Indian Plastic Pipe Sector

The consolidation curve – Organized plays in a sweet spot

- India's plastic pipes industry, estimated at Rs 400bn-420bn, has grown at a 10% CAGR over FY16-FY21 and pegged to clock a 11-12% CAGR over FY21-FY25E.
- The industry is currently ~65% organized with the UPVC segment being 57-58% organized and CPVC 80%. Industry players have been sharpening focus on high- margin business, as indicated by the growing share of CPVC pipes and fittings products.
- The share of top-5 players has risen from 22% in FY12 to ~37% in FY21. We believe the top organized players will continue to gain market share while unorganized players will reel under operating challenges amid volatility in imported RM and stricter tax compliance.
- We assume current coverage on pipes and initiate coverage on Prince Pipes (PRINCPIP; ADD, Mar'22 TP Rs 781) – well-positioned to incrementally gain market share in a consolidating industry.

Plastic pipes – a fast-growing building material category in last 5 years: The plastic pipes industry was estimated at Rs 400bn-420bn in FY21 and saw a ~10% CAGR over FY16-FY21; growth was driven by rising demand from irrigation and WSS (water supply + sanitation) sectors, and metal pipe replacement demand from residential real estate. As per our estimates, the industry is expected to reach Rs 550bn-600bn by FY25E, growing at a 11-12% CAGR over FY21-FY25E driven by (a) GoI's continued focus on increasing farmer income via better irrigation facilities and infra creation, improvement of WSS infra, and execution of 'Housing For All' schemes in urban and rural areas; and (b) discovery of newer applications for CPVC and HDPE pipes.

Organized RM supply chain to provide a sustainable tailwind for bigger players: Raw materials form 65-70% of sales for the plastic pipes industry and their prices are directly linked to crude oil, changes in global demand-supply conditions and import-export regulations. Most of the industry's RMs are supplied either from domestic petrochemical companies or imported. Anti-dumping Duty (ADD) imposed on CPVC imports by some countries from Aug'19 and the pandemic-induced supply chain disruptions have affected business models of many regional/unorganized players, even as they are likely to come back once things normalize. However, we believe bigger organized players are well placed to capture incremental market share gains from unorganized players as they strengthen foothold across geos and improve visibility via A&P spending and distribution network streamlining.

4QFY21 review: 4QFY21 was a stellar quarter for the pipes industry with strong volume recovery and increasing OPM amid all-time high PVC prices. Large players continued to gain market share from unorganized players; however, the trend is set to reverse as PVC resins/credit availability has improved. Farmer affordability remains low due to higher PVC prices. Off a low base of the next three quarters, improving housing demand and a likely revival in agri demand on expected price correction, FY22E volume growth for players is likely to be in mid-teens. Near-term margins will soften in the absence of inventory gains and higher costs pushing up fixed costs.

View: We are constructive on the mid-to-long term growth prospects of the organized sector. We assume current coverage on pipes and initiate coverage on Prince Pipes (PRINCPIP; ADD, Mar'22 TP Rs 781) – in a good position to capture market share in a consolidating industry.

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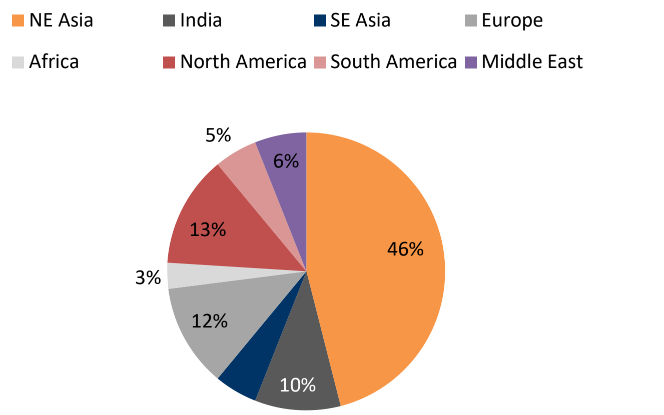

Source: Company, Equirus Securities

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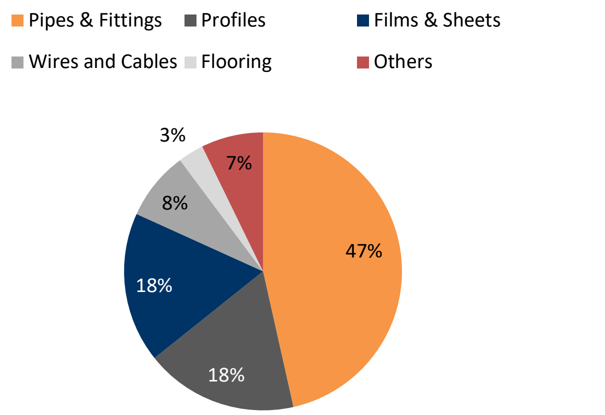

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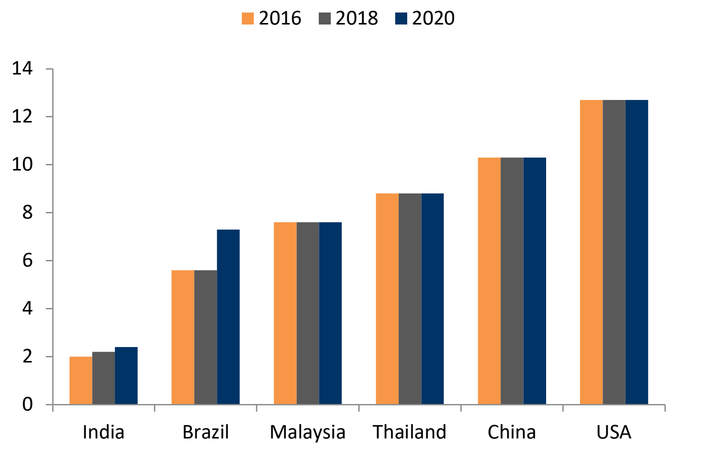

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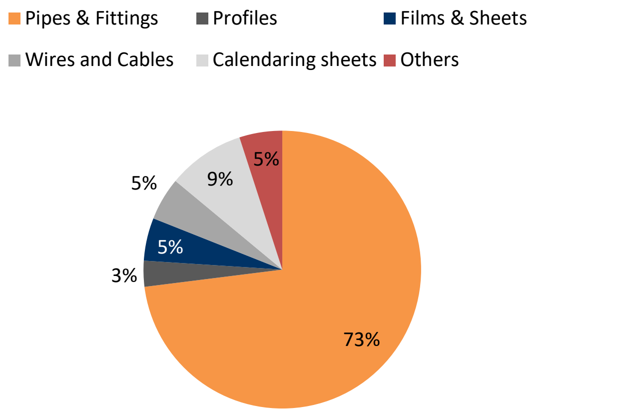

Source: Company, Equirus Securities

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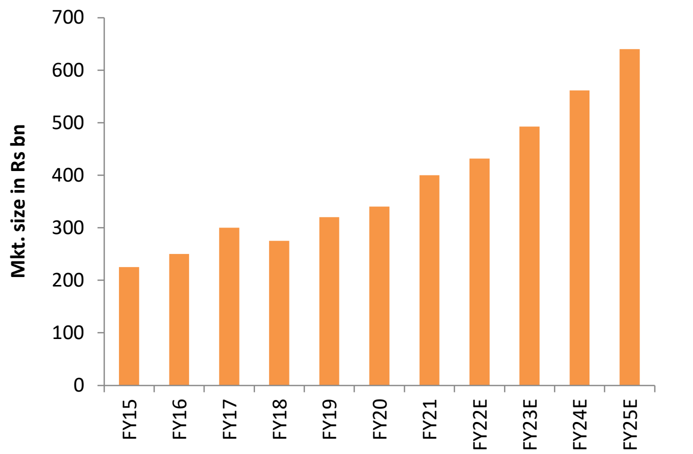

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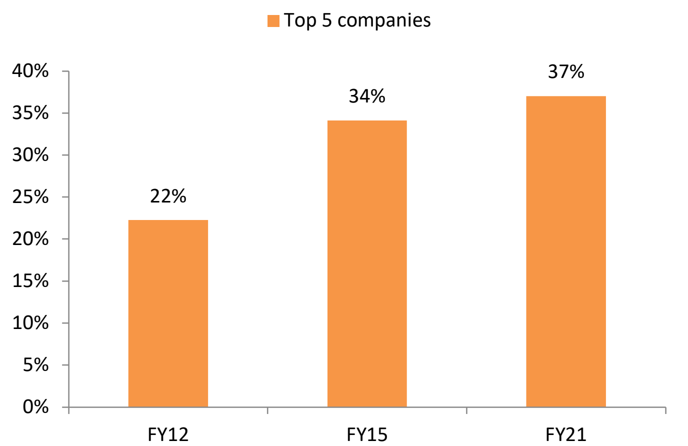

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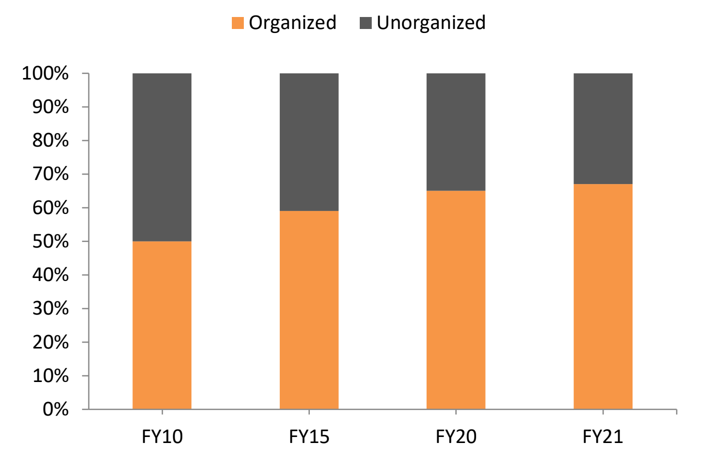

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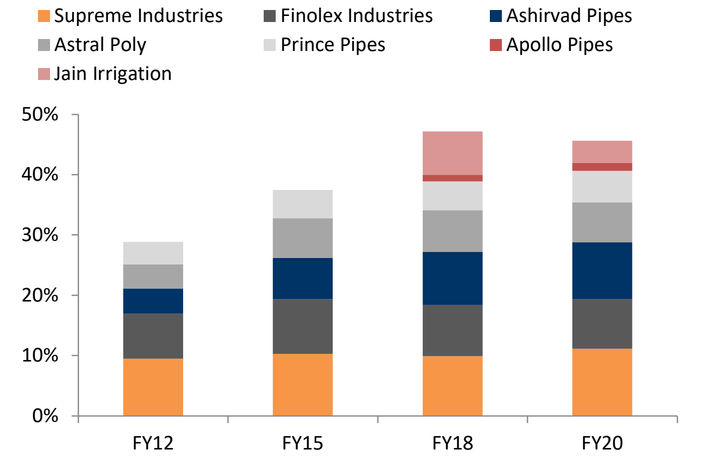

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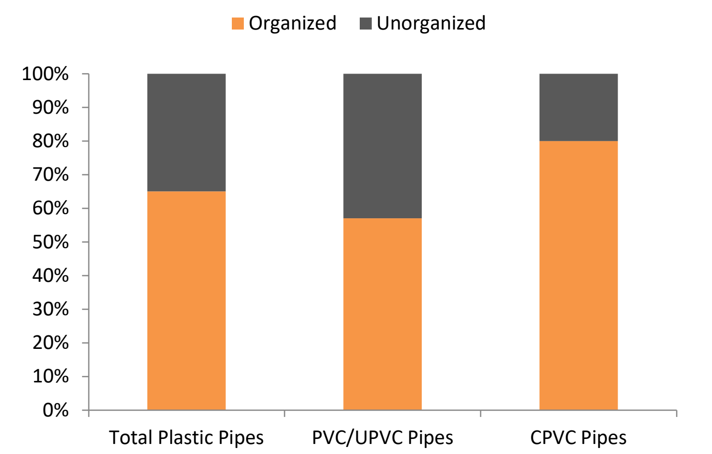

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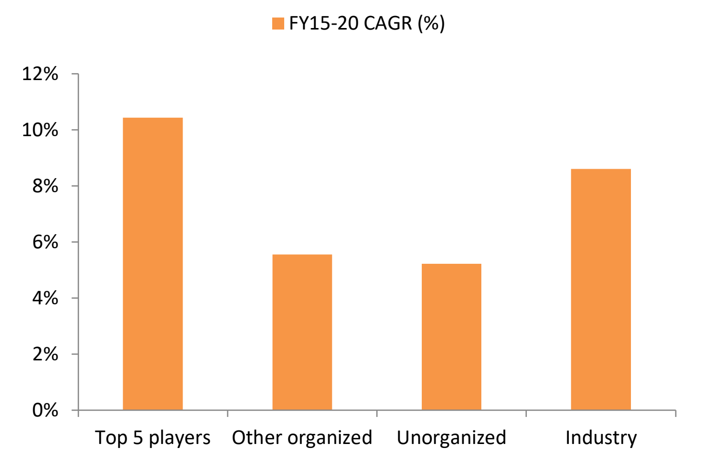

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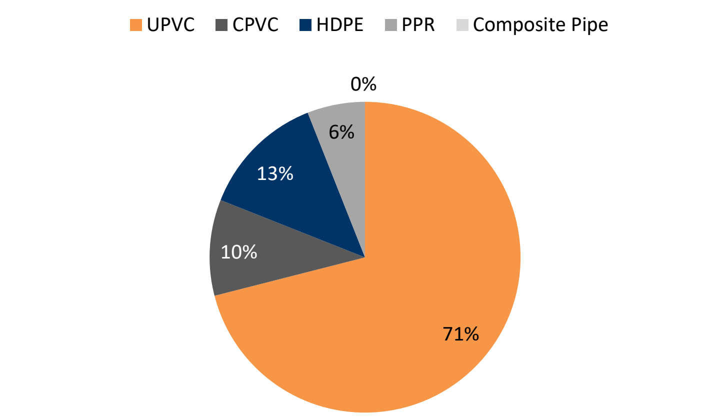

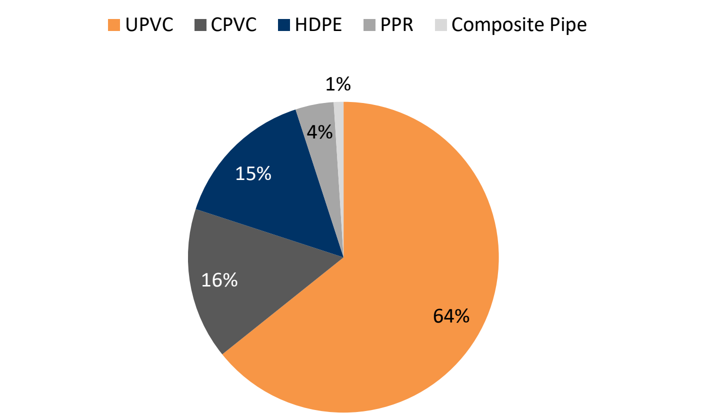

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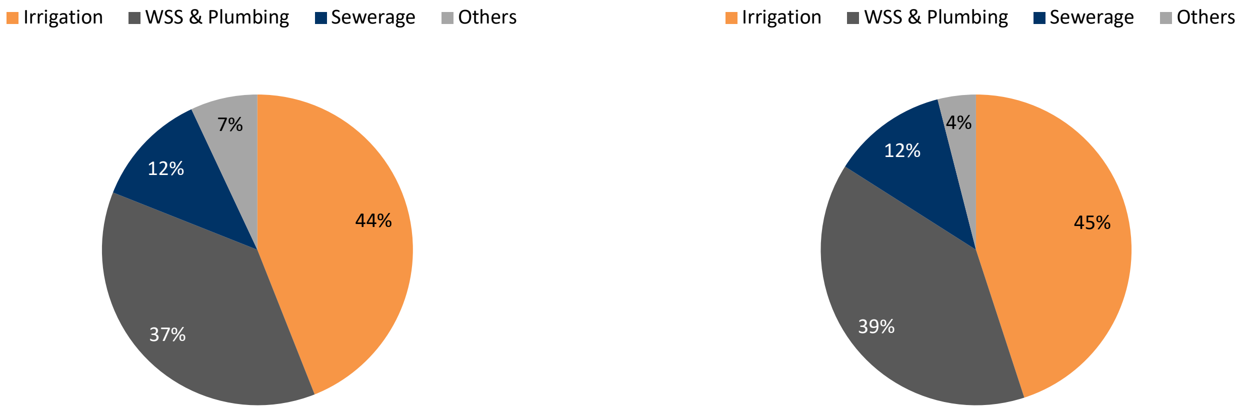

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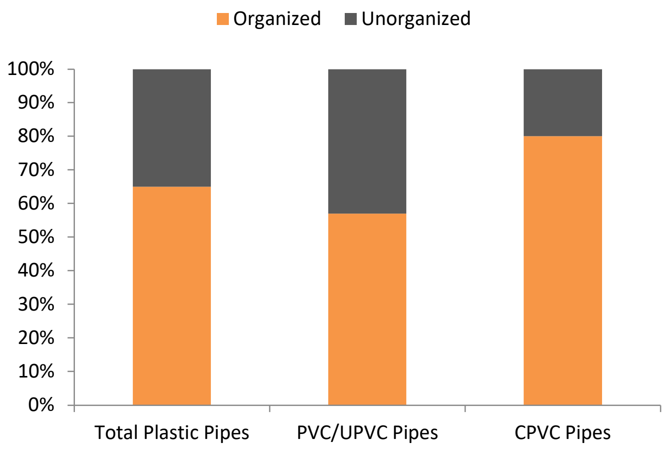

Source: Company, Equirus Securities

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Segment	Industry Size (Rs bn)	Applications
PVC/UPVC pipes	254	Agricultural and Residential Water supply
CPVC pipes	65	Residential plumbing applications
HDPE pipes	60	Irrigation, Sewerage, City Gas distribution
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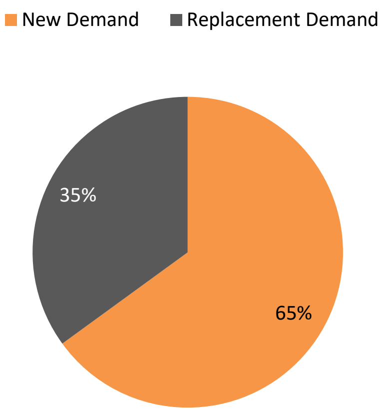

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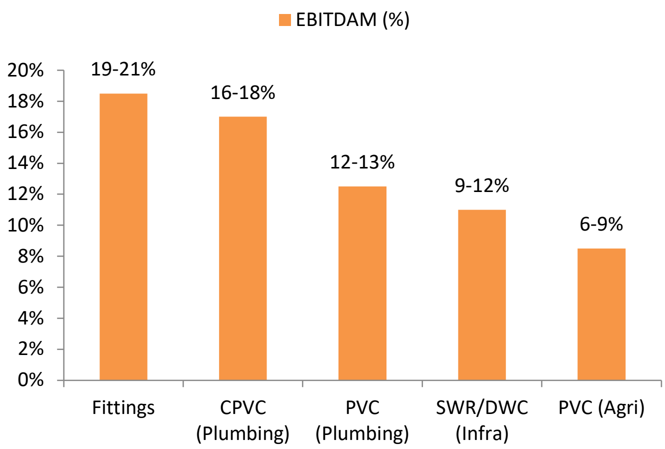

Source: Company, Equirus Securities

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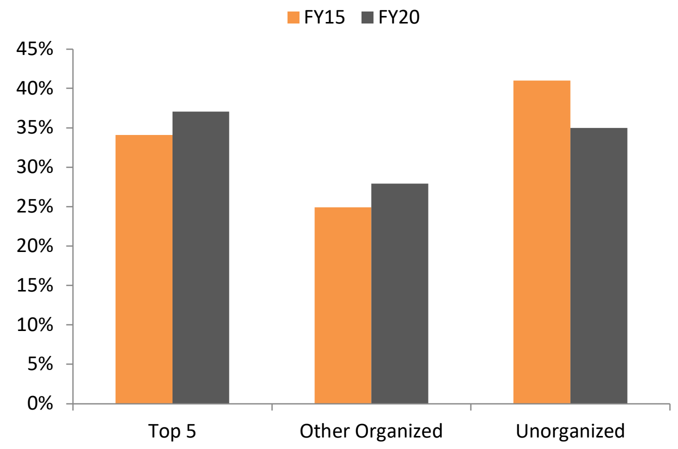

Source: Company, Equirus Securities

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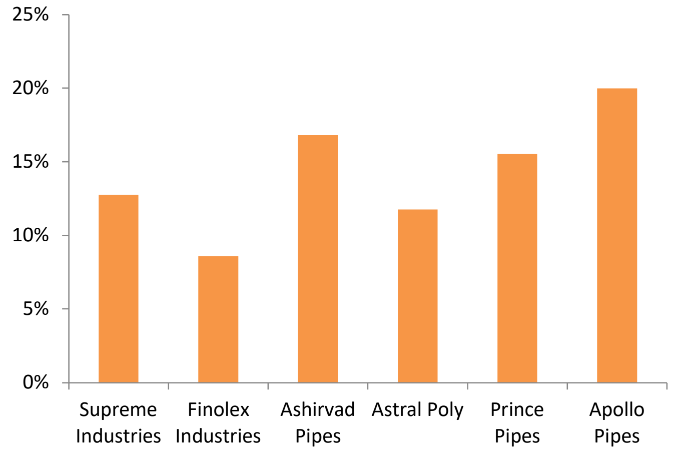

** Ashirvad Pipes numbers is for FY15-20.*

Source: Company, Equirus Securities

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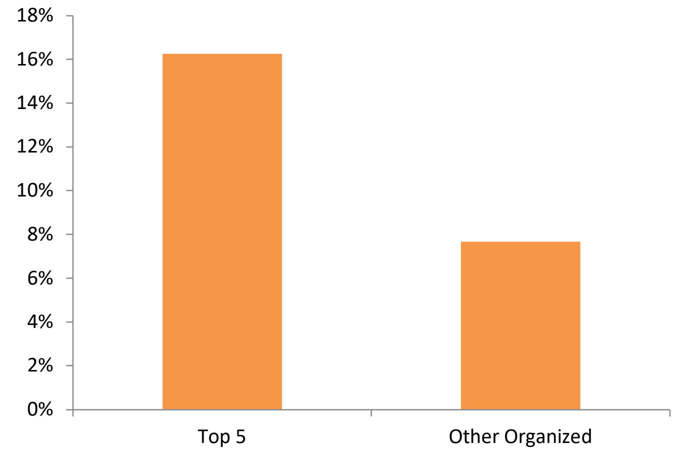

Source: Company, Equirus Securities

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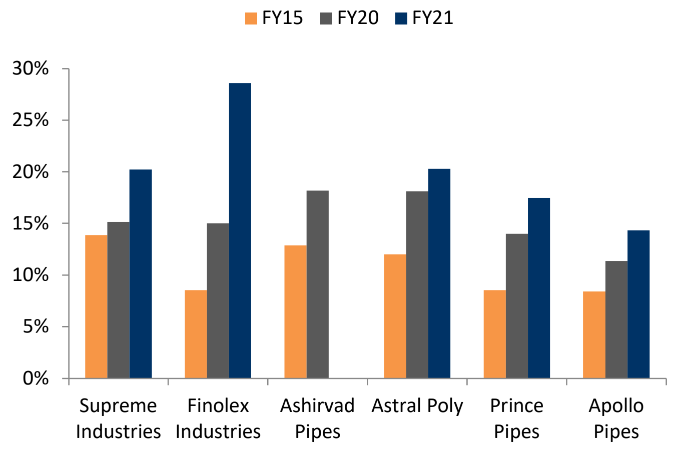

Source: Company, Equirus Securities

**FY21 number not available for Ashirvad*

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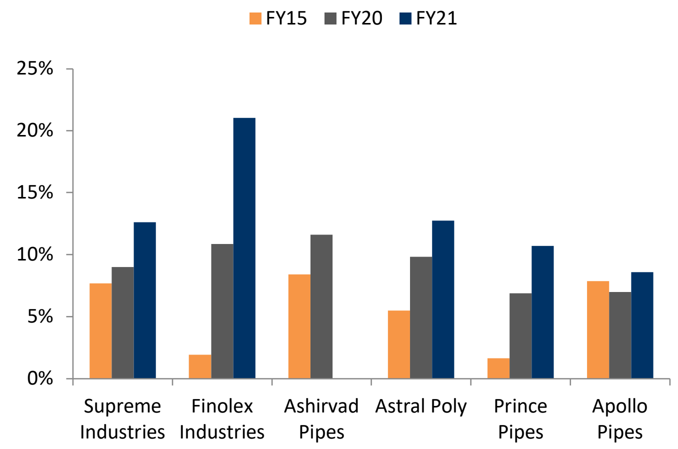

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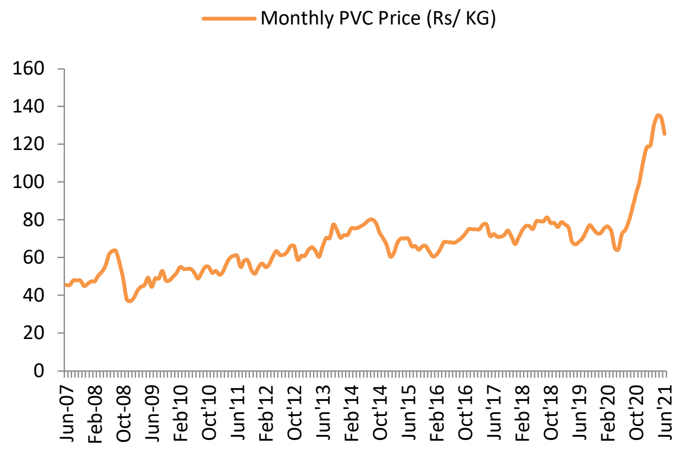
**FY21 number not available for Ashirvad*

Exhibit 22: Surge in PVC prices leads to market expansion, higher FY21 margins



Source: Company, Equirus Securities

Piping – Industry Dynamics

Fastest-growing building material segment; ongoing consolidation to strengthen grip of organized players

Strong growth ahead

Industry to grow at a 11-12% CAGR over FY21-FY25E to reach Rs 550bn-600bn by FY25E

Plastic pipes find application in irrigation, residential/commercial real estate construction and WSS infra development. The industry was pegged at Rs 400bn-420bn in FY21 and clocked a ~10% CAGR over FY16-FY21 amid rising demand from irrigation and WSS sectors, and metal pipe replacement demand from residential real estate. Being a cost-effective way to transport water, pipes will continue to form an integral part of infra development. As per various estimates, the industry is expected to reach Rs 550bn-600bn by FY25E, clocking a 11-12% CAGR over FY21-FY25E driven by (a) GoI's continued focus on increasing farmer income via better irrigation facilities and infra, creation and improvement of WSS infra and execution of 'Housing For All' schemes, and (b) discovery of newer applications for CPVC and HDPE pipes and further inroads made by UPVC pipes into other applications.

