

# INDIAN AQUACULTURE INDUSTRY

Retail Equity Research (South India Focus)

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Retail Equity Research (South India Focus)  
**Indian Aquaculture Industry**  
Aquaculture

Positive

Indian Shrimp industry: Huge untapped potential

- India ranks 2<sup>nd</sup> in global aquaculture production with a size of ~USD10.6bn contributing 0.4% to India's GDP.
- The industry is among major contributors to foreign exchange with an exported value of USD7.08bn in FY18.
- Shrimps accounts for major chunk of aquaculture market in India, contributing 68% in value terms to total exports (FY18).
- The outbreak of EMS disease in Vietnam & Thailand in 2011 &2012 has benefited India to gain market share. India's shrimp export has grown at a robust CAGR of 20% since FY10.
- Currently, the US accounts for ~38% of Indian shrimp exports followed by South-East Asia (24%) and EU (18%).
- India's potential for shrimp production is enormous given, 8129km coastline, 12lakhs hectares of brackish water (only 1.4 lakhs hectares currently used) and favorable weather.
- We have identified two investment opportunities in the sector, Apex Frozen Foods Ltd, one of the largest player in processing segment and Avanti Feeds Ltd, the market leader in shrimp feed segment.

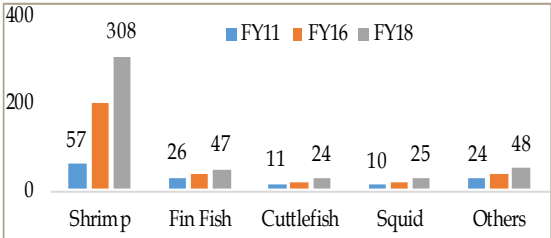
**Apex Frozen Foods Ltd (Apex) is an integrated producer and exporter of processed shrimps in Andhra Pradesh. The company has processing capacity of 15,240MT including leased capacity of 6,000MT.**

- Apex has almost doubled its processing capacity during FY14-18 to 15,240MT and is now adding 20,000MT, expecting to complete by Q3FY19.
- Recent backward integrations in farming (600acres) and hatchery (1bn to 1.4bn seeds) will ensure supply and cost saving.
- Out of the total new capacity, 5,000MT is for value added-products, which will improve realization and margin.
- Apex has strong track record of growing above industry. Apex revenue has grown at a robust 31% CAGR while industry grew at ~12%.
- Shrimp realisation witnessed a declining trend since Q3FY18 due to extended winter in US coupled with strong supply which has now stabilised in Q2FY19.
- Due to unusual high growth witnessed in FY18, PAT is expected to de-grow in FY19E, but excluding FY18, earnings growth is strong at 44%CAGR.
- We initiate Apex by valuing at 14x on FY20E EPS and arrive at a Target of Rs434. We recommend Buy.

**Avanti Feeds Ltd (AFL), is a leading manufacturer of Shrimp Feeds with a capacity of 6,00,000MT, and Shrimp Processor & Exporter with a capacity of 22,000MT. AFL has a tie-up with Thai Union Group, Thailand (~25% stake)**

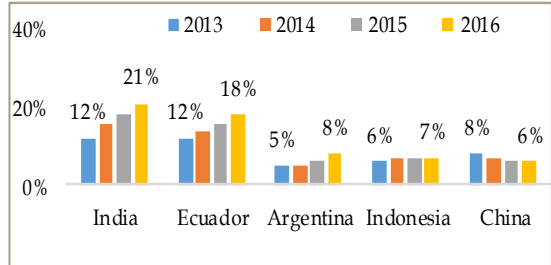
- AFL has recently completed its major capacity expansions in both Feed (1,75,000MT) & Processing (15,000MT) segments which will add growth.
- AFL is the market leader in Feed segment and is now aiming to become one among the largest players in processing also post recent capacity addition.
- The strong association with Thai Union group in terms of technical expertise & marketing tie-up is benefiting AFL to gain market share.
- Strong track record of growing above industry growth in last 5Yrs. Volumes grew at 33%CAGR (industry-20%), Revenue/PAT grew at 33%/61% CAGR.
- FY18 witnessed unusual margin gain of 750bps which is unlikely to sustain due to correction in shrimp & RM prices and demand slowdown. Expect PAT to de-grow in FY19E but to normalise post FY19E.
- We initiate AFL with a Buy rating by valuing at 15x (2Yr Avg-22x, PEG=0.7) on FY20E and arrive at a Target of Rs427.

Indian marine exports dominated by shrimps (Rs.bn)



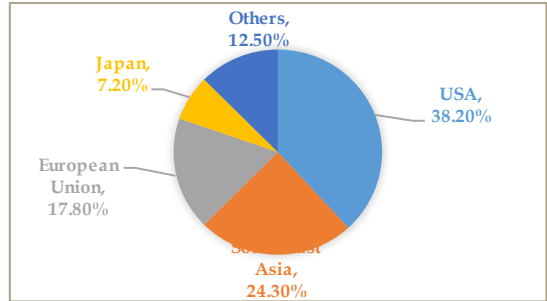
Source: MPEDA, Geojit Research

India is the top exporter of shrimp globally



Source: UNComtrade, Geojit Research

USA, the major export market for Indian shrimps



Source: UNComtrade, Geojit Research

Apex Frozen Foods Buy TP: Rs.434 Return: 47%

Y.E Mar (Rscr)	FY18E	FY19E	FY20E
Sales	999	975	1,322
Growth (%)	42.9	-2.3	35.6
EBITDA	110	103	143
Margins (%)	11	10.6	10.8
PAT Adj.	79.1	70.3	97
Growth (%)	214.8	-11.1	37.9

Avanti Feeds Ltd Buy TP: Rs.427 Return: 35%

Y.E Mar (Rscr)	FY18E	FY19E	FY20E
Sales	3,393	3,454	4,108
Growth (%)	29.7	1.8	18.9
EBITDA	683	409	541
Margins (%)	20.1	11.8	13.2
PAT Adj.	447	278.3	387.8
Growth (%)	108.7	-37.7	39.4

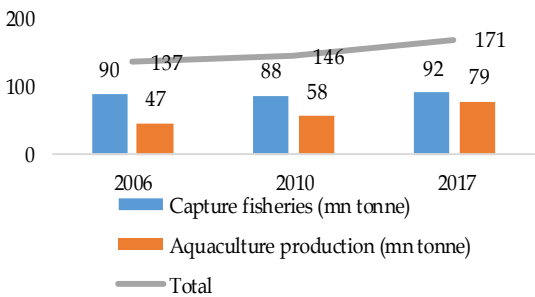
During last decade, share of aquaculture in overall global seafood industry production has increased from ~34% in 2006 to ~47% in 2017 and is expected to reach ~53% by 2026.

India's aquaculture with a size of ~USD10.6bn (representing 0.4% of total India's GDP) contributes ~5% to global aquaculture production and ranks 2<sup>nd</sup> after China.

Industry Rationale...  
Indian aquaculture industry...

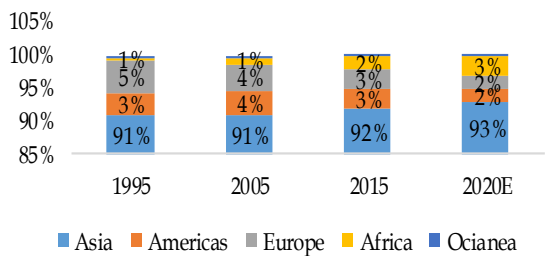
Indian fisheries, growing at 13% CAGR during FY12-FY17 has reached a size of Rs1,248 billion in FY17 representing ~7% of India's overall agriculture GDP (0.8% of total India GDP). Globally, capture fisheries (fishing from natural water bodies, sea, lakes, ponds etc.) was the key source of seafood until 1970s. The industry then started witnessing a shift from capture fisheries to aquaculture (rearing and cultivation of aquatic species under controlled conditions) due to better fisheries infrastructure, disease management and government support. During last decade, share of aquaculture in overall global seafood industry production has increased from ~34% in 2006 to ~47% in 2017 and is expected to reach ~53% by 2026, while capture fisheries is expected to remain stagnant. India's aquaculture with a size of ~USD10.6bn (representing 0.4% of total India's GDP) contributes ~5% to global aquaculture production and ranks 2<sup>nd</sup> after China. The industry is among major contributors of foreign exchange with exported value of USD7.08bn in FY18.

Shifting to aquaculture (Mn Ton)



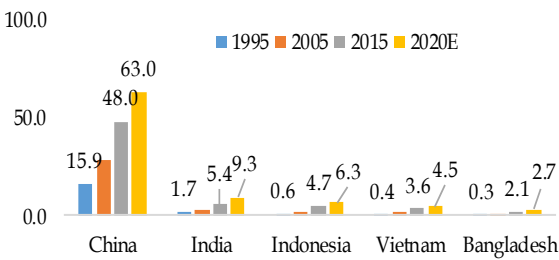
Source: FAO, Company, Geojit Research

Asia account for over 90% in aquaculture production



Source: FAO, Company, Geojit Research

India ranks 2<sup>nd</sup> in aquaculture production (Mn Ton)



Source: FAO, Company, Geojit Research

India's marine products exports mainly comprises of frozen shrimps. In FY18, shrimps contributed 41% in volume and 68% in value terms to total seafood exports.

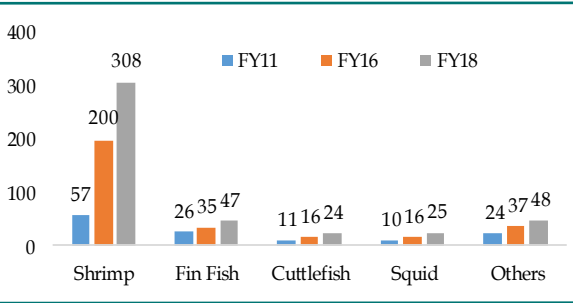
The global farmed shrimp production is expected to grow at a CAGR of ~2% to reach a volume of ~7 Million Tons by 2026.

India has benefitted from the demand rise for disease-free and healthy shrimp as the production in other major South Asian countries has been hit by diseases and increase in labour costs.

Indian marine exports market dominated by shrimps

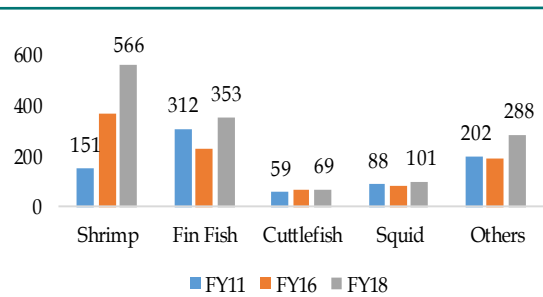
Shrimps are the major chunk of aquaculture market in India. Of the total aquaculture production in India, ~ 80% is exported. India's marine products exports mainly comprises of frozen shrimps, cuttlefish, frozen squids and dried fish with shrimps dominating the exports basket. In FY18, shrimps contributed 41% in volume and 68% in value terms to total exports. Shrimp exports size has grown at a CAGR of 21%/27% in rupee/dollar terms over FY11-18 to Rs308bn/USD4.84bn

India's key export products in value (Rs.bn)



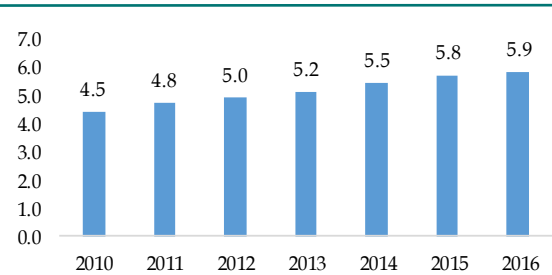
Source: MPEDA, Geojit Research

India's export basket in volumes (000 Tons)



Global aquaculture shrimp production...

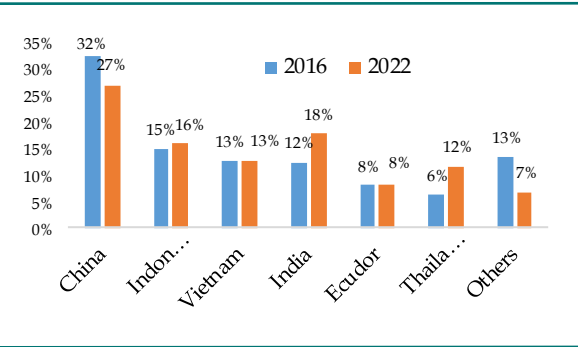
The global farmed shrimp production has reached a volume of 5.89 Million Tons in 2016 growing at a CAGR of ~3% during 2010-2016. The trend, however, remained quite fluctuating during past five years as a result of the EMS disease (Early Mortality Syndrome) that was originated in China in 2009 and affected cultivation in China, Thailand, Vietnam and Mexico. Going forward, global shrimp production is expected to grow at a CAGR of ~2% to reach a volume of ~7 Million Tons by 2026.



