REVIEW 2019 | OUTLOOK 2020

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MACROECONOMICS OUTLOOK

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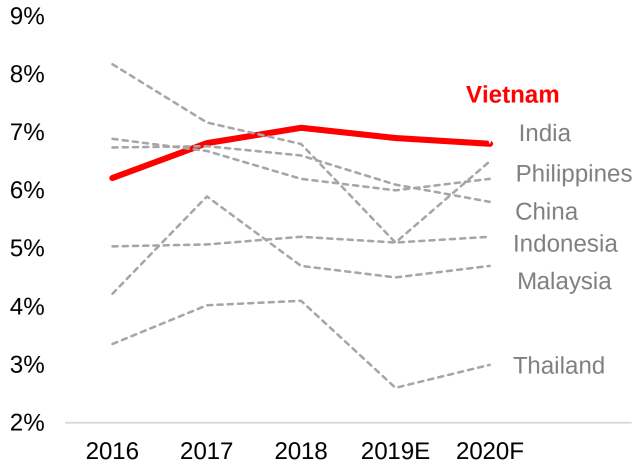
I. The GDP growth rate is maintained at a high level, inflation and exchange rate remain stable

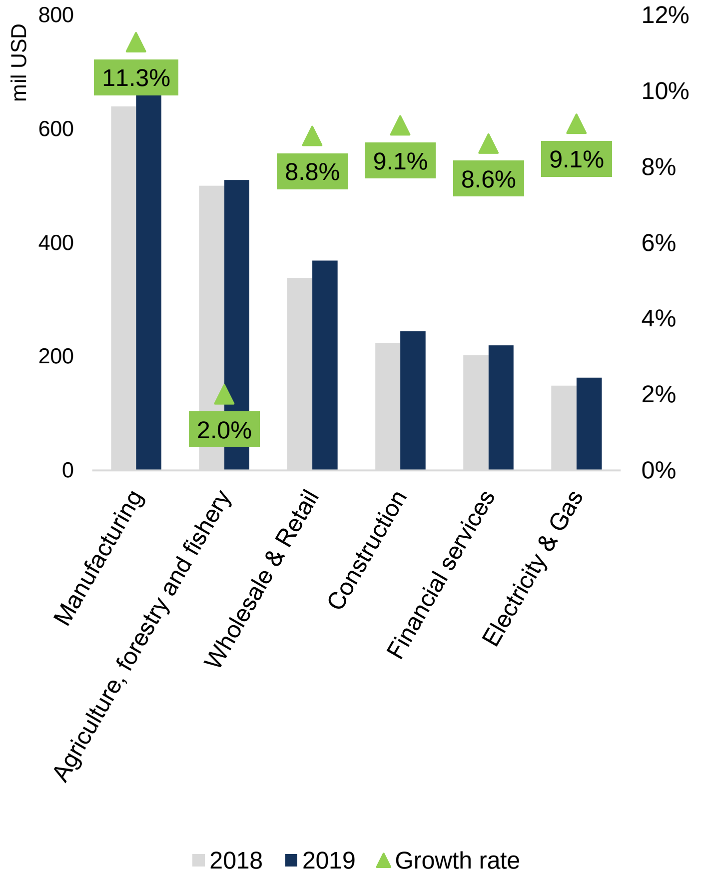
According to the Asian Development Bank (ADB), although world economic growth is expected to decelerate, Vietnam is still able to maintain a relatively high economic growth rate compared to other countries in the region. In 2019, Vietnam's GDP increased by 7.02%, which is the 2nd highest figure within the past decade and belongs to the group of the fastest-growing economy globally. The driving force of this remarkable growth came from the manufacturing sector, with large FDI projects such as Samsung and Formosa.

GDP growth rate of some Asian countries

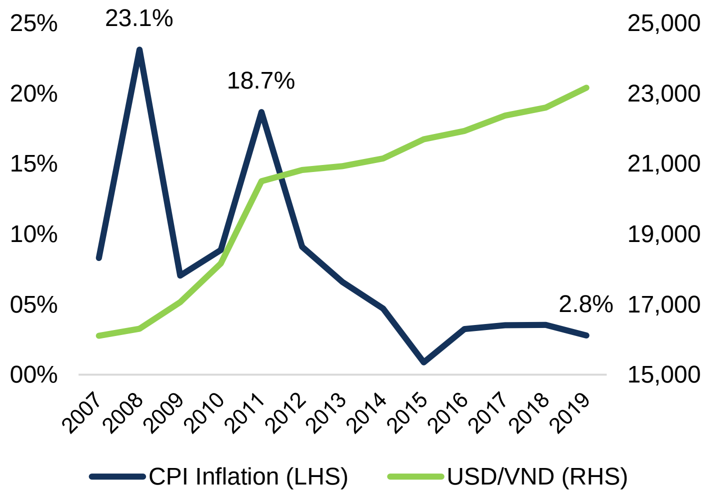


Sources: World Bank, ADB, GSO, FPTS Research

Vietnam's GDP by sector



Inflation and exchange rate



Sources: World Bank, ADB, GSO, FPTS Research

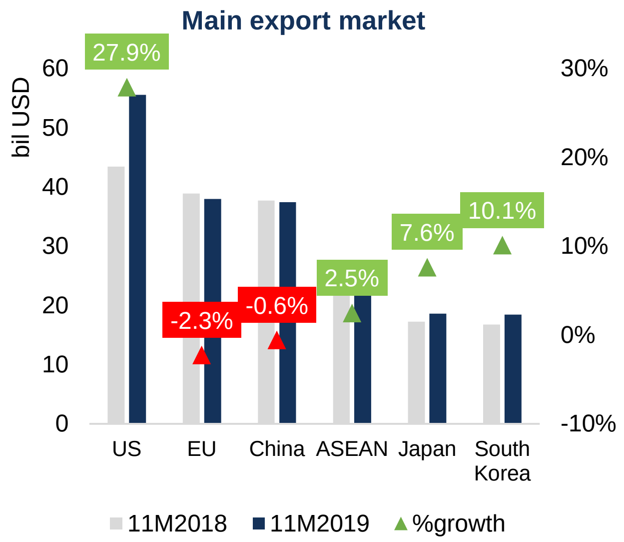
- **Inflation:** the average CPI in 2019 went up by 2.79% - the lowest figure in the past 3 years. According to ADB's forecast, Vietnam inflation rate would rise to 3.5% in 2020, equivalent to the government's plan.
- **Exchange rates:** as of December 2019, the USD/VND exchange rate remains flat compared to the end of 2018. In comparison with some other currencies in the region, the volatility of USD/VND is quite stable: Thailand (+6.8%), Indonesia (+2.5%), Philippines (+2.5%), Malaysia (-0.9%), China (-2.7%), India (-2.0%) and South Korea (-6.4%).

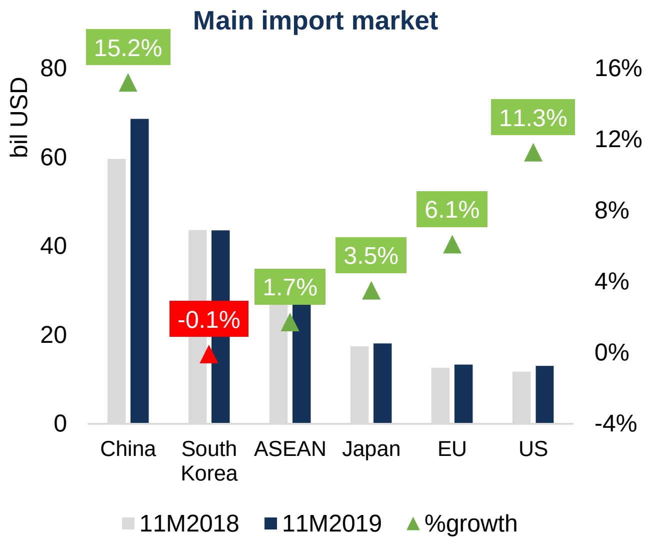
II. Substantial growth of import and export, prospects from new trade agreements

According to the Ministry of Industry and Trade (MoIT), in 11M2019, the estimated export value is US$241.4 billion (+7.8% y-o-y) and import value is US$232.3 billion (+7.4% y-o-y). The trade surplus had reached a remarkably figure of US$9.1 billion, which mainly came from the FDI sector.

Vietnam is in a favorable position to benefit from the US-China trade war in short-term

After the first 11 months of 2019, export to the U.S., Vietnam's largest export market (23% of exports), has reached US$55.6 billion (+27.9% y-o-y). Export to Japan and South Korea maintained a moderate growth rate of 8-10%. The declining markets are EU (-2.3%), China (-0.6%) and Hong Kong (-12.8%). In regard to imports, China is still the largest partner accounting for nearly 30% of Vietnam import value, in which imports from this market increased significantly by 15.2% in 11M2019.





Sources: GSO, CGD, FPTS Research

Prospects from new trade agreements

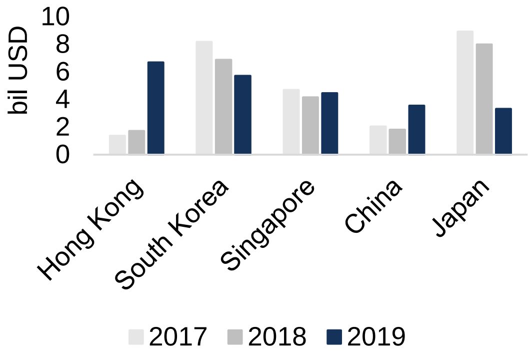
In 2019, there are 2 new important trade agreements for Vietnam, which are the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) and the Vietnam-EU Free Trade Agreement (EVFTA). Up to now, Vietnam has 13 FTAs with countries and regions in the world, providing opportunities for the economy.

FTA	Status	Members	Description	Comment
CPTPP	- Dec-2018: Effective for 6 members - Jan-2019: Effective for Vietnam	12 members of TPP except for the US Members list might be extended	510 million people 13% of global GDP 15% of global trade	Most members have signed FTAs with Vietnam; Japan, Australia, and Canada are key markets Opportunities for exporting wood, footwear, textiles
EVFTA	- Jun-2019: Official signing - 1H2020: Ratification by the EU parliament	Vietnam and 27 members of the EU	610 million people 23% of global GDP 12% of global trade	Opportunities for exporting footwear, textiles and agricultural products

III. FDI flows focus on processing and manufacturing industries; A sharp increase in newly registered FDI from China and Hong Kong

According to Vietnam Foreign Investment Agency, the total registered FDI capital in Vietnam in 2019 has reached more than US$38 billion (+7.2% y-o-y). However, the implemented capital was only US$20.4 billion, equal to about 53.6% of the total registered capital. In 2019, there are strong FDI flows from Hong Kong and China to Vietnam, specifically including US$6.4 billion registered from Hong Kong (up nearly 4 times) mainly comprised of stake acquisition of Vietnam Beverage Co., Ltd. China also registered to invest more than US$3 billion in Vietnam, equivalent to an increase of nearly 2 times compared to the same period last year, and mainly focused on processing and manufacturing industries.

Top 5 countries investing in Vietnam (11M2019)



Notable FDI projects in 2019

Project	From	Value (USD)
Vietnam Beverage Ltd	Hong Kong	3.85 bil.
Horse racing complex	South Korea	420 mil.
LG Display expansion	South Korea	410 mil.
Radial tires ACTR	China	280 mil.
Goertek multimedia devices	China	260 mil.
Advance Tyre Vietnam	Hong Kong	214 mil.
Meiko Vietnam	Hong Kong	200 mil.

Sources: MoIT, VFIA, GSO, FPTS Research

IV. Interest rates

Since central banks raise the interest rate at the end of 2018, the interest rates in the first 10 months of 2019 have been stable. Accordingly, the deposit rates in VND are at 4.3% - 5.5%/year for term deposits from 1 month to less than 6 months; 5.3% - 6.5/year for deposits from 6 months to less than 12 months and at 6.5% - 7% for 12 months or more. The VND lending interest rates are maintained at 6% - 9% for short-term loans and 9% - 11% for medium and long-term loans.

In 2019, the US Federal Reserve (FED) also cut interest rates 3 times, currently down to 1.5 - 1.75%/year. Following that, in November, the State Bank of Vietnam also issued decisions related to the adjustment of reducing deposit rates and lending rates at credit institutions and branches of foreign banks.

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STOCK MARKET OUTLOOK

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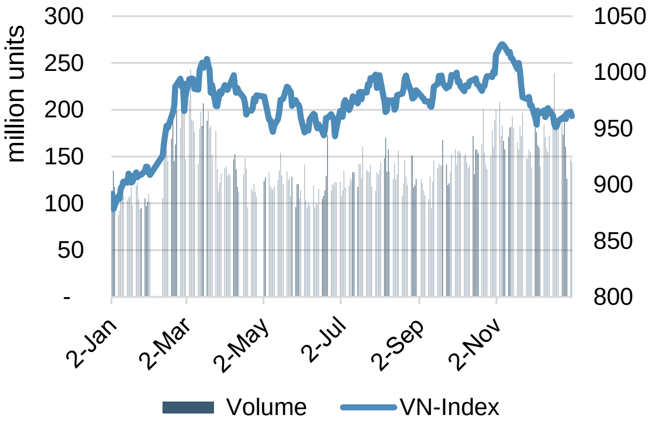
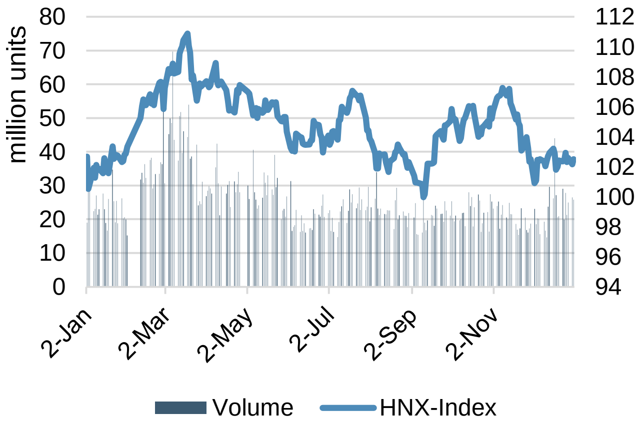
I. Stock market – sideways trend played the leading role

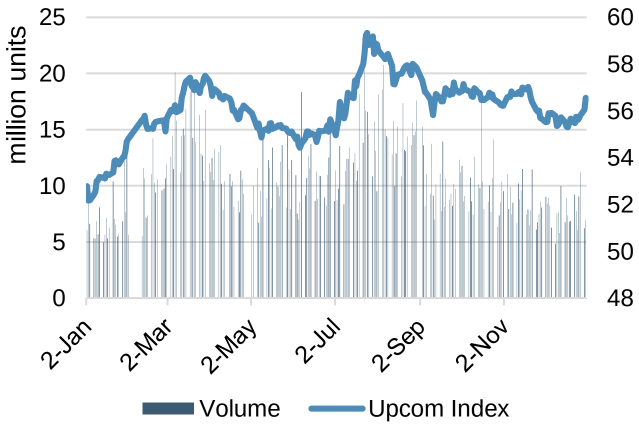
VN-Index price chart in 2019



HNX-Index price chart in 2019



UPCOM-Index price chart in 2019



Following a significant slump in 2018 and sliding to the support area of 880 points, the VN-Index rebounded in the first quarter of 2019 before shaping the horizontal fluctuation in the range of 950-1,000 points for most of 2019. The market performance may be divided in to two main periods in the year:

- The first period lasted from January to the end of June, featured by a strong rally in the first quarter as a result of good impacts from macro data and domestic business performance, combined with supporting international information such as temporary halts to U.S.-China trade war and Fed's cautious stance on rate hikes. After the VN-Index peaked at 1,010 points, a 3-month following retracement dragged it back to 950 points, caused by worse-than-expected earnings reports, escalating U.S-China trade war and signs of slowing world economy.

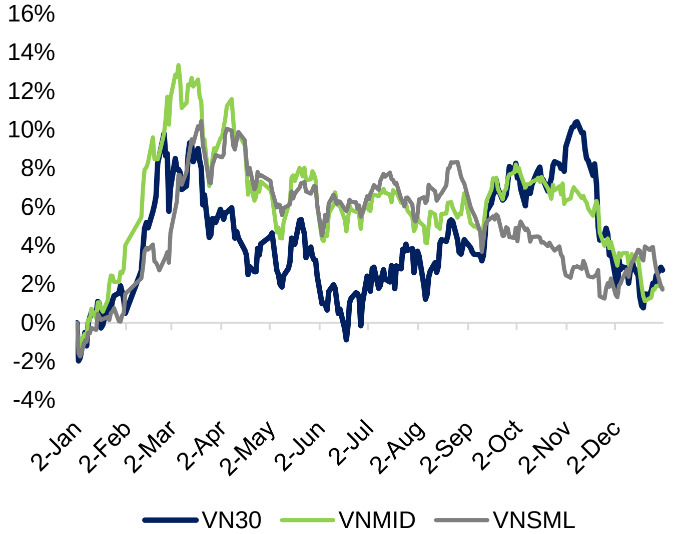
- The second period was the rest of 2019. The stock market slightly revived from July to October 2019, with the VN-Index hitting the 1,000-point resistance five times. This recovery was attributed to the investor optimism about Fed's monetary policy and the outperformance of large-cap influencers like VCB, MWG and FPT. However, after the VN-Index climbed to a fresh 52-week high of 1,024 points in early November, a rapid and strong correction erased most of the value gained in the last four months. Pressures from foreign outflows and corrections of heavyweight stocks in the VN30-Index basket were reportedly key drivers of the weak market performance towards the end of the year.

In 2019, the VN-Index advanced 68.45 points, or 7.67%, from the end of 2018. Similarly, the-UPCOM Index rose 7.05% in the year.

At the Hanoi Stock Exchange, the HNX-Index seemed not to break the long-term negative trend due to mixed performances in the second half of 2019. The gauge sank 1.65% over 2018.

1. Strong divergence between market capitalization and industry groups in the last 6 months

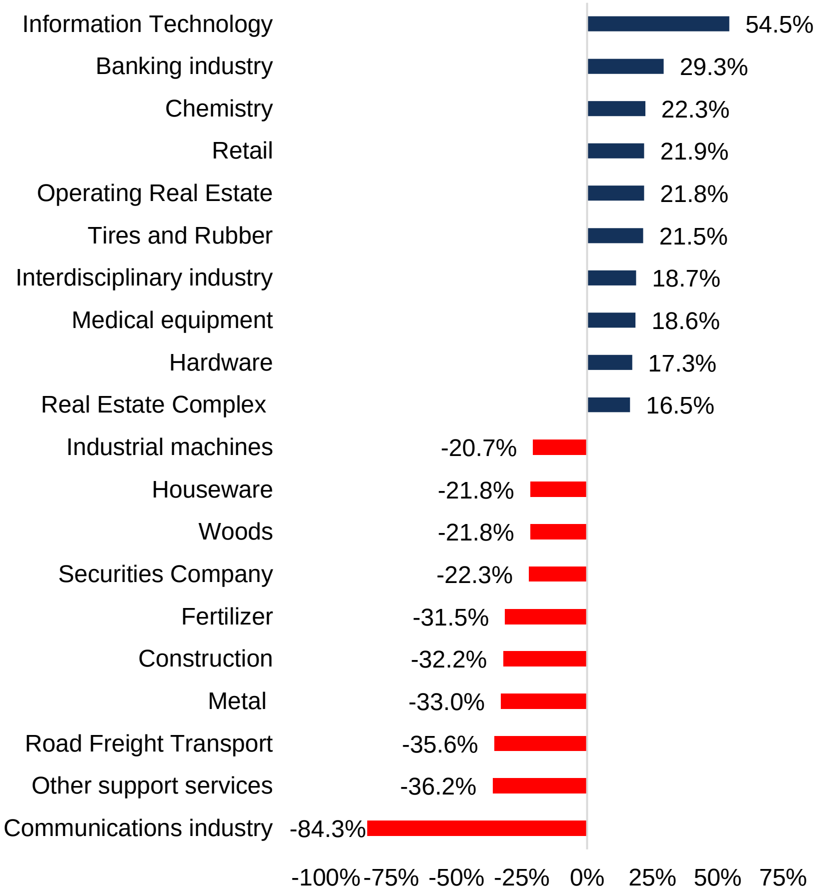
Fluctuation correlation between VN30, VNMID and VNSML



Playing a leading role in the market, the VN30-Index moved slightly upward like the VN-Index. In contrast, mid-cap and small-cap stocks tended to decrease in the second half of 2019.

By industry, information technology (+54.47%), banking (+29.35%) and chemicals (+22.28%) recorded the biggest growth. In contrast, media (-84.26%), other support services (-36.22%) and road transport (-35.56%) dropped most in the reviewed period. However, given impacts on the VN-Index, the divergence of top five sectors by market capitalization exerted a drag force on the market trend in 2019. In particular, banks (VCB and BID), real estate companies (VIC and VHM) and oil and gas firms (GAS) supported the uptrend while construction companies (CTD and ROS) and food producers (SAB and MSN) erased their previous gains and negatively affected the market development.

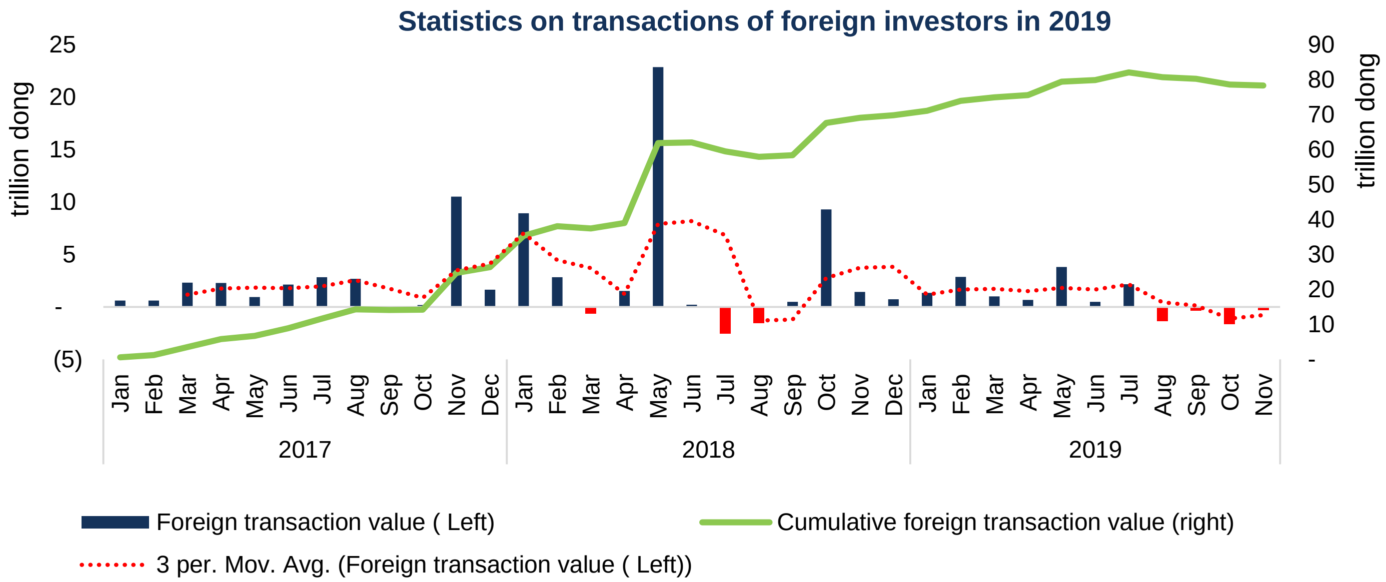
Fluctuations of industry groups in 2019



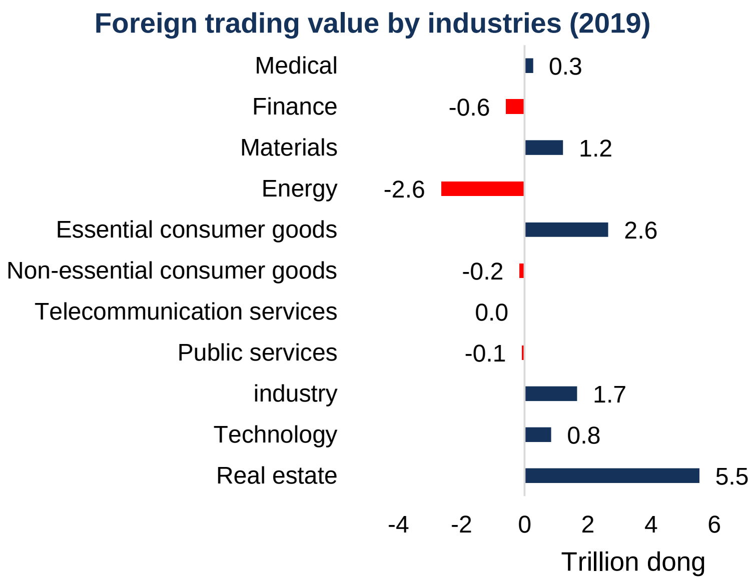
Ticker	Impact on VN-Index		
	The first 06 months	The last 06 months	2019
VCB	19.9466	24.4921	44.4387
VIC	21.486	0.331	21.817
VHM	8.6801	8.3554	17.0355
BID	-1.94	17.8585	15.9185
GAS	9.0103	0.1441	9.1544
VRE	5.767	0.5717	6.3387
FPT	1.7393	2.9838	4.7231
VJC	1.6767	2.9651	4.6418
MWG	1.0641	3.1561	4.2202
CTG	0.8755	1.9065	2.782
SSI	-0.2474	-0.8004	-1.0478
YEG	-1.3001	-0.2425	-1.5426
TCB	-5.4576	3.6922	-1.7654
POW	0.5856	-2.4103	-1.8247
HVN	1.2141	-3.0717	-1.8576
CTD	-1.1191	-1.1085	-2.2276
BVH	-1.2089	-1.9244	-3.1333
ROS	-1.3377	-1.9244	-3.2621
SAB	2.3505	-7.9776	-5.6271
MSN	2.5578	-8.2392	-5.6814

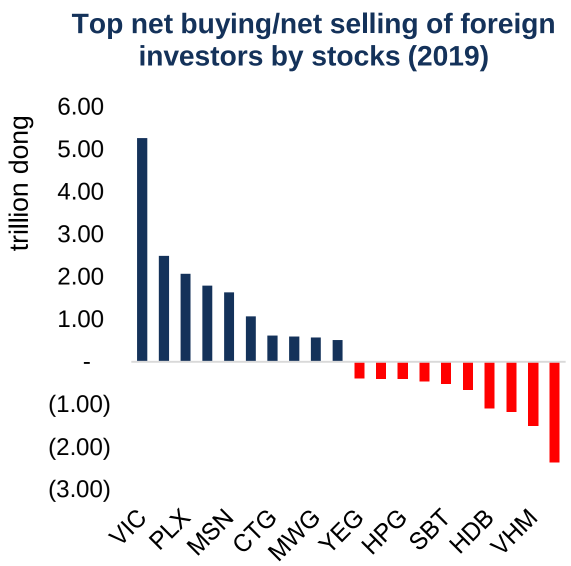
2. Foreign inflows slowed down. Net selling by some funds partly weakened market indices.

Data on foreign investment funds in the last three years showed that the foreign portfolio investment kept rising in in Vietnam. The strongest expansion was seen from late 2017 to mid-2018. The VN-Index also experienced the sharpest growth in value and set a record of over 1,200 points. In 2019, SCIC's ambitious divestment plan failed to meet expectations as the reserve prices were deemed inappropriate to the market value (e.g. SGC and DMC). The foreign inflow, therefore, slowed down. In 2019, the net foreign investment value was just over VND6,500 billion.



Real estate, consumer staples and industrials were targeted by foreign portfolio investment (FPI). In particular, foreigners bought net most VIC, PLX, VCB, MSN and VRE. Except for MSN, most foreign-preferred stocks gained ground in the year. According to the observation, foreign investors were very active when the VN-Index moved in the range of 910-960 points. Meanwhile, the upper moving range of 960-1,020 points did not catch their interests. Worse, net foreign selling on HOSE in the last months of 2019 negatively affected the short-term trend of VN-Index.



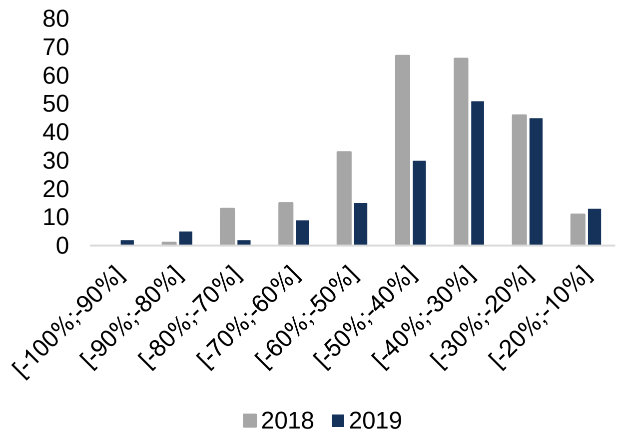


3. Positive market breadth showed recovery signs of short-term investment opportunities

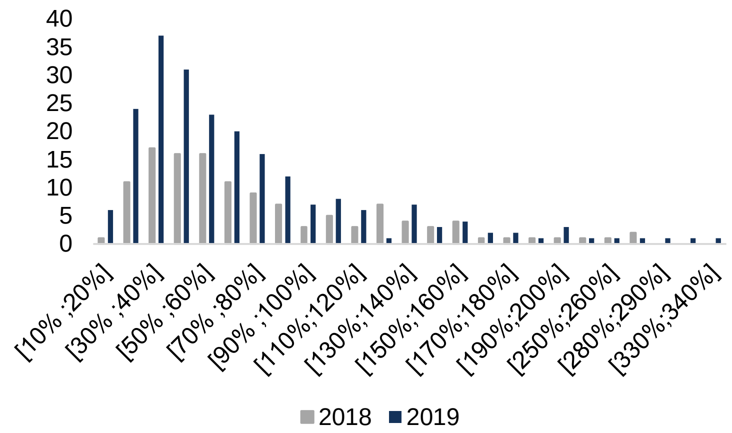
The compared distribution of upward movements and downward movements in 2018 and 2019 showed that the market breadth was inclined to the negative territory, driven by outnumbering decliners. However, it was positive that the average level of the frequency graph was shifting to the right.

In 2018, the frequency of declining fluctuations was largely recorded in the range of 40 - 45%. In 2019, this indicator improved when the concentration range decreased to only 30-35%. On the upside, profitability in 2019 did not change too much from 2018, largely in the range of 32 - 52%. Nevertheless, the market witnessed an improved frequency of most volatility levels. The highest frequency level lay in the 30 - 40% growth range and the opportunity of price growth of over 100% showed an improved frequency against 2018.

Market breadth in downward trend

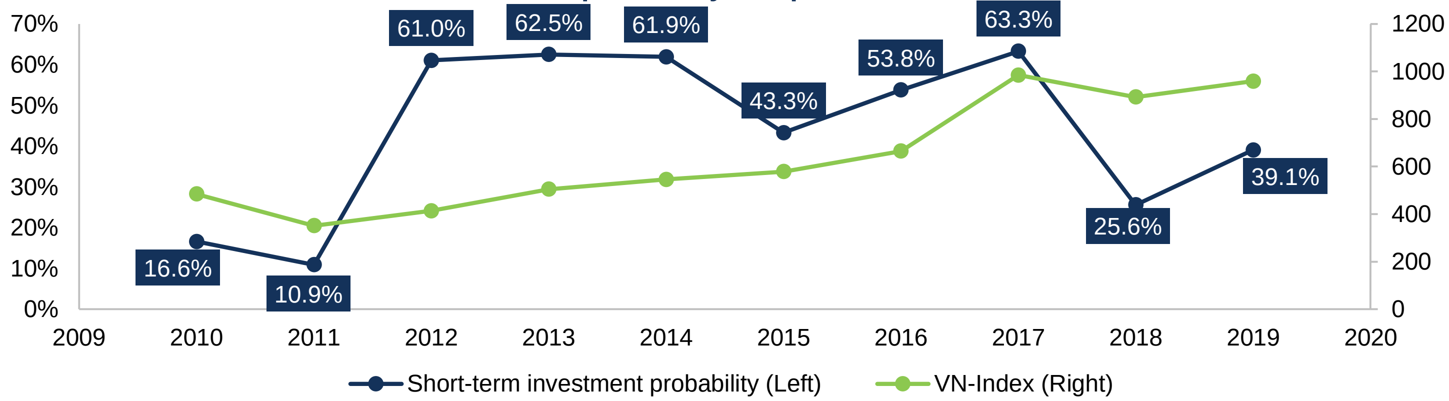


Market breadth in upward trend



The probability of short-term profitability is a comparing indicator of the number of opportunities brought by outperforming stocks to the overall market in the short term. The highest probability of short-term investment profitability was recorded at 63% in 2017. Along with the strong trend correction in 2018, this ratio dropped to 26%. However, in 2019, with the return of cash flows seeking cheaper equity assets, the probability of short-term investment is showing signs of recovering and reaching the level of 39%.

Short-term investment probability compared to VN-Index fluctuation



The market size also tended to expand over the years. In 2019, HOSE had 378 listed companies (+1.34% yoy) and the listings on HOSE, HNX and UPCOM totaled 1,609 (+3.61% yoy). Therefore, although the probability of the short-term investment opportunities improved, it was not so easy to seek for potential targets, particularly amid the strong divergence of stock groups and unsupported cash flows which usually focused on only a few driving stocks that featured special appeals like strong revenue/profit growth and benefits from policy incentives rather than market-wide ripple effects as seen before the market set new peaks in 2018.

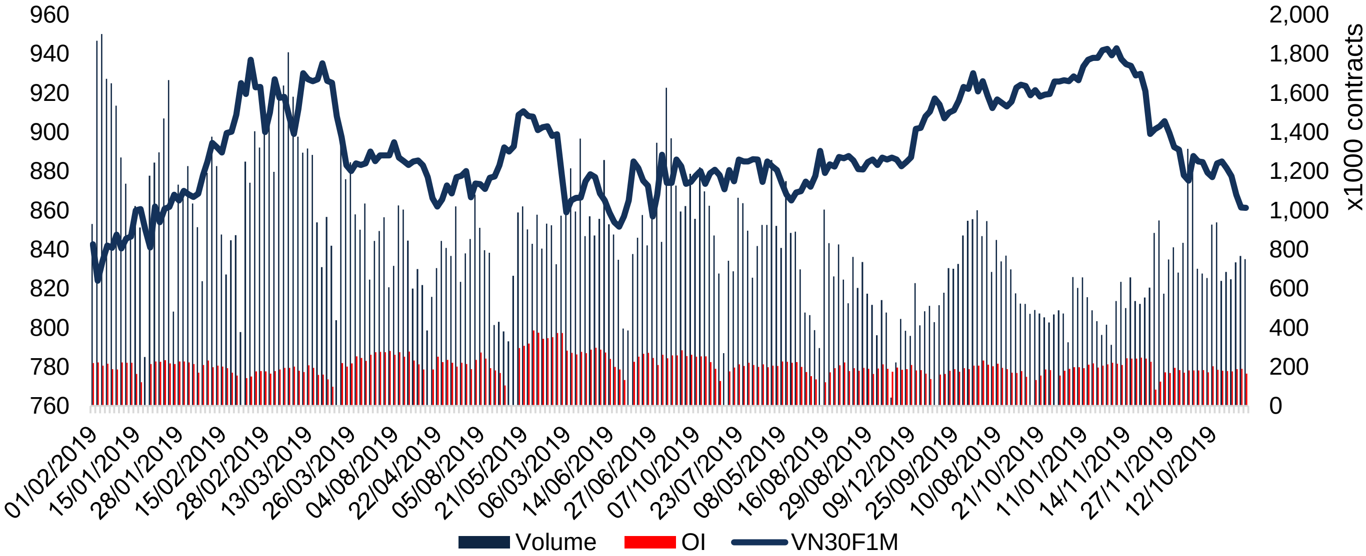
II. Derivatives market – Future contracts and covered warrants enrich the trading options

While the stock market still had no clear likelihood of growth, the launch of the derivatives market helped diversify investment choices and generated more opportunities, helping keep short-term cash flows in the market instead of being withdrawn.

In 2019, one-month VN30 futures contracts drew the most interest of investors. The average Open Interest (OI) of the VN30F1M contract in 2018 was 11,140 units per day. In 2019, it climbed to 20,059, nearly doubling the figure in 2018. Regarding liquidity, the daily trading volume of VN30F1M contracts tended to decrease slightly in the second half of 2019 but the average annual value still reached 84,551 units per day, representing a year-on-year growth of 11.62%.

Covered warrants were officially traded in Vietnam from June 28, 2019. In the first session, only 10 warrant codes based on six underlying stocks listed and traded on HOSE were floated. By the end of the year, listed warrant codes increased to 37, based on 19 underlying stocks. The introduction of covered warrants has helped diversify options for investors and partly positively impacted the trading psychology of investors in underlying securities such as MWG, FPT and TCB.

Price and liquidity of VN30F1M contract



III. Outlook 2020

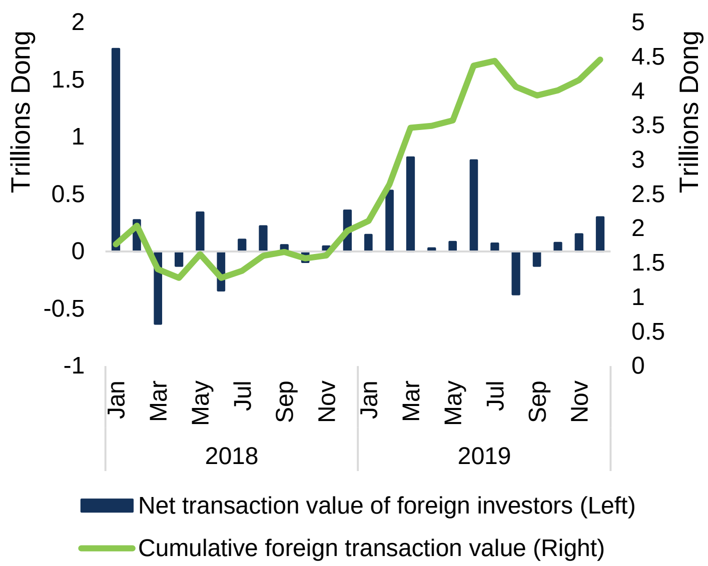
1. New indices - Factors increase the attraction of foreign cash flow

The Ho Chi Minh Stock Exchange (HoSE) officially announced the launch of new indices from November 18, 2019 - including Vietnam Diamond Index (VN DIAMOND), Vietnam Financial Select Sector Index (VN FIN SELECT), Vietnam Leading Financial Index (VN FIN LEAD). The launch of these new indices will be the premise for the formation of index ETFs, attracting the attention of foreign investors to Vietnam's stock market, especially in stocks whose foreign ownership rooms are already full. This will also be a factor expected to create a positive impact on the market when the amended Securities Law takes effect in 2021.

Currently, the operation of ETFs in Vietnam stock market is becoming more active. The assets of five largest investment funds exceed US$150 million, including VNM ETF, FTSE VietNam ETF, VFMVN30 ETF, iShares MSCI Frontier 100 ETF, and KIM Kindex Vietnam VN30 ETF. In particular, VFMVN30 ETF is the largest domestic ETF in the market with an asset value of VND6,727 billion (recorded on January 2, 2020) and using the VN30 Index as the benchmark. In addition, there are many mid-size ETFs by asset value. For the new indices, the SSIAM VNFIN LEAD ETF is the first ETF to have the benchmark based on the VN FIN LEAD Index and has an expected scale of about US$25-30 million.

VN Diamond	VN FinLead	VN FinSelect
CTG	CTG	CTG
TCB	TCB	TCB
TPB	TPB	TPB
MBB	MBB	MBB
VPB	VPB	VPB
CTD	EIB	EIB
DXG	VCB	VCB
FPT	BID	BID
GMD	HCM	HCM
KDH	SSI	SSI
MWG	STB	STB
NLG	BVH	BVH
PNJ	VND	VND
REE	HDB	BMI
		TVB
		VCI

Accumulated cash flow of foreign investors into E1FVN30



With respect to impacts on HOSE indices, these three indices will include constituent stocks, estimated to account for a third of total impacts on the market. ETFs that use the new indices as their benchmarks will help motivate large-cap stocks and give investors more ground to assess short-term trends.

2. Market upgrade – good but not quickly impacted

MSCI and FTSE are two well-reputed investment research firms that provide reputable indices, portfolio risk and performance analytics in the world. If Vietnam's stock market meets their upgrading criteria, it will be upgraded to an emerging market. This will be a great opportunity for listed companies in Vietnam to attract foreign investors.

In its November Report, MSCI announced that Vietnam is accounting for the second largest proportion of the MSCI FRONTIER MARKETS 100 INDEX - a representative index of frontier markets. If the Kuwaiti market meets its requirements, MSCI will upgrade the MSCI Kuwait Index to the emerging market in the semi-annual review in May 2020. If this is the case, the proportion of Vietnamese stocks in the MSCI Frontier Markets Index basket will be expected to increase from the current 12.31% to 30%.

Criteria	Emerging
Size and Liquidity Requirements	
Number of companies meeting the following Standard Index criteria	3
Company size (full market cap)	*USD 1,551 bil.*
Security size (float market cap)	*USD 776 mil.*
Security liquidity	*15% ATVR*
Market Accessibility Criteria	
Openness to foreign ownership	Significant
Capital turnover level	Significant
Availability of Investment Instruments	Good and tested
Competitive landscape	High
Stability of the institutional framework	Modest

The Ishare MSCI Frontier 100 ETF is the only ETF that invests on the MSCI FM 100 Index with a total value of US$502.9 million. Currently, Vietnam market only accounts for 17% of the index, equivalent to about US$85.5 million (VND1.98 trillion). If the share of Vietnamese stocks in the MSCI Frontier Markets Index basket is increased as expected, this means that the Ishare MSCI Frontier 100 ETF fund is likely to buy VND1.5 trillion and become the largest ETF fund in Vietnam market.

Criteria	ADV EMG WATCH	SEC EMG WATCH
Market and Regulatory Environment		
Formal stock market regulatory authorities actively monitor market	X	X
Fair and non -prejudicial treatment of minority shareholders	X	
No or selective incidence of foreign ownership restrictions	X	
No objection to of significant restrictions or penalties applied to the investment of capital or the repatriation of capital and income	X	X
Developed equity market	X	
Developed foreign exchange market	X	
No or simple registration process for foreign investors	X	
Custody and Settlement		
Settlement – Rare incidence of fail trades	X	X
Clearing & Settlement – T+2/ T+3	X	X
Custody – Omnibus and segregated account facilities available to international investors.	X	
Dealing Landscape		
Brokerage – Sufficient competition to ensure high quality broker services	X	X
Liquidity – Sufficient broad market liquidity to support sizeable global investment	X	X
Transaction costs – implicit and explicit costs to be reasonable and competitive	X	X
Transparency – market depth information / visibility and timely trade reporting process	X	X

Regarding the upgrade opportunity according to FTSE Russell's criteria, the Vietnamese market has met the T+2/T+3 payment criteria but still deemed limited due to the pre-trading check of cash availability. According to information released by the State Securities Commission (SSC) on December 20, 2019, the SSC Vice President said “[Vietnam] will not choose to be upgraded at all cost” and the enough cash balance is obligatory to any stock purchase. As a result, Vietnam’s hope for an upgrade to second-tier emerging market in FTSE's 2020 annual review is being faded.

As regards market reactions, in history, all markets considered for upgrading have positive responses. After being added to the watchlist in 2009, Qatari market staged a long uptrend and it climbed to a new peak when it was officially upgraded in 2013. Being added to the watchlist in 2009 helped the UAE market end negative impact caused by the global economic crisis and start a long-term positive uptrend. These markets shared positive reactions before and after being added to the watchlist but they only boomed after being officially upgraded. Therefore, if similar developments happen to the Vietnamese market, what we need to focus more attention on is how foreign fund flows into the market to catch the long-term trend.

3. States'owned divestment stock will be more attractive

Companies	Ticker
Vietnam engine and Agricultural Machinery Corporation	**VEA**
Vietnam National Petroleum Froup	**PLX**
Airports Corporation of Vietnam	**ACV**
Viglacera Corporation	**VGC**
Vietnam Pharmaceutical Corporation	**DVN**
Vietnam Machinery Installion Corporation	**LLM**
Vietnam Industrial Construction Corporation	**VVN**
Quang Ninh Thermal Power Joint Stock Company	**QTP**
Hai Phong Thermal Power Joint Stock Company	**HND**

The government planned to divest VND60 billion worth of share capital in State-owned enterprises (SOEs) in 2017-2020 as per the Prime Minister's Decision No. 1232/QD-TTg dated August 17, 2017. Nevertheless, it divested just VND896 billion in 13 SOEs in 2019, raising total proceeds of VND1,839 billion. From 2017 to 2019, only 92 SOEs were divested with a total share capital value of VND4,704 billion, grossing aggregate proceeds of VND8,964 billion. This outcome fulfilled just 7.8% of the plan.

The sluggish equitization or privatization of SOEs is largely attributed to major divestment policy changes, which have perplexed companies subject to equitization. Moreover, another important cause of this lethargy stems from existing difficulties in business valuation and unattractive offering prices to external investors, particularly foreigners. At present, the Ministry of Finance is revising relevant regulations to clear so-called bottlenecks in Decree 126/2017/ND-CP and Decree 32/2018/ND-CP and its draft amended rules will also address such issues as equitization cost, financial data, business valuation and offering prices. If everything goes as wished, the draft rules will be issued and enforced in early 2020, a factor expected to invigorate the divestment and equitization process.

4. VN-Index forcast to keep sideway trend

Closing at 960.99 points in the last trading day of 2019, the VN-Index substantiated the support zone of 950-970 points and the mid-term flat channel. Accordingly, this sideway price channel may continue to play a considerable role on HOSE in the first half of 2020. As Vietnam's long-term trend is forecast to be ascending, the existence of cumulative signs and the sideways trend are more positive as the market experienced the downward trend of 2018.

A sustained period of accumulation often heralds a booming period on the horizon. As for the VN-Index, the upper resistance area of 1,000-1,025 points will act as a warning point for a possible breakthrough to form a new trend. Its performance in this area in 2020 will need to be closely monitored to identify the advent of an uptrend. In an optimistic scenario, the expected target of the VN-Index for 2020 will be at 1,100-1,150 points

On the Hanoi Stock Exchange, the HNX-Index is forecast to hover around 100 points in the first half of 2020. A strong support level, if it happens, may help the gauge stay within 100-110 points in the sideways price channel.

IV. Conclusion

We believe that Vietnam's stock market is still in the correction phase of the long-term growth trend. The market plummeted in 2018 and stabilized in 2019, supported by consolidation phases. Although the market liquidity tended to decrease slightly, it improved in Q4, 2019. If this improvement continues and the VN-Index stays above 950 points in the first half of 2020, we hope that more positive changes will come toward the end of 2020. The VN-Index is expected to be in the region of 1,100 - 1,150 points.

Foreign trading is also expected to be a supportive factor. The foreign trading in 2019 was not as good as expected since the accumulated value showed signs of slowing down and net selling pressures from of ETFs weighed up in the second half of the year. The pessimistic performance was attributed to signs of global economic and political instability and foreign ownership caps in certain sectors. As the U.S. and China have come closer to a new trade deal, ongoing interest rate cuts across the globe and new market support policies of Vietnam's regulators, we believe that foreign trading will likely revive in 2020.

Short-term investment opportunities in 2020 are likely to be similar to 2019. The distribution chart for stock price movements is showing signs of improvement and helping increase the probability of short-term investment profitability but this indicator is closely correlated to market breadth. If the VN-Index's uptrend cannot be formed soon enough, it is unlikely that growing stocks will increase in number. Therefore, we think that investors should focus on fluctuations rather than expect on the market breadth. Specifically, higher focus is necessarily focused on stocks that grow 30-50% in value and this is a reference rate of profit for investors with a trend-following strategy.

We continue to appreciate stocks with special motivations such as strong revenue/profit growth and benefits from policy incentives. Besides, investors should look into transactions of ETFs. Although the opportunity of market upgrade is not high, any change in the weight of stocks in the MSCI Index basket may still exert a strong impact on the trend of chosen stocks. VNM, HPG, MSN and some stocks that were negatively affected by outflow pressures from ETFs in late 2019 may bring in good opportunities when foreign investors reverse to buy more stocks than they sell again.

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CONSTRUCTION

CONTINUING DECELERATION IN 2020 DUE TO STAGNANT RESIDENTIAL MARKET

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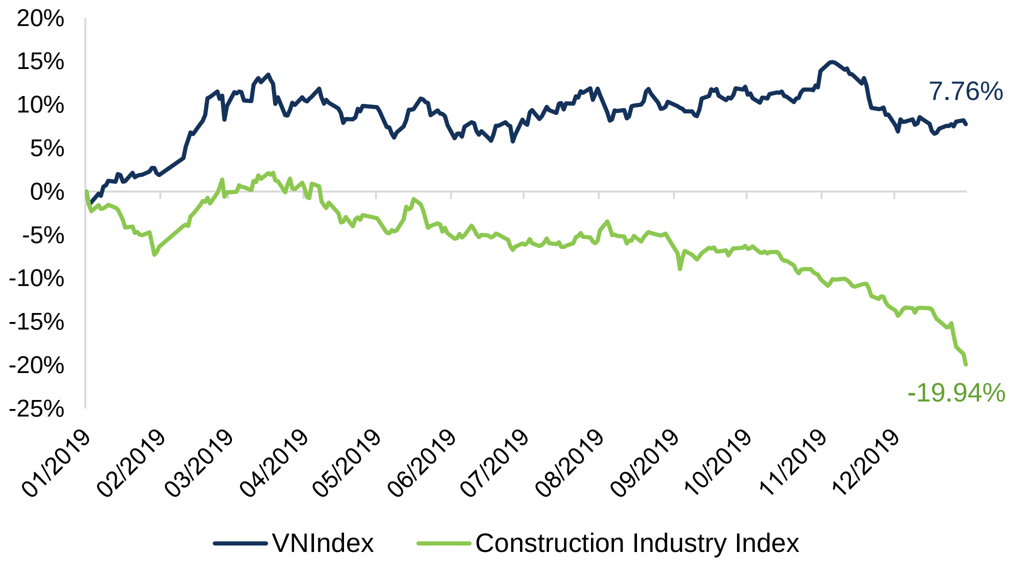
Construction Industry Index and VNIndex Movement

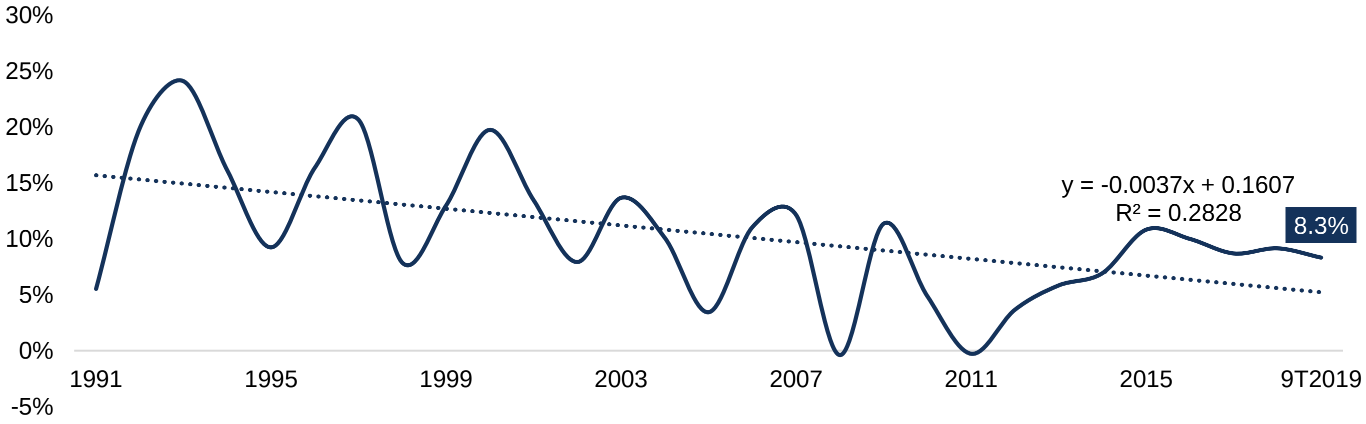


A. INDUSTRY HIGHLIGHTS

I. The construction industry is going into the Shakeout stage

The construction industry in Vietnam experienced a 30-year growth period, stemming from various social and economic reforms of Doi Moi (1986). However, we believe that its Growth stage is near the end, the industry is going into the shakeout stage where growth is expected to be lower and less volatile.

