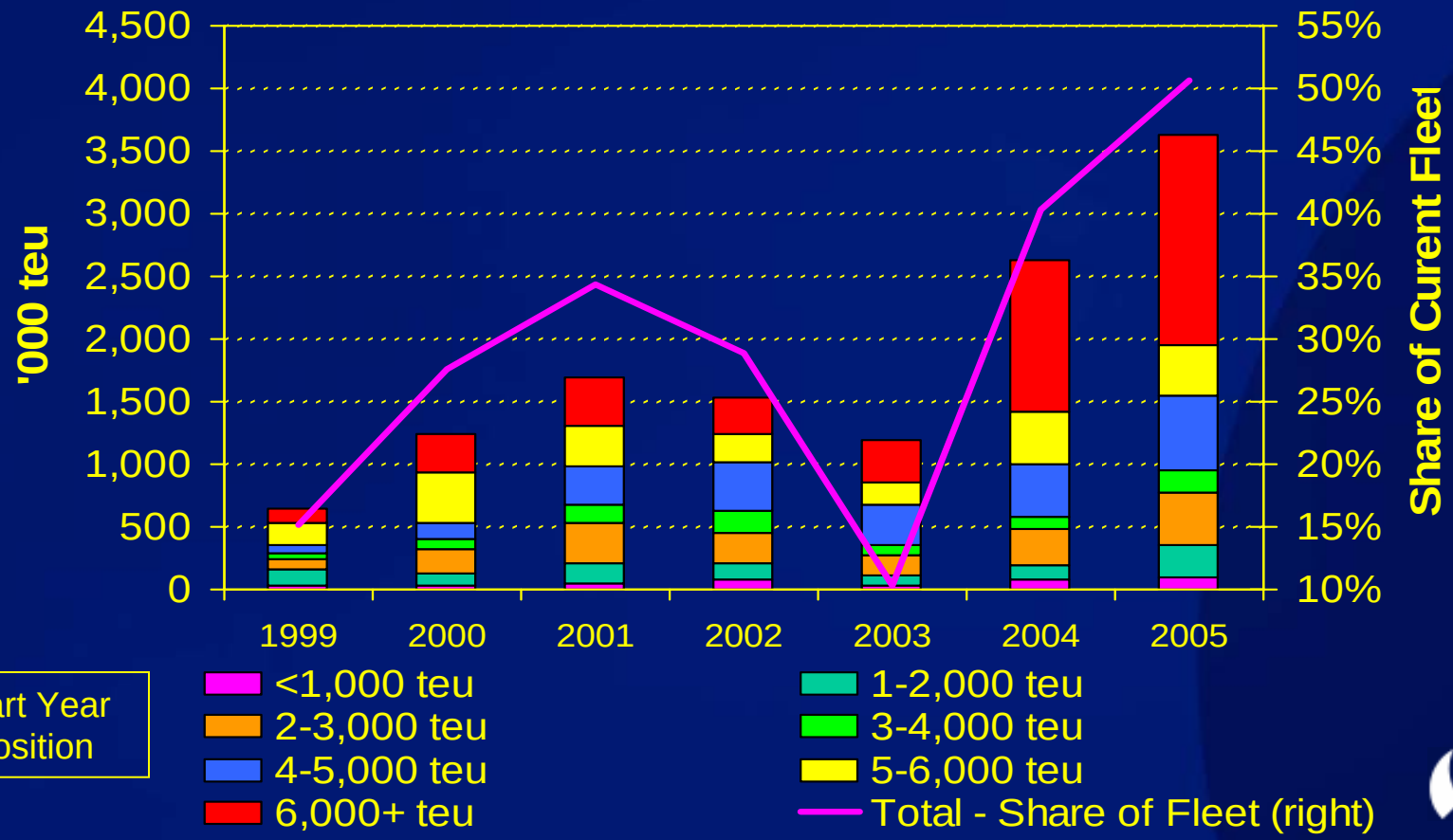
Drewry

The container shipping market cycle



Drewry

Development of the containership order-book



Drewry

Post-Panamax capacity due for 2005 delivery

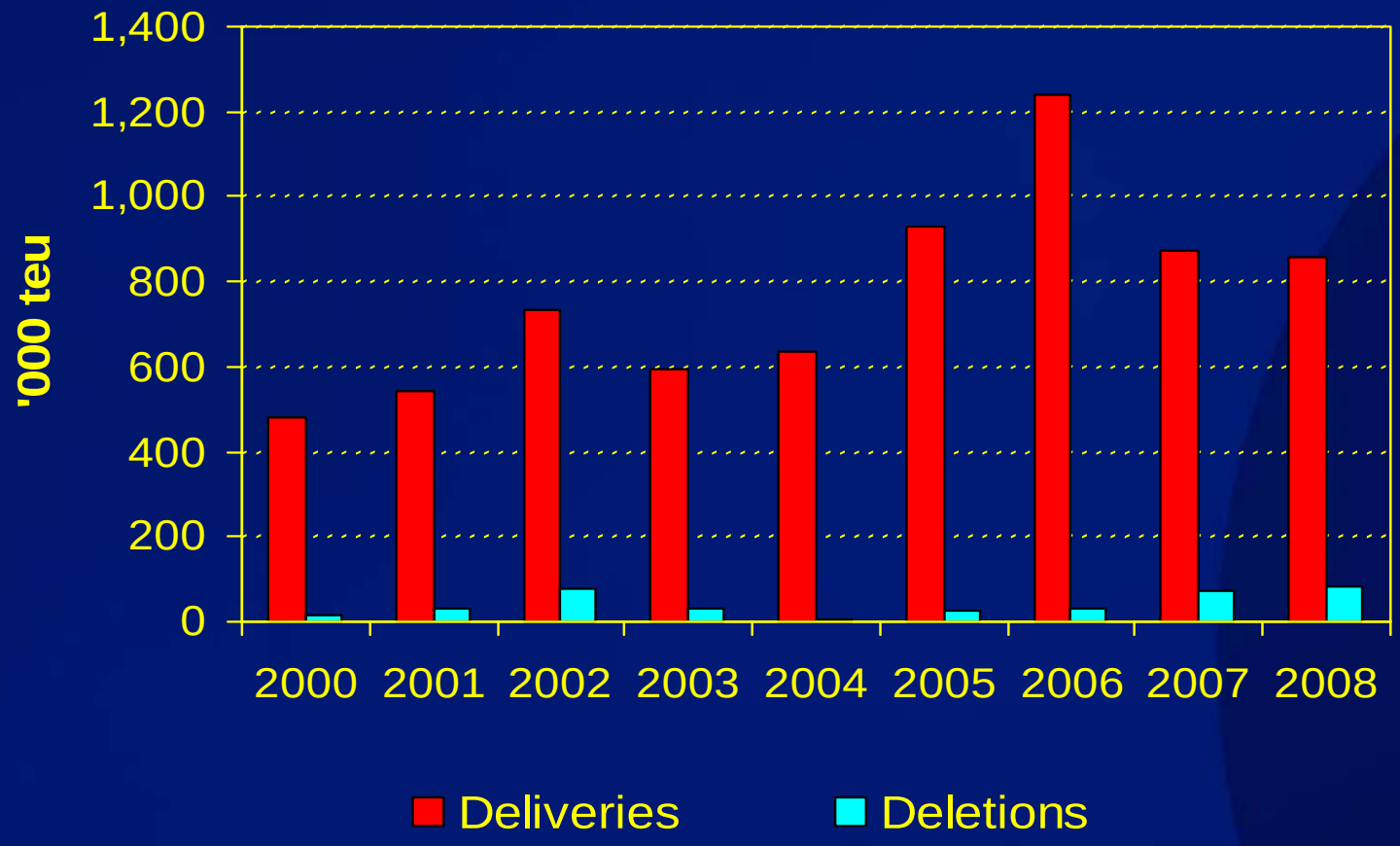
Carrier/Grouping	Ships	Teu	Avg Teu
MSC	14	107,559	7,683
Grand Alliance	13	96,134	7,395
CKYH	11	76,368	6,943
CMA CGM/Norasia	7	44,256	6,322
CSCL	5	35,536	7,107
Evergreen	4	29,594	7,399
New World Alliance	4	25,400	6,350
Maersk Sealand	2	15,800	7,900

Plus another 231,000 teu of Panamax slots.

How much of this will end up in the Pacific?

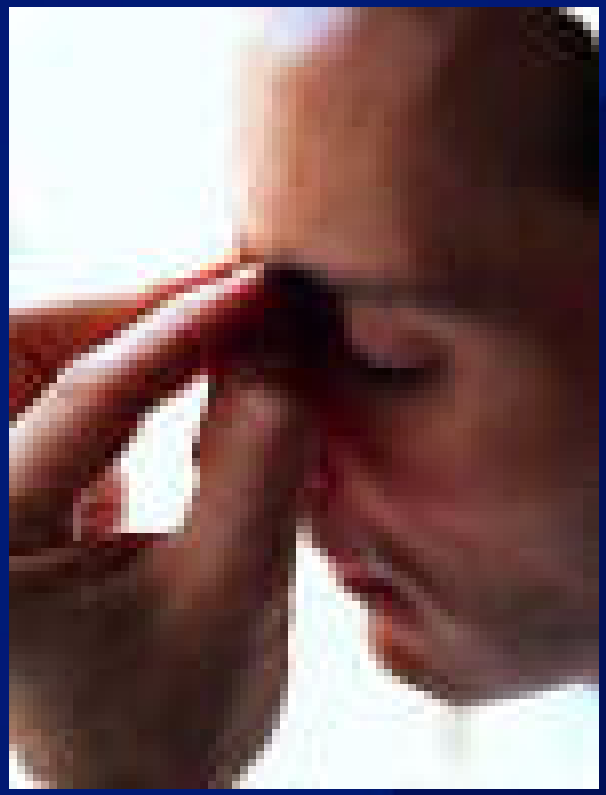
Drewry

Deliveries and deletions – cellular fleet



Downside risks for the container market

- High oil prices
- Slow down of the China effect
- Revaluation of the renminbi
- US budget deficit
- Trade protectionism
- Infrastructure bottle-necks



Growth in container ship size

Year	Average ship size (teu)	Largest ship in world fleet (teu)
1980	975	3,057
1990	1,355	4,409
2000	1,741	7,200
2004	1,999	8,468

Container ship sizes – There are limits

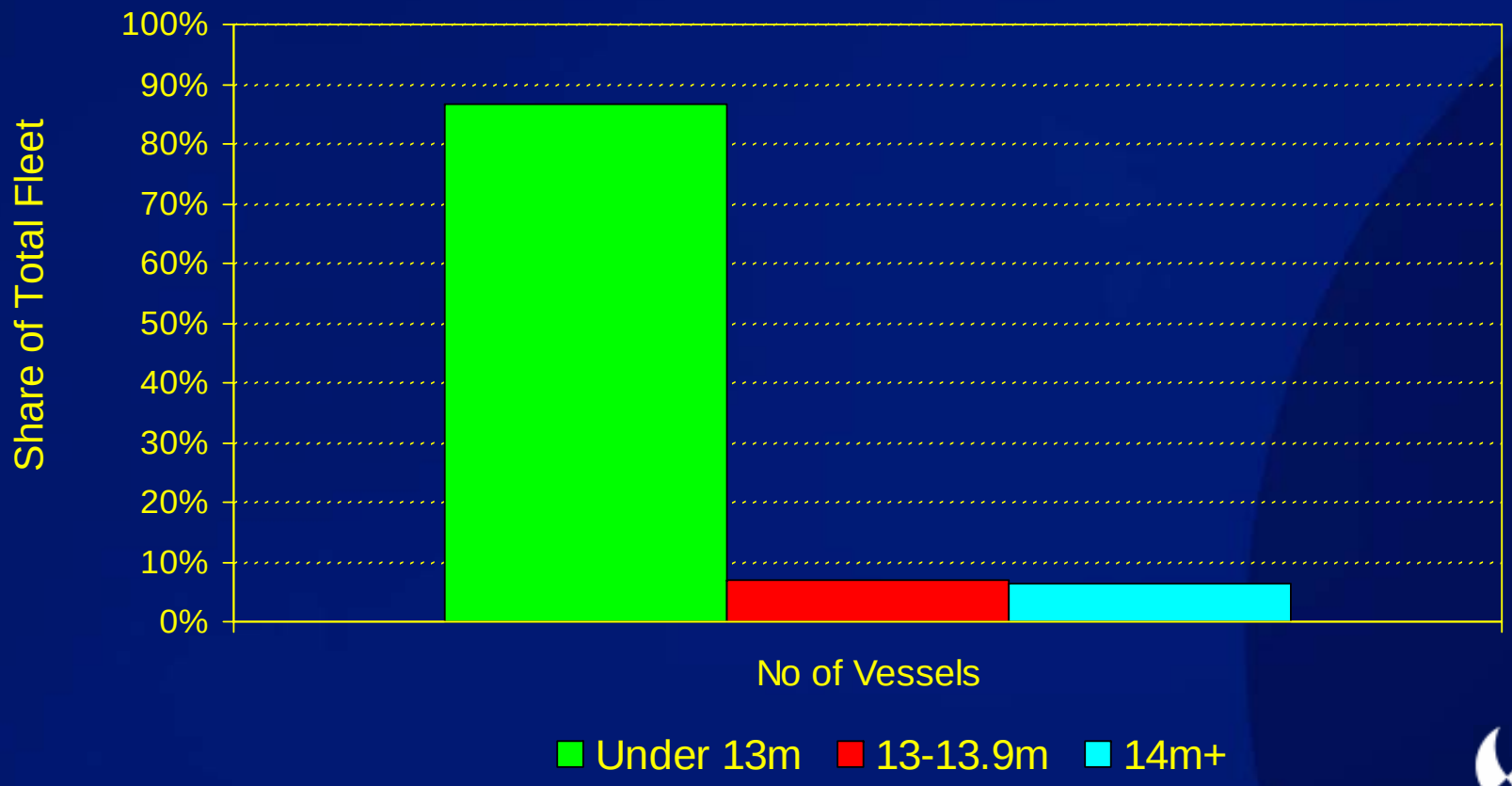
- Economies of scale level off as ships get bigger.
- Plus the cost of transhipment and feedering will soon outweigh mainline vessel savings. **The total cost of the network solution is what matters.**
- Shippers prefer more ports, more routes, shorter transits, greater frequency. **Freight rates are already low.**
- Port constraints (water depth, equipment, time spent in port by bigger ships).
- *How would you fill an 18,000 teu ship…..not once but every week…..??*

Direct calls vs. Transhipment

- "Call once" versus "call everywhere" with big ship.
- The reality is in the middle, leaning towards 2 to 4 port calls in each main region
- Direct calls by mainline vessels will always make sense for major markets which are a short deviation from the main shipping routes

Drewry

Draft – the needs of the few to be paid by the many?



Implications for container ports

Port draft constraints will always limit ship size…..

……wider (and longer) ships
rather than deeper ships

Implications for container ports

- Faster container handling is necessary just to keep up with vessel upsizing. **Otherwise extended port time destroys the rationale for bigger ships.**
- No radical changes in ship to shore handling technology
- Physical process lifting metal boxes

TOPICS

- Container ports:

✓Regional analysis of congestion, utilisation & capacity

✓Supply chain issues

✓Terminal ownership

Port capacity issues

- Environmental and regulatory constraints on expansion projects
- Need to optimise existing capacity
- Increasing ship sizes
- Direct calls vs. transhipment – affects the type and location of capacity needed

Drewry

Container port congestion hot-spots

- Ongoing
- Intermittent

Drewry Shipping Consultants Ltd **www.drewry.co.uk**

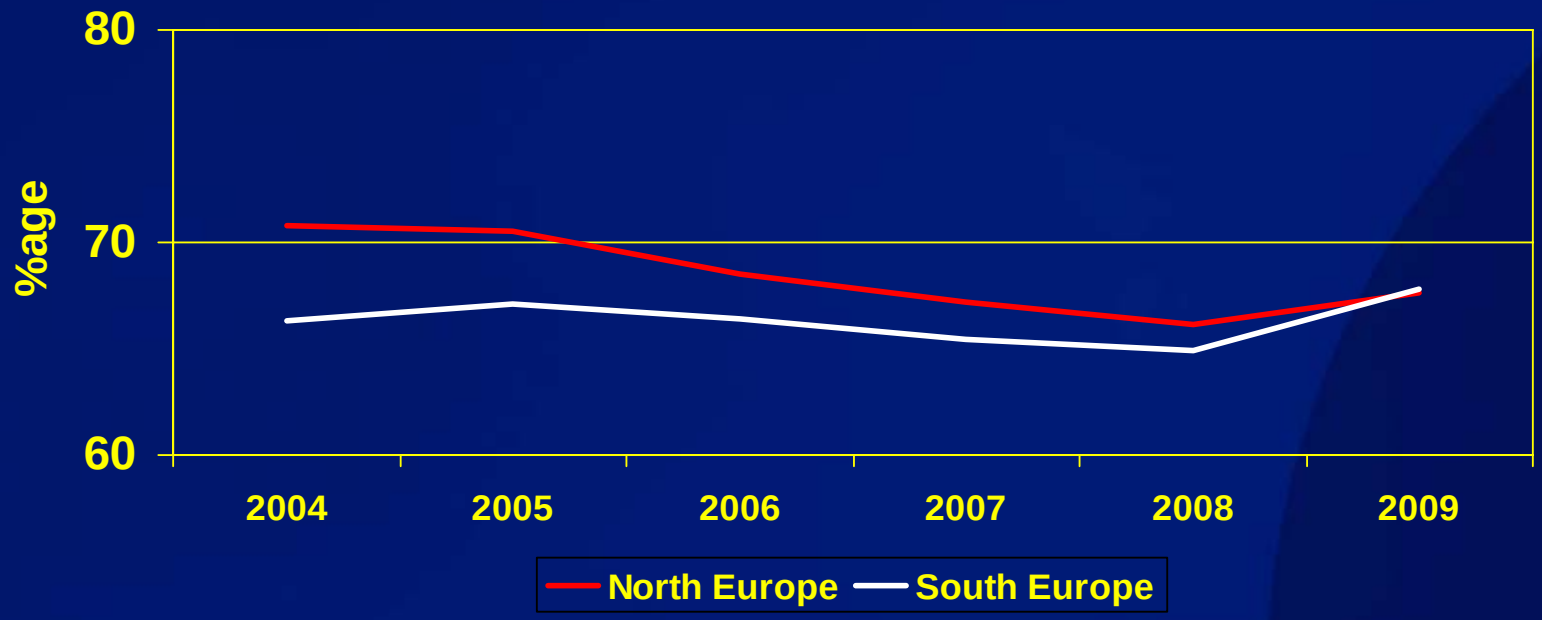
Drewry

Europe

- Regulatory delays to expansion plans (e.g. Euromax, Maasvlakte II, London Gateway, Felixstowe etc)
- Environmental lobby increasingly active
- Landside congestion
- Concentration of traffic at key ports whilst others are empty (e.g. Amsterdam)

Drewry

Forecast European capacity utilisation

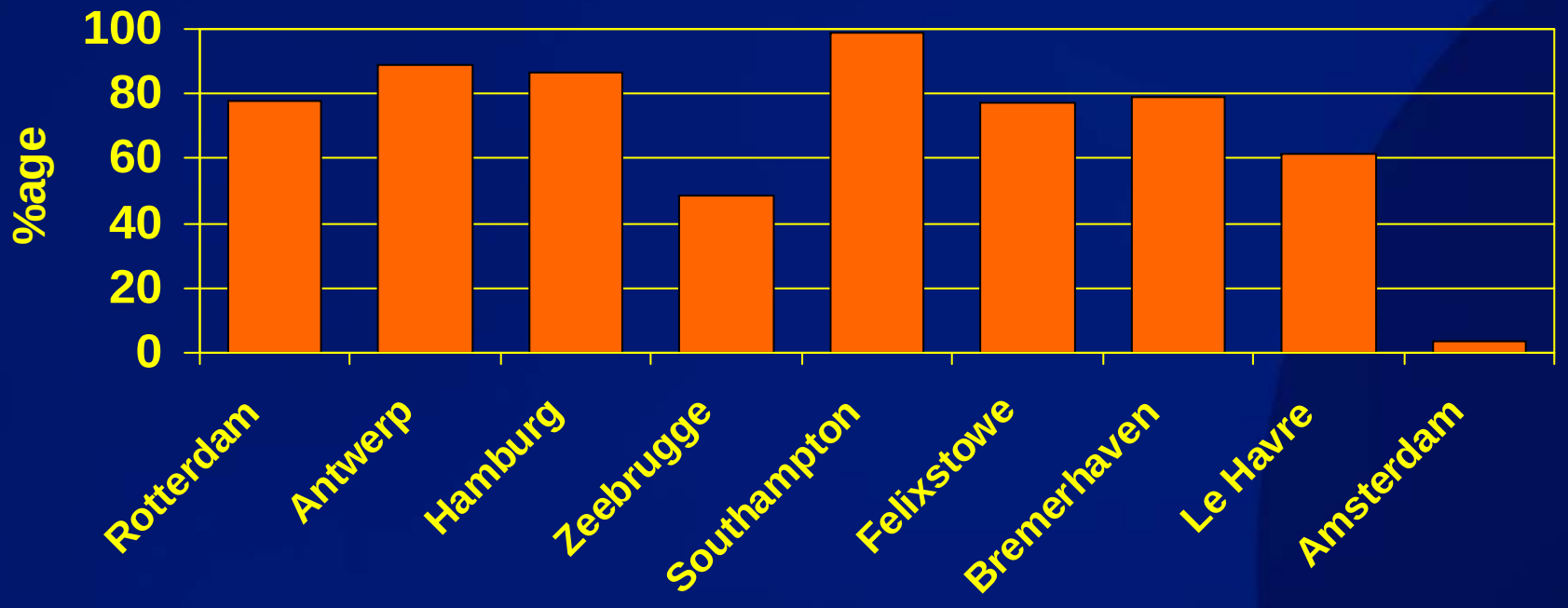


These are average utilisation levels across the whole of each region so include all terminals. This is why utilisation levels appear to be low and don't worsen.

Within these totals, the picture is quite different, with major terminals under pressure and other terminals under-utilised.

Drewry

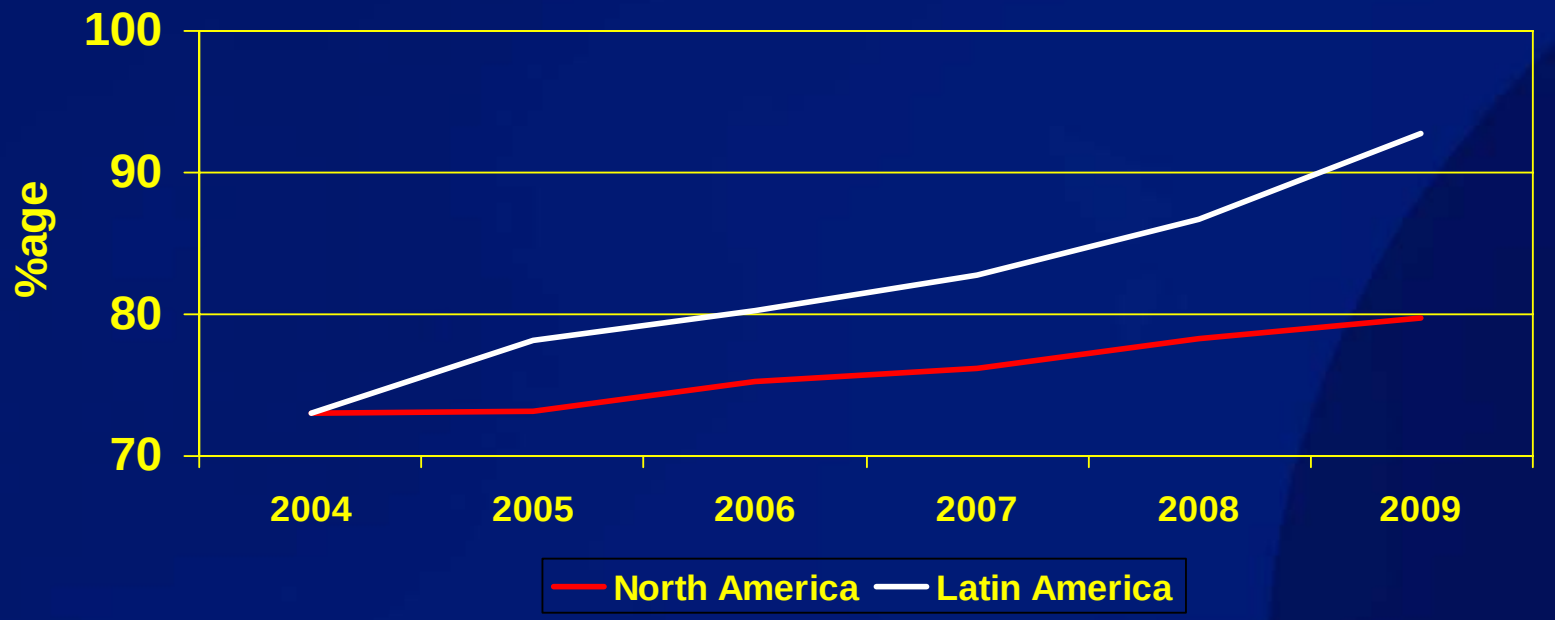
Container port utilisation levels, 2003



Note: Includes all terminals in each port

Drewry

Forecast Americas capacity utilisation



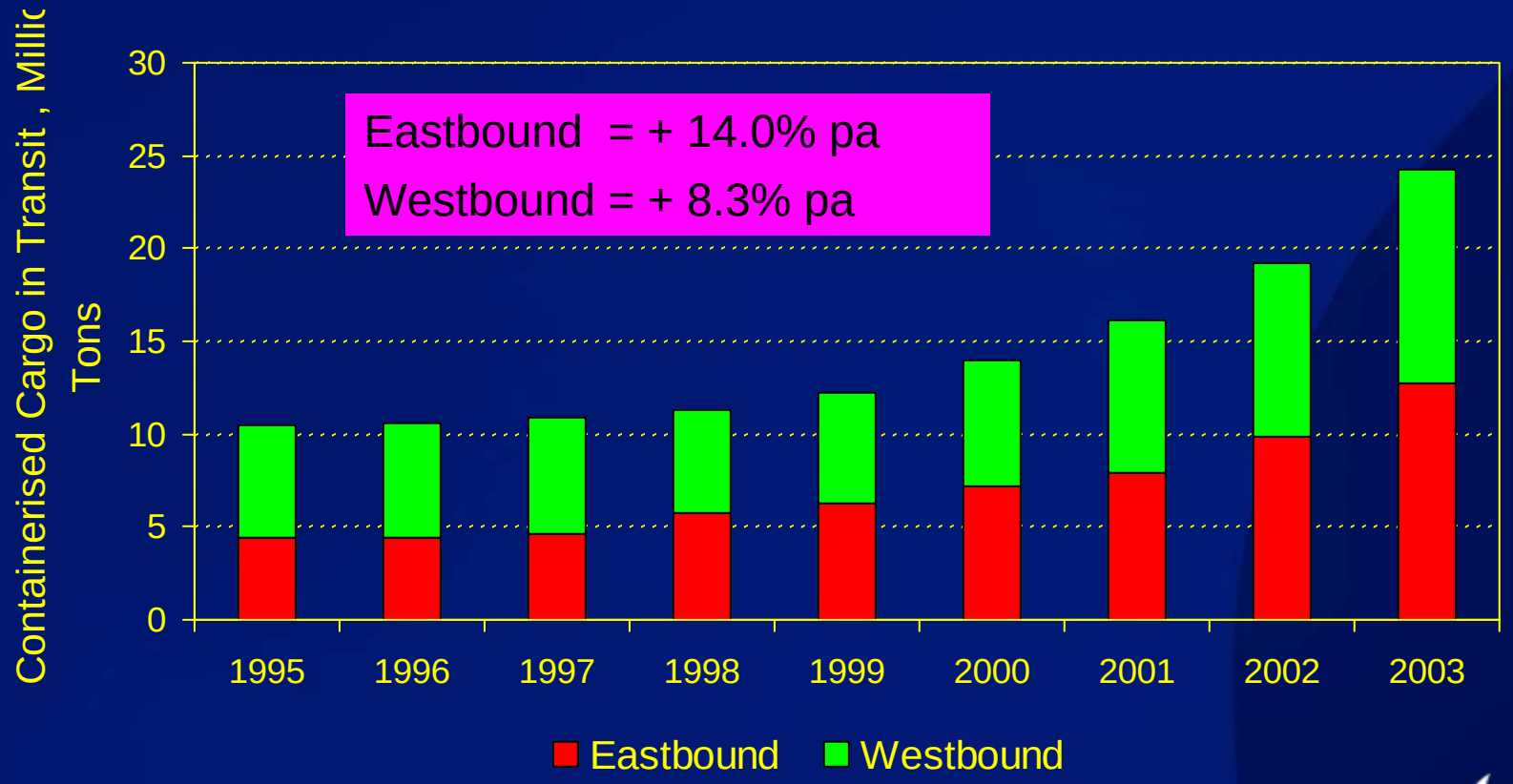
In North America, the scale of seasonal peaks can cause congestion problems even when average capacity utilisation is below 80%. Labour issues and intermodal congestion exist. Concentration of traffic at key ports whilst others are under-utilised (e.g. Seattle, Oakland).

In Latin America, new projects will need to come forward as average utilisation exceeds 90% by 2009.

