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Valuation Date: 19/04/2019
Closing price: VND
Ticker: ANV

Recommendation: BUY
Target price: 39,579 VND
Upside: 48.9%
Stock Exchange: (HOSE)
Sector: Agricultural
Industry: Fishery

MARKET PROFILE	
Closing price (19/04/2019)	26,600 VND
Target price	39,579 VND
Upside	48.9%
52-Week Price range (VND)	15,500-30,800
Average daily volume	450,501
Shares outstanding	127,539,625
Market Cap (VND bn)	3,392.55
Beta	0.81
Foreign own ratio	0%
Debt to Equity	0.36

KEY FINANCIAL METRICS	2018A	2019E	2020F	2021F	2022F	2023F
Revenue	4,136,199	5,303,434	6,559,867	9,806,479	12,044,020	14,722,066
Gross profit margin	20.94%	17.44%	15.91%	15.80%	17.01%	18.13%
Net profit margin	14.67%	13.37%	9.58%	10.76%	11.95%	13.47%
EBITDAR Margin	19.82%	16.22%	15.52%	16.11%	17.43%	18.07%
ROA	17.64%	11.51%	7.29%	11.14%	13.66%	16.51%
ROE	43.34%	38.19%	14.00%	20.93%	24.10%	27.40%
Earnings per share (EPS)	4,660	3,445	3,054	5,129	6,993	9,639

Source: Team's estimates

ANV: Leaping Through Dark Age

Investment summary

We issue a **BUY** recommendation on Nam Viet Corporation with a target price of **39,578 VND**, using both using the Discounted Free Cash Flow to Firm and Relative Multiple Valuation method. This offers a 48.9% upside from its closing price of **26,600 VND** on **April 19th, 2019**. Our recommendation is based on various fundamental analysis and projection listed below:

Potential high growth market for Nam Viet

Recent demand for Pangasius export grows strongly. In 2018, the value export to US reached 549 million USD, growing 60% compared with 2017. China-US trade war has heavily affected China whitefish export to US, which makes US market potential. Expected to enter the market by 2021, Nam Viet aims at gaining some market shares in such potential market. China market, the main target of Nam Viet, has constantly increased its Pangasius import from Vietnam. Though being affected by trade war in 2018, China import still grows at a relatively high rate (29%). EU market also shows positive signal as Vietnam Pangasius export to EU has grow positively for the first time in the last 5 years. Besides, China and EU, other markets that Nam Viet focuses in also indicates positive signals

Binh Phu farm will be key in capturing full potential of Pangasius market

With the expected 4000 billion VND worth investments in Binh Phu project, Navico will double its current production and ready to capture the high growth potential of Pangasius Industry. This largest project in Vietnam Pangasius industry, will provide Navico with quality brood stocks and best environment for growing fish - using high tech in water treatment.

Fully vertically integrated supply value chain ensures the position of Navico

Compared to other competitors in the market Navico is the only companies that have a fully vertically integrated supply chain, from hatching to farming, producing fish feed to processing the final products for consumptions. This makes a great competitive advantage for ANV. Not only the company has better control on highly fluctuated input cost but also on the output quality. Moreover, other risks affected company profitability can also be mitigated, for instance: environmental factors...

Consistent improvement in performance

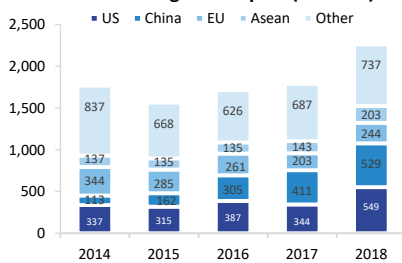
Nam Viet illustrates a consistent improvement in core activities, resulting in significant enhancement in company health. Company liquidity increases, so as to its receivable turnovers and inventory turnovers. Currently, the company is one of the top 3 leading firms in the industry in terms of sales. Many performance indicators have increased and gradually caught up with the market leader, Vinh Hoan, who is double in size compared to Nam Viet.

Highly dedicated with long history of experience of the founder

Mr. Doan Toi has a long history of Pangasius Industry. By the time he established Navico, it was one of the first Pangasius companies in the industry. With the ability and deep knowledge about the industry, Navico soon became the king of Pangasius industry. However, due to the wrong decision, he made a lost investment in DAP and Cromit, which brought Navico down from the thrown and made a lost some years. However, Mr. Doan Toi has sacrificed for the company and used his own money to buy back all the bad investment. Now Mr. Toi focus only in Pangasius industry and with his knowledge as well as experience he has made Navico become the top 3 biggest company in the industry. With a clear strategy and dedicated founder, we believe Navico will make a leap in the future.

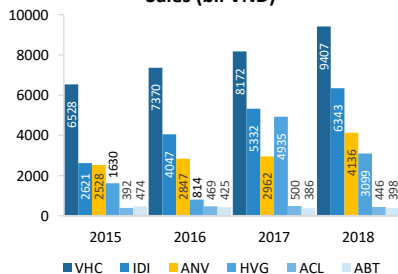
Source: Team's estimates

Vietnam Pangasius Export (mil USD)



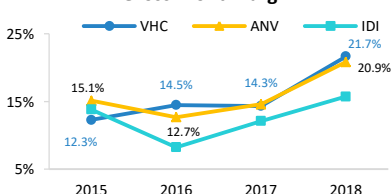
(*) Source: VASEP

Sales (bil VND)



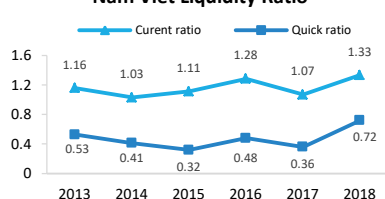
(*) Source: Team's estimate

Gross Profit Margin



(*) Source: Team's estimate

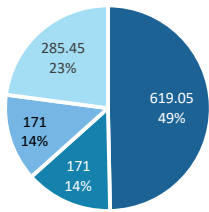
Nam Viet Liquidity Ratio



(*) Source: Team's estimate

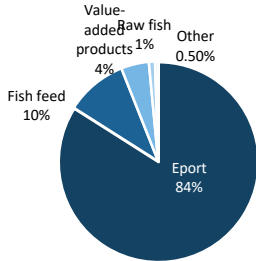
Nam Viet Ownership Structure 2018 (billion VND)

Doan Toi Doan Chi Thanh Doan Chi Thien Other



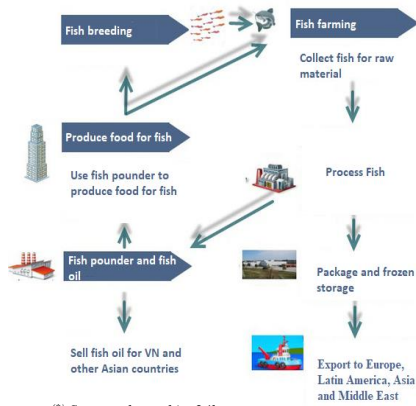
(*) Source: Nam Viet Corporation

Revenue Breakdown



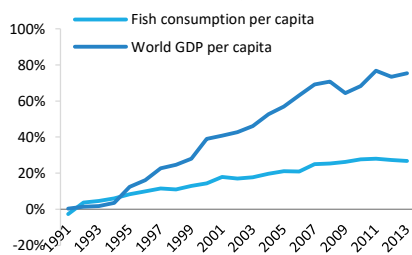
(*) Source: Nam Viet Corporation

Nam Viet Vertically Integrated Supply Chain



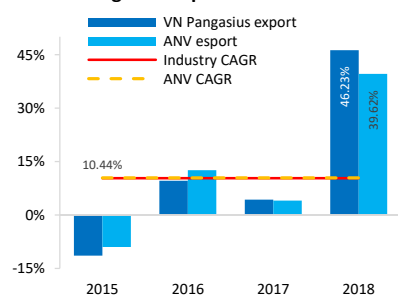
(*) Source: thuonghieu24h.com

Growth rate of GDP and Fish consumption compare to 1990



(*) Source: FAO-UN

Pangasius Export Growth Rate



(*) Source: Team's estimate

Business Description

Navico History

Nam Viet Corporation (Navico) was established in 1993 in the field of industrial construction by Mr. Doan Toi, the current chairman. Since 2002, Navico has changed to invest in seafood market, specialize in processing pangasius. In 2006, Navico became the largest exporter of Vietnam pangasius with the export turnover \$165m and have gone public successfully. Due to the wrong expansion to fertilizer industry and mining industry (Vinachem joint stock company and Cromit joint stock Company). ANV suffered the huge amount of loss and lost the leader position of Vietnam pangasius exporter (2009).

Appreciating these mistakes, Chairman Doan Toi decided to purchase the company's weak investment and focus on ANV core business. His decision has changed the situation and made ANV become the second largest Vietnam pangasius exporter.

Product Portfolio

Navico both farms and processes: Pangasius (97%) (Appendix 6) and Tilapia (3%) with the most popular forms: boneless, skinless fillets or portions in different sizes and shapes cut from fillets. Navico products are ensured with quality and well-manage, these products have been exported to more than 70 countries. Products of ANV have been qualified by ASC, Global GAP, IFS, Halal, BRC food certificate and H.A.C.C.P to ensure the safety and quality of Navico products. In the near future, the company shall increase its development and production in added-value products, which tends to yield a higher margin. At the moment, Navico targets in collagen, gelatin, fish oil...

Competitive advantage

Having the full value-chain from feed to end-product, Nam Viet Corporation ensures 100% supply of high-quality brood stocks for farming and export, controls the supply cost and customizes based on customer demand. Navico possesses a strong value chain due to its supply lock-in chain (Appendix 8). The company has their own hatchery area to create spawn fish from strong parents. ANV has started to preserve quality strong genes since 2015 for farming area. Nam Viet also self-supply for fish feed to ensure the component of the food for fish. ANV can grow enough fish for their own factories and ready to be packaged for exporting. They also have their own by-product factory to fully used and add value to their products. With the locked-in supply value chain, they can reduce cost, customize products that meet customers need and build a strong relationship with customers. Nam Viet Pangasius have been exported to many different countries including big market like China, EU and Latin America.

Company Strategies

With its strategies to develop in-depth supply locked-in value chain and apply new technology for its production, Nam Viet will invest 4000 billion VND in "Nam Viet Binh Phu Aquaculture" project which will be the country largest-ever pangasius farming project (Appendix 9). This will enhance the capacity up to 320,000 tons per year with 600 hectares of farming site in An Giang (Appendix 7). Moreover, the Farming area will apply Israel technology for water-treating, which will fulfill the most strictly standards on uniform size, exact timing, environment-friendly for the environment. This will ensure enough spawn fish as well as material fish for production and guarantee 100% self-supply for export.

