AARTI INDUSTRIES LTD.

King of Benzene Derivatives

Initiating Coverage

Date: July 16, 2018

Initiating Coverage

NALANDA RESEARCH

BUY

Downside Scenario	Current Price	Price Target	Upside Scenario
	1240	1543 24.4%	

July 16, 2018

Aarti Industries Ltd

Foray in new value added business verticals to drive growth

We initiate coverage on Aarti Industries Ltd with a buy rating and target price of Rs 1543, implying ~24.4% upside potential from current levels. Our view stems from the fact that the company is the leading manufacturer of benzene based derivatives with its presence across the entire value chain. Further Aarti's foray in new business verticals like Nitro-toluene, Ethylation, Quadrupling of PDA capacity, Expanding chlorination capacity, Setting up a new R&D lab will be the growth drivers of the next decade. Promoters are first generation technocrats who adopted to challenging business over the last 4 decades. The company has strong project execution track record coupled with recent large deal wins which provide visibility for future growth. Hence, we expect EPS CAGR of 23% from FY18-21E.

New business verticals to drive growth

- Expansion in nitro toluene(30,000 TPA) and downstream ethylation(10,000 TPA) at a capex of Rs 190 crore.
- Quadrupled PDA(Phenylene Diamines) capacity from 3000 TPA to 12,000 TPA provides strong footprint of future growth. We believe strong demand from end user industries like high end polymers will help the company to work on optimum utilization.
- Expanding chlorination capacity from 1,10,000 TPA to 1,75,000 TPA by FY19E.
- Setting up a new R&D lab at an investment of Rs 75 crore

Large deal wins gives incremental revenue visibility post FY20E

- Big deal wins of Rs 4000 crore (10 year revenue visibility) and Rs 10,000 crore (20 year revenue visibility) bagged by the company will give incremental revenues of Rs 900 crore every year from FY21E.
- The company plans to deploy capital worth Rs 690-700 crore in phases from FY18-20E and will generate cumulative revenues of Rs 14000 crore by FY35E.
- Blended margins from the deals will be approx. 26%.

Margins to expand further post expansion

- The company has consistently improved EBITDA margins from FY14-17. However, in FY18 company witnessed decline in margins to the tune of 230 bps and stood at 18.4% as compared to 20.7% in FY17. We believe stability of margins is linked to volumes which had consistently recorded growth of 10-15%. The company adopts a cost + margin model where the effective raw material price hike is passed on to end user with one quarter lag.
- We believe optimum utilization coupled with operating leverage in new business verticals will lead to improvement in margins and likely to be around 21-22% by FY20E and FY21E.

Impressive execution track record with sound fundamentals

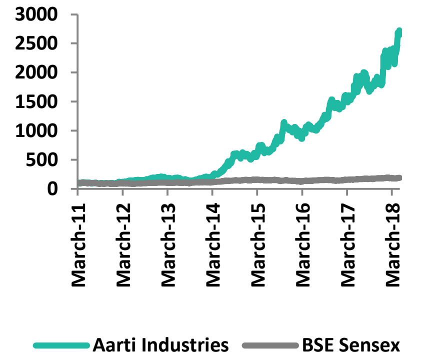
- In the past the company has been able to demonstrate strong execution record by expanding customer base, de-risking business with multiple end user industries, focusing on value added products. This resulted EBITDA multiplying by 1.5x over FY15-18 and going ahead it is expected to be 1.9x from FY18-21E.
- The company has reinforced its cost leadership model and backward integration by reducing capital expenditure.

Stock Details	
Industry	Chemicals
Sensex	36542
Nifty	11018
Bloomberg Code	ARTO:IN
BSE Code	524208
NSE Code	AARTIIND
Eq. Cap. (Rs. Crs.)	40.65
Face Value (Rs.)	5
52-w H/L	1360/821
Market Cap (Cr.)	10227
Book Value (INR)	194
Avg. Daily Vol.	3196
TTM EPS (Rs.)	40.97
P/E (x)	30
P/BVPS (x)	6.4

Valuation Data

	FY18	FY19E	FY20E
P/E	30.3	25.1	22.4
P/BV	6.4	5.3	4.6
EV/EBITDA	15.0	14.0	13.0

Aarti Industries Ltd Vs SENSEX



Share Holding Pattern

	Q4FY18	Q3FY18	Q4FY17
Promoters	51.1%	53.6%	54.6%
FII	4.3%	4.4%	3.9%
DII	14.2%	13.2%	12.1%
Retail	29.2%	27.4%	29.3%

13%	19%	16%
Total Revenue CAGR FY18 -20E	EBITDA Growth CAGR FY18 -20E	PAT growth CAGR FY18-20E

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Valuations

We expect the company to notch re-rating in its valuations on the back of:

- Higher volume offtake on the back of expansion and foray into new business verticals.
- Strong demand from key end user industries like agrochemicals, dyes & pigments, speciality additives, pharma etc.
- Strong revenue and profitability owing to huge capex visibility.
- Diversification in high margin business to improve the overall EBITDA margins of the company.

- Aarti Industries Ltd has consistent track record of performance in terms of volume growth and revenue visibility, hence, we believe DCF valuation combined with EV/EBITDA multiple method would be much appropriate to value the company.
- In DCF valuation, we factor in WACC of 10.3% & Risk free rate of 7.21% (Average 10-Year G-Sec bond yield).
- For EV/EBITDA method, we assign target multiple of multiple of 15x by FY20E EBITDA.
- Combining the above valuation methods we arrive at a **target price of Rs 1543/share by FY20, thereby giving an upside of 24.4% from current valuations.**

Financial Snapshot

Particulars(INR Crore)	FY14	FY15	FY16	FY17	FY18	FY19E	FY20E	FY21E
Revenue	2632.5	2908.0	3006.6	3163.5	3806.2	4554.5	4824.7	6036.2
Growth		*10.5%*	*3.4%*	*5.2%*	*20.3%*	*19.7%*	*5.9%*	*25.1%*
EBITDA	401.5	465.7	572.3	653.5	699.3	870.2	983.8	1254.6
Growth		*16.0%*	*22.9%*	*14.2%*	*7.0%*	*24.5%*	*13.0%*	*27.5%*
PAT	162.4	205.9	256.9	315.8	333.1	402.2	449.1	623.2
Growth		*26.7%*	*24.8%*	*22.9%*	*5.5%*	*20.7%*	*11.7%*	*38.7%*
EBITDA Margin(%)	15.3%	16.0%	19.0%	20.7%	18.4%	19.1%	20.4%	20.8%
PAT Margin(%)	6.2%	7.1%	8.5%	10.0%	8.8%	8.8%	9.3%	10.3%
EPS	18.3	23.2	30.8	38.5	41.0	49.5	55.2	76.6
P/E	4.7	10.7	14.0	16.6	30.0	25.1	22.4	16.2

Source: NSPL Research

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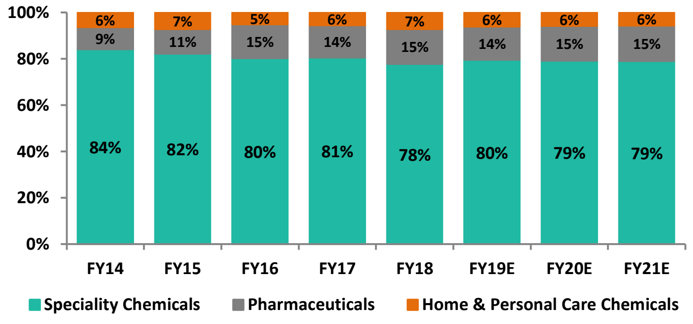
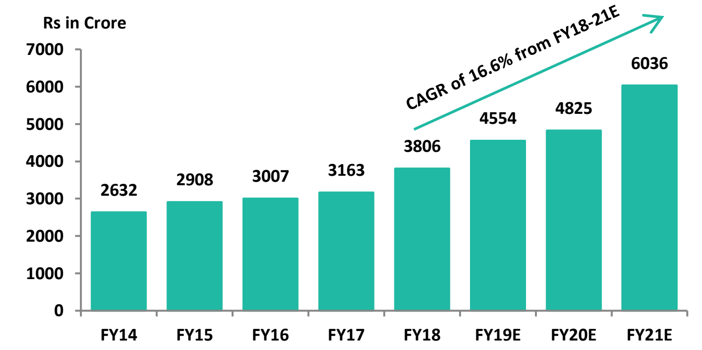
Investment Rationale

Segmental breakup of revenues (in %)



Source: NSPL Research

Strong revenue growth on the cards



Source: NSPL Research

1.) Strong sustainable business model gives promise for future growth

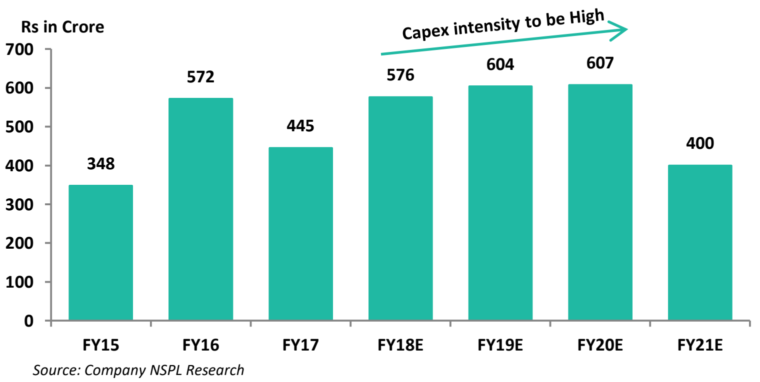
- Historically, the company's revenue grew at CAGR of 9.7% from FY14-18. The major contributor to the growth was the pharma segment where revenues became 2.2x from Rs 249 crore in FY14 to Rs 556 crore in FY18.
- Speciality chemical business segment revenues grew at a CAGR of 6.7% from FY14-18. However, going forward with foray in new business verticals, we expect this business to grow at a CAGR of 11.3% from FY18-21E.
- The speciality chemicals share has declined from 84% in FY14 to 78% in FY18. On the flip side, pharma has shown promising growth capturing 15% in FY18 from 9% in FY14.
- We expect the pharma business to contribute 15% and speciality chemical business to contribute around 79-80% to the top-line by FY21E.
- Home & personal care segment contributed 5-7% in revenue from FY14-18. Going ahead we do not expect significant contribution from this business and is expected to be around 5-6% by FY21E.

Past and future project plans on the table

Project	Location	Capacity details	Commissioning	Status	Comments
Nitro-chloro benzene	Vapi	75,000 TPA from 57,000 TPA	Nov-15	Completed	To strengthen existing presence by diversifying further in benzene value chain
PDA(Phenylene Diamines)	-	12,000 TPA from 5,400 TPA	Q2FY17	Completed	To strengthen its presence in high end polymer market
Toluene Value Chain					
Nitro- Toluene	Jhagadia	30,000 TPA	Q2FY18	Completed	To foray in toluene chain. Its by-product xylene will be an input in ethylation
Ethylation	Dahej	8,000-10,000 TPA	Q2FY17	Completed	This will increase agrochemicals output by 8,000-10,000 TPA
Chlorination	Jhagadia	-	Expected in FY20E	Yet to commence	-
Chlorobenzene Value Chain					
Chlorination	Jhagadia	1,75,000 TPA from 1,10,000 TPA	Expected in FY19E	Yet to commence	This will be used to service the Rs 4000 crore contract
Calcium chloride	Jhagadia	30,000 TPA	Q2FY17	Completed	Used for oil exploration and for de-icing activities
Co-gen power plant	Jhagadia, Kutch & Vapi	-	Q4FY17	Completed	Helps in reducing power cost by Rs 25-30 crore
Hydrogenation	-	-	Expected in FY19E	Yet to commence	-
Acid reconcentration	Vapi	-	-		Recycling of sulphuric acid to reduce working capital

Source: NSPL Research

Capex intensity to propel growth



Source: Company NSPL Research

- We believe the company will incur an overall capex of Rs 1600-1700 crore from FY19-21E including the maintainance capex as seen in fig.
- The capex of Rs 1600-1700 crore is divided into:
- — Rs 690-700 crore for large deals,
- — Rs 75 crore for R&D lab,
- — Rs 100 crore for zero discharge plant,
- — Rs 400-425 crore maintainance capex,
- — Rs 150-160 crore pharma de-bottlenecking and
- — Rs 200-250 crore for speciality chemical de-bottlenecking capex.

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2.) Leading player in Nitro-Chloro benzene(NCB) value chain makes it the preferred player

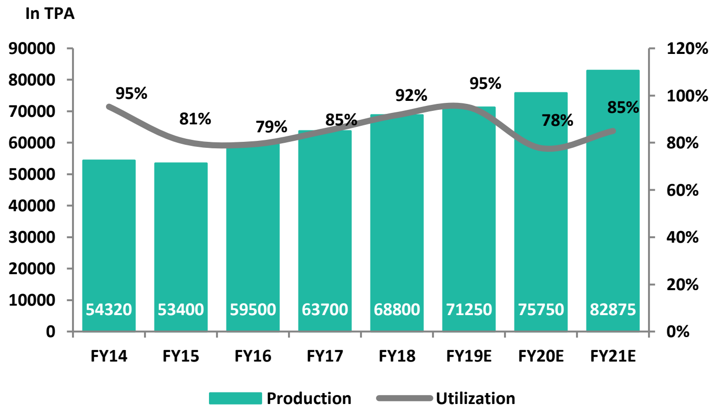
- The company is the leading player in benzene based derivatives having presence across the entire value chain (Chlorination, Nitration, Ammonolysis, Hydrogenation). The company has ~65% domestic and 25-40% global market share.
- The company has forward & backward integrated capacities which makes it the market leader in benzene derivatives.
- Over the years, company has consistently increased capacity of PNCB/ONCB along with building strong distribution network over the globe, which is nearly impossible for any competitor to replicate.
- The company has maintained a dominant position in Nitro- Chlorobenzene based speciality chemical market.
- The company expanded its capacity from 57,000 TPA in FY14 to 75,000 TPA in FY16. With further de-bottlenecking we expect 30% increase in overall capacity to 97,500 TPA by FY20E.

Past capacity addition makes Aarti the dominant player in NCB business

Nitro-Chloro Benzene	FY14	FY15	FY16	FY17	FY18	FY19E	FY20E	FY21E
Installed Capacity in TPA	57000	66000	75000	75000	75000	75000	97500	97500
Capacity Addition		9000	9000				22500	

Source: Company NSPL Research

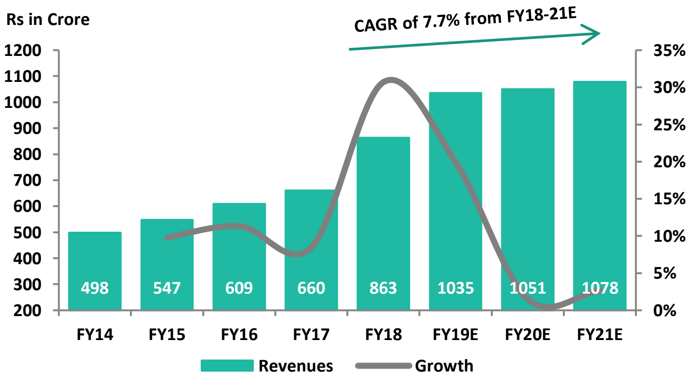
Strong demand of PNCB/ONCB to lift utilization



Source: NSPL Research

- The company has virtual monopoly in the NCB business.
- PNCB demand has seen a growth of approx. 20% in the previous decade. The major demand comes from pharma sector. PNCB is used in the manufacture of framycetin, paracetamol and dyes.
- ONCB demand comes from agrochemicals. This is used as an intermediate product for the manufacture of red dye and aniline. The remaining demand comes from the rubber chemicals, synthetic aromatics, perfumes and lubricants.
- The company is operating at 91.7% utilization in FY18 and we expect it to be approx. 95% by FY19E.
- We expect volume CAGR of approx. 6.4% from FY18-21E led by strong demand of PNCB from the domestic market.