Growth drivers

Among various building material categories, pipes has seen better performance over the last five years owing to the following:

- Continuous uninterrupted water supply is a necessity both in residential projects and irrigation. Therefore, consumers are willing to spend on piping via replacement/new demand.
- There are multiple demand drivers such as irrigation (45% of demand), real estate plumbing and WSS (38%), urban/semi-urban sewerage infra (12%) and industrial uses (<5%).
- Pipes, though bulky in nature, are low priced products, especially in residential real estate (overall piping cost only 1-2% of residential project)
- Pipes have to be concealed during the time of construction and any leakage or joint loosening requires masonry work which damages the paint, tiles and overall look of the house; thus, maintenance cost becomes much higher in case of a pipe burst. With increasing awareness about durability of plastic pipes and BIS standards, residential consumers (UPCV, CPVC) and farmers (UPVC) are increasingly opting for better quality pipes to minimize these problems.

Solid footprint of organized players

Organized players benefitting from rising consumer/plumber awareness on quality and adherence to BIS standards

The share of organized players in the piping industry has increased from ~50% in FY10 to ~67% in FY21 while that of top-5 players from 22% in FY12 to ~37% in FY21. Over FY15-FY20, organized players have topped industry growth as they continued to gain market share from unorganized manufacturers and few larger regional organized players facing B/S challenges. By consistently investing in branding and BTL activities, organized players have increased plumber/ consumer awareness over importance of quality and adherence to BIS standards in pipes, particularly for residential real estate. Organized segment growth has further been aided by increased focus on value-added products and fittings, as well as product portfolio expansion offered to channel partners; in this manner, organized players have become one-stop solution providers for plumbing applications. Among several variants of plastic pipes, demand for UPVC and CPVC has been rising owing to affordability, high quality, durability and newer applications.

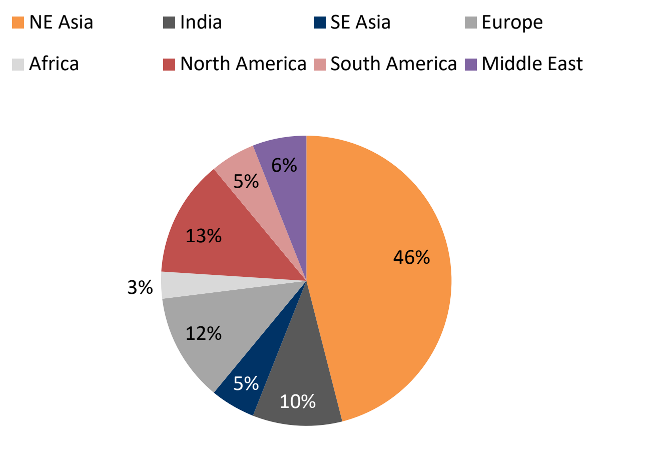
With tax compliance becoming more stringent due to e-invoicing/GST regulations and stricter adherence to BIS standards, unorganized manufacturers continue to be impacted. Even in FY21, supply-side constraints and RM cost inflation has hurt unorganized players and worsened their profitability and B/S. Additionally, some larger, regional organized players have been facing growth and B/S challenges, resulting in market share losses to bigger players. We believe top organized players will continue to gain market share while unorganized players will grapple with operating challenges due to volatility in imported RM supply and stricter tax compliance.

Segment-wise margin profile

Fittings have highest margins (20%+) and PVC agri pipes the lowest (6-9%)

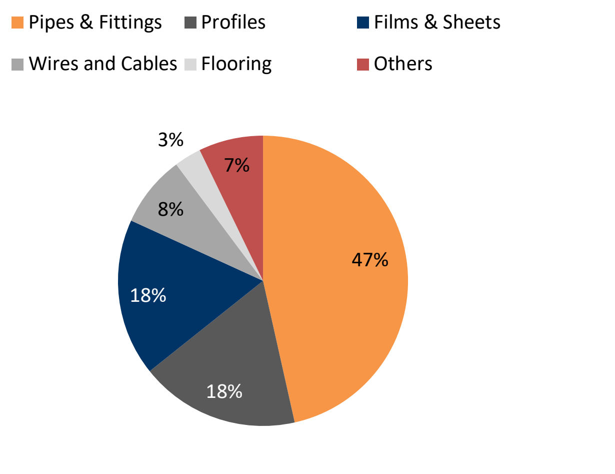
- As per our understanding, margins in **fittings** are the highest in piping industry (20%+) due to the specialized nature of work and number of SKUs to be maintained. Capex is 2.5-3x higher in fittings business vs. pipes as investment must be made in moulds for various SKUs (asset turns: 2.5x vs. 3.5-4x in pipes). Because of this, organized players have been making strong inroads into this segment since the last 5-7 years and now dominate the category.
- Margins in **CPVC** are the second best (16-18%) due to specialized usage of this product (for hot and cold-water applications), its consumer positioning and RM sourcing being mostly organized and imported, leading to lower presence of unorganized players.
- Margins in **PVC** plumbing range between 12-13% and that in **sewerage/DWC** between 9-12%. **PVC Agri** has the lowest margin (6-9%) due to its commoditized nature, pricing sensitivity of farmers, and the presence of several unorganized players.

Exhibit 23: China amongst the world's largest PVC consumer; India amongst the fastest growing



Source: Company, Equirus Securities

Exhibit 24: Pipes & fittings form a large part of end consumer segment for PVC market globally



Source: Company, Equirus Securities

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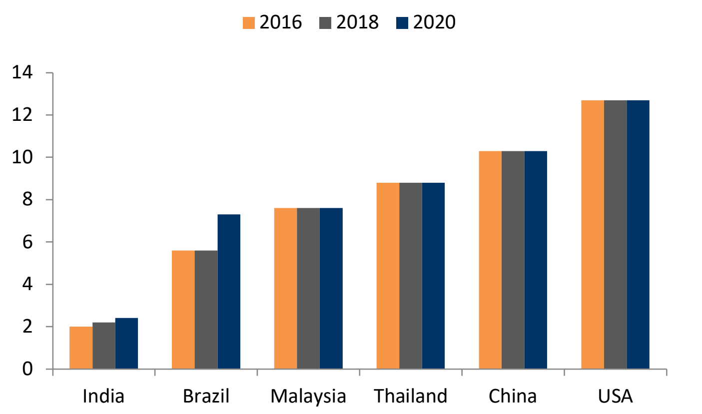
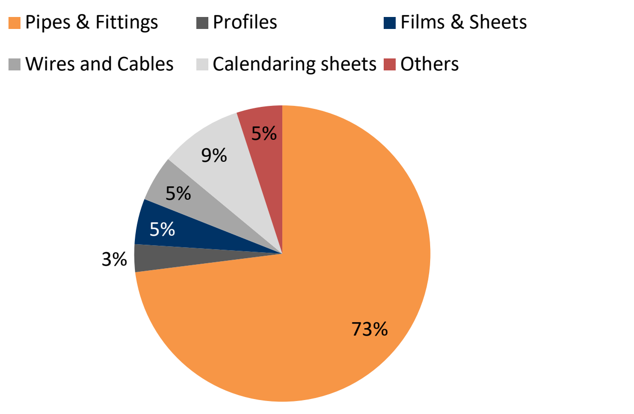


Source: Company, Equirus Securities

Exhibit 26: Pipes & fittings form the largest part of end consumer market for PVC in India



Source: Company, Equirus Securities

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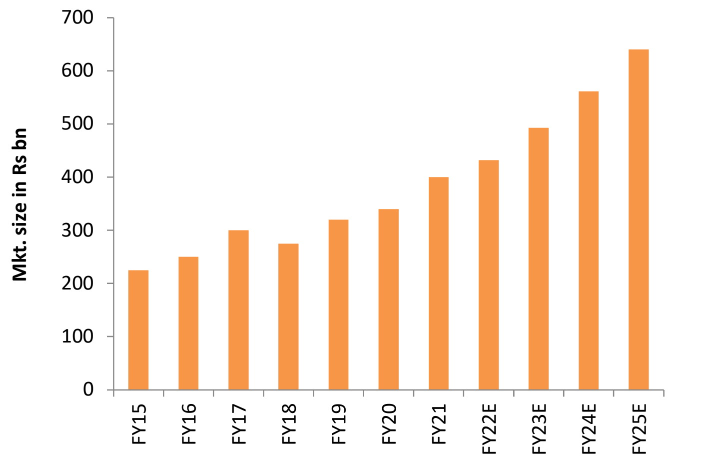

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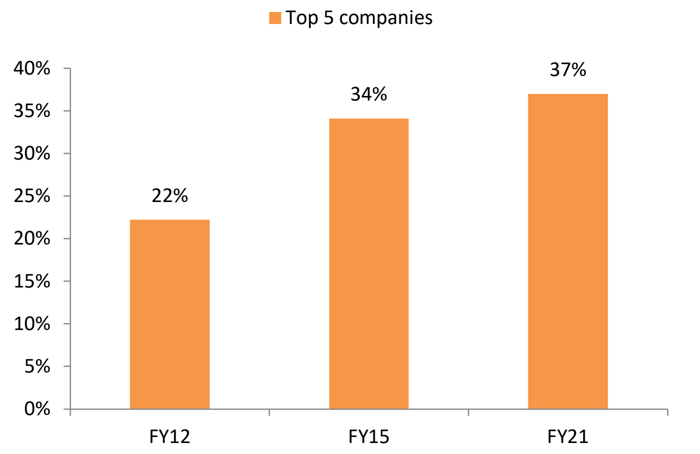

Source: Company, Equirus Securities

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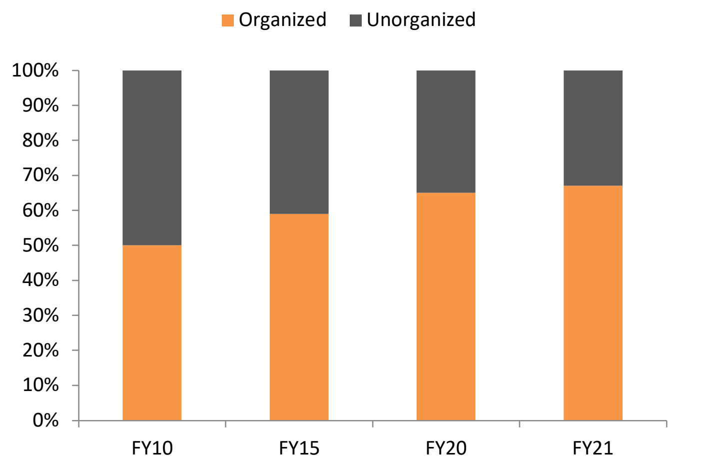

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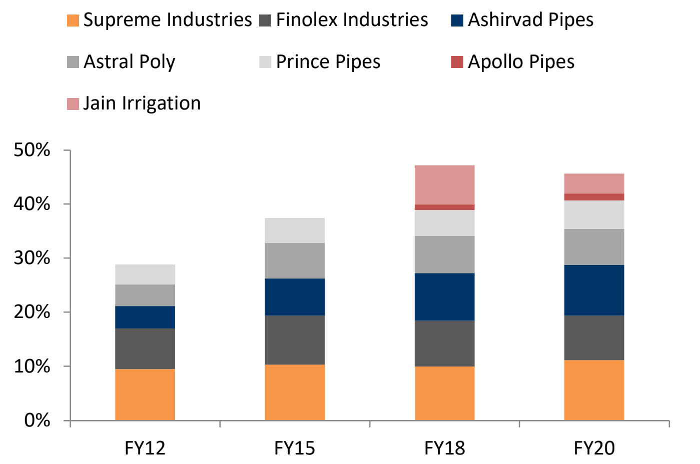
Exhibit 30: Supreme Industries leads the overall piping segment



Source: Company, Equirus Securities

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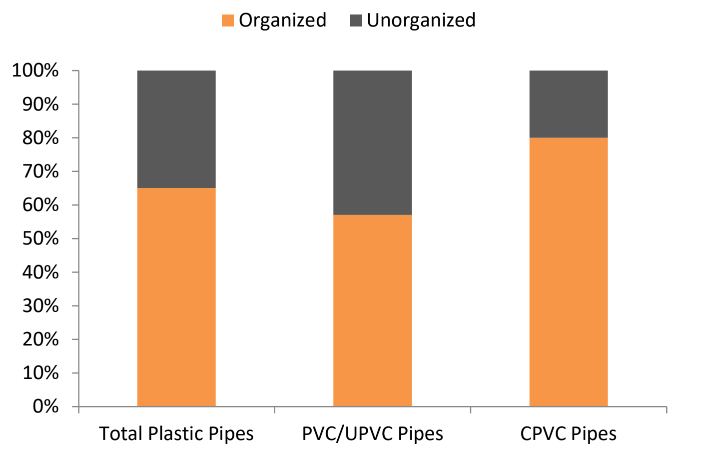

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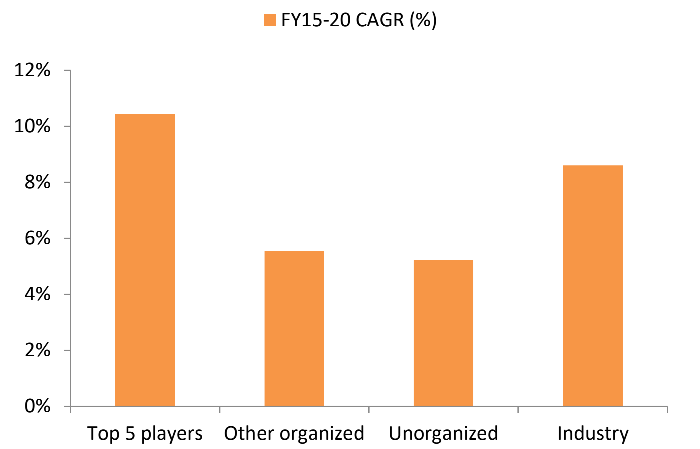

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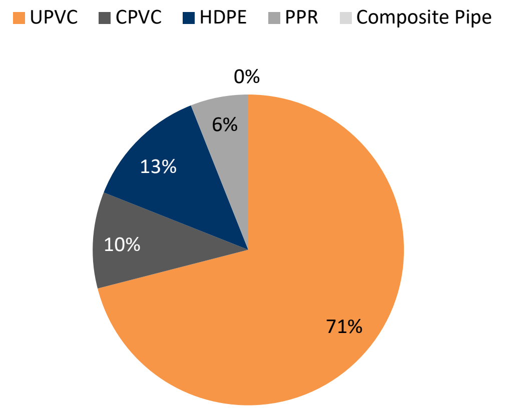
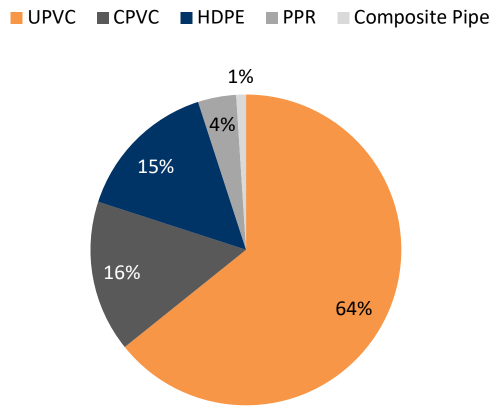
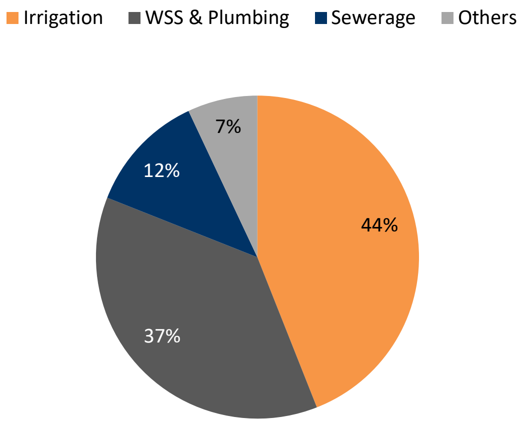
Exhibit 33: In FY14, UPVC/CPVC formed 71%/10% of overall piping market in India; in FY20, UPVC's share slipped to 65%

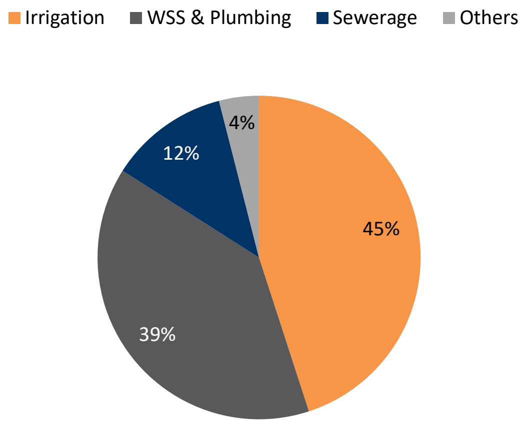




Source: Industry, Equirus Securities

Exhibit 34: FY15 & FY20 end consumer market: Irrigation the largest end consumer, WSS & plumbing also UPVC/CPVC/HDPE consumption





Source: Industry, Equirus Securities

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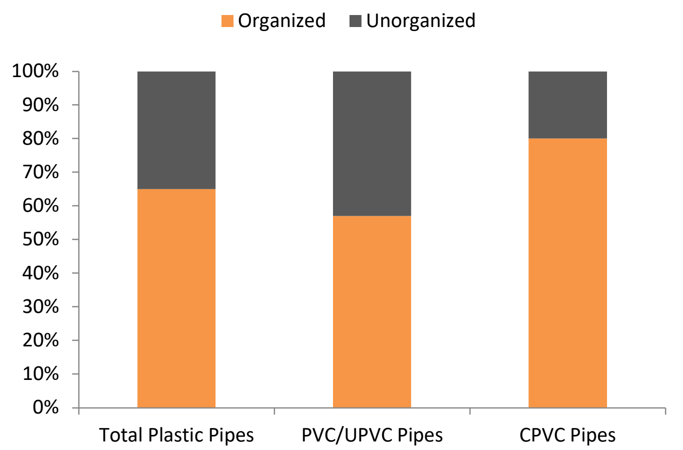

Source: Company, Equirus Securities

Exhibit 36: UPVC pipes to remain the largest segment in piping industry; CPVC is the fastest growing

Segment	Industry Size (Rs bn)	Applications
PVC/UPVC pipes	254	Agricultural and Residential Water supply
CPVC pipes	65	Residential plumbing applications
HDPE pipes	60	Irrigation, Sewerage, City Gas distribution
PPR pipes	21	Specialized Industrial Applications
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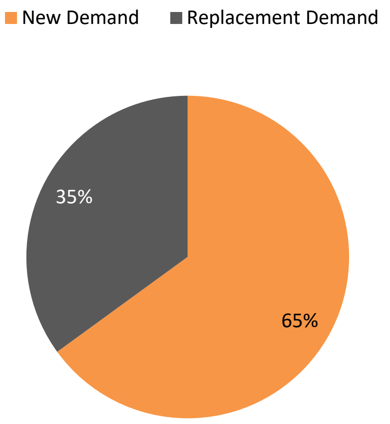
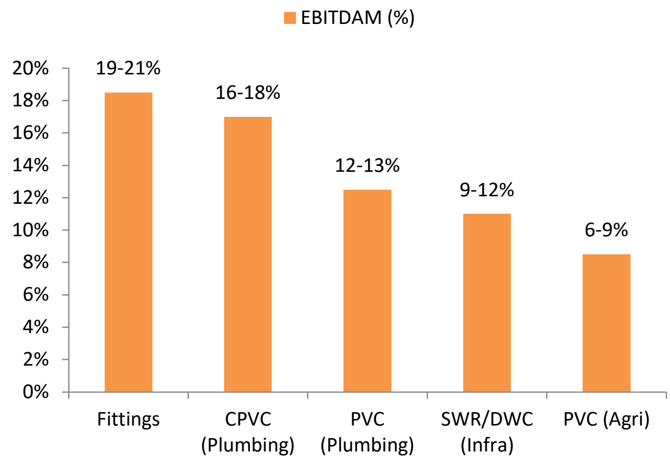


Source: Company, Equirus Securities

Exhibit 38: Fittings generate highest margins followed by CPVC plumbing; PVC has the lowest margins



Source: Company, Equirus Securities

Organized RM supply chain to provide sustainable tailwinds for bigger players

Key raw materials sourced from a mix of imports and domestic supplies

India currently relies completely on imports to meet its CPVC requirements from Korea, Japan, China and Europe

Key raw materials for the plastic pipe industry are PE (polyethylene), PVC (polyvinyl chloride), CPVC (chlorinated polyvinyl chloride) and PPR (made from Polypropylene Random Copolymer plastic). Raw materials form 65-70% of plastic pipe industry sales and their prices are directly linked to crude oil, and changes in global demand-supply and import-export regulations. Most of industry's raw materials are supplied either from domestic petrochemical companies or imported. India currently relies completely on imports to meet its CPVC requirements from Korea, Japan, China and Europe. For PVC, 45-50% of requirements are met indigenously while the balance from Taiwan, Japan, South Korea and China (collectively over 70% of India's imports). In case of PP, indigenous production satisfies 90% of the domestic requirement. For HDPE, 40-45% of domestic requirement is met through imports from the UAE, Saudi Arabia, Qatar, Singapore and the US (collectively over 80% of India's imports).

Organized players better placed to face risks, pass on RM cost inflation

Though India has significant polymer capacity, it continues to be a net importer of PVC and PE as demand growth has outpaced capacity addition. Therefore, volatility in international feedstock prices, exchange rate fluctuations, and demand-supply mismatch are key risks faced by players. Given that 35-40% of pipes and fittings industry is unorganized and highly competitive, players are able to pass on RM price increases only partly to end users. However, organized players are better placed to pass on RM price hikes and face risks as they enjoy established relationships with RM suppliers, have a wide distribution base and a well-recognised brand presence.

Unorganized players struggle to negotiate prices, pass on RM price hikes, or secure timely deliveries

Additionally, in case of plastic pipes, unorganized players are increasingly finding it tough to negotiate prices and securing deliveries via cash payments because of the stranglehold of large suppliers or importers. On the other hand, organized players can make use of their operating leverage for getting better procurement and timely delivery terms and so are able to manage their cost better. Compared to this, RM supply chains of other building materials like tiles and wood panel are still heavily dependent on unorganized/semi-organized sources, thereby helping the unorganized segment remaining dominant as of now.

ADD on CPVC resins from Aug'19

India completely depends on imports from Korea, Japan, China and Europe to meet its CPVC requirements. CPVC pipes account for ~15-16% of the plastic pipes industry and will be the fastest growing (20+% CAGR over next 3-4 years) pipes category. There are only a handful of quality CPVC resin suppliers in the world (Lubrizol, Sekisui, Kaneka, Kem One) with whom the top domestic players already have a tie-up. Mid-sized and unorganized players depend on imports from China, Korea, Japan and Europe. As per DGFT, between FY15-FY19, total imports grew at a 14-15% CAGR while that from China and Korea increased at a 40%+ CAGR. In Feb'20, GoI imposed an ADD on imports of CPVC, originating in or exported from China PR and Korea RP, for a period of 5 years from the date of imposition of provisional ADD, i.e., 26 Aug'19. The notification covers countries that export through China/Korea and any Chinese/Korean company that exports CPVC resin/compound through other countries to India. The final ADD ranges from US$ 2,024 – 2,161/t for Resin and US$ 2,657 – 2,853/tonne for compounds. As per DGTR findings, imports from these two countries were ~32% of India's overall CPVC resin/compound imports.

ADD on CPVC imports from few countries and supply chain disruption hurting regional/unorganized players

The duty has made imports from these countries uncompetitive vs. US and Japan. As many smaller/unorganized players were sourcing CPVC resins from China and Korea, imposition of ADD has impacted their cost of production. This has further been exacerbated by supply chain disruption in FY21 caused by a combination of increased demand post opening of lockdown restrictions across the World, shutdown of capacities in US and other regions due to maintenance and higher freight costs + container unavailability; this has hampered the availability of resin and compounds for the regional and smaller players. This has helped the organized players in gaining mkt. share as well as increase distribution network in regions wherein local manufacturers were having higher presence.

