

Oil & Gas Industry

“Weakening demand as the outbreak disrupts normal global economic activity”

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Oil and gas industry

Global Market:

- WTI price plummeted to -37 USD/bbl on April 20, 2020, which is unprecedented in the history despite the effort from OPEC+, leading by Saudi Arabia and Russia with G20 to stabilize the worldwide oil price amidst of market turmoil. Thus, oil price was free falling 25% as the Covid-19 pandemic is wide spreading.
- Global demand directly takes a hit when the outbreak started from China early this year then spread like wildfire within 2-4 months. Rapid escalation in Covid-19 spread has forced the economic powerhouses like the US, Europe and Japan to lock down. Demand in March declines 10% from same period 2019 and 12% from the end of 2019, equivalent of 10-12 barrels each month. In April and May, there's likely to be a deeper dip of over 25% or 25-26 barrels a month.
- The effort OPEC+ to stabilize the market by cutting production on April 9th to 9.7 mbpd, effective in May-June, 2020 and revert to 5.7 mbpd until the end of April 2022. Moreover, G20 also agreed to stabilize oil market and consider to further cut 15 mbpd.

Vietnam Market

- The impact of Covid-19 and a decline in oil price early March, upstream activities are grappling, creating a domino effect to oilfield service companies like PetroVietnam Drilling & Well Services Corporation (PVD) and PetroVietnam Technical Services Corporation (PVS). Both service charge and the workload are under pressure due to limited exploration activities.
- As for mid- and downstream, companies such as PetroVietnam Gas JSC (GAS), Viet Nam National Petroleum Group (PLX), Binh Son Refining and Petrochemical Joint-Stock Company (BSR), and PetroVietnam Oil Corporation (PVOIL) are all suffering from a deep plunge of 30-40% of oil price, especially aviation fuel drops 60-70%.

Oil and gas industry

Global market

Global demand is experiencing the impact of the Covid-19 outbreak starting from China then spreading across the world within the past 2-4 months. Rapid escalation in the spread has forced the economic powerhouses like the US, Europe and Japan to lock down. Demand in March declines 10% from same period 2019 and 12% from the end of 2019, equivalent of 10-12 barrels each month. In April and May, there's likely to be a deeper dip of over 25% or 25-26 barrels a month.

Weakening demand as the outbreak disrupts normal global economic activity

According to EIA's April report, worldwide oil consumption in March was 89.4 mbpd, dropping 10.01 mbpd compared to the same period in March 2019 and 12.7 mbpd in Dec.2019. The gap between Supply and Demand increase 9.6 mbpd.

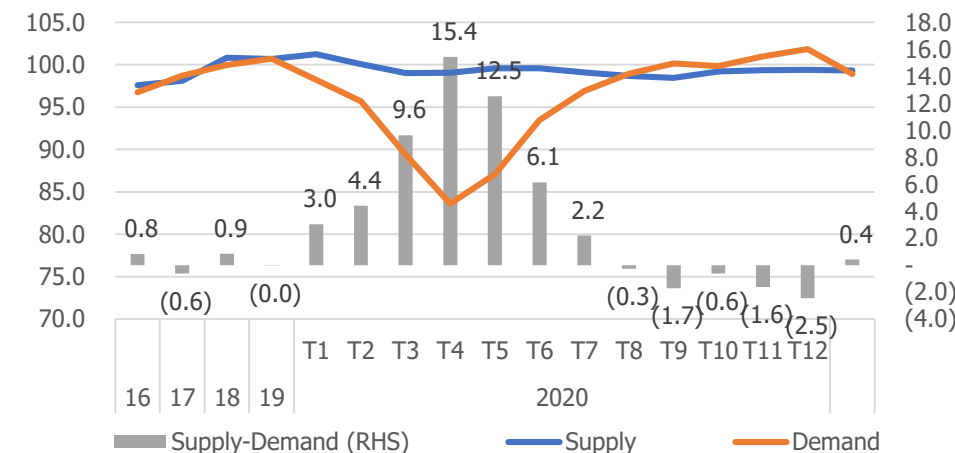
EIA suggests April and 2Q20 demand will continue to decline to respectively 83.5 mbpd and 88 mbpd. Whereas, supply remains high (before new cut deal) at respectively 99.1 and 99.4 mbpd. Thus, supply surplus reaches its peak in April at 15.4 mbpd and 11.4 mbpd for the 2nd quarter.