De-bottlenecking to drive NCB revenue growth



Source: NSPL Research

- Since the company is resorting for de-bottlenecking the growth going ahead will be on the back of increased volumes.
- Increase in realizations could also be a reflection of increasing crude oil prices, since the company works on cost basis model where it passes on the increasing crude oil price effect to the end user with one quarter lag to ensure that margins remains unaffected.
- We believe the nitro-chlorobenzene(NCB) business to grow at a CAGR of 7.7% from FY18-21E.

Competitive positioning and wide clientele base augurs well

- The company is consistently expanding its R&D facilities to cater to niche markets and diversify the product portfolio.
- The company supplies products to more than 500 domestic customers and over 150 international customers.
- The company has diverse portfolio of products catering to diverse clientele & end users. Key end user industries are agrochemicals(25%), polymers & additives(20%), dyes & pigments(20%) and pharmaceuticals(15%) etc.
- Good monsoon, increase in urea subsidy & DBT installation etc will drive the growth of agrochemical companies which will directly reflect the company's growth going ahead.

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3.) Nitro-Toluene expansion will diversify the company's business model

- The company has installed capacity of 30,000 TPA in Gujarat (Jhagadia). The commercial production started from Q3FY18.
- The company aims to target the domestic market initially & then gradual ramp up in downstream value chain will help the company to become export oriented.
- The customers are same as in benzene derivatives, hence Aarti plans to leverage its existing relationship which will lead to ramp up in utilization in the near term.
- End user industries of Nitro-toluene are agro-chemicals, optical brightener's, pigments & pharmaceuticals etc.

Nitro-Toluene Raw Materials	
Toluene	Rs 55-65 kg
Nitric Acid	Rs 25 kg

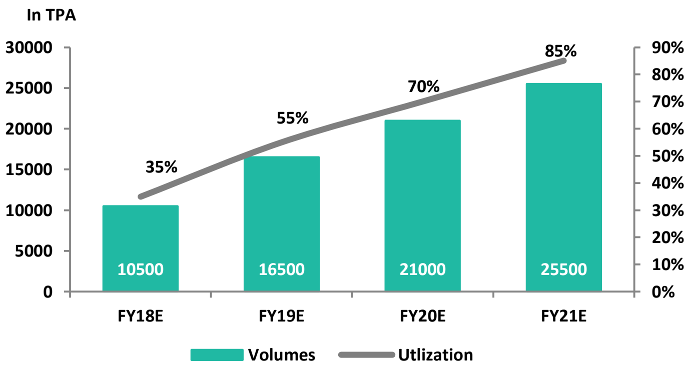
Source: NSPL Research

Average selling price of Nitro-toluene is approx. Rs 85-95/kg.

If toluene prices increase then the company increases the nitro-toluene prices to pass on the effect to end user in order to protect the margins.

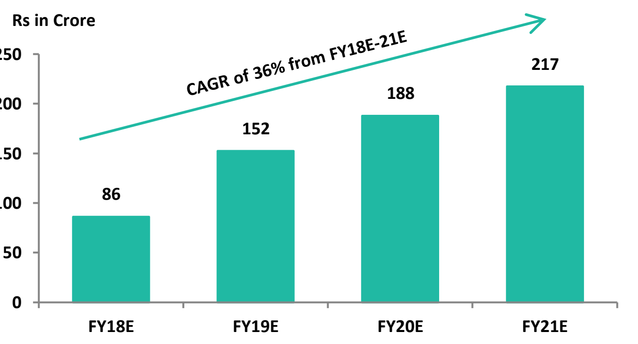
- Toluene (methylbenzene) is a natural substance of crude oil and is used as a raw material in the manufacturing of Nitro-Toluene. Toluene prices are in the range of Rs 55-65 per kg.
- Conc. Nitric acid is the another raw material used and prices are around Rs 25 per kg.
- 1 ton of toluene gives 1.25 ton of nitro-toluene.
- Nitro-Toluene is used to make nylon, polyurethanes and plastic soda bottles. Moreover, it is used in pharmaceuticals, cosmetic nail products, dyes and organic chemicals.

Impressive nitro-toluene volume growth backed by strong demand



Source: NSPL Research

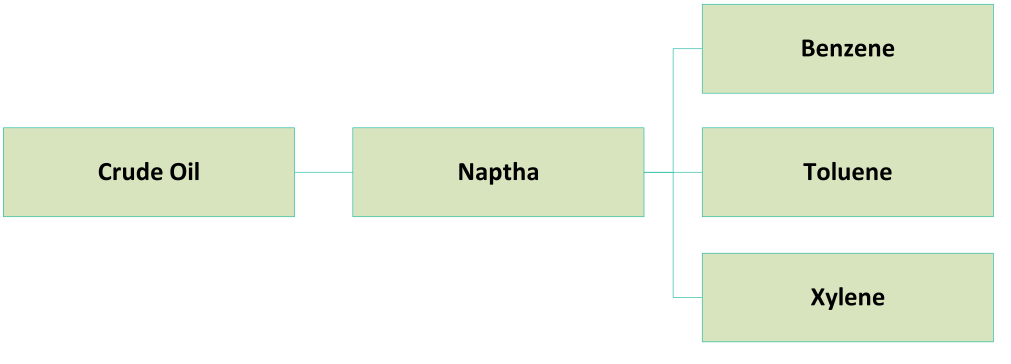
Strong revenue growth led by strong volumes



Source: NSPL Research

- The business operated at 35% utilization in FY18. We expect gradual ramp up in utilization levels due to leveraging of existing client relationship to cross sell toluene. Also, strong demand growth in domestic industry is expected since toluene is import substitute will lead to optimum utilization levels.
- Toluene prices generally follow the trend of crude oil. Since we expect the crude oil prices to increase in FY19E, we factor in toluene prices to go up.
- We believe at optimum utilization the business could generate revenues of approx Rs 180-230 crore by FY20E.
- We expect the business revenue to grow at a CAGR of 36% from FY18-21E.

Toluene Production Chain



Source: NSPL Research

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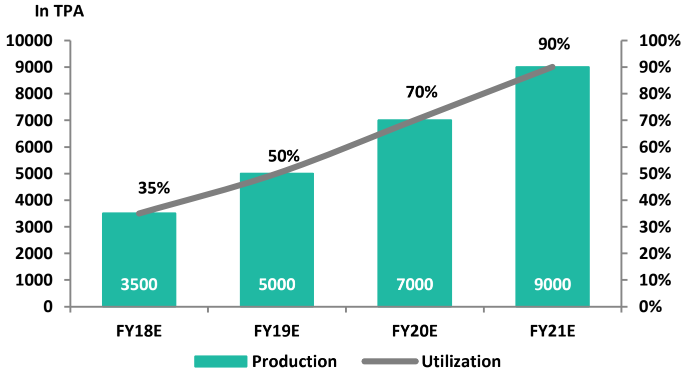
4.) Downstream expansion in Ethylation improves business visibility

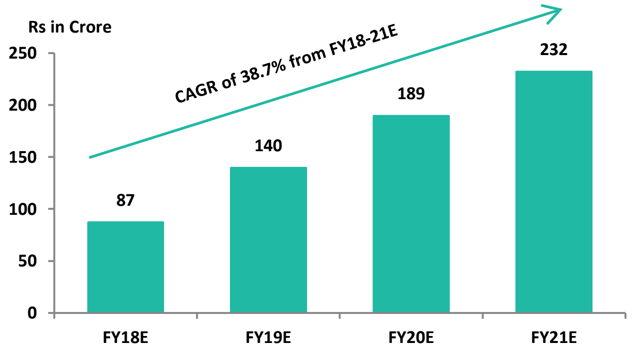
Strong agrochemical offtake to increase demand of ethylation



Source: NSPL Research

- The company is the first to produce ethylation derivative in India.
- The Greenfield ethylation unit has adopted Swiss technology. The company has the capacity to manufacture about 8,000 – 10,000 TPA of ethylene derivatives in Dahej.
- **Mono Ethyl Aniline** is the ethylene derivative produced.
- End user of this derivative is mainly Agrochemical(Herbicide) and speciality additives chemicals.
- Current realizations of this derivative is Rs 200-300 per kg.
- In FY18 utilisation stood at 35%. On the back of good monsoon, increase in fertilizer subsidy and DBT installation we expect utilization to be above 50% and volume CAGR to the tune of 37% from FY18E-21E.

Ethylation revenue trajectory to be strong

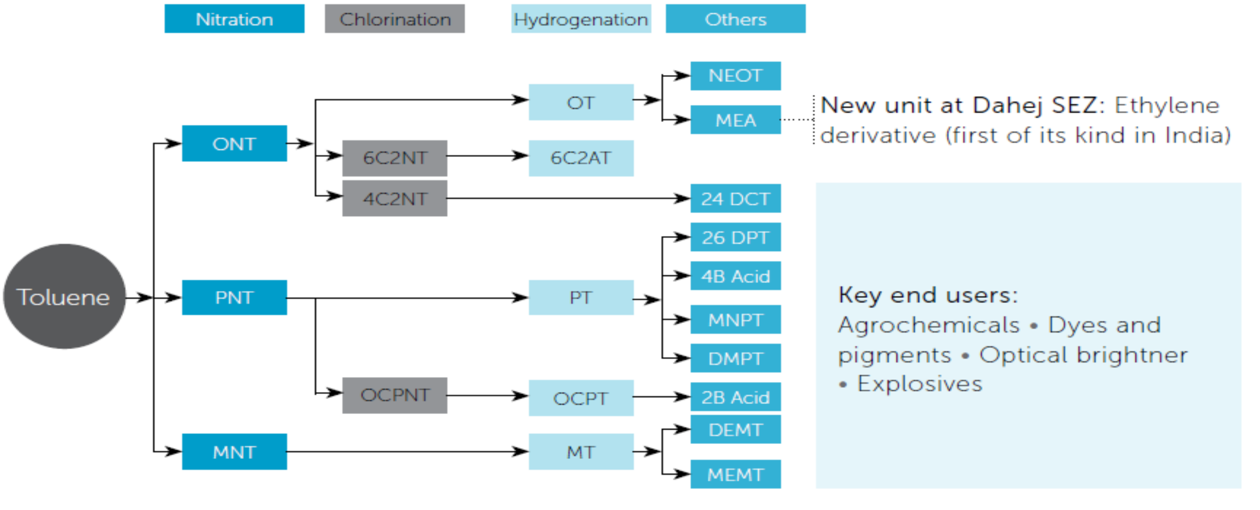


Source: NSPL Research

- Strong demand in the domestic market and low base effect will eventually lead to strong revenue trajectory going ahead.
- This product has margins of approx. 20-25%, since major raw material xylene is obtained from nitro-toluene as a by-product which reduces input cost.
- At peak utilization, the plant can generate revenues close to Rs 200-250 crore by FY21E.
- We expect the company to post revenue CAGR of 38.7% from FY18-21E.

- One of the raw material required is ethylene which will be sourced through a pipeline directly from the supplier Reliance Industries which is situated few kms away, it will enhance supply seamlessness and moderate logistical challenges.
- The other raw material will be obtained from the nitro-toluene facility which will be used as an input to ethylation.

Ethylene derivative value chain



Source: Annual Report, Company

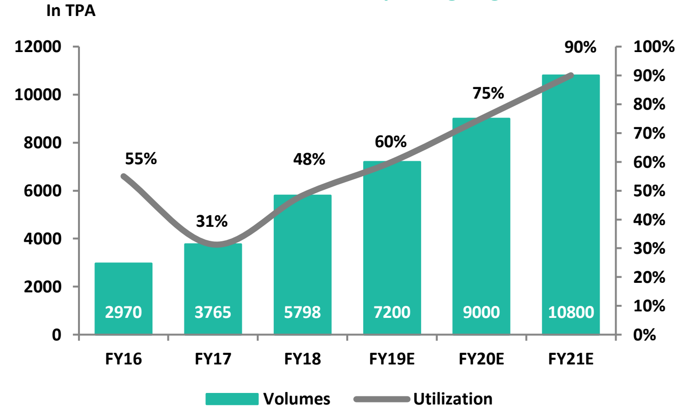
5.) Quadrupled PDA Capacity provides strong footprint of growth

- The company is the only manufacturer of PDA(Phenylene Diamines) in India. This is used as an import substitute in domestic market and for polymer application in global market.
- PDA is one of the benzene derivatives and is mainly used in manufacturing dyes, engineering polymer's , speciality additives, photography and medical applications.
- The company has increased the capacity of PDA(Phenylene Diamines) from 5400 TPA in FY16 to 12,000 TPA in FY17.

Phenylene Diamines (PDA)	FY14	FY15	FY16	FY17	FY18	FY19E	FY20E	FY21E
Installed Capacity in TPA	3000	3000	5400	12000	12000	12000	12000	12000
Capacity Addition			2400	6600				

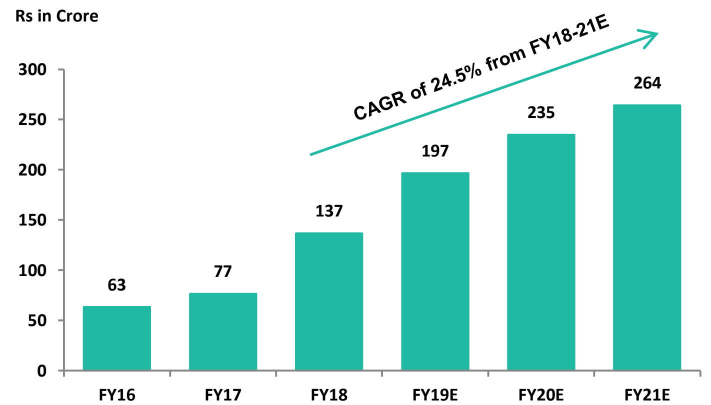
Source: NSPL Research

Utilization of PDA to improve going ahead



Source: NSPL Research

Strong PDA revenue growth led by strong volumes



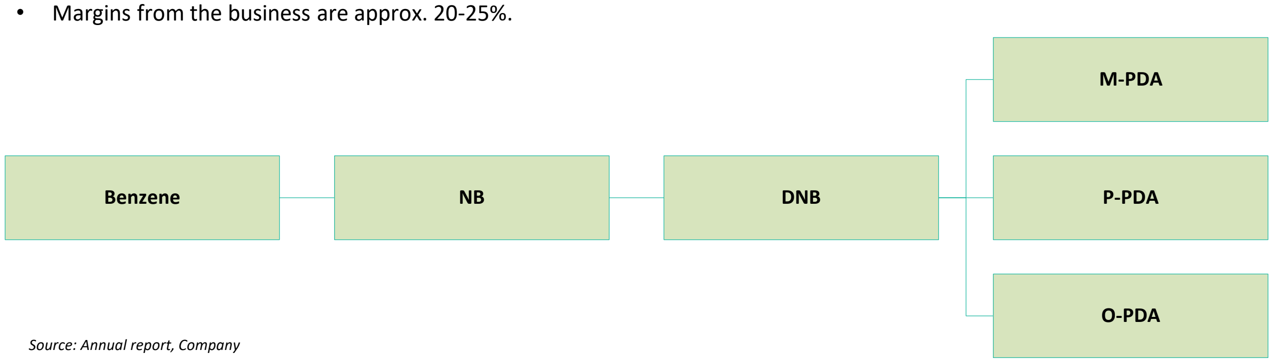
Source: NSPL Research

- Strong demand from high end polymers coupled with operating leverage and improved visibility in the domestic markets will eventually lead to revenue visibility of 1.9x from FY18-21E to the company.
- This expanded capacity will strengthen the company's presence in the high growth industries of engineering polymers and speciality additives making Aarti Industries the only Indian source for MNCs who presently do not source this product from India.
- Post expansion in FY17, the company operated at a low utilization of 31.4%. In FY18 utilization stood around 48%. We expect strong volume growth of 23% CAGR from FY18-21E.
- Since no further expansion is yet outlined we expect the plant to run on near optimum utilization levels by FY21E.

