The RoRo Market from a broker’s perspective

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- **Assets**
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  - Dirty & Clean

- **Gas**
  - LPG & LNG

- **Chemical**

- **Dry Bulk**
  - Handy to Cape

- **Liner**
  - Roro, Ferry, PCTC, Container and MPP

- **Offshore**

- BRS Liner department employs 7 shipbrokers in 4 offices (Paris, Geneva, Hamburg, Shanghai) focusing on the RoRo, PCTC, Ropax/Ferry, Container and MPP sectors.
1. OVERVIEW OF THE CURRENT SITUATION*

2. MAIN THREATS AND CHALLENGES BEING FACED BY RORO OWNERS AND OPERATORS

3. EXPECTATIONS FOR THE FUTURE

* PRESENTATION IS PRIMARILY FOCUSED ON SHORT SEA ROROS WITH STRAIGHT STERN RAMP
OVERVIEW OF THE CURRENT SITUATION

• MARKET IS EXITING A LONG PERIOD OF CONTRACTION (2009-2014)
  ➢ DECREASE IN FLEET SIZE
  ➢ AGEING FLEET WITH VERY FEW NEWBUILDINGS
  ➢ DECREASE IN NUMBER OF OWNERS/OPERATORS & CONSOLIDATION
  ➢ WEAK CHARTER RATES

• MARKET CONDITIONS HAVE STARTED IMPROVING IN 2014 SO THE MARKET HAS FOUND A BALANCE
Approx. 40 vessels with approx. 160,000 LM capacity are endowed with quarter stern ramp (mostly deep sea roro/conro)
IN THE LAST 5 YEARS, THE RORO FLEET HAS DECREASED:

• BY 103 VESSELS IN TERMS OF FLEET NUMBER (22% OF THE ACTIVE FLEET)
• ABT 61,000 LM CAPACITY HAS BEEN LOST (ABT 6% OF THE CURRENT CAPACITY)

THE FLEET WILL CONTINUE TO DECREASE IN NUMBERS - 108 VESSELS (23% OF ACTIVE FLEET IN NUMBERS OR 15% ACTIVE FLEET CAPACITY) ARE OLDER THAN 30 YEARS!
FLEET BREAKDOWN – NUMBER & AVERAGE SIZE PER AGE CATEGORY

Fleet Breakdown per Age & Orderbook
LM Capacity & Nº Ships

% Fleet on Order Vs Active Fleet = 4.3%
% Of Fleet on Order Vs Active Fleet < 30 Years = 5.6%

108 VLS older than 30 yrs are clear demolition candidates (ABT 154,000LM)

Average LM Nº Ships

0 500 1,000 1,500 2,000 2,500 3,000 3,500 4,000

> 40 Years 35 - 40 Years 30 - 35 Years 20 - 30 Years 20 - 10 Years 10 - 5 Years < 5 Years Orderbook

0 20 40 60 80 100 120 140 160

Average Lm Nº Ships
212 Vessels Demolished Between 2009 and 2015
- Abt 383,500 LM capacity -
DEMAND FOR TONNAGE

• THE RORO MARKET IS CONCENTRATED IN EUROPE, NORTH AFRICA AND THE BLACK SEA

• NON-EUROPEAN MARKETS STILL DO NOT HAVE A SUFFICIENT INFLUENCE ON THE RORO SECTOR TO SPUR SERIOUS DEMAND

• ECONOMIES OF EU COUNTRIES AND THE COUNTRIES AT ITS PERIPHERY HAVE BEEN GOING THROUGH A LONG PERIOD OF NEGATIVE OR MINIMAL GROWTH AND WEEK DEMAND

• THE SITUATION HAS STARTED TO CHANGE IN 2014 WITH THE IMPROVING ECONOMIC CONDITIONS IN MOST EUROPEAN COUNTRIES
Average Charter Rates per Size Segment (€ / day)
2010 - May 2015

- 1000-1300 LM
- 1600-1800 LM
- 2500-3000 LM
- 3500+ LM

Year 2010 to 2015
OWNERS & OPERATORS

• DIFFICULT MARKET CONDITIONS ALLOWED THE SURVIVAL OF THE FITTEST ONLY => DECREASING NUMBER OF ACTIVE PLAYERS

• THE TREND OF CONSOLIDATION HAS SLOWED DOWN BUT SHIPPERS/OPERATORS CONTINUE TO COOPERATE (SOL-STORA ENSO, STENA-MANNLINES, MESSINA-MARQUISA...)

