

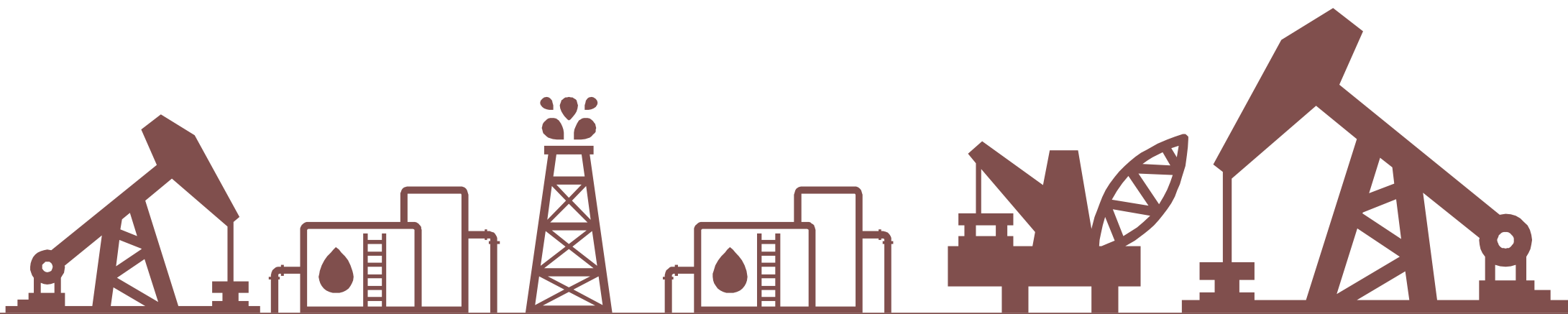


Getting the house in order

Implications of prolonged low oil prices

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Introduction

Notwithstanding its cyclical nature, since 2014 the oil and gas industry has had to contend with a prolonged period of low oil prices. This has forced an industry-wide rethink of how – and when – oil and gas resources will be developed. In 2016, the National Oil Company's upstream profit after tax declined by 90% relative to 2014, and activity in this segment may remain muted as International Oil Companies (IOCs) and resources owners apply more rigour before making investment decisions.

While PwC's 2017 CEO survey revealed that oil and gas CEOs short-term confidence about their company's growth has risen compared to last year, they remain less confident than CEOs in other sectors about their company growth.

As a country with over 3.6 million barrels of oil equivalents (mmboe) of reserves, producing 744,000 barrels of oil equivalent per day (boe/day) and a major exporter of liquefied natural gas (LNG) with over 30 metric tons per annum (MTPA) of sales registered, Malaysia remains a key oil and gas producer.



To this end, its oil and gas industry which has thrived under the stewardship of Malaysia's National Oil Company, PETRONAS must now reposition itself to survive in the “new normal” of lower prices. This will likely involve a complete rethinking on how upstream developments are carried out, combined with a possible rationalisation of the services sector.

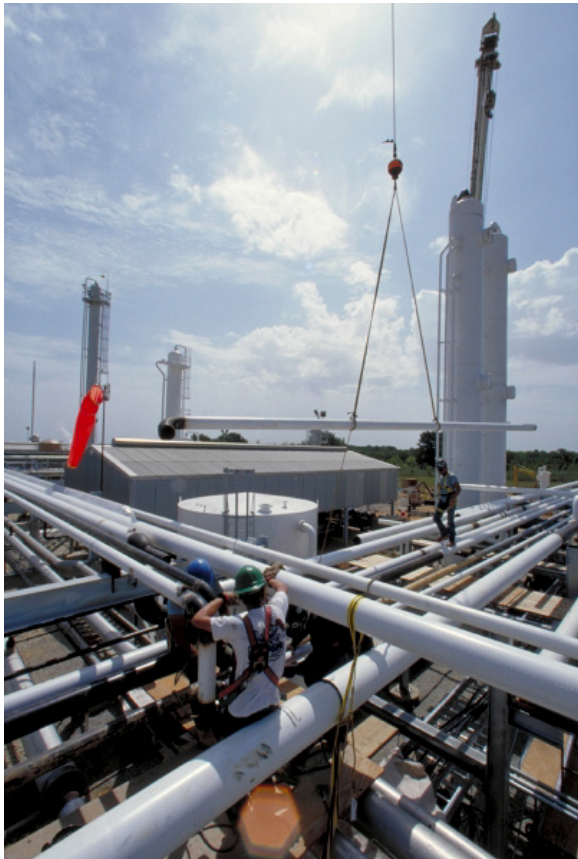
In reviewing the possible avenues towards ensuring the industry's sustainability, this paper also highlights a case study from Norway, where another National Oil Company (NOC) applied a different approach to lowering upstream breakeven costs and allowed market forces to shape a leaner services sector.

These were seen as a necessary correction as the global oil and gas sector braces itself for a “lower forever” price outlook, and presents a number of lessons that can be emulated elsewhere.

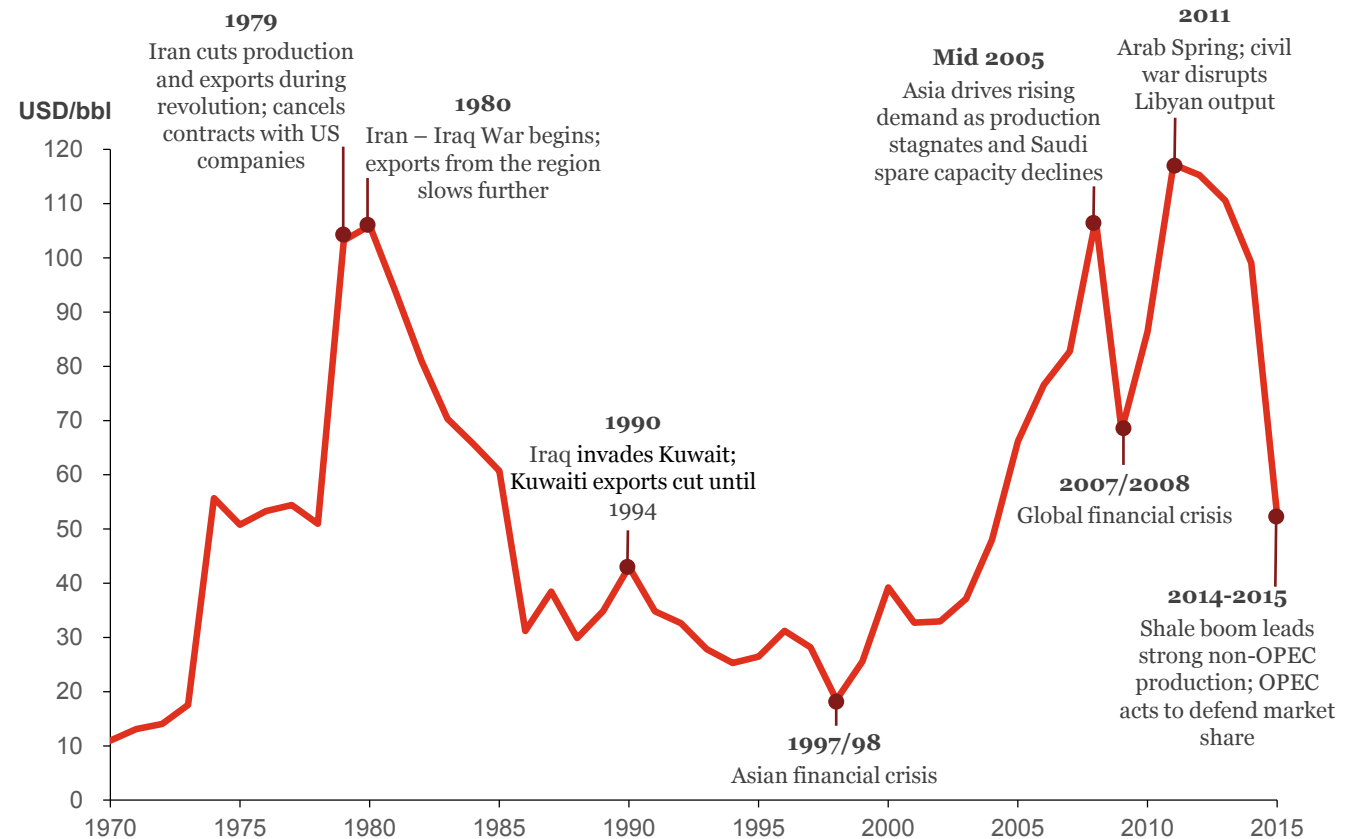
The “New Normal”

1

The oil and gas industry is cyclical, with large oil price fluctuations evident over the past 40 years



Yearly average crude oil price 1970 – 2015



Source: Business Insider, Goldman Sachs

Oil price remains relatively low relative to pre-2014 levels despite recent recovery

Brent Crude daily price January 2006 – January 2017



Source: Bloomberg, Strategy & Research



Limited recovery in overall hiring and spending going forward

Since 2014, investments have been declining. This is set to continue throughout 2017 but the industry is expecting a mild recovery.

“Will the Global economic growth improve, stay the same or decline over the next 12 months(2017)?”

The oil and gas CEOs said:



34%

Improve



16%

Maintain



49%

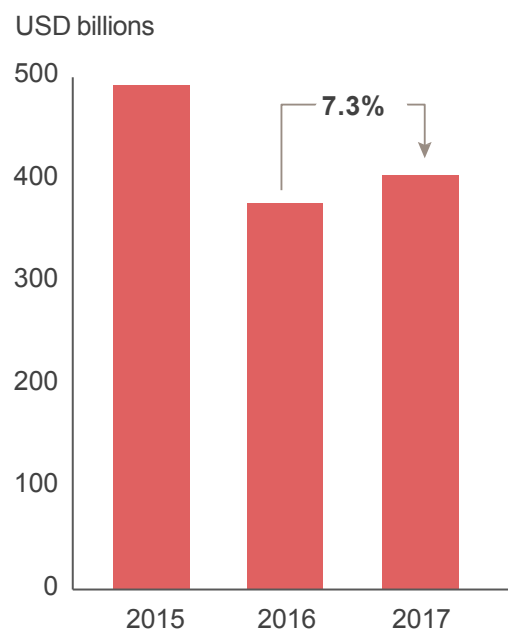
Decline

Source: PwC 20th CEO Survey

Capital expenditure (CAPEX) spending is expected to increase beyond 2018. However, it will be modest, with a 4% increase in 2018, down from 8% in 2017¹. Projects will be subjected to more vigorous scrutiny going forward to ensure returns.

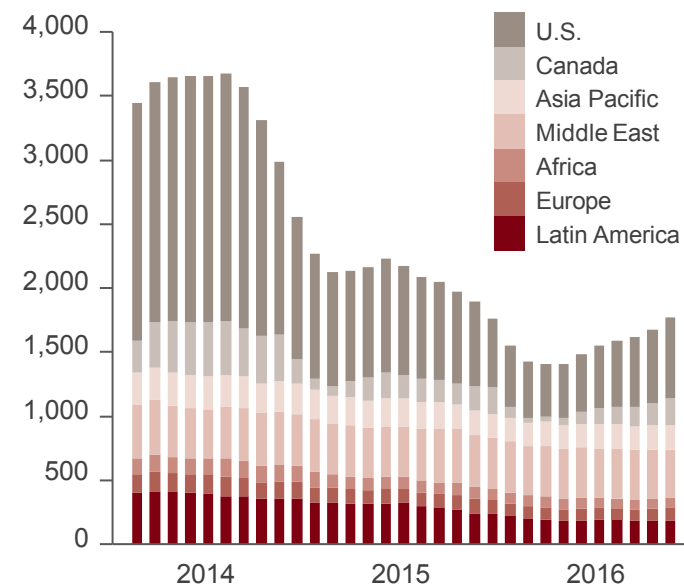
Energy companies, particularly in North America, will be well-positioned to increase production activity in response to higher prices

Global oil and gas CAPEX



Source: Rystad Energy; Strategy&

Number of global rigs, June 2014–Dec 2016

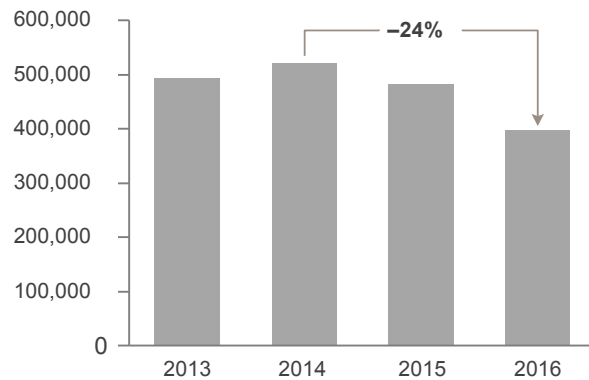


Source: Rystad Energy; Strategy&

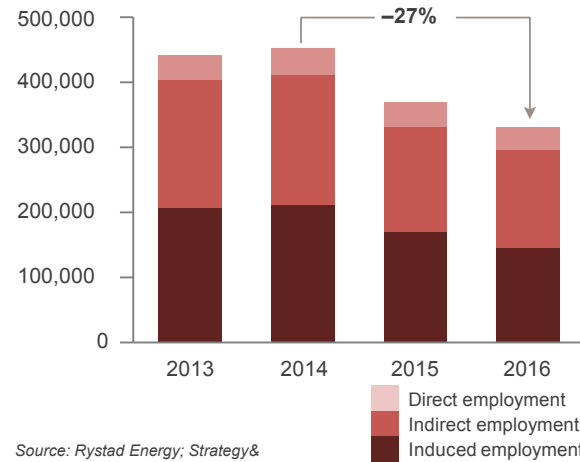
¹ According to preliminary results of Barclays' major global spending survey of more than 200 companies.

Limited recovery in overall hiring and spending going forward

Number of U.S. employees in upstream oil and gas



Number of U.K. offshore employees in upstream oil and gas



As evident in the United States (US) and the United Kingdom (UK), the recent oil price plunge negatively impacted upstream investment.

Given the current oil price range, projects will tend to primarily focus on existing regions, mature fields and lower cost plays.

These projects will likely place emphasis on criteria such as short lead time, lower risk and quicker value realisation instead of purely pursuing resource additions.

This is set against a backdrop which sees future projects becoming more challenging and increasingly complex.



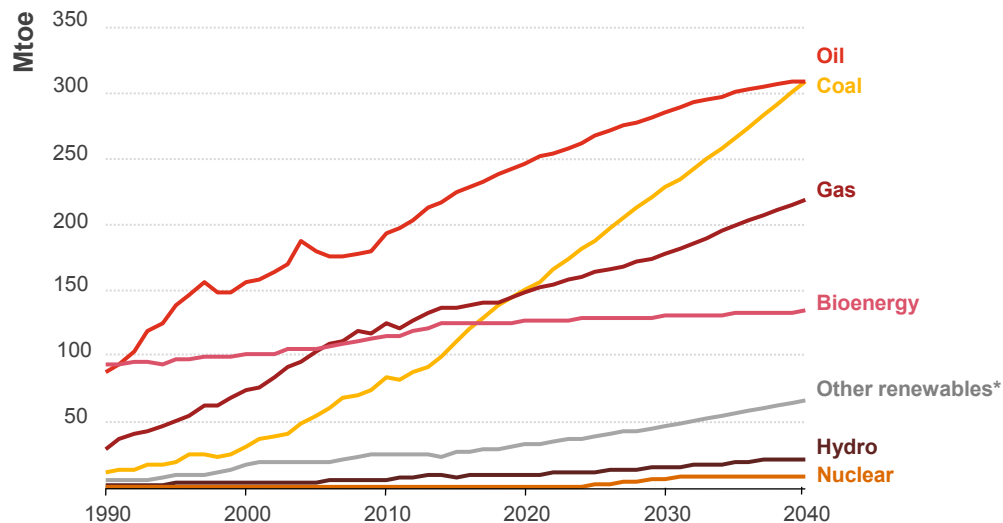


Outlook for Southeast Asia

2

Southeast Asia remains heavily reliant on hydrocarbon

Primary energy demand by fuel in Southeast Asia (SEA), 1990-2040



* Includes solar PV, wind and geothermal

Source: IEA South East Asia Outlook 2015



Gas has emerged as a prominent fuel source and is expected to remain as one of the top three fuel sources in the region.



GDP

SEA economy grew **5.3%** p.a. (2007 – 2015). And the region's economy is the **6th** largest in the world, and the **3rd** largest in Asia.



Population

SEA has the **3rd** largest population in the world (2015). More than half are under the age of 30, and **47.7%** living in urban areas.

With the increase of population and urbanisation in SEA, energy consumption is set to increase by 62% by 2035.¹

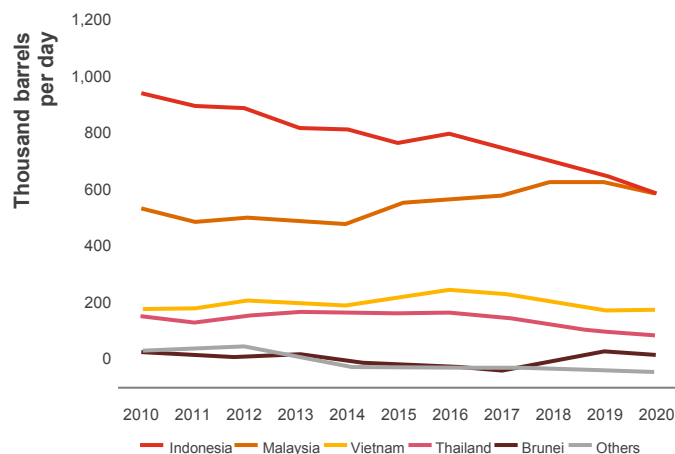
Fossil fuel is still expected to dominate the fuel mix for the next few decades with an increase in prominence of gas consumption. Escalation in coal use is also expected due to the ability to access huge resources at low production costs.

However, as countries and consumers shift to address emissions and climate change, renewable sources will also gain significance.

¹ Source: BP Energy Outlook

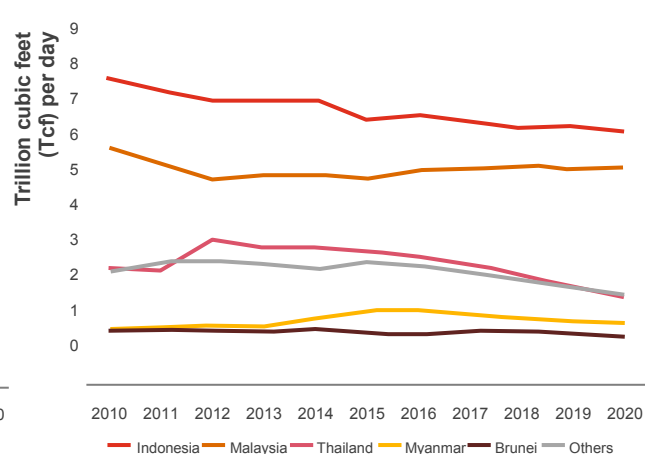
Oil and gas productions have declined due to mature fields and low upstream investments

Liquids production from SEA countries



Source: Rystad Energy

Natural gas production from SEA countries



Source: Rystad Energy

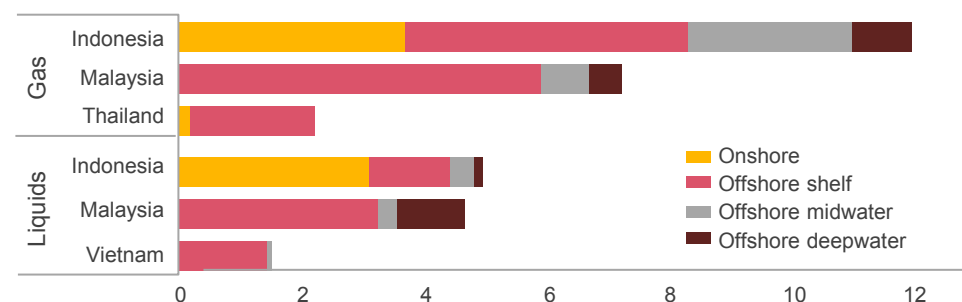


The reduction in LNG production are due to the decline from mature fields, exacerbated by low investment in upstream segments because of the prolonged period of low oil prices.

Almost 65% of the total resources in SEA is gas. Malaysia remains among the top three LNG exporting nations in the world and is the largest LNG exporter in SEA.

The region is a key global producer of natural gas with 21 Tcf per day delivered in 2015.

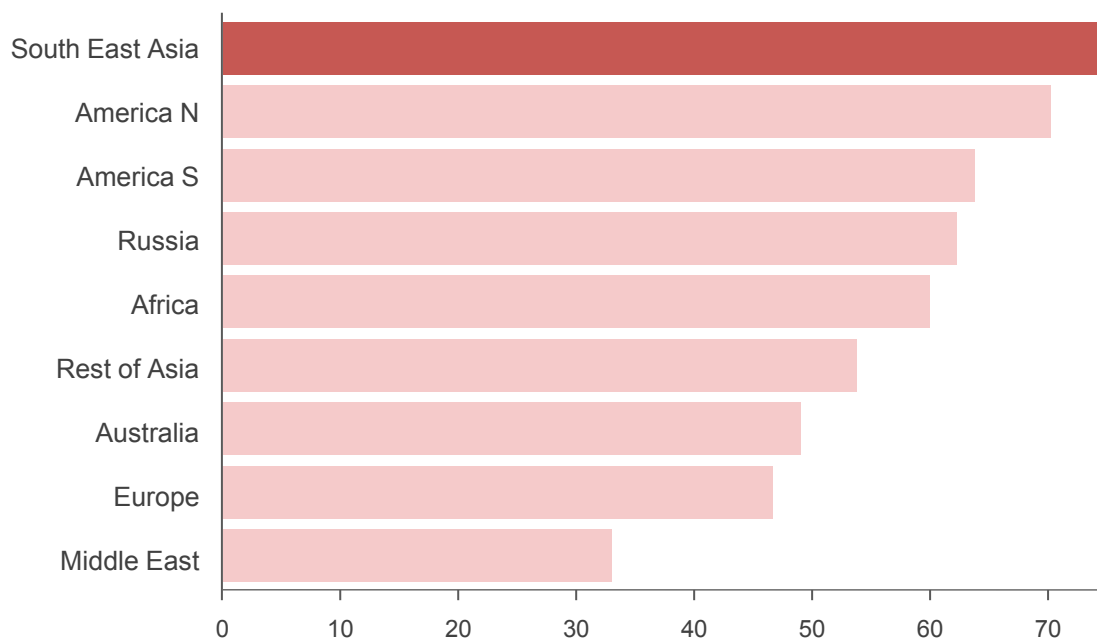
2015 Resources breakdown for the region



Source: Rystad Energy

The region faces high breakeven oil price¹, which will adversely affect upstream investments

2015 Average Brent breakeven price for non-sanction project by region. (USD/bbl)



Source: Rystad Energy

¹ For non-sanctioned projects in the world

Given the relatively higher average breakeven price average of SEA oil fields, the upstream investment segment is expected to be adversely affected.

As such SEA upstream will be less attractive for international Exploration and Production (E&P) companies, since a significant number of projects will likely be deemed uneconomic to pursue.

New entrants will likely comprise smaller players in the region but they would not have the same capacity as larger IOCs in initiating and undertaking major projects.

Concerted action by both resource owners and the oil service providers needs to be taken to reduce the breakeven price to remain competitive.



Action required:

A concerted effort involving both NOCs and service providers must be undertaken to reduce breakeven prices.

Implications for Malaysia



Local oil and gas service players continue to face challenges

“A prominent marine support company foresees it will continue registering losses this year following a net loss of RM142.87 million incurred last year.”

The Sun Daily, May 2017



“The RM1bil impairment by a local FPSO player indicates that we are addressing the burden of the severe under-utilisation of several assets, particularly in the OSV segment.”

The Star, March 2017

“Local oil and gas service provider and operator reported 1QFY18 core net loss of RM15.6mn. The shortfall was mainly due to lower than expected contribution from the drilling division.”

TA Securities, Jun 2017



“The impairment of this drilling company resulted it taking a big hit in its 4th quarter ended Dec 31, 2016 results, recording RM1.57bil in net losses, believed to be among the biggest losses in its history.”

The Star, Feb 2017



“The overall OSV business outlook still appears rather tepid and operations of hook-up commissioning (HUC) and topside maintenance services (TMS) are expected to be slow this year.”

Alliance DBS, Aug 2016

“Five out of eight of this company’s drilling rigs still idle without any contract secured. The utilisation rate is expected to fall from 2015’s 52% to 41% in 2016.”

Alliance DBS, May 2016

“Banks and oil and gas companies made record provisions for bad debts in 2016 had been increasing their provisions for bad debts since 2014 in light of the weak commodity price.”

The Star, March 2017



Whilst PETRONAS works to reduce cost for the local upstream sector

PETRONAS continues to focus on its group-wide efforts to optimise costs, further improve efficiency and operational excellence through an initiative called CORAL 2.0, which covers the following:

The objectives are:



Lower industry cost base.



Achieve world-class efficiency and lean operations through benchmarking and asset sharing.



Infuse global innovations through industry collaboration.



Ensure competitiveness through an engaged ecosystem.

Three major cost areas of focus are:



Drilling and completion



Engineering and construction



Operations and maintenance

Expected result:

Target annual cost-savings of

***RM4.0 to
RM7.0 billion
from the year 2019¹***



Source: PETRONAS Presentation at Oil & Gas UK Conference 2016 and PETRONAS website

CORAL 2.0 is making traction, but what else can be done?

FY16

In FY16, the group managed to reduce controllable costs by eight per cent, or **RM4.1 billion**, as compared to FY15.

Source: PETRONAS Financial Results Announcement 31 December 2016

FY17

YTD, the group reduced controllable costs of **RM1.0 billion**.

Source: PETRONAS Financial Results Announcement 30 June 2017



Action required:

Further efforts are required to ensure that cost savings targets are achieved through cost optimisation, improved efficiencies and innovation.





Similar to Malaysia, excess capacity and reduced utilisation in the Norwegian O&G service sector compelled banks to **respond aggressively to protect their interests.**

Banks and market participants must all work together to find viable solutions

Senior Lenders focus areas

1

No leakage to un-prioritised:

- Subordinated loans
- Dividends
- Investments
- Non-core business

2

No payments to bondholders:

- Payments-in-kind
- Write-down
- Runway after bank runway

3

Suspend newbuilding program:

- Cancellation (preferred)
- Transfer of contract
- Postponement

4

Define strategic assets:

- Market non-core assets for sale
- Develop segment competencies

5

Owner contribution:

- Fresh capital needed from owners
- 1:2 Norwegian Krone regarding deferment of repayments

6

Conversion of debt to equity:

- Increased understanding of need for write downs
- Demands more favourable terms than bondholders if equitised

7

Harmonisation of terms:

- Establish master agreement that includes all lenders and regulates all conditions

8

Amended credit arrangements:

- Runway 2020/(23)
- Maintain interest
- Limited amortisation
- Cash sweep of surplus cash
- New covenants
 - Min. cash
 - LTV > 1

Source: PwC analysis

Bondholders need to be realistic going into restructuring negotiations

Difference between expectations and solutions

	Bondholders' ask	Observed solutions
1 Return	Wanted interest	Must accept payments-in-kind
2 Instalment	Wanted down payment as compensation	Accepted write-downs of principal
3 Maturity	Wanted redemption instead of increased maturity	Accepted a longer payment runway than the banks
4 Settlement	Wanted redemption as settlement	Accepted share conversion at less favourable rate

Source: PwC analysis

Norway O&G debt restructuring experience:

“Despite refinancing negotiations between the largest stakeholders and efforts to conduct out-of-court restructuring, overcapacity in the market and serious liquidity problems will probably **result in several large bankruptcy** proceedings in Norway in 2016 and 2017.”

“The question may in many cases no longer be what the parties are obligated to under a written contract, but how the contract can be amended **in order to ensure the survival** of the parties.”

Stine D. Snertingdalen,
Partner, KVale

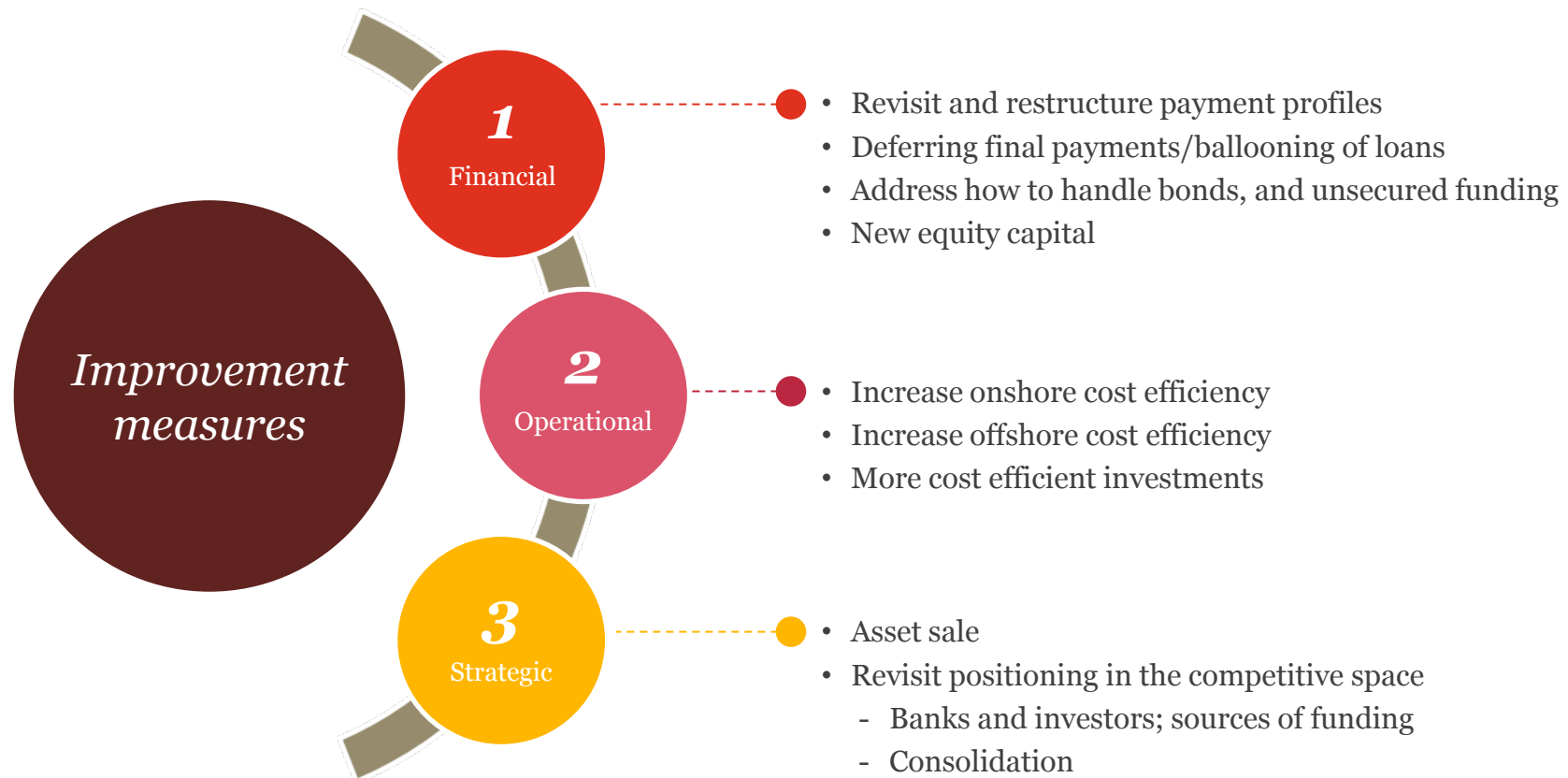
Source: The Strategic View



We have yet to see an industry wide response in Malaysia and SEA to their suboptimal capital structures



Oil and gas companies also need to focus on other measures



Case study: A National Oil Company's response

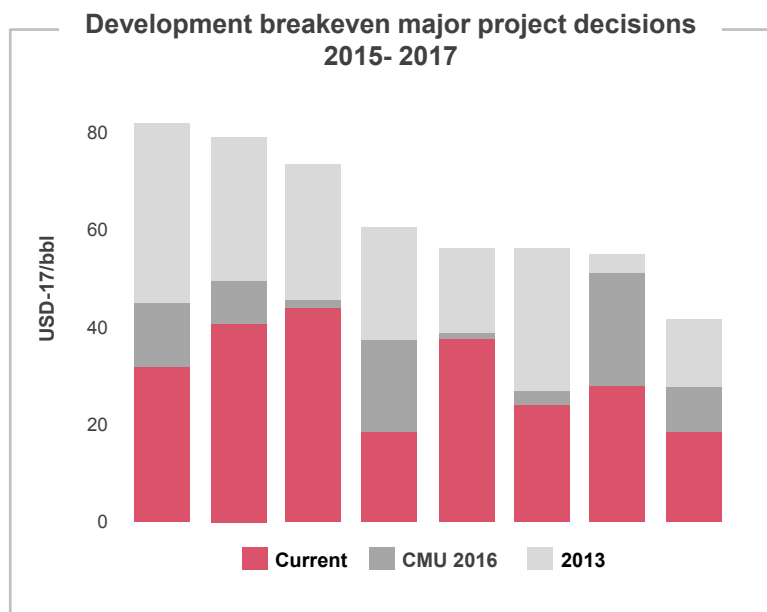


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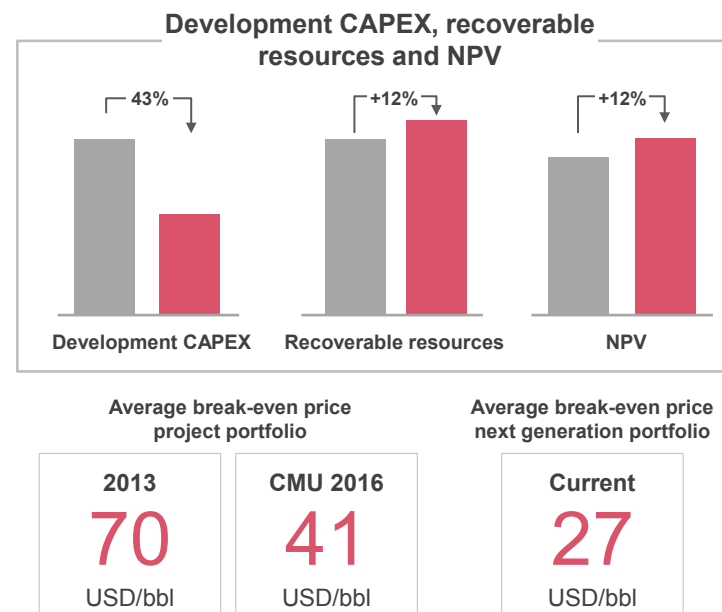
Statoil¹ successfully reduced breakeven price from USD70/bbl to USD27/bbl in three years

Breakeven price for major projects



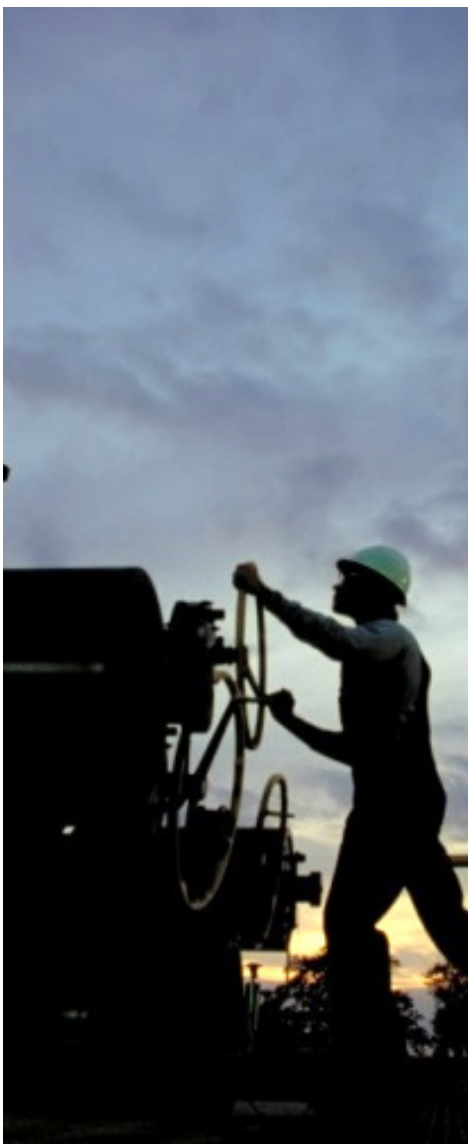
Source: Statoil

20-30% reduction in oil price => 12% increase in NPV



Source: Statoil

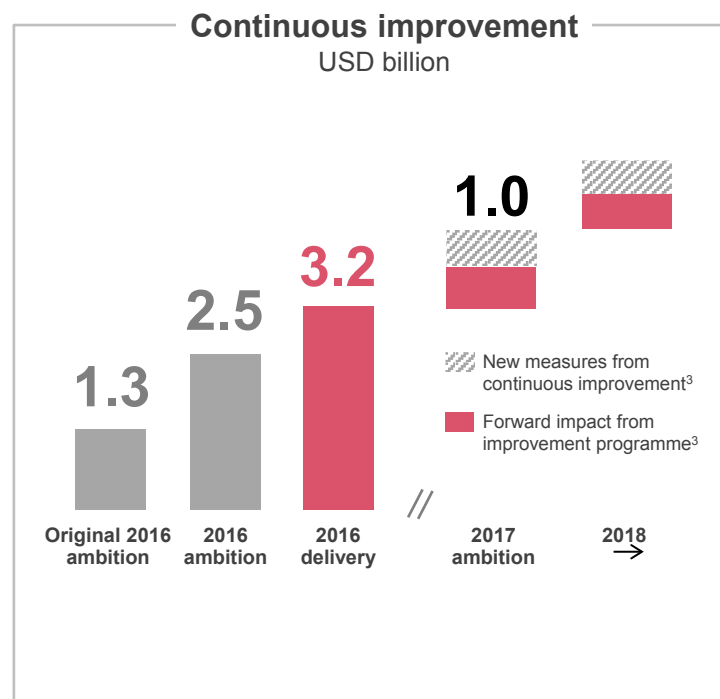
¹ Statoil is Norway's National Oil Company



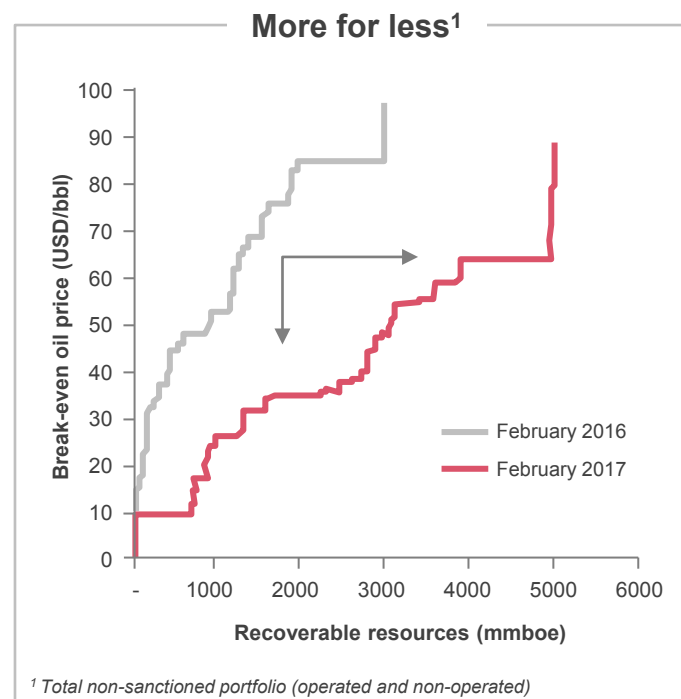
In 2016 Statoil revealed yearly OPEX efficiencies of USD 3.2billion

Significant cost reductions have been undertaken

Breakeven oil price continues to fall for unsanctioned projects in 2017



Source: Statoil



Source: Statoil

How did Statoil do it?

Cost reduction initiatives which led to breakeven price of USD27/bbl



- Standardisation, leaner concepts, and cost effective solutions (e.g. Reduce drilling cost by improving drilling efficiency, well placement, and simplifying wells).



- Collaboration with suppliers (e.g. Optimising field layout, reducing the number of wells and seabed intervention costs)
- Performance-based contracts

The results:

Less weight, lower complexity, less documentation, and lower costs.
The Company (Statoil) now has a standard package that can be implemented at other fields in Statoil's portfolio.

Source: E&P Magazine

“The project team (is) willing to challenge the conventional way of thinking and collaborate closely with suppliers ... **We have challenged the supplier to find new subsea solutions and they have responded.**”

*Margareth Øvrum,
Executive Vice President in Statoil*

Source: E&P Magazine

A photograph of an industrial facility, likely a refinery or chemical plant, featuring a complex network of pipes, tanks, and structural steel. In the foreground, a large, polished, curved metal pipe is prominent. In the background, various industrial structures, including distillation columns and storage tanks, are visible under a clear sky.

Conclusion

5

The protracted low oil price environment provides a window of opportunity to get the “house in order”

1

Achieve differentiated and sustainable performance going forward, companies need to look outside their traditional business areas and innovate.

Recent mergers and acquisition (M&A) activity in the OFS sector such as GE's recent acquisition of Baker Hughes is an effort to create a business focused on more efficient well operations through automation, enhanced imaging, and data analysis. And the just-completed combination of Technip and FMC Technologies has fashioned a company whose core capabilities will be subsea engineering and equipment.

2017 Oil and Gas Trends by Strategy&

2

This means quickly adopting new thinking, exploring risk sharing models and pursuing greater industry collaboration.

BP's recent alliance with Kosmos to seek assets in Mauritania and Senegal is a good example of a major IOC leveraging the technical exploration skills of a smaller rival.

Schlumberger and Halliburton, already offer integrated field management solutions that oversee and operate assets on behalf of companies such as Petrofac in managing day-to-day operations.

2017 Oil and Gas Trends by Strategy&

3

Reshape the business and rethink operational, financial and strategic imperatives to reflect a different operating environment.

M&A can be a fulcrum for transforming a company like Shell's \$70 billion deal to buy Britain's BG Group in 2016, a move that greatly expanded Shell's position in the natural gas market. Or M&A can be used to bolt on less ambitious but equally promising new capabilities, which was the purpose of several deals over the past few years by Total and Statoil that give these companies a foothold in renewable energy.

2017 Oil and Gas Trends by Strategy&

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