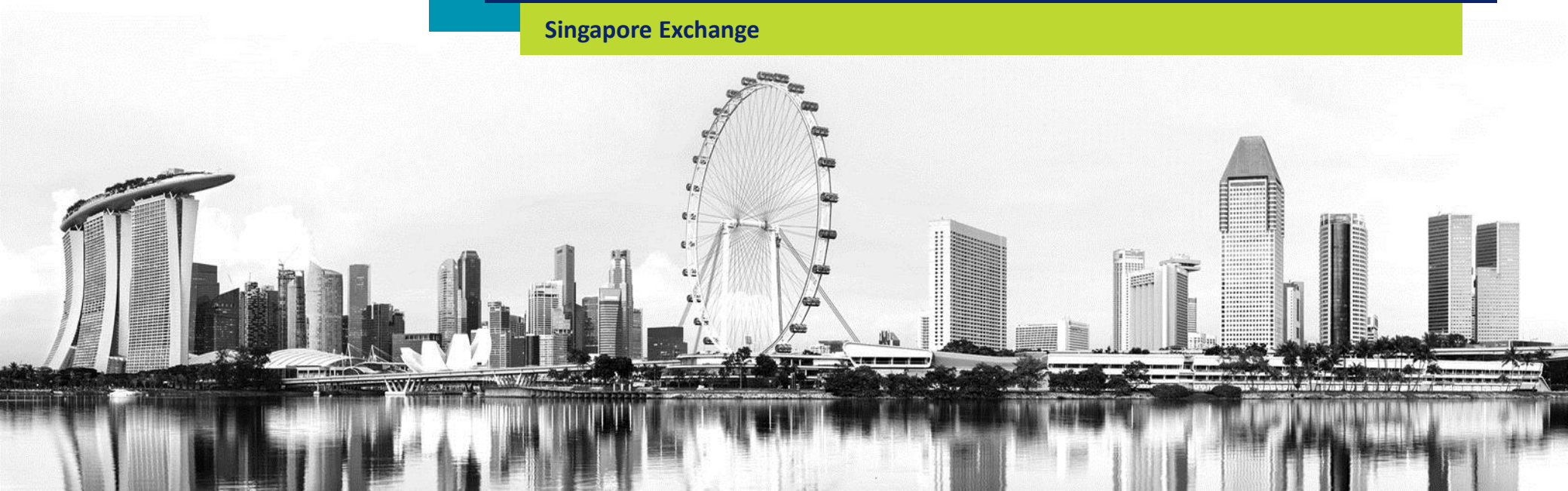


Maritime & Offshore Services

Research and Products Team

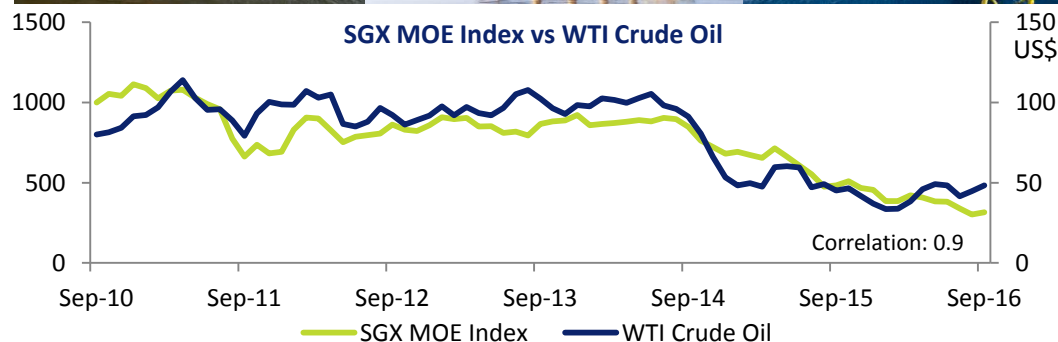
October 2016

Singapore Exchange



Maritime & Offshore Services Sector

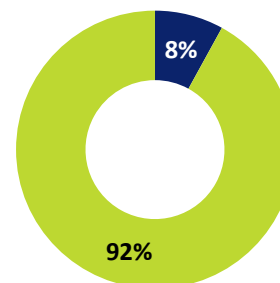
- The Maritime & Offshore Services (MOE) sector is made up of various marine-related businesses from shipping vessels and shipyards, to offshore engineering, drilling and marine-related support services.
- Around 90% of global trade is through the shipping industry, with over 17 million shipping containers and over 50,000 ships registered in more than 150 nations.
- Singapore is ranked overall No. 1 maritime capital in the world*, surpassing Hamburg, Oslo, Hong Kong, Shanghai. It is also the leading country for attractiveness and competitiveness for shipping and the ports and logistics business.
- Singapore has largest cluster of Maritime & Offshore Services companies within Asia Pacific (ex-Japan) and 2nd globally (ex-USA) after Oslo with 59 companies and a combined market capitalisation of over S\$28 billion.



Source: Bloomberg (Sep 2016), International Chamber of Shipping, *Menon Business Economics (2015)

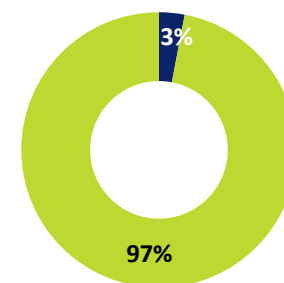
All SGX Listed Companies

■ MOE Sector ■ Other Sectors

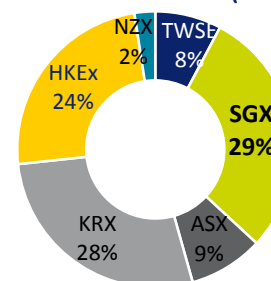


MSCI Asia Pacific ex Japan Index

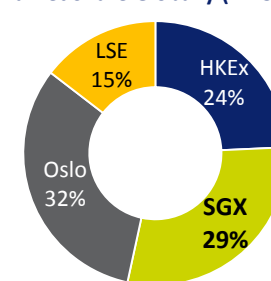
■ MOE Sector ■ Other Sectors



Market Share in Asia Pacific (Ex-Japan)



Market Share Globally (Ex-USA)



Note: Market share is defined by number of companies.

