



Black Sea Ports as Enablers of Trade

8th Black Sea Port & Shipping 2019

10 July 2019

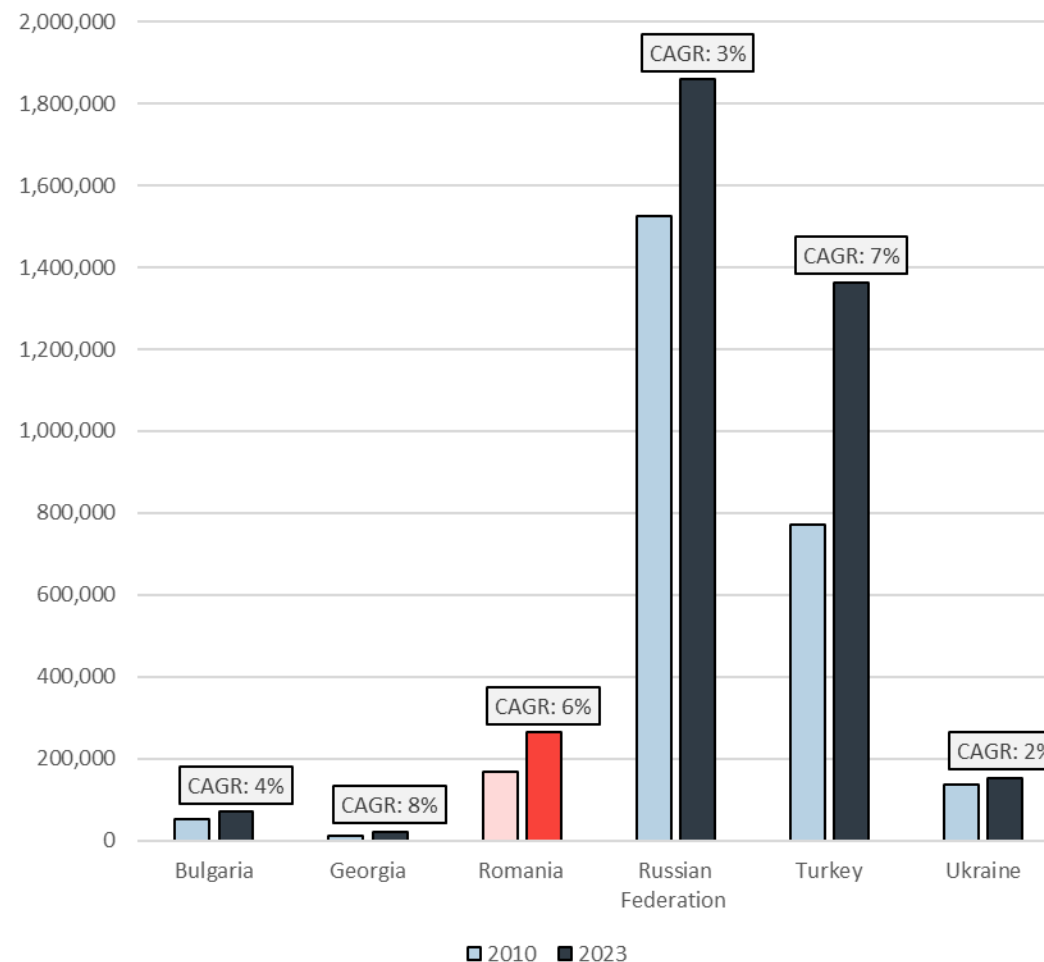
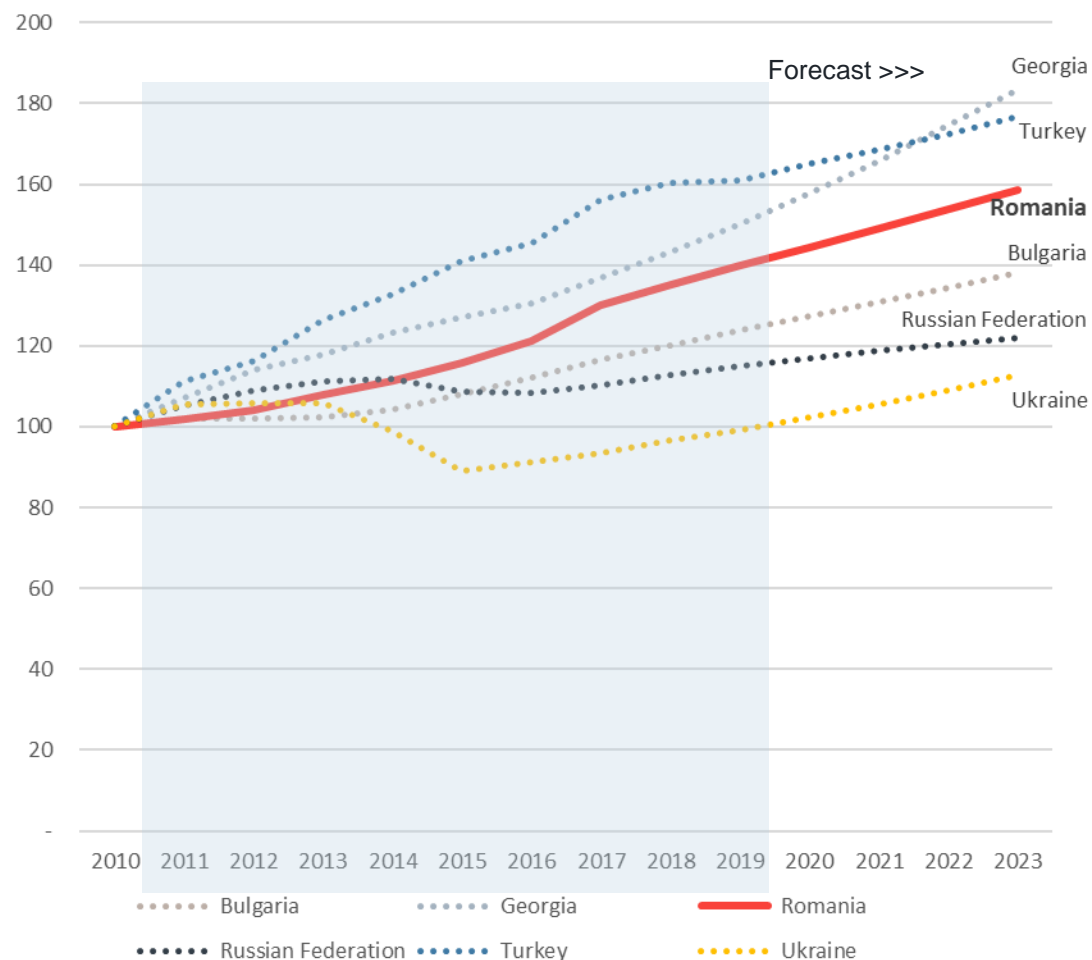
Key Themes