Construction Value Added Real Growth



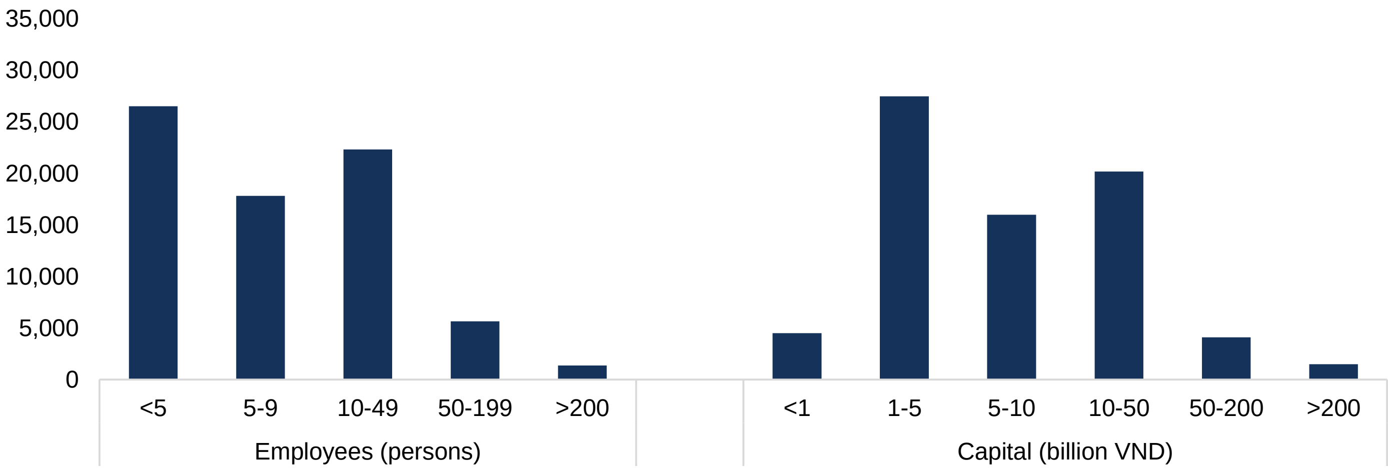
Source: GSO

The real growth of industry value added in the last 30 years also shows that construction is highly cyclical with alternating acceleration-deceleration phases (real growth rate difference in each cycle is about 10 – 15 percentage points). Currently, the construction industry is in its seventh cycle since 1986, growing 8.33% in the first nine months of 2019, ranked second across industries in Vietnam (only behind manufacturing).

II. Fractured market and intense competitive pressure leads to low construction profit margins

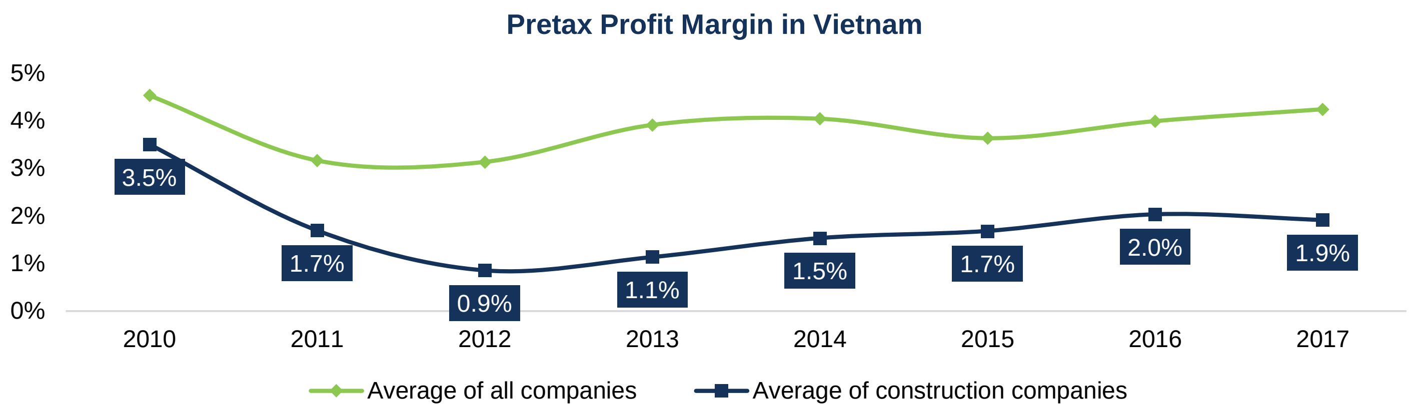
At small scales, construction is labor-intensive and has low initial capital requirements. This leads to a very fractured market with many small companies competing (according to Decree 39/2018/ND-CP, a construction company is considered small when it has less than 100 employees or 20 billion VND in capital). According to the General Statistics Office of Vietnam (GSO), there are about 74,000 construction companies in Vietnam with employees and capital as follows:

Vietnam Construction Companies in Operation 2017



Source: GSO

With the fragmented market and slowing growth, competitive pressure in construction is high and expected to increase. The dominant competitive strategy will be price-cutting, which will put downward pressure on the already low pretax profit margin of construction companies (mostly 2% in the last 10 years).



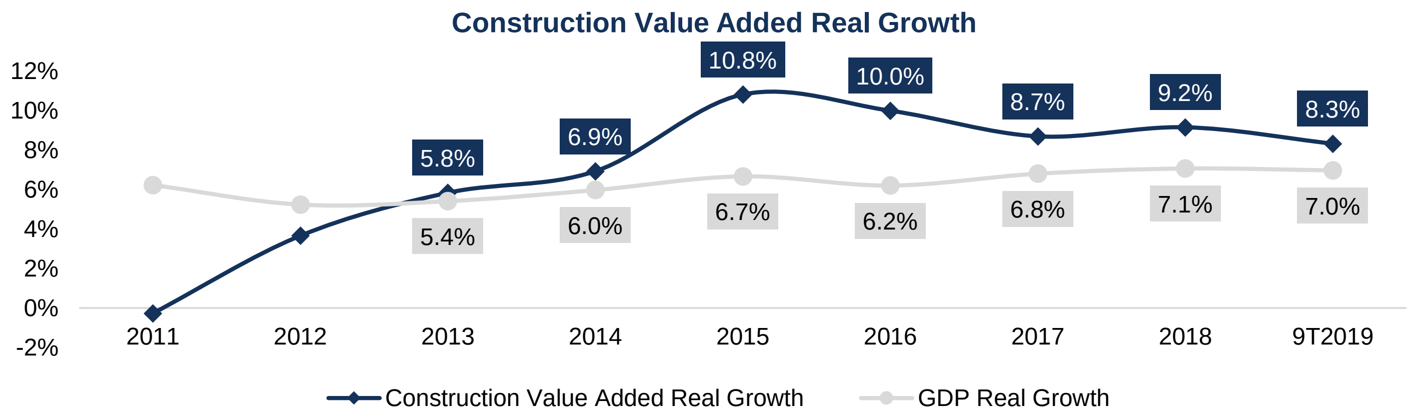
III. Risks

The fluctuation of construction material prices is the biggest risk in construction, due to (1) low pretax profit margin of construction companies, and (2) materials account for 70% of total construction costs, however, material supply is dependent on project's location and is difficult to control. This risk is proportional to project size, not only because of the high contract value but also because big projects can take a few years to finish. Contractors can mitigate this risk by taking adjustable unit price-based contracts instead of fixed unit price-based or package contracts. Adjustable unit price-based contracts, however, only mitigate part of material price risk while lower expected profit from the project.

B. INDUSTRY REVIEW 2019

I. Construction growth slowed in the first nine months of 2019

Performance in 9M2019 shows that construction is continuing its deceleration (which started in 2015), reaching 8.3% real growth in value-added, slightly down compared to 9M2018 (8.5%). Slowing growth will put pressure on construction companies, lowering revenue growth and profit margins.

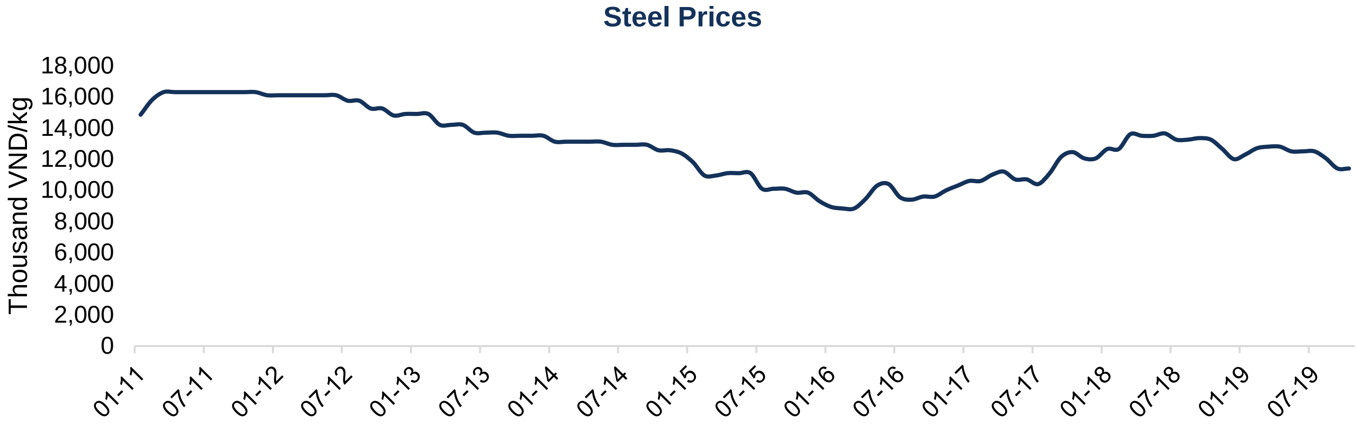


Source: GSO

II. Construction material prices

Material is the major cost in construction, standing at about 70% of total costs. Construction materials usually are commodities with demand mostly met with domestic supply. Among construction materials, steel and cement are the most used, accounting for 45% and 15% of construction material costs, respectively. In recent years, investment incentives from the government and abundant natural resources have led to rapid increases in domestic production capacity of both steel and cement, creating downward pressure on the prices of these two materials.

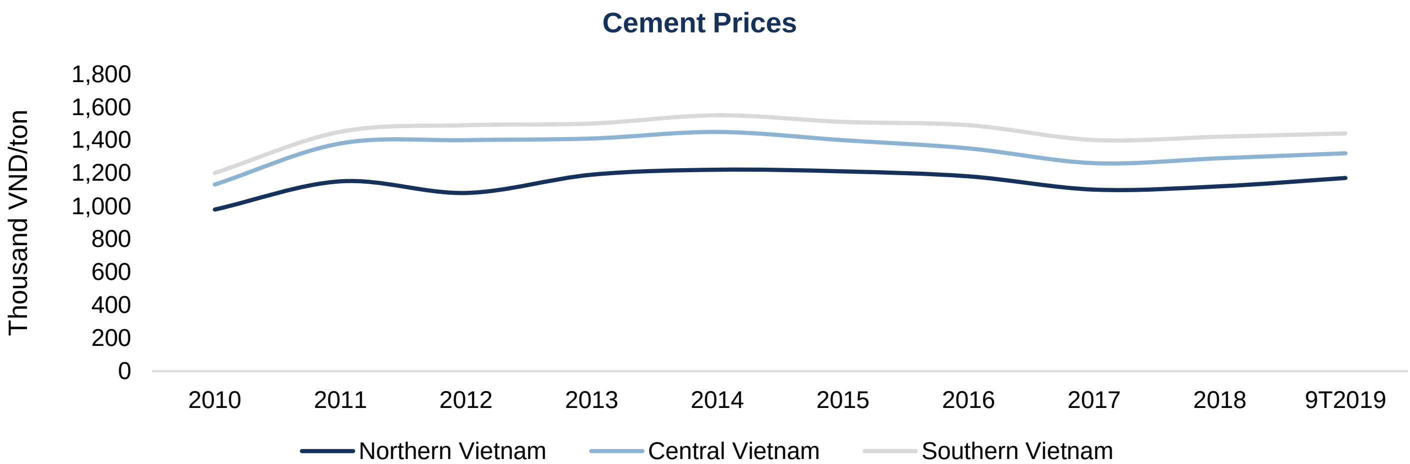
1. Steel: slightly down in 2019



Source: Vietnam Steel Association

Domestic steel price is influenced by Vietnam's tariffs against Chinese steel, which has been in effect since 2016. In 2016 – 2018, steel prices recovered about 20% due to tariffs, while many major steel producers started investment to increase capacity. Since mid-2018, increased production capacity and lowering tariffs have put downward pressure on steel prices. In 2019, steel has fallen 7.3%, from 12,300 to 11,400 VND/kg.

2. Cement: increased slightly in 2019



Source: Vietnam Cement Association

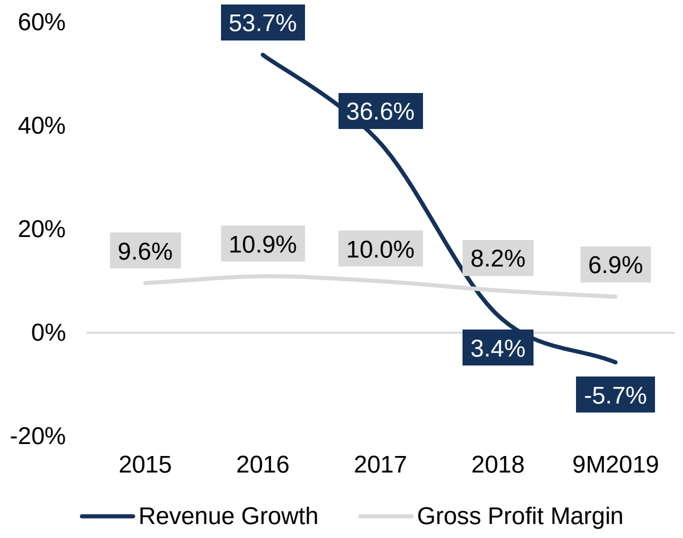
Domestic cement prices have been quite stable in 2011 – 2018, mostly due to over-capacity in production (total cement capacity exceeds about 50% of total domestic demand). In 2019, the government has loosened a few exporting restrictions for cement, leading to about 01 – 05% increase in domestic cement prices. However, we believe that there is little room for growth in the export markets, due to many major cement exporters nearby (including China and Thailand).

III. Select construction companies' performance in 9M2019, by sector

To assess the effects of construction markets and material prices on companies performances, we aggregated revenue growths and gross profit margins of 12 big general contractors, divided into two sectors: (1) residential and non-residential, and (2) infrastructure[1].

[1] Residential and non-residential includes 07 companies: CTD, HBC, VCG, PHC, VC9, ROS. Infrastructure includes 05 companies: PC1, C4G, DPG, SJG, C47

Residential, Non-residential Performance

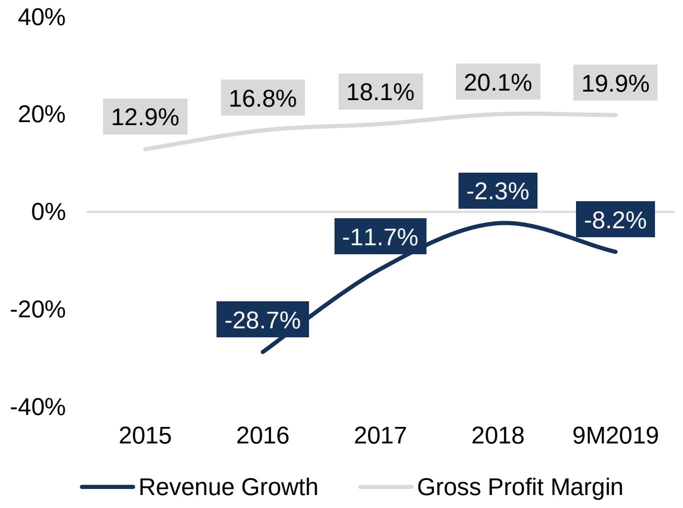


Source: Financial Reports

A stagnant residential construction market in 2018 – 2019, especially in big cities such as Hanoi and Ho Chi Minh City, has negatively affected the performance of residential and non-residential construction companies.

Revenue growth of the sector has slowed down in 2018 – 9M2019 after the high-growth period of 2016 – 2017. At the same time, gross profit margin decreased 4 percentage points (from 10.9% to 6.9% in 9M2019), signaling intense competitive pressure in the sector.

Infrastructure Performance



Source: Financial Reports

Challenges in raising investment capital for the infrastructure of the government have led to the decreasing revenue of infrastructure construction companies since 2015.

On the other hand, gross profit margins for these companies have been increasing, due to:

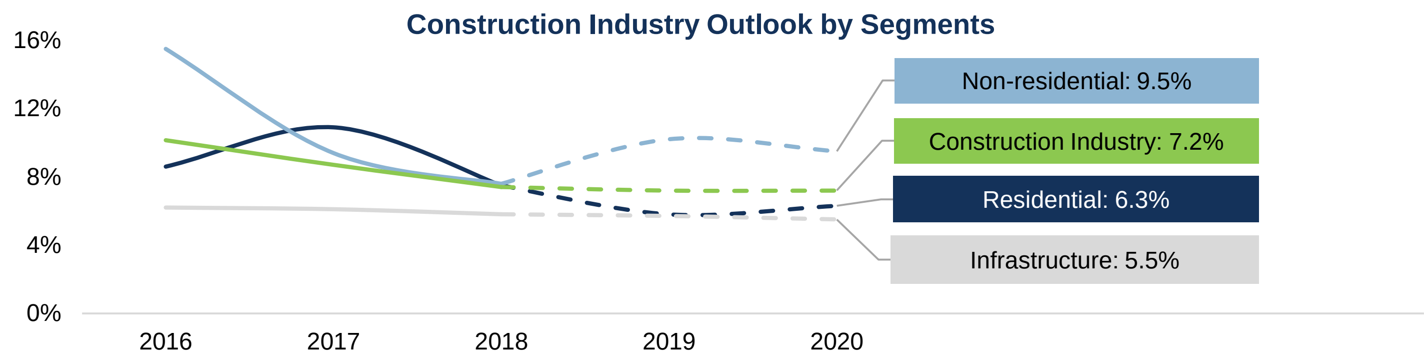
(1) Lower competitive pressure in the infrastructure sector compared to the residential/non-residential sector. Large infrastructure contractors usually focus on a few market segments where they have a considerable competitive advantage. This helps these contractors maintain stable profit margins even though revenue is decreasing.

(2) Infrastructure contractors generally have advantages in diversifying revenue compared to others, usually by investing in transportation or energy infrastructure projects. These projects typically have higher profitability than construction, which improves and stabilizes gross profit margins.

C. INDUSTRY OUTLOOK 2020

In 2020, we expect material price fluctuation will be favorable for construction. Steel prices are expected to decrease due to increasing domestic production capacity and ending import tariffs. Cement prices, on the other hand, could increase slightly by 3-5% due to loosening export restrictions.

However, the industry outlook for 2020 is less favorable. Construction is expected to grow 7.2% annually in 2019-2020, down from 9.2% in 2018. According to BMI, both residential and infrastructure construction will experience slow growth in 2020 at 6.3% and 5.5%, respectively, due to real estate market stabilization and challenges in raising infrastructure investment funds by the government. Construction's main growth driver will be non-residential, which is expected to grow by 9.5% in 2020. Among non-residential, industrial construction stands to gain the most, particularly from investments moving from China into Vietnam.



Source: BMI

I. Residential Construction

Residential construction is expected to grow by 5.8% and 6.3% in 2019 and 2020, respectively, lower than the average of the past few years (9.0%). Stabilizing the real estate market is one of the main priorities of the Vietnamese government, typically done through monetary policy and project regulation. These approaches aim to balance residential product supply and demand, as well as preventing asset bubbles in the real estate market, essentially trading off short-term growth for medium to long-term stability.

1. Monetary policy

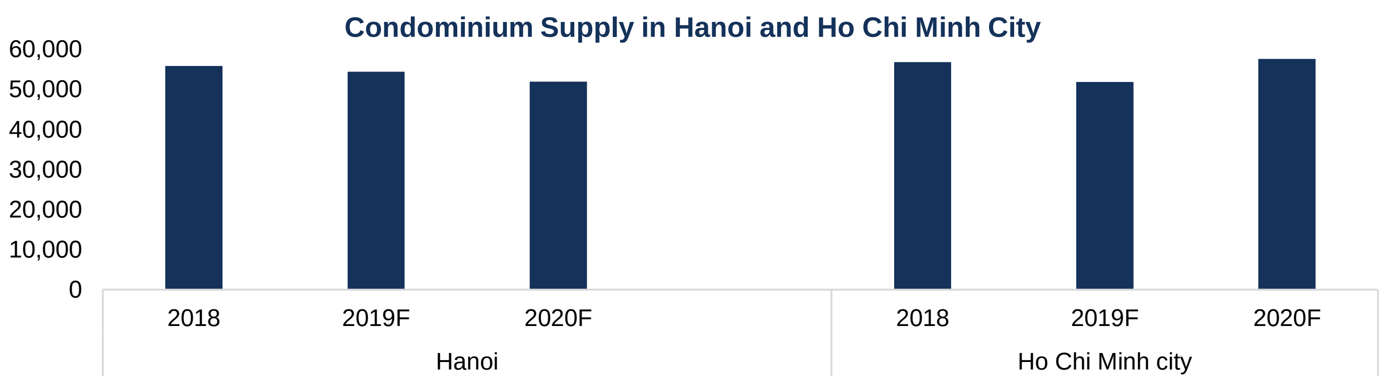
Vietnam's real estate market has shown signs of overheating in the last three years, prompting the State Bank of Vietnam (SBV) to tighten policies regarding real estate credit. In 2019, SBV further issued Circular 22/2019/TT-NHNN about Limits and prudential ratios of banks and foreign banks branches with the most important points as follows:

(1) Continuing to decrease the maximum ratio of short-term capital for provision of medium-term and long-term loans from 40% to 37% from 01/10/2020, then further to 34% from 01/10/2021 and 30% on 01/10/2022;

(2) Consumer loans above 04 billion VND's risk multiplier will be increased to 120% from 01/01/2020 and to 150% from 01/01/2021.

2. Project regulation

In 2018, condominium supply in Hanoi and Ho Chi Minh city increased sharply and showed signs of a supply-demand mismatch. In particular, condominium supply in Hanoi and Ho Chi Minh city rose 14% and 21% in 2018. However, supply for the low-end segment decreased even though demands are high. On the other hand, both mid-end and high-end segments saw supply rose considerably. To prevent the mismatch from getting worse, the People's Committees of both Hanoi and Ho Chi Minh City have tightened regulation and approval of condominium projects. Ho Chi Minh City, especially, has halted approving any condominium projects in central business districts (District 1 and District 3) since 11/2018 to limit high-end condominium supply. These restrictive measures will slow down the residential market in these major cities in 2019 and 2020, according to statistics provided by Savills.



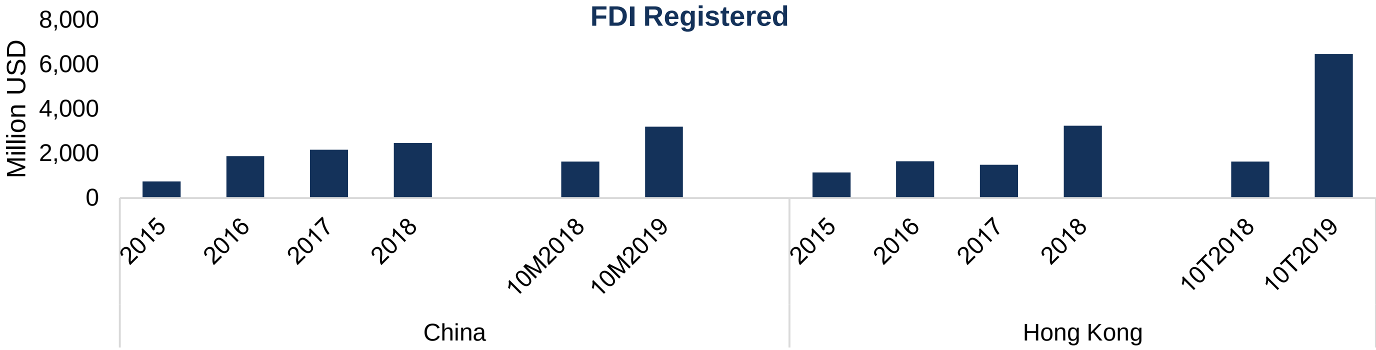
Source: Savills

II. Non-residential Construction

In 2019 – 2020, non-residential construction is expected to grow the fastest among construction segments at 9.8% annually. This high growth comes from industrial construction, which is enjoying short-term benefits from the US-China trade war, including investments moving from China to Vietnam and increased exports to the US.

1. Investments moving from China to Vietnam

The US-China trade war started in 07/2018 and kept on escalating since. With more than 360 billion USD of export barred by tariffs, producers in China are under pressure to move their factories. Due to favorable geographic location, low costs and a business-friendly environment, Vietnam has become a promising destination for these producers. In the first 10 months of 2019, FDI registered from China and Hong Kong have both soared, accounting for 33% of total investment registered. Prominent movers include Yokowo (automobile parts), Lever Style (fashion), and Hanwa Aero Engine (airplane engines), etc.



Source: Foreign Investment Agency

Investment funds flowing into Vietnam have generally increased both occupancy and rent for industrial zones nationwide in 1H2019, creating a high demand for new zones. According to the Ministry of Planning and Investment, Vietnam currently has 251 industrial zones in operation with a 74% occupancy rate. Furthermore, there are 75 industrial zones in development, which will add about 44% to the current industrial zone area. According to Savills, updated information about major cities and provinces is as follows:

City/Province	Industrial Zone Area (ha)	Occupancy (%)	Occupancy (% y-o-y)	Rent (USD/m2)	Rent (% y-o-y)
Northern					
Bac Ninh	3,651	85.3%	+6.3%	88	+13.0%
Hai Phong	2,656	71.2%	-10.0%	93	+4.5%
Hanoi	1,624	88.3%	+8.5%	114	+8.6%
Hung Yen	1,226	85.3%	+6.2%	78	+6.7%
Vinh Phuc	997	81.7%	-11.1%	61	+8.8%
Hai Duong	980	74.4%	+18.8%	65	+29.4%
Southern					
Dong Nai	6,317	93.3%	+20.8%	90	+21.1%
Binh Duong	6,296	96.7%	+27.6%	102	+54.6%
Ba Ria – Vung Tau	5,168	69.6%	-1.4%	55	+7.8%
Long An	3,523	83.1%	+3.8%	113	+26.7%
Ho Chi Minh City	2,620	87.5%	+24.3%	146	0%
Tay Ninh	2,619	89.1%	+63.6%	59	+31.1%

Source: Savills

2. Increased exports to the US

Vietnam is being seen as the biggest winner in the first year of the US-China trade war, mostly from increased exports to the US. In the first 09 months of 2019, the US is Vietnam's biggest export market (23%) with total export value at 44.9 billion USD (+28% y-o-y). Products that have increased the most include garment, machinery, and wooden products.

Sources: UNComtrade, Ministry of Industry and Trade

However, Vietnam might be affected by US tariffs if the US-China trade war keeps escalating. It is very popular for Chinese manufacturers to ship their products to Vietnam for minor processing before exporting to the US. In the future, the US's definition of "Made in China" might change and include Vietnam. In 07/2019, US Department of Commerce has put a 400% tariff on Vietnamese steel for this reason.

III. Infrastructure Construction

Infrastructure construction is the slowest growth sector in Vietnam. This trend will continue in 2019 – 2020 with infrastructure growth at only 5.6% annually, mainly due to challenges in raising capital for infrastructure investment by the Vietnamese government.

Annually, Vietnam spends about 5-6% of its GDP on infrastructure, almost double the global average but only able to meet 60% of demands[2]. The biggest bottleneck in infrastructure investing in Vietnam is capital. In past years, most of the infrastructure funds came from Official Development Assistance (ODA) loans, state budget, and state-backed loans. However, the Vietnamese government's current ability to invest in infrastructure is limited, due to (1) continuing budget deficit and almost at-the-limit national debt, and (2) ODA loans drying up as Vietnam became a middle-income country. As a result, the state budget can only meet about 30% of investment demand, down from about 67% in 2015 (according to World Bank). The second bottleneck in Vietnam infrastructure investment is weaknesses in managing public projects, leading to delay or running over budget, especially in large and complicated projects.

Public-Private Partnership (PPP) is being hailed as the solution to raise investment capital. However, PPP's appeal is marred by incomplete rules and regulations, especially in regards to international investors. In the last few years, PPP projects were typically done under a simply project contract with the government – while this is acceptable for domestic purposes, it is insufficient for international banks, which limits PPP's ability to attract international funds. To solve this problem, the government has submitted the first draft for the Law of PPP investing to the Congress for deliberation. The new Law includes some major points: (1) Committees for reviewing and approving PPP projects, (2) PPP companies can raise capital from issuing bonds, and (3) Mechanism for risk-sharing between the government and investors through prices, fees or contract duration adjustments. However, administrative reforms are slow to take effect, therefore infrastructure construction is expected to keep a slow pace in the short-term.

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[2] Vietnam needs to invest about 19 billion USD annually on infrastructure to sustain current pace of growth, among which is energy – 44%, roads and bridges – 21%, and telecommunication – 17% (according to Global Infrastructure Hub).

D. SUMMARY

Overall, Vietnam's construction industry has low profitability, intense competitive pressure, and declining future growth. In 2020, despite favorable material price movement, we believe the outlook for construction is **LESS FAVORABLE**, due to:

- Residential - the biggest construction market – is expected to stagnate in 2020 because of the real estate market stabilization by the government;
- Infrastructure construction continues growing slowly due to limited public funding and incomplete legal framework for PPP projects;
- While non-residential construction is expected to benefit from the US-China trade war in 2020, this sector could be affected negatively if the trade war continues to escalate.

E. WATCH LIST

Ticker	Market Cap. Jan 08, 2019 (bil. VND)	Revenue 9M2019 (bil. VND)	Net Income 9M2019 (bil. VND)	NI Growth y-o-y	NI Margin	ROE (TTM)	P/E
CTD	4,027	16,262	478	-59.9%	2.9%	9.8%	5.1
	Comments: CTD is under intense competitive pressure in the residential construction market. This is shown in decreasing performance in 2019 and is expected to continue in 2020.						
PC1	2,771	4,274	318	-26.0%	7.4%	10.3%	7.2
	Comments: The Line 3 500kV Project and recent renewable investment trends have brought sharp increases to PC1's construction and production lines in 2019. Real estate development will be PC1's main growth driver with PCC1 Thanh Xuan in 2020, which is expected to bring in 887 billion VND in revenue.						
DPG	1,620	764	1	-98.9%	0.1%	0.1%	25.4
	Comments: DPG's construction has shown little growth, mainly due to challenges in the infrastructure capital of Vietnam. In the next few years, DPG's main growth driver will be real estate development, with Vong Nhi expected to bring in 1,040 billion VND in revenue in 2019 and 1,400 billion VND in 2020.						
FCN	1,213	1,805	145	+16.0%	8.0%	13.5%	3.8
	Comments: FCN's revenue has been on the rise since 2016. However, this trend has largely slowed down, mainly due to mounting competitive pressure in residential and non-residential foundation construction. Underground construction, especially Tunnel Boring Machine (TBM) is expected to lead FCN's growth in the next few years with major ongoing urban metro line projects in Hanoi and Ho Chi Minh City.						

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STEEL

ENTERING THE STAGE OF RESTRUCTURE

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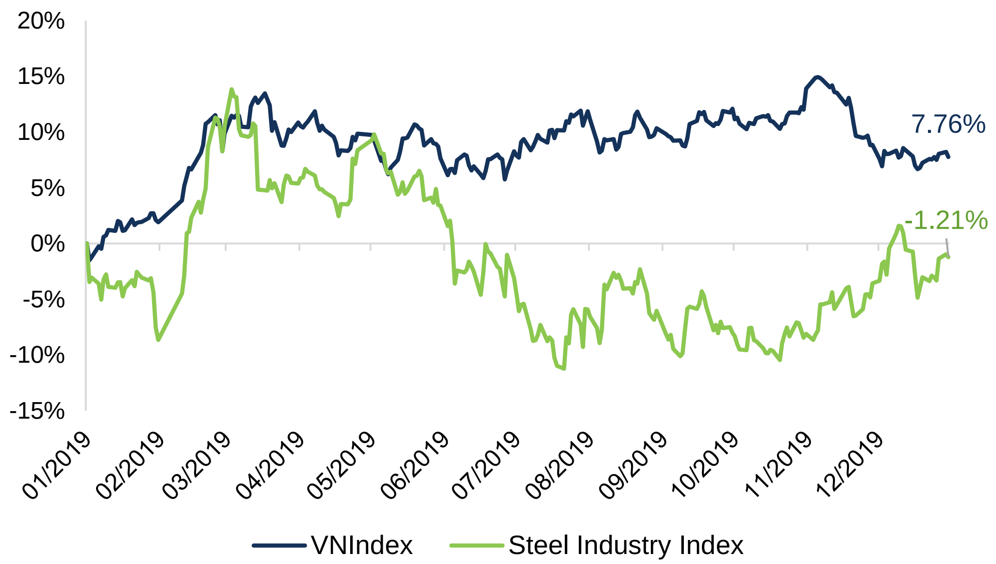
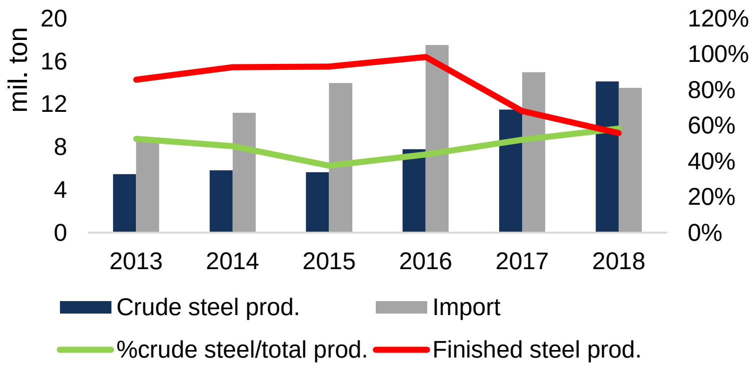
Steel Industry Index and VNIndex Movement



A. INDUSTRY HIGHLIGHTS

I. The Vietnamese steel industry is developing towards upstream of the value chain, reducing dependence on imports

Vietnamese steel production and import



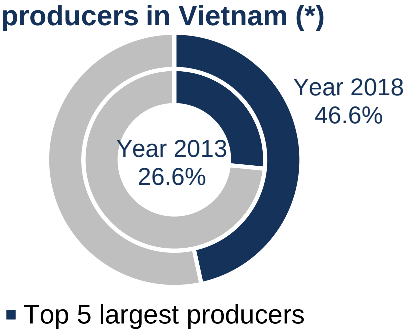
Sources: VSA, GSO, FPTS Research

Before 2015, Vietnam's steel production still had to rely heavily on imports, which is mainly came from China. The main imported products of Vietnam are crude steel products, in which domestic business had been underdeveloped due to intensive capital requirements.

Since 2015, after Hoa Phat and Formosa expanded production capacity, domestic crude steel production capacity has been improved, and the amount of steel imported has also decreased significantly. Until now, the amount of imports only accounts for approximately 55-60% of production.

II. The industry structure becomes more concentrated

Market share of top 5 largest steel producers in Vietnam (*)



Sources: VSA, FPTS Research

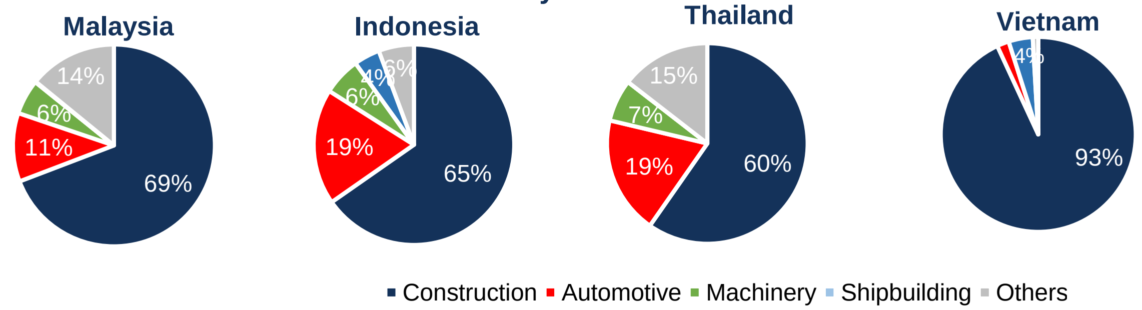
With large projects (i.e: Hai Duong steel complex of Hoa Phat Group and Vung Ang steel complex of Hung Nghiep Formosa Ltd.) coming into operation, Vietnam's steel industry becomes more concentrated, with the market share of the 5 largest steel manufacturers accounting for 47% in 2018, compared to only 27% in 2013. This trend would likely continue when large steel complexes such as the Dung Quat steel complex come into operation.

(*) market shares is based on the consumption of long steel, steel pipes, galvanized steel, cold-rolled coil, and hot-rolled coil

III. The domestic market is heavily dependent on the construction industry's cycle, the export market experiences difficulties due to protectionist policies

Compared to other Southeast Asian countries' manufacturing industries like Thailand's, Indonesia's, and Malaysia's; Vietnam's manufacturing industry of automobiles and machinery is underdeveloped. Therefore, most demand for steel comes from the construction sector; and the development of Vietnam's steel industry depends heavily on the construction industry. Meanwhile, Vietnam's export products are mainly flat steel products (galvanized steel sheet, CRC) and more sensitive to the trade policies of other countries. The recent rise of protectionism will remain a challenge for Vietnam's steel export.

Steel use by sectors in 2018



Sources: SEAISI, POSRI, FPTS Research

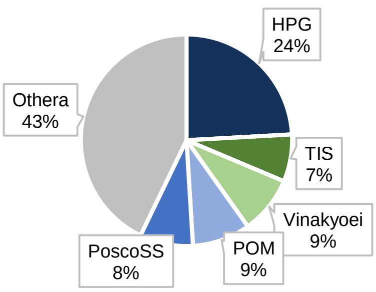
B. INDUSTRY REVIEW 2019

Products	Consumption 9M2019 (mil ton)	%y-o-y
Construction steel	7.8	+5.8%
Steel pipes	1.8	+0.2%
Galvanized steel	2.7	-3.9%
CRC	1.8	+13.9%
HRC	3.1	+27.9%
Total	**17.3**	**+8.2%**

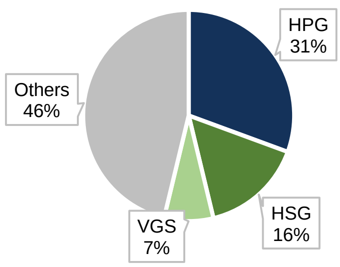
In 9M2019, the growth of Vietnam's steel consumption had a clear differentiation by product groups. The total steel consumption of the industry reaching 17.4 million tons (+8.2% y-o-y), with 52% of the increase came from the HRC steel of Formosa Ha Tinh Formosa.

The construction steel segment witnessed a slower growth of 5.8%, while galvanized steel and steel pipe segments were negatively affected by the export market.

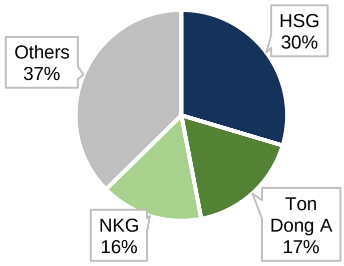
Market share of construction steel (9M2019)



Market share of steel pipes (9M2019)



Market share of galvanized steel(9M2019)

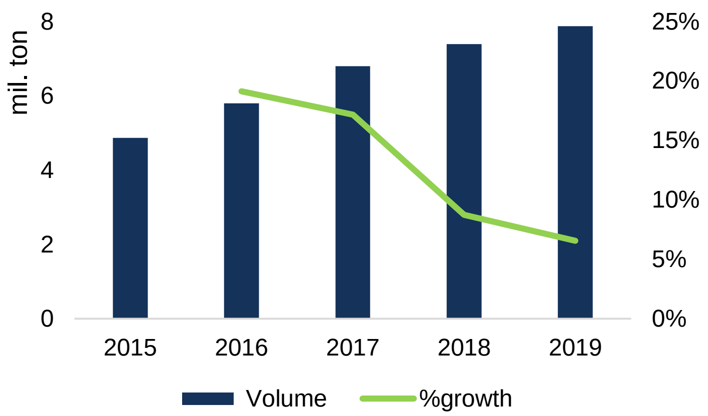


Souces: VSA, FPTS Research

I. Construction steel - Strong growth in the first 2 quarters, slowing down at the end of the year due to slow disbursement of public investment and weakening real estate market

In 9M2019, the growth of construction steel consumption only increased by 5.8% compared to 9.7% of last year. With the weakening of the real estate market and delays in disbursement of infrastructure investments, steel demand is showing signs of slowing down. According to report No.13133/SXD-PTN&TTBDS of Department of Construction, only 1 residential project received investment approval and no project has received investor certification in Ho Chi Minh City in 9M2019.

Consumption of construction steel in 9M

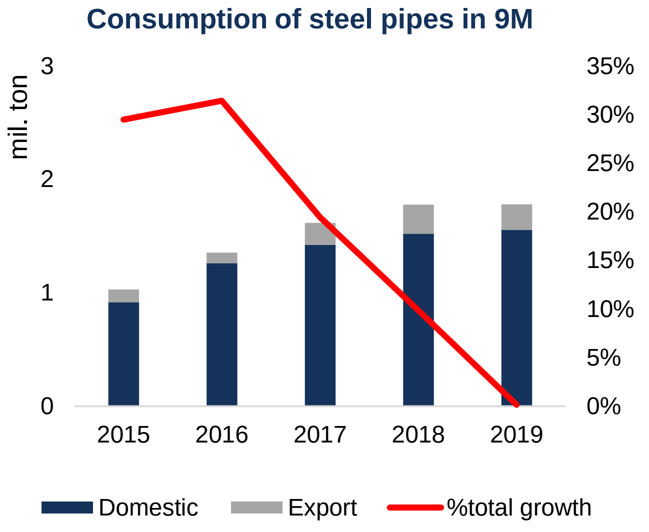


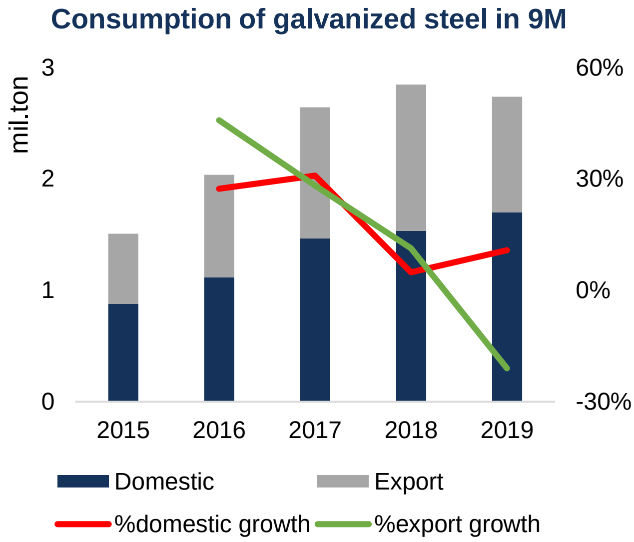
Real estate statistic in HCMC

Description	2017	2018	9M2019
Project approval	3	8	1
Investor certification	44	19	0
Construction appoval	69	53	24
Project completion	27	61	17
Number of housing units completed	21,280	35,370	12,453

Sources: HCMC Department of Construction, VSA, FPTS Research

II. Steel pipes and galvanized steel – stagnation from the export market

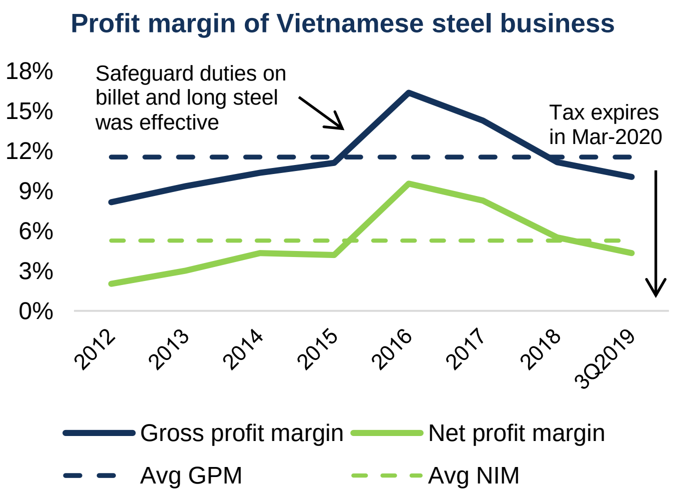




Sources: VSA, FPTS Research

The consumption of steel pipe and galvanized steel products has witnessed a considerably slower growth compared to the last 4 years. Especially, galvanized steel consumption has decreased by 3.9% over the same period. The main reason is that the trade protection policies have led to a sharp drop in export volume, while domestic demand could not offset. Coupling with supply capacity still in surplus, the competition will soon become more intense.

III. Profit margin shrinking due to price volatility of raw materials and finished products



Materials	Average 9M2019	% to 9M2018
Iron ore 62%	95 USD/ton	+35-40%
Coking coal	185 USD/ton	-8 -10%
Scrap steel	385 USD/ton	Same
Billet	530 USD/ton	-8-10%
HRC	540 USD/ton	-10-15%
Finished long steel	**568 USD/ton**	**-8-10%**

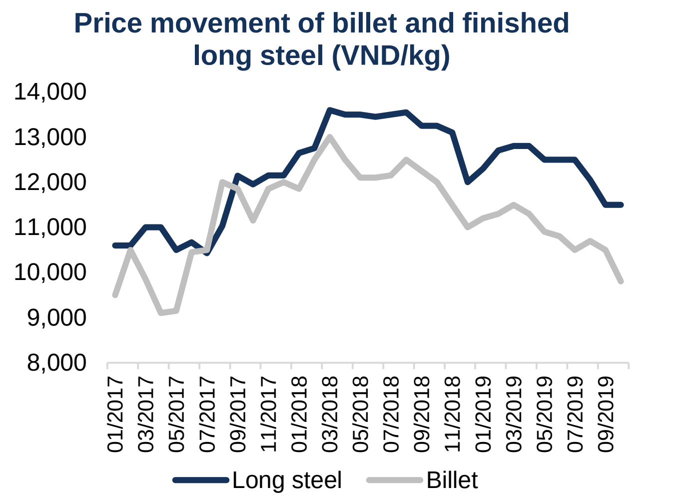
Businesses included: HPG, POM, HSG, TIS, NKG, VGS, VIS, HMC, SMC, TLH, DTL, DNY
Sources: VSA, Bloomberg, FPTS Research

In 3Q2019, the revenue of almost listed steel companies fall by 10-15%, and their after-tax profits drop sharply compared to the same period last year. The main reason comes from the lower price of finished steel products over the same period, opposite the remarkably volatile raw material prices in the period of 2018-2019.

- Manufacturers using BOF technology are negatively affected by the sharp rise in iron ore prices since early 2019, after the dam collapse in Brazil and storms in Australia causing supply disruptions (details in the HPG Report - November 2019).
- Manufacturers using EAF technology with a gross profit margin of 5 - 10% are strongly affected because the price of finished steel products decreases by 8-10% and scrap prices remain flat.

C. INDUSTRY OUTLOOK 2020

I. Construction steel – Demand for construction slows down, domestic production capacity expands resulting in a higher level of competition



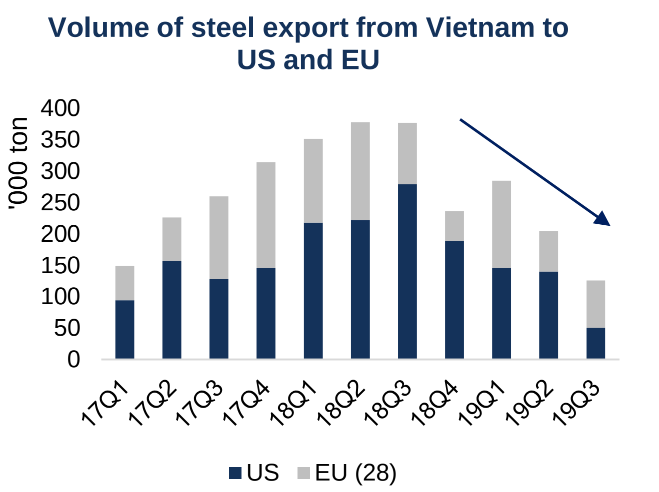
Sources: VSA, FPTS Research

In the short term, the Government's measures to stabilize the real estate market (credit tightening, reviewing project approval's procedures) will likely hinder the residential construction. The primary growth driver will be from the industrial segment, with the shift from China to Vietnam (more details in the Construction Industry).

Accordingly, the estimated demand for construction steel in 2020 will reach approximate 11 million tons, equivalent to a growth of about 7%. Notably, the first phase of the Dung Quat Steel Complex – which has a designed capacity of 2 million tons/year (~20% of construction steel consumption in 2019) is expected to come into operation and raise the supply capacity of construction steel to 17 million tons/year. Additionally, the safeguarding tariff for construction steel and billet will expire in March 2020. In the absence of an extension, the supply of steel in 2020 could increase substantially. **We expect construction steel will continue to grow steadily in 2020, but competition will become fiercer, especially in the Southern and Central of Vietnam.**

II. Flat steel – Divergent prospects for each product segment

1. Galvanized steel – Supply expansion has stopped; the export market outlook is gloomy

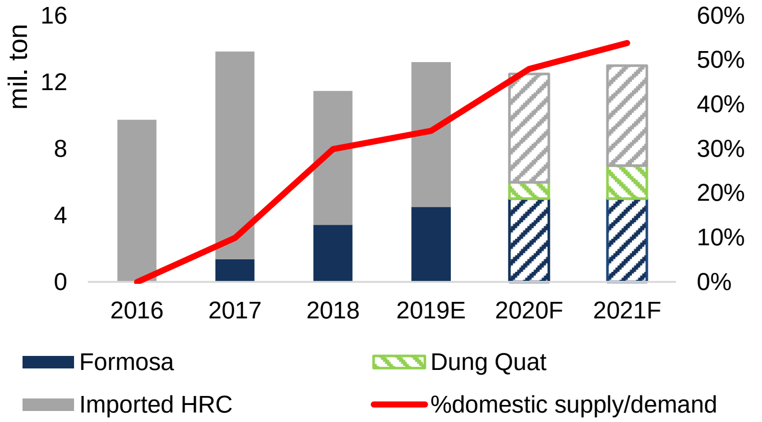


Sources: GSO, FPTS Research

The estimated consumption of galvanized steel in 2019 (including domestic and export market) is 3.5-4 million tons. However, with the capacity expansion in the period from 2016 to 2018, the supply capacity has reached 7.5 - 8 million tons/year - equivalent to the utilization rate of only about 40-50%. Currently, industry leaders such as HSG, NKG, Ton Dong A have no longer expanded their capacity and they are focusing on improving operational activities. Besides, the prospects of export markets become less optimistic with the wave of trade protection globally (especially in the US and EU markets). **Consequently, the competitive pressure in galvanized steel will be more drastic, especially in the domestic market.**

2. Hot-rolled coil (HRC) – Promising growth prospect

Supply and demand of HRC



Sources: VSA, FPTS Research

Before 2017, Vietnam could hardly produce HRC and had to depend entirely on imports, especially from China. After that, with 2 projects Formosa - Ha Tinh (operating from 2017) and Dung Quat - Hoa Phat (expected to operate in 2020), it is estimated that domestic supply can produce about 6.5-7.0 million tons HRC/year, equivalent to ~55-60% of domestic demand. With the rise of trade protectionism, especially for products originating from China, flat steel producers will need to diversify their input supply to minimize the risk of taxation in the export market. **We expect this segment will have the highest growth in 2020.**

III. Update on trade policies

Nation	Content	Status	Comment
Vietnam	Safeguarding duties on billet and long steel	• Expire in Mar-2020 • Under review for an extension	• In the absence of an extension, the risk of competition with Chinese steel will increase. However, Chinese steel dump into Vietnam (as in 2015) is unlikely to happen in the current context of trade protectionism.
	• Anti-dumping tax on color-coated steel	• Effective from Oct-19 to Oct-2024	• Positive impact on domestic coated and cold-rolled steel producers, especially when the export market prospect is pessimistic.
	• Anti-dumping tax stainless steel	• Effective from Oct-2019 to Oct-2023	
	Tariff on HRC	• The Ministry of Finance proposed HRC tariff of 5% in Aug- 2019 • Rejected in the Decree No.125/2017/ND-CP amended and supplemented	• If HRC is subject to the tariff, domestic HRC producer (Formosa and Hoa Phat) will be benefited. Domestic producers of steel pipes, coated and cold rolled steel will be negatively affected • Currently, domestic HRC output is not enough to meet demand. Thus, this tax policy is unlikely to be applied in the near future.
Malaysia	Investigation of dumping of CRC	• Imposing temporary anti-dumping for 120 days (Aug-Dec)	• Negative impact on the prospect of Vietnam's cold-rolled and coated steel export
Indonesia	Investigation of dumping of coated steel	•Starting investigation from Aug-2019	

Sources: MoIT, TRAV, FPTS Research

D. SUMMARY

In 2020, we expect Vietnam's steel industry outlook would:

- Long steel - demand from the residential construction leveled off, primary growth driver came from the industrial segment. New supply from Dung Quat Steel Complex (phase I) and imported steel (in the absence of the trade policies extension) lead to more intense competition pressure.
- Flat steel:
    - HRC producers would benefit from strong domestic demand and increased trade protection for products originating from China.
    - Galvanized sheet, steel pipe, and CRC producer should limit their capacity expansion and focus on improving the operating efficiency. The domestic market will be in focus since export markets are having a cloudy outlook.