- The specialty polymers market is expected to display significant growth in the coming years due to constantly changing needs of end-user industries and technological advancements in the application sectors of specialty polymers.
- The high end polymer market globally is expected to grow at 8-9% per annum.
- The company being the only producer of PDA in India, hence we expect the business to gain significant presence across the market. Increasing end use applications will lift the demand coupled with operating leverage will eventually lead to operate the capacity at near optimum levels.
- We expect revenues to grow at a CAGR of 24.5% from FY18-21E.

Benzene to PDA Process Flow

- PDA is created through reduction of di-nitro benzene. The business is the highest growth segment in terms of revenues and profitability for the company.
- Margins from the business are approx. 20-25%.



Source: Annual report, Company

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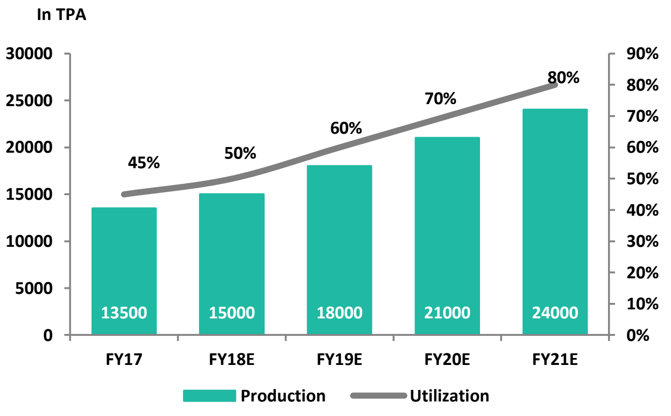
6.) Calcium chloride business

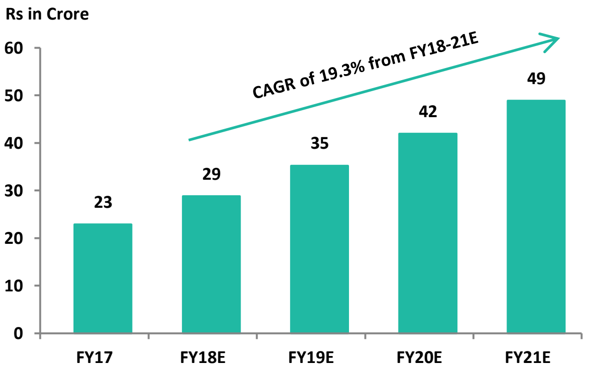
- The calcium chloride granulation unit has an installed capacity of about 30,000 TPA at Gujarat(Jhagadia).
- This unit convert the by-product HCL into high quality calcium chloride granules which is then exported in global markets.
- The company derives 98% of revenues through exports.
- Calcium chloride finds application in oil extraction and de-icing activities.
- The trend in the international oil & gas sector is related to the business growth. Thus, any downturn in the international oil & gas sector can affect the business to a great extent.

Expectation of optimum utilisation post FY21E



Source: NSPL Research

Expected revenue trajectory



Source: NSPL Research

- We believe with no capacity addition in the pipeline the company will be able to operate at optimum utilization by FY21E.
- At optimum utilization the company will generate revenues of Rs 50 crore by FY21E.
- We expect revenue to grow at a CAGR of 19.3% from FY18-21E.

Production process of calcium chloride

- Calcium chloride is produced as a product solution from reaction of calcium carbonate and hydrochloric acid upon the following reaction:

$$CaCO_3 + 2HCl = CaCl_2 + H_2O + CO_2$$

- Limestone and HCL are the raw materials used to produce calcium chloride.
- Any fluctuation in the pricing of raw materials will affect the margins of the business.

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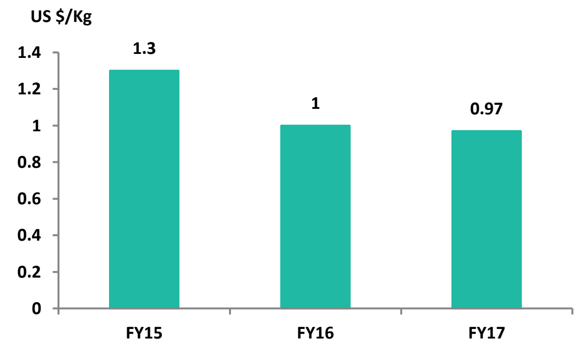
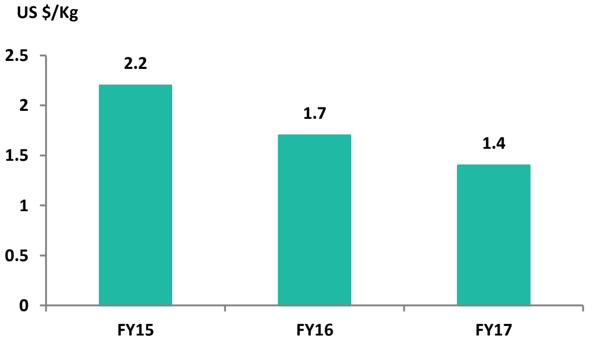
7.) Despite decline in selling prices of key chemicals EBITDA grew strongly

Para Di-Chloro benzene



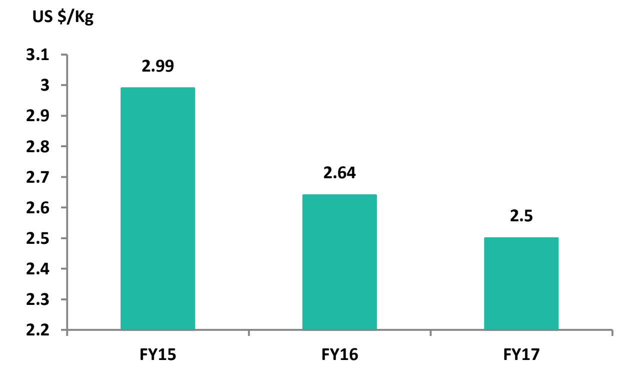
Source: NSPL Research, Infodrivemedia.net

3, 4 Di-Chloro Aniline



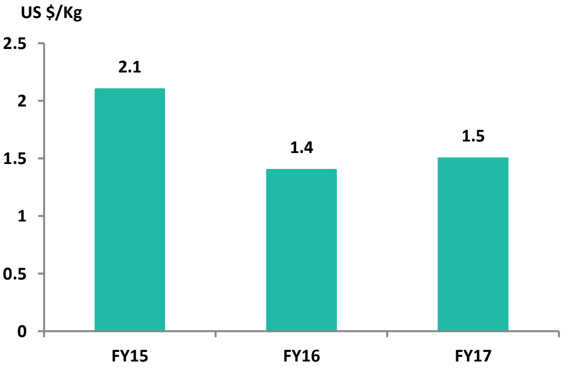
Source: NSPL Research, Infodrivemedia.net

Ortho Nitro Aniline



Source: NSPL Research, Infodrivemedia.net

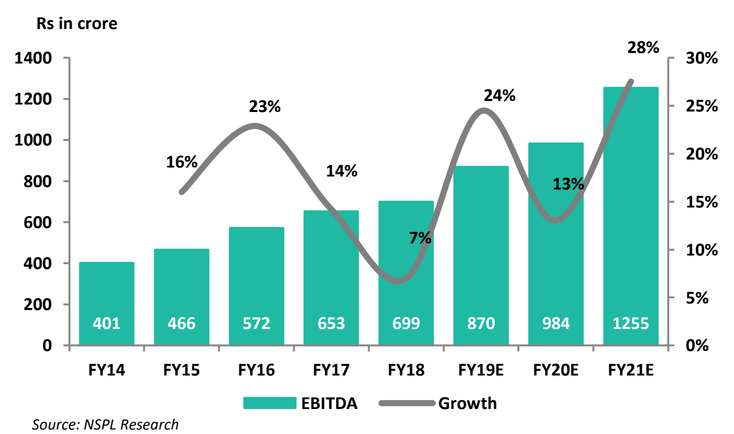
Mono Methyl Aniline



Source: NSPL Research, Infodrivemedia.net

- The company follows cost + margins business model wherein any sort of fluctuation in raw materials is passed on to the end user with one quarter lag.
- As shown in charts above, the selling price of key chemicals has been continuously decreasing in the export market and despite decline in selling prices, the company has been able to grow its absolute EBITDA and maintain the EBITDA margins from FY14-17.

Strong EBITDA growth going ahead



Source: NSPL Research

- The company has been able to strategically hedge themselves from the declining selling prices of their key chemicals by following cost + margin business model. Once the selling prices starts to increase in favour of the company, strong set of numbers can be expected.
- In FY18, company recorded strong volume growth in the range of 10-15% which led to revenue growth. However, going ahead with revival in **volume + price effect** will lead to stronger growth in topline and EBITDA.
- We expect EBITDA to grow at a CAGR of 21.5% from FY18-21E.

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8.) Big deals to materialize post FY20E gives strong revenue visibility

- The company secured 2 high value contracts which provides significant revenue visibility in the long term.
- For both contracts, the respective customers are global majors with annual revenues of over US$10b, although the company has not disclosed their names.
- The company secured 2 deals as mentioned below:
    1.) Rs 4000 crore deal for 10 year period.
    2.) Rs 10,000 crore deal for 20 year period
- We believe these deals will have significant impact on the earnings of the company going ahead.

Rs 4000 crore deal for 10 year period

- In June 2017, the company bagged Rs 4000 crore contract from a global agrochemical company to supply a high-value agrochemical intermediate for use in herbicides over a period of 10 years, beginning FY21.
- As per the contract, the company will be one of the major suppliers of the intermediate to the customer.
- The contract requires an investment of Rs 400 crore by the company(10% capital employed).
- Management expects operating margins from this deal to be approx. 40% for a period of 10 years.
- We expect cumulative profit to be approx. Rs 750-800 crore and post tax margins to be approx. 20-22% over 10 years . Revenues will be equal across the contract period of Rs 400 crore per annum from FY21E.

Rs 10,000 crore deal for 20 year period

- In December 2017, the company bagged another contract worth Rs 10,000 crore from a leading global chemical conglomerate for exclusive supply of a high-value specialty chemicals intermediate over a period of 20 years, beginning FY21.
- The company will only act as a converter/processor on the intermediate.
- The customer will provide the company with approx. Rs 290-300 crore as advances (in installments) towards the capex required and these advances will be set off against revenues from the contract over a period of time.
- The margins from the contract will be approx. 15%.
- We expect the cumulative profit to be approx. Rs 1000 crore over a period of 20 years. Revenues will be equal across the contract period of Rs 500 crore per annum from FY21E.

9.) Buy-backs in recent past increases our confidence in the company

Buyback Math			
	No of shares	Price	Value in crores
January 2018	820000	1200	98.4
October 2016	1200000	800	96
Total	**2020000**	**962**	**194.4**

Source: NSPL Research

- The company has in the past buyback up to 20.2 lakh equity shares, representing up to 2.42% of the total number of equity share capital. The average buy-back price per equity share was Rs 962 payable in cash for an aggregate buy-back size amount of Rs 194.4 crore.
- Buybacks gives us a lot of confidence in the company as this indicate that management themselves believe that lot of value unlocking can happen in the company which will drive the growth going ahead.

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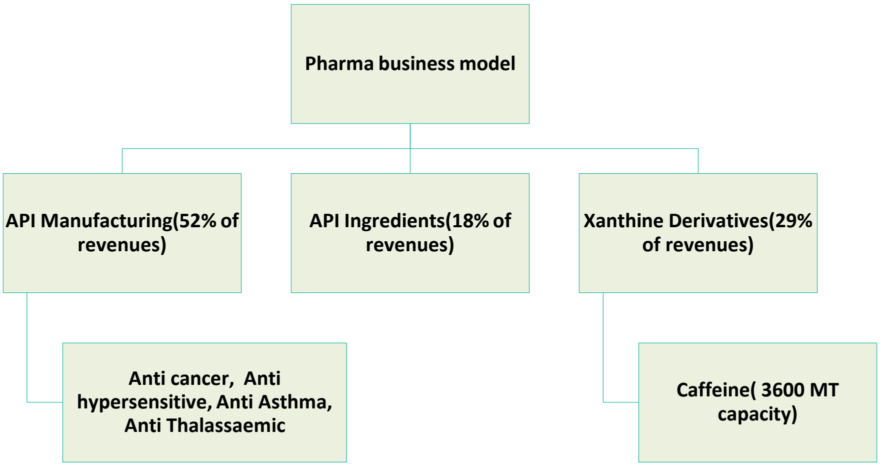
10.) Pharma business to witness strong growth trajectory going ahead

- From FY14-18, pharma business has shown promising growth which led to revenues becoming 2.2x. However, pharma business has not been able to contribute significantly to the bottomline. EBIT margins from the business is approx. 10-14%.
- Since pharma is a working capital intensive business which chokes the cash in working capital, the cash flows from the business is not improving.
- Almost 50% of the revenues from pharma business are from exports to US and Europe.