Exhibit 39: Tie-up of bigger brands for supply of CPVC resin with international players

Indian Company	Foreign Partner
Ashirvad Pipes	Lubrizol
Astral Pipes	Sekisui
Finolex Industries	Multiple Sources
Prince Pipes	Lubrizol
Supreme Industries	Kaneka Corporation
Apollo Pipes	Largely Kem One

Source: Industry, Equirus Securities

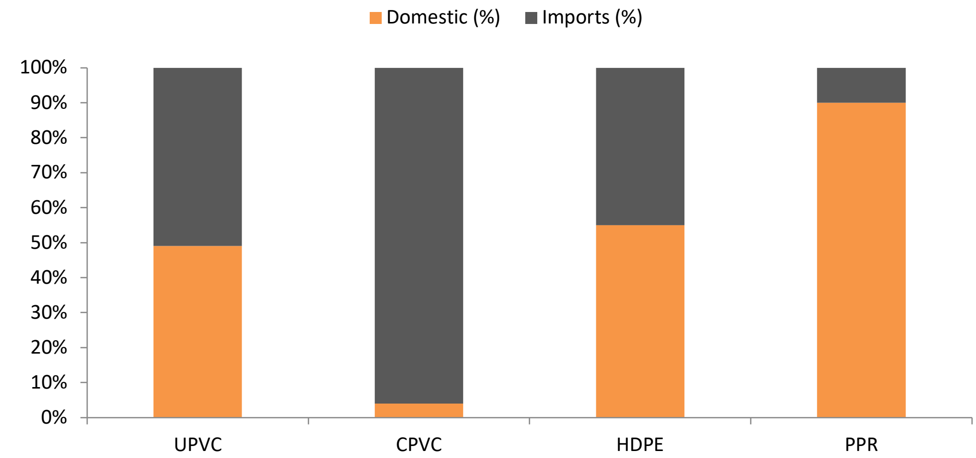
Astral buys CPVC resins from multiple sources in addition to Sekisui
Apollo pipes buys CPVC resins from 1 additional sources in addition to Kem One

Exhibit 40: Tie-up of big brands with international players for supply of CPVC resins

Country of origin	Name of the company	Duty USD/t (Resin)	Duty USD/t (Compound)
China	Shandong Gaoxin Chemical	2,087	2,717
	Shandong Pujie rubber and plastic	2,053	2,853
	Shandong Xiangsheng New Materials Technology	2,045	2,853
	Weifang Sundow Chemical	2,025	2,853
	Shandong Xuye Materials	2,057	2,657
	Any other producer	2,161	2,853
Korea	Any producer	2,024	2,853
Any country other than China/Korea	Any producer	2,161	2,853
Any country other than China/Korea	Any producer	2,024	2,853

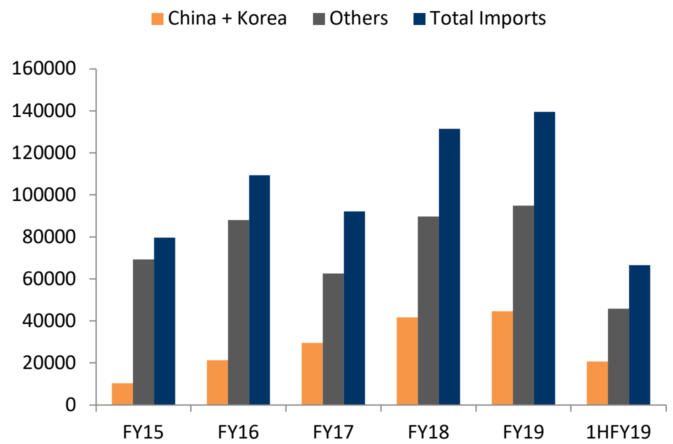
Source: Industry, Equirus Securities

Exhibit 41: Domestic vs. import mix for different RM in pipes



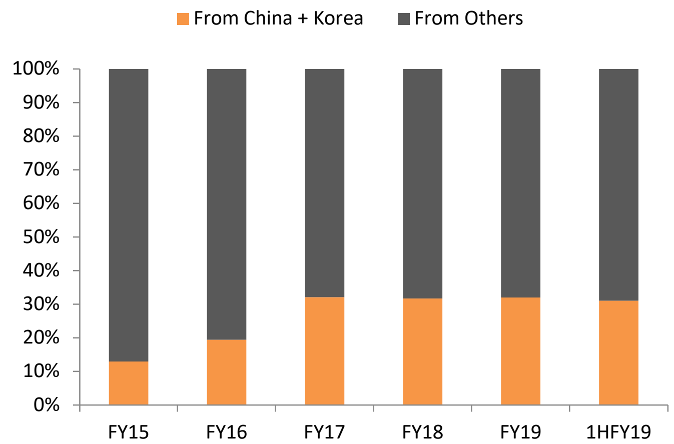
Source: Industry, Equirus Securities

Exhibit 42: Imports of CPVC resin from China & Korea grow strongly over FY15-FY19



Source: Company, Equirus Securities

Exhibit 43: Share of China & Korea in total imports up from ~13% to ~30% over FY15-FY19



Source: Company, Equirus Securities

Organized brands gaining market share, visibility

Driving factors: Diversified mfg. base, strong distribution channel, enhanced product portfolio

Multiple manufacturing sites help lower transportation costs, maintain cost efficiencies & ensure WC management

- Multi-locational strategy: In pipes, transportation costs play a critical role due to bulkiness of the product. Therefore, proximity of manufacturing plants to RM sources and end consumer markets become very important in maintaining cost efficiencies and WC and improving dealer inventory and ROI. Typically, freight could be anywhere between 4-6% depending on the distance between the plant/warehouse and the distributor; this can be brought down to 2-3% by setting up local manufacturing and supplies.

  Most top players have focussed on increasing presence via multiple manufacturing locations. Regional and unorganized players have never concentrated on this type of multi-locational strategy; consequently, larger players have increasingly made inroads into the former's strongholds since last few years. Pipe distribution mainly follows a two-tier system wherein the company sells to distributor who in turn either sells to sub-dealer or to end-consumer. In projects, companies either deal with end-consumer via distributors or directly.

- **Strong distribution channel:** Most pipe manufacturers have established positions in the northern, western and southern regions. A few players however have spread their manufacturing base in the East – set to emerge as one of the fastest growing regions over the next 3-4 years. We believe continuous efforts by organized players to increase channel partners and widen distribution networks provide them a competitive edge and help target the underpenetrated market. As per CRISIL, organized players, particularly in the SWR (soil, waste and rain) segment, cater to unserved demand from financially-stressed players.

Focus on rationalizing and expanding distribution channel

  Organized players are also focusing on rationalizing/expanding their distribution channel and adding more dealers/retailers in areas wherein they have been traditionally facing competition from unorganized/regional players. The ongoing pandemic has helped companies with better balance sheets and operational/marketing efficiencies to bring into their fold some distribution partners of unorganized brands. Channel partners in the building material industry are increasingly looking to tie-up with players that ensure timely supplies, have a comprehensive product portfolio and help them during a crisis.

Organized players a one-stop solution provider for channel partners and consumer piping needs

- **Comprehensive product portfolio:** Competitive intensity in commodity products such as PVC pipes along with inroads made by smaller players into CPVC over FY13-FY19 has led bigger, organized players to make their product portfolios more comprehensive; thus, they have emerged as a one-stop solution provider for channel partners and consumer piping needs. The distribution channel is more open to join manufacturers that provide a basket of all piping and water supply/storage products under one roof. Most organized players have launched new products such as HDPE and PPR, and more recently entered into overhead plastic tanks. Organized players have also launched products and entered pipe fittings and solvents; this differentiates them from unorganized players who sell only piping as fittings, while solvents require higher precision and manufacturing capabilities. Consequently, organized players have seen margin gains and incremental wallet share of consumers.

Competition in overhead water tanks mostly with regional players who undercut by 15-25% in terms of pricing

- **Diversification into overhead tanks:** Of late, several established and upcoming organized players have started diversifying into overhead tanks. As per industry estimates, water tank market in India is Rs 50bn-55bn, of which 80% is for overhead tanks. Water tank industry has been growing at 9-10% over the last five years and there are ~250+organized players and many more unorganized players. As per industry estimates, ~30% of the market is organized while the rest unorganized. About 80% of tank demand is for less than 2,000 litres. It is a very fragmented market wherein a strong manufacturing network is required to minimize freight cost and right distribution network is required to sell this product; this is because, competition is mostly with regional players, who undercut organized manufacturers by 15-25% in terms of pricing.

  With one of the bigger companies facing challenges in this segment, a vacuum has been created at the top of the pyramid; some pipe manufacturers are targeting to capture this. Asset turns in this business are 4-4.5x and manufacturers can earn 14-5% EBITDAM in this segment.

Exhibit 44: Comparative analysis of key players

Particulars	Ashirvad Pipes*	Astral Pipes	Finolex Industries	Prince Pipes	Supreme Industries	Apollo Pipes	Jain Irrigation	Kisan Mouldings
Capacity in MT	2,00,000	2,57,946	3,70,000	2,59,000	5,09,000	1,18,000	NA	50,000
Sales Volume in MT	1,49,532	1,36,590	2,12,060	1,38,289	2,94,357	47,333	NA	NA
Utilization (%)	74.8%	53.0%	57.3%	53.4%	57.8%	40.1%	NA	NA
No. of Manufacturing Facilities	2	7	3	7	8	4	NA	5
Manufacturing Location	Karnataka and Rajasthan	Gujarat, Tamil Nadu, Rajasthan, Maharashtra & Uttarakhand	Maharashtra and Gujarat	Maharashtra, Tamil Nadu, Uttarakhand, Dadra & Nagar Haveli, Rajasthan and Telangana	Maharashtra, Telangana, Uttar Pradesh, Madhya Pradesh and West Bengal	Uttar Pradesh, Chhattisgarh, Gujarat, Karnataka	NA	Maharashtra, Madhya Pradesh, Dadra & Nagar Haveli
FY21 Pipes Revenues (Rs bn)	29	25	26	21	41	5	11	2
FY16-21 Pipes Revenue CAGR	16%	12%	5%	16%	13%	20%	-7%	-15%
% of revenues from Plastic pipes & fittings	100%	76%	76%	100%	65%	90%	20%	NA
Other revenue contributors in FY21	0%	24%	24%	0%	35%	10%	80%	NA
Other product segment	None	Adhesives	PVC resins	None	Packaging, Industrials and Consumer	Plastic Bath Fittings & storage tanks	Hitech Agri Inputs, Agro and Others	Irrigation systems, Moulded Furniture
Mkt. share in overall industry	9%	6%	7%	5%	10%	1%	3%	0.5%
Mkt. share in organized industry	13%	9%	10%	8%	15%	2%	4%	1%
No. of Distributors	1,100	850	1,000	1,500	1,368	600	NA	100
Dealers/Retail Touch Points	53,000	33,000	21,000	46,171	35,900	20,000	NA	3,000
SKUs	NA	NA	2,100	7,200	8,774	1,500	NA	NA
Warehouses/Depots	11	12	2	11	37	NA	NA	NA
Dominant Presence	Residential Plumbing	Residential Plumbing	In Agriculture	1/3rd presence in Agriculture 2/3rd presence in Plumbing + SWR	Has strong presence in both Residential plumbing and Irrigation	Has presence in both Residential plumbing and Irrigation	Caters to agricultural, industrial and infrastructural customers	NA
Product Portfolio	UPVC, SWR, CPVC pipes and fittings	UPVC, CPVC, HDPE pipes and fittings, Water Tanks	UPVC, CPVC pipes and fittings, Water Tanks	UPVC, CPVC, HDPE, PPR pipes and fittings, Water Tanks	UPVC, CPVC, HDPE, PPR pipes and fittings, Water Tanks	UPVC, CPVC, HDPE, PPR pipes and fittings, Water Tanks	UPVC, CPVC, HDPE, PE pipes and fittings	CPVC, UPVC & SWR pipes
Irrigation: Residential Mix	10%:90%	10%:90%	63%:37%	31%:69%	#25%:75%	47%:53%	NA	NA
@Ad spending (% of sales)	2-3% of sales	3-4% of sales	1-2% of sales	2-3% of sales	2-3% of sales	1-2% of sales	0.5-1% of sales	NA
Mkt. share (%)	30%+ in CPVC pipes	20-25% in CPVC pipes	14% Agri pipes	5-6% in overall pipes mkt.	10% in overall pipes mkt.	1.5% in overall pipes mkt.	2.5% in overall pipes mkt.	0.5% in overall pipes mkt.
Brand Ambassador	None	Pipes: Ranveer Singh Adhesives: Varun Dhawan	None	Akshay Kumar	None	Under planning	None	None

** Ashirvad Pipes numbers are for FY20, # As per our understanding, @ Ad spending are based on FY20 numbers*

Source: Industry

Exhibit 45: Presence of brands across different geographies

Region	Brands Present
North	Ajay, Prince, APL Apollo, Supreme Industries, Ashirvad Pipes, Astral Pipes, Vectus, Finolex Industries
South	Ashirvad Pipes, Astral, Sudhakar, Supreme, Finolex, Nandi, Raksha
East	Ashirvad Pipes, Astral, Supreme, Finolex, Prince, Skipper, Vectus
West	Ashirvad Pipes, Astral, Supreme, Finolex, Prince, Kisan
Central	Ashirvad Pipes, Astral, Supreme, Finolex, Prince, Plasto

Source: Industry

Strong branding – An edge to organized players, mainly in residential plumbing

- About 10-12 years ago, plastic pipes were considered a commodity product and top players did not invest heavily in ATL activities. However, over the last 7-10 years, with the introduction of newer products like CPVC typically used in residential plumbing, pipes have gradually transitioned from a B2B to a B2B-B2C product. Astral was the first company to do celebrity tie-ups in the industry; bigger organized players and upcoming horizontally diversified players have been **continuously investing in BTL and ATL activities** to create brand awareness among plumbers and consumers, and differentiate themselves from 'me too' products.

Brand spends considered an important investment by organized players

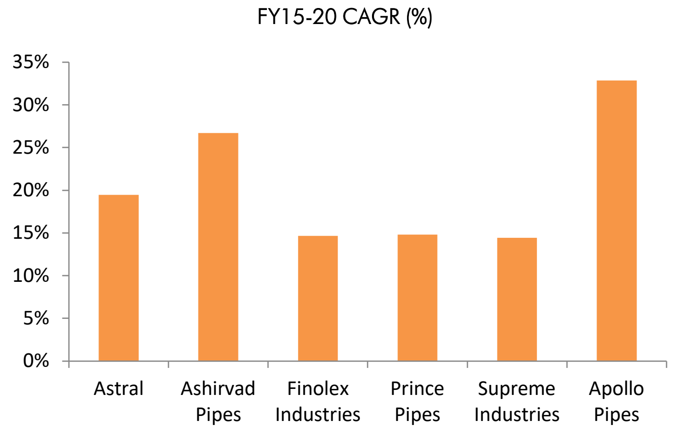
- As per our understanding, cost of residential plumbing (35-40% of piping industry) forms only 1.5-2% of total cost of buying a house. But installation of pipes is a critical process as it gets concealed; also, in case of any leakage or waterflow blocking, the paint, tiles and wall construction need to be broken and repaired. Hence, **consumers are increasingly participating in making the end decision on pipes to be installed**, and are ready to pay a premium for quality assurance. Most organized players have banked upon this need, leading to better realizations and margins compared to unorganized manufacturers.
- **ATL line activities** – like celebrity tie-ups in film marketing and brand sponsorship in leading sporting events – have been **picking up strongly**. Besides, pipe companies have been investing in ramping up BTL activities and increasingly conducting plumber and dealer meets to raise awareness about their product portfolio and giving them incentives for using their products.

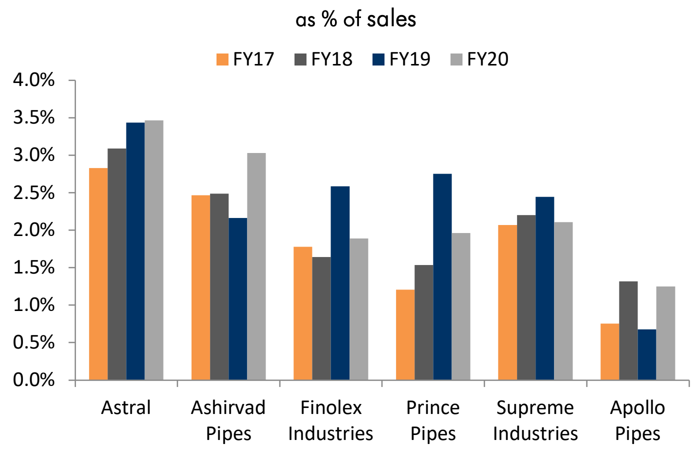
EBITDA margin gap between top 5 branded players and local/regional brands jumps from ~60-90bps in FY15 to ~500-600bps in FY20

- On strong brand and ability to charge a premium, players with good brand equity enjoy higher gross margins. Also, their national presence, reach & distribution and lower operating cost support gross margins. As a result, key brands have gross margins of 30-35% vs. 25-30% for small regional players. The margin gap between leading brand players and local/regional brands, merely ~100bps in FY15, has jumped to ~600bps in FY19.

  Higher gross margins of branded players also leads to higher EBITDA margins. We note that **regional local brands have EBITDA margins of 9-12% and key branded players 14-18%** despite incurring higher expenses for branding, sales and distribution and administration. The avg. EBITDAM gap between Top 5 branded players and local/regional brands which was ~60-90bps in FY15, has jumped to ~500-600bps in FY20 (some of the regional players posted EBITDA losses).

Exhibit 46: Leading players increasing ad & promotional spends to increase visibility





Source: Industry, Equirus Securities

Exhibit 47: Key factors driving purchase decisions of end consumers

Factors driving purchasing decision	North	South	East	West	Central
Rank 1	Price	Quality	Price	Brand Strength	Price
Rank 2	Brand Strength	Brand Strength	Plumber suggestion	Quality	Quality
Rank 3	Quality	Price	Quality	Price	Brand Strength
Rank 4	Plumber suggestion	Plumber suggestion	Brand Strength	Plumber suggestion	Plumber suggestion

Source: Vectus DRHP

Top-5 players well placed to capture growth opportunities

We analysed data of 18-19 companies to understand key developments in the industry.

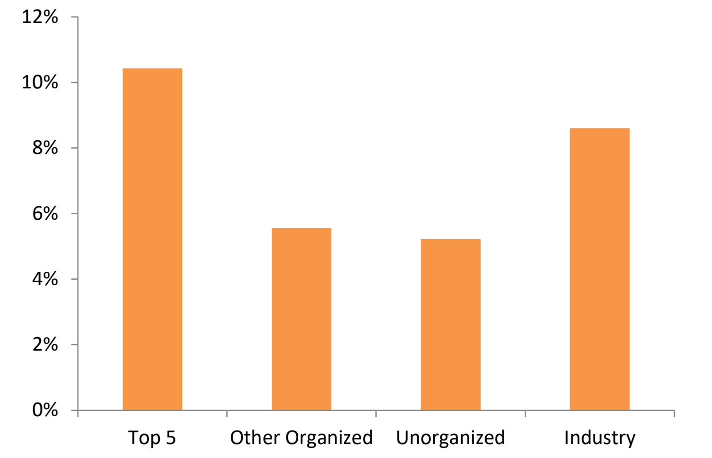
Market share of top-5 players rose from 34% in FY15 to 37% in FY20

- Our analysis indicates that over FY15-FY20 (FY21 data unavailable for unlisted companies), sales of top-5 players have strongly outperformed other organized/regional players as well as unorganized players; this implies consolidation in the pipes industry.
- Top-5 players saw an ~10% revenue CAGR during the period vs. 6% for other organized/ regional players and 5% for unorganized players. During FY15-FY20, the pipe industry has grown at a 9% CAGR.
- The market share of top-5 players has improved from 34% in FY15 to 37% in FY20. Other organized players have seen market share improve from 25% in FY15 to 28% in FY20. For unorganized players, the share has fallen from 41% in FY15 to 35% in FY20.
- In the last 3-4 years, few players with strong brand names in their own segments have entered the piping segment to capitalize on growth opportunities. Likes of Somany Home Innovation (*Truflow*) and HIL (*Aerecon*) have seen strong piping growth, off a low base, in last 3 years. These companies target Rs 10bn+ in pipe revenues over the next 3-4 years.
- EBITDA CAGR for top-5 players was 16% over FY15-FY20 and that of other organized players 8%.

Absolute A&P spending by top-5 players up from Rs 1.1bn in FY15 to Rs 3.1bn in FY20

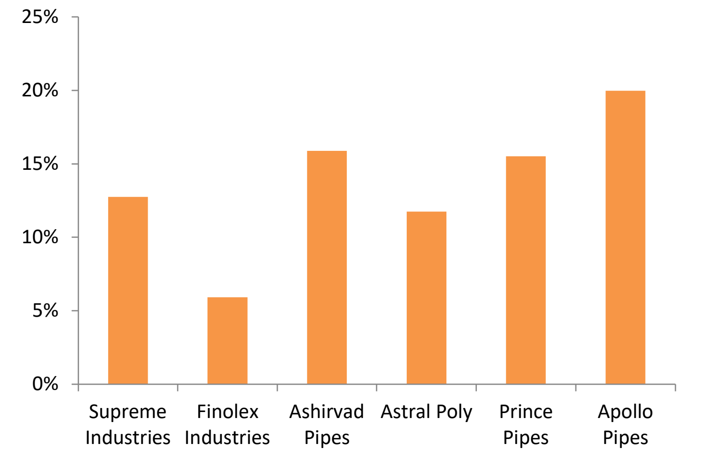
- Avg. D/E for top-5 players slid from 0.8x in FY15 to 0.2x in FY20 and for other organized/ regional players from 2.0x to 0.97x.
- Avg. non-cash WC/sales for top-5 players has remained constant at 14% in last 5 years while that for other organized/regional players has spilled from 21% to 20%. Avg. debtor days for top-5 players have reduced from 39 in FY15 to 27 in FY20; for other organized/regional players, there has been an increase from 48 to 54 days.
- Absolute A&P spending by top-5 players increased from Rs 1.1bn in FY15 to Rs 3.1bn in FY20; for other organized/regional players, it increased from Rs 211mn to 497mn in FY20.

Exhibit 48: Top 5 players outpaced other organized/unorganized players in terms of revenues over FY15-FY20



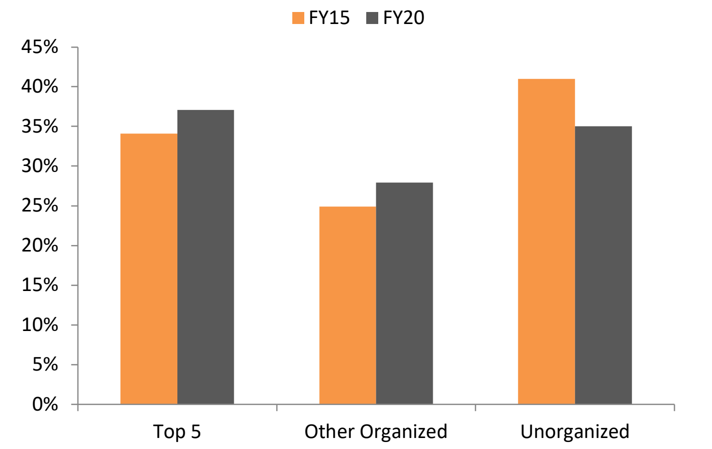
Source: Company, Equirus Securities

Exhibit 49: Prince Pipes and Apollo Pipes see strongest revenue CAGR (on a low base) over FY15-FY20



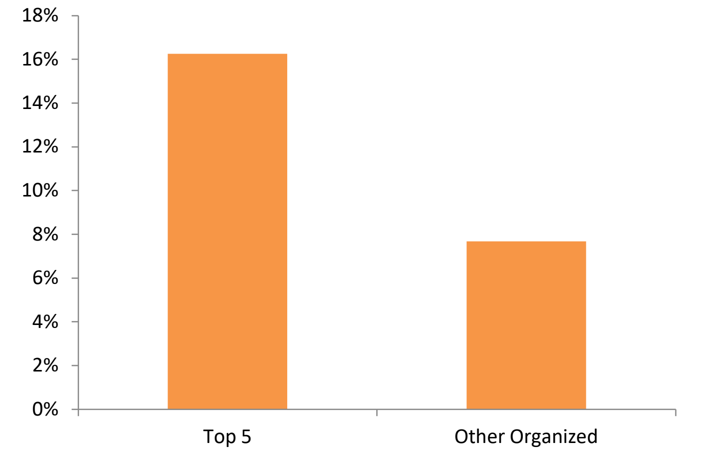
Source: Company, Equirus Securities

Exhibit 50: Mkt. share for top-5 pipe players rises over FY15-FY20



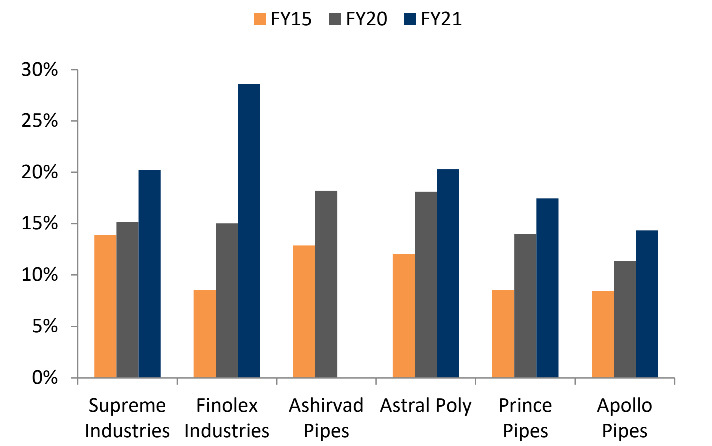
Source: Company, Equirus Securities

Exhibit 51: 16% EBITDA CAGR for top-5 players over FY15-20 strongly outpaces that of other organized players



Source: Company, Equirus Securities

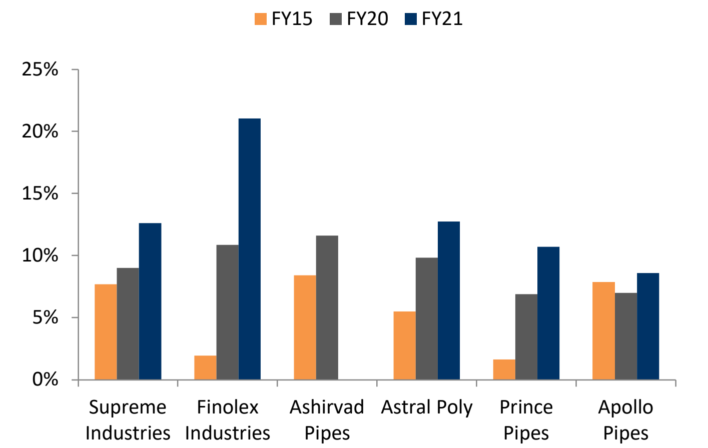
Exhibit 52: EBITDAM for leading players improves over FY15-FY21



Source: Company, Equirus Securities

**FY21 number not available for Ashirvad*

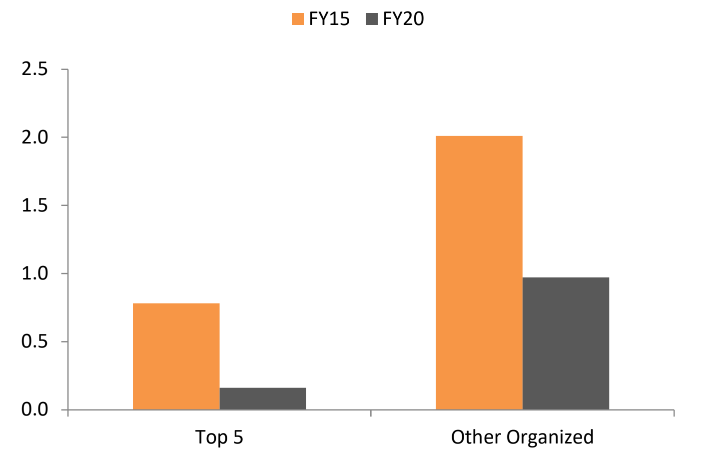
Exhibit 53: PATM for leading players rises strongly over FY15-FY21