Market Overview

An increase in world demand for Aquaculture

With the growing of world population at a rate of 1% per year, the world will be soon reach 8 billion people in 2025. This place an increase in demand for meat consumption. Along with this trend, people are eating more fish than before, compare to 50 years ago people are eating twice much as before. However, with the effect of pollution and global warming as well as overfishing. Sea and rivers are running out of fish every year. This place an opportunity for aquaculture to capture the growing demand and expand its market shares. ANV with great advantage in producing Pangasius (Top 10 most consumed fish) will gain benefit to the current world situation.

Economy factors foster the growth of aquaculture in Vietnam

Vietnam recently experience a favorable economy for production with GDP growth rate in 2018 reach 7.08%, with stable inflation rate around 3.54% and young labor force.

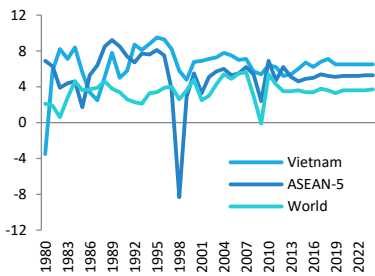
Recent trade war between China and US has open opportunity for Pangasius export in Vietnam. Both China and US impose tax on different products (for example US impose tax on Tilapia and China impose tax on lobster, crab...). This creates incentives for the consumer to move to cheaper products like Pangasius.

Breakthrough trade agreement between Vietnam and EU like EVFTA and CP TPP will enhance the export of Pangasius in Vietnam as these agreements will reduce tax and barriers for Vietnam to export.

High increase in Pangasius export

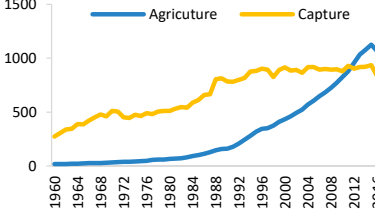
Recently the Pangasius export has increased again with the highest rate from 2014 – 2018. To growth rate of total export of the industry in 2018 was about 46.23%, the CAGR from 2014 to 2018 was about 10.27%. The main contribution for this growth rate mainly come from US, China, ASEAN and recent increase again in EU. Reasons for this trend are the increase in demand in these countries. Moreover, the Vietnamese Pangasius is currently improve its quality and safety, which is also qualified by certificate such as Global GAP, ASC, IFS, HALAL...

GDP Growth Rate (%)



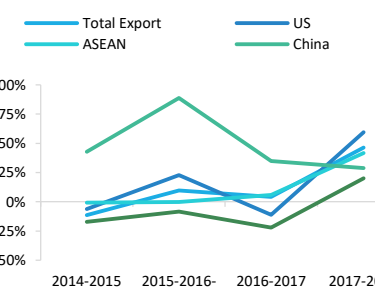
(*) Source: IMF

Fish Production: Agriculture vs Capture (mil tons)



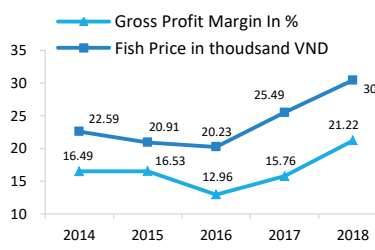
(*) Source: FAO-UN

Pangasius Total Export Growth Rate



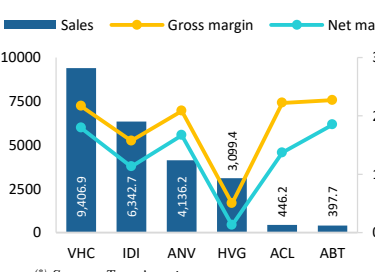
(*) Source: VASEP

Gross Profit Margin vs Fish Price



(*) Source: Agrimonitor

Profitability Comparison (bil VND)



(*) Source: Team's estimate

	Brood stock to fish fry	Fish fry to fingerling	Farming to mature
ANV survival rate	5-15%	70-80%	75-85%
The industry survival rate	3-10%	30-70%	65-75%

(*) Source: Nam Viet Corporation

China market is increases its import for Vietnam Pangasius from 2014, with the CAGR of 47.02%. China is the second biggest market for Pangasius export in Vietnam. The increase is forecasted to continue to increase by 2025 due to high demand and increase in fish consumption in China. US market is the biggest Pangasius export for Vietnam. After the trade war happen, Tilapia has been imposed 10% of tax. A lot of exporter in China has leave US market, leaving a chance for Vietnam Pangasius to expand as a substitute product. The export in US increased by 59.54% in 2018. EU market has seen an increase back in 2018 after decreasing in recent year, the recent for this increase is due to Vietnam has increased the quality of Pangasius quality and has been qualified by ASC for export.

ASEAN is seen as a new market for Pangasius to export due to a high increase in recent year. This increase is due to high growth in both GDP and Fish consumption.

Increase in Pangasius price due to lack of supply of pangasius for processing

Recently Pangasius price has risen at a very high rate with 26% in 2017 and 19.45% in 2018. The reason for this rise is because the increase in demand and lack of fish for processing. Fish for processing is mostly bought from farmer or self-products by firm. However, problem such as diseases, climate change, water sources, saline intrusion has impacted on fish growing. Moreover, the industry is lacked of fish fingerling for growing and there is a decrease in quality of fish fingerling and fish fry.

Pangasius industry in Vietnam is struggling to have qualified brood stocks for fish fry and fish fingerling. The mortality rate in pangasius is roughly 30% for fingerling to develop to mature fish.

Competition Positioning

Top 3 companies in the industry

Compare by both net revenue and profit margin, ANV are among the top 3 companies in Vietnam Pangasius industry. We choose VHC and IDI for our peers comparison as they have the same business model and revenue as well as profit structure.

Fully vertically integrated value chain create a competitive advantage for ANV

Compare with VHC and IDI, only ANV have enough fish farming area for their own demand, while IDI have to ally with the farmer for fishing area and VHC only farming around 65% of their need. This help ANV to manage their farming area and control the quality of Pangasius better than other peers. Moreover this can save a lot of cost and prevent the company from price fluctuation impact of pangasius.

ANV also have their own feed fish production compare to the top player, VHC. This can ensure the ingredient of feed fish for the fish. This can also reduce cost for ANV.

	ANV	IDI	VHC
Area of Farming	250ha Supply 100% of fish for factory	300ha (own 40ha, cooperate 260ha,), supply 95% of fish for factory	530ha, 65% of fish for factory
Feed Fish production	292000 tons/year	378,000 tons/year	Outsource
Amount of Fish for Process	4 factories 600tons/day	2 factories 450 tons	8 factories 850 tons/day

Hatchery area increases the quality and the health of ANV Pangasius

The problem about the fish gene in brood stock has affect the quality of the hold Pangasius market and affect the price recently.

ANV has invested to research and preserve quality gene since 2015 to create a strong, quality gene to produce fish for farming, while other competitor only concern about it recently. IDI only open an 12ha area for fish hatchery in 2018 and VHC only plan to open a company in fish fry in 2019.

With only 20,000 brood stock fish can create around 14 billion fish fry. Also, the brood stock of ANV is now far better in survival rate compare to the market:



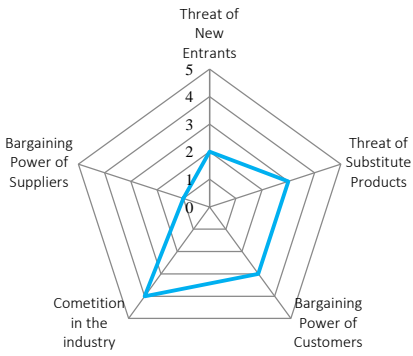
Binh Phu enhances the strength of ANV

Binh Phu project is current biggest project in the industry of Vietnam Pangasius. With the area for farming around 600ha. Binh Phu will make ANV become the largest Pangasius production. With better ecological condition and high technology in water treatment from Israel. Binh Phu will improve the quality of Pangasius of ANV. Moreover, 150ha for brood stock and 450ha for high-tech farming will double the current production of ANV with fully integrated value chain.

Diversified export market compared to IDI,VHC

More than 50% of VHC export is to US and more than 50% of IDI export is to China will lead these two companies become too much depend on one market for export. However, ANV with a diversified export market with no market account for more than 20% will diversified its risk across nations, especially in the highly fluctuation of Pangasius export market. Moreover, with the strategies to cooperate with the distributor instead of establishing subsidiaries like VHC can ensure the demand of the market and mitigate its loss when market demand decrease as it don't have to pay for fixed cost.

Porter's 5 Forces



(*) Source: Team's analysis

Porter's 5 forces

Threats of new entrants: Low

We believe threat of new entrants is low as foreign new entrants could not grow fish with the same taste, quality and color like Vietnam. Domestic new entrants could not control cost as well as ANV due to lack of economy of scale and full value chain

Threats of substitute product: Moderate

Although Tilapia and other food can substitute for Pangasius but Pangasius still has its differentiation as the taste is original and the price is competitive.

Bargaining power of suppliers: Insignificant

As ANV has a lock-in supply chain, they only have to buy Soybean, Cassava in foreign market and Rice in Vietnam. Due to its scale, they can have negotiation and sign contracts for long period.

Competition in the industry: Significant

The market share of Pangasius in Vietnam comprises a lot of big and small fishery firms. But the market is mainly constituted by some big firms like ANV, VHC, IDI and HVG. ANV has some strong competitive advantages and high investment can ensure its position in the market.

Bargaining power of customers: Moderate

ANV with quality products and large scale can have voice when negotiate and cooperating with other company for selling their products. Moreover, cooperation with their distributor can ensure the demand with an appropriate price.

Corporate Governance

Shareholder's structure comprise mostly of Doan Toi shares, the founder, and related people with Doan Toi like his two sons and brother and sister. Doan Toi shares account for 47.75% and his related people account for 27.79%. With most shares belong to Doan Toi and his related people, Doan Toi can make the decision without consider the vote of other shareholders. The structure of shareholders do not comprise any institutional investor, which make the company decision is more subjective to the founder. Moreover, without the foreign institutional investor, the company is lack of technology and strategies sharing from foreign country.

However, Doan Toi has long history experience in Pangasius industry, he used to make ANV become the leader of the industry. Although later he made some wrong investment decision in other industries (DAP and Cromit company), which make the company lost its position, he ready to admit his fault and buy back the wrong investment from Navico using his own money. After that, he has fully concentrated on Pangasius makes Navico present in top 3 companies of the industry. We believe with a large shares of company, Doan Toi will dedicate fully his time and effort to the company with his strong experience in the industry.

The company structure including Board of Director, Board of Management and Supervisory Board.