Black Sea Ports as enablers of trade

- Macroeconomic backdrop
- Direction of travel in containerised volumes at major Black Sea ports
- Relationships to Bosphorus Strait traffic
- Container loop connectivity at Black Sea ports
- Short - Mid term developments creating opportunities for Black Sea ports
- The role of ports and barriers to improved trade connections

Black Sea Macro Backdrop

Strong broad-base of economic growth across the region predicted to continue in the short run at least, particularly in Georgia, Turkey, and Romania



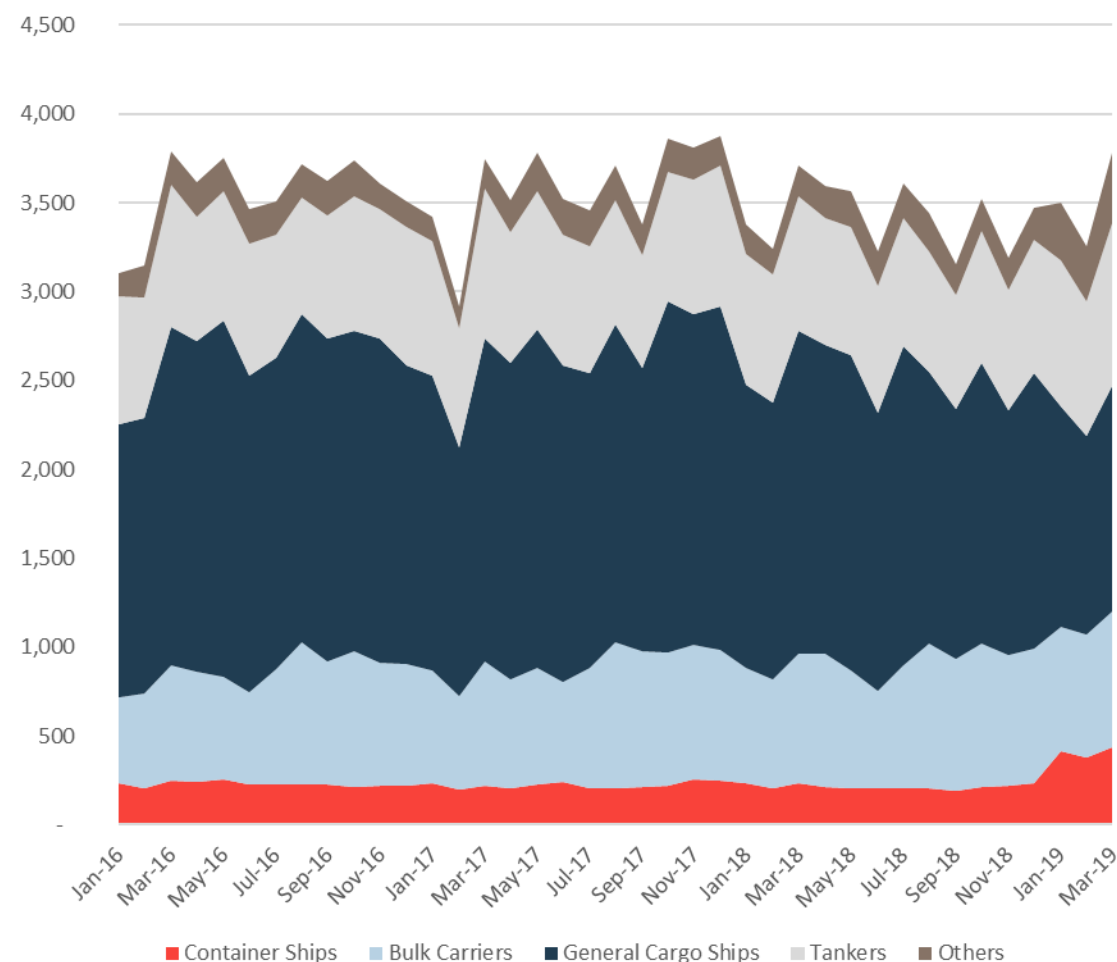
Bosphorus Strait Maritime Metrics

Short run Bosphorus traffic appears to show downward trend as vessel sizes

- The long run Black Sea shipping dynamics are largely dependent on, the constraints of the Bosphorus Strait (draft 20m, air draft 58m, length 299m, c.10,800k TEU in containership terms)
- Bulk carriers display an upward volume trend since 2016
- Q1 2019 saw Containerships reverse in downward trend in volume
- General Cargo ships continue to decline strongly year on year
- Generally shorter, sharper seasonal reduction around Chinese New Year observed in container vessel transits with other cargo types

	2016	2017		2018		2019 (to end Q1)	
Bulk Carriers	7664	8206	7%	8501	4%	2163	9%
Container ships	2734	2659	-3%	2561	-4%	1222	82%
General Cargo	21344	21163	-1%	19269	-9%	3621	-27%
Tankers	8703	8832	1%	8587	-3%	2502	13%
Others	2108	2118	0%	2185	3%	1033	118%
Total	42553	42978	1%	41103	-4%	10541	2%