• WEAK CHARTER RATES & THE SHRINKING OF THE TRAMP MARKET HAVE BEEN HURTING TONNAGE PROVIDERS IN PARTICULAR

• HIGH ENTRY BARRIERS FOR POTENTIAL NEW COMPANIES

• ‘TOP 20’ OPERATORS CONTROL 42% OF THE FLEET IN NUMBERS AND 61% IN TERMS OF TOTAL LM CAPACITY

=> THIS TREND WILL CONTINUE !
Top 20 Roro Operators
LM Capacity & N° of Ships

Grimaldi:
30 Vessels (approx. 115,210 LM) are deep sea con/ro's with quarter stern ramp

Messina:
8 Vessels (approx. 42,350 LM) are deep sea con/ro's with quarter stern ramp

Bahri:
All 6 Vessels (approx. 37,400 LM) are deep sea con/ro's with quarter stern ramp

CMA CGM:
Saint Roch & Stjerneborg – only quarter stern ramp roros operating on a short sea (shuttle) service in Med
### Top 20 RoRo Parent Owners

<table>
<thead>
<tr>
<th>Rank</th>
<th>Owner</th>
<th>LM Capacity</th>
<th>No. of Vessels</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Grimaldi</td>
<td>115,210</td>
<td>30</td>
<td>Deep sea con/ros with quarter stern ramp</td>
</tr>
<tr>
<td>2</td>
<td>Messina</td>
<td>48,400</td>
<td>8</td>
<td>Deep sea con/ros with quarter stern ramp</td>
</tr>
<tr>
<td>3</td>
<td>Bahri</td>
<td>37,400</td>
<td>6</td>
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TOP 20 OWNERS OWN 44% OF THE FLEET AMOUNTING TO 62% OF THE TTL LM CAPACITY
THE ORDERBOOK 2015-2018 (INCLUDING VESSELS ALREADY DELIVERED IN 2015):

- 5 X DEEP SEA CON/ROS - ACL
- 4 X DEEP SEA CON/ROS WITH QTR STERN RAMP – GRIMALDI
- 3 X DEEP SEA CON/ROS WITH QTR STERN RAMP – MESSINA
- 2 X 1140 LM ROROS FOR NOR-LINES (LNG POWERED)
- 2 x 1030 LM SINGLE DECK ROROS FOR SEASPAN, CANADA (DUAL FUEL, BUILT FOR COASTAL TRADE)
- 1 X 1950 LM RORO FOR SEAROAD, AUSTRALIA
- 1 X 2550 LM RORO BUILT BY VISENTINI SHIPYARD*
- 1 X 1800 LM RORO BEING BUILT BY EGYPTIAN MOD (AL HURREYA 3) – DELIVERY UNCERTAIN
- 3 X ROROS FOR JAPANESE DOMESTIC TRADE

*ONLY VESSEL BUILT ON SPECULATION AND FOR THE TRAMP MARKET
WHAT HAS BEEN DELIVERED TO THE WORLD FLEET IN THE LAST 5 YEARS?

- 87 VESSELS WITH TTL 312,130 LM HAVE BEEN DELIVERED TO THE FLEET SINCE 2010. THE AVERAGE VESSEL SIZE WAS 3580 LM.

HOWEVER:

- 25 OF THESE VESSELS (29%) WITH TTL 120,150 LM CAPACITY (38%) ARE DEEP SEA RORO/CONRO VESSELS WITH QUARTER STERN RAMP (ABT 4,800 LM AVERAGE SIZE)

SINCE 2010, VERY LITTLE TONNAGE HAS BEEN DELIVERED FOR THE TRAMP MARKET (NOT ORDERED FOR A SPECIFIC SERVICE):

- ONLY 12 VESSELS WITH 41,216 LM CAPACITY WHERE DESTINED FOR THE MARKET, AVG. SIZE 3430 LM (SMALLEST UNIT 2570 LM WEDELLSBORG)
- SINCE 2013 24 VESSELS HAVE BEEN DELIVERED OF WHICH ONLY 1 FOR THE TRAMP MARKET (WEDELLSBORG)!

