RO-RO FREIGHT MARKET OVERVIEW

By

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MDS Transmodal

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1. Paper attempts to consider:

- Overall World trade
- Roro's role within the trade
- Roro strengths, weaknesses & opportunities
- Potential lessons from market analysis

2. Global International Cargo: 2004

- 9.7 billion tonnes of which:

	m tonnes	
Oil & Coal	3,447	36%
Other bulks	4,192	43%
Non bulk	2,046	21%
of which in units (approx)	*880*	*9%*
	9,685	100%

Source: MDST World Wide Demand database/CFI/estimates

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3. Global International unit load cargo : (including vehicles)

- Maritime trade in 2004: 880m tonnes

m tonnes

	Intra	Extra	Total
Australasia/Oceania	3	22	25
East/South Africa	2	12	14
Far East	155	146	301
Gulf & ISC	10	40	50
Latin America	7	44	51
Mediterranean	29	47	76
North America	3	119	122
NW Europe	134	96	230
West Africa	1	10	11
Total	**344**	**536**	**880**

Source: MDST World Wide Demand database

- Market dominated by Far East (intra + extra), North America (extra) and NW Europe (extra)
  - not major ro-ro markets

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4. Inter Continental Trade in Vehicles

m tonnes

	Vehicles (2004)	Growth '96 – '04
Europe/Med – Americas	2.2	+56%
Europe/Med – Asia	5.6	+62%
Europe/Med – Africa	1.1	+177%
Asia – Americas	4.6	+46%
Asia – Africa	0.4	-1%
Africa – Americas	0.1	+42%
To/from Oceania	2.9	+40%
	17.1	**+54%**

Source: MDST World Wide Demand database

- Vehicles almost totally a ro-ro trade
- Growth of around 5% p.a.

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5. Regional trade in vehicles

m tonnes

	Vehicles (2004)	Growth '96-'04
Intra Americas (exc. Intra N.A.)	0.6	-37%
Intra Asia	5.9	+26%
Scandinavia – Continental Europe	1.1	+66%
British Isles – Continental Europe	3.2	+78%
Mediterranean – Continental Europe	12.9	+33%
Scandinavia – British Isles	0.2	+56%
Scandinavia – Mediterranean	0.2	+68%
Mediterranean – British Isles	1.0	+49%
Intra Scandinavia	0.1	+55%
Intra Mediterranean	1.2	+49%
	26.6	**+35%**

Source: MDST World Wide Demand database

- Vehicles almost totally a ro-ro trade
- Growth of 3-4% p.a.

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6. Car Carrier Fleet

	Regional Fleet (< 3,000 cars)	Deep Sea Fleet (> 3,000 cars)
Ships built by 1996	120	234
Present fleet	152	355
Growth in fleet size	+27%	+52%
Growth in demand	+35%	+55%

Source: MDST Containership database

- Fleet and demand growth in step

7. Global trade in unitizable tonnes (constant basket of goods): Inter-Continental trade

m tonnes

	Containerised/general cargo 2004	Growth '96 – '04
Europe/Med – Americas	89	+19%
Europe/Med – Asia	129	+47%
Europe/Med – Africa	20	+15%
Asia – Americas	148	+60%
Asia – Africa	14	+23%
Africa – Americas	6	-29%
To/from Oceania	47	+10%
	452	**+35%**

Source: MDST World Wide Demand database

- Dominated by Far East
- Tonnages growing slower than units

8. Global trade in unitizable tonnes (constant basket of goods): Regional trade

m tonnes

	Containerised/general cargo 2004	Growth ’96 – ‘04
Intra Americas (exc. Intra N.A.)	46	+33%
Intra Asia	195	+24%
Scandinavia – Continental Europe	21	+36%
British Isles – Continental Europe	70	+19%
Irish Sea	8	+31%
Scandinavia – British Isles	6	+5%
Scandinavia – Mediterranean	2	+26%
Mediterranean – British Isles/Continent	25	+15%
Intra Scandinavia/Baltic	21	+20%
Intra Mediterranean	29	+20%
	423	**+20%**