Monthly Vessel Traffic, Bosphorus Strait since 2016



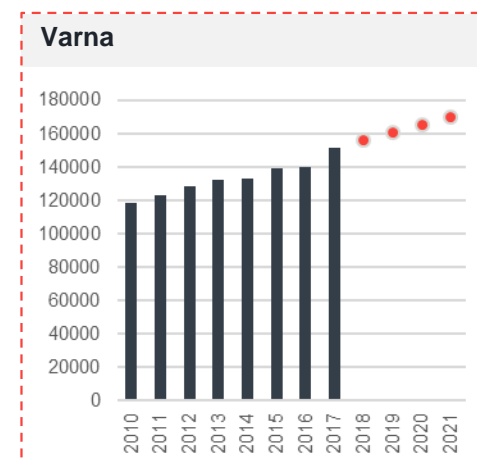
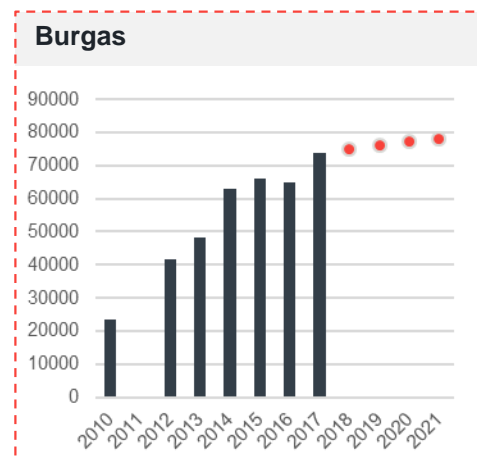
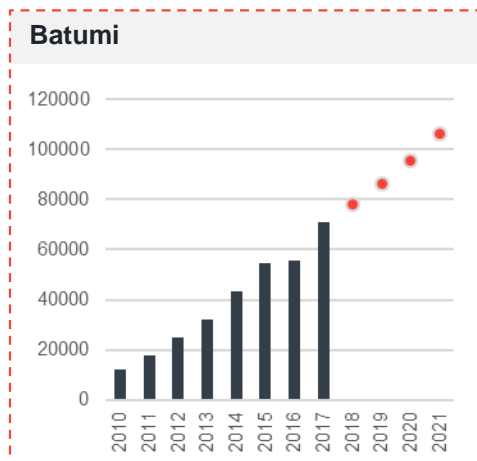
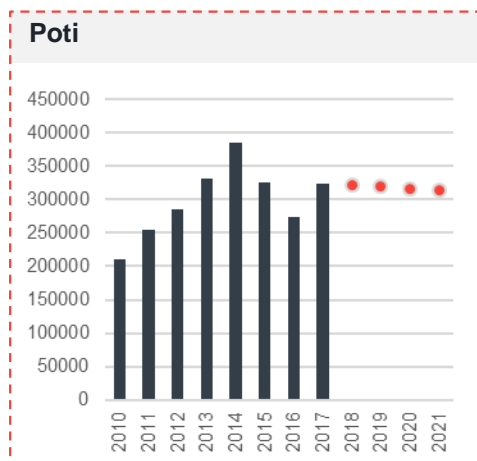
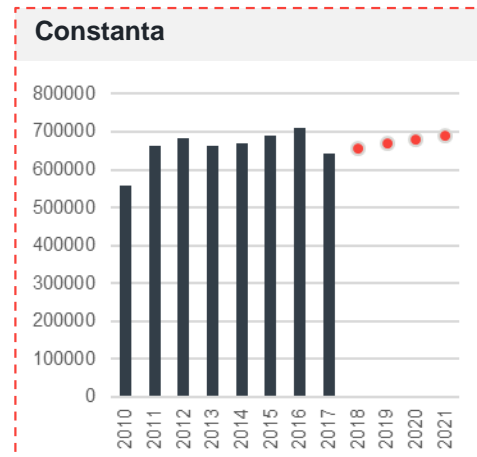
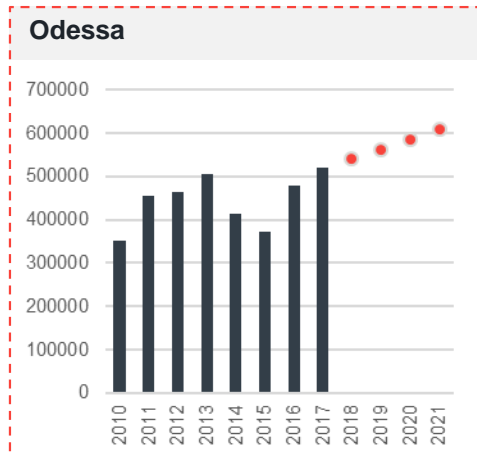
Black Sea Container Throughput