Annual consumption is projected to reach 95.51 mbpd, dropping 5.2% or 5.24 mbpd from 2019.

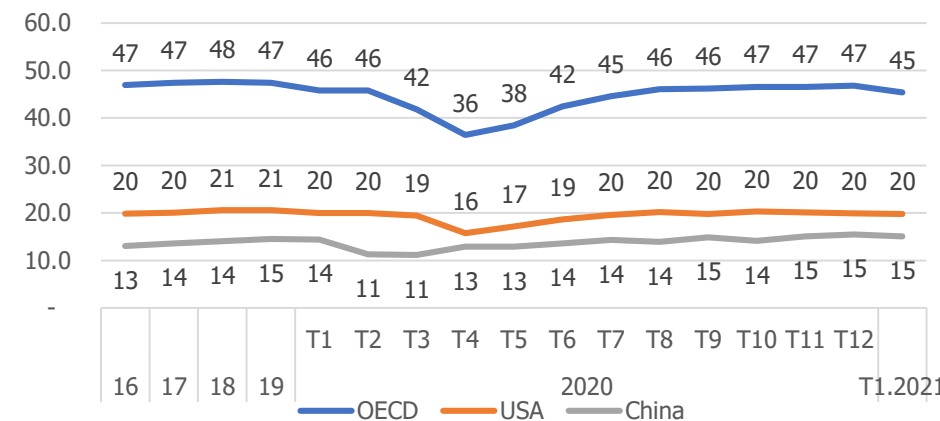
Meanwhile, International Energy Agency (IEA) warns of crashing demand in April, dropping 29 mbpd, to hit the lowest level since 1995. FY20, IEA estimates refinery intake to decline 9.3 mbpd to 91 mbpd.

Crude demand in China is sharply declining since February 2020 to 11.3 mbpd and 11.2 mbpd in March, down 21.6% from January and 22.4%-22.9% yoy. EIA forecast a recovery in April demand to 12.9 mbpd and 15.5 mbpd by the end of the year. OECD's crude intake dipped to 41.8 mbpd (-10.6% yoy) in March and could reach the bottom in April to 36.4 mbpd (-22.6 yoy) Since the beginning of 2020, March and April demand has erased 11.8% and 23.2%. OECD's demand could recover in May and reach 46.8 mbpd in Dec 2020.

Global supply- demand before OPEC+ production cut agreement April 9th 2020



Oil consumption by country



Source: EIA, MBS research

Oil and gas industry

Global market

The effort OPEC+ to stabilize the market by cutting production on April 9th to 9.7 mbpd, effective in May-June, 2020 and revert to 5.7 mbpd until the end of April 2022. Moreover, G20 also agreed to stabilize oil market and consider to further cut 15 mbpd.

According to EIA, supply in March 2020 reached 99.02 mbpd, dropping 1.05 mbpd from February and 1.24 mbpd from March 2019. Average output in the 1st quarter slightly declined 0.19 mbpd yoy to 100.11mbpd.

USA's crude production remained at 12.72 mbpd in March, up 0.83 mbpd yoy. In 1Q20, monthly output reached 12.73 mbpd. EIA forecasts that the USA will produce 12.39 mbpd in April and slightly drop to 12 mbpd each month for the rest of the year. Average monthly output is expected to be 11.75 mbpd, or 96.15% of 2019 average.