Source: Company, Equirus Securities

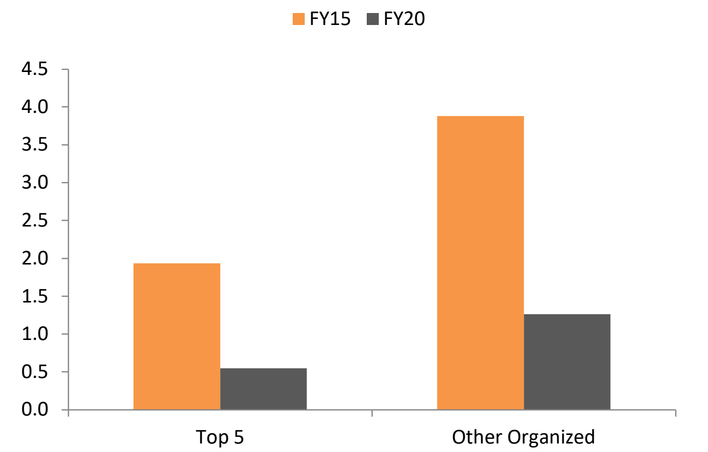
**FY21 number not available for Ashirvad*

Exhibit 54: Avg. D/E for top-5 players at a comfortable level and drops for other organized players as well



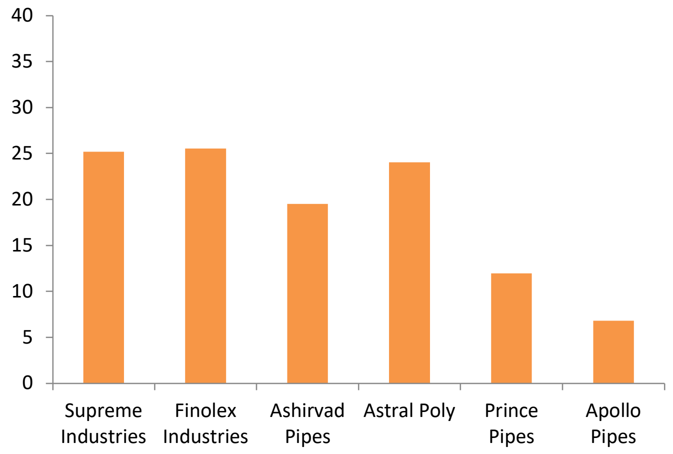
Source: Company, Equirus Securities

Exhibit 55: Debt/EBITDA for top-5 players, other organized players has corrected



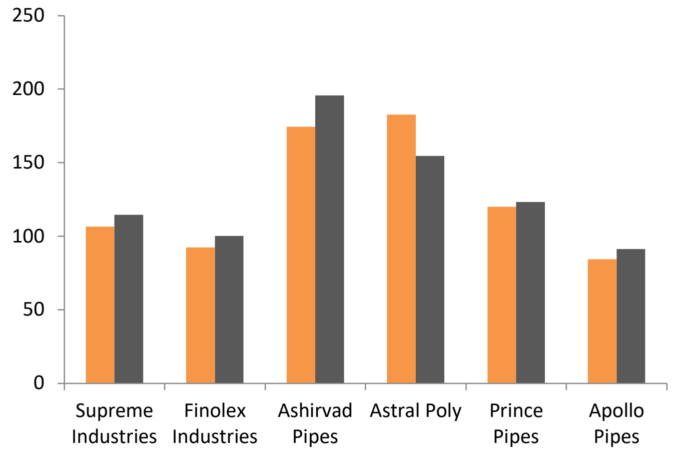
Source: Company, Equirus Securities

Exhibit 56: Revenue/distributor for Supreme & Finolex slightly higher given their strong agri segment presence



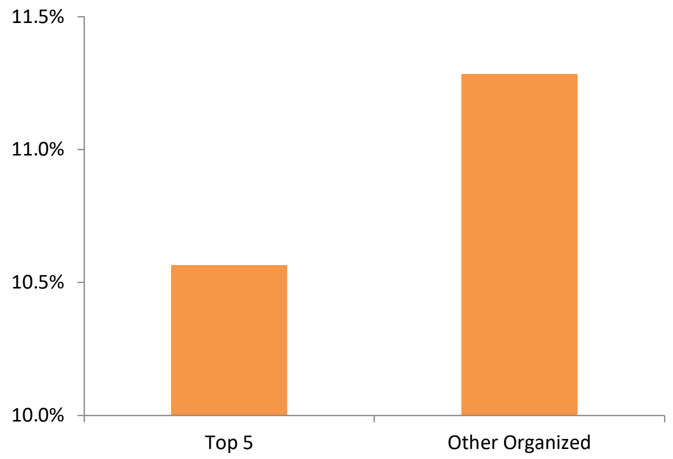
Source: Company, Equirus Securities

Exhibit 57: Realization/kg for companies with higher CPVC contribution continues to improve



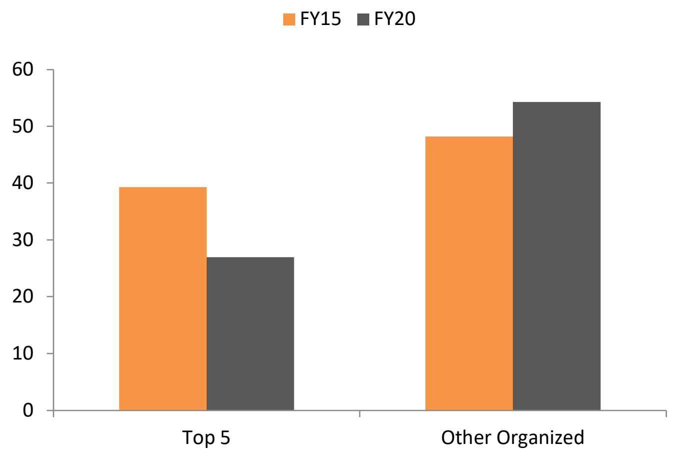
Source: Company, Equirus Securities

Exhibit 58: Gross block of top-5 & other organised players increases at an ~11% CAGR over FY15-FY20



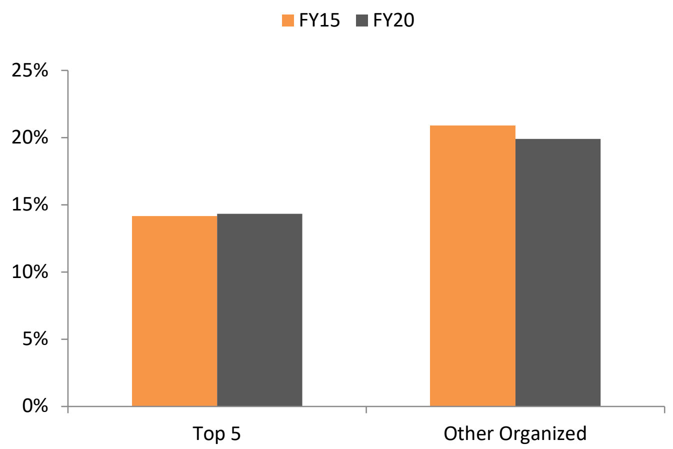
Source: Company, Equirus Securities

Exhibit 59: Receivable days for top-5 players fall from 39 to 27 days over FY15-FY20



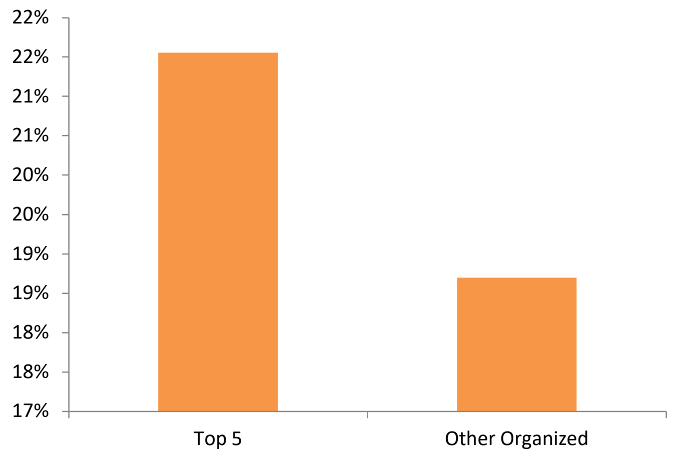
Source: Company, Equirus Securities

Exhibit 60: NWC/sales for top-5 companies flattish while that for other organized players drops slightly



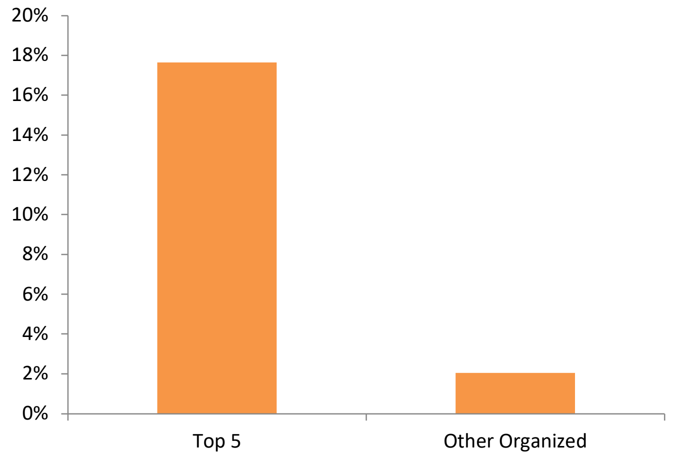
Source: Company, Equirus Securities

Exhibit 61: A&P CAGR for top 5 players grows by 22% over FY15-FY20



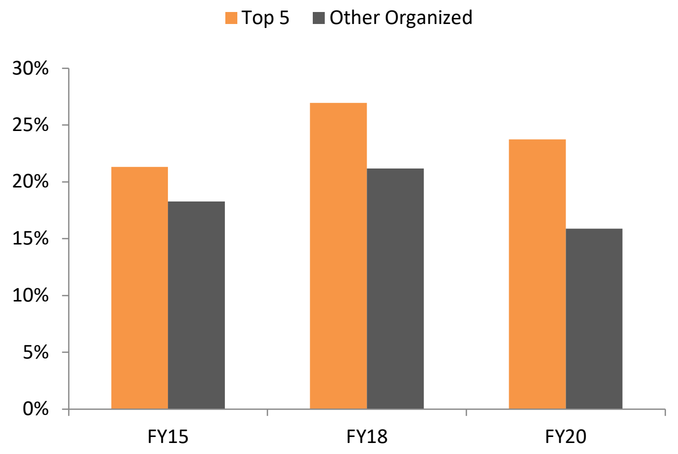
Source: Company, Equirus Securities

Exhibit 62: Avg. logistics costs for top-5 players up 18% CAGR over FY15-FY20



Source: Company, Equirus Securities

Exhibit 63: Avg. ROCE gap between top-5 and other organized players widens in FY20



Source: Company, Equirus Securities

Industry growth drivers

Govt schemes such as PMKSY, AIBP, CADWN and AMRUT have fuelled volume offtake

- In real estate, increasing investments in WSS projects, substitution of metal pipes with polymer pipes, and replacement demand have driven plastic pipe offtake in the last decade. On the other hand, initiatives such as Pradhan Mantri Krishi Sinchayee Yojana (PMKSY), Accelerated Irrigation Benefits Programme (AIBP), and Command Area Development and Water Management (CADWM) Programme have fuelled volume offtake from the irrigation sector.
- Additionally, the industry has received a boost from GoI' Atal Mission for Rejuvenation and Urban Transformation (AMRUT) scheme, aimed at providing basic services such as WSS and ensuring every household has access to a tap with assured water supply and a sewerage connection. As a result, demand for soil, waste and rain, and drainage pipes has been robust.

Irrigation

Investment in irrigation sector to rise by 10-15% led by Maharashtra, Karnataka and Madhya Pradesh

- Irrigation (45-50% of plastic pipe demand in India) will be a key industry volume driver due to strong govt. focus on development of irrigation-related infra to help farmers grow income, reduce dependence on rains and stop water wastage. Plastic pipes are primarily used in irrigation and WSS projects, and major demand sources are public sector projects. In India, groundwater continues to be the biggest source of irrigation. As per CRISIL estimates, of the total agricultural land in India, area under irrigation is ~49% while the remaining 51% is completely rain-dependent. In FY22, investment is expected to rise 10-15% led by Maharashtra, Karnataka and Madhya Pradesh – states that urgently need to increase irrigation coverage. Construction spends in irrigation will rise to Rs 3.7tn over FY21-FY25 from Rs 3.1tn during FY16-FY20.
- Measures announced by govt. in FY22 budget:

a. Enhancement in agricultural credit to Rs 16.5tn in FY22.

b. A micro irrigation fund with a Rs 50bn corpus has been created under the NABARD scheme.

Real Estate

- Real estate is a key end-user of plastic pipes in India. Over the past few years, sector demand has been sluggish and developers had to push back handing over possession of projects due to approval delays and financial issues. Over the next 3-4 years, the real estate sector is expected to see continued recovery.
- Pradhan Mantri Awas Yojana (PMAY), a scheme under the 'Housing for All by 2022' programme, witnessed healthy construction over the past three financial years, particularly in FY19 and FY20. As on Mar'21, for PMAY – Urban, against the assessed demand of 11.2mn houses, the ministry has sanctioned 11.1mn houses; of this, 7.3mn are grounded and over 4.3mn have been delivered. For PMAY – Gramin, in first phase, 19.2mn (90%) houses have been sanctioned while 13.6mn (71%) have been completed.
- Measures announced by govt. in FY22 budget:

a. In the Feb'21 budget, GoI merged NRDWP (National Rural Drinking Water Programme) into Jal Jeevan Mission to provide tap connections to every rural household by FY24.

b. Jal Jeevan Mission (Urban) focuses on providing water supply to 4,378 ULBs with 26mn household tap connections.

c. As per pipe manufacturers, GoI's vision to provide piped water access across urban and rural households could genuinely accelerate volume growth opportunities. With the outlay expected to be ~Rs 1.1tn over FY21-FY26, piping material cost for last mile connectivity would be between 8-12% of the total budget allocated, which means potentially Rs 80bn-120bn worth of piping would be required. Assuming a bear case scenario of only 30% of the allocated budget flowing in on ground, ~Rs 25bn worth of piping systems would still be required (7-8% of incremental opportunity total piping industry).

Urban Infrastructure

Over FY21-FY25, CRISIL Research expects urban infra spends at Rs 2.9tn, up 1.35x from last 5 financial years

- Investment in urban infrastructure in FY21 is expected to have fallen by 8-12% yoy as the coronavirus pandemic led to reduced spending. In FY22, investment is expected to rise 15-20% yoy as deferred projects kick off and GoI focuses on Swachh Bharat Mission, Jal Jeevan Mission, AMRUT and metro projects, a bulk of which were under implementation and have achieved financial closure. Over FY21-FY25, CRISIL Research expects urban infra to see Rs 2.9tn spending – a 1.35x increase from the previous five financial years.
- Half of the amount is expected to be in WSS projects, driven primarily by state governments and through centrally sponsored programmes such as Jal Jeevan Mission, AMRUT and Swachh Bharat Mission.
- After WSS, metro construction will attract the most investment in urban infra development. CRISIL Research estimates that spending in metro rail will increase 1.3x to Rs 1tn over the next five years. Bulk of these projects are under construction and have achieved financial closure. The pandemic-led lockdown and labour migration drove investment lower in FY21. However, projects deferred this financial year are expected to restart the next financial year. Several projects announced and being implemented by various state governments will drive medium-term growth of pipe sector.
- Measures announced by govt. in FY22 budget:
  - Ministry of Housing and Urban affairs has been allocated Rs. 545bn. Higher government budgetary allocation for urban development is expected to drive plastic pipe demand used for the infrastructure sector.

Risks

- Any major real estate slowdown will affect consumption of all building material industries.
- Lower than allocated spending by central or state governments on schemes (PMKSY, PMAY, Nal se Jal)
- Volatility in RM prices and INR depreciation will hit the profitability of plastic pipes players.
- Resurgence in increased competitive intensity among larger national and regional players.

4QFY21 Review - Plastic Piping Sector

Equirus
Onward Upward

Peak margins unsustainable; volume growth to continue

- 4QFY21 turned out to be a stellar quarter for the pipes industry with sharp volume recovery and strong profit growth amid all-time high PVC prices. Large players continued to gain market share from unorganized players, but this trend is set to partly reverse as PVC resins and credit availability has improved.
- But partial lockdowns in many parts of country due to Covid 2.0, have impacted demand and will reflect in muted numbers in 1QFY22. But improving housing demand and a likely revival in agri demand on correction in PVC prices, volume growth to see uptick from 2QFY22.
- EBITDAM for all players are at elevated levels with price hikes taken in the PVC segment, inventory gains on elevated PVC prices and stringent cost control. With the PVC prices already started cooling off from Jun'21; we see some margin contraction in FY22E as PVC prices cool off and increase in costs like A&P push up fixed costs.

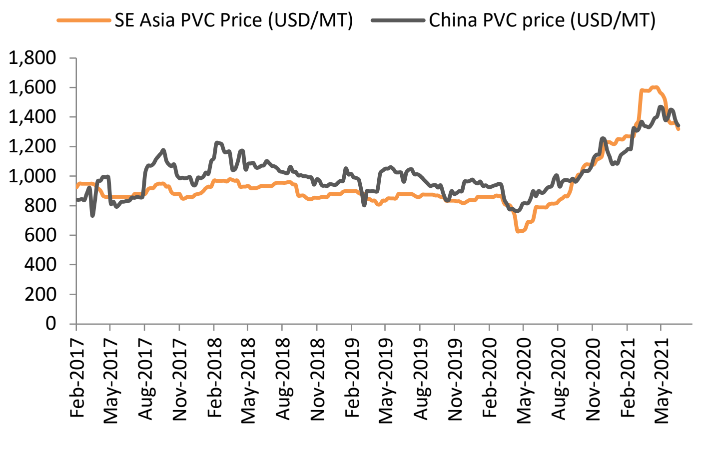
Improving housing demand buoys volumes: 4QFY21 volumes benefitted from strong housing sector demand whereas the agri segment remained weak. Astral (ex-Rex)/ Prince/Apollo posted 26%/34%/26% pipe volume growth but FNXP/SI posted degrowth of 4%/2% in volumes on weak agri demand. With unlocking happening plumbing focused players will see volume uptick from 2QFY22 onwards. While relatively more price sensitive agri demand will come after seasonally weak 2Q quarter and correction in PVC prices.

Quarters ahead to see strong growth: Large organized players will continue to grow strongly on (a) a likely revival in agri demand, on abating PVC prices, (b) strong housing demand, and (c) capacity expansion in new geographies (East & South India) and product categories (water tank business), and a better product mix. Also, with a weak base for the next two quarters, growth will be in double digits for most players.

Improving product mix and capacity expansion to drive next leg of growth: Other than FNXP, all players are expanding capacity by setting up new plants: (1) Astral in Orissa, (2) Apollo in Raipur, (3) SI in Orissa, Tamil Nadu and Assam, and (4) Prince in Telangana. Of late, FNXP has increased investments in non-agri and CPVC pipes & fittings; this should lead to margin expansion. SI is set to increase depth in the water tank segment and launch new value-added products in furniture and cross-laminated films. Astral too is focussing on new products in the adhesives business at the R&D stage and establish itself in the water tank business.

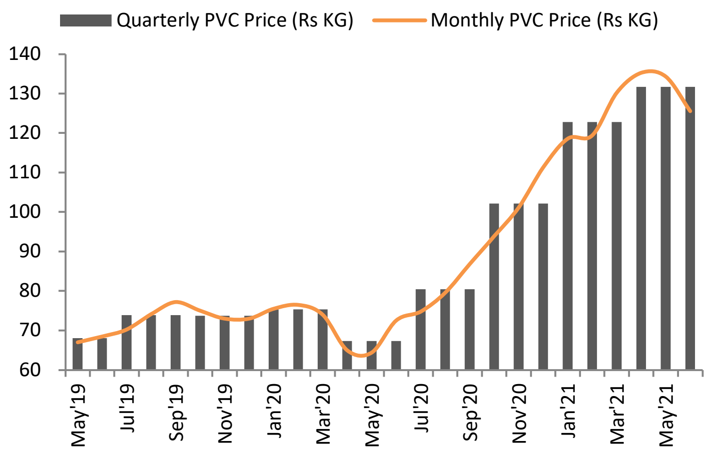
View: After many quarters of underperformance in the non-agri segment, FNXP is seeing good traction in fittings/CPVC (+18%/+28% yoy in 4Q); there is further acceleration through new SKUs and addition of retail points in urban regions. SI's packaging/industrial segments are clocking good volumes and margin recovery, even as pipes will remain a major contributor ahead. Astral's adhesive business started showing strong growth but revenue traction from the water tank business and ramp-up of the Orissa plant are still a few quarters away. Strong volume growth registered for Prince and Apollo, volumes expected to be further supported through commissioning of new plants.

Exhibit 64: PVC Price corrected moderately from all-time high in 4Q21 on supply issues. China PVC price corrected sharply in May-Jun'22



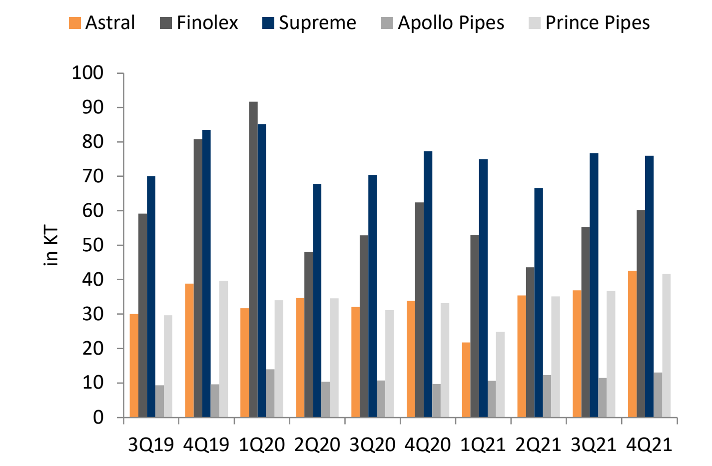
Source: Company, Equirus Securities

Exhibit 65: PVC prices jumped in 4Q21 due to supply shortfall and trend continues in Apr'21 with some stabilization in international prices during May-June period



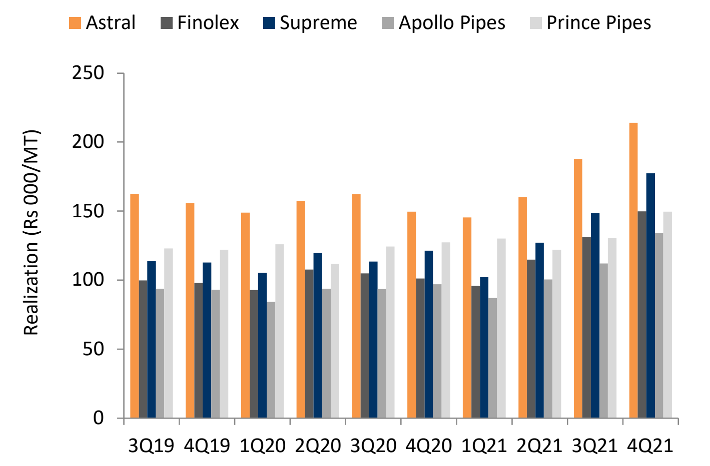
Source: Company, Equirus Securities

Exhibit 66: Astral/Finolex/Supreme/Apollo/Prince 4QFY21 volumes grew 26%/-4%/-2%/26%/34% yoy



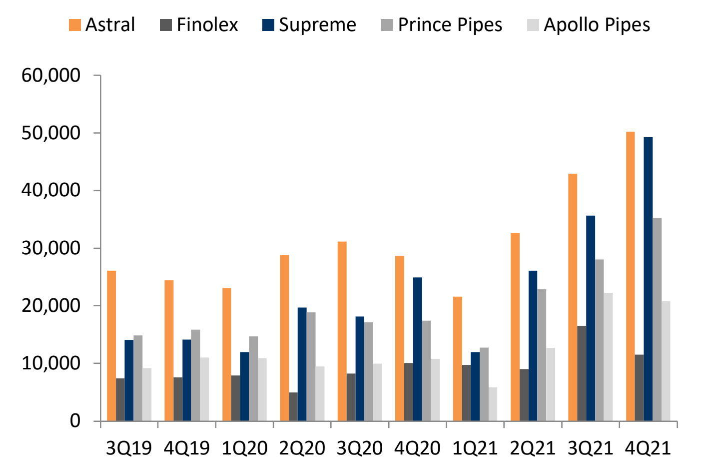
Source: Company, Equirus Securities

Exhibit 67: Sequential improvement in realization for all players driven by high PVC prices. In % term Finolex has highest jump



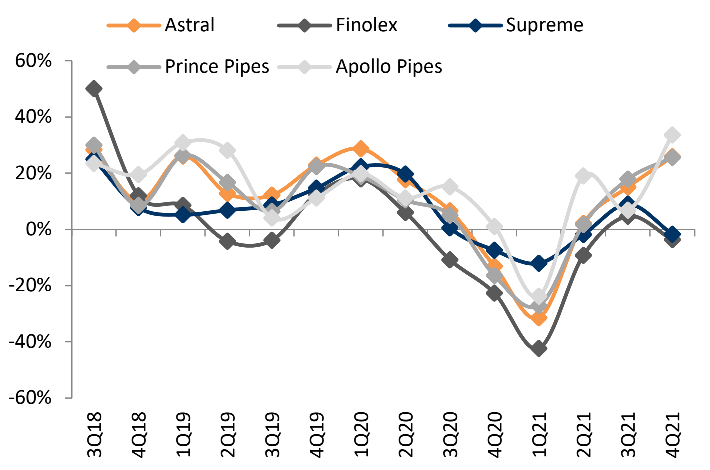
Source: Company, Equirus Securities

Exhibit 68: EBITDA/MT expands yoy for majority players on higher PVC prices



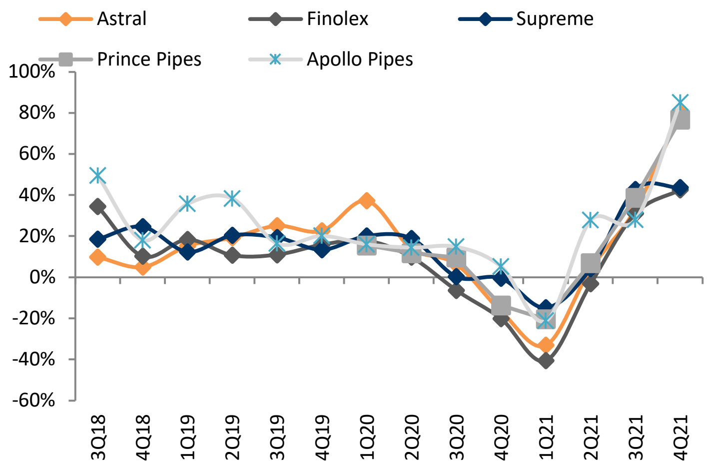
Source: Company, Equirus Securities

Exhibit 69: Volume growth: Housing sector focused players seen strong volume growth and agri focused like Finolex lagged peers



