



GRIMALDI GROUP

Supply chain disruption

- **Factors, Consequences and Answers:
The Finnlines experience**



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NORDIC MARITIME EXPO IN FINLAND



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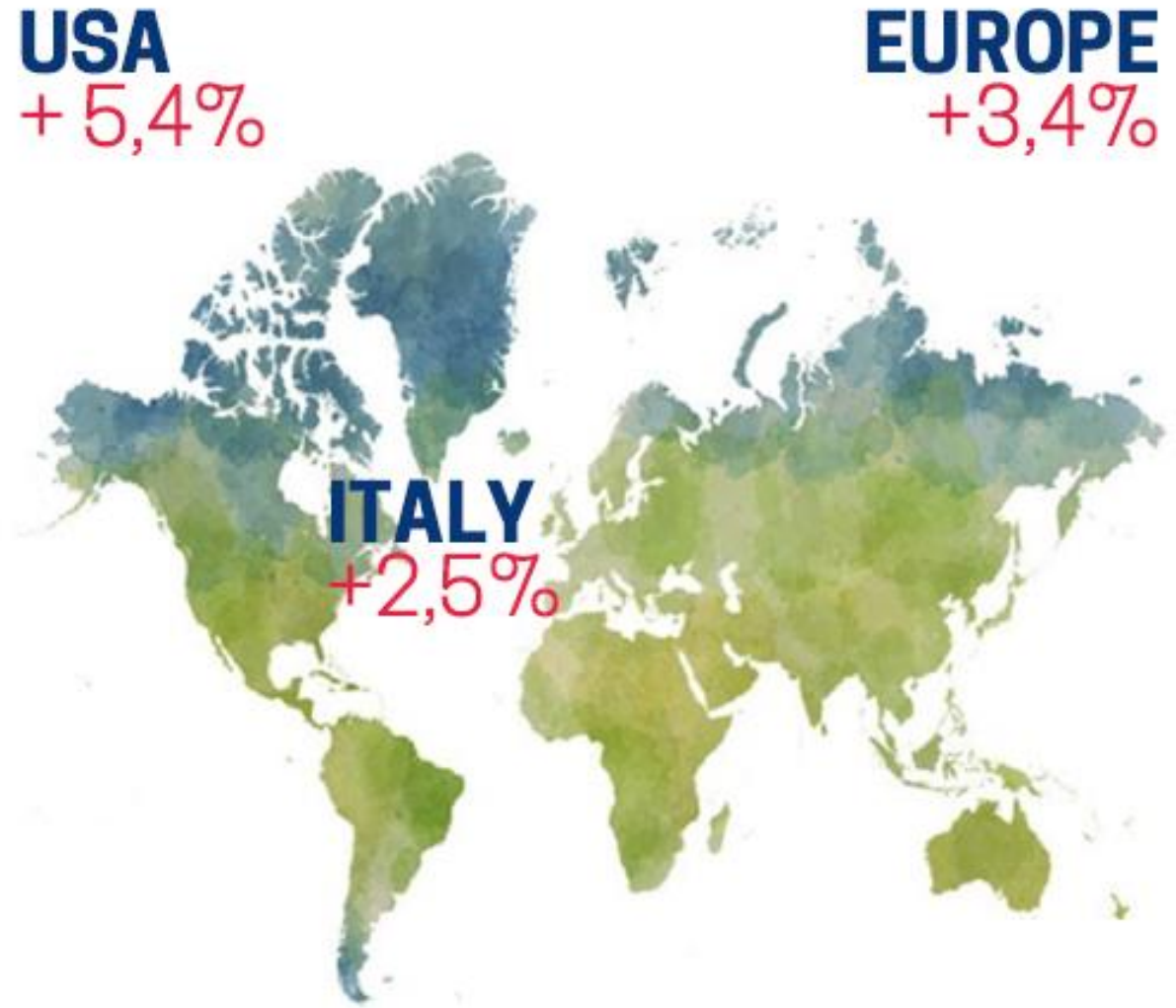
Finnlines

1) Factors of disruption:

- Lockdowns
- Border delays
- Inflation
- Fuel price increase
- Price Volatility
- Currency fluctuation
- Loss of skilled staff
- Energy shortage
- Transportation network disruption
- Extreme weather
- Ports closure
- Industrial disputes

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The data refer to July YTD 2021 vs the same period of last year