China to remain the largest shrimp producer followed by India...

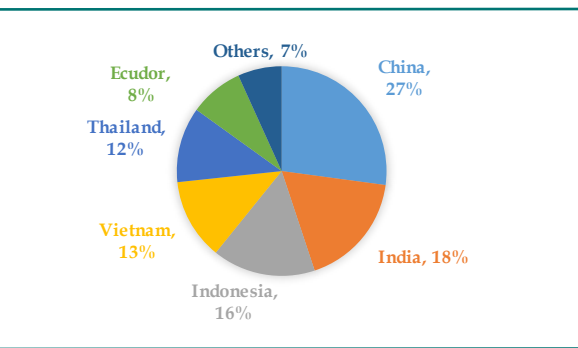
The global production of farmed shrimp was dominated by China in 2016 (32.40%). China, India, Indonesia, Vietnam and Thailand represents more than 78% of total production. India represented the fourth-largest market for shrimps in 2016 (12.40% share), with a production volume of 0.54 Million Tons, grown at a CAGR of 27.8% during 2009-2016. India has benefitted from the demand rise for disease-free and healthy shrimp as the production in other major South Asian countries has been hit by diseases and increase in labour costs. India is now represented as the largest shrimp exporter to the US and European Union. Looking forward, shrimp production in India is expected to reach a volume of ~1.00 Million Tons by 2022, growing at a CAGR of 10.82% during 2016-2022.

Global shrimp market break up



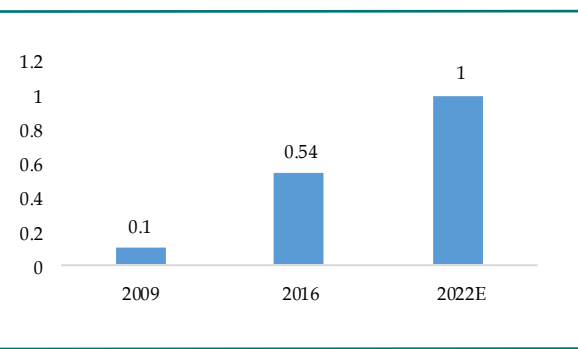
Source: Company, Geojit Research

India in 2<sup>nd</sup> position after China in shrimp production



Source: Company, Geojit Research

India shrimp production (MT)



Source: Company, Geojit Research.

Major Shrimp Consuming countries...

As per 2016 data, USA is the largest consumer of shrimps, (29.60%) followed by China (24.30%), Europe (18.60%) and Japan (7.34%).

USA:

USA has the highest per capita consumption of shrimp in the world and represents the biggest importer of shrimp in the world currently.

Japan:

Japan once had the highest per capita consumption of shrimp but the trend has been declining over the past few years. Weak Japanese Yen, high prices of shrimp, are some of the factors impacting the per capita consumption of shrimp in Japan.

Europe:

Europe is the third largest importer of shrimps in the world. The demand of shrimp in Europe is constantly increasing with the increasing health consciousness. Since the shrimp and value-added shrimp are gaining popularity in Europe, per capita consumption of shrimp is expected to increase in the coming years.

China:

In 2016, China was the leading producer of shrimp in the world. The consumption of shrimp in China is more compared to its production. Domestic shrimp consumption in China has increased at a rate 123% during 2005-2015 and is expected to grow in coming years also. With the booming demand of shrimps for the domestic consumption, China is expected to become the top importer of shrimp in the world in coming years.

USA is the top importer of shrimps globally with ~27% share

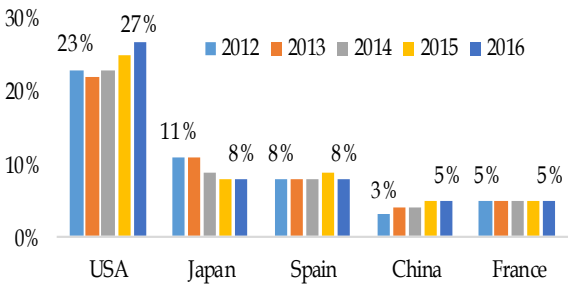
India's share in shrimp exports has grown from 16% to 21% in 2010-2016 and is currently the top exporter globally.

USA is the top-most destination (38.2% in FY17) for India's shrimp exports and India has the highest share out of total US shrimp imports.

Major Shrimp importing countries...

Developed countries such as the USA, Japan, and EU are highly dependent on imports of fishery products, as they are not self-sufficient in meeting their domestic requirement. South-east Asian countries such as Thailand source seafood products from countries like India, carry out value addition, and re-export to countries in the West, thereby earning better margins.

Top 5 shrimp importing countries (MT)

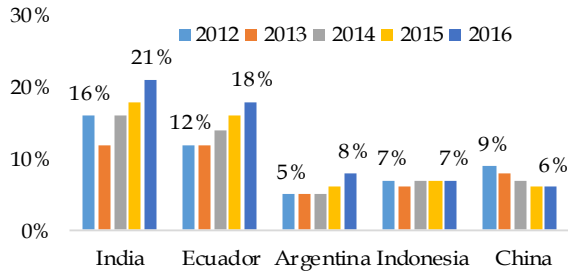


Source: UNComtrade, Company, Geojit Research.

India is the top exporter of shrimp globally

The rising demand for shrimp is met by top exporting countries such as India, Ecuador, Argentina, Indonesia and China, accounting for 60% (in volume terms as of 2016) of total shrimp exports. India's share has grown from 16% to 21% in 2010-2016.

Top 5 shrimp exporting countries (MT)

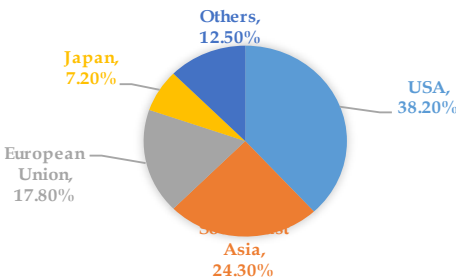


Source: UNComtrade, Company, Geojit Research.

USA, the major export market for Indian shrimps...

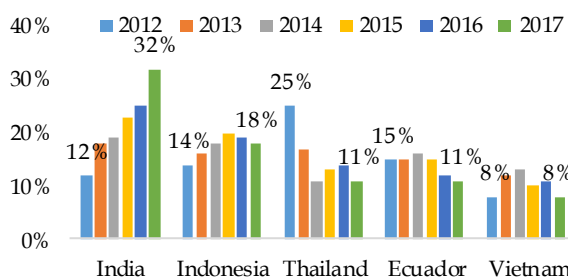
Of the total frozen shrimp exports from India, USA is the top-most destination (38.2% in FY17) followed by south-east Asia (24.3%), European Union (17.8%) and Japan (7.2%). The spread of EMS (Early Mortality Syndrome) disease in aquaculture farms in south-east Asia have helped India to gain market share, they had started importing from India to fulfill their export obligations, as well as to satisfy the local demand. However, demand from south-east Asia has declined, as their domestic production started recovering.

India shrimp export-country break up



Source: USDA, Company, Geojit Research.

US imports of shrimp-top countries share trend (volume)

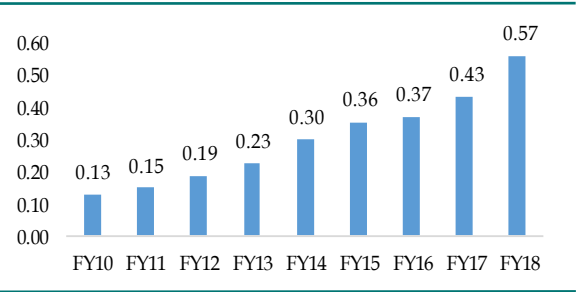


Source: MPED, Company, Geojit Research.

India’s potential for shrimp production is enormous given, 8129km coastline, 12lakhs hectares of brackish water (only 1.4 lakhs hectares currently used) and favorable weather.

974kms long coastline, proper aquaculture farms and government support makes Andhra Pradesh, the highest shrimp producer state of India.

Indian shrimp export volume trend (Mn Ton)

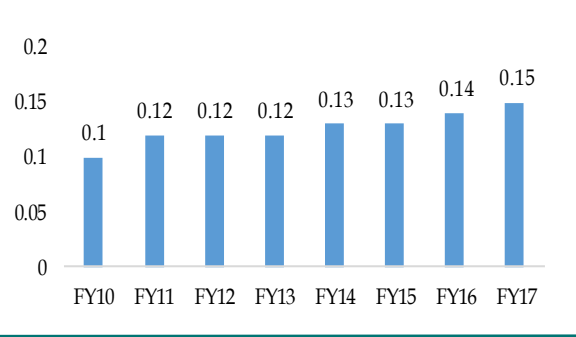


Source: MPEDA, Geojit Research

India’s potential for shrimp export...

India has emerged as one of the leading seafood suppliers in the world, due to a long coast line and favorable weather conditions. The country has a long coastline of 8,129 km in addition to vast inland water resources and hence offers the scope for large exploitation of marine wealth. In India, there is a tradition of extensive culture of shrimp in large water bodies. India’s potential for shrimp production is enormous given around 12 lakh hectares available for brackish water but only 1.4 lakh hectares has been brought under shrimp cultivation.

India - Area under shrimp cultivation (Million Hectres)



Source: MPEDA, Company, Geojit Research.

Andhra Pradesh, the highest producer of shrimps...

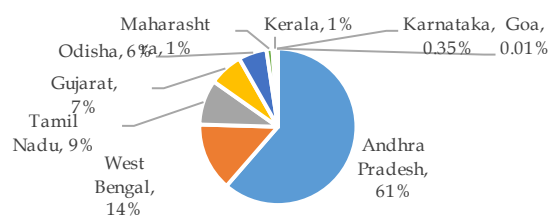
Although West Bengal has higher area under cultivation (AUC), export production from this state is low, as farmers here depend on traditional aquaculture farming which relies on natural brackish water areas and does not involve construction of aquaculture farms. While Andhra Pradesh’s AUC is lower than West Bengal’s, production is high as players construct proper aquaculture farms. Further, the 974 kms long coastline, which provides access to 1.24 million ha of brackish water, has helped Andhra Pradesh in setting up a large number of aquaculture farms and providing a boost to the shrimp industry since 2009. Andhra Pradesh (AP) is the most favourable state as far as policies are concerned, with the government offering subsidies/incentives for setting up farms, purchasing feeds, and setting up processing units and tax exemptions.

State wise area under cultivation (Ha)

State	Potential brackish water area (in Ha)	Area under Culture (in Ha)-FY16	FY16 Cultivation %	FY23E %
West Bengal	4,05,000	58,285	14%	22%
Gujarat	3,76,000	4,552	1%	2%
Andhra Pradesh	1,50,000	42,462	28%	41%
Maharashtra	80,000	1,413	2%	3%
Kerala	65,000	12,622	19%	18%
Tamil Nadu	56,000	8,263	15%	26%
Orissa	31,600	10,778	34%	57%
Goa	18,500	10	0%	0%
Karnataka	8,000	2,281	29%	36%
Total	11,90,100	1,40,666	12%	17%

Source: MPEDA, Company, Geojit Research.

State wise shrimp export production...

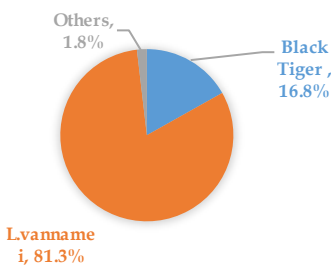


Source: MPEDA, Company, Geojit Research

Market Breakup by Species...

India, historically used to farm mainly 'Penaeus Monodon' or Black Tiger Shrimp specie, which has higher production costs but lower yields than Litopenaeus Vannamei (L.Vannamei) specie or Pacific White Shrimp.

Shrimp production-break up by species (%)



Source: Company, Geojit Research

L.Vannamei...the game changer

L Vannamei is one of the most well-known breed of shrimp across the world. It grows to a maximum length of 230 millimeters (9.1 in), with a carapace length of 90 mm (3.5 in). It is restricted to areas where the water temperature remains above 20 °C (68 °F) throughout the year. Its production is comparatively easier, as they can be reared at high stocking densities up to 150/ square meters and are tolerant to a wide range of salinities.

Due to breakout of white spot syndrome virus (WSSV), the production of Tiger shrimp remained stagnant. In 2003, pilot research and small scale production of L. Vannamei, was initiated. After six years of research, large scale production of L vannamei was permitted in 2009 and since then it skyrocketed. In FY17, L.Vannamei's production accounted for ~81% while Black Tiger Shrimp represented ~16.83% of the total.

The popularity and demand for the white leg shrimp is expected to rise in the coming few years, owing to their unique taste and ease of availability. On the supply side too, farmers are up-scaling the production of white shrimps, as they are easy to cultivate and command high export realisations.

White shrimp (L .Vannamei)



White shrimp (L .Vannamei)



### Shrimp cultivation cycle...

India, historically used to farm mainly ‘Penaeus Monodon’ or Black Tiger Shrimp specie, which has higher production costs but lower yields than Litopenaeus Vannamei (L.Vannamei) specie or Pacific White Shrimp.

State	Species	Crop	Stocking Period	Harvesting Period
Kerala	P monodon	1st	January - March	April -June
	P monodon	2nd	October-Dec.	March-April
	L vannamei	-	Jan – Dec.	Jan – Dec.
Karanataka	P monodon	1st	January-Feb	May-June
	P monodon	2nd	August-Sept	Nov-Dec.
	L vannamei	-	Jan - Dec	Jan - Dec
Maharashtra	P monodon		Feb-March	June/July-Aug
	P monodon	2nd	Aug-Sept.	January-Feb.
	L vannamei	1st	Jan – Dec.	Jan - Dec
Gujarat	P monodon	-	Feb-March	June-Aug
	L vannamei	-	Jan – Dec.	Jan – Dec.
West Bengal	P monodon	1st	Jan – July (Traditional)	April- Nov
	P.monodon	1st	Feb-April	May-July
	P.monodon	2nd	June-Aug	Sept-Nov
	L vannamei	-	April - July	July - Oct
Odisha	P monodon	1st	Feb – April	July – Sept
	P monodon	2nd	July – Aug	Oct – Nov
	L vannamei	-	April - July	July - Oct
Andhra Pradesh	P monodon	1st	Jan – March	May – June
	P monodon	2nd	July – August	Sept – Nov
	L vannamei	-	Jan – Dec.	Jan – Dec.
Tamil Nadu	P monodon	1st	March-April	June – July
	P monodon	2nd	July-Aug	Oct-Nov
	L vannamei	-	Jan – Dec.	Jan – Dec.

Source: MPEDA, Company, Geojit Research

### Shrimp Value chain

Industry value chain:

- Broodstock
- Hatchery
- Cultivation, Harvesting and storing
- Processing & value addition
- Exporting

**Broodstock:** Pacific white leg shrimp broodstock is either sea-caught and pawnd, or purchased from tank-reared broodstock from the USA. Majority of broodstock used in India is being imported from Hawaii or Florida. Broodstock imported is sent to quarantines set up by Coastal Aquaculture Authority in India to ensure the SPF (Specific pathogen free) status, before transferring to licensed hatcheries.

**Hatchery:** Quarantined broodstocks are kept for hatching approximately 20 days before reaching larvae stage and being sold to shrimp farmers.

**Farming:** Baby shrimp are fed for approximately 20 days before being transferred to open ponds, where they are reared for 120 to 180 days before developing into a fully grown shrimp. Feed is the major input in farming, constituting ~60-70% of total cost. Farmers are able to crop twice a year.

**Processing & Value addition:** Fully grown shrimps are transferred to processing plants for primary processing which involves slicing of shrimp heads and washing. Then undergoes sorting process based on commercially accepted sizes and weights before having their skins peeled off and being soaked in phosphate chemicals helps to maintain the quality and taste of the shrimp. The raw shrimp is then frozen before packaging. Further value addition can be carried out by partially or completely cooking the shrimp. Indian exporters are increasingly focused on value-added products, where higher value-add typically leads to higher price realisations

**Four players:**

- Farmers
- Feed manufactures
- Processors & exporters
- Consumers.

Shrimp farming is generally fragmented due to its labour intensive nature. Farmers generally do not have cold storages due to high cost and hence lower their bargaining power. Processors can directly procure shrimp from farmers or from agents with cold storage facility. Due to seasonality in cropping, processors need to procure in large quantum during harvest season which increases inventory and working capital requirements.

As per latest data, India has 2433 (source: CAA, India) approved farms permitted for the culture of pacific white leg shrimp, 548 processing facilities with a combined installed capacity of ~ 27,000 MT per day (Source: MPEDA) and 590 cold storage capacities with a combined capacity of ~3,03,000MT (Source: MPEDA).

Any adverse change in the demand-supply and export prices will impact the farmers most, as the farm gate prices moves in tandem with global prices. Feed manufactures will also get impacted if the farmers’ income reduces as it will affect cultivation. However, processors are relatively less impacted as they pass on the changes to farmers, but any short of supply from farmers will impact volumes.

**Farmer’s profitability analysis...**

Indicative break-even price for shrimp farmer

Area	in hectare	1	% of reve- nue
Yield	Range 3.3MT to 7.9MT de- pends on state	5MT	
Revenue	300	15,00,000	
Feed cost	Feed Conver- sion Ratio (FCR) =1.5, @ Rs65/kg	4,87,500	32.5%
Rent	Rs70k/acre	1,75,000	11.7%
Labour	2 employees @ Rs10,000/m	2,40,000	16.0%
Power and other pond related charges		100000	6.7%
Seed		20000	1.3%
Total expense		10,22,500	68%
Profit		4,77,500	32%
Indicative Break-even price (not considered deprecia- tion on machinery and interest on borrowing)	per kg		205

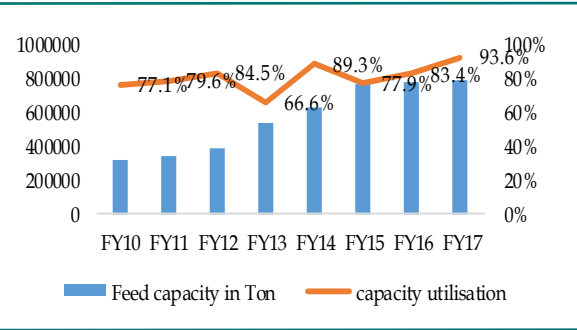
Source: Industry reports, Company, Geojit Research

**Indian Shrimp Feed industry ...**

Feed is one of the major inputs required for aquaculture (~60%). The shrimp feed segment is highly organised as the shrimp industry caters to the export market, with organised players accounting for 80% of the shrimp feed industry. So farmers are required to maintain certain quality standards and are more likely to prefer a more established brand of feed.

Andhra Pradesh currently dominates the Indian shrimp feed market accounting for ~60% followed by West Bengal (14.10%). Indian shrimp feed market has reached a consumption volume of 799,190 Tons in FY17, growing at a CAGR of 18.25% during FY10- FY17. Looking forward, the shrimp feed market consumption in India is expected to grow at a CAGR of 12.70% during FY18 to FY23, reaching a volume of 1,710,874 Tons. In value terms, the consumption is expected to grow at a CAGR of 16.42% during the same period, reaching a value of US\$ 2,067 Million.

Shrimp feed production capacity trend (Ton)



Source: Industry reports, Company

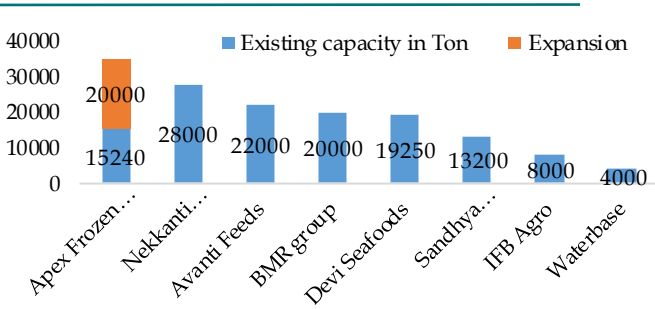
Value added Products

The shrimp processing industry is steadily shifting from supplying raw materials and semi-processed products to ready-to-eat Value Added Products (VAP). VAP processes differ from product to product involving use of skilled workmanship and, various flavoring and breading ingredients etc. The prices of value added shrimp are directly proportional to the degree and nature of the value addition.

India is a relatively small player in the shrimp VAP export market and accounts for ~ 7% of the global VAP. Due to its high potential, Indian companies have started focusing on this segment as well. India's shrimp VAP exports grew at 39% CAGR during 2012-16 indicating a strong growth in realisations.

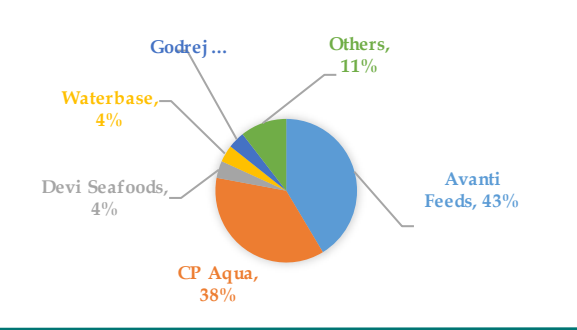
Major players in shrimp processing industry...

Shrimp Processing capacity (Ton)-Major players



Source: Industry reports, company, Geojit Research

Shrimp Feed market share



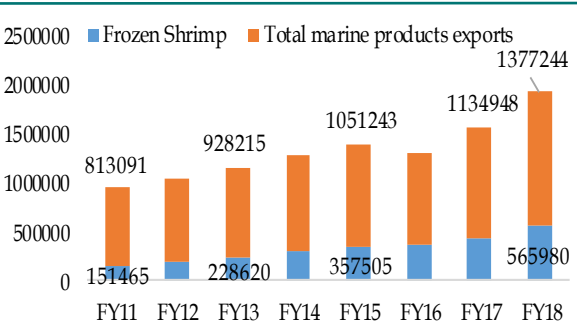
Source: Industry reports, company, Geojit Research

Outlook...

Growing Indian shrimp exports...

Indian marine exports have witnessed a robust growth of 20% & 21%YoY in FY17 & FY18 respectively, after witnessing de-growth of 10%YoY in FY16. Shrimp exports which accounts for ~68% of total (in value terms) grew by 16%/30% in FY17/FY18. The increased production of L.Vannamei, along with increase in infrastructure facilities for production of value added products supported growth in the last two years. The main reasons for de-growth in FY16 was revival of the shrimp aquaculture production in Thailand and Vietnam, which was down due to diseases, resulted in better supply situation and eased the prices of shrimp in the world market. India's total shrimp exports had touched 5.65 lakh tons in FY18 with a growth of 21% YoY

Indian shrimp exports trend (Ton)



Source: MPEDA

Current demand-supply mismatch in US...

USA is still the top destination for Indian shrimp exports with ~40% contribution. The extended winter in US coupled with strong supply from exporting countries (14%YoY in FY18 Vs flat growth in FY17) caused a demand-supply mismatch in US. India’s supply to US grew by robust 39% YoY in FY18 (Vs 10% de-growth in FY17). Due to this, the shrimp prices started to decline from 2HFY18. The lower export prices of shrimp impacted the domestic farm-gate prices and hence profitability of the farmers which affected stocking density in the farms.

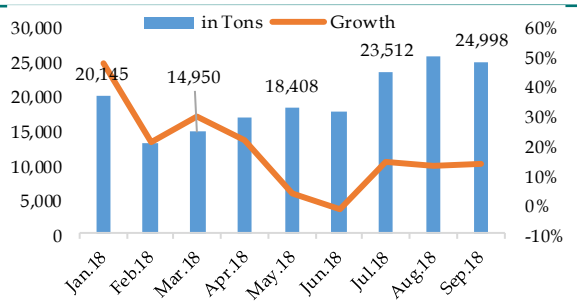
Measures to stabilise temporary slowdown

To stabilize the falling farm-gate prices in March/April in India, especially in Andhra Pradesh, exporters agreed to pay slightly more to farmers, after the intervention of the state government. Farm gate prices remained much lower during April-June 2018, compared with the last 5–6 years and improved sharply (~20-25%) in the ongoing quarter.

Indian shrimp exports to US resumes growth...

The price crash in international trade caused a near zero negotiation trade situation among the US buyers during May-June 2018, particularly with Indian exporters. Consequently, the Indian exports to the US have slowdown in the months of May (4%YoY) & June (2%YoY de-growth). Shipments for Christmas season has started in September. Latest US import data shows growth of 15%/13%/14% YoY in July/Aug/Sept 2018. We expect ~8-10% YoY growth in US imports from India in the current fiscal.

US shrimp imports from India-monthly trend (Ton)

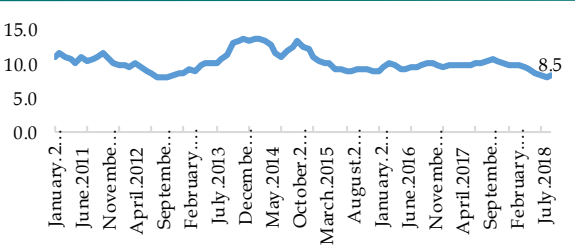


Source: NOAA.gov

Shrimp prices has stabilised in Q2FY19 from recent decline

Since India is the second largest producer and the largest farmed shrimp exporting country in the world, Indian supply and price structure are likely to influence the overall international trade. Many farmers in the southern India have adopted a low density and delayed stocking policy to adjust supply, but farmers in Odisha, West Bengal and Western Coast have invested heavily on large volume production for the July-Oct peak season. Therefore, the overall production in India is expected to be stable with good harvests until October/November. Due to the excess supply and extended winter in US, the shrimp prices were consolidating to \$8/kg levels (blended average) against average \$10.5 levels in Q3FY18 from where the prices started to decrease. However, the sharp decline in shrimp prices is likely to support consumption going forward. Additionally, recent rupee depreciation (~13% in last 1 year) supports the shrimp prices in rupee value. The prices has now stabilised in Q2FY19 but the recovery will depend on the future demand-supply.

Shrimp prices-US import from India (blended) in US\$



Source: NOAA.gov

US shrimp imports-Top 10 countries recent trend (Ton)

Country	FY17	FY18	May.18	Jun.18	Jul.18	Aug.18	Sep.18
India	1,62,856	2,26,324	18,408	17,708	23,512	25,888	24,998
Indonesia	1,18,702	1,23,404	10,060	10,482	9,331	11,366	10,374
Ecuador	71,558	74,759	6,884	5,293	5,894	8,571	6,966
Vietnam	60,473	55,680	3,469	3,755	4,444	6,113	6,600
China	35,585	49,391	3,142	3,494	4,293	5,705	6,278
Thailand	79,064	70,757	3,409	3,272	3,301	3,358	4,157
Mexico	22,173	29,098	467	370	622	1,033	1,105
Peru	8258	10102	1,311	1,214	758	978	932
Argentina	8926	12638	932	838	756	937	981
Total import	6,02,368	6,85,868	50,574	49,246	55,952	66,843	64,674
Growth YoY	-0.3%	14%	-6%	-8%	-8%	8%	5%
Growth-India YoY	-10%	39%	4%	-2%	15%	13%	14%
India as % of Total import	27%	33%	36%	36%	42%	39%	39%

Source: NOAA.gov

Retail Equity Research (South India Focus)

# Apex Frozen Foods Ltd

## Aquaculture

BSE CODE : 540692      NSE CODE: APEX  
BLOOMBERG CODE: APEX.IN      SENSEX : 35,591

**BUY**

Rating as per Large cap      12 month investment period  
**CMP Rs296      TARGET Rs434      RETURN 47%**

### Poising to leap...

Apex Frozen Foods Ltd (Apex) is an integrated producer and exporter of processed shrimps in Andhra Pradesh. The company has processing capacity of 15,240MT including leased capacity of 6,000MT.

- Apex has almost doubled its processing capacity during FY14-18 to 15,240MT and is now adding 20,000MT, expecting to complete by Q3FY19.
- Recent backward integrations in farming (600acres) and hatchery (1bn to 1.4bn seeds) will ensure supply and cost saving.
- Out of the total new capacity, 5,000MT is for value added-products, which will improve realization and margin.
- Apex has strong track record of growing above industry. Apex revenue has grown at a robust 31% CAGR while industry grew at ~12%.
- Shrimp realisation witnessed a declining trend since Q3FY18 due to extended winter in US coupled with strong supply which has now stabilised in Q2FY19.
- Due to unusual high growth witnessed in FY18, PAT is expected to de-grow in FY19E, but excluding FY18, earnings growth is strong at 44%CAGR.
- We initiate Apex by valuing at 14x on FY20E EPS and arrive at a Target of Rs434. We recommend Buy.

### Poising to become one among largest players...

During FY14-18, Apex has almost doubled its processing capacity to current 15,240MT. In FY18, utilisation was at ~93% and to capitalise growing shrimp demand, Apex is currently setting up a new processing facility of 20,000MT (expects to complete by Q3FY19), to become one among largest players.

### Integrated player...

Apart from processing capacity, Apex has 1,800 acres of farm land (added ~600acres in FY18), breeding capacity of over 1bn seeds (adding one more unit in FY19E to 1.4bn) , cold storage of 1,500MT of finished goods and own reefer fleet for transportation. ~18-20% of total raw material is sourced from in-house farming (cost advantage of ~Rs70-80/Kg). Backward integration also ensures supply and allows flexibility in production plans based on customer needs

### Diversifying region risk...

To diversify the risk of being depend on single market (US), the company is gradually increasing its non-US share. Share of EU in overall revenue mix has increased to ~25% in H1FY19 from 18.2% in FY17.

### Increasing mix of high margin value added products...

Apex is eyeing a larger share on value-added products going forward. Out of the upcoming 20,000MT new capacity, 5,000MT is for value-added products which will fetch more realization. Considering the additional cost on value addition, margin gain of ~\$1 per kg is expected.

### Robust performance above industry...

Apex's revenue has grown at robust 31%CAGR over FY14-18 Vs industry growth of ~12%. EBITDA/PAT margins expanded 470bps/530bps in the same period. PAT grew at stupendous 53% CAGR, resulted in strong RoE of 38% in FY18.

### Valuation & Outlook: High growth to continue post FY19...

The recent decling trend in shrimp realisation due to extended winter in the US coupled with strong supply has now stabilised and is expected to improve post FY19. While PAT is expected to de-grow in FY19, 11% CAGR is expected over FY18-20E. Excluding high growth period of FY18, earnings growth is strong at 44%CAGR. We initiate Apex by valuing at 14x (1Yr Avg-1SD) on FY20E EPS and arrive at a target of Rs434. We recommend Buy.

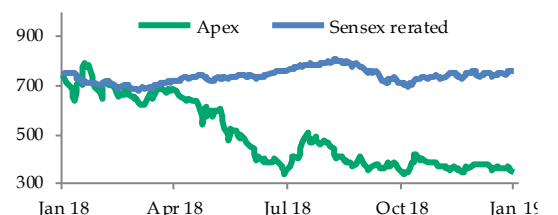
#### Company Data

Market Cap (cr)	1,078
Enterprise Value (cr)	1,187
Outstanding Shares (cr)	3.1
Free Float	28.0%
Dividend Yield	0.6%
52 week high	810
52 week low	330
6m average volume (cr)	0.01
Beta	1.01
Face value	10.0

Shareholding (%)	Q1FY19	Q2FY19	Q3FY19
Promoters	72.49	72.49	72.49
FII's	0.53	0.57	0.36
MFs/Insti	5.4	5.32	6.85
Public	16.15	16.40	15.88
Others	5.42	5.21	4.42
Total	100.00	100.00	100.00

Price Performance	3 month	6 Month	1 Year
Absolute Return	-17.3%	-29.5%	-45.2%
Absolute Sensex	2.3%	-4.7%	-0.4%
Relative Return*	-19.5%	-24.8%	-44.7%

over or under performance to benchmark index



Y.E Mar (Rscr)	FY18E	FY19E	FY20E
Sales	999	975	1,322
Growth (%)	42.9	(2.3)	35.6
EBITDA	110	103	143
EBITDA Margins%	11.0	10.6	10.8
PAT Adj.	79.1	70.3	97.0
Growth (%)	214.8	(11.1)	37.9
Adj.EPS	25.3	22.5	31.0
Growth (%)	141.8	(11.1)	37.9
P/E	11.7	13.2	9.5
P/B	3.1	2.5	2.0
EV/EBITDA	9.2	9.6	6.8
ROE (%)	38.4	21.1	23.6
D/E	0.3	0.2	0.1

Vincent Andrews  
Research Analyst

Apex is currently setting up a new processing facility of 20,000MT, which is expected to be completed by Q3FY19, to become one among the largest players in shrimp processing.

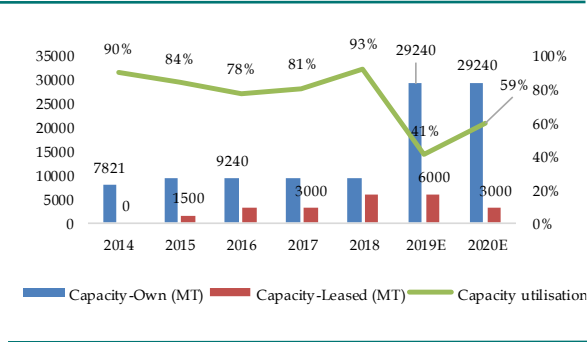
Apex is an integrated player having presence across the value chain from Hatchery, Farming, Processing and Exporting of Shrimp.

Investment Rationale...

Becoming one among largest players...

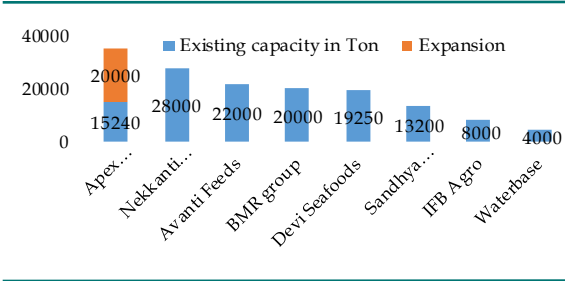
Apex, started in 1995 with a small leased shrimp processing facility, in order to capitalise the robust demand growth witnessed in the industry, has expanded to current 15,240MT processing capacity including own capacity of 9,240MT. In FY18, when the existing capacities were running in full utilisation, for catering to the increased demand, the company added additional leased facility of 3,000MT in April 2018. In FY18 end, utilisation was at 93%. In order to take advantage of the growing global shrimp demand and partially to reduce expenses related to leased capacity, the company is now setting up a new processing facility of 20,000MT which is expected to be completed by Q3FY19. With this Apex is going to become one among the largest players in shrimp processing. When the industry resume its growth post the current demand slowdown scenario, we expect that the additional capacity will contribute to accelerate growth post FY19E. Also the new plant site has designed in such a way that brown-field expansion is possible which will reduce capex per unit of capacity in future.

Huge capacity addition



Source: Company, Geojit Research.

Among largest player in shrimp processing capacity (Ton)



Source: Company, Geojit Research, Apex including leased capacity of 6000MT

Integrated player...

Apex is an integrated player having presence across the value chain from Hatchery, Farming, Processing and Exporting of Shrimp. Apart from the processing capacity, Apex has 1,800 acres of farm land, breeding capacity of over 1bn SPF (Specific pathogen free) seeds, cold storage of 1,500 MT of finished goods and own reefer fleet for transportation of goods.

Apex imports the brood stock from Hawaii and get quarantine the same in government facility in India (Chennai) to ensure the SPF status of the imported brood stock before carried to the hatchery. The company has ~740 ponds and around 18-20% of the total raw material requirement is sourced from in-house farming and the rest is purchased from farmers. In-house farming has a cost differential of Rs70-80 per kg.

Hatchery	Farming	Processing	Logistics	
1bn spf seeds	1,800 acres	35,240 MT (FY19E)	1,500MT	own reefer fleet

*Apex is reducing dependence on the US gradually. In FY17, the total US contribution was at 81.8% which was reduced to 76.2% in FY18 and again to 75% in H1FY19.*

*Out of the upcoming 20,000MT of new capacity, 5,000MT is for value-added products (cooked, breaded and par fried shrimp).*

*Apex has increased its in-house farming by ~600 acres to ~1800acres which is now expected to contribute ~18%-20% of total raw material requirement.*

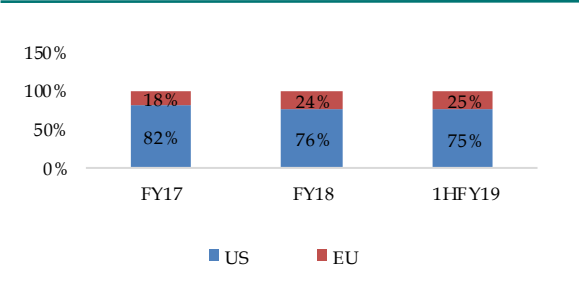
*During the last five years, Apex revenue has grown at a robust 31% CAGR while PAT grew at stupendous 53% CAGR.*

*FY18 witnessed a robust demand growth. However, due to extended winter US along with strong supply, industry started to witness a demand slowdown since 2nd half of FY18.*

Diversifying to reduce dependence on the US...

In order to diversify the risk of being dependent on a single market (US), company is gradually increasing its non-US share in the total export pie. In FY17, the total US contribution was at 81.8% which was reduced to 76.2% in FY18 and again to 75% in H1FY19. The share of EU in the overall revenue mix had increased to ~25% in H1FY19 from 18.2% (FY17). Apex aims to have a better region mix in the coming years and to diversify across globe. The commissioning of ready-to-eat products will also help the company to foray into new markets

Diversifying regional risk



Source: Company, Geojit Research.

Increasing mix of high margin value-added products

Apex is eyeing a larger share on value-added products going forward. Out of the upcoming 20,000MT of new capacity, 5,000MT is for value-added products (cooked, breaded and par fried shrimp). This ready-to eat category is expected to fetch more realization of around \$2-\$4 per Kg. Considering the additional cost on value addition, a margin of \$1 is expected. The new facility is expected to be ready for full operation in FY20. So on an assumption of ~75% utilization of this new capacity, 15%-20% contribution from ready-to-eat category can be expected in FY20E.

Backward integration improves supply & profitability...

Apex is also taking steps to reduce costs through backward integration. The company already has 3 hatchery units with total 1bn capacity and is setting up one more unit to enhance it to 1.4bn. Apex has also increased its in-house farming by ~600 acres to ~1800acres which is now expected to contribute ~18%-20% of total raw material requirement. Currently, In-house production has a cost saving of ~Rs70-80 per Kg. In addition to the cost reduction, backward integration ensures supply and allows flexibility in production plans based on customer needs.

Robust historical performance...

During the last five years, Apex revenue has grown at a robust 31% CAGR while PAT grew at stupendous 53% CAGR. EBITDA/PAT margins expanded by 470bps/530bps in the same period. This has resulted in a strong RoE of 38% in FY18. After the major expansions also the D/E is negligible at 0.3x. Cash flow from operations which has grown at 37% CAGR in the last 5Yrs will help debt reduction going forward.

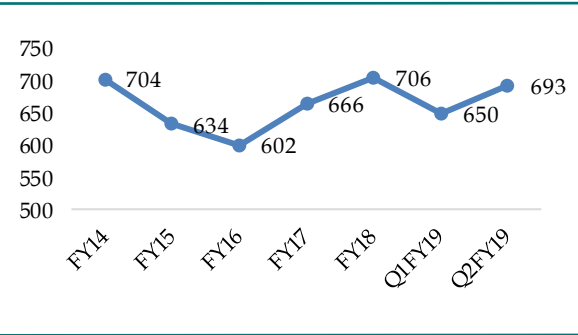
Current demand slowdown seems temporary...

In the shrimp aquaculture business, the two key variables are the global demand-supply scenario & the resultant shrimp price and the sustainability of cultivation by farmers. FY18 witnessed a robust demand growth in the first half. However, industry started to go through a demand slowdown towards the 2nd half of FY18 on account of extended winter in the US. At the same time, increased production in India and on-streaming of supply from South-east Asian countries has resulted in a demand-supply mismatch and shrimp prices started to correct. As of Q1FY19, shrimp prices saw a correction of 15-20% from the high price witnessed in FY18. This has also resulted into a sharp decline of 25-30% in farm gate prices which always move in tandem with export prices. The risk is that any further sharp correction may impact the farmers' sustainability in production due to concern in profitability.

Now, international shrimp price seems to be consolidating at these levels as per latest industry data while farm gate price saw a significant recovery of around 20-25% in Q2FY19. US export demand was also showing a gradual pick up in July/Aug/Sept, 2018 with 15%/13%/14% YoY growth against slowdown in May-June, 2018. Additionally, since the US raised duty on shrimp & other aquaculture products from China to 25% in the latest round of tariff levies which may result shifting of orders to India.

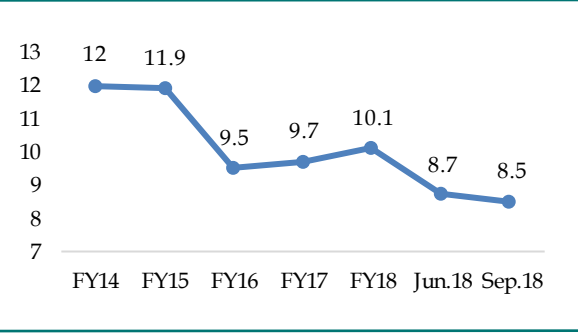
Apex's revenue has grown at 31% CAGR in the last 5Yrs. The commissioning of new capacities of 20,000MT by Q3FY19E will support future growth.

Apex realisation trend-Rs/Kg



Source: Company, Geojit Research, Data FY17

Shrimp price in US\$/Kg



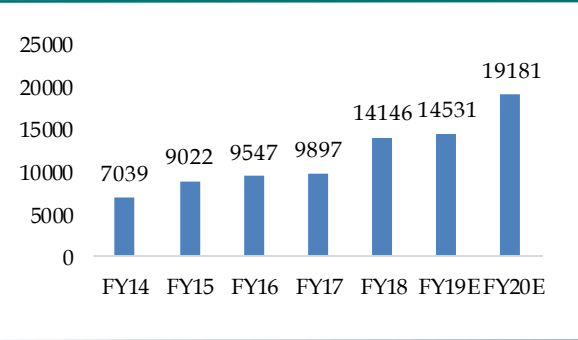
Source: NOAA, Geojit Research

Financials

Revenue to grow at 15% CAGR over FY18-

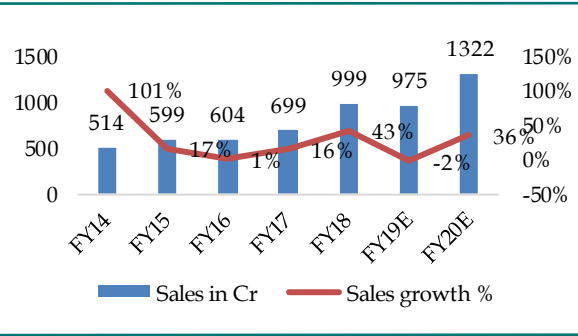
Apex's revenue has grown at 31% CAGR in the last 5Yrs. Apex expanded the capacity by ~2 times to 15,240MT during this period to capitalise the strong industry growth. The commissioning of new capacities of 20,000MT by Q3FY19E will accelerate future growth. As of FY18, the existing capacities were running at full capacity utilisation. Though we expect current demand slowdown will impact FY19E volumes, the industry is expected to resume growth post FY19. We expect revenue to grow at 14%CAGR over FY18-20E.

Sales volume (Ton) trend



Source: Company, Geojit Research.

Sales & sales growth trend (in Rs cr)



Source: Company, Geojit Research.

Due to current demand slowdown & correction in the international shrimp prices, we expect margins to decline to 10.6% in FY19 from 11% in FY18 and to improve to 10.8% by FY20E.

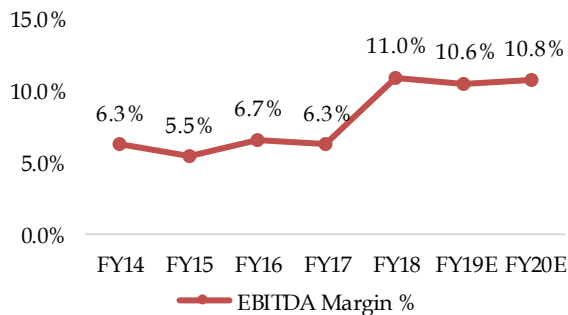
Improvement in margins on account of backward integration and value added products will support RoE post FY19 decline.

We expect 10% CAGR in earnings over FY18-20E, but excluding high growth year-FY18, the growth is strong at 44%CAGR in next two years. Currently Apex is trading at 11x 1YrFwd P/E. Considering high growth, we value Apex at 14x on FY20E. .

Margin to improve post FY19 decline...

Apex has witnessed a sharp improvement in margins (Gross/EBITDA margins grew by 570bps/470bps) in FY18 on account of various factors like robust volume growth (43%YoY), operational leverage due to fully utilization of capacities, increased mix of high margin value added products and backward integration efforts. Apex's new capacity for value added products and additional pre-processing facility added in FY18 will help to increase volume in higher value products in the Ready-to-Cook category and thereby increase realization and margins. Due to current demand slowdown & correction in the international shrimp prices and surge in farm gate price, we expect margins to decline to 10.6% in FY19 from 11% in FY18 and to improve to 10.8% by FY20E. Additionally, the company plans to discontinue the leased operation in a phased manner depending on the utilization of the new facility which will also support margin improvement.

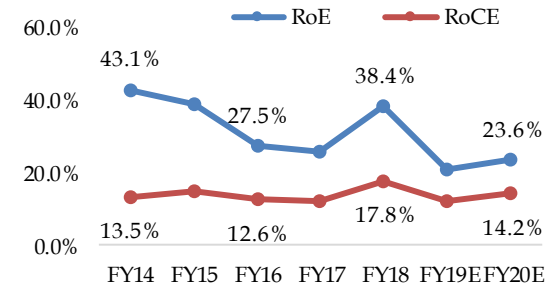
EBITDA Margin trend



Source: Company, Geojit Research.

RoE to compress in the short-term then to improve...

After robust RoE of 38.4% in FY18, the normalisation of margins will compress the RoE in the short-term. However, the volume growth post FY19 along with improvement of margins on account of backward integration and value added products will support RoE from FY20 onwards.

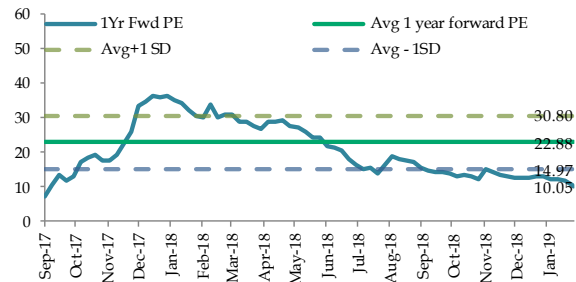


Source: Company, Geojit Research.

Valuation

After IPO listing in September 2017, Apex was trading at higher valuations supported by strong earnings growth expectations in FY18. However, the valuations couldn't sustain when the industry started showing signs of slowdown post H1FY18. While we expect 24%YoY de-growth in earnings for FY19E factoring current slowdown, we believe the demand-supply mismatch to normalise post FY19E. In July, 2018 US exports from India witnessed a growth of 15%YoY after slowdown/de-growth in May/June months. We expect the volume/margin improvement to resume post FY19 decline. We expect 10% CAGR in earnings over FY18-20E, but excluding high growth year-FY18, we estimate a strong 44%CAGR in next two years. Currently Apex is trading at 10x 1YrFwd P/E. Considering high growth, we value Apex at 14x on FY20E.

1Yr Fwd P/E



Source: Company, Geojit Research.

Apex has own processing capacity of 9,240 MT, leased processing capacity of 6000MT, 1,800 acres of farm land, breeding capacity of over 1bn SPF seeds, cold storage of 1,500 MT of finished goods and own reefer fleet for transportation of goods.

Peer comparison

Company	Mcap (cr)	Sales ( Rs cr)			EBITDA Margin %		
		FY16	FY17	FY18	FY16	FY17	FY18
Apex Frozen	1184	604	699	999	7.1%	6.3%	11.0%
Waterbase	729	299	320	342	4.0%	9.5%	16.9%
Zeal Aqua	120	119	173	178	NA	NA	13%
Coastal Corp	396	310	437	507	NA	NA	NA
Avanti Feeds	5641	1935	2616	3393	11.9%	12.6%	20.1%

Company	PAT Margin %			Sales CAGR	EBITDA CAGR
	FY16	FY17	FY18	FY16-18	FY18
Apex Frozen	3.2%	3.6%	7.9%	29%	65%
Waterbase	0.7%	3.6%	8.8%	7%	120%
Zeal Aqua	1.6%	1.0%	2.4%	22%	NA
Coastal Corp	2.2%	3.1%	4.9%	28%	NA
Avanti Feeds	8.1%	8.2%	13.2%	32%	72%

Company	EPS			P/E		
	FY17	FY18	FY19	FY17	FY18	FY19
Apex Frozen	10.5	25.3	22.5	28.3	11.7	13.2
Waterbase	3	7.6	N/A	48.3	19.1	NA
Zeal Aqua	1.4	2	N/A	68.6	48.0	NA
Coastal Corp	13.2	24.6	N/A	25.8	13.8	NA
Avanti Feeds	15.7	32.8	20.5	23.4	11.2	18.0

Source: Bloomberg, Geojit Research

Company Description

Apex Frozen Foods Ltd (Apex) is an integrated producer and exporter of processed, ready-to-cook shrimps which operates in Andhra Pradesh. It has presence across the value chain - Hatchery, Farming, Processing and Exporting of Shrimp. Apex has own processing capacity of 9,240 MT (at Kakkinada, AP), leased processing capacity of 6000MT (at Bapatla, AP), 1,800 acres of farm land, breeding capacity of over 1bn SPF seeds, cold storage of 1,500 MT of finished goods and own reefer fleet for transportation of goods. Apex supplies ready-to-cook products to food companies, retail chains, restaurants, club stores and distributors spread across USA, UK and European countries. Apex strategically focus on the market of the USA, the largest importer of aquaculture products in the world. Apex is setting up a new processing plant with a total capacity of 20,000 MT along with 5,000MT of cold storage in East Godawari (AP), expecting to complete by Q3FY19.

Products...

The products majorly comprises of variants of processed Vannamei shrimp (White shrimp) in frozen form and are sold under the brands owned by customers and also through own brands namely Bay fresh, Bay Harvest and Bay Premium.



Key Risks...

- Any adverse development in major markets like US and EU.
- Any high volatility in shrimp price/demand.
- Risk of break out of new infections/diseases.
- Top 5 customers contribute ~69% revenue.
- Processing & procurement operations are concentrated in Andhra Pradesh only.
- Any adverse change in the US anti-dumping duty.
- High volatility in foreign exchange rates.

Standalone Financials

PROFIT & LOSS ACCOUNT

Y.E March (Rs Cr)	FY16A	FY17A	FY18E	FY19E	FY20E
Sales	604	699	999	975	1,322
% change	0.7	15.8	42.9	-2.3	35.6
EBITDA	40	44	110	103	143
% change	22.5	9.9	148	-6.1	38.2
Depreciation	4.9	6.3	8.7	13.4	17.2
EBIT	35.4	38.1	101.4	90	125.6
Interest	10.4	11.2	8.7	6.9	6
Other Income	4.7	10.6	19.9	23.4	26.4
PBT	29.8	37.4	112.6	106.5	146
% change	6.5	25.7	200.6	-5.4	37.1
Tax	10.6	12.3	33.5	36.2	49.1
Tax Rate (%)	35.70	32.90	29.70	34.00	33.60
Reported PAT	19.2	25.1	79.1	70.3	97
Adj.*	-	-	-	-	-
Adj. PAT	19.2	25.1	79.1	70.3	97
% change	4.4	31.1	214.8	-11.1	37.9
No. of shares (cr)	2.4	2.4	3.1	3.1	3.1
Adj EPS (Rs)	8	10.5	25.3	22.5	31
% change	4.4	31.1	141.8	-11.1	37.9
DPS (Rs)	-	-	2.3	2.3	2.3

BALANCE SHEET

Y.E March (Rs Cr)	FY16A	FY17A	FY18A	FY19E	FY20E
Cash	1	1	3	3	21
Accounts Receivable	41	83	67	85	120
Inventories	60	64	102	93	128
Other Cur. Assets	29	43	119	79	108
Investments	-	-	-	-	-
Gross Fixed Assets	68	102	138	243	248
Net Fixed Assets	55	83	111	203	191
CWIP	8	1	21	10	5
Intangible Assets	-	-	-	-	-
Def. Tax (Net)	-	-	-	-	-
Other Assets	0	2	5	5	7
Total Assets	194	277	428	479	579
Current Liabilities	28	55	46	45	62
Provisions	-	-	-	-	-
Debt Funds	76	106	81	71	63
Other Liabilities	7	6	-2	-2	-1
Equity Capital	24	24	31	31	31
Reserves & Surplus	59	85	271	334	424
Shareholder's Fund	83	109	302	365	455
Total Liabilities	194	277	428	479	579
BVPS	35	46	97	117	146

CASH FLOW

Y.E March (Rs Cr)	FY16A	FY17A	FY18A	FY19E	FY20E
Net inc. + Depn.	24	31	88	84	114
Non-cash adj.	21	22	39	43	55
Changes in W.C	0	4	3	7	6
C.F.O	3	(30)	(46)	(34)	(81)
Capital exp.	37	14	33	57	39
Change in inv.	(16)	(27)	(57)	(94)	-
Other invest.CF	0	(2)	(1)	-	-
C.F - investing	-	-	-	-	-
Issue of equity	(16)	(29)	(58)	(94)	-
Issue/repay debt	-	-	127	-	-
Dividends paid	(10)	(10)	(16)	(7)	(6)
Other finance.CF	-	(3)	-	(7)	(7)
C.F - Financing	-	-	-	-	-
Chg. in cash	(21)	17	85	(24)	(21)
Closing cash	(0)	3	60	-62	18
	2	5	64	3	21

RATIOS

Y.E March	FY16A	FY17A	FY18A	FY19E	FY20E
Profitab. & Return					
EBITDAmargin (%)	6.7	6.3	11.0	10.6	10.8
EBIT margin (%)	5.9	5.5	10.2	9.2	9.5
Net profit mgn.(%)	3.2	3.6	7.9	7.2	7.3
ROE (%)	27.5	26.1	38.4	21.1	23.6
ROCE (%)	12.6	12.4	17.8	12.3	14.2
W.C & Liquidity					
Receivables (days)	27.7	32.5	27.4	28.6	28.3
Inventory (days)	33.2	32.2	30.2	36.4	30.5
Payables (days)	11.2	16.1	14.9	14.1	13.8
Current ratio (x)	1.4	1.4	2.4	2.3	3.0
Quick ratio (x)	0.5	0.6	0.6	0.8	1.1
Turnover &Levg.					
Gross asset T.O (x)	9.5	8.3	8.3	5.1	5.4
Total asset T.O (x)	3.4	3.0	2.8	2.2	2.5
Int. covge. ratio (x)	3.4	3.4	11.7	13.0	20.9
Adj. debt/equity (x)	1.0	1.0	0.3	0.2	0.1
Valuation ratios					
EV/Sales (x)	1.7	1.5	1.0	1.0	0.7
EV/EBITDA (x)	24.8	23.3	9.2	9.6	6.8
P/E (x)	37.1	28.3	11.7	13.2	9.5
P/BV (x)	8.5	6.5	3.1	2.5	2.0

Retail Equity Research (South India Focus)

# AVANTI FEEDS Ltd

## Aquaculture

BSE CODE : 512573      NSE CODE: AVANTI  
BLOOMBERG CODE: AVANT.IN      SENSEX : 35,591

**BUY**

Rating as per Large cap      12 month investment period  
**CMP Rs316      TARGET Rs427      RETURN +35%**

## Ready for the next stage of growth...

Avanti Feeds Ltd (AFL), is a leading manufacturer of Shrimp Feeds with a capacity of 6,00,000 MT, and Shrimp Processor & Exporter with a capacity of 22,000 MT. AFL has a tie-up with Thai Union Group, Thailand (~25% stake).

- AFL has recently completed its major capacity expansions in both Feed (1,75,000MT) & Processing (15,000MT) segments which will add growth.
- AFL is the market leader in Feed segment and is now aiming to become one among the largest players in processing also post recent capacity addition.
- The strong association with Thai Union group in terms of technical expertise & marketing tie-up is benefiting AFL to gain market share.
- Strong track record of growing above industry growth in last 5Yrs. Volumes grew at 33%CAGR (industry-20%), Revenue/PAT grew at 33%/61% CAGR.
- FY18 witnessed unusual margin gain of 750bps which is unlikely to sustain due to correction in shrimp & RM prices and demand slowdown. Expect PAT to de-grow in FY19E but to normalise post FY19E.
- We initiate AFL with a Buy rating by valuing at 15x (2Yr Avg-22x, PEG=0.7) on FY20E and arrive at a Target of Rs427.

## Ready with new capacities...

AFL has recently completed its capacity expansions in both feed manufacturing (1,75,000MT in Q4FY18) and shrimp processing (15,000MT in Q3FY18). Currently AFL enjoys dominant position in feed segment and is now targeting to become one among the top players in processing segment as well post recent capacity addition. The existing feed capacity was running at full utilisation when commissioning the new capacity in Q4FY18. The revenue contribution from processing segment will accelerate from FY19.

## Benefiting from Tie-up with Thai Union.

AFL entered into a tie-up with Thai Union Group (world's largest seafood manufacturers & processors) in 2002. Currently Thai Union has ~25% equity participation in AFL and is also holding 40% equity in AFL's processing & exporting subsidiary. Collaboration with Thai Union is contributing significantly to both business segments in terms of technical expertise & marketing tie-up.

## Market leader in feed segment...

AFL is the leader in shrimp feed industry with market share of ~43% in FY18 (FY17-39%) followed by CP Aqua (38%). Full utilisation of capacities and major expansions are showing its ability to gain market share. AFL is now exploring more diversification in fish & other feeds and to explore in other countries also. AFL expects share of 46%-47% in FY19 and it has reached 46% in Q1FY19.

## Operational excellence...

AFL has a strong track record of growing above the industry growth. AFL's feed segment's volume has grown at a CAGR of 33% in last 5 Yrs while industry grew at ~20%. Revenue/EBITDA grew at 33%/58% CAGR in the same period and PAT growth was robust at 61% which resulted in strong RoE of ~54% in FY18. Even after major expansions, debt stands negligible and is having zero net debt.

## Valuation: Growth to normalize post de-growth in FY19E...

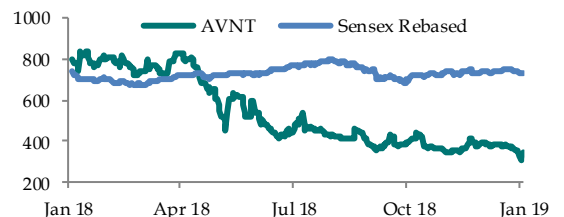
FY18 saw an unusual margin gain (750bps) aided by multiple tails winds in the industry. The high margins in FY18 is not likely to sustain due to subsequent correction in shrimp & raw material prices. However, the recent declining trend in shrimp realisation in the US has now stabilised in Q2FY19E. FY19 to see a de-growth in earnings, but excluding FY18, CAGR of 22% is expected in next two years. We initiate AFL with a Buy rating by valuing at 15x (2Yr Avg-19x, PEG=0.7) on FY20E and arrive at a Target of Rs427

Company Data	
Market Cap (cr)	4,305
Enterprise Value (cr)	3,924
Outstanding Shares (cr)	13.6
Free Float	28%
Dividend Yield	1.7%
52 week high	865
52 week low	335
6m average volume (cr)	0.09
Beta	0.83
Face value	1.0

Shareholding (%)	Q1FY19	Q2FY19	Q3FY19
Promoters	43.78	43.76	43.76
FII's	28.42	28.78	29.27
MFs/Insti	1.03	1.21	2.12
Public	19.17	19.12	17.85
Others	7.6	7.05	7.00
Total	100.00	100.00	100.00

Price Performance	3 month	6 Month	1 Year
Absolute Return	-2.8%	-19.9%	-55.9%
Absolute Sensex	8.1%	-0.8%	2.2%
Relative Return*	-10.9%	-19.2%	-58.1%

over or under performance to benchmark index



Y.E Mar (Rscr)	FY18E	FY19E	FY20E
Sales	3,393	3,454	4,108
Growth (%)	29.7	1.8	18.9
EBITDA	683	409	541
EBITDA Margins%	20.1	11.8	13.2
PAT Adj.	447	278.3	387.8
Growth (%)	108.7	(37.7)	39.4
Adj.EPS	32.8	20.4	28.5
Growth (%)	108.7	(37.7)	39.4
P/E	9.6	15.5	11.1
P/B	1.4	3.4	2.6
EV/EBITDA	5.5	8.4	5.7
ROE (%)	53.7	24.1	26.6
D/E	0.0	0.0	0.0

Vincent Andrews  
Research Analyst

Started with shrimp feed manufacturing capacity of 10,000MT in 1994, Avanti has now expanded 60 times to 6,00,000MT as of FY18.

AFL's processing capacity has been recently expanded by 15,000MT in Q3FY18 to reach a total capacity of 22,000MT hence to become one among the top players in processing industry also.

Collaboration with Thai Union, world's largest seafood manufacturers, processors and exporters is contributing to AFL significantly in both business segments. .

AFL's market share in feed segment has from 43% in FY18 to ~45% in H1FY19 and expects to reach 46%-47% in FY19.

Investment Rationale...

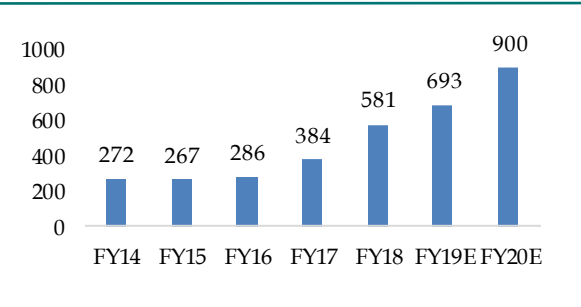
Feed business: Ready for next growth...

Indian shrimp industry saw a spurt in volume growth in the last decade (18% CAGR over FY09 -FY18) with industry tail winds like introduction of L.Vannamei for large scale production in India, spread of EMS disease in the aquaculture farms of south-east Asia. AFL has capitalised this growth witnessed in the industry with its aggressive expansion strategy. Started with shrimp feed manufacturing capacity of 10,000MT in 1994, it has now expanded 60 times to 6,00,000MT. The existing feed capacity was at full utilisation when Avanti added new capacity of 1,75,000MT in Q4FY18. FY18 utilisation was at 71% considering the new capacity addition. We expect the utilisation to increase to ~80% by FY20E in Feed segment. AFL has revenue target of USD1bn by 2022, means further expansion is possible on achieving full utilisation.

Processing business: Contribution to accelerate...

AFL has recently completed its large capacity expansion of 15,000MT in Q3FY18 in its processing segment to reach a total capacity of 22,000MT hence to become one among the top players in the processing industry. The revenue contribution from processing segment was in the range of 14%-17% during the last 3Yrs. With this capacity addition, revenue contribution from the segment is expected to improve to 22% by FY20E.

Processing revenue to accelerate (Rs.cr)



Source: Company, Geojit Research

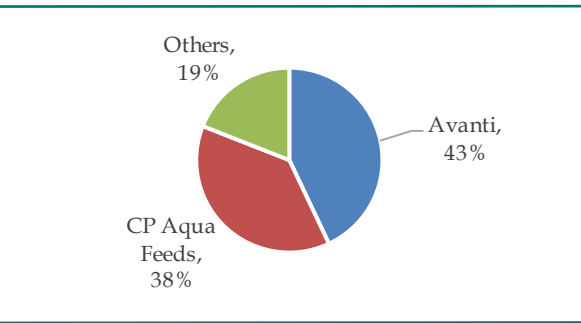
Benefiting from Tie-up with Thai Union...

In 2002, for technical upgradation and development of feed for L.Vannamei species, AFL entered into a technical collaboration with Thai Union Group PCL, which is the world's largest seafood manufacturers, processors and exporters. Currently, Thai Union has 25% equity participation in AFL and has technical collaboration and marketing tie-up in India. Thai Union is also holding 40% equity in AFL's processing & exporting business subsidiary company, Avanti Frozen Foods Pvt Ltd. Collaboration with Thai Union is contributing to AFL significantly in both business segments. AFL works closely with Thai Union in various activities like feed formulation, improving shrimp productivity for the farmer by reducing FCR (Feed conversion ratio) and in R&D. The new state-of-the art shrimp processing plant has been established in consultation with technical expertise from Thai Union. Through this tie-up, AFL benefits from the competency of Thai Union in value added and & cooked products and in expanding exports to newer markets. The setting up of upcoming hatchery will also begin by taking technical aid from Thai Union.

Market leader sustain gains...

AFL has ~25 years of rich experience in shrimp culture industry. Avanti is the leader in the shrimp feed segment with a market share of 43% as of FY18 (~39% in FY17) followed by CP Aqua Feeds with a market share of ~38%. The full utilisation of its existing capacities and the aggressive expansions are showing its ability to gain market share. AFL will continue to invest in new capacities to capture larger market share. It is exploring the possibility of exporting feed to other countries as well as expanding to fish and other feeds. Market share has further increased to ~45% in H1FY19 and expects it to reach 46%-47% in FY19.

Avanti is the market leader in Feed segment



Source: Company, Geojit Research

From the core Feed business segment, AFL has expanded to the processing segment and is now in the process of setting up a shrimp hatchery with a capacity of 400 million seeds

AFL has a strong track record of growing above industry growth. AFL's feed segment volume has grown at a CAGR of 33% during last 5 Yrs while industry grew at ~20%.

AFL's revenue has grown at 33% CAGR during FY14-18 supported by robust capacity additions at a time when multiple tail winds were supporting industry. Factoring in recent developments in the industry,

Backward integration & diversification...

From the core Feed business segment, AFL has expanded to the processing segment and is now in the process of setting up a shrimp hatchery with a capacity of 400 million seeds in Andhra Pradesh for capex of Rs12cr. The plant will be operating in two phases with 200 million seeds in each phase. A good quality seed ensures good quality shrimp and successful crop. The company is also exploring the possibility of more diversification into fish feed and other feeds for cultivation of fish species like Seabass which has great export potential. Thai Union has proven technology for producing feed for these species that can be readily adopted by the company.

Loyalty through quality & service...

AFL maintains its market leadership via quality product and technical assistance provide to farmers. The quality of feed is critical for shrimp farmers because poor or inconsistent quality may impact the entire culture and jeopardize their investment. Farmers prefer feed with better quality to ensure better yield. AFL provides quality feed with best-in-class Feed Conversion Ratio (FCR) ensuring higher yield. The technical support from Thai enables the company to have ideal feed formulation which gives best FCR to farmers.

AFL has continuous engagement with the farmers, shares knowledge & insight, assist them in their farming, pond preparation, seed selection, and culture practices till successful harvest is obtained. AFL has a robust technical team to advice farmers. AFL's team of 250+ technical graduates in fisheries science visit ponds of farmers and advise them during the process of the culture. Additionally, the Technical After Sales Service Team (TASS) also visits shrimp ponds and educate farmers on appropriate practices to get the best harvest.

Additionally, AFL is also consistently identifying new areas which are brought under cultivation, covering it with technical team and creating dealership base. AFL's 80% of the sales is through dealer network and 20% sales are made directly large and corporate farmers. AFL conducts periodic meetings with farmers to educate and advise them on contemporary developments in culture practices and disease prevention measures to achieve the best outcome

Operational excellence...

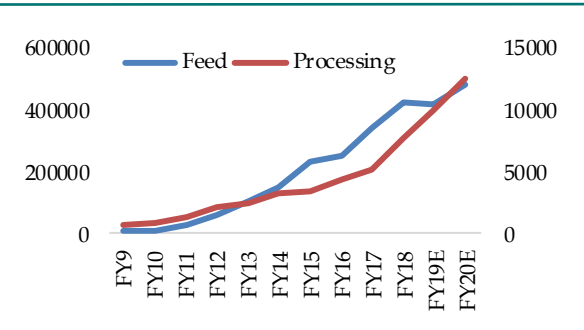
AFL has a strong track record of growing above industry growth. AFL's feed segment volume has grown at a CAGR of 33% during last 5 Yrs while industry grew at ~20%. Consequently, revenue/EBITDA have grown at 33%/58% CAGR over the same period and PAT growth was robust at 61%. EBITDA/PAT margins grew by 1200bps/800bps. This has resulted in strong RoE of ~54% in FY18. It is also worthwhile to note that even after the huge expansions, the company has huge cash pile of ~ Rs560cr.

Financials

Revenue to grow at 10% CAGR over FY18-20E...

AFL's revenue has grown at 33% CAGR during FY14-18 supported by robust capacity additions at a time when multiple tail winds were supporting industry. AFL has almost trebled its feed capacity during this period to 6,00,000MT which helped to capitalise the industry growth. AFL's feed volume grew at 33% CAGR in the last 5Yrs while processing volume grew at 25% CAGR. Higher international shrimp prices and stable level of feed prices supported strong growth. Addition of 15,000MT to its processing capacity in Q3FY18 will increase revenue contribution from processing segment in the coming years. However, recently, industry is witnessing a correction in shrimp prices due to slowdown in global shrimp demand on account of extended winter in the US. Shrimp prices has come down by ~15%YoY in Q1FY19E. Owing to this domestic farm gate prices also witnessed a correction of 20-30% which has impacted farmers and thus resulted in ~25%-30% reduction in shrimp culture. So the company currently expects flat growth for feed business and ~25% growth for processing business for FY19E. Factoring in recent developments in the industry, we estimate revenue to grow at 10% CAGR over FY18E-20E Vs ~30% growth in FY18

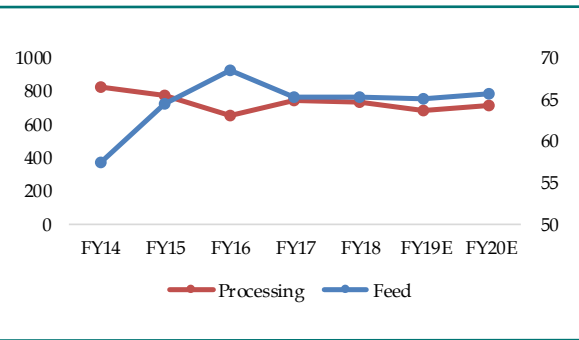
Volume trend (in MT)



Source: Company, Geojit Research.,LHS Feed

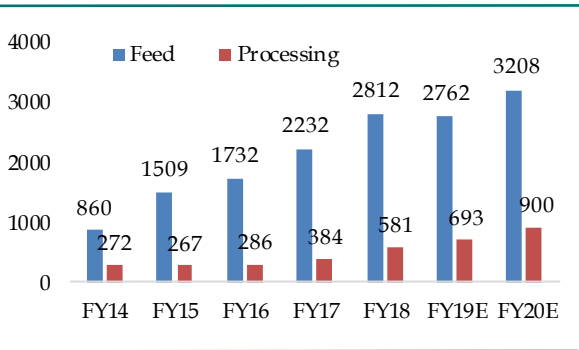
We expect EBITDA margin to normalise in FY19 and factor EBITDA margin of 11.8%/13.2% for FY19E/FY20E.

Realisation trend (Rs/Kg)



Source: Company, Geojit Research, RHS Feed

Sales trend (Rs Cr)

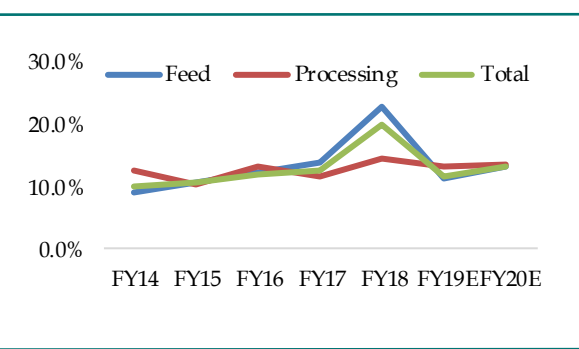


Source: Company, Geojit Research

EBITDA margin to normalise from higher levels...

Historically, AFL’s EBITDA margin was in the range of 10%-13%, but in FY18 it had improved sharply to ~20%. This is on account of various factors like strong volume growth in both feed (26%YoY) & processing (52%YoY), higher shrimp realisation and decline in raw material prices. Now prices of raw materials like soya and fish meals started to surge. The recent correction in shrimp prices has impacted shrimp culture and feed demand and is expected to continue in the short-term till the prices normalise. We expect EBITDA margin to normalise in FY19 and factor EBITDA margin of 11.8%/13.2% for FY19E/FY20E.

EBITDA Margin trend

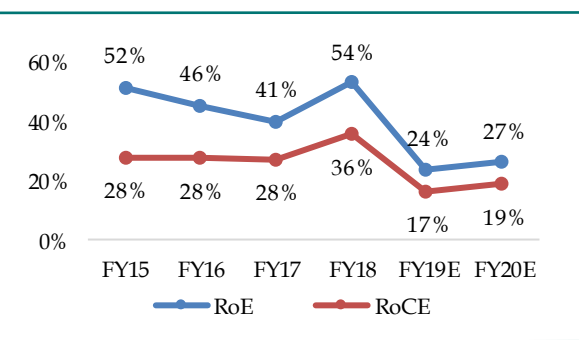


Source: Company, Geojit Research.

RoE to compress in short-term...

FY18 witnessed unusual margin improvement due to various industry tailwinds which is expected to normalise in FY19. Because of the higher profit earned in FY18 coupled with the expectation of normalisation of profitability in FY19, decline in RoE is expected in short term

Return ratios to decline in the short-term



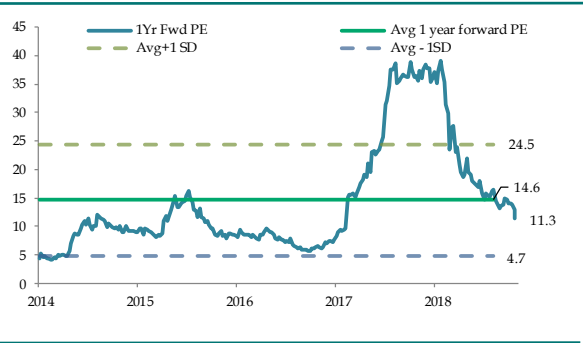
Source: Company, Geojit Research.

If we exclude the high growth FY18, we expect earnings CAGR of 22% in next 2Yrs. We value AFL on 15x (2Yr Avg-22x, PEG=0.8) on FY20E earnings.

Valuations...

FY18 witnessed a sharp re-rating in valuations on account of significant jump in earnings due to multiple industry tailwinds like good demand, higher realisation and fall in raw material prices. All these resulted in a strong improvement in EBITDA margin (750bps) which is not likely to sustain due to subsequent correction in shrimp & RM prices. Correction in international shrimp prices has also impacted farm gate price which has resulted in reduction in shrimp culture and feed demand. Valuations declined sharply in May 2018. We expect margins to normalise from high levels of FY18 and PAT to see de-growth in FY19. We expect demand growth to resume as the farm gate prices has recovered which will support farmers. If we exclude the high growth FY18, we expect earnings CAGR of 22% in next 2Yrs. We value AFL on 15x (2Yr Avg-22x, PEG=0.8) on FY20E earnings.

1 Yr Fwd P/E



Source: Company, Geojit Research.

Peer comparison

Company	Mcap (cr)	Sales (Rs cr)			EBITDA Margin %		
		FY16	FY17	FY18	FY16	FY17	FY18
Apex Frozen	1184	604	699	999	7.1%	6.3%	11.0%
Waterbase	729	299	320	342	4.0%	9.5%	16.9%
Zeal Aqua	120	119	173	178	NA	NA	13%
Coastal Corp	396	310	437	507	NA	NA	NA
Avanti Feeds	5641	1935	2616	3393	11.9%	12.6%	20.1%

Company	PAT Margin %			Sales CAGR	EBITDA CAGR
	FY16	FY17	FY18	FY16-18	FY18
Apex Frozen	3.2%	3.6%	7.9%	29%	65%
Waterbase	0.7%	3.6%	8.8%	7%	120%
Zeal Aqua	1.6%	1.0%	2.4%	22%	NA
Coastal Corp	2.2%	3.1%	4.9%	28%	NA
Avanti Feeds	8.1%	8.2%	13.2%	32%	72%

Company	EPS			P/E		
	FY17	FY18	FY19	FY17	FY18	FY19
Apex Frozen	10.5	25.3	22.5	28.3	11.7	13.2
Waterbase	3	7.6	N/A	48.3	19.1	NA
Zeal Aqua	1.4	2	N/A	68.6	48.0	NA
Coastal Corp	13.2	24.6	N/A	25.8	13.8	NA
Avanti Feeds	15.7	32.8	20.5	23.4	11.2	18.0

Source: Bloomberg, Geojit Research

Company Description

Avanti Feeds Ltd (AFL), incorporated in 1993 is a leading manufacturer of Shrimp Feeds and Shrimp Processor & Exporter. The company has a strong technical and marketing tie-up with the Thai Union Group Public Company Ltd (equity participation of ~25%), the world's largest seafood processors and leading manufacturer of prawn and fish feeds in Thailand. The shrimp process & exports business of Avanti is carried out through its subsidiary, Avanti Frozen Foods Pvt Ltd which is a joint venture with Thai Union (40% equity). Avanti has 5 shrimp feed manufacturing units in India (4 in Andhra Pradesh & 1 in Gujarat), with feed manufacturing capacity of 6,00,000MT and has shrimp processing capacity of 22,000MT. The company is now doing a backward integration by setting up a shrimp hatchery with a capacity of 400 million seeds in Andhra Pradesh with the technical expertise from Thai Union. Additionally, Avanti has a fleet of insulated as well as refrigerated vehicles to transport the shrimps. Avanti exports its products mainly to USA and to other countries like Europe, Japan, Australia and Middle East. Also, AFL has 4 wind mills of 3.2MW in Karnataka. Power generated from wind mills is sold to BESCO under Power Purchase agreement.

Avanti has 5 shrimp feed manufacturing units in India (4 in Andhra Pradesh & 1 in Gujarat), with feed manufacturing capacity of 6,00,000MT and has shrimp processing capacity of 22,000MT.

*Of the 13 molecules they have in pipeline, four molecules are under various stages of clinical trials.*

### Feed Products...

Avanti produces international quality feeds for Prawn and fish. The brands include Profeed, Titan, Manamei

### Markets: Feed...

Andhra Pradesh, Gujarat, West Bengal, Tamil Nadu, Maharashtra, Karnataka, Goa, Telangana, Haryana, Punjab, Daman and Diu, Kerala and Puducherry.

### Markets: Export

USA, Europe, Japan, Australia and Middle East.

### Feed brands...



### Infrastructure & Production facilities



The range of export products include the following:

- Head on
- Easy peel
- Raw headless shell-on
- Raw peeled and deveined tail-on
- Raw peeled and deveined tail-off
- Butterfly cut peeled and deveined tail-on
- Skewers
- Cooked tail on
- Cooked tail off
- Cooked in shell
- Shrimp rings
- Marinated products.

### Key Risks...

- Any adverse development in major markets like US and EU.
- Any high volatility in prices of shrimp, raw material and shrimp demand.
- Risk of break out of new infections/diseases.
- Any adverse change in US anti-dumping duty.
- High volatility in foreign exchange rates.

## Standalone Financials

### PROFIT & LOSS ACCOUNT

Y.E March (Rs Cr)	FY16A	FY17A	FY18E	FY19E	FY20E
Sales	1,935	2,616	3,393	3,454	4,108
% change	13.6	35.2	29.7	1.8	18.9
EBITDA	230	330	683	409	541
% change	26.7	43.5	107	(40.1)	32.2
Depreciation	10.2	13.7	23.8	35.1	34.8
EBIT	219.5	316	658.9	373.9	505.9
Interest	1.8	2.7	3	1	0.6
Other Income	16.6	21.8	48.2	55.3	73.9
PBT	238.2	335.2	703.4	428.2	579.2
% change	32.4	40.7	109.8	(39.1)	35.3
Tax	79.2	108.4	238	127.6	162.2
Tax Rate (%)	33.30	32.40%	33.80	29.80	28.00%
Reported PAT	157.5	214.4	446.5	278.3	387.8
Adj.*		-	-0.8	-	-
Adj. PAT	157.5	214.4	447.3	278.3	387.8
% change	35.9	36.1	108.7	(37.8)	39.4
No. of shares (cr)	13.6	13.6	13.6	13.6	13.6
Adj EPS (Rs)	11.6	15.7	32.8	20.4	28.5
% change	35.9	36.1	108.7	(37.8)	39.4
DPS (Rs)	2.8	3.6	2.4	2.4	2.4
CEPS (Rs)	12.3	16.7	34.6	23	31

### CASH FLOW

Y.E March (Rs Cr)	FY16A	FY17A	FY18A	FY19E	FY20E
Net inc. + Depn.	168	227	470	313	423
Non-cash adj.	77	120	250	151	193
Changes in W.C	0	3	3	1	1
C.F.O	(37.1)	67.4	(166.7	17.1	-53.9
Capital exp.	122	292	281	355	400
Change in inv.	-66	-107	-79	-25	-25
Other invest.CF	80	-323	-202	-250	-300
C.F - investing	6	4	12	-	-
Issue of equity	20	(426)	(269)	(275)	(325)
Issue/repay debt	-	-	-	5	-
Dividends paid	-50	6	-11	-4	4
Other finance.CF	-30	-38	-49	-33	-33
C.F - Financing	6	94	14	-	-
Chg. in cash	(74)	107	(45)	(32)	(29)
Closing cash	66	-29	-34	48	46
	70	41	7	55	101

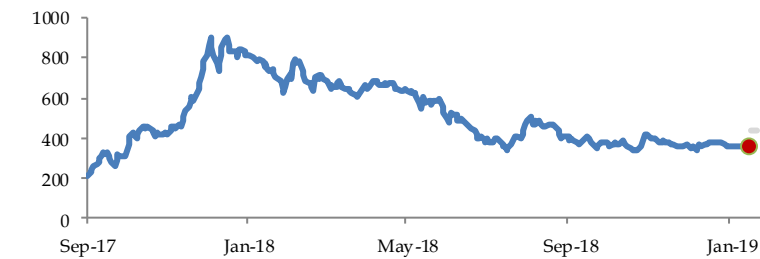
### BALANCE SHEET

Y.E March (Rs Cr)	FY16A	FY17A	FY18A	FY19E	FY20E
Cash	70	41	7	55	101
Accounts Receivable	35	23	50	62	77
Inventories	286	356	525	516	601
Other Cur. Assets	18	20	28	28	32
Investments	31	360	584	834	1,134
Gross Fixed Assets	161	228	349	374	399
Net Fixed Assets	104	160	312	302	292
CWIP	44	94	2	2	2
Intangible Assets	0	0	0	-	-
Def. Tax (Net)	-	-	9	9	9
Other Assets	34	15	10	13	16
Total Assets	622	1,069	1,526	1,821	2,26
Current Liabilities	183	289	323	347	396
Provisions	1	16	18	18	21
Debt Funds	8	13	5	2	2
Other Liabilities	9	115	148	172	209
Equity Capital	9	9	9	14	14
Reserves & Surplus	412	626	1,022	1,268	1,623
Shareholder's Fund	421	635	1,031	1,282	1,637
Total Liabilities	622	1,069	1,526	1,821	2,26
BVPS	93	140	227	94	120

### RATIOS

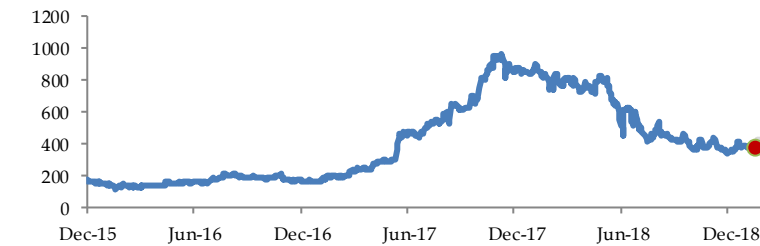
Y.E March	FY16A	FY17A	FY18A	FY19E	FY20E
Profitab. & Return					
EBITDAmargin (%)	11.9	12.6	20.1	11.8	13.2
EBIT margin (%)	11.3	12.1	19.4	10.8	12.3
Net profit mgn.(%)	8.1	8.2	13.2	8.1	9.4
ROE (%)	45.9	40.6	53.7	24.1	26.6
ROCE (%)	28.0	27.7	36.2	16.9	19.1
W.C & Liquidity					
Receivables (days)	6.4	4.1	4.0	5.9	6.1
Inventory (days)	47.9	44.7	47.4	55.0	49.6
Payables (days)	28.0	34.6	40.6	40.5	38.1
Current ratio (x)	2.2	2.5	3.4	4.0	4.6
Quick ratio (x)	0.6	0.2	0.2	0.3	0.4
Turnover &Levg.					
Gross asset T.O (x)	13.0	13.5	11.8	9.6	10.6
Total asset T.O (x)	3.5	3.1	2.6	2.1	2.0
Int. covge. ratio (x)	119.4	116.5	222.3	386.5	812.5
Adj. debt/equity (x)	0.0	0.0	0.0	0.0	0.0
Valuation ratios					
EV/Sales (x)	2.2	1.5	1.1	1.0	0.7
EV/EBITDA (x)	18.3	11.9	5.5	8.4	5.7
P/E (x)	27.3	20.1	9.6	15.5	11.1
P/BV (x)	3.4	2.3	1.4	3.4	2.6

Recommendation summary (last 3 years)- Apex Frozen Foods Ltd



Source: Bloomberg, Geojit Research.

Recommendation summary (last 3 years)- Avanti Feeds Ltd



Source: Bloomberg, Geojit Research.

Dates	Rating	Target
31 <sup>st</sup> Jan ,2019	Buy	434

Dates	Rating	Target
31 <sup>st</sup> Jan ,2019	Buy	427

Large Cap Stocks;			Mid Cap and Small Cap;		
Buy	-	Upside is above 10%.	Buy	-	Upside is above 15%.
Hold	-	Upside is between 0% - 10%.	Accumulate	-	Upside is between 10% - 15%.
Reduce	-	Downside is more than 0%.	Hold	-	Upside is between 0% - 10%.
Neutral	-	Not Applicable	Reduce/Sell	-	Downside is more than 0%.
			Neutral	-	Not Applicable

To satisfy regulatory requirements, we attribute ‘Accumulate’ as Buy and ‘Reduce’ as Sell.  
The recommendations are based on 12 month horizon, unless otherwise specified. The investment ratings are on absolute positive/negative return basis. It is possible that due to volatile price fluctuation in the near to medium term, there could be a temporary mismatch to rating. For reasons of valuations/return/lack of clarity/event we may revisit rating at appropriate time. Please note that the stock always carries the risk of being upgraded to BUY or downgraded to a HOLD, REDUCE or SELL.  
Neutral- The analyst has no investment opinion on the stock under review

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