Singapore's Role in the Maritime & Offshore Services Sector

Importance of Asia in the Maritime & Offshore Services sector



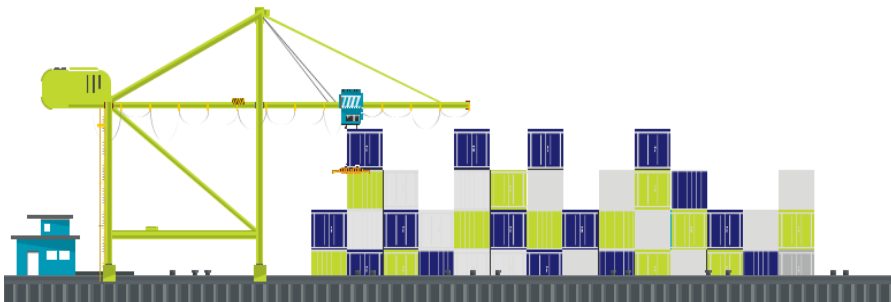
Asia accounts for about **70%** of global container throughput handled by the world's top 30 container ports



9 of 10 busiest container ports are in Asia



Asia is at the **cross-roads** of East-West trade and has strong business networks and trade relationships



Singapore as an International Maritime Centre



International Maritime Centre

Home to more than **130** international shipping groups, over **5,000** maritime-related establishments, connected to **600** ports in over **120** countries, **busiest port** in the world, **No. 1** maritime capital in the world*



Significant contributor to Singapore's GDP

Maritime accounts for **7%** of GDP



Government Support

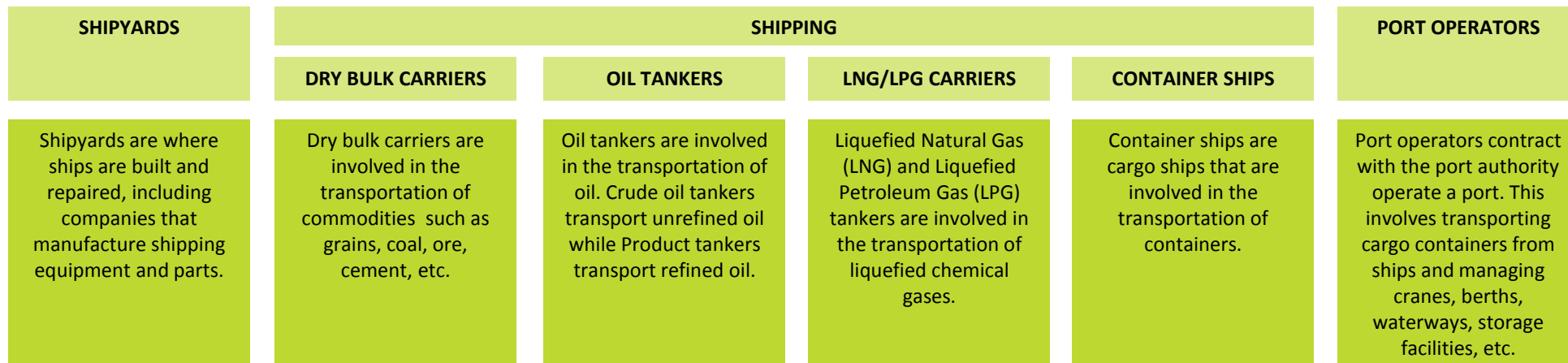
Maritime and Port Authority of Singapore (MPA) established in 1996 to develop Singapore as a premier global hub port and an international maritime centre



Source: MPA & EDB website, *Menon Business Economics (2015)

Maritime & Offshore Services Industry Chain

MARITIME



OFFSHORE SERVICES



Key Macro-economic Drivers within the industry chain of the sector

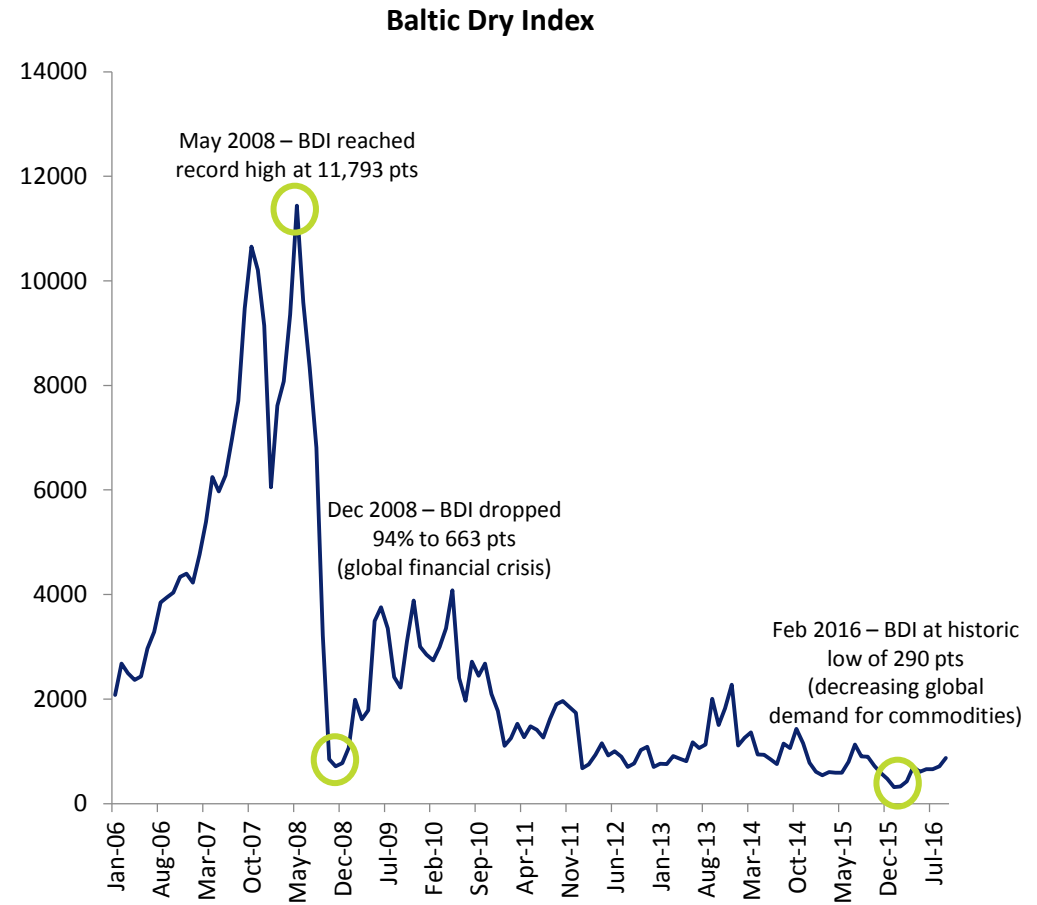
Dry Bulk Carriers

■ Drivers

- Global demand for commodities
- Global manufacturing output
- Supply of dry bulk vessels (inventory and new order book)

■ Current outlook

- Decreased global demand for commodities (e.g. steel and iron ore) and manufacturing output (e.g. China's industrial production slowdown) result in lower vessel demand
- Increased global production of vessels result in oversupply of vessels
- Dry bulk charter rates remain low due to increased supply and lower demand
- The Baltic Dry Index (BDI), which is used as a leading indicator of world trade and charts the cost of transporting commodities by sea, remains low



Source: Bloomberg (Sep 2016)

Key Macro-economic Drivers within the industry chain of the sector

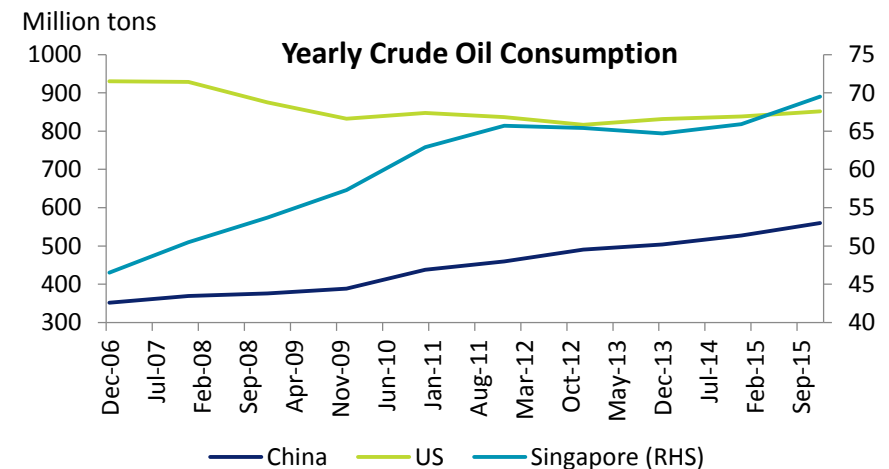
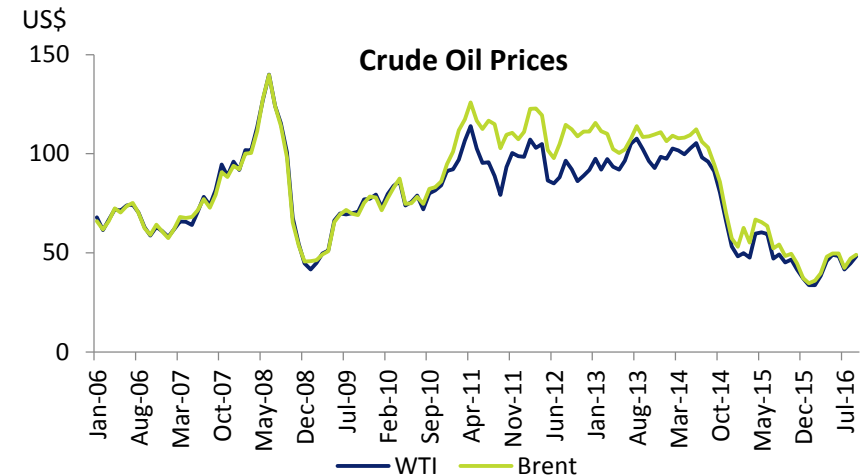
Oil Tankers & Offshore Services

■ Drivers

- Global oil production, refining and inventory levels
- Global demand for oil
- Oil prices
- Supply of oil tankers and offshore vessels (inventory and new order book)

■ Current outlook

- Global supply of oil has increased due to new oil supplies (e.g. US, Iraq, Iran), improved technologies to enhance crude oil production efficiency, and high refinery runs.
- Global demand for oil continues to improve with higher global oil consumption (e.g. US, China, Europe, India)
- The oversupply of oil was one of main reasons that drove oil prices low throughout 2015
- Tanker charter rates have remained high due to strong freight market and lower fleet supply as a result of increased supply and demand for oil
- OPEC in 28 Sep 2016 agreed to reduce global oil output to a range of 32.5-33.0 million barrels per day, the first agreement the cartel has reached since 2008, resulting in a 7.9% gain in price of crude oil in the month of Sep



Source: Bloomberg (Sep 2016)

Key Macro-economic Drivers within the industry chain of the sector

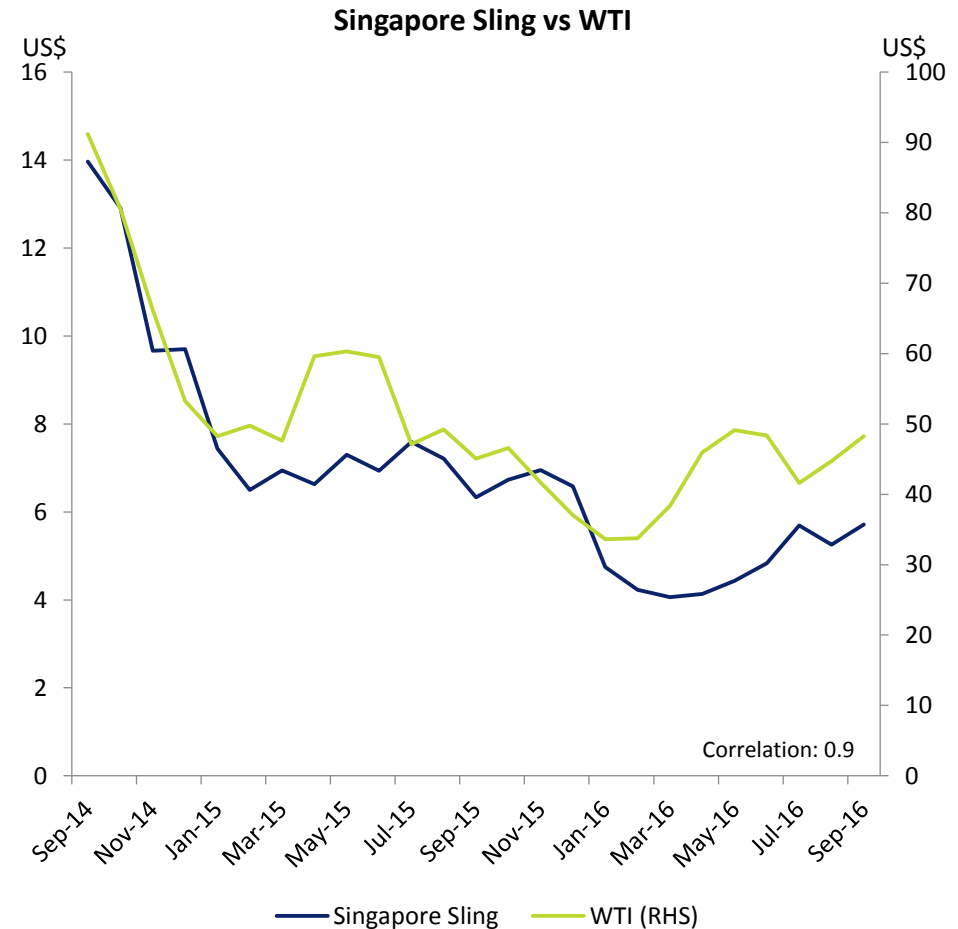
Liquefied Natural Gas (LNG) & Liquefied Petroleum Gas (LPG) Carriers

■ Drivers

- Global supply of LNG/LPG
- Global demand of LNG/LPG
- Oil prices
- Supply of LNG/LPG vessels (inventory and new order book)

■ Current outlook

- Asian demand for LNG has increased over the years with increasing demand from India and South Korea but an oversupply of LNG vessels, exceeding vessel demand have kept LNG charter rates low
- Increasing global LPG trade (mainly from US exports) and a tight LPG vessel supply have kept LPG charter rates profitable
- Oil and LNG prices have a strong correlation as shipments are generally price-indexed to crude oil
- The Singapore Sling, or SGX LNG Index Group, charts an index of spot prices for LNG traded in Asia



Source: Bloomberg (Sep 2016)

Key Macro-economic Drivers within the industry chain of the sector



Container Ships

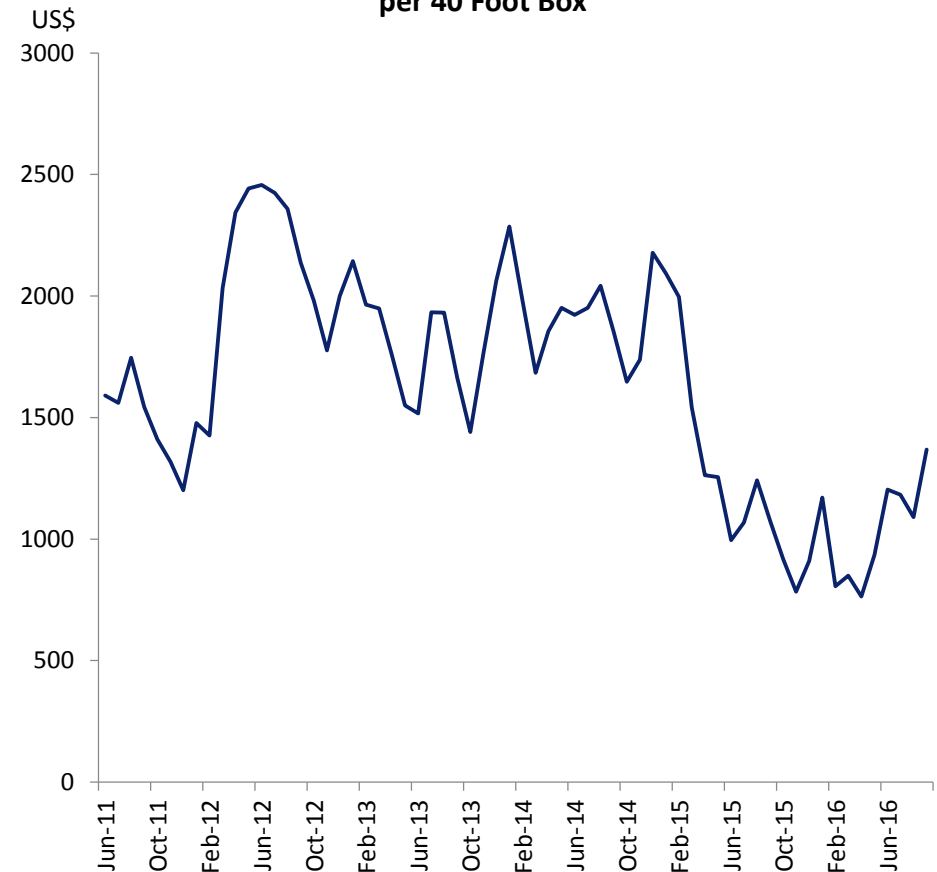
■ Drivers

- Global demand for trade and freight
- Supply and size of container vessels (inventory and new order book)

■ Current outlook

- Global demand for trade has decreased due to weak Europe-bound and intra-Asia trade
- Larger container ships are more able generate stronger demand and maintain profitable levels as they carry more containers as compared to smaller container ships
- Oversupply of containerships have increased idle capacity
- Weak demand for containerships and a growing fleet supply have caused freight rates to fall

WCI Composite Container Freight Benchmark Rate
per 40 Foot Box



Source: Bloomberg (Sep 2016)

Commonly used valuation methodologies for the sector

Price-to-earnings ratio (P/E)

- P/E derived by dividing stock price by earnings per share
- An overview of how much an investor is paying for a stock
- Indicates the number of years it would take to recoup an investment (assuming profits are constant)
- Forward P/E (using historical range or peer comparison) valuation most commonly used for companies with proven profit track records

Price-to-book ratio (P/B)

- P/B derived by dividing stock price by book value per share
- Shows an investor how much a stock is worth relative to its book value
- Typically used to value companies with high fixed costs and highly cyclical and/or volatile earnings
- Forward P/B mostly used either based on historical trading range or peer comparison

Enterprise Multiple (EV/EBITDA)

- EV/EBITDA is used to determine the value of a company, taking into account the company's debt, which other multiples such as P/E do not include
- Enterprise multiples vary depending on the industry and should be compared within the industry or industry average in general

Discounted Cash Flows (DCF)

- Present value of an investment (adjusted for time value of money). Sum of value of each period's free cashflow to the firm, discounted back to present
- Analysts typically use 10-year DCF models with a terminal growth rate assumption as a sanity check on valuation (P/E and P/B)

SGX's 59 Maritime & Offshore Services companies

MARITIME

SHIPYARDS			SHIPPING		PORT OPERATORS
<ul style="list-style-type: none"> ASL Marine AVIC International Beng Kuang Marine Cosco Corporation Dyna-Mac Holdings ES Group Holdings 	<ul style="list-style-type: none"> JES International * <i>Keppel Corporation</i> Nam Cheong Otto Marine Sembcorp Marine 	<ul style="list-style-type: none"> Triyards Holding Vard Holdings * <i>Yangzijiang Shipbuilding</i> First Ship Lease Trust Rickmers Maritime 	<ul style="list-style-type: none"> Mercator Lines Pan Ocean Co Pan-United Corp Samudera Shipping Seroja Investments Singapore Shipping 	<ul style="list-style-type: none"> Berlian Laju Tankers Courage Marine Manhattan Resources Marco Polo Marine 	<ul style="list-style-type: none"> * <i>Hutchison Port Holdings Trust</i>

OFFSHORE SERVICES

OFFSHORE SERVICES					
<ul style="list-style-type: none"> Atlantic Navigation Ausgroup CH Offshore Ltd Charisma Energy Civmec Ltd Ezion Holdings 	<ul style="list-style-type: none"> Ezra Holdings Falcon Energy Gaylin Holdings Heatec Jietong Hoe Leong IEV Holdings 	<ul style="list-style-type: none"> Jason Marine Jasper Investments Jaya Holdings Kim Heng KS Energy KTL Global 	<ul style="list-style-type: none"> Mermaid Maritime MTQ Nordic Group Pacific Radiance PACC Offshore SBI Offshore 	<ul style="list-style-type: none"> Sinwa Ltd Swiber Holdings Swissco Holdings XMH Holdings Vallianz Holdings Viking Offshore 	<ul style="list-style-type: none"> EMAS Offshore NauticAWT

* Indicates Straits Times Index (STI) stocks

A look at some sector leaders on SGX

Keppel Corporation

World's largest builder of offshore rigs



HPH
Global leader in the container port industry



**sembcorp
marine**

Global leader in marine & offshore engineering solutions



POSH
*Largest Asia-based and globally
Top 5 international operator of OSVs*



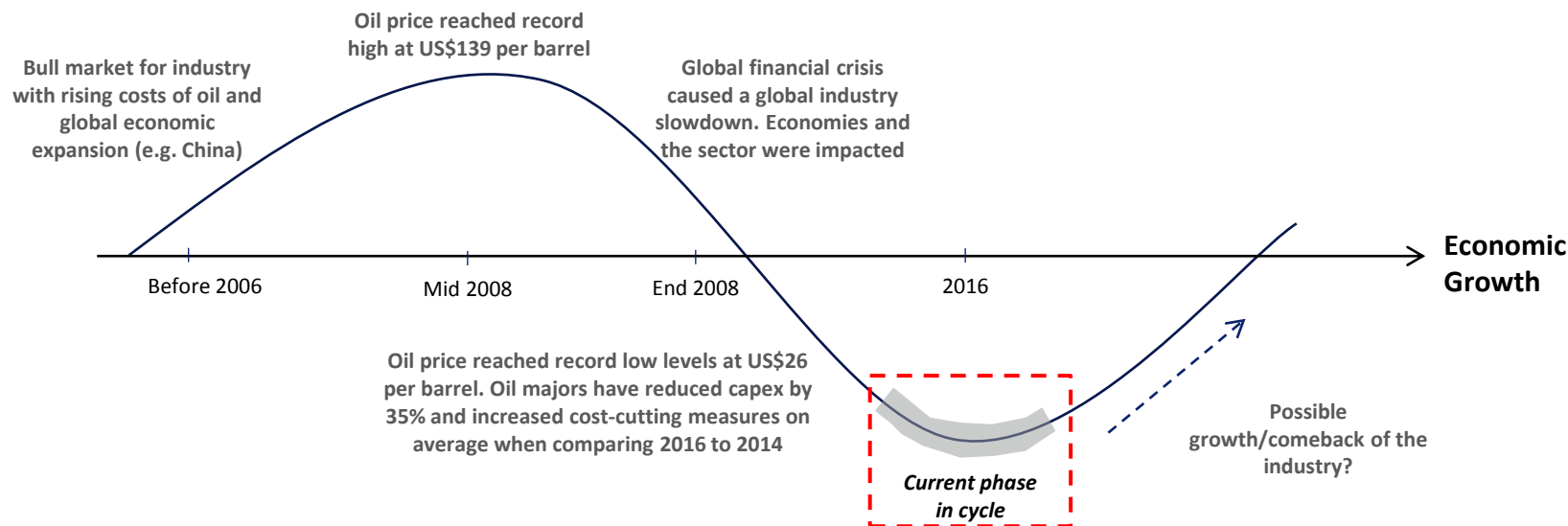
Yangzijiang Shipbuilding (Holdings) Ltd.

Largest private shipbuilder in China

Source: Company websites



Sector cycle and future of the industry...



- Some analyst sentiments / expectations of the sector
 - Expect to see increasing defaults and bankruptcies in the sector
 - Possible consolidations, mergers and acquisitions, debt restructuring, sale of businesses within the industry
 - Oil prices could improve towards end of 2016, inline with OPEC meeting in end Sep to curb oil output
 - WTI reached US\$49 per barrel in Sep

Source: Bloomberg (Sep 2016), DBS

Balance sheet highlights of Singapore's Maritime & Offshore Services stocks

- **There are 11 companies in the sector with net cash positions based on last reported quarterly financials**
 - The total net cash of these 11 companies represent approximately one-third of their combined market capitalisation
- **Net cash/net debt can be used as part of an analysis to determine a company's financial health**
 - Companies with strong balance sheets are generally better-positioned to survive a crisis, especially given uncertainties in the oil and gas industry

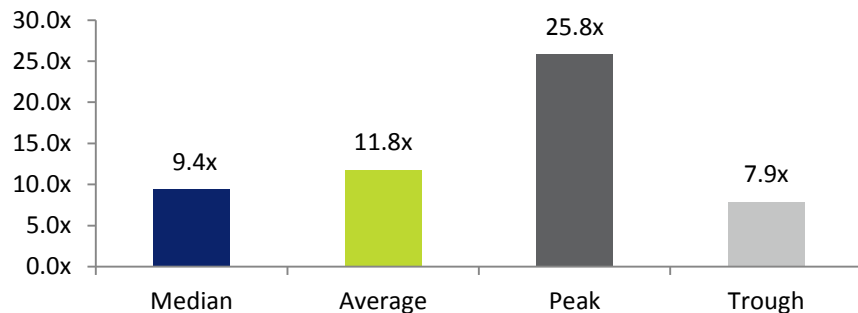
Companies	SGX Code	GICS Sub-Industry Name	Market Cap S\$M	Net cash S\$M	Net cash to equity
YANGZIJANG SHIPBUILDING	BS6	Machinery	2,874	1016.7	22%
MANHATTAN RESOURCES	L02	Marine	59	48.0	32%
DYNA-MAC HOLDINGS	NO4	Energy Equipment & Services	108	36.6	20%
CIVMEC	P9D	Construction & Engineering	163	26.5	16%
SBI OFFSHORE	5PL	Trading Companies & Distributor	37	24.2	74%
SINWA	5CN	Transportation Infrastructure	87	22.2	25%
JASON MARINE GROUP	5PF	Marine	14	14.0	64%
CH OFFSHORE	C13	Energy Equipment & Services	226	9.7	4%
ES GROUP HOLDINGS	5RC	Machinery	50	3.7	11%
JAYA HOLDINGS	BJE	Machinery	12	2.2	13%
JASPER INVESTMENTS	FQ7	Energy Equipment & Services	17	0.5	N.A.
Total			3,647	1,204.3	

Source: Bloomberg (Sep 2016)

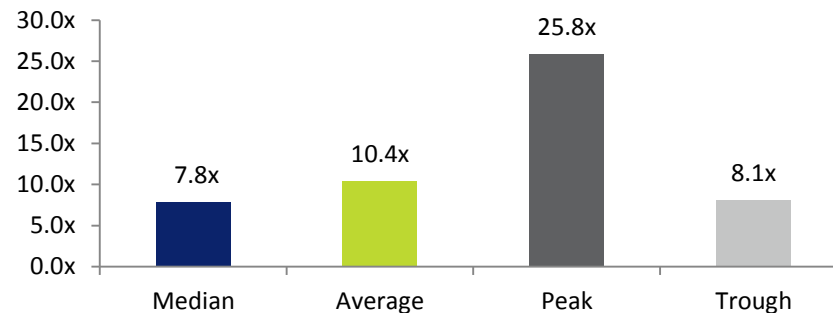
Net cash is defined by the subtraction of a company's total short and long-term debt by its total cash. If a company has more debt than cash, they are typically referred to as net debt.

Valuations of the Maritime & Offshore Services Sector

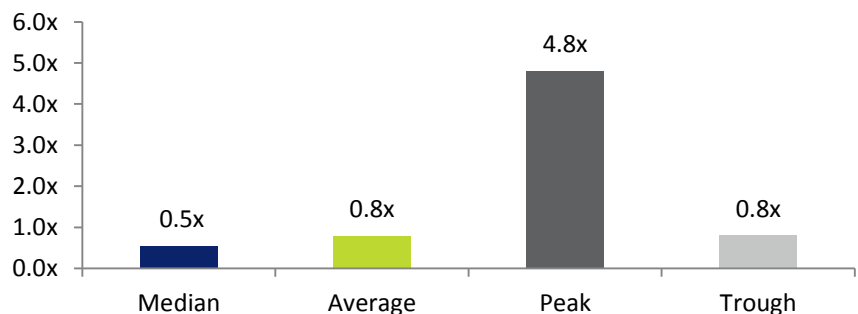
Trailing PE



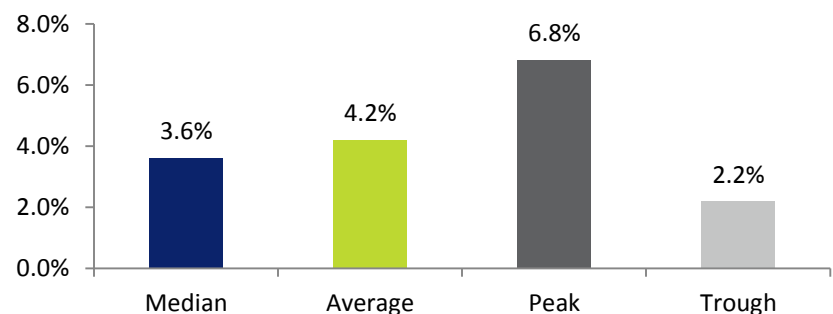
Trailing EV/EBITDA



Trailing PB



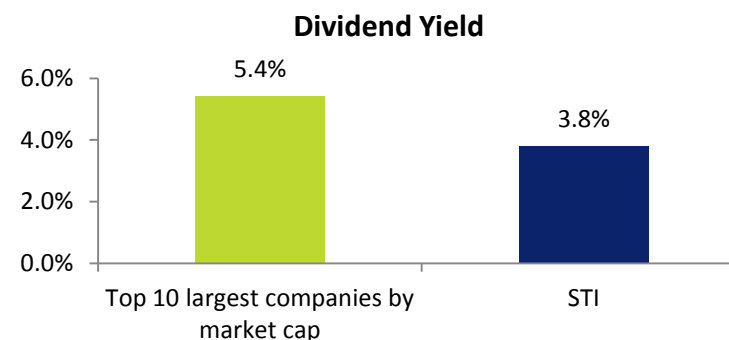
Dividend Yield



Source: Bloomberg (Sep 2016), 'Peak' and 'Trough' valuations of the sector are across a 10 year historical period

Top 10 Singapore Maritime & Offshore Services stocks with better dividend yields

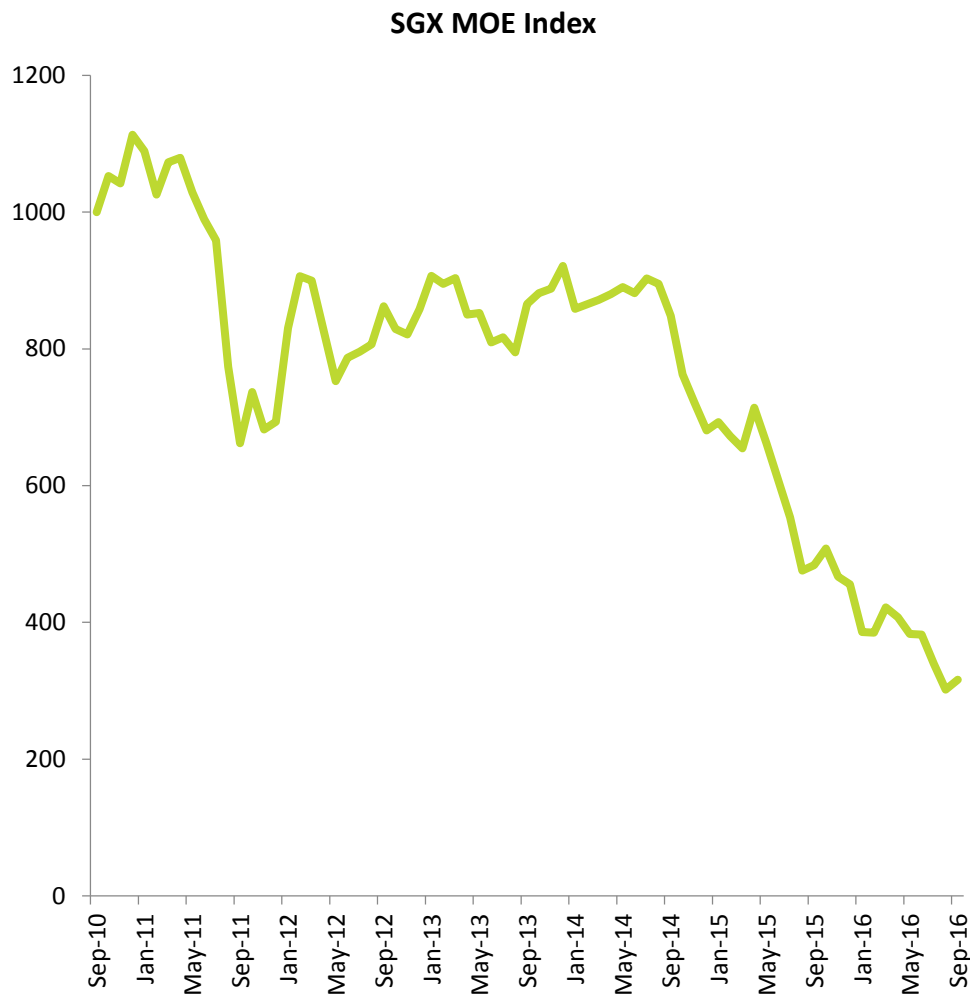
- The 10 largest capitalised Maritime & Offshore Services plays listed in Singapore are trading at trough Price-to-Book (PB) levels of 0.81x against historical average PB levels of 2.10x
- The top 10 largest capitalised companies have an average dividend yield of 5.4%, higher than the Straits Times Index's (STI) 3.8%



Singapore's 10 largest in sector (by market cap)	SGX Code	GICS Sub-Industry Name	Market Cap S\$M	Historical average trailing PB	Current trailing PB	Dividend Yield (%)	Net Debt to Equity [#]	ROE (%)
KEPPEL CORP	BN4	Industrial Conglomerates	9,784	2.23x	0.88x	5.6	60%	10.8
HUTCHISON PORT HOLDINGS TRUST	NS8U	Transportation Infrastructure	5,286	0.79x	0.72x	8.1	43%	4.6
YANGZIJIAN SHIPBUILDING	BS6	Machinery	2,874	3.00x	0.64x	6.0	-22%	7.4
SEMBCORP MARINE	S51	Machinery	2,727	3.54x	1.08x	2.7	111%	-15.8
COSCO CORP SINGAPORE	F83	Machinery	593	3.29x	0.82x	-	427%	-58.7
PACC OFFSHORE SERVICES HOLDINGS	U6C	Energy Equipment & Services	571	0.64x	0.40x	1.6	57%	-13.4
EZION HOLDINGS	5ME	Energy Equipment & Services	570	1.79x	0.28x	-	109%	0.2
PAN-UNITED CORP	P52	Trading Companies & Distributor	339	1.37x	1.29x	6.2	87%	5.8
CH OFFSHORE	C13	Energy Equipment & Services	226	1.38x	1.03x	7.8	-4%	2.8
VARD HOLDINGS	MS7	Machinery	182	1.56x	0.29x	-	370%	-14.9
Average:				2.10x*	0.81x*	5.4%		

Source: Bloomberg (Sep 2016) excluding secondary listings, *market cap weighted average calculation, [#]negative values show net cash position

SGX MOE Index

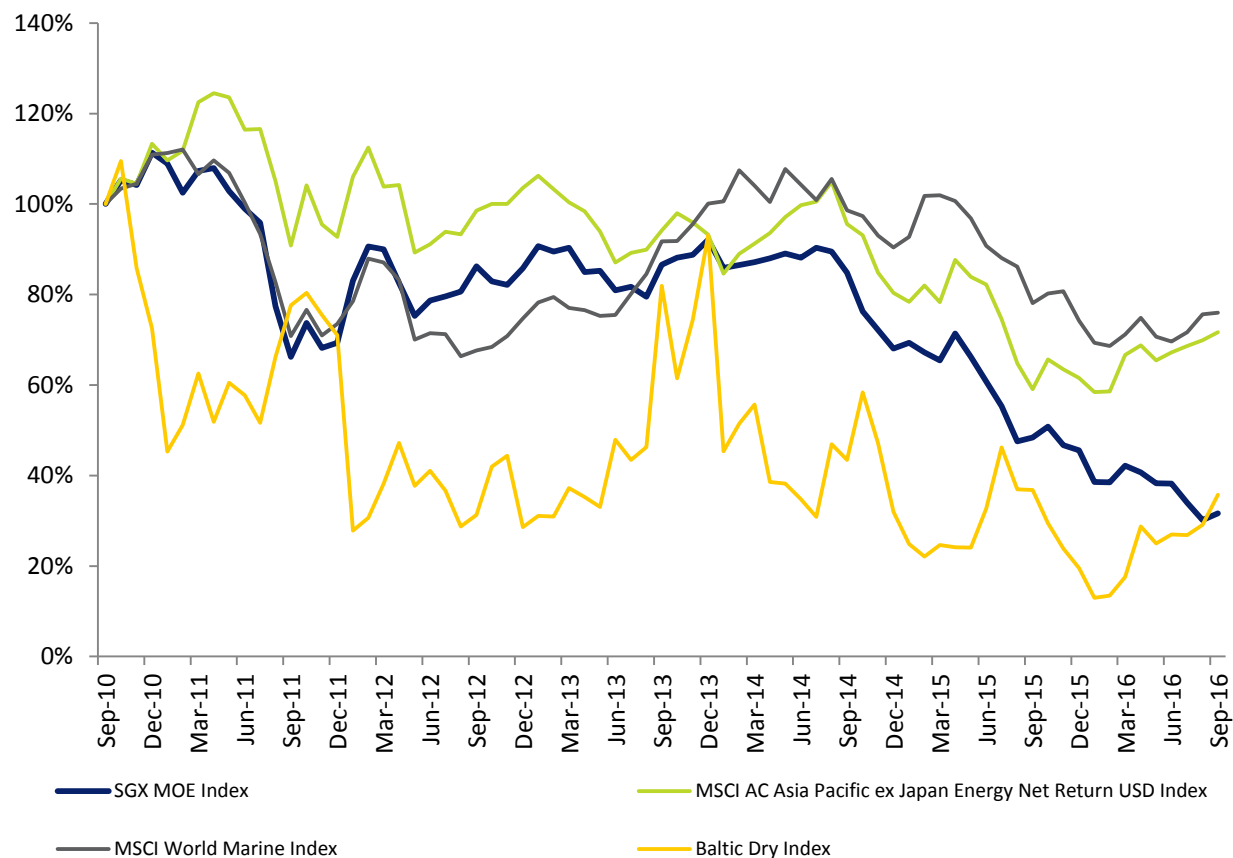


- The index measures the performance of listed maritime & offshore (MOE) companies in Singapore, based on free-float and is market capitalisation-weighted
- 19 member companies with a combined market capitalisation of about S\$27 billion
- Returns
 - In Sep 2016, the index averaged a total return of 4.9%
 - One-year and three-year annualised returns were negative 32.3% and negative 26.3% respectively
- Index inclusion criteria
 - New constituents must either: (i) derive at least 50% of sales revenue from the MOE industry; or (ii) maintain at least 50% of operating assets within the MOE industry.
 - Existing constituents must either: (i) derive at least 40% of sales revenue from the MOE industry; or (ii) maintain at least 40% of operating assets within the MOE industry.

Source: Bloomberg (Sep 2016), refer to appendix for full list of SGX MOE Index constituents

Returns of the SGX MOE Index against sector-related world indices

- The SGX MOE Index has been negatively impacted by global cyclical downturns
- The index sees similar trend to world shipping and energy related indices
 - Companies within the index are well diversified and across marine and shipping, and offshore services



Note: Chart is based off 100% starting at Sep 2010.

Source: Bloomberg (Sep 2016)

Summary

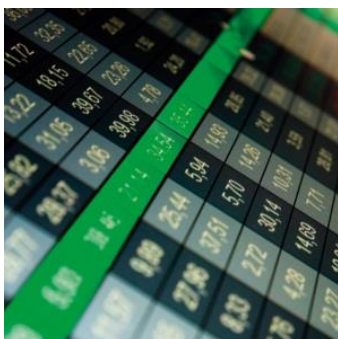
No. 1

Singapore is ranked most important maritime capital in the world



59

Companies within the sector, forming a combined market cap of over S\$28B



7%

Of Singapore's GDP is contributed by the sector



4.2%

Average dividend yield of the sector



0.8x

Largest 10 companies by market cap trading at trough levels

Appendix



Constituents of the SGX MOE Index

Name	Stock code	GICS Industry	Index Weight (%)	Market Cap (\$Mil)	Price (\$)	SDAV (\$\$,000)	PE	PB	Dividend Yield (%)
EZION HOLDINGS LTD	5ME	Energy Equipment & Services	11.7	570	0.28	7,554	-	0.3	-
KEPPEL CORP LTD *	BN4	Industrial Conglomerates	9.8	9,784	5.39	33,549	8.3	0.9	5.6
HUTCHISON PORT HOLDINGS TRUST *	NS8U	Transportation Infrastructure	9.7	5,286	0.61	7,256	15.4	0.7	8.1
SEMBCORP MARINE LTD	S51	Machinery	9.6	2,727	1.31	6,830	-	1.1	2.7
YANGZIJIANG SHIPBUILDING *	BS6	Machinery	9.2	2,874	0.75	11,206	8.9	0.6	6
SEMBCORP INDUSTRIES LTD *	U96	Industrial Conglomerates	8.9	4,628	2.59	16,369	13.7	0.8	3.9
EZRA HOLDINGS LTD	5DN	Energy Equipment & Services	8.4	168	0.06	5,677	-	0.2	-
FIRST SHIP LEASE TRUST	D8DU	Diversified Financial Services	6.2	115	-	108	-	-	-
VARD HOLDINGS LTD	MS7	Machinery	5.7	182	0.15	1,248	-	0.3	-
SINGAPORE SHIPPING CORP LTD	S19	Marine	4.5	114	0.26	50	7.4	1.2	3.8
NAM CHEONG LIMITED	N4E	Machinery	3.4	109	0.05	713	-	0.3	-
VALLIANZ HOLDINGS LTD	545	Energy Equipment & Services	2.5	68	0.02	671	2.6	0.2	3.6
AUSGROUP LTD	5GJ	Construction & Engineering	2.1	39	0.05	802	-	0.7	-
TRIYARDS HOLDINGS LTD	RC5	Machinery	2.1	88	0.27	111	2.7	0.3	3.7
NORDIC GROUP LTD	MR7	Construction & Engineering	1.7	89	0.23	87	7.5	1.4	5.3
RICKMERS MARITIME	B1ZU	Marine	1.6	35	0.04	246	-	0.1	-
PACIFIC RADIANCE LTD	T8V	Energy Equipment & Services	1.5	98	0.14	223	-	0.2	7.3
SWISSCO HOLDINGS LTD	ADP	Energy Equipment & Services	0.8	38	0.06	209	-	0.1	1.8
IEV HOLDINGS LTD	5TN	Energy Equipment & Services	0.5	15	0.05	515	39.2	0.4	2.3

* Indicates Straits Times Index (STI) stocks

Source: Bloomberg (Sep 2016)

Thank you

Singapore Exchange

Beijing ▪ Hong Kong ▪ London ▪ Mumbai ▪ Tokyo

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