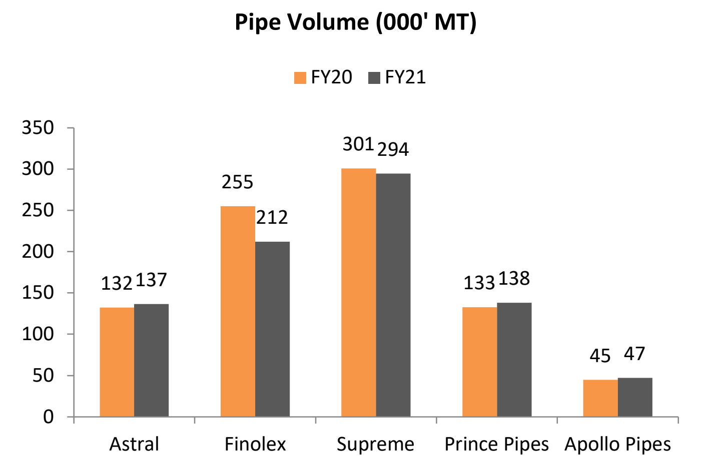
Source: Company, Equirus Securities

Exhibit 70: Pipe revenue growth: Elevated PVC prices and higher volumes led to strong revenue growth in 4QFY21 for all players



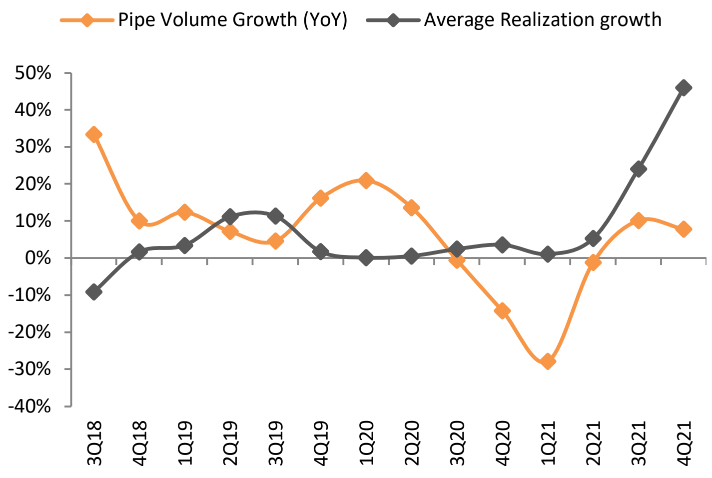
Source: Company, Equirus Securities

Exhibit 71: FY21 volumes was up 3-5% for all plumbing players. Finolex with agri focused has seen 17% decline due to lack of demand for agri pipe



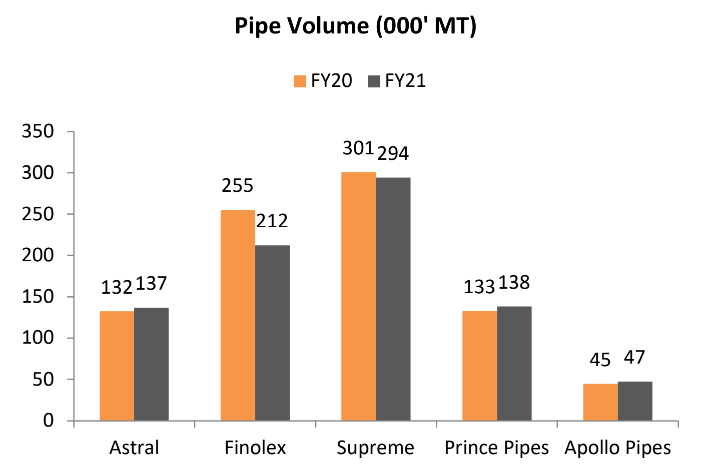
Source: Company, Equirus Securities

Exhibit 72: Aggregate strong volume & realization growth in 4Q21 on overall basis on strong demand from housing sector and higher PVC prices



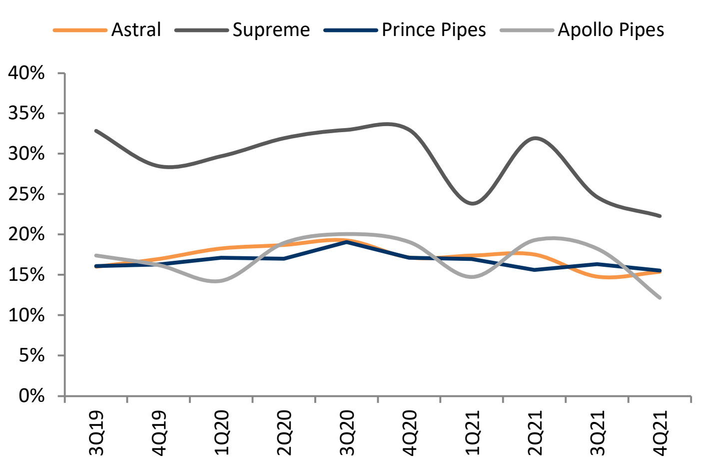
Source: Company, Equirus Securities

Exhibit 73: FY21 volumes was up 3-5% for all plumbing players. Finolex with agri focused has seen 17% decline due to lack of demand for agri pipe



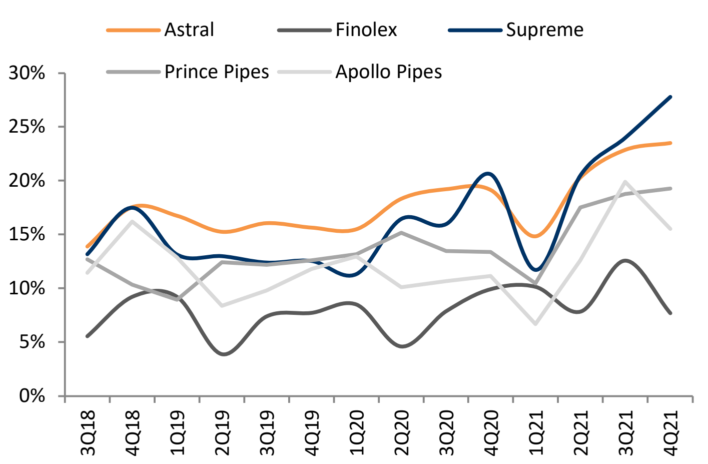
Source: Company, Equirus Securities

Exhibit 74: Employee+ Other expenses as % of revenue: Plumbing players has been operating with lowest ratio



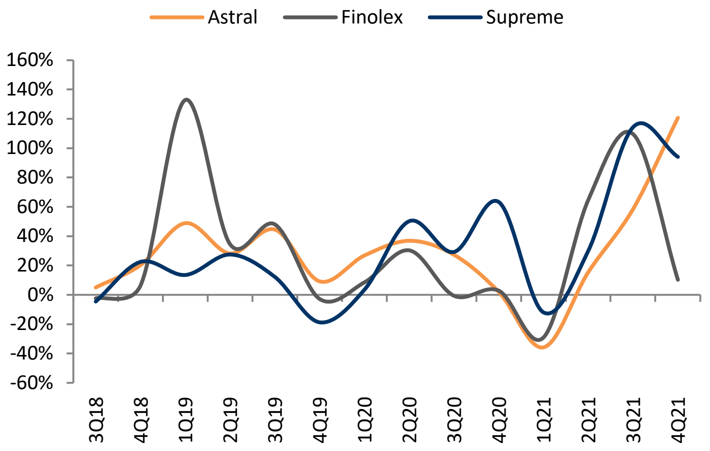
Source: Company, Equirus Securities

Exhibit 75: Pipe EBITDA margins: Higher PVC prices and higher volumes led to margin expansion for most players; albeit dipped for some due to one time inventory gain in 3Q21



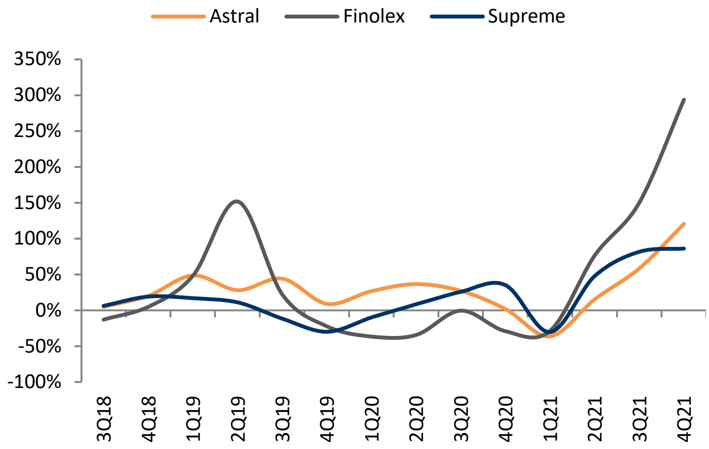
Source: Company, Equirus Securities

Exhibit 76: Pipe EBITDA growth: Sharp dip in Pipe EBITDA for Finolex due to inventory gains in 3Q, Astral pipe EBITDA growth beat peers on higher CPVC proportion.



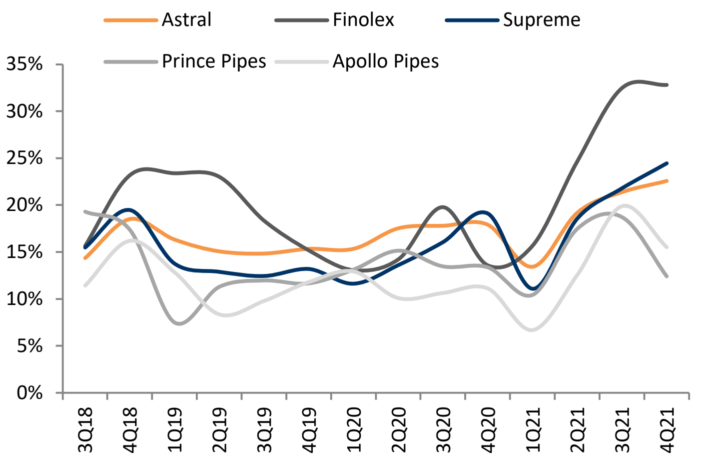
Source: Company, Equirus Securities

Exhibit 77: Overall EBITDA growth: Strong overall EBITDA growth for most players on low base



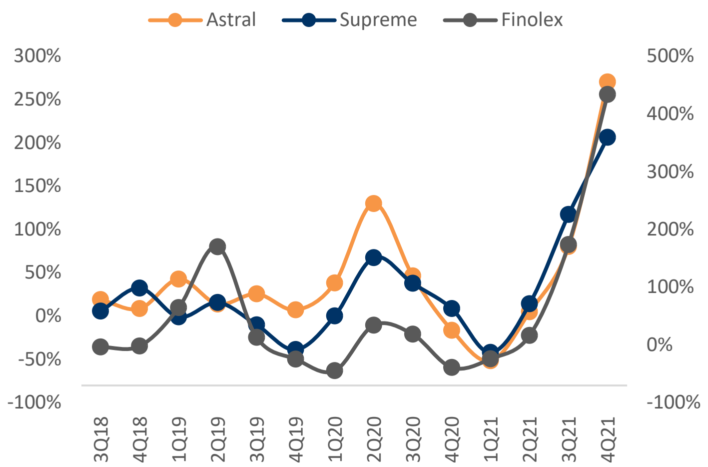
Source: Company, Equirus Securities

Exhibit 78: Overall EBITDA margins: Margins dipped on qoq basis due to presence of inventory gains in 3Q21 for most players



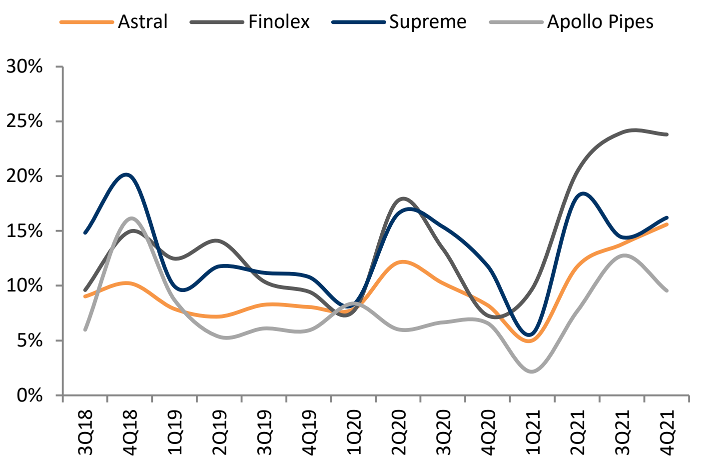
Source: Company, Equirus Securities

Exhibit 79: PAT growth: Strong overall PAT growth for all players due to low base



Source: Company, Equirus Securities

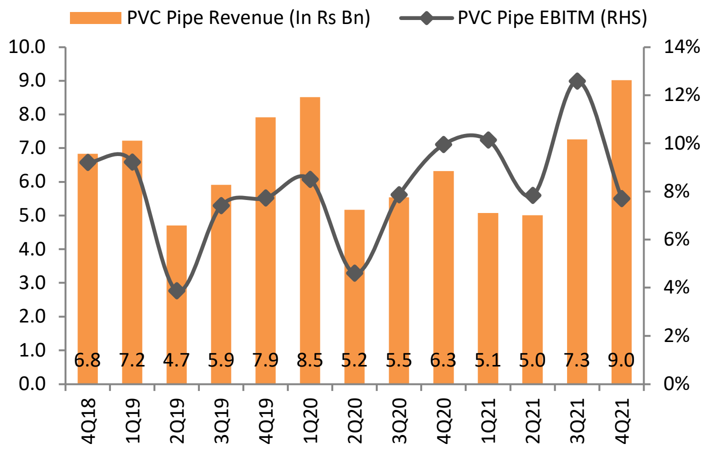
Exhibit 80: PAT Margin: Margin expansion yoy for all players on decent overall performance



Source: Company, Equirus Securities

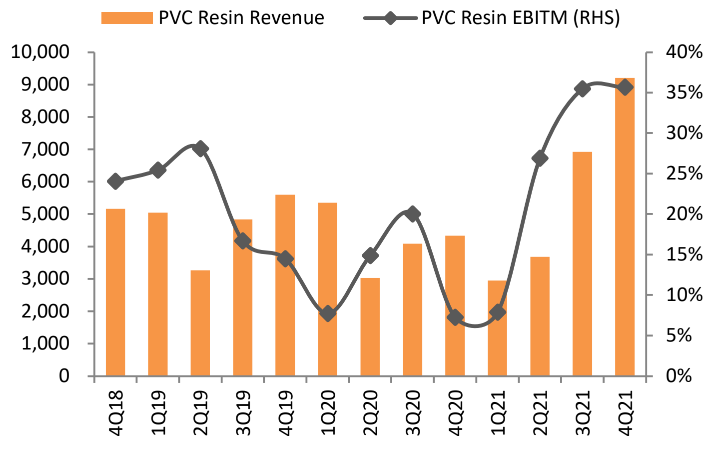
Finolex Industries Ltd.

Exhibit 81: Pipe revenues up 43% yoy with 2.2% yoy EBITM expansion to ~7.7%



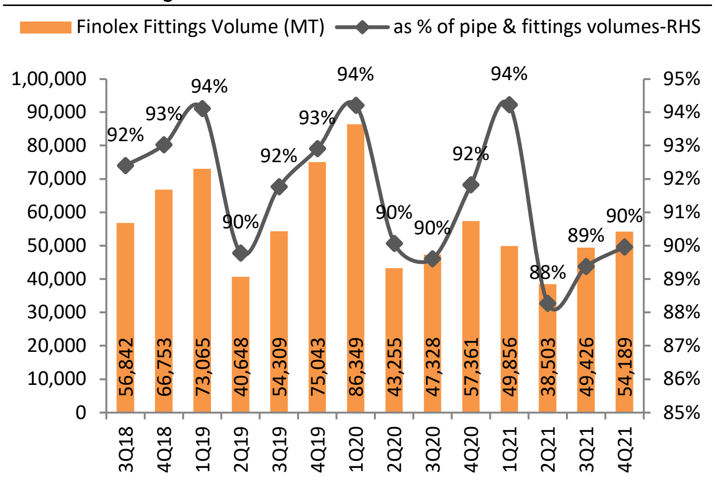
Source: Company Data, Equirus

Exhibit 82: PVC revenues increased 112% yoy with EBITM at ~36% on significant improvement in spreads and prices



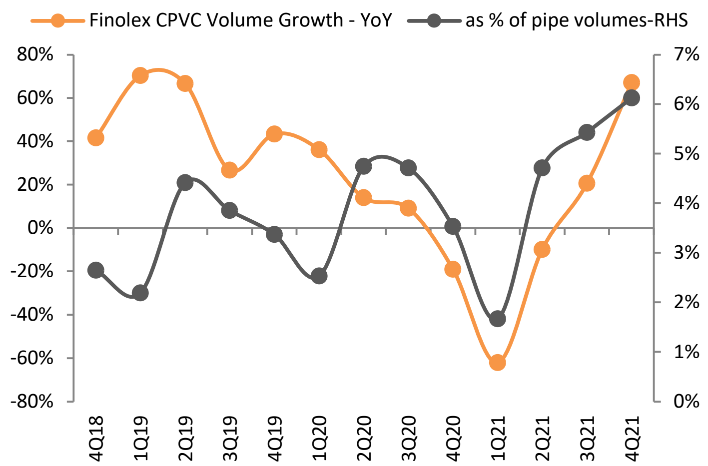
Source: Company Data, Equirus

Exhibit 83: Rising share of fittings in overall pipe revenues to aid margins further



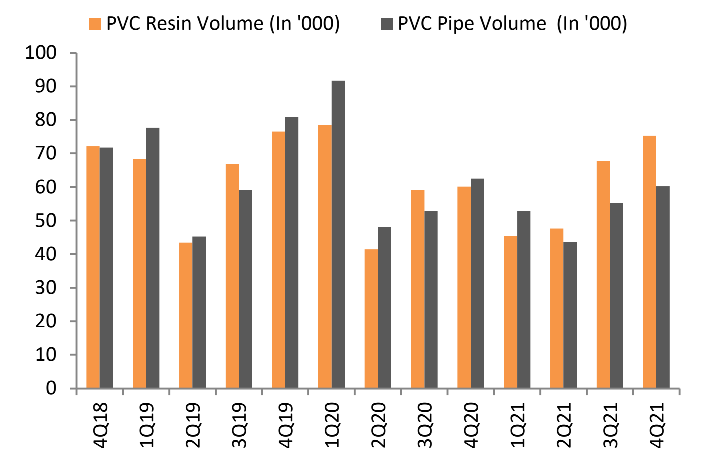
Source: Company Data, Equirus

Exhibit 84: Rising share of CPVC pipes in overall volumes to boost pipe margins



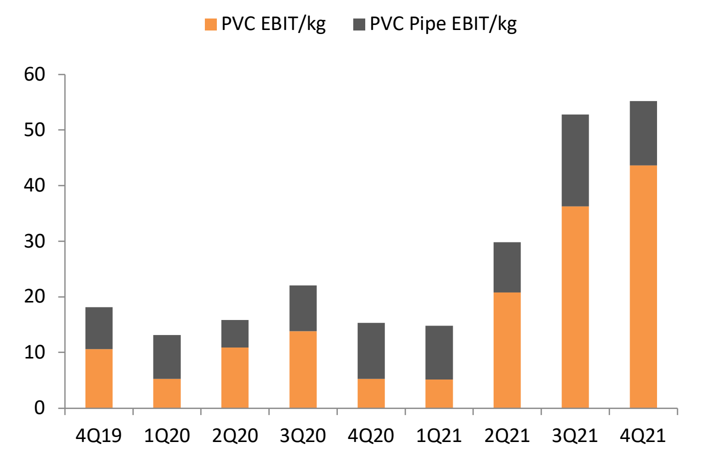
Source: Company Data, Equirus

Exhibit 85: PVC pipe volumes decreased 4% yoy and PVC resin volume jumped 25% yoy due to sharp increase in demand



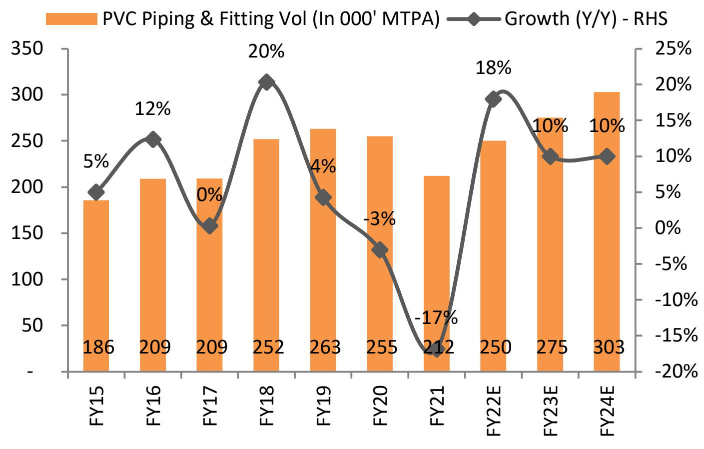
Source: Company Data, Equirus

Exhibit 86: EBIT/kg increased sharply due to improvement in PVC-EDC spreads



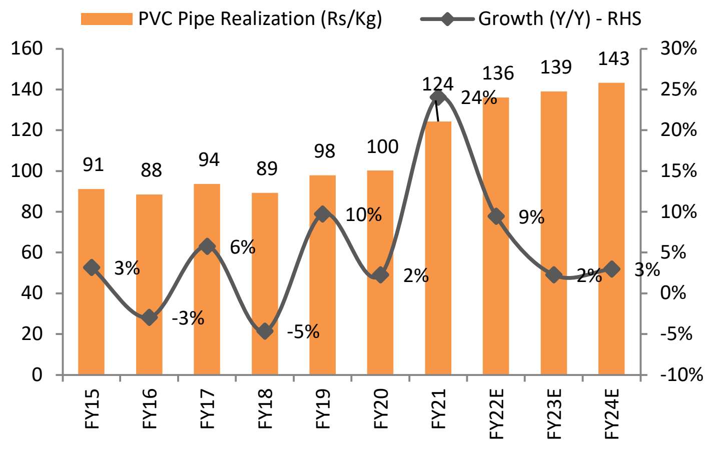
Source: Company Data, Equirus

Exhibit 87: We expect sharp demand recovery in FY22E



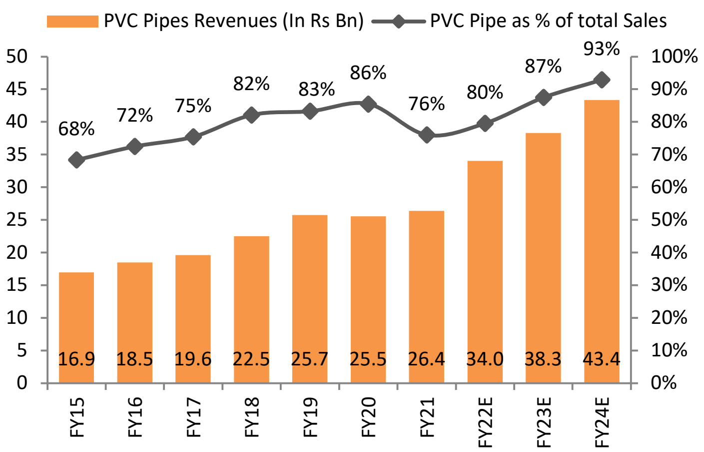
Source: Company Data, Equirus

Exhibit 88: PVC pipe realizations to stay above Rs 125/kg from FY22E



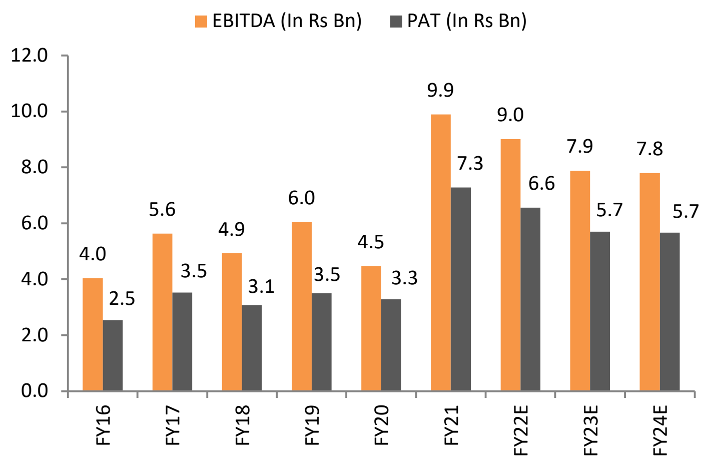
Source: Company Data, Equirus

Exhibit 89: PVC pipes (% of sales) rising with higher internal consumption of PVC resin



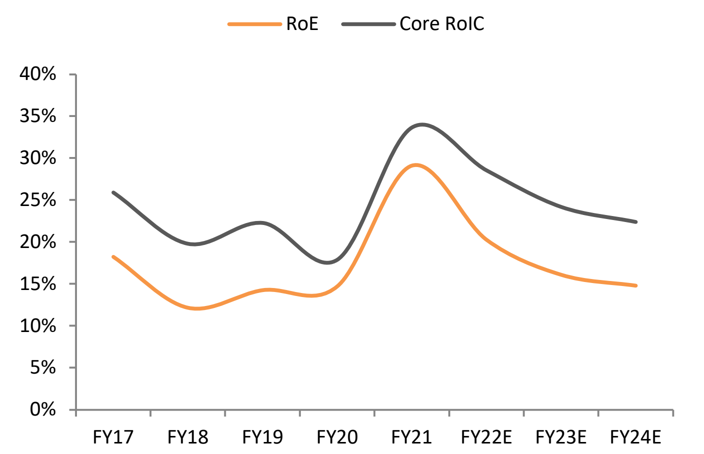
Source: Company Data, Equirus

Exhibit 90: Expect 11%/12% EBITDA/PAT degrowth over FY21-23E on contraction in PVC-EDC spread



Source: Company Data, Equirus

Exhibit 91: Return ratios to peak in FY21 on highest PVC prices, but will fall to historical average