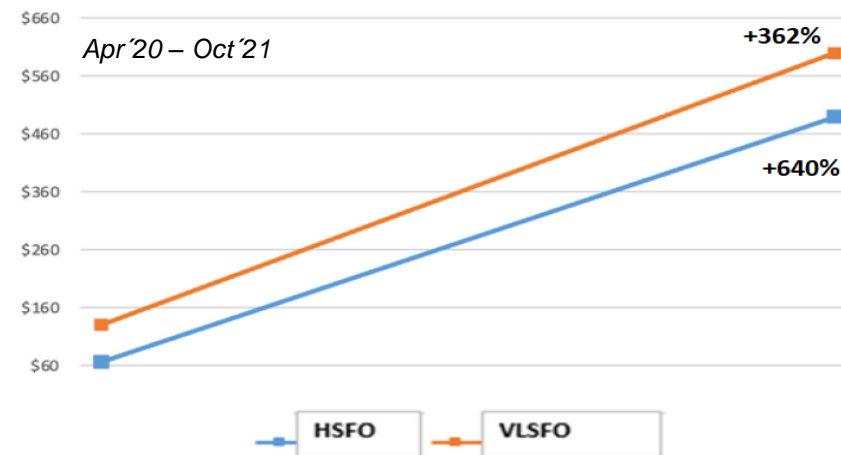
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CRUDE OIL PRICE TREND



BUNKER PRICE TREND



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- 17% truck drivers for 2021
- 30.000 drivers per year

2) Consequences for the sea logistic:

- Ineffective equipment rotation
- Trade´s imbalances (supply vs demand)
- Port congestion
- Schedules unreliability
- Sea Freight increase
- “Trailerization”

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- At the beginning of 2020, a large amount of empty container were blocked in Europe and USA
- Due to Covid-19 related issues, the cargo handling time at port have lengtheed (delivery time passed from 60 days to 100)

2) Consequences for the sea logistic:

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 - Port congestion
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 - “Trailerization”
- Later in 2020, the Western demand for goods from Asia has quickly rebounded causing severe imbalance between demand and supply. The effect of which has been produced sensible increase in the transport costs

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➤ Although the general effect is an increase in the sea-freights, the scales are different:

- ❑ Containers: +450%
(since the pandemic outbreak – *World container index*)
- ❑ Break-Bulk: +1.114%
(since the pandemic outbreak – *Baltic dry index*)
- ❑ Ro-Ro segment: +12%.

The Ro-Ro segment has shown greater capacity to support the market and closeness to its stakeholder

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- **”Trailerization”**

“After decades of containerisation, we are today witnessing trailerisation. While the global shortage of containers has challenged importers and exporters and led to world-wide supply-chain disruptions, ro-ro vessels have proved to be efficient and competitive modes of transport.”

E. Grimaldi

3) Answers from the Carriers:

- Digital transformation
- Decarbonization
- Increased frequency
- Economy of scale
- Development of major sea-corridor
- Cargo diversification
- Intermodality

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- Development of the ERP system continued in 2021
- New self-service check-in for lorries and drivers will be launched in 2021
- New digital service for customers will be launched in 2023
- Development of the online store for consumers continued and expected to be launched in 2022

Digitalisation is the key to cut the turnover time in port and allow slower speed at sea.

Seamless flow of information and optimization of the whole transport chain increases the efficiency and cost benefits of logistics as well as contributes to reduce the climate impacts of transport.

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- January 2021:
 - ❑ Mv Finnsea returned to Finnlines and employed to strengthen the North Sea connections
- April 2021:
 - ❑ time-charter of the Mv Eurocargo Savona to increase the capacity on the Hanko<>Rostock route
- April 2021:
 - ❑ doubling of the Kotka <> Travemunde frequency
- November 2021:
 - ❑ Nordölink service increased capacity with entry in service of the Mv Finnclipper
- January 2022:
 - ❑ Polish service frequency increase to 6 weekly connection (formerly 3)

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- Digital Transformation
- **Decarbonization**
- Increased frequency
- **Economy of scale**

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- June 2022:
 - ❑ Entry in service of the Mv Finneco I (first of a series of 3)
- Q1 2023:
 - ❑ Delivery of the 2 Superstar Ro-Pax



Battery banks: lithium-ion battery systems to enable zero-emission operations and to reduce noise in port



Solar panels: 600m² of solar panels to produce clean electricity to users on board



Promas Lite systems to increase energy efficiency



An innovative air lubrication system to create bubble layers which will reduce friction and hydrodynamic resistance



Optimised hull lines to optimise efficiency



Main engines type and size carefully selected to achieve the lowest possible fuel oil consumption

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- Integration
- Increased frequency
- Economy of scale
- Development of major sea-c
- **Cargo diversification**
- Decarbonization