FLEET RENEWAL FOR SMALLER SIZES IS BECOMING A PROBLEM:

- ONLY 21 VSLs UNDER 2000 LM HAVE BEEN DELIVERED IN THE LAST 10 YEARS, OF WHICH ONLY 11 UNDER 1500 LM
- OF THE 21, ONLY 2 HAVE BEEN DESTINED FOR THE TRAMP MARKET
 WHICH YARDS HAVE BEEN BUILDING RORO VESSELS?

**TOP 20 Yards building RoRo tonnage 2010-2018**

- **DAE SUN**: 1
- **CHONHAIIJ**: 3
- **ALEXANDRIA**: 1
- **CHONHAIIJ**: 3
- **VISENTINI**: 3
- **TSUJI HI**: 5
- **SEDEF TUZLA**: 2
- **P+S STRALSUND**: 2
- **NAVANTIA PUERTO REAL**: 2
- **NAIKAI INNOSHIMA**: 1
- **KEGOYA**: 2
- **ULJANIK**: 4
- **STX O8SB JINHAE**: 1
- **KYOKUYO CHOBU**: 3
- **DAEWOO**: 2
- **HUDONG-ZHONGHUA**: 6
- **ODENSE LINDO**: 10
- **JINLING**: 7
- **FLENSBURGER**: 3
- **HYUNDAI MIPO**: 3

**Note**: Numbers indicate the number of vessels delivered and on order.

- **4 X DEEP SEA CON/ROS WITH QTR STERN RAMP FOR GRIMALDI**
- **4 X DEEP SEA CON/ROS WITH QTR STERN RAMP FOR MESSINA**
- **4 X DEEP SEA CON/ROS WITH QTR STERN RAMP FOR MESSINA**
- **5 X DEEP SEA CON/ROS FOR ACL**
- **17 X DEEP SEA CON/ROS WITH QTR STERN RAMP (11 FOR GRIMALDI AND 6 FOR BAHR)”**
MAIN CHALLENGES TO THE RORO MARKET

○ EMISSION CONTROL LEGISLATION

- THE BIG GAME CHANGER – ECA REGULATION IMPLEMENTED 1ST JAN 2015
- THE MAJORITY OF COSTS WILL FALL ON OPERATORS’ SHOULDERS
- END 2014 / BEG 2015 – PERIOD OF FLEET OPTIMIZATION
- MIGRATION OF TONNAGE WHICH IS EITHER TOO SMALL OR TOO OLD FOR INVESTMENTS
- USE OF MDO IS A SHORT-TERM SOLUTION WHICH DEPENDS ON THE BUNKER PRICES (-35% VS MAY 2014)
- INVESTMENTS IN EMISSION ABATEMENT TECHNOLOGY: SCRUBBERS, LNG, METHANOL
- OPTIMIZATION OF SERVICES: SAILING SPEED, FREQUENCY, CLOSURE OF UNPROFITABLE LINES

○ MODAL BACKSHIFT AND LOSS OF CARGO TO PCTC CONTAINER OPERATORS

- EMISSION CONTROL RULES HAVE INCREASED MARINE TRANSPORTATION COSTS OVERALL – WILL THE SHIPPERS & END USERS CONTRIBUTE OR WILL THEY TURN TO OTHER MODES OF TRANSPORT?
- SERVICES COMPETING WITH OTHER MODES OF TRANSPORT AND LONG-HAUL SERVICES ARE UNDER PRESSURE
- PCTC OPERATORS ARE INCREASINGLY PENETRATING SHORT SEA MARKETS
- CONTAINER TRANSPORTATION REMAINS A CHEAP(ER) ALTERNATIVE
MAIN CHALLENGES TO THE RORO MARKET

○ ECONOMIC ENVIRONMENT

- OVERALL, EUROPEAN ECONOMIES ONLY SHOWED MINIMAL GROWTH IN 2014 (0.8%) AND SO FAR IN 2015 (PROJECTION ABT 1.5%)
- SOUTH EUROPEAN ECONOMIES CONTINUE TO SUFFER
- THE DECLINE IN OIL PRICES WILL LIKELY HAVE CONFLICTING IMPLICATIONS ON THE EMERGING MARKETS ON EUROPE’S PERIPHERY, FAVOURING OIL-IMPORTING ECONOMIES AND HURTING OIL EXPORTERS LIKE RUSSIA AND NORTH AFRICAN COUNTRIES

○ GEOPOLITICAL PROBLEMS, WARS, SEASONAL FLUCTUATION AND RESTRICTIONS

- SANCTIONS ON RUSSIA HAVE HAD A DETRIMENTAL EFFECT ON THE BALTIC & BLACK SEA MARKET
- VOLATILE MEDITERRANEAN MARKET IS SENSITIVE TO GEOPOLITICAL SHOCKS (CIVIL WAR IN SYRIA, CONFLICTS IN LIBYA)
- SEASONAL FLUCTUATION IN DEMAND IN THE MED
- IMPORT RESTRICTIONS (ALGERIA)
EXPECTATIONS FOR THE FUTURE

**TONNAGE SUPPLY**

- **RORO FLEET WILL CONTINUE TO SHRINK IN NUMBER (18 VESSELS ON ORDER VS 108 OLDER THAN 30 YEARS) AND CAPACITY (ABT 58,000 LM ON ORDER VS ABT 155,000 LM OVER 30 YEARS OLD)**
- **VESSELS WILL CONTINUE TO GROW IN SIZE (ECONOMIES OF SCALE)**
- **WE EXPECT A SHORTAGE OF TONNAGE IN 2 SIZE SEGMENTS: 700-1500 LM AND 3000+**
- **WE ARE TURNING A CORNER FROM OVERSUPPLY TO UNDERSUPPLY**

**NEWBUILDING ACTIVITY**

- **NEWBUILDING PRICES/CONDITIONS ARE FAVORABLE**
- **WE EXPECT AN INCREASE IN RORO ORDERS AS FROM 2\textsuperscript{ND} HALF 2015**
- **FOCUS ON LARGE ROROS WITH 3000-5000 LM CAPACITY**
- **FLEXIBILITY - DOUBLE-STACKING AND CAR DECKS**
- **VESSELS EQUIPPED WITH DUAL-FUEL TECHNOLOGY OR SCRUBBERS**
- **ASIAN YARDS WILL CONTINUE TO BUILD THE MAJORITY OF NEW TONNAGE**
- **PURE TONNAGE PROVIDERS HAVE BEEN ABSTAINING FROM NEW ORDERS – WE HOPE THIS WILL CHANGE**
EXPECTED FOR THE FUTURE

- **DEMOLITION ACTIVITY**
  - Demolition activity has started to slow down drastically on the back of recent improved charter rates
  - However, the large number of vessels >30 years old will eventually have to be recycled

- **DEMAND**
  - After five years of weak demand, the situation is improving so there is room for optimism despite our reservations regarding the full recovery of the European economies
  - We expect continued good performance in continent-UK corridor, the Spanish domestic and Turkey to Italy markets
  - The demand side should receive a boost once the situation in Ukraine, Syria and Libya is resolved
  - Less pressure on operators’ costs as long as the bunker prices remain moderate
  - We expect stable demand for ice-classed tonnage and large ROROs
  - Vessels under 1500 LM will continue to migrate from North Europe to ‘secondary markets’

- **NEW MARKETS – NEW OPPORTUNITIES**
  - Continued growth of the South-East Asian Roro market (Philippines and now Indonesia)
  - More demand in the Middle East and Arabian Gulf, especially if sanctions on Iran are lifted
  - Increase of activity in the Caribs with focus on Mexico and Cuba as a new Roro destination
Thank you for your attention!

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