We believe that the steel industry will enter the **RESTRUCTURING STAGE**. Small and medium businesses will be subject to significantly increased competitive pressure. Industry leaders with upstream-oriented value chains will have positive growth potential and opportunities to enlarge their market share.

E. WATCH LIST

Ticker	Market Cap. Jan 08, 2019 (bil. VND)	Revenue 9M2019	NPAT 9M2019	NPAT Growth	Net Income Margin	ROE (TTM)	P/E	P/B
HPG	65,437	45,682	5,655	-17.2%	12.4%	17.1%	7.1	1.4
	• HPG is one of the industry leaders with the largest market share in long steel and steel pipes in Vietnam. • From 2013 to 2017, with the investment in Hai Duong Steel Complex, HPG took the first-mover advantage of applying BF technology to produce steel and had grown rapidly to gain market share. Currently, HPG continues to invest heavily in Dung Quat Steel Complex the become the leading steel producer in Southeast Asia. • Prospects: Phase I of the Dung Quat project will go into operation in late 2019 and early 2020 will double the capacity of long steel, helping to maintain the position of HPG. Phase II of the Dung Quat project (expected from Q2-2020) will help complete HPG's value chain in the flat steel segment.							
HSG	3,356	20,489	298	+340.4%	1.5%	3.7%	7.4	0.6
	• HSG is the leading enterprise in galvanized steel and the 2nd largest in steel pipe segment, with the competitive advantage of the retail distribution system. • During 2016-2018, when the galvanized steel market was flourishing, HSG had utilized the use of financial leverage to expand production capacity as well as the distribution system. Currently, when competition becomes fiercer as other domestic businesses also expand their capacity and export markets outlook are negatively affected by trade protection, HSG is focusing on reducing debt, divesting from non-core segments, and restructuring the distribution system. • Prospects: In the short term, although the cash flow from operating activities is showing signs of improvement, high leverage and operational restructuring may take longer to resolve. In the long term, HSG is competent to enhance its operation and hold on to the leading position.							

NKG	1,406	8,976	40	-82.6%	0.4%	-4.5%	N/A	0.5
	• NKG is among the top 3 largest galvanized steel producers with long-term operational experience. • During 2016-2018: NKG also increased the use of financial leverage to expand production capacity. However, the heavy dependence on export activities had damaged NKG as other countries increased trade protectionism. Currently, NKG has liquidated some of its factories and cutting down capacity. Furthermore, the shareholder structure and the management team was replaced, with SMC JSC (HSX: SMC) having the largest ownership and holding key positions in the BoD. • Prospects: intense competition will limit NKG's output growth. Moreover, as NKG's business model mainly deals with wholesale agents, the profitability of NKG is lower than HSG and extremely sensitive to fluctuations in HRC steel prices as well as its ability to cut costs.							
TIS	4,402	7,646	41	-12.3%	0.5%	1.2%	38.8	1.3
	• TIS is a state-owned enterprise operating in the long steel segment, owning the very first iron and steel complex in Vietnam. • Prior to 2007, TIS had the largest market share in Vietnam and was considered as the pioneer of Vietnam's steel industry. Nevertheless, in 2008, TIS invested massively to expand capacity production, but the project was stopped in 2012 due to the lack of capital (TIS's construction in progress is ~5,300 bil. VND, ~50% of total assets). Currently, the Government is planning to divest its capital at TIS but still facing many obstacles. • Prospects: Inefficient investment has caused TIS to lose its position and the progress related to restructuring and state divestments is still congested.							
VIS	1,757	3,448	-141	N/A	-4.1%	-52.1%	N/A	3.1
	• VIS operates in the construction steel segment, with the primary market in the North of Vietnam. • In the period of 2012-2018, Vietnam's construction steel consumption CAGR is ~6% per year. However, as VIS had been running at full capacity since 2010, VIS consumption has hardly increased. The shareholder structure also has a substantial change with the current largest shareholder Kyoei Steel Group (Japan), replacing Song Da Corporation (a state-owned enterprise). • Prospects: VIS uses EAF to produce steel with a gross profit margin of about 4-6.5%, which is lower than the industry's average. Its new projects are being discontinued, thus it is difficult to improve competitiveness.							

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CEMENT

INCREASING OPERATIONAL RISKS

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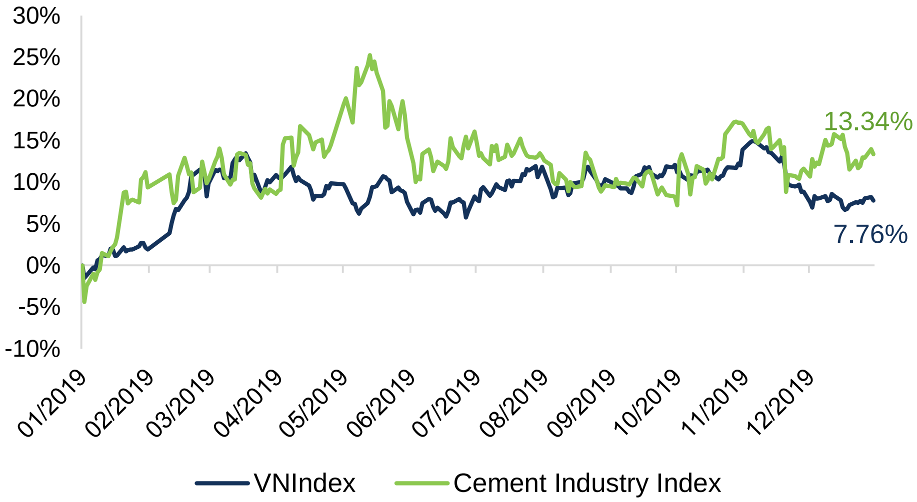
Cement Industry Index and VNIndex Movement

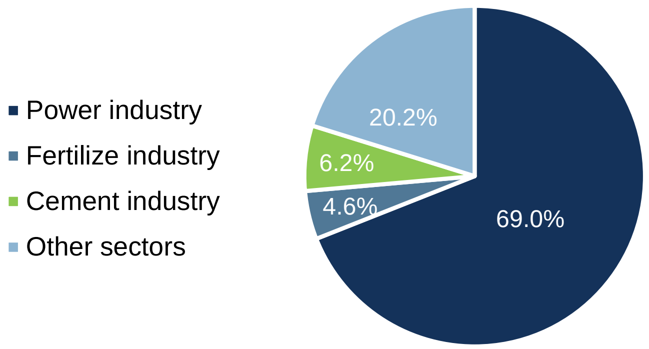


A. INDUSTRY HIGHLIGHTS

I. The cement industry has the highest consumption of fuel and electricity in the industry sector

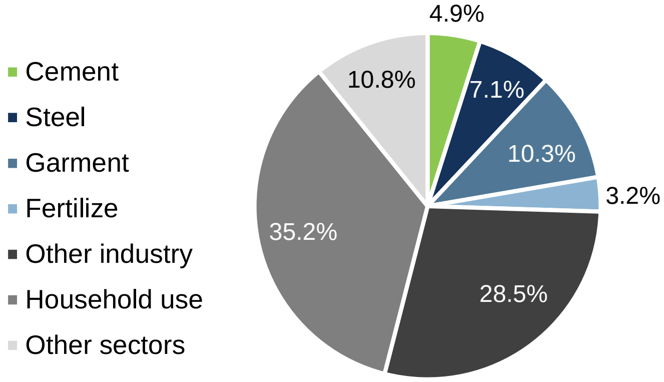
The cement industry is among the highest fuel (particularly coal dust) and electricity consumption sectors. With coal and electricity costs accounted for 40-50% of total production costs, the cement industry's coal demand is ranked 2nd and the electricity demand is ranked 3rd in consumption volume nationwide. Therefore, cement production is heavily dependent on fluctuations of coal and electricity prices, which have been in an unfavorable trend in recent years and directly affecting overall industry profit margin.

Coal consumption by sector (2018)



Sources: VIRAC, TKV, FPTS Research

Electricity consumption by sector (2018)



Sources: EVN, General Statistic Office, FPTS Research

II. Sharing similar technology but bearing a large gap in operating efficiency between production plants

There are two main types of technology for cement production including the vertical kiln and rotary kiln technology (consisting of wet and dry rotary kilns). Currently, 92% of the factories across the country have switched to dry rotary kilns, which is the best production technology currently available. However, according to Vietnam Institute of Construction Materials, production lines of each plant bear large gap of efficiency due to differentiated operation management including (1) investing methods and coordinating capability between machine segments and (2) selecting production techniques (grinding, burning or mixing methods) for the existing line.

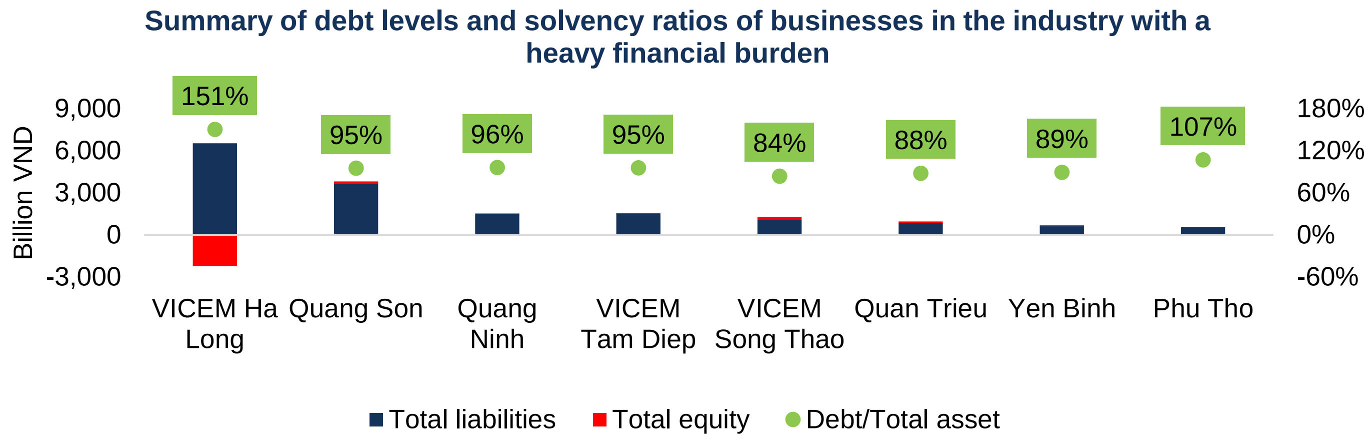
Among current cement manufacturers, foreign joint venture factories are being considered as having the best operating performance thanks to their well-invested new production lines and techniques. The remaining manufacturers often invest in fragmented lines with many bottlenecks in technology, leading to the inefficient utilization of production capacity and hamper cost reduction.

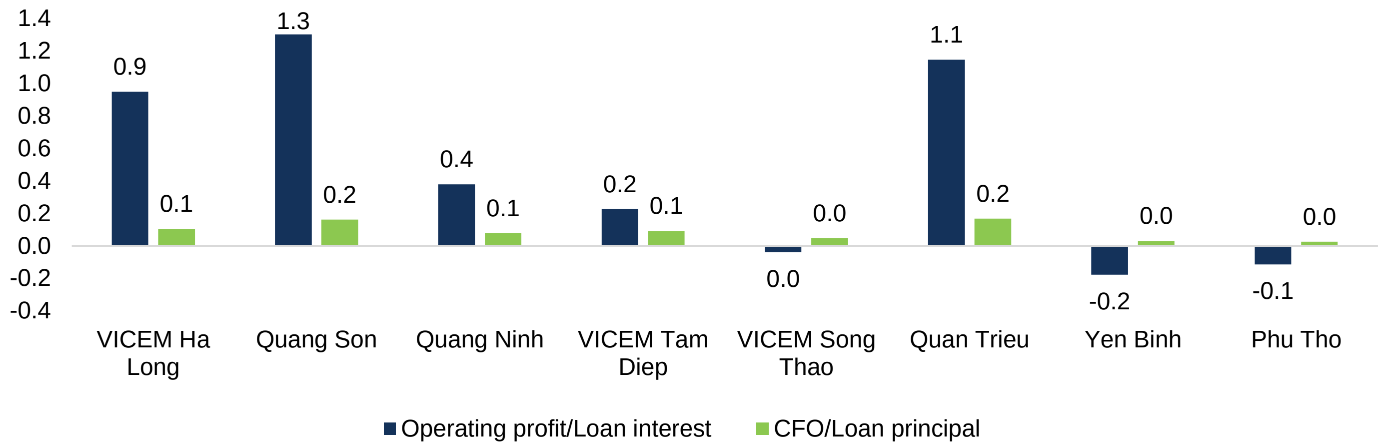
III. Low entry barriers and price-competitive products

The cement industry has a low entry barrier as it does not require large sources of capital and specific professional experience. In the previous construction development period (2000-2010), cement manufacturers were encouraged to operate in rural provinces to promote the regional industry which led to the ease to apply for a permit to build factories, exploit raw materials and quickly enter the market.

Products in the industry lack differentiation, mainly comprise of bagged cement (PC and PCB 30, 40) and common bulk cement. According to state regulations, cement products must comply with the general standards of the Ministry of Construction in terms of properties and quality. Therefore, different manufacturers provide identical products and thus, have to focus mainly on the competition of price or trade discount for distributors.

IV. Financial distress exists in various businesses in the industry



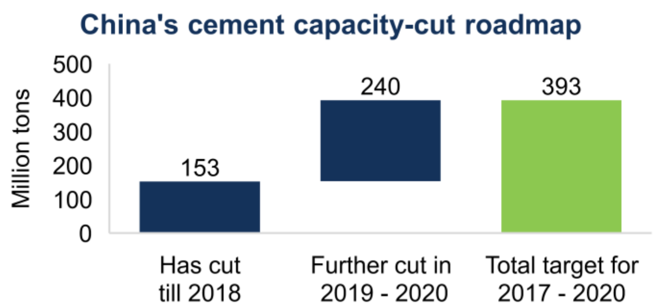


Sources: VICEM, Vietnam Cement Association, FPTS research

Currently, in the cement industry, many businesses are having high levels of debt and the risk of insolvency due to large foreign debt (mainly USD and EUR) leveraged to build factories between 2008 and 2012. At that time, loan principals grew quickly due to a sharp increase in the USD and EUR exchange rate (USD/VND increased by 31%, EUR/USD increased by 17%) while the revenue source barely increased due to the slow growth of the real estate and construction markets. Thus, these firms could not repay debts in time, which made it difficult for them to roll over the capital to maintain operations. Apart from the above-mentioned businesses, the average debt to equity in the industry has remained relatively high (fluctuating over 50%). Facing the poor financial situation in the industry, banks have continued to tighten lending, putting significant pressure on the performance of many cement manufacturers.

B. INDUSTRY REVIEW 2019

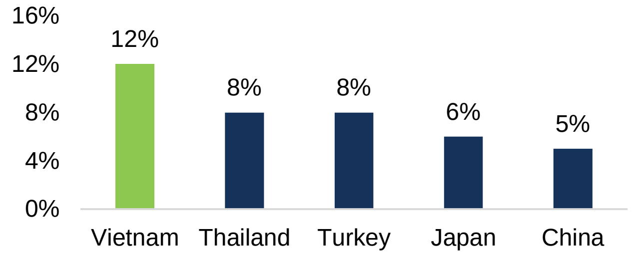
I. Favorable short-term market condition due to a sharp increase in export to China



Sources: Global Cement, FPTS Research

In 2018 - 2019, the trend of the cement industry shifted to the export market due to intense domestic surplus. Demand in the export market, consisting of mainly low-value and unprofitable raw products (clinker), mostly comes from China (accounted for 38% of total exports) and the Philippines (accounted for 21%). Supply cut from two major cement exporters, China and Thailand (accounted for 41.3% of total Asian exports), is helping to boost Vietnam's cement consumption.

Cement export market share (2018)



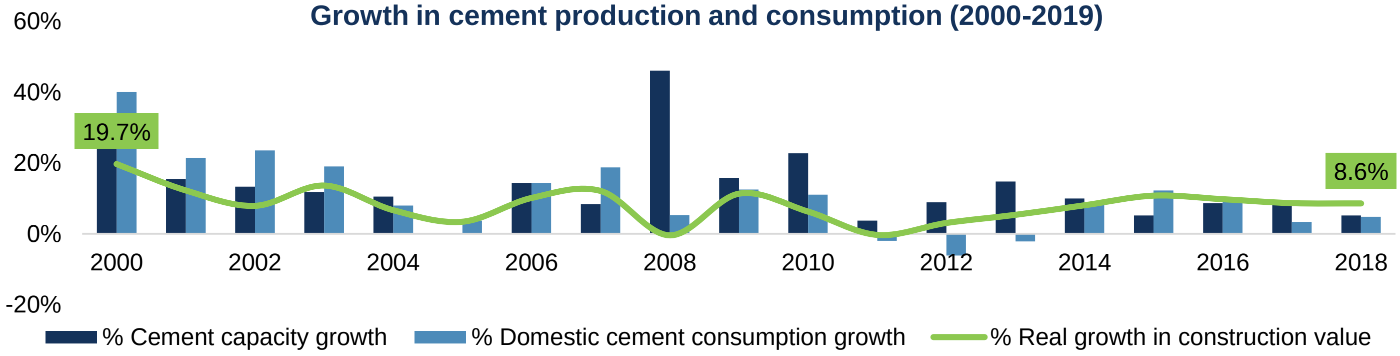
Source: Department of International Trade

According to the World Cement Association, limited sources of supply in these two countries has led to changes in export ranking and higher price levels in Asia. From the end of 2018, Vietnam has officially become the largest exporter of cement in the world (with 12% of export market share). In the first 6 months of 2019, compared to the same period of 2018, thanks to a sharp increase in cement export value to China (up 65% in volume and 88% in value), the total mobilization capacity of this industry has increased by 2% (estimated to reach 94%).

II. Domestic consumption slow growth intensifies domestic oversupplied pressure

The cement industry has a history of more than 120 years (1899 until now) but has only been developing at a fast pace since 2000. The capacity growth rate is 1.4 times higher than the domestic consumption growth in the same period.

Growth in cement production and consumption (2000-2019)

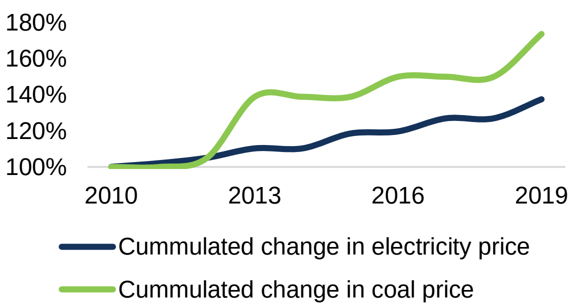


Sources: Vietnam Cement Association, Ministry of Industry & Trade, General Statistic Office, FPTS Research

In particular, the early saturation of the construction industry in the last 10 years has significantly reduced domestic cement consumption. From 2008 to 2019, the growth rate of domestic cement consumption decelerated rapidly to 5.3%, modestly equal to 34% of previous growth rate from 2000 to 2008. However, the capacity growth remained high (CAGR 10.3%), resulting in a significant oversupply and fiercely competitive situation in the industry since 2010. By 2019, the industry's production capacity has reached 103 million tons, while the domestic demand is only estimated at 70.8 million tons (equivalent to 68% of total production output).

III. Production costs continue to rise quickly with both coal and electricity price adjustment

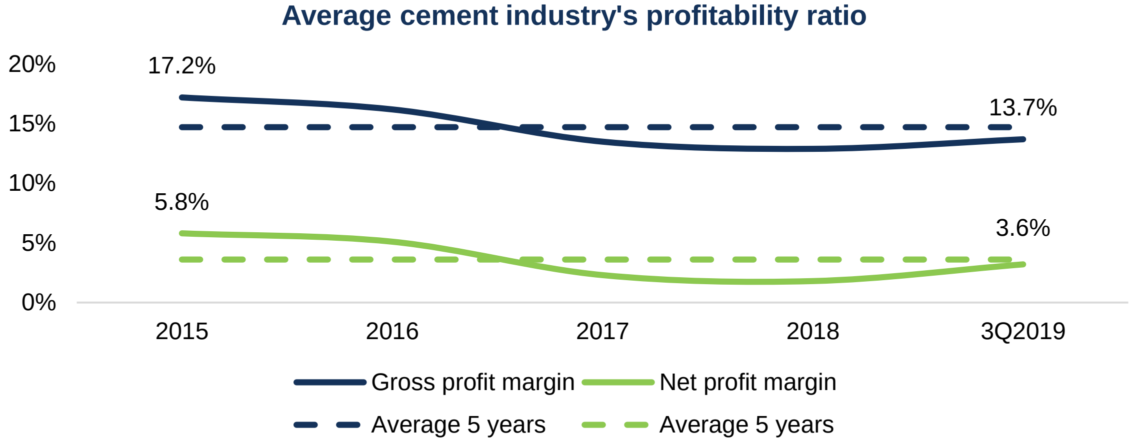
Cumulated change in coal and electricity price (2010-2019)



Sources: TKV, EVN, FPTS Research

The costs of coal and electricity continue to increase rapidly. Domestic coal price increases by about 6.3%/year due to the gradual exhaustion of supply from existing mines while electricity price increases by about 4.1%/year due to the pressure of increasing production costs from main thermal power and electricity price adjustments (minimizing the gap for the mark-to-market price mechanism). Since the beginning of 2019, prices of electricity and coal have both increased by 8.4% and 15.8% respectively, making the profit margin of manufacturers significantly decline by 1- 1.5%. We believe that this trend will continue in the future, making it difficult for many manufacturers to maintain production activities.

IV. Industry profitability weakened as various businesses are close to negative earnings

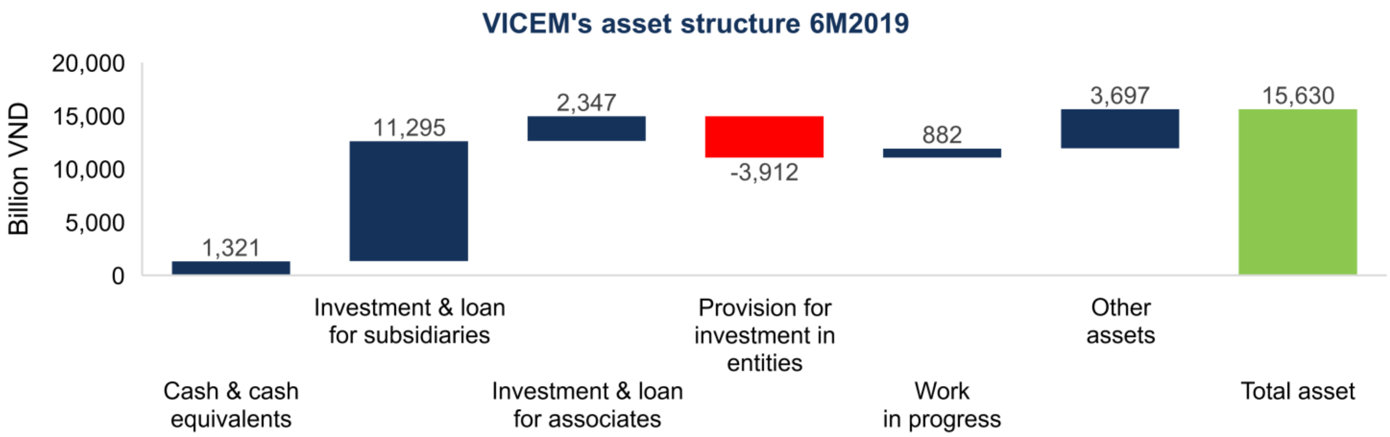


Source: FPTS Research

In 2019, revenue and profit margin of the industry has recovered due to favorable exports and a slight increase in selling price (2-3% increase compared to the beginning of the year). However, considering the long-term trend, the profit margin is declining quickly in the recent period (2015 - 2019) because of issues in input costs, financial interest and sales capability mentioned above. It is noteworthy that the industry's profitability rate is very low, in which about 30% of businesses are underperforming with heavy losses as of 2018 and is likely to increase in number soon when competition in the industry continues increasing.

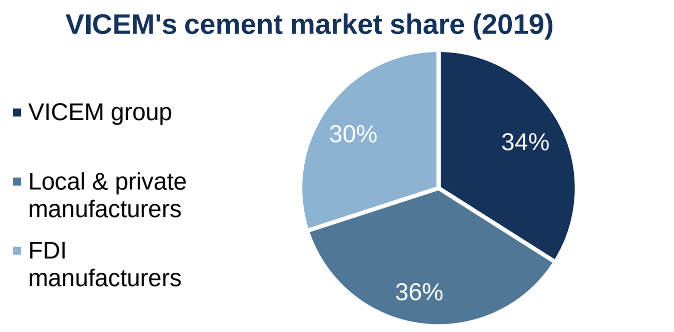
C. INDUSTRY OUTLOOK 2020

I. Likelihood of continuing delay in valuable IPO of VICEM



Sources: VICEM, FPTS Research

The value of VICEM's parent company mainly comes from investments in subsidiaries and associates with a total of 10 controlling subsidiaries and 3 associates. Among that, 6 out of 10 companies have been listed and remaining 4 subsidiaries and 3 associates are unlisted and has not been recorded to market value, including 2 main groups: the best performing manufacturers: including VICEM Hoang Thach, associated companies including Chinfon, INSEE, and Nghi Son; and weakest financial manufacturers include: VICEM Ha Long, VICEM Tam Diep & VICEM Song Thao, which has been fully provisioned. This makes remaining VICEM assets become attractive with well-operated companies and large market shares holding in the industry.



Source: Vietnam Cement Association

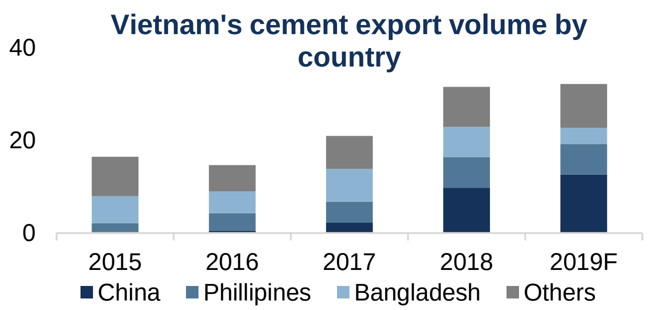
In the market, VICEM subsidiaries accounted for nearly 1/3 of Vietnam's cement market share. Especially, there are outstanding manufacturers such as VICEM Hoang Thach (accounted for 8% of the national market share) or VICEM Ha Tien (accounted for 11% of national market share and is currently the largest manufacturer in the South). At the same time, the VICEM cement brand has large intangible value, is currently being positioned in the middle and high-end segment, separated from other cement brands. The company is planning to set a 2020 IPO valuation at VND 27,057 billion, 1.6 times the current total assets.

However, the IPO may not feasible to deploy in 2020 due to significant issues:

- **Many subsidiaries have not had capability for independent competition:** Except from two leading subsidiaries, VICEM Hoang Thach and VICEM Ha Tien, who can produce effectively with independent competitive advantages, most remaining subsidiaries cannot create independent and competitive advantages as of weak financial position and business result unable to improve because of negative general market trend.
- **Forcing to bear more weak businesses into the system:** The burden of weak financial cement businesses is a significant barrier for the equitization of VICEM, causing serious decline in the capital of the corporation due to mandatory investment in these plants up to 4,454 billion VND (including VND 3,253 billion of equity and VND 1,201 billion of loan capital, accounted for 28% of VICEM's parent company assets).

According to our assessment, current VICEM group's capability is not yet ready for IPO, as well as facing further problems in valuing VICEM's assets (mining rights, investments in subsidiaries & associates, real estate in progress) will make it difficult for VICEM's IPO to be completed in 2020.

II. Risk of large fluctuation in export due to change in domestic and international policy



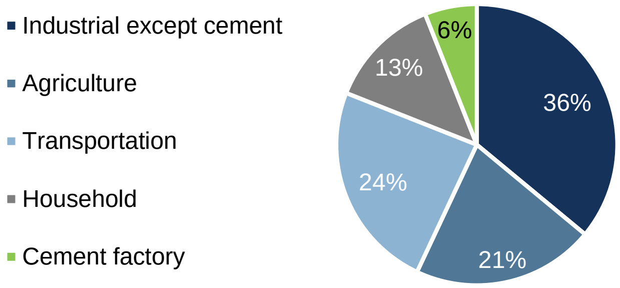
Sources: General Statistic Office, FPTS research

A positive export market is an important factor to maintain Vietnam cement industry's ability to consume (accounted for 32% of total consumption), while reducing competitive pressure in the domestic market, indirectly supporting support businesses for domestic consumption. However, we assess that this market outlook is unstable, subject to various risks of frequent domestic and international policy changes such as:

- **Vietnam**: Although recent government regulations (such as eliminate duties and refund VAT on export cement) provide support for cement export, in the long run, the government discourages the sale of domestic resources. Specifically, in document No. 4721/VPCP-CN, the Government has consulted with the Ministry of Construction on a long-term solution to restrict cement export, which is considered as a loss of national resources. Although there is no official legislation to implement this proposal, the Ministry of Construction is considering to set a plan to limit export targets in the coming years and provide stricter controls on cement consumption.
- **Other countries**: The trend of increasing safeguard tariffs in many import markets may negatively affect the exportability of domestic enterprises. Some main importers of Vietnam cement recently, such as the Philippines, have imposed an import tax of 4.8 USD per ton of cement. Bangladesh has also applied an 8% additional VAT on cement (from 15% to 23%) to protect local manufacturers. Other countries like South Africa are considering the proposal of the South African Trade Association (ITAC) to impose high taxes on imported cement. China may also consider imposing a tax on Vietnam's cement in case it wants to impose protectionism in the near future.

III. Tighten legislation related to pollution in production & sustainable growth issues

Sources of fine particales PM2.5 in Vietnam



Source: Vietnam Institution of Science and Technology

In the past 10 years of development, the cement industry has left heavy consequences on living quality across Vietnam. The concentration of air pollution (measured by the AQI index) of major cities is constantly rising (reaching a record in 2019 when AQI reaches 333 points, 3.3 times higher than the recommendations of WHO). The serious air pollution comes mainly from heavy industries such as iron, steel, coal, and cement (of which cement accounted for 6% of total emissions of dust and smoke nationwide).

This pollution situation is similar to what has happened in China before the government began to force-cut heavy industrial activities in an effort to restore the living environment (a typical example is to cut cement production nationwide). In Vietnam, the government has made a preliminary policy in combating pollution in the cement industry, along with a wave of protests against cement production activities causing serious pollution such as closing Dai Viet cement plant (Quang Ngai), withdrawing the mining license of Phuc Son Cement (Hai Duong), forcing the removal of Thu Duc - Ha Tien Cement grinding station (Ho Chi Minh City) from the city.

Based on these arguments, we believe that manufacturers in the industry will face the high possibility of having stricter policies in managing production pollution, leading to possible consequences: (1) increased costs for pollution handling (investment in dust filtration systems, waste treatment systems, increased cost of recycling raw material mines) (2) higher difficulty to obtain license to operate and exploit resources (3) Vietnam’s government cut of industry production or closing polluted plants as currently happening in China.

D. SUMMARY

From the overall point of view, we evaluate that the prospect of the cement industry for 2020 will be at an **UNFAVORABLE** level with the following main trends:

- Although there has been a recovery in the whole industry's business activity based on increasing exports, growth motivation may only maintain in the short-term as export in two main markets, Philippines and Bangladesh could suffer significant influence from the new tax rate applied this year.
- IPO of VICEM - the largest cement manufacturing group in the country, which is an investment highlight of the industry next year, may be delayed, thus reduce the attractiveness of cement stocks.
- Stricter environmental control policies are being considered to be applied in the next year due to the impact of the heavy environmental pollution in 2019, which will put great pressure on production costs for industry manufacturers.

E. WATCH LIST

Ticker	Market Cap. Jan 08, 2019 (bil. VND)	Revenue 9M2019 (bil. VND)	Net Income 9M2019 (bil. VND)	Net Income Growth	Net Income Margin	ROE (TTM)	P/E
HT1	5,570	6,898	529.71	+19.91%	7.6%	13.1%	7.6
BCC	759	2,835	93.36	+152.63%	3.4%	7.7%	5.0

HT1

- VICEM Ha Tien Cement Joint Stock Company (HSX: HT1) is the largest cement manufacturer in the South - the largest cement consumption market in the country.
- HT1 has a strong competitive advantage compared to other industry manufacturers which come from ownership of a majority of limestone mines to produce cement in the southern region (which is scarce). As a result, HT1 has few competitors in the region and maintains high selling prices and stable profit margins.
- Prospects: Expect the implementation of the VICEM Ha Tien Complex project on land of previous disposed Thu Duc crushing plant in the middle of 2020 along with the delayed deployment of new competitors factory in the region (Kaito Ha Tien) until 2021.

BCC

- BCC (VICEM Bim Son) is a large cement manufacturer in Thanh Hoa province and the North with a convenient location to export to the Chinese market.
- BCC faces fierce competition in the domestic market, especially in Thanh Hoa province from a series of large-capacity plants in operation such as Long Son, Cong Thanh and Nghi Son (13.8 million tons), accounted for 14% of the total cement capacity of the country), so it is difficult to maintain profitability.
- Prospects: China continues to import cement & clinker from Vietnam to make up the deficit that helps maintain BCC's consumption volume. Also, BCC no longer bears fluctuations from exchange rate risk after paying its foreign currency debts.

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CERAMIC TILE

SLOW GROWTH IN 2020

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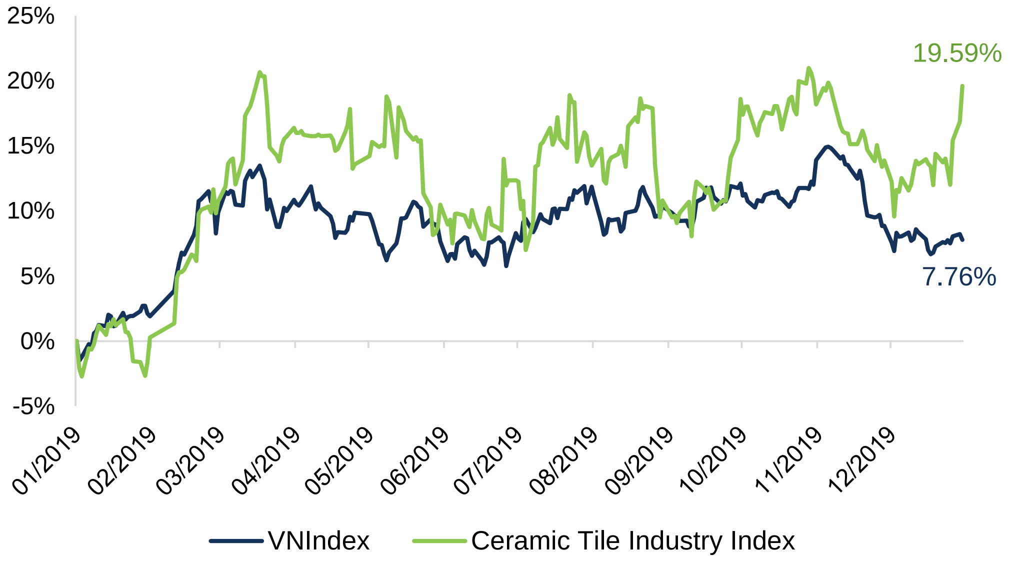
Ceramic Tile Industry Index and VNIndex Movement



A. INDUSTRY HIGHLIGHTS

I. The industry currently in the shakeout stage

Going through the growth stage between 2000 and 2009, the industry is presently in the shakeout phase with significant features recognized as below:

(1) **During 2010 and 2019, the industry scale grew at a much slower rate as compared to the previous 10-year period**. Specifically, the compounded annual growth rate (CAGR) of total output stood at 5.8 percent while it was recorded at 20.5 percent for the course from 2000 to 2009. With regard to consumption, during 2010 and 2019, the volume's CAGR reached 6.1 percent compared with the rate of 17.8 percent of the preceding period.

(2) **There exists stiff competition among ceramic tile manufacturers** due to oversupply and the huge pressure from substitutes. Now that the prices of ceramic tiles have been falling; the growth of the industry's revenue, cash flows and profit have been slowing down in recent years.

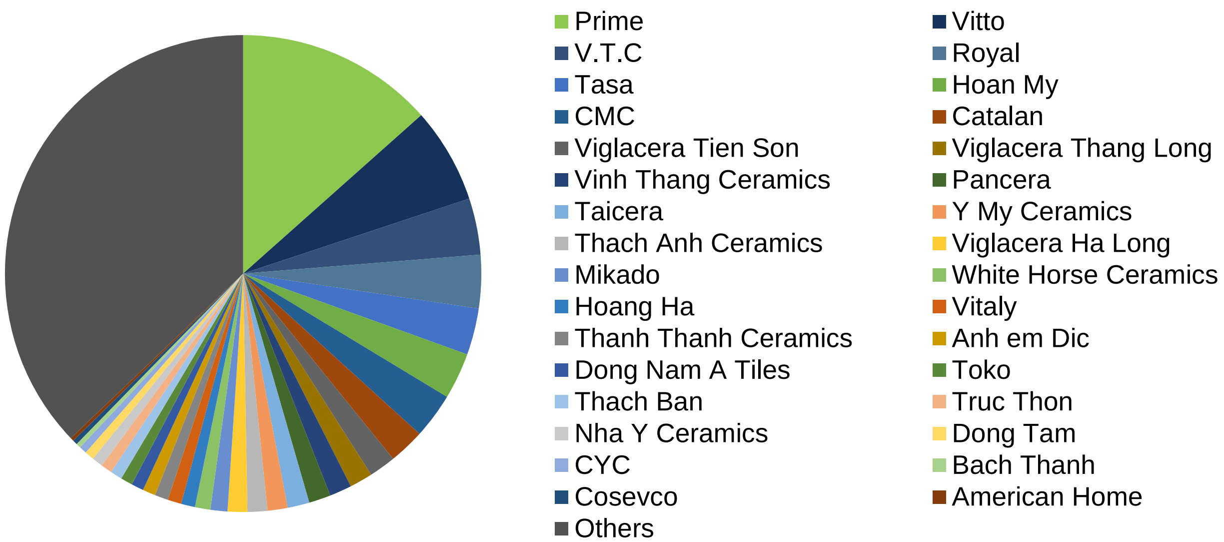
(3) **Vietnam's ceramic tile consumption per capita has been comparatively high, which reached 6.11 square meter (m^2)**. According to Acimac's and World Bank's latest statistics, this is the highest amount of consumption among the top 10 largest countries in terms of ceramic tile consumption.

II. Large market shares seized by FDI and unlisted manufacturers

The industry is highly fragmented with roughly 82 medium and large-sized manufacturers together with numerous small family-owned businesses. In 2018, Vietnam consumed approximately 542 million m2 and of which Prime Group JSC (a member of Siam Group (Thailand) accounted for the largest market share of 13.5%. Next came unlisted manufacturers namely Vitto, VTC Ceramics, Royal Group, Tasa Ceramics, Hoan My Ltd.

Regarding listed manufacturers, CMC Joint Stock Company (HSX: CVT) accounts for 3.1% of the total market shares. Next are Viglacera Tien Son (HNX: VIT), Viglacera Thang Long (UPCOM: TLT) and Viglacera Ha Long (HNX: VHL) whose market shares are 1.8%, 1.6%, and 1.3%, respectively. Other companies include Taicera (HSX: TCR) with 1.48%, Thanh Thanh Ceramics (HNX: TTC) 0.9%, Truc Thon (UPCOM: TRT) 0.8% and Chang Yih Ceramics (UPCOM: CYC) 0.5%.

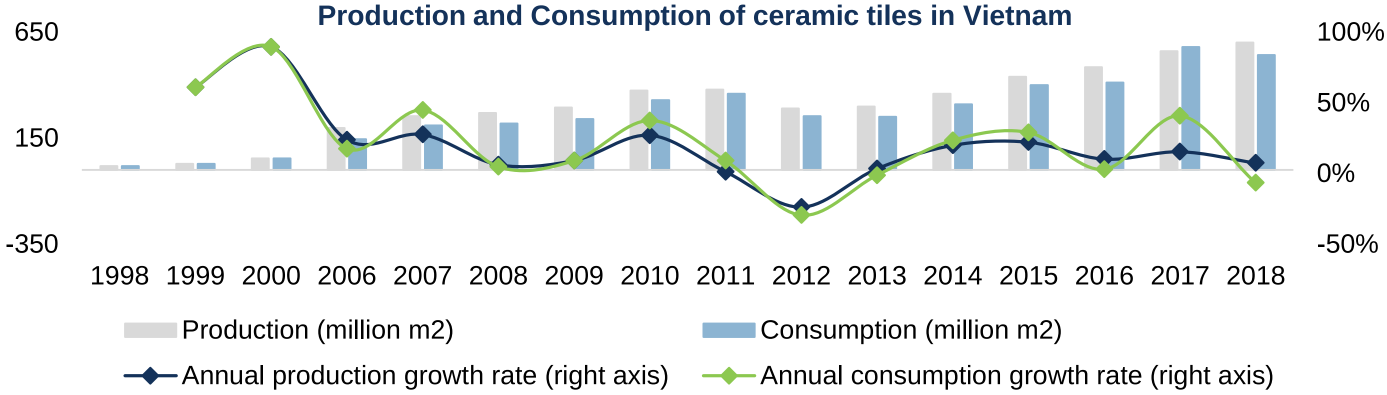
Vietnam's 2018 ceramic tile market share by consumption



Sources: General Statistics Office of Vietnam, FPTS Research

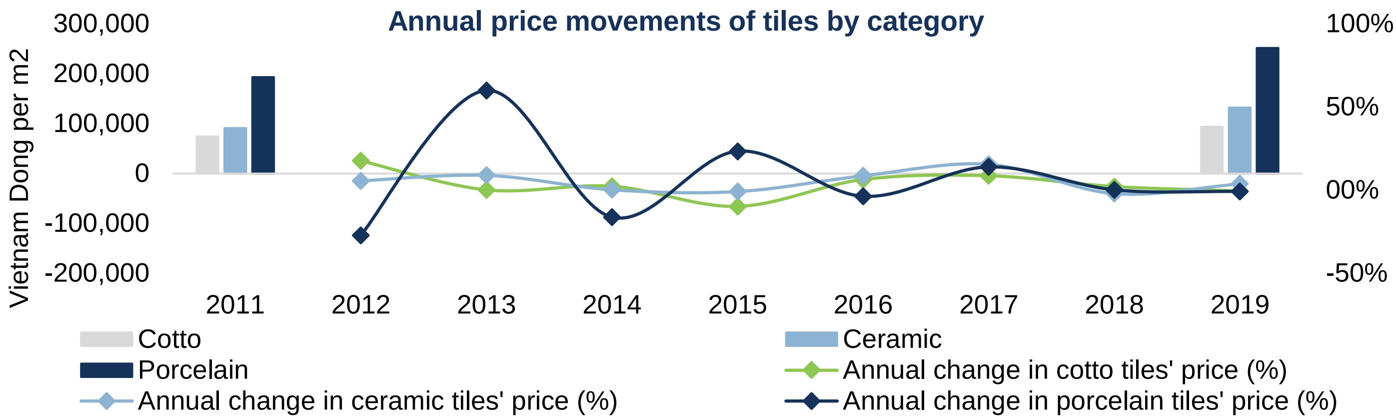
III. Oversupply leading to stiff competition among Vietnamese ceramic tile manufacturers

As mentioned above, the industry is oversupplied. The proportion of consumption to production volume averaged at about 90% from 2010 to 2018. Regarding consumption share by category, porcelain tiles had its proportion increased to 22.8% in 2018 (+3.8% as compared to 2010). In contrast, cotto and ceramic tiles exhibited a downward trend whose shares have been falling by 0.5% per year since 2010.



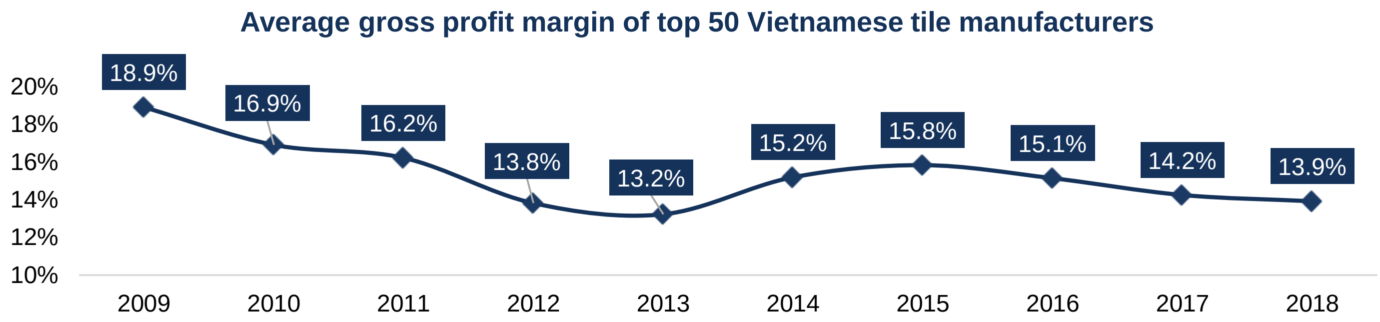
Sources: Acimac, Ceramic World Web, FPTS Research

In recent years, price movements of cotto, ceramic and porcelain tiles have been in a downtrend. The fierce price competition among firms comes from two main reasons: (1) a considerable number of manufacturers and (2) the fact that there exists only a slight differentiation between manufactured tiles.



Sources: Vietnam Institute for building materials, FPTS Research

Now that the harsh competition is putting downward pressure on tiles' prices, the industry's average profit margins have been decreasing since 2015. The gross profit margin of the top 50 Vietnamese tile manufacturers was only 13.91% in 2018, falling respectively by 0.33% and 1.91% compared to 2017 and its latest peak in 2015.



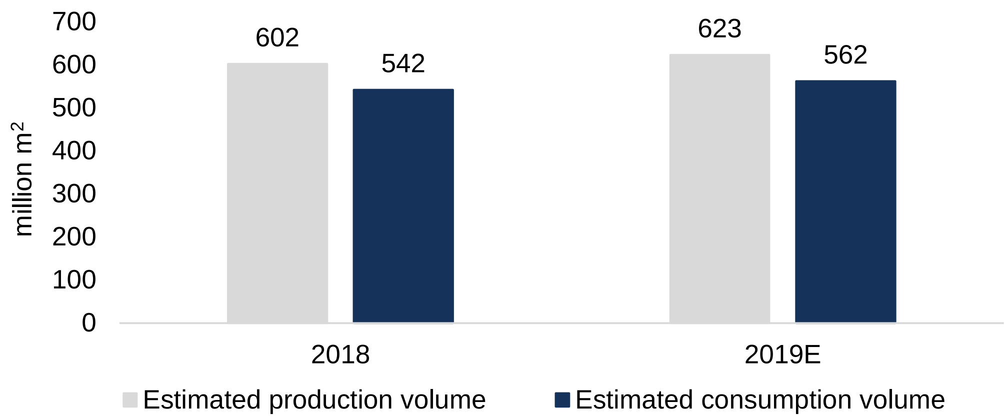
Sources: General Statistics Office of Vietnam, FPTS Research

B. INDUSTRY REVIEW 2019

I. Low annual growth rates of domestic ceramic tile production and consumption

In general, Vietnamese construction industry growth continued to slow down in 2019. As a result, the demand for ceramic tiles grew slowly throughout the year. Given the fact that the industry is oversupplied, the overall performance in terms of production and consumption growth was quite modest. Specifically, total tile production and consumption volume in 2019 is estimated at 623 million m2 (+3.5% y-o-y) and 562 million m2 (+3.7% y-o-y) respectively.

Estimated tile production and consumption of 2019



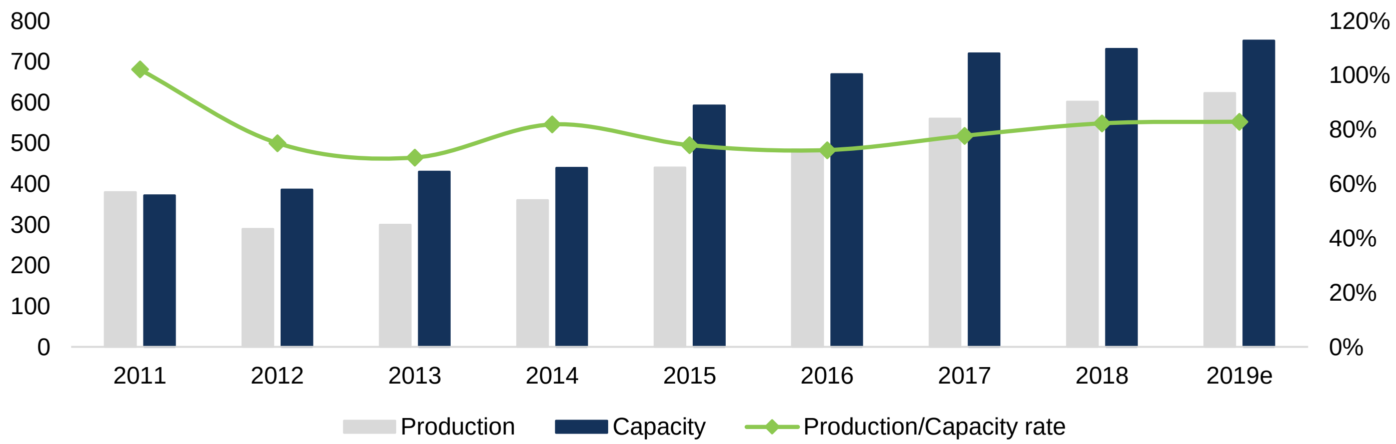
Source: FPTS Research

II. The slow growth of the industry's production capacity

Similar to 2018, the industry's production capacity continued to grow slowly in 2019. According to Vietnam Building Ceramic Association (VIBCA), total capacity in 2019 reached 751.5 million m2 per year (+2.7% y-o-y). In terms of capacity share by type; cotto, ceramic and porcelain tiles made up 4.1%, 73.1%, and 22.8% respectively.

Lack of incentives to increase the industry's capacity came from two main reasons: (1) the industry was still not operating at full capacity as mentioned earlier in this report, (2) construction industry's growth, especially in the residential housing segment, kept slowing down in 2019.

Ceramic industry's production capacity growth in Vietnam (2011-2019e)



Sources: Vietnam Building Ceramic Association (VIBCA)

III. An ongoing downward trend in prices of tiles in 2019

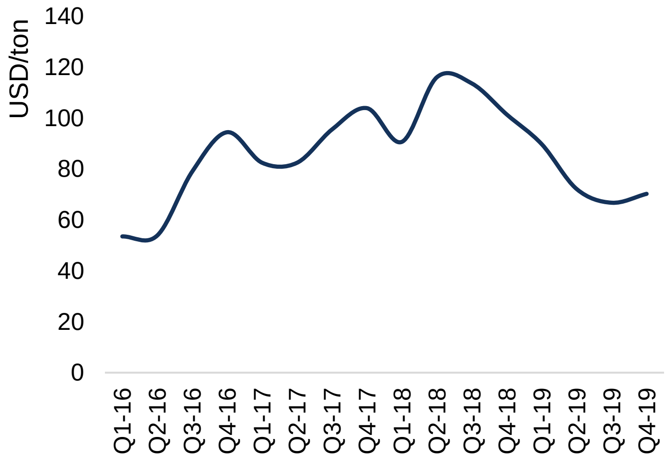
In general, tiles' prices continued to fall in 2019. The decreases ranged from 5% to 10% depending on types and sizes. Given the existing fierce competition, the majority of Vietnamese tile manufacturers had to lower their products' prices to maintain annual sales volumes. Specifically, the price fluctuations of some firms in 2019 were as follows:

#	Manufacturers	Product line	Price 2018	Price 2019	Changes
1	VIT	Digital printed porcelain size 80x80 cm	409,300	394,300	- 4%
		Digital printed porcelain size 60x60 cm	321,100	306,100	- 5%
		Porcelain size 60x60 cm	330,100	315,100	- 5%
		Porcelain size 80x80 cm	383,200	368,200	- 4%
2	CVT	Micro crystal porcelain size 80x80 cm	280,000	250,000	- 11%
		Soluble salt polished porcelain size 80x80 cm	450,000	350,000	- 22%
3	Viglacera Ha Noi	Ceramic size 30x30 cm	160,000	145,000	- 9%
		Cotto size 40x40 cm	124,000	109,000	- 12%
		Edge polished ceramic size 50x50 cm	135,700	120,700	- 11%
4	Dong Tam	Polished ceramic size 40x40 cm	145,000	131,818	- 9%
5	Vitto	Polished ceramic size 50x50 cm	148,276	137,931	- 7%

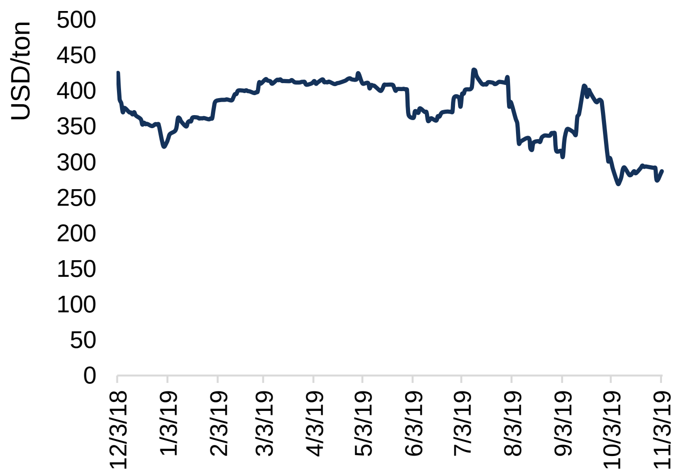
IV. A downward trend in prices of thermal coal and compressed natural gases (CNG)

While raw input materials (clay, kaolin, and feldspar) had a little fluctuation in price, prices of thermal coal and CNG decreased in 2019. Thermal coal or CNG is the input fuel in manufacturing tiles. Fuel cost accounts for about 29.3% of total input material cost and over 20% of the production cost of ceramic tiles. In 2019, the CNG coal price (calculated based on FO oil price of Singapore) was in a downward trend. Specifically, in November 2019, the price of Australian 6,000 kcal/kg thermal coal and the price of FO 380cst Singapore oil decreased by 21.7% and 12.3% respectively as compared to the beginning of the year. In the context of fierce competition of the tile industry, the reduction in input fuel costs had partly relieved the heavy downward pressure on profit margins of Vietnamese tile manufacturers.

FOB Price of 6.000 kcal/kg thermal coal at Newcastle port



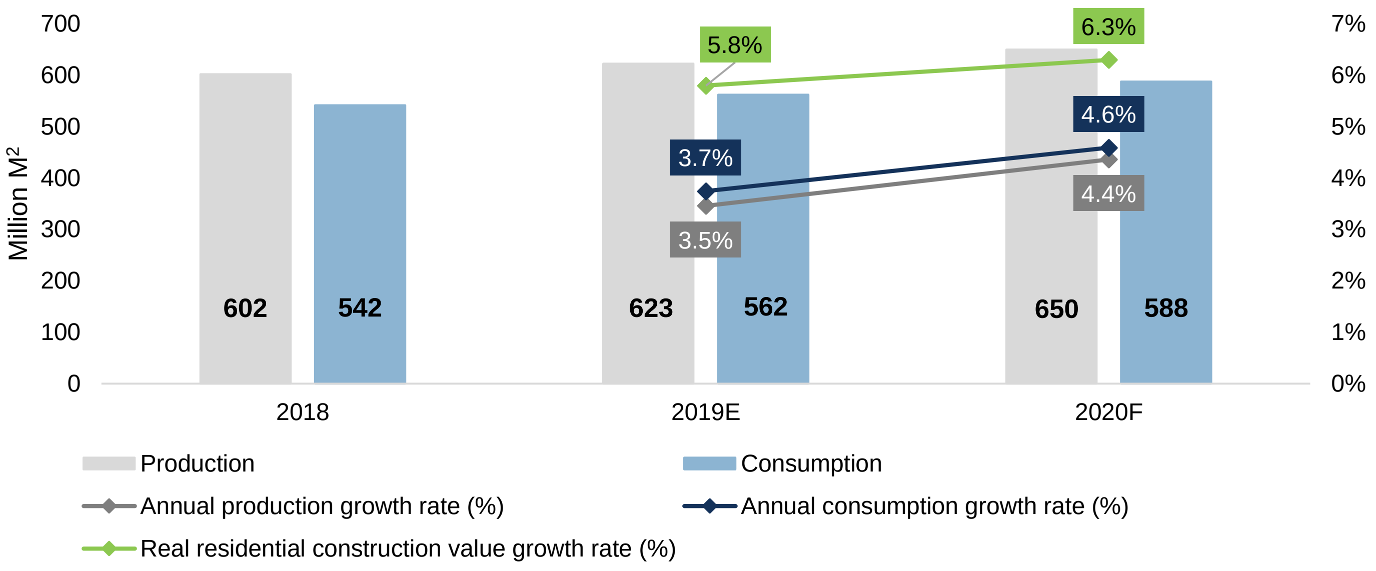
Fuel Oil FO 380cst Singapore



Sources: Bloomberg, FPTS Research

C. INDUSTRY OUTLOOK 2020

I. 2020 annual production and consumption growth rates forecasted to improve



Sources: BMI, FPTS Research

Production and consumption of ceramic tiles in 2020 are forecasted to reach 650 (+4.4% y-o-y) and 588 million m2 (+4.6% y-o-y) respectively. The growth rate of production and consumption of ceramic tiles industry in 2020 is expected to improve compared to 2019 due to the following reasons:

- According to BMI, the growth rate of real residential construction value (the segment which holds the biggest share of tiles' consumption) is forecasted to reach 6.3% in 2020, which is 0.5% higher than the growth rate of 5.8% estimated for 2019.
- Rapid urbanization rate (as World Bank expected to reach 37.34% in 2020, an increase of 1.02% compared to 2019) with an average population growth of 0.9% per year will accelerate the demand for ceramic tiles (the product accounts for up to 60% of the consumption of surface finishing construction materials). According to estimates from CIC and the 2019 Vietnamese population census, in the period from 2019 to 2023, the total demand for new and replacement houses will be 691.7 thousand apartments, equivalent to 2.5% of the total number of houses nationwide in 2019.

II. Competitive advantage rooted in the ability to differentiate and manufacture large tiles

The Vietnamese tile industry will still be oversupplied in the long term and there exists little differentiation in product lines of numerous tile manufacturers. Due to these two reasons, price competition will be harsher for Vietnamese tile firms. Thus, in 2020, the profits of enterprises in the industry will continue to narrow.

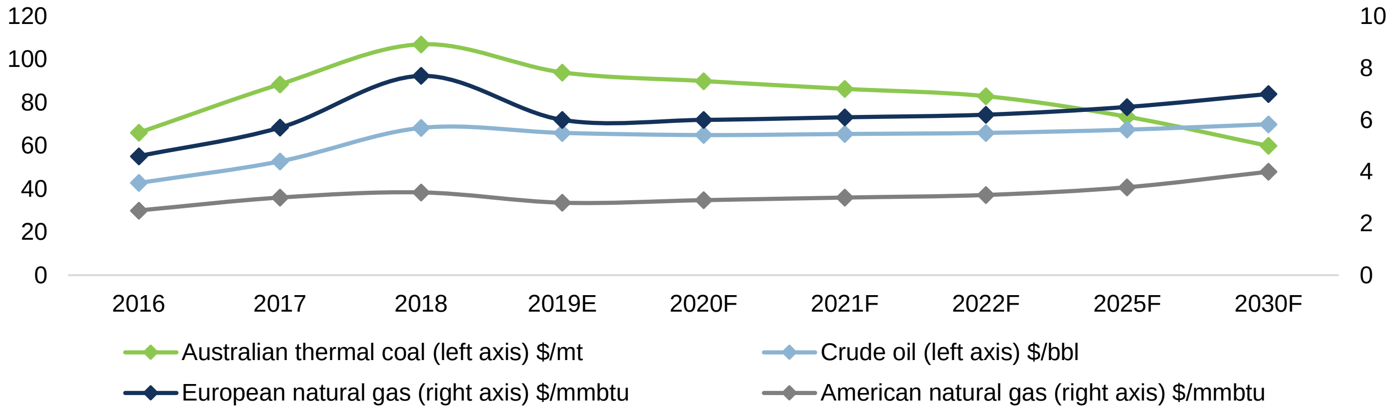
The opportunity to maintain and improve profit margins will come from the ability to manufacture differentiated product lines. A number of listed companies in the second half of 2019 made a move to differentiate their products such as Viglacera Tien Son (Euro tile & Colorful body) or JSC CMC (Soluble salt polished, micro crystal polished and sugar tiles).

In 2020, the two types of tiles which are expected to sell well will be mosaic tiles (sizes 10x10cm, 15x15cm, 20x7cm and 20x20cm) together with large and super-large tiles (80x80cm, 60x120cm, 80x120cm, 120x240cm and 160x320cm). With such trends in tiles' consumption, manufacturers of ceramic tiles with aesthetic differences and large sizes such as 80x80cm, 60x120cm, 80x120cm are expected to increase competitiveness and improve profit margins.

III. Thermal coal and CNG prices forecasted to follow different trends in long term

Fuel cost accounts for about 29.3% of total input material cost and over 20% of tile production cost. Prices of thermal coal and compressed natural gas tend to fluctuate sharply, affecting the production costs of manufacturers in the industry. According to World Bank's forecast, coal and natural gas prices will fluctuate in the opposite direction between 2020 and 2030. Accordingly, coal price is expected to decline to 60 USD/ton in 2030, equivalent to an average reduction of 4.4% per year.

The average price of natural gas at Henry Hub, USA in 2019 decreased to 2.8 USD/mmbtu and gradually increase by 2030 to 4.0 USD/mmbtu. European natural gas prices are expected to follow the same upward trend from 6 USD/mmbtu to 7 USD/mmbtu by 2030.



Source: World Bank

Tile manufacturers situated in northern Vietnam are expected to benefit the most as coal prices are forecasted to be in the downtrend in the long run. In contrast, for the region in the South where tile factories here mainly use CNG, the cost of input fuel is expected to increase, making it much more difficult to compete in terms of tiles' price; especially in the context of fierce competition with products from the North with lower selling prices

D. SUMMARY

Based on the above analysis, we believe that the ceramic tile industry will have a **NEGATIVE** outlook with the following supportive reasons:

- The ceramic tile growth rate continues to decelerate in 2020. Demand for ceramic tiles is expected to be low as residential construction growth rate is forecasted to reach only 6.3% in 2020 compared to the average rate of 9%/year of the previous periods.
- The excess of supply and lack of product differentiation will restrain prices of ceramic tiles in 2020. Only a few manufacturers have been able to differentiate their products to expand their target markets and to reduce the competitive pressure, leaving the majority of the manufacturers in the industry facing various difficulties in 2020.

E. WATCH LIST

<table>
<tr><th>Ticker</th><th>Market Cap.
Jan 08, 2019
(bil. VND)</th><th>Revenue
9M2019
(bil. VND)</th><th>Net Income
9M2019
(bil. VND)</th><th>Net Income Growth</th><th>Net Income Margin</th><th>ROE (TTM)</th><th>P/E</th></tr>
<tr><td rowspan="2">CVT</td><td>731</td><td>1,040</td><td>109</td><td>-4.3%</td><td>18.0%</td><td>26.8%</td><td>4.3</td></tr>
<tr><td colspan="7">In terms of production capacity, CVT is the 7th largest manufacturer of ceramic and porcelain tiles in the industry and the biggest one among listed firms.

2019 was a difficult year for CVT. Although there still existed a growth in 9M2019 net revenue, CVT's 9M2019 profit continued to decline compared to the same period. This resulted from the fierce price competition in the tile market leading to a narrower profit margin. The new product line’s sales volume (soluble salt polished and micro-crystal polished porcelain tiles) was at only 300 thousand m2, equivalent to 30% of the annual plan although the selling price was adjusted down by 10.7% and 22.2% with 80x80cm micro-crystal polished and soluble salt polished porcelain tiles.

Outlook: In 2020, CVT’s profit margins are expected to improve sharply thanks to the greater sales volume of the new product line. This expectation is based on CVT’s sales-boosting acts carried out in late 2019 which included: (1) exclusive brands for the new product instead of using tile distributors’ brands, (2) exclusive distribution network for the new product and (3) TV and radio advertisement.</td></tr>
<tr><td rowspan="2">VIT</td><td>298</td><td>1,010</td><td>55</td><td>+267.0%</td><td>12.5%</td><td>29.8%</td><td>5.1</td></tr>
<tr><td colspan="7">VIT manufacturers 100% porcelain tiles. Regarding production capacity, VIT is the 9th largest manufacturer in the industry and the 2nd biggest one among listed firms.

2019 was a successful year for VIT when the firm brought out new product lines to the market. These products including Eurotiles and Colorful body tiles were well received by the market. This, to some extent, helped relieve pressure from the existing fierce price competition and increase the firm’s average gross profit margin due to high selling prices.

Outlook: Now that VIT is manufacturing and distributing new differentiated products (Eurotile and Colorful Body tiles), lower pressure from existing harsh competition is expected in 2020. As a result, VIT is expected to maintain the revenue and profit growth as in 2019</td></tr>
<tr><td rowspan="2">VHL</td><td>750</td><td>1,487</td><td>93</td><td>-5.1%</td><td>18.3%</td><td>21.5%</td><td>5.3</td></tr>
<tr><td colspan="7">VHL manufactures 100% cotto tiles. With regard to production capacity, VHL is the 16th largest manufacture in the industry and the 5th biggest one among listed firms.

In 2019, VHL maintained the 2018 trend which was increasing the sales proportions of fired roof and cotto tiles while decreasing that of bricks. Together with the sharp decline in the price of input thermal coal, VHL enjoyed a higher gross profit margin, which estimated to be 3.0% higher than that of 2018.

Outlook: In 2020, the forecasted decreasing bricks price and the trend in preferring unfired roof tiles to fired ones will create many difficulties for VHL regarding pushing sales volume. Moreover, given the Ministry of Construction’s planning of using unfired construction materials, VHL’s long-term outlook is quite gloomy.</td></tr>
<tr><td rowspan="2">TTC</td><td>79</td><td>268</td><td>13</td><td>+10.3%</td><td>13.6%</td><td>27.1%</td><td>4.9</td></tr>
<tr><td colspan="7">In terms of production capacity, TTC is the 15th largest manufacturer of ceramic and porcelain tiles in the industry and the 4th biggest one among listed firms.

2019 was a rough year for TTC. No revenue growth was reported as the 9M2019 net revenue decreased by 8.7% as compared to the previous period. Although the price of input natural gases went down during 2019, TTC’s gross profit margin narrowed. This resulted from the declining prices of TTC’s products as the firm was competing severely with cheaper tiles manufactured in the North of Vietnam.

Outlook: TTC’s sales prospect is expected to be negative in 2020. Its competitiveness is weak as the manufacturing technology is outdated, which cannot manufacture tiles bigger than the size of 60x60cm.</td></tr>
</table>

(*return to Table of Contents*)

PLASTIC

MAINTAINING THE GROWTH MOMENTUM

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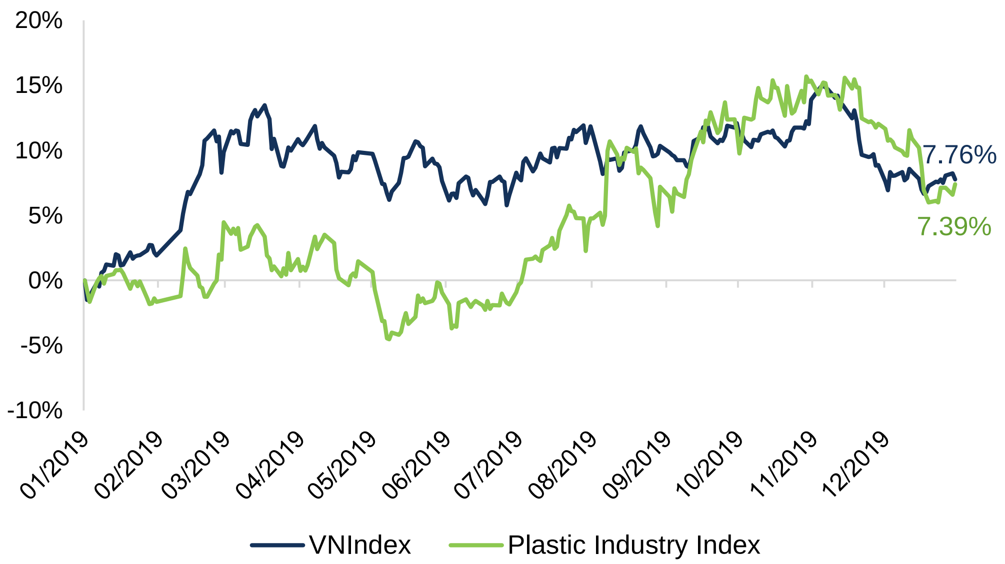
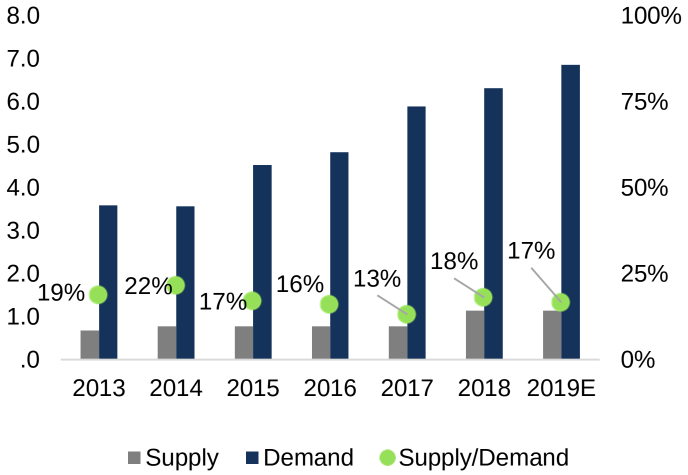
Plastic Industry Index and VNIndex Movement



A. INDUSTRY HIGHLIGHTS

I. Raw plastic materials depend on imports because of inadequate upstream capacity

Domestic demand and supply of plastic materials

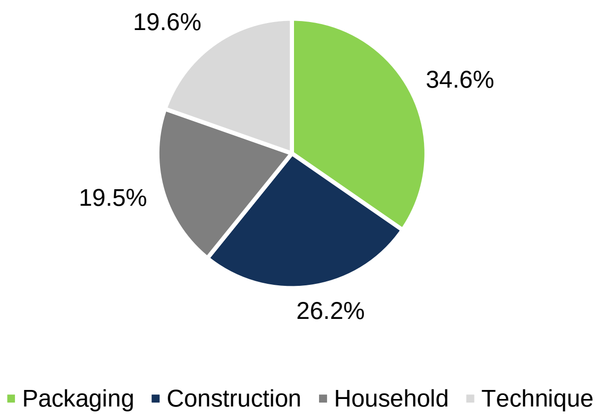


Sources: S&P Global Platts, FPTS Research

Raw plastic materials of Vietnam's plastic industry depend heavily on imports because the upstream production has not met the domestic demand. The petrochemical industry is very capital intensive in both initial investment capital and working capital required during operation. Moreover, Vietnam refinery production is highly PVC-oriented when downstream converters are currently using more than 30 types of plastic materials annually. Therefore, many types of plastic materials are depending entirely on imports, especially PE, the most versatile material and widely used among plastic converters.

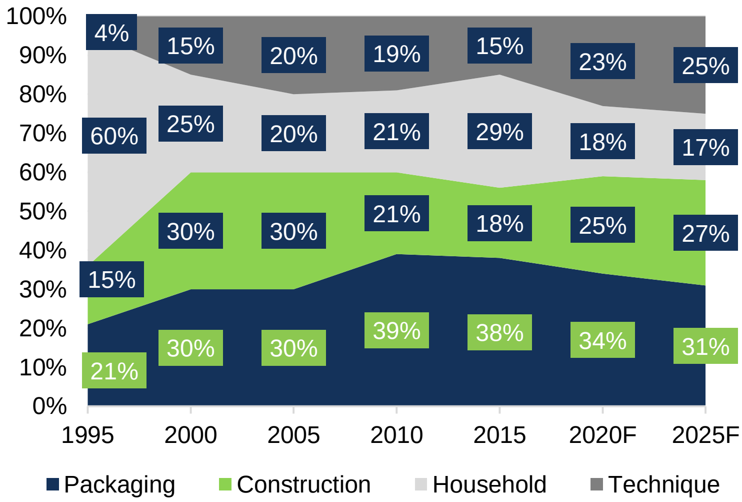
II. Vietnam's plastic consumption value is shifting toward the construction and technique segment

Vietnam's plastic consumption value (2018)



Sources: GSO, FPTS Research

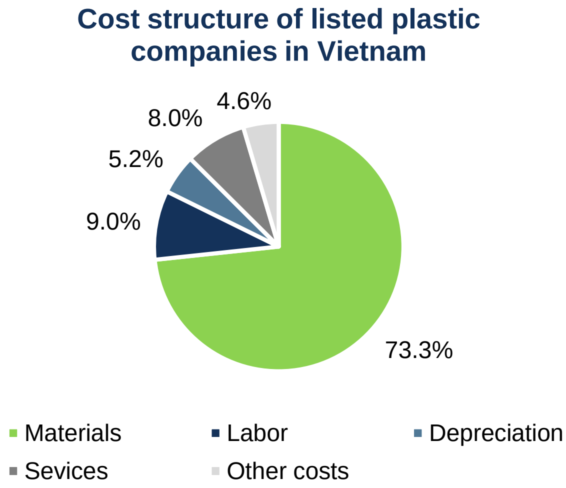
Historical and Target Industry Structure

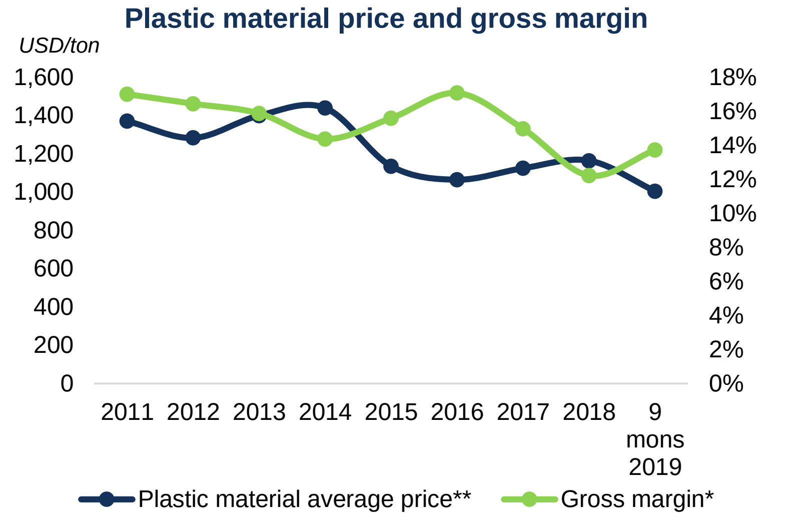


Sources: Ministry of Industry and Trade, FPTS Research

According to statistics from the General Statistics Office, Vietnam's plastic industry in 2018 has a scale of 14.4 billion USD, of which the product segment accounting for the largest proportion is the packaging segment with a value of about USD 5 billion, equivalent to 35% of the total plastic consumption. The scale of the remaining segments such as construction, household, technique is USD 3.8 billion (26%), USD 2.7 billion (19%) and USD 2.9 billion (20%) respectively. The value structure of the plastic industry has maintained a trend of shifting toward high value-added segments such as construction and technique. The contribution of these two segments in the industry value structure has increased by 2% and 1% in 2018.

III. Plastic materials account for a large proportion in the industry cost structure





*** Average prices of the following plastic materials: HDPE, LDPE, LLDPE, PP, PVC*

Average gross margin of the following listed plastic companies AAA*, NNG, RDP, SPP, VBC, TPP, TPC, NHP, BBS, BPC, PMP, BXH, STP, PBP, BMP, NTP, DNP, DAG, DPC, NHH*

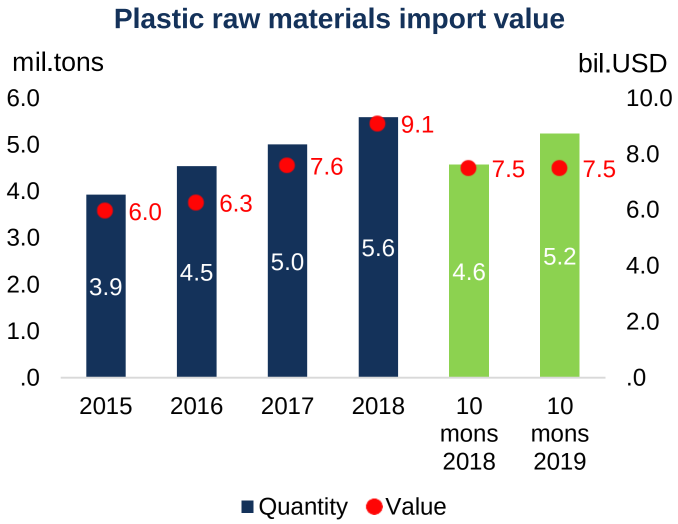
****Excluding plastic materials trading sector of AAA*

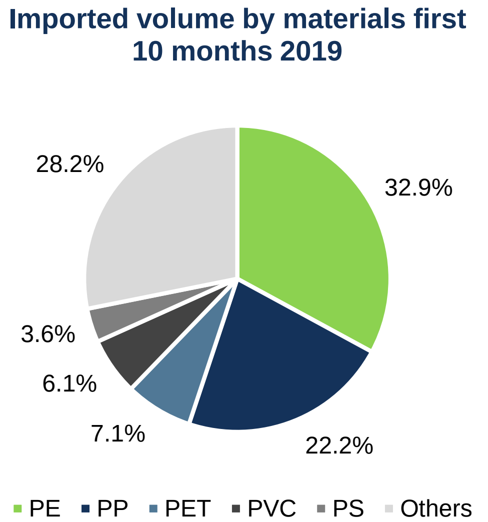
Source: FPTS Research

The manufacturing of plastic products is mainly the process of changing the physical shape of plastic materials. This is the main reason that the cost of plastic materials always accounts for a large proportion of the cost structure of downstream plastic converters. In Vietnam, the cost of plastic materials accounts for 73% on average. Therefore, the profitability of the industry will be affected by fluctuations in plastic material prices. Generally, the gross profit margin of plastic converters in Vietnam is negatively correlated with the price of plastic materials in the global market.

B. INDUSTRY REVIEW 2019

I. Imported plastic materials volume and value continue to grow

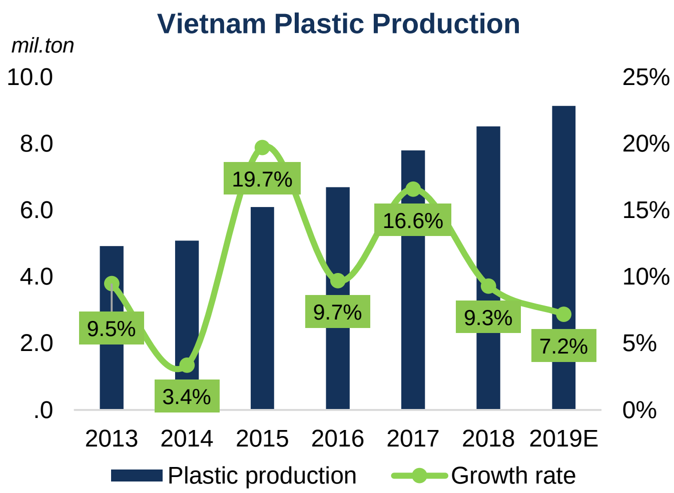




Sources: Custom Statistic, FPTS Research

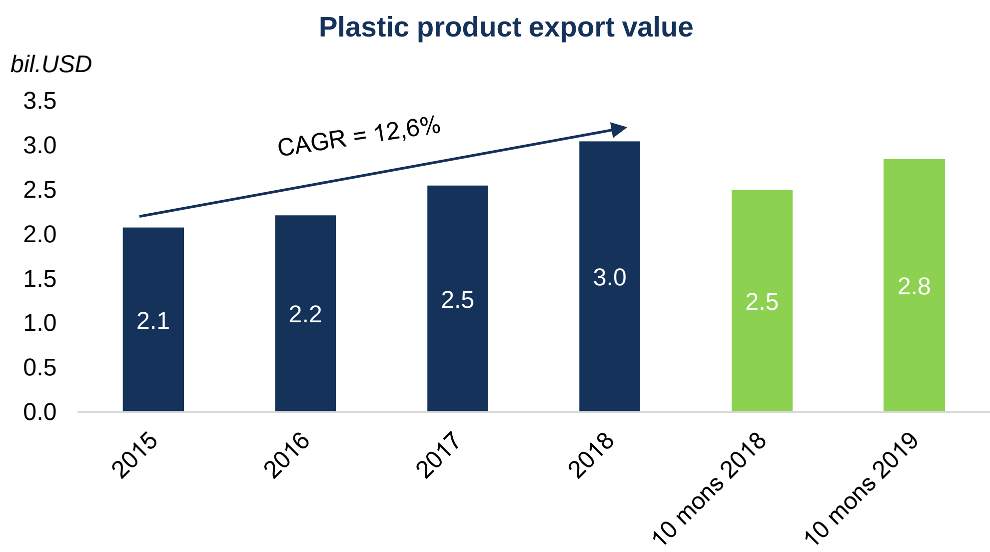
Imported plastic materials of Vietnam in the period of 2015-2018 continued to grow in both volume and value, and the growth trend continues in 2019. According to the General Department of Customs, the volume of primary-form plastic materials imports in the first 9 months of 2019 was estimated at 5.2 million tons, up by 13% y-o-y. The value of imported plastic materials is about US$ 7.5 billion, which is equal to the 2018 figure, although the volume increased sharply because the average price of imported plastic materials, mainly PE and PP, tends to decrease in 2019. The petrochemical capacity in Vietnam has not met the growing demand of the downstream, so the raw plastic materials of Vietnam still depend heavily on imports. In the first 10 months of 2019, the two types of raw materials, PE and PP, still account for the largest proportion of 33% and 22% of the total imported amount, respectively. This is due to the fact that these are the two most consumed materials and Vietnam has not been able to produce PE.

II. Plastic production continues to slow down



The plastic industry's slow downtrend will continue in 2019. Plastic production in 2019 is estimated to reach 9.1 million tons, 7.2% increased compared to 2018. Packaging and construction segments are still the main growth engine of the Vietnam plastic industry. The slowdown in the growth of the manufacturing industry, as well as the construction industry, is the main reason for the decelerating growth of Vietnam's plastic industry in 2019. According to the General Statistics Office, in the first 9 months of 2019, the manufacturing industry and construction industry grew by 11.4% and 8.3% respectively, 1.3% and 0.2% lower than the same period figure.

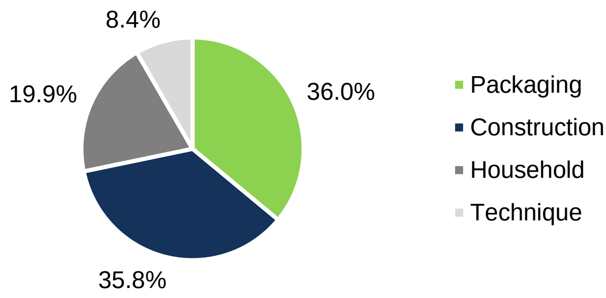
III. The export value of plastic products maintains growth momentum



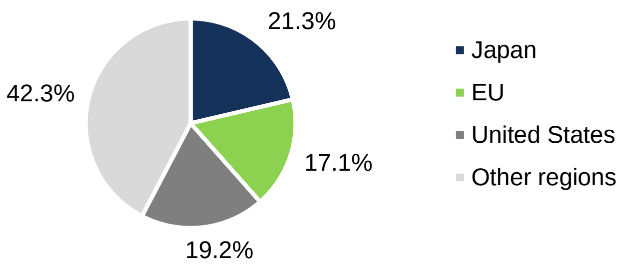
Sources: Custom Statistic, FPTS Research

The export value of plastic products in 2019 still maintains a positive growth momentum. In the first 10 months of 2019, the export value of plastic products was estimated at US$ 2.8 billion, up 12% over the same period. Growth in export turnover of plastic products in the first 10 months of 2019 decreased slightly by 0.6% compared to the average growth in the period of 2015-2018.

Exported value by product categories first 10 months 2019



Exported value by regions first 10 months 2019



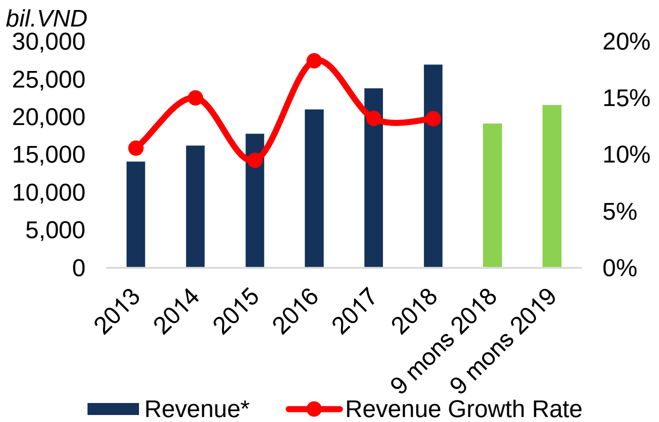
Sources: Custom Statistic, FPTS Research

Packaging and construction segments account for a large proportion of the export turnover of plastic products. In the first 9 months of 2019, the export value of plastic packaging and construction plastic products was estimated at US$996 million and US$989 million, up 4% and 18% respectively over the same period. Among export plastic products, household plastic segment is the highest growth segment in the first 10 months of 2019 with a value of about US$550 million, up 39% y-o-y.

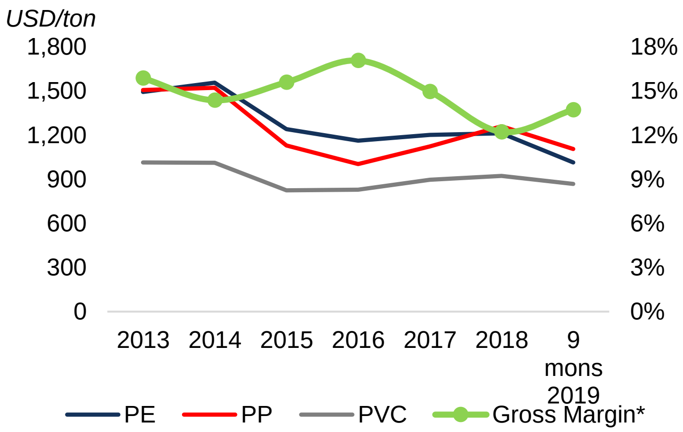
Among all export markets of Vietnam plastic products, Japan, the US, and the EU are three most important markets accounting for 57% of the export value in the first 10 months of 2019. Japan is the market which has the largest export turnover of around US$606 million, accounting for 21% of the total value of exported plastic products in the first 10 months of 2019. The US is a market with the highest growth rate. US export turnover of plastic products in the first 10 months of 2019 is US$545 million, increase 38% over the same period.

IV. Stable revenue growth and improving gross margin among plastic converters

Revenue of listed plastic companies



Gross margin and plastic material prices



** Data of the following listed plastic companies: AAA***, NNG, RDP, SPP, VBC, TPP, TPC, NHP, BBS, BPC, PMP, BXH, STP, PBP, BMP, NTP, DNP, DAG, DPC, NHH*

*** Excluding plastic materials trading sector of AAA*

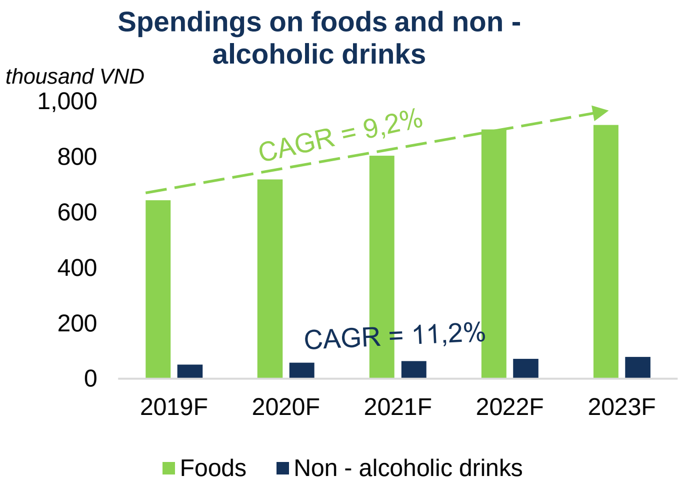
Source: FPTS Research

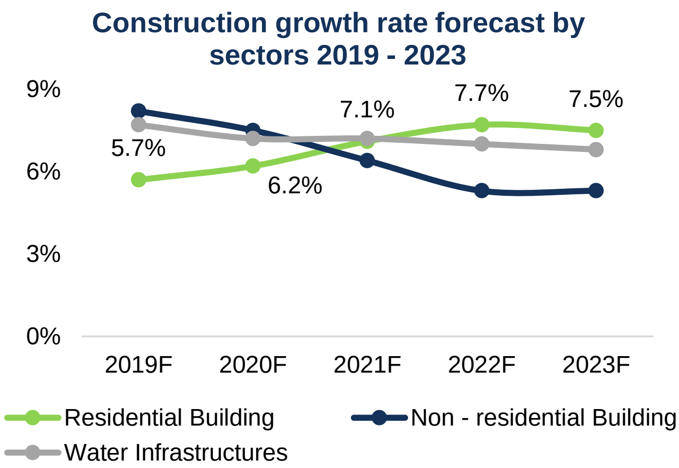
Sales of listed plastic converters still keep stable growth momentum. In the context that the growth rate of the plastic industry, in general, is slowing down, the net revenue growth of listed plastic companies has remained relatively stable. Net revenue growth of listed plastic converters is reported at about 13% on average between 2017 and 2018. In the first 9 months of 2019, net sales of listed plastic companies also grew by 12.9% compared to the same period.

The gross profit margin improved due to the decline in raw plastic material prices. From 2016 to 2018, prices of plastic raw materials continued to increase along with the recovery of Brent crude oil price, leading to a sharp decline in the gross margin of listed plastic converters. During this period, the average price of plastic materials increased by 13.3%, making the average profit margin of plastic companies in Vietnam decrease from 17% to 12%. However, during the end of 2018 and the first 9 months of 2019, oil prices plummeted and remained low, along with the oversupply of PE and PP in the South East Asia region, caused prices of all plastic raw materials dropped deeply, namely: average PE price fell by 18.4% y-o-y, PP dropped by 13.3% y-o-y, PVC dropped by 7.7% y-o-y. The sharp decline in prices of plastic materials improved the average gross profit margin of listed plastic converters to 14% in the first 9 months of 2019.

C. INDUSTRY OUTLOOK 2020

I. Packaging and construction segment is still the growth engine of the industry

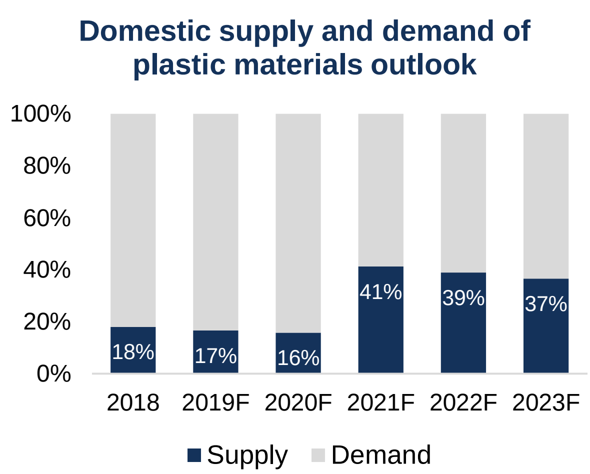




Source: BMI Research

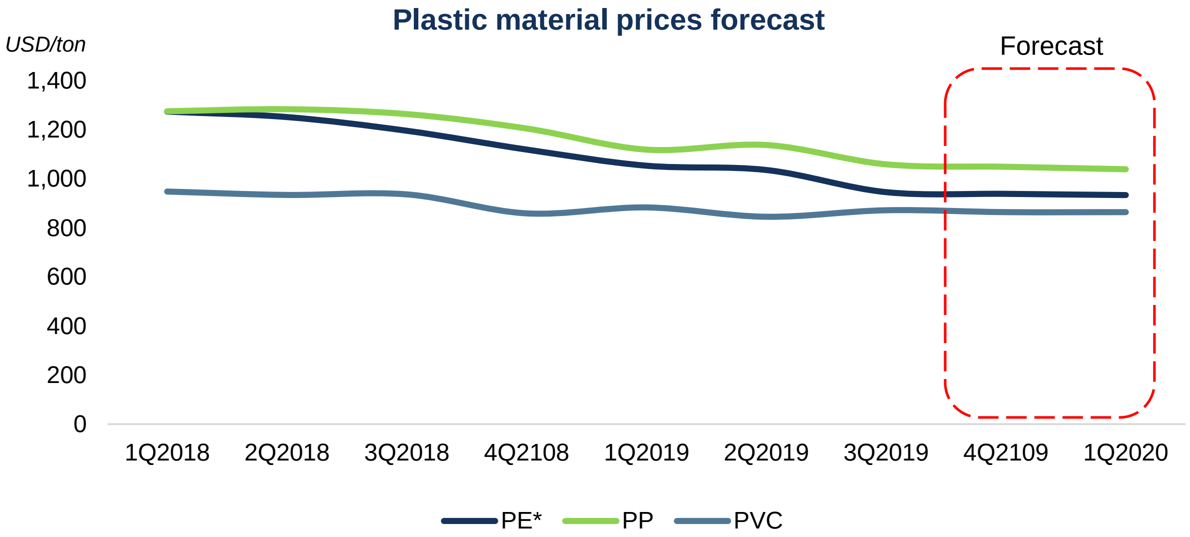
Vietnam's plastic industry is expected to maintain an average annual growth rate of 6.5% between 2019 and 2023 due to (1) According to BMI research, spending on two segments of food and non-alcoholic drinks in Vietnam will increase at CAGR of 9.2% and 11.2% respectively between 2019 and 2023. This will be the main growth momentum for the packaging segment (2) residential building and water infrastructure construction is forecasted to grow by 6.7% and 7.3% a year respectively, which will create the main growth motivation for construction segment over the same period (3) The short term trend of shifting production to Vietnam along with the policy of developing auxiliary industries of the government will create opportunities for development of engineering plastic in the future.

II. Increase in domestic plastic material capacity



The supply of plastic materials in the country has grown to meet the needs of downstream converters. In 2018, the Nghi Son refinery officially came into operation with a designed capacity of 370 thousand tons of PP per year, increasing the total design capacity of PP by 246% and satisfied about 50% of domestic demand. In 2018, there were also two major petrochemical projects approved by the government and entered the construction process: Long Son petrochemical project and HyoSung petrochemical project with PP is still the main product. Once completed and put into operation at the end of 2020 and early 2021, the output from these two factories and existing output are expected to meet 41% of domestic demand for plastic materials.

III. Short-term decrease in plastic material prices



**PE price is the average price of HDPE, LDPE, and LLDPE*

Sources: Bloomberg, ICIS, FPTS Research

In the short term, two types of plastic materials, PE, and PP will maintain the downtrend due to (1) Oil prices remain relatively low compared to the average in 2018, (2) petrochemical projects in Southeast Asia region started operating, leading to an oversupply in the short term. PE prices in Q4 2019 and Q1 2020 are expected to average around US$940/ton, down 7.2% compared to the first 9 months of 2019 and down 13.5% y-o-y. Similar to PE, the average PP price in the fourth quarter of 2019 and the first quarter of 2020 is forecasted at US$1,045/ton, down 5.5% compared to the first 9 months and down 10.1% over the same period. For PVC, the selling price in Southeast Asia is on a downward trend in the second quarter of 2019 due to (1) a slight decrease in demand in China and (2) a change in the anti-dumping tax policy in India leading to difficulties in exporting to this market. In Q3 and Q4 2019, PVC prices in Southeast Asia tended to recover mainly due to tight supply in the short term because large refineries in Korea, Japan and China entered the maintenance period in October. However, the recovery trend of PVC prices is not expected to persist in the short term only because demands from China and India, the two biggest markets in the region are still growing slowly. Average PVC prices in the fourth quarter of 2019 and the first quarter of 2020 are forecasted at US$865/ton, down 0.35% compared to the first 9 months of 2019 and down 0.8% over the same period.

IV. Prospects from EVFTA

The EU is an important market of the Vietnam plastic industry, accounting for about 20% of the total export value of plastic products in 2018. After EVFTA comes into force, the tariff on most plastic products exported to the EU market will be removed. This will be a great advantage to increase the export of plastic products of the Vietnam plastic industry toward the EU market. The EVFTA has now completed its signing in June 2019 and is in the process of being waited for approval by the European Parliament. It is expected that EVFTA will take effect in early 2020.

D. SUMMARY

In 2020, Vietnam plastic industry is expected to **MAINTAIN THE GROWTH MOMENTUM** with the following factors:

- Spending growth on food, non-alcoholic drinks and construction growth are the main drivers for packaging and construction segments.
- Improved domestic material production capacity helps reduce dependence on imported materials.
- Raw plastic material prices maintain a downward trend in the short term to help improve the gross profit margin of plastic converters.

E. WATCH LIST

Ticker	Market Cap. Jan 08, 2019 (bil. VND)	Revenue 9M2019 (bil. VND)	Net Income 9M2019 (bil. VND)	Net Income Growth	Net Profit Margin	ROE (TTM)	P/E
AAA	**2,122**	**7,407**	**438**	**+176%**	**5.9%**	**15.9%**	**4.6**
	• AAA is a plastic converter with the largest scale in the packaging segment. Total designed capacity of AAA is 96 thousand tons per year. AAA's products aim for the export market, the most important of which is the EU and Japan markets accounting for 44% and 29% of 2018 sales respectively. • Plastic bag segment: There is not much room for growth in the market when 6 factories have been operating at maximum designed capacity. Sales volume in the first 9 months of 2019 increased by 21.8% y-o-y, mainly from Japan and the US market. Bag output in 2020 is expected to grow by 5-8%. The new product, which is a bio-based bag, has contributed only about 10% of total consumption. • Plastic materials trading: This is the main driven factor of AAA's revenue growth in the period of 2016 - 2019, but the profit is not significant. With about 5% of the current domestic market share, AAA's plastic resin trading segment is expected to remain stable and the gross profit margin will be improved to 3 - 3.5% in 2020. • Industrial real estate segment: This is the main contributor of AAA's profit in the short term. The An Phat Complex project in the first 9 months of 2019 brought AAA about VND 244 billion, accounting for 47% of profit before tax. AAA will continue to increase the rate of industrial park exploitation at the current 60% to 90% in 2020. • Account receivables increased rapidly in the first 9 months of 2019 by 63%. • Dilution risks: In 2018, AAA issued VND 400 billion worth of bonds and warrants to raise capital for An Phat Complex project. The total number of warrants attached bonds can be converted into 40 million shares with the conversion price from 14,000 to 14,500 per share. At present, An Phat Holdings has acquired all of these warrants and is likely to carry out the conversion in 2020 to increase its ownership at AAA.						
NTP	**3,082**	**3,388**	**301**	**+35.7%**	**8.9%**	**17.4%**	**6.8**
	• NTP is the largest scale converter in the plastic pipe industry with a leading position in the Northern market. NTP is expected to maintain its leading market share in the Northern market thanks to its large distribution system and diverse product category. • Growth in sales volume and revenue of NTP is expected at an average of 4% and 3% in the period of 2019-2023. • Price fluctuation of plastic materials and USD/VND exchange rate will affect gross profit margin because NTP imports 100% of plastic materials, accounted for a large proportion in its production cost structure. • Competition from new entrants such as HSG causes NTP to maintain high trade discount as well as commission that negatively affect profit after tax.						
BMP	**3,637**	**3,178**	**328**	**-3.6%**	**10.3%**	**16.7%**	**8.7**
	• BMP is also a large converter in the plastic pipe industry with a leading position in the South market. BMP is expected to continue to maintain its leading position in the Southern market thanks to its traditional brand and large distribution network. • Growth in sales volume and revenue of BMP is expected at an average of 5% and 3% in the period of 2019 - 2023. • Competition in the plastic pipe industry in the South force BMP to increase the discount rate, which negatively affects its profit after tax. • The risk of depending on the supplier is considerable as BMP and TPC Vina - the BMP's supplier of 50% of PVC materials are both subsidiaries of SCG Thailand.						

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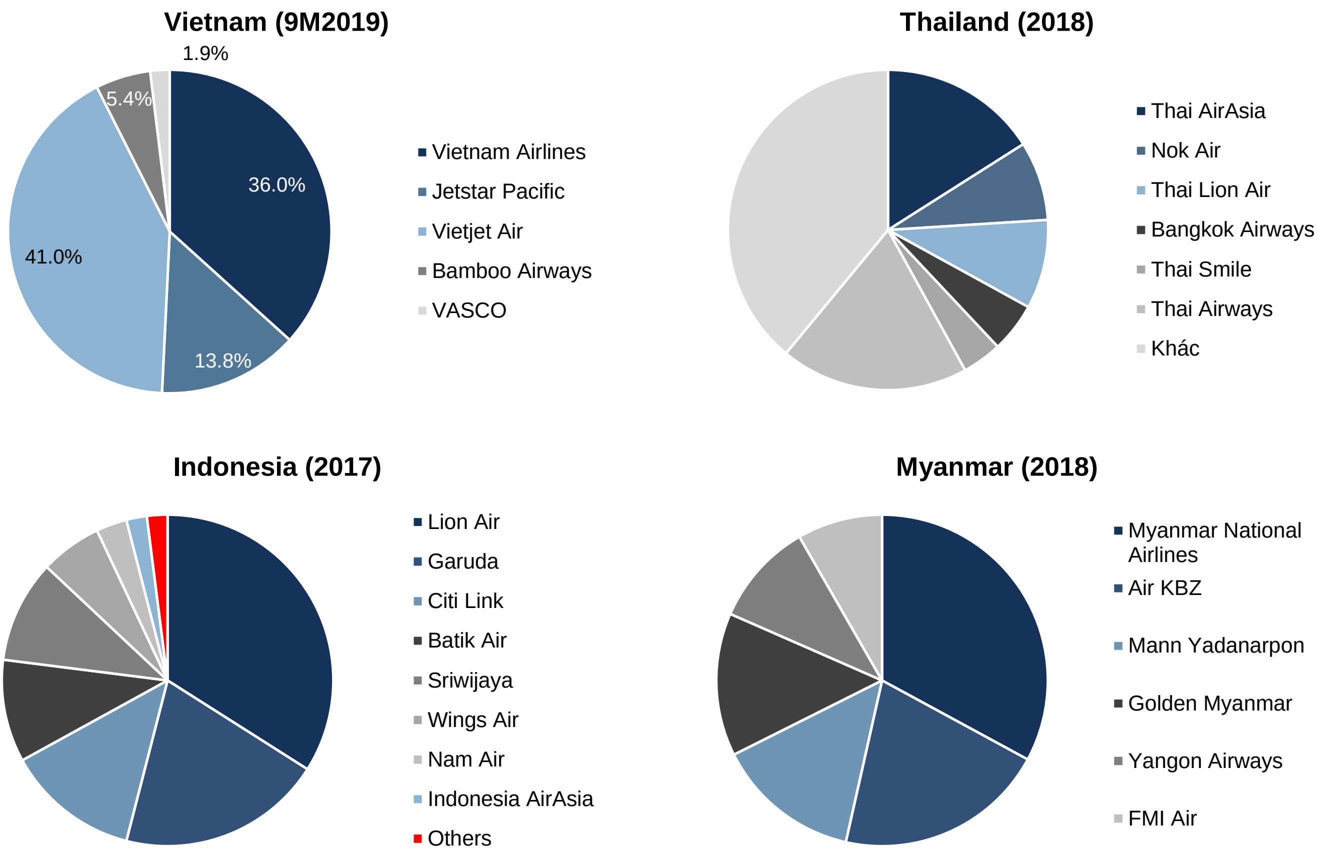
Aviation Industry Index and VNIndex Movement

A. INDUSTRY HIGHLIGHTS

I. Vietnam Air transport has a high level of concentration

As of December 2019, there are 5 domestic airlines and 70 international airlines in Vietnam. Compared with other countries in Southeast Asia, the concentration level of Vietnam Air Transport is relatively high with key players as HVN (Vietnam Airlines, Jetstar Pacific, VASCO) and VJC. In January 2019, Bamboo Airways, the only hybrid airline (combining traditional and low-cost airlines) joining the market changed the Vietnam Aviation industry.

Domestic aviation market share of Vietnam and some countries in Southeast Asia



Sources: CAPA, FPTS Research

II. Infrastructure system does not meet the demand, overloading always occurs

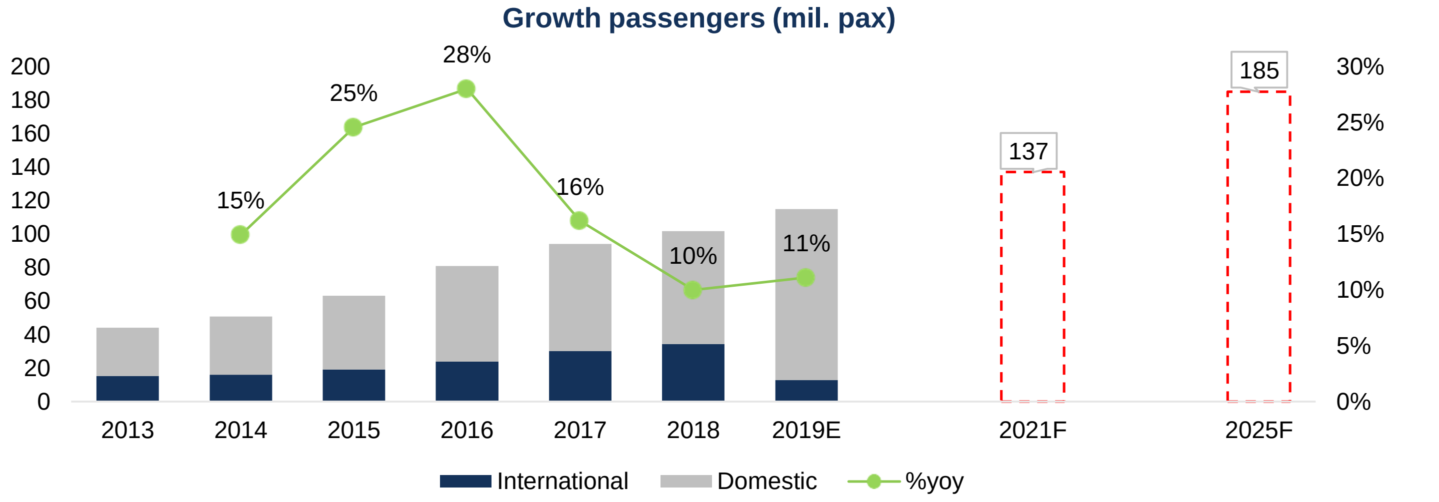
The total capacity of 22 airports managed by the Airports Corporation of Vietnam (ACV) is 90.4 million passengers. However, passenger throughput in 2019 reached 115 million passengers, exceeding 27.2% of the designed capacity. Moreover, the imbalance still occurs between airports. While Tan Son Nhat, Noi Bai, Da Nang, and Nha Trang airports always exceed the capacity of about 20-30%, Can Tho, Rach Gia, Dien Bien, Ca Mau airports only operate about 10 % designed capacity.

III. Air services sector brings high profit margin

Diversified air services with high profit after tax (about 22.5% in 9M2019) includes aviation services (such as flight assistance, fuel supply) and non-aviation services (such as ground services, restaurants, duty-free goods, airline catering, ...). Enterprises involved in airline services are mainly owned by Vietnam Airlines Corporation (HVN) and Vietnam Airport Corporation (ACV).

B. INDUSTRY REVIEW 2019

I. Passengers growth slowed down, expected passengers throughput Vietnam airports in 2019 only 8% growth compared to 2018



Source: ACV

In 2019, passenger throughput Vietnam airports reached 115 million passengers (+11% y-o-y). The cause of the slowdown in the aviation industry comes from:

(1) No more booming from first-time passengers in 2014-2016 when Vietjet Air (LCC) entered the market. According to data from Vietjet Air, about 70% of its passengers are first-time passengers. Therefore, the growth of this passenger segment will decrease.

(2) The number of tourists from China and South Korea - accounting for 60% of the number of tourists coming to Vietnam has plummeted since 2017. According to the first 9 months of 2019, the number of tourists from China only about 4 million visitors, an increase of only 4.4% y-o-y compared to 24% in 2018 due to the shift of Chinese tourists to East Asian countries such as Japan and South Korea.

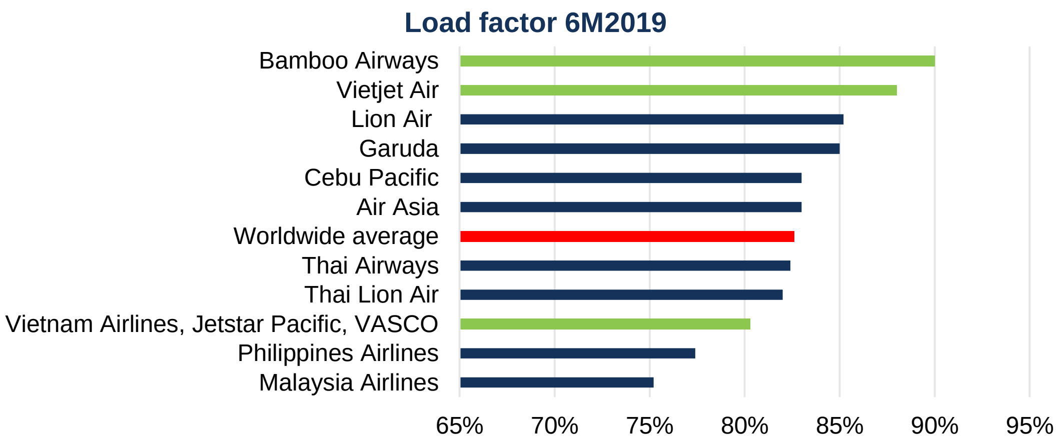
Source: Vietnam National Administration of Tourism

II. Air Transport Sector - including Vietnam Airlines, Jetstar Pacific, VASCO, Vietjet Air, Bamboo Airways

1. Increasing competition with the entry of Bamboo Airways

Bamboo Airways is the only hybrid airline that combines traditional and low-cost airlines operating in Vietnam. The launch of Bamboo Airways in January 2019 ended the monopoly period of Vietnamese aviation. Despite being just put into operation, Bamboo Airways has captured more than 5% of the market share (mainly taking market share from Vietnam Airlines) with a load factor of 90% and the highest on-time performance among airlines. In 9 months of operation, Bamboo Airways has carried out more than 12,000 flights, transporting more than 1.5 million passengers (equivalent to nearly 4% of the total number of passengers carried by Vietnam airlines).

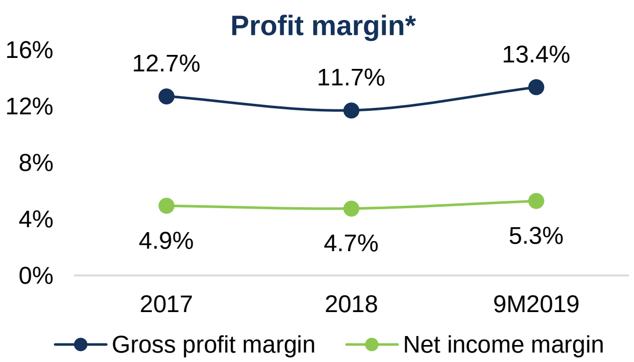
2. High load factor compared to other countries in the region

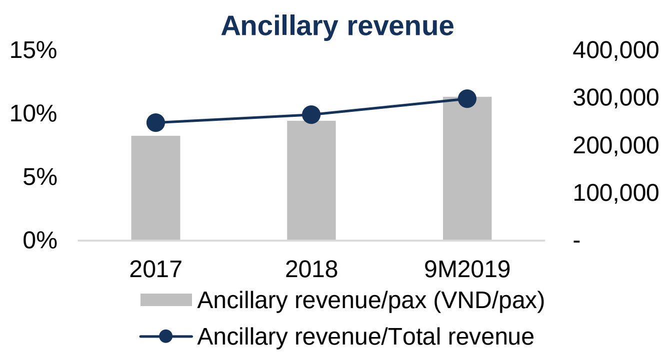


Source: FPTS Research

The passenger load factor of airlines in Vietnam is high compared to other airlines in Southeast Asia. Especially, Bamboo Airways and Vietjet Air have load factors of 90% and 88% in the first 6 months of 2019, respectively. In general, the airlines of Vietnam Airlines Joint Stock Company (HVN), the load factor is only 80.3% - low compared to low-cost carriers but relatively high for full service carriers in the Philippines or Malaysia.

3. The profitability of passenger and cargo transportation grew back, growth ancillary revenue thanks to international routes



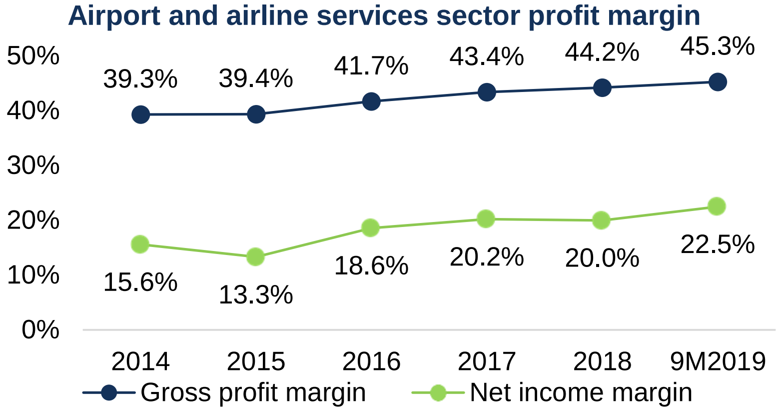


** Revenue and profit are calculated solely in the field of air transport and ancillary activities, eliminating the revenue and profit from the sale and lease of aircraft. Data from financial statements of HVN, VJC and Bamboo Airlines.*
Sources: FPTS Research

The gross profit margin of air transport in 9 months of 2019 reached 13.4% (up from 11.7% in 2018). The reason for this improvement comes from the revenue from ancillary activities that bring higher profit margins than traditional passenger transportation. The ratio of ancillary revenue to total revenue also increased, in 9 months of 2019 the rate of ancillary revenue reached 11.2% (up from 9.3% in 2017). Ancillary revenue per passenger also increased from 220,000 VND/pax in 2017 to over 300,000 VND/pax in 9M2019.

III. Air cargo terminal and airline services sectors

The profitability ratio of the airline services sector will remain high in 2019



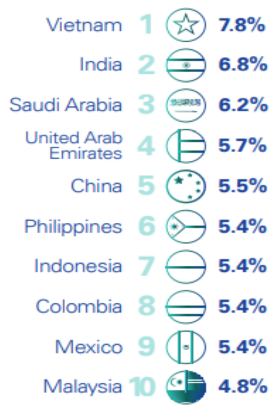
**Data from financial statements of NCT, SCS, SGN, SAS, CIA, AST, NCS, MAS*

Sources: FPTS Research

However, there was a divergence between airline services in 2018 and 9M2019. Growth businesses are those operating in air cargo terminal and services at airports such as restaurants, duty-free. Other services such as airline catering, airport taxi have lower profit margins than in 2018.

C. INDUSTRY OUTLOOK 2020

I. Vietnam is still expected to be one of the countries with the highest passenger growth in the world

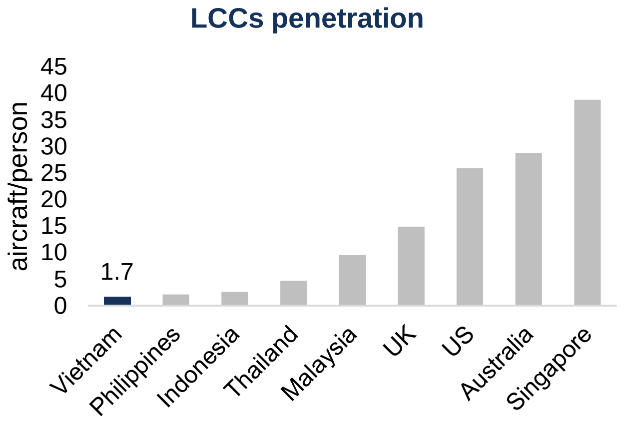


According to ACI (Airports Council International) 's report in the period of 2019 - 2040, Vietnam will have the fastest passenger growth rate of 7.8%/year.

Tourism is still a driven factor however it will no longer be the only supporting factor in aviation in the future. The demand for traveling by air will play an increasingly important role due to the convenience and affordable price.\

II. Air Transportation Segment

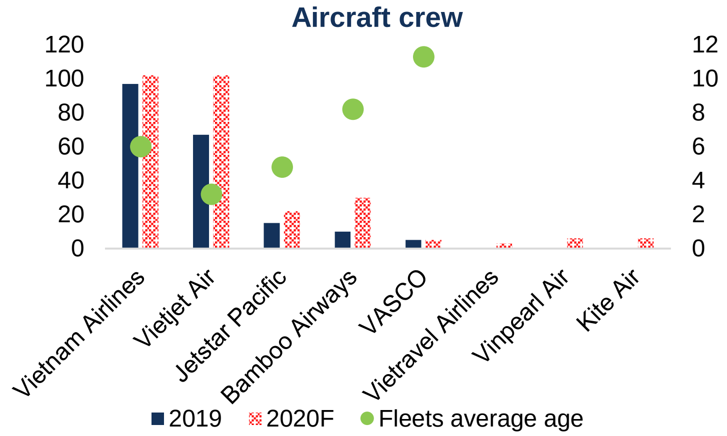
1. Low-cost carriers still have growth opportunities due to low penetration



Sources: VJC, FPTS Research

After the boom period of the low-cost aviation period 2014 - 2017 with the participation of Vietjet Air, 2018 - 2019 witnessed a slowdown. However, compared with other countries in the region such as the Philippines, Indonesia or Thailand, the penetration rate of LCC in Vietnam is still relatively low. According to data from Vietjet Air, Vietnam's LCC penetration is 1.7 aircraft/million people, lower than 2.1; 2.6 or 4.7 of the above countries, respectively.

2. Competition is expected to intensify in 2020



Sources: CAA, FPTS Research

The level of competition in the air transport segment will be increasingly fierce as more companies involved in the market. After being approved by the Ministry of Transport, Bamboo Airways has launched a plan to increase the number of aircraft to 30 in the first quarter of 2020. Focusing on chartering to complete the tourism ecosystem, Vietravel Airlines is also ready to take off in November 2020. Vinpearl Air with the high-end segment has planned to put 6 aircraft into the system and start its first flight in July 2020. The participation of businesses in air transport activities puts pressure on existing airlines while passenger growth is slowing down.

3. Supporting documents in force from 2020

Decree No. 89/2019/ND-CP changes a number of issues as follows:

	92/2016/ND-CP (old)	89/2019/ND-CP (new)
Capital requirements		
Aircraft crew < 10 aircraft	700 bil. VND	300 bil. VND
Aircraft crew 11 – 30 aircraft	1,000 bil. VND	600 bil. VND
Aircraft crew > 30 aircraft	1,300 bil. VND	700 bil. VND
Aircraft crew		
Number of wet-leasing aircraft	=< 30% total	- =< 30% total - =< 10 aircraft

Under the new decree, newly acceded airlines such as Vietravel Airlines or Kite Air can operate 30 aircraft instead of 10 aircraft if they comply with the old one.

III. Airline Services segment - competition is expected to increase in 2020

In September 2019, Vietjet Air issued a written request for permission from the Civil Aviation Authority of Vietnam to deploy self-service at Noi Bai airport, Cam Ranh from January 2020. If approved, Vietjet Air will take the initiative in exploiting and expanding its ecosystem, helping to improve profitability. Along with the benefits of the airline, the current ground serving businesses such as Saigon Ground Service JSC (SAGS), Hanoi Ground Service JSC (HGS) have been negatively impacted on their revenue.

D. SUMMARY

In 2020, Vietnam's aviation industry will experience a slowdown, but it will be a pivotal year for the aviation industry. New entrants to the market will reshape as well as enhance the competitiveness among airlines.

- Air transportation segment: is still benefiting from passenger growth. Current airlines are under pressure of competition from newly acceded airlines. The degree of differentiation is growing with different passenger segments, expanding the form of the charter (such as Viettravel Airlines).
- Airport port segment: Continuing the process of upgrading and expanding the airport system.
- Aircargo terminal and airline services are still a business segment with high profits. Especially, aircargo terminal operators will expect production to come from the development of e-commerce.

E. WATCH LIST

Ticker	Market Cap. Jan 08, 2019 (bil. VND)	Revenue 9M2019 (bil. VND)	Net Income 9M2019 (bil. VND)	Net Income Growth 9M2019	Net Income Margin	ROE (TTM)	P/E
HVN	47,441	75,094	2,513	+37.2%	3.3%	15.8%	16.6
	• As an airline with a dual-brand strategy: Vietnam Airlines – FSC, Jetstar Pacific - LCC, VASCO - socio-economic routes • Market share has been declining since 2014 due to the boom of LCC, especially Vietjet Air. In 2019, Bamboo Airlines entered the market, the market share of HVN decreased to only 52%. • The opening of more routes to the US has made a great impression but has not yet been proved effective. In the near future, HVN focuses on developing service quality, waiting for opportunities from the expansion of infrastructure at airports such as Noi Bai, Tan Son Nhat, and Long Thanh.						
VJC	79,021	39,879	3,784	+0.6%	9.5%	36.9%	14.9
	• VJC is the largest LCC in Vietnam with market share increasing continuously since 2014. • The international aviation segment and ancillary services provide a source of profit growth for businesses with a low-cost advantage compared to other LCCs in the region. However, these core activities tend to decrease, especially in 9M2019 • VJC aims to expand the ecosystem, continue to maintain its low-cost advantage by proposing to the Ministry of Transport about autonomy in supporting ground activities.						
AST	3,960	545	170	+40.6%	31.3%	33.6%	16.5
	• AST is operating in the field of airline services with the main revenue coming from the business of souvenir stores and restaurants at the airports. In 2019, AST will further develop its duty-free business. • 9M2019 business results recorded a growth of 26% y-o-y from souvenir stores with a gross profit margin of 62%. • AST has the advantage of the business location when operating at Danang airport (due to the advantages of the parent company operating this airport). In 2020, AST plans to expand the store system at the airport to 102 (in 2019, operating 97 stores).						
SCS	5,998	549	367	+8.4%	67.9%	49.2%	12.6
	• Being a cargo terminal operator at Tan Son Nhat airport with a market share in Tan Son Nhat airport reaching 31% in 2018. • SCS operates mainly in domestic and international terminal operations with a gross profit margin in the first 9 months of 2019 reaching 79.3% (up from 78.2% in 2018). • Unlike its direct competitor - TCS, SCS is also able to expand its cargo terminal and take advantage of its flexibility to operate both domestic and international goods. In the future, SCS will benefit from the cargo growth rate of Tan Son Nhat airport, forecasting CAGR growth of 8.7% (period 2018 - 2025).						

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FERTILIZER

EXPECTED FAVORABLE WEATHER TO IMPROVE CONSUMPTION

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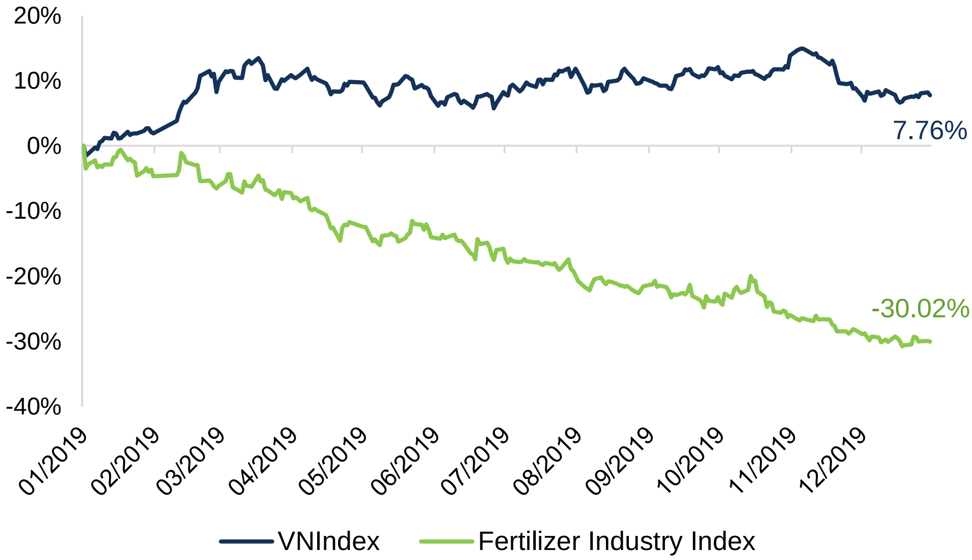
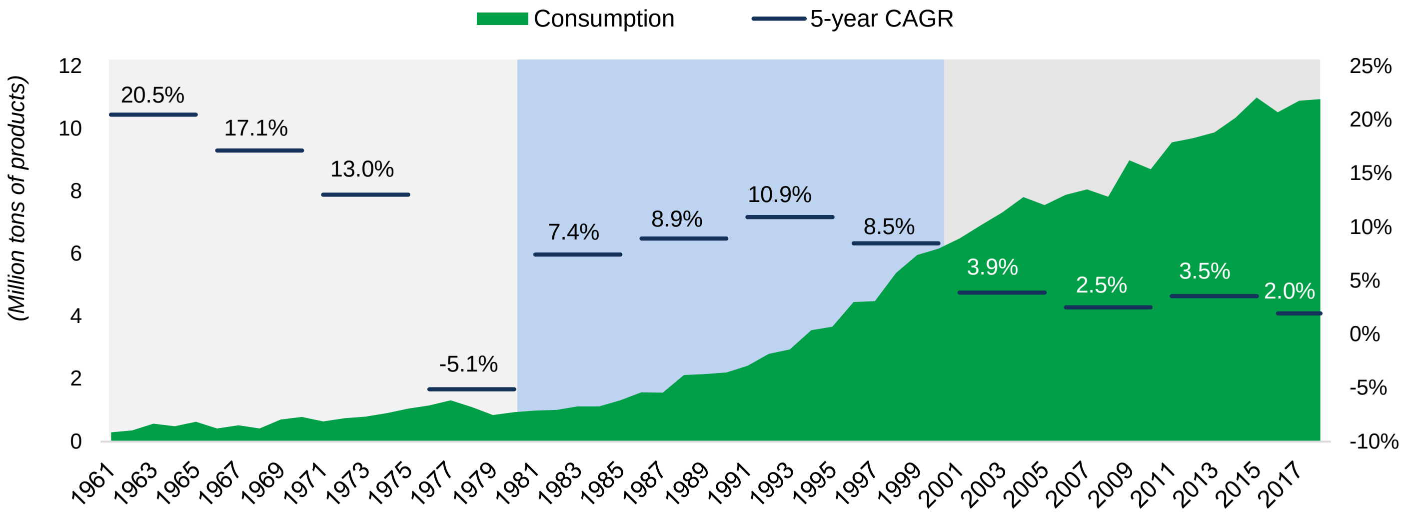
Fertilizer Industry Index and VNIndex Movement



A. INDUSTRY HIGHLIGHTS

Fertilizer consumption and compounded annual growth rate in 1961 - 2018



Sources: IFASTAT, Vietnam Ministry of Agriculture & Rural Development (MARD), FPTS Research

I. Vietnam Fertilizer industry is in a mature stage, the growth rate is slowing down

In 2001 - 2015, the growth rate reached 2.5% - 3.9% per year and decreased to ~ 2% per year in 2016 - 2018. Some product segments of NPK, Urea, Phosphate (accounting for nearly 70% of total demand) has started to oversupply. Domestic DAP fertilizer production meets 35% of total demand, the rest depends on imports.

II. The annual fertilizer consumption is ~11 million tons, over 90% is chemical fertilizer, the rest is organic

Chemical fertilizers including NPK fertilizer accounted for the largest proportion of consumption structure (35.5%), followed by Urea (22.2%), DAP (10.1%) and Phosphate (9%). Vietnam has to import completely SA, Kali, and part of DAP fertilizer. Organic fertilizer accounts for a small proportion but has been growing rapidly in the past 10 years.

III. The number of enterprises in the industry is quite large and differentiated in scale

Currently, the fertilizer industry has 735 licensed fertilizer trading and manufacturing enterprises with a total capacity of up to 29.5 million tons per year. In which, there are 10 large enterprises of Vietnam Chemical Group (Vinachem) and 2 enterprises of Vietnam Oil and Gas Group (PVN) accounting for the major annual domestic fertilizer production. The rest are small and medium-sized enterprises, mainly involved in the NPK fertilizer segment.

IV. Weather and climate risks are important factors affecting Vietnam fertilizer industry

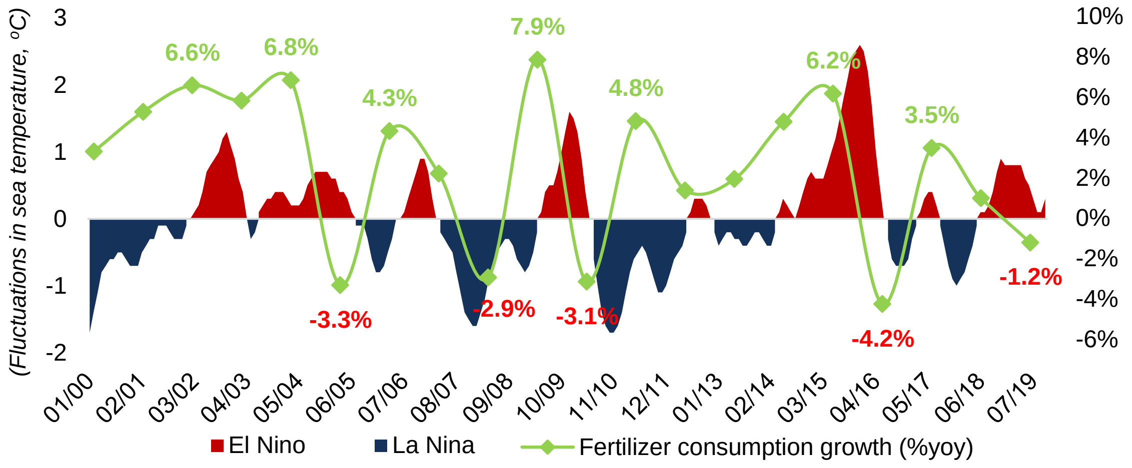
Despite the stability of arable land, plant structure and crops, climate factors are the largest risks for the Vietnam fertilizer industry. Favorable weather would increase cultivated areas and boost fertilizer demand. However, weather phenomena adversely affecting agriculture, such as storms, ENSO causing extreme weather (drought or flooding) or sea-level rise leading to saline intrusion. In 2015 - 2016, the strong El Nino climate phenomenon caused severe drought in the Central Highlands and saline intrusion in the South, agricultural cultivation faced difficulties, leading to a sharp decrease in fertilizer demand (-4.2% y-o-y).

(See more Vietnam Fertilizer Industry Report – Sep2019)

B. INDUSTRY REVIEW 2019

I. In 2019, the El Nino phenomenon adversely affects agricultural cultivation, reducing fertilizer demand

Ocean Nino Index and growth of Vietnam fertilizer consumption



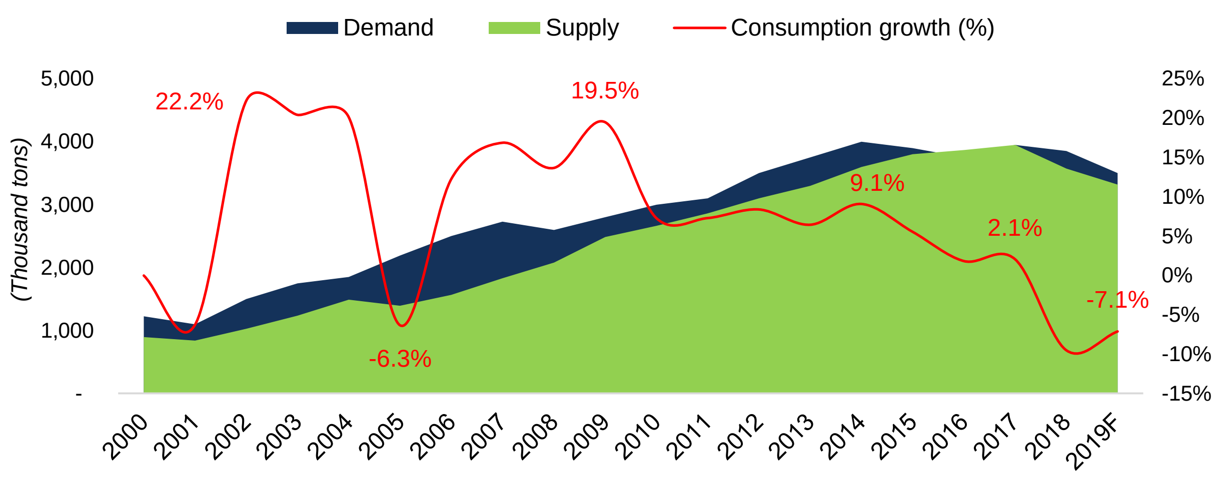
Sources: Climate Prediction Center (CPC), FPTS Research

At the beginning of 2019, the El Nino climate phenomenon has reappeared. The temperature in the whole country is higher than the average of many years from 0.5ºC to 2ºC, there are many prolonged heatwaves. The rainy season comes later than one month, the rainfall decreases significantly, especially in the Central Region and Central Highlands, 50% less than the average of many years. Drought in the Central Region, Central Highlands and saline intrusion in the South have adversely affected agricultural production, reduced cultivated areas, resulting in a significant reduction in fertilizer demand.

According to FPTS, NPK fertilizer is the most sensitive fertilizer to weather because farmers tend to use single fertilizers such as Urea, DAP, Potassium (easier to dissolve, avoid loss) to reduce damage when bad weather occurs. We estimate that NPK fertilizer production and consumption in 2019 will decline significantly (-7.1% y-o-y and -9.1% y-o-y). Urea, DAP fertilizer demand and output increased slightly, but not offset the decline in NPK fertilizer output.

II. Supply and Demand of Vietnam fertilizer market in 2019

Domestic production and consumption NPK fertilizer in 2000 - 2019



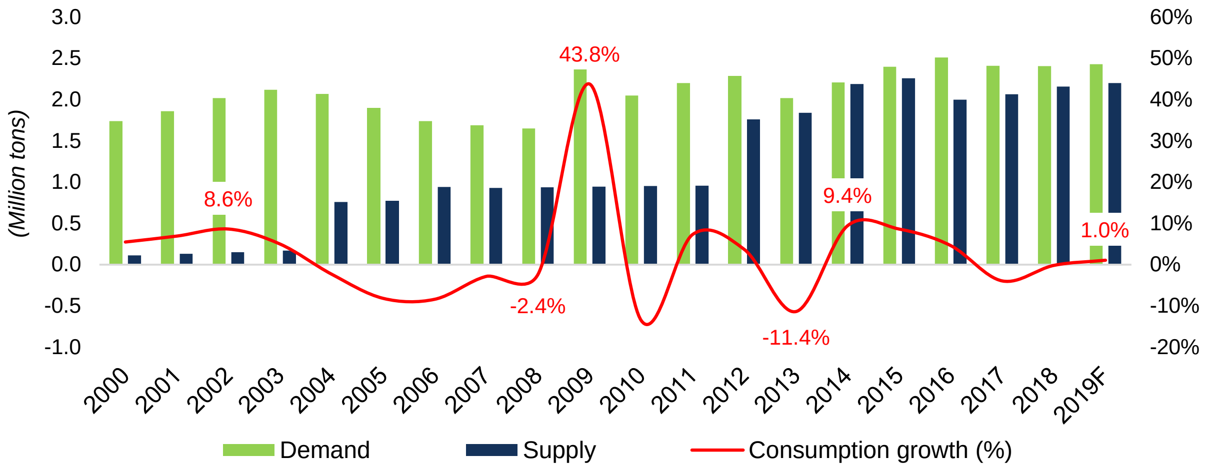
Sources: Vietnam Ministry of Agriculture & Rural Development (MARD), FPTS Research

1. NPK fertilizer market is mostly affected by weather; demand and production decreases sharply

In 2019, we estimate that NPK fertilizer production and demand will continue to decrease by -7.1% and -9.1% y-o-y. Due to the effect of El Nino, the cultivated land acreage decreased significantly in the Central Highlands and Mekong River Delta. Along with that, hot and dry weather makes farmers tend to use single fertilizers such as Urea, DAP, Potassium instead of NPK fertilizers (due to easier dissolution, avoiding losses) to reduce losses.

On the supply side, domestic high-quality NPK projects have started to operate with low capacity. Fierce competition has caused local production facilities and businesses to give market share to businesses with high-quality products, good brand recognitions and wide distribution channels such as DPM, BFC, DCM, etc.

Domestic Urea supply and demand in 2002 - 2019



Sources: MoIT, MARD, FPTS Research

2. Urea demand grows slowly and stably at 2.4-2.5 million tons per year

Domestic Urea demand in 2019 is estimated at 2.45 million tons, +1.9% compared to 2018. Urea fertilizer is necessary for the entire growth period of the crop, should be relatively constant demand over the years. In hot weather with little rain, Urea fertilizer is used more to replace NPK fertilizer.

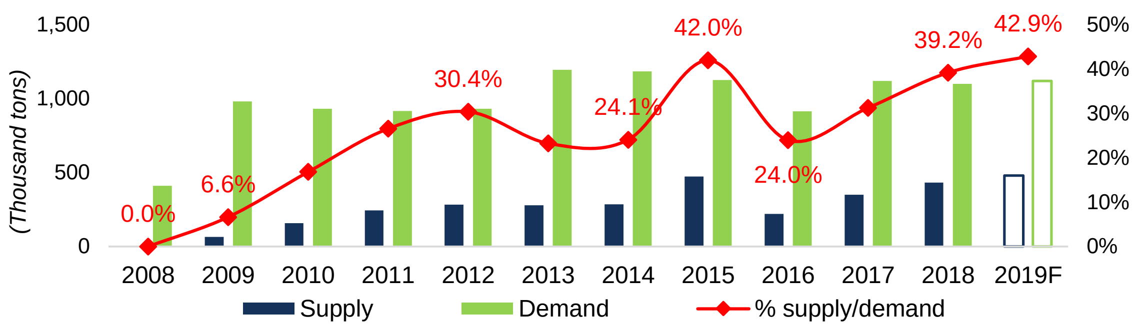
Domestic Urea production in 2019 is affected by factors such as:

(1) Urea plants perform long overhaul, affecting actual capacity, reducing output during the maintenance period.

(2) DPM and DCM continue to be affected by fluctuations in natural gas price. 2019 is the first year that DCM is no longer guaranteed on the price of natural gas input from PVN, production costs increased significantly. DPM's input natural gas price increased due to the cost of shipping accounting for 2019 increased from 1 USD to 1.4 USD/MMBTU, pushing up production cost.

3. DAP fertilizer supply increased rapidly but only met over 40% of domestic demand in 2019

Domestic DAP supply and demand in 2008 - 2019

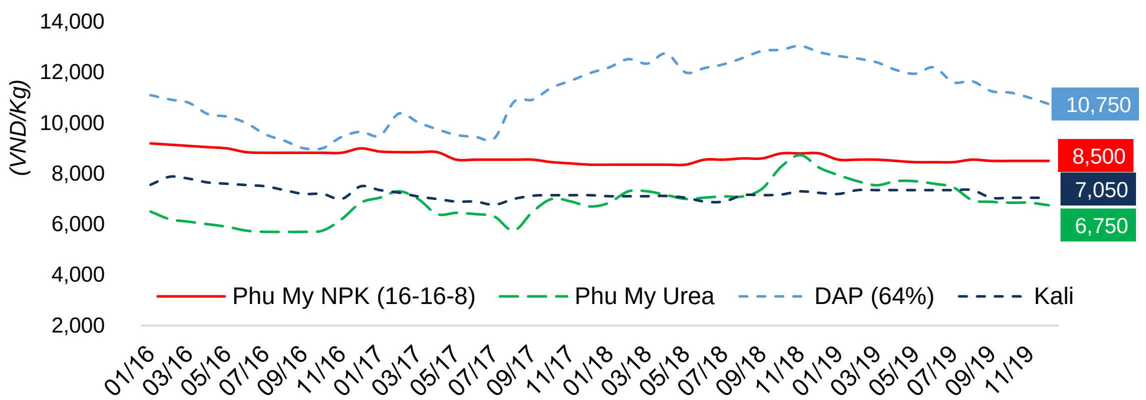


Sources: Agromonitor, FPTS Research

DAP fertilizer production increased rapidly, CAGR in 2016 - 2019 reached ~30% per year due to the benefit from safeguard tax. In recent years, domestic DAP production has encountered difficulties, high production costs due to depreciation and interest of the new factory. Domestic products do not have competitive advantages compared to imported products. From August 2017, Government has decided to impose safeguard duties on imported DAP fertilizers with the tax rate gradually decreasing to 0 until March 2020. According to Agromonitor, DAP production 9M.2019 continues to grow ~4% y-o-y.

In 2019, domestic demand for DAP fertilizer is estimated at 1.12 million tons (+2.7% y-o-y), of which direct consumption for crops is ~70 - 75% and for NPK production is 25 - 30%. Domestic supply only meets ~40% of total consumption, the rest depends on imports.

Fertilizer retail prices in Ho Chi Minh market



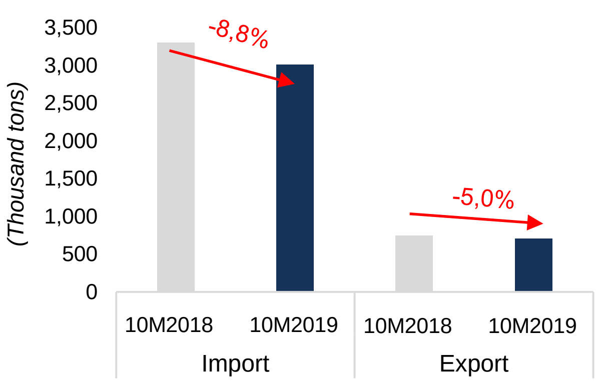
Sources: Agromonitor, FPTS Research

III. NPK fertilizer price is stable while single fertilizer prices have dropped sharply in 2019

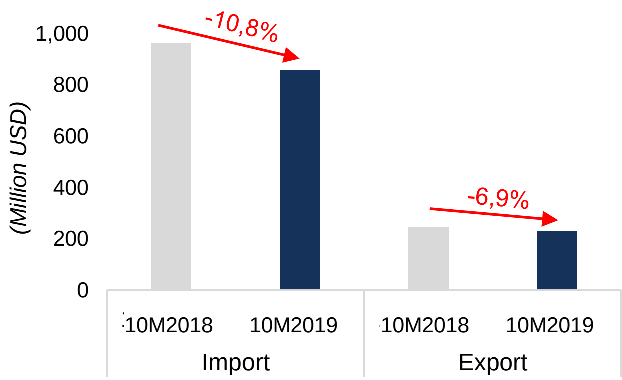
Domestic NPK price is less volatile, tends to decrease slightly due to competitive pressure. In 9M2019, domestic NPK price was stable at 8,500 VND/kg, a slight decrease of 0.5% compared to 2018. Compared to imported NPK prices, domestic prices were more stable due to the supply of domestic NPK can actively compensate for the shortage. Besides, domestic competition pressure makes NPK fertilizer price decrease slightly.

Single fertilizer prices fluctuated sharply in 2019. DAP price fell sharply after benefiting from safeguard tax. After the preliminary safeguard tax on August 19, 2017, domestic DAP price increased sharply. By March 7, 2019, the safeguard tariff dropped to 1.07 million VND/ton, domestic price began to decrease. Urea price decreased slightly in 2019, but on average 11M2019, Phu My Urea retail price was 7,327 VND/kg (+2.6% compared to average 2018). Potassium price in 2019 increased slightly by 2.4% due to the influence of world potassium price.

Fertilizer volume Import and Export



Fertilizer value Import and Export



Sources: General Department of Vietnam Customs, FPTS Research

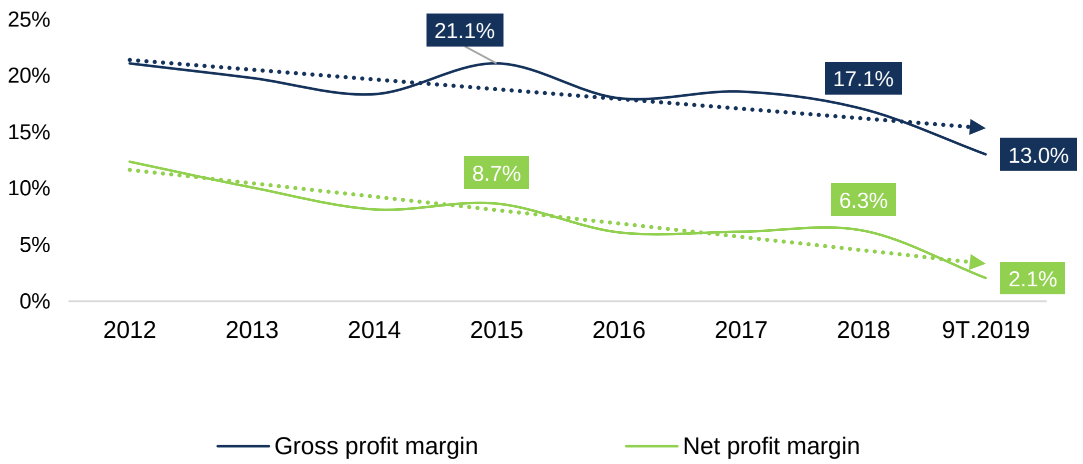
IV. Vietnam continued to trade fertilizer deficit but decreased both import volume and value in 10M2019

Fertilizer import in 10M2019 reached over 3 million tons, valued at 858.79 million USD, -8.8% y-o-y in volume and -10.8% y-o-y in value. The whole SA and potassium are imported because they cannot be produced (accounting for 25.6% and 23.9% in value). Fertilizer imports dropped sharply in 2019 due to weak domestic demand, falling domestic fertilizer prices, so imported fertilizers don't have significant competitive advantages.

In 10M2019, Vietnam exported 707.43 thousand tons of fertilizers, valued at 229.43 million USD, -5.0% in volume and -6.9% in value compared with 10M2018. Vietnam fertilizer is mainly consumed in the Southeast Asia market, of which Cambodia is the main market, reaching 264.89 thousand tons, accounting for 37.44% of total export volume. The most exported product is NPK fertilizer, however, it has been decreasing in the last few years.

V. Profit margins of enterprises decreased according to fluctuations in fertilizer and input material prices

Profit margins of fertilizer listed companies*



** Companies: DPM, DCM, BFC, LAS, SFG, VAF, NFC, DDV, QBS*

Sources: Financial report of companies, FPTS Research

The profitability of fertilizer enterprises is declining sharply, especially in 9M2019 due to:

- Fertilizer prices fell slightly while natural gas, apatite ore, and imported materials increased.
- In 2019, the weather is not favorable, the sale quantity of businesses sharply decreased. Meanwhile, administrative expense, depreciation and interest expenses have to be maintained, making net profit margin tend to decrease more strongly than the gross profit margin.

Since 2015, fertilizers have been listed as non-VAT subjects, which reduced the industry profit margin due to the VAT of input factors being included in the production cost.

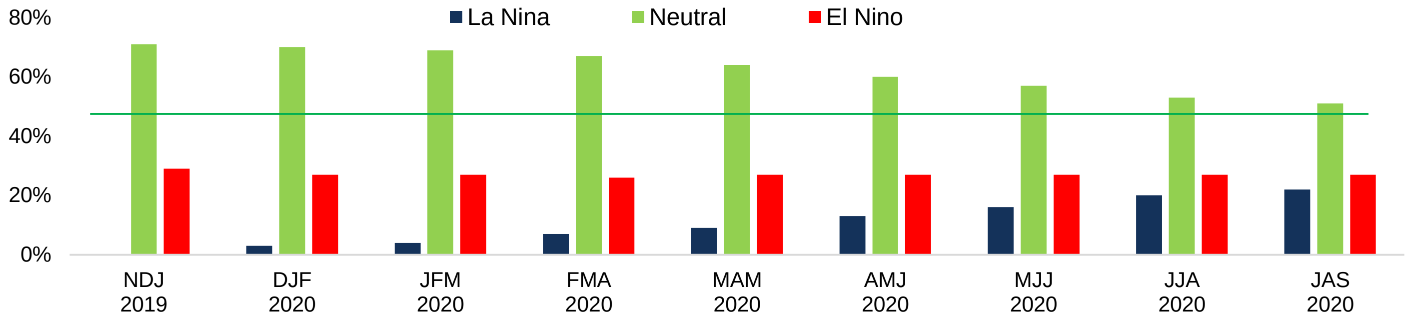
C. INDUSTRY OUTLOOK 2020

I. Development trends - Continuing to shift to high-quality fertilizers combined with organic fertilizers

The trend of using high-quality NPK fertilizer combined with organic fertilizers is expected to create the growth for the world and Vietnam fertilizer industry in the coming period. Due to the full of nutrients, the use of high-quality NPK fertilizer saves fertilizing and brings high efficiency for crops. The development of organic fertilizers will not only improve the quality of the soil but also be the foundation for the development of organic agriculture in the future. In the medium term, we expect that the production and consumption of high-quality NPK fertilizers and organic fertilizers will be an inevitable trend of the Vietnamese fertilizer industry.

II. Fertilizer demand is expected to increase due to favorable weather and recovery of agricultural prices

Probability forecast of happening ENSO at NINO3.4 area in 2020



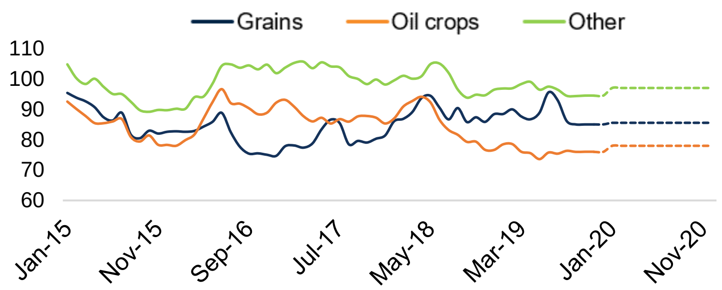
Sources: National Oceanic and Atmosphere Administration (NOAA), FPTS Research

1. The weather is forecast to be more favorable in 2020

ENSO phenomenon is forecasted to remain neutral in 9M2020. By the end of 2019, the intensity of the El Nino began to weaken. The temperature in the last 4 months in 2019 is 0.5-1ºC higher than the average of many years; rainfall is 10-25% lower than the average of many years. In 9M2020, ONI expected to fluctuate in the range of 0-0.5ºC, ENSO returned to a neutral state. As forecasted, the area of agricultural cultivation is expected to increase, leading to an improvement in fertilizer demand in 2019/2020 crop compared to the same period.

2. The world agricultural prices are expected to recover slightly in 2020

Price index of the world agricultural products
(2010 = 100%)



Sources: World Bank, CMO – Oct. 2019

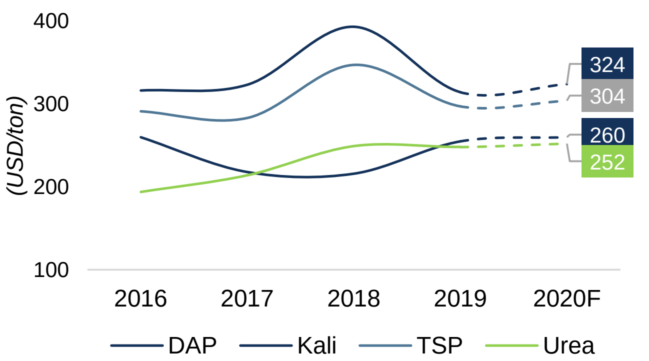
According to World Bank's forecast, grain prices such as rice, wheat, and maize in 2020 will be stable after a sharp decline in mid-2019. The average price of oil crops is forecast to increase by 1.9% in 2020 due to the decrease in cultivated areas in the short term.

Industrial crop prices tend to rise more strongly. Cotton price is expected to rise by 6-7%, sugar price is forecasted to rise by 1.1% in 2019/2020, which is expected to support domestic fertilizer demand.

III. Domestic production is supported by the recovery of fertilizer prices, expected to improve profit margin

1. World fertilizer prices are expected to increase by 1.6-3.2% in 2020

World fertilizer price forecast in 2020

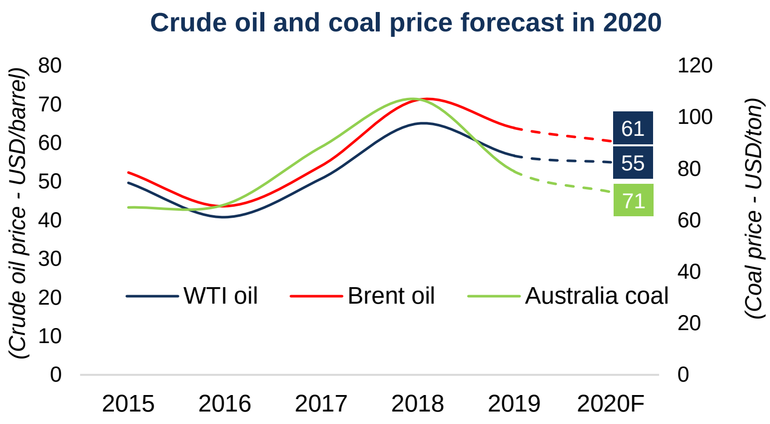


Sources: World Bank, CMO – Oct. 2019

World fertilizer prices have decreased slightly in 2019. According to World Bank, the price of fertilizers is expected to increase by 1.6 - 3.2% in 2020 due to the increase in energy and input costs. Domestic fertilizer price has lagged with the world price. As forecasted, domestic fertilizer prices will recover when demand increases in 2020.

As material prices become more stable, the increase in output prices helps to improve the gross profit margin of manufacturers with a full value chain. For the NPK fertilizer segment, the increase in single fertilizer prices will reduce the gross profit margin of NPK businesses due to fierce competition of this segment, causing the price of NPK fertilizer to increase more slowly.

2. Crude oil and coal prices are expected to continue to decline in 2020, expecting to reduce input costs



Sources: World Bank, EIA, FPTS Research

According to EIA's forecast, the crude oil prices in 2020 will be stable at 60.5 USD/barrel for Brent oil and 55 USD/barrel for WTI oil. Coal prices are forecast to decline compared to 2019, in which Australian coal prices will drop from 79 USD/ton to 71 USD/ton in 2020 (according to World Bank forecast). After sharp fluctuations in 2018 - 2019, the slight decrease in energy prices will help fertilizer businesses improve their gross profit margin over the same period when gas and coal costs account for ~60% of the total cost of production.

Currently, PVGAS conducts revaluation of natural gas contracts for DPM and DCM because domestic natural gas prices based on FO oil prices are forecast to decline sharply, affecting PVGAS's business results. Natural gas prices sold to DPM and DCM can be based on another formula, which greatly affects the business activities of these two businesses.

3. Government support policies are being reviewed and approved

VAT policy for fertilizer products - Change from non-taxable to 5%.

After a long delay from 2017 to 2019, the revised VAT law is expected to be approved by the National Assembly and officially takes effect in 2020-2021. With value-added tax rate of 5%, manufacturers expect to reduce large expenses calculated on product costs, increasing competitive advantage for domestic enterprises.

Safeguard tax policy for imported DAP and MAP products - Review decision at the end of the period.

On September 3, 2019, the Ministry of Industry and Trade issued Decision No.2700/QD-BCT on the final review of safeguard tax for imported DAP and MAP fertilizers. The final review period is no more than 06 months from the date of the review decision, in case of necessity, it may be extended once (not exceeding 06 months).

At the end of the review, the results could be renewed or not. Whatever the outcome, a portion of the fertilizer business will benefit. If renewed: DAP and MAP enterprises will benefit; If not renewed: NPK businesses will help to reduce the losses due to the lower DAP prices.

D. SUMMARY

In 2020, Vietnam fertilizer industry expects to be **MORE FAVORABLE** with the following trends:

- The trend of using high-quality fertilizers combined with organic fertilizers gradually shapes domestic production.
- Fertilizer demand increased slowly and stably; demand for NPK complex fertilizer was sensitive to weather and climate.
- Profit margins of the fertilizer industry expect to improve slightly due to the higher expectation in fertilizer prices and better consumption.
- The possibility that the revised VAT policy will take effect in 2020 is not high because the National Assembly still needs to discuss other laws. If passed, this law will at least take effect from 2021.

With the above trends, the Vietnam fertilizer industry in 2020 is expected to be more positive than 2019. More favorable weather is expected to improve agricultural cultivation and domestic fertilizer consumption in 2020.

E. WATCH LIST

<table>
<tr><th>Ticker</th><th>Market Cap.
Jan 08, 2019
(bil. VND)</th><th>Revenue
9M2019
(bil. VND)</th><th>Net Income
9M2019
(bil. VND)</th><th>Net Income
Growth</th><th>Net Income
Margin</th><th>ROE (TTM)</th><th>P/E</th></tr>
<tr><td rowspan="2">DPM</td><td>4,911</td><td>5,398</td><td>151,8</td><td>-72.9%</td><td>2.8%</td><td>3.8%</td><td>17.6</td></tr>
<tr><td colspan="7">• DPM has great advantages in branding and distribution systems throughout the country. Having 04 regional subsidiaries and thousands of agents from the North to the South, DPM leads the share of Urea fertilizer market (accounting for 33.8% total consumption quantity).
• In 3Q2018, DPM officially operated chemical NPK plant (capacity: 250,000 tons per year) and upgraded the NH3 line (+90,000 tons per year), aiming to diversify fertilizer and chemical products. In 2019, DPM conducts short-term maintenance at Urea plant and handle technical problem by upgrading NH3 lines. This 72-day maintenance period has greatly affected output at the factories.
• In 2020, Phu My plant cluster is expected to operate more stably after overcoming technical issues, the output will increase significantly compared to 2019. Input gas price is expected to decrease according to FO oil price in 6M.2020. Before PVGAS approves new natural gas price policy, profit margins are expected to improve compared to 2019.
(See more DPM Valuation Report – Dec2019)</td></tr>
<tr><td rowspan="2">DCM</td><td>3,276</td><td>4,935</td><td>308,22</td><td>-45.1%</td><td>6.2%</td><td>6.7%</td><td>8.2</td></tr>
<tr><td colspan="7">• With advantages from granular Urea (slow solubility, used in NPK fertilizer production), DCM is ranked the second in Urea market share (accounting for 27.4%) and is the largest Urea exporter in the country.
• In Q3 2019, DCM ran a trial of the liquefied-urea NPK plant (capacity: 300,000 tons per year), increasing supply of high-quality NPK segment for the domestic and Cambodia market.
• DCM has a solid operating cash flow with actively paid debts. Revenue grew rapidly but profit margin decreased because DCM is not guaranteed to natural gas price policy of PVN from 2019.
• Stable Urea production and new NPK fertilizer is expected to increase market share in Cambodia. Like DPM, the input gas price for DCM is expected to decrease according to FO oil price in 6M2020.</td></tr>
<tr><td rowspan="2">BFC</td><td>663</td><td>2,416</td><td>69,8</td><td>-53.7%</td><td>2.9%</td><td>15.0%</td><td>6.2</td></tr>
<tr><td colspan="7">• BFC leads the share of the NPK fertilizer market (accounting for 13.5% total consumption quantity) with advantages of large production capacity and good product quality.
• The profit margin gradually decreased due to the increase in raw material prices while NPK fertilizer price was stable and tended to decrease slightly due to competition pressure.
• In 2020: BFC expects to face fierce competition from newly launched high-quality NPK projects such as DPM, DCM, etc. BFC is a leading enterprise in the NPK segment, but cannot control the input material sources. Therefore, the ability to compete with strong rivals such as DPM and DCM will be difficult.
(See more BFC Update Valuation Report – Oct2019)</td></tr>
</table>

(return to Table of Contents)

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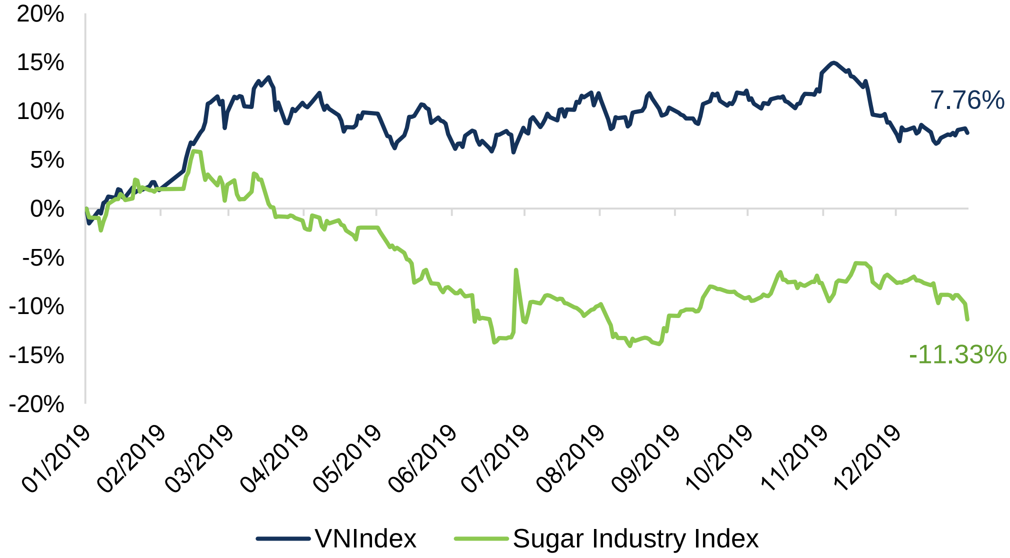
Sugar Industry Index and VNIndex Movement



FPT Securities

A. INDUSTRY HIGHLIGHTS

I. Natural and weather conditions affect sugarcane quality

Vietnam is a tropical country with favorable weather conditions for sugarcane production. In which, specific natural and weather conditions of each planted area have a great influence on sugarcane quality such as cane's yield and sugar content level which directly affects the production of sugar.

Region	Planted area (ha)	Yield (tons/ha)	Sweetness (CCS)	Cane crushed (tons)	Sugar yield (kg/ton cane)	Cane price (VND/kg)	Characteristic	FPTS' assessment
North & Northern Central	66,917	59.7	10.13	3,993,225	102.7	800 - 950	The highest yield of sugar production	Average
Central Coast – Central Highlands	123,242	60.3	9.44	7,433,706	95.0	900 – 1,000	The largest plantation area, high sugar yield	Good
Southeastern	25,476	81.1	8.98	2,065,535	89.8	950 – 1,000	Highest cane yield	Good
Mekong Delta	25,783	75.2	9.89	1,938,181	90.2	1,100 – 1,200	Highest cane price	Bad

Sources: Vietnam Sugarcane and Sugar Association (VSSA), FPTS Research and Assess

*More detail at **Sugar Industry Report - July 2019***

II. Being affected by trade agreements

Vietnam's sugar industry is participating in numbers of trade agreements, in which the following 03 FTAs have the most impact on the industry:

(1) WTO Agreements require Vietnam to import sugar from WTO members every year, starting with 55,000 tons of sugar from the year 2007. The import quota then increases by 5% per annum. In 2019, Vietnam's sugar import quota is 98,000 tons and expects to be 103,000 tons in 2020. The WTO quota includes quotas of sugar import from other trade agreements.

(2) ASEAN – China Free Trade Area (ACFTA) reduces sugar import tariff and quota from China to ASEAN countries. Particularly, the agreement of eliminating import quota and tariff of High-fructose corn syrup (HFCS), which is 10% - 15% cheaper and 1.2 – 1.5 times sweeter than cane sugar, has been negatively impacting the consumption of Vietnam's domestic sugar.

(3) ASEAN Trade in Goods Agreement (ATIGA) allows countries in ASEAN to freely exchange goods, including sugar, without being bound by tariffs and import quotas. In Vietnam, the ATIGA agreement is going to take effect on January 1st, 2020, removing all import quotas and lowering tariffs to 5%.

III. Small scale of production compared to Thailand, a direct competitor

Compared to the direct competitor, the production scale of Vietnam's sugar industry is much smaller. In Vietnam, there are a total of 38 sugar mills with an average cane crushing capacity of 4,100 tons cane/day (TCD) equivalent to only 1/3 of the average capacity in Thailand. Besides, cane plantation area in Vietnam is small, fragmented and has not been developed well.

Cane and Sugar production in Vietnam and Thailand (crop year 2018/19)

CANE	Planted area (ha)	Cane yield (tons/ha)	Cane crush (tons)	Sweetness (CCS)	Cane price (VND/ton)
Vietnam	**192,395**	**63**	**12,201,667**	**9.5**	**800,000 – 900,000**
Thailand	1,913,152	68	130,970,004	12.64	630,000 – 650,000
Sugar	**Number of mills**	**Average crushing capacity (TCD)**	**Sugar production (tons)**	**Sugar yield (Kg sugar/ton cane)**	**Sugar production cost (VND/kg)**
Vietnam	**38**	**4,100**	**1,170,000**	**95.9**	**11,900 – 13,000**
Thailand	56	15,000	14,580,671	111.3	8,000

Sources: VSSA, Thailand's Office of Cane and Sugar Board (OCSB), FPTS Research

B. INDUSTRY REVIEW 2019

I. El Nino caused sugarcane production to decline in 2018/19

In the crop year 2018/19, Vietnam/s cane plantation area dropped roughly 20% y-o-y while cane production decreased 21% y-o-y due to (i) Drought conditions resulted from the impact of El Nino in mostly cane plantation areas, especially the Central Coast – Central Highlands; (ii) Sharp decline in sugar price since 2017/18 crop year has led mills to reduce cane purchasing prices, making farmers switch from sugarcane to other crops, mainly in the Southeastern and Mekong Delta.

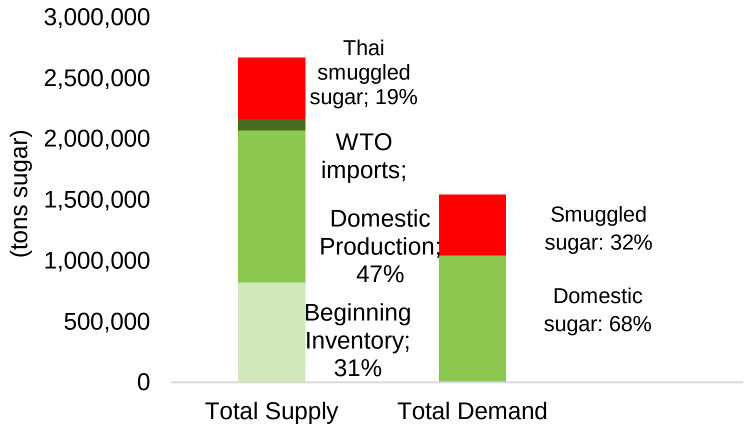
Cane and sugar production in 2018/19

	2018/19	2017/18	% y-o-y
		Cane production (tons)	
North & Northern Central	**4,163,958**	3,993,225	+4.3%
Central Coast – Central Highlands	**5,130,294**	7,433,706	-31.0%
Southeastern	**1,669,684**	2,065,535	-19.2%
Mekong Delta	**1,237,730**	1,938,181	-36.1%
Total	**12,201,666**	15,430,647	**-20.9%**
		Sugar production (tons)	
Total	**1,170,000**	1,421,000	**-17.7%**

Sources: VSSA, FPTS Research

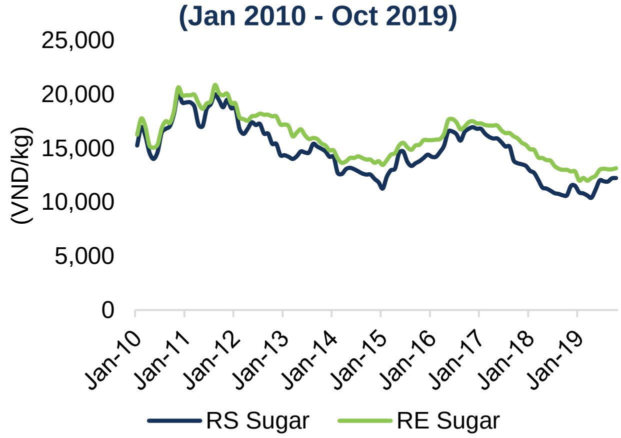
II. Fierce competition against Thai smuggled sugar, price continues to slump

Sugar supply and demand crop year 2018/19



Sources: VSSA, FPTS Research and Estimation

Domestic sugar price movements (Jan 2010 - Oct 2019)



Sources: Department of Price Management (DoPM)

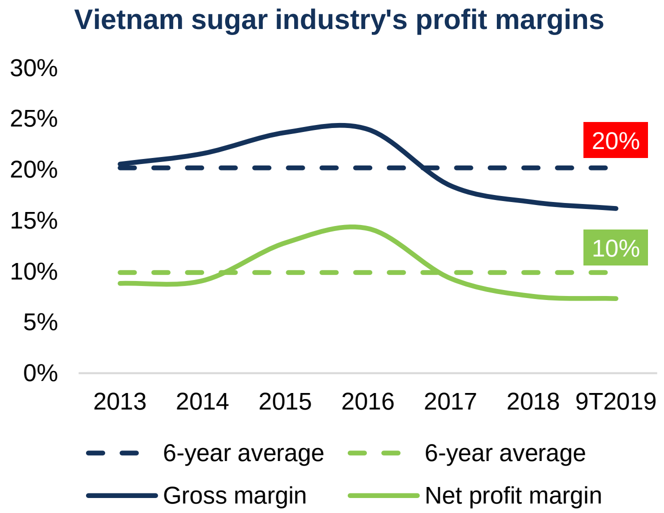
In the crop year 2018/19 (July 2018 – June 2019), the production of sugar in Vietnam was about 1.2 million tons of sugar (-20% y-o-y), in which, there were 94,000 tons of sugar imported under WTO quotas and more 1,1 million tons from domestic producers. Meanwhile, sugar consumption was under extreme pressure from (i) Thai smuggled sugar which is 10% – 15% cheaper than domestic sugar; (ii) No quota and tariff HFCS imported from China.

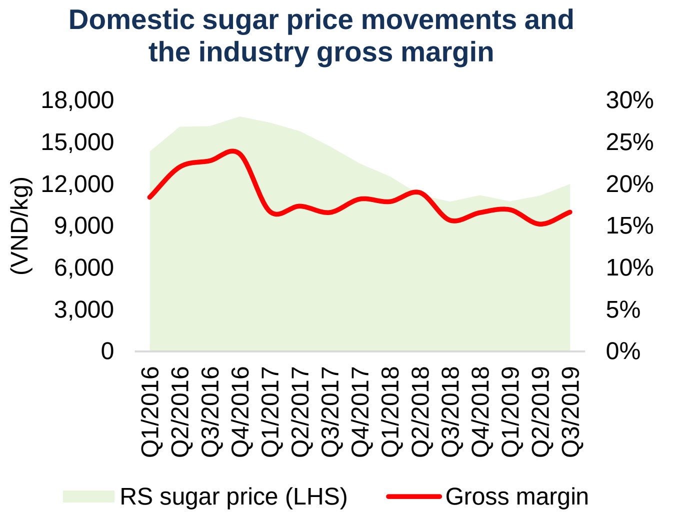
Domestic sugar prices were falling from Q1/2017 to Q2/2019. The average sugar price in crop year 2018/19 was 10,972 VND/kg (-15.5% y-o-y). Especially, in Q1/2019, the price dropped to the lowest in 10 years with only 10,400 VND/kg (-10% y-o-y and -30% compared to the same period in 2017).

In Q3/2019, the sugar price in Vietnam lightly recovered and reached 12,000 VND/kg (+12% y-o-y) due to the increasing demand for confectionery and beverage production preparing for Mid Autumn Festival and Lunar New Year. However, the domestic sugar industry is still facing hardship and pressure from Thai sugar being imported into Vietnam.

By 2020, when the ATIGA agreement officially comes into effect in Vietnam, all sugar import quotas from ASEAN will be eliminated and the tariff will be at 5% only. At that time, Vietnam's sugar industry will not only be challenged by Thai smuggled sugar, but also legal sugar imported from Thailand, directly affecting domestic sugar prices.

III. Sinking profit margins





Sources: DoPM, FPTS Research from Financial statements of listed sugar companies account for ~80% nationwide market share: SBT, QNS, LSS, SLS, KTS*

**QNS: include all segments (soymilk, sugar, others)*

Due to the impact of dropping sugar price in recent years, the sugar industry in Vietnam experienced a sharp decline in margin, which are now below the 6-year average. The industry gross and net income margin in 9M2019 are 16% and 7% respectively.

C. OUTLOOK 2020

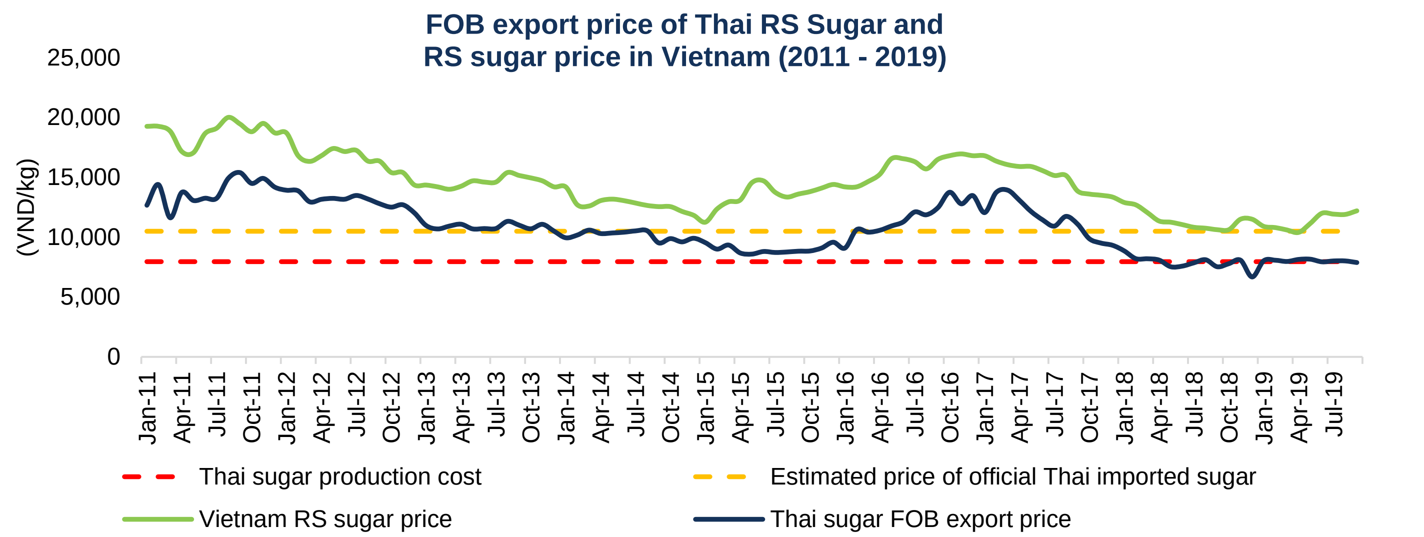
I. Prospect to take advantage of cheap raw sugar

Because a sugarcane crushing season lasts for around 4 to 5 months, some domestic mills have imported raw sugar from countries in the region to refine sugar in the remaining time of the year. Only those mills which have RE (Refined Extra) line can refine raw sugar all year round. RE sugar is usually more expensive than RS sugar (Refined Standard) about 10% due to its higher quality and lower supply. RE sugar production in Vietnam is about 0.6 million tons per year (33% of total sugar production) and supplies for only 65% of domestic RE demand.

Besides, the RE sugar market is less likely to face direct competition with Thai sugar because it is harder to store RE sugar during transportation. We expect that Thailand sugar mills will mainly export RS sugar or raw sugar to Vietnam, then refine and distribute them through domestic mills. Thus, domestic sugar mills which already have RE refinery line are expected to take advantage from importing cheap raw sugar from Thailand after ATIGA and might be more beneficial than Thai enterprises with existing mills, warehouses and distribution channels in Vietnam.

II. Try to maintain competitiveness with officially imported sugar from Thailand

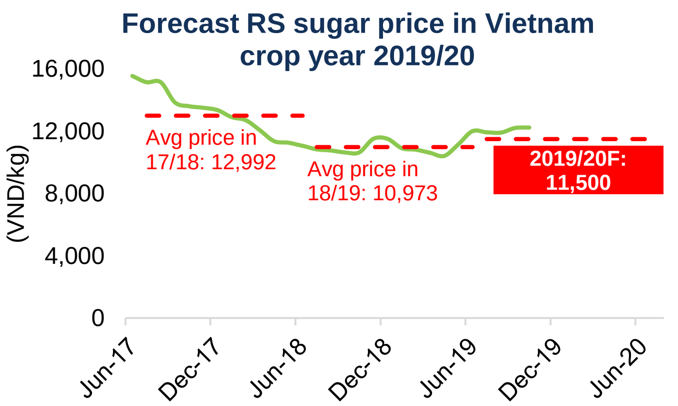
According to FPTS's estimation, Thailand's cost of white sugar production is about 8,000 VND/kg (0.34 US/kg, 30% - 35% lower than the production cost in Vietnam), thanks to the lower cane purchasing price. In the past, the Thai Government supported sugar mills and fixed cane prices at an average of 630,000 - 650,000 VND/ton (27 – 28 USD/ton cane). At the moment, Thailand's export price is around its production cost, aiming to compete in the export market. In 2017, Brazil filed a complaint to WTO, claiming that the Thai Government's support of sugarcane prices led to a sharp drop in world sugar prices and an increase in Thai sugar global market share. In early 2018, the Thai Government initiated some temporary changes in the sugar industry policies to ease tensions with Brazil. However, there has been no significant impact on Thai's sugar industry.



Sources: DoPM, USDA, FPTS Research

We estimate that Thai sugar when being imported into Vietnam will face barriers such as (1) Import tax at 5%, (2) Transportation cost accounts for about 20% of cost, (3) Distribution and local advantages at roughly 5% of costs. Therefore, the minimum selling price of Thai RS white sugar in Vietnam is expected to be around 10,000 - 10,500 VND/kg. **Hence, we expect sugar enterprises with a production cost of 10,500 VND/kg or lower to be able to compete with official Thai sugar imported into Vietnam after 2020.**

III. The domestic sugar price is hard to rebound



Sources: DoPM, FPTS Research

The average domestic sugar price in 2018/19 was 10,973 VND/kg (-15.5% y-o-y). At the beginning of the 2019/20 crop year (Q3/2019), the domestic sugar price recovered slightly (+ 12% y-o-y) thanks to:

(1) Increasing sugar demand on the occasion of the Mid-Autumn Festival and the Lunar New Year for production of food and beverage industry;

(2) Government's increasing protection against smuggling activities in Q3/2019.

However, according to our assessment, **the domestic sugar price is unlikely to strongly increase and maintain at an average of 11,500 (+5% y-o-y) in the crop year 2019/20**, due to:

(1) Vietnam's sugar industry continues to face difficulties due to pressure from cheap Thai sugar imported officially after the ATIGA came into effect on January 1, 2020. Currently, the average production cost in Thailand is 8,000 VND/kg, about 30% lower than domestic sugar enterprises.

(2) Unpredictable movements of Thai smuggled sugar into Vietnam while Thailand's sugar inventory forecast to continue at a high level after its record production periods (2017-2019), reaching over 10 million tons in 2019/20 (+5% y-o-y). Meanwhile, Thai domestic demand for sugar in gradually decreases from 2017 (after the Thai Government imposed consumption tax on sugar-sweetened beverage manufacturers and floated Thai domestic sugar price).

(3) There is still no measurement or protection against China's HFCS imported into Vietnam.

D. SUMMARY

In 2020, we expect that Vietnam's sugar industry will continue to face (1) Competition with Thai sugar; (2) The unlikeliness of sugar price to rebound. There will be a strong division among the industry. Small businesses with low competitiveness will be eliminated and leave the market share to large enterprises that are capable of controlling cost, taking advantage of the value chain, developing high added value products.

Besides, investment risks in the sugar industry include (1) Risk of smuggled Thai sugar; (2) Risk of fluctuations in global sugar prices; (3) Weather risks affecting sugarcane plantation area.

E. WATCH LIST

<table>
<tr><th>Ticker</th><th>Market Cap. Jan 08, 2019 (bil. VND)</th><th>Revenue 9M2019 (bil. VND)</th><th>Net Income 9M2019 (bil. VND)</th><th>Net Income Growth</th><th>Net Income Margin</th><th>ROE (TTM)</th><th>P/E</th></tr>
<tr><td rowspan="2">SBT</td><td>11,376</td><td>8,543</td><td>358.4</td><td>+8.6%</td><td>4.2%</td><td>5.1%</td><td>17.9</td></tr>
<tr><td colspan="7">• Thanh Thanh Cong – Bien Hoa JSC., (HSX: SBT) is a leading enterprise in Vietnam's sugar industry with advantages in extensive capacity, production technology, strong brand and large distribution channels.
• SBT expanded the production capacity by investing and acquiring businesses in the industry. Currently, SBT owns 09 sugar mills and becomes the largest sugar production firm in Vietnam, providing the market with over 500,000 tons of sugar per year (more than 30% market share nationwide). SBT's cane plantation area is massive with nearly 65,000 ha in Vietnam, Laos, and Cambodia, favored by natural conditions for mechanization activities, orienting to produce high-value sugar products serving export.
• Outlook: With the advantage of scale, SBT is expected to be one of the businesses capable of reducing the competitive gap with Thai sugar, as well as taking advantage of cheap sources of raw sugar after integration.
(Full report on SBT)</td></tr>
<tr><td rowspan="2">QNS</td><td>9,432</td><td>6,048.2</td><td>806.9</td><td>+2.4%</td><td>13.3%</td><td>24.1%</td><td>7.5</td></tr>
<tr><td colspan="7">• Quang Ngai Sugar JSC., (UPCOM: QNS) is the second largest sugar production enterprise in Vietnam with a competitive advantage from diversifying business products.
• Soymilk business is the most important component of QNS's revenue and profit, with a high profit margin (~40%). QNS owns 03 soymilk factories with a production scale of 395 million liters of milk per year, being the largest soymilk enterprise, leading the market of branded soymilk in Vietnam. In addition, QNS owns An Khe sugar - biomass power plant with a large production scale, high efficiency, taking advantage in the value chain. Each year, QNS supplies the market with nearly 200,000 tons of sugar (~10% market share). An Khê biomass power plant has high production efficiency and low investment rate.
• Outlook: QNS's soymilk segment still has room for growth, demand for soymilk in Vietnam is expected to grow at a rate of 10.5% per annum in the period of 2019 - 2024F. In 2020, the price of soybean material is expected to decline to favor QNS to continue enjoying high profit margin. In 2019, QNS completes RE sugar refining line, hoping to help the sugar segment take advantage of cheap raw sugar after integration.
(Full report on QNS)</td></tr>
</table>

<table>
<tr><td rowspan="2">LSS</td><td>310</td><td>1,322.7</td><td>13.7</td><td>N/A</td><td>1.0%</td><td>0.1%</td><td>N/A</td></tr>
<tr><td colspan="7">

- Lam Son Sugar JSC., (HSX: LSS) is the largest sugar manufacturer in the North of Vietnam with the main product of refined sugar RE, which has a high price and low competition.
- LSS owns a large cane plantation area of over 10,000 ha, with advantages of flat terrain, favorable for activities of expanding concentrated fields, mechanization, and productivity improvement. However, the material area of LSS is frequently affected by weather conditions (floods, storms), affecting the efficiency of sugarcane production. In addition to sugar production and high-tech agricultural products, LSS is investing in a number of non-core projects that are not yet effective, such as eco-park project, bamboo production project, agarwood oil, and by-products.
- **Outlook**: Benefiting from long-term industrial customers in the North. However, LSS needs to focus on controlling costs to improve profitability and competitiveness after integration.

</td></tr>
<tr><td rowspan="2">SLS</td><td>418</td><td>586.8</td><td>40.3</td><td>-49.3%</td><td>6.9%</td><td>11.5%</td><td>7.6</td></tr>
<tr><td colspan="7">

- Son La Sugar JSC., (HNX: SLS) is a small-scale mill with a competitive advantage from low cane purchasing price and low production cost.
- SLS owns a plantation of roughly 8,000 ha in Son La, an area with favorable soil and natural conditions for sugarcane production. The raw sugarcane here has the highest sugar content in the country, helping SLS to achieve high sugar production efficiency. Each year, the company distributes to the market about 60,000 tons of sugar, equivalent to ~5% of the nationwide market share. Between 2016 and 2018, SLS uses relatively large financial leverage to serve investments to increase and improve plant capacity. It is estimated that the company will fulfill its financial obligations by the 2021/22 crop year.
- **Outlook**: With low production costs and high production efficiency, SLS can compete with Thai sugar after integration. Another potential opportunity for SLS comes from RE sugar production line (completed in 2018) making SLS is the only enterprise producing RE sugar in the Northern region and Red River Delta.

(Full report on SLS)

</td></tr>
<tr><td rowspan="2">KTS</td><td>45</td><td>128.4</td><td>1.2</td><td>-88.3%</td><td>0.9%</td><td>1.3%</td><td>4.1</td></tr>
<tr><td colspan="7">

- Kon Tum Sugar JSC., (HNX: KTS) is a small-scale mill which is difficult to gain advantages of scale whilst having small and unstable sugarcane plantation area.
- From 2016/17, KTS focused on sugar trading activities, shifting the revenue structure from self-produced sugar consumption to commercial sugar consumption. KTS trades sugar through companies related to large shareholders, raising the risk of unable to collect account receivables from customers.
- **Outlook**: Decreasing sugar price and high competition pressure after integration will cause difficulties for the company. Increasing the proportion of trading revenue with a light profit margin reduces the business efficiency of the business, increasing the risk of capital appropriation.

(Full report on KTS)

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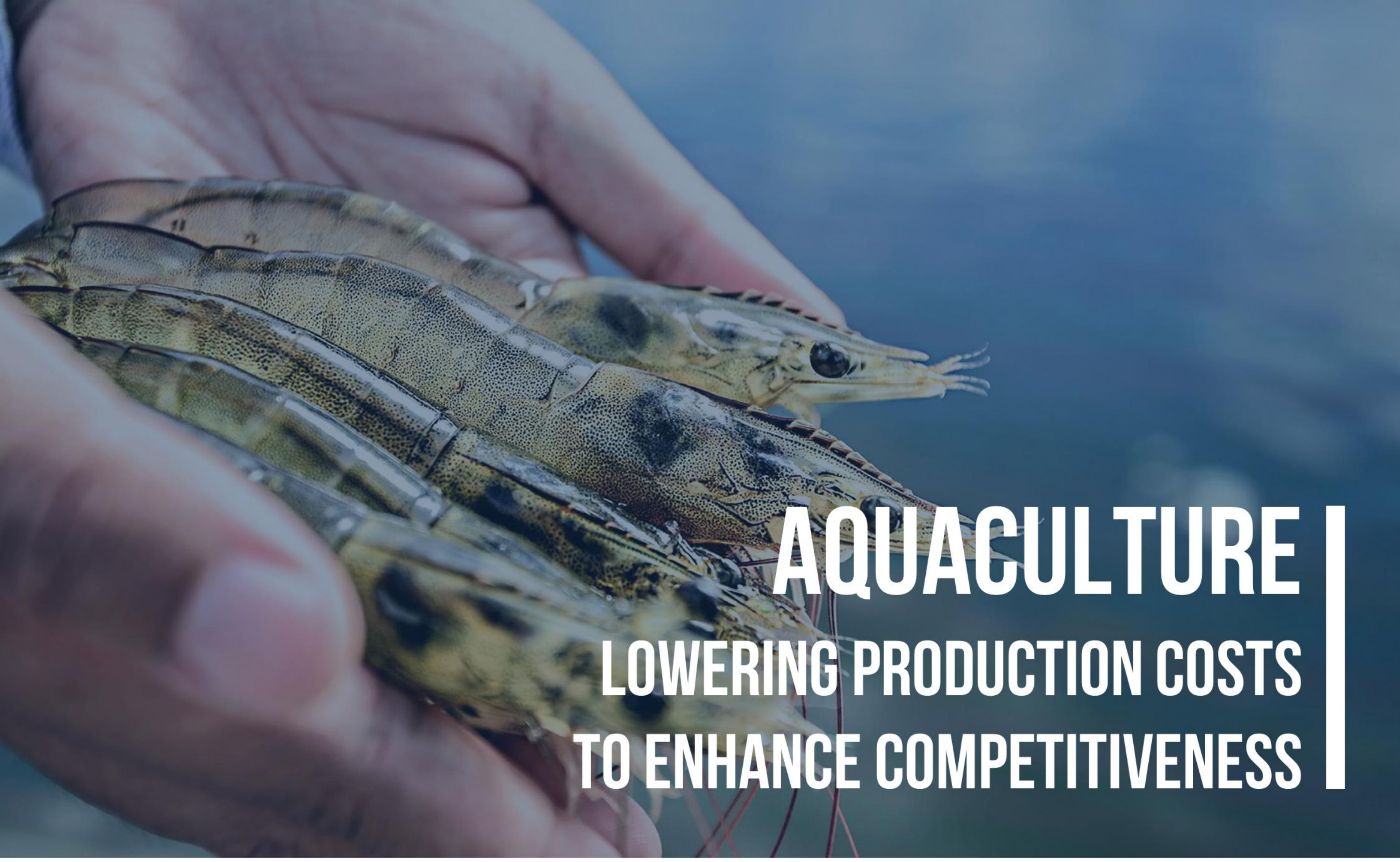

AQUACULTURE

LOWERING PRODUCTION COSTS TO ENHANCE COMPETITIVENESS

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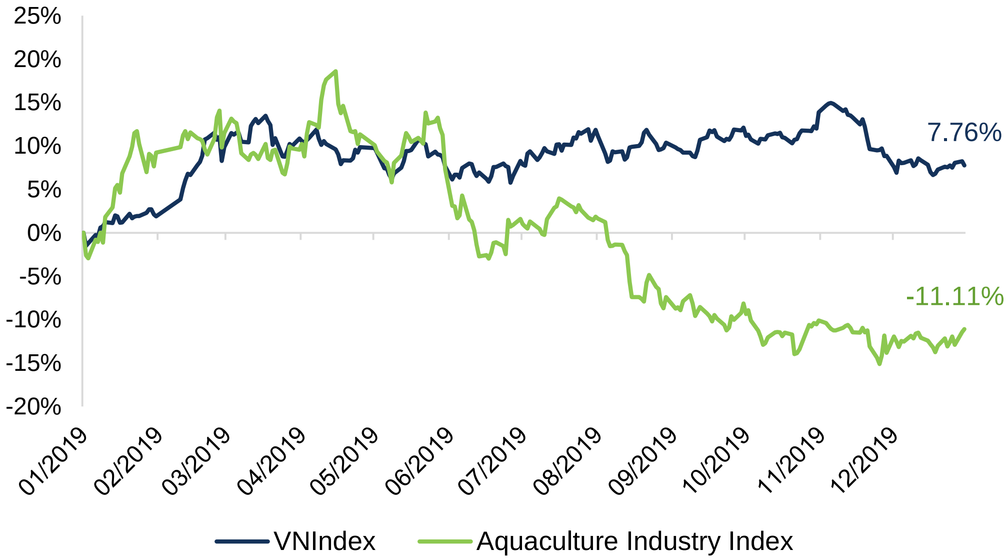
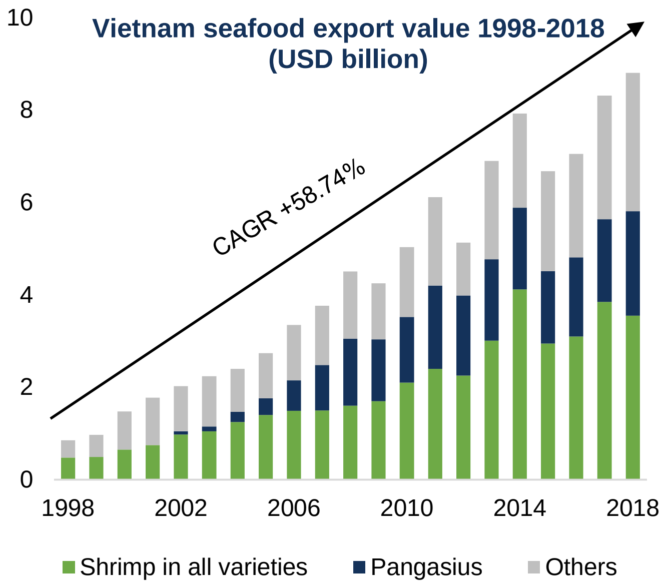
Aquaculture Industry Index and VNIndex Movement



A. INDUSTRY HIGHLIGHTS

I. Shrimp and Pangasius export account for 60% of total seafood export value in Vietnam



Sources: Vietnam Association of Seafood Exporters and Producers (VASEP), FPTS Research

With favorable natural conditions, owning a dense river network, long coastlines, and abundant seafood resources, Vietnam has many opportunities to develop strongly aquaculture. Since 1998, thanks to the strong development of aquaculture, mainly shrimp and pangasius, Vietnam's seafood export value has improved strongly.

In the period from 1998 to 2018, Vietnam's seafood export value had a compound annual growth rate (CAGR) of about 58.74%. In 2018, the total seafood export value reached 8.79 billion USD. Meanwhile, shrimp and pangasius export value accounted for 40% and 26% respectively, contributing 3.43% to the total GDP of Vietnam in 2018.

Due to the leading contribution of shrimp and pangasius' exporting value in Vietnam's total seafood export value, therefore, we mainly focus on the analysis of Vietnam's shrimp and pangasius exporting activities.

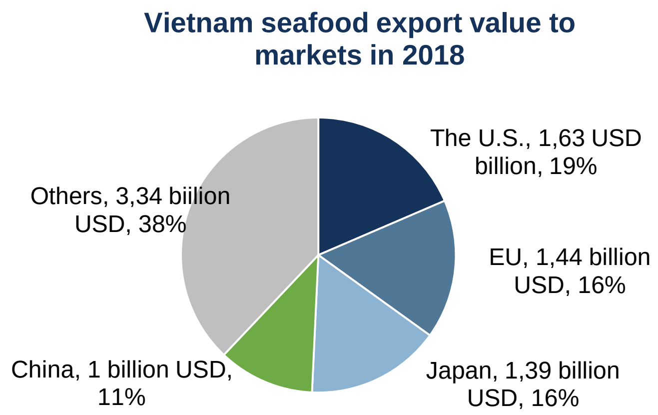
II. Lowering aquaculture costs is essential for Vietnam's shrimp and pangasius export

Besides having favorable natural conditions, Vietnam's shrimp and pangasius farming activities still face difficulties, resulting in high farming costs, significantly affecting the profits of the whole industry.

- Seeds are the key element in the aquaculture value chain because the quality of the seed will determine the overall outcome for the farmers. However, Vietnamese farmers have not been able to fully control the seed production stage. Due to a lack of access to shrimp seed-producing technologies, over 80% of shrimp broodstock have to be imported in Vietnam. Besides, pangasius hatchery farming areas are still very fragmented, the quality of parental breeds gradually degenerates.
- At the same time, feed cost accounts for about 75% of total farming cost, but the market share of feed in Vietnam is dominated by foreign suppliers, or domestic feed enterprises have to import raw materials to produce.

Therefore, the fluctuations in input material prices make hard for farmers to control costs, while unable to adjust export prices, accordingly, affecting profitability and causing many difficulties for exporting shrimp and pangasius of Vietnam.

III. Intense competition in shrimp and pangasius export markets

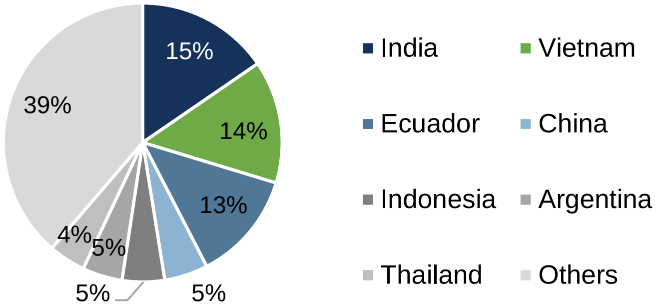


Sources: VASEP, FPTS Research

Over 30 years of development, Vietnam's seafood products have exported to more than 150 countries and territories in the world. In particular, the U.S., the E.U., Japan, and China are the main export markets of Vietnam's seafood, accounting for over 60% of the total export value (in 2018).

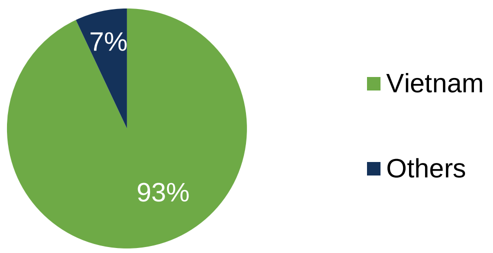
However, in export markets, Vietnam's seafood products face tough competition with other competitors around the world.

Market share of shrimp export in the world in 2018



Sources: The Food and Agriculture Organization (FAO), FPTS Research

Market share of pangasius export in the world in 2018



Sources: International Trade Center (ITC), FPTS Research

Shrimp segment: Shrimp is a popular aquatic species with trading value accounting for the highest proportion of the total annual seafood transactions in the world, therefore, competition in shrimp export activities takes place extremely strongly in the global.

In 2018, the three largest shrimp exporting countries of the world (including India, Vietnam, and Ecuador) accounted for more than 40% of the global shrimp export market share, of which, Vietnam ranked second with a market share of about 14%.

Pangasius segment: Thanks to favorable natural conditions, Vietnam has become a country with the largest market share of pangasius export in the world, with an absolute market share in 2018 of 93%. However, Vietnam's pangasius product is currently facing competition against other alternative whitefish species due to many similar characteristics, such as Atlantic cod, tuna, and tilapia, etc.

IV. Typical risks of aquaculture

(1) Aquaculture depends heavily on weather, epidemics and environmental pollution: Climate change, disease and polluted environment are becoming more and more negative, which have significantly affected farming results and quality of raw material sources, thereby directly affecting the price of raw shrimp and pangasius. As a result, many enterprises, especially those that cannot control the sources of the input materials, see a decline in profits.

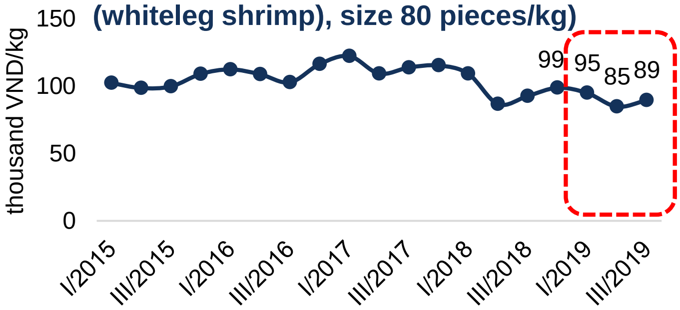
(2) Risk of technical and trade barriers in export markets: Seafood is an essential food for humans, thus, it is strictly required to meet the standards of quality, hygiene, and safety. In addition, in some export markets, trade barriers are imposed to protect the domestic industry against foreign competition. Typically, in the U.S. market, Vietnam's pangasius and shrimp have been subject to antidumping duty for many years, which has created a significant impact on the competitive advantage of Vietnam seafood products in the U.S. market.

B. INDUSTRY REVIEW 2019

I. Shrimp segment

1. Shrimp raw materials prices at the end of 2019 are increasing because of supply shortage

Quarterly shirmp raw material prices (whiteleg shrimp), size 80 pieces/kg)



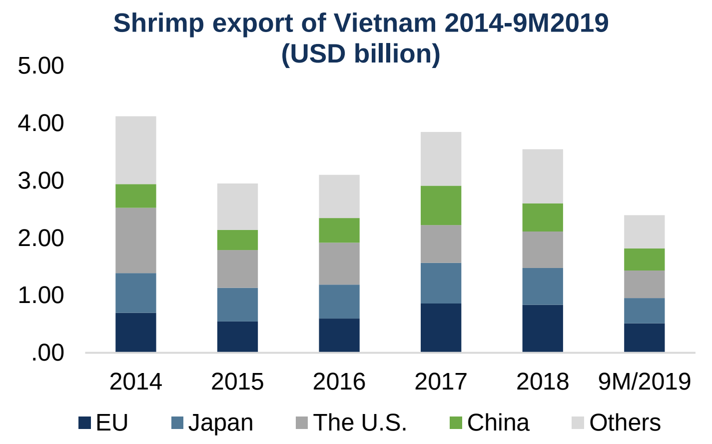
Sources: thitruongthuysan.com, FPTS Research

In the first half of 2019, shrimp market prices decreased slightly. In Q2 2019, shrimp prices decreased by 14% compared to the end of 2018 to 85,000 VND/kg, due to the shrimp supply more than the demand of exporting enterprises.

However, in Q3 2019, shrimp supply began to decrease due to unfavorable weather, complicated diseases, and narrowed farming areas. Therefore, shrimp prices tend to recover, averaging 89,000 VND/kg.

We assess that the supply of shrimp by the end of 2019 has not increased significantly, meanwhile the higher demand for raw shrimp of exporting companies for the main holidays. Therefore, the price of raw shrimp will continue to maintain the uptrend. This will increase the pressure on the input cost of exporting shrimp companies, especially those that do not have their farming areas.

2. Competitive pressure will continue, total shrimp export value in 2019 is estimated to decrease by 4% compared to 2018



Sources: VASEP, FPTS Research

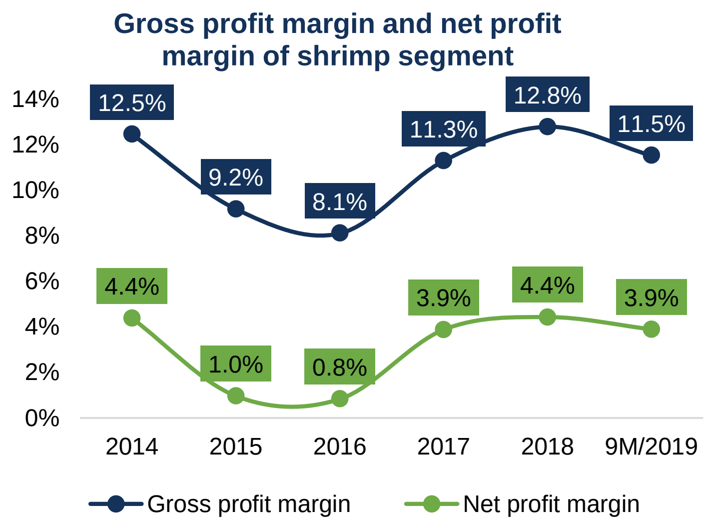
In the period of from 2014 to the first nine months of 2019, Vietnam's shrimp export value was not stable due to unpredictable supply and demand, because (1) Shrimp farming activities are significantly affected by weather, diseases and (2) Heavy competition between shrimp exporting countries in the world.

Continuing the unfavorable situation of export activities in 2018, shrimp export results in the first 9 months of 2019, also decreased compared to the same period, reaching about USD 2.4 billion. In particular, the most negative decreased value is the traditional export markets of Vietnam's shrimp including the E.U., Japan, and the U.S.

The cause is that the competitive advantage of Vietnam's shrimp products in these markets is not high, due to the higher farming costs making the export price difficult to compete with competitors like India, Indonesia, Ecuador, etc. Meanwhile, Vietnam's shrimp export to China grew slightly as China reduced shrimp imports from two main sources, including Ecuador and India (accounting for about 50% and 25% of the total shrimp import value of China, respectively) since this countries' shrimp farming activity affected by diseases. Therefore, this will be a favorable opportunity for Vietnam's shrimp to continue increasing export value to China market.

According to VASEP, Vietnam's shrimp export value in Q4 2019 is forecasted to be higher in the U.S., Japan, and China when their inventories begin to decline, causing the demand to increase. Forecasting that the Vietnam shrimp export value in 2019 will reach USD 3.4 billion, down 4% y-o-y.

3. Exporting shrimp enterprises' profits have declined slightly



Based on data of MPC, FMC, CMX. Source: FPTS Research

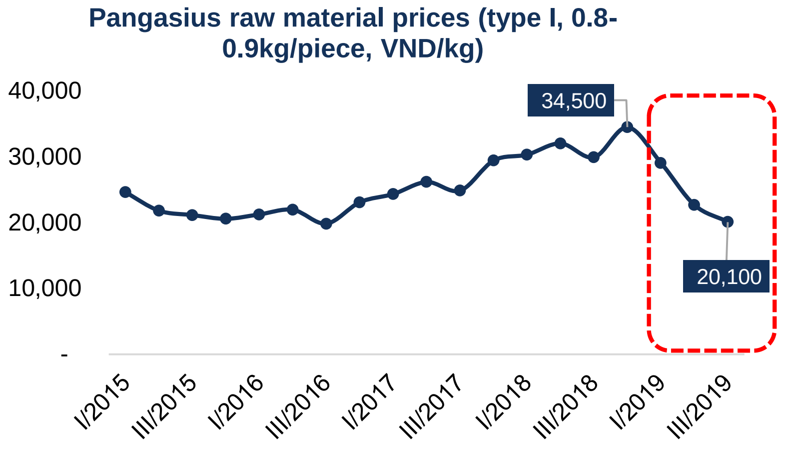
Between 2014 and 2018, the gross profit margin of shrimp enterprises fluctuated between 8% to 13%.

In the first nine months of 2019, gross profit margin declined slightly to 12% compared to 13% for the whole of 2018 due to shrimp export value decreased and the price of raw shrimp tended to increase from the third quarter.

The net profit margin of shrimp enterprises is around 1% to 4%, due to difficulties about competition and technical and trade barriers taking place in export markets, making the operating costs of Vietnam's shrimp export enterprises high.

II. Pangasius segment

1. Sharp decline in pangasius price due to difficulty in export markets



Source: VASEP, FPTS Research

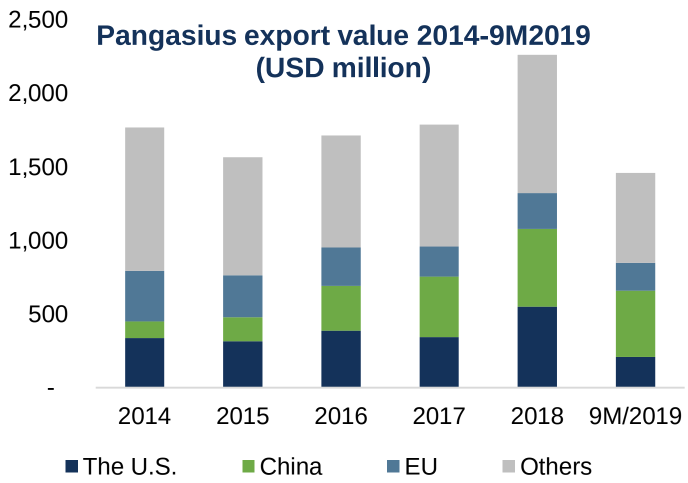
Between 2015 and 2018, pangasius prices increased due to relatively stable demand in export markets. However, since the beginning of 2019, pangasius prices began to decline rapidly, down 42% from 34,500 VND/kg in Q4 2018 to 20,100/kg/VND in Q3 2019.

The cause of this significant decrease is due to (1) A strong rise in pangasius supply in Mekong Delta caused by farmer's expectation in price growth momentum since 2018, while (2) Slower demand in export markets because of high inventories.

The falling in pangasius price caused strong losses for farmers in the Mekong Delta. According to our estimates, the current market price of pangasius of about 20,000 VND/kg is 10%-15% lower than the production cost of pangasius. Till this moment, the price of raw pangasius has not shown any sign of recovery yet. Pangasius exporting enterprises having their farming areas now focus on harvesting fish in their farming areas and help purchase fish from farmers.

According to VASEP, pangasius price at the end of 2019 is low and hard to rebound due to the impact of the difficult export situation.

2. Strong fall in other export markets, especially in the U.S., offset turnover from exporting to China



Sources: VASEP, FPTS Research

Due to the slowdown movement of pangasius price, Vietnam's pangasius export in the first 9M2019 experienced a sharp decline, valued about USD 1.46 billion, an 8% decrease over the same period last year. The export price is no longer maintained as high as in 2018 due to shrinking demand and high inventory.

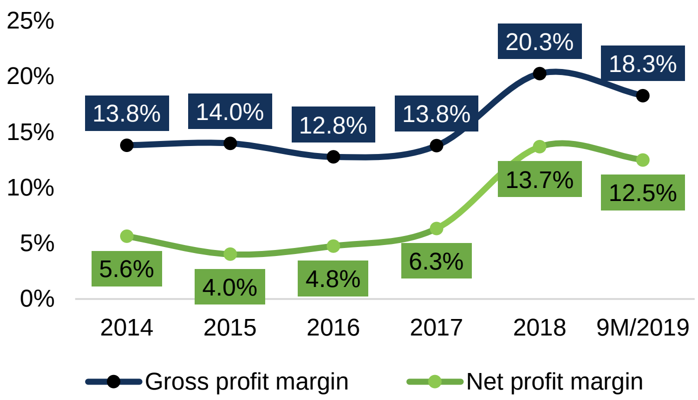
Despite the difficult export situation to the U.S., main market, in which the export value has decreased by 43.6% y-o-y to reach only USD 208.3 million in 9M2019, the export value to the Chinese market has still grown positively with an increase of 19.6% y-o-y, reaching a value of 450.7 million USD.

Significant improvement in exports to China market was due to the support of (1) Enhancing the perspective of Vietnam's pangasius by shifting from provincial trading to official national trading, (2) Increasing preference of Chinese people towards pangasius products in restaurants, hotels, etc., (3) VAT on imported seafood reduced from 10% to 9% (effective from April 1, 2019), (4) the African Swine Ferver (ASF) in China broke out and spread since the beginning of 2019 causing strong increase in pork price, thereby indirectly improving the demand for substitutes, including Vietnam's pangasius.

The pangasius export in Q4 2019 is estimated to be improved, because of the peak buying period in the exporting markets to reserve for major holidays. According to VASEP's estimation, Vietnam's pangasius export in 2019 is over USD 2.2 billion (-3% y-o-y).

3. Difficult export activities lowered the profit margin of Vietnamese pangasius enterprises

Gross profit margin and net profit margin of pangasius industry



Note: Based on data of VHC, ANV, IDI, ABT, ACL

Source: VASEP, FPTS Research

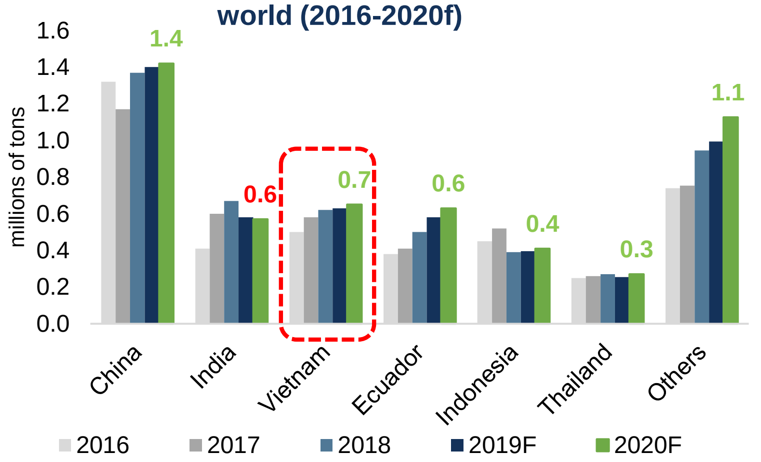
Compared with the gross profit margin (GPM) of the shrimp segment, the pangasius segment's GPM is higher, due to the lower competition from pangasius export thanks to Vietnam's absolute advantage in the global market.

In 2018, the segment achieved outstanding results thanks to a significant improvement in consumption demand, the sharp increase in export price caused the gross profit margin to increase from an average of 14% between 2014 and 2017 to 20% in 2018. However, the segment's GPM decreased in 9M2019, dropped to 18% due to slower demand, causing low export price. Accordingly, the net profit margin is also down to 12% compared to 14% in 2018.

C. INDUSTRY OUTLOOK 2020

I. Tough competition will continue when the supply is projected to remain strong growth

Production of aquaculture shrimp in the world (2016-2020f)



Sources: FAO (2018), Global Outlook for Aquaculture Leadership (GOAL-2019), FPTS Research

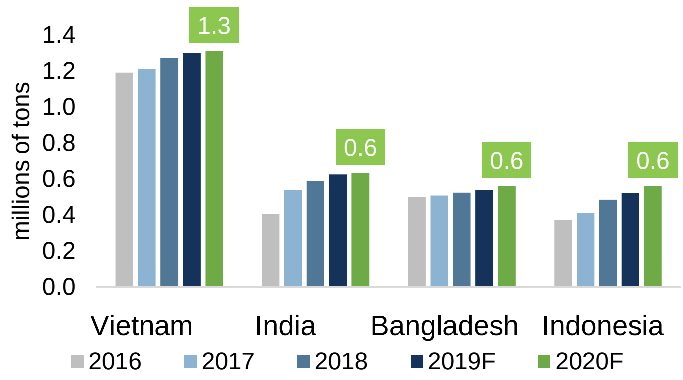
1. Shrimp segment:

Food and Agriculture Organization (FAO) forecasts that global shrimp production in 2020 will increase up to 5 million tons (+2% y-o-y). In particular, the supply growth comes from China (+1% y-o-y), Vietnam (+3% y-o-y), Ecuador (+9% y-o-y), Indonesia (+4% y-o-y), Thailand (+6% y-o-y). Meanwhile, India's shrimp production is estimated to decrease by 2% y-o-y due to concerns about the impact of diseases on India's shrimp farmers.

Specific analysis of three largest shrimp exporters in the world (including India, Vietnam, and Ecuador):

- Despite having many competitive advantages thanks to low shrimp farming costs, shrimp production of India is not stable due to weather and diseases. Indian shrimp production in 2020 is estimated to decrease, which will be a great opportunity for shrimp exporting countries to increase market share, including Vietnam.
- Meanwhile, Ecuador is gradually showing as a prominent competitor in the global shrimp market, when Ecuador's shrimp farming technology has developed rapidly and the quality of shrimp is highly recognized in export markets. Therefore, we assess that Ecuador is likely to be the most remarkable competitor of Vietnam's shrimp in 2020.
- Vietnam's shrimp production in 2020 is forecasted to reach about 0.7 million tons (+3% y-o-y). This is an optimistic signal for Vietnam's shrimp export activities, accordingly, the global shrimp supply also increases, which means that competitive pressure will continue to increase in the global shrimp market, so Vietnam's shrimp exporting enterprises need to make efforts to resolve internal difficulties and take advantage of opportunities to improve the competitiveness of Vietnam's shrimp.

Production of pangasius in the world (2016-2020F)



Sources: Global Outlook for Aquaculture Leadership (GOAL), FPTS Research

2. Pangasius segment:

Global pangasius production is expected to continue to grow by Global Leadership in Aquaculture conference (GOAL), reach about 3 million tons in 2020, an increase of 5% compared to 2018. In particular, Vietnam's pangasius production is estimated to increase slightly, reaching about 1.31 million tons. Besides, pangasius production of India, Bangladesh, and Indonesia also increased positively to 0.64 million tons, 0.56 million tons and 0.56 million tons, respectively.

Therefore, despite owning the absolute advantage of exporting pangasius in the global and the increasing competition of alternative whitefish species, Vietnam's pangasius export value may increase in 2020.

II. Vietnam seafood export value to the EU will be recovered from 2020 thanks to enjoying preferential tax from the Vietnam – Europe Free Trade Agreement (EVFTA)

Vietnam has a great opportunity in the EU market when the EVFTA was signed in June 2019 and is expected to come into force in 2020. We believe that this agreement will be a lever, creating the most favorable conditions for Vietnam to boost seafood export value in general, especially two key products including shrimp and pangasius to the E.U. market.

Preferential tax for shrimp products when the EVFTA takes effect

HS Code	Description	Percent of total shrimp export value to Europe in 2018	MFN Tariff	GSP Tariff	EVFTA Tariff	Comment
030616, 030617, 030626, 030627	Raw of shrimps and prawns	73%	12%	4,2%	0%	shall be eliminated entirely and such goods shall be free of any customs duty from the date of entry into force of this Agreement
160521, 160529	Prepared or preserved of shrimps and prawns	27%	20%	7,0%	0%	shall be removed in eight equal annual stages beginning on the date of entry into force of this Agreement

Sources: WTO and International Trade Center, European Commission, FPTS Research

For shrimp products, when EVFTA Agreement comes into effect, import taxes for raw shrimp will be reduced from 4.2% to 0% and processed shrimp will be reduced from 7% to 0% after seven years.

Preferential taxes for pangasius products when the EVFTA Agreement takes effect

HS code	Description	Percent of total pangasius export value to Europe in 2018	MFN Tariff	GSP Tariff	EVFTA Tariff	Comment
030272	Fresh or chilled of pangasius	3%	8%	4,5%	0%	To be removed in four equal annual stages beginning on the date of entry into force of this Agreement
030324	Frozen of pangasius	4%	8%	4,5%	0%	
030432	Fresh or chilled fillets of pangasius	8%	9%	5,5%	0%	
030462	Frozen fillets of pangasius	85%	9%	5,5%	0%	

Sources: WTO and International Trade Center, European Commission, FPTS Research

For pangasius products, the main pangasius products exported to the EU market are frozen pangasius fillets (accounting for about 85% of the total pangasius export value), currently at 5.5% tax rate will be reduced to 0%, and other pangasius products (including HS code: 030272, 03024, 030432) will be also reduced from 4.5-5.5% to 0% after three years.

Currently, Vietnam's seafood products are enjoying preferential tax rates under General System of Preferences (GSP) of the EU. However, when the EVFTA Agreement comes into effect, the preferential tax rate will be based on the Most Favored Nation (MFN) Status, until it is lower than the current GSP taxes and move towards 0%.

Therefore, if the EVFTA Agreement comes into effect in 2020, the preferential tax of raw shrimp will be reduced to 0% immediately, while processed shrimp and pangasius products will still enjoy the current GSP. Therefore, in 2020, it is expected that only raw shrimp exports will benefit the most exporting to the EU market.

Moreover, Vietnam's aquaculture in 2020 has many opportunities to increase export value when there are many optimistic signals in export markets:

- On October 11, 2019, the U.S. Department of Commerce (DOC) announces the preliminary decision in the 15th period of review (POR15). Accordingly, the preliminary taxes for mandatory defendants and voluntary respondents is USD 0.00/kg; The Vietnam-wide tax rate is USD 2.39 /kg. This tax rate is much lower than the final result of the previous review (POR14, the tax rate from USD 1.37/kg to USD 2.39/kg). However, the final result will be announced by the DOC in the official conclusion after 120 days after a preliminary conclusion (expected around February 2020). We believe that the official result will be positive thanks to the efforts of the whole pangasius enterprises gradually trying to overcome technical and trade barriers to increase export value to the U.S. market. Moreover, on October 31, 2019, the U.S. Department of Agriculture (USDA) officially recognized Vietnam’s food safety control system on catfish as equivalent to American regulations. We assess that it will help to open great opportunities for Vietnam’s pangasius exporters to recover their export value and also create favorable conditions to export to many other markets.
- And 2020 will also be the year of many major events in the key export markets of Vietnam's seafood, including the 2020 Tokyo Olympic Games in Japan and the European Football Championship 2020, etc. The big events will take place leading a higher demand for food.

D. SUMMARY

Based on the current situation and supporting factors in the future, we assess that Vietnam's aquaculture in general, shrimp and pangasius segment in particular in 2020 will be more positive than in 2019, thanks to:

- Aquaculture areas of enterprises have been expanded and invested in with high-tech farming orientation, helping to improve their self-provided input and limit the impact of fluctuations in raw material prices.
- Export prices are expected to stabilize gradually as inventories in export markets begin to decline. Meanwhile, demand and competitive advantage of Vietnam’s aquaculture increase due to the significant support from trade agreements, especially the EVFTA.

At the same time, Vietnam's aquaculture is still facing many difficulties including:

- High production costs
- Improving quality control and food safety in the value chain to meet the standard requirements in export markets
- Taking advantage of opportunities for sustainable development, increasing competitive abilities in the global market.

E. WATCH LIST

Ticker	Market Cap. Jan 08, 2019 (bil. VND)	Revenue 9M2019 (bil. VND)	Net Income 9M2019 (bil. VND)	Net Income Growth	Net Income Margin	ROE (TTM)	P/E
MPC	3,207	12,730	387	-35.6%	3.04%	10%	4.1

MPC

- **Minh Phu Seafood Corporation (UPCOM: MPC)** is among the largest shrimp exporters in the world and is the largest shrimp exporter in Vietnam (accounting for about 21.1% of Vietnam's shrimp export market share in 2018).
- MPC owns 2 farming areas with a total area of 900 hectares including Kien Giang and Loc An (Ba Ria-Vung Tau) farming areas, shrimp raw material harvested from these two areas can meet about 10% of demand, the rest is purchased by shrimp farmers in the Mekong Delta provinces and partly imported from India. Therefore, MPC's business results are greatly affected by fluctuations in raw shrimp prices in the market.
- MPC's main export markets are the U.S., Japan, and the E.U. with a proportion of total sales of 41%, 21%, 9% respectively in 2018. In the first 9 months of 2019, the company's business results face difficulties in exporting to the largest market - the U.S., because Vietnam shrimp in this market heavily competes with low-price shrimp from India, Indonesia, and Ecuador. In addition, the company is short of input material shrimp.
- In 2020, MPC is planning to expand the shrimp farming area, as well as applying high-tech shrimp farming techniques to reduce production costs.

Ticker	Market Cap. Jan 08, 2019 (bil. VND)	Revenue 9M2019 (bil. VND)	Net Income 9M2019 (bil. VND)	Net Income Growth	Net Income Margin	ROE (TTM)	P/E
FMC	1,254	2,748	168	+41.2%	6.12%	30%	4.8

FMC

- The core business of **Sao Ta Foods Joint Stock Company (HOSE: FMC)** is processing frozen shrimp. In 2018, FMC is the 3rd largest exporter in Vietnam's shrimp segment.
- The main products of FMC are processed shrimp such as steamed shrimp, breaded shrimp, pre-fried shrimp, etc. FMC’s products export to the main markets including the E.U., Japan, and the U.S., accounting for 42%, 26%, and 13% respectively in 2018. Thanks to the strategy of early focus on exporting to the E.U. market, FMC's business results grow more stably than other enterprises in the industry.
- Currently, FMC is able to self-provided 20% of raw shrimp production through a farming area of about 160 hectares and about 80% of raw shrimp has to be bought from outside sources. Thus, FMC's profit is sensitive to fluctuations in shrimp raw material prices.
- Recently, FMC expands shrimp farming area nearly 90 hectares, expected to start operating from the beginning of 2020, increase FMC's self-provided shrimp proportion from 20% to 30%. Moreover, the 5,000 tons cold storage will start operating in 2020, contribute to save costs and improve the company's gross profit margin.

VHC	7,387	5,696	981	-5.3%	17.2%	29%	5.4

- **Vinh Hoan Corporation (HOSE: VHC)** is the company with the largest market share in the Vietnam pangasius export segment (15.3% market share in 2018) and also is the largest pangasius supplier in the world. VHC has the advantage of product quality, traceability and high reputation in export markets.
- The company owns a farming area of nearly 600 hectares, can provide about 55% of raw pangasius, the rest is purchased from farmers in the area of the Mekong Delta.
- VHC's main products include pangasius fillets, fishmeal, fish oil, collagen, and gelatin. Pangasius fillets' exporting sales accounts for about 91% in 2018.
- VHC's main export markets include the U.S., China and the EU with a proportion of total sales of 68%, 11% and 6% respectively.
- In 2020, VHC's self-provided proportion is expected to increase to 60% thanks to the development of a new 220 hectares farming area at Tan Hung district, Long An province. Besides, from July 2020, the new collagen and gelatin factory of VHC will also start operating, enhancing the total capacity of collagen and gelatin factories to 3,500 tons of products per year.

ANV	2,885	3,102	506	+64.6%	16.3%	37%	3.6

- The core business of **Nam Viet Joint Stock Company (HOSE: ANV)** is exporting frozen pangasius fillet (accounting for 84% of sales in 2018) and is the 3rd largest pangasius exporter of Vietnam.
- ANV has the ability to control about 30% of seeds, 100% of feeds and 100% raw pangasius through the 330 hectares farming areas. These advantages help ANV to control better its GPM, especially when raw material pangasius prices have increased sharply.
- The main export markets of ANV are China, the E.U., and the U.S. with the proportion of total sales in 2018 of 20%, 14%, and 13% respectively. In the first 9 months of 2019, ANV's export value to China market has grown strongly, accounting for about 33% of ANV's total revenue. However, ANV only distributes pangasius products through an exclusive partnership, Shanghai Fenglei International Trading Co., Ltd, so we assess that ANV's business results depend on the trading situation with this partner.
- Since the beginning of 2018, the company has developed the Binh Phu high-tech farming area of 600 hectares (including 150 hectares for hatchery and 450 hectares for raw pangasius). The total estimated investment capital is about 4,000 billion VND and to be expected to complete in the middle of 2020. This area is expected to help ANV to fully control raw pangasius, which is an opportunity for ANV to save costs and increase profits for the company in the future.

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PHARMACEUTICAL

ADVANTAGES FROM LEGAL POLICIES FOR QUALITY DOMESTIC MANUFACTURERS

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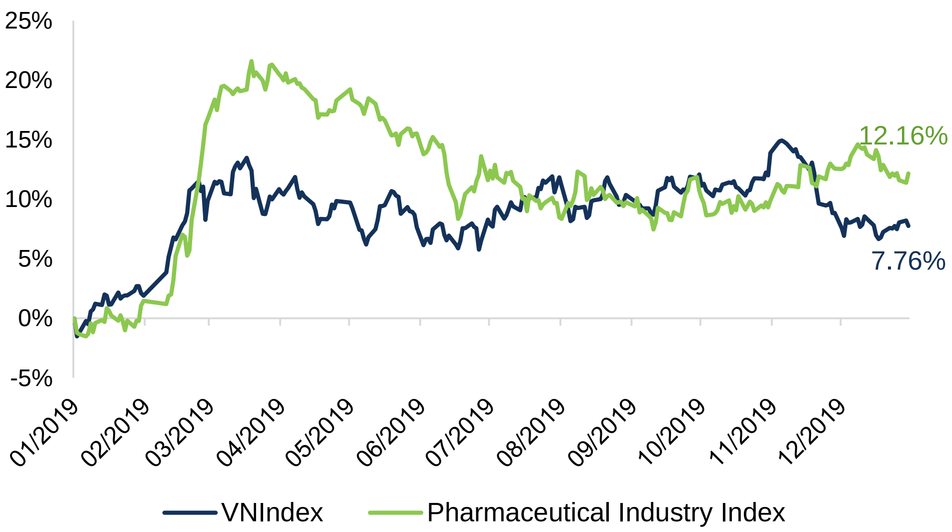
Pharmaceutical Industry Index and VNIndex Movement



A. INDUSTRY HIGHLIGHTS

I. Active pharmaceutical ingredients (APIs) are dependent on imported resources

The value of imported APIs account for approximately 90% of API demand in Vietnam.

- **For patented and generic drugs**, the pharmaceutical technology in Vietnam is not capable of manufacturing active pharmaceutical substances and key starting materials.
- **For herbal medicine ingredients**, domestic suppliers cannot meet the industry's demand and cannot compete against low-priced ones smuggled through the borders.

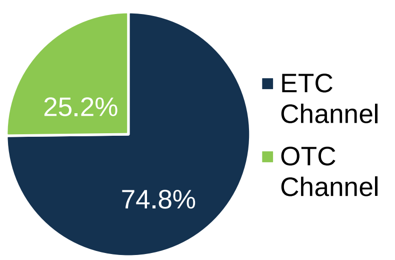
II. WHO-GMP is the minimum and homogenous standard for domestic manufacturers

Certification	Number of domestic manufacturers	Manufacturer	Description
WHO-GMP	176	TRA, DBD, PMC, DP3, DCL, etc.	Minimum manufacturing standard requirement for domestic pharmaceutical firms, according to Decision No.3886/2004/QD-BYT.
PIC/s-GMP	1	DHG	Manufacturing standard certified by PIC/s members.
J-GMP	1	Savipharm	Manufacturing standard certified by Japanese Pharmaceuticals and Medical Devices Agency (PMDA).
EU-GMP	2	IMP, PME	Among the most stringent manufacturing standard globally, certified by most European medicine agencies.

Source: Ministry of Health (Vietnam)

III. Consumption value of imported pharmaceutical drugs is dominant over domestic products

Vietnamese pharmaceutical sales breakdown based on distribution channel (2018-2019)

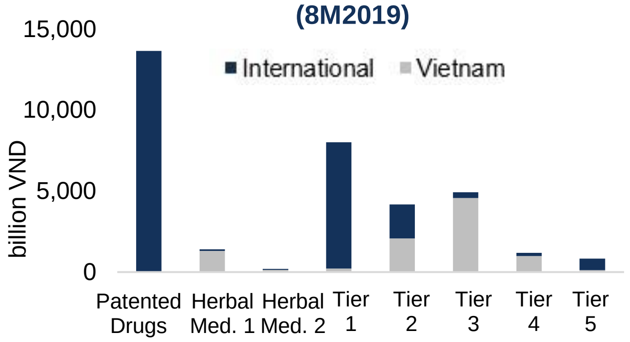


Source: BMI

Pharmaceutical products in Vietnam are distributed from manufacturers to patients via 2 channels, ETC (ethical drugs, accounts for 74.8% of sales) and OTC (over-the-counter, accounts for the remaining 25.2%). Foreign product sales are dominant over domestic product sales in both channels.

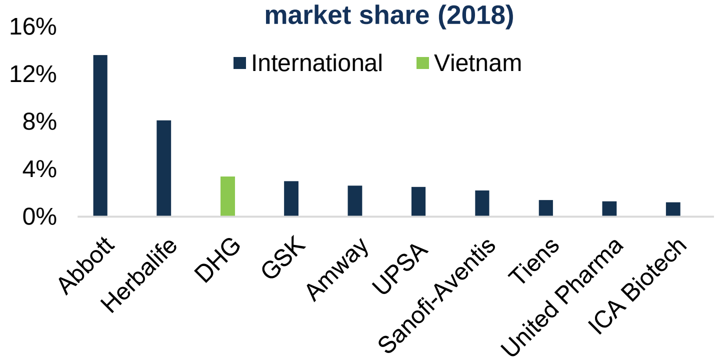
- In the ETC channel, foreign pharmaceutical drug value takes up approximately 73% of total bid value. Most of these products belong to the high-quality bidding tiers, including the patented drug tier and tier 1.
- OTC channel: there are many domestic pharmaceutical medicine and dietary supplement manufacturers; however, their market shares are modest. Among 10 leading manufacturers in the OTC channel (whose sales take up about 40% of OTC sales), DHG is the only domestic manufacturer and accounts for only 3% of OTC sales.

ETC value breakdown based on tiers, (8M2019)



Source: Ministry of Health

10 OTC leading manufacturers in terms of market share (2018)

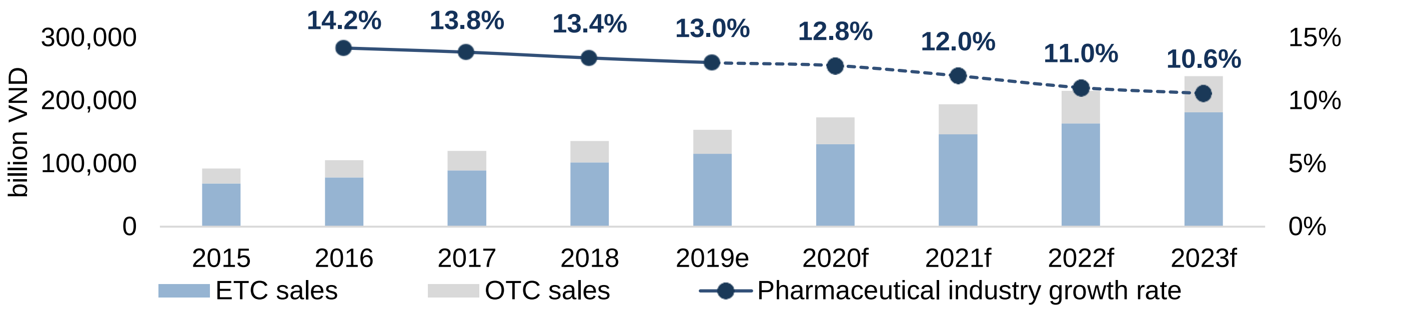


Source: Euromonitor

B. INDUSTRY REVIEW 2019

I. Pharmaceutical growth is driven by sales from ETC channel

Domestic pharmaceutical sales growth (2015-2020f)



Source: BMI

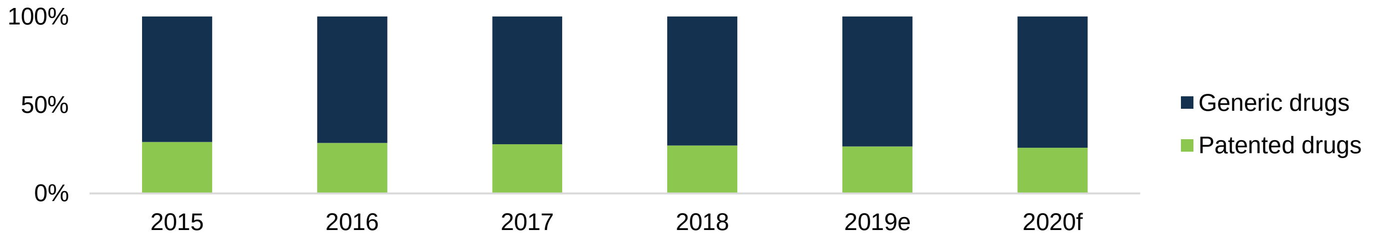
1. Sales from the ETC channel have been dominant over sales from the OTC channel

a. Sales growth of the ETC channel was driven with sales of generic drugs

Sales from the ETC channel in 2019 accounts for 75.1% of all pharmaceutical product sales in Vietnam and has grown at a rate of 13% since 2018 due to the following reasons:

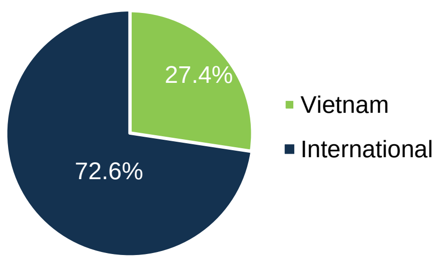
- Health insurance coverage has gone up from 28% to 90% of the population from 2005 to 2019. The Government has been promoting for national health insurance with various approaches including financially supporting the poor and increasing charges for non-covered services.
- The number of hospitals has been increasing as they benefit from a supportive tax policy of 0% in the first 4 years of operation and 10% of the following years.
- Generic drug sales growth has surged between 2015 and 2019e with a CAGR of 15.03% annually thanks to the Ministry of Health's orientation towards the replacement of patented drugs with generic ones (Pharmaceutical Law 105/2016/QH13).

Value of types of drugs in the ETC channel (2015-2019e)



b. Value of foreign products is dominant the pharmaceutical market

Value of ETC products in terms of origins (8M2019)



Source: Ministry of Health (Vietnam)

The value of foreign products accounts for about 73% of ETC channel's total bid value in Vietnam (as of August 2019) due to Vietnam's pharmaceutical manufacturers' inability to bid in the largest tiers.

- Domestic manufacturers are not yet capable of bidding in the patented drug tier because of their (i) limited technology and (ii) unwillingness to invest in researching and registering for invented products.
- In tier 1 of the generic drug group, domestic EU-GMP qualified manufacturers only consist of IMP and PME, both of which account for only about 5% of the value of tier 1 as of August 2019.

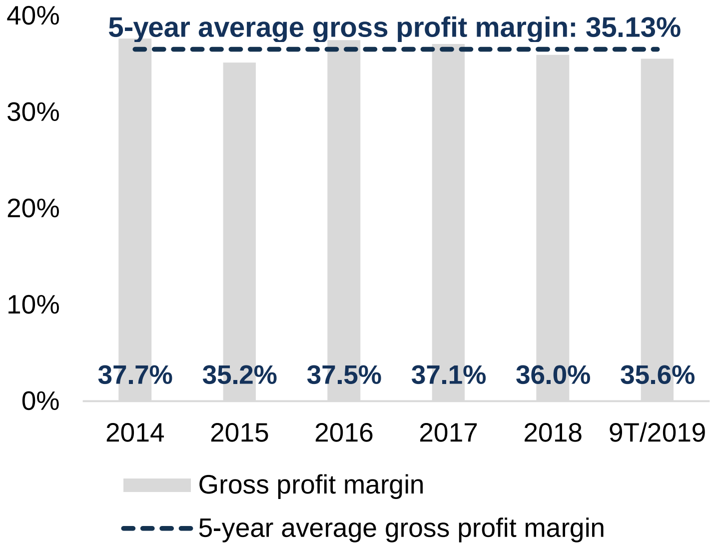
2. The proportion of sales from the OTC channel has been shrinking

The value of sales from the OTC channel accounts for 24.9% of total pharmaceutical sales in Vietnam, which has dropped from 26.7% in 2016. Sales growth of the OTC channel has reached 11.9% in 2019, gradually decreasing from 13.08% in 2016 because of the Government's stricter control:

- The number of pharmaceutical substances allowed to be sold without any prescriptions in the OTC channel was reduced from 250 to 243 substances (Circular No.07/2017/TT-BYT).
- Antibiotics sold without prescriptions account for about 90% of all antibiotic sales in Vietnam, which have been restricted as an approach to control the antibiotic resistance (AR) situation (Decision 4041/QD-BYT).

II. Gross profit margin slightly decreased due to APIs' price rising

Average gross profit margin of major domestic pharmaceutical manufacturers (2015-2019e)



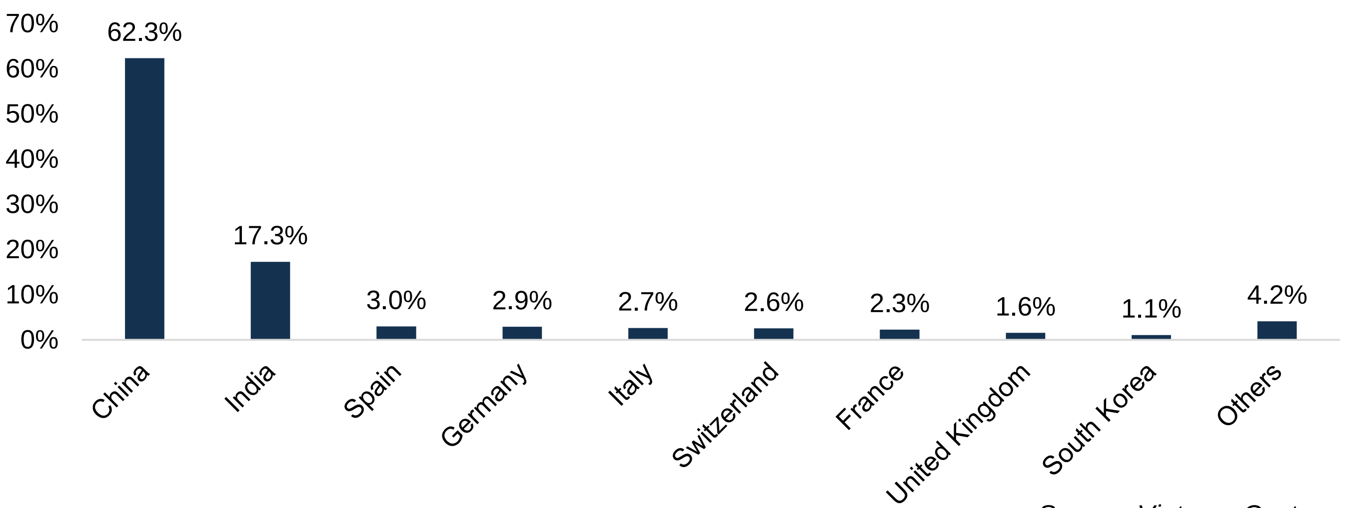
Source: FPTS Research. Average figures were based on data collected from the following listed companies: DBD, DBT, DCL, DHG, DHT, DMC, DP3, IMP, LDP, MKP, OPC, PMC, PME, SPM, TRA, VDP

The average gross profit margin of major domestic pharmaceutical manufacturers as of September 2019 had a decreasing tendency; however, the movement was not significant.

The main cause of such downward movement was the increase of APIs price imported from China (which accounts for 62.34% of total imported APIs) and India (which accounts for 17.32% of total imported APIs):

- The price hike of imported APIs from China was due to environmental issues as China Food and Drug Administration (CFDA) and China Ministry of Environmental Protection (MEP) closed all unqualified factories, equivalent to nearly 40% of all Chinese API and KSM manufacturers. This situation had led to a lack of supply of APIs.
- The price of imported APIs from India also rose because 60% of the value of their key starting materials (KSMs) in India was dependent on Chinese suppliers.

Value of imported pharmaceutical ingredients based on sources (10M2019)



Source: Vietnam Customs

III. Circular No.15/2019/TT-BYT imposed stricter manufacturing requirements

1. Pharmaceutical products: bidding policies in the ETC channel re-divided bidding tiers based on manufacturing certifications

a. Herbal products: Advantages for manufacturers with WHO-GACP certified ingredients

Circular No.11/2016/TT-BYT (expired)		Circular No.15/2019/TT-BYT (starting Oct-2019)		Comments
Tier 1	WHO-GMP certified manufacturing standard	Tier 1	WHO-GACP certified ingredients, WHO-GMP certified manufacturing process	Manufacturers possessing quality ingredient sources, such as TRA, OPC, & NDC, can avoid competition against lower priced and lower quality products.
Tier 2	Non-WHO-GMP manufacturing standard	Tier 2	WHO-GMP certified manufacturing process	
		Tier 3	Non-WHO-GMP certified manufacturing process	

b. Patented and generic drugs: stricter requirements in higher tiers after Circular No.15/2019/TT-BYT

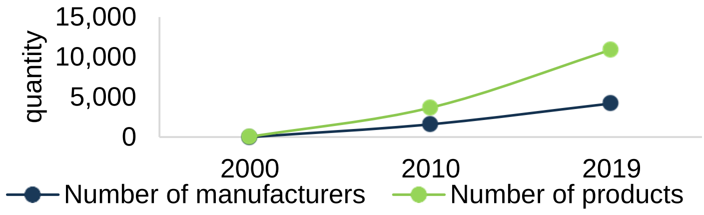
Compared to Circular No.11/2016/TT-BYT, Circular No.15/2019/TT-BYT (starting October 2019) offers a stricter list of agencies capable of certifying GMP standards for domestic manufacturers. For example, EU-GMP manufacturers certified by non-Stringent Regulatory Authority (SRA) members would have to bid in tier 2 instead of tier 1. Moreover, PIC/s-GMP certified by non-ICH members would have to bid in lower tiers instead of tier 2 after October 2019.

Impacts of Circular No.15/2019/TT-BYT on domestic manufacturers heading for higher manufacturing standards:

Positive	Savipharm (J-GMP), IMP (EU-GMP) and PME (EU-GMP) are the only 3 manufacturers able to bid in tier 1 and 2.	These firms possess a competitive advantage against foreign manufacturers thanks to the domestic legal policies.
Neutral	A few manufacturers postponed their upgrading manufacturing process and adjusted their manufacturing standard plan to comply with the new circular such as TRA.	In the short term, these firms' expanding prospects and growths tend to face a slowdown. However, they will be able to expand and grow more efficiently after getting higher manufacturing standard.
Negative	Several manufacturers, including DHG, headed for a higher manufacturing standard but were not certified by the right agencies.	These firms have lost not only their manufacturing standard competitive advantage against other domestic manufacturers but also their higher bidding tier qualifications.

2. HS-GMP standard requires stricter supplement product manufacturing process

Number of supplement manufacturers and their products (2000-2019)



Sources: Vietnam Association of Functional Foods (VAFF), Vietnam Food Administration (VFA)

Decree No.15/2018/ND-CP, has required supplement product and functional food manufacturers to comply with HS-GMP[3] standard or above before July 2019. Currently, there are approximately 300 out of 4,190 manufacturers in Vietnam qualified for the HS-GMP. This means the opportunities after the next two years[4] will belong to these HS-GMP certified manufacturers as the number of certified suppliers has dropped significantly.

[3] HS-GMP: the minimum good manufacturing practice standard for supplement products and functional foods in Vietnam. The guidelines were significantly based on ASEAN-GMP (1996). Currently, there is no other lower standard being acknowledged or used in Vietnam.

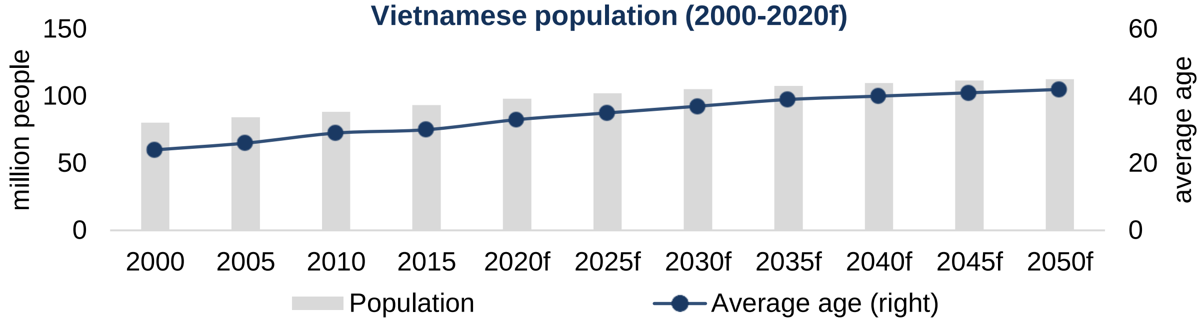
[4] Non-HS-GMP products manufactured before July 1st, 2019 are allowed to circulated and traded within 24 months (Vietnam Food Administration, Ministry of Health).

C. INDUSTRY OUTLOOK 2020

I. Demand for pharmaceutical products increases due to population and disease characteristics

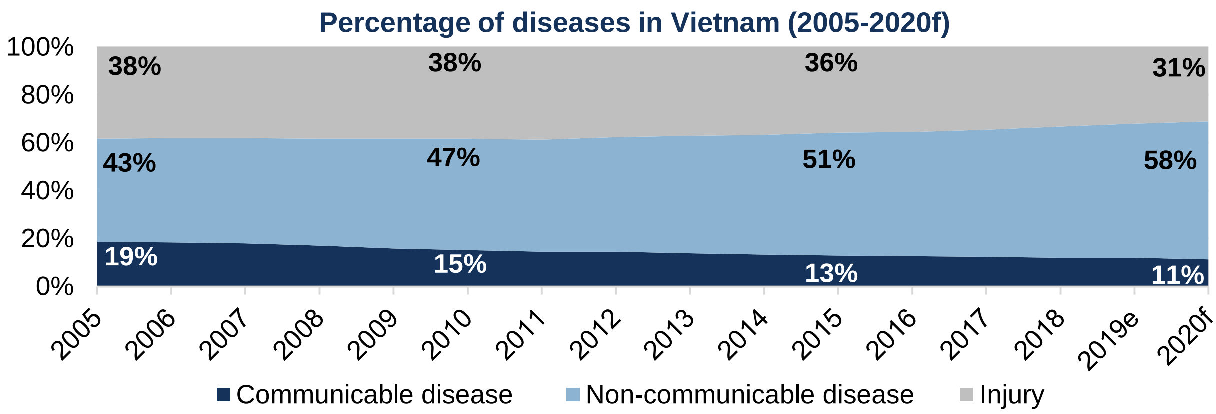
Pharmaceutical product consumption in Vietnam has been growing with a CAGR of 12%/year within the last 10 years. This two-figure growth rate is expected to maintain at least until 2023. The main drivers for such demand come from the changes in the characteristics of the Vietnamese population and diseases.

- The Vietnamese population is estimated to increase at the rate of 1.24% in 2020. At the same time, the Vietnamese population is facing an aging tendency. As a result, the average age of the country will go up to 33 years in 2020 (compared to 30 years in 2015).



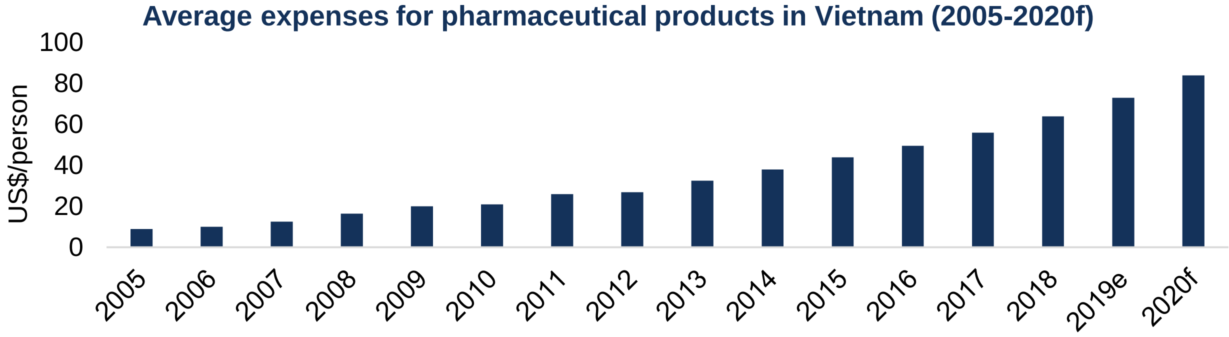
Source: DansoVietnam

- Non-communicable diseases, including heart-related, respiratory and oncological diseases, tend to increase.



Source: BMI

- The average expenses for pharmaceutical products in Vietnam are estimated to go up from US$73/person in 2019 to US$84/person in 2020.



Source: International Journal of Environmental Research and Public Health

II. Domestic manufacturers have a competitive advantage against foreign manufacturers thanks to supportive legal policies

As of 2018, domestic pharmaceutical manufacturers can only provide about 52.5% domestic demand. The Ministry of Health has imposed certain priorities for the Vietnamese manufacturers:

- **Law of Pharmacy 105/2016/QH13 (Chapter II – Note 7)** prioritizes domestic bidders if they can provide comparable products with foreign bidders in terms of quality, quantity and supply ability.
- **Circular No.03/2019/TT-BYT** increases the number of substances prioritized for domestic bidders from 146 to 640 substances.

As a result, domestic manufacturers have been upgrading their manufacturing standard to leverage these policies:

- IMP and PME 2 pioneers in constructing EU-GMP production lines to bid in tier 1 and 2.
- Savipharm has been heading for opportunities in tier 2 which requires lower standards than tier 1.
- Several other manufacturers are trying to upgrade/construct to possess at least one EU-GMP and PIC/s-GMP production line to bid in tier 1 and tier 2.

D. SUMMARY

In 2020, the pharmaceutical industry in Vietnam will be **MORE FAVORABLE** with the following trends:

- The price of imported APIs from China and India continues to gradually hike.
- Manufacturing standards for pharmaceutical products and supplemental products continues to be enhanced and monitored strictly.
- Demand for pharmaceutical products continue to increase as the Vietnamese population is aging and the rate of non-communicable diseases is going up.
- The pharmaceutical industry’s growth drivers will come from the ETC channel, in which sales of generic drugs will play an important role.

Because of the above trends, we believe that only domestic pharmaceutical manufacturers investing in quality production lines (EU-GMP certified for patented and generic drugs, WHO-GACP certified for ingredients of herbal medicines, and HS-GMP certified for supplemental and functional foods) would be able to expand (to offset the supply shortage), to participate in new markets (including higher ETC tiers and exporting opportunities), and leverage the legal policy priorities to compete against foreign manufacturers.

E. WATCH LIST

<table>
<tr><th>Ticker</th><th>Market Cap.
Jan 08, 2019
(bil. VND)</th><th>Revenue
9M2019
(bil. VND)</th><th>Net Income
9M2019
(bil. VND)</th><th>Net Income
Growth</th><th>Net Income
Margin</th><th>ROE
(TTM)</th><th>P/E</th></tr>
<tr><td rowspan="2">IMP</td><td>2,396</td><td>866.4</td><td>110.5</td><td>+11.3%</td><td>12.7%</td><td>10.3%</td><td>16.0</td></tr>
<tr><td colspan="7">IMP manufactures mainly antibiotics and specialized medicines. This firm is a domestic pioneer in pursuing the EU-GMP standard for its 3 factories.
• Between 2013-2016, IMP faced difficulties in the ETC channel because of their high priced products.
• From 2017 to now, IMP has gradually returned to the ETC channel thanks to supportive legal policies for domestic manufacturers. Its factory “IMP 3” was also certified for the EU-GMP standard.
• Its factory “IMP2”, of which the capacity is estimated to reach 20-25% in 2020, and its factory “IMP 4” will begin operating commercially from Q3/2020. With the contributions from these two new EU-GMP factories, IMP will be able to maintain its growth rate above 10% per year.</td></tr>
<tr><td rowspan="2">PME</td><td>4,013</td><td>1,328</td><td>224.1</td><td>-1.7%</td><td>16.8%</td><td>16%</td><td>12.5</td></tr>
<tr><td colspan="7">PME manufactures mainly antibiotics and specialized medicines. It possesses 2 EU-GMP production lines and 1 EU-GMP production line.
• Stada has been a strategic shareholder which played an important role in supporting PME with technological advance, managerial and operational activities.
• Before 2018, PME maintained a revenue ratio of 50/50 for sales from the ETC and sales from the OTC channel. However, PME has planned to raise the OTC sales ratio to 65% by 2021.
• PME’s new EU-GMP non-beta-lactam factory will begin operating from Q2 2020, opening up expanding opportunities for PME.</td></tr>
<tr><td rowspan="2">TRA</td><td>2,454</td><td>1,171</td><td>108</td><td>-3.5%</td><td>9.2%</td><td>15.5%</td><td>15.2</td></tr>
<tr><td colspan="7">TRA manufactures mainly herbal medicines and is capable of growing its own WHO-GACP qualified herbal ingredients.
• Sales from the OTC channel accounts for more than 90% of TRA’s revenue; however, the firm has planned to expand its sales from the ETC channel to change the structure of the OTC/ETC proportion to 70/30.
• Super Delta Pte., Ltd., representing Daewoong Pharmaceutical Co., Ltd., is a South Korean strategic shareholder which plays an important role in TRA’s plan to expand its generic drug production.
• TRA’s Hung Yen Generic Drug Factory is expected to finish upgrading its production lines to EU-GMP standard in 2022, helping TRA expanding its sales in higher tiers in the ETC channel.</td></tr>
</table>

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TEXTILE

NEGATIVE IMPACTS FROM TRADE WAR

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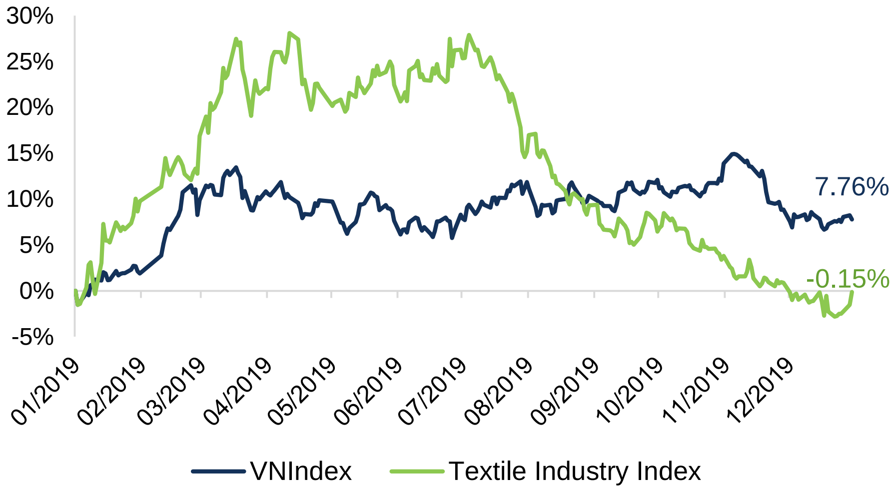
Textile Industry Index and VNIndex Movement



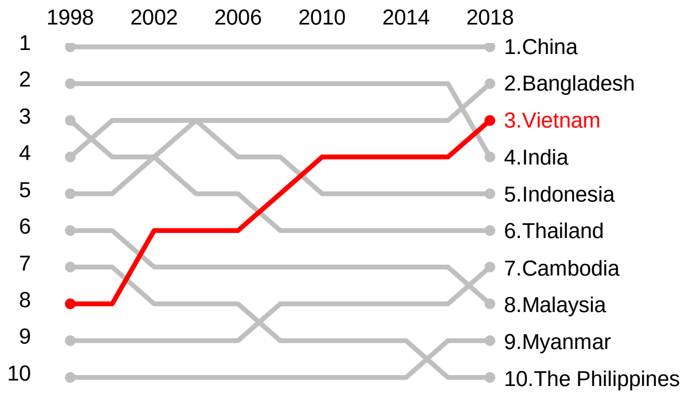
A. INDUSTRY HIGHLIGHTS

I. Current positions of Vietnam's textile and garment industry

Vietnam is the third textile and garment export country in the world, after China and Bangladesh (2018). With a double growth rate CAGR (1998-2018) reaching 17.3%, Vietnam is one of the countries having the highest textile export growth rate in the world.

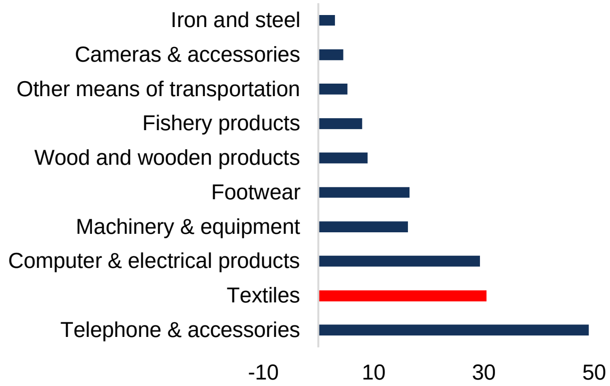
Since 2013, the textile and garment industry has continuously been the 2nd largest export industry of Vietnam, contributing to 15% of GDP in 2018.

Top 10 world textile exporting countries



Sources: UNCTAD, FPTS Research

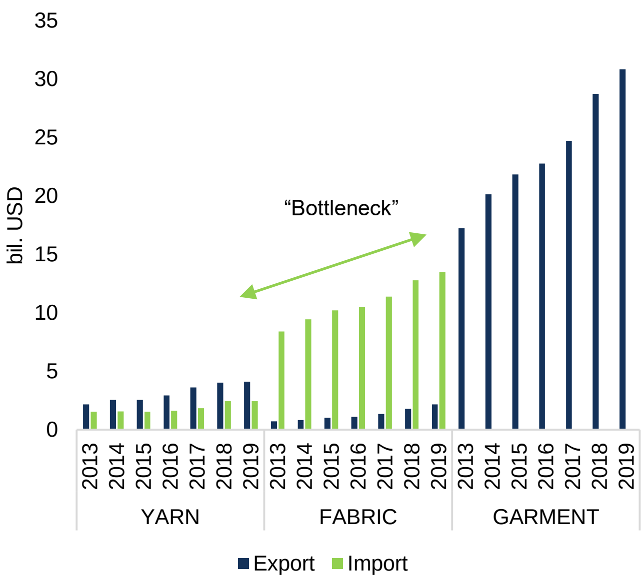
Top 10 key export industries of Vietnam 2018



Sources: Ministry of Industry and Trade, FPTS Research

II. The bottleneck in the fabric production stage is the weakness of Vietnam's textile and garment industry

Import - export balance of Vietnam's textile and garment industry



Sources: VISTA, FPTS Research

While over 70% of yarn production must be exported, garment enterprises have to import 70% of fabric to produce. This comes from 2 causes:

(1) Dyeing and the finishing fabric processes pollute the environment due to consuming lots of chemicals, standardized wastewater treatment systems require large investment capital and long recovery time.

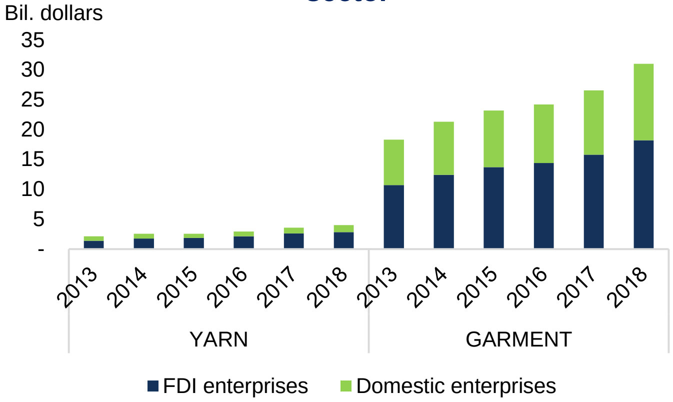
(2) Vietnam does not have an advantage in the scale of fabric production compared to China. Vietnam's fabric production scale is about 2 billion meters/year, while China's fabric production scale is about 90 billion meters/year. China's fabrics are always 30% cheaper than Vietnam's fabrics due to the economics of scale. China is also the largest fabric supplier of Vietnam, accounting for around 50% of market share over the years.

III. Export turnover mainly comes from FDI enterprises

Two stages contributing over 90% of the annual export turnover are yarn and garment productions mainly coming from FDI enterprises. FDI enterprises account for only 40% of the total number of textile and garment enterprises, thanks to the advantages of machinery, technology, and orders from the parent company, they contribute up to 70% of yarn export turnover and 59% of garment export turnover (2018).

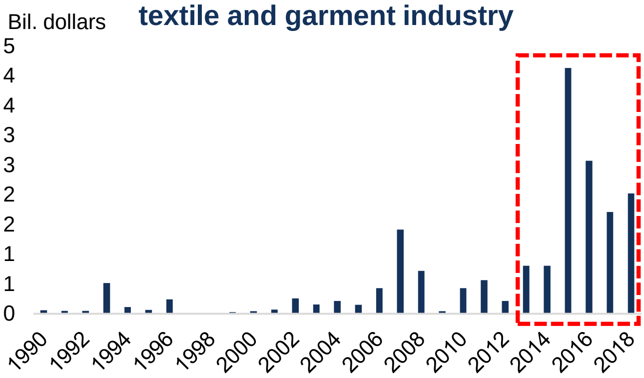
Since 2013, FDI inflows into Vietnam's textile and garment industry have increased sharply because of the opportunity to expand the market from 12 signed FTAs. Especially, CPTPP and EVFTA have market sizes of about 90 billion dollars and 250 billion dollars respectively. These two agreements with "rules of origin from yarn forward and fabric forward" have spurred FDI inflows to invest in the supporting industries such as yarn productions, textile dyeing, and finishing fabric.

Textile and garment export from FDI sector



Sources: General Department of Vietnam Customs, FPTS Research

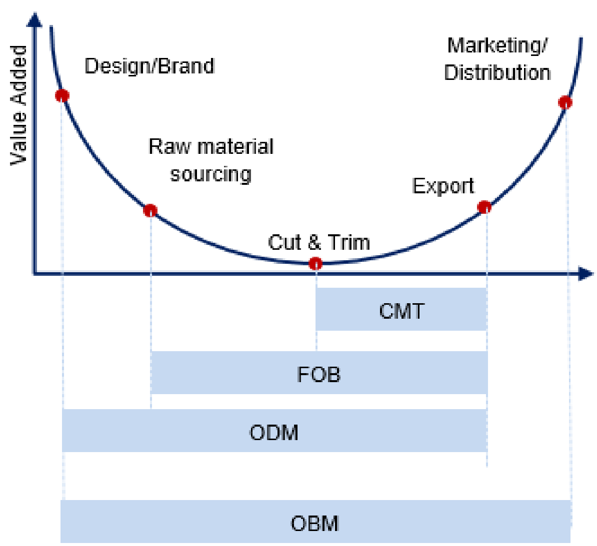
Foreign direct investment in Vietnam's textile and garment industry



Source: VISTA, FPTS Research

IV. High export turnover but low value-added

Value added in textile manufacturing



Source: FPTS Research

The majority of small and medium-sized textile and garment enterprises using the export method of CMT (receive raw materials from ordering party, cut and make, then export finished products). CMT is the lowest added value method, the profit earned is the cut and make fee. This is a labor-intensive stage. While Vietnam is gradually losing the advantage of cheap labor, the profit margin received will be narrower. Shifting to the higher added value methods such as FOB, ODM, and OBM is a development trend of the industry.

Leading enterprises such as Thanh Cong Textile Garment Investment Trading (TCM), Song Hong Garment (MSH), TNG Investment and Trading (TNG) have all switched to mainly producing under FOB method (buying raw materials, cut and make, then exporting finished products). FOB method has higher added value than CMT because besides getting processing fees like CMT, enterprises can also get profit from actively purchasing raw materials.

Other enterprises such as Viet Tien Garment Corporation (VGG), Garment 10 Corporation (M10), Nha Be Garment Corporation (MNB), besides manufacturing for export, they also have their own brand (OBM method). OBM method brings the highest added value but also requires businesses to take more responsibility such as doing market research, investment in distribution store chains, etc. In recent years, the penetration of the famous retail fashion brands such as H&M, Zara, and Uniqlo have made the domestic market more competitive.

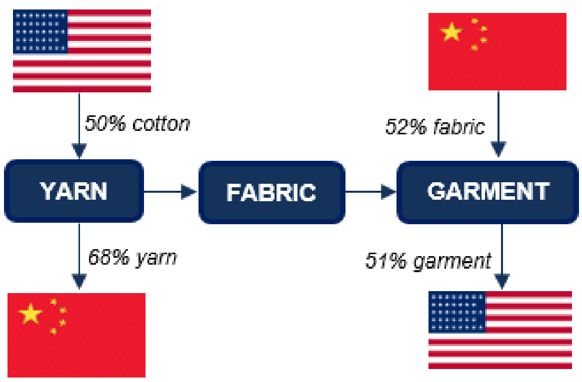
B. INDUSTRY REVIEW 2019

Source: VISTA, FPTS Research

According to the report of the Vietnam Textile and Apparel Association (VISTA), Vietnam's textile and apparel export turnover in 2019 is estimated at 39 billion dollars (+9.5% YoY), one billion dollars lower than the target set off at the beginning of the year. The main reason is the negative impact of the US-China trade war on global textile demand, while CPTPP free trade agreement (effective from January 14, 2019) expected to be the main driving force for export turnover has not brought positive results yet.

I. Two-sided impacts form the US-China trade war

The US and China are both major import and export partners of Vietnam textile and garment industry. The fact that the US imposes punitive tariffs on China's textile and garment has created a major impact on Vietnam's textile and garment industry.



Source: FPTS Research

Tranche	Value	Additional tariff	Effective date	Textile products
1	34	25%	06/07/2018	
2	16	25%	23/08/2018	
3	200	10%	24/09/2018	Yarn & fabric
		25%	10/05/2019	
4A	112	15%	01/09/2019	Garment
4B	160	15%	15/12/2019	Garment

(*) Tranches 1,2,3 increase to 30% from 1/10/2019

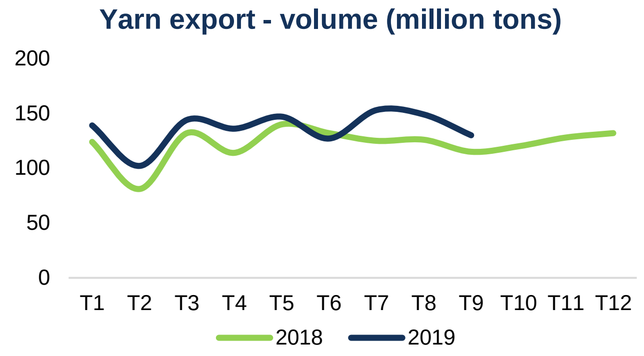
Sources: World Customs Organization (WCO), FPTS Research

Yarn enterprises are negatively affected by the US-China trade war

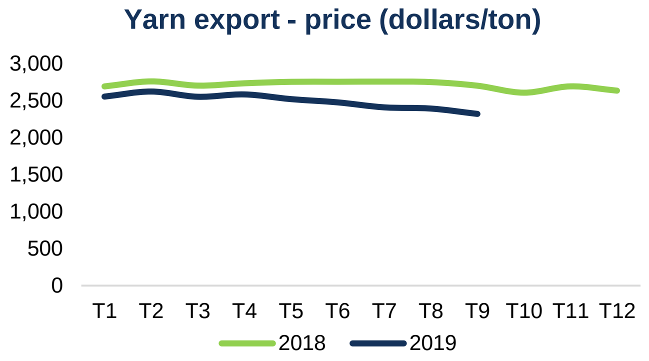
The US punitive tariff on Chinese products in tranche 3 including yarns and fabrics has negatively impacted Vietnam's yarn export turnover. While yarn export volume is slightly rising, the sharp decrease of fiber price has slowed down the growth of Vietnam's yarn export turnover. Vietnam's yarn export turnover in 9M2019 only reach 3% compared to 14% in the same period last year. The yarn price decreased due to two reasons:

(1) The US punitive tariffs imposed on China yarns have reduced the competitiveness of China yarn in the US market, the amount of yarn not exported to the US partly sold in the Chinese market, which reduces pressure on Vietnam's yarn price.

(2) The majority of China yarn importers are yarn traders, who take the opportunity of a trade war to put downward pressure on Vietnam's yarn prices to buy speculative stockpiles.

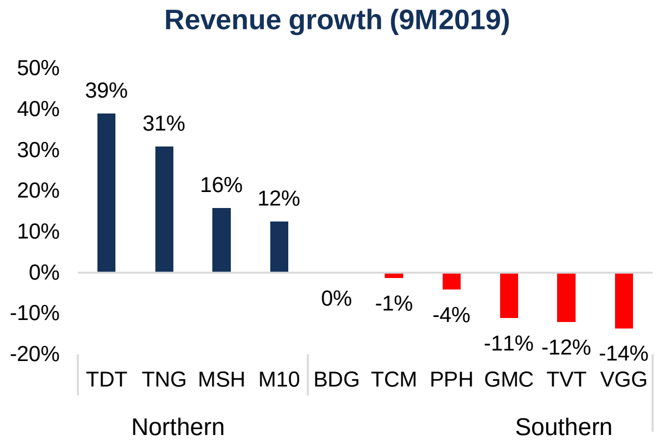


Sources: VISTA, FPTS Research



Sources: VISTA, FPTS Research

Garment enterprises in the North benefited from the flow of orders from China

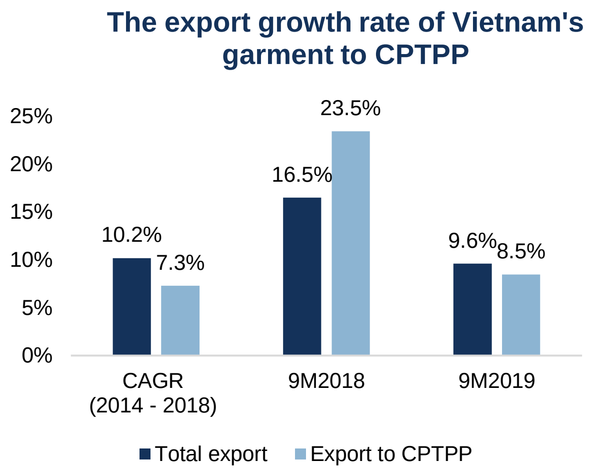


Source: FPTS Research

China garment is subject to duties from September 1, 2019, and the next round from December 15, 2019. However, the flow of garment orders from China to Vietnam began in late 2018 due to concerns about the trade war. This movement mainly came to Northern enterprises because of the geographical advantage of being closer to China than Southern ones.

This is reflected in 9M2019 business results of garment businesses. While Northern enterprises still maintain positive revenue growth, Southern enterprises have negative revenue growth compared to the same period last year.

II. Vietnam's textile and garment has not yet taken advantage of CPTPP



Sources: VISTA, FPTS Research

Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP), effective from December 30, 2018, has 11 member countries: Canada, Mexico, Peru, Chile, New Zealand, Australia, Japan, Singapore, Brunei, Malaysia, and Vietnam. This is a new generation free trade agreement that has a variety of commitments in Vietnam.

Vietnam's textile and garment export growth to CPTPP countries in 9M2019 was only 8.5%, lower than the same period last year (23.5%). According to the statistics of the Ministry of Industry and Trade, in 7M2019, the utilization rate of CPTPP for Vietnam's textile and garment was only 0.03% (out of the total 3.1 billion dollars of textile and garment exports to CPTPP, only 9.2 million dollars is exported under the CPTPP form). There are 3 main reasons:

(1) Negatively affected by the US-China trade war

CPTPP came into effect on December 30, 2018 when the US-China trade war has become unpredictable, causing global demand for textiles and garments to slow down. This partly affected the results of Vietnam's textile and garment exports to CPTPP countries.

(2) CPTPP does not have a tax advantage compared to other FTAs Vietnam already has with 7 out of 10 CPTPP member countries

Vietnam already has FTAs with 7 out of 10 CPTPP member countries, most of these FTAs have now ended the tariff elimination schedule. Vietnam's textile and garment now applies a 0% tax rate when exporting to these countries. Thus, even though CPTPP has been in effect, it does not bring tariff advantages to Vietnam.

	Australia	NewZealand	Chile	Japan	Brunei, Malaysia, Singapore
FTA	AANZFTA	AANZFTA	VCFTA	AJFTA	ATIGA
Effective year	2010	2010	2014	2008	2009
Eliminated entirely (number of tariff lines)	81,8%	81,4%	87%	98,5%	100%
Eliminated follow a schedule	3 – 4 years (Finished)	5 – 7 years (Finished)	4 – 8 years	11 years (Finished)	-
Note					As ASEAN member countries, these countries already have 7 FTAs with Vietnam in total

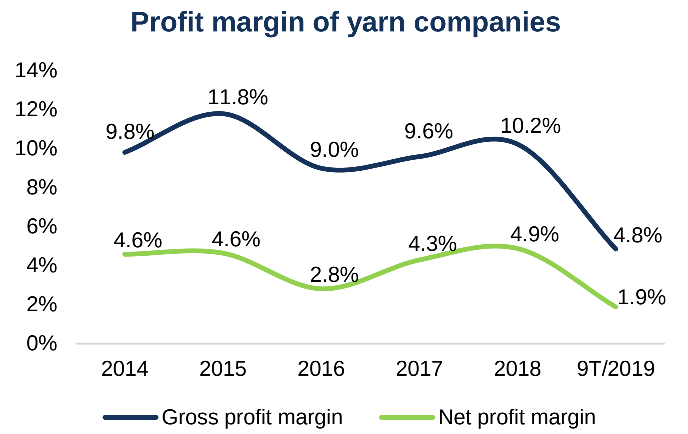
Source: VCCI, FPTS Research

(3) CPTPP's rules of origin are the biggest barrier to export to CPTPP member countries

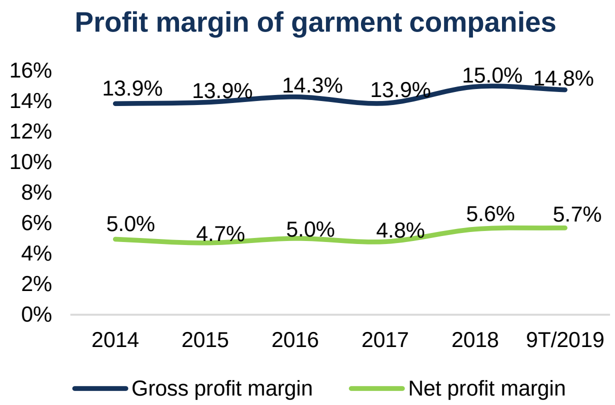
In order to receive duty-free access to CPTPP countries, Vietnam's textile and garment have to meet the "yarn forward" rules of origin. Accordingly, the spinning process must be performed in Vietnam, the dyeing and sewing process must be performed in CPTPP member countries.

Vietnam's textile and apparel industry currently imports 70% of fabric from countries: China (52%), South Korea (18%), and Taiwan (15%). In order to meet the CPTPP rule of origin, it is necessary to invest in domestic fabric production or convert the fabric import market to CPTPP countries. A period of one year since CPTPP's effective date is not sufficient to address internal issues within the sector value chain.

III. The profit margins of yarn companies are shrinking, profit margins of garment companies are stable



Sources: STK, ADS, FTM, FPTS Research



Sources: VGG, TCM, TNG, MSH, M10, GMC, PPH, HTG, TDT, TVT, FPTS Research

The gross profit margins in 9M2019 of yarn companies have plummeted to the lowest in the last 5 years due to impacts from the trade war.

The gross profit margin in 9M2019 of garment companies remained around 14-15% and the net profit margin was around 4.5-6%. Most garment companies using CMT or FOB level 1 method, the gross profit margin of both forms mainly depends on the enterprise's negotiating ability and type of product produced. Because it does not depend on raw material price fluctuations, so there is not much change over the years.

C. INDUSTRY OUTLOOK 2020

According to the General Department of Customs, Vietnam's textile and garment export turnover in 2020 will reach 43 billion dollars (+8.3% YoY), lower than the growth rate of 16% (2018) and 9.5%. (2019). We assess that the prospect of Vietnam's textile and garment industry in 2020 is not positive due to the escalating trade war, only a few companies can take advantage of CPTPP in 2020 and EVFTA will only take effect from 2022.

Textile and apparel export turnover of Vietnam

Sources: VISTA, General Department of Vietnam Customs, FPTS Research

I. There is not much room for growth in the CPTPP market

Canada is the only promising market

Canada, Mexico, and Peru are the three countries that do not have FTA with Vietnam and are currently applying MFN tax on Vietnam's textile and garment. When CPTPP came into effect, Mexico and Peru had a low rate of immediate tax elimination and a long-time schedule for eliminating taxes. In addition, Mexico and Peru have relatively small annual textile imports (about 3-4 billion dollars and 0.7-0.8 billion dollars) and a highly competitive textile environment because of major textile and apparel exporters such as China, Bangladesh, and Cambodia account for a large market share in these markets.

We believe that only Canada is the most promising market with an annual textile and apparel import turnover of about 12 billion dollars and has already removed 88.8% of tariff lines after the CPTPP came into effect, the remaining tariff lines will be eliminated in 4 - 6 years.

		Canada	Mexico	Peru
MFN tariff	Yarn & Fabric (HS chapter 50 – 60)	0.76%	8.08%	5.6%
	Garment (HS chapter 61 – 63)	15.79%	21.57%	10.88%
CPTPP tariff	Eliminated entirely (number of tariff lines)	88.8%	27.6%	13.3%
	Eliminated follow a schedule	4 – 6 years	6 – 15 years	6 – 11 years

Source: VCCI, FPTS Research

Only a few Vietnam textile and garment companies can take advantage of CPTPP

Vietnam's textile and garment will be able to take advantage of tax preferences if it meets the CPTPP's rules of origin. We think that in 2020 only a few companies will meet this rule, including: (1) Companies producing synthetic fibers, and (2) Companies producing garments with complete value chains from yarn production-weaving and dyeing-sewing.

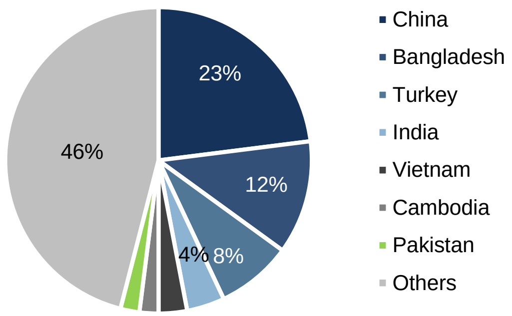
II. Vietnam garment companies could not take advantage of EVFTA in 2020

EVFTA was signed on June 30, 2019, and is currently being ratified internally in the EU and Vietnam in order to officially take effect (expected in early 2020).

EVFTA's preferential tariff will increase the competitiveness of Vietnam's textile and garment in the EU market

Compared to other competitors in the EU market, the GSP[5] tax currently applied to Vietnam is lower than the MFN[6] tax applied to Turkey but higher than the EBA[7] tax applied to Bangladesh and Cambodia. When EVFTA takes effect, Vietnam's textile and garment will return to the same tax rate of 0% with Bangladesh and Cambodia. However, we believe that Vietnam's advantage will be more stable than Bangladesh and Cambodia because the list of EBA beneficiary countries will be reviewed periodically and if they no longer meet the criteria, they will be removed from the list, while the tax preferences from EVFTA will be maintained after the agreement takes effect.

Major garment exporters in the EU 2018

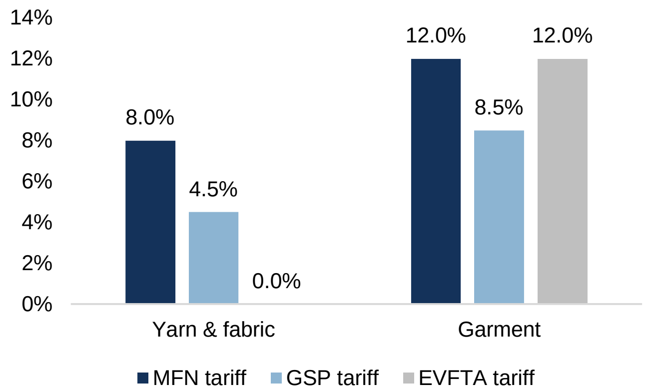


Sources: International Trade Center (ITC), FPTS Research

Countries	Tariff applied
Turkey	MFN
China	GSP
India	GSP
Vietnam	GSP
Pakistan	GSP
Bangladesh	EBA
Cambodia	EBA

Sources: Ministry of Industry and Trade, FPTS Research

Tariff applied to Vietnam's textile when EVFTA takes effect



Sources: VCCI, FPTS Research

However, Vietnam's textile and garment industry could not take advantage of EVFTA right after it takes effect

When EVFTA takes effect, the tax applied on yarns and fabrics will be eliminated immediately, but garment products will have to follow a schedule from 3 to 7 years for tax elimination. Garment products contribute about 80% of textile and apparel export turnover over the years, so the schedule for tax elimination applied to garments will affect the overall export turnover of the whole industry.

[5] *GSP (Generalized System of Preferences): A tax incentive that developed countries apply on certain products imported from developing countries*

[6] *MFN (Most Favoured Nation): This is the principle of equality and non-discrimination among all WTO members.*

[7] *EBA (Everything But Arms): This scheme grants full duty-free and quota-free access to the EU Single Market for all products (except arms and armaments).*

The current GSP tax rate (about 8.5%) for Vietnam garments will be maintained until the EVFTA preferential tax rate (about 12%) decreases gradually according to the schedule and is lower than the GSP tax rate, after that the lower tax rates will come into effects and gradually reduced towards 0%. Thus, if EVFTA takes effect in early 2020, the ability of garment manufacturing enterprises to boost exports to the EU will start from 2022.

EVFTA's rules of origin are the biggest barrier to export to the EU

To receive preferential tariffs, Vietnam's textile and garment have to meet the "fabric forward" rules of origin. Accordingly, the process from fabric to garment production must be carried out in Vietnam. Or we can use fabric imported from the countries where Vietnam and EU both have a free trade agreement, including the present (Korea) and the future (Japan and some ASEAN countries are negotiating FTA with the EU); and perform garment manufacturing in Vietnam.

Currently, over 50% of domestic fabric demand is imported from China, in order to take advantage of EVFTA, Vietnam garment companies must find alternative fabric materials by (1) Cooperate with domestic fabric manufacturers to create cohesion in the value chain, (2) Import fabrics from countries which have FTAs with both Vietnam and EU such as Korea, Japan.

D. SUMMARY

In 2020, Vietnam's textile and garment industry will be **UNFAVORABLE** have the following trends:

- The escalating trade war continues to slow down global demand for textiles, preferential tariffs from CPTPP will be a driving force to boost export turnover and lessen negative impacts from trade war
- CPTPP with the "yarn forward" rules of origin will open up opportunities for companies producing synthetic yarns or garment companies having complete value chain from yarn production - weaving and dyeing - sewing.
- EVFTA brings opportunities for yarn businesses when receiving 0% tax right after the agreement comes into effect.
- Companies producing synthetic fibers due to: (1) Not being adversely affected by trade war because they do not so dependent on the Chinese market as cotton fiber manufacturers, and (2) Having opportunities to sell yarns to textile businesses to meet the CPTPP's rules of origin.
- Garment companies having a complete value chain from yarn production - weaving and dyeing - sewing because they can meet CPTPP's "yarn forward" rules of origin.

E. WATCH LIST

Ticker	Market Cap. Jan 08, 2019 (bil. VND)	Revenue 9M2019 (bil. VND)	Net Income 9M2019 (bil. VND)	Net Income Growth	Net Income Margin	ROE (TTM)	P/E
STK	1,188	1,654	161	+23%	21.2%	5.7	5.6

STK is the third-largest synthetic yarn manufacturer in Vietnam and is one of only two companies producing recycled yarn in Vietnam.

Less affected by the trade war. Unlike the general gloomy situation of the yarn segment, STK produces synthetic yarns and has diverse outputs. It does not depend on the Chinese market and is less affected by the trade war.

Possibility of revenue growth in the domestic market. The CPTPP's "yarn forward" rules of origin will motivate textile companies to purchase yarns domestically. As the third-largest synthetic yarn manufacturer in Vietnam, this will be an opportunity for STK to increase sales in the domestic market.

Recycled yarn continues to be a growth driver. The recycled yarn has a higher gross profit margin than virgin yarn, the fact that major fashion brands such as Nike, Adidas, Decathlon, etc. commit to using recycled materials will continue to boost demand for this product. STK has increased the percentage of recycled yarn in revenue from 2.6% (2016) to 32% (9M2019), gross profit margin also improved from 9.6% (2016) to 15.6% (9M2019).

Ticker	Market Cap. Jan 08, 2019 (bil. VND)	Revenue 9M2019 (bil. VND)	Net Income 9M2019 (bil. VND)	Net Income Growth	Net Income Margin	ROE (TTM)	P/E
TCM	1,113	2,789	154	-28%	15.2%	5.5	5.9

TCM is one of the few companies that have a complete value chain from yarn production – weaving and dyeing – sewing which means it can meet the CPTPP's "yarn forward" of rules of origin. TCM expects to boost exports to CPTPP countries in 2020, especially Canada. By November 2019, TCM is the first company in Ho Chi Minh City to obtain a Certificate of Origin (C/O) according to the CPTPP standard. The company now has orders for export to Canada and already has orders for 2020.

In the short term, reducing yarn exports helps improve the company's gross profit margin. TCM's yarn segment is low and unstable gross profit margin. TCM's focus on internal demand will help improve the gross profit margin in the short term.

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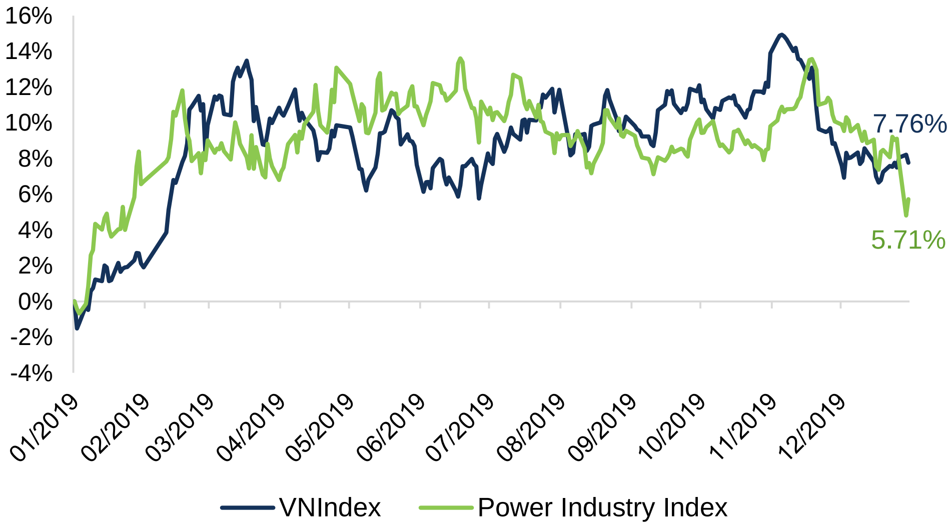
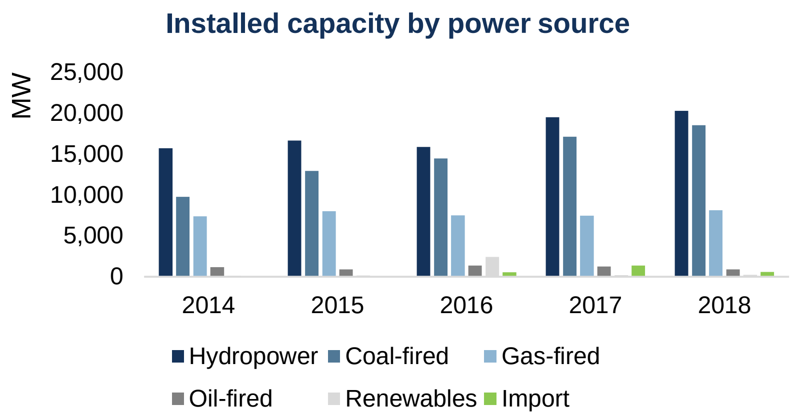
Power Industry Index and VNIndex Movement



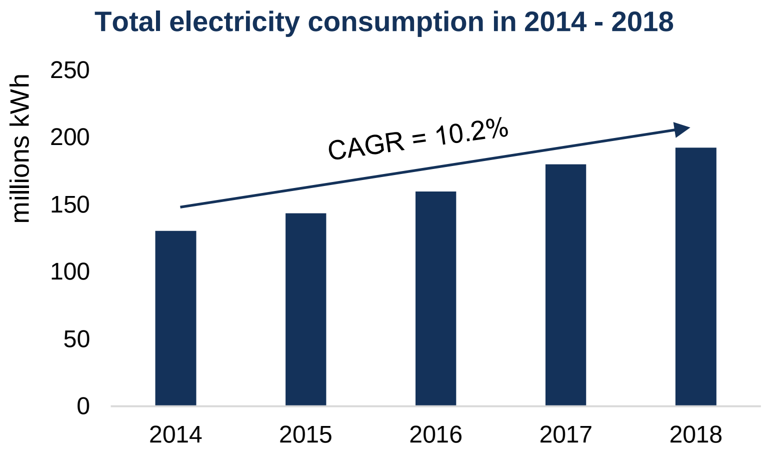
A. INDUSTRY HIGHLIGHTS

I. Power source depends mainly on hydropower and thermal power



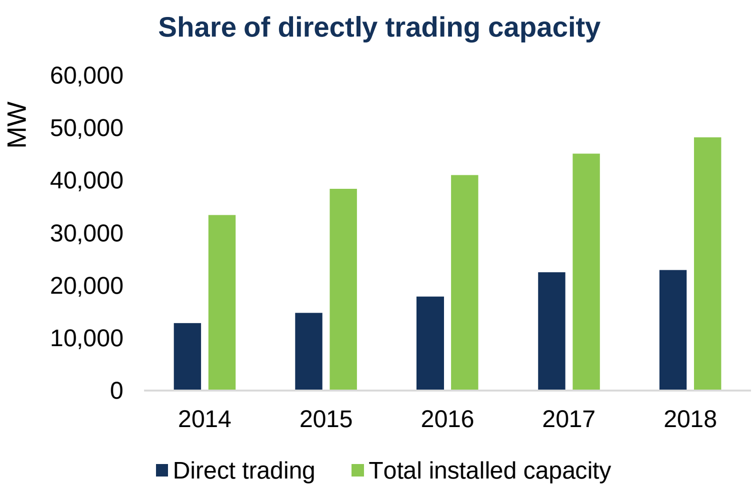
Vietnam's electricity production is mainly based on five categories: Hydropower, thermal power, thermal power and gas, thermal oil and renewable energy. In particular, hydropower, coal-fired thermal power, and gas-fired thermal power are the three main production sources of the country with the proportion of capacity accounting for about 97% of the total system capacity.

II. Great potential with motivation coming from Vietnam's economic growth



Generally, between 2014 and 2018, the growth rate of electricity consumption in the country reached 10.2% per year. The main growth driver of electricity demand comes from a sufficient and stable economic development demand. Accordingly, when the total value of domestic products (GDP) increases by US$1, Vietnam's economy requires about 1.25 kWh (2018 figures). Therefore, in order to maintain future GDP growth, the country's electricity demand is still very large. This is an opportunity for domestic power plants to develop.

III. Low competitive industry



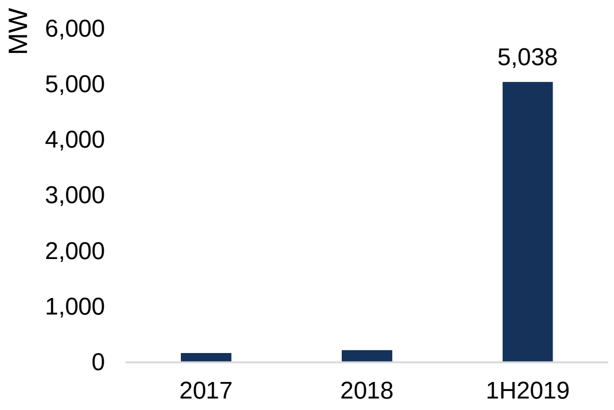
Although the electricity market has entered phase 2 - the Vietnam Wholesale Electricity Market, the competitiveness factor between the power plants is still low. Currently, the electricity produced by power plants is still mostly purchased through a power purchase agreement (PPA) with a rate of about 80 – 100% of the electricity output of a power plant. Competition only takes place in the range of 0 – 20% of the remaining electricity output, and only power plants participating directly in the electricity market must compete to sell electricity (about 90 factories, corresponding to 21,977/48,533 MW of the whole system are participating directly in the market).

B. INDUSTRY REVIEW 2019

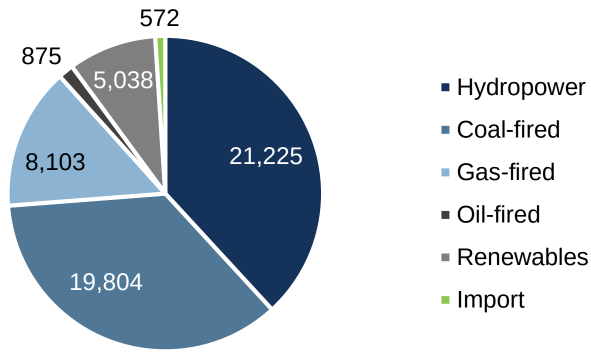
I. Development of power source – growing capacity from renewable energy

In 2019, Vietnam's installed capacity is estimated to be added about 6,759.5 MW, bringing the total installed capacity to about 55,322 MW. In particular, the fastest growing electricity source in 2019 is renewables with the participation of solar power plants. As of June 30, 2019, the country's solar power capacity has increased by about 4,397 MW (about 67% of the additional power capacity in 2019), equivalent to 30 times the national renewables capacity by the end of 2018. Accordingly, the proportion of renewable electricity accounted for 9.5% of the installed capacity of the whole industry (by the end of 2018, the proportion of renewable electricity accounted for only 0.5%). The development of renewable sources will help Vietnam gain a new and promising source of energy, contributing to ensuring national energy security.

Renewable capacity updated to 1H2019



Estimated installed capacity in 2019 (MW)

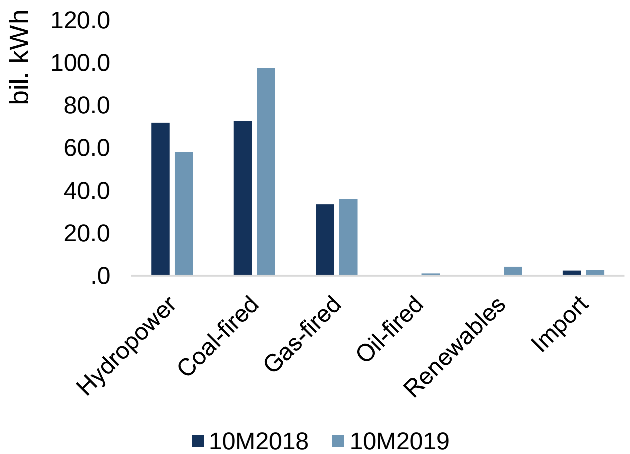


Source: FPTS Reseach

II. Electricity production by fuel type in 2019

1. The thermal power plants grew strongly in 2019, while the production of the hydropower plants fell by the El Niño phenomenon

Power generation output by power source



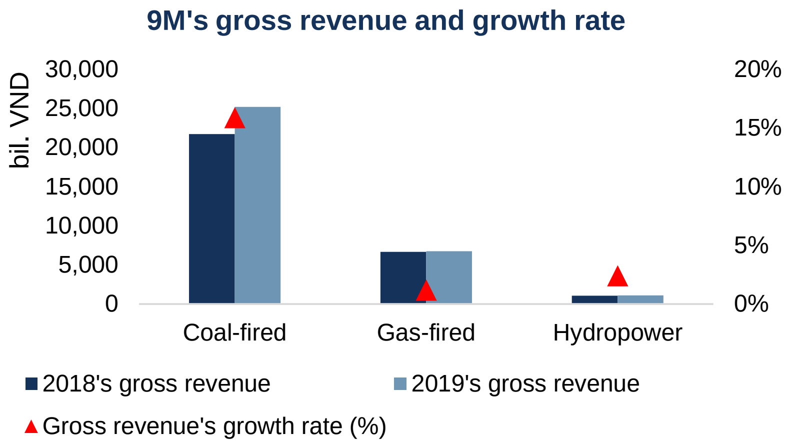
The phenomenon of El Niño in 2019 has negatively affected the generation capacity of hydropower plants. Therefore, thermal power plants (coal-fired, oil-fired and gas-fired) are strongly mobilized during the year to ensure electricity energy security.

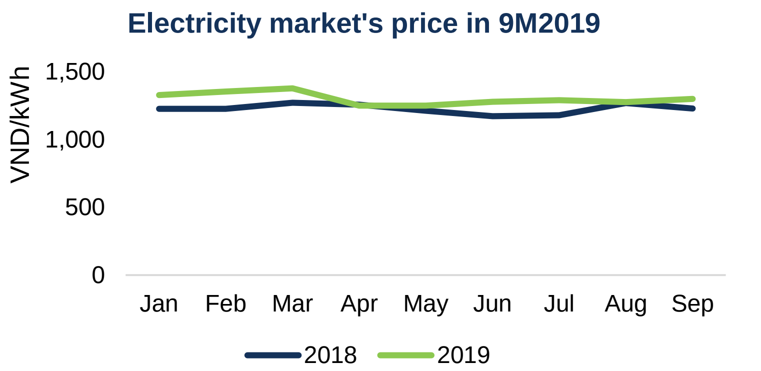
Coal-fired power plants are benefiting most from being the country's second lowest-cost energy source as well as being the most readily available. The total accumulated electricity production from coal has reached about 98 billion kWh in the first 10 months of 2019, an increase of 34.1% compared to the same period in 2018.

Estimated electricity output by power sources in 2019:

Power source	Estimated volume		Comment
	Value	%y-o-y	
Hydropower	65.30	-23.2%	Electricity production from hydropower has a sharp decline in 2019 due to unfavorable weather conditions. According to EVN's announcement, the amount of water in the hydroelectric reservoirs in 2019 is lower than the average for many years, especially in the Northern and Northern Central regions. By the end of 2019, the total useful capacity of reservoirs across the country is estimated to be lower than the normal water level of about 11 billion m^3, of which the North lacks 8.6 billion m^3, the Central 2.1 billion m^3 and the South is 0.6 billion m^3. Corresponding to that, electricity produced in the last months from hydropower is expected to continue to decline approximately 4.82 billion kWh.
Coal-fired	118.69	+41.5%	Coal-fired power plants have grown strongly in 2019. The main drivers of growth for this group come from (1) Its independence on domestic fuel supply, (2) large capacity, and (3) production processes that are less affected by external conditions.
Gas-fired	43.51	+8.6%	Electricity produced from natural gas has experienced a slight growth despite the declining domestic natural gas supply. The growth in output mainly comes from the use of oil which replaces natural gas of gas-fired power plants.
Oil-fired	2.57	+1110.6%	As the selected power source for stabilizing the electricity system, oil-fired power has a strong growth in 2019. The electricity produced from oil is forecasted to reach about 2.57 billion kWh in 2019 and more than 8.6 billion kWh in 2020 to offset the decline in hydropower output as well as gas-fired power plants.
Renewable energy	5.29	N/A	Despite a sharp increase in the share of installed capacity in 2019, renewable power plants, mostly solar power projects, still contribute a small part of the country's electricity output. There are two reasons: (1) The actual capacity of solar power projects is unstable, depending on the weather; (2) About one-fifth of the solar power plants are under capacity constraints due to overloaded transmission systems. By the end of 2019, only about 35% of the designed capacity of these plants was mobilized.
Import	2.78	+9.8%	Electricity imports tend to increase during the first half of 2019 due to domestic supply does not keep up with demand. Electricity was imported from Laos and China, with a growth rate of 9.4% over the same period. However, in the second half of 2019, the national electricity system is expected not to import electricity thanks to new renewable energy sources coming into operation.

2. Revenue growth was uneven among sources of electricity production





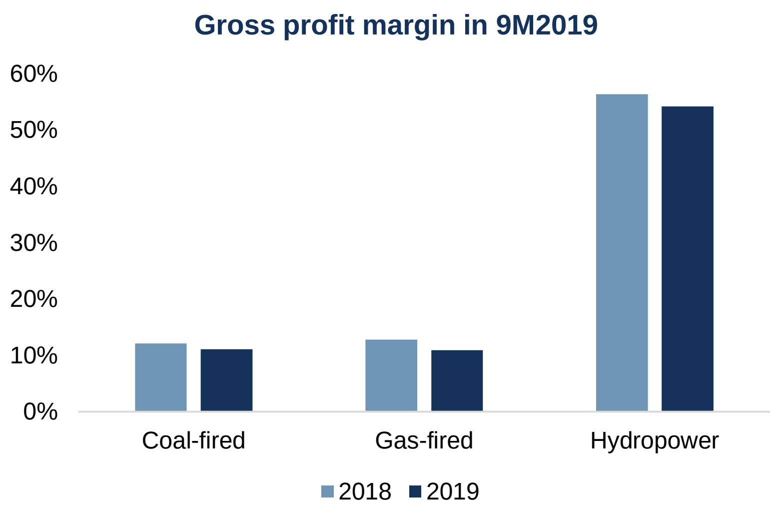
Overall, in the first 9 months of 2019, the power industry has had growth in revenue with growth average around 12.05%.

Coal-fired power plants are the most beneficiary group in 2019. The total revenue of these power plants increased by about 16% y-o-y thanks to a 31% growth in output.

Despite weather conditions, the revenue of gas power plants tend to move sideways over the same period (+1.16% y-o-y). The main reason is due to the decline in gas supply, causing the plants to not operate at maximum capacity.

Despite a 19% decline in output, hydropower plants in 2019 still have slight revenue growth of 2.38% thanks to higher electricity prices. The main reason is the increase in electricity generation output of thermal power plants in the market. Thermal power plants, with high production costs, has caused the average electricity price of the market to increase.

3. Gross profit margin in the industry decreased primarily due to higher input costs



Based on data from PPC, NT2, HND, BTP, SBA, SJD, CHP, TBC, QTP, NCP, NBP

Source: FPTS Research

The gross profit margin in the first 9 months of 2019 has a negative movement compared to the revenue growth. The average decline of the industry was about 10.1% compared to 2018. The main reason comes from the higher cost of input fuel in the recent period.

Gas-fired power plants have the highest change in gross profit margin. As the supply of gas in the country is not sufficient for the needs of power, gas power plants often must boost electricity production from oil. The production cost of gas-fired power plants tends to increase in 2019 because the cost of producing electricity from oil is usually 2-3 times higher than producing electricity from gas (production costs from oil is estimated at 5,000 VND/kWh, from gas is about 1,600 - 1,700 VND/kWh).

New domestic coal's price for power plants in 2019

Coal type	Old price (Before 1/4/2019)	New price (After 1/4/2019)	Change (%)
5a	1.696.000	1.845.000	*+8,8%*
5b	1.486.000	1.660.000	*+11,7%*
6a	1.382.000	1.504.000	*+8,8%*
6b	1.241.000	1.358.000	*+9,4%*
Average	1.526.000	1.671.800	*+9,6%*

Source: MOIT, FPTS Research

The gross profit margin of coal-fired power plants is also generally lower than in 2018 by 8.6%, mainly due to the increase in coal price. From April 1, 2019, according to data released by the Ministry of Industry and Trade, the price of coal sold to domestic electricity production has increased by an average of 9.6%. In particular, the types of coal most used for generating activities such as coal dust 5a, 5b, 6a, 6b have an increase of 8-12%.

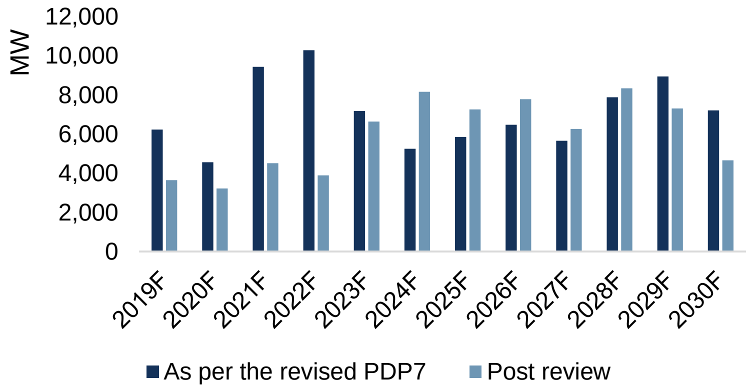
Hydropower plants have low volatility in the gross profit margin in 2019. Despite being adjusted to increase forest environmental fees by about 60% (according to Decree 156/2018/ND-CP takes effect from January 1, 2019). The environmental fees in the production cost of a hydropower plant only accounts for about 10% of production costs. As a whole estimate for the hydroelectric group, the production cost of a power plant will increase by about 4.1% when applying the new fees.

C. INDUSTRY OUTLOOK 2020

I. Power development trend

1. Power sources in power development planning VII revised continue to be slow compared to the plan in the period of 2020-2023

Expected capacity of power sources completed between 2019 and 2030



According to the forecast of installed capacity of the Ministry of Industry and Trade, the total installed capacity of the period 2016 - 2030 is expected to be about 85,000 MW, lower than the electricity plan of about 15,200 MW. In particular, the installed capacity in the operation period of 2018 - 2022 will be short of about 17,000MW than planned. Delays in the progress of power projects will influence the backup of the power system and cause risks of power supply shortages, especially in the Southern region.

2. Renewable energy continues to grow with a new focus on wind power

a. Solar power capacity is expected to slow down in 2020

Growth in solar power capacity is expected to slow down in 2020 as the FIT rate is no longer applied for new projects. According to the Prime Minister's latest conclusion on the draft mechanism for solar power development, only solar power plant projects that have signed a power purchase agreement and will go into operation in 2020 can apply a new FIT rate. In the remaining cases, public bidding will be applied to reduce the purchase price of EVN from solar power. Because there are no longer the previous great incentives, solar power plant projects are expected to continue to grow moderately.

The rooftop solar power source is also tending to delay to the end of 2019 due to the absence of a new FIT price mechanism. Before June 30, 2019, the purchase price of electricity from rooftop solar power projects being applied is US cents 9.35/kWh. However, with coming projects, the failure to issue new regulations on FIT prices are the barriers to participate in.

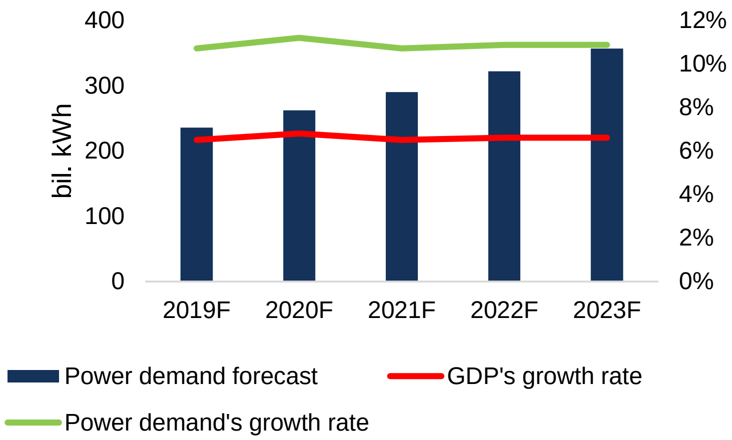
b. Wind power is expected to become the fastest-growing power source in 2020

We believe that wind power projects will enter a rapid development stage in the next year thanks to new supporting mechanisms in Vietnam. Accordingly, the new price of wind power plants is U.S. cents 8.5-9.8/kWh, about 18% higher than the old 20-year average price. Similar to the previous policy, this mechanism only applies to wind power projects that have been put into commercial operation before November 1, 2021. Setting a more attractive new pricing mechanism will be a motivated factor to promote wind power projects in the future.

II. Forecast of the electricity market in 2020

1. Electricity demand continues to grow at 11%

Forecast of electricity demand in the period of 2019 - 2023

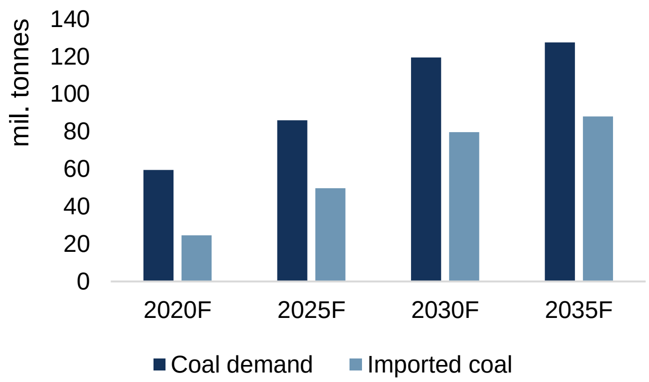


The demand for electricity is expected to continue to grow at about 10%. This growth rate is based on forecasts of GDP growth in subsequent years along with the intensity of electricity use in Vietnam. According to Fitch Solutions, GDP growth in the period 2019 - 2022 will maintain from 6.5 to 6.8%/year and stable at 6.6% from 2023. At the same time, the IMF also forecasts Vietnam's GDP growth will be at 6.5%/year in the coming years. Most recently, ADB also revised its Vietnam's economic growth forecast to 6.9% for 2019 and 6.5% for 2020, respectively.

2. Coal-fired power plants will maintain their growth momentum in 2020

In 2020, coal-fired power plants will still be the main power source in the country. Electricity production from this group is forecasted to reach about 134 billion kWh in 2020, contributing about 50.4% of the country's electricity demand. The two main causes for this forecast come from:

Forecast of demand and import of coal for coal thermal power in the period of 2020-2035



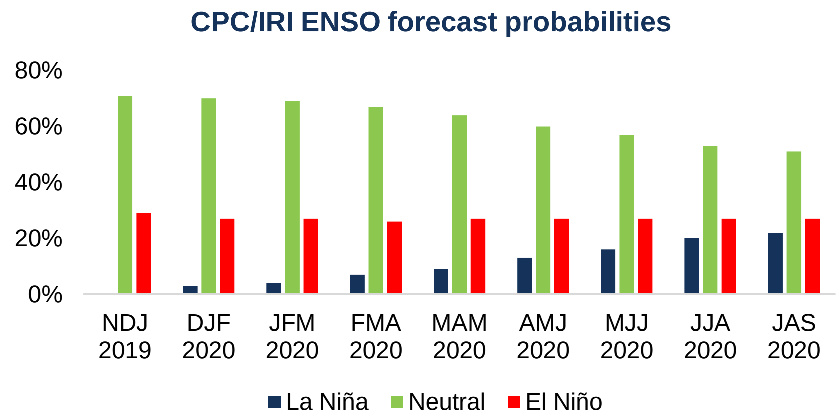
- Coal-fired power plants can use imported coal instead of domestic coal. Unrestricted by the only domestic supply like the existing gas power plants, coal-fired power plants can use both imported coal and domestic coal for electricity. Forecasted for 2020, power plants will use about 24.5 million tons of imported coal, meeting about 41% of domestic coal demand.
- The production processes of hydroelectricity and renewable electricity factories are less affected by weather. The power generation process of thermal power plants is usually more stable and easier to control than hydro or renewable power plants.

3. Electricity production from oil continued to be mobilized to compensate for power shortages

Increasing demand for electricity will lead to the power shortage in the coming years due to exceeding the current supply capacity of the electricity system. According to EVN's assessment, oil-fired power sources (including oil-fired power plants and gas-fired power plants with using oil) will have to produce about 8.6 billion kWh (about 16 times higher than the electricity generated from oil in 2018) the electricity demand of the whole country in 2020. The main causes of this deficiency include:

- As mentioned above, in the period 2020-2023, Vietnam power sources are expected to be short of about 17,000 MW, affecting the power supply of the whole industry.
- The capacity of solar power plants will continue to be limited in the next 10 - 12 months because of building additional transmission systems. It is expected that by the end of 2020, the current solar power projects will be fully released.
- The supply of gas for gas-fired power plants continues to decline in the short term due to the slow progress of new gas projects and the exhausted old gas fields.

4. In the short term, the ENSO-neutral state is expected to boost the output of hydropower by about 23%



NDJ: November – December – January season*

According to the forecast of IRI, the International Research Institute on climate and society, the climate in Vietnam (belonging to Nino 3.4 region) is likely to remain neutral (Nino Index ranges from -0.5ºC to 0.5ºC) from now until the first half of 2020. We assess that maintaining the neutral state of the climate will help the hydroelectric reservoirs return to the average level for many years, adding about 10-15 billion kWh to the system (+23% y-o-y), contributing to ensuring the supply of the country.

D. SUMMARY

In general, the power sector's activities in 2020 are forecast to be **MORE POSITIVE** than in 2019. The main trends that are forecasted in 2020 include:

- Growth in the capacity of power sources mainly comes from renewable power projects, especially wind power.
- Demand for electricity continues to grow at a high proportion, with an estimated growth of about 11% compared to 2019.
- Power plants will continue to be mobilized at a high level, especially oil-fired power plants (or gas-fired power plants with using oil).

E. WATCH LIST

<table>
<tr><th>Ticker</th><th>Market Cap. Jan 08, 2019 (bil. VND)</th><th>Revenue 9M2019 (bil. VND)</th><th>Net Income 9M2019 (bil. VND)</th><th>Net Income Growth</th><th>Net Income Margin</th><th>ROE (TTM)</th><th>P/E</th></tr>
<tr><td rowspan="2">PPC</td><td>8,144</td><td>5,908</td><td>776.4</td><td>-12%</td><td>13%</td><td>13.3%</td><td>7.7</td></tr>
<tr><td colspan="7">PPC is one of the few listed electricity businesses that have paid off their debt. Thus, operating results of enterprises have been significantly improved in recent years.

PPC's production activities are quite stable with the priority coal supply thanks to the long-term coal trading contract with TKV. However, the Pha Lai 1 plant's units are too downgraded, causing operating problems. Currently, PPC is implementing the renovation and upgrading of the Pha Lai 1 Plant. It is expected that the plant's capacity will increase by about 115 MW with improving fuel consumption.

Outlook: Large potential growth in electricity consumption due to (1) the country's electricity demand tends to grow in the coming years; (2) the new additional power source in the period of 2019 - 2023 is behind schedule, creating room for existing plants.</td></tr>
<tr><td rowspan="2">VSH</td><td>4,578</td><td>285.9</td><td>107.7</td><td>-62%</td><td>37.7%</td><td>3.5%</td><td>34.0</td></tr>
<tr><td colspan="7">VSH is a hydropower business in the Central region with a convenient location for hydropower plants. The total electricity capacity of VSH is about 136 MW and is expected to increase by 150 MW from 2020 when the Thuong Kon Tum hydropower plant comes into operating.

VSH's business is heavily influenced by regional rainfall. In general, in the period of 2015-2018, VSH is one of the most efficient enterprises with an average of 5.38 million kWh/1 MW of plant capacity.

Outlook: In the short term, VSH has opportunities for growth due to rapidly increasing domestic demand and the advantage of location near the Southern region. The weather in 2020 is also expected to be more favorable with the neutral state of the climate in the region. Moreover, the Thuong Kon Tum Plant project, which starts operating in 2020, will bring a solid growth in electricity output of the business.</td></tr>
</table>

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