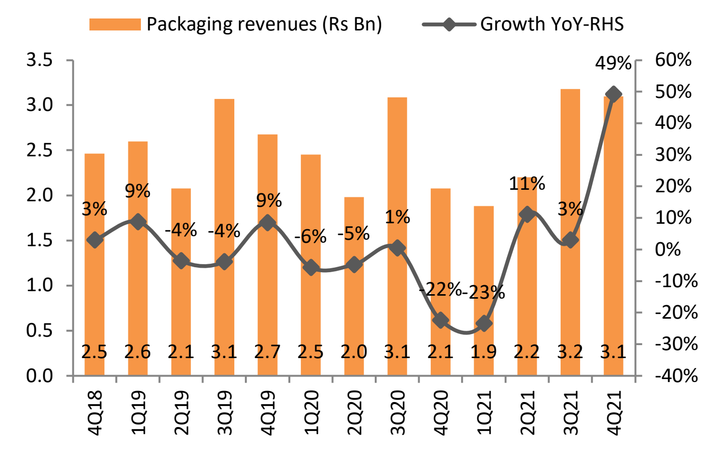
Source: Company Data, Equirus

Exhibit 92: SoTP based valuation snapshot

Particulars (Rs Mn)	FY21A	FY22E	FY23E	FY24E
Finolex Ind PAT	7,280	6,562	5,700	5,664
Multiple	18	18	18	18
Finolex Ind Biz Value	131,044	118,124	102,596	101,957
Finolex Cable 11% stake @ 40% holding Disc	4992	4992	4992	4992
Target Price (Rs/share)	219	198	173	172

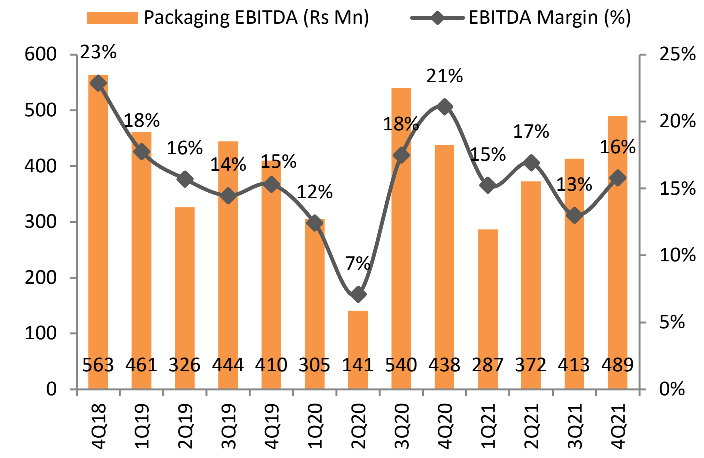
Source: Company Data, Equirus

Exhibit 93: Packaging revenues grew 49% yoy as demand picking up



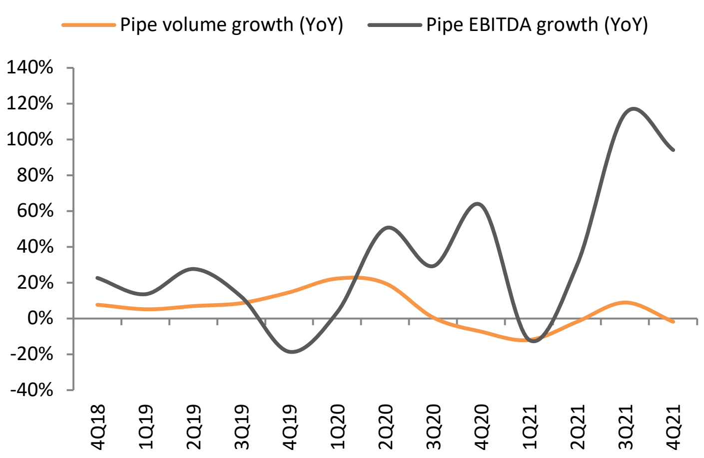
Source: Company Data, Equirus

Exhibit 94: Packaging EBITDA remained improved yoy on sharp increase in PVC prices



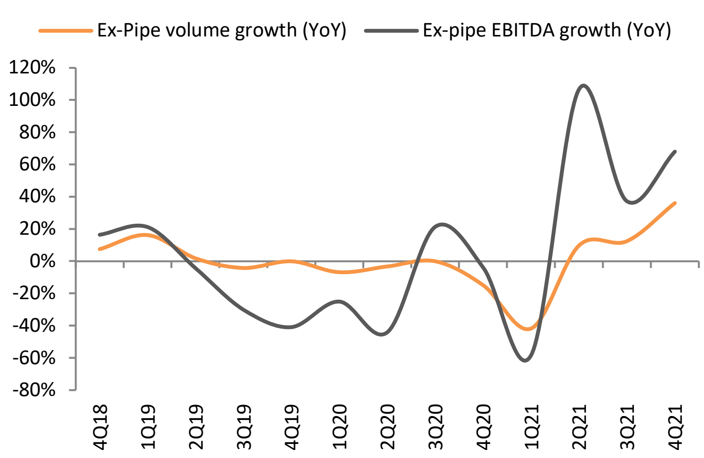
Source: Company Data, Equirus

Exhibit 95: Pipe volume decreased by 2% and EBITDA jump led by margins improvement due to higher realisations



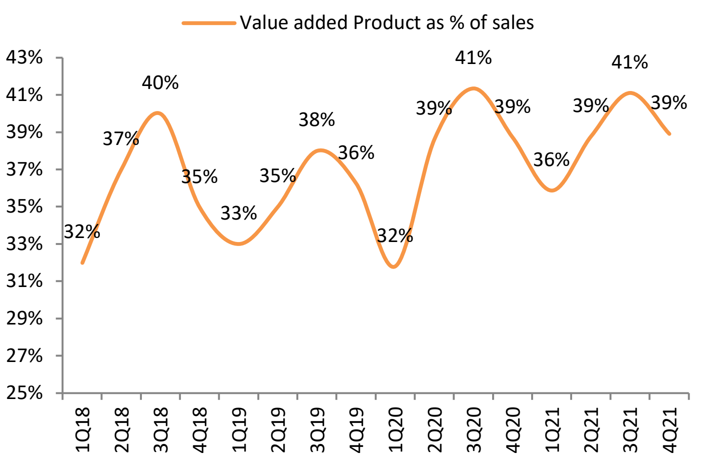
Source: Company Data, Equirus

Exhibit 96: Ex-pipe volume growth of 36% lifted the ex-piping EBITDA growth in 4Q21



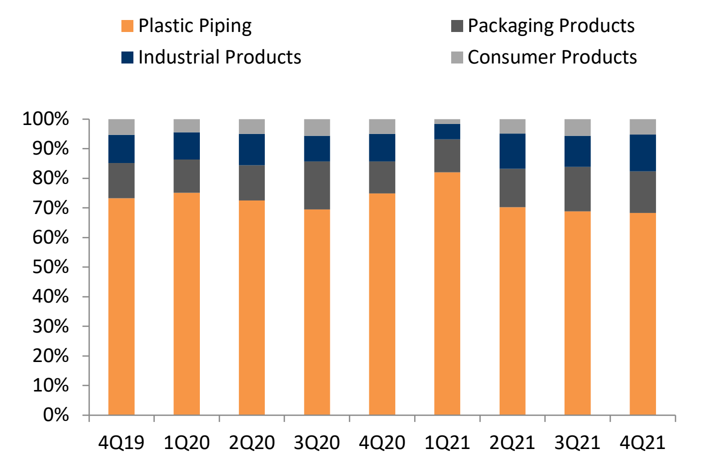
Source: Company Data, Equirus

Exhibit 97: Share of value added products improved on new products launch



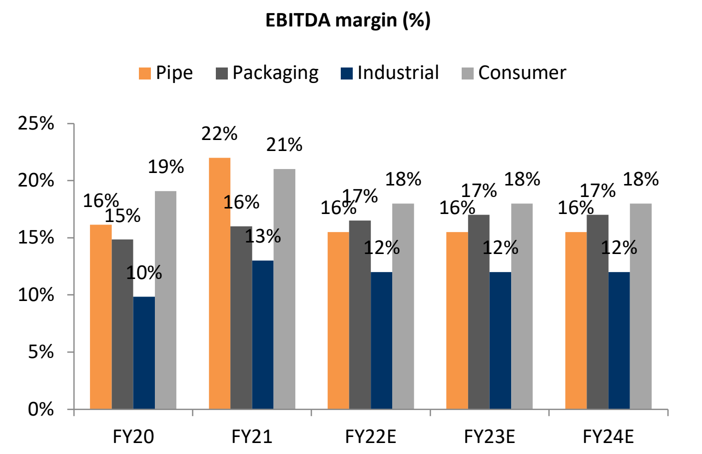
Source: Company Data, Equirus

Exhibit 98: Share of other segments increasing in overall pie but pipe still remains major contributor



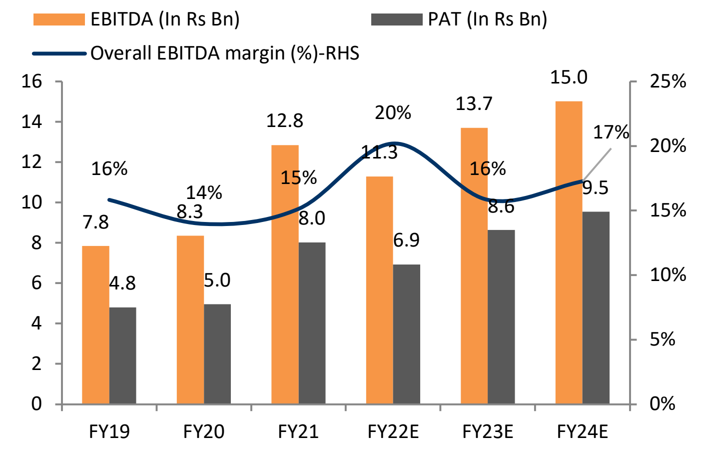
Source: Company Data, Equirus

Exhibit 99: Packaging and consumer margins contribution will remain higher on value added products



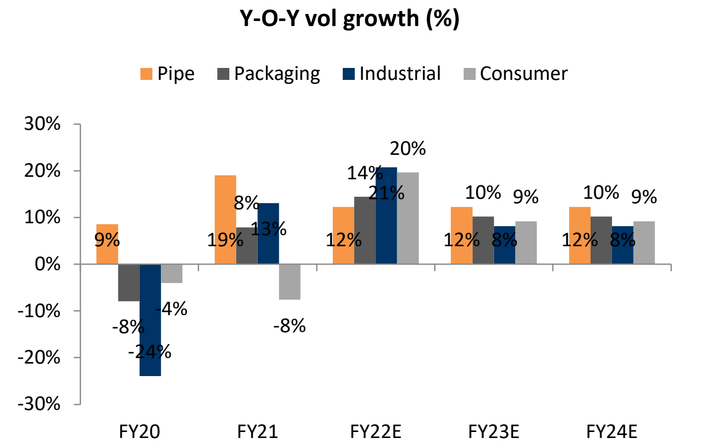
Source: Company Data, Equirus

Exhibit 100: EBITDA and PAT will be flattish in FY22E as volume growth will be offset by PVC price softening



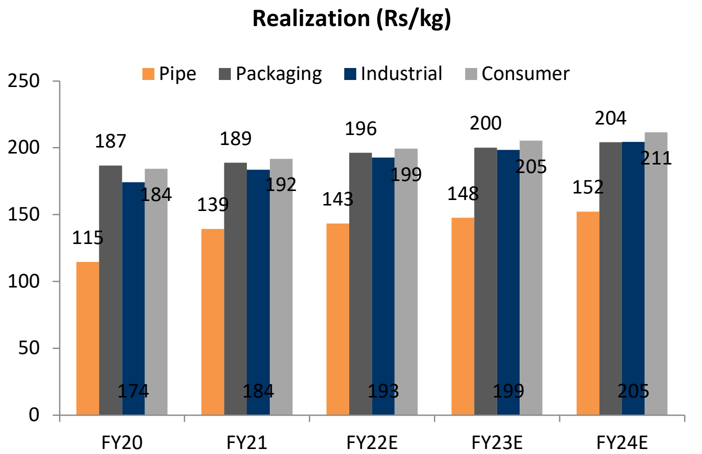
Source: Company Data, Equirus

Exhibit 101: All segments to show healthy volume growth in FY22E and FY23E



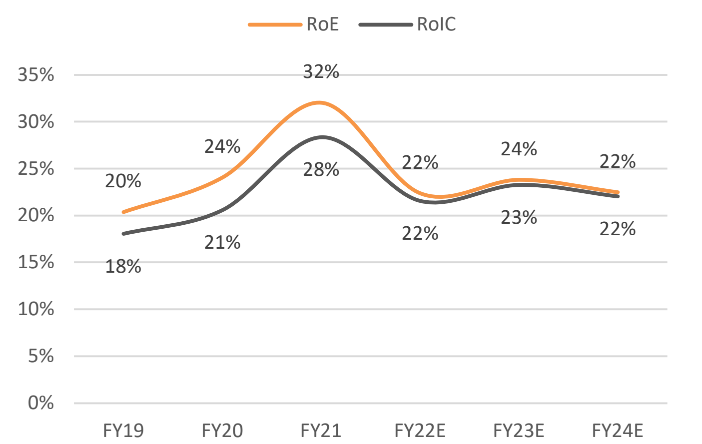
Source: Company Data, Equirus

Exhibit 102: Higher realisations in other segments over Pipes on value-added products



Source: Company Data, Equirus

Exhibit 103: Return ratios to normalise, FY21 onwards as PVC prices will soften



Source: Company Data, Equirus

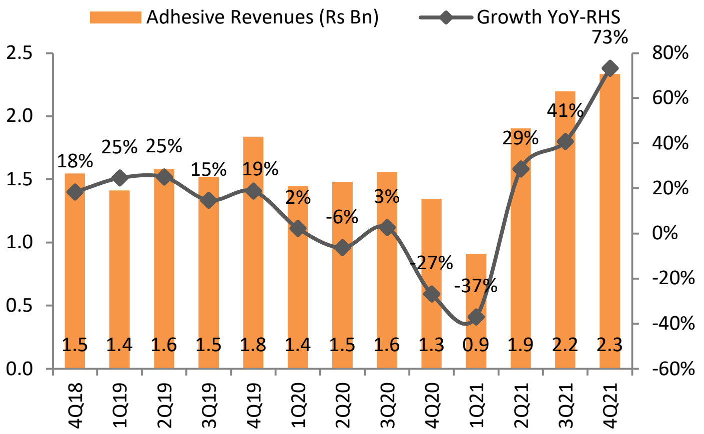
Exhibit 104: SoTP valuation

Rs in Mn	Mar'22	Sep'22	Mar'23	Mar'24
TTM Plastic PAT	6,925	7,125	8,630	9,549
Core Business Multiple (x)	40	40	40	40
Business Value	276,984	284,990	345,218	381,958
Supreme Petrochem stake @ 30% Holding company discount (Rs Mn)	14,280	14,280	14,280	14,280
SOTP Value	291,264	299,270	359,498	396,238
SOTP Value (Rs/Share)	2,290	2,353	2,826	3,115

Source: Company Data, Equirus

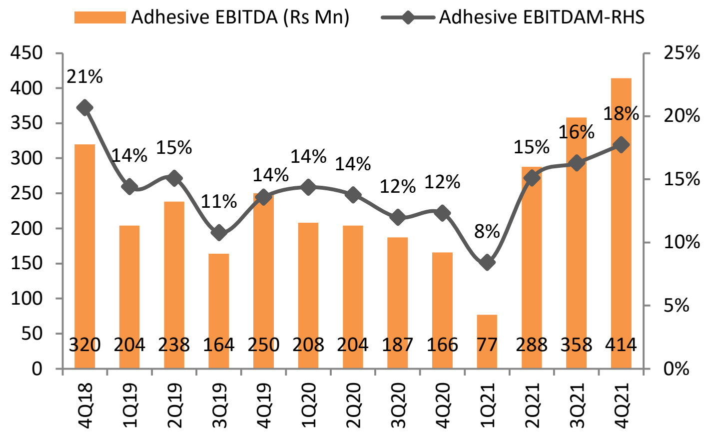
Astral Ltd.

Exhibit 105: Jump in revenues due to successful structural changes in adhesive segment



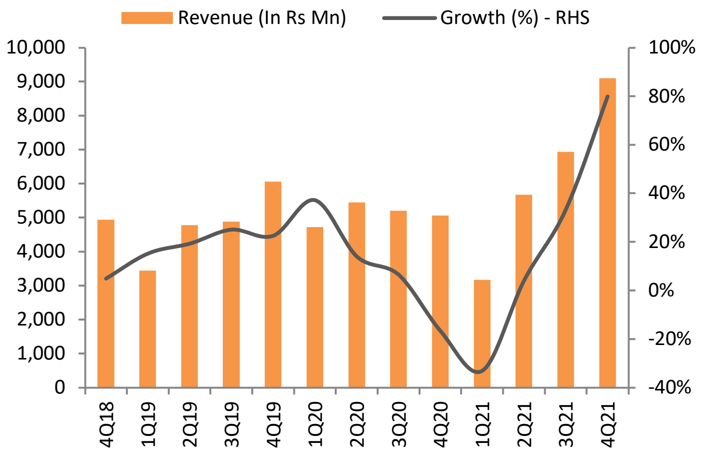
Source: Company Data, Equirus

Exhibit 106: Successful structural changes led to yoy improvement in adhesive EBITDA margin



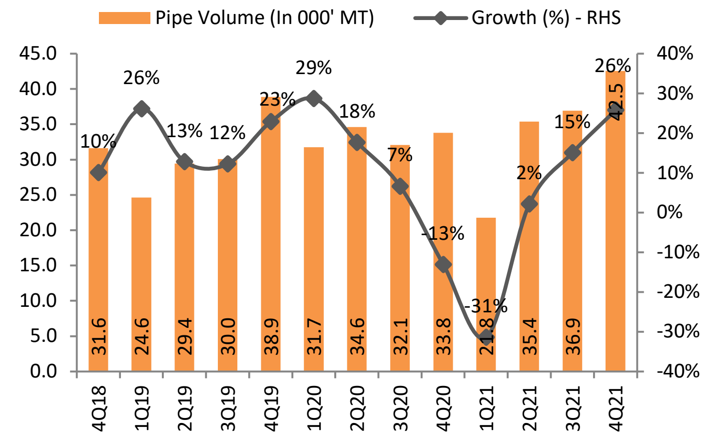
Source: Company Data, Equirus

Exhibit 107: Pipe revenue growth of 80% yoy led by volume growth and realization gain



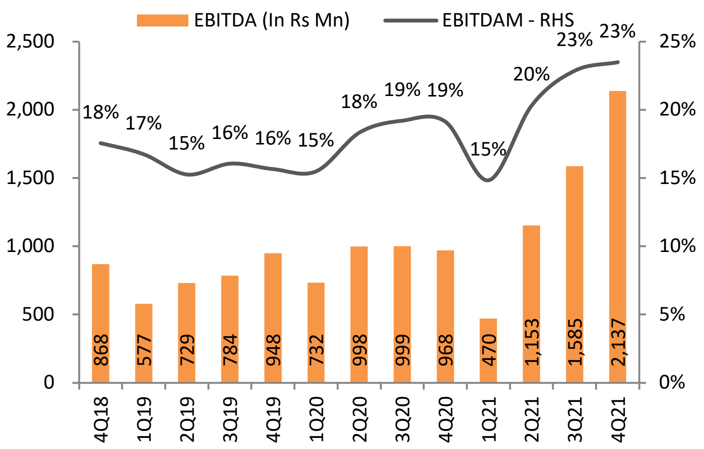
Source: Company Data, Equirus

Exhibit 108: Pipe volumes grew by 26% yoy due to demand revival led by housing sector



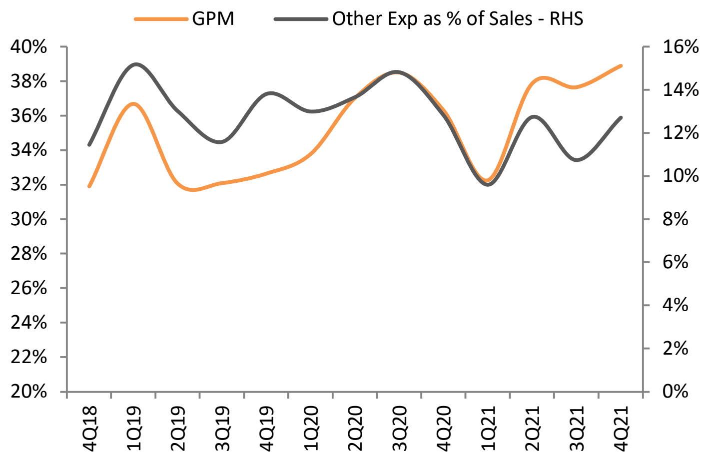
Source: Company Data, Equirus

Exhibit 109: Pipe EBITDA and margins grew on higher realisations



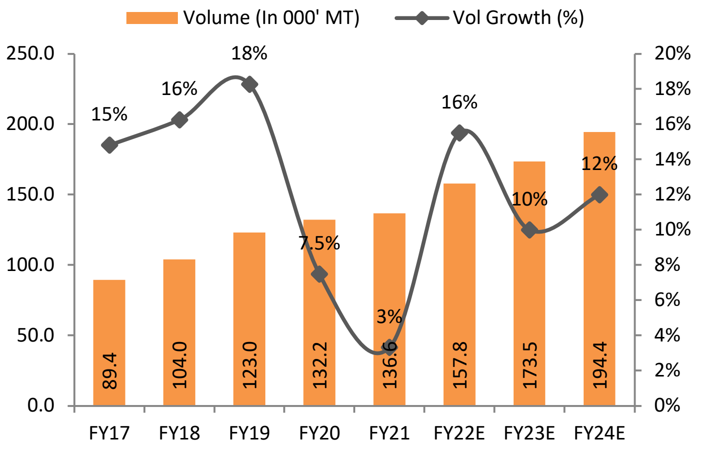
Source: Company Data, Equirus

Exhibit 110: GPM expansion on higher realisations due to sharp increase in PVC prices



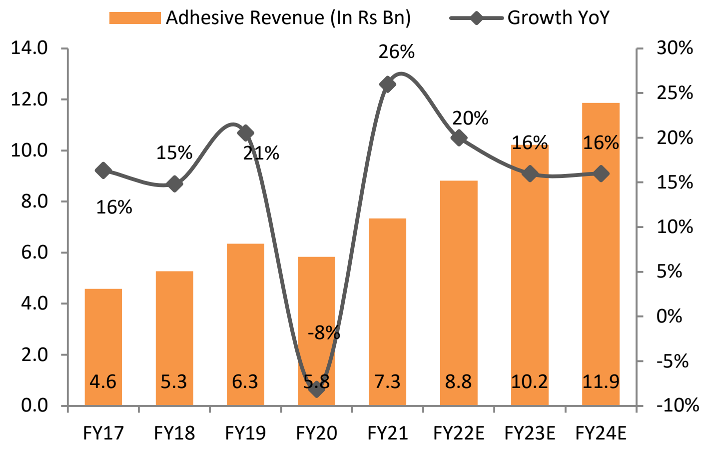
Source: Company Data, Equirus

Exhibit 111: Volumes to grow with double-digit rate from FY22E-24E on lower base of FY21.