Indicative forecasts based on adjusted GDP:TEU multipliers generally demonstrate growth across major ports the region

We generally observe a strong correlation between macroeconomic factors such as GDP & population which implies that, as countries get wealthier (and/or larger), their demand for containerised goods increases

This generally appears to be happening across the Black Sea region & its trade partners resulting in strong outlooks for its ports

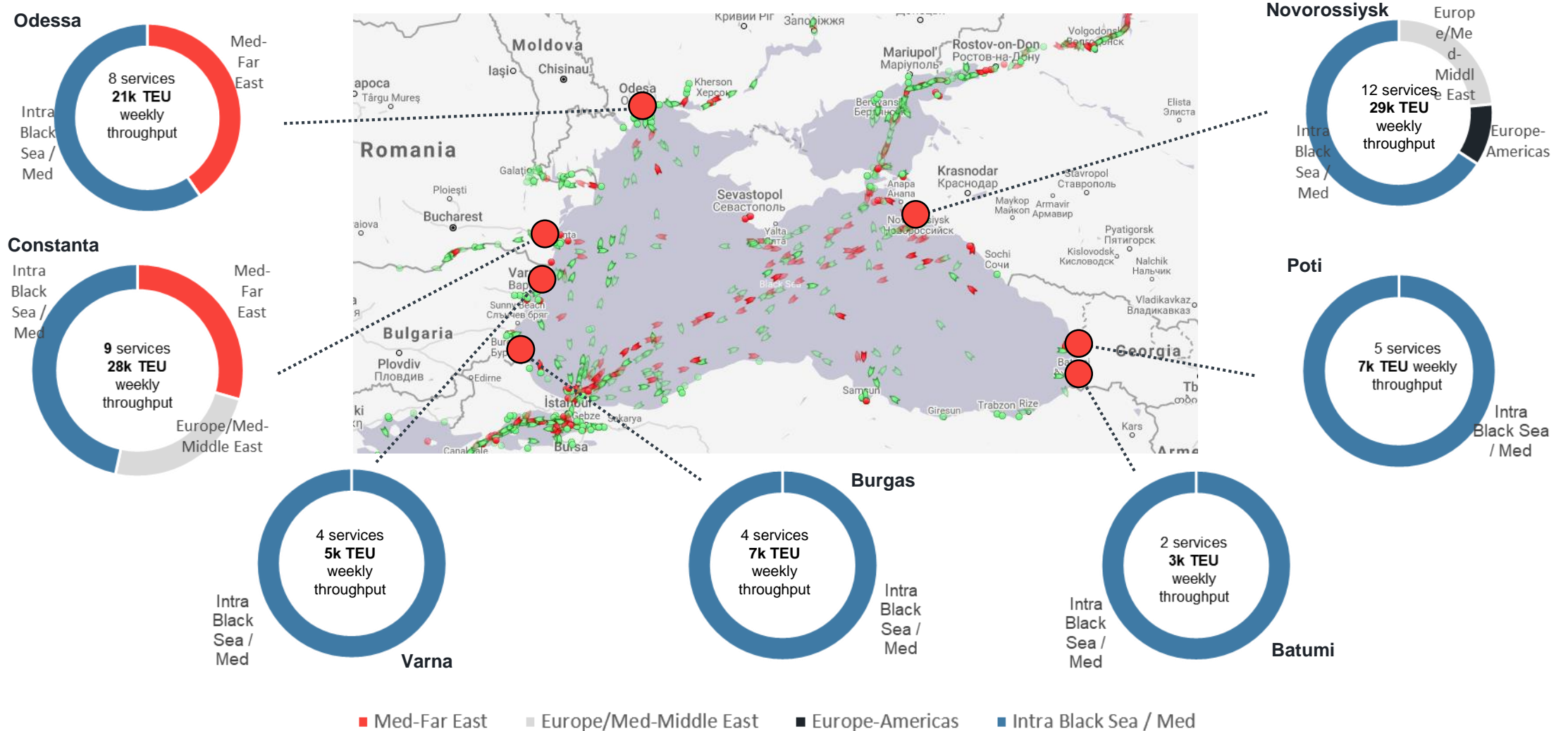
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■ TEU • Forecast TEU

Black Sea Maritime

Deep Sea container connections at three of the largest Black Sea ports connect the region to the Far East, Middle East, and North and South America. All are complemented by high feeder throughput to facilitate regional maritime trade



Deep Sea Container Service Connections

Deep sea services operated by Ocean Alliance & Maersk Line connect the region with economic centres throughout Asia, Middle East and Americas

- **Ocean Alliance, Med-3 (Constanta & Odessa)**

- Pusan, Shanghai, Ningbo, Xiamen, Shekou, Singapore, Port Said West, Beirut, Tripoli, Izmit, Ambarli, Constanza, Odessa, Piraeus, Port Said West, Jeddah, Port Kelang, Pusan

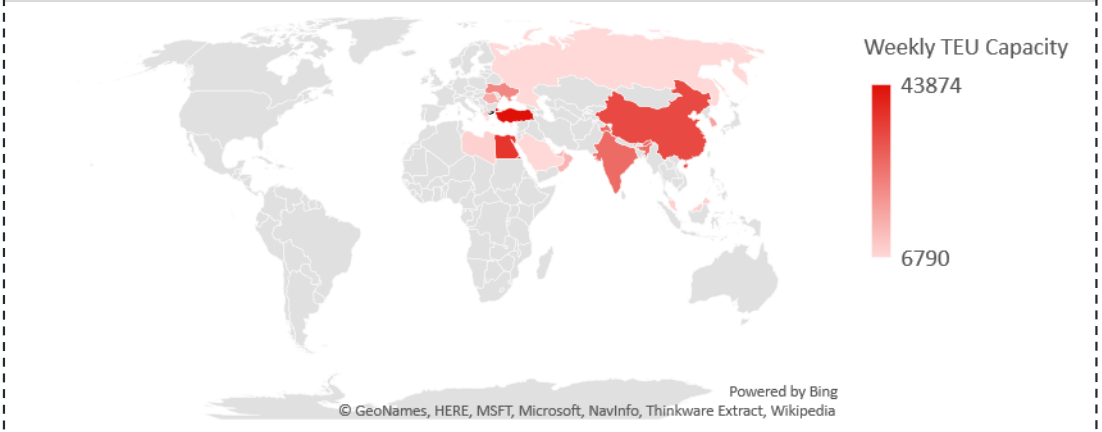
- **Maersk Line ME-3 (Constanta)**

- Pipavav, Hazira, Jawaharlal Nehru, Jebel Ali, Salalah, Port Said East, Damietta, Ambarli, Izmit, Novorossiysk, Yuzhny, Ilyichevsk, Constanza, Ambarli, Iskenderun, Port Said East, Jeddah, Salalah

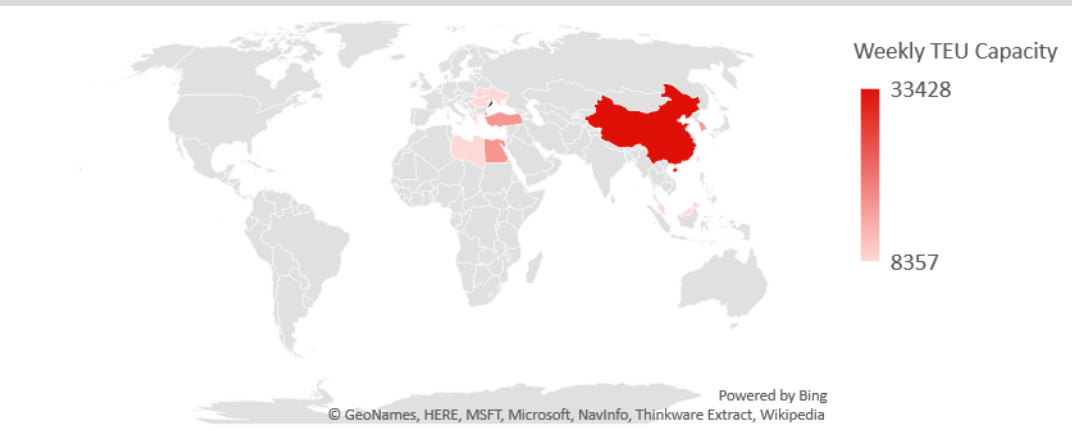
- **Maersk Line ECUMED (Novorossiysk)**

- Tangier, Algeciras, Piraeus, Izmit, Ambarli, Yuzhny, Novorossiysk, Ambarli, Izmit, Izmir, Algeciras, New York, Manzanillo, Buenaventura, Guayaquil, Balboa, Manzanillo, Tangier

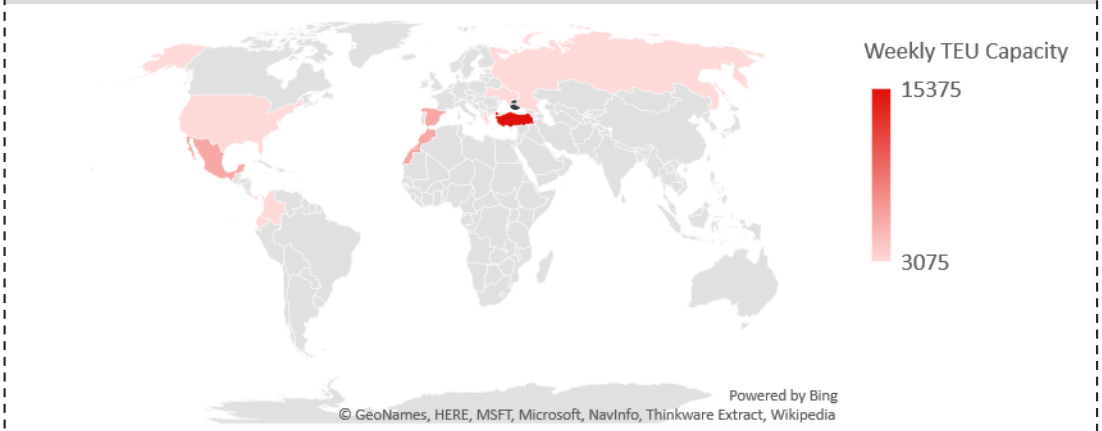
Constanta



Odessa



Novorossiysk



Future Growth Drivers & Opportunities

Three examples of developments which are likely to impact Black Sea shipping dynamics in future years

Istanbul Canal Development



- A secondary conduit between the Black Sea and Marmaris sea, to the West of the Bosphorus Strait
- Primarily targeted at reducing the pressure and risks associated with an increasingly congested Bosphorus Strait
- Would increase max draft passable to c.25m, enabling very large merchant vessels access to the Black Sea ports
- Planned opening for 2023, pre feasibility studies have been carried out but no ground yet broken
- Estimated costs c.\$10bn, to be funded domestically rather than seeking private capital investment

Ukrainian Container Port Developments



- **Odessa** - HHLA has been developing the SC Container Terminal Odessa expansion since 2010. The project will add 600,000 TEU of additional capacity when finished
- **Yuzhny** - TIS has estimated that it has the capability to expand to a capacity of 2m TEU per annum. Space exists to extend the terminal quay line and improve yard operation however no firm expansion plans have been tabled
- **Chornomorsk** - ample yard space exists for future development. Ukraine Seaports Authority has listed deepening the access channel to 16m as one of it's priority project

Danube Developments



- Danube currently underutilised in terms of cargo throughput, especially in the context of the Rhine despite its significantly larger size; meaning more road and rail cargo movements
- 39.6m tons of cargo were moved along the Danube in 2016, an increase of >3% vs the prior year
- Potential markets for empty container movements, soybean movements, recycling and biomass markets; however water level fluctuations currently cause planning issues for logistics companies and cargo owners
- Benefits could be unlocked by the development of holistic Danube-wide development strategies to include tri-modal port facilities. Ultimately this would bringing inward investment, job creation and potential business innovation

Role of Ports

Port offerings are developing in line with industry shifts towards door to door service

Shifting focus to port activities

- Economies of scale broadly reached in terms of vessel developments
- Efficiencies also gained through mergers and acquisitions within the liner markets
- Pressure therefore to find similar efficiencies throughout landside commodity chains

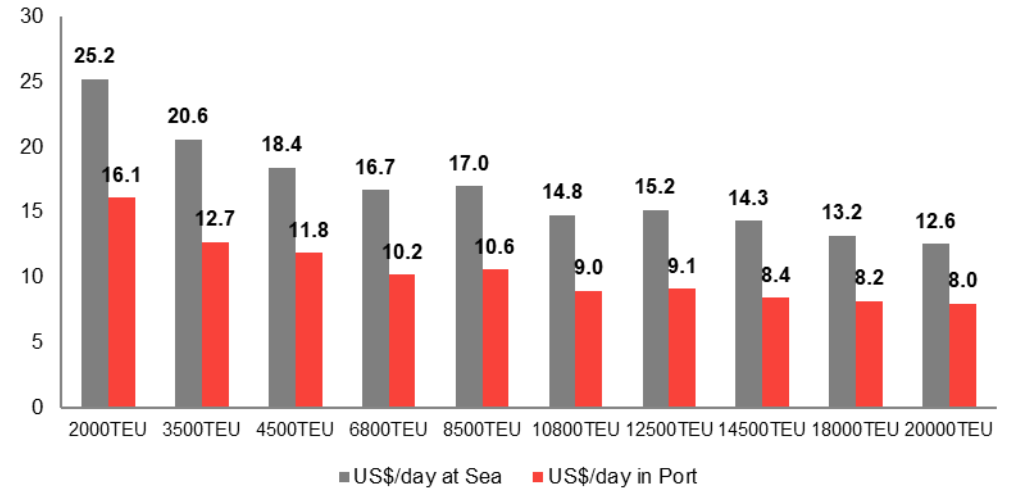
How are ports reacting

- Focus on achieving seamless connections with intermodal networks and landside infrastructure
- Attempting to achieve differentiation
- Increasingly intelligent operations to drive transparency for shipping lines and cargo owners

Sources of investment

- Stevedore companies
 - *Horizontal integration opportunities*
 - *Direct investments expand market opportunities*
- Shippers and shipping lines
 - *Vertical integration opportunities*
 - *Terminals as a support function of primary transport business*
 - *Generally parent company investment*
- Financiers
 - *Hybrid of integration & restructurings sees both horizontal and vertical integration*
 - *Invest to achieve financial returns capital holdings*

Indicative economies of scale in container ship capacities, \$ / FEU



Summary

Black Sea Ports as enablers of trade

- Macroeconomic backdrop
 - *Macro level growth set to continue across the region*
- Direction of travel in containerised volumes at major Black Sea ports
 - *Generally upwards, with those 'future-proofed' deep water facilities benefiting from industry-wide developments the most*
- Relationships to Bosphorus Strait traffic
 - *Noticing larger vessel movements already with potential for step-change driven by Istanbul Canal*
- Container loop connectivity at Black Sea ports
 - *Deep Sea connections at three facilities, could see further expansion in future*
- Short - Mid term developments creating opportunities for Black Sea ports
 - *Investment in (and planned in) the region*
- The role of ports and barriers to improved trade connections
 - *Requirement for ports to develop their offering in order to keep pace with wider maritime & transport industry developments*

Thank you

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