mprc

malaysia petroleum resources corporation

ABOUT MPRC

Malaysia Petroleum Resources Corporation (MPRC) was established to advance the local oil and gas services and equipment (OGSE) industry and anchor on Malaysia's strategic geographical location to transform the country into a thriving regional hub for the sector.

To reinforce Malaysia's appeal as a regional hub, MPRC provides trade and investment facilitation services to attract international players to establish their regional bases in the country. That includes leveraging on partnerships with fellow Government agencies and international counterparts to promote Malaysian OGSE capabilities globally.

To stimulate competitiveness and nurture long-term resilience among Malaysian OGSE players, MPRC focuses on industry development initiatives covering access to finance, human capital development, market access and internationalisation, and technology and innovation.

Formed in April 2011 as an agency reporting to the Prime Minister's Department, MPRC provides policy recommendations to the Government to promote the globalisation of local OGSE capabilities in the upstream, midstream and downstream sectors.

For more information, please visit www.mprc.gov.my

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ABOUT MPRC100

MPRC100 is a list of 100 OGSE companies in Malaysia, ranked based on revenue. It further highlights the growth of these companies and provides a point of reference for industry players, potential investors and other stakeholders.

Within this document, we have mapped segments that MPRC100 companies operate in. In addition, our commentary provides an aggregated view of the OGSE industry in Malaysia, as well as supplemental analysis.

In this year's edition, the segment-based analysis has been aligned with the recently released PETRONAS Activity Outlook 2018-2020.

OUR APPROACH

Our study was based on PETRONAS-licensed companies as at September 2017, whose primary businesses are related to the OGSE sector. We have also included listed companies with licensed subsidiaries/associates. Companies were assessed based on their consolidated financial results for financial year (FY) 2016. We had an initial population of 4,144 companies. Our primary source of data is Companies Commission of Malaysia's (SSM) Corporate and Business Information Data (CBID) database, from which we obtained financial records of these companies. Our analyses and studies were based on data available as of October 2017. After applying our methodology (see page 26 and 27), we arrived at a final population of 1,843 OGSE companies. These companies were then further categorised into the top MPRC100 companies, 184 non-MPRC100 Mid-Tiers and 1,559 Small and Medium-sized Enterprises (SMEs).

MOVEMENT

Major rank climbers within the top-100 list compared to the previous edition include Berlian McDermott Sdn. Bhd., Petrofac E&C Sdn. Bhd., Hyperwave Systems Engineering Sdn. Bhd., Kontena Nasional Global Logistics Sdn. Bhd. and CMC Engineering Sdn. Bhd.

New entrants into MPRC100 include Onesubsea Malaysia Systems Sdn. Bhd., Ocean Vantage Engineering Sdn. Bhd., Fugro Geodetic (Malaysia) Sdn. Bhd., Anticorrosion Protective Systems (M) Sdn. Bhd., E&P O&M Services Sdn. Bhd., Pioneer Engineering Sdn. Bhd., Nautical Returns Sdn. Bhd., Cekap Technical Services Sdn. Bhd. and HSE Resources Sdn. Bhd.

In this edition, we have included OceanMight Sdn. Bhd. and Boustead Penang Shipyard Sdn. Bhd. in place of their respective parent companies, KKB Engineering Bhd. and Boustead Heavy Industries Corporation Bhd. This is because the latter two companies' revenue contribution from OGSE activities have been decreasing, and thus we have excluded them from the final population.

MESSAGE FROM THE CEO

RETAINING VALUE & 'MUSCLING UP' FOR THE FUTURE

The global Oil and Gas industry is experiencing one of its toughest adjustment cycles as oil prices normalise following a period of unnatural highs between 2008 and 2014.

The scaling down of exploration and development projects by global oil companies between 2014 and 2016 created a ripple effect across the value chain. OGSE players especially took a hard hit from upstream project reductions, leading to excess capacity in some segments. Consequently, this triggered a cash flow crunch for companies as evident in the financial results of companies featured in this year's edition of MPRC100.

The downturn created a situation in which companies had to enter a survival mode by quickly shedding excesses and reducing costs. Companies that are invested for the long-haul took tough decisions early and restructured business models and balance sheets. Meanwhile, some companies that sought to cash-in on the 'boom' period exited during the intense adjustment phase.

MPRC100 FY2016 reveals that Malaysian companies demonstrated financial resilience compared to regional peers. Yet, we recognise that recovery remains challenging as oil prices are unlikely to revert to the heady days of USD100/bbl. Accepting the "real normal" of lower oil prices, industry players must therefore find new and innovative ways to maintain productivity at lower costs.

To muscle up for the long term, Malaysian companies must embrace deeper structural reforms. The future will be kinder to companies that provide economies of scale and integrated solutions, own technologies, employ quality talent, and possess export capabilities. These measures will better equip local OGSE companies in transitioning towards greater competitiveness in an increasingly open market.

In such an environment, information transparency is key and MPRC continues to champion this cause through our work. The annual MPRC100 publication is one such endeavour to highlight the financial performance of our top OGSE companies.

The recent release of the PETRONAS Activity Outlook 2018-2020 is another positive step to empower relevant actors with crucial industry information. It provides clarity on future demand and reduces risk premiums attached to investing amid volatilities. We expect this report to become a regular feature of our market.

Recognising the tough landscape for the Malaysian OGSE industry, MPRC continues to work with fellow Government agencies such as the Economic Planning Unit and Bank Negara Malaysia, among others, to ensure more holistic and effective problem-solving. We also work collaboratively with PETRONAS, industry trade associations and OGSE companies to address challenges in an open and transparent manner.

These collective efforts are vital in realising the Government's vision to enhance Malaysia's position as the top Asia Pacific OGSE hub.

> *"Accepting the "real normal" of lower oil prices, industry players must find new and innovative ways to maintain productivity at lower costs*

DATUK SHAHROL HALMI
President / Chief Executive Officer
Malaysia Petroleum Resources Corporation

MPRC100 RANKINGS & CATEGORIES

	No.	Company Name	Revenue (RM mil)			PBT Margin (%)	TFA (RM mil)	Geological / Reservoir	Geophysical Services	Field Development / Reservoir Management Services	Project Management Consultancy	Engineering Consultancy	HSE Consultancy	Geophysical Consultancy	Production / Upstream Consultancy	Geomatics Services	QA / QC Services	Building Design	Major Platform Fabricator	Minor Platform Fabricator	Onshore Construction	Onshore Tank Facilities	Offshore Constructions	Offshore Support Vessel Contractor	Pipeline Installation Contractor	FSO / FPSO Owner / Operator / Contractor	Subsea
			FY2016	Rank 2016	Rank 2015	FY2016	FY2016	EXPLORATION			DEVELOPMENT																
★	1	SAPURA ENERGY BERHAD	10,184.0	1	2	-7.0	29,663.6		●							●			●	●	●		●	●	●		
★	2	MISC BERHAD	9,597.2	2	1	29.3	44,163.2																				
★	3	DIALOG GROUP BERHAD	2,534.5	3	3	14.5	2,345.7		●	●		●			●		●		●	●	●	●	●	●	●		
★	4	MUHIBBAH ENGINEERING (M) BHD.	1,918.6	4	7	9.5	1,286.3				●								●	●	●	●	●			●	
★	5	TECHNIP GEOPRODUCTION (M) SDN. BHD.	1,667.0	5	NA	8.0	114.2																●				
	6	KNM GROUP BERHAD	1,646.8	6	6	-19.2	3,162.9				●								●				●		●		
★	7	SERBA DINAMIK HOLDINGS BERHAD	1,408.6	7	NA	11.8	507.2									●			●	●			●				
★	8	BUMI ARMADA BERHAD	1,317.4	8	4	-147.6	17,468.0					●											●	●		●	
★	9	WAH SEONG CORPORATION BERHAD	1,276.6	9	5	-17.7	1,463.3																		●		
★	10	SCOMI ENERGY SERVICES BHD	1,208.8	10	8	1.0	739.0				●																
★	11	TOYO ENGINEERING & CONSTRUCTION SDN. BHD.	1,202.0	11	29	2.8	39.0				●								●								
★	12	WESTSTAR AVIATION SERVICES SDN. BHD.	717.9	12	NA	17.0	1,516.7																				
★	13	DAYANG ENTERPRISE HOLDINGS BHD.	708.2	13	14	11.1	2,555.3													●			●	●			
★	14	BARAKAH OFFSHORE PETROLEUM BERHAD	622.6	14	22	2.6	400.6				●	●							●	●			●		●		
★	15	DELEUM BERHAD	608.7	15	19	8.2	266.2								●			●		●	●		●		●		
	16	FMC WELLHEAD EQUIPMENT SDN. BHD.	605.2	16	NA	19.7	132.9					●			●												●
	17	E.A. TECHNIQUE (M) BERHAD	591.7	17	23	3.6	715.0																	●		●	
★	18	PANTECH GROUP HOLDINGS BERHAD	513.3	18	24	10.3	252.2																				
★	19	UZMA BERHAD	471.1	19	26	10.7	724.0	●	●	●		●		●	●	●							●			●	
	20	SCHLUMBERGER WTA (MALAYSIA) SDN. BHD.	454.5	20	10	-1.9	113.1	●																			
★	21	INTEGRATED PETROLEUM SERVICES SDN. BHD.	451.9	21	11	1.1	3.5				●	●	●		●		●							●			
	22	ONESUBSEA MALAYSIA SYSTEMS SDN. BHD.	434.7	22	NA	15.8	221.4					●			●												●
	23	YINSON HOLDINGS BERHAD	424.4	23	31	69.0	3,629.8					●														●	
	24	DAYA MATERIALS BERHAD	399.2	24	16	-50.3	657.3												●	●	●	●	●		●		
	25	BERLIAN MCDERMOTT SDN. BHD.	395.8	25	96	-18.6	201.0																●				
★	26	PETROFAC E&C SDN. BHD.	378.5	26	52	6.5	1.2				●	●	●		●								●			●	
★	27	ASIAFLEX PRODUCTS SDN. BHD.	376.5	27	25	14.1	766.8																				
	28	DESTINI BERHAD.	354.8	28	41	13.0	308.6																				
★	29	PETRA ENERGY BHD.	332.1	29	17	-37.5	451.1				●				●				●	●			●	●			
★	30	IEV (MALAYSIA) SDN. BHD.	323.8	30	210	-0.6	0.4																●				
★	31	UMW OIL & GAS CORPORATION BERHAD	321.1	31	13	-367.9	5,644.8																				
	32	MARINE & GENERAL BERHAD	303.4	32	21	-42.5	2,288.4																	●			
	33	SANKYU (MALAYSIA) SDN. BHD.	284.5	33	40	8.1	74.5																				
★	34	NAIM ENGINEERING SDN BHD	266.5	34	32	-7.1	131.8												●		●		●		●		
	35	OCEAN VANTAGE ENGINEERING SDN. BHD.	260.9	35	NA	1.5	5.1				●		●							●	●		●				
	36	DOWELL SCHLUMBERGER (MALAYSIA) SDN. BHD.	259.5	36	20	-1.7	199.2			●	●	●	●		●												
	37	SCHLUMBERGER WELLOG (M) SDN. BHD.	258.6	37	36	9.7	13.1		●																		
	38	EASTERN PACIFIC INDUSTRIAL CORPORATION BERHAD	256.5	38	35	14.7	845.1												●	●			●		●		
	39	STRATEQ SDN. BHD.	251.0	39	NA	11.0	166.5																				
★	40	SOLAR ALERT SDN. BHD.	242.1	40	NA	25.5	40.8						●						●								
★	41	HYPERWAVE SYSTEMS ENGINEERING SDN. BHD.	236.6	41	74	3.0	9.0				●									●	●		●				
★	42	ALAM MARITIM RESOURCES BHD	229.5	42	34	-64.9	715.7																●	●			
★	43	ICON OFFSHORE BERHAD.	226.9	43	42	-66.0	1,246.0																	●			
★	44	ASIAN SUPPLY BASE SDN. BHD.	214.3	44	NA	18.2	383.6																	●			
★	45	EMERSON PROCESS MANAGEMENT (MALAYSIA) SDN. BHD.	205.4	45	47	14.2	4.3				●										●						
★	46	PETRONNIC SDN. BHD.	199.2	46	NA	2.1	1.4				●		●								●						
★	47	TRANSWATER API SDN. BHD.	189.8	47	44	-3.3	18.5				●	●	●						●	●	●		●				
	48	KUALITI ALAM SDN. BHD.	188.3	48	51	20.9	188.8														●						
	49	HI-ESSENCE CABLE SDN. BHD.	185.1	49	58	3.7	106.6																				
	50	SHOREFIELD SDN. BHD.	181.2	50	68	2.1	7.8																				

★ Note: These are the MPRC registered companies whose detailed information is published in MPRC's Malaysia OGSE Catalogue

Drilling Rigs	Drilling Services	Well Services / Well Completions	Lab Services	Maintenance - Piping & Valve / Structural	Maintenance - E & I	Maintenance - Mechanical (Rotating)	Maintenance - Mechanical (Static)	Maintenance - Pipeline	Maintenance - Safety Equipment	Minor Fabrication & Repair	Underwater Services	Asset Integrity Services	Health, Safety, Environment (HSE) & Security	Manpower Services	Environmental Clean-Up / Waste Disposal	Marine Vessel Services	Helicopter / Air Transportation Services	Land Transportation Services	Warehousing & Storage Services	Cargo Tankers	Decommissioning Contractor	Chemicals Supply and Services	Subsea	Drilling Equipment	Electrical	HVAC	ICT	Instrumentation	Insulation	Marine System	Mechanical	Pipelines	Riser	Rotating Equipments	Safety System	Structural	Transportations	Valves	Warehouse Equipment	Workshop Tools
			PRODUCTION																		DECOM	PRODUCTS																		
B		B		B	B	B		B		B	B	B		B		B					B		B								G			G						G
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					B																																			

Group	Services Mode of Operation	Products Mode of Operation
B	Self-Operated, Rig Owner-Operator, Vessel Owner-Operator	Manufacturer, Fabricator
G	Agent	Dealer, Buying Arm

(more on next page)

MPRC100 RANKINGS & CATEGORIES (cont'd)

★	No.	Company Name	Revenue (RM mil) FY2016	Revenue Rank 2016	Revenue Rank 2015	PBT Margin (%) FY2016	TFA (RM mil) FY2016	Geological / Reservoir	Geophysical Services	Field Development / Reservoir Management Services	Project Management Consultancy	Engineering Consultancy	HSE Consultancy	Geophysical Consultancy	Production / Upstream Consultancy	Geomatics Services	QA / QC Services	Building Design	Major Platform Fabricator	Minor Platform Fabricator	Onshore Construction	Onshore Tank Facilities	Offshore Constructions	Offshore Support Vessel Contractor	Pipeline Installation Contractor	FSO / FPSO Owner / Operator / Contractor	Subsea
								EXPLORATION			DEVELOPMENT																
★	51	AECOM PERUNDING SDN. BHD.	179.8	51	55	9.3	2.5					●	●														
★	52	R.M. LEOPAD SDN. BHD.	177.7	52	30	19.9	35.6														●	●	●	●	●	●	
	53	FUGRO GEODETIC (MALAYSIA) SDN. BHD.	175.9	53	NA	-12.2	4.3									●					●		●	●			
	54	MHS AVIATION BERHAD	173.8	54	37	-33.3	436.6																				
★	55	NAM CHEONG DOCKYARD SDN. BHD.	170.4	55	12	-25.6	560.5																	●			
	56	PETROLEUM GEO-SERVICES EXPLORATION (M) SDN. BHD.	168.5	56	48	-6.5	8.4		●																		
	57	YOKOGAWA KONTROL (MALAYSIA) SDN. BHD.	162.6	57	65	8.2	3.2			●										●	●						
	58	KONTENA NASIONAL GLOBAL LOGISTICS SDN. BHD.	162.6	58	87	12.9	0.2																				
★	59	BOUSTEAD PENANG SHIPYARD SDN. BHD.	162.5	59	NA	80.2	148.5												●								
	60	ANTICORROSION PROTECTIVE SYSTEMS (M) SDN. BHD.	159.0	60	258	15.5	3.4																				
	61	AWAN INSPIRASI SDN. BHD.	154.8	61	NA	-11.3	9.8																				
★	62	E&P O&M SERVICES SDN. BHD.	149.5	62	NA	23.2	1.2																			●	
	63	TUMPUAN MEGAH DEVELOPMENT SDN. BHD.	148.7	63	60	1.0	8.4																	●			
	64	WEATHERFORD (MALAYSIA) SDN. BHD.	146.8	64	NA	-35.9	27.3			●	●	●			●												
	65	DYNAC SDN. BHD.	146.3	65	49	3.9	167.3				●	●															
	66	VELOSI (M) SDN. BERHAD	138.8	66	53	1.2	3.0				●	●	●			●	●				●						
	67	BELATI OILFIELD SDN. BHD.	137.6	67	50	3.5	0.0																				
	68	WOOD GROUP ENGINEERING SDN. BHD.	134.6	68	114	1.3	0.0					●	●														
	69	CMC ENGINEERING SDN.BHD.	133.6	69	94	12.2	26.4																				
	70	PRESTARIANG SYSTEMS SDN. BHD.	125.2	70	75	15.7	16.0																				
★	71	BUREAU VERITAS (M) SDN. BHD.	124.6	71	69	13.4	11.9					●	●														
★	72	CARIMIN PETROLEUM BERHAD	123.5	72	56	5.1	151.5		●		●									●	●		●	●	●		
	73	BJ SERVICES (M) SDN. BHD.	122.0	73	NA	-87.3	36.7																●				
	74	GRADE ONE MARINE SHIPYARD SDN. BHD.	121.3	74	63	5.9	281.5																	●			
	75	CAMERON (MALAYSIA) SDN. BHD.	115.8	75	59	32.0	12.7																				
	76	INTEGRATED LOGISTICS SOLUTIONS SDN. BHD.	115.2	76	76	6.1	211.8																				
	77	WZS MISI SETIA SDN. BHD.	113.9	77	54	3.3	22.6												●	●	●	●	●		●		
	78	ORKIM MARINE SDN. BHD.	113.6	78	90	4.7	55.2																				
	79	OCEANCARE CORPORATION SDN. BHD.	112.2	79	71	2.3	11.0																				
	80	WELFIELD SERVICES SDN. BHD.	110.3	80	117	2.6	10.5														●		●				
★	81	OCEANMIGHT SDN. BHD.	109.7	81	292	-0.4	4.2												●								
	82	TRACTORS PETROLEUM SERVICES SDN. BHD.	107.4	82	77	10.0	3.7				●																
	83	SBN INDUSTRIES SDN. BHD.	107.1	83	99	1.1	6.6																				
★	84	TRISYSTEMS ENGINEERING SDN. BHD.	100.9	84	67	25.0	9.6					●			●						●		●				
	85	FPSO TECH SDN. BHD.	98.7	85	111	-7.3	198.0																			●	
★	86	PIONEER ENGINEERING SDN. BHD.	93.9	86	NA	6.9	22.6				●		●				●		●	●	●		●		●		
	87	BAHTERA SRI KANDI SDN. BHD.	92.4	87	NA	2.6	32.8																	●			
	88	NAUTICAL RETURNS SDN. BHD.	91.8	88	NA	-39.5	7.9																	●			
	89	ETD MAKMUR (M) SDN. BHD.	90.5	89	70	-5.4	15.1					●				●				●	●						●
★	90	TECHNIP CONSULTANT (M) SDN. BHD.	89.9	90	78	6.2	20.4				●	●	●		●												
★	91	CEKAP TECHNICAL SERVICES SDN. BHD.	88.2	91	NA	1.2	0.6	●	●	●	●	●	●	●	●	●	●			●			●				
	92	AJANG SHIPPING SDN. BHD.	87.6	92	81	22.9	254.3																	●			
	93	EP ENGINEERING SDN. BHD.	87.3	93	64	1.5	0.7	●	●		●	●	●	●	●												
	94	BREDERO SHAW (MALAYSIA) SDN. BHD.	87.0	94	66	-1.3	34.9																		●		
	95	INDKOM ENGINEERING SDN. BHD.	86.6	95	121	26.3	15.0																				
	96	SCIENCE-TECH SOLUTION SDN. BHD.	86.1	96	NA	1.6	9.8													●			●		●		
★	97	HANDAL RESOURCES BERHAD	83.1	97	73	-13.7	42.8														●						
	98	T7 GLOBAL BERHAD	83.0	98	135	6.2	48.2				●	●	●		●	●					●		●	●			
	99	HSE RESOURCES SDN. BHD.	82.6	99	NA	1.8	23.0				●								●	●	●		●		●		
★	100	DIMENSION BID (M) SDN. BHD.	82.3	100	88	-21.4	57.4	●	●																		
		TOTAL	54,004.0				129,063.1	5	9	6	25	23	16	3	15	8	5	1	18	21	25	5	34	21	16	9	3

★ Note: These are the MPRC registered companies whose detailed information is published in MPRC's Malaysia OGSE Catalogue

Drilling Rigs	Drilling Services	Well Services / Well Completions	Lab Services	Maintenance - Piping & Valve / Structural	Maintenance - E & I	Maintenance - Mechanical (Rotating)	Maintenance - Mechanical (Static)	Maintenance - Pipeline	Maintenance - Safety Equipment	Minor Fabrication & Repair	Underwater Services	Asset Integrity Services	Health, Safety, Environment (HSE) & Security	Manpower Services	Environmental Clean-Up / Waste Disposal	Marine Vessel Services	Helicopter / Air Transportation Services	Land Transportation Services	Warehousing & Storage Services	Cargo Tankers	Decommissioning Contractor	Chemicals Supply and Services	Subsea	Drilling Equipment	Electrical	HVAC	ICT	Instrumentation	Insulation	Marine System	Mechanical	Pipelines	Riser	Rotating Equipments	Safety System	Structural	Transportations	Valves	Warehouse Equipment	Workshop Tools
			PRODUCTION																		DECOM	PRODUCTS																		
					🔵	🔵				🔵		🔵	🔵	🔵		🔵									🟢				🟢	🟢	🟢	🟢		🟢		🟢		🟢		
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Group	Services Mode of Operation	Products Mode of Operation
🔵	Self-Operated, Rig Owner-Operator, Vessel Owner-Operator	Manufacturer, Fabricator
🟢	Agent	Dealer, Buying Arm

WHERE DO MPRC100 COMPANIES OPERATE

To provide readers with a better understanding of the Oil & Gas services and products supply chain, Figure 1 below illustrates the segments that MPRC100 companies operate in.

Broadly, the services supply chain can be categorised into Exploration, Development, Production and Decommissioning segments, corresponding with the various phases along the life-cycle of a project. The Development phase typically lasts between 1-4 years and 15-20 years for the Production phase.

Based on the updated PETRONAS' Standard Work & Equipment Categories (SWEC) and MPRC analysis, the Oil & Gas services and products supply chain covers 42 services and 19 product sub-segments.

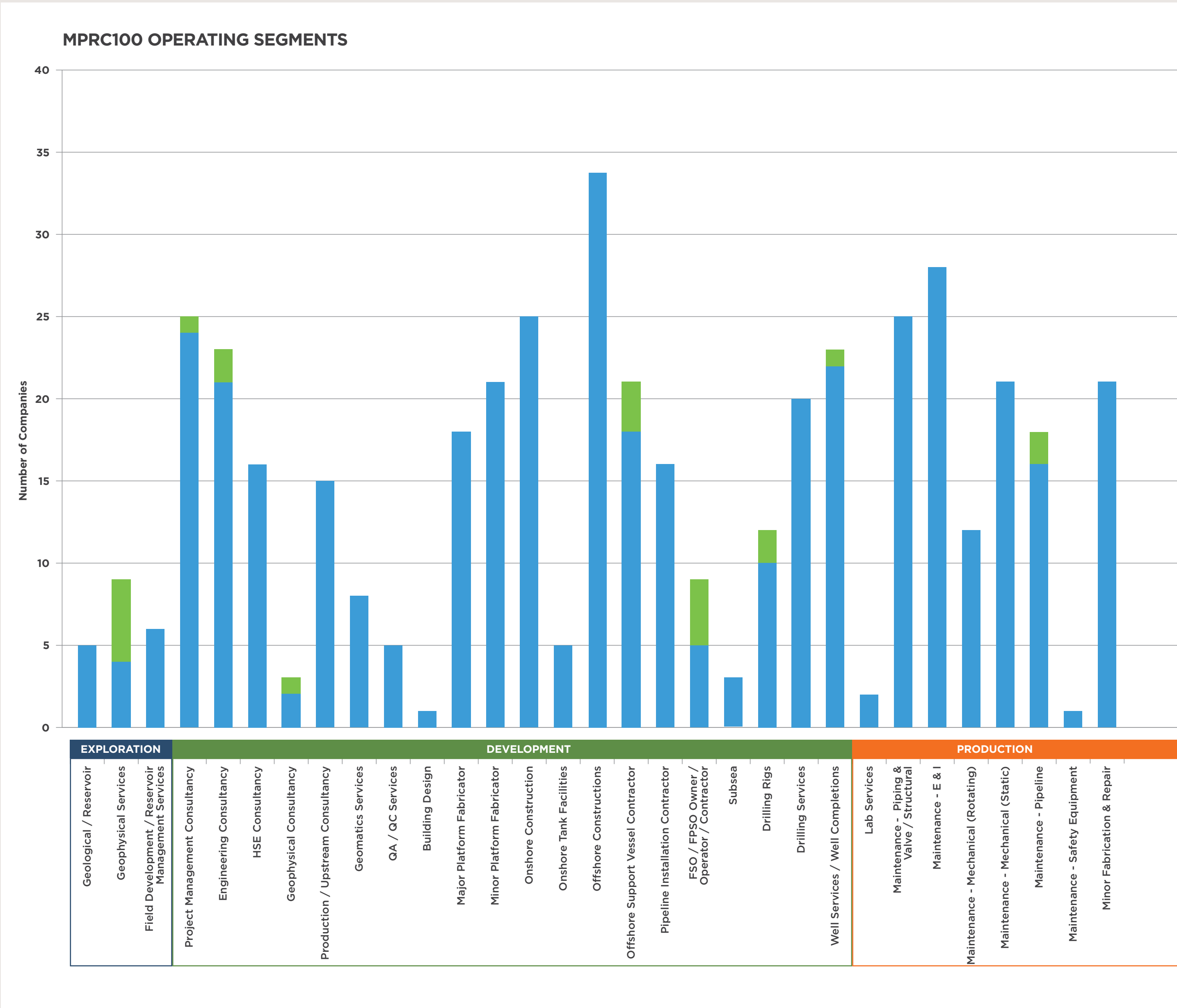


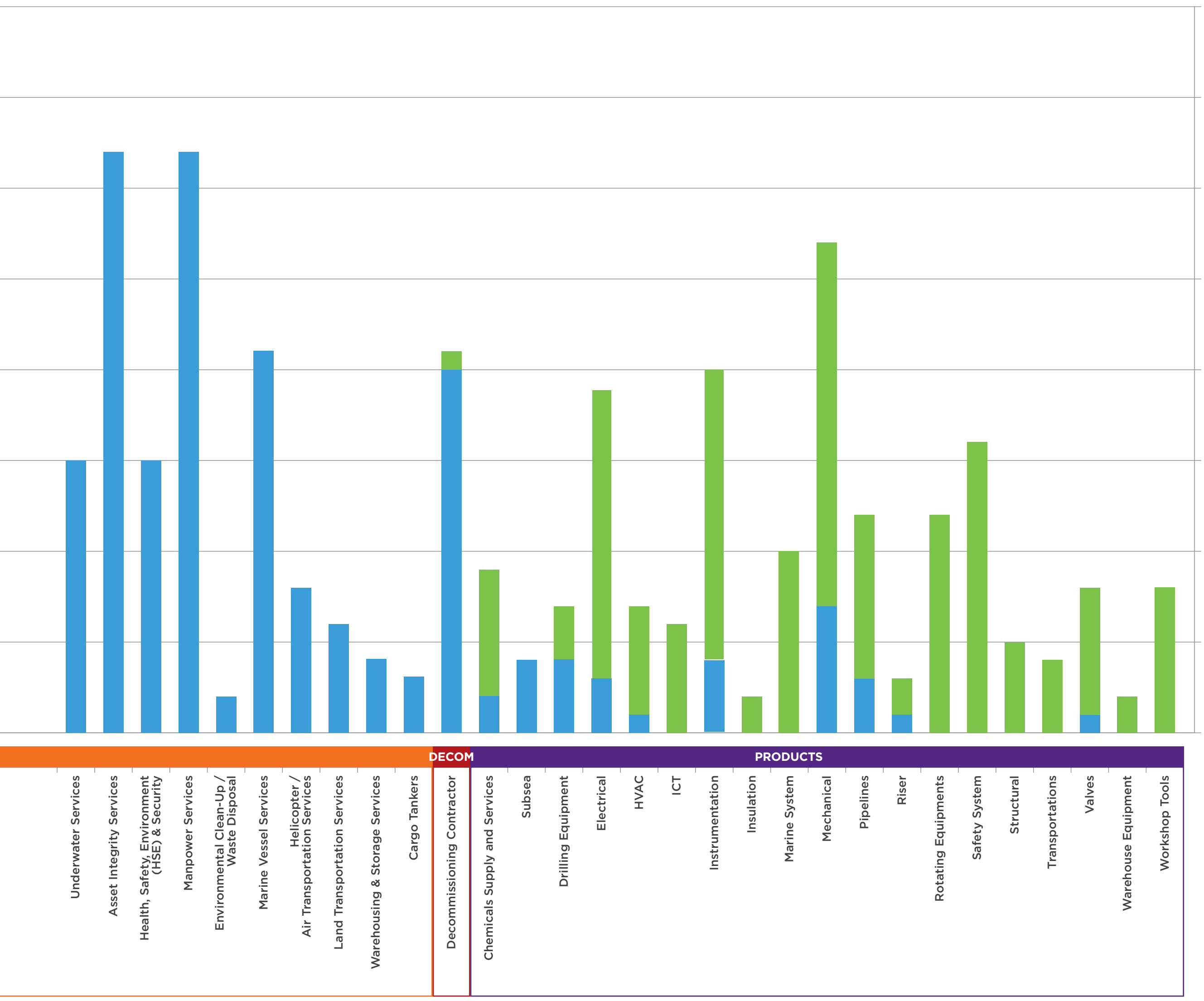
Figure 1

The table below reflects the degree of value-adding activities carried out by MPRC100 companies:

Group	Services Mode of Operation	Products Mode of Operation
● (blue)	Self-Operated, Rig Owner-Operator, Vessel Owner-Operator	Manufacturer, Fabricator
● (green)	Agent	Dealer, Buying Arm

Note that since the last MPRC100 edition, PETRONAS has restructured the mode of operations for SWEC licenses, resulting in the removal of the group covering Rig & Vessel Operator, Assembler, Chemical Blender, Packager and System Integrator.

Figure 1 shows that MPRC100 companies operate across all segments of the Oil & Gas services and products supply chain. Companies involved in the services segment continue to exhibit a higher degree of value-added activities.



Source: PETRONAS, MPRC Analysis

OIL & GAS INDUSTRY: EMERGING OPPORTUNITIES

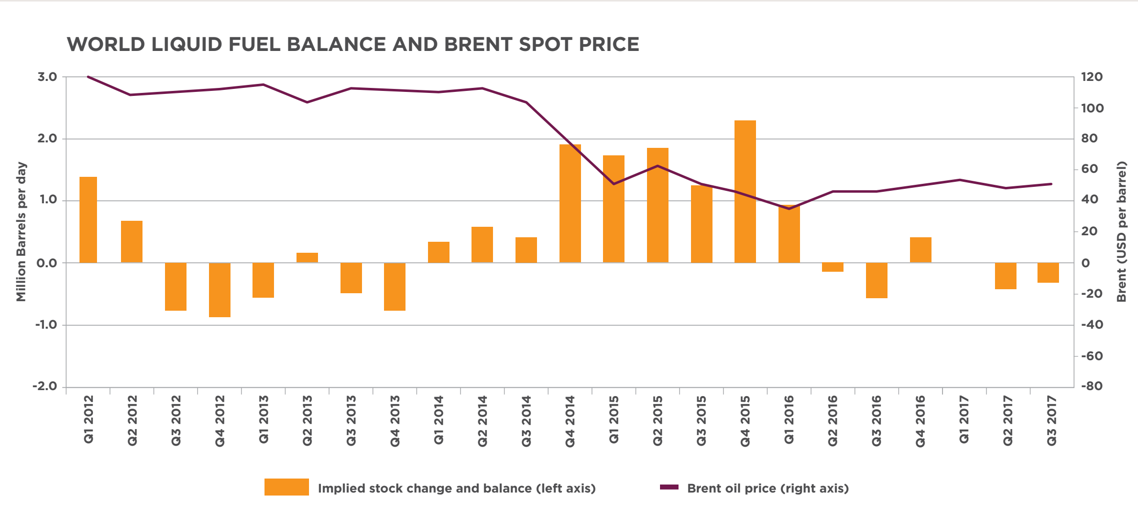


Figure 2 Source: EIA, October 2017

Global oil prices fell to its lowest point in 13 years averaging at USD31/bbl in January 2016. Since then, oil prices slowly recovered to USD53/bbl in December. Inventory drawdown was balanced between OPEC-led oil production cuts against supply increases from US shale producers. At the end of 2016, OPEC and a number of non-OPEC countries reached a key agreement to limit production. This allowed global demand to catch up thus supporting the stability in oil prices for the medium term.

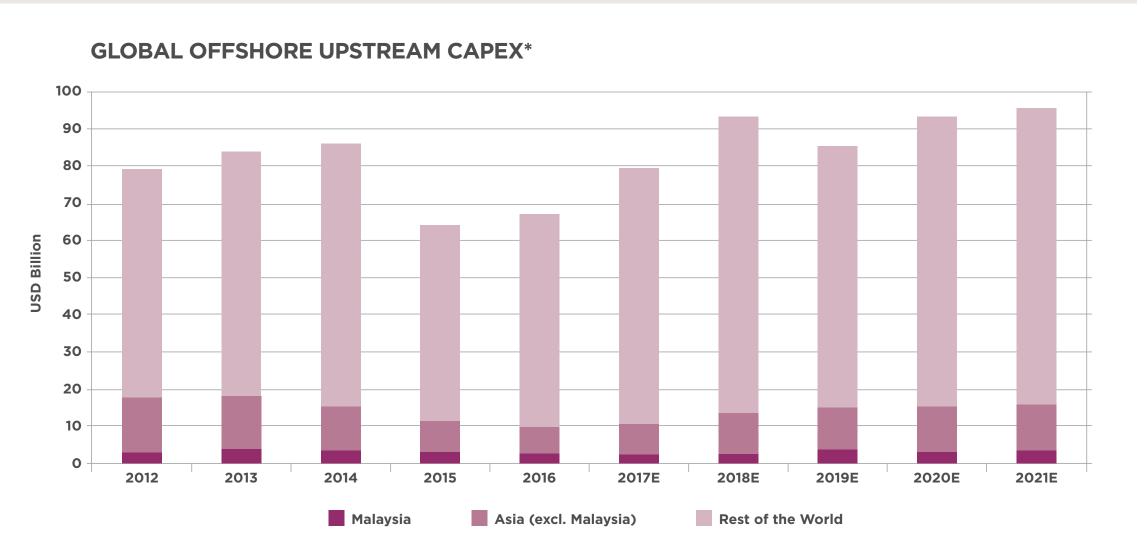


Figure 3 (*excluding Drilling CAPEX) Source: Wood Mackenzie Forecast – Infield Analytics 2017

With stability in prices, global oil producers are starting to invest in developing their oil and gas reserves again. Figure 3 shows that global CAPEX spending for offshore upstream activities is expected to rise from 2017 onwards. In Asia (excluding Malaysia), 51 greenfield projects are expected to be sanctioned between 2018 to 2021, mainly from China, India and Indonesia. This signals recovering prospects in overseas markets.

> *"With stability in prices, global oil producers are starting to invest in developing their oil and gas reserves again*

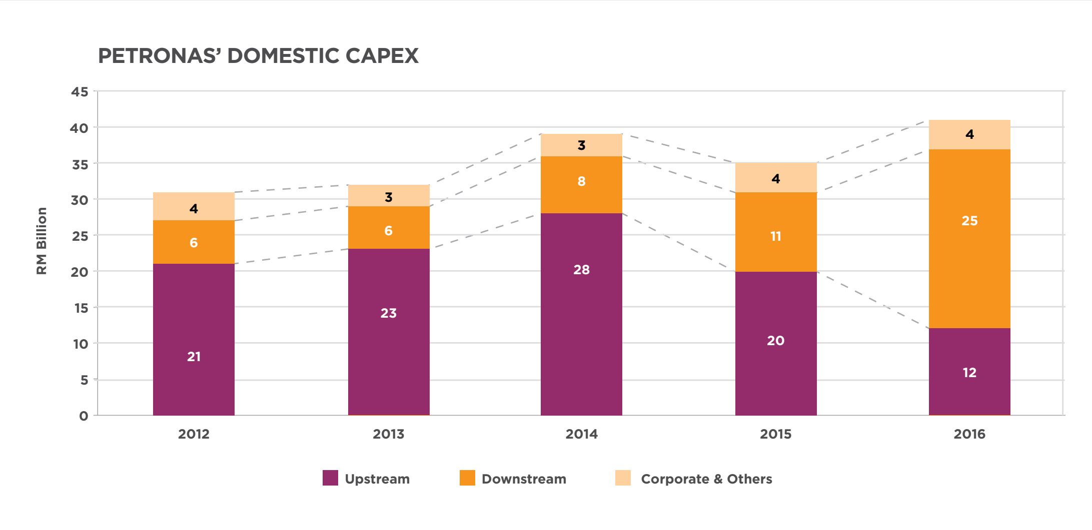


Figure 4 Source: PETRONAS

In Malaysia, the industry outlook differs. Although PETRONAS' total domestic CAPEX spending increased year-on-year from RM35 billion to RM41 billion in 2016, the focus has shifted from upstream to downstream activities.

Downstream CAPEX spending increased to RM25 billion from RM11 billion in 2015. This was mainly due to increased spending for ongoing downstream projects such as the Refinery and Petrochemical Integrated Development (RAPID) project in Johor, as well as the Sabah Ammonia Urea (SAMUR) project in Sabah. We foresee the focus on downstream projects to continue until 2019 when the RAPID project is expected to be completed.

OUR TAKE:

Emerging opportunities in the global upstream sector and PETRONAS' mid-term focus on downstream activities point to a need for Malaysian OGSE companies to review their strategies. These companies will need to either explore overseas markets, or diversify into other local growth segments.

2016: THE MALAYSIAN OGSE SECTOR IN REVIEW

1. Total revenue declined by 10.1%

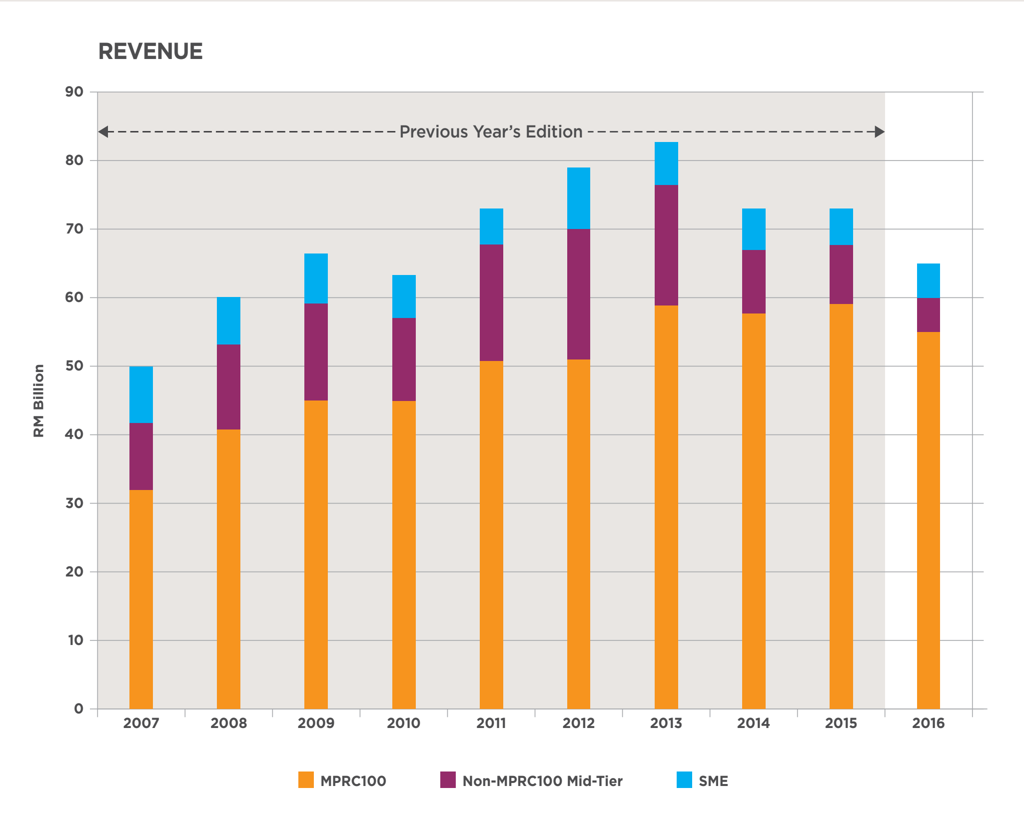


Figure 5

In 2016, the Malaysian OGSE sector recorded RM66.6 billion in total revenue, declining 10.1% from the previous year's RM74.1 billion, in line with the decline in industry activities during the year.

Total revenue for MPRC100 companies fell by 8.3% to RM54 billion in 2016, while Non-MPRC100 Mid-Tier players recorded a 25.8% decline to RM6.3 billion.

Meanwhile, the SME category recorded a revenue decline of 5.7% to RM6.3 billion.

2. Total profit before tax (PBT) declined mainly due to large asset impairments

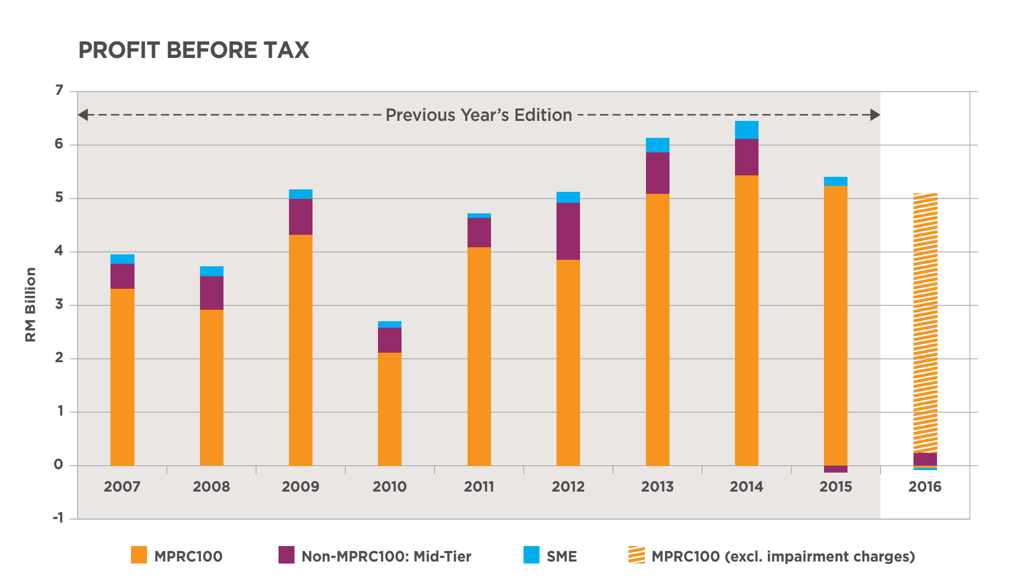


Figure 6

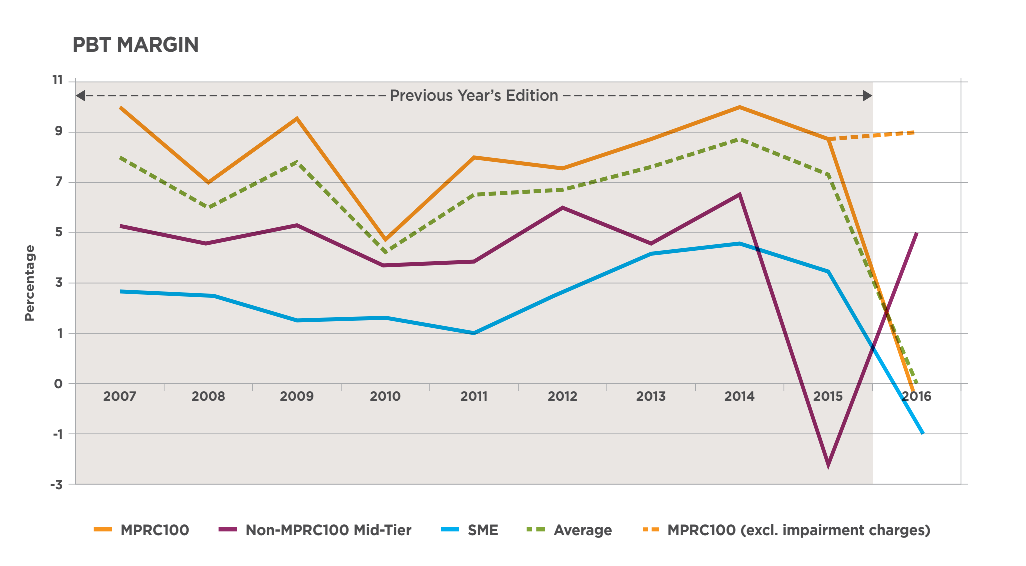


Figure 7

Total PBT for the OGSE sector in 2016 dropped significantly from RM5.3 billion in 2015 to RM146 million in 2016, with an average PBT margin of 0.2% (2015: 7.1%). This was mainly due to a decline in total PBT of MPRC100 companies from RM5.2 billion, to a total loss before tax of RM96 million. Average PBT margin therefore dropped from 8.2% to -0.2%.

Additionally, the decline in the total PBT for MPRC100 companies was largely due to asset impairment charges by "capital intensive" players. With companies such as Sapura Energy, Bumi Armada and UMW Oil & Gas impairing their Floaters, Drilling Rigs, Marine Vessels and Exploration & Production (E&P) assets, total impairment charges recorded by MPRC100 companies during the year amounted to nearly RM5 billion. Excluding impairment, total PBT and average PBT margin for MPRC100 in 2016 would have been approximately RM4.9 billion and 9.0% respectively.

In contrast, total PBT and average PBT margin for the Non-MPRC100 Mid-Tier category saw a recovery in 2016. This was due to reclassification of a number of Mid-Tier companies into the SME category following their continued decline in annual revenues[1]. Consequently, total PBT and average PBT margin for the SME category was adversely impacted.

"The losses in 2016 were mainly contributed by asset impairment charges by "capital intensive" players

ADDITIONAL ANALYSIS: 2016 PBT

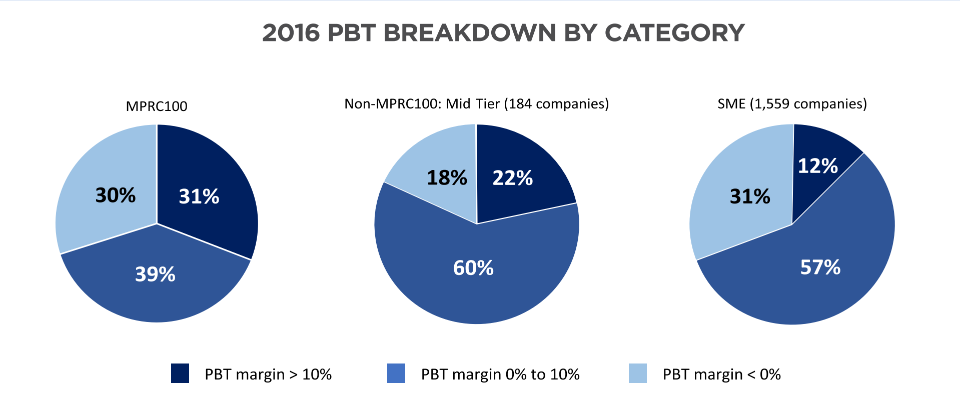


Figure 8

Given that Malaysian OGSE companies experienced a sharp drop in PBT in 2016, we drilled in deeper by breaking down each category's PBT results for the year.

Figure 8 shows that overall a majority of Malaysian OGSE companies recorded positive PBT margins in 2016. Interestingly, 31% of MPRC100 companies, 22% of Non-MPRC100 Mid-Tier companies and 12% of SMEs recorded double-digit PBT margins.

"Majority of OGSE companies recorded positive PBT margins in 2016

[1] The SME classification is based on "Guideline for New SME Definition" issued by SME Corp. Malaysia (Secretariat to the National SME Development Council) - updated August 2016

3. Total fixed assets (TFA) continued to increase

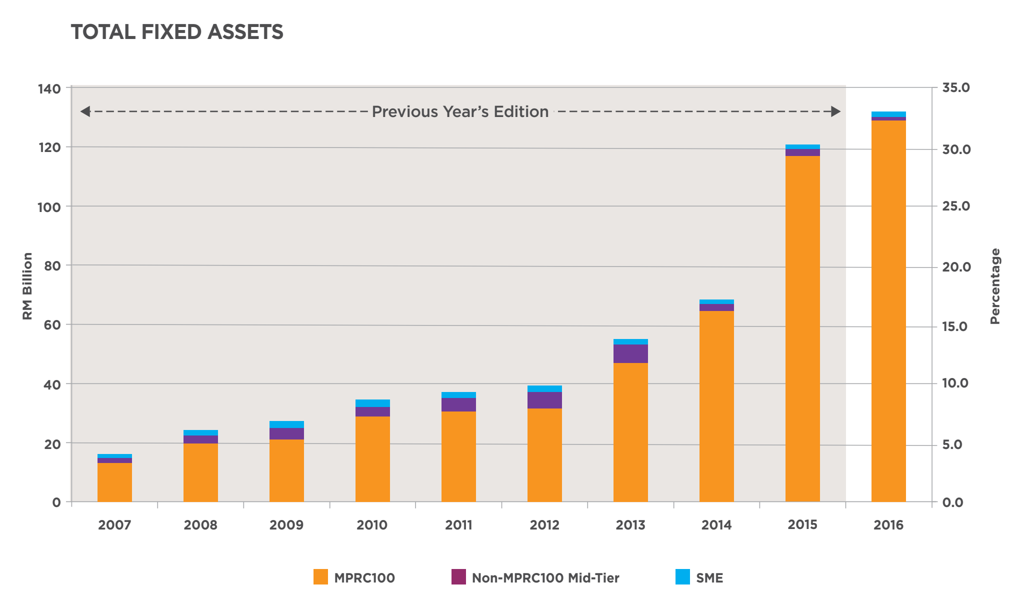


Figure 9

The Malaysian OGSE sector continued its upward trend of fixed asset acquisitions in 2016. The sector's TFA increased by 9.4% (RM11.3 billion) in 2016 to RM132.1 billion. MPRC100 companies continued to hold the largest portion of TFA at 97.7%.

ADDITIONAL ANALYSIS: 2016 TFA

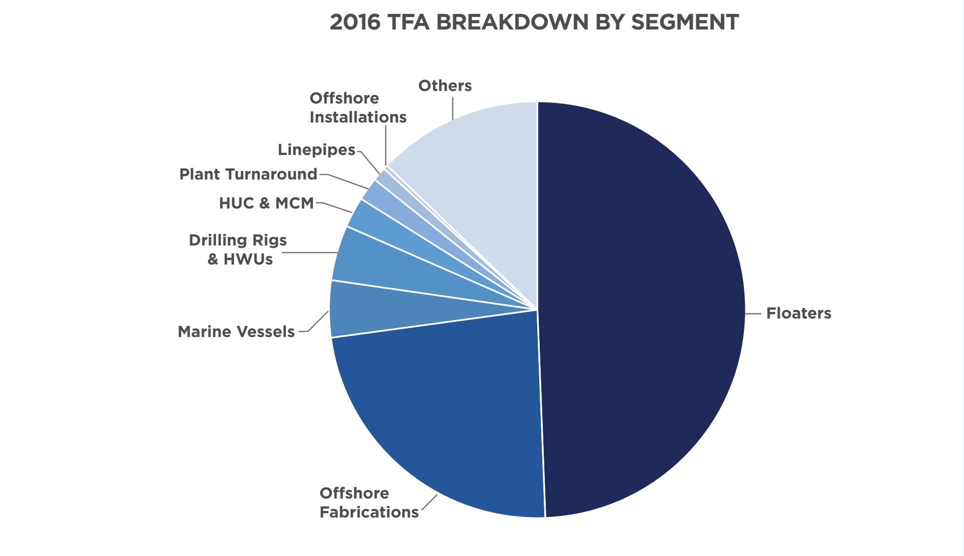


Figure 10

In 2016, companies in the Floaters segment accounted for 49% of the sector's TFA, while Offshore Fabrications, Marine Vessels and Drilling Rigs & HWUs segments accounted for another 32%.

The OGSE sector's TFA increase in 2016 was largely due to the delivery and construction of new floaters by MISC, Bumi Armada and Yinson. These include MISC's Gumusut-Kakap Semi-Submersible Production System, 4 FPSO vessels from Bumi Armada and Yinson's FPSO Genesis. This expansion continues to position these companies as world-class players in the Floaters segment. (Please see page 30 and 31 for the article titled "Malaysian FPSO players set to capitalise on stabilising demand").

"Floaters segment accounted for 49% of the sector's total fixed assets

ADDITIONAL ANALYSIS: MPRC100 FY2016 TOP PERFORMERS

Within this section, we assessed the performance of MPRC100 companies against the rest of the sector. We also identified companies that have outperformed the sector and their MPRC100 peers.

1. The Malaysian OGSE sector continued to be adversely affected, but still fared better than international peers

The previous section used average ratios as it was a sector-level analysis. Here, the focus is on the dynamics at a company level. Therefore, median analysis is a more appropriate measure as it provides a better understanding of a typical company within each category.

We looked at two measures—year on year (Y-o-Y) revenue growth and PBT margin—where medians for the three categories of the Malaysian OGSE sector, (i) MPRC100 companies, (ii) Non-MPRC100 Mid-Tier, and (iii) SMEs were compared against one another.

We then compared with the median performance of international OGSE companies. For this, we used Bloomberg's Top-100 OGSE companies by revenue. We believe this is a more comprehensive list compared to previous MPRC100 edition where we used Bloomberg's Global Oilfield Services Competitive Peers list, which listed 39 companies and also included US-based onshore services companies.

Figures 11 and 12 below show that overall, median revenue growth and PBT margin declined in 2016 when compared to 2015. However, the median Malaysian OGSE companies in all categories continued to outperform their international peers as they had in the previous year.

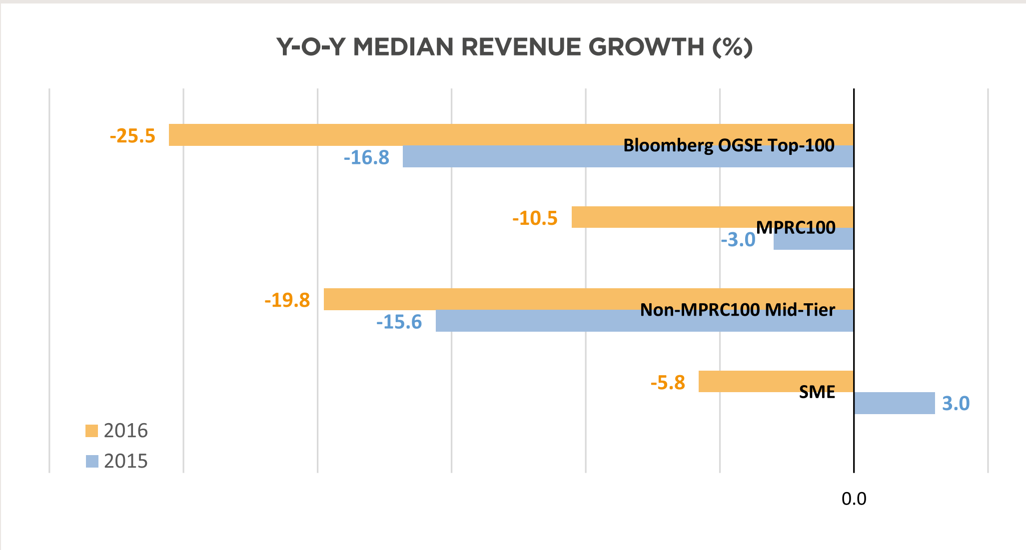


Figure 11

Figure 11 shows that 2016 Y-o-Y median revenue growth for MPRC100 companies had a lower decline rate of 10.5% compared to the Bloomberg OGSE Top-100 median decline of 25.5%. Non-MPRC100 Mid-Tier and SME categories also showed revenue contraction in 2016.

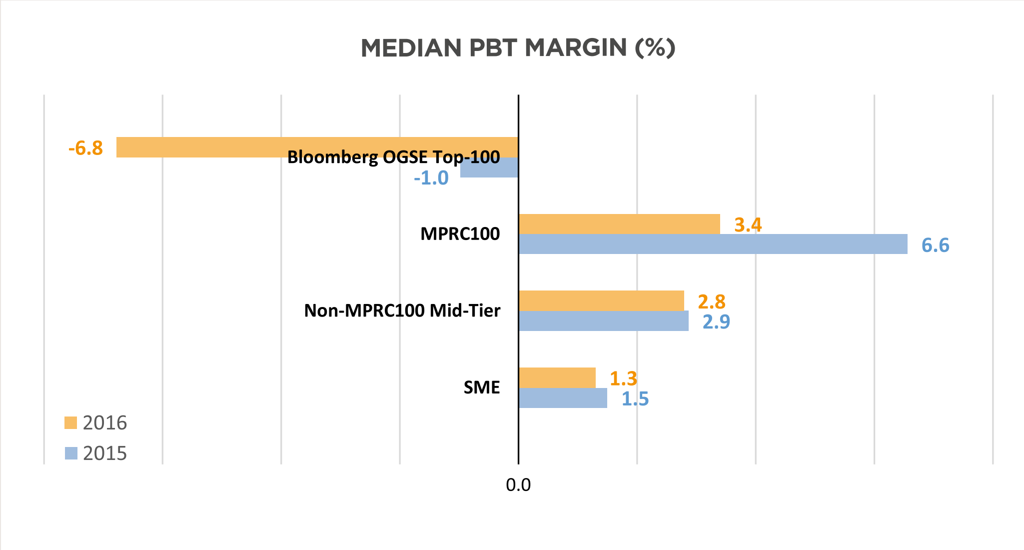


Figure 12

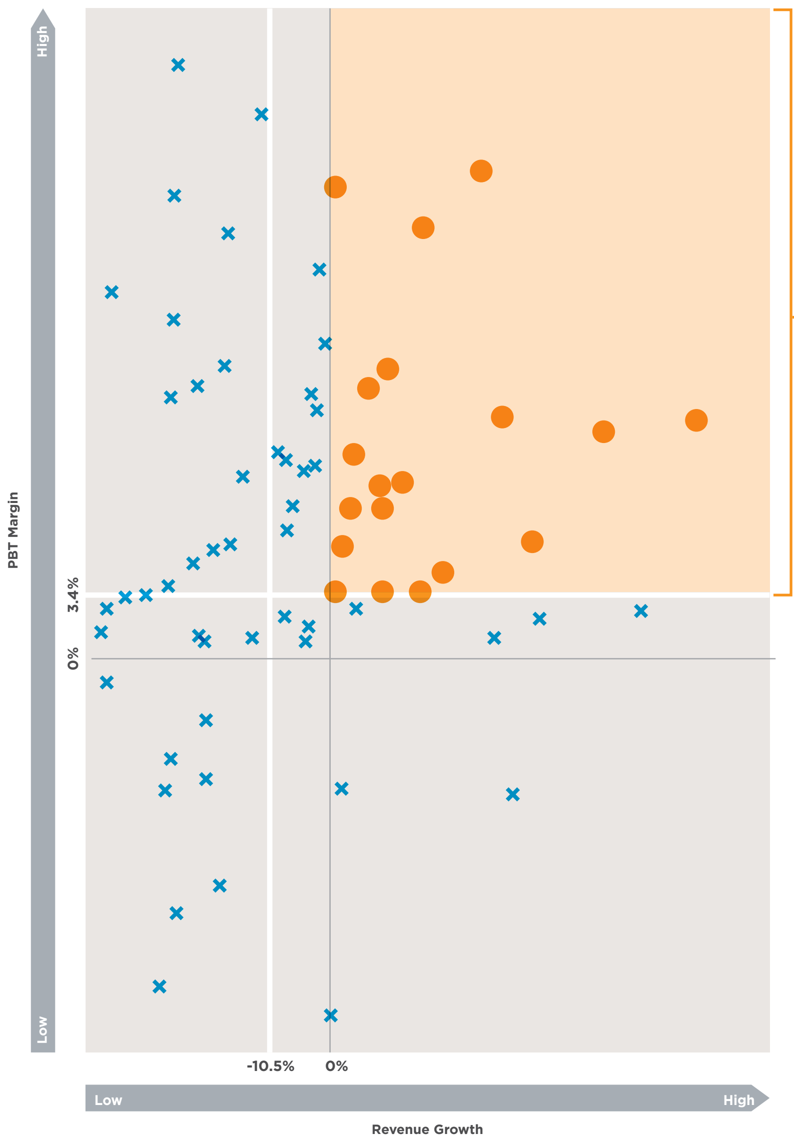
Figure 12 clearly shows that the median PBT margin for MPRC100 companies in 2016 was significantly higher at 3.4% compared to the Bloomberg OGSE Top-100 median PBT of -6.8%. In addition, median PBT margin for the Non-MPRC100 Mid-Tier and SME categories also remained positive in 2016.

"Median PBT margin for MPRC100 companies in 2016 was significantly higher at 3.4% compared to Bloomberg OGSE Top-100 median PBT of -6.8%

2. Top performers amid the down cycle

In identifying the top performers among the MPRC100 companies, we plotted them against median revenue growth of -10.5% and median PBT margin of 3.4% in the scatter chart below. We further narrowed the focus area to start at revenue growth of 0% (see shaded area). This is to identify companies that managed to grow their revenue and recorded higher than average profits amid the down cycle of 2016. We found that 21 companies outperformed their peers in 2016. They are listed in the table below:

MPRC100 QUADRANT MATRIX



Company Name	Rank 2016
DIALOG GROUP BERHAD	3
MUHIBBAH ENGINEERING (M) BHD.	4
E.A. TECHNIQUE (M) BERHAD	17
YINSON HOLDINGS BERHAD.	23
PETROFAC E&C SDN. BHD.	26
DESTINI BERHAD	28
SANKYU (MALAYSIA) SDN. BHD.	33
STRATEQ SDN. BHD.	39
SOLAR ALERT SDN. BHD.	40
HI-ESSENCE CABLE SDN. BHD.	49
AECOM PERUNDING SDN. BHD.	51
YOKOGAWA KONTROL (MALAYSIA) SDN. BHD.	57
KONTENA NASIONAL GLOBAL LOGISTICS SDN. BHD.	58
ANTICORROSION PROTECTIVE SYSTEMS (M) SDN. BHD.	60
E&P O&M SERVICES SDN. BHD.	62
CMC ENGINEERING SDN. BHD.	69
PRESTARIANG SYSTEMS SDN. BHD.	70
INTEGRATED LOGISTICS SOLUTIONS SDN. BHD.	76
ORKIM MARINE SDN. BHD.	78
INDKOM ENGINEERING SDN BHD.	95
T7 GLOBAL BERHAD	98

Figure 13

ADDITIONAL ANALYSIS: SEGMENTAL FINANCIAL ANALYSIS

In this section, our analysis is focused on "capital intensive" MPRC100 companies, based on above average median asset turnover, categorised based on our assumption of their main business segments. These companies' total fixed assets (TFA) accounted for a large proportion of the sector TFA and would generally have higher financing requirements.

Company Name	Rank 2016	Revenue (RM mil)	PBT (RM mil)	TFA (RM mil)	Segment
SAPURA ENERGY BERHAD	1	10,184.0	-712.6	29,663.6	Offshore Fabrications
MISC BERHAD	2	9,597.2	2,814.0	44,163.2	Floaters
DIALOG GROUP BERHAD	3	2,534.5	368.7	2,345.7	Plant Turnaround
MUHIBBAH ENGINEERING (M) BHD.	4	1,918.6	182.5	1,286.3	Offshore Fabrications
KNM GROUP BHD.	6	1,646.8	-316.6	3,162.9	Others
BUMI ARMADA BERHAD	8	1,317.4	-1,944.3	17,468.0	Floaters
WAH SEONG CORPORATION BERHAD	9	1,276.6	-225.9	1,463.3	Linepipes
SCOMI ENERGY SERVICES BHD.	10	1,208.8	12.0	739.0	Others
WESTSTAR AVIATION SERVICES SDN. BHD.	12	717.9	121.8	1,516.7	Others
DAYANG ENTERPRISE HOLDINGS BHD.	13	708.2	78.7	2,555.3	HUC & MCM
BARAKAH OFFSHORE PETROLEUM BERHAD	14	622.6	16.4	400.6	Offshore Installations
E.A. TECHNIQUE (M) BERHAD	17	591.7	21.5	715.0	Marine Vessels
UZMA BERHAD	19	471.1	50.5	724.0	Others
YINSON HOLDINGS BERHAD.	23	424.4	292.8	3,629.8	Floaters
DAYA MATERIALS BERHAD	24	399.2	-200.9	657.3	Others
DESTINI BERHAD	28	354.8	46.2	308.6	Others
PETRA ENERGY BHD.	29	332.1	-124.5	451.1	HUC & MCM
UMW OIL & GAS CORPORATION BERHAD	31	321.1	-1,181.3	5,644.8	Drilling Rigs & HWUs
MARINE & GENERAL BERHAD	32	303.4	-128.9	2,288.4	Marine Vessels
NAIM ENGINEERING SDN. BHD.	34	266.5	-18.9	131.8	Others
EASTERN PACIFIC INDUSTRIAL CORPORATION BERHAD	38	256.5	37.7	845.1	Others
STRATEQ SDN. BHD.	39	251.0	27.6	166.5	Others
ALAM MARITIM RESOURCES BHD.	42	229.5	-148.9	715.7	Marine Vessels
ICON OFFSHORE BERHAD	43	226.9	-149.8	1,246.0	Marine Vessels
ASIAN SUPPLY BASE SDN.BHD.	44	214.3	39.1	383.6	Others
KUALITI ALAM SDN. BHD.	48	188.3	39.5	188.8	Others
HI-ESSENCE CABLE SDN. BHD.	49	185.1	6.8	106.6	Others
MHS AVIATION BERHAD	54	173.8	-57.9	463.6	Others
NAM CHEONG DOCKYARD SDN BHD	55	170.4	-43.7	560.5	Marine Vessels
BOUSTEAD PENANG SHIPYARD SDN. BHD.	59	162.5	130.4	148.5	Offshore Fabrications

Figure 14

(more on next page)

(continued from previous page)

Company Name	Rank 2016	Revenue (RM mil)	PBT (RM mil)	TFA (RM mil)	Segment
DYNAC SDN. BHD.	65	146.3	5.6	167.3	Others
CARIMIN PETROLEUM BERHAD	72	123.5	6.3	151.5	HUC & MCM
GRADE ONE MARINE SHIPYARD SDN. BHD.	74	121.3	7.2	281.5	Others
INTEGRATED LOGISTICS SOLUTIONS SDN. BHD.	76	115.2	7.0	211.8	Others
FPSO TECH SDN. BHD.	85	98.7	-7.2	198.0	Others
AJANG SHIPPING SDN. BHD.	92	87.6	20.1	254.3	Marine Vessels
HANDAL RESOURCES BERHAD	97	83.1	-11.4	42.8	Others
T7 GLOBAL BERHAD	98	83.0	5.2	48.2	Others
DIMENSION BID (M) SDN. BHD.	100	82.3	-17.6	57.4	Others

Figure 14

We further analysed the segments based on five key financial ratios, detailed in the table below:

	2015					2016				
	Growth	Profitability		Debt Coverage		Growth	Profitability		Debt Coverage	
Segment	Revenue Growth (Y-o-Y)	EBITDA Margin (%)	PBT Margin (%)	Debt to Equity Ratio	DSCR*	Revenue Growth (Y-o-Y)	EBITDA Margin (%)	PBT Margin (%)	Debt to Equity Ratio	DSCR*
FLOATERS	6.7	39.0	19.8	0.34	3.13	-15.9	55.8	10.3	0.59	1.49
OFFSHORE FABRICATIONS	14.4	32.7	15.2	1.31	1.62	3.4	31.9	-3.3	1.37	1.58
MARINE VESSELS	-15.7	7.8	-14.3	0.97	0.36	-42.5	16.9	-26.7	1.30	0.31
DRILLING RIGS & HWUS	-17.2	-4.6	-41.5	0.61	3.77	-61.8	2.9	-367.9	1.67	0.17
HUC & MCM	-8.6	31.0	16.3	1.15	0.86	-27.1	30.2	-3.4	1.06	1.06
PLANT TURNAROUND	-7.6	18.8	15.7	0.42	4.44	7.5	18.0	14.5	0.35	7.36
LINEPIPES	-24.6	8.2	1.9	1.00	0.53	-30.6	-0.8	-17.7	1.42	1.22
OFFSHORE INSTALLATIONS	-37.6	7.5	0.9	0.65	1.63	5.1	10.2	2.6	0.21	1.72
ASSET HEAVY AVERAGE	1.0	29.4	11.5	0.61	1.88	-12.2	26.5	-2.5	0.81	1.28

Figure 15 (*Debt Service Coverage Ratio = (Cash + Net Cashflow from Operations)/(Interest + Short Term Borrowings))

We observed that revenue growth and profitability for most segments deteriorated in 2016 compared to 2015. The Drilling Rigs & HWUs segment showed significant deterioration due to under-utilisation and impairments. Meanwhile, other segments; Offshore Fabrications, Marine Vessels, HUC & MCM as well as Linepipes also showed losses in 2016. In contrast, Plant Turnaround and Offshore Installations segments strengthened during the year.

However, if we compare EBITDA margins, which are more reflective of a company's operating cashflow, the overall situation remained relatively stable.

"Revenue growth and profitability for most segments have deteriorated in 2016, except for Plant Turnaround and Offshore Installations

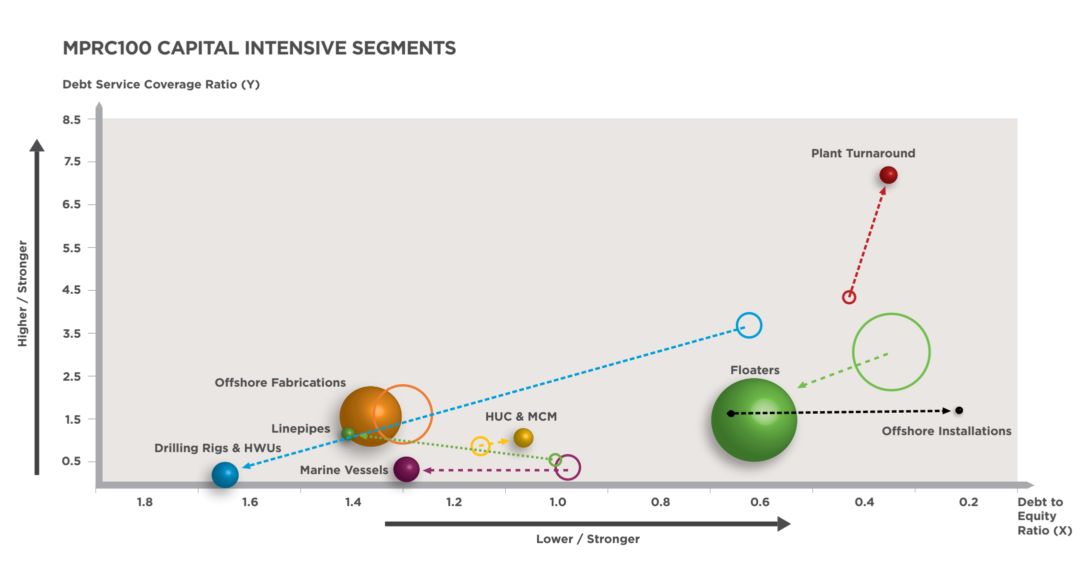


Figure 16

In Figure 16, we revisit debt to equity (DE) ratios and debt service coverage ratios (DSCR) to analyse the financial stability of companies in each segment as of end-2016.

The Drilling Rigs & HWUs, and Marine Vessels segments showed the weakest debt coverage positions indicating that cashflow from operations and cash carried forward could potentially be unable to meet short-term debt obligations.

OUR TAKE:

With DSCR of less than 1.0, companies in the Drilling Rigs & HWUs, and Marine Vessels segments were more likely to require debt restructuring or capital injections in the immediate future.

In 2017, we observed that several major companies such as UMW Oil & Gas, Alam Maritim and Nam Cheong engaged in debt restructuring and fundraising activities to strengthen their balance sheets. Therefore, we hope to see improvements in the financial stability of these two segments in the next MPRC100 edition.

ADDITIONAL ANALYSIS: COMPARISON WITH TOP REGIONAL PLAYERS

As a whole, OGSE companies in Malaysia and the region continued to be adversely affected by the industry downturn. In order to see how Malaysian OGSE companies measure up against regional peers, we analysed the top-20 listed OGSE companies in Southeast Asia based on revenue in calendar year (CY) 2016.

No	Company Name	Bloomberg Ticker	Country	CY2015 (USD mil)	CY2016 (USD mil)	Revenue Growth (%)
1	KEPPEL CORP LTD	KEP	SG	7,499.1	4,894.7	-34.7
2	SAPURA ENERGY BERHAD	SAPE	MY	3,022.0	2,580.2	-14.6
3	SEMBCORP MARINE LTD	SMM	SG	3,615.5	2,569.3	-28.9
4	MISC BERHAD	MISC	MY	2,792.3	2,318.0	-17.0
5	PETROVIETNAM TECHNICAL SERVICES CORP.	PVS	VN	1,067.8	835.3	-21.8
6	DIALOG GROUP BERHAD	DLG	MY	681.7	614.5	-9.9
7	EZRA HOLDINGS LTD	EZRA	SG	543.8	525.1	-3.4
8	PETROVIETNAM CONSTRUCTION JSC	PVX	VN	527.4	416.9	-21.0
9	KNM GROUP BERHAD	KNMG	MY	419.6	398.2	-5.1
10	THORESEN THAI AGENCIES PCL	TTA	TH	626.2	387.4	-38.1
11	BUMI ARMADA BERHAD	BAB	MY	559.5	344.3	-38.5
12	EZION HOLDINGS LTD	EZI	SG	351.1	318.2	-9.4
13	WAH SEONG CORPORATION BERHAD	WSC	MY	476.0	308.3	-35.2
14	ELNUSA PT	ELSA	ID	282.0	272.2	-3.5
15	PETROVIETNAM DRILLING AND WELL SERVICES CORP.	PVD	VN	659.1	240.0	-63.6
16	FALCON ENERGY GROUP LTD	FALE	SG	342.4	220.5	-35.6
17	PETROSEA TBK PT	PTRO	ID	206.8	209.4	1.2
18	PACC OFFSHORE SERVICES HOLDING	POSH	SG	280.8	183.1	-34.8
19	DAYANG ENTERPRISE HOLDINGS BERHAD	DEHB	MY	152.0	168.3	10.7
20	BARAKAH OFFSHORE PETROLEUM BERHAD	BARAKAH	MY	153.0	149.9	-2.0

Figure 17

Source: Bloomberg, MPRC Analysis

The list above is based on Bloomberg's OGSE companies that are based in Southeast Asia. To align with MPRC100, we have amended the list by replacing MMHE and Scomi Group with MISC and Scomi Energy. Emas Offshore and Triyards were consolidated under Ezra Holdings. Swiber Holdings Ltd. and Vallianz Holdings were excluded due to unavailability of their full CY2016 financial data.

From the list, there are 8 Malaysian players in the top-20, compared to 6 in Singapore, 3 in Vietnam, 2 in Indonesia and 1 in Thailand. In the previous year's list, there were only 2 Vietnamese companies, 1 from Indonesia and none from Thailand.

We extracted the quarterly revenues, PBT margins and fixed assets of the top-20 Southeast Asian OGSE companies (up to Q3 2017) and aggregated them by country:

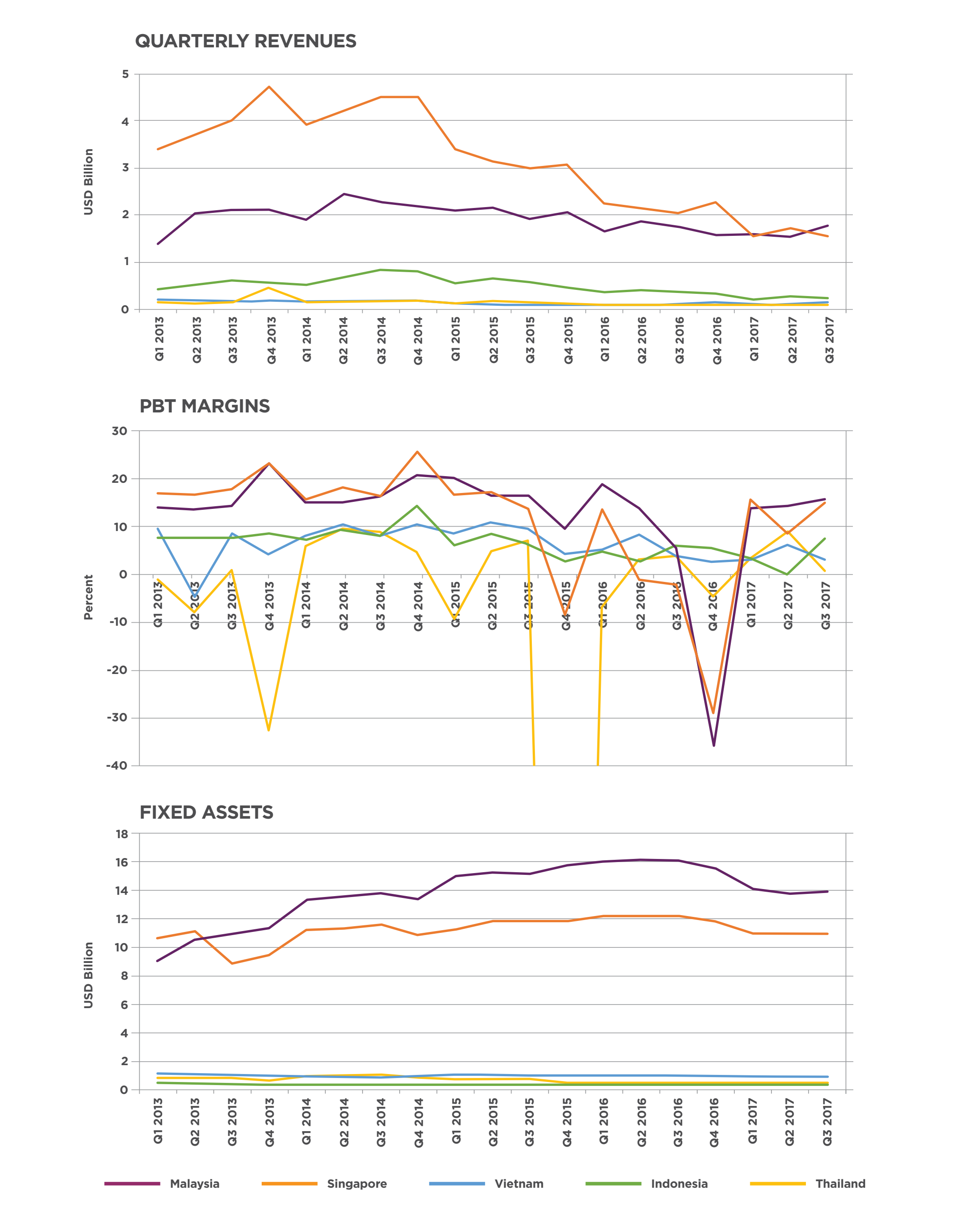


Figure 18

Source: Bloomberg, MPRC Analysis

Using these financial data as indicators, we found that the financial metrics of regional OGSE companies continued to decline in CY2016. However, Malaysian companies were not as severely affected.

Malaysian players have caught up with their Singaporean counterparts in terms of total revenue. Their full year losses were also not as steep. However, we are keeping a keen eye on audited Q4 2017 results, in case there are further impairments. Meanwhile, growth in total fixed assets have also abated.

"Malaysian players have caught up in terms of total revenue and their full year losses were also not as steep

OUR TAKE:

Malaysia was not as badly affected as their regional counterparts due to the breadth of segments in which they operate. To illustrate this, we have categorised each of the top-20 companies' major operating segments.

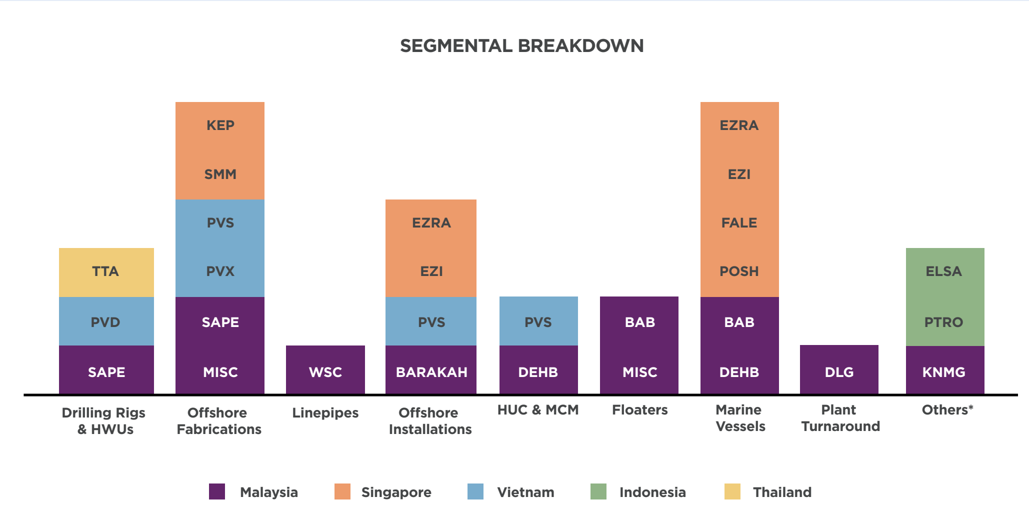


Figure 19 (*Others: Product & Manufacturing, Supply Base & Logistics) Source: Bloomberg, MPRC Analysis

OUTLOOK

As oil prices stabilised in 2017, the oil and gas industry appears to have found its footing against the downturn. Global oil companies are spending again, albeit cautiously, on development projects, tempered by the 'lower for longer' expectation.

Locally, the performance of listed players between Q1 to Q3 2017 as well as new project announcements point to prospects of a gradual recovery. We also see OGSE companies diversifying towards downstream opportunities due to PETRONAS' focus on this segment.

However, the impetus for companies to undertake structural reforms amidst a challenging industry landscape persists driven by the need to be competitive over the long term.

While restructuring of highly-leveraged parts of the value chain remains tough, companies such as UMW Oil and Gas, Alam Maritim, and Nam Cheong embarked on serious restructuring efforts, securing support from local financial institutions.

It is encouraging to note that financial support has been extended for parts of the industry that are showing potential for growth. As the local oil and gas industry moves towards greater information transparency, potential investors can now be more discerning in their investment decisions.

Meanwhile, companies that are stalling from undertaking deeper adjustments with hopes of a sharp recovery will be disappointed to find that this will not be the case. Project owners are likely to seek services from companies that offer greater value and flexibility given their heightened focus on achieving cost-effectiveness. Those who are unable to cater to this demand will find it difficult to compete.

From the Government's perspective, we note that all parties within the system are aligned with the intent to moderate the market's impact to the industry's accumulated capabilities, while at the same time encouraging the emergence of leaner and stronger players. MPRC will continue to work with all relevant stakeholders to preserve existing value and encourage greater competitiveness within the industry.

METHODOLOGY

1 POPULATION SAMPLING

Initial list from PETRONAS SWEC Licensees as of September 2017 and listed OGSE companies with PETRONAS' licensed associate/ subsidiaries companies

- Started with 4,175 companies
- Reduced to 4,144 companies after 31 non-corporate entities were excluded

Total of 632 companies were eliminated

- Removed companies that fell within the following categories:
  - Products: containers, miscellaneous, office and automotive; or
  - Services: ICT and integrated operations, general building maintenance services; or
  - Core business activities described in their website that do not include O&G related activities
  - Excluding category managed items by PETRONAS

2 DATA ACQUISITION

Requested SSM to extract the raw financial information from their CBID database

- The request was made for FY2007 – FY2016 period

Successfully extracted for 2,203 companies

- The request to SSM was made as of October 2017. If no accounts are lodged by that date, we can assume either:
  - The company is late in filing its accounts; or
  - The company had a change in that FY

3 DATA PROCESSING

3.1 TRANSLATION

The raw financial information from SSM's CBID is translated based on sum of corresponding parameters ending in each calendar year

- Revenue, PBT and TFA parameters were translated accordingly for our analysis purposes

3.2 SANITISATION

To identify any irregularities of the raw financial information which may affect the analysis if not corrected

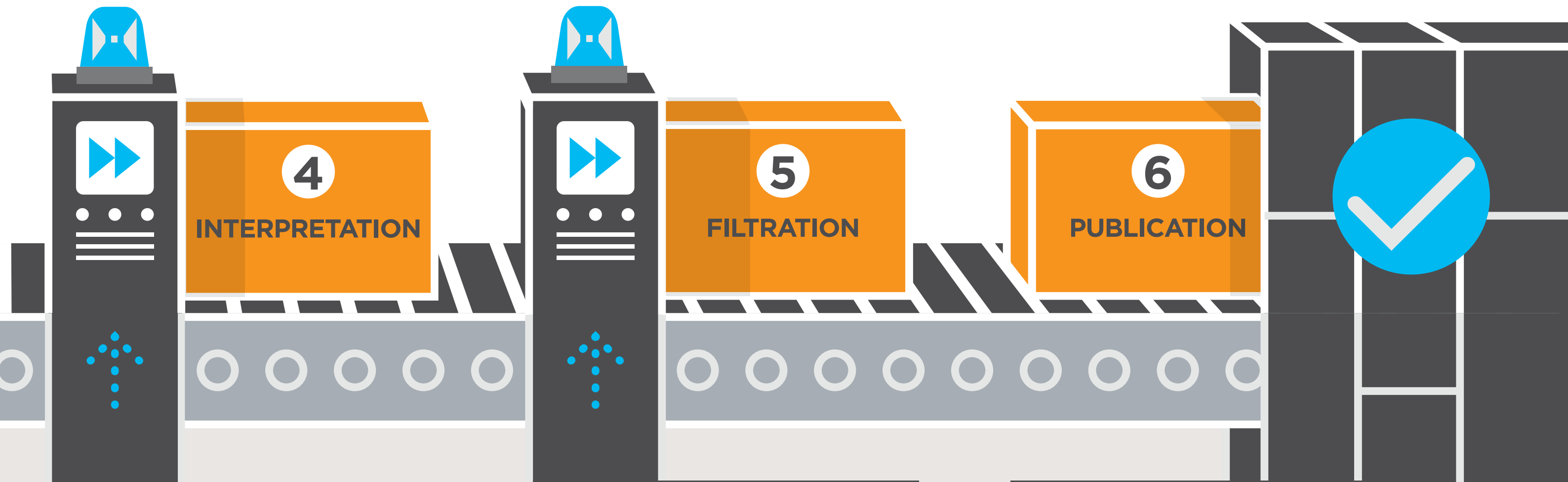
- The identification is done through factoring the parameters' y-o-y change by 500. Value more than 500 (or less than 1/500 but greater than zero) could indicate unit's data-entry error
- Total of 88 companies were affected

3.3 CONSOLIDATION

Total of 82 companies were identified

- 59 companies with immediate shareholders that are already in our population
- 23 subsidiaries of listed companies which recorded in their most recent audited accounts

Final population sample of 1,961 companies



1,961 companies are ranked only by their Revenue in 2016 and grouped into MPRC100, Non-MPRC100 Mid-Tier and SME

- Non-MPRC100 Mid-Tier:

  Sales turnover > RM50mil and ≤ RM500mil (Manufacturing) OR

  Sales turnover > RM20mil and ≤ RM500mil (Services & Other sectors)
- SME:

  Sales turnover ≤ RM50mil (Manufacturing) OR

  Sales turnover ≤ RM20mil (Services & Other sectors)
- 118 companies have no Revenue recorded for FY2016 based on SME CBID
- If a business exceeds the threshold set under financial criteria for 2 consecutive years (based on its financial year/accounting period) then it can no longer be deemed as an SME. Similarly, a business that is previously large can become an SME if it fulfills the qualifying criteria of SMEs for 2 consecutive years

Selected financial information and ranking information are made available

- To perform basis analysis on the size/growth of the O&G related activities

Engage industry, regulators and other stakeholders for their feedback on the process and to obtain their support

Discuss internally whether based on the stakeholders engagement, any revision in process is required

- If YES, revise and repeat process from step 2
- If NO, proceed to step 6

Draft, design and publish MPRC100 FY2016 edition document

MALAYSIAN OGSE COMPANIES EYE GLOBAL OPPORTUNITIES

Integrated Malaysian oilfield services player Sapura Energy has bucked the declining trend in international revenues.

Oil and gas services and equipment (OGSE) companies around the world were hit by the slump in new investments following the 2014 oil price crash. At the height of the downturn, these companies experienced severe crunches as projects were cancelled or deferred on the back of oil companies adjusting to significantly lower oil prices.

To better understand how Malaysian OGSE companies were impacted during the downturn, Malaysia Petroleum Resources Corporation (MPRC), a government agency that is responsible for developing the OGSE industry in Malaysia, analysed some trends.

Based on Bloomberg data, since the peak of the oil price crash in 2014, revenue for global OGSE companies in 2016 fell by 20%. Comparatively, revenue for Malaysian players fell by 15%, slightly cushioned by domestic offshore activities.

MPRC also found that three Malaysian OGSE players made it to the Bloomberg top-100 ranking for OGSE companies based on FY2016 revenue - Sapura Energy Bhd ranked 23rd with USD2.58 billion, MISC Bhd ranked 25th with USD2.32 billion and Dialog Group Bhd was 85th with USD614.4 million. Another four companies were also found to be closing in the top-100 global listing – KNM Group Bhd at No.115 with USD398.1 million, Bumi Armada Bhd at No.125 with USD318.5 million, Wah Seong Corp Bhd at No.129 with USD308.6 million and Scomi Energy Services Bhd at No.133 with USD300.1 million (refer to Table 1).

Rank	Company Name	Rev FY2016 (USD mil)	Country
1	SCHLUMBERGER LTD	27,810.0	US
2	HALLIBURTON CO	15,887.0	US
3	TECHNIP FMC PLC	13,744.1	US
23	SAPURA ENERGY BHD	2,580.8	MY
25	MISC BHD	2,320.0	MY
85	DIALOG GROUP BHD	614.4	MY
100	HELIX ENERGY SOL	487.6	US
115	KNM GROUP BHD	398.1	MY
125	BUMI ARMADA BHD	318.4	MY
129	WAH SEONG CORP	308.6	MY
133	SCOMI ENERGY SERVICES	300.1	MY

Table 1: Malaysian OGSE services companies ranking by revenue based on Bloomberg data

Looking abroad for opportunities

What set these companies apart from their peers was their ability to break new ground by shifting their focus to different areas of opportunity, MPRC President and CEO, Datuk Shahrol Halmi said.

"Faced with reduced prospects at home due to the difficult global economic climate, but also armed with renewed competitiveness and attractiveness due to their capacity and track record of completing complex projects at lower costs, these Malaysian OGSE players took steps to lessen reliance on their home markets and went on to compete and win new business abroad," he said.

One example is Sapura Energy Berhad, which bucked the trend of declining international revenues. This integrated OGSE company managed to more than double its international revenues from 2014 to 2016 despite the majority of global OGSE companies having consistently recorded a drop in international revenues between 2014-2016. Sapura's international revenues grew from USD674 million in FY2014 to USD1.03 billion in FY2015 and USD1.56 billion in FY2016.

Acknowledging the challenging business environment due to the volatility of oil prices, Tan Sri Dato' Seri Shahril Shamsuddin, President & Group CEO of Sapura Energy said that the company managed to remain competitive by securing and executing projects globally in a reliable manner.

Sapura Energy secured new works worth RM6.3 billion (approximately USD1.52 billion) for FY2017. Notable wins for the group include the EPCI of the Trans Anatolian Gas Pipeline in Turkey, EPCIC of B-127 Project in India, KMZ sour gas pipeline in Mexico, a long-term plug and abandonment contract in Brunei, and decommissioning work in Malaysia, Brunei and Australia.

Another Malaysian group, Wah Seong Corporation Berhad won a pipeline coating and storage contract for the 1,200 km Nord Stream II pipeline that runs from Russia to Germany in a deal worth 600 million euros.

Bumi Armada Berhad, the fifth largest FPSO player in the world, derived an average of 89% of its revenue from international business between 2014 and 2016. The company also managed to expand outside their traditional Asian and Nigerian strongholds in 2017 to new regions in the Mediterranean and the North Sea, and is now eyeing Brazil and other parts of West Africa.

On this, Bumi Armada's CEO Leon Harland explained that the organisation has evolved in recent years from a predominantly Asian-focused OSV business to an international energy services provider. While the company has traditionally been strong in Asia and Nigeria, in 2017 it expanded operations into Indonesia, the Mediterranean, the North Sea (UK) and Angola.

MPRC100 COMPANIES IN THE MEDIA

Building on the OGSE hub vision

MPRC was established in 2011 to develop the OGSE industry in Malaysia and leverage on the country's strategic geographical location to transform the nation into a regional hub for the industry. Apart from attracting OGSE MNCs to base their Asia Pacific headquarters in Malaysia, the agency also carries out efforts to grow regional champions amongst local players by connecting Malaysia to the world.

Shahrol acknowledges that there will be challenges ahead for the Malaysian OGSE industry as headwinds from the low oil price environment continue to impact players.

"In reality, we are looking at a continued period of adjustment for OGSE companies as oil prices are expected to remain under pressure in the medium term with the oil and gas value chain adjusting to fundamental supply and demand dynamics."

"As the rebalancing of these factors occur, competition will remain intense and companies that can be productive at lower costs will be better-poised to capitalise on opportunities," he said, adding that MPRC is carrying out several initiatives to encourage Malaysian OGSE players to move beyond Malaysian shores.

"MPRC also continues to work with our counterparts both locally and abroad to promote and introduce capable Malaysian OGSE services to new markets," said Shahrol.

Between 2012 and 2016, the agency has helped a total of 36 Malaysian companies expand to 10 countries including to Myanmar, Vietnam, Indonesia, Bahrain and the USA, he said.

"With global oil and gas development activities expected to increase following several years of spending reductions, and international OGSE companies still recovering from low oil prices, the time is right to pursue opportunities that will boost export earnings for the Malaysian OGSE sector," Shahrol added.

Cautious optimism amid 'lower forever outlook'

Commenting on the outlook ahead, Sapura Energy's Shahril meanwhile believes that the company is well positioned to address an even wider scope of the energy value chain globally thanks to the group's diversity of skills and talents.

"We will continue to pursue our strategies on global market expansion and cost optimisation, and setting the scene right as the industry finds its way back to recovery," he said.

Meanwhile, Bumi Armada's Harland said that going forward, the company will focus on the South Atlantic region especially on Brazil and West Africa. He expects approximately 60% of future FPSO projects to come from these two regions.

"Learning from past lessons and leveraging on our team of highly-experienced professionals, we continue to pursue new large projects on a selective basis and with the goal to try and secure one new project per year," Harland said.

"Our current priority is to bring our recently operating units steadily into full production and operation mode and ensure cash collections at the same time," he added.

A new era for Malaysian OGSE services companies

As confidence returns in the upstream sector on the back of stabilising oil prices, the success of a few Malaysian OGSE companies on the international stage is an encouraging sign.

Coupled with the Government's push to position the country as a key OGSE services hub in Asia Pacific, these forays beyond local shores in tough times, demonstrate the readiness of Malaysian OGSE companies to take on global opportunities.

For more information on collaboration opportunities with Malaysian OGSE players, please visit www.mprc.gov.my

This article was first published in Upstream Online (www.upstreamonline.com) on 4 December 2017

MALAYSIAN FPSO PLAYERS SET TO CAPITALISE ON STABILISING DEMAND

Armed with a track record of executing complex international projects, Malaysian players are expected to benefit from a pick-up in FPSO activity between 2018 to 2021.

The sharp drop in oil prices in 2014 which led to a decline in investments for oil and gas production worldwide resulted in a challenging environment for the global Floating Production, Storage and Offloading (FPSO) sector in the past two years.

However, energy market consultancy Douglas Westwood believes gradual recovery is around the corner given that 10 FPSOs came on stream in 2017. This included high-capex units P-66 and Armada Olombendo which were ordered during the downturn.

Anticipating 10 to 11 FPSO awards annually from 2018-2021, Douglas Westwood predicts that global orders will stabilise, with 60-70% of demand originating from Latin America and West Africa. (see chart 1).

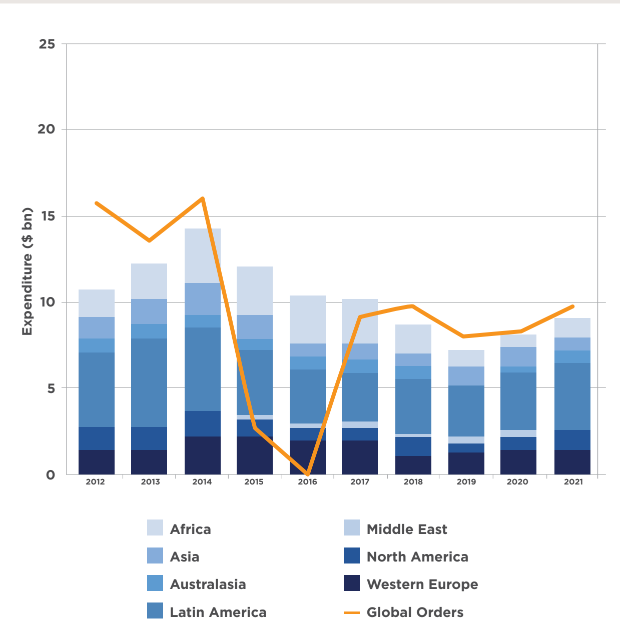


Chart 1: Phased FPS expenditure (2017-2021)
Source: Douglas Westwood

Three Malaysian FPSO players in the spotlight

Starting modestly with just two vessels in 2004, Malaysia is now home to three of the top 10 leased FPSO operators in the world with a combined fleet of 20 FPSO vessels (see Chart 2).

Research conducted by Malaysian oil and gas services and equipment (OGSE) industry development agency Malaysia Petroleum Resources Corporation (MPRC) indicates that Bumi Armada (fifth largest FPSO player in the world) leads the ranks with 9 vessels, followed by MISC (sixth largest) with 6 vessels, and Yinson (seventh largest) with 5 vessels.

These companies also demonstrated resilience over the past six years to register 63% revenue growth between 2010 and 2016 (based on filings with Malaysia's stock exchange Bursa Malaysia) (see chart 3).

"Just like their global counterparts, Malaysian FPSO players experienced a dip in orders during the past two years as investments in oil and gas projects were scaled down. Armed with strong track records from operating in complex and challenging international projects however, companies such as Bumi Armada, MISC and Yinson are well-poised to capitalise on growth opportunities as the investment cycle picks up," MPRC's President and CEO Datuk Shahrol Halmi said.

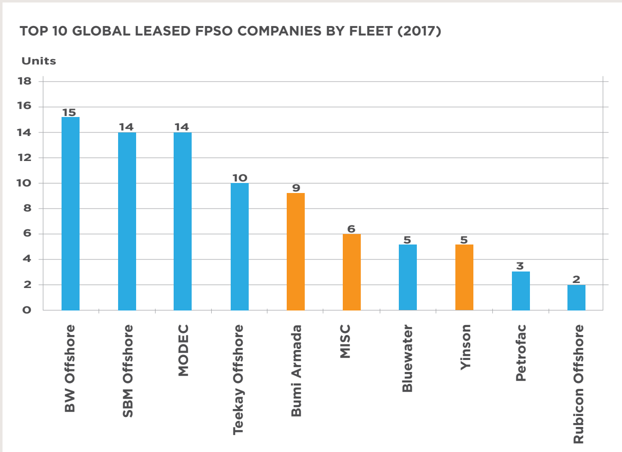


Chart 2: Top 10 Global Leased FPSO Companies by Fleet (2017)
Source: Companies' Annual Reports, MPRC research

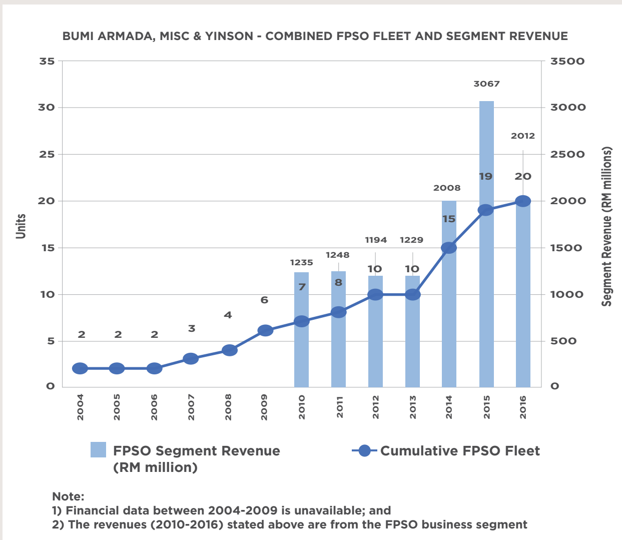


Chart 3: Malaysia's Combined FPSO Fleet and Segment revenue
(Bumi Armada, MISC and Yinson)
Source: Bloomberg & Companies' Annual Reports

MPRC100 COMPANIES IN THE MEDIA

Innovative solutions for global mega projects

Bumi Armada scored a world-first in Indonesia's Madura BD field, which features extremely high levels of sour gases in the well fluids.

Its Karapan Armada Sterling III FPSO is the world's first floating facility with a sulphur processing plant that has a production capacity of 25 tonnes per day, allowing it to strip hydrogen sulphide—a feedstock to make fertilisers—from gas, leaving the hydrocarbon for use in Indonesia's domestic gas market.

The FPSO's ability to monetise high-sulphur gas fields will potentially encourage the rest of the industry to explore fields with similar characteristics. This is a significant development as Bumi Armada has successfully demonstrated its technical prowess to integrate onto a floating facility a large, complex sulphur processing unit typically found in onshore complexes.

Another example of a successful FPSO deployment by a Malaysian company is Yinson's FPSO John Agyekum Kufuor in the Offshore Cape Three Points (OCTP) field. Located in the Tano basin some 60km offshore Ghana, the OCTP field is complex, with water depths ranging from 600m to 1000m. Gas produced on-board Yinson's FPSO is transported through a pipeline to Ghana for use by domestic consumers and helps generate some 1,100MW of power for the country.

The distinction of operating Malaysia's first deepwater FPSO at a water depth of 1,300m belongs to MISC. Constructed in its subsidiary Malaysia Marine & Heavy Engineering's (MMHE) fabrication yard, FPSO Kikeh has been operating in the Kikeh oil field located 120km offshore Sabah since 2006.

Driving technological breakthroughs

In an era of slim operating margins, extracting cost efficiencies through engineering and the ability to be technologically competent becomes paramount, Shahrol said.

"Malaysian FPSO companies' continuous investments in talent and technology development, having cultivated in-house engineering and fabrication capabilities over the years, have allowed them to carve out strong niches in the global FPSO industry," he added.

For example, Bumi Armada's Olombendo FPSO—which has one of the largest external turrets in the world and currently based in offshore Angola—is also capable of both producing and processing from light and heavy oil reservoirs. This engineering feat gives them a clear competitive advantage where fewer than 10% of floaters in the world possess heavy oil processing capabilities.

Bumi Armada's Head of Engineering, Bruno Solinas explained that the company has a core group of around 200 engineers based in Kuala Lumpur who are highly specialised.

"This allows us to control the whole FPSO conversion process, and more crucially, source the right vendors at the right price," he said.

Bumi Armada is one of the three lease FPSO players in the world with capabilities to design and build external turrets for their FPSO fleet, fully engineered in-house.

MISC scored a regional first when it introduced the MAMPU 1 technology in the Anjung Kecil oilfield in Sarawak which allows a floating vessel to produce more oil whilst reducing CO2 emission levels by 30% on daily flaring rates. MAMPU 1 features a homegrown technology, Sep-iSYSTM which produces an additional 50 barrels of oil from 1 million scf flared gas when combined with its Condensate Recovery System (CRS).

Well positioned with future growth

Looking ahead, Malaysian FPSO players are set to continue their international expansion plans.

Bumi Armada is actively bidding for ONGC's KG-DWN98/2 project and Petrobras' Buzios field project alongside globally renowned players, SBM Offshore and MODEC. It is also keen to secure Eni's ZabaZaba project in Nigeria.

Yinson is bidding for the Greater Pecan project offshore Ghana, while MISC is actively scouting for opportunities in the South Atlantic region.

This initiative by Malaysian companies to step up and stand shoulder to shoulder with other international heavyweights to secure new projects aligns with the Government's vision to make Malaysia a world class OGSE hub capable of serving the global oil and gas industry.

For more information on collaboration opportunities with Malaysian OGSE players, please visit www.mprc.gov.my

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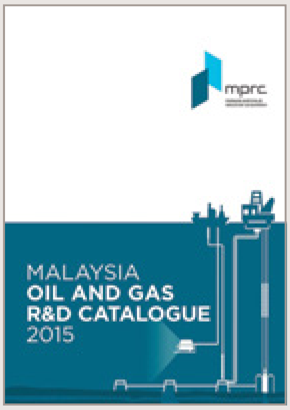
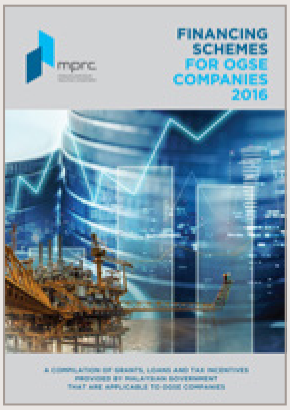
This article was first published in Upstream Online (www.upstreamonline.com) on 18 December 2017

OTHER MPRC PUBLICATIONS



MALAYSIA OIL AND GAS R&D CATALOGUE

The Malaysia Oil & Gas R&D Catalogue is a compilation of R&D capabilities to support innovation and technology development for the oil and gas industry.



FINANCING SCHEMES FOR OGSE COMPANIES

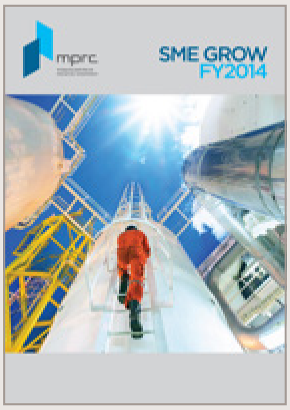
This financing guide for OGSE companies features a compilation of grants, loans and tax incentives provided by Malaysian government agencies and Development Financial Institutions that are relevant to the OGSE sector.

MALAYSIA OGSE CATALOGUE

The Malaysia Oil & Gas Services and Equipment (OGSE) Catalogue 2017 summarises the background and project experiences of Malaysian OGSE companies. Additionally, this catalogue maps the capabilities of Malaysian OGSE companies in 13 major segments of the oil & gas value chain via a user-friendly matrix. Office addresses, telephone numbers, fax numbers as well contact persons and email addresses are provided for each individual company.

DOING BUSINESS IN SOUTHEAST ASIA: GUIDE FOR MALAYSIAN OGSE COMPANIES

Produced in collaboration with MATRADE, this guide outlines the oil & gas landscape and market entry strategies for Malaysian OGSE companies interested in expanding their business to Indonesia, Myanmar, Thailand and Vietnam. This publication also features on-the-ground insights from local OGSE players, key contacts, as well as information on MATRADE's export assistance programmes for Malaysian exporters.



SME GROW

SME GROW lists active OGSE Small and Medium Enterprises (SMEs) with the potential to grow from the SME segment into Mid-tier companies. SME GROW applies a filtering process to identify a number of SME companies with high potential, and ranked based on both revenue growth and profitability.

These printed publications are available for download at www.mprc.gov.my/publication

GLOSSARY

CAPEX	Capital Expenditure
CBID	Corporate and Business Information Data
CY	Calendar Year
DE	Debt to Equity
DSCR	Debt Service Coverage Ratio
EBITDA	Earnings before Interest, Tax, Depreciation and Amortization
EIA	US Energy Information Administration
FPSO	Floating Production Storage and Offloading
FSO	Floating, Storage and Offloading
FY	Financial Year
HUC	Hook-Up and Commissioning
HWU	Hydraulic Workover Unit
MCM	Maintenance, Construction & Modification
MPRC	Malaysia Petroleum Resources Corporation
MT	Total Metric Tonnes
OGSE	Oil & Gas Services and Equipment
OPEC	Organisation of the Petroleum Exporting Countries
RAPID	Refinery and Petrochemicals Integrated Development
ROA	Return on Fixed Assets
PBT	Profit Before Tax
SAMUR	Sabah Ammonia Urea
SME	Small and Medium-sized Enterprise
SSM	Companies Commission of Malaysia (Suruhanjaya Syarikat Malaysia)
SWEC	Standard Work & Equipment Categories
TFA	Total Fixed Assets
Y-o-Y	Year-on-Year

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FEEDBACK

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