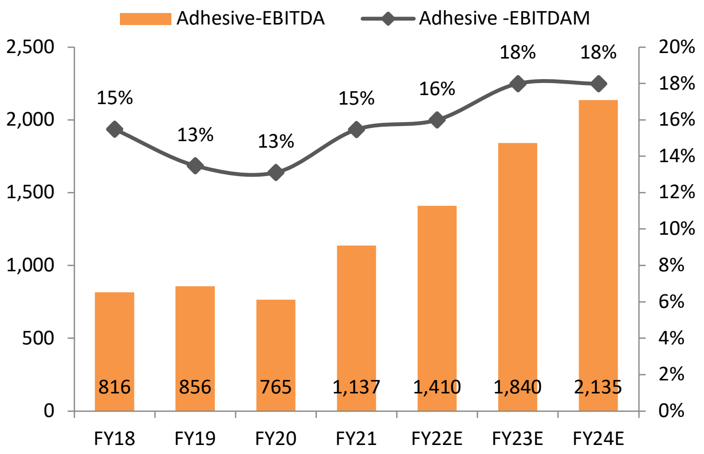
Source: Company Data, Equirus

Exhibit 112: Adhesive to show strong revenue growth on new products and market penetration



Source: Company Data, Equirus

Exhibit 113: Adhesive EBITDA margin to expand further as operational efficiencies improve



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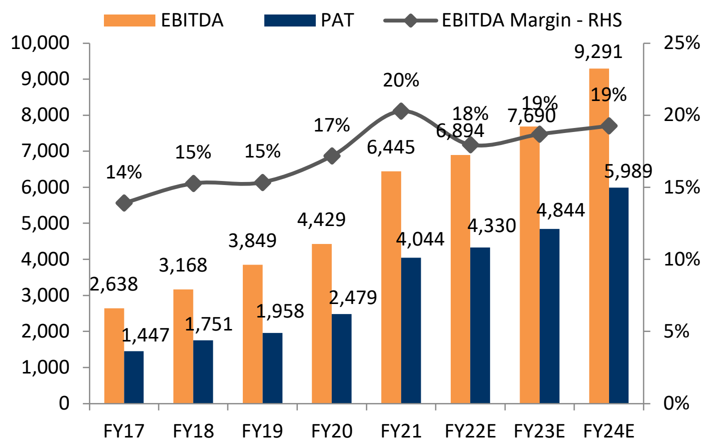
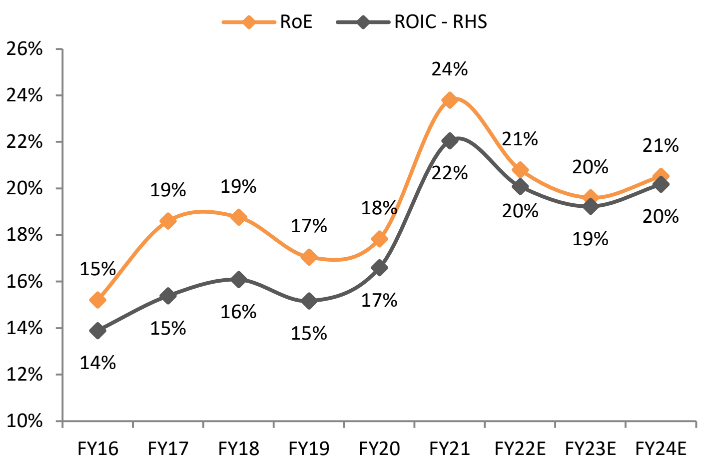
Source: Company Data, Equirus

Exhibit 114: Overall EBITDA margins to settle around ~19%



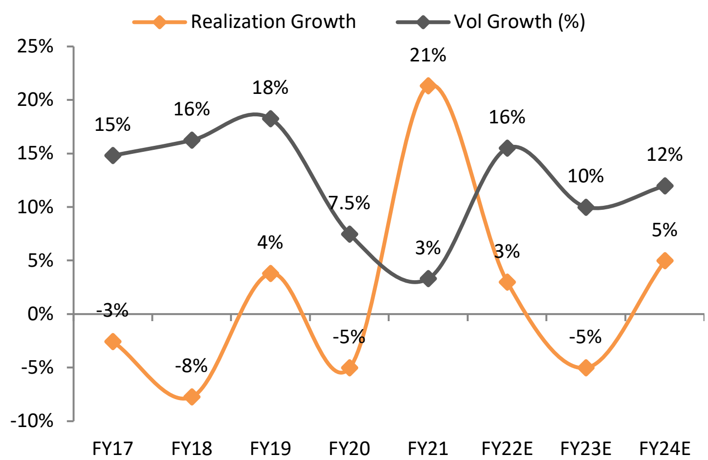
Source: Company Data, Equirus

Exhibit 115: Return ratios to normalise after record high in FY21 on sky-high PVC prices



Source: Company Data, Equirus

Exhibit 116: Realisation in Pipes to dip in FY22E on price softening but to show volume growth



Source: Company Data, Equirus

Comparable Valuation:

Company	Reco.	CMP	Mkt Cap Rs. Mn.	Price Target	Target Date	P/E			EV/EBITDA			P/B			RoE			Div Yield
						FY21A	FY22E	FY23E	FY21A	FY22E	FY23E	FY21A	FY22E	FY23E	FY21A	FY22E	FY23E	FY22E
Finolex Industries	ADD	185	114,726	198	Mar'22	15.7	17.4	20.0	11.6	12.3	13.8	3.7	3.4	3.1	29%	20%	16%	3%
Supreme Industries	ADD	2,172	275,902	2,321	Sep'22	34.7	40.1	32.2	21.1	24.0	19.4	9.7	8.4	7.1	32%	22%	24%	1%
Astral	SELL	2,025	406,838	1447	Sep'22	96.7	90.3	80.7	58.6	54.8	48.8	20.6	17.2	14.6	24%	21%	20%	0%
Prince Pipes	ADD	735	80,869	781	Mar'22	36.5	40.9	32.0	30.2	32.5	26.2	7.7	6.8	5.8	24%	18%	20%	1%
Apollo Pipes	BUY	1,038	13,607	1,253	Mar'22	31.1	29.8	21.9	18.4	17.4	13.0	3.9	3.5	3.0	14%	12%	15%	0%

Annexure

Comparative Analysis of building material products

Particulars	Pipes	Plywood	Laminates	MDF	Tiles	Bathware (Sanitaryware + Faucets)
Industry Size (Rs bn)	Rs 400-420bn	Rs 230-250bn	Domestic - Rs 35bn Exports - Rs 15-20bn	Rs 24-25bn	Domestic - Rs 180-200bn Exports - Rs 110-120bn	Combined Rs 130-140bn
Top Players	Supreme, Ashirvad, Astral, Finolex Industry, Prince pipes	Centuryply, Greenply	Greenlam, Merino, Centuryply, Royal Touche, Stylam	Greenpanel, Action Tesa, Centuryply, Rushil Décor	Kajaria, Somany, HR Johnson, Asian Granito, Varmora, Simpolo	Jaquar, Hindware, Cera, Roca/Parryware, Kohler
Organized : Unorganized (%)	65%:35%	20%:80%	60%:40%	90%:10%	45%:55%	65%:35%
Competitive Intensity	Moderate	High	Moderate at top of pyramid but High at lower end of pyramid	Moderate	High	Moderate but gradually increasing
Retail : Institutional mix (%)	75% : 25%	70% : 30%	70% : 30%	40% : 60%	75% : 25%	75% : 25%
Last 5 years growth rate (%)	9-10%	3-4%	5-6%	12-13%	3-4%	7-8%
Product Differentiation	Residential: Moderate Irrigation: Low	Low	Moderate	Low	Low	Moderate
Key Influencing Factor	Quality & Price	Price	Design, Quality & Price	Price	Design, Quality & Price	Design, Quality & Price
Usage Type	Concealed	Visible but has an applied upon layer of Laminates	Visible surface product	Visible but has an applied upon layer of Laminates	Visible surface product	Visible surface product
New vs. Replacement demand (%)	65%:35%	85%:15%	70%:30%	90%:10%	75%:25%	70%:30%
Replacement Cycle (years)	Irrigation: 18-20 years Residential: 15-17 years	15-16 years	10-12 years	7-8 years	15-16 years	Sanitaryware: 14-15 years Faucetware: 10-12 years
Key brand Influencers	Builder/Contractor/Plumber	Interior Designer/Carpenter/Consumer	Interior Designer/Consumer/Carpenter	Interior Designer/Carpenter	Builder/Interior Designer/Consumer	Builder/Interior Designer/Consumer
Impact of Branding	Moderate	Moderate	Moderate	Low	Moderate	High
Mode of Branding	ATL + BTL	Mostly BTL. Only mkt. leaders prefer ATL + BTL	Mostly BTL. Only mkt. leaders prefer ATL + BTL	BTL	ATL + BTL	ATL + BTL
Asset Turns (x)	3.5-4x	3-3.5x	2-2.5x	1.15-2x	1.5-2x	1.4-1.5x
WC Investment Intensity	Moderate	High	Moderate	Low	High	Moderate
Raw Material volatility	High	Moderate	High	Moderate	Moderate	Moderate

Source: Industry, Equirus Securities

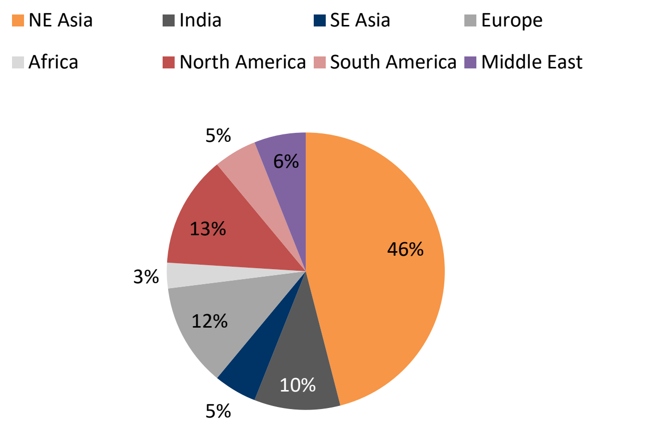
Global PVC market

Demand for PVC highest in Asia, with China forming 42% of demand while India ~10%

- As per Mordor Intelligence, globally, the PVC market was valued at US$ 45bn in 2020 and is set to clock a 4%+ CAGR over CY21-CY26. PVC applications in building and construction dominated the end-user industry, in terms of both volume and value in 2020. In 2020, the Asia-Pacific region dominated the global PVC market.
- PVC-based pipes and fittings accounted for major application share in terms of volume and value (45-47%). Over the medium term, the factors driving the growth of the market studied are PVC's dominant position in the construction industry and increasing applications in the healthcare industry.
- Global demand for PVC has seen a steady increase over the last decade, and energy efficiency drives promise to push demand even higher. The demand for PVC is highest in Asia, with China forming 42% of the demand while India ~10%. In Japan and US, demand has largely stabilised, but the growing economies and large populations of developing countries such as India and China have huge consumption potential.
- Over the years, many S-PVC plants have had to shut down or shift from mercury-based catalyst processes to mercury-free processes owing to strict environmental regulations in China. This led to a shutdown of 4.5mtpa of S-PVC capacities in China over 2015-19. As per CRISIL, over 2021-25, global S-PVC capacity is expected to increase by 1-2mtpa while demand is expected to grow at a faster pace, increasing by almost 7-8mtpa. Thus, S-PVC plant operating rate is expected to increase from 87% in financial year 2019 to 95-96% by 2025.
- The global PVC market is highly fragmented among the top five players. Major manufacturers of PVCs are Formosa Plastics Corporation, Shin-Etsu Chemical Co. Ltd, Westlake Chemical Corporation, INEOS, and Orbia amongst others.
- In Jan-Sep'20, PVC prices declined 7% owing to tepid demand due to the pandemic. However, in 4QCY20, PVC prices increased by 30% yoy to US$1,080/MT due to strong demand, especially from China, and tight supply after scheduled plant turnarounds. Also, supply from the US was constrained in Sep-Oct'20 period owing to the Hurricane Laura. Higher prices of feedstock EDC and VCM also supported PVC prices.
- CRISIL Research expects PVC prices to remain elevated during 1QCY21 post which the price is expected to see some correction with an ease in supply tightness. Therefore, in 2021, the price range for PVC is expected to be between USD 1,000-1,100/MT. A gradual recovery in demand will restrict any further decline in price.
- Over the years, many PVC plants in China shut down or were forced to shift from mercury-based catalyst processes to mercury-free processes. Around 18mtpa capacity in China is still dependent on mercury-based catalyst processes. If these also have to shut down under the Minamata Convention without replacement, then the market will get even tighter and prices/margins could increase.

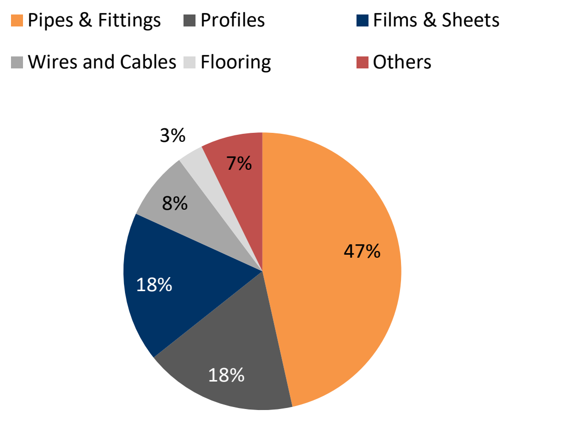
Source: Mordor Intelligence

Exhibit 117: China a major consumer of PVC globally, India the fastest growing



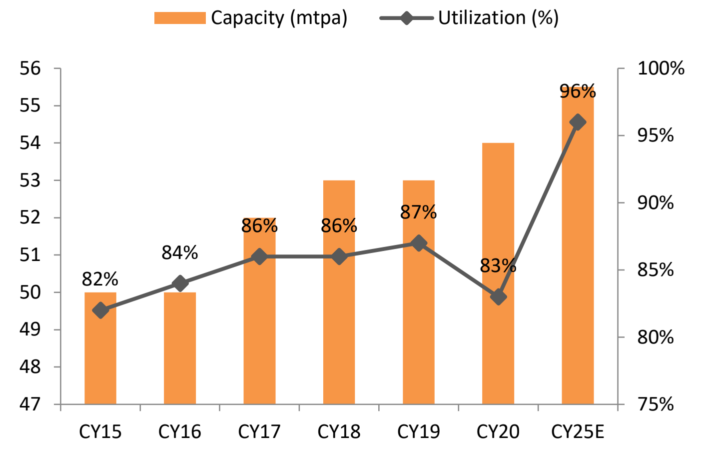
Source: Industry, Equirus Securities

Exhibit 118: Pipes & fittings form a large part of end consumer segment for PVC market globally



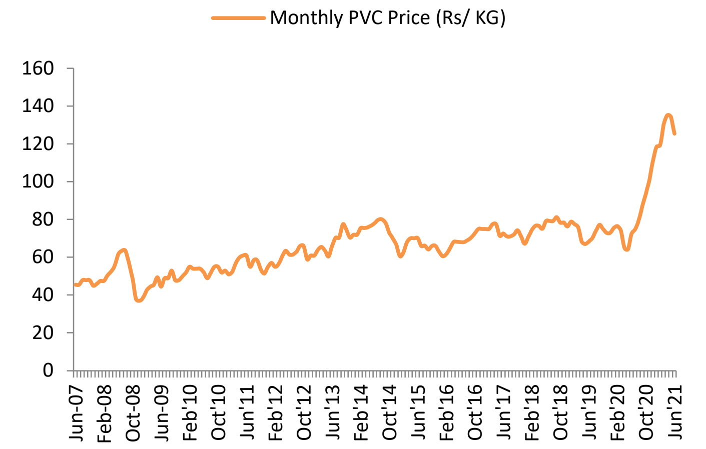
Source: Industry, Equirus Securities

Exhibit 119: Limited addition in global PVC capacity; demand to remain strong leading to higher utilization



Source: Industry, Equirus Securities

Exhibit 120: Surge in PVC prices leads to market size expansion, higher margins during FY21



Source: Industry, Equirus Securities

Reasons PVC is preferred

PVC is strong, lightweight, durable to weathering, rotting, chemical corrosion and abrasion, and versatile

- A key feature of PVC is that it can be combined with additives and fabricated into a variety of forms, including pipes and fittings, profiles and tubes, windows and doors, sidings, wires and cables, film and sheets, toys and other moulded products and floorings.
- PVC is strong and lightweight, durable to weathering, rotting, chemical corrosion and abrasion, versatile, and easy to use. Such characteristics make it an ideal option for many applications, such as pipes, windows, flooring, and roofing.
- PVC pipes are widely used for pipeline systems for water, waste, and drainage, as these pipes suffer no build-up, scaling, corrosion, or pitting, and they provide smooth surfaces reducing energy requirements for pumping.
- PVC flooring has durability, freedom of aesthetic effects, ease in installation, easy to clean, and recyclability. Another area is roofing. It is used for its low maintenance requirements, and because it lasts more than 30 years.
- Only 43% of PVC's content comes from oil while balance 57% from salt, meaning that PVC is less dependent on fossil fuels compared to other materials. This feature, coupled with the fact that PVC products can last up to 100 years, can be recycled and can provide products with good quality to price ratio, greatly reduces its life cycle costs.

Recent developments

- In Jul'20, KEM ONE tied up with Polyloop to develop PVC recycling at the Balan site.
- In Feb'20, INEOS and UPM Biofuels formed a long-term agreement to supply a renewable RM for new/innovative bio-attributed polymers to be produced at INEOS Köln, Germany. The world's first commercially available bio-attributed PVC uses residue from wood pulp manufacturing.

Global CPVC market

In CY19, Asia contributed ~46% CPVC consumption share followed by Europe at ~23%

- As per 360-degree research, the global CPVC pipe market is projected to grow from ~US$ 1.1bn in 2020 to ~US$ 2.1bn by 2026, an ~11% CAGR over CY20-CY26.
- In CY19, Asia contributed ~46% consumption share followed by Europe at ~23%.
- CPVC pipe and fittings have been widely used in household and commercial places. Among those applications, Hot and Cold-Water distribution accounted for the largest share (2019: 35%).
- At present, major CPVC manufacturers are Lubrizol, Kaneka Chemical, Sekisui Chemical and Arkema SA, France. Lubrizol plays a key role in the CPVC pipe and fitting market because of its largest share in supplying CPVC compounds. Lubrizol usually supplies CPVC compounds to specific companies and those companies then produce pipe and fittings, and market these products under the Lubrizol brand.

Indian plastics pipe market

Domestic demand for PVC at 3.3mtpa in FY20 and the market grew at a 5.5% CAGR over FY15-FY20

35-40% of plastic pipe industry unorganized & marked by stiff competition

- India's plastic pipes market stood at Rs 400bn-420bn as on FY21 (10% CAGR over FY16-21). Industry growth in the period was led by construction and irrigation sectors, WSS project investments, substitution of metal pipes with polymer pipes, and normal replacement demand.
- Domestic demand for PVC was 3.3mtpa in FY20 and the market grew at a 5.5% CAGR over FY15-20 led by growth in pipes & fittings (73% of overall demand).
- In terms of PVC consumption in India, western region accounts for >50% of demand followed by North and South (together 40-42%); remaining (<10%) comes from the East.
- Plastic pipes are made from UPVC (64-65% of total demand), CPVC (15-16%), HDPE (15%) and polypropylene or PPR (4-5%).
- In terms of usage, irrigation forms 45% of demand, residential & commercial plumbing 38%, sewerage infrastructure 12% and other industrial demand the rest.
- India meets ~56% of its PVC requirements via imports. Imports have been largely sourced from Japan, Taiwan, South Korea, and China historically.
- CPVC pipe will remain the fastest- growing segment with 15-17%+ CAGR over next 3-4 years while HDPE/DWC and UPVC should grow at 10-11% and 8-9% CAGR respectively.
- Govt. initiatives such as Pradhan Mantri Krishi Sinchayee Yojana (PMKSY), Accelerated Irrigation Benefits Programme (AIBP), and Command Area Development and Water Management Programme have supported irrigation sector growth. The industry also received a boost from Atal Mission for Rejuvenation and Urban Transformation (AMRUT) scheme. As a result, demand for soil, waste and rain, and drainage pipes has remained robust.
- With a large-scale shift from metal pipes to polymer-based pipes in plumbing and piping, organized players have invested in the development of polymers such as CPVC for hot and cold-water plumbing, firefighting, and transportation of industrial fluids.
- PVC resin and additives together account 70-75% of total RM cost for manufacturing pipes. PVC resin is the main RM for manufacturing of PVC pipes & fittings while Ethylene dichloride (EDC) for PVC. EDC is a derivative of crude and so PVC resin prices are directly linked to crude price volatility. As per our understanding, organized players normally have a long-term supply tie-up with big suppliers of PVC & CVPC resins due to which they get a 4-5% discount via advance payment. Regional/unorganized players depend on either domestic distributors or importers/ traders for their RM supply and have to pay some premium (1-2%).
- As 35-40% of the plastic pipe industry is unorganized, players are not fully able to pass on RM cost inflation to end users. Organized players are better placed in this context given their stablished relationships with RM suppliers, wide distribution bases and brand presence.

PVC production capacity in India

Reliance Industries, CCVL, Finolex Industries, DCW and DCM Sriram - India's key PVC producers

- Domestic PVC capacity is pegged at 1.5-1.6mtpa as on FY21E with Reliance Industries, CCVL (Chemplast Cuddalore Vinyls), Finolex Industries, DCW and DCM Sriram being the key producers. These players collectively meet 45-49% of domestic demand, while the balance is met through imports. Taiwan, Japan, South Korea and China together account for 65-70% of India's imports.
- RIL dominates the western market, while CCVL and DCW have their plants in the South. In the North, only DCM Shriram has a manufacturing facility. RIL is integrated backward as it produces ethylene, chlorine, EDC and VCM at its Gujarat petrochemical plant.
- CCVL's PVC plant is located at Cuddalore, with a captive import terminal facilitating VCM imports. It sells most of its produce to South, East and West India. CCVL plans capacity expansion of 31ktpa via debottlenecking (capex Rs 235mn), to be completed by FY23.
- Finolex has production units for EDC and VCM, which partly meet its PVC requirements.
- DCM Shriram produces PVC through the calcium carbide route.
- Import duty on polymers is 14% in Brazil, 10% in Philippines and Malaysia, and 6.5% in China, Japan, US and EU. Thus, import duty on PVC in India largely matches that in global economies.
- As per CRISIL, utilization of domestic PVC producers is expected to be high over the next 4-5 years due to healthy demand growth (7-8% CAGR). During the period, additional capacity of 1.5mtpa will come on stream, thus reducing the share of imports from 56% in FY20 to 45% by FY24.

Domestic PVC capacity pegged at 1.5-1.6mtpa as on FY21E

Company	Capacity (ktpa)	Plant Location
Reliance Industries	770	Hazira and Dahej, Gujarat
CCVL	300	Cuddalore Plant, Tamil Nadu
Finolex Industries	272	Ratnagiri Plant, Maharashtra
DCW	90	Sahupuram Plant, Tuticorin
DCM Shriram	82	Kota Plant, Rajasthan
Total	1,514	

Source: Industry, Chemplast Sanmar DRHP, Equirus Securities

Note: Recently Indian conglomerate Adani Group has announced that it plans to build a coal to PVC plant at Mundra in the western Gujarat state at Rs 292bn. (Source)

CPVC production capacity in India

- In India, DCW is the only company to have signed the technology license agreement with Arkema – one of the four players globally with a technology patent. With this technology tie-up, DCW in FY17 set up a CPVC manufacturing plant with an installed capacity of 10,000mtpa of CPVC resin and 12,000mtpa of CPVC at Sahupuram, Tamil Nadu.
- As per DCW AR20, C-PVC imports (resins + compound) by India for FY19 stood at ~137,000 MT. Of these imports, the combined share of cheap imports from China and South Korea was at ~50 Thousand MT or ~36% of total imports. The share of imports from China & South Korea was 33% or 25.1 Thousand MT between Apr-Aug'19. Post the provisional ADD imposed in Aug'19, the share of imports from China and South Korea went down to 6% during Sep-Dec'19.

Lubrizol's CPVC plant in JV with Grasim Industries coming up in Gujarat

- Lubrizol's CPVC plant in JV with Grasim Industries coming up in Gujarat: Once commissioned, this ~100,000MT CPVC plant at Grasim's site in Vilayat, Gujarat, will be the largest single-site capacity for CPVC resin production globally. The CPVC resin produced at Vilayat will enable product sold under Lubrizol's FlowGuard® Plus, Corzan® and BlazeMaster® brands. With this investment to supply resin to its existing compounding plant in Dahej, Gujarat, Lubrizol becomes the only company in India with end-to-end CPVC capability.

CPVC Producers in India	Capacity (mtpa)	Location	Status
DCW	10,000	Sahupuram Plant, Tuticorin	Operational
Grasim Lubrizol JV (proposed)	1,00,000	Bharuch, GIDC-Vilayat	Scheduled to start in 2022
Meghmani Finechem (proposed)	30,000	Dahej, Gujarat	Scheduled to start in 2023

Source: Industry, Equirus Securities, Lubrizol, Business Standard

**Kem One, France and Chemplast had signed an agreement in Nov'16 to form a JV to manufacture CPVC. The new facility was supposed to come up at Karaikal, Puducherry with technology from Kem One and a capacity of 22,000mtpa of CPVC resins. As of now, there has been no update on the same. (Source: Kem One)*

HDPE and DWC (Double Wall Corrugated) Pipes

HDPE consumption from pipe industry at 13% in volume terms in FY20 and should touch 17% by FY30

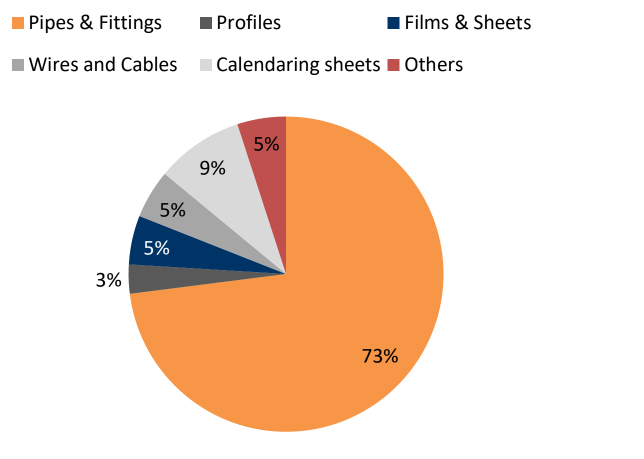
- Domestic HDPE capacity was ~5.6mtpa as of FY19. Some major players operating in India's High Density Polyethylene (HDPE) market are Haldia Petrochemicals, ONGC Petro Additions, Reliance Industries, Indian Oil Corporation, GAIL India, HPCL-Mittal Energy, and Brahmaputra Cracker and Polymers. Dow, INEOS, SABIC and LyondellBasell Industries Holdings B.V. are some of the international players operating in the Indian market.
- HDPE accounts for ~50% of overall PE demand. Within HDPE, nearly 40-45% of domestic requirement is met through imports with top five countries (UAE, Saudi Arabia, Qatar, Singapore, US) collectively accounting for 82% of India's imports in FY19. As per Chemanalyst, import of HDPE declined by ~5% in FY20. Global economic slowdown and halt in industrial activities impacted HDPE price in 2020 causing it to dip sharply. High-density polyethylene prices in India hovered between US$ 830-860/t in 4QFY20.
- As per Chemanalyst, HDPE consumption from the pipe industry stood at 13% in volume terms in FY20 and should touch 17% by FY30. With strong expansion of the agriculture sector and Indian government's strenuous efforts to enhance water transportation facilities in agriculture, a strong boost in demand for HDPE pipes is expected. Moreover, domestic refiners actively planning to expand their petrochemicals and chemicals footprint will drive market growth.
- DWC pipes are a sub-category of HDPE pipes and are gradually replacing RCC pipes in underground drainage and other infra projects due to its longer life and low maintenance.

What happened in FY21: The plastic pipe industry has seen unprecedented PVC price rise due to disruption of global supply chains, container shortages and declaration of force-majeure by large resin manufacturers. PVC prices have more than doubled and continue northward. Unorganized players faced both availability and working capital constraints. This led to market share gains for organized players. With the buzz around real estate revival, government infrastructure push, and exit of some players, prospects for the industry look bright which is reflecting in a near-term strong performance by listed players. During FY21, the prices of PVC were in downward trend from 18th March 2020 till first half of May'20 and overall prices of PVC had gone down by Rs 13.5/kg during that time. Thereafter, beginning 18th May 2020 prices of PVC started continuously increasing m-o-m up-to Apr'21 with prices increasing by approx. Rs 70/kg up-to 31st March 2021. This has affected country's PVC consumption which has seed de-growth by around 16% in volume for the year.

The surge in PVC prices is attributable to persistent supply-side constraints globally, firm crude oil prices, high product demand and logistical challenges. In addition, more recently, there have been production outages in Europe and North America, with some shutdowns caused by the extreme cold wave in February.

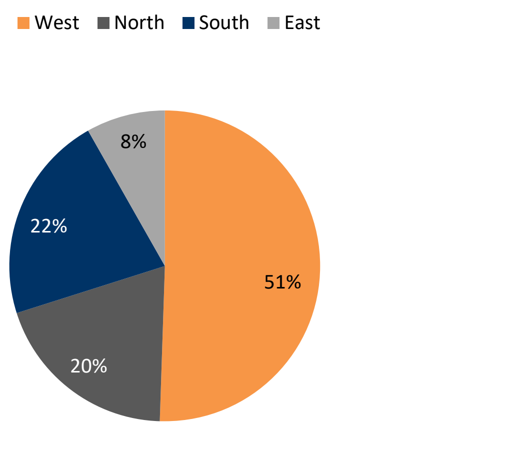
As per industry people, several US plants, which were shut down due to the polar freeze in Jan'21 month, have re-started in March and early to mid-April, but this will not be enough to ease the supply tightness the global polymer markets are witnessing. Container availability issues, planned annual turnarounds for maintenance in Asia, plant outages in the Middle East, not to mention high freight costs and surging energy values, are the reasons why building raw material inventories today will prove to be beneficial for converters in the absence of any negative pricing triggers. The sharp increase in PVC prices has narrowed the gap between CPVC pipes and PVC pipes leading to market share gains for the former in residential sector.

