

Date: 12/04/2019
Ticker: ANV USD/VND = 23,636

Investment Highlights

We issue a **BUY** recommendation on Nam Viet Joint Stock Company with a one – year target price of VND 30,599 using the Discounted Free Cash Flow to Firm Method and Multiple Valuation Method. This offers a 15,03% upside from its closing price of VND 26,600 on April 12th, 2019. Navico is able to further maximize their firm value by capitalizing on the future favorable demographic and economic conditions through its proper core business strategy, thoroughly integrated value chain and potential business growth. Our recommendations are based on the following key catalysts:

Thriving Prospects of the Pangasius Exporting Business

According to a FAO's report, by 2030, the fish consumption has progressed from 17.2 kg/person/year in 2010 to 18.2 kg/person/year in 2030. The production of pangasius is estimated to be one of fastest growing industries, maintaining roughly a 5% share of the global production until 2030 while the aquaculture production around the world will grow at a CAGR of 1.76% from 2020 to 2030. The Vietnamese pangasius output achieved a CAGR of 5.25% in 2014 - 2018 and is expected to continuously grow by 10% in 2019. Apart from that, Vietnam is ideally located in a favorable the geographical region and ecological conditions – the Mekong delta - to produce the fish at relatively low cost, mild flavor and delicate texture, which are the ultimate competitive advantages compared to other countries around the world. We strongly believe that the pangasius industry could accomplish a better revenue momentum in the medium term.

Core Business with Pioneering Strategy Enhances Costs Efficiency and Quality

The preparations of a closed integrated production value chain acts as a precursor to reduce the production costs from 5% - 10%, compared to the market, combining the initiative of fingerlings, feed manufacturing, quality control and sustain the farming to compress the production costs with massive production as well as to eliminate of market's variation. Moreover, feasible solutions are being applied to focus on increasing the labor productivity, reducing administrative cost, and integrating technology to business. All of that grants the company a huge competitive advantages of production, resulting in a rise in the gross margin from 17.6% in 2015 to 22.9% in 2018.

The Sustainable Development of International Market

With over 15 year-experience in pangasius industry, Navico has proven their own competitiveness by consecutively maintaining their position in the Top 5 of the largest pangasius exporters in Vietnam. A strong growth of core business reporting in a CAGR of 10.42% in 2014 – 2018 is reasonably followed by the continuous development of core business in diverse, stable markets, including strategic partners with strong distribution networks to deliver to end users. Furthermore, upon observing of positive signals from the Middle East, the United States, China, Navico is planning a different strategy to reap the potential revenue of each market. The Company's emphasis on the pangasius business is able to grow successfully in the emerging key markets, especially China – concentrating on a differentiation strategy on the fish-serving food chains, large fish commercial chains which is becoming the new development trend.

Key Figures

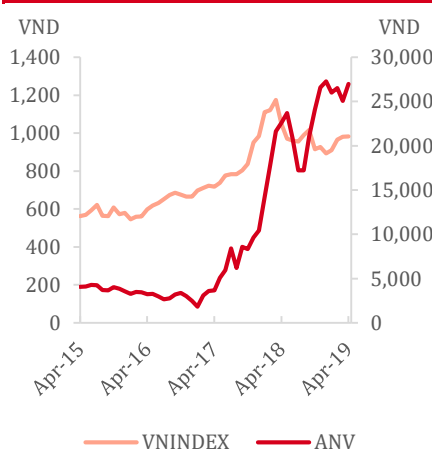
Closing price	26,600 VND (1.13 USD)
Target price	30,599 (1.29 USD)
Upside/downgrade	15.03%
Recommendation	BUY
Share outstanding	127,144,875
Market capitalization	3,382.05 Billion VND
P/E	5.64x
EV/EBITDA	5.90x

Source: Thomson Reuters, Team estimates

Valuation	Worst Case	Base Case	Best Case
DCF (75%)	28,598	30,933	33,763
EV/Revenue (15%)	28,826	28,826	28,826
P/E (5%)	24,400	24,400	24,400
EV/EBITDA (10%)	16,595	16,595	16,595
Target Price	28,847	30,599	32,721
Upside	8.45%	15.03%	23.01%
Recommendation	Hold	Buy	Outweight

Source: Team estimates

One-year Price Movement



Source: Thomson Reuters

Key ratios	2018	2019F	2020F	2021F	2022F	2023F
Total revenue	4,117	4,736	5,469	6,340	7,374	8,601
% growth	39.6%	15.0%	15.5%	15.9%	16.3%	16.6%
Gross profit	944	1,169	1,350	1,565	1,821	2,124
Gross margin	22.9%	24.7%	24.7%	24.7%	24.7%	24.7%
NPAT	599	485	694	859	1,146	1,383
% growth	321.4%	-19.0%	42.9%	23.8%	33.4%	20.7%
ROE	37.0%	24.4%	29.3%	29.5%	30.9%	28.9%

Source: Company filings, Team estimates

Business Description

Nam Viet Corporation ('NAVICO' or 'ANV') is the second largest pangasius exporting company in Vietnam. Originally established in 1993 as Nam Viet Co., Ltd., the company initially operated in the field of civil and industrial construction. Seven years later, in 2000, Doan Toi - the Chairman of Nam Viet decided to shift their investment direction into the seafood processing industry upon observing potential economic values of the pangasius. The company was privatized and transformed into Nam Viet Corporation in 2006 before it was officially listed in the Hochiminh Stock Exchange under the ticker symbol 'ANV' in December 2007.

Pangasius products are the major revenue contributor

In 2018, 84% of NAVICO total revenue comes from export of fresh and value-added pangasius products (fillet, butterfly cut, etc.), amounting to 3459.1 billion VND (**Figure 1**). The Company also provides fish feed, seafood by-products (fish oil, fish powder, biodiesel and adhesives) and other activities including paper packaging manufacture and printing, civil and industrial construction as well as fertilizer production.

Export plays a predominant role

NAVICO is an export-oriented pangasius manufacturer whose revenue from foreign markets added up to 80% (3,305.3 billion VND) at the end of 2018. Their major importers include China (distributed through Shanghai Fenglei International Trading Co., Ltd), where the company managed to surpass other Vietnamese competitors in terms of export volume only after 6 months. In addition, Nam Viet export is equally shared among ASEAN countries (Thailand, Malaysia), North America (Brazil, Colombia), and Europe (Italy, Belgium, Netherlands) (**Figure 2**). In 2020, Nam Viet aspires to file their long-awaited return to the promising US market, which is the largest consumer of the Vietnamese pangasius with a market share of 24.2% and a growth rate of 54.5%.

Company Strategy

In order to succeed, NAVICO maintains its focus on 3 main factors: a sustainable fully integrated value chain, a 4-P strategic business plan and their serious commitment to product quality.

A sustainable fully integrated value chain

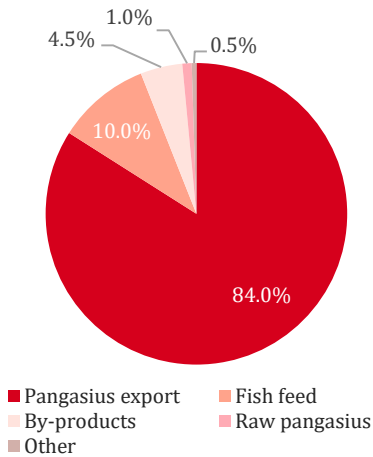
Nam Viet has successfully set up complete a value chain (**Figure 3**) which helps the company avoid the risk of input scarcity and price fluctuation.

- **Hatchery:** Nam Viet hatcheries can supply 14 billion in-house fingerlings using 20,000 brood stocks annually. Their larvae are estimated to survive at a rate of 5-15%, which is 2-5% higher compared to other farmers. In addition, the survival rate of NAVICO fingerlings vary from 70% to 80%, while other companies can only maintain theirs at around 30- 50%. This allows the company to actively control the quantity, the quality and the price of their fingerlings supply.
- **Feed factory:** NAVICO is securing forward supply contracts to ensure the price and quantity of their feed factory input. High-quality raw input materials (soy bean, cassava and fish meal) are imported from foreign countries while rice bran, which makes up around 40-50% of the feeding compound, is obtained locally from the rice export factories. These materials are processed at Navifeed factory with a total capacity of 380,000 tons per annum, 80 percent of which is used to directly supply the farming sites and the rest 20% for sale.
- **Farming site:** With 24 farming areas, NAVICO operates a total farming site of over 300ha, with total volume 120,000 tons per year. Since 2018, the company has constructed Binh Phu high-tech aquaculture 600ha, projected farming area to reach 750 ha and rise hatchery area with 150 ha. Until 2021, NAVICO's capacity will reach to 250,000 tons annually. Until 2018, the company can raise 30% in fingerling to mature. This rate will be projected 70% in 2019 and 100% in 2020.
- **Processing plant:** NAVICO has 4 factories with a maximum total capacity reaching 1200 tons per day. At the present, total operating capacity achieves 450 tons per day by 2 processing factories, 1 being rented out and 1 under repair. Having increased the farming volume, the firm expects their processing output to increase to 500 tons/day in 2020 and 870 tons/day in 2021.
- **Distribution:** The firm orientates a vertical integrated distribution channel. This allow them to capture of large market share through maintaining the relationship with strategic partners in each market, owning distribution network to delivery products to consumers. Their typical wholesale partners include Markro, Dayseaday, Opergel foods, El Nasser star and Shanghai Fenglei International.

Commitment to products quality

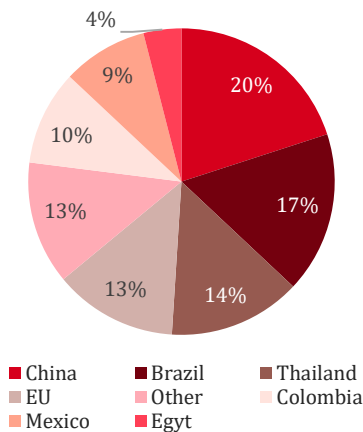
With a team of highly qualified technicians, they can control the quality from their fingerlings to the farming areas to ensure the quality of every single-product. In addition, the company also sends technical staff to monitor farmers. Therefore, farmers can reduce the risks in the production process, especially the quality, while the production of raw pangasius increases in quantity. Their farming sites also meet ASC

Figure 1: Revenue breakdown 2018



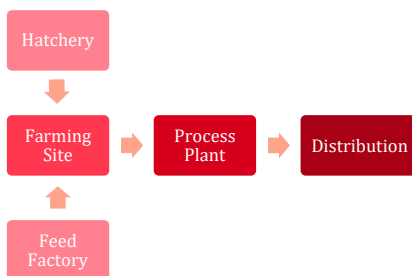
Source: Annual report

Figure 2: Exporting markets



Source: Annual report

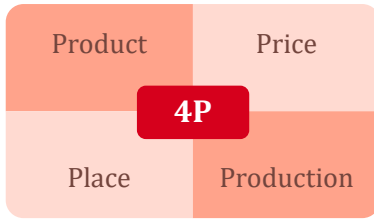
Figure 3: Integrated full value chain



Source: Team's collection

and BAP standards, which are among the strictest global criteria. Besides, the factories meet other global certifications such as ISO, HALAL, IFS, BRC, etc.

Figure 4: 4P strategic plan



Source: Company filing

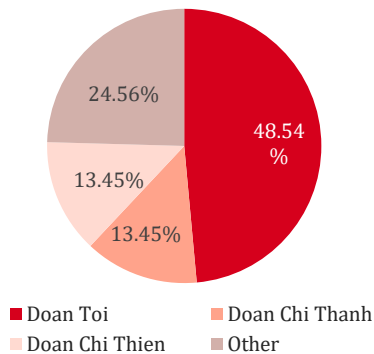
4P business strategic plan (Figure 4)

- **Product:** NAVICO continues to improve the quality of their farms as well as output product to match every customer's demand.
- **Price:** ANV develops massive and high-technology farming sites to reach maximum efficiency to lower our input cost.
- **Promotion:** Company sells the product at a more affordable price to the strategic partners to support their distribution of the final product.
- **Place:** Besides the existing markets, NAVICO keeps exploring more markets with potential customers.

Shareholder Structure

Up to now, there are 127.539.625 shares outstanding. There are three biggest investors in the company are Doan Toi, Doan Chi Thanh, Doan Chi Thien with ownership of 46.33%, 13.50% and 13.50%, respectively (**Figure 5**). Most of shareholders are Board of Director, so there are some positive impacts on the company, such as guarantees the stability of management decisions (**Appendix D**).

Figure 5: Shareholder structure



Source: Company filing

Corporate Governance

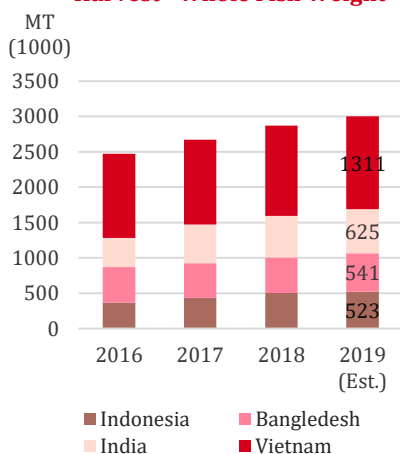
The effectiveness of the concentrated corporate governance (CG) is developed by three main components with independent and cross check mechanism:

- (1) **General Shareholders Meeting (GSM):** the GSM provide the ultimate decision power with one share one vote policy including right of inspection, a right to dividend, pre-emptive right, etc.
- (2) **Board:** The Board established governance supervisory comprising of risk, governance, election committees, nomination, audit.
- (3) **Audit and Oversight:** the internal auditor oversees the board, compliance regulation annually, designed by Chief Governance Officer and external audit are employed by contracting with highly reliable experts (A&C - audit company) to have a better grasp of possible risks the Company may encounter.

Local Economic & Social Responsibility

The firm implements energy, water saving policy to mitigate the impact throughout production to environment. The special concern of company to training about labour safety, hygiene practices, working safety has improved in recent years. Moreover, Navico actively contribute the local community through diverse charity funds and granted children of employees those who accomplished high academic achievement.

Figure 6: Pangasius World Harvest - Whole Fish Weight



Source: Global Seafood Market Conference

Industry Overview and Competitive Positioning

Industrial overview

The largest player in global market

Vietnam has retained its dominated position in global pangasius market for the last 20 years. Currently, Vietnam is the world largest pangasius supplier, recording a half of global market. The remainder provided by India, Bangladesh, Indonesia, Malaysia, and China. The forecast output volume of total Vietnam pangasius will rise around 1.311 million tons in 2019 which records higher than total amount of India and Bangladesh (**Figure 6**).

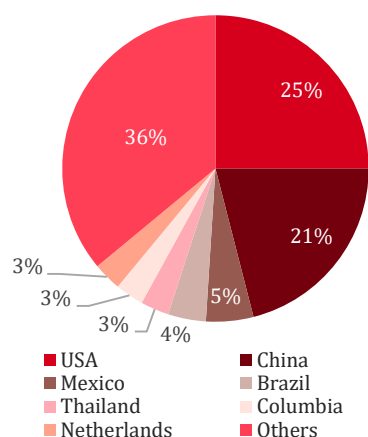
The pressure of catfish growth from host countries

Pangasius became the native fish of Vietnam, possessing huge economic value, wide-range acceptance and the demand is high in major markets, including the US and China, the number of countries have seen the bright prospects that plan to stepped in to produce the fish, placing a considerable competitive pressure on Vietnam. Moreover, the imported countries, especially, Brazil, start increasingly producing native fishes to meet their domestic demand, while most of Vietnam's pangasius targets to export to those countries. That results in a fierce competition in global market.

Government jumped to spur export and sustain domestic production

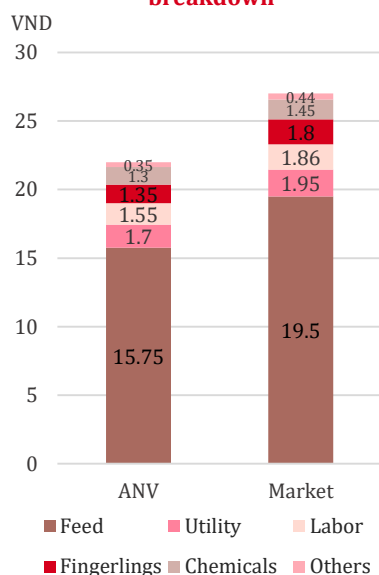
Vietnam's government proactively has signed many Free Trade Agreement ("FTA") so as to foster conditions for expanding our export market, putting the effort to remove trade barriers. By implementing that, the mechanism is create to encourage Vietnamese enterprises to participate in regional value chains and seek new opportunities in emerging market. In 2018, the aquatic products export increased 8.4% year on year ("VASEP") demonstrate the good outlook. On the other hand, with the plan to enhance the quality of pangasius and stability of the supply, the authorities awarded the

Figure 7: Top Vietnamese Exporting Markets



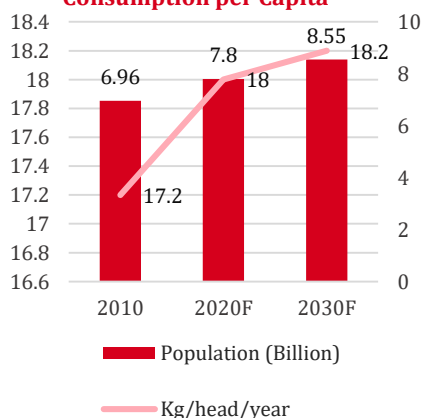
Source: Company filings

Figure 8: ANV vs Market Cost breakdown



Source: Team estimates

Figure 9: Global Fish Consumption per Capita



Source: FAO

bottleneck of industry - the hatchery stage challenges many domestic firms. Government carried out the 3 levels of pangasius farming to support from broodstocks to fingerlings to overcome the shortages of fingerlings. That stabilizes the domestic production and foster the aquatic export.

Advantages of pangasius production and quality

Almost farming sites of local pangasius enterprises are located in Mekong delta, benefiting advantages of ecological conditions: plentiful sources of rice bran, fish meal; water supply from downstream river; cheap labor costs, making the firms save 5-10% lower production costs compared other neighbor countries. Beside that the Vietnam's pangasius meat is high appreciated around the world because of non-containing fishery smell, great color, naturally sweet tastes. Obviously, Vietnam, owns the high competitive advantages in commerce by offering the reasonable price associated with the premium fillet.

Global political movements redeem the exporting seafood growth.

Vietnam simultaneously take advantages to import pangasius products into three largest market which catfish export volume into US, China- Hong Kong and Mexico record around 25%, 21%, 5% of total pangasius export, respectively (Figure 7). The prospect outlook is still positive when catfish consumption is increasing rapidly, household final consumption expenditure of United States and European nations remains high, as well as the demand growth from Middle East, especially, UAE, Egypt and Saudi Arabia (26.4%). Specially, the largest market with 1.3 billion people are increasing the catfish demand and expect to grow rapidly in next years

Competitive positioning

The key farming efficiency

Since 2014, the preparation of hatching area aimed to solve the bottleneck of production from brood stocks, fish fries to fingerlings that manages the production quality. This eliminate the shortage of fingerlings from market which are vulnerable disease, unqualified origin and seasonal price fluctuation. While other rivals purchase fingerlings from market when signs of demand growth surge.

The prominent element compresses the product costs

The input raw materials to fish feed accounts for around 72% of pangasius's price with ratio 1:1,55. With fixed cost contracts and large amount of materials, the feed price declines to average 10,000 VND/kg. That acts as precursor to reduce the manufacturing price compared to other competitors, relying on feed production outsourcing.

The place emerges the competitive advantage

According to NAVICO, possessing the benefit of self-supply from feed factory and hatchery area provide Nam Viet reduce production cost 5-10% which price is around 22,000 VND/kg compared to 27,000 VND/kg from market (Figure 8). Beside that 100% initiative of farming helps NAVICO avoid the risks in terms of diseased fishes, price changes and thus, increase effectiveness.

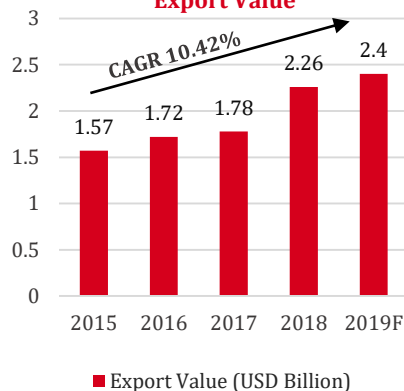
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Thriving Prospects of the Pangasius Exporting Business

According a FAO's report, by 2030, the fish consumption kg/person/year has progressed from 17.2 in 2010 to 18.2 in 2030 (Figure 9). The pangasius production has recorded as one of fastest species risen and maintained the share around 5% of total global production until 2030 while global aquaculture production will grow at 1.76% of CAGR in 2020 -2030. Vietnam pangasius gains 5.25% of CAGR in 2014-2018. A part from that, Vietnam possesses geographic range, ecological conditions - Mekong delta - to product the fish's relatively low cost, mild flavor and delicate texture have gains competitive advantages compared to other countries across the world. We strongly believe that pangasius industry could accomplish better revenue momentum over medium term.

Figure 10: Vietnam Pangasius Export Value



Source: VASEP

Core Business with Pioneering Strategy Enhances Costs Efficiency and Quality

The preparations of closed integrated production value chain acts as precursor to reduce the production costs from 5% - 10%, compared to market, combining from initiative of fingerlings, feed manufacturing, quality control and sustain the farming to compress the production costs with massive production as well as to eliminate of market's variation. Moreover, the feasible solutions focused on increasing the labour productivity, reducing administrative cost, integrating technology to business. All of that bring the huge competitive advantages of production and result in the rise in gross margin from 17.6% in 2015 to 22.9% in 2018.

The Sustainable Development of International Market

With over 15 years-experience in pangasius industry, Navico has proven the their own competitiveness by consecutive scoring top 5 of the largest pangasius exporter in Vietnam. A strong growth of core business reporting in a CAGR of 10.42% in 2015 – 2018 is reasonably followed by the continuous development of core business in diverse, stable market, including strategic partners with the strong distribution networks to delivery to end users (Figure 10). Furthermore, observation of positive signals from Middle East, United States, China, Navico plans different strategy to reap the potential revenue of each market, The Company's emphasis on pangasius business is able to grow successful in the emerging, key markets, especially, China – concentrating differentiation strategy on the related fish-serving food chains, large fish commercial chains which become new trend development

Valuation

Valuation Price Target: VND30,599 (USD1.29)

Recommendation: BUY

We evaluate ANV using both Discounted Free Cash Flow to Equity and Relative Valuation methods with 3 multiples EV/Revenue, P/E and EV/EBITDA. ANV's shareholding structure represents the proxy for the assigned weights to these valuation methods (Figure 11). 75% of ANV's current shareholders are BOD's member and management team who are able to employ cash-flow-related methods thanks to their accessibility to ANV's strategic direction and management. The rest 25% free float belongs to minor shareholders to whom the Relative Valuation method would be more applicable because of information asymmetry.

Figure 11: Valuation Results

Method	Value	Weight	Contribution
DCF	30,933	75%	23,240
EV/Revenue	28,826	15%	4,324
P/E	24,400	8%	1,830
EV/EBITDA	16,595	8%	1,245
Target Price in 2019			30,599
Current Price			26,600
Upside			15.03%

Source: Team estimates

Discounted Free Cash Flow to Equity

DCF – The “CF” Part: Cash Flow

Revenue Projection (Figure 12)

ANV's Revenue is broken down into 2 components: Domestic and Export.

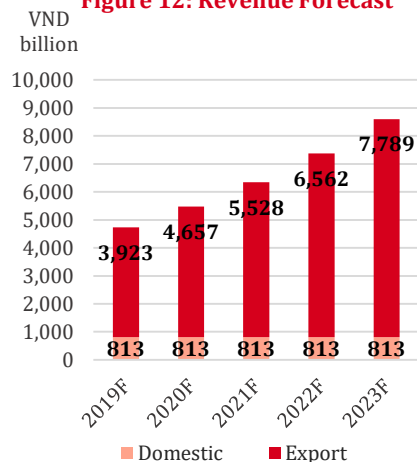
Domestic: 2 key drivers of this component is limited domestic demand due to taste preference and a wide range of other alternatives. Based on our quantitative method, we assume that domestic revenue remains the same as 2018 due to its fluctuated growth rate trend from 2015 to 2018.

Export: Our team estimates the revenue growth rate of this segment is 15% compared to industry growth 10% in 2019. The foreign strategic partnership remains an indispensable thanks to the stable demand and potential benefits which ANV aligns with its wholesale partner in market research for customer portfolio. ANV's most apparent partnership is with FengLei Int. who has reliable distribution channel from warehouse, transportation and retailer system (more than 30 stores). Our team estimates foreign market demand growth would mostly come from China-Hong Kong, EU, Middle East, especially UAE, Egypt and Saudi Arabia.

DCF – The “D” Part: Discount Rate

ANV's cost of equity is calculated based on the popular risk measurement CAPM. Risk-free rate of 4.80% is the current yield of 10-year Vietnamese government bond (12-April-2019, Asian Development Bank). According to the estimation of Prof. Aswath Damodaran Vietnam's equity risk premium of 8.59% is from the perspective of Prof. Aswath Damodaran. ANV's Beta of 0.81 is derived from Thomson Reuters financial record of the company (Figure 13). Comparable's betas and Debt/Equity ratio are estimated to be 0.92 and 68.2% respectively, from which we achieve the comparables's unlevered beta of 0.58. This number is re-levered by using ANV's current Debt/Equity ratio to arrive at ANV's levered beta of 0.77. Based on comparable companies, the WACC is 9.18% while WACC based on historical beta 9.43%.

Figure 12: Revenue Forecast



Source: Team estimates

Gross Margin, Selling, General and Administrative Expenses

Gross Margin is forecast to burst down from 22.9% in 2018 to 24.9% in 2023. The proportion of Selling, General and Administrative Expenses over Total Revenue is projected to stabilized in coming years due to our expectation that positive effects of economies of scale will offset the result of larger investment in expanding strategy and product quality enhancement. Moreover, it can also lead to a soar in net income growth by 20%.

Figure 13: Cost of Capital

Variable	Value
Risk-free Rate	4.80%
Beta	0.77
Equity Risk Premium	8.59%
Cost of Equity based on Historical Beta	11.75%
Cost of Equity based on Comparables	11.41%
Capital Structure	27% Debt, 72.85% Equity
WACC	9.18%

Source: Aswath Damodaran, Thomson Reuters, Team estimates

Figure 14: Summary of DCF Method

DCF Summary (VND bn)	
Growth rate	1.0%
WACC	9.30%
PV of Terminal Value	78,675,699
Equity Value	109,545,884
As of % of Equity Value	71.82%
Less: Cash & Cash Equivalents	8,431,275
Plus: Debt	1,625,909
Number of Outstanding Share	127,144,875
Intrinsic Value per Share (VND)	VND 30,933
Difference from Current Price	16,29%

Source: Team estimates

Figure 16: Relative Valuation

	EV/ Revenue	P/E	EV/ EBITDA
Vinh Hoan	1.07x	6.13x	4.95x
Hung Vuong	0.61x	91.87x	7.57x
I.D.I	0.72x	2.07x	11.78x
Cuu Long	0.88x	4.14x	3.90x
NAVICO	1.11x	5.64x	5.90x
Mean	0.80x	5.13x	6.26x

Source: Thomson Reuters

Capital Expenditure and Depreciation

ANV's factories is operating under 37.5% of maximum capacity. Moreover, the current maximum capacity is expected to rise by 1.9 times in the near future thanks to technology application. In the next 5 years the capital expenditure will rise significantly due to Binh Phu construction, by 5 times. We assume that the company will finance 80% of Binh Phu farming site construction with long-term debt at a commercial interest rate of 10% since the company did not publish that information.

Figure 15: ANV's Terminal Value (by EV/EBITDA)

		Exit Multiple				
		6.0x	7.0x	8.0x	9.0x	10.0x
WACC	7.30%	35,021	36,390	37,918	39,636	41,580
	8.30%	31,785	32,864	34,056	35,379	36,857
	9.30%	29,116	29,984	30,933	31,977	33,130
	10.30%	26,880	27,589	28,359	29,198	30,117
	11.30%	24,981	25,567	26,201	26,886	27,631

Source: Team estimates

Worst, Base and Best cases (Figure 15)

We deploy worst, base and best cases from ANV's Revenue Forecast to analyze the effects of strategic growth, terminal growth rate on our target price.

Relative Valuation

With Relative Valuation method, we take advantages of three multiples EV/Revenue, P/E and EV/EBITDA because of the following reasons:

- P/E is adopted because Earning reflect fundamental value of a company.
- EBITDA is a pre-interest, pre-depreciation and pre-tax figure, which is immune to differences of capital structure between peers.
- While EV/EBITDA takes into operating expenses, EV/Revenue looks at the top line in case the company engaging in high-growth businesses that don't have positive earning yet.

Since ANV is one of the largest food processing companies in Vietnam we look for appropriate peers based on such criteria as: Business Model, Market Capitalization and same product segment. Among Vietnam food processing companies, we found Vinh Hoan Corporation, Hung Vuong Corporation, I.D.I International Development and Investment Corporation, Cuulong Fish Joint Stock Company. Besides, movement of the chosen peers' multiples demonstrated consistent trends with that of ANV. The similar results of relative valuation and DCF method (Figure 16) reinforce our target price.

Financial Analysis

Our financial analysis is based on historical data from 2016 to 2018:

Ratios	2016A	2017A	2018A	2019E	2020E	2021E	2022E	2023E
Profitability								
EBITDA margin	5.4%	11.7%	18.8%	15.8%	15.8%	15.8%	15.8%	15.8%
Operating profit margin	3.2%	8.4%	16.8%	13.8%	13.3%	12.8%	13.4%	13.2%
NPAT margin	0.7%	4.8%	14.6%	5.9%	8.1%	8.6%	10.2%	10.5%
Return on assets	0.4%	5.0%	19.6%	6.1%	7.9%	8.9%	10.2%	10.4%
Return on equity	1.5%	10.5%	37.0%	14.4%	21.1%	22.7%	26.2%	25.7%
Liquidity & Credit								
Quick Ratio	0.48	0.35	0.72	6.81	1.29	0.64	0.46	0.39
Current Ratio	1.28	1.07	1.33	9.83	2.51	1.23	0.90	0.76
Interest Coverage Ratio	1	4	17	2	3	4	5	6
Financial Leverage								
Debt to assets	0.46	0.41	0.37	0.49	0.52	0.54	0.54	0.52
Debt to equity	1.05	0.79	0.68	1.42	1.30	1.42	1.37	1.25
Equity Multiplier	2.30	1.93	1.85	2.61	2.52	2.65	2.59	2.47
Shareholder Ratios								
Earnings per share	273	1,120	4,717	2,060	3,216	3,865	5,197	6,121
Dividend payout ratio	0%	41%	25%	20%	20%	20%	20%	20%

EBITDA Margin Improvements During 2016-2018 Due to Enhancing the Effectiveness Of ANV's Cost-Cutting Efforts

ANV's EBITDA margin experienced an upward trend from 5.4% to 18.8% because of ANV's ability to lock-in both supply and demand from a sustainable integrated full value chain. As a result of rising dominance of exporting activities which grows by 56,9% and accounts for 80,3% of total revenue (**Figure 17**) a slightly shrinking revenue from domestic sales did not put much significant adverse effect on ANV's EBITDA margin due to its low profitability. (**Appendix B2, B3**)

Coupled with a higher EBITDA margin back by pangasius consuming property and Vietnam geographic competitive position for farming, ANV production places ahead it foreign competitors from India, Indonesia and Bangladesh whose unattractive pangasius quality could not attract favor from global customers. ANV considerable effort of controlling input and output quality meets global certifications which can be considered as positive encouragements.

Efficiency Operations Complied with Downstream Partnership in Varied Foreign Markets.

Historically, ANV's cost-saving efficiency shows a gradually enhancement in cutting back its cash cycle. Due to cooperation with ANV's strategic partners, its distribution plan has successfully reached a great expansion in the most outstanding and potential market – China. ANV's strength of large production capacity has eventually matched a local wholesale with large distribution channel. Thus, its downstream partnership has accelerated the company overall health and efficiently generating cash. This originates from a combination of lowering accounts receivable days and inventory days despite a moderate declining of account payable days. As a whole, cash cycle dropped down from 205 days in 2017 to 143 days in 2018.

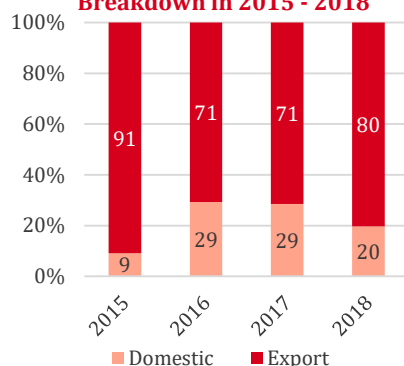
External Financing Provides Primarily Support for Working Capital Investments

Due to ANV's arrangement for foreign market expansion, the Company's working capital was mainly subjected to short-term borrowings. (**Figure 19**) As the current ratios is a reliable indicator representing the company's liquidity while ANV production which has been boosted mostly for exporting activities accounts for current ratio to rise from 1.07 in 2017 to 1.33 in 2018. However, in 2018 ANV's interest coverage ratio of 17 which was extraordinarily high compared to interest coverage ratio of 4 in 2017. This shows company ability to meet its interest obligation is significantly sound and in 2018 the company was excessing in cash.

Immense Rise Capital Expenditure Requirements in the Foreseeable Future

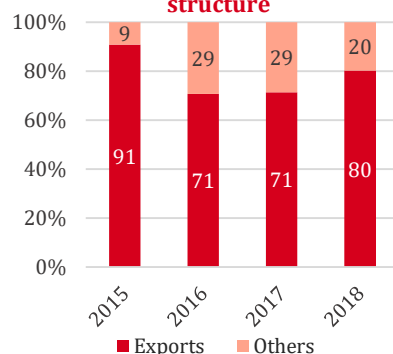
ANV's high-technology Binh Phu farming site expansion will initially take up to VND4000 billion to meet up foreign market demand. The farming investment starts in 2018, which explains for more than VND410 billion in land purchase and land management cost. (**Appendix C**). Our team estimates company's financing plan involves more than 80% of long-term debt in the next 5-year period in order to

Figure 17: Revenue Breakdown in 2015 - 2018



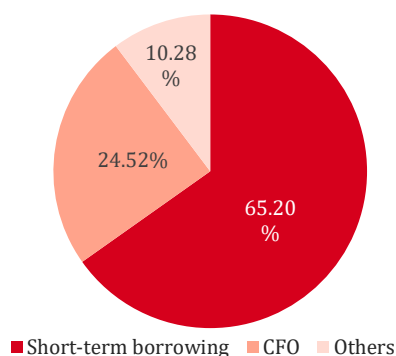
Source: Company filings

Figure 18: Gross profit structure



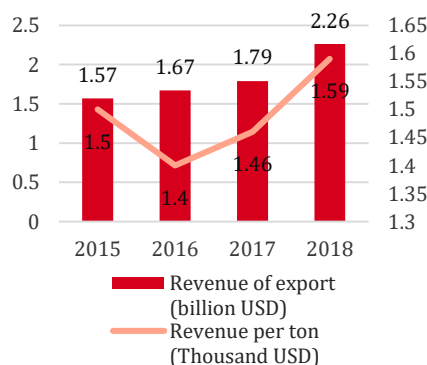
Source: Company filings

Figure 19: Total Source of Cash in 2015 - 2018



Source: Company filings

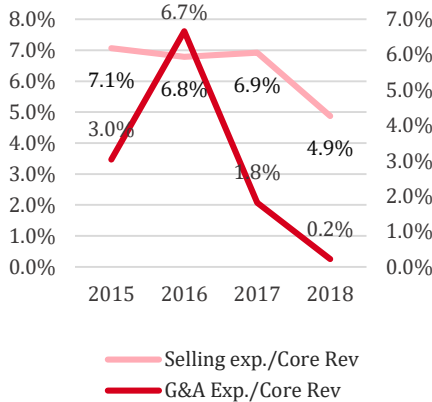
Figure 20: Revenue of Export



Source: Company filings

constructing Binh Phu farming site. ANV's capital expenditure will eventually cause its financial leverage to increase considerably.

Figure 21: Selling, General Administration Expenses in 2014 - 2018



Source: Company filings

ROE Decomposition

	2018	2019F	2020F	2021F	2022F	2023F
Net Profit Margin	4,117	4,736	5,469	6,340	7,374	8,601
Asset Turnover	39.6%	15.0%	15.5%	15.9%	16.3%	16.6%
Leverage Ratio	944	1,169	1,350	1,565	1,821	2,124
ROE	22.9%	24.7%	24.7%	24.7%	24.7%	24.7%
Adjusted ROE	599	485	694	859	1,146	1,383

In the projection horizon, we expect the ratios of selling expenses/core revenue and G&A expenses/core revenue to remain stable at 3.9% and 0.2% respectively. This is spurred by the historical ratios even the ratio of total equity/total debt will increase gradually from 944 in 2018 to approximately 2124 at the end of 2023. Beside Upward trends in financial leverage, there will be significant increases in the Company's ROE largely driven by remarkable improvement in gross margin and consequently high net profit margin.

Investment Risks

Impact and likelihood of the following risks are presented in Figure 22.

Market Risks

[M1] Interest rate increase (High probability, High impact)

Despite NAVICO's reliance on short-term borrowing funds its business while average interest expense accounts for 1-3 of revenue in the past. It is forecasted that this account will rise dramatically under the lending options which has high impact on company under the funding options to Binh Phu Project.

[M2] Exchange rate fluctuate (High probability, High impact)

NAVICO is holding the number of assets in USD and EUR associated with the currency volatility. In 2018, NAVICO enjoyed the advantage of the strong increase of USD, whilst EUR offsetted the part of assets entailed its. With the orientated- export strategy, net cash flows in USD and EUR are hedged by forward contracts on an 12-month rolling basis to mitigate this risk of currency fluctuation, though unpredictable externalities can change the exchange rate.

[M3] Pangasius price risk (High probability, Medium impact)

The fish price has high influence on both demand and supply as the relationship between fish price and NAVICO gross profit, indicated by the correlation at 0.483 (Figure 23). That leads in focusing on pangasius export, recording 80% total revenue. But thanks to close production chain, firm is able to control the production price better than market.

Business and Operational Risks

[B1] Substitute and ready-to-cook products (High probability, Medium impact)

In the light of imported countries accelerates the output volume of native fishes to meet demand of domestic consumption. The pure pangasius fillet faced the pressure from similar types of products in these nations, although Vietnam's pangasius positioned with the reasonable price and good quality of product. There is increasing a new trend of using marinated foods due to its usability, time-saving, cost-efficiency fitted their lives.

[B2] Concentrated Ownership (Medium probability, High impact)

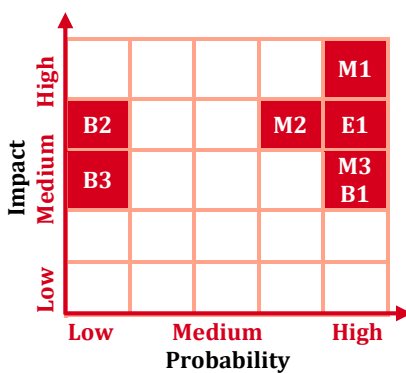
With 77% of shares is hold by the executive board (Appendix D) that entails the risk of controlling shareholders known to abuse their power and extract "private benefits of control" at the expense of the minority shareholders. In the past, NAVICO's decision to expand out of core-business caused the losses that adversely affected the interest of minor shareholders.

[B3] Management risk (Low probability, Moderate impact)

NAVICO's executive team combines veteran managers in fishery industry who worked more than decade in NAVICO. Losing key staff members may impact NAVICO's prospect and prestige. A part from that though, no pulic process and experience gaps among generations is unavoidable, NAVICO is preparing to tranfer the power progressively to next generation.

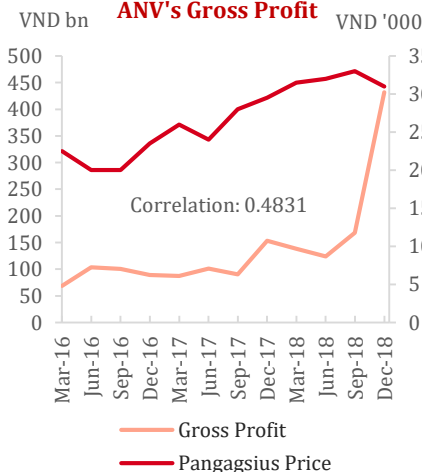
[B3] Quality of Navico's products (Low probability, high impact)

Figure 22: Risk Matrix



Source: Team analysis

Figure 23: Correlation between Pangasius Price vs ANV's Gross Profit



Source: Thomson Reuters, Team estimates

NAVICO success is acclaimed its quality of fillet. Food hygiene must be a priority throughout production processing by comprehensive quality control from broodstocks to packaged products. Additionally, inventory and distribution negatively impact on the quality of fresh products.

Enviromental Risk

[E1] Specific industry risk (High probability, High impact)

Risks of diseases, pollution, climate change, hav influenced sea level rise, has caused polluted, salt water to penetrate deeply into the fields, directly impacting farming areas. With specific activities of production, the environmental degradation profoundly impact on fishery industry, causing the high mortality rate of fingerling, tilapia during farming stage.

PART A: FINANCIAL STATEMENT

APPENDIX A1: FINANCIAL RATIO

	2014A	2015A	2016A	2017A	2018A	2019E	2020E	2021E	2022E	2023E
Growth Rates (%)										
Revenues	-73.9%	-9.9%	13.2%	4.4%	39.6%	15.0%	15.5%	15.9%	16.3%	16.6%
COGS	-52.1%	-34.0%	16.9%	0.8%	31.1%	12.1%	15.5%	15.9%	16.3%	16.6%
Gross profit	-108.4%	-227.8%	-4.1%	25.3%	79.0%	24.9%	15.5%	15.9%	16.3%	16.6%
Selling expenses	-84.7%	-15.8%	-15.4%	7.4%	10.3%	15.0%	15.5%	15.9%	16.3%	16.6%
Administration expenses	-61.5%	-39.1%	93.5%	-71.4%	-80.6%	15.0%	15.5%	15.9%	16.3%	16.6%
EBITDA	-125.1%	-132.5%	-27.4%	125.6%	125.7%	27.1%	15.5%	15.9%	16.3%	16.6%
Depreciation and Amortization	-425.2%	-107.6%	6.0%	58.1%	-14.1%	13.2%	37.3%	35.3%	-8.8%	24.2%
EBIT / Operating profit	-95.1%	33.4%	-40.1%	170.6%	180.3%	28.7%	13.2%	13.5%	20.1%	15.8%
EBT	-97.7%	-91.6%	460.0%	477.7%	314.2%	-18.1%	38.5%	23.8%	26.2%	20.7%
NPAT	-97.4%	-97.5%	1175.9%	632.2%	321.4%	-17.6%	42.4%	23.8%	33.3%	20.7%
EPS					321.2%	-17.5%	42.4%	23.8%	33.3%	20.7%
Profitability										
Gross profit margin	-12.4%	17.6%	14.9%	17.9%	22.9%	24.9%	24.9%	24.9%	24.9%	24.9%
EBITDA margin	-23.4%	8.4%	5.4%	11.7%	18.8%	20.8%	20.8%	20.8%	20.8%	20.8%
EBIT margin / Operating profit margin	4.1%	6.1%	3.2%	8.4%	16.8%	18.8%	18.5%	18.1%	18.7%	18.5%
EBT margin	2.2%	0.2%	1.0%	5.6%	16.8%	11.9%	14.3%	15.3%	16.6%	17.2%
NPAT margin	2.2%	0.1%	0.7%	4.8%	14.6%	10.4%	12.9%	13.8%	15.8%	16.3%
Return on Assets (ROA)	1.0%	0.0%	0.4%	5.0%	19.6%	10.9%	12.3%	14.5%	16.9%	17.4%
Return on Equity (ROE)	4.5%	0.1%	1.5%	10.5%	37.0%	24.8%	29.6%	29.6%	31.0%	29.0%
ROIC	8.0%	3.0%	2.7%	14.2%	36.5%	23.4%	19.0%	21.8%	26.8%	28.9%
Financial leverage										
Debt Equity Ratio	1.09	1.27	1.05	0.79	0.68	1.25	0.86	0.79	0.64	0.48
Debt to Total Asset ratio	0.44	0.50	0.46	0.41	0.37	0.47	0.39	0.41	0.36	0.30
Equity Multiplier	2.46	2.53	2.30	1.93	1.85	2.65	2.19	1.93	1.76	1.59
Liquidity										
Quick Ratio	0.41	0.32	0.48	0.35	0.72	7.90	3.35	1.01	0.75	0.67
Current Ratio	1.03	1.11	1.28	1.07	1.33	10.94	5.56	1.90	1.41	1.26
Coverage ratios										
Interest coverage (EBIT/interest)	2	2	1	4	17	3	4	6	8	12
Efficiency										
Receivables Turnover	4.7	4.3	4.5	4.8	7.6	7.7	8.1	8.2	8.2	8.2
Accounts receivable Days	77	84	80	76	48	48	45	45	45	45
Inventories Turnover	2.5	1.7	1.9	2.3	3.4	3.5	3.7	3.7	3.7	3.7
Inventories Days	145	218	190	157	107	103	100	99	99	99
Payables Turnover	5.3	8.5	10.7	13.2	29.8	30.2	32.2	32.0	32.0	32.1
Accounts payable Days	68	43	34	28	12	12	11	11	11	11
Cash Cycle	153	259	236	205	143	139	133	133	133	132
Current Asset Turnover	0.8	1.3	1.5	1.8	2.4	1.6	1.6	2.1	2.3	2.3
Fixed Asset Turnover	2.8	7.5	8.5	8.8	8.8	5.8	4.5	4.0	3.7	3.7
Asset Turnover	0.5	0.8	0.9	1.0	1.3	1.0	1.0	1.1	1.1	1.1

APPENDIX A2: BALANCE SHEET (IN VND MILLIONS)

	2014A	2015A	2016A	2017A	2018A	2019E	2020E	2021E	2022E	2023E
Current asset	1,909,324	1,824,163	1,907,897	1,317,061	2,090,119	3,503,419	2,515,515	2,840,557	3,218,440	3,657,406
Cash and Cash equivalents	8,913	12,707	21,796	25,902	69,153	1,344,686	87,133	98,392	111,481	126,686
Short term investments	502	-	900	-	451,530	505,756	568,930	642,445	727,910	827,190
<i>Provision for ST investments</i>	<i>(150)</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>(30,224)</i>	<i>(34,000)</i>	<i>(38,393)</i>	<i>(43,501)</i>	<i>(49,434)</i>
Accounts receivable	655,549	495,274	748,878	472,602	611,248	607,007	682,829	771,060	873,635	992,791
<i>Provisions for receivables</i>	<i>(106,768)</i>	<i>(31,022)</i>	<i>(105,744)</i>	<i>(89,167)</i>	<i>(42,054)</i>	<i>(41,762)</i>	<i>(46,979)</i>	<i>(53,049)</i>	<i>(60,106)</i>	<i>(68,304)</i>
Inventories	1,148,753	1,304,064	1,195,358	887,129	969,279	1,083,258	1,218,568	1,376,025	1,559,079	1,771,724
<i>Provisions for Inventory deduction</i>	<i>(1,182)</i>	<i>(1,661)</i>	<i>(268)</i>	<i>(13,310)</i>	<i>(7,037)</i>	<i>(7,864)</i>	<i>(8,847)</i>	<i>(9,990)</i>	<i>(11,319)</i>	<i>(12,863)</i>
Other current assets	203,707	44,801	46,977	33,905	38,000	42,564	47,880	54,067	61,260	69,615
Long term assets	1,417,540	1,449,909	1,109,929	1,385,253	1,334,949	1,930,930	2,671,668	3,284,770	3,923,273	4,535,035
Long term investments	738,378	772,349	173,102	496,646	334,213	374,350	421,110	475,524	538,784	612,269
<i>Provisions for LT Investments</i>	<i>(13,135)</i>	<i>(17,469)</i>	<i>(17,912)</i>	<i>(18,740)</i>	<i>(8,652)</i>	<i>(20,851)</i>	<i>(23,455)</i>	<i>(26,486)</i>	<i>(30,010)</i>	<i>(34,103)</i>
Tangible Fixed Assets	215,111	173,205	161,518	197,285	209,961	522,868	1,132,864	1,697,424	2,277,240	2,818,590
<i>Historical price</i>	<i>796,017</i>	<i>810,569</i>	<i>857,048</i>	<i>986,815</i>	<i>1,079,664</i>	<i>1,472,545</i>	<i>2,197,545</i>	<i>2,922,545</i>	<i>3,647,545</i>	<i>4,372,545</i>
<i>Accum depreciation</i>	<i>(580,906)</i>	<i>(637,364)</i>	<i>(695,530)</i>	<i>(789,530)</i>	<i>(869,703)</i>	<i>(949,678)</i>	<i>(1,064,681)</i>	<i>(1,225,122)</i>	<i>(1,370,305)</i>	<i>(1,553,955)</i>
Intangible Fixed Assets	116,151	213,697	210,924	243,266	297,099	283,246	269,392	255,539	241,685	227,832
<i>Historical price</i>	<i>117,036</i>	<i>215,659</i>	<i>215,716</i>	<i>250,504</i>	<i>307,058</i>	<i>307,058</i>	<i>307,058</i>	<i>307,058</i>	<i>307,058</i>	<i>307,058</i>
<i>Accum Amortization</i>	<i>(885)</i>	<i>(1,962)</i>	<i>(4,792)</i>	<i>(7,238)</i>	<i>(9,959)</i>	<i>(23,812)</i>	<i>(37,666)</i>	<i>(51,519)</i>	<i>(65,373)</i>	<i>(79,226)</i>
Financial Leased Assets	86,189	92,241	116,988	78,041	41,802	(29,450)	61,525	61,525	61,525	61,525
<i>Historical price</i>	<i>117,001</i>	<i>144,391</i>	<i>174,399</i>	<i>108,366</i>	<i>61,525</i>	<i>61,525</i>	<i>61,525</i>	<i>61,525</i>	<i>61,525</i>	<i>61,525</i>
<i>Accum Amortization</i>	<i>(30,812)</i>	<i>(52,150)</i>	<i>(57,411)</i>	<i>(30,325)</i>	<i>(19,723)</i>	<i>(90,975)</i>	-	-	-	-
Construction in progress	164,744	110,454	125,878	66,176	392,882	725,000	725,000	725,000	725,000	725,000
Other long-term assets	110,102	105,432	339,431	322,579	67,644	75,768	85,232	96,245	109,049	123,922
Total assets	3,326,864	3,274,072	3,017,826	2,702,314	3,425,068	5,434,349	5,187,183	6,125,327	7,141,712	8,192,441
Current liabilities	1,855,015	1,639,411	1,486,753	1,232,275	1,567,562	358,118	1,024,380	2,340,867	3,618,727	4,870,351
Short term debt	1,358,547	1,303,072	1,161,787	1,025,232	1,251,131	-	621,291	1,893,815	3,112,047	4,294,409
Accounts payable	311,605	208,388	221,495	99,773	118,846	128,177	144,426	163,245	185,117	210,521
Bonus funds	1,269	1,213	804	591	557	-	-	-	-	-
Other current liabilities	183,594	126,738	102,667	106,679	197,028	229,941	258,663	283,808	321,563	365,421
Long term debt	118,621	338,886	222,066	76,078	9,524	2,683,610	2,105,212	1,469,086	769,464	-
Total long term liabilities	118,621	338,886	222,066	76,078	9,524	2,683,610	2,105,212	1,469,086	769,464	-
Total liabilities	1,973,636	1,978,297	1,708,819	1,308,353	1,577,086	3,041,728	3,129,591	3,809,953	4,388,191	4,870,351
Shareholder equity	1,352,817	1,295,297	1,314,539	1,397,861	1,847,982	1,886,866	2,057,591	2,315,374	2,753,521	3,322,090
Chartered capital	660,000	660,000	660,000	1,250,446	1,250,446	1,250,446	1,250,446	1,250,446	1,250,446	1,250,446
Share premium	611,965	611,965	611,965	21,519	21,519	21,519	21,519	21,519	21,519	21,519
Retained earnings	108,270	21,750	69,992	153,314	603,435	642,319	813,044	1,070,827	1,508,974	2,077,543

Other funds	-	29,000	-	-	-	-	-	-	-	-
Treasury stock	(27,418)	(27,418)	(27,418)	(27,418)	(27,418)	(27,418)	(27,418)	(27,418)	(27,418)	(27,418)
Minority Interest	411	478	(5,532)	(3,900)	-	-	-	-	-	-
Total liabilities and owner equity	3,326,864	3,274,072	3,017,826	2,702,314	3,425,068	4,928,593	5,187,183	6,125,327	7,141,712	8,192,441

APPENDIX A3: INCOME STATEMENT (IN VND MILLIONS)

	2014A	2015A	2016A	2017A	2018A	2019E	2020E	2021E	2022E	2023E
Net Revenue	2,769,743	2,494,423	2,824,525	2,949,141	4,117,989	4,612,536	5,188,691	5,859,147	6,638,595	7,544,040
COGS	3,113,259	2,055,332	2,403,469	2,421,648	3,173,944	3,704,141	4,166,828	4,705,244	5,331,188	6,058,314
Gross profit	(343,516)	439,091	421,056	527,493	944,045	908,395	1,021,863	1,153,903	1,307,408	1,485,726
Selling expenses	190,510	160,344	135,666	145,764	160,836	180,151	202,654	228,840	259,283	294,647
G & A expenses	112,915	68,743	133,025	38,051	7,388	8,276	9,309	10,512	11,911	13,535
EBITDA	(646,941)	210,004	152,365	343,678	775,821	719,967	809,899	914,550	1,036,214	1,177,544
Depreciation & Amortization	(761,232)	57,535	60,996	96,446	82,894	93,828	128,857	174,294	159,037	197,503
Operating Profit / EBIT	114,290	152,469	91,369	247,232	692,927	626,139	681,042	740,256	877,176	980,041
Financial income	20,896	40,942	154,496	19,625	73,915	74,432	77,433	80,926	84,984	89,697
Interest income	7,346	15,145	6,158	9,949	50,699	50,699	50,699	50,699	50,699	50,699
Investment income	(3,937)	(77,357)	(96,193)	(2,089)	(12,696)	(16,492)	(18,515)	(20,870)	(23,609)	(26,792)
Other financial income	17,487	103,154	244,530	11,765	35,912	40,225	45,250	51,097	57,894	65,790
Financial expenses	83,339	117,117	89,338	63,842	75,220	401,836	304,807	276,006	267,533	251,501
Interest expense	65,852	81,839	76,318	56,834	45,918	369,016	267,887	234,315	220,296	197,821
Other financial expenses	17,487	35,278	13,020	7,008	29,302	32,821	36,920	41,691	47,237	53,680
Net other income	9,705	(3,268)	(10,416)	(31,650)	558	625	703	794	900	1,023
Profits from associates/ joint ventures	-	(67,876)	(117,273)	(4,757)	(2,032)					
Earning before tax	61,552	5,150	28,838	166,607	690,148	299,360	454,372	545,970	695,527	819,260
Income tax	233	3,964	14,776	23,142	85,672	37,420.0	45,437	54,597	34,776	40,963
Deferred tax	13	(405)	630	(535)	310					
Net income	61,306	1,591	13,432	144,000	604,166	261,940	408,934	491,373	660,751	778,297

APPENDIX A4: COMMON SIZE OF INCOME STATEMENT

ANV COMMON SIZE INCOME STATEMENT	2014A	2015A	2016A	2017A	2018A	2019E	2020E	2021E	2022E	2023E
Net Revenue	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
COGS	112.4%	82.4%	85.1%	82.1%	77.1%	80.3%	80.3%	80.3%	80.3%	80.3%
Gross profit	-12.4%	17.6%	14.9%	17.9%	22.9%	19.7%	19.7%	19.7%	19.7%	19.7%
Selling expenses	6.9%	6.4%	4.8%	4.9%	3.9%	3.9%	3.9%	3.9%	3.9%	3.9%
G & A expenses	4.1%	2.8%	4.7%	1.3%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%
EBITDA	-23.4%	8.4%	5.4%	11.7%	18.8%	15.6%	15.6%	15.6%	15.6%	15.6%
Depreciation & Amortization	-27.5%	2.3%	2.2%	3.3%	2.0%	2.0%	2.5%	3.0%	2.4%	2.6%
Operating Profit / EBIT	4.1%	6.1%	3.2%	8.4%	16.8%	13.6%	13.1%	12.6%	13.2%	13.0%
Financial income	0.8%	1.6%	5.5%	0.7%	1.8%	1.6%	1.5%	1.4%	1.3%	1.2%

<i>Interest income</i>	0.3%	0.6%	0.2%	0.3%	1.2%	1.1%	1.0%	0.9%	0.8%	0.7%
<i>Investment income</i>	-0.1%	-3.1%	-3.4%	-0.1%	-0.3%	-0.4%	-0.4%	-0.4%	-0.4%	-0.4%
<i>Other financial income</i>	0.6%	4.1%	8.7%	0.4%	0.9%	0.9%	0.9%	0.9%	0.9%	0.9%
Financial expenses	3.0%	4.7%	3.2%	2.2%	1.8%	8.7%	5.9%	4.7%	4.0%	3.3%
<i>Interest expense</i>	2.4%	3.3%	2.7%	1.9%	1.1%	8.0%	5.2%	4.0%	3.3%	2.6%
<i>Other financial expenses</i>	0.6%	1.4%	0.5%	0.2%	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%
Net other income	0.4%	-0.1%	-0.4%	-1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Profits from associates/ joint ventures	0.0%	-2.7%	-4.2%	-0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Earning before tax	2.2%	0.2%	1.0%	5.6%	16.8%	6.5%	8.8%	9.3%	10.5%	10.9%
Income tax paid	0.0%	0.2%	0.5%	0.8%	2.1%	0.8%	0.9%	0.9%	0.5%	0.5%
Deferred tax	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Net income	2.2%	0.1%	0.5%	4.9%	14.7%	5.7%	7.9%	8.4%	10.0%	10.3%
Minority Interest	0.0%	0.0%	-0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Net income attributable to Equity Shareholders	2.2%	0.1%	0.7%	4.8%	14.6%	5.7%	7.9%	8.4%	10.0%	10.3%

APPENDIX A5: FCFE SCHEDULE (IN VND MILLIONS)

	2015A	2016A	2017A	2018A	2019E	2020E	2021E	2022E	2023E
Free Cash Flow to Equity (FCFE)	88,153	(117,672)	355,874	435,874	1,224,414	(533,700)	396,983	410,864	425,579
Terminal value									4,062,550
Cost of equity	11.58%								
Discount Period					0.7	1.7	2.7	3.7	4.7
Discount Factor					0.92	0.83	0.74	0.67	0.60
Present Value of FCFE					1,131,459	(441,998)	294,650	273,304	253,711
Cumulative Present Value of FCFE	1,511,126								
Present Value of Terminal value	2,421,907								
Equity value	3,933,033								
<i>Proportion of PV of Terminal Value to Equity Value</i>	<i>61.58%</i>								
Plus Total Debt	1,260,655								
Less Cash and Cash equivalent	(69,153)								
Enterprise Value	5,124,535								
Number of Outstanding shares	127,144,875								
Intrinsic Value per Share	30,993								

PART B: PROJECTION OF ANV'S REVENUE

APPENDIX B1: COST OF EQUITY CALCULATION

Variable	Value
Risk-free rate	4.80%
Beta	0.81
Equity Risk Premium	8.59%
Cost of equity	11.58%

Source: Team estimate

Beta	
Unlevered beta	0.58
D/E ratio	68.2%
Tax rate	12%
Levered beta	0.77

Source: Thomson Reuter, Team estimate

Risk-free rate; The risk-free rate applicable to ANV is based on 10-year Vietnam Government bonds with yield of 4.796% in April 19th 2019.

Beta: Since single regressed Beta has many drawbacks, we modify the regression beta. The method is shown below:

- (1) We find the companies working in similar or relevant industry of food processing industry in which ANV operates.
- (2) 5-year regression Beta of these companies are average out and de-levered by D/E ratio and tax rate to get the unlevered beta.
- (3) We come up with the levered beta by formula: $\text{Levered beta} = \text{Unlevered beta} * (1 + (1-t)*D/E)$

Equity risk premium: Using methodology and data offered by Prof. Aswath Damodaran, we come up with the equity risk premium for Vietnam is 8.59%.

APPENDIX B2: REVENUE PROJECTION – REVENUE FROM EXPORTING

	2014A	2015A	2016A	2017A	2018A	2019E	2020E	2021E	2022E	2023E
Revenue	2,467,571	2,267,393	1,997,847	2,106,799	3,305,276	3,923,363	4,657,031	5,527,896	6,561,613	7,788,635
Growth		-8.1%	-11.9%	5.5%	56.9%	18.7%	18.7%	18.7%	18.7%	18.7%

Source: Team estimate

Revenue from exporting was oscillated since 2014. Until 2017, it increased again, and it can be said that the year 2018 was a successful year for the company. We expect that revenue from exporting will raise based on historical performance, market demand and outlook. Chinese clients continue to be the biggest clients, company keeps looking for new customers from other countries.

APPENDIX B3: REVENUE PROJECTION – REVENUE FROM DOMESTIC

Domestic	2014A	2015A	2016A	2017A	2018A	2019E	2020E	2021E	2022E	2023E
Revenue	302,172	227,158	826,679	842,341	812,714	812,714	812,714	812,714	812,714	812,714
Growth		-24.8%	263.9%	1.9%	-3.5%	0.0%	0.0%	0.0%	0.0%	0.0%

Source: Team estimate

Revenue from domestic has been not the key factor of revenue. In the past, this revenue decreased overtime. Based on historical data and BOD's point of view, revenue from domestic will be stable in the next years.

PART C: CAPITAL EXPENDITURE, DEPRECIATION AND AMORTIZATION

NEW ASSETS	2019E	2020E	2021E	2022E	2023E
New Fixed Assets	392,881	725,000	725,000	725,000	725,000
Depreciation of Tangible Assets					
New assets in 2015	12,311	24,622	24,622	24,622	24,622
New assets in 2016		22,718	45,436	45,436	45,436
New assets in 2017			22,718	45,436	45,436
New assets in 2018				22,718	45,436
New assets in 2019					22,718
Total Depreciation	12,311	47,340	92,777	138,213	183,649

Recently, the company officially started construction of Binh Phu High-tech Aquaculture Application Area of 600ha with investment capital of VND 4,000 billion. Therefore, we reckon that ANV will spend a lot of expenditures on its manufacturing activity.

PART D: OWNERSHIP STRUCTURE

(As of 01/2019)

No	Investor Name	% Outstanding	Number of shares	
1	Doan (Toi)	46.33%	58,905,000.00	Chairman and CEO
2	Doan (Thanh Chi)	13.50%	17,160,000.00	Son of Doan Toi
3	Doan (Thien Chi)	13.50%	17,159,999.00	Son of Doan Toi
4	Nguyen (Huu Trong)	2.03%	2,585,630.00	Member of Supervisory Board
5	Nguyen (Nhut Duy)	0.41%	519,000.00	Vice General Director
6	Do (Nghiep Lap)	0.37%	469,000.00	Vice General Director
7	Mirae Asset Global Investments Co., Ltd.	0.04%	55,000.00	
8	Le (Dung Tien)	0.02%	30,000.00	Chief accountant
9	Duong (Phong Minh)	0.02%	20,444.00	Chief of Supervisory Board
10	Doan (Hoi Quoc)	0.02%	20,000.00	Young sibling of Doan Toi
11	Tran (Canh Minh)	0.02%	20,000.00	Finance Director
12	Le (Huong Thi Lan)	0.01%	14,440.00	
13	Le (Mai Thi Tuyen)	0.01%	7,500.00	Member of Supervisory Board

PART E: KEY EXECUTIVES

No	Name	Position	Education	Experience
1	Doan Toi	Chairman of BOD, General Director	Bachelor of Laws	2006 -now: Chairman of the Board cum General Director of Nam Viet Joint Stock Company 2001 -2006: General Director of the Company Nam Viet Limited 1971 to 2001: Military officers

				(Junior Colonel) retired.
2	Nguyen Duy Nhut	Member of BOD, Vice General Director	Master of Economic	2006 - now: Member of BOD, Chief Financial Officer; 2004 - 2006: Finance Director; 2002 - 2004: Vice Director of An Giang State Treasury; 1989 - 2002: Head of An Giang State Treasury Department; 1983 - 1989: Officer of An Giang Department of Finance.
3	Do Lap Nghiep	Member of BOD, Vice General Director	Master of Business Administration	2006 - now: Member of BOD, Production Director; 2004 - 2006: Production Manager; 2000 - 2004: Vice Director of Nam Viet Fishery Frozen Factory
4	Nguyen Van Vy	Director of Aquaculture Division	Master of Business Administration	From 1999 - now: Director of Aquaculture Division
5	Tran Minh Canh	Finance Director	Bachelor of Business Administration	2010 - 2017: Finance Director; 2008 - 2010: Vice Director of Finance of Nam Viet
6	Huynh Thi Kim Thoa	Chief Accountant	Bachelor of Business Administration	From July 19, 2007, working at Nam Viet Company
7	Doan Chi Thanh	Sale Director	Bachelor of Information Technology at RMIT University Melbourne Campus	2006 - now: Member of the Board of Directors, Assistant of General Director; 2005 - 2006: Assistant of General Director of Nam Viet Company Limited
8	Doan Chi Thien	2012: Assistant to General Director	Bachelor of Business Administration	2012 -now : Assistant of General Director, Nam Viet Company

PART F: COMPETITIVE MATRIX

Dimension	ANV	IDI	VHC	ACL	HVG
Hatchery	Almost 100% self-sufficient Method: Self-breeding with specific hatchery area Plan: 150ha new at Binh Phu (new)	Non- sufficient Method : Associated with farmer Plan: Not available	30% Self-suffient Method: Associated with farmer Plan: 220 ha (100% self-sufficient)	Non-sufficient Method: Outsourcing	Self-sufficient
Feed Factory	Capacity: 380,000 tons/year (100% self-sufficient) Number of factory: 1	Capacity: 378,000 tons/year Number of factory: 1	Buying from Phillippines partner	Capacity: 156,000 tons/year Number of factory: 1	Capacity: 1,500,000 tons/year Number of factory: 6

Farming Area	Area: 330ha + 450 ha new(100% self-24,000 tons/month , 100% self-sufficient) Capacity: 120,000 tons/years + 130,000 tons/year (new)	240 ha (40ha self-production; 200ha outsourcing) Capacity: 96,000 tons/year Plan: 350 ha	Area: 815ha, (530ha -65% self-production, 285ha-outsourcing) Capacity: 200,000 tons/year Plan: 230ha	Area: 120 ha (80% self-sufficient) Capacity: 36,000 tons/year	Area: 700ha Capacity: 120,000 tons/year (50% export)
Processing Factory	Max Capacity: 1,200 tons/day Current Capacity: 450 tons/day Number of factory: 4	Max Capacity: 450 tons/day Current Capacity: 450 tons/day Number of factory: 2	Max Capacity: 850 tons/day Current Capacity: 850 tons/day Number of factory: 6	Max Capacity: 250 tons/day	"Max Capacity: 1200 tons/day Current Capacity: 450 tons/day Number of factory: 11

PART G: Output Yield and Value of Pangasius Exports

	2012	2013	2014	2015	2016	2017	2018	2019 (Est.)
Output yield (million tons)	1.19	1.15	1.16	1.05	1.19	1.23	1.42	1.51
Annual export (billion USD)	1.80	1.73	1.75	1.57	1.67	1.79	2.26	2.53

Source: VASEP

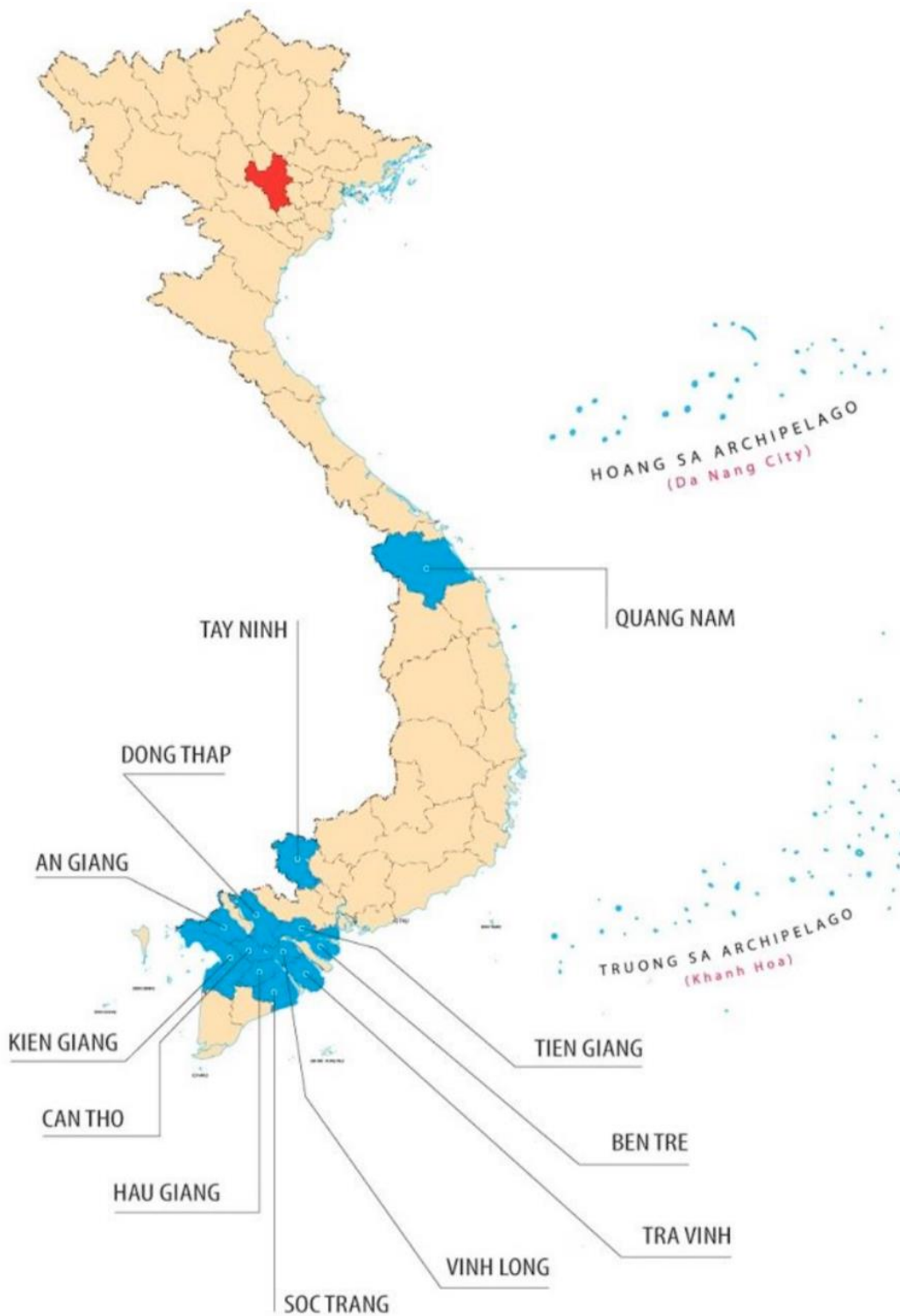
Part H: Top 5 Vietnamese Pangasius Exporting Companies (2010-2017)

Million USD

2010	2011	2012	2013	2014	2015	2016	2017
VINH HOAN 126,4	VINH HOAN 150,7	VINH HOAN 154,9	VINH HOAN 166,2	VINH HOAN 207,4	VINH HOAN 227,6	VINH HOAN 251,2	VINH HOAN 270,3
HUNG VUONG 100,9	HUNG VUONG 123,5	HUNG VUONG 111,9	AGIFISH 112,6	HUNG VUONG 139,7	BIEN DONG 116,7	BIEN DONG 134,0	HUNG VUONG 120,6
VIET AN 61,7	AGIFISH 84,0	AGIFISH 91,9	HUNG VUONG 105,5	NAM VIET 109,8	HUNG VUONG 95,7	HUNG VUONG 102,2	BIEN DONG 114,2
AGIFISH 58,8	VIET AN 83,0	VIET AN 82,8	NAM VIET 86,7	AGIFISH 84,6	NAM VIET 93,1	GOLDEN QUALITY 100,7	I.D.I 96,7
NAM VIET 58,2	NAM VIET 53,7	I.D.I 58,3	I.D.I 79,7	BIEN DONG 76	I.D.I 67,5	NAM VIET 80,2	NAM VIET 85,3

Source: VASEP

Part I: Nationwide Major Fish Farming Area



Source: Company filings