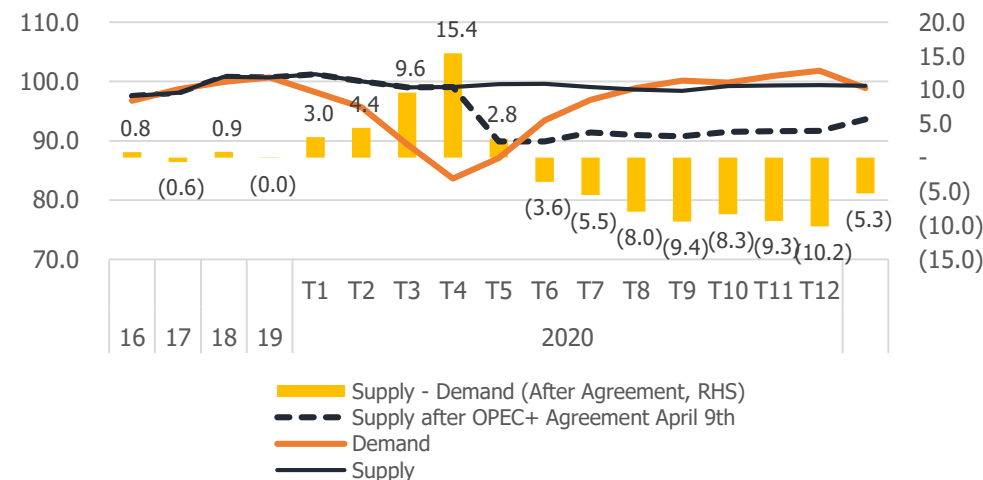
OPEC's crude production reached 27.7 mbpd in March, slightly dropping 0.23 mbpd from February and 1.9 mbpd yoy. EIA suggests that monthly average by the end of the year will continue to increase, averaging 28.65 mbpd or 97.9% of 2019 average (estimated before new cut on April 9th).

On April 9th, 2020, OPEC+ has reached a new cut deal that will take effect in May 2020. OPEC+ agrees to cut 9.7 mbpd in May and June, 7.7 mbpd by the end of 2020 and 5.7 mbpd starting from 2021. On top of that, G20 has joined to stabilize the market and agreed to further cut 20 mbpd.

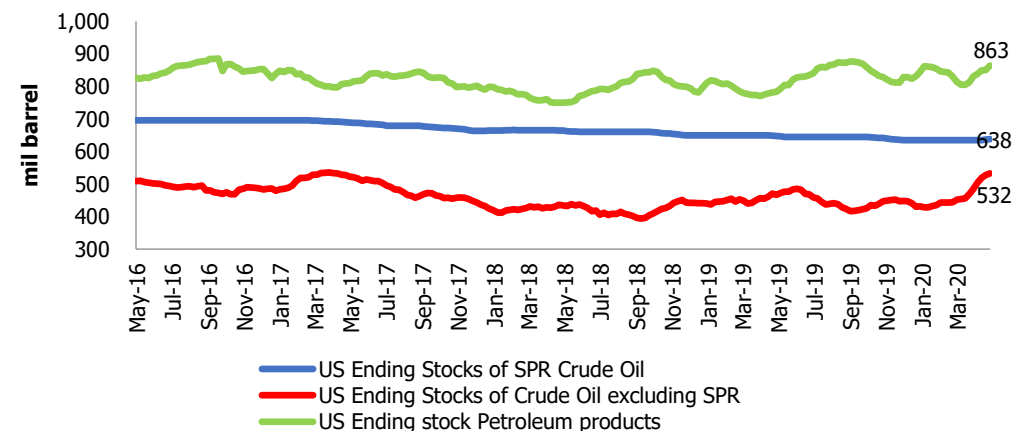
Accordingly, May and June supply will reach roughly 90 mbpd whereas demand remains unchanged at 87-93.5 mbpd. Thus, there's a surplus of 3.6 mbpd and will surge to 10.2 mbpd by the end of the year.

IEA projects oil production will sharply fall as a result of April 9th agreement and other countries will increase their proven oil reserves. Along with recovery in oil demand once the Covid-19 outbreak is contained, within late half of 2020, demand is expected to surpass supply.