Drewry

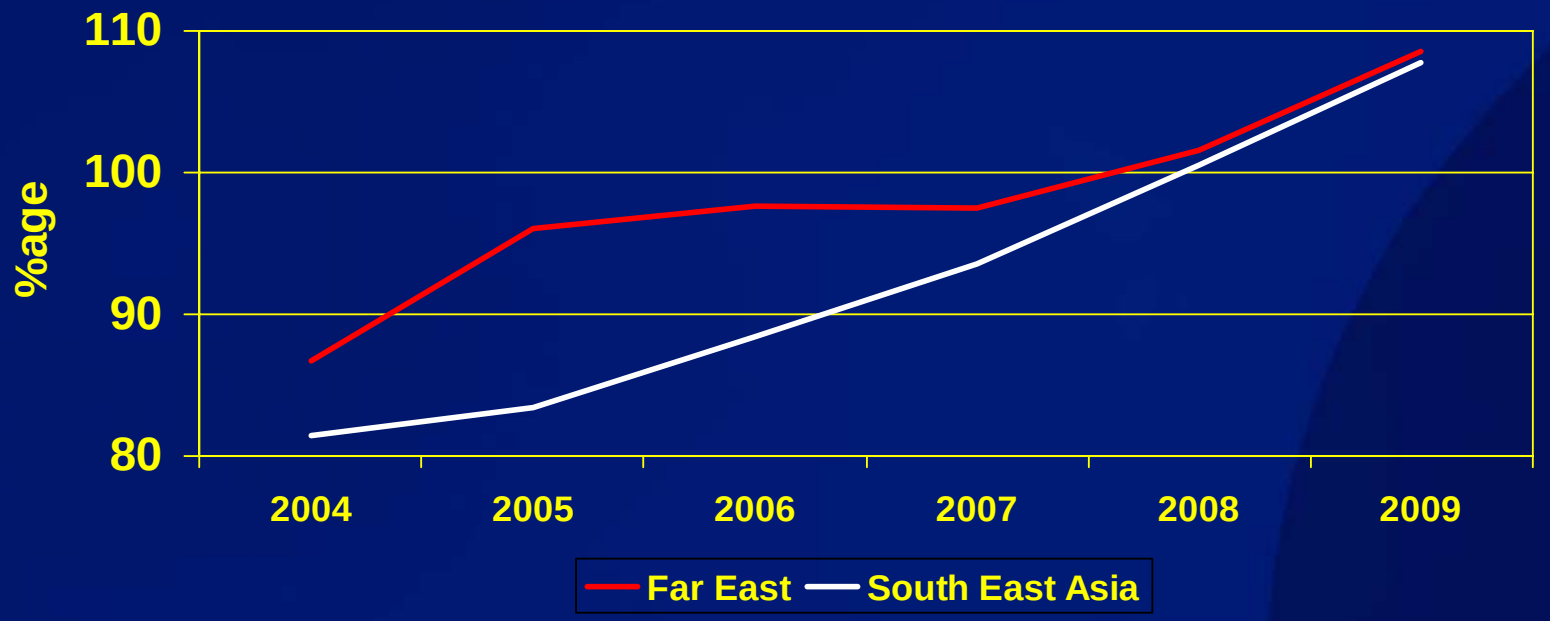
Drewry

Panama - An anti-congestion strategy



Drewry

Forecast Asian capacity utilisation



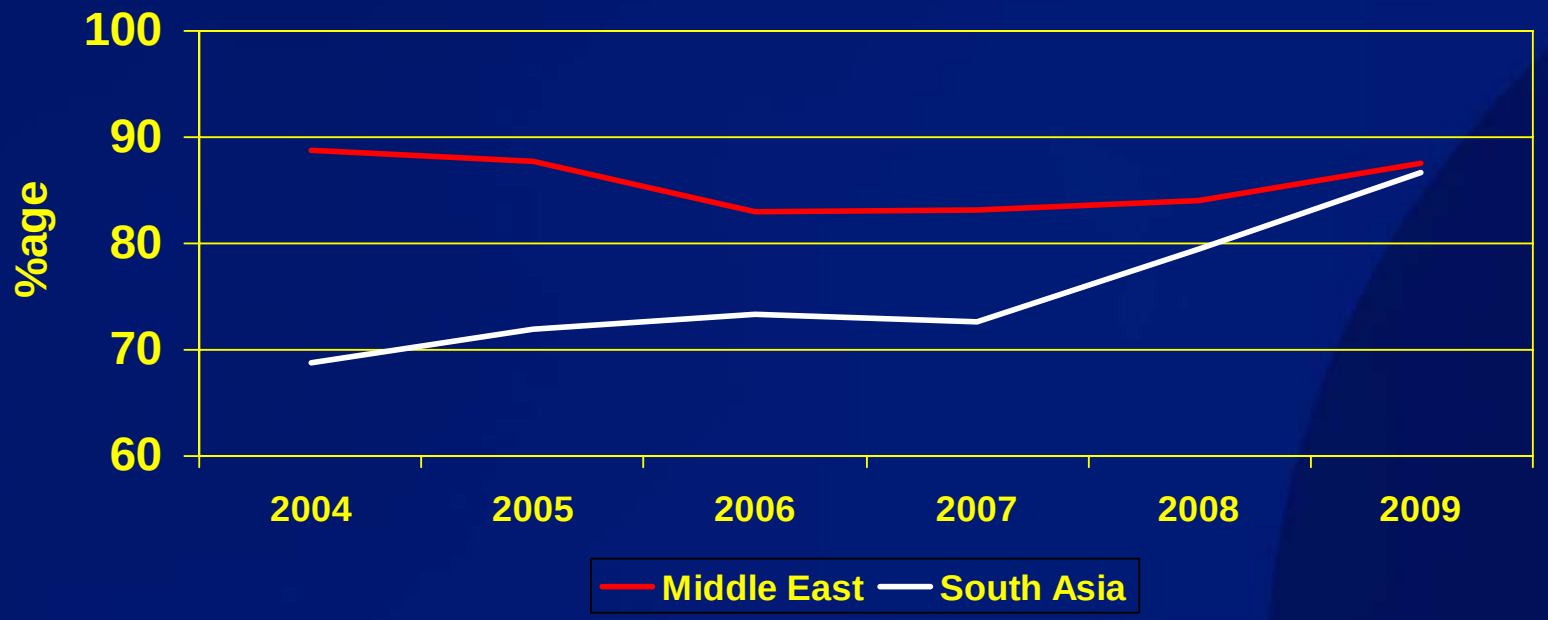
Again this is an average of all terminals. Compared with Europe though, there are less under-utilised terminals in the Far East and SE Asia.

Quite clearly more new projects will have to come on stream to meet demand.

Drewry

Drewry

Forecast Mid east/ISC capacity utilisation



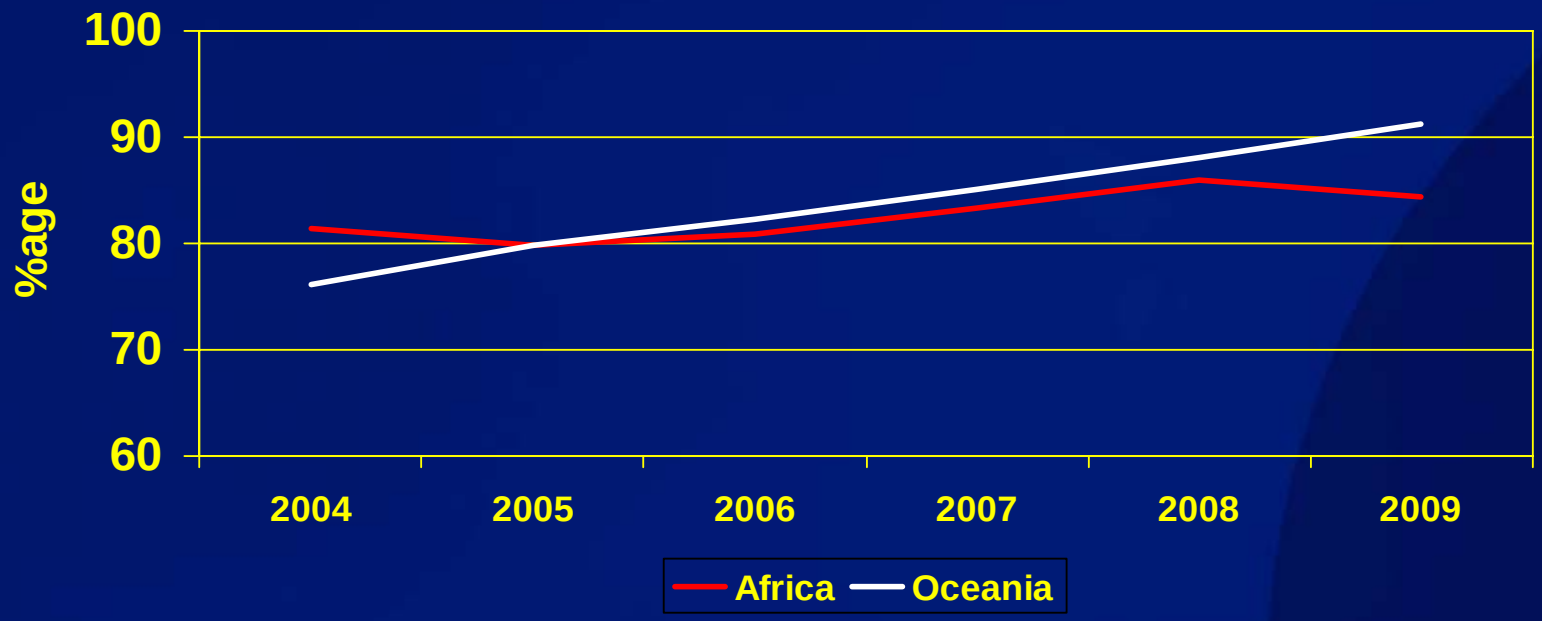
In the Middle East, strong volume growth fuelled by high oil prices is leading towards more capacity pressure

In South Asia, certain ports and terminals are under real pressure whilst others are less so. Bureaucracy slows the bidding and building process.

Drewry

Drewry

Forecast Africa/Oceania capacity utilisation



In Africa, there is significant latent capacity which can be released by improved productivity.

Oceania will need new projects to come forward as average utilisation exceeds 90% by 2009.

Drewry

Congestion in the supply chain

- Probably for the first time, congestion is a developed country problem, and not one for developing countries only.
- Congestion surcharges will become more common – in some surprising places.
- Freight rates will be under threat from higher operating costs and lower vessel productivity.
- Congestion arising from infrastructure shortcomings has no quick fix. Fixes in one part of the supply chain may just shift the problem elsewhere.
- Changes to supply chains – return to regional/national sourcing; or an acceptance of sub-optimal routeings; or an abandonment of JIT systems? Each solution = higher costs.

Current actions

- Short term: Vessel queuing costs etc leading to congestion surcharges (e.g. LA/LB US$200/TEU, US$400/FEU)
- Long term: Rise in shipping costs & then freight rates??

Action by carriers:

- Investing in terminals to internalise port costs and guarantee access to capacity
- Trying to use alternatives e.g. All-water services from Far East to US

Drewry

Shipping line interests in terminals

NORTH EUROPEAN CONTAINER PORTS

1997	2005 and beyond
• Rotterdam (Sea-Land)	• Antwerp (MSC) • Antwerp (P&O Nedlloyd/Cosco) • Le Havre (CMA CGM) • Le Havre (MSC) • Bremerhaven (MSC) • Hamburg (Hapag Lloyd) • Amsterdam (NYK) • Rotterdam (P&O Nedlloyd) • *Rotterdam (APM Terminals)* • *Bremerhaven (APM Terminals)* • *Zeebrugge (APM Terminals)* • *Le Havre (APM Terminals)*

Drewry

Current actions

Action by terminal operators:

- Vehicle booking systems (e.g. Southampton)
- Greater partnerships with customers
- Investment in improving performance – optimising capacity
- Longer term planning horizon
- Involvement in funding landside infrastructure

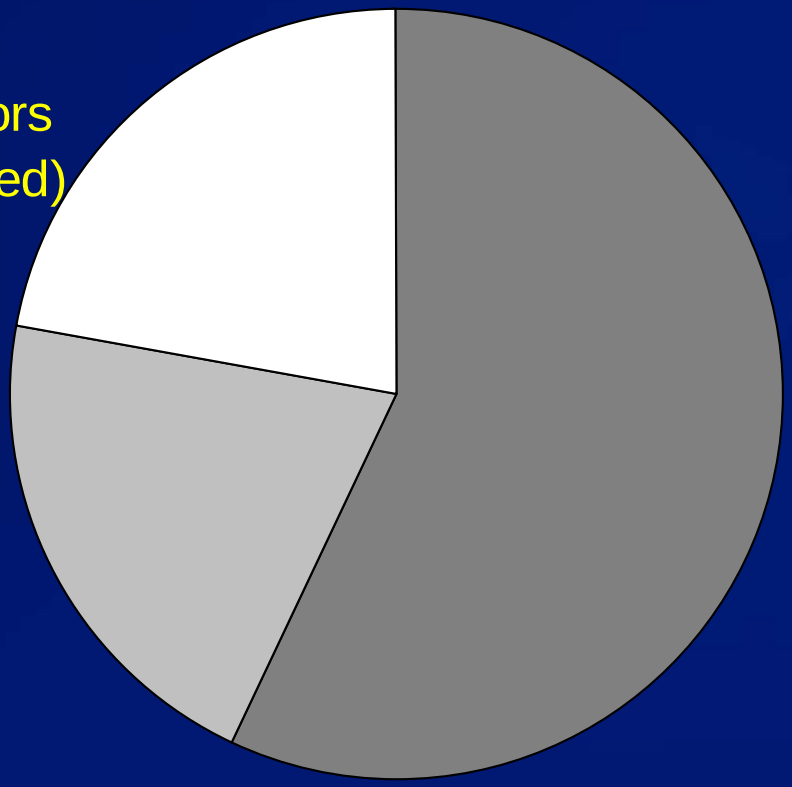
Current actions

Action by logistics providers and shippers:

- Pressure to work 24/7 is being pushed further up the supply chain
- Peaks in delivery time requirements from cargo owners – can they ever be smoothed?
- Greater stocks/longer lead times – “Just in case” rather than “just in time”
- Attempts to use rail, barge and feeder more

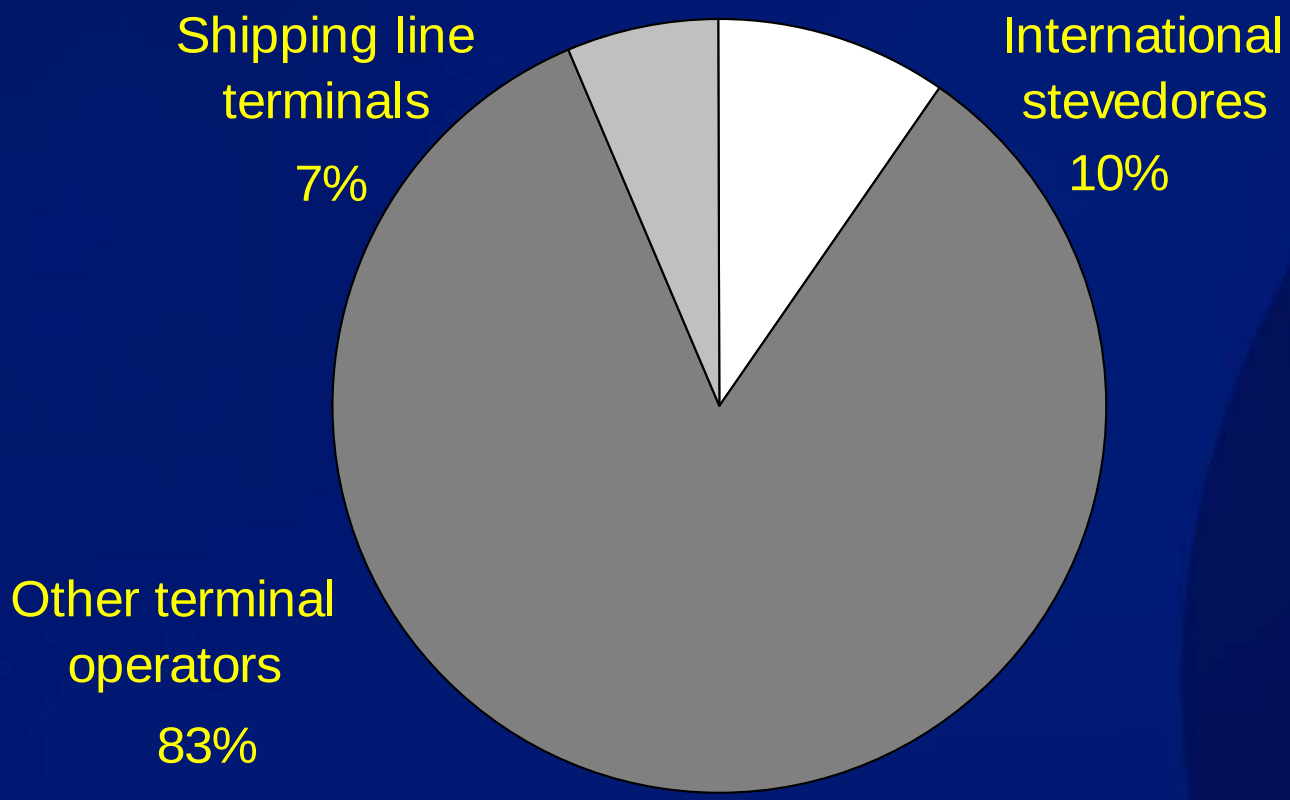
Drewry

Global container port throughput - 2003



Source: Annual Review of Global Container Terminal Operators (2004)

Estimated split by number of terminals



CONCLUSIONS

- Strong volume growth can be expected for the next few years. China is having an extra-ordinary effect, but it will moderate
- More container port capacity is needed almost everywhere. Longer term planning horizons for port capacity expansion are essential
- Vessel orderbook is very large. Ironically port congestion is helping to mitigate it. Increasing ship sizes do have limits, especially draft.
- Shipping line and global stevedore involvement in terminals will increase. More integration with the supply chain would help overcome congestion.
- Key ports will remain the focus for the large scale expansion, other ports need to focus on niches

Container ports: Avoid the hype

- Every port seems to want to be a “mega hub”. In reality very few can be. **More hubs than spokes!!**
- Every port is apparently “ideally or strategically located”.
- Transhipment isn’t free.
- Not every port will see post-Panamax ships.
- Big terminals and operators grab the headlines, but most are small or medium sized.

Behind the hype – the reality

- Strong base of local hinterland cargo
- If transhipment, backing from carrier(s) important
- High quality inland transport links
- Long term GDP growth
- Limited competition
- Sensible tariff levels
- Ability to control costs, especially labour
- Ability to expand capacity
- Limited requirement to dredge, re-equip etc
- Political and commercial stability
- Sensible concession/operating agreement

Changing balance

10 YEARS AGO…

- Shipping lines could take the view that whatever their demands were (e.g. bigger ships, more volumes, more port calls), ports would and could respond

When shipping lines said “jump”…

…….ports said “how high?”

Drewry

Changing balance

TODAY…..

- The pendulum is swinging the other way. Ports (and inland infrastructure) are influencing shipping lines more.

When shipping lines say “jump”…..

….ports say “we’d like to, we want to, we will if we can…….

but it’s not quite as simple as that anymore……..”

Drewry

The trusted independent maritime adviser

Franc J Pigna
Director
Drewry Americas &
Aegir Port Property Advisers
pigna@drewry.co.uk or
pigna@aegirports.com

Neil Davidson
Research Director
Drewry Shipping Consultants Ltd
davidson@drewry.co.uk

Drewry