Board of Director

The board directors consist of Doan Toi and his two sons (each own 13.24% of company shares) and other member also has shares with the company. This making the board more dedicate to the company. Moreover, all of the members have a long history working with Navico, therefore, most of the member will understand deeply the market.

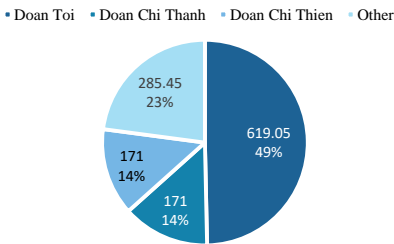
Board of Management

Doan Toi is also the CEO of the company. Except his two sons, all of the members of BOD belong to board of management. This might cause some problem in supervising the Board of Management. Most of the board of management has long history experience with ANV.

Supervisory Board

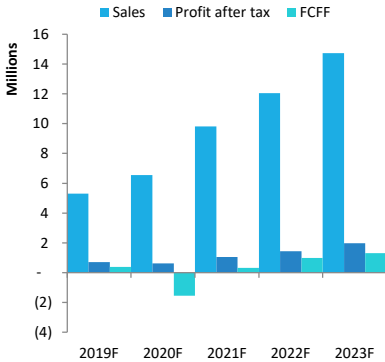
The company both has supervisory board and external audit company to oversight for the company. With A&C as the external audit for the company, the company can ensure it transparent as A&C is a foreign Audit company based at England.

Nam Viet Ownership Structure 2018 (billion VND)



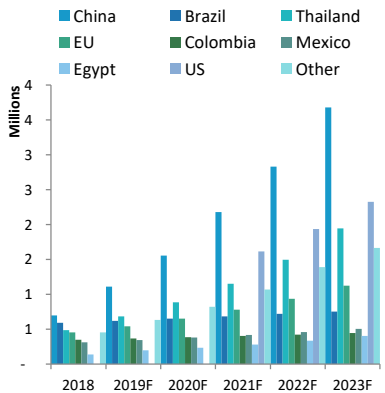
(*) Source: Nam Viet Corporation

Revenue forecast

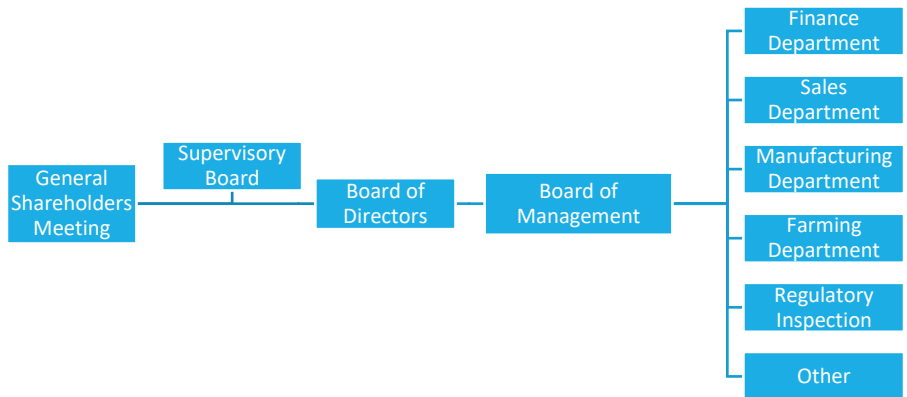


(*) Source: Team's estimate

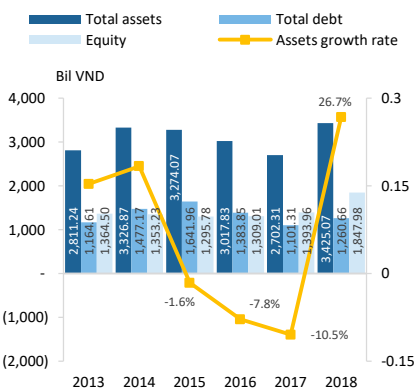
Revenue by Country



(*) Source: Team's estimate

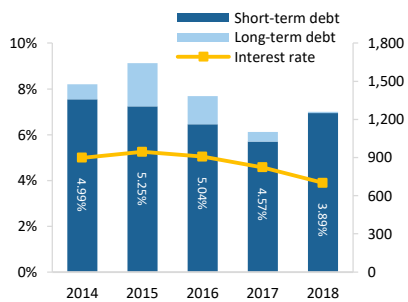


Assets Structure



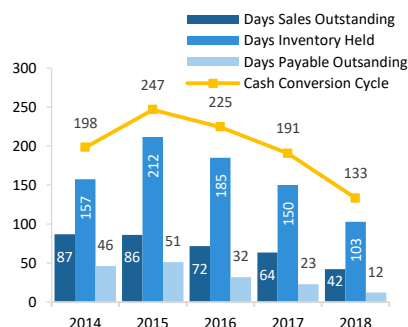
(*) Source: Team's estimates

Nam Viet Debt Structure (billion VND)



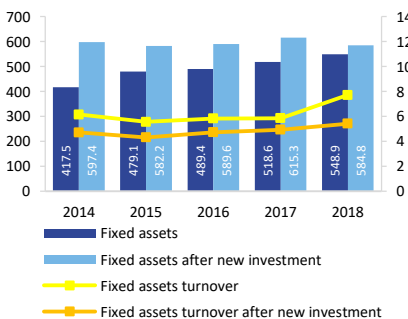
(*) Source: Team's estimates

Cash Conversion Cycle (days)



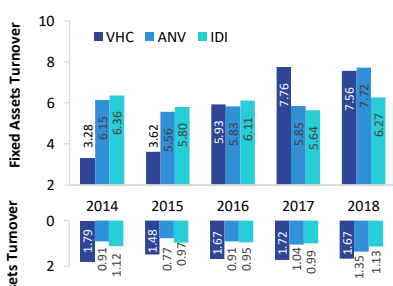
(*) Source: Team's estimates

Nam Viet Fixed Assets Turnover



(*) Source: Team's estimates

Assets Turnover Comparison



(*) Source: Team's estimates

Financial Analysis

Under Dupont analysis, over the last 5 years, Nam Viet has bettered off its return by improving its assets turnover, profit margin and lowering its leverage level. At first glance, the company seems to grow in a healthy manner.

	2014	2015	2016	2017	2018
ROE	9.29%	0.24%	2.04%	11.52%	48.32%
Profit margin	2.21%	0.06%	0.47%	4.86%	14.61%
Assets turnover	0.91	0.77	0.91	1.04	1.35
Leverage (Assets/Equity)	4.65	5.00	4.77	2.29	2.45

The restructure of company resources

Due to instability of Catfish market, many companies operating in the segment has gone through many difficulties and Nam Viet is no exception. Admitting its unimpressive performance in the past, the company has managed to change its strategy to adapt with the market challenges. During 2014 to 2017, Nam Viet balance sheets indicate a huge cut off in assets, the company shrinks by roughly 20% in 4 years. However, thanks to the favoring market, in 2018 ANV has significantly improve its performance.

In terms of resources, Nam Viet tries to replace its liabilities with equity. Reducing long-term debt from to only 0.28% of total resources in 2018 and shortening the account payable level from around 7% - 8% (of assets) to roughly 3.5% in 2018. As the market no longer favors debt financing due to the increasing interest rate, Nam Viet has decided to re-position itself into a less levered position when the company become more stable in performance.. The short-term debt is still considered to be relatively high, about 40% of total resources. However, this is quite normal for the entities operating in this segment as short-term debt is an efficient tool to finance for working capital. One of the advantages of NAVICO when taking on debt is its noticeable low interest rate, roughly 4% in 2018 while the average interest rate fluctuates around 7-11%. This is due to the fact that the company is rather a family business. The directors can grant interest-free loans to the parent company to fulfill the need of working capital. In 2017, NAVICO increased its equity and most of the newly-raised shares come from the family-based management team. The fact has its pros and cons. On one hand, it indicated the commitment of the board and the increase in equity, though theoretically costly, can help enhance the company profitability by reducing the interest expenses; especially when the economic is unstable. On the other hand, it would be lack of independence.

Constant improvement in assets utilization and profit margin

On the assets side, it is apparent that the company assets structure has become more liquid. The decrease in account receivables and inventory proportion to assets can indicate a good sign. Lower receivable and inventory level with growing sales speed up the turnover rates and the company cash conversion cycle. Moreover, it is worth mentioning that fish is rather perishable, and the storing process can be both risky and costly. Though 2018 observed a magnificent growth of catfish demand, the industry itself is rather unstable where demand can suddenly drop due to regulations and political reasons. Hence, being able to manage the inventory efficiently can help the company save lots of cost, especially when the company is expanding its farming areas.

In 2018, ANV has invested in its new farming area in Binh Phu. The greatest risk that investors fear about the investment is the real market demand compared to the company estimation. In the last fiscal year, ANV showed an accurate judgment. Taking into account the long-term work in progress, the utilization ratio indicates an increase in fixed asset turnovers. This means that the in 2018 the company has already been able to generate a sufficient revenue to cover new investment. Though the risk for the coming years still exists, the economy has so far portrayed a relatively bright picture for Vietnam catfish market. Hence, it is reasonable to be optimistic about the company profitability in the near future. Compared with its direct competitors, ANV gradually shows its strength in assets utilization as fixed assets turnover has risen above the other two. In terms of total asses turnover, though ranks below Vinh Hoan, NAVICO illustrates consistent improvement through time while Vinh Hoan seems to reach its saturation point, fluctuating around 1.7 time.

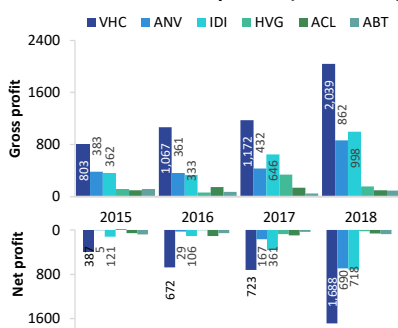
Navico's ability to control input costs over fluctuation to enhance profitability

Further investigation on the Balance sheet and Income statement show that there is a decline in account payable, advance to suppliers (in both value and proportion to total assets) and in the rate of cost of good sold. It proves the efficient of the company vertically integrated value chain as the company become less dependent on suppliers. As a result, the company will be less sensitive to material price fluctuation; which, later on, retain its profitability. In comparison with other exporters, NAVICO possesses a relatively high gross margin as well as net profit margin despite its disadvantage in size and market compared to Vinh Hoan, mostly thanks to its low cost of good. In 2018, Nam Viet profit margin closely approached the leading company in the industry, Vinh Hoan, even though the latter is double in scale. Such signal, once again, shows ANV's strength having a superior value chain.

Improving cashflow management and utilization

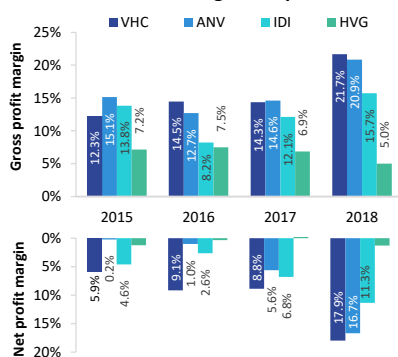
From the company Cash flow statement, it can be seen that the company used to struggle with its cash flow. First, it is due to the company inefficient investment in other associate companies. Second, it is because the company high selling and administrative expenses. In the past, Nam Viet has written off a good amount of receivable, leading to its low net income.

Profit Comparison (billion VND)



(*) Source: Team's estimates

Profit margin Comparison

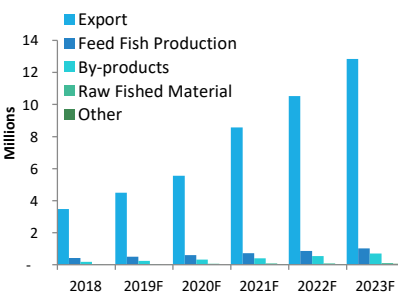


(*) Source: Team's estimates

Method	Weight	Price
FCFF	80%	43,064.75
P/E	20%	25,630.95
Expected price:		39,578
Current Price		26,600
Upside		49%

Variables	Value
D/E	0.365560685
Beta	0.813662735
Risk Premium	10.96%
Risk Free rate	4.78%
Cost of Equity	13.698%
Cost of Debt	3.89%
Tax rate	15%
WACC	10.92%

Revenue forecast by segment



(*) Source: Team's estimate

In recent years, the company has gotten rid of its investment in other associates and improved its receivable management, lowering selling and administrative cost. This results in a healthier cashflow for Nam Viet. The most likely risk involving cashflow is company's ability to manage and rotate its short-term financing. Currently, it seems to manage the matter efficient, using its land use right, inventory as collaterals. In 2018, there is a surge in NAVICO cash and, especially, bank deposit, still the company took on loan (short-term). We find this explainable as deposit can act as collateral that help the company take on loan but still earn the interest along with it. Instead of using cash as working capital contribution, loan can be cheaper (than equity) and more efficient. However, in the future, the company expects to fund an abundant resources of 4000 billion VND for its planned expansion in the coming years. We assumes that they will finance for the fund by both debts and equity. This, hence, may place a burden on company cashflow if the sales does not live up to Nam Viet's expectation.

Valuation

We evaluate ANV using both Discounted Free Cash Flow to Firm and Relative Valuation methods with P/E for valuation. We using different weight with 80% for DCF and remaining 20% for relative valuation. The reason chose this ratio because Vietnamese Stock Market is currently quite fluctuated after a recent downtrend in 2018. Therefore, we believe the market is under value and does not recognize full potential of ANV.

Discounted Free Cash Flow to Firm

For Discounted free cashflow to firm (or DCF) we apply 2 stages FCFF model for our valuation. The first stage from 2019 to 2023, our valuation is based on our forecast sales, company's expansion in different markets. After that we expect the terminal growth to be 2% the same as the world GDP growth rate.

Discount rate

We applied popular risk measurement CAPM to arrive at ANV cost of equity. Risk-free rate of 4.78% is the current yield of 10-year Vietnamese government bond. Vietnam's equity risk premium of 10.96% is from the perspective of Prof. Aswath Damodaran. We estimated beta by running 2-years regression return between ANV' stock return and VNINDEX return. We estimated beta around 0.81 for the period from 04/01/2016 to 28/12/2018. We have risk Cost of equity around 13.69%. We estimated D/E by 0.36 and estimated the cost of debt around 3.89% by divided interest expense in 2018 with average total debt in 2017 and 2018. The tax rate for ANV is applied with 15% as the tax for aquaculture industry, regulated by the government in 2015. We have WACC at 10.92% as a discount rate for our valuation.

Free cashflow to firm (FCFF)

Revenue Projection: We forecast the revenue by breaking down the revenue into segments including: Export, Feed Fish Production, By-products, Raw Fish Material and other. We mainly focus our valuation in Export as it account for 84% of the revenue in 2018. Other segments such we forecast to increase at 20%, which is relative to the growth rate of ANV revenue in the future. Except By-products we expect to growth for 30% due to high potential of these products.

Export forecast: We forecast the revenue by divide it into different markets based on the export market in 2018

1. China market: We expect export to China will increase by 60% in 2019 due to the demand in China market is still high. Moreover, Feng Lei, the main distributor of ANV has its plan to increase their stores from 28 to 50 stores in 2019. Vietnam Pangasius has also begin to place on Alibaba – Ecommerce company, which will be one of the key drivers for ANV to expand to this market. We believe when Binh Phu start to operation ANV soon will account for a large shares of this market.

2. Colombia, Brazil, Mexico market: We expect that the Colombia and Brazil are expected to remain the same due to slight decline in 2018. We expect Colombia and Brazil will grow by value with 5% as the inflation of Vietnam. Mexico market is expected to growth at 10% due to high increase in the first 2 months in 2018 with 18.2%.

3. Thailand market: is expected to grow by 40% due to high consumption of fish in Thailand and recent increase in ASEAN market.

4. EU market: Recently, EU market experience high increase after the period of decline, recent increase is due to improvement in quality of Pangasius. With ASC certificate, we expect the revenue in EU market will increase by 20%. For the first 2 months in 2019 we have seen England increase by 36%, Germany by 74%, Holland by 89%

5. Egypt market: We expect the export in Egypt market will increase by 40% and 20% after that due to high demand in UAE market and ANV already have HALAL certificate to export to UAE

6. US market: US market recently increase at a very high rate in 2018. We expect that ANV will come back to US market as its plan in 2021. We expect that ANV will capture 10% of the industry export due to its current position in the market.

7. For other market: We expect to growth at 40% in the 2019 due to high CAGR increase from 2014 to 2018 of the industry at 46.23%

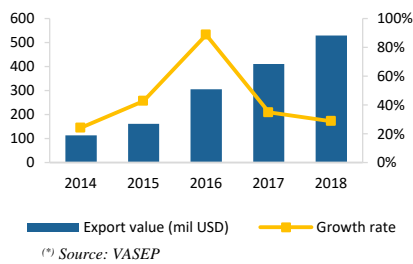
Gross Margin, Selling, General and Administrative Expenses

For gross profit margin: We expect that gross profit margin is impacted by the price of Pangasius. For a conservative forecast, we believe that the price of Pangasius will be around 26,000VND, therefore the margin will be at 17.44%. SG&A is expect to growth at the same rate with net revenue with 3.9% for Selling expense and 0.2% for General and Administrative expense.

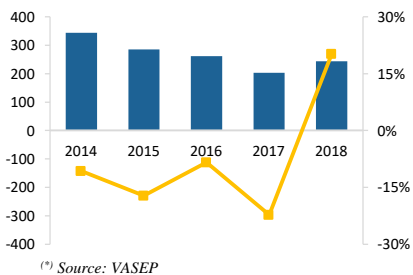
	Base Case	Worst Case	Best Case
Sales Growth	28.2%	10%	33.2%
Fish Price	26,000	24,700	27,300
Gross Profit Margin	17.4%	16.6%	18.2%
Target Price	39,578	22,901	48,544

Company	
VHC	6.03
IDI	2.76
ANV	5.56
Meadian	4.783333333
Expected P/E of ANV	5.5
ANV EPS	4,660.17
Price	25,630.95

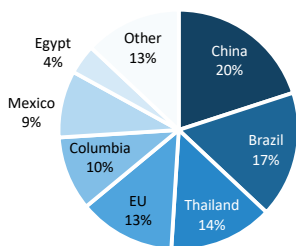
Pangasius Export to China and Hongkong



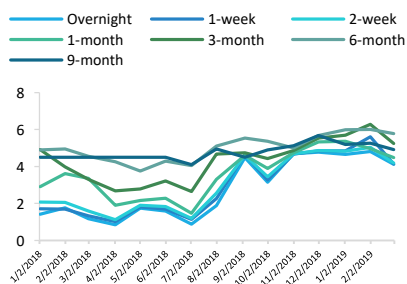
Pangasius Export to EU



Revenue Breakdown 2018



Interbank Interest Rate 2018-2019



Capital Expenditure and Depreciation

For CAPEX, we expect that it will comprise from both maintenance cost for fixed assets and new investment in Binh Phu project. According to the new, Binh Phu is constructed in 2019 and 2020 with 4000bn VND. Therefore, we will project the CAPEX by 2000bn for each year. The depreciation will be in ratio with the new investment of Fixed Asset.

Capital for Binh Phu Investment

In order to finance for Binh Phu investment, we expect that the company will raise capital by both equity and debt with the ratio 50/50. We expect that the company will issue shares at the current market price with total value of 2000bn VND in 2019 and borrow 2000bn VND in 2020.

Worst, Base and Best cases

We deploy worst, base and best cases to analyze the effects of sales and the impact of Fish price in ANV in 1 year scenario.

Relative Valuation

With Relative Valuation method, we take multiple P/E for our relative valuation. We choose only a group of domestic company only as Vietnam is the biggest market that export Pangasius, therefore it represent for the P/E of the world Pangasius industry.

We choose VHC and IDI for our valuation. We expect the P/E of ANV is 5.5 with the price base on this valuation is 25,630 VND

Risks

Market risk: Low

China is the second largest countries that import catfish from Vietnam and the main target of Navico. Nam Viet itself also wish to increase its market share in the market. However, China market has several risks that should be taken into account. China seems to take on the footstep of the US to become a consuming market rather than manufacturing market in long-term. In a shorter term, many China company plan on having their own Pangasius farms. However, China demand for Vietnam Pangasius is expected to still increase as the market itself is huge. Moreover, Nam Viet has founded a long-term relationship with its distributor, Feng Lei, in China; which somewhat guarantee Nam Viet future sales in China market.

Besides US and China, EU is another market that gain attention from Vietnamese catfish exporters. According to VASEP, in 2018, US import contributed for 24.3% total catfish export value, followed by China and Hongkong which made up 23.38%. EU occupied a 10.79% of total export value of catfish. Though EU is full of potential, Vietnamese catfish exporters meet lots of obstacles entering the market. First, it is strict in regulation. EU requires lots of regulation from its exporters, especially agricultural products exporters, in terms of origins, quality, farming environment, packaging and even certifications. Second, EU white fish market is highly competitive. According to EU Ministry of Foreign Affairs, Pangasius is considered to be a lower-end type of whitefish. As the living standard and income increase, European tends to move toward a higher-end substitution such as codfish, halibut... Not to mention that, the number of suppliers is relatively high and the European countries itself encourage local farming development.