Global supply- demand after OPEC+ production cut agreement April 9th 2020



US Weekly Ending Stocks of Crude oil and Petroleum products



Source: EIA, OPEC+, MBS research

Oil and gas industry

Global market

Oil price movement in first 4 months of 2020

WTI price plummeted to -37 USD/bbl on April 20, 2020, which is unprecedented in the history despite the effort from OPEC+, leading by Saudi Arabia and Russia with G20 to stabilize the worldwide oil price amidst of market turmoil. Thus, oil price was free falling 25% as the Covid-19 pandemic is wide spreading.

Price has plummeted since early March after the OPEC+ panel on March 6th came into no agreement to further cut 1.5 mbpd. Oil was trading at 18-year lowest price on March 31st.

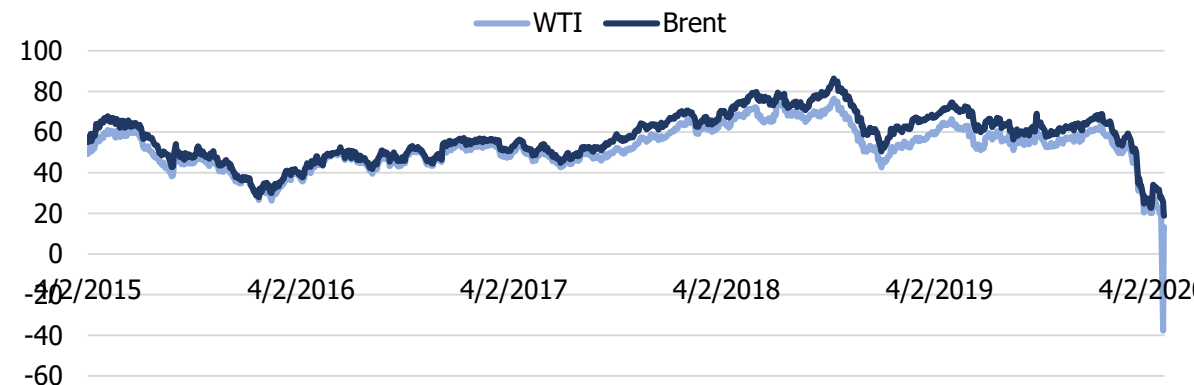
On April 9th, OPEC+ agreed to cut 9.7 mbpd in May and June 2020, 7.7 mbpd in July until the end of 2020 and 5.7 mbpd in 2021. Furthermore, G20 joined a hand to stabilize the market by further cutting 15 mbpd.

Despite that, while the cut deal hasn't taken effect, supply will remain at 98-99 mbpd whereas global demand dips 15% in March and is projected to drop 25\$ in April and May, which widens the gap between supply and demand and shortage of storage for oil. Investors are dumping WTI May futures contracts expiring on April 21st, thus further plummeting oil price to -37 USD/bbl.

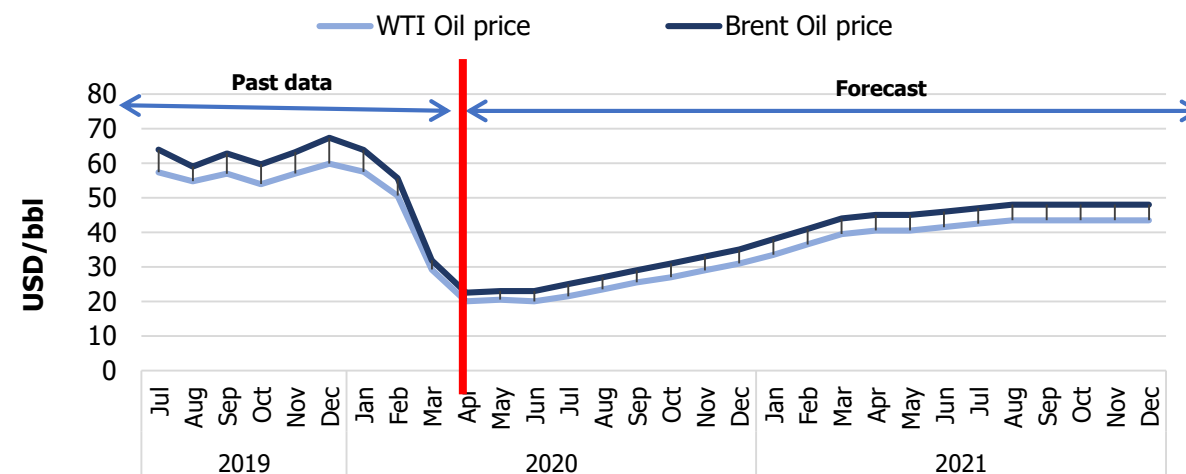
Analysts suggest that oil price plunge is inevitable despite OPEC+'s new cut deal "The agreement is simply not enough as oil demand destruction could reach 30 mbpd, 3x OPEC+ cut".

EIA estimates WTI and Brent to drop respectively to 20 USD/bbl and 22.5 USD/bbl in April then recover in December to 31 USD/bbl and 33 USD/bbl. Though, these are estimates before April 9th agreement.

Oil Price Movement



Oil Price Forecast



Source: Bloomberg, EIA, TTNC MBS

Oil and gas industry

Vietnam market

Oil price sharply dropped to 30 USD/bbl in March 2020, putting pressure to oil companies, especially the upstream sector that involves exploration and drilling.

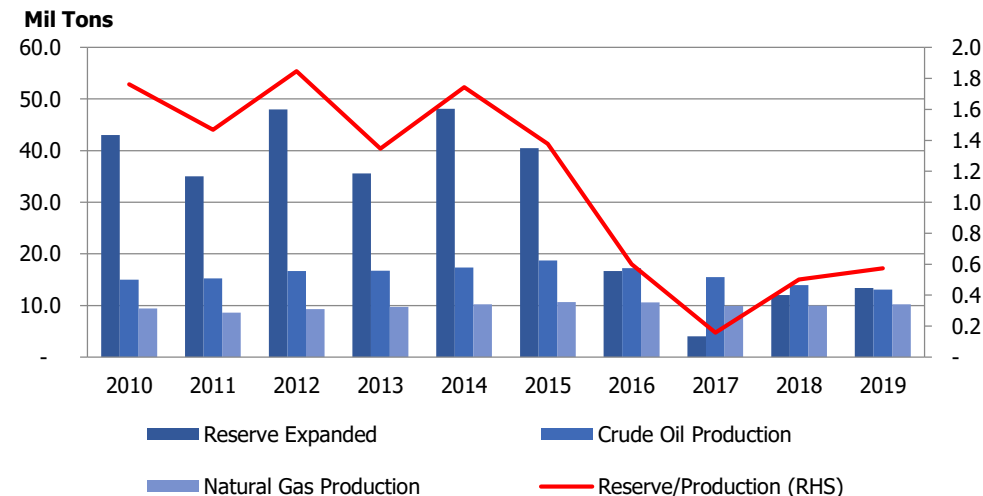
According to PVN, for each \$1 drop in oil price, its retail revenue drops \$225,000/ barrel. At the price of 30-25 USD/bbl, PVN records a loss of VND 3 billion in FY20 revenue. In case of oil price free falling, revenue and profit will continue to plunge.

Upstream activities are grappling, creating a domino effect to oilfield service companies like PetroVietnam Drilling & Well Services Corporation (PVD) and PetroVietnam Technical Services Corporation (PVS). Both service charge and the workload are under pressure due to limited exploration activities.

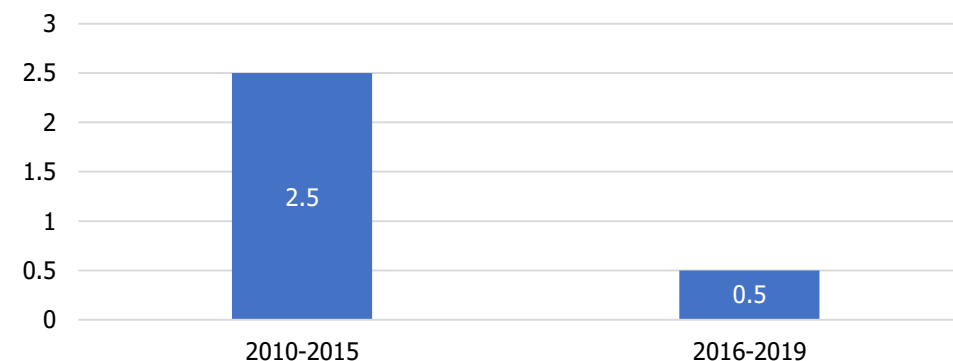
Exploration, Drilling and Manufacturing.

- Exploration activities in the past few years have been limited as oil price is dropping since 2015 with no sign of recovery. The dip in oil price this year even exacerbates the problem due to limited capital resources, dwindling proven oil reserves, thus companies resort to expand to areas with low potential. Escalated tension in the East Sea is another hurdle. According to PVN, investment for exploration in 2014 was 2.5-3 billion a year but since then, it has dropped to USD 500 million within 2015-2019. Investment for exploration activities is under constraint. Output is dwindling as large oil reserves such as Bach Ho field and Cuu Long basin are running out whereas smaller reserves require substantial investment.
- Several investors have shown sign of reluctance and prolong progress of few projects in 2020 such as Jardin decided to suspend Nam Du- U Minh project. At the same time, other foreign-owned projects like Blue Whale of Exxon Mobil are cut down and capital flows are extended.

Vietnam Oil & Gas Production and Reserve Expand



Annual investment for oil exploration (bn USD)



Source: MOIT, MBS Research

Oil and gas industry

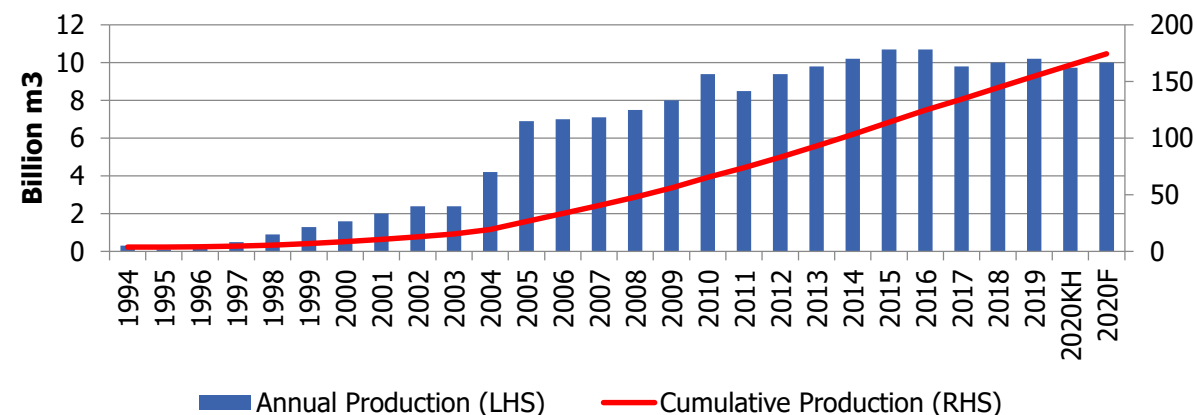
Vietnam market

Dip in oil price takes a toll on domestic LNG projects but it also pushes the importation of LNG in response to rising electricity-generating demand

Focus on LNG extraction to ensure electricity production and increase output in 2022.

- LNG Nam Con Son Phase 2: completion of pipe systems from Sao Vang- Dai Nguyet gas field (2021) and Su Tu Trang field (2022)
- Thi Vai TNG terminal with phrase 1 capacity of 1 mn ton/ year, completed by 2022 to provide for Nhon Trach power plant 3&4.
- In the long term, PVN will allocate resource to LNG extraction projects in Ma Lay- Tho Chu, including Lot B O Mon, Nam Du- U Minh where has a large reserve for long-term development plan.

Vietnam's Natural Gas Production



Project	Investor	Capacity	Status
LNG Hai Linh	Hai Linh Ltd.,	220 nghìn tấn/năm	Pending
LNG Thi Vai	PVN-PVGAS	GD1 triệu tấn/năm- Hoàn thành 3-6tr tấn/năm	Capital raising
LNG Son My	PVN-PVGAS		Pending
LNG Bac Lieu	Delta Offshore Energy Pte	150-174 million m3	Approved
LNG Cai Mep Ha	Tập đoàn T&T và GEN X Energy	9 mn ton/ year	Reviewing
LNG Van Phong	Petrolimex		Reviewing
LNG Long Son	EVN-GENCO3	Phrase 1: 3.5 mn ton- Phrase 2: 6.5 mn ton/year	Reviewing
LNG Ca Na	Gulf Energy Development	6 mn ton/year	Reviewing
LNG Vung Ang	Siemens	Ensure LNG for a 1.500 MW- electricity plant	Reviewing

Source: MOIT, MBS Research

Oil and gas industry

Vietnam market

Refinery and distribution:

Due to the Covid-19 pandemic and decline in oil price, oil refinery and distribution are both affected. Demand is weakening as production and mobility are restricted.

We view downstream companies such as GAS, PLX, BSR, and PVOIL are under pressure of the Covid-19 and the free fall of oil price. The outbreak within the last 2 months has driven price down 30-40%, especially aviation fuel experienced 60-70% decline and may continue to prolong.

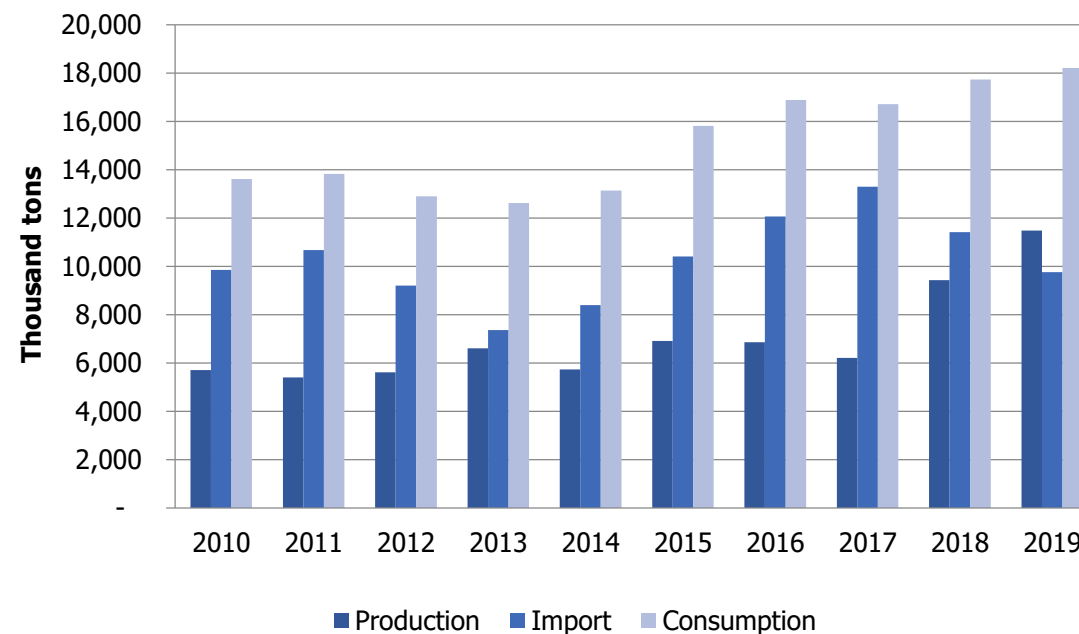
Processing activities

Decline in oil price and weakening demand due social distancing to cope with the Covid-19 have slowed down refinery activities. Deteriorating consumption, low inventory turnover, and wide spread between sale price and material price render refinery companies to take on large losses in 1Q20.

Distribution

Distribution channels are disrupted. Petrolimex and PVOIL, 2 largest distributor, that make up for 70% of market share, are struggling and reporting enormous loss.

Gasoline Production- Consumption and Import-Export



Source: MOIT, MBS research

Oil and gas industry

Vietnam market – Financial result

PVN's financial results

Item	Unit	2017	2018	2019		2020		
				Plan	Result	Plan	Q1 result	% annual Plan
Addition to oil reserve	Mn ton	4.00	12.00	10-15	13.38	10-15	NA	NA
Oil output	Mn ton	15.50	14.00	12.40	13.11	10.62	2.83	26.6%
Gas output	Mn ton	9.90	10.00	9.70	10.21	9.74	2.32	23.8%
Oil refinery output	Mn ton	6.80	11.80	11.35	11.49	11.82	3.42	28.9%
Electricity output	Bn kwh	20.58	21.00	21.60	22.60	21.60	5.33	24.7%
Fertilize output	Mn ton	1.65	1.63	1.58	1.58	1.56	0.44	28.2%
Revenue	Trillion VND	267.2	320.9	383.2	396.9	641.0	165.0	25.7%
Pre-tax profit	Trillion VND	46.9	50.6	31.3	43.8	32.3	NA	NA
Net income	Trillion VND	37.2	38.6	24.7	35.2	27.5	NA	NA
Attributable to budget	Trillion VND	97.5	121.3	87.5	108.0	82.1	20.8	25.3%

*: - 2020 Plan was created based on Crude Brent of USD 60 per barrel
 - FY17-19 revenue was in consolidated financial statement

Source: PVN, MBS Research

Macro outlook

Stock market outlook

Key investment themes

Sector Outlook

Oil and gas industry

Vietnam market – Financial result

Oil companies' financial result

Ticker	Unit	Financial result until 1Q20			2019 result		2020 target		1Q20 result		2020 Forecast		Impact of drop in oil price	
		Total asset	Debt	Mark cap 7.5.2020	Revenue	Pre-tax profit	Revenue	Pre-tax profit	Revenue	Pre-tax profit	Revenue	Pre-tax profit	Short term 3-6M	Mid-long term >9M
GAS	Bn VND	65,453	13,490	131,488	75,310	15,068	66,164	8,294	17,094	2,968	61,644	11,617	Neutral	Positive
PLX	Bn VND	55,079	33,119	49,233	189,656	5,648	n/a	n/a	38,478	-1702	152,600	3,600	Negative	Positive
BSR	Bn VND	47,629	15,923	18,603	102,824	3,054	80,686	1,364	17,991	-2,345	63,797	No loss	Negative	Neutral
PVS	Bn VND	25,428	12,467	5,736	17,233	948	15,000	800	3,241	177	16,561	1,032	Neutral	Positive
PVD	Bn VND	21,338	7,154	4,030	4,368	189	4,680	100	1,675	26	6,026	325	Positive	Negative
PVT	Bn VND	11,214	5,379	2,843	7,758	1,016	6,200	550	1,578	120	6,850	700	Negative	Neutral
DPM	Bn VND	11,438	3,171	5,440	7,757	467	9,237	512	1,711	129	8,600	650	Positive	Neutral
DCM	Bn VND	10,194	4,010	4,240	7,177	463	5,940	55	1,393	100	6,200	260	Positive	Neutral
OIL	Bn VND	21,552	11,223	8,381	79,872	412	n/a	n/a	17,684	-531	68,000	No loss	Negative	Neutral
PVB	Bn VND	856	411	324	383	52	621	58	377	60	600	60	Positive	Negative

Source: companies' financial statements, MBS Research

Macro outlook

Stock market outlook

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Sector Outlook