Exhibit 121: Pipes & fittings drive PVC consumption in India



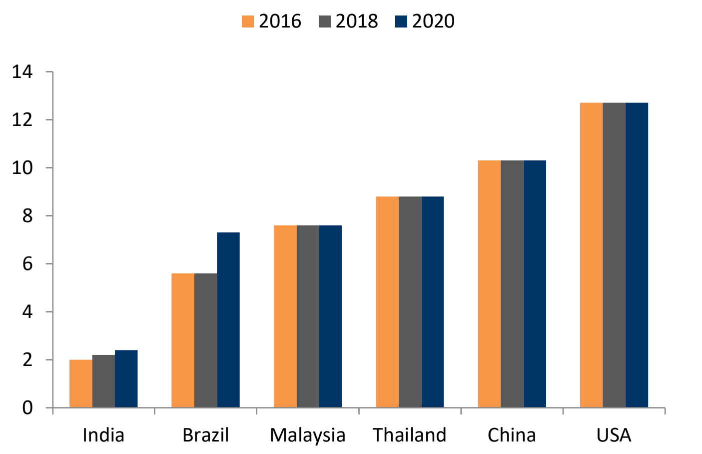
Source: Industry, Equirus Securities

Exhibit 122: West India leads PVC consumption followed by North/South



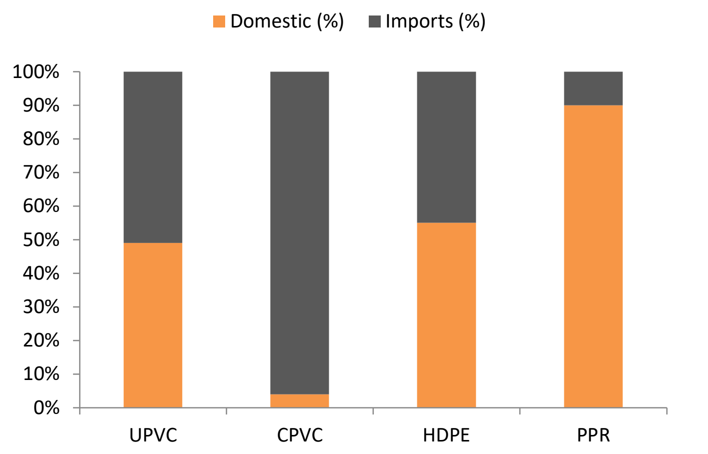
Source: Industry, Equirus Securities

Exhibit 123: India - among lowest per capita plastic consumption rate among EMs



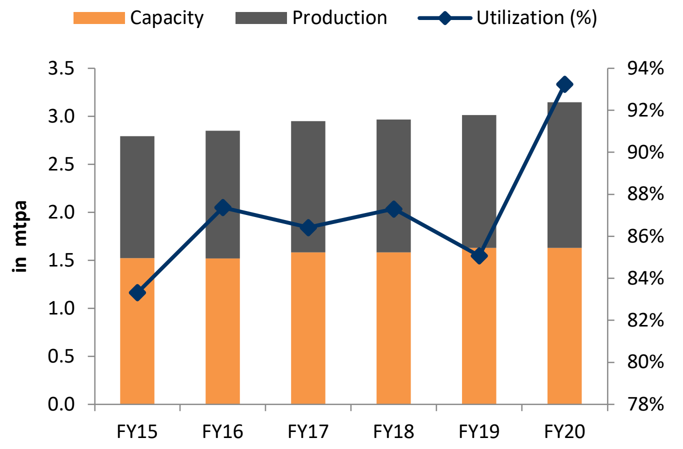
Source: Industry, Equirus Securities

Exhibit 124: CPVC demand in India majorly depends on imports



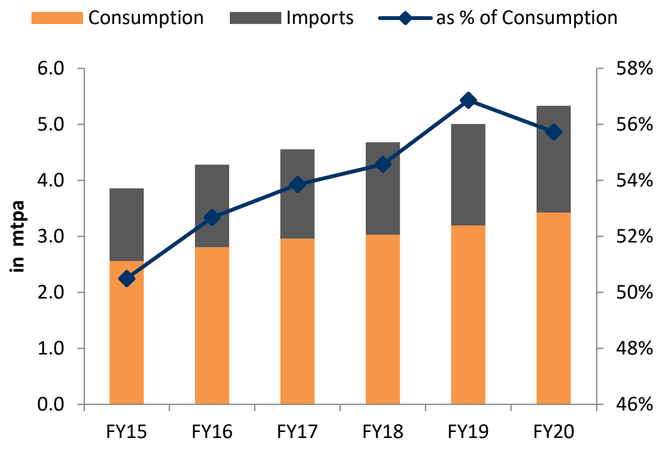
Source: Industry, Equirus Securities

Exhibit 125: Utilization in PVC improves in last 5 years though lack of capacity addition has led to growth in imports



Source: Industry, Equirus

Exhibit 126: India imported 56% of its PVC requirements from Japan, Taiwan, South Korea, and China historically FY20



Source: Industry, Equirus

Exhibit 127: HDPE consumption by end use: Usage in pipes expected to increase from 13% in FY20 to 17% by FY30

Source: Chemanalyst, Equirus Securities

Type of Pipes

UPVC pipes (64-65%% of industry demand)

- They are the most widely used plastic pipes with mkt. size of ~Rs 212bn in FY20. As per industry estimates, ~65% of demand for these pipes comes from Irrigation and Agricultural related activities while the rest comes from residential/commercial plumbing. Replacement of Galvanised Iron pipes with UPVC pipes has supported demand growth of UPVC in past decade. Features such as affordability and longer life compared with GI pipes have aided this segment. Government initiatives such as AIBP also entail growth potential. This segment has presence of unorganized segment as over the years, the product has become commoditized. The ratio of organized to unorganized in this segment is 50%:50%.

- UPVC segment is expected to grow at 10-11% CAGR over FY20-24 largely led by agriculture and plumbing segments. In 2HFY21, UPVC segment growth has been impacted due to higher PVC prices which impacted the offtake from agricultural consumers. In the medium term, UPVC segment is expected to see healthy offtake from various govt. schemes related to Irrigation and agricultural infra development. PVC pipes are sold through a combination of B2B and B2C channels - agricultural pipes are largely sold via distributors/dealers.

CPVC pipes (15-16% of Industry demand)

- CPVC pipes has been the fastest growing segment in the plastic pipes industry in the last decade and it had a mkt. size of Rs 52bn in FY20. These pipes are primarily used in plumbing applications, as well as hot and cold, potable water distribution systems. The segment is still at a nascent stage in India and has huge potential due to factors such as longevity, corrosion free, fire resistant, being lead-free, and the ability to withstand high temperatures. CPVC is broadly classified into two grades, namely (a) Pipe grade and (b) Fitting grade based on end use applications. Since this is a specialized product with most of the RM being imported and tying up of technology licensing required with globally renowned players, branded players have historically maintained a strong foothold in this segment. The ratio of organized to unorganized in this segment is 80%:20%.

- The product is ideally suited for self-supporting constructions where temperatures go up to 90°C. CPVC exhibits fire-retardant properties. It is very difficult to ignite and tends to self-extinguish when not in direct contact of flame. It is used as a material for water piping systems in residential as well as commercial construction because it can withstand corrosive water at temperatures of 40°C-50°C or higher. It is used in hot and cold-water plumbing distribution both at residential and commercial areas, fire protection, reclaimed water piping, chilled water piping, hydronic piping and distribution (radiators, fan coils, etc.) and is used in many industrial piping applications.

- Industry players estimate the segment to grow at ~15-17% CAGR over FY20-24 driven by plumbing segment, demand for which is largely B2C in nature.

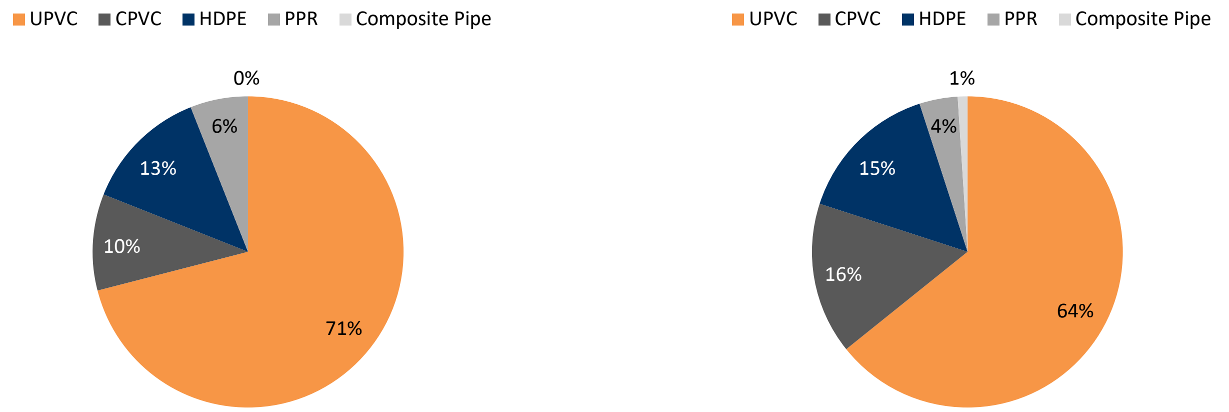
HDPE pipes (15% of Industry demand)

- HDPE pipes are used in irrigation, sewerage & drainage, city gas distribution and chemical & processing industries. These pipes have been gaining prominence over traditional metal and cement pipes, due to durability, low maintenance and longevity versus metal pipes. Government schemes, such as PMKSY, are expected to lend support to the segment. This segment is expected to see 10-11% CAGR over FY20-24.

PPR pipes (4-5% of Industry demand)

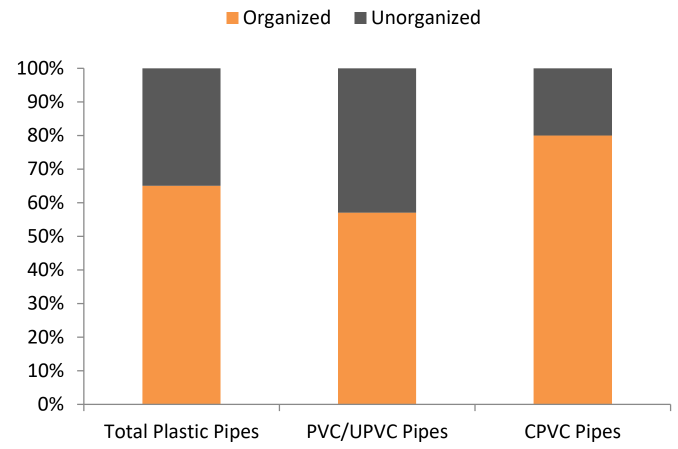
- These pipes, which are used for various industrial purposes, are relatively costly compared with other plastic pipes, which restricts their usage. Segment is expected to grow at 6-7% CAGR over FY20-24.

Exhibit 128: In FY14, UPVC/CPVC formed 71%/10% of piping market in India; UPVC's share slips to 64-65% in FY20



Source: Industry, Equirus Securities

Exhibit 129: Piping industry ~65% organized; UPVC segment 57-58% organized and CPVC 80%



Source: Company, Equirus Securities

Exhibit 130: UPVC pipes to remain the largest piping segment, CPVC the fastest growing

Segment	Industry Size (Rs bn)	Applications
PVC/UPVC pipes	254	Agricultural and Residential Water supply
CPVC pipes	65	Residential plumbing applications
HDPE pipes	60	Irrigation, Sewerage, City Gas distribution
PPR pipes	21	Specialized Industrial Applications
Total	400	

Source: Company, Equirus Securities

Exhibit 131: Types of plastic pipes and their application

Particulars	Galvanised iron (GI)	UPVC	CPVC	HDPE	PPR
Life (Years)	15-20	20-25	30-35	50	50
Max operating temperature (degrees Celsius)	200-250	60-70	90-100	90-100	90-100
Strength (hoop)	Higher than plastic pipes	500-600	450-550	350-400	250-300
Cost	Costlier than plastic	Cheaper than GI	Cheaper than GI, costlier than UPVC	Cheaper than GI, costlier than UPVC	Cheaper than GI, costlier than UPVC
Corrosion	Corrodes faster	No effect due to chemical resistance	Has anti-corrosive properties	Excellent anticorrosion and chemical resistance	Good chemical resistance and corrosion resistance
Leakage	Vulnerable to leakage	Leakage-free	Leakage-free for lifetime	Leakage-free	Relatively leak-free but requires installation by skilled manpower
Bacterial growth	More prone to bacterial growth compared with plastic	Relatively low compared with GI	Extremely low compared with GI	Extremely low compared with GI	Relatively low compared with GI
Installation	Time- and energy consuming	Done through cold welding	Done through cold welding	Cold welding. Known for more tolerance to poor installation	Fusion-welded system which requires specialised training and equipment
Thermal conductivity and insulation	Needs insulation as heat loss occurs faster due to high thermal conductivity	Requires less insulation as low thermal conductivity reduces heat loss	Requires less insulation as low thermal conductivity reduces heat loss	Requires less insulation as low thermal conductivity reduces heat loss	Higher thermal conductivity than CPVC, requires insulation

Source: Industry, Vectus Industries DRHP

Water Tank market

- Earlier, concrete and steel tanks were popular for storage of water; but plastic water storage tanks have emerged as the most effective alternative for water storage over past ~30 years. As per TechSci Research, based on raw material, the market can be categorized into LLDPE, HDPE, stainless steel, cement and others. The LLDPE segment is expected to grow at a fast pace owing to its higher tensile strength and higher impact and puncture resistance.
- Based on water storage capacity, the market can be fragmented into up to 500 litres, 501-1000 litres, 1,000-5,000 litres, 5,000-15,000 litres, 15,000– 100,000 litres and above 100,000 litres. The 1000-5000-liter segment is expected to register significant growth owing to its widespread use for residential purposes.
- Due to the voluminous size of tanks, the transportation cost is very high. This makes it difficult for manufacturers to trade interstate and, thus, pan India players typically have several plants in various regions to cover the surrounding areas.
- Manufacturers are coming up with additives which offer increased life and durability in extreme climatic conditions. Further, protection from UV rays, thermal insulation and multi layers are some features driving demand for plastic water storage tanks.
- India's plastic water tank market is fragmented with unorganized players controlling ~70% of the market.
- Blow moulded tanks form 40-45% market share and roto moulded tanks the remaining. There is increasing demand for blow moulded tanks owing to their superior value proposition compared with the former, and higher demand for smaller (up to 2,000 litre) tanks.
- Tanks with 2,000+ litre capacity are mostly used in institutions such as schools and offices, whereas tanks with up to 1,000-litre capacity are used in households. 1,000 litre tanks control 40-45% of the mkt. while less than 1,000 litre form 30-35% of the mkt. (500 litre

tanks have the highest demand). On the other hand, 1,000-2,000 litre tanks account for 15-20% of the mkt. Going forward, due to increasing consumption of water and construction of bigger buildings requiring higher storage capacities, demand is expected to shift from less than 1,000 litre tanks category to tanks of 1,000-2,000 litre capacity.

- In terms of usage, Overhead tanks account for 80-85% of the total market while loft and underground tanks account for the remaining. Underground plastic water tanks have a market share of ~5% only as customers still prefer underground concrete tanks for water storage. Loft tanks, on the other hand, account for 10-15% share and can be kept in an empty space above washrooms and bathrooms due to compact size. These tanks are used along with underground and overhead tanks.
- About 90% demand is for new plastic tanks while 10% demand is from replacement mkt.
- B2B vs. B2C: B2C customers consisting mainly households requiring tanks for storage of water make up 75-80% of the plastic water tanks market while the B2B segment (builders and contractors) form the remaining share.

Plastic water storage tanks vs. Concrete/Steel tanks

- Plastic tanks are generally made of linear low-density polyethylene (LLDPE) or high-density polyethylene (HDPE). The fine polymer granules of these materials are heated along with desired colour pigments and moulded into the desired shape using various manufacturing techniques. Polymers used for manufacturing plastic water tanks are essentially inert to water. Therefore, plastic tanks can also be used for agriculture and irrigation, fire suppression reserves in buildings, food processing in industries and as waste-water containers.
- Compared to steel and concrete tanks, Plastic water tanks are cheaper, made of highly durable plastics which occupy less floor space (vs. concrete tanks) and are lighter in weight. Additionally, concrete tanks cannot be transported and need to be constructed at the location, which is very time consuming and difficult to repair if cracks are developed in the tank.
- Plastic water storage tanks are rust-proof compared with steel tanks and less prone to leakage compared with concrete tanks.
- Also, due to inertness to water, plastic tanks maintain water quality and are maintenance-free.

Exhibit: Comparison of various water storage tanks on various parameters

Criteria	Plastic Tanks	Concrete Tanks	Steel Tanks
Material used	LLDPE, HDPE	Reinforced concrete, Ferro-cement	Stainless steel
Cost	Cheaper than concrete and steel	Expensive than plastic, cheaper than steel	Most expensive
Leakage	Least prone to leakage	Prone to leakage if not constructed properly	Less prone to leakage
Installation	Light weight, can be transported anywhere, easier to install	Heavy weight, cannot be transported, difficult to install and often requires construction at the site, hence, time consuming	Heavier than plastic, lighter than concrete tank, difficult to transport, easier to install
Rust proof	Rust proof	Not rust proof as leakage can cause reinforced steel corrosion	Chromium is added to make it rust proof, corrosion of rivets, screws can pollute water
Life	Life less than concrete tanks, but more than steel tanks	Long lasting than plastic if maintained properly	Life less than plastic and concrete tanks
Maintenance	Maintenance free	Cement wash required every few years	Maintenance free
Water quality	Maintains water quality	Susceptible to chemical and biological leakage such as lime and bacteria growth	Maintains water quality

Source: Vectus Industries DRHP

Exhibit: Comparison of Roto and Blow moulding

Roto moulding process	Blow moulding process
Traditional technology	Relatively new technology
3-stage process	1-stage process
Requires LLDPE as raw material	Requires HDPE as raw material
Can produce up to 50,000 litre tanks	Suitable for smaller tanks (up to 2000 litres)
Complex designs can be manufactured	Comparatively simple design can be manufactured
Used for overhead as well as underground tanks	Mainly used for overhead tanks
Consumes more raw material per litre of tank and thus, relatively heavier tank for a given size	Consumes less raw material per litre of tank and thus, relatively lighter tank for a given size
Slower production rate	Faster production rate
Relatively costlier tanks owing to higher raw material consumption	Relatively cheaper tanks owing to lesser raw material consumption

Source: Vectus Industries DRHP

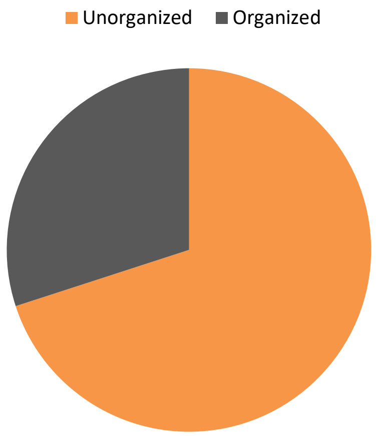
Growth triggers

- Rising urbanisation, increasing fresh-water withdrawal and consumption for various domestic and industrial applications have created substantial demand for economical water storage methods, which is expected to drive demand for plastic water storage tanks in India. Additionally, the need for treated, recycled and soft water in industrial and commercial sectors is propelling the market.
- An emerging trend includes increasing demand for four layered water storage tanks for protection from bacteria and fungus. Over the next 3-4 years, the industry is expected to grow at 13-14% CAGR led by increased focus on water storage and rain harvesting and gradual replacement of concrete/steel tanks with Plastic tanks
- As water is stored in overhead or elevated tanks, durability plays a critical role in selection criteria. The domestic plastic water tank industry has grown at 10-11% CAGR over FY12-FY20, reaching Rs 55bn in FY20. Unorganized players dominate the industry with a 70% market share. Over the next 3-4 years, the industry is expected to grow at 13-14% CAGR led by increased focus on water storage and rain harvesting and gradual replacement of concrete/steel tanks with Plastic tanks.
- The major players operating in India water tanks market include CST Industries, Inc., Sintex Plastics Technology, Shubham Acqualink (India), UIG Water Tanks India, Joemillars Aquatek India, Frontier Polymers, Beltechno India, Indraprastha Aqua Solution, Jindal Plast (INDIA), Shree Balaji Polymer and others.

Diversification of pipe players in plastic tank market

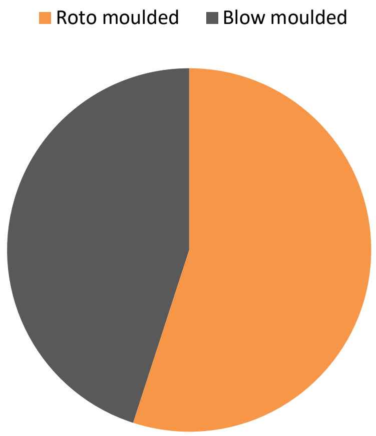
- Indian plastic storage tanks industry is currently pegged at ~Rs 50-55bn and it is expected to see at-least low double-digit growth in the foreseeable future due to increased focus on water storage and Rain harvesting in Urban and Semi-urban areas and gradual replacement of concrete/steel tanks with Plastic tanks. Additionally, ~70% of the market is controlled by unorganized/regional players which gives a huge opportunity to the branded players to grow faster in this category.
- With one of the industry leaders largely out of the market, a vacuum has been created at the top of the pyramid which some of the pipe manufacturers are targeting to capture.
- In this business, a strong manufacturing network is required to minimize freight cost (due to bulkiness) and right distribution network is required to sell this product as competition is mostly with regional players, who don't give consistent quality products and hence are able to undercut the organized manufacturers in terms of pricing by 15%-25%.
- Most distributors/dealers of the branded pipe players already selling the product and so moving into this segment is a natural extension for the pipe manufacturers.

Exhibit 132: Unorganized segment dominates overhead water tank market



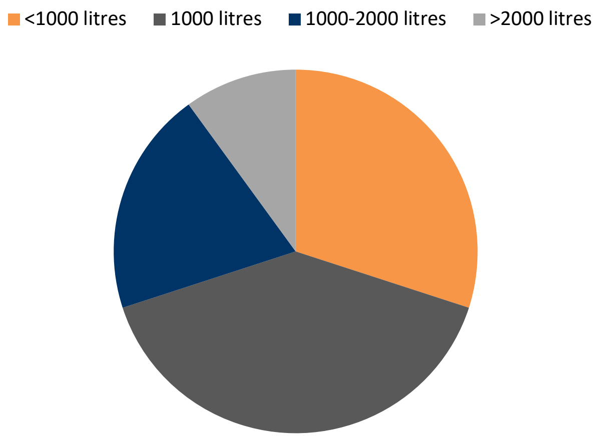
Source: Vectus Industries DRHP, Equirus Securities

Exhibit 133: Roto moulded tanks has a higher mkt. share in domestic overhead tank industry



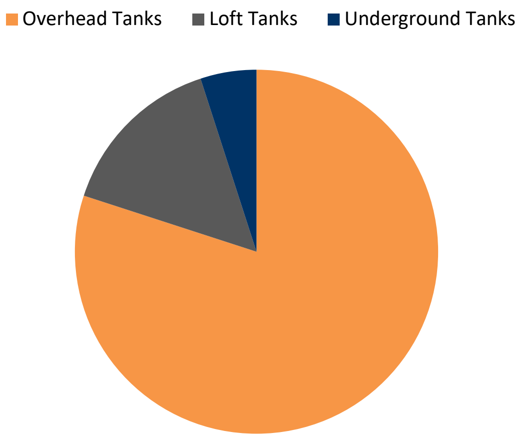
Source: Vectus Industries DRHP, Equirus Securities

Exhibit 134: 1000 litres or less capacity tanks control 70% of total market



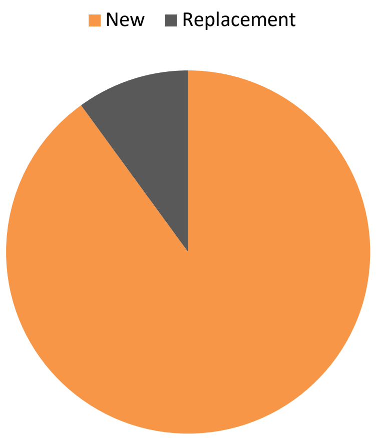
Source: Vectus Industries DRHP, Equirus Securities

Exhibit 135: Overhead tanks preferred domestically vs. other categories



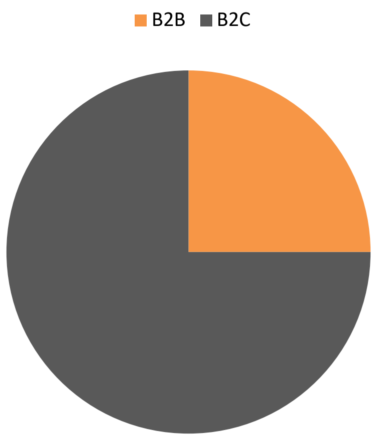
Source: Vectus Industries DRHP, Equirus Securities

Exhibit 136: New demand normally drives overhead tank demand; replacement low due to limited penetration



Source: Vectus Industries DRHP, Equirus Securities

Exhibit 137: Overhead tanks preferred domestically vs. other categories



Source: Vectus Industries DRHP, Equirus Securities

Prince Pipes & Fittings Ltd

Strong contender brand to sector leaders – initiate with ADD

CMP	Target Price
Rs 735	Rs 781
	Mar 2022
Rating	Upside
ADD	6% (↑)

- Prince Pipes (PRINCPIP) is currently India's fifth largest player (value market share) with a combined capacity of ~262,634mtpa and plants located across India. The company has gradually become a one-stop piping solutions provider with a vast product portfolio comprising pipes, fittings and overhead tanks.
- We believe PRINCPIP is well-positioned to capture incremental market share in a consolidating industry and continues to be a strong challenger brand to sector leaders. Post tie-up with Lubrizol for CPVC compounds and investments in branding, PRINCPIP's visibility has improved, leading to more share of channel business/customer wallet share.
- We estimate revenue/EBITDA CAