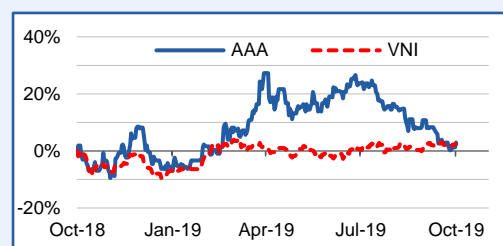




# An Phat Bioplastics (AAA) [NOT RATED]

# Company Report

Industry	Plastics		2015A	2016A	2017A	2018A
Report Date	October 16, 2019	Rev y/y	3.5%	32.8%	89.8%	96.9%
Current Price	VND15,050	EPS y/y *	-12.0%	119.4%	42.7%	-58.1%
Dividend Yield	6.6%	GPM	11.8%	14.3%	13.5%	8.4%
		NPM	2.5%	6.6%	5.5%	2.3%
		EV/EBITDA	36.1x	20.1x	10.6x	8.8x
		P/B	0.9x	0.9x	0.9x	1.0x
		P/E *	20.9x	9.5x	6.7x	15.9x



			AAA	Peers**	VNI
Market Cap	USD112.0mn	P/E (ttm)	7.6x	8.5x	16.9x
Foreign Room	USD41.4mn	P/B (curr)	0.9x	0.8x	2.4x
ADTV30D	USD1.2mn	Net D/E	87.6%	8.8%	NA
State Ownership	0.0%	ROE	14.4%	9.7%	14.6%
Outstanding Shares	171.2 mn	ROA	5.8%	6.5%	2.5%
Fully Diluted O/S	211.2mn				

\* fully diluted EPS \*\* foreign peers

## Company Overview

AAA is the leading manufacturer of thin plastic packaging in Vietnam with an annual capacity of nearly 96,000 tons. AAA exports almost all of its packaging output, mainly to the EU and Japan. AAA's businesses also include plastic resin trading and industrial park development.

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## Pioneer in sustainable plastic packaging

- AAA is the leading manufacturer of thin plastic packaging in Vietnam; its products are mainly exported. Aside from impressive growth with 2013-2018 net revenue and NPAT-MI CAGR of 47% and 27%, respectively, AAA grabs our attention as Vietnam's pioneer in the inevitable move towards biodegradable plastic products.
- We expect healthy growth of plastic packaging sales along with contributions from new businesses in plastic material trading and industrial parks will continue to drive earnings growth.
- AAA has made investments in biodegradable products that we consider as not only an eco-conscious initiative, but also a survival decision given that biodegradable plastic is a direct substitution for AAA's traditional plastic products over the long run.
- We see moderate operating cash generation, high leverage and an appetite for dilutive capital raising instruments like warrant bonds to fund capacity expansion as the key issues that need to be measured when making an investment decision regarding AAA.
- AAA's valuation looks compelling at a 2019 P/E of 6.9x based on the company's earnings guidance and fully diluted share count (vs a TTM P/E of 7.9x of domestic peers and 8.5x of regional peers) given AAA's better fundamental ratios and long-term outlook from biodegradable products.
- Key risks: volatility of plastic input costs; the emerging trend of reducing single-use plastics.

**Strong plastic packaging sales supplemented by contribution from new businesses.** AAA's NPAT-MI achieved 27% CAGR over 2013-2018, which came from the traditional plastic packaging segment and new businesses. AAA's plastic packaging segment enjoyed strong sales volume growth CAGR of 26% during 2013-2018, fueled by its capacity expansion and effort to penetrate key export markets such as the EU and Japan. This segment accounted for 80-90% of AAA's total revenue prior to 2017, with the remaining revenue coming from trading plastic materials. In late 2017 and 2018, AAA expanded its trading business and entered the industrial park business by acquiring Viet Hoa – Kenmark Industrial Park. In 2019, AAA is on track to achieve its earnings guidance of VND510bn (USD22.2mn) vs a low base of VND180bn (USD7.8mn) in 2018 NPAT-MI thanks to favorable input prices and contributions from new businesses in 2019 and onward (details on pages 15-16).

**Biodegradable products are here, but the conversion process will take time.** AAA started to invest in biodegradable plastics in 2013 and was able to produce them in 2015. However, AAA's environmentally-friendly biodegradable products cost more than traditional plastic products, which is the main barrier for customers in making the switch from traditional plastics. Per AAA, its biodegradable packages are 2.2-2.5x higher in selling prices compared to traditional plastic bags and currently account for only 10% of AAA's total sales. The technology, input material sources and costs behind biodegradable products also pose challenges for companies like AAA to scale up production. Hence, as both consumers and manufacturers of biodegradable products are taking time in making the shift, AAA is well positioned to capture potential growth from this movement.



## Contents

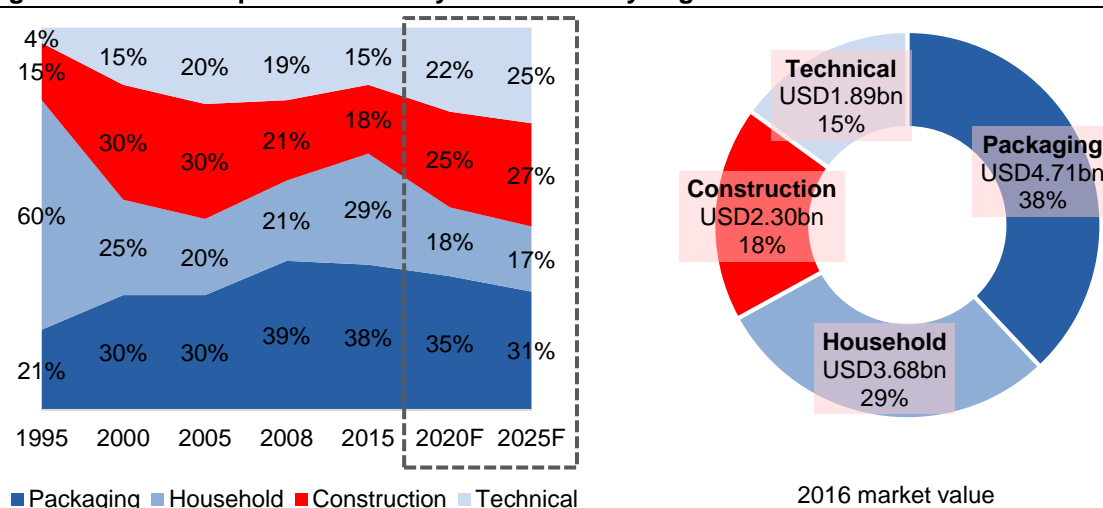
Mapping Vietnam's plastics industry .....	3
Business overview.....	7
Business segments.....	7
Ownership and corporate structure .....	10
Financial performance.....	11
2018 recap .....	15
2019 outlook.....	16
Long-term outlook: pioneering sustainable plastic packaging .....	17
Peer comparison .....	20
Table of Figures .....	23

## Mapping Vietnam's plastics industry

**Vietnam's plastics industry is very fragmented.** According to the Vietnam Plastic Association (VPA), there are around 2,000 plastic enterprises in Vietnam, of which 80% are private companies and the remaining 20% are FDI enterprises. About half of these are small and medium-sized enterprises (SMEs) with charter capital lower than VND500mn (USD21,700). Nearly 80% of Vietnam's plastic enterprises are located in Ho Chi Minh City (HCMC) and nearby provinces such as Dong Nai, Binh Duong and Long An.

**The Government is pushing construction and technical plastics.** Vietnam's plastic products are divided into four main segments: packaging plastics (accounting for 38% of market share by volume), household plastics (29%), construction plastics (18%) and high-tech plastics (15%). According to the Government's long-term blueprint for developing Vietnam's plastics industry through 2025, the plastics industry will be restructured by gradually reducing the portion of packaging and household plastics and increasing the portion of construction and high-tech plastics.

**Figure 1: Vietnam's plastics industry market size by segment**



Source: StoxPlus, VPA, VCSC compilation

- **Packaging plastics:** Comprising of nearly 400 enterprises, the plastic packaging sector, especially soft packaging and polyethylene terephthalate (PET) food packaging, supports industries in the consumer goods sector, including packaged food and canned and bottled beverages. Products in this segment include polyethylene (PE) films/bags, woven sheets/bags, laminated films/bags, biaxially oriented polypropylene (BOPP) films/bags, plates, (high-density polyethylene) HDPE and PE trays and bottles, among others.
- **Household plastics:** This segment includes plastic furniture, cabinets, kitchenware and toys, among other products. Local enterprises mainly focus on the mass market with low profit margins, whereas FDI enterprises dominate the high-end product range with higher profit margins.
- **Construction plastics:** This segment is comprised of two categories: 1) plastic pipes and 2) plastic profile systems (including doors and windows). Growth in these products is supported by 1) a healthy property market and large pipeline of infrastructure projects; 2) the bulky size of construction plastics making transportation difficult and inefficient, thus limiting competition from imported products; and 3) specific consumer tastes in local brands.
- **Technical plastics:** This segment is a supporting industry for other industrial sectors, especially for international manufacturers such as Samsung and LG. The products in this segment encompass plastic fittings used in household appliances, consumer electronics, automobile and motorcycle assembly and other products.

## Limited domestic petrochemical capacity causes plastic production to rely on imported resin

Currently, Vietnam's petrochemical industry only produces 913,000 tons of petrochemical products (i.e., plastic granules/resins including PP, PET, PVC, and PS) per annum, which is an inconsequential supply of input materials for a plastic industry that grew by 13.3% CAGR over the last 10 years to reach 7.8 million tons of total output in 2018 as shown in Figure 4.

Therefore, approximately 70-80% of Vietnam's demand for plastic granules/resins and other additives for plastic production must be satisfied by imports. The amount of imported plastic granules/resins has been rising in conjunction with the increasing production of plastic products as shown in Figure 4, gaining 12.6% CAGR during 2008-2018 to reach five million tons in 2018. South Korea, Saudi Arabia, Taiwan and Thailand are the main plastic granule/resin providers for Vietnam.

Such heavy dependency on imported raw materials provides high risk in input cost that fluctuates corresponding to crude oil prices (historical price chart in Figure 5). Additionally, foreign exchange volatility for the local plastic industry places a major hindrance on profit margins.

**Figure 2: Summary of Vietnam's petrochemical capacity**

	Year of latest capacity upgrade	Intermediate feedstock (Propylene, Ethylene, etc.)	Final petrochemical products (PP, PET, PVC, PS, etc.)
		Tons per annum per product type	
Current production capacity			
Binh Son Refining and Oil Corporation (BSR – Dung Quat refinery)	2011	Propylene: 1,000-30,000	PP: 150,000
Phu My Plastics & Chemicals Corporation (Phu My Plastics & Chemicals PVC plant)	2004	none	PVC: 200,000
TPC Vina Plastic and Chemical Corporation	2010	none	PVC: 190,000
Vietnam Polystyrene Company	2012	none	PS: 48,000
	2016		EPS: 38,000
Hung Nghiep Formosa	2016	none	PET: 145,000 BOPP: 60,000
Youl Chon Vina Plastic JSC	2013	none	BOPP: 12,000
Euro Film Corporation	2016	none	BOPP: 30,000
LG Vina Chemical	2003	none	DOP: 40,000
Viet-Thai Plastchem			
Total			913,000
Capacity expansion pipeline			
Long Son Petrochemicals (LSP)	2023F	Olefin: 1.6 million	PVC and PE: up to two million

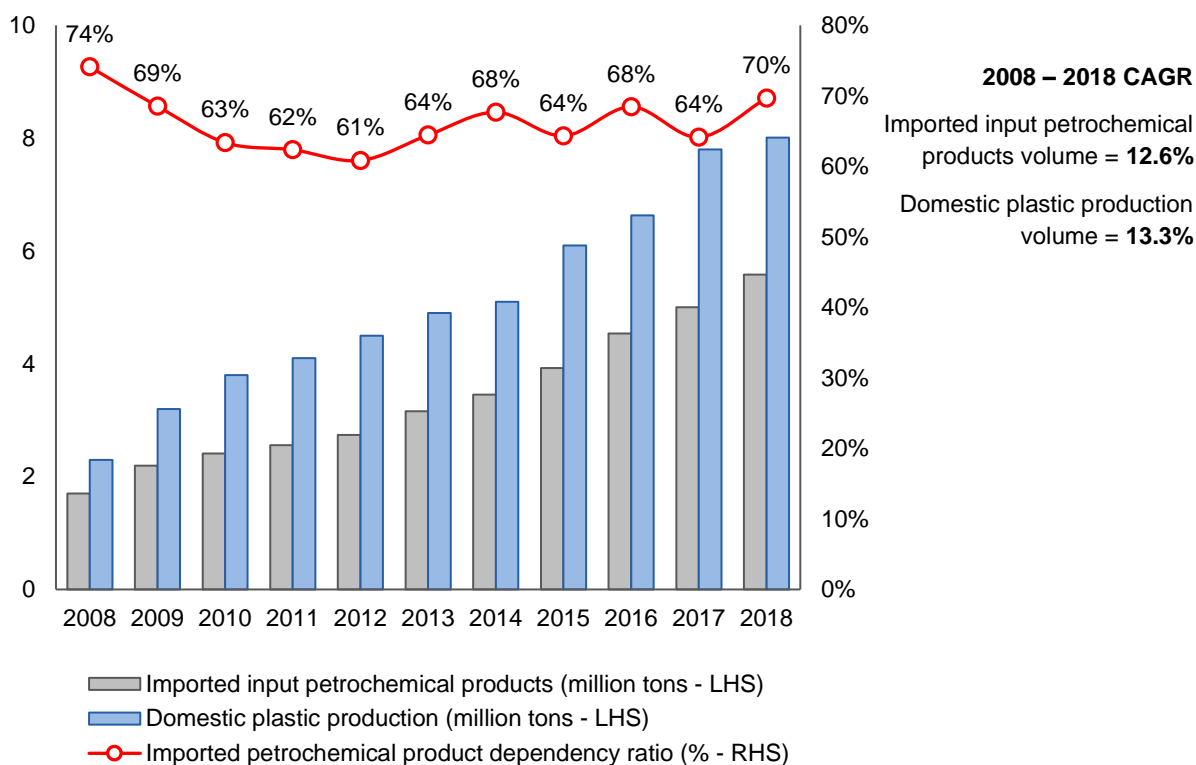
Source: VCSC compilation

**Figure 3: List of the abbreviations for plastic products**

Abbreviations for plastic products	Full name	Common uses/applications	Illustration of applications
<b>BOPP</b>	Biaxially oriented polypropylene	BOPP is used in a wide range of flexible packages for food as well as for gifts, flowers, PET bottle labels and adhesive tapes, among many other applications.	
<b>DOP</b>	Dioctyl phthalate	DOP is a general-purpose plasticizer. It is mainly used for improving the softness and pliability of PVC.	
<b>EPS</b>	Expanded Polystyrene	EPS is used in several applications due to its outstanding shock absorbency. Some of its major applications are as a protective packaging for consumer electronic products, children's car seats and cycling helmets.	
<b>PET</b>	Polyethylene terephthalate	PET is a popular packaging choice for many foods and beverages because it is hygienic, strong, lightweight, shatterproof and retains freshness. It is most commonly used to package carbonated soft drinks and water.	
<b>PP</b>	Polypropylene	PP is used in a variety of applications such as packaging, household products, plastic parts for various industries (including the automotive industry), special devices like living hinges along with textiles.	
<b>PS</b>	Polystyrene	PS is often used in products that require clarity, such as food packaging and laboratory ware. When combined with various colorants, additives or other plastics, polystyrene is used to make appliances, electronics, automobile parts, toys, gardening equipment and other products.	
<b>PVC</b>	Polyvinyl chloride	PVC is used in a variety of applications in building and construction, healthcare, electronics, automobile manufacturing and other sectors. It is also used in products ranging from piping and siding, blood bags and tubing, wire and cable insulation and windshield system components, among others.	
<b>PE</b>	Polyethylene	PE is a lightweight, durable thermoplastic with wide applications. Different types of PE (i.e., HDPE, LDPE and LLDPE) are used in applications ranging from films, tubes, plastic parts and laminates in several sectors (packaging, automotive and electrical, among others).	

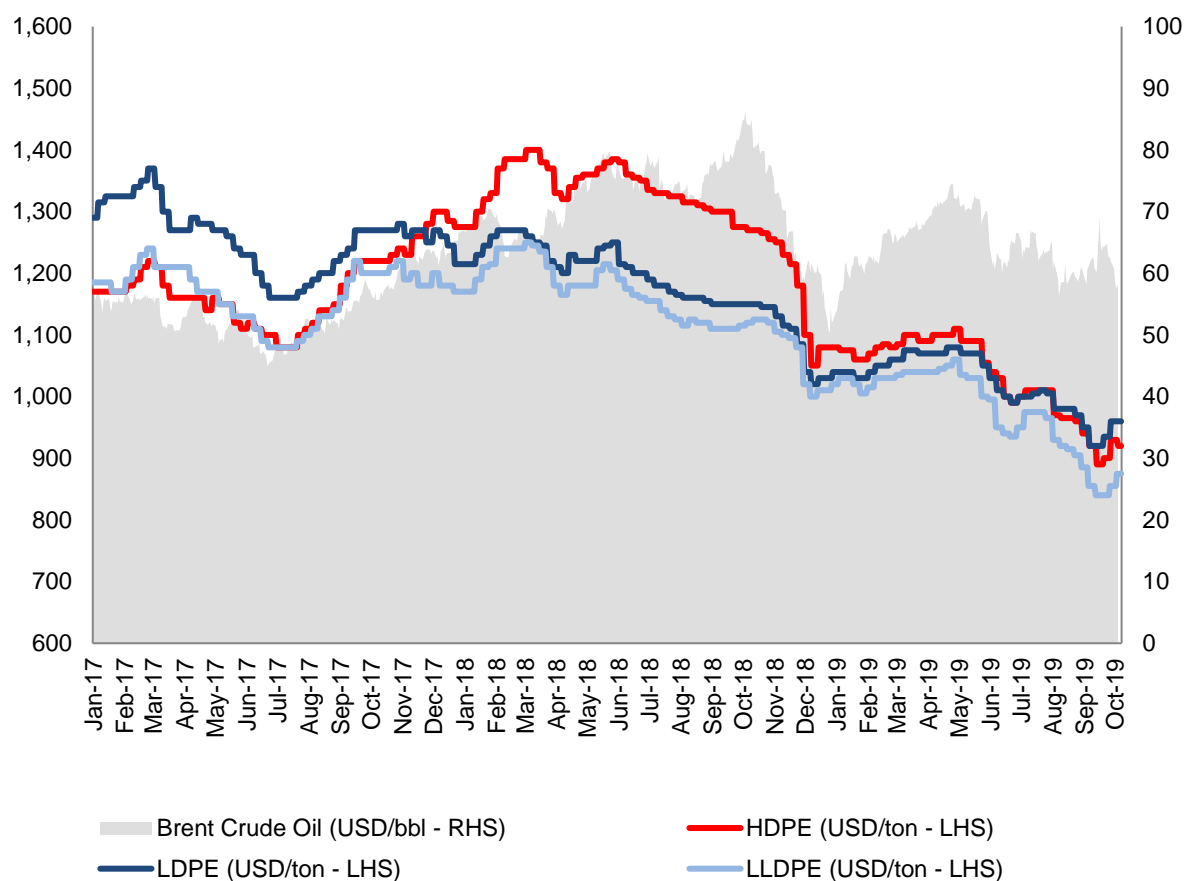
Source: VCSC compilation

**Figure 4: Imported input petrochemical products vs domestic plastic production volume**



Source: Vietnam Customs, VPA, VCSC compilation

**Figure 5: Correlation between crude oil prices and plastic raw material prices**



Source: Bloomberg, VCSC compilation



## Business overview

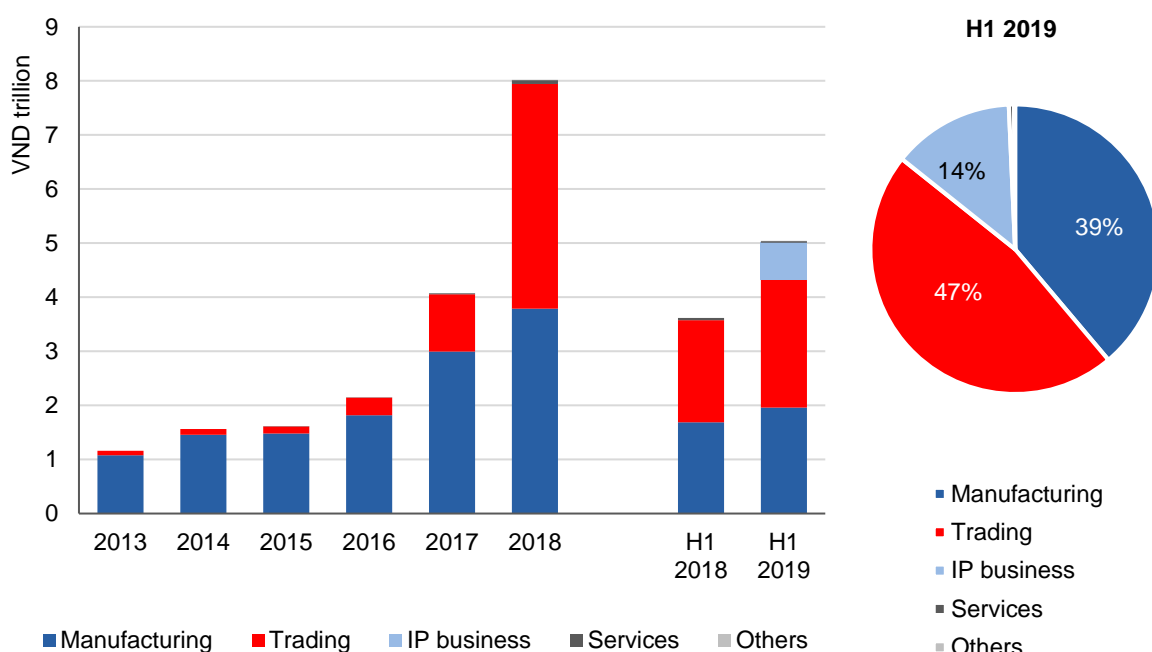
### Business segments

**AAA is the largest thin plastic packaging manufacturer in ASEAN.** Established in 2002 as a small company called Anh Hai Duy, AAA changed its name to An Phat Plastics in 2006 after establishing its first thin plastic packaging production plant in Hai Duong Province in 2005. Since then, AAA has grown into a leading manufacturer of thin plastic packaging in Vietnam. The company has also expanded into the plastic-related material trading and industrial park development businesses. In 2010, AAA conducted its initial public offering (IPO) and listed shares on the Hanoi Stock Exchange. In 2016, AAA moved its listed shares to the Ho Chi Minh Stock Exchange. In early 2019, the company changed its name to An Phat Bioplastics JSC.

AAA's traditional business is manufacturing plastic packaging – mainly different types of plastic bags and wraps. This segment accounted for 80-90% of AAA's total revenue before 2017, with the remaining revenue coming from trading plastic-manufacturing-related materials such as plastic resins, masterbatch filler, CaCO<sub>3</sub> powder (a key input material in producing masterbatch filler) and other additives. The proportion between AAA's manufacturing and trading businesses varies from year to year, depending on market conditions and the company's strategies.

In 2018, AAA entered the industrial park development business by acquiring Viet Hoa – Kenmark Industrial Park (IP) in Hai Duong Province via an auction conducted by the Bank for Investment and Development of Vietnam (BIDV). AAA owns 100% of this IP, which contributed to AAA's business performance starting in 2019 and accounted for 14% of the company's H1 2019 revenue.

**Figure 6: AAA's revenue breakdown by segment**



Source: AAA, VCSC compilation

### Plastic product manufacturing

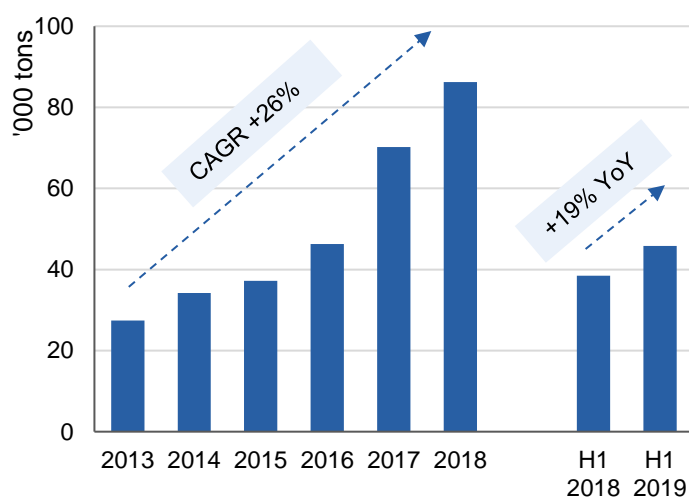
AAA produces a wide range of thin plastic packaging such as T-shirt bags, garbage bags, zipper and roll bags, among others, as seen in Figure 7. AAA exports all of its packaging outputs mainly to the EU and Japan markets that accounted for 50% and 33% of AAA's packaging output in H1 2019, respectively, as seen in Figure 9. This business segment enjoyed strong sales volume growth with CAGR of 26% over 2013-2018, fueled by AAA's continuous capacity expansion as seen in Figure 10.

Figure 7: AAA's packaging product portfolio



Source: AAA

Figure 8: Packaging sales volume



Source: AAA, VCSC compilation

Figure 9: Packaging revenue breakdown by market for H1 2019

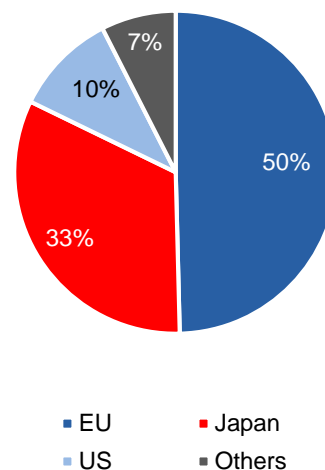


Figure 10: AAA's plastic product capacity

Factory	First year of operation	Location	Main markets	Capacity (tons)	Product
<i>Current production facilities</i>					
No.1	2005	Hai Duong	EU	10,800	Garbage bags, shopping bags, roll bags
No. 2	2008	Hai Duong	EU	15,600	Garbage bags, shopping bags, roll bags
No. 3	2009	Hai Duong	EU	10,800	Biodegradable bags, roll bags
No. 5	2012	Hai Duong	Japan	11,000	T-shirt bags
No. 6	2016	Hai Duong	Japan	37,000	Garbage bags, shopping bags, food bags
No. 7	2017	Hai Duong	US	9,600	Drawstring bags
Total				94,800	
<i>Planned production facilities</i>					
No. 8	2020E		EU Japan	30,000 tons	Multilayer packaging
No. 9	2019-2020E		EU	14,000 tons	Industrial plastic packaging (jumbo bags, sling bags, etc.)
			Japan		
			China US	210 million units	Technical plastics (plastic parts for industrial supporting industry)

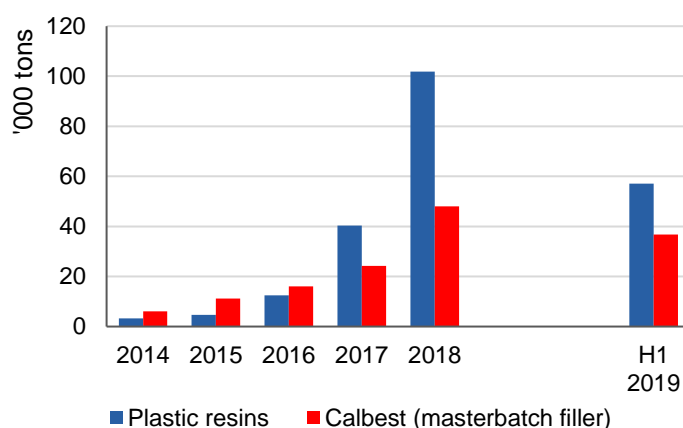
Source: AAA, VCSC compilation



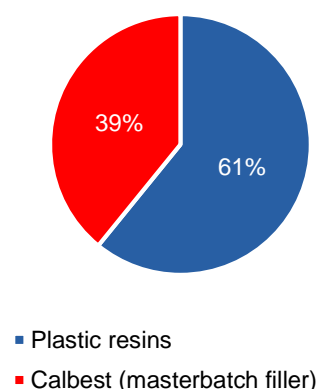
### Material manufacturing & trading

AAA produces CaCO<sub>3</sub> power (capacity of 222,000 tons per annum) and filler masterbatch from CaCO<sub>3</sub> (capacity of 150,000 tons per annum) under the Calbest brand at its An Phat – Yen Bai factory (Yen Bai Province). In addition to manufacturing products derived from CaCO<sub>3</sub>, AAA also trades various types of plastic resins (e.g., PP and PE) and other additives that are used in the plastics industry to reduce production costs or enhance the properties of products. This business was a minor segment for AAA prior to 2017, but it has been increasing significantly due to the rise in plastic resin trading activities from the two subsidiaries, An Thanh Bicsol and An Thanh Singapore. These two companies were established in 2017 with the purpose of specializing in plastic material trading. In just over two years of operation, An Thanh companies have become some of the largest plastic resin trading entities in Vietnam. While the Calbest products earn relatively a high gross margin of 25-30%, the gross margin of the plastic resin trading business is very thin at 3-5%.

**Figure 11: Material sales volume**



**Figure 12: Material sales volume breakdown by product for H1 2019**



Source: AAA, VCSC compilation

### Industrial park (IP) business

In 2018, AAA entered the industrial park development business by acquiring Viet Hoa – Kenmark IP in Hai Duong Province via an auction conducted by the Bank for Investment and Development of Vietnam (BIDV) through its fully-owned subsidiary, An Phat Complex. The auctioned properties of this IP included land use rights and all properties attached to the land with a value of VND756.5bn (USD32.9mn). The initial investment capital was planned at USD98.4mn, of which the previous investor – Kenmark Company – disbursed about 50% (approximately USD44mn) from 2007-2009 for completing the construction of technical infrastructure and the wastewater treatment station for 13 factories in an area of 11.4 ha out of a total area of 46 ha.

After acquiring the IP, AAA has conducted maintenance and repaired the infrastructure of five completed factory blocks and put three manufacturing plants into operation. The An Phat Complex IP reached an occupancy rate of 10% by the end of 2018 and nearly 59% by the end of June 2019. Hence, the IP contributed to AAA's business performance starting in 2019.

**Figure 13: AAA's An Phat Complex IP**



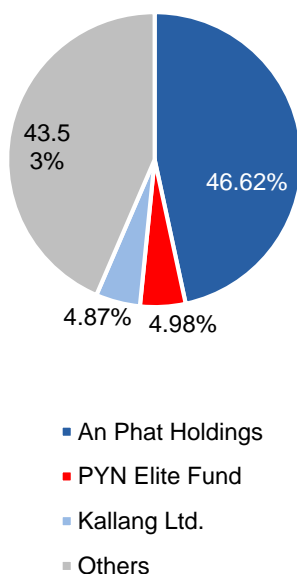
Source: AAA, VCSC compilation

## Ownership and Corporate structure

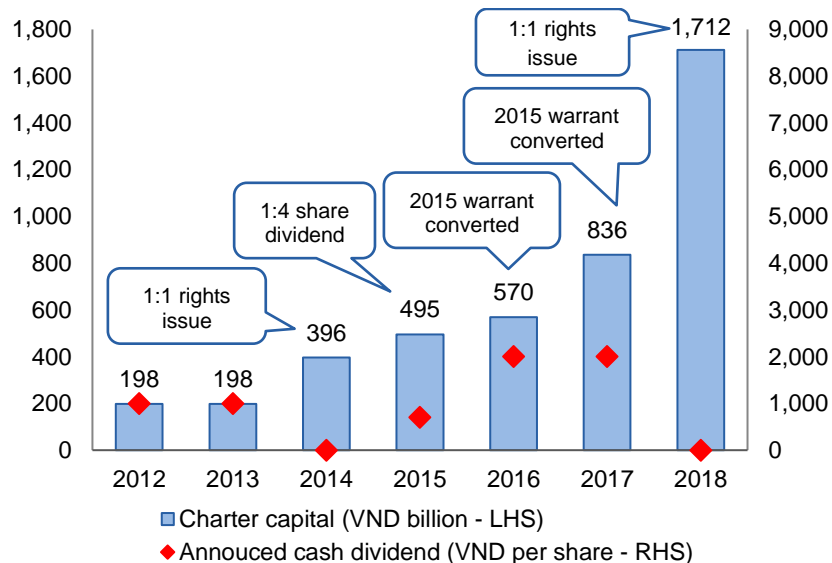
Aside from An Phat Holdings (a related entity to AAA's management that holds 46.62% of the company), AAA only has two major shareholders that are both financial investors: PYN Elite Fund (owned 4.98% as of November 2018) and Kallang Limited (owned 4.87% as of April 2019). It is worth noting that Kallang Limited (an entity belonging to the DWS Vietnam Fund managed by Deutsche Bank) is in progress of closing down the fund and therefore must gradually reduce its holdings in all Vietnamese companies. This leaves ~50% of shares that are deemed to be mostly held by retail investors.

Throughout the company's history, AAA has continuously conducted several capital raisings, notably via rights issues in 2012, 2014 and 2018 and via warrant bonds in 2015 and 2018 (as noted in Figure 16). The 4,000 warrants issued in 2018 will be fully bought by AAA's largest shareholder – An Phat Holdings – from the three bond holders from October 17, 2019 to November 15, 2019. After the transaction and warrant conversion, An Phat Holdings' stake in AAA will increase to 54.54% from the current level of 46.62%.

**Figure 14: AAA's shareholder structure**



**Figure 15: AAA's charter capital raising and cash dividend payment**



Note: FY2019 dividend plan is set at 15-20% par value. If paid by cash, this will be equivalent to VND1,500 to VND2,000/share. AAA already paid a VND500 cash dividend interim in August 2019. This leaves a VND1,000 cash dividend per share deemed to be paid, assuming AAA's minimum FY2019 cash dividend of VND1,500/share.

Source: AAA, VCSC compilation

**Figure 16: Summary of AAA's issued warrant bonds**

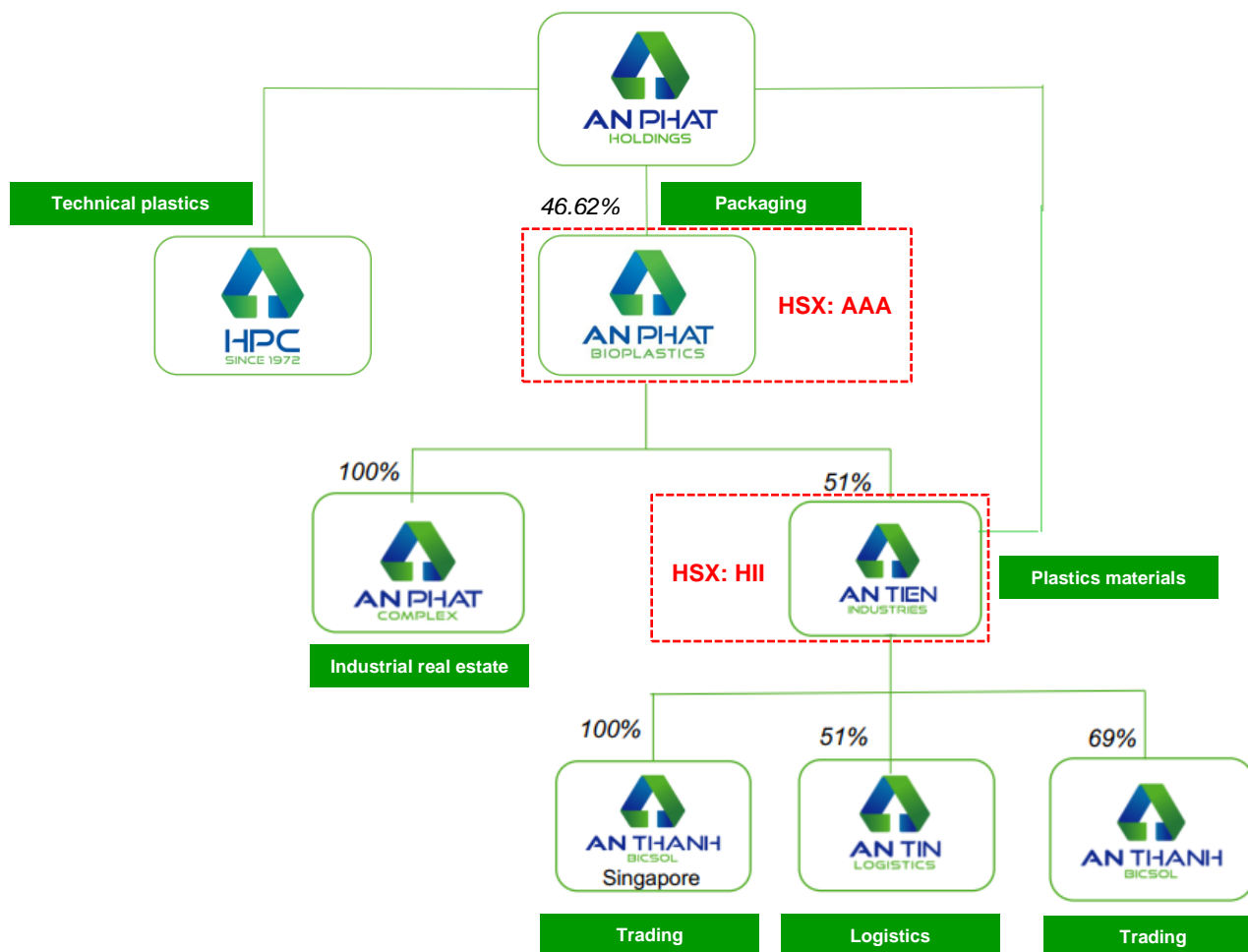
Number of bonds issued	Bond face value	Term of bonds	Number of warrants issued	Lock-up period for warrants	Shares converted from warrant	Warrant converted price	Actual warrants converted time	Actual warrants converted amount
December 2015 warrant bonds (Total bond amount = VND300 billion)								
300,000 bonds	VND1.0mn	Min: 1 year Max: 3 years	300,000 warrants (one warrant for one bond)	one year from bond issuance	30 million shares (equivalent to 100 shares per warrant)	Min: VND11,000 per share Max: VND11,500 per share	December 2016	5.065 million shares
							May 2017	585,000 shares
							December 2017	24.35 million shares
November 2018 warrant bonds (Total bond amount = VND400 billion)								
400 bonds	VND1.0bn	3 years	4,000 warrants (10 warrants for one bond)	one year from bond issuance	40 million shares (equivalent to 10,000 shares per warrant)	Min: VND14,000 per share Max: VND14,500 per share	October and November 2019	40 million shares being bought back by An Phat Holdings

**Bond buyers:** Keb Hana HCM (VND100bn), Shinhan Investment (VND200bn) and Shinhan VN Securities (VND100bn)

Source: AAA, VCSC compilation

AAA holds 100% of all plastic packaging production plants shown in Figure 10 as well as 100% of the An Phat Complex (the subsidiary that controls the An Phat Complex IP). AAA also holds 51% of An Tien Industries (HSX: HII) that owns the An Phat – Yen Bai factory that produces and trades plastic additives, the An Thanh Bicsol companies that specialize in trading activities and An Tin Logistics that provides domestic logistics services, including freight forwarding and warehousing.

**Figure 17: AAA's ownership structure**



Source: AAA, VCSC compilation

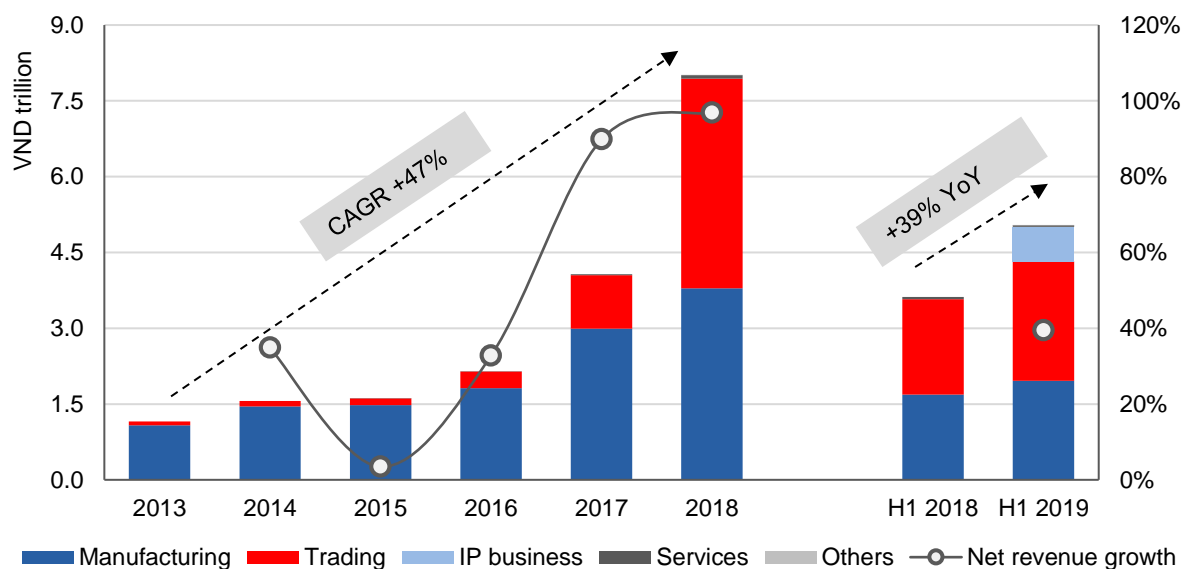
## Financial performance

### Core business of plastic packaging enjoyed healthy growth while new segments accelerated.

AAA enjoyed robust growth with 2013-2018 CAGRs of 47% in net revenue and 27% in NPAT-MI, which was driven by both healthy growth from the traditional plastic packaging segment and AAA's initiatives in expanding other businesses, including material trading and industrial parks.

AAA's plastic packaging segment was the main growth driver for AAA as it enjoyed strong sales volume growth CAGR of 26% during 2013-2018, which was fueled by AAA's continuous capacity expansion. Prior to 2016, AAA's market for plastic packaging was focused on the EU, but the company has gradually penetrated the Japanese and American markets in order to secure new pillars for growth. As Japanese importers are diversifying away from China (the biggest exporter of plastic packaging) into other countries such as Vietnam, new opportunities have been created for Vietnamese companies with established brand names and high-quality products to expand and diversify their businesses. AAA has been capitalizing on this trend as it put its Factory No.6 into operation in 2016; this factory is specifically customized for the Japanese market. Subsequently, AAA launched Factory No.7 in 2017 that is focused on customized products for the US market.

Figure 18: AAA's revenue



Source: AAA, VCSC compilation

Figure 19: AAA's manufacturing revenue

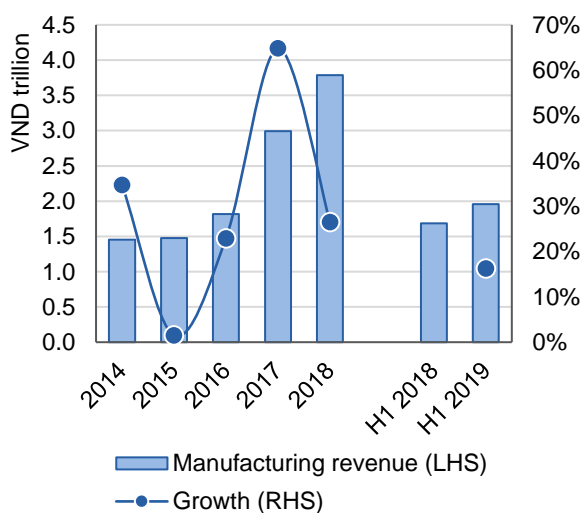
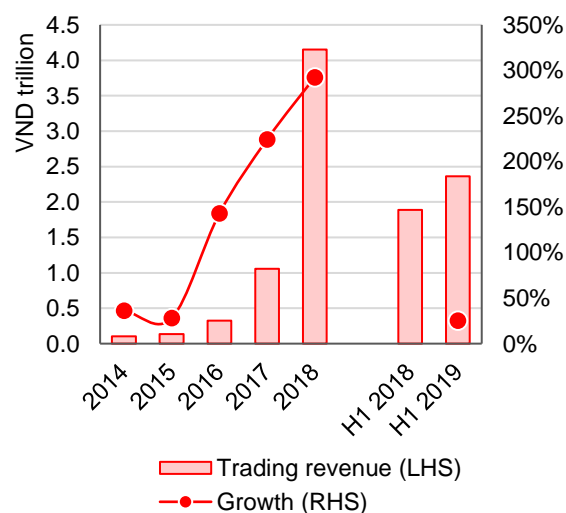
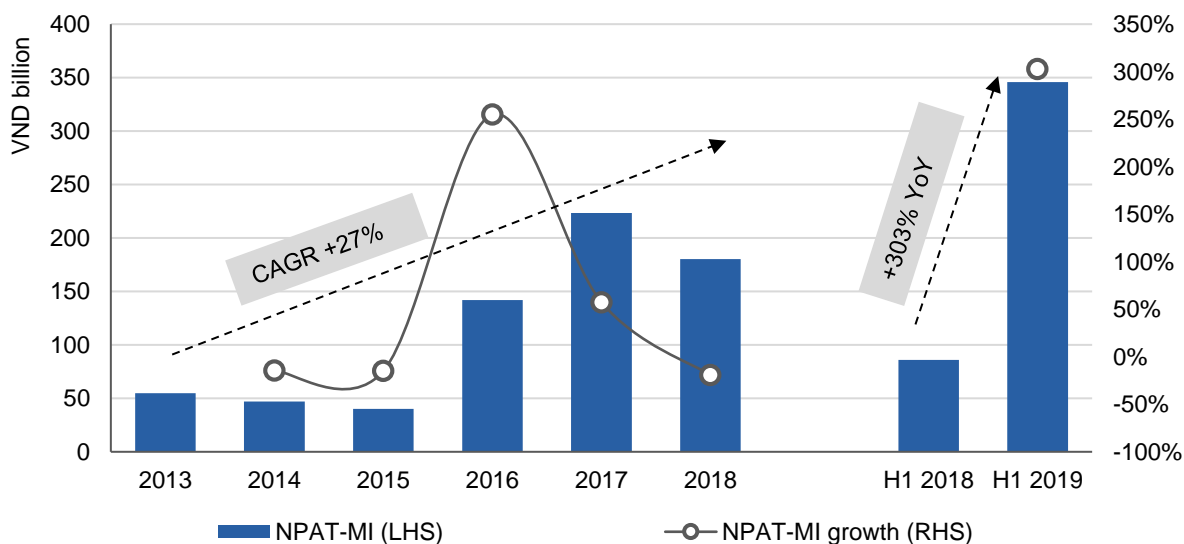


Figure 20: AAA's trading revenue



Source: AAA, VCSC compilation

Figure 21: AAA's NPAT-MI

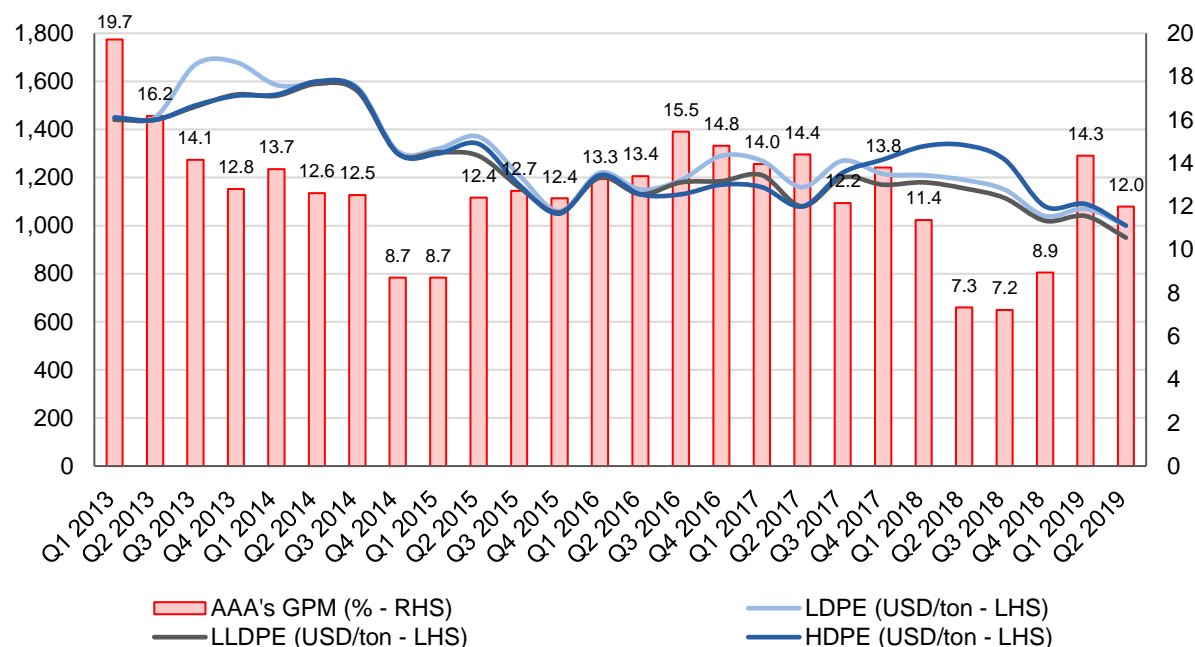


Source: AAA, VCSC compilation

### High dependency on imported input materials and export revenue results in volatile margins.

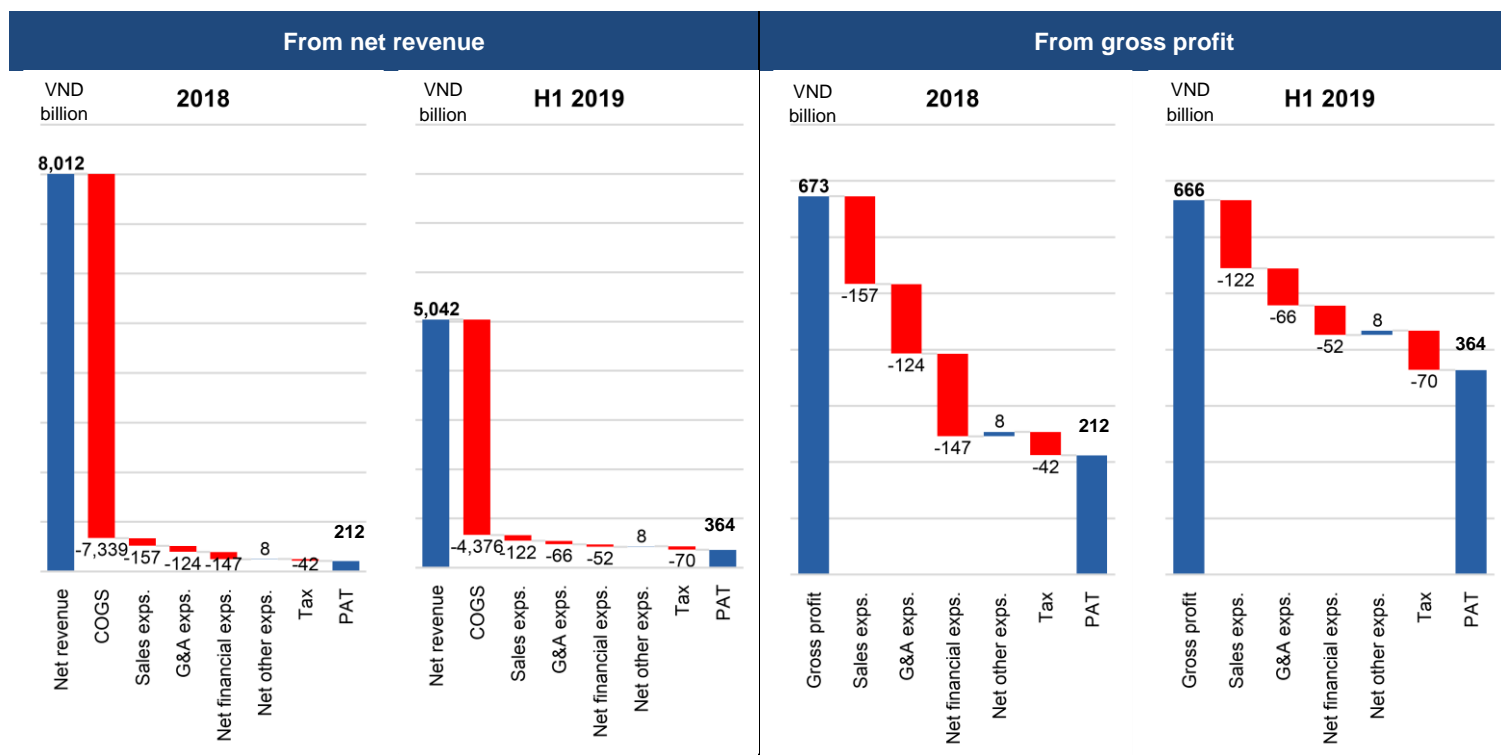
Price movement in plastic inputs, specifically HDPE, LDPE and LLDPE (different types of PE plastic that is used in thin plastic packaging production), is the main factor dictating AAA's margins. Unlike Vietnamese plastic pipe companies whose business locally-focused, AAA exported almost all of its outputs to wholesales importers. Hence, AAA has little bargaining power over the selling prices as well as narrow room for price competition tools such as giving sales discounts. As AAA does not have control over input material and export prices, the company's gross margin is therefore highly volatile. In addition to input prices, the rising contribution of the low-margin trading business also caused the blended margin level to fall during 2018-2019. Figure 22 illustrates AAA's gross margin movement against the price volatility of its common input materials HDPE, LDPE and LLDPE.

**Figure 22: HDPE, LDPE, and LLDPE prices in comparison with AAA's quarterly gross margin**



Source: Bloomberg, BMP, VCSC compilation

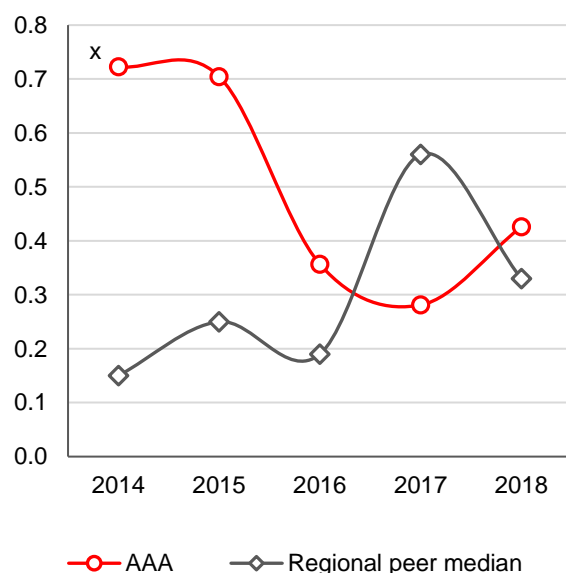
**Figure 23: AAA's expense waterfall charts for 2018 and H1 2019**



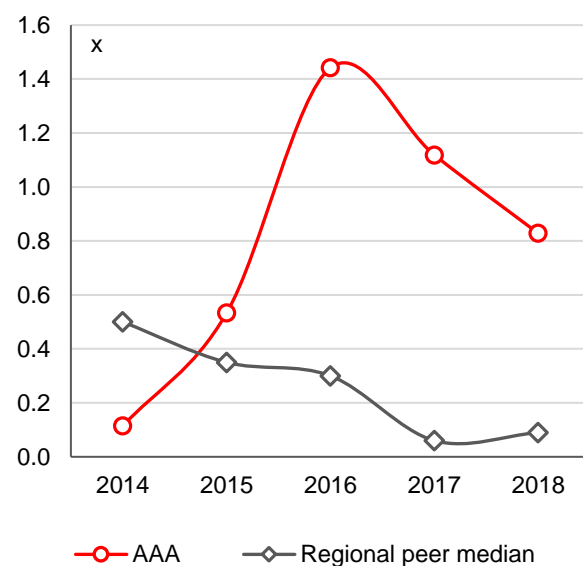
Source: AAA, VCSC compilation

**Aggressive capacity expansion is fueled not only by new capital but also by high leverage.** AAA's aggressive capacity expansion together with modest operating cashflows over the years called for continuous new capital to be injected into the company. AAA funded such capital demand with a mix of heavy debt financing and large equity dilutive events (i.e., rights issues and warrant bonds as in Figure 15). AAA has an appetite for warrant bonds through which the company has risen a total of VND700bn (USD30.4mn) in 2015 and 2018. With a cash ratio (i.e., the ability of the company in meeting its current liabilities by cash and cash equivalents) deteriorating below the level of its regional peers (Figure 24) and a net debt to equity ratio moving around the safety threshold of 1.0x and well above regional peer level (Figure 25), AAA's liquidity and solvency conditions should always be kept in check.

**Figure 24: Cash ratio comparison between AAA and peers**



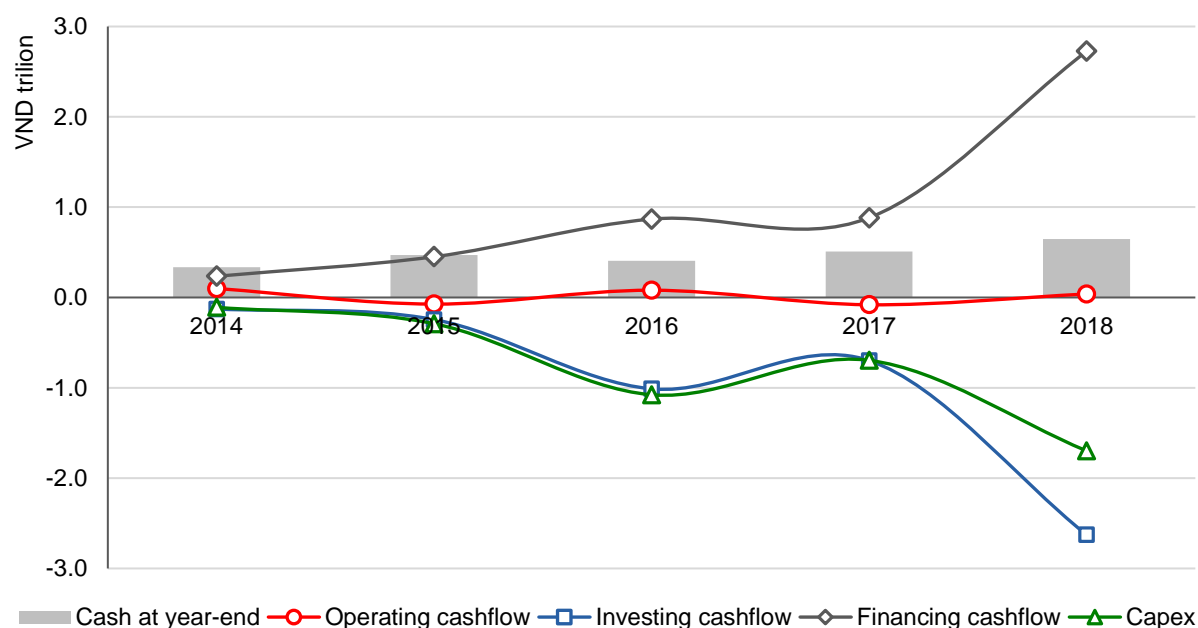
**Figure 25: Net debt/equity ratio comparison between AAA and peers**



Note: Regional peers are as listed in Figure 38

Source: Bloomberg, AAA, VCSC compilation

**Figure 26: AAA's cashflows and cash balance**



Source: AAA, VCSC compilation



## 2018 recap

**Figure 27: AAA's 2018 results**

VND bn	2017	2018	Growth	VCSC comments
<b>Revenue</b>	<b>4,070</b>	<b>8,012</b>	<b>96.9%</b>	* Packaging sales volume grew 23% YoY * Trading revenue surged from VND1.1tn (USD46.0mn) to VND4.2tn (USD180.6mn) thanks to newly established trading subsidiaries An Thanh Bicsol and An Thanh Singapore in late 2017.
Gross profit	550	673	22.3%	
SG&A expenses	-185	-280	51.4%	
<b>Operating profit</b>	<b>365</b>	<b>393</b>	<b>7.5%</b>	* Slower growth compared to revenue growth due to compressing GPM.
Financial income	56	62	10.3%	
Financial expenses	-95	-209	119.4%	* Total debt balance rose to VND3.8tn (USD166.7mn) at end-2018 from VND2.4tn (USD103.4mn) at end-2017.
Net other income/loss	2	8	316.3%	
<b>Profit before tax</b>	<b>328</b>	<b>254</b>	<b>-22.6%</b>	
Profit after tax	263	212	-19.4%	* High interest expenses eroded operating profit.
<b>NPAT-MI</b>	<b>223</b>	<b>180</b>	<b>-19.3%</b>	
<i>GPM</i>	<i>13.5%</i>	<i>8.4%</i>		* High input plastic prices during late 2017 to 2018. * Increasing proportion of trading revenue that has low margin.
<i>SG&amp;A exp./Sales</i>	<i>4.5%</i>	<i>3.5%</i>		
<i>OPM</i>	<i>9.0%</i>	<i>4.9%</i>		
<i>NPM</i>	<i>5.5%</i>	<i>2.3%</i>		

Source: AAA's financial statements, VCSC comments

**Figure 28: AAA's quarterly results summary**

VND bn	Q1 2017	Q2 2017	Q3 2017	Q4 2017	Q1 2018	Q2 2018	Q3 2018	Q4 2018	Q1 2019	Q2 2019
<b>Revenue</b>	<b>729</b>	<b>854</b>	<b>1,062</b>	<b>1,425</b>	<b>1,298</b>	<b>2,318</b>	<b>2,187</b>	<b>2,209</b>	<b>2,612</b>	<b>2,430</b>
Gross profit	102	123	129	197	148	170	158	197	375	291
SG&A expenses	-41	-26	-32	-85	-58	-63	-69	-89	-99	-89
<b>Operating profit</b>	<b>60</b>	<b>97</b>	<b>97</b>	<b>111</b>	<b>89</b>	<b>107</b>	<b>89</b>	<b>108</b>	<b>276</b>	<b>203</b>
Financial income	82	-64	4	33	7	12	22	21	53	40
Financial expenses	-53	9	-21	-30	-26	-60	-55	-67	-63	-82
Net other income/loss	0	25	0	-23	2	1	3	2	7	0
<b>EBT</b>	<b>90</b>	<b>67</b>	<b>80</b>	<b>91</b>	<b>73</b>	<b>60</b>	<b>57</b>	<b>64</b>	<b>273</b>	<b>161</b>
Income tax exp	-18	-18	-13	-16	-13	-9	-10	-11	-49	-21
Profit after tax	72	49	67	75	60	51	48	54	224	140
<b>NPAT-MI</b>	<b>67</b>	<b>39</b>	<b>15</b>	<b>65</b>	<b>60</b>	<b>26</b>	<b>43</b>	<b>52</b>	<b>214</b>	<b>132</b>
<i>GPM</i>	<i>14.0%</i>	<i>14.4%</i>	<i>12.2%</i>	<i>13.8%</i>	<i>11.4%</i>	<i>7.3%</i>	<i>7.2%</i>	<i>8.9%</i>	<i>14.3%</i>	<i>12.0%</i>
<i>SG&amp;A exp./Sales</i>	<i>5.7%</i>	<i>3.0%</i>	<i>3.1%</i>	<i>6.0%</i>	<i>4.5%</i>	<i>2.7%</i>	<i>3.2%</i>	<i>4.0%</i>	<i>3.8%</i>	<i>3.7%</i>
<i>OPM</i>	<i>8.3%</i>	<i>11.4%</i>	<i>9.1%</i>	<i>7.8%</i>	<i>6.9%</i>	<i>4.6%</i>	<i>4.0%</i>	<i>4.9%</i>	<i>10.6%</i>	<i>8.3%</i>
<i>NPM</i>	<i>9.2%</i>	<i>4.6%</i>	<i>4.9%</i>	<i>4.6%</i>	<i>4.6%</i>	<i>1.1%</i>	<i>2.0%</i>	<i>2.3%</i>	<i>8.2%</i>	<i>5.4%</i>

Source: AAA's financial statements

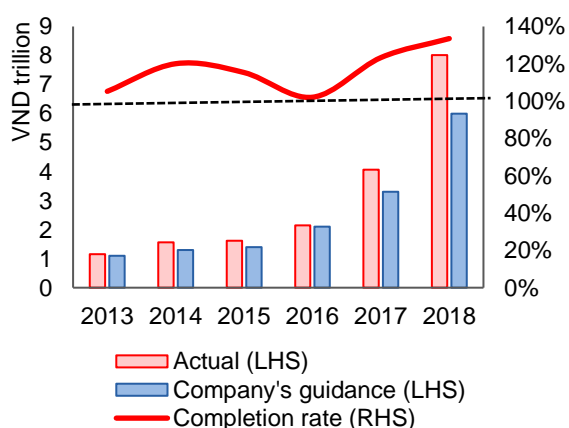
## 2019 outlook

**Figure 29: AAA's H1 2019 results and guidance for full-year 2019**

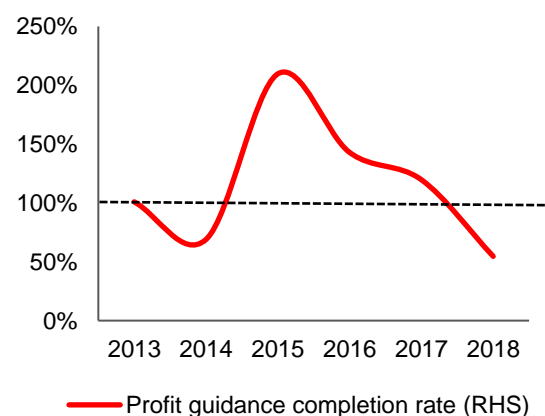
VND bn	H1 2018	H1 2019	Growth	2019G	H1 as % of 2019G	VCSC comments
<b>Revenue</b>	<b>3,616</b>	<b>5,042</b>	<b>39.4%</b>	<b>10,000</b>	<b>50%</b>	* Packaging sales volume grew 19% YoY in H1 2019. * Trading revenue from An Thanh companies continued to score high growth of 25% YoY. * New contribution from the An Phat Complex IP.
Gross profit	318	666	109.7%			
SG&A expenses	-121	-188	54.6%			
<b>Operating profit</b>	<b>196</b>	<b>478</b>	<b>143.8%</b>			* Improving operating profit thanks to GPM recovery on the back of lower input plastic prices and new contribution from the IP segment
Financial income	19	93	387.8%			* Total of VND23bn (USD1.0mn) gain from divestment from two subsidiaries in H1 2019 vs VND1.5bn (USD66,000) in H1 2018. * Gain from interest received reached VND58bn (USD2.5mn) in H1 2019 vs VND11bn (USD0.5mn) in H1 2018.
Financial expenses	-86	-145	68.7%			* Total debt rose to VND4.2tn (USD182.2mn) at the end of June 2019 from VND3.8tn (USD166.7mn) at end-2018.
Net other income/loss	3	8	145.6%			
<b>Profit before tax</b>	<b>132</b>	<b>434</b>	<b>227.8%</b>			
Profit after tax	111	364	228.9%			
<b>NPAT-MI</b>	<b>86</b>	<b>346</b>	<b>302.7%</b>	<b>510</b>	<b>68%</b>	* H1 2019 PAT achieved strong growth from last year's low base and hence fulfilled a majority of AAA's guidance thanks to robust revenue growth and operating margin improvement, especially in Q1 2019. * As such, we expect AAA to surpass 2019 guidance for PAT, but with no significant divergence as we see volatile oil prices toward the end of 2019 and higher contribution of thin-margin trading activities that could put pressure on margin expansion.
<b>GPM</b>	<b>8.8%</b>	<b>13.2%</b>				* Margin slightly increased due to favorable plastic input prices. This trend is in line with other domestic plastics manufacturers' H1 2019 results. * New contribution from IP business.
SG&A exp./Sales	3.4%	3.7%				
OPM	5.4%	9.5%				
NPM	2.4%	6.9%				

Source: AAA's financial statements, VCSC

**Figure 30: Comparison between AAA's actual result and guidance for net revenue**



**Figure 31: Comparison between AAA's actual result and guidance for profit proxies\***



Note: (\*) AAA uses different proxies for profit guidance for different years (i.e., PBT of parent, PAT of parent, consolidated PBT and consolidated PAT). We only present the profit completion rate based on the actual results vs its respective proxies.

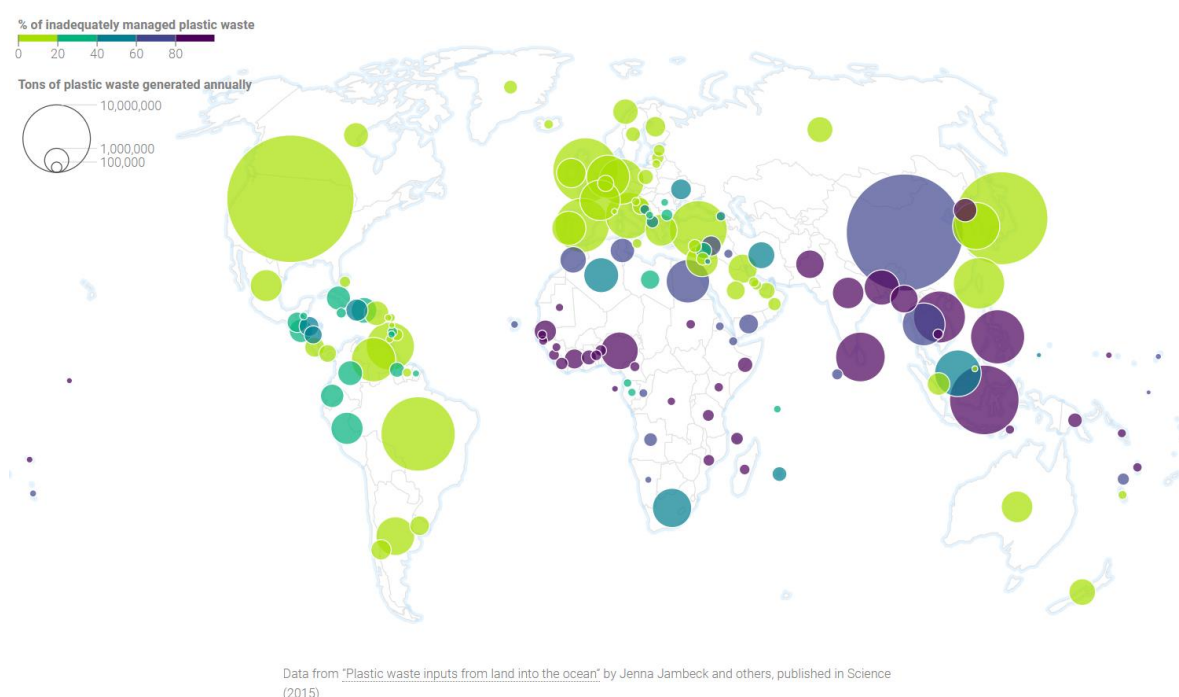
Source: AAA, VCSC compilation

## Long-term outlook: Pioneering sustainable plastic packaging

**Growing amount of plastic waste is receiving international attention.** Despite gaining significant success in the plastic packaging business, AAA is faced with the emerging global trend of eliminating single-use plastics. Per the UN Environment Programme, more than 8.3 billion tons of plastic has been produced since the early 1950s, of which 60% has ended up in either a landfill or nature without being fully degraded or recycled. The consequences of this results in worldwide plastic pollution that threatens people's health and living conditions.

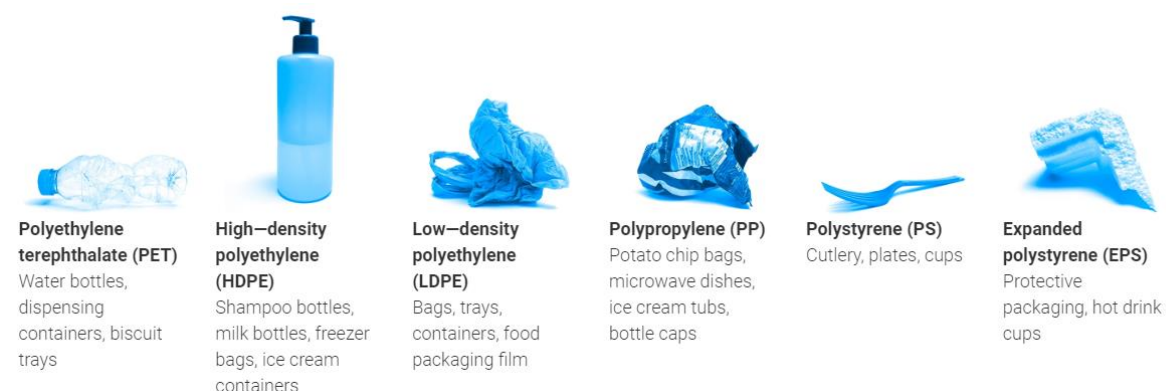
*"The same properties that make plastics so useful — their durability and resistance to degradation — also make them nearly impossible for nature to completely break down. Most plastic items never fully disappear; they just get smaller and smaller. Many of these tiny plastic particles are swallowed by farm animals or fish who mistake them for food, and thus can find their way onto our dinner plates. They've also been found in a majority of the world's tap water. By clogging sewers and providing breeding grounds for mosquitoes and pests, plastic waste — especially plastic bags — can increase the transmission of vector-borne diseases like malaria" (The UN Environment Programme).*

**Figure 32: Plastic waste generated annually and plastic waste management level by country**



Source: UN Environmental 2018

**Figure 33: Common single-use plastic products**



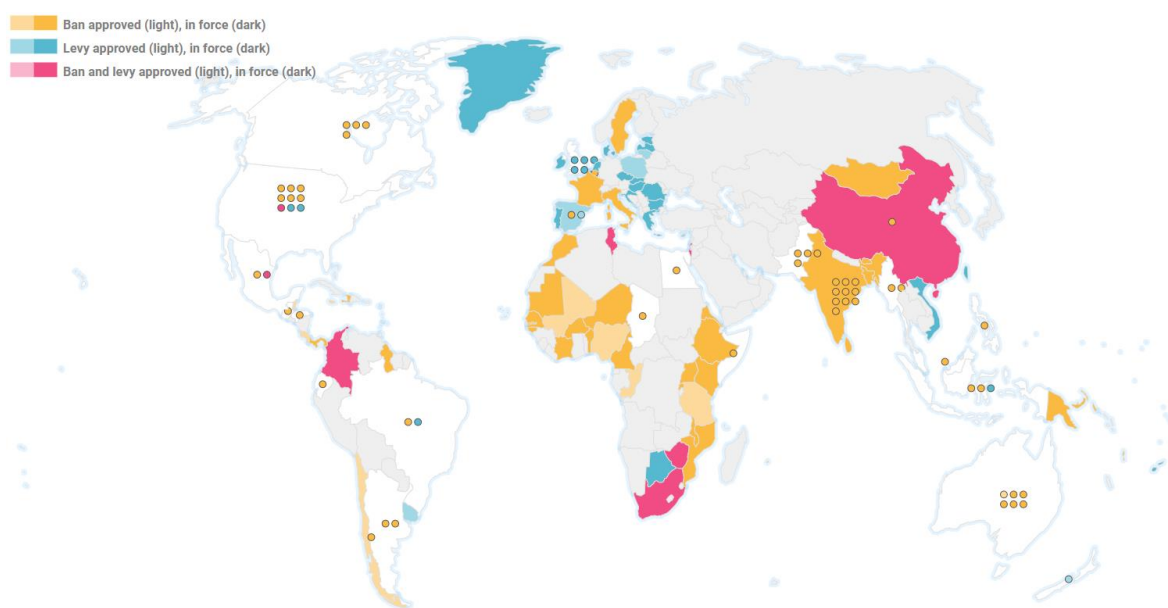
Source: UN Environmental 2018

In recent years, governments and consumers throughout the world are being more aware of plastic pollution and are thus taking action to reduce single-use plastic products. Per the UN Environment Programme, an impressive and growing number of national governments have joined the movement:

- 127 countries have adopted legislation to regulate plastic bags.
- 27 countries have enacted legislation banning specific products, materials or production levels.
- 27 countries have instituted taxes on the production of plastic bags.
- 30 countries charge consumers fees for plastic bags.
- 63 countries have mandates for producer responsibility on single-use plastics, including deposit-refunds, product takeback and recycling targets.
- Eight countries have established a ban of microbeads through national laws or regulations.

Vietnam has joined the movement with Prime Minister Nguyen Xuan Phuc setting an ambitious plan to eliminate single-use plastic products in stores, markets and supermarkets in urban areas by 2021. By 2025, the Prime Minister aims for the whole country not to use disposable plastic products, which he stated at the first national anti-plastic parade organized by the Ministry of Natural Resources and Environment in June 2019.

**Figure 34: Illustration of global engagement in controlling plastic waste through legislation**



Source: "Banning single-use plastic: lessons and experiences from countries" UN Environment report (2018)

Source: UN Environmental 2018

**AAA is taking action in expanding its production to biodegradable products.** Such movement poses a direct substitution to AAA's core products (i.e., plastic packaging), hence calling for an expansion in AAA's strategy in order to protect and sustain the company's relevance to customers as well as its economic value. The company has recognized the importance of the trend since 2013 and has been investing in R&D and production of biodegradable plastic packaging products that are made with materials that can be fully degraded in water and CO<sub>2</sub> in the natural environment. In 2015, AAA was able to make bio-based biodegradable products using corn (also known as PLA – polylactic acid); since then it has been expanding into fossil-based biodegradable materials (such as PBAT) under the brand AnEco (as in Figure 35).

Unlike its traditional plastic packaging, AAA's targeted markets for biodegradable products are both wholesale importers and domestic end-customers. AAA is focused on pushing this product segment to the domestic market for both environmental and economic benefits. The company has partnered with retail chains (e.g., Vinmart, Lotte and Aeon) and F&B chains (e.g., Highlands Coffee and Phuc Long Coffee & Tea) to partially replace their traditional plastic packaging with AnEco products as well as help to promote these products to consumers. Individual consumers can also buy AnEco's products through Vinmart and also through e-commerce platforms like Shopee and Tiki.



Figure 35: AAA's biodegradable product branding for domestic market



Source: AAA, VCSC compilation

**Biodegradable products are here, but the conversion process takes time.** Being environmentally-friendly means higher costs and higher prices for AAA's biodegradable products, which is the main barrier for the company to market these products successfully to its customers. Per AAA, its biodegradable packages are 2.2-2.5x higher in selling prices compared to traditional plastic bags and they currently account for only 10% of AAA's total sales. The technology, input material sources and costs behind biodegradable products also pose challenges for companies like AAA to scale up production. Therefore, as both consumers and the manufacturers of biodegradable products are taking time in making the shift, AAA is well positioned to capture potential growth from this movement. AAA's management has set a target to increase the biodegradable product proportion of the company's total sales from 10% currently to 50-60% within the next five years. In addition, AAA is investing in biodegradable input material production (i.e., PLA and PBAT).

## Peer comparison

We use a P/E comparison, which represents the current market valuation of the expected 2019 earnings growth prospects of AAA, to form our view on AAA's relative valuation vs its domestic and regional peers.

Over the last three years, AAA has been trading at a premium P/E that ranges from 5.5x to 13.5x with an average of around 8.5x vs domestic peers thanks to the company's larger scale, outperforming fundamentals and growth potential from biodegradable products.

AAA is trading at a 2019 P/E of 6.9x based on the company's 2019 earnings guidance and including the upcoming 40 million shares deemed to be converted from November 2018 warrants (noted in Figure 16). We believe AAA deserves to be traded at a premium compared to domestic peers of that have a TTM P/E median of 7.9x.

Compared to regional peers that we view as a comparable universe for AAA comprised of thin plastic packing producers in China, Thailand, Taiwan, Malaysia and India, AAA's 2019 P/E of 6.9x looks attractive given AAA's better profitability (TTM ROE of 14.4% vs a 9.7% regional peer median).

	2018A	2019G	% YoY
NPAT-MI (VNDbn)	180	510	183%
EPS (VND)	948	2,181	130%
PER	15.9x	6.9x	

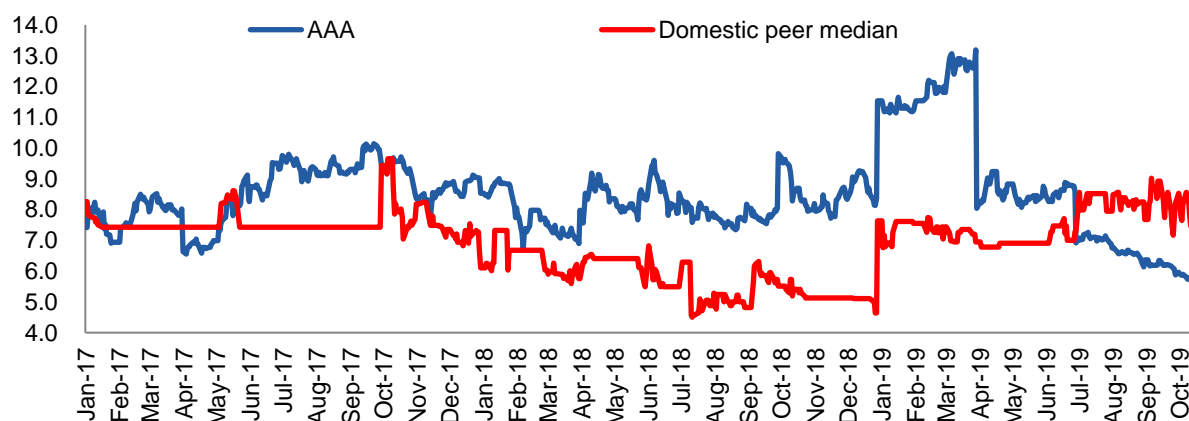
Source: AAA, VCSC. Note: AAA's EPS and P/E is calculated based on fully diluted share count

**Figure 36: Local peers**

Ticker	Company name	Market cap (USD mn)	TTM Net Sales (USD mn)	Y-o-Y %	TTM NPAT (USD mn)	Y-o-Y %	Gross margin (%)	Net margin (%)	Net debt/Equity (%)	ROE (%)	ROA (%)	TTM P/E	Current P/B
TTP	Tan Tien Plastic Packaging	15.2	74.0	16.7	2.1	-34.4	8.1	2.8	-7.6	6.3	4.0	6.3	0.4
VBC	Vinh Plastic and Bags	5.8	42.2	14.6	1.1	-2.4	9.0	2.9	203.1	24.7	6.0	3.5	1.2
RDP	Rang Dong Plastic	13.7	70.4	23.6	0.6	N/A	9.7	0.8	169.9	2.9	0.8	27.9	0.7
SPP	Saigon Plastic Packaging	2.8	34.0	-29.2	0.3	-71.2	10.9	0.8	259.0	2.3	0.5	10.1	0.2
TPC	Tan Dai Hung Plastic	8.5	32.4	0.2	1.1	2.3	9.0	3.5	50.2	8.2	4.0	7.9	0.6
<b>Average</b>		<b>9.2</b>	<b>50.6</b>	<b>5.2</b>	<b>1.0</b>	<b>-26</b>	<b>9.3</b>	<b>2.2</b>	<b>134.9</b>	<b>8.9</b>	<b>3.1</b>	<b>11.1</b>	<b>0.6</b>
<b>Median</b>		<b>8.5</b>	<b>42.2</b>	<b>14.6</b>	<b>1.1</b>	<b>-18</b>	<b>9.0</b>	<b>2.8</b>	<b>169.9</b>	<b>6.3</b>	<b>4.0</b>	<b>7.9</b>	<b>0.6</b>
<b>AAA</b>	<b>An Phat Bioplastics</b>	<b>112</b>	<b>410.3</b>	<b>54.6</b>	<b>19.1</b>	<b>82.9</b>	<b>13.2</b>	<b>6.9</b>	<b>87.6</b>	<b>14.4</b>	<b>5.8</b>	<b>7.6</b>	<b>0.9</b>

Source: Bloomberg, VCSC. Note: AAA's EPS is calculated based on fully diluted share count that includes 40 million shares deemed to be converted from November 2018 warrants

**Figure 37: Historical Price-to-Earnings Ratio (P/E) of AAA vs domestic peers**



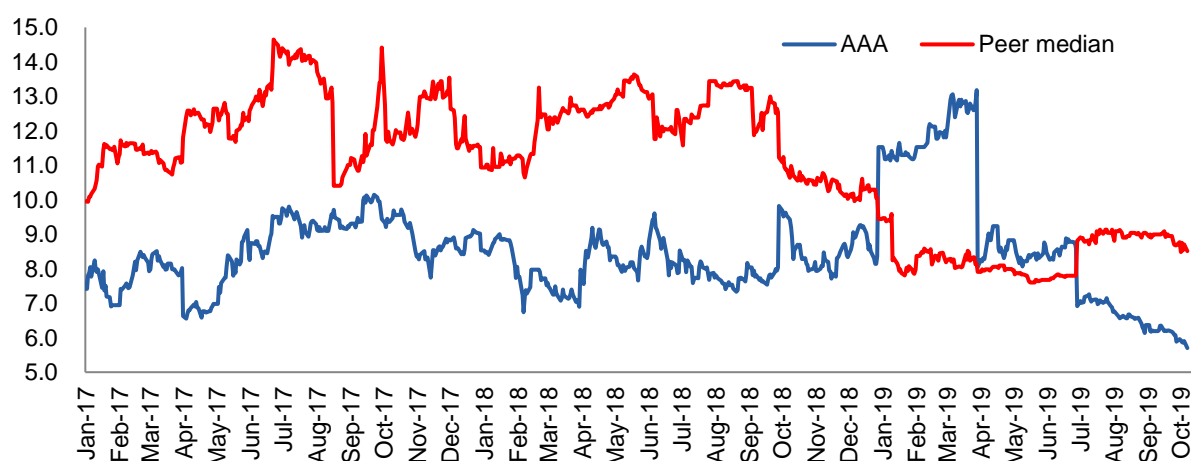
Source: Bloomberg, VCSC



**Figure 38: Regional peers**

Company	Country	Mkt cap (USD mn)	TTM Net Sales (USD mn)	Y-o-Y (%)	TTM NPAT (USD mn)	Y-o-Y (%)	Net debt/Equity (%)	ROE (%)	ROA (%)	TTM P/E (x)	LQ P/B (x)
Jiangsu Shuangxing Color Plastic New Materials	China	769	615	23.4	36	75.5	-2.4	3.2	2.7	22.5	0.7
Ton Yi Industrial	Taiwan	609	1092	-2.8	25	-48.3	54.3	4.1	2.0	25.0	1.0
Polyplex Thailand	Thailand	422	459	12.0	75	53.5	15.0	21.0	15.4	5.3	1.1
Shanghai Haishun New Pharmaceutical Packaging	China	263	84	31.0	9	-10.6	-7.8	9.7	6.6	29.9	2.8
Polyplex	India	194	650	27.2	47	107.0	-0.2	12.4	6.6	4.2	0.5
Panca Budi Idaman	Indonesia	134	306	24.7	21	29.2	8.8	20.9	14.3	6.5	1.3
SLP Resources	Malaysia	99	45	3.5	6	19.0	-29.9	14.0	12.4	16.4	2.2
Garware Polyester	India	74	136	13.7	12	146.5	-1.1	6.1	5.1	6.5	0.4
Trias Sentosa	Indonesia	71	228	34.7	5	58.2	48.8	2.9	1.5	14.0	0.5
Cosmo Films	India	56	309	N/A	9	-5.2	97.0	9.4	3.4	6.4	0.6
Indopoly Swakarsa Industry	Indonesia	44	211	3.7	5	64.6	55.6	3.2	1.8	8.5	0.3
Thantawan Industry	Thailand	43	90	-8.4	6	-39.5	-26.7	12.1	9.5	6.7	0.8
Fuling Global	China	41	124	18.4	6	-21.0	39.5	11.7	6.0	5.0	0.7
Thai OPP	Thailand	35	51	6.2	3	-6.2	-20.6	7.7	6.5	11.3	0.8
Multibax	Thailand	24	46	-8.9	3	54.5	74.7	16.3	6.9	8.9	1.4
<b>Average</b>		<b>192</b>	<b>296</b>	<b>12.8</b>	<b>18</b>	<b>31.8</b>	<b>20.3</b>	<b>10.3</b>	<b>6.7</b>	<b>11.8</b>	<b>1.0</b>
<b>Median</b>		<b>74</b>	<b>211</b>	<b>12.9</b>	<b>9</b>	<b>29.2</b>	<b>8.8</b>	<b>9.7</b>	<b>6.5</b>	<b>8.5</b>	<b>0.8</b>
<b>An Phat Bioplastics</b>	<b>Vietnam</b>	<b>112</b>	<b>410.3</b>	<b>54.6</b>	<b>19.1</b>	<b>82.9</b>	<b>87.6</b>	<b>14.4</b>	<b>5.8</b>	<b>7.6</b>	<b>0.9</b>

Source: Bloomberg, VCSC. Note: AAA's EPS is calculated based on fully diluted share count that includes 40 million shares deemed to be converted from November 2018 warrants

**Figure 39: Historical Price-to-Earnings Ratio (P/E) of AAA vs regional peers**


Source: Bloomberg, VCSC

**Figure 40: Stock price performance of AAA vs VN-Index**


Source: Bloomberg, VCSC

## Financial statements

P&L (VND bn)	2015	2016	2017	2018
<b>Revenue</b>	<b>1,615</b>	<b>2,144</b>	<b>4,070</b>	<b>8,012</b>
COGS	-1,425	-1,837	-3,519	-7,339
<b>Gross Profit</b>	<b>190</b>	<b>307</b>	<b>550</b>	<b>673</b>
Sales & Marketing exp	-75	-57	-106	-157
General & Admin exp	-42	-63	-79	-124
<b>Operating Profit</b>	<b>73</b>	<b>188</b>	<b>365</b>	<b>393</b>
Financial income	22	30	56	62
Financial expenses	-50	-54	-95	-209
- o/w interest expense	-24	-27	-81	-126
Associates	3	2	0	0
Net other income/(loss)	2	1	2	8
<b>Profit before Tax</b>	<b>51</b>	<b>167</b>	<b>328</b>	<b>254</b>
Income Tax	-10	-24	-65	-42
<b>NPAT before MI</b>	<b>41</b>	<b>143</b>	<b>263</b>	<b>212</b>
Minority Interest	1	1	40	32
<b>NPAT less MI, reported</b>	<b>40</b>	<b>142</b>	<b>223</b>	<b>180</b>
<b>NPAT less MI, adjusted</b>	<b>40</b>	<b>142</b>	<b>223</b>	<b>180</b>

EBITDA	156	280	533	638
EPS reported, VND	722	2,277	2,260	948
EPS adjusted, VND	722	2,277	2,260	948
EPS fully diluted, VND	722	1,584	2,260	948
DPS, VND	700	2,000	2,000	0
DPS/EPS (%)	97%	126%	89%	0%

RATIOS	2015	2016	2017	2018
<b>Growth</b>				
Revenue growth	3.5%	32.8%	89.8%	96.9%
Op profit (EBIT) growth	7.6%	157.0%	94.8%	7.5%
PBT growth	-11.5%	229.1%	96.9%	-22.6%
EPS growth, adjusted	-12.0%	119.4%	42.7%	-58.1%

<b>Profitability</b>				
Gross Profit Margin	11.8%	14.3%	13.5%	8.4%
Op Profit, (EBIT) Margin	4.5%	8.7%	9.0%	4.9%
EBITDA Margin	9.7%	13.1%	13.1%	8.0%
NPAT-MI Margin, adj,	2.5%	6.6%	5.5%	2.3%
ROE	5.0%	16.0%	17.3%	7.8%
ROA	2.4%	5.6%	5.8%	3.0%

<b>Efficiency</b>				
Days Inventory On Hand	45.1	66.1	51.2	34.8
Days Accts, Receivable	25.5	27.6	28.6	25.3
Days Accts, Payable	46.3	50.2	42.7	28.4
Cash Conversion Days	24.3	43.5	37.1	31.7

<b>Liquidity</b>				
Current Ratio x	1.6	1.2	1.1	1.2
Quick Ratio x	0.9	0.6	0.5	0.6
Cash Ratio x	0.7	0.4	0.3	0.4
Debt / Assets	46.4%	57.9%	52.0%	50.9%
Debt / Capital	52.5%	65.1%	59.4%	56.3%
Net Debt / Equity	53.3%	144.2%	111.9%	82.8%
Interest Coverage x	3.0	6.9	4.5	3.1

Source: Company's financial statements, VCSC

B/S (VND bn)	2015	2016	2017	2018
Cash & equivalents	470	407	510	645
ST investment	0	0	50	721
Accounts receivables	103	221	418	692
Inventories	214	451	537	863
Other current assets	284	283	629	1,069
<b>Total Current assets</b>	<b>1,072</b>	<b>1,362</b>	<b>2,143</b>	<b>3,989</b>
Fix assets, gross	1,138	2,019	2,909	4,161
- Depreciation	-310	-370	-511	-754
Fix assets, net	828	1,649	2,398	3,407
LT investment	43	44	0	48
LT assets other	13	22	36	85
<b>Total LT assets</b>	<b>883</b>	<b>1,716</b>	<b>2,433</b>	<b>3,540</b>
<b>Total Assets</b>	<b>1,955</b>	<b>3,078</b>	<b>4,576</b>	<b>7,529</b>

Accounts payable	201	304	519	623
Short-term debt	439	801	1,418	2,492
Other ST liabilities	27	35	54	91
Total current liabilities	667	1,140	1,991	3,206
Long term debt	468	983	960	1,343
Other LT liabilities	0	0	0	0
<b>Total Liabilities</b>	<b>1,135</b>	<b>2,123</b>	<b>2,951</b>	<b>4,549</b>

Preferred Equity	0	0	0	0
Paid in capital	495	570	836	1,712
Share premium	147	161	198	532
Retained earnings	116	162	284	266
Other equity	51	52	59	71
Minority interest	10	11	248	399
<b>Total equity</b>	<b>819</b>	<b>955</b>	<b>1,625</b>	<b>2,980</b>
<b>Liabilities &amp; equity</b>	<b>1,955</b>	<b>3,078</b>	<b>4,576</b>	<b>7,529</b>
Y/E shares out, mn	49	82	84	171

CASH FLOW (VND bn)	2015	2016	2017	2018
<b>Beginning Cash Balance</b>	<b>337</b>	<b>470</b>	<b>407</b>	<b>510</b>
Net Income	41	143	263	212
Dep, & amortization	83	93	168	245
Chge in Working Cap	-224	-242	-395	-899
Other adjustments	27	87	-118	481
<b>Cash from Operations</b>	<b>-73</b>	<b>80</b>	<b>-81</b>	<b>39</b>

Capital Expenditures, net	-290	-1,077	-696	-1,699
Investments, net	46	66	-3	-930
<b>Cash from Investments</b>	<b>-244</b>	<b>-1,012</b>	<b>-699</b>	<b>-2,628</b>

Dividends Paid	-2	-86	-100	-136
Δ in Share Capital	0	0	407	1,419
Δ in ST debt	110	362	617	1,075
Δ in LT debt	341	514	-23	383
Other financing C/F	3	78	-19	-15
<b>Cash from Financing</b>	<b>451</b>	<b>868</b>	<b>882</b>	<b>2,726</b>

<b>Net Change in Cash</b>	<b>133</b>	<b>-63</b>	<b>103</b>	<b>136</b>
<b>Ending Cash Balance</b>	<b>470</b>	<b>407</b>	<b>510</b>	<b>645</b>

## Table of Figures

Figure 1: Vietnam's plastics industry market size by segment .....	3
Figure 2: Summary of Vietnam's petrochemical capacity .....	4
Figure 3: List of the abbreviations for plastic products.....	5
Figure 4: Imported input petrochemical products vs domestic plastic production volume.....	6
Figure 5: Correlation between crude oil prices and plastic raw material prices.....	6
Figure 6: AAA's revenue breakdown by segment.....	7
Figure 7: AAA's packaging product portfolio .....	8
Figure 8: Packaging sales volume .....	8
Figure 9: Packaging revenue breakdown by market for H1 2019.....	8
Figure 10: AAA's plastic product capacity.....	8
Figure 11: Material sales volume .....	9
Figure 12: Material sales volume breakdown by product for H1 2019.....	9
Figure 13: AAA's An Phat Complex IP.....	9
Figure 14: AAA's shareholder structure .....	10
Figure 15: AAA's charter capital raising and cash dividend payment.....	10
Figure 16: Summary of AAA's issued warrant bonds .....	10
Figure 17: AAA's ownership structure.....	11
Figure 18: AAA's revenue .....	12
Figure 19: AAA's manufacturing revenue .....	12
Figure 20: AAA's trading revenue .....	12
Figure 21: AAA's NPAT-MI .....	12
Figure 22: HDPE, LDPE, and LLDPE prices in comparison with AAA's quarterly gross margin.....	13
Figure 23: AAA's expense waterfall charts for 2018 and H1 2019 .....	13
Figure 24: Cash ratio comparison between AAA and peers .....	14
Figure 25: Net debt/equity ratio comparison between AAA and peers .....	14
Figure 26: AAA's cashflows and cash balance .....	14
Figure 27: AAA's 2018 results.....	15
Figure 28: AAA's quarterly results summary.....	15
Figure 29: AAA's H1 2019 results and guidance for full-year 2019 .....	16
Figure 30: Comparison between AAA's actual result and guidance for net revenue .....	16
Figure 31: Comparison between AAA's actual result and guidance for profit proxies* .....	16
Figure 32: Plastic waste generated annually and plastic waste management level by country .....	17
Figure 33: Common single-use plastic products.....	17
Figure 34: Illustration of global engagement in controlling plastic waste through legislation .....	18
Figure 35: AAA's biodegradable product branding for domestic market .....	19
Figure 36: Local peers.....	20
Figure 37: Historical Price-to-Earnings Ratio (P/E) of AAA vs domestic peers .....	20
Figure 38: Regional peers.....	21
Figure 39: Historical Price-to-Earnings Ratio (P/E) of AAA vs regional peers.....	21
Figure 40: Stock price performance of AAA vs VN-Index.....	21

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Equity rating key	Definition
BUY	If the projected TSR is 20% or higher
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