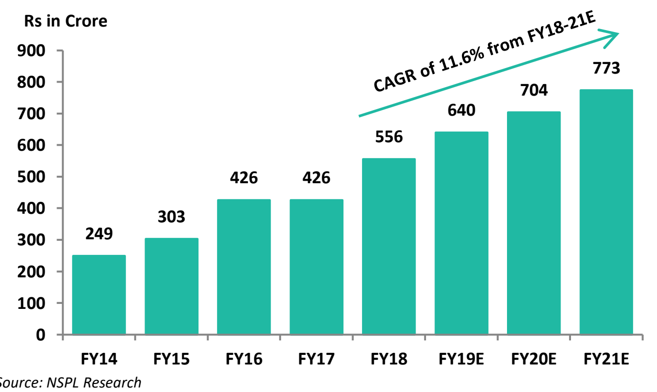
Source: NSPL Research

The pharma business is divided into 3 parts as discussed in the figure above:

1. API Manufacturing
2. API Ingredients
3. Xanthine Derivatives.

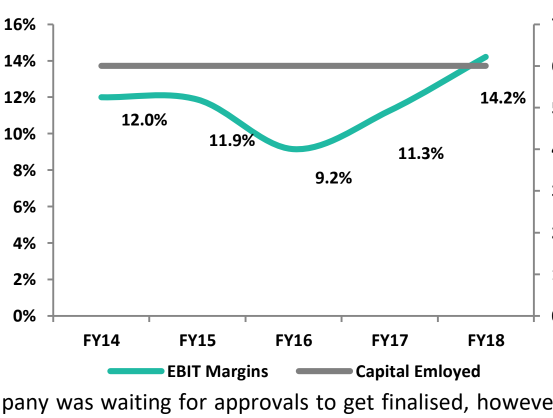
- The pharma portfolio comprised of 48 commercial APIs, with 33 EUDMFs & 28 US DMF. It has 12 API's under development.
- The API manufacturing facility is USFDA & EUGMP accredited with dedicated production blocks for Steroids and Oncological APIs.
- Aarti being backward integrated in the pharma business helped to sustain the downturn in pharma cycle.
- In the Xanthine derivatives segment, company has flagship product called **Caffeine** with an installed capacity of 3600 TPA. Despite volatility in caffeine prices from FY15-17 the company was able to maintain stable revenues.
- The company has been able to successfully clear all the USFDA inspections with no warning letters.
- However, we believe the pharma cycle is bottomed out and export market might see a significant revival which will aid the pharma revenues going ahead.

Pharma revenue set to grow on strong footing



Source: NSPL Research

Strong margin recovery seen in pharma business



- In FY16, EBIT margins recorded lowest at 9.2% because the company was waiting for approvals to get finalised, however, it rebounded again to 11.3% in FY17 and in FY18 it stood at 14.2%.
- We believe as the utilization of the existing capacity start's increasing, operating leverage will start to kick in which will result in expansion of margins & ROCE going forward.
- The company has diverse clientele base in pharma segment as shown in fig below.
- We expect the pharma revenue to grow at a CAGR of 11.6% from FY18-21E.

Pharma client list

Segment	Client	% of revenues
Pharma	Sun pharma, Sanofi, Cipla, Dr.Reddy's, Zydus, Cadila etc	15-20%

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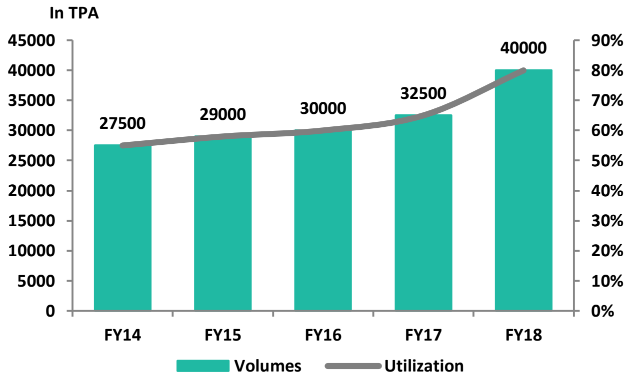
Other business: Home & Personal Care Chemicals(HPC) business not generating enough at the bottom-line

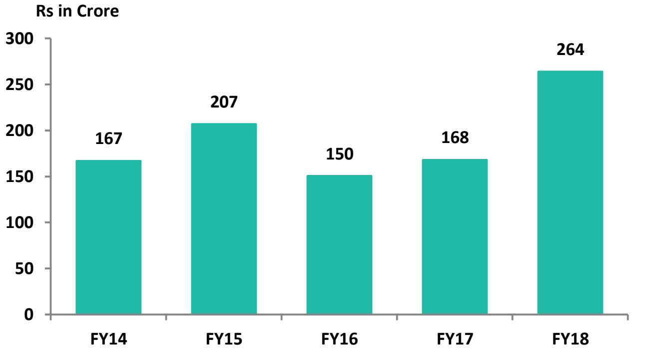
- HPC(Home & Personal Care Chemicals) business has shown quite sluggish trend over the years. The business contributes 5-6% of the total revenues. On the bottomline front the contribution is very marginal. EBIT margins from the business are 0.5-1% and the capital employed is approx. 3.5%.
- The management has already stated their intent to divest the business into a separate entity & to focus on high margin speciality chemical business.
- The reason for sluggishness in the margin front is because surfactant manufacturers enjoy modest bargaining power with large raw material suppliers who compete on pricing and squeeze suppliers on the margin front which has affected the company. We believe only strong players who have near monopoly and strong relationship with the clients can survive this businesses.
- The installed capacity is 50,000 TPA and currently operating at about 80% utilization. We believe utilization to remain in the same range going ahead.

HPC business volume show a growth trend



Source: NSPL Research

Revenue started gaining momentum



Source: NSPL Research

- The company has manufacturing plants located at Pithampur (Madhya Pradesh) and Silvassa. The company manufactures Non-ionic surfactants which includes concentrates for shampoo, hand wash, dish wash, oral care etc.
- The major customers of the business are HUL, CalvinKare, Dabur, 3M India etc.

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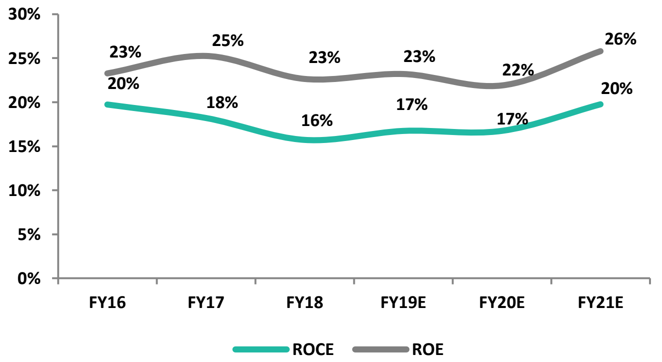
Financial metrics

Return ratios to improve going ahead

Operating leverage to expand return ratios going ahead

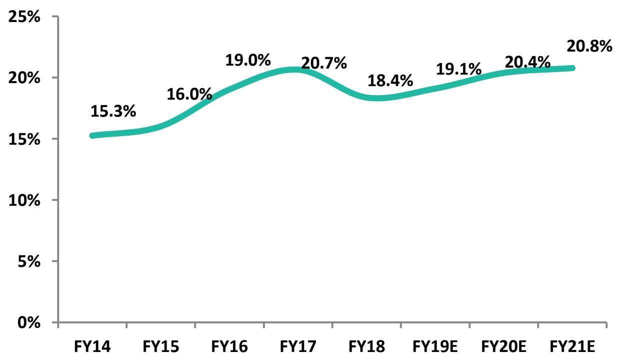


Source: NSPL Research

- Historically from FY15-17, ROCE is around 16-20% and ROE around 23-25%. The company has been able to maintain such strong returns as the company has insulated itself from the fluctuation's of raw material pricing.
- We believe foray in new business verticals like nitro-toluene, ethylation etc will be the major reasons for return ratios expansion going ahead. Also, De-bottlenecking of pharma capacity will lead to operating leverage and revival in pricing of key molecules like caffeine etc will be an incremental driver of return ratios going ahead.
- Investments in R&D to fetch better innovated products which benefits will eventually lead to higher return ratios going ahead.
- Going forward, we expect ROCE at 20% and ROE at 26% levels in FY21E.

New business verticals to improve the EBITDA margins

EBITDA margins to expand post expansion

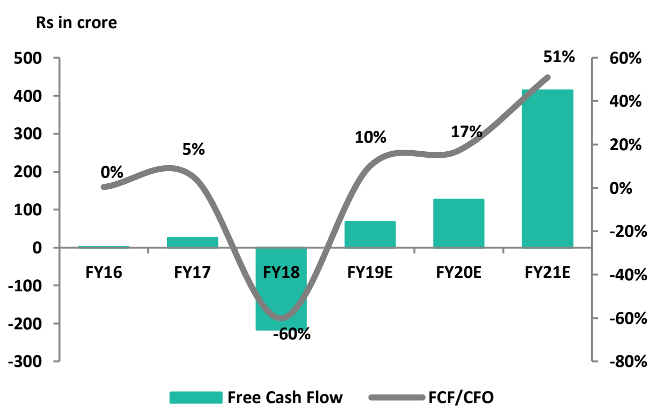


Source: NSPL Research

- The company has been able to improve the EBITDA margins from 15.3% in FY14 to 18.4% in FY18.
- The company is in a position to be accredited as one of lowest cost manufacturers because of complete integration(Backward & Forward) across the value chain.
- The improvement in margins was due to strategic hedging of raw material prices and controlled logistics cost.
- Going ahead, value added and high margin business will lead to higher operating leverage, coupled with ramp up in the utilization levels will improve the margins going ahead.
- With increasing crude oil prices we believe the company will be able to pass on the complete price increase effect by increasing the product prices which will ultimately have no impact on the EBITDA.
- We forecast, EBITDA margins to be in the range of 20-21% in FY20-21E.

Strong free cash flow generation of 3-4x improves future visibility

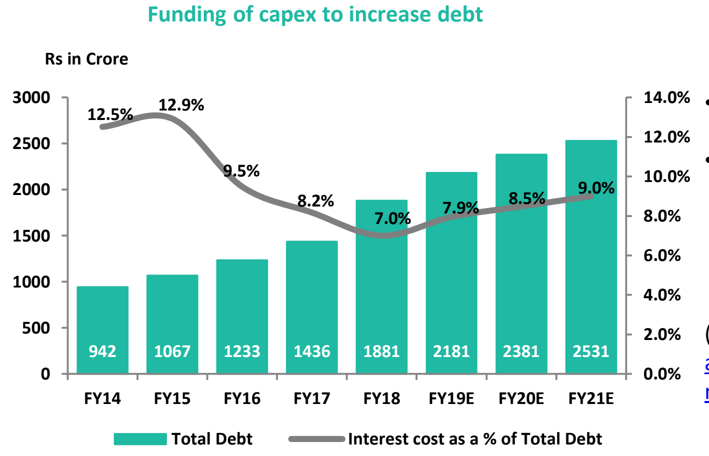
FCF/CFO to show strong traction by FY21E



Source: NSPL Research

- From FY15-18, the company reported very lumpy free cash flows owing to high maintainance capex.
- Going forth with the upcoming value added products, we expect the free cash flows to increase drastically.
- We expect the company to generate free cash flow to the tune of Rs 400-450 crore in FY21E and cumulative free cash flow of Rs 550-600 crore from FY19-21E which improves visibility in the long term.
- Free cash flow will be a major pie of the operating cash flow once majority of the capex is completed by FY21E(as shown in the fig).

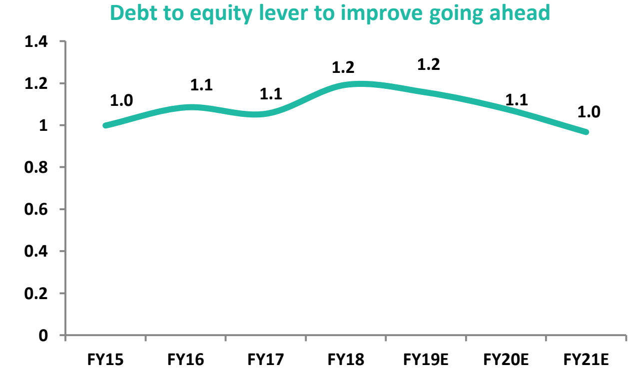
Debt to equity lever to improve going ahead



Source: NSPL Research

- The total debt as on FY18 stood at Rs 1881 crore with an interest cost of 7%. The company has been gradually improving interest cost as a percentage of debt which resulted in improvement of the bottom-line margins.
- We expect debt to increase by 650-700 crore from FY18-21E owing to funding of ongoing expansion capex.
- The company has availed total bank loan facilities of Rs 1362 crore as on September 2017. The company has strong credit rating on the debt borrowed. This has helped the interest cost as a percentage of debt to come down significantly from 12.5% in FY14 to 7% in FY18. Refer link below:

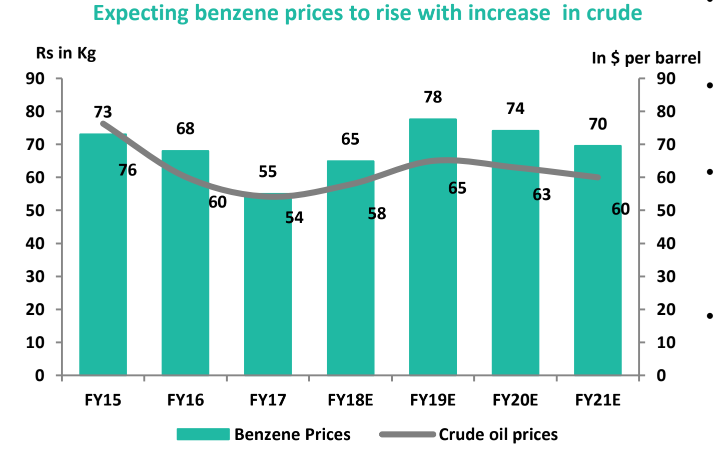
(https://www.crisil.com/mnt/winshare/Ratings/RatingList/RatingDocs/Aarti_Industries_Limited_January_05_2018_RR.html)



Source: NSPL Research

- The company's D/E has been hovering around 1.0-1.1x from FY15-17. In FY18 it peaked at 1.2x.
- Going ahead with the strong profit generation, we expect the D/E to improve.
- Approx. 50% of the total debt component is a function of short term borrowings which relates to funding the working capital for benzene inventory related adjustments in one quarter.
- We believe debt to equity to be in the range of 0.9-1x by FY20-21E.

Increase in benzene price is a pass on to end user



Source: NSPL Research

- Majority of the raw material required by the company is benzene and any significant fluctuation in benzene prices will affect profitability in the short term.
- However, the price increase of benzene is a pass on to the end user with one quarter lag. Hence, there is no material impact on the absolute EBITDA.
- The only impact of increase in benzene prices is that it increases the working capital requirement of the business which is funded by short term debt, leading to increase in interest outgo and decline in profitability on a temporary basis.
- Over the years, benzene prices has shown tremendous fluctuation still the company has been able to pass through the effect and have not taken any hit on absolute EBITDA. Inspite of such fluctuation, EBITDA margins increased from 15.3% in FY14 to 18.4% in FY18.

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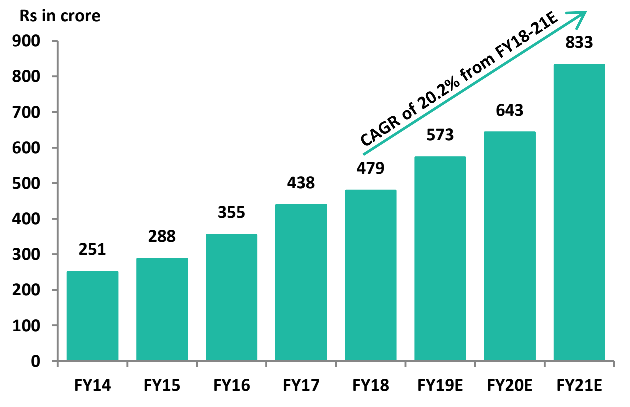
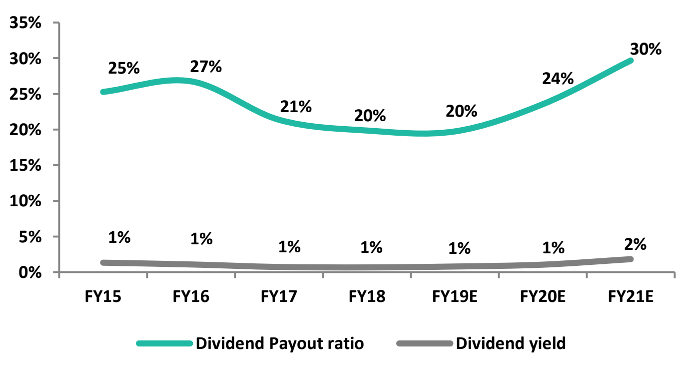
Strong cash profit generation augurs well



Source: NSPL Research

- Historically from FY15-18, the company generated annual cash profit in the range of Rs 250-500 crore and cash profit margins stood in the range of 10-14%.
- Going ahead we estimate cash profit to grow at a CAGR of 20.2% to Rs 833 crore by FY21E. Also cash profit margins to improve by 120 bps to 13.8% by FY21E.
- Strong cash profit generation helps to fund the working capital and capex thereby reducing complete dependence on debt.
- Cash profit is a measure of profitability, higher the profitability higher is the cash profit generation and vice-versa. We believe optimum utilization of value added verticals will substantially aid the bottom-line and thereby higher cash profit generation.

Consistent track record of dividend payment



Source: NSPL Research

- Historically, the company has consistently paid dividend of Rs 1 per equity share. Dividend pay-out ratio is in the range of 20-25% from FY15-18.
- We estimate the company to maintain healthy dividend per share. Dividend yield to be maintained between 1-2% by FY21E.

Wide experience base of promoters in speciality business instills our confidence in the management

- The company is promoted by the first generation technocrats graduated from reputed institutes like Department of Chemical Technology (UDCT), Mumbai.
- The company is promoted by three family entrepreneurs – Chandra Kant Gogri, Rajendra Gogri, Parimal Desai and Shantilal Shah.
- The promoter holding is 58.7% in the company.

Name	Designation	Classification	Education	Background
Mr. Chandra Kant Gogri	Chairman Emeritus	Founder	Chemical Engineer, UDCT	Founder of Aarti group. Chemical engineer from UDCT. Currently provides guidance to the board after his retirement in 2012.
Mr. Rajendra Gogri	Chairman, MD & CEO	Founder and brother of Mr. Chandra Kant Gogri	Chemical Engineer, UDCT and Masters in chemical engineering from Lowa University	Leads finance, operations & marketing
Mr. Rashesh Gogri	Vice Chairman & MD	Second Generation, Son of Mr. Chandra Kant Gogri	Production Engineer, Mumbai university	Commercial & marketing functions, especially for pharma segment
Mr. Shantilal Shah	Vice Chairman	Founder	Chemical Engineer, UDCT	Heads the banking and financial division
Mr. Parimal Desai	Director	Founder	Chemical Engineer, UDCT	Technical and R&D function for Aarti Group
Mr. Manoj Chheda	Director	Professional	B.Com	Graduate in commerce from Mumbai University and has experience in domestic and international marketing. Currently heads the international marketing
Mrs. Hetal Gogri Gala	Director	Professional	Electronics engineer, Mumbai and MEP from IIMA	She has experience in operations, purchase and marketing. She heads the purchase and supply chain management
Mr. Renil Gogri	Director	Son of Mr. Rajendra Gogri	Mechanical Engineer, IIT bombay	Handles systems development, improvement in operations, adaption of IT and other allied activities
Mr. Kirit Mehta	Director	Professional	B.Com	Graduate in commerce having 30+ years of experience in the chemicals industry

Source: NSPL Research

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Strong relationship across sectors and diversified client base

- In FY17-18, the company generated 85% of the revenues from the customers who have been associated for more than 5 years.
- No single customer accounted for more than 9-10% of revenues indicating diverse client base and no dependence on any single customer for majority of revenues.
- Foray in new business verticals like toluene which have the same set of customers as in benzene, the company has to leverage upon the existing client relationship to cross sell toluene. We believe this integration will further strengthen the client relationship and might be the sole supplier of benzene and toluene derivatives.
- Over the years, the company has transformed itself from **"Vendor to Partner"** indicating the faith which the existing client base have in the company.

Diversified clientele base

	Client	% of revenues
Agro-chemicals	**BASF, Gharda Chemicals Ltd, DOW,FMC, Syngenta, UPL, Bayer etc**	**20-25%**
Polymer & Additives	**BASF, Solvay, Teijin, Ticona, Everlight, Chemipro,**	**15-20%**
Paints, Dyes & Pigments, Printing Inks	**BASF, Eastman, Sudarshan Chemicals, Huntsman, Clariant, Atul Ltd**	**20-25%**
Pharma	**Sun pharma, Sanofi, Cipla, Dr.Reddy's, Zydus, Cadila, Pfizer**	**15-20%**

Source: NSPL Research

Key Risks

Rupee appreciation is a cause of concern

- Aarti's 50% of turnover is export oriented, hence rupee appreciation is a cause of concern.
- We have seen rupee appreciation from Rs 65 to Rs 63(2017-18) and such sharp fluctuation of rupee appreciation can impact the margins of the company. The company can hedge itself from small appreciation but if sudden changes in rupee occur then it can be a margin dampener.

Crude derived raw material

- The company's raw material are mostly crude derived which means fluctuation in crude prices may have a temporary impact on company's earnings.
- PAN, Alpha Olefins, Pthalic Anhydride are some of the raw materials which are crude derivatives.

Any delay in ramp up of capacity utilization can have significant impact on earnings

- Our faith in the company's growth is on the back of ramp up in existing utilization level which will lead to significant growth in earnings.
- Any disturbance in demand or slow ramp up of existing facility will have significant impact on the earnings.

Downturn in Pharma business can impact the bottom-line

- The pharma business is expected to turnaround owing to bottoming out of prices of existing molecules. The management too intends to increase the utilization, expansion of key molecule facilities etc. However, if there is any failure to improve the leverage from pharma business then it can impact the bottomline
- Also, the continual of pricing pressure in the overseas market can impact the bottomline.

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Valuations

- Incorporated in 1984, Aarti Industries Ltd is the largest producer of benzene based derivatives in India with a global footprint. The company has 17 integrated manufacturing plants (backward and forward) to manufacture more than 125 products. The company supplies products to more than 500 domestic customers and over 150 international customers. The products are used in the downstream manufacture of pharmaceuticals, agrochemicals, polymers & additives, speciality additive, rubber chemicals, surfactants, pigments, dyes etc. The company has reinforced its cost leadership model through backward integration and controlled operating cost. The company has in total 3 R&D centres across India. Out of the three, two are particularly focused on pharma API's and one in speciality chemicals.

- The company is diversifying its portfolio by foray in toluene business and downstream ethylation. We believe the capex of Rs 190 crore has the ability to generate Rs 400-450 crore at peak utilization. The plant has started contributing to revenues from Q3FY18. The customers are same as in benzene derivatives hence gradual ramp will lead to growth going ahead.

- The company has expanded its PDA capacity from 5400 TPA in FY16 to 12000 TPA in FY17. The expansion provides 1.9x the revenue visibility. Currently the plant is operating at 48% utilization and going ahead with strong demand from high end polymers we expect the revenue to grow at a CAGR of 24.5% from FY18-21E. The company is also in the manufacturing of calcium chloride business owing to high margin and manufacturing of HCL acid which is used as an input, is done in-house. The company has installed capacity of 30,000 TPA currently operating around 50-55% utilization. This is mainly exported and is used in oil exploration and de-icing activities.

- The pharma business has undergone intense pricing pressure impacting the margins. However, the company has expanded capacities in API's and caffeine business. With increase in utilization the pharma business might be a turnaround. The pharma portfolio is comprised of 48 commercial APIs, with 33 EUDMFs & 28 US DMF. It has 12 API's under development. The API manufacturing facility is USFDA & EUGMP accredited with dedicated production blocks for steroids and oncological APIs. We expect the pharma revenue to grow at a CAGR of 11.6% from FY18-21E.

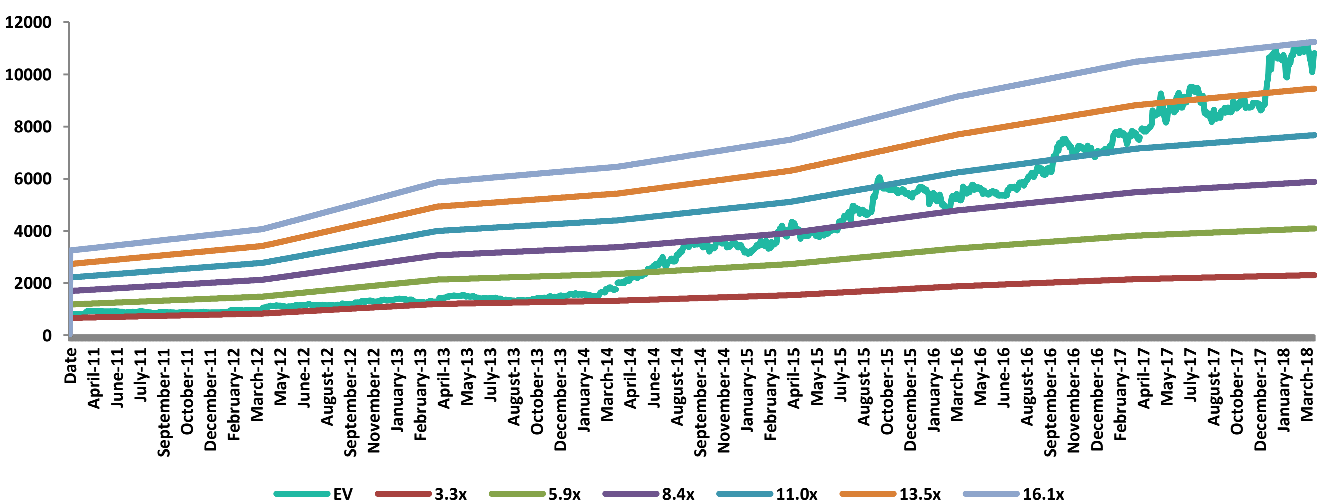
- The HPC business is not significant and over the years not contributed enough to the bottomline. Management has already guided the intent to divest the HPC business and clearly focus on high margin speciality chemicals business. We might see the HPC business divestment in the coming years. This might improve the cash flow to certain extent thereby improving the working capital.

- Going ahead, we estimate revenue/EBITDA/PAT to grow at 17%/22%/23% from FY18-21E respectively. Further, we factor in total capex of Rs 1600-1700 crore to be incurred in FY19-21E for said capacity expansion plans. The funding will be through debt and through internal accruals. We estimate the company to raise debt of approx. Rs 650-700 crore. We believe the company will generate cumulative free cash flow of Rs 550-600 crore from FY19-21E. Going forward, we expect the ROE/ROCE to be at 26%/20% respectively by FY21E from current 23%/16% in FY18.

Going forward we expect the company to notch re rating in its valuations on the back of:

1. Higher volume offtake on the back of expansion and foray into new business verticals.
2. Strong demand from key end user industries like agrochemicals, dyes & pigments, speciality additives, pharma etc.
3. Strong revenue and profitability owing to huge capex.
4. Diversification in high margin business to improve the overall EBITDA margins of the company.

EV/EBITDA Band chart



Source: NSPL Research

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We Initiate coverage on Aarti industries with a Buy rating and an average target price of Rs 1543/share (DCF & EV/EBITDA multiple). We believe that Aarti Industries Ltd offers a high revenue growth opportunity and has great potential in improving its profitability metrics on the back of new business verticals, operating leverage and to pass on the increased cost of raw materials.

Our DCF methodology helps us to arrive at a target price of Rs 1553/ share. Our methodology is divided into three phases:

- Forecasting for FY22E & FY23E at a rate of 17.3% derived from (ROE*Retention rate)
- A terminal growth rate of 5.5% which helps us arrive at a terminal value
- WACC has been calculated as 10.3%, Risk free rate taken as 7.21%.

Our EV/EBITDA multiple methodology helps us to arrive at a target price of Rs 1533/Share.

- We believe a higher competitive positioning in the industry, deeper penetration in markets, product innovation and better pricing mechanism to command a premium in the multiple.
- We have currently assumed a multiple of 15x on FY20E to arrive at a target price of Rs 1533/share. Currently it is trading at 13x FY20E EBITDA.

DCF Valuation

Discounted Cash Flow (DCF)	FY14	FY15	FY16	FY17	FY18	FY19E	FY20E	FY21E	FY22E	FY23E
Cash flow from Operations	315	339	574	470	360	671	733	814	955	1121
Purchase of fixed assets	-228	-348	-572	-445	-576	-604	-607	-400	-350	-350
Free Cash Flow to firm(FCF)		-8	2	25	-216	67	126	414	605	771
Growth							***228%***	***46%***	***27%***	***228%***

Debt	1881
Cash and Cash Equivalents	255
Equity Value	12626
No. of Shares (In crore)	8.13
Per Share Value	**1553**
Current Price	**1240**
Upside Potential	**25.5%**

Source: NSPL Research

WACC Calculations	
Beta	0.68
Risk Free Rate	7.21%
Market Return	12.9%
Market Risk Premium	5.7%
Cost of Equity	11.1%
Cost of Debt	7.5%
Weight of Equity	83.5%
Weight of Debt	16.5%
WACC	**10.3%**

Source: NSPL Research

EV/EBITDA Valuation

	FY17	FY18	FY19E	FY20E	FY21E
EV	7584	10803	12172	12376	12411
EBITDA	653	699	870	984	1255
Current EV/EBITDA	12	15	14	13	10

Source: NSPL Research

Target EV	14757
Equity Value	12463
No. of Shares (In crore)	8.13
Target Price	**1533**
CMP	**1240**
Upside Potential	**23.6%**

Source: NSPL Research

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Industry Overview

Agro-chemicals industry to perform better owing to normal monsoon and disbursement of subsidy

- According to industry sources, India's agrochemicals sector posted a 15-year CAGR (FY01- FY16) of 8-10% and is worth US$ 2.25bn (Rs 130-140bn). Besides, India exports agrochemicals is worth US$ 2.45bn. Hence, overall market stood at US$ 4.7bn as of FY16.
- Domestic and export markets (50% of India's overall industry) are pegged to grow at 8% and 16% respectively by FY19E.
- Our belief stems from the fact that key chemical companies such as BASF, Monsanto, Dow Chemical Company have been investing heavily in their agrochemical business which has been driving the market for **herbicides**.
- Herbicides are chemical substances used to control the growth of unwanted plants and weeds in an agricultural land. They are also known as weed-killers. The global herbicides market is accounted for $27.45 billion in 2016 and is expected to reach $44.56 billion by 2023 growing at a CAGR of 7.1%.
- The agro-chemical market is structurally driven by better monsoon which makes the land arable and improves the soil quality. Other growth drivers are the government initiatives of timely disbursement of subsidy through DBT installation which might improve the working capital cycle of agro-chemical companies and perform better.

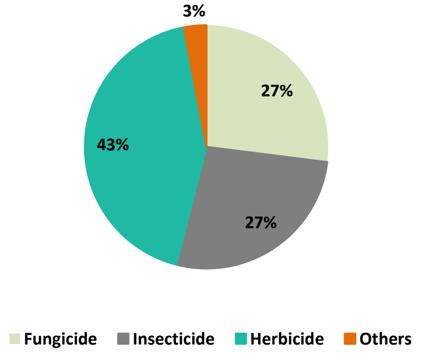
Market share of major players across globe

	>15%	5-15%	1-5%	0.5-1%	<0.5%
Europe	Bayer, Syngenta	BASF	Cheminova	Sipcam, Oxon	Isagro, Helm
USA		DOW, Monsanto, Dupont	FMC, Platform, Albaugh	Chemtura, Amvac, Gowan	
Japan			Sumitomo, Arysta	Kumiai, Hokko	Agro Kanesho, SDS Biotech,
Others			Adama, Nufarm, UPLL, Sinochem	Redsun, Wynca	Rallis, Sinon, Excel, Gharda, Nutrichem

Source: NSPL Research

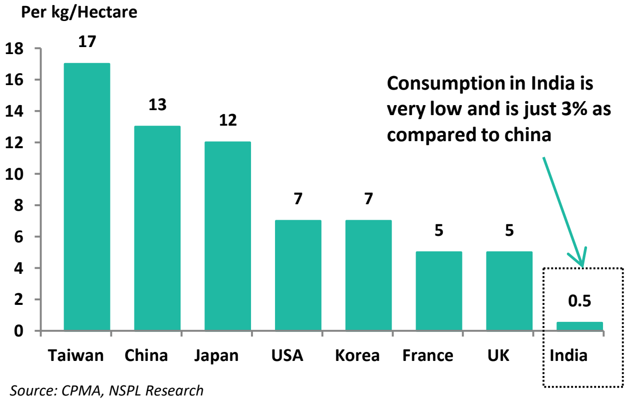
- As seen from fig above BASF, Syngenta, DOW, Monsanto are the major players in Europe & USA capturing more than 15%+ market share.
- Since Aarti industries have all the above players as their clients in their portfolio we believe the company stands to gain business for any new product innovation in their portfolio.
- Recent commentary from major Agro-chemical companies like UPL, BASF has been very positive where the management believes the agro-chemical cycle bottoming out, growth drivers to be in place, Supportive MSP and various factors will eventually lead to investment cycle pick up in agro-chemical portfolio.
- India is a low-cost destination for manufacturing. Therefore, agro chemical companies have been able to leverage inexpensive but high-quality skillsets to strengthen their R&D infrastructure and create cost-effective products that cater to major target markets such as Latin America, Africa, and APAC countries (other than China). Since the 'agronomics' in these target markets is similar to those in India, farmer affordability in these geographies to purchase innovator products from companies such as Bayer, BASF, and Syngenta, is low and **we believe this is the key driver for Indian agrochemicals exports.**

Herbicide constitute a major chunk of Agro-chem market



Source: CPMA, NSPL Research

India stands at the bottom in agro-chemicals consumption



Source: CPMA, NSPL Research

- Herbicide constitutes a major chunk of the agro-chemical portfolio of 43% in FY16 and Aarti Industries portfolio comprises of generic herbicides product.
- The herbicide consumption in India stands at 0.35 USD billion in FY14 and is expected to grow at a CAGR of 15% over the next five years to reach ~0.8 USD billion by FY19.
- Rice and wheat crops are the major application areas for herbicides. Increasing labor costs and labor shortage are key growth drivers for herbicides. Various channel checks suggest that herbicide market growth outperformed insecticides and fungicides in Q3FY18 owing to rise in wages by the center.
- We think structural long-term growth drivers for India's agrochemicals industry are in place. These include rising farmer income, declining arable land, low penetration of agrichemicals, mounting labour costs and poor crop yields.

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Nitro-chlorobenzene to register strong growth on the back of exports demand growing at 20% per annum

- Global nitrochlorobenzene market is expected to witness growth on account of increasing application as intermediate for chemicals to manufacture fertilizers, dyes, paints and coatings. Growth of pharmaceutical industry in emerging markets of China and India is expected to have a positive impact on nitrochlorobenzene market. Agriculture industry growth in China, India and Brazil on account of favorable regulatory support coupled with raw material access is expected to promote the demand for fertilizers and thus in turn promote nitrochlorobenzene market growth.
- Asia Pacific is expected to be the fastest growing market for Nitrochlorobenzene in the light of positive agriculture industry outlook in China and India amid regulatory inclination to increase production output at domestic level. Rapid development of pharmaceutical, pesticides, dyes, rubber and chemical industry in China on account of easy raw material access and low manufacturing cost is expected to have a positive impact on nitrochlorobenzene market in the near future. As a result, Paints and coatings industry in India is expected to witness growth and is likely to fuel nitrochlorobenzene market demand in the near future. The government of India framed Draft National Chemical Policy in February 2014, intended for increasing country's chemical output from 3% in 2014 to 6% by 2020. This policy is expected to promote new opportunities for nitrochlorobenzene market players in the near future.
- Some of the key players in Nitrochlorobenzene market are BASF, Dow Chemical, Mitsubishi Chemical, LG Chem, AkzoNobel, Mitsui Chemicals, Toray Industries, Eastman Chemical Company, Monsanto and Evonik Industries. Application growth in Asia Pacific along with raw material access particularly in China and India is expected to force nitrochlorobenzene manufacturers to keep their production bases in vicinity.

- **The Nitro - chloro benzene market is divided in three forms:**
  1.) Para nitro chlorobenzene (PNCB)
  2.) Ortho nitro chlorobenzene (ONCB)
  3.) Meta nitrochlorobenzene (MNCB)

- PNCB is available as flakes and in molten form. Transportation and storing is a problem, as molten form requires heated tanks. The demand has seen a growth of about 20% in the previous decade. The major demand comes from pharma sector. This is basically used in the manufacture of framycetin, paracetamol and dyes. Dyes account for more than 40% of the total demand. They are used to manufacture para-chloroaniline and para-nitroaniline. **The export sector of this product is growing at a healthy pace**. Agrochemicals and rubber chemicals contribute nearly 25% of the total demand.
- In terms of consumption of ONCB, demand comes from agrochemicals. The pharma sector especially Sandoz, United Phosphorous and Gujarat Insecticides utilize it to produce quinalphos. The demand has declined mainly due to substitute products being used instead of ONCB. The remaining demand for ONCB comes from dyes and intermediates. This is used as an intermediate product for the manufacture of red dye and aniline. The remaining demand comes from the rubber chemicals, synthetic aromatics, perfumes and lubricants.
- **Manufacturing process:** These products are produced by continuous nitration of monochlorobenzene with nitric acid and sulphuric acid. The process involves chlorination in the first stage, which results in the formation of MCB. Second stage involves the process of nitration in which chlorobenzenes are produced. The third stage involves crystallization process where crude NCBs are purified.

Demand and supply

- The demand and supply scenario is slightly complicated as PNCB and ONCB are co - produced. The price movements are inverse in terms of these co-products.
- Historically, in case of PNCB there has been an oversupply. However, in case of ONCB there has been a lack of supply due to rising international prices and substantial increase in exports. Calender year CY18 depicts a different picture altogether where few players constitute the market like Aarti Industries and Seya industries. On the other hand, foreign players either shut down the plant or were forced to shut down due to enforcement of pollution causing norms.
- Any effort to increase the production of ONCB leads to the production of PNCB and hence will lead to the fall in the already low prices. Imports are not a threat as internationally the producers are facing difficult times due to environmental and economic concerns.

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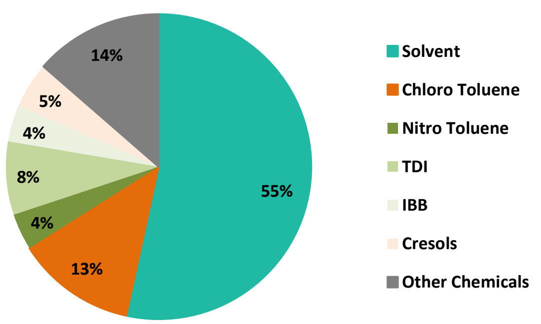
Toluene demand growth in double digits going ahead

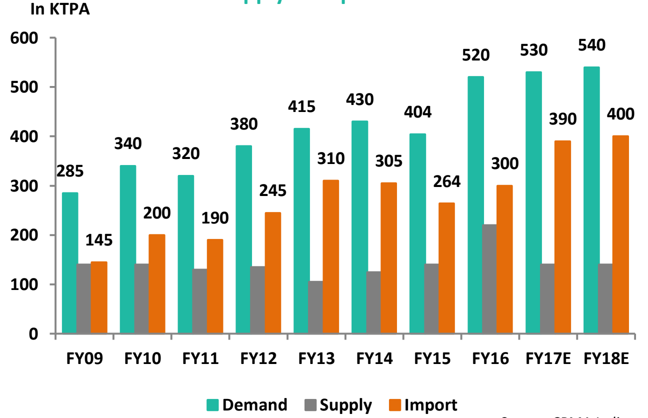
- Demand for toluene in India is huge while production is frail. India is highly dependent on toluene imports due to the imbalance between domestic production and demand.
- Demand of toluene is growing at a CAGR of 7.7% from fiscal year FY08-09 to FY16-17 and will be in double digits during the period of FY16 to FY21.
- The global toluene market is projected to reach USD 23.41 billion by 2021 at a CAGR of 6.3%.
- The growing end-user base of toluene in end-user industries such as automotive, building & construction, and oil & gas is expected to lead to the high growth of the toluene market. In addition, the growing petrochemical industry in the Asia-Pacific region is further expected to drive the toluene market.
- Benzene and xylene are projected to lead the toluene market during the forecast period, both, in terms of value and volume. The most common derivatives of benzene and xylene are, Polyethylene Terephthalate (PET), Polystyrene (PS), and cumene, among others. The growing applications of PET and PS are expected to support the benzene and xylene markets, which in turn is expected to drive the toluene market.
- North America is the fastest growing market for toluene. Growth in the North American market is led by the rising demand from the automotive, building & construction, industrial, and gasoline consumption, due to the increasing quality & performance standards of the end-products in which toluene is used as a solvent or additive. These factors along with the discovery of shale oil is also driving the toluene market.

Indian Toluene demand breakup(FY16)- 520 KTPA



Source: CPMA, NSPL Research

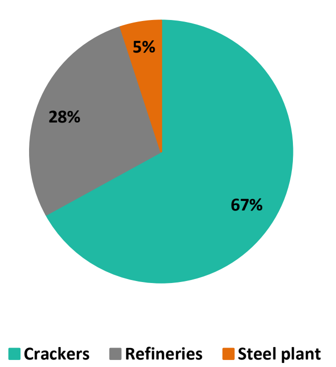
Demand Supply & Import of Toluene in India



Source: CPMA India

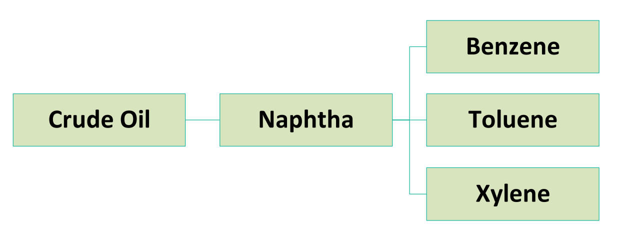
- India is a net importer of toluene. Toluene imports are set to grow by 2-3% annually. Singapore and Korea are major exporter of toluene to India. Major imports are in the ports of Kandla and Mumbai in India.
- The Indian toluene market is 55% on solvent demand which is printing inks, paints, adhesives, Bulk drugs etc.
- **Aarti industries has 30 KTPA of toluene capacity capturing 10-11% market share in overall toluene capacity of 270 KTPA**. We believe toluene is an import substitute in domestic market, players setting up capacity in India will directly eat the imports share and likely to grow much faster than the industry.
- The toluene business is more competitive market globally with many big names, led by Lanxess (Germany). Deepak Nitrite is a leading domestic player.

Toluene Supply Sources



Source: NSPL Research

Toluene Chain



Source: NSPL Research

- As seen from fig above, 67% toluene is produced by crackers i.e Naphtha in the Aromatic separation process.
- Toluene is a natural constituent of crude oil and is manufactured and sold in drums(1 drum=172 kilogram).
- Benzene can also be produced via toluene. Similar end users of toluene as compared to benzene helps player's like Aarti Industries to leverage existing client relationship and cross sell toluene and capture the imports market.

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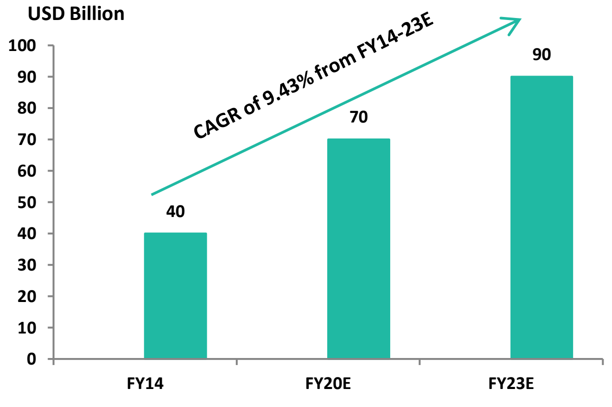
Speciality chemical demand to propel going ahead

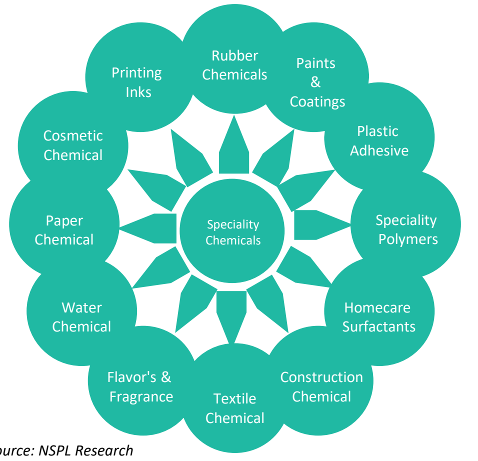
- The Indian speciality chemical industry stands at $25 billion as of FY16. The industry has evolved from one dominated player into many small niche players having client base with a global footprint.
- Speciality chemicals comprise high value and low volume chemicals and are recognized for their performance enhancing end use applications. The industry finds applications which touch upon every population segment. Speciality chemicals have diversified end user and finds application across industries like paints, coatings, plastics, home care surfactants, flavors and fragrances etc.
- The speciality chemical industry is highly fragmented and growth is largely driven by domestic and exports demand in select segments.
- Speciality chemicals are witnessing increased usage in customer related industries such as agrochemical, pharmaceutical, automotive and textiles propelled by higher consumer demand for better quality and superior products.
- We believe the industry is in a sweet spot and increased usage of high quality speciality chemicals might propel the growth going ahead.

Speciality chemicals growth outlook



Source: NSPL Research

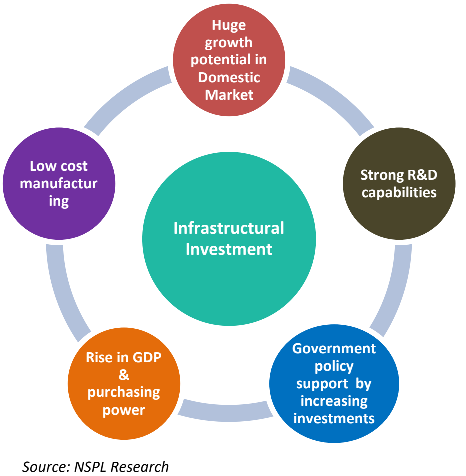
Multi-facets users of speciality chemicals



Source: NSPL Research

- India's position as a manufacturing hub for specialty chemicals strengthened following an increasing shift in manufacturing capacities to Asia, weakening in Chinese exports and a sustained improvement in India's competitiveness.
- The road map appears promising as India's chemical industry is poised for robust growth and investment on the back of solid domestic demand and robust export market. Key reform initiatives like the government's "Make in India" and National Chemical Policy are aligned to boost investments in the country enabling framework to accelerate manufacturing of chemicals in order to meet growing internal and external demands as well as reduce dependence on imports.
- The upcoming years will provide an opportunity for domestic industry players to scale and consolidate, while the international players may choose to form a Joint Venture(JV) with domestic players.
- India's emergence as a leading global speciality chemicals manufacturing location is evident by improvements in infrastructure, regulation, licenses, taxes and other catalysts like:
  1.) Large population with lowest per-capita consumption
  2.) Relatively strong GDP growth outlook
  3.) Rapid progress in key end-user industries domestically
  4.) Favorable initiatives by government
  5.) Development of chemical clusters with adequate infrastructure facilitating international investment

Structural growth drivers for the industry



Source: NSPL Research

- We believe speciality chemicals has a long way of growth going ahead on the back of low cost manufacturing, rise in GDP, purchasing power, favorable government policies etc. World class engineering and infrastructure will be some of the structural themes which might play out for the overall sector.
- Our belief is that Aarti Industries stands right to gain from the structural change in the ground level and rising consumption of chemicals will propel the growth going ahead.
- Comparative low labour costs, excellent army of technical manpower, capabilities to research and develop facilities, potential to increase share in undeveloped domestic and global markets, growing construction industry particularly in China, India and Brazil, will push industry growth in the coming years.
- Present usage of specialty chemicals in India is significantly low as compared to developed markets. Per capita consumption of chemicals in India is much lower than the western countries of about 1/10th of the world average.

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Peer Comparison

Rs in Crore

Company Name	Market Cap	Revenue	EBITDA	PAT	EBITDA Margin	PAT Margin	P/E	ROCE	ROE
Aarti Industries Ltd	**10366**	**3806**	**699**	**313**	**18.3%**	**8.2%**	**30**	**16%**	**23%**
PI Industries	11073	2309	554	368	24%	16%	30	24%	19%
Vinati Organics	5165	756	228	144	30%	19%	36	25%	18%
Seya Industries	1188	346	106.5	52.4	30.8%	15%	22	7.2%	7.1%

Source: NSPL Research

- Aarti Industries margins are lower as compared to peers owing to higher dependence on benzene value chain only.
- Aarti Industries ROCE and ROE is less as compared to PI Industries & Vinati Organics. Going ahead with the incremental revenue from the 2 big deals and improving share of value added products, the ROCE will tend to go by +20%.
- Aarti Industries has a diversified business model catering to end users like agrochemicals, dyes & pigments, speciality additives, pharma etc. However, its peers PI Industries & Vinati Organics derives 70-80% of revenues from the agro-chemicals space only . Diversification across business verticals distinguishes itself from its peers.
- We believe the only direct peer of Aarti industries in the listed space is Seya industries with a market cap of Rs 1000 crore. The comparison is as shown below:

Comparison of Aarti Industries vs Seya Industries

Parameters	Aarti Industries	Seya Industries
Forward Integration	Integrated across the entire value chain in benzene	Not integrated in the entire value chain in benzene
Backward Integration	Completely backward integrated having chlorination capacity of 1,10,000 TPA. Plans are afoot on increasing to 1,75,000 TPA	Partially backward integrated having chlorination capacity of 15,000 TPA
Presence in market	4 decades	3 decades
NCB business	NCB capacity of 75,000 MT	NCB capacity of 55,000 MT
PDA business	PDA capacity of 12,000 TPA, virtually the market leaders in PDA	Not present in PDA
Toluene business	Expanded in Toluene - Current market share of 11-12% in terms of capacity	Not present in Toluene
Ethylation business	Downstream Ethylation - N- Ethyl Aniline manufacturing	Not present
Calcium Chloride	Installed capacity of 30,000 TPA. Margins are 20-25%	Not present in calcium chloride
Pharma business	Pharma business - API's, Intermediates & Caffeine	Not present in pharma vertical
Raw Materials	Raw material price increase can be passed on	Cannot pass the raw material price increase
Acid division	In-house acid division of manufacturing sulphuric acid reduces input cost	Doesn't have acid division
End user Industries	Agro-chemical, Pharmaceuticals, Dyes & Pigments etc	Agro-chemical, Pharmaceuticals, Dyes & Pigments
Client base	Diversified clientele base	Diversified clientele base
ROE	23%	7.1%
ROCE	16%	7.2%
Future capex	Rs 500-600 crore annually	Rs 100-150 crore annually

Source: NSPL Research

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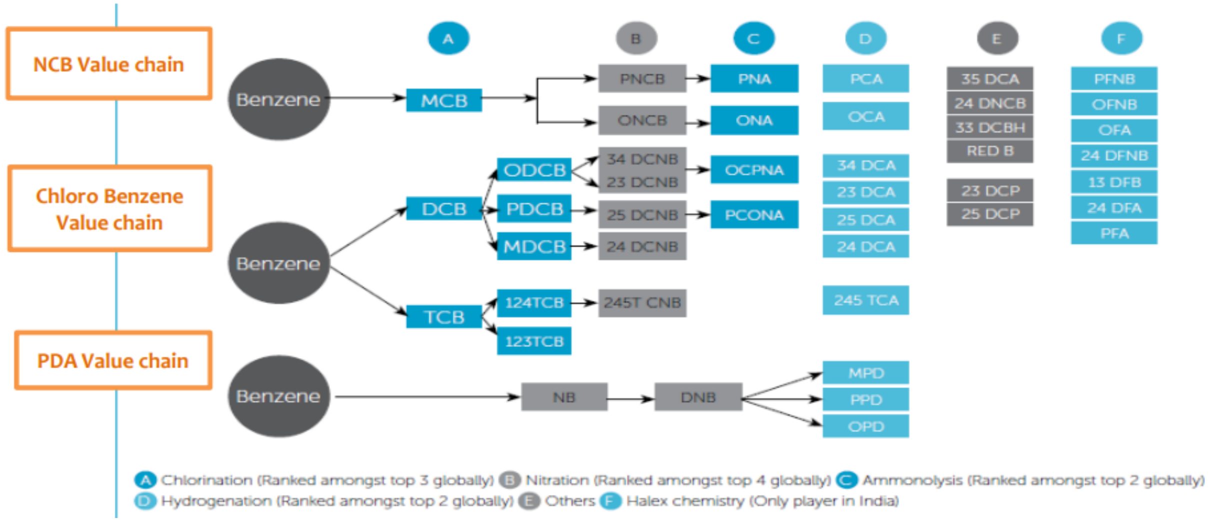
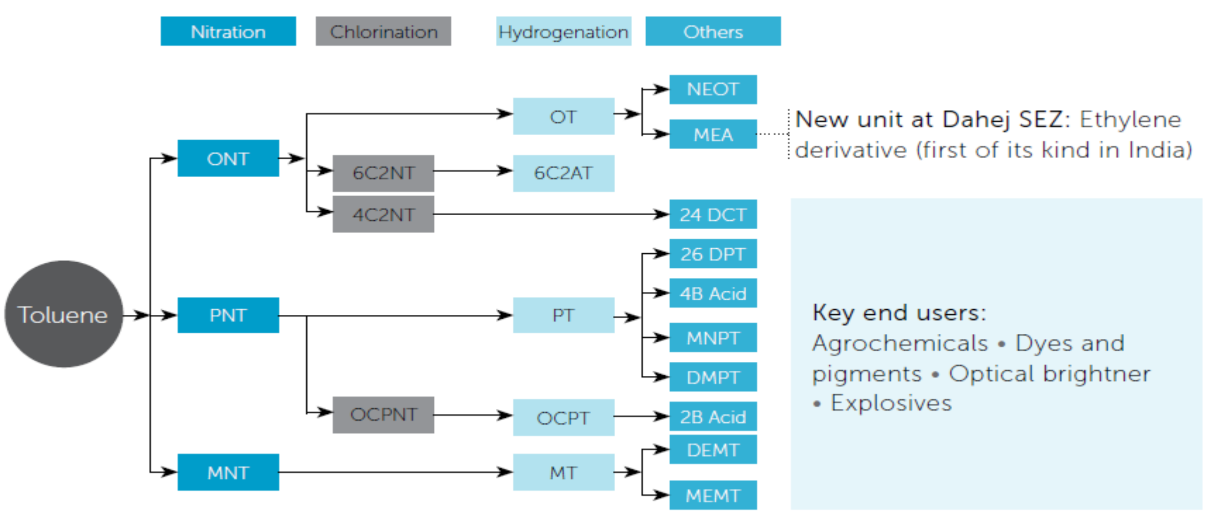
Aarti Industries value chain

Benzene Value Chain



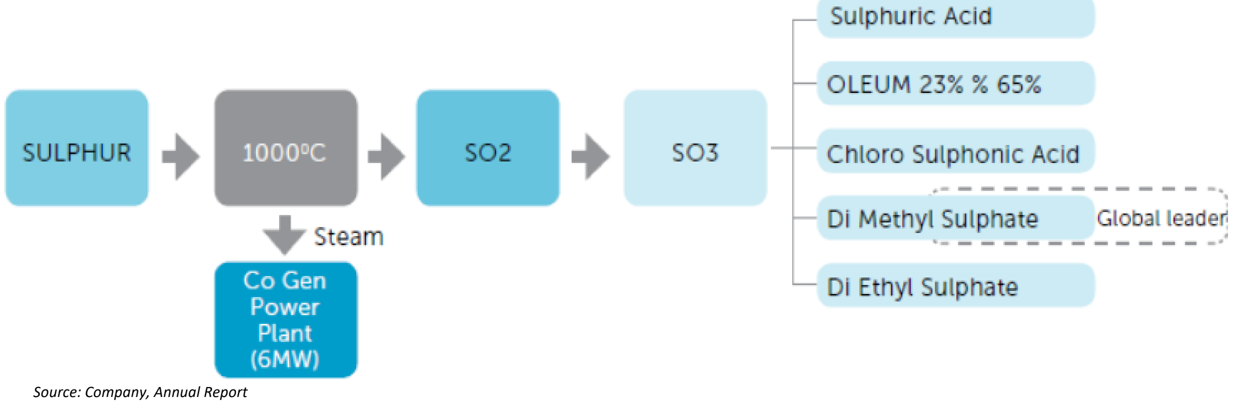
Source: Company, Annual Report

Toluene Value Chain



Source: Company, Annual Report

Sulphuric Acid & Derivatives

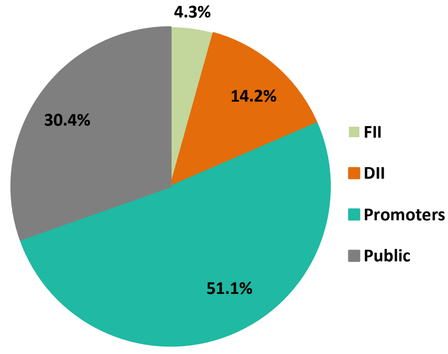


Source: Company, Annual Report

Management Team

Name	Designation
Chandrakant V. Gogri	Chairman Emeritus
Rajendra V. Gogri	Chairman & Managing Director
Rashesh C. Gogri	Vice Chairman & Managing Director
Shantilal T. Shah	Vice Chairman
Parimal H. Desai	Whole Time Director
Hetal Gogri Gala	Whole Time Director
Reni R. Gogri	Whole Time Director
Manoj M. Chheda	Whole Time Director
Kirit R. Mehta	Whole Time Director
Laxmichand K. Jain	Independent Director
K.V.S. Shyam Sunder	Independent Director
Bhavesh R. Vora	Independent Director
Priti P. Savla	Independent Director
Ramdas M. Gandhi	Independent Director
Vijay H. Patil	Independent Director
P.A. Sethi	Independent Director
Ganpati D. Yadav	Independent Director

Shareholding Pattern



Fund Holding

Funds Holding	%
HDFC mid cap opportunities fund	8.0%
DSP Blackrock small cap fund	2.6%
L&T Mutual fund - Emerging business fund	2.3%
IIFL wealth management	2.1%

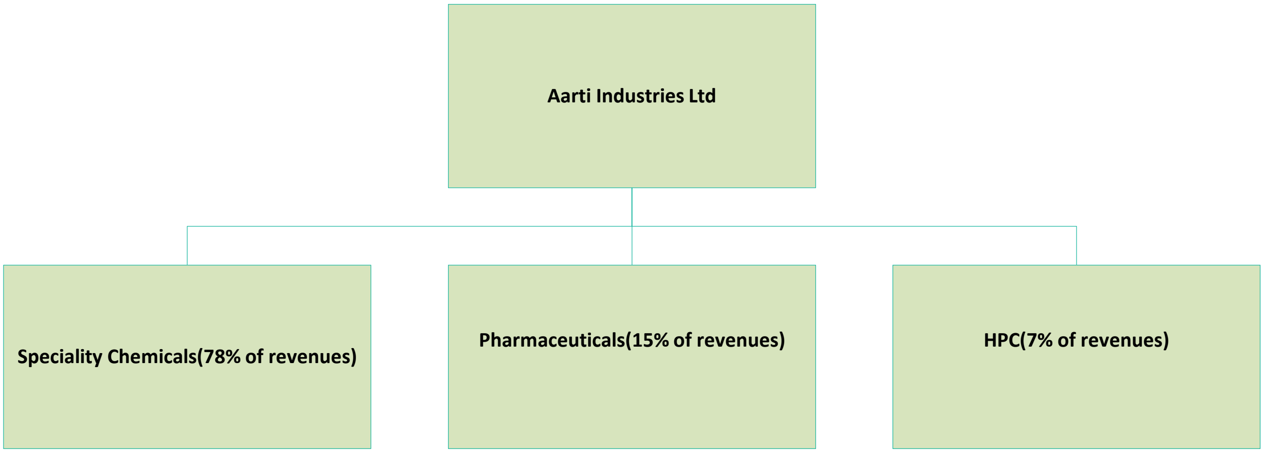
Source: NSPL Research

Company Background - *De risked business model with diverse products and end user industries*

- Aarti Industries Limited is a leading Indian manufacturer of Specialty Chemicals and Pharmaceuticals with a global footprint.
- The company is one of the most respected and competitive benzene based speciality chemical companies in the world.
- The products are used in the downstream manufacture of pharmaceuticals, agrochemicals, polymers & additives, fuel additive, rubber chemicals, surfactants, pigments, dyes etc.

Manufacturing Plants

- The company has 17 integrated manufacturing plants (backward and forward) to manufacture more than 125 products.
- These units are located in Gujarat, Maharashtra, Madhya Pradesh and Silvassa.
- The company supplies products to more than 500 domestic customers and over 150 international customers.



Source: NSPL Research

Business Model

As discussed in fig., the company has 3 business verticals:

- Speciality chemicals(contributing 78% to revenues)
- Pharmaceuticals(contributing 15% to revenues)
- HPC-Home & Personal Care Chemicals(contributing 7% to revenues)

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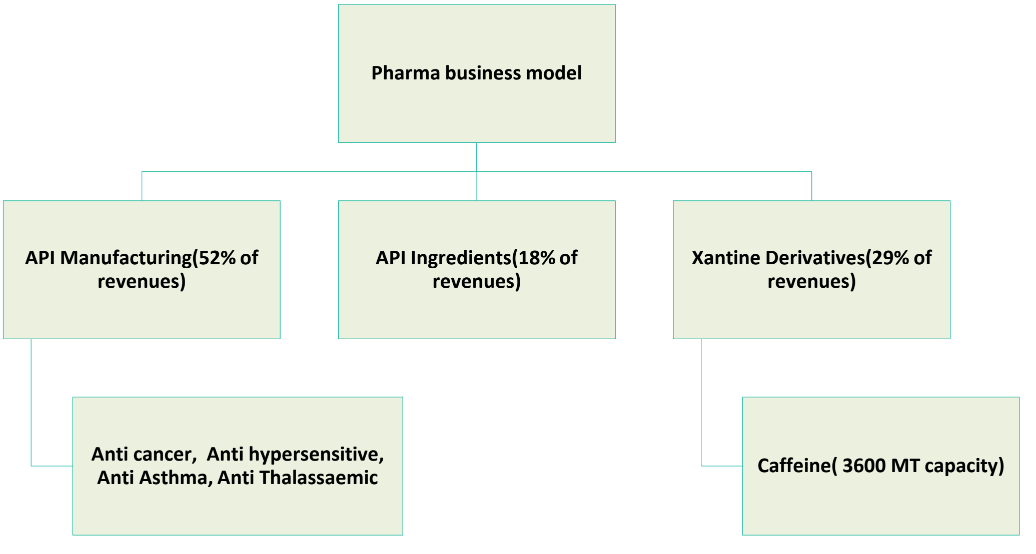
Speciality Chemicals

- The company is mainly focused on manufacturing of benzene derivatives. It commands 65% domestic market share and 25-40% globally. The company has also added toluene derivatives in the portfolio which makes its presence across diverse business verticals. The company also manufactures sulphuric acid and derivatives which are captively used. The overall portfolio constitutes 125 products
- **Benzene manufacturing is done in stages:**
    - Chlorination: Ranked top three
    - Nitration: Ranked top four
    - Ammonolysis: Ranked top two
    - Hydrogenation: Ranked top two
    - Fluoro-compunds: Only producer in India

- **Chlorination** of Benzene into MCB, ODCB, PDCB & TCB. The company presently has a chlorination capacity of 1,10,000 tons per annum - Largest in India
- **Nitration** of MCB into PNCB, ONCB and Dinitration to 2:4 Dinitro Chloro Benzene with a capacity of 90,000 tons per annum - Largest in India.
- **Ammonolysis** of Nitro chloro compounds such as PNCB, ONCB, 2:5 DCNB and 3:4 DCNB in a high pressure batch (autoclave) process. The company is the largest manufacturer of Amination products in India and is making various Amino compounds such as PNA, ONA, OCPNA, PCONA, etc.
- **Reduction** of various Nitro compounds such as PNCB, ONCB, MNCB, ONA, PNA, MDNB, 2:5 DCNB and 3:4 DCNB mainly by catalytic Hydrogenation to PCA, OCA, MCA, OPDA, PPDA, MPDA, 2:5 DCA & 3:4 DCA respectively. The company presently has a reduction capacity of 20,000 tons per annum
- **Sulphonation, Methoxylation, Condensation & Fluorination** products are also a part of the company's range.
- **Acetylation** & other chemical reaction facilities to manufacture various derivatives which are mainly used in Dyes & Pigments.

Pharmaceuticals



Source: NSPL Research

- **The Pharma business is divided into 3 parts as discussed in the figure above:**
    - API Manufacturing
    - API Ingredients
    - Xantine Derivatives.
- The pharma portfolio is comprised of 48 commercial APIs, with 33 EUDMFs & 28 US DMF. It has 12 API's under development.
- The API manufacturing facility is USFDA & EUGMP which are accredited with dedicated production blocks for Steroids and Oncological APIs.

Home & Personal Care Chemicals

- This segment encompasses the manufacture of non-ionic surfactants and concentrates.
- End-use applications of the company's products include shampoos, hand & body wash, dish wash, detergents, soaps, and toothpaste.
- The segment is served by two manufacturing units based at Pithampur and Silvassa.
- The major customers of the business are HUL, CalvinKare, Dabur, 3M India etc.

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Profit and Loss(Rs in crore)	FY15	FY16	FY17	FY18	FY19E	FY20E	FY21E
Revenue From Operations	**2908.0**	**3006.6**	**3163.5**	**3806.2**	**4554.5**	**4824.7**	**6036.2**
Cost of raw materials	1644.3	1603.5	1673.1	2170.0	2568.9	2644.3	2811.7
Purchase of stock in trade	170.6	115.0	101.8	117.5	0.0	0.0	0.0
Change of Inventories	17.2	49.3	-31.6	-105.9	0.0	0.0	0.0
Employee Benefit Expenses	93.6	120.7	152.3	190.1	219.6	253.7	293.0
Other Expenses	516.5	545.8	614.4	735.3	895.7	942.9	1011.9
TOTAL EXPENDITURE	**2442.3**	**2434.3**	**2510.0**	**3106.9**	**3684.2**	**3840.9**	**4781.6**
EBIDTA	**465.7**	**572.3**	**653.5**	**699.3**	**870.2**	**983.8**	**1254.6**
Other Income	5.5	5.9	2.0	7.8	2.9	3.0	3.0
Depreciation	82.0	98.5	122.5	146.2	170.5	193.8	209.8
EBIT	**389.2**	**479.8**	**532.9**	**560.8**	**702.6**	**792.9**	**1047.8**
Interest	138.0	117.0	117.3	131.7	173.3	201.9	227.8
Exceptional Items	3.5	0.0	0.0	0.0	0.0	0.0	0.0
PBT	**254.8**	**362.8**	**415.6**	**429.2**	**529.3**	**591.0**	**820.0**
Tax	61.0	94.6	88.1	82.9	111.1	124.1	172.2
PAT	**193.7**	**268.1**	**327.5**	**346.3**	**418.1**	**466.9**	**647.8**
Profit attributable to Non Control. Interest	-1.7	-11.2	-11.8	-13.2	-15.9	-17.8	-24.6
Share of Profit/Loss of Associates	13.9	0.0	0.0	0.0	0.0	0.0	0.0
PAT	**205.9**	**256.9**	**315.8**	**333.1**	**402.2**	**449.1**	**623.2**
EPS in Rs	**23.2**	**30.8**	**38.5**	**41.0**	**49.5**	**55.2**	**76.6**
Dividend Amount	**52.0**	**68.8**	**67.4**	**66.1**	**79.3**	**105.8**	**185.1**

Source: NSPL Research

Balance Sheet(Rs in crore)	FY15	FY16	FY17	FY18	FY19E	FY20E	FY21E
Share Capital	**44.3**	**41.7**	**41.1**	**40.7**	**40.7**	**40.7**	**40.7**
Reserves & Surplus	1025.3	1095.6	1321.4	1537.8	1846.7	2171.4	2576.8
Shareholders Fund	**1069.6**	**1137.3**	**1362.5**	**1578.4**	**1887.3**	**2212.1**	**2617.5**
Non Controlling Interest	5.9	52.1	63.9	77.0	93.0	103.8	144.1
- Long Term Borrowings	419.1	526.8	596.4	908.3	1018.3	1118.3	1168.3
- Deferred Tax Liabilities(Net)	102.7	127.1	155.4	177.4	231.3	259.1	344.8
- Other Non Current Liabilities	0.2	0.2	0.5	0.0	0.5	0.5	0.5
Total Non Current Liabilities	**521.9**	**654.0**	**752.3**	**1085.7**	**1250.0**	**1377.8**	**1513.5**
- Short Term Borrowings	648.3	706.4	839.3	1012.5	1162.5	1262.5	1362.5
- Trade Payables	248.8	305.2	299.7	357.5	487.1	454.7	623.7
- Other Current Liabilities	156.6	91.0	153.6	185.3	204.5	217.3	223.7
- Short Term Provisions	14.6	20.5	27.8	31.0	41.7	48.2	55.7
Total Current Liabilities	**1068.4**	**1123.1**	**1320.4**	**1586.3**	**1895.8**	**1982.7**	**2265.6**
TOTAL EQUITY & LIABILITIES	**2665.7**	**2966.5**	**3499.1**	**4327.5**	**5126.1**	**5676.4**	**6540.7**
Fixed Assets	**966.9**	**1245.5**	**1694.9**	**1996.2**	**2399.1**	**2809.0**	**3206.1**
- Capital Work in Progress	193.0	313.0	269.5	436.2	520.9	545.1	439.5
- Goodwill	0.0	0.4	0.4	0.4	0.4	0.4	0.4
- Intangible Assets under development	0.0	0.0	1.7	1.3	1.3	1.3	1.3
- Non Current investments	172.9	41.3	47.0	47.2	49.9	53.2	56.8
- Other Non Current Assets	103.3	132.3	168.4	225.2	269.5	337.7	385.2
Total Non Current Assets	**1436.1**	**1732.5**	**2181.9**	**2706.5**	**3241.1**	**3746.8**	**4089.3**
- Other Current Financial Assets	172.9	167.9	168.7	224.8	296.0	337.7	385.2
- Inventories	551.7	495.2	571.4	747.3	801.1	792.7	824.9
- Trade Recievables	439.0	523.4	524.7	590.8	657.1	664.8	989.0
- Cash	33.7	29.0	28.5	32.1	89.8	86.2	200.9
- Other Current Assets	32.3	18.5	23.9	26.0	41.0	48.2	51.4
Total Current Assets	**1229.7**	**1234.0**	**1317.2**	**1620.9**	**1885.0**	**1929.7**	**2451.4**
TOTAL ASSETS	**2665.720**	**2966.480**	**3499.050**	**4327.460**	**5126.142**	**5676.440**	**6540.721**

Source: NSPL Research

Cash Flow (Rs in crore)	FY15	FY16	FY17	FY18	FY19E	FY20E	FY21E
Cash Flow from Operating Activities							
Profit before tax	**251.3**	**362.8**	**415.6**	**429.2**	**529.3**	**591.0**	**820.0**
Op. Profit before Working Capital Change	466.6	575.0	654.4	707.0	873.1	986.8	1257.7
Op. Profit After Working Capital Changes	397.7	671.5	567.5	442.8	782.0	857.1	986.0
Taxes Paid(Net)	-58.3	-97.8	-97.5	-82.9	-111.1	-124.1	-172.2
Net Cash Flow from Operating Activities	**339.5**	**573.6**	**470.1**	**359.9**	**670.9**	**733.0**	**813.9**
Cash Flow from Investing Activities							
Purchased of Fixed Assets	**-303.1**	**-466.5**	**-530.2**	**-576.3**	**-603.8**	**-607.0**	**-400.0**
Sale/(Purchase) of Investments	-4.2	-4.0	0.8	-0.3	-2.7	-3.3	-3.6
Net Cash Flow from Investing Activities	**-297.7**	**-452.0**	**-528.9**	**-576.5**	**-606.5**	**-610.3**	**-403.6**
Cash Flow from Financing Activities							
Proceeds From Long-Term Borrowings	285.0	201.1	200.0	311.8	110.0	100.0	50.0
Proceeds/Repayment from Other Borrow	-38.5	52.7	132.9	173.2	150.0	100.0	100.0
Interest Paid	-138.0	-117.0	-117.3	-131.7	-173.3	-201.9	-227.8
Dividend Paid	-48.3	-95.2	-0.6	-77.8	-93.3	-124.4	-217.7
Net Cash Flow from Financing Activities	**-23.0**	**-128.4**	**58.3**	**220.2**	**-6.7**	**-126.3**	**-295.6**
Net Inc/(Dec) in Cash and Cash Equivalent	**18.9**	**-6.8**	**-0.5**	**3.6**	**57.7**	**-3.7**	**114.7**
Cash and Cash Equivalents at Beginning	14.9	33.7	29.0	28.5	32.1	89.8	86.2
Total Cash & Cash Equivalent	**33.7**	**29.0**	**28.5**	**32.1**	**89.8**	**86.2**	**200.9**

Source: NSPL Research

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Financial Ratios	FY15	FY16	FY17	FY18	FY19E	FY20E	FY21E
Growth Ratios							
Revenue Growth	10.5%	3.4%	5.2%	20.3%	19.7%	5.9%	25.1%
EBITDA Growth	16.0%	22.9%	14.2%	7.0%	24.5%	13.0%	27.5%
PAT Growth	26.7%	24.8%	22.9%	5.5%	20.7%	11.7%	38.7%
PBT Growth	23.6%	42.4%	14.6%	3.3%	23.3%	11.7%	38.7%
Raw Materials Growth	8.8%	-3.5%	-1.4%	25.1%	17.8%	2.9%	6.3%
Margin Profile							
EBITDA Margins	16.0%	19.0%	20.7%	18.4%	19.1%	20.4%	20.8%
PBT Margins	8.8%	12.1%	13.1%	11.3%	11.6%	12.2%	13.6%
PAT Margins	7.1%	8.5%	10.0%	8.8%	8.8%	9.3%	10.3%
Gross Margins	63.0%	58.8%	55.1%	57.3%	56.4%	54.8%	46.6%
Return Ratios							
ROCE	17.1%	19.8%	18.2%	15.7%	16.7%	16.7%	19.8%
ROIC	15.6%	17.4%	17.6%	15.8%	16.4%	16.4%	18.7%
ROA	7.3%	7.9%	8.1%	7.0%	7.4%	7.4%	9.5%
Operating ROA	16.5%	17.7%	16.7%	14.8%	16.1%	16.1%	19.2%
Debt Ratios							
Debt to Equity	1.0	1.1	1.1	1.3	1.2	1.1	1.0
Debt to Assets	0.5	0.4	0.4	0.4	0.5	0.4	0.4
Debt to Total Capital	0.5	0.5	0.5	0.6	0.6	0.5	0.5
Interest Coverage	2.8	4.1	4.5	4.3	4.1	3.9	4.6
DuPont Analysis							
PAT Margin	7.1%	8.5%	10.0%	8.8%	8.8%	9.3%	10.3%
Asset Turnover	1.1	1.1	1.0	1.0	1.0	0.9	1.0
Equity Multiplier	2.5	2.6	2.6	2.7	2.7	2.6	2.5
ROE	19.2%	23.3%	25.3%	22.7%	23.2%	21.9%	25.8%

Source: NSPL Research

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