Fortunately, Nam Viet customers is rather diversified, which mean the effect of changing economic landscape in certain region would be less served compared with other countries that is more commitment with certain market.

Interest rate risk: High

As the economy became too heated up at the end of 2018, the Government must act to prevent the risk of economic bubble. Via monetary policy, Vietnam State Bank has increased the interest rate with the aim of slowing down the economy. Since the September of 2018, the interest rate has remained high and so far, there is no sign of reducing. Fortunately, since 2015, when the company business became more stable, it has gradually paid off its long-term debt. This help the company narrows its exposure to interest rate risk.

Even though short-term financing is high, it is a common issue for companies in this industry. Hence, other competitors shall be exposed to the same risk. What should be concern is company's financing plan for expansion in the coming years. It is very likely that the company will take on a long-term debt to finance for the expansion.

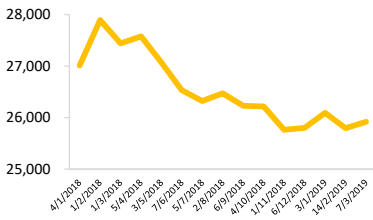
Exchange rate risk: Low

Most of the company sales is generated from exporting activities. Hence, it is apparent that the company will be highly exposed to exchange rate risk. From the company analysis and strategy, China is one of the most potential market to Nam Viet Corp.. Under China-US trade war, it is expected that the Renminbi (China currency) will continue to depreciate in the future. This will badly affect the company pre-determined contract under Renminbi with China customers. NAVICO is well-aware of such situation; hence, stated by the company, it will sign the contract under a more international currency such as USD and Euro to hedge against the risk. One of the advantages of Nam Viet is that their customer portfolio is rather diversified in terms of nationality. This can also help reducing the risk of exchange rate fluctuation. Though the problem can be temporarily adjusted and hedged, the fact that most of its sales are foreign currency make the company exposure to exchange rate risk relatively high.

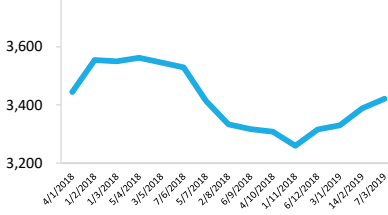
Industry risk: Medium

According to Seafoodsource.com, the surged demand in Pangasius has motivated many unskilled farmers to convert their rice field into Pangasius farm as the profit is said to be "about 10 times higher". The sudden unplanned expansion in Pangasius farming in the Mekong delta area posted a

Exchange rate: EUR/VND

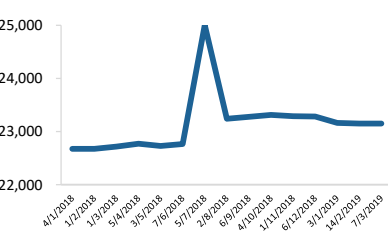


Exchange rate: CYN/VND



(*) Source: State Bank of Vietnam

Exchange rate: USD/VND



(*) Source: Vietcombank

great threat to contaminate the water. Moreover, it causes the material cost to increase due to higher demand. Which, at the end of the day, will lead to input as well as output price fluctuation. Thanks to the company close process, it is able to self-supply all the crucial input materials such as: fish feed, seeds... As a result, covering more chains in the value chain helps the company to well-manage its input cost as well as output quality; more important, reserve its profitability through costs fluctuation.

As mentioned, the increase in farming density can cause the abnormal change to water environment, increase the probability of spreading diseases. The company water supply can even though partly resolve the problem, the risk needed to be interfered by the authority for affective result.

Though NAVICO can monitor its cost, the risk involves with import-export regulation, taxation, requirements are more difficult to mitigate; not to mention it can be costly to gain the required certifications for exporting to certain countries. European Union is known with its strict requirement for imported agricultural product.

Environmental risk: High

Environment factor has a tremendous effect on the Catfish industry. Though Nam Viet has gradually completed its farming process into a close chain to help mitigate many variables such as material costs, environment factor still remains an independent variable that can only be predicted and prevented rather than managed. Global warming, on of the top concern of the world, shall has significant effect on the industry. The abnormal change in wheatear can lead affect fish growth and, more importantly, the spread of diseases.

In recent years, Vietnam has welcomed more and more typhoons hitting our islands and mainland. This is said to be the results of El nino. As the likelihood of having a catastrophe increases through time, fish farms are being at risk as these problems are far from being managed by human.

Other environmental problems can be mentioned are water pollution and salinity invasion. As stated above, Nam Viet has gradually completed its close farming procedure which include a water purify system (claimed by the company Board). Since” NAVICO has constructed a separate farming area to mitigate the quality of water” and its farming area is located in a rather upper stream location of Mekong river, the risk of salinity invasion and water pollution shall not be served for the company.

Generally speaking, this risk is not frequent but can cause great impact. Thought it can hardly be mitigated, all companies operating in the same industry shall face the risk.

APPENDIX 1: Balance sheet

in Vietnam Dong million	2016	2017	2018	2019F	2020F	2021F	2022F	2023F
A. CURRENT ASSETS	1,907,896	1,317,061	2,090,120	2,775,819	3,224,404	4,120,723	5,238,411	6,725,903
I. Cash and cash equivalents	21,796	25,902	69,153	693,810	647,617	341,425	605,634	1,084,724
1. Cash	17,026	25,902	32,153	693,810	647,617	341,425	605,634	1,084,724
II. Short-term financial investments	900	-	451,530	77,282	77,282	77,282	77,282	77,282
III. Accounts receivable - Short-term	643,134	383,435	569,194	719,725	907,792	1,345,665	1,662,358	2,031,257
% of Net Sales	0	0	0	0	0	0	0	0
1. Accounts receivable from customers	516,875	430,414	567,365	761,274	932,120	1,402,382	1,719,617	2,109,031
2. Prepayments to suppliers	76,362	8,472	5,148	11,063	11,039	18,508	21,534	27,123
5. Loan receivables	22,122	9,336	1,475	9,455	7,067	14,050	15,140	19,851
6. Other short-term receivables	133,518	24,380	37,260	46,459	59,018	87,178	107,885	131,710
7. Allowance for doubtful debts	(105,744)	(89,167)	(42,054)	(108,527)	(101,452)	(176,451)	(201,818)	(256,458)
8. Shortage of assets awaiting for resolution.	-	-	-	-	-	-	-	-
IV. Inventories	1,195,090	873,819	962,242	1,249,049	1,554,736	2,319,886	2,856,416	3,496,047
1. Inventories	1,195,358	887,129	969,280	1,263,110	1,569,167	2,343,708	2,884,337	3,531,083
2. Allowances for inventories	(268)	(13,310)	(7,037)	(14,061)	(14,430)	(23,822)	(27,921)	(35,036)
V. Other current assets	46,977	33,905	38,001	35,953	36,977	36,465	36,721	36,593
1. Short-term prepaid expenses	9,954	9,846	7,124	8,485	7,805	8,145	7,975	8,060
2. VAT deducted	37,022	24,060	30,876	27,468	29,172	28,320	28,746	28,533
B. LONG-TERM ASSETS	1,109,930	1,385,254	1,334,949	3,372,834	5,390,181	5,372,119	5,342,916	5,374,738
I. Accounts receivable - Long-term	263,998	252,862	4,699	4,699	4,699	4,699	4,699	4,699
1. Accounts receivable	246,750	246,750	-	-	-	-	-	-
6. Other long-term receivables	18,337	7,175	4,515	4,515	4,515	4,515	4,515	4,515
II. Fixed assets	489,430	518,592	548,862	612,572	2,661,939	4,688,328	4,715,293	4,815,148
1. Tangible fixed assets	161,518	197,285	209,961	223,989	2,197,313	4,098,161	3,966,658	3,870,467
- Cost	857,048	986,815	1,079,664	1,178,087	3,300,359	5,482,983	5,707,735	5,982,882
- Accumulated depreciation	(695,530)	(789,530)	(869,703)	(954,098)	(1,103,046)	(1,384,822)	(1,741,076)	(2,112,414)
2. Finance lease assets	116,988	78,041	41,802	21,505	10,602	5,458	3,322	3,011
- Cost	174,399	108,366	61,525	35,760	21,756	14,853	11,634	10,593
- Accumulated depreciation	(57,411)	(30,325)	(19,723)	(14,255)	(11,154)	(9,395)	(8,312)	(7,581)
3. Intangible fixed assets	210,924	243,266	297,099	367,077	454,024	584,709	745,313	941,670
- Cost	215,716	250,504	307,058	379,943	470,488	605,726	772,159	975,912
- Accumulated amortisation	(4,792)	(7,238)	(9,959)	(12,865)	(16,463)	(21,017)	(26,846)	(34,242)
IV. Long-term work in progress	125,878	66,176	392,882	2,368,470	2,338,143	292,847	237,101	168,857
2. Construction in progress	125,878	66,176	392,882	2,368,470	2,338,143	292,847	237,101	168,857
V. Long-term financial investments	155,190	477,906	325,561	320,761	320,761	320,761	320,761	320,761
associates	6,798	2,041	10	10	10	10	10	10
3. Investments in other entities	166,304	166,304	155,304	150,504	150,504	150,504	150,504	150,504
financial investments	(17,912)	(18,740)	(8,652)	(8,652)	(8,652)	(8,652)	(8,652)	(8,652)
5. Held-to-maturity investments	-	328,300	178,900	178,900	178,900	178,900	178,900	178,900
VI. Other long-term assets	75,433	69,718	62,944	66,331	64,637	65,484	65,061	65,272
1. Long-term prepaid expenses	75,433	69,183	62,719	65,951	64,335	65,143	64,739	64,941
2. Deferred income tax assets	-	535	225	380	302	341	322	331
TOTAL ASSETS	3,017,826	2,702,315	3,425,069	6,148,653	8,614,584	9,492,843	10,581,327	12,100,641
C. LIABILITIES	1,708,818	1,308,353	1,577,086	1,668,628	3,565,975	3,492,478	3,283,589	3,014,896
I. Current liabilities	1,486,752	1,232,275	1,567,562	1,668,628	1,803,801	2,085,521	2,313,788	2,580,273
% of Sales	0	0	0	-	-	-	-	-
1. Accounts payable to supplier	221,495	99,773	118,846	168,212	200,685	305,931	372,693	458,592
2. Advances from customers	10,741	16,164	14,213	23,967	26,392	41,945	50,066	62,243
3. Taxes payable to State Treasury	16,305	24,179	85,163	77,488	117,067	159,316	205,625	245,880
4. Payables to employees	32,555	49,981	62,684	86,317	104,355	158,013	193,141	237,257
5. Expenses payable	10,324	7,375	20,479	20,054	29,033	40,287	51,474	61,857
8. Unearned revenue	-	-	488	318	593	738	999	1,167
9. Other short-term payables	32,741	8,979	13,999	17,291	22,072	32,525	40,299	49,169
liabilities	1,161,787	1,025,232	1,251,131	1,274,081	1,302,593	1,345,177	1,397,584	1,461,743
12. Bonus and welfare fund	804	591	557	901	1,010	1,590	1,907	2,365
II. Long-term liabilities	222,066	76,078	9,524	-	1,762,174	1,406,957	969,801	434,623
D. EQUITY	1,309,008	1,393,962	1,847,983	4,480,024	5,048,610	6,000,365	7,297,738	9,085,745
I. Owners' equity	1,309,008	1,393,962	1,847,983	4,480,024	5,048,610	6,000,365	7,297,738	9,085,745
1. Share capital	660,000	1,250,446	1,250,446	3,250,446	3,250,446	3,250,446	3,250,446	3,250,446
- Ordinary shares	660,000	1,250,446	1,250,446	3,250,446	3,250,446	3,250,446	3,250,446	3,250,446
- Preference shares	-	-	-	-	-	-	-	-
2. Share premium capital	611,965	21,519	21,519	21,519	21,519	21,519	21,519	21,519
5. Treasury shares	(27,418)	(27,418)	(27,418)	(27,418)	(27,418)	(27,418)	(27,418)	(27,418)
11. Retained profits	69,992	153,314	603,435	1,235,476	1,804,062	2,755,817	4,053,190	5,841,197
- Retained profits brought forward	69,992	10,947	3,434	603,435	1,235,476	1,804,062	2,755,817	4,053,190
- Retained profits for the current year	-	142,367	600,001	632,041	568,586	951,755	1,297,373	1,788,007
12. Capital expenditure fund	-	-	-	-	-	-	-	-
13. Benefits of non-controlling shareholders	(5,532)	(3,900)	-	-	-	-	-	-
TOTAL RESOURCES	3,017,826	2,702,315	3,425,069	6,148,653	8,614,584	9,492,843	10,581,327	12,100,641

Appendix 2: Income Statement

in Vietnam Dong million	2016	2017	2018	2019F	2020F	2021F	2022F	2023F
1. Sales	2,847,113	2,962,439	4,136,199	5,303,434	6,596,348	9,886,737	12,176,539	14,916,694
2. Deductible items	22,588	13,298	18,210	23,578	29,183	43,847	53,937	66,115
3. Net sales	2,824,525	2,949,141	4,117,989	5,279,857	6,567,165	9,842,890	12,122,602	14,850,579
New depreciation for Binh Phu	-	-	-	-	141,364	282,728	282,728	282,728
4. Cost of goods sold	2,463,127	2,516,690	3,255,567	4,358,930	5,521,637	8,285,561	10,057,394	12,153,905
5. Gross profit	361,398	432,450	862,423	920,926	1,045,528	1,557,329	2,065,208	2,696,674
5. Financial income	154,496	19,625	73,915	94,770	117,876	176,673	217,592	266,557
7. Financial expenses	89,338	63,842	75,220	93,230	262,550	266,128	254,642	239,984
Interest expense	76,318	56,834	45,918	60,475	221,808	205,065	179,435	147,853
<i>Other Financial Expenses</i>	<i>13,020</i>	<i>7,008</i>	<i>29,301</i>	<i>32,755</i>	<i>40,742</i>	<i>61,064</i>	<i>75,207</i>	<i>92,131</i>
associates	(117,273)	(4,757)	(2,032)	-	-	-	-	-
9. Selling expenses	135,791	145,839	160,836	206,215	256,493	384,433	473,471	580,018
10. Administrative expenses	134,239	39,380	8,659	11,102	13,809	20,697	25,491	31,227
11. Net profit from operating activities	39,254	198,257	689,591	705,149	630,551	1,062,744	1,529,196	2,112,002
12. Other income	4,101	2,694	1,748	1,748	1,748	1,748	1,748	-
13. Other expense	14,517	34,344	1,190	1,190	1,190	1,190	1,190	-
14. Other profit/ (loss)	(10,416)	(31,650)	558	558	558	558	558	-
15. Total profit before tax	28,839	166,606	690,150	705,707	631,110	1,063,302	1,529,755	2,112,002
16. Current corporate income tax expenses	14,776	23,142	85,672	-	-	-	76,488	105,600
17. Deferred corporate income tax expenses	630	(535)	310	-	-	-	-	-
18. Profit after tax	13,432	143,999	604,167	705,707	631,110	1,063,302	1,453,267	2,006,402

Appendix 3: Cashflow

in Vietnam Dong million	2016	2017	2018	2019F	2020F	2021F	2022F	2023F
I. Profit before tax	28,839	166,606	690,150	705,707	631,110	1,063,302	1,529,755	2,112,002
2. Adjustments for:								
- Depreciation	77,338	80,285	80,052	90,328	166,222	317,509	402,889	421,584
- Provisions	74,863	(784)	(50,377)	-	-	-	-	-
- Gains/losses from unrealised foreign Exchange	3,736	(229)	4,516	-	-	-	-	-
- Gains/losses from investing activities	(21,637)	(5,284)	(56,118)	-	-	-	-	-
- Interest expenses	76,318	56,834	45,918	60,475	221,808	205,065	179,435	147,853
- Other adjustments	-	-	-	-	0	0	0	0
3. Profit from operating activities before changes in working capital:	239,458	297,429	714,141	856,509	1,019,139	1,585,876	2,112,079	2,681,439
- Increase/Decrease in receivables	(108,516)	342,128	113,329	(138,933)	(186,123)	(435,960)	(314,307)	(366,261)
- Increase/Decrease in inventory	123,648	308,229	(82,150)	(266,680)	(302,622)	(761,697)	(532,519)	(635,041)
- Increase/Decrease in payables	83,523	(137,516)	32,223	71,759	105,542	238,110	174,530	200,883
- Increase/Decrease in prepaid expenses	7,058	7,778	9,185	(3,387)	1,693	(847)	423	(212)
- Increase/Decrease in trading securities	-	-	-	374,248	-	-	-	-
- Interest paid	(76,397)	(57,322)	(39,862)	(60,475)	(221,808)	(205,065)	(179,435)	(147,853)
- Enterprise income tax paid	(3,997)	(14,778)	(25,502)	-	-	-	(76,488)	(105,600)
- Other receipts/Expense from operating activities	-	-	-	2,048	(1,024)	512	(256)	128
- Other expenses from operating activities	(609)	(213)	(334)	-	-	-	-	-
Net cash flows from operating activities	264,168	745,735	721,031	835,090	414,798	420,929	1,184,028	1,627,482
II. Cash flow from investing activities								
1. Purchase of fixed assets and other long-term assets	(58,122)	(55,855)	(432,390)	(2,127,291)	(2,182,701)	(295,774)	(370,972)	(449,699)
2. Proceeds from disposals of fixed assets and other long-term assets	820	2,949	1,152	-	-	-	-	-
entites	(26,384)	(352,790)	(904,815)	-	-	-	-	-
4. Repayment from borrowers and proceeds from sales of debt instruments of other entites	4,847	24,630	610,388	-	-	-	-	-
5. Investments in other entites	-	-	-	4,800	-	-	-	-
6. Investment returns from other entites	166,561	-	9,613	-	-	-	-	-
7. Interest, dividends and profit received	13,649	5,601	31,190	-	-	-	-	-
Net cash flows from investing activities	101,370	(375,464)	(684,861)	(2,122,491)	(2,182,701)	(295,774)	(370,972)	(449,699)
III. Cash flows from financing activities								
1. Receipts from stocks issuing and capital contribution from owners	-	-	-	2,000,000	-	-	-	-
2. Fund returned to equity owners, issued stock redemption	-	-	-	-	-	-	-	-
3. Long-term and short-term borrowings received	4,703,475	3,387,763	3,809,930	13,056	1,793,808	(309,042)	(380,619)	(466,271)
4. Loan repayment	(4,979,320)	(3,636,945)	(3,631,850)	-	-	-	-	-
5. Finance lease principle paid	(49,465)	(33,207)	(21,517)	-	-	-	-	-
6. Dividends, profit paid to equity owners	(31,605)	(83,764)	(149,438)	(84,685)	(75,733)	(127,596)	(174,392)	(240,768)
Dividend/ Share Capital	-	-	0	0	0	0	0	0
Net cash flows from financing activities	(356,915)	(366,153)	7,125	1,928,371	1,718,074	(436,638)	(555,011)	(707,039)
Net cash flows within the period	8,623	4,118	43,294	640,969	(49,830)	(311,483)	258,045	470,744
Cash and cash equivalents at the beginning of year	12,707	21,796	25,902	69,153	710,122	660,293	348,810	606,855
Cash and cash equivalents at the end of year	21,796	25,902	69,153	710,122	660,293	348,810	606,855	1,077,599

Appendix 4: Loan

in Vietnam Dong million	2016	2017	2018	2019F	2020F	2021F	2022F	2023F
Interest Rate	5.04%	4.57%	3.89%	4.75%	7.23%	7.43%	7.55%	7.73%
Interest Expense	68,503	65,852	81,839	76,318	56,834	45,918	60,475	221,808
Total Debt	1,164,611	1,477,169	1,641,958	1,383,853	1,101,310	1,260,656	1,273,712	3,067,519
Short term loans								
Begin	1,303,072	1,161,787	1,025,232	1,251,131	1,273,712	1,301,798	1,343,893	1,395,737
Net Borrowing	(141,285)	(136,555)	225,899	22,580	28,086	42,095	51,845	63,512
% of Net Sales	-5.00%	-4.63%	5.49%	0.43%	0.43%	0.43%	0.43%	0.43%
End	1,161,787	1,025,232	1,251,131	1,273,712	1,301,798	1,343,893	1,395,737	1,459,249
Long term Loan								
Begin	338,886	222,066	76,078	9,524	-	1,765,722	1,414,584	982,120
Net Borrowing	(116,820)	(145,988)	(66,554)	(9,524)	2,000,000	-	-	-
% of Net Sales	(0)	(0)	(0)	-	(234,278)	(351,137)	(432,464)	(529,782)
End	222,066	76,078	9,524	-	1,765,722	1,414,584	982,120	452,338
Other Financial Expense	13,020	7,008	29,301	32,755	40,742	61,064	75,207	92,131
% of Net Sales	0.46%	0.24%	0.71%	0.62%	0.62%	0.62%	0.62%	0.62%

Appendix 5: Fixed Asset

in Vietnam Dong million	2016	2017	2018	2019F	2020F	2021F	2022F	2023F
CAPEX	58,122	55,855	432,390	2,127,291	2,182,701	295,774	370,972	449,699
CAPEX % of Net Sales	2.06%	1.89%	10.50%	40.29%	33.24%	3.00%	3.06%	3.03%
Depreciation	77,338	80,285	80,052	90,328	166,222	317,509	402,889	421,584
Tangible Fixed Assets								
Begin	810,569	857,048	986,815	1,079,664	1,176,501	3,296,949	5,477,476	5,699,815
Addition	60,564	141,159	101,219	110,364	2,137,273	2,205,745	253,398	310,420
% of Net Sales	2.14%	4.79%	2.46%	2.09%	32.54%	22.41%	2.09%	2.09%
Disposal	14,085	11,391	8,371	13,527	16,825	25,218	31,058	38,047
% of Net Sales	0.50%	0.39%	0.20%	0.26%	0.26%	0.26%	0.26%	0.26%
End	857,048	986,815	1,079,664	1,176,501	3,296,949	5,477,476	5,699,815	5,972,188
%Growth	5.73%	15.14%	9.41%	8.97%	180.23%	66.14%	4.06%	4.78%
Tangible Fixed Assets Accumulated Depreciation								
Begin	637,364	695,530	789,530	869,703	954,048	1,102,833	1,384,319	1,740,138
Depreciation	48,349	55,786	64,754	79,735	158,096	310,097	395,016	412,500
Depreciation/ Tangible Fixed Asset	5.80%	6.05%	6.27%	7.07%	7.07%	7.07%	7.07%	7.07%
Buy Financial Lease	20,898	49,139	23,180	13,161	7,644	4,645	3,166	2,474
Disposal	(11,080)	(10,925)	(7,762)	(8,551)	(16,955)	(33,256)	(42,363)	(44,238)
Disposal/ Tangible Fixed Asset	1.33%	1.19%	0.75%					
End	695,530	789,530	869,703	954,048	1,102,833	1,384,319	1,740,138	2,110,875
Finance lease assets								
Begin	144,391	174,399	108,366	61,525	35,736	21,716	14,799	11,568
Addition	68,590	8,527	1,128	1,446	1,799	2,696	3,320	4,067
% of Net Sales	2.43%	0.29%	0.03%	0.03%	0.03%	0.03%	0.03%	0.03%
Buy Financial Lease	(38,581)	(74,560)	(47,969)	(27,235)	(15,819)	(9,613)	(6,551)	(5,121)
% of Begin Finance lease Asset	26.72%	42.75%	44.27%	44.27%	44.27%	44.27%	44.27%	44.27%
End	174,399	108,366	61,525	35,736	21,716	14,799	11,568	10,514
Finance lease assets Accumulated Depreciation								
Begin	52,150	57,411	30,325	19,723	14,253	11,152	9,394	8,314
Depreciation	26,159	22,053	12,578	7,691	4,543	2,887	2,085	1,746
Depreciation/ Finance Lease Asset	16.41%	15.60%	14.81%	15.82%	15.82%	15.82%	15.82%	15.82%
Buy Financial Lease	-	-	-	-	-	-	-	-
Buy Asset Accumulated Depreciation Lease	(20,898)	(49,139)	(23,180)	(13,161)	(7,644)	(4,645)	(3,166)	(2,474)
Lease	54%	65.91%	48.32%	48.32%	48.32%	48.32%	48.32%	48.32%
End	57,411	30,325	19,723	14,253	11,152	9,394	8,314	7,585
Intangible Assets								
Begin	215,659	215,716	250,504	307,058	378,768	467,962	601,647	766,295
Addition	94	37,435	56,554	72,672	90,391	135,478	166,856	204,404
% Net Sales	0.00%	1.27%	1.37%	1.38%	1.38%	1.38%	1.38%	1.38%
Disposal	(37)	(2,648)	-	(962)	(1,196)	(1,793)	(2,208)	(2,705)
% of Net Sales	0.00%	0.09%	0.00%	0.02%	0.02%	0.02%	0.02%	0.02%
End	215,716	250,504	307,058	378,768	467,962	601,647	766,295	967,993

Intangible Assets Accumulated Depreciation								
Begin	1,962	4,792	7,238	9,959	12,860	16,443	20,968	26,756
Addition	2,830	2,446	2,720	2,902	3,582	4,525	5,788	7,338
Addition/ Intangible Assets Accumulated	1.31%	1.05%	0.98%	0.85%	0.85%	0.85%	0.85%	0.85%
Disposal	-	-	-	-	-	-	-	-
End	4,792	7,238	9,959	12,860	16,443	20,968	26,756	34,093
Construction in progress								
Begin	110,454	125,878	66,176	392,882	2,368,864	2,338,989	294,213	239,066
Addition	15,424	-	326,706	2,031,431	2,039,095	58,595	72,166	88,406
% of Net Sales	0.55%	0.00%	7.93%	-	-	-	-	-
Convert to Fixed Asset	-	(59,702)	-	(55,450)	(2,068,969)	(2,103,371)	(127,313)	(155,963)
	0.00%	-2.02%	0.00%	-	-	-	-	-
End	125,878	66,176	392,882	2,368,864	2,338,989	294,213	239,066	171,509

Appendix 6: Pangasius features



Featuring no fish bones between muscles, no fishy taste, smooth texture and high meat yield (about 40%). Pangasius has become top consumed freshwater fish around the world. Pangasius is a healthy choice for families and particularly for people who pay special attention to a healthy diet, low cholesterol while sufficient protein. Pangasius contains rich mineral and nearly all vitamins, especially vitamin A and D in liver and some B vitamins. Pangasius is a species of high nutritional value because of the nutrient content of protein, Omega 3, high EPA and DHA, low fat and low in cholesterol. Compare with other Pangasius in world, Vietnam Pangasius is more preferred. Vietnamese Pangasius higher quality with other country with white color (compare with red and yellow color in Chinese Pangasius) and better taste due to great nutrient of Mekong delta and ecological condition (compare to Indonesia, India and Bangladesh).

Appendix 7: Navico farming area



ANV farming areas located in An Giang and Dong Thap provinces. These areas are the upstream of Mekong river that flow into Vietnam, An Giang and Dong Thap are close to Mekong River mouth which has convenient waterway and road transport. The near international border gate Tinh Bien, Vinh Xuong - Tan Chau and Long Binh - An Phu provides opportunities for collaborating with other Vietnam provinces and ASEAN countries. An Giang has a plentiful sources of surface water and groundwater. Each year, 70% An Giang area is floodplain, lasts about 3-4 months per year. Healthy floodplains give rivers the space to spread out and slow down, which allows such sediment to settle. This keeps water cleaner, protecting local drinking water and aquatic species like fish. Shading of streams by floodplain vegetation also helps regulate water temperature and allow fish species to grow. The upstream area also prevent ANV from El nino, which increase the amount of salt in the water

Appendix 8: Nam Viet lock-in chain

Navico Fish Feed Factory

There are 4 main input raw material: soybean meal from Argentina, US; cassava from Cambodia; rice bran from Vietnam rice export factories, and fish meal from Peru. All input materials have fixed contract in 6 months that ensure the quality, quantity and the supply cost for the full-chain value if there are any fluctuation of Vietnam Seafood market as a whole or Pangasius sector in particular.

The Feed Factory current has a capacity up to 380,000 tons per year in which the tracabile technology is applied to track the origin of every shipment. Beside, all fish are feeded based on the controlled, floating grain-based diet that optimize fish health and company sustainable development.

Navico hatchery

By the end of October 2018, the average price of raw pangasius in the Mekong Delta has reached a record high of 35,000 – 36,500 VND/kg. Many exporters of pangasius clearly lack raw pangasius for processing, resulting in many delayed or canceled orders. The price of raw pangasius increased so fast that export prices also increased. The main reason for this is lack of fish fry for growing. Fish seed production plays an important role in improving exported pangasius quality and fish export value and minimize risks to fish farmers. Different from other Pangasius corporation, Navico can supply fish fry, fingerlings itself by hatchery.

Being more proactive with diagnostics—that is, working closely with a veterinarian or diagnostic lab to anticipate and stay ahead of common problems like ESC—can also lead to better disease control. Navico carefully select the strongest new-generation antibiotics to lower mortality and improved performance. With 20,000 broodstocks ANV can create 14 billion fingerling fish.

0-20g stage is the most difficult and important stage in growing fingerlings. That's the problem of a whole Vietnam aquaculture due to the extremely high mortality rate. However, Navico can keep the survival rate around 5-15% from egg to fish fry while other farmers can only maximize this rate up to 3-10%.

The stage from fish fry to fingerlings needs a careful care due to low rate of survival. By new technology in the hatchery and nursery phases, Navico can ensure the higher-quality fingerlings, around 70-80% with the capacity 14bn fingerlings per year, while other farmers just successfully keep 30-50% fish fry alive.

Navico farming site

In 2013, the fish farming area was expanded from 100 hectares to 300 hectares, which could provide over 120,000 MTs of fish materials per year.

Raising fingerlings successfully cannot ensure 100% that it can be alive and develop strongly until processing. Instead, there are normally 25-35% death losses in most Pangasius farmers. By the thorough research and good nursing plan, Navico can decline the mortality rate to 15-25% with the total product cost is about VND 22,000 per kg of ready-to-be processed fish, while the other farmer 's cost is VND 27,000 per kg.

Navico processing factory

NAVICO currently has 4 processing factories, An Do Duong factory, Dai Tay Duong factory, Thai Binh Duong factory and Nam Viet factory. In 2018, the current production of fish processing is 450 tons per day. The maximum capacity of total 4 factories can increase up to 1200 tons per day.

Factories of ANV produce quality goods that meet both quality and safety for many export market. Nam Viet has received a lot of reputation certificate for food processing. Currently, ISO, IFS and Halal are three most famous certificates that Navico have already acquired.

Export market

Nam Viet has a diversified portfolio of exporting countries, currently Nam Viet export to more than 70 countries with some big consumption market like China, EU and Latin America.

In 2018 ANV successfully expanded its market to China with the cooperation of the distributor, Feng Lei. Feng Lei is a local wholesaler of China. It has a large distribution system from warehouse, transportation and more than 30 stores that can supply to customers from different market to restaurant.

Together with wholesale partner, such as Makro, DaySeaDay, Inlet, Opergel, El Nasser, Navico conducts market research about the consuming behavior or habits of locals. Hence, the thorough customer portfolio is made that allow Navico to customize or adjust suitably on customer demand or preferences. It both satisfies customer demand and declines the risk of stock out demand or excess supply.

Appendix 9

Nam Viet Binh Phú Aquaculture project:

In November 2018, Navico decided to invest VND 4,000bn in constructing 600 ha of high-technology farming site in An Giang in 2 years: from 2019-2020 through Nam Viet – Binh Phu Aquaculture One Member Co. with 100% ownership. It will be the largest farming site in Vietnam and ensure sufficient supply for export market expansion.

Through Binh Phu Farming Site, Nam Viet will complete its integrated value-chain from feed to end-product and ensure 100% supply of high-quality broodstock for farming and export, maximizing economies of scale.

The project is divided into two areas, including high quality three-stage pangasius broodstock production site (150 ha area, VND 1,000 billion investment capital) devoted to high-quality fingerlings and high-technology farming site (450 ha area, VND 3,000 billion investment capital) which will raise 200,000t of pangasius per year.

This farm can fulfill the most strictly standards on uniform size, exact timing, environment-friendly, etc. and 100% products will be exported

Management and operation will be automated in water pumping, feeding, harvesting, transportation, origin tracking, etc.

Environmental friendliness is assured by Japan technology in pond water treatment and minimization of pumping sewage.

Moreover, Israel technology is applied to enhance broodstock quality.

Thanks to high-tech activities, this project is support by government through tax exemption: 0% tax rate for the first 3 years, 5% tax rate for the next 9 years and 10% tax rate for the next following years.

Currently, Navico has 330 ha of farming site which supplies 95,000 tons pangasius fish each year. This capacity will be increased to 120,000 tons each year after the project starts operating in Q4.2019. Total export value of Navico will be doubled, reaching USD 250-300 million per year, in which USD 150 million is from this project.

Appendix 10

SWOT ANALYSIS:

I/ STRENGTHS:

ANV has a better growth motivation compared with others company in Vietnam aquaculture thanks to the expansion plan for materials and export markets in the next 2 years.

Full-value chain: Such a few Vietnam corporations can totally conduct a self-supply strategies as Nam Viet, even VHC - the largest Vietnam Pangasius exporter just self produce ⅔ their materials. Thanks to a full chain integrated value from producing food, raising fish and processing mature Pangasius, Navico is more powerful in controlling their own supply materials for processing and exporting

Navico pursues diversification strategies to address the adverse effects of price volatility in international markets. Be on top largest Vietnam Pangasius exporter, Navico mainly exports to our neighbor, China. Chinese market is considered as a potential market with the estimated revenue for 2019 about 30-35%. Simultaneously, Navico also expands market share in familiar markets, such as Latin America, Asean , or even come back US market in 2020. This diversification strategy efficiently prevents ANV from being vulnerable to shocks and price fluctuations.

Good cost control:Cost of good sold has acquired the largest percentage in Navico cost structure for many years. In 2018, it was about 78.70% of total sales. Therefore, Navico put a great effort in completing its full-chain value in order to stabilize the quality and quantity of input materials, control producing cost and develop export market. Navico has applied ERP software in managing operation from producing to selling, analyzing profitable activities and suggesting suitable improving solutions. Hence, the labor cost and salaries have been reduced.

II/ WEAKNESSES:

The workforce is not stable. 87.2% of Navico workforce is blue-collar workers that can easily change workplace among corporations in the same industry or other industry. Therefore, Navico must take care about their sufficient compensation in order to keep these employees.

ANV products is mainly raw fish products for export. ANV lacks of by-products compare to IDI and VHC which has invested and developed fish oil and collagen for commerce

III/ OPPORTUNITIES:

In 2018, the demand for Pangasius from almost export market increases, particularly US market with the growth 54.5% YOY acquire 24.2% the total export revenue of processing Pangasius in Vietnam. In 2019, exporting Pangasius is expected to keep growing.

Thanks to trade war, Chinese market will continuously a fast-growing market. Prices of US seafood products in China will increase owing to higher tariffs. Pangasius is not an alternative of US products, but if the price of US products is too high, Pangasius will become the potential choice of Chinese consumers who prefer paying less for high-quality products.

The market price of Pangasius at the end of 2018 was quietly high due to a rising ex-farm prices and a lack of quality of fingerlings for stocking. An expected improvement in fingerlings availability for grown hasn't actually been achieved. In EU, the premium, chemical-free products, 100% white meat, is in high demand, going at price \$4.2-\$4.55 per kilogram. The weather is bad for fry combining with the extremely high mortality rate when fingerlings are under 20g will threat the sources of input materials for Vietnam pangasius manufacturers who cannot produce fingerlings by themselves. However, it will motivate Navico growth thanks to its nearly completed full chain value that allows Navico to produce fingerling, satisfy requirement for their core business and also sell to the others.

The appreciation of USD will facilitate Vietnam export as well as increase profit from those contracts paid by USD.

US market is still the target market for Vietnam producers, especially in the situation that trade-war escalation can facilitate Vietnam pangasius export to replace for tilapia from China.

EU market is also potential if EU-Vietnam Free Trade Agreement (EVFTA) is passed in 2019 which remove almost 90% tariffs for Vietnam aquaculture in the next 3-4 years. This enormous benefit will drastically increase the competitive advantage for Vietnam product because the current tariffs 14% are limiting the revenue of Vietnam export enterprises.

IV/ THREATS:

The "whitefish war" between EU and Vietnam in early 2018 due to the claim that raising pangasius polluted Mekong rivers will set Vietnam pangasius industry in danger if it keeps continue.

Besides, the "whitefish war" between US and Vietnam started in 2000 in which US catfish growers and wholesalers started a campaign to curtail imports of Vietnam pangasius, knowing that about 90 percent of the catfish imported by the U.S. was from Vietnam, will be a threaten sign .

When enter US market, the competitive price should be in concern. Different from VHC which achieves 0% tariffs owing to the long export period, ANV, as a beginner, may suffer the tax at the beginning

Appendix 11: Revenue forecast

Revenue and COGS (in million)

Revenue Breakdown by Segment	2018	2019F	2020F	2021F	2022F	2023F
Export	3,474,407	4,490,671	5,560,354	8,575,608	10,526,083	12,847,381
Growth		29.25%	23.82%	54.23%	22.74%	22.05%
% of Total Sales	84%	85%	85%	87%	87%	87%
Feed Fish Production	413,620	496,344	595,613	714,735	857,682	1,029,219
Growth		20.00%	20.00%	20.00%	20.00%	20.00%
% of Total Sales	10%	9%	9%	7%	7%	7%
By-products	186,129	241,968	314,558	408,925	531,603	691,084
Growth		30.00%	30.00%	30.00%	30.00%	30.00%
% of Total Sales	4.5%	5%	5%	4%	4%	5%
Raw Fished Material	41,362	49,634	59,561	71,474	85,768	102,922
Growth		20.00%	20.00%	20.00%	20.00%	20.00%
% of Total Sales	1.0%	1%	1%	1%	1%	1%
Other	20,681	24,817	29,781	35,737	42,884	51,461
Growth		20.00%	20.00%	20.00%	20.00%	20.00%
% of Total Sales	1%	0%	0%	0%	0%	0%
Total	4,136,199	5,303,434	6,559,867	9,806,479	12,044,020	14,722,066
Growth		28%	24%	49%	23%	22%
		35.32%	29.23%	54.36%	28.07%	27.42%

CAGR Growth rate 2014 - 2018 of the Industry	2017 - 2018 Growth rate of the Industry	Revenue by Region (in million)	2018	2019F	2020F	2021F	2022F	2023F
47.02%	28.67%	China	694.881	1,111.810	1,556.534	2,179.148	2,832.893	3,682.760
		Growth % of Export	20%	60%	40%	40%	30%	30%
-8.34%	-17.08%	Brazil	590.649	620.182	651.191	683.750	717.938	753.835
		Growth % of Export	17%	5%	5%	5%	5%	5%
14.92%	48.77%	Thailand	486.417	680.984	885.279	1,150.863	1,496.121	1,944.958
		Growth % of Export	14%	40%	30%	30%	30%	30%
-8.29%	19.97%	EU	451.673	542.008	650.409	780.491	936.589	1,123.907
		Growth % of Export	13%	20%	20%	20%	20%	20%
-2.80%	14.71%	Colombia	347.441	364.813	383.053	402.206	422.316	443.432
		Growth % of Export	10%	5%	5%	5%	5%	5%
-3.63%	-4.65%	Mexico	312.697	343.966	378.363	416.199	457.819	503.601
		Growth % of Export	9%	10%	10%	10%	10%	10%
-5.94%	27.93%	Egypt	138.976	194.567	233.480	280.176	336.211	403.454
		Growth % of Export	4%	40%	20%	20%	20%	20%
13.02%	59.54%	US				16,141.161	19,369.393	23,243.272
		Growth % of Export					20%	20%
10.27%	46.23%	Other	451.673	632.342	822.045	1,068.658	1,389.256	1,667.107
		Growth % of Export	13%	40%	30%	30%	30%	20%
		Total	3,474.407	4,490.671	5,560.354	8,575.608	10,526.083	12,847.381
		Growth		29%	24%	54%	23%	22%

Appendix 12: Valuation

DCF model	2019F	2020F	2021F	2022F	2023F
EBIT*(1-Tax rate)	766,181,576,943	847,421,933,594	1,255,779,333,638	1,603,141,712,426	2,115,346,766,603
Depreciation	90,327,675,527	166,195,106,210	317,398,869,324	402,625,506,646	421,086,180,894
Changes in WC	(331,806,318,260)	(373,541,681,175)	(946,246,946,603)	(657,238,590,602)	(782,134,101,123)
CAPEX	(2,127,291,378,789)	(2,181,694,766,369)	(293,559,029,634)	(367,310,858,615)	(444,316,209,912)
Value of New Shares Issue	2,000,000,000,000				
Free Cashflow	397,411,555,422	(1,541,619,407,740)	333,372,226,725	981,217,769,854	1,309,982,636,462
Sustainable Growth	2%				
Discount rate	10.92%				
Terminal Value					14,987,038,167,365
DCF	369,611,679,284	(1,292,676,298,062)	252,028,383,711	668,794,764,495	10,014,818,929,707
Firm value	10,012,577,459,134				
Less: Total Debt	1,260,655,642,480				
Plus: Cash and Equivalents	69,153,027,332				
Equity Value	8,821,074,843,986				
Price per Share	43,064.75				
Market price	26,600				

Relative Valuation

Company	P/E ratio
VHC	6.03
IDI	2.76
ANV	5.56
Meadian	4.78333333
Expected P/E of ANV	5.5
ANV EPS	4,660.17
Price	25,630.95

Method	Weight	Price
FCFF	80%	43,064.75
P/E	20%	25,630.95
Expected price:		39,578
Current Price		26,600
Upside		49%