Source: MDST World Wide Demand database

- Regional growth lower than inter continental growth

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9. Inter-Continental deployment of lo-lo and ro-ro vessels (nominal capacity)

	Containerizable cargo 2004 M TEU equivalent	Shipping service capacity LOLO M TEU 2006	Shipping service capacity RORO M TEU 2006
Europe/Med – Americas	10	15	0.7
Europe/Med – Asia	16	27	0.2
Europe/Med – Africa	2	5	0.8
Asia – Americas	21	38	0.2
Asia – Africa	1	4	-
Africa – Americas	1	1	-
To/from Oceania	5	8	1.5
Total	**56**	**98**	**3.4**

Source: MDST World Wide Demand database
MDST Containership Databank

- Ro-ro provides only 3.4% of deep-sea container capacity

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10. Regional deployment of lo-lo and ro-ro vessels

	Containerizable cargo 2004 M TEU equivalent	Shipping service capacity LOLO M TEU 2006	Shipping service capacity RORO M TEU 2006
Intra Americas (exc. Intra N.A.)	6	12	2
Intra Asia	24	34	1
Irish Sea	3	-	4
British Isles – Continental Europe	12	3	17
Scandinavia – British Isles	1	-	1
Intra Scandinavia/Baltic	3	8	7
Intra Mediterranean	4	5	5
Total	**53**	**62**	**37**

(includes lo-lo feeder vessels)

Source: MDST World Wide Demand database

MDST Containership Databank

- Ro-ro provides 37% of regional capacity

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11. Ro-ro's Role & Challenge

- Ro-ro vessels dominate some short sea markets
  - but minimal deep sea role
  - only modest role outside Europe

- Unfortunately, deep sea and lo-lo feeder markets growing faster

- Associated acceptability of the container by distributors

12. Trade Growth : non bulks (non vehicles) (constant basket of goods)

m unitizable tonnes

	1996	2004	CAGR (%)
Intra Europe/Med	772.9	969.5	2.9
Europe/Med Americas	74.8	88.7	2.2
Europe/Med Asia	87.4	128.8	5.0

Source: MDST World Wide Demand database

- Most rapid growth in markets in which ro-ro plays little role
- Inevitable consequence of globalisation
  - linking low cost producers to areas of high consumption

13. Worldwide container trade growth 1996 - 2005

	1996	2005	% growth
Total port traffic (MTEU)	160	393	+146%
Excluding transhipment (MTEU)	127	284	+124%
Approximate door-door units moved	85	177	+108%
Compared with millions trailers UK – Continent/Ireland *	4.9	7.2	+47%

* Approx 25% of world total

- Growth in units > tonnes (trade imbalances/light cargoes)
- Lo-lo port traffic >>> Ro-ro port traffic
- Worldwide container growth at 8-9% p.a.
- Regional growth in European ro-ro trades 4-5% p.a. range

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14. Recent ro-ro Ship Capacity (exc. car carriers) Trend 2003 and 2006

'000s lane metres

	2003	2006	Absolute Growth
Intra NW Europe	522	573	+ 51
Intra Mediterranean	394	447	+ 53
Intra Asian (exc. ferries)	27	60	+ 33
Intra Americas	108	109	+ 1
Inter-continental	199	222	+ 23
Total all routes	**1291**	**1473**	**+ 182**

- Overall growth 14% over 3 years
- Capacity growth concentrated on established markets

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15. Ro-ro freight only versus ro pax services

- Increasing trend to build ro pax vessels
  - Passenger ferry market in decline: low cost airlines
  - Ro pax vessels cater for growth in low cost haulage within Europe

	Service capacity as deployed (lane metres)		
	2003	2006	Change
Ropax	185	235	+ 27%
Freight only	67	74	+ 10%

Source: MDST Containership Databank

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16. Roro ships on order – area of deployment

	'000s lane metres
Intra N.W.Europe:	119
Intra Mediterranean:	21
Area not clear:	40
	180

17. Roro market dominated by short crossings

- Cruise ferry info estimate world trailer market of approximately 30m units (inc. domestic traffic)
  - which implies that:

	Market share
To/from British Isles	29%
Intra Baltic	21%
Intra Greece/Italy (inc. Adriatic)	21%
Intra Japan	6%
Domestic Spanish	2%
All others approx.	20%

18. Concentration on shorter crossings: Great Britain – Continent 1994 - 2004

	'000s trailer units	of which with Northern Ports*
Before Eurotunnel 1994	3614	17.6%
Inc. Eurotunnel 2004	5561	12.2%
Exc. Eurotunnel 2004	4280	15.9%

* Immingham – Forth Range

- Competitive pressure encouraged <u>shorter</u> crossings
- Impact of low cost haulage stronger than:
  - road congestion effects
  - rising fuel costs
- Competitive environment 'pulls' operators towards high volume (shorter) routes

19. Concentration on shorter crossings: Great Britain – Continent 2001 - 2005

	2001	**2005**
Total trailers	4885	5655
of which:		
Dover Straits	62.7%	63.2%

- More recent evidence suggests trend to Dover Straits slowing down but not reversing

20. Ro-ro market response therefore:

- To consolidate on short distance routes
  - where required market share lower
  - where market growth relatively low

- To build high proportion ro pax
  - encouraging shorter haul
  - implying <u>collaboration</u> with driver accompanied truckers

- To therefore reduce length proportion end-to-end journey by water
  - counter to policies of promoting short sea shipping
  - severely limits the market for ro-ro ships!

21. The case for ro-ro: a reminder!

- Ro-ro offers low cost handling in return for higher capital costs
  - particularly where lo-lo facilities under developed
- Ro-ro highly suited to (some) low volume routes where containers, vehicles and forest products carried on same ship
- Ro-ro highly suited to carriage of vehicles

BUT

- Massive expansion of lo-lo capacity could encourage more cars moved by container !
  - but concentration on fast ferries incompatible with rising fuel costs
  - replicating overland speeds by sea technically exciting but is it commercially rational ?
- Scale economies of latest lo-lo vessels (+ 10,000 TEU) limits ro-ro deep sea potential
- Few economies not now served by lo-lo container ports

22. So where are the opportunities?

- Where a substantial proportion of the market is on wheels
- Where requirement for high service frequency encourages consolidation of trailer, car and container markets
- Where markets growing
- Where transports costs can be cut
  - for example through double stack containers
- Where subsidies available!
  - but are political initiatives credible?
  - are ‘Motorways of the Sea’ a competitive threat to established operators?

23. And the threats

- That roro's liaison with road hauliers fails to offer minimum cost solutions

- Those roro operators without direct relationship with shippers lose market share

- Long term success falls to lolo operators able to
  - integrate short sea feeder traffic
  - now offer competitive (45') units
  - penetrate traditional roro markets
  - offer the lowest costs!

24. Some arguments

- Larger deep-sea lo-lo vessels leading to strong growth of feeder markets
- Rising fuel prices/road pricing improves case for cutting length of overland haul
  - fitting environmental case
- Presently intra European and deep sea markets operate in relative isolation
- Opportunity for ro-ro to consolidate both markets on daily basis
  - but requires new strategy within layout of deep sea ports
  - not compatible with driver accompanied trucking approach

25. Summary – what does market analysis tell us?

- Ro-ro applications under competitive pressure on deep sea routes

- Short sea traffic making increased use of containers
  - ro-ro successful in using ‘double stack’ approach
  - but difficult to penetrate growing feeder market

- Growth in sourcing from Asia leading to distribution centres in deep sea ports
  - but not necessarily co-located with most ro-ro services

- Existing ro-ro services vulnerable to higher road haulage costs

- Existing ro-ro services do not maximise length of water transport
  - so may not attract Government support

Which leaves us with two questions:

- can ro-ro play a role in the expanding deep-sea supply chains?
- can long maritime lengths of hauls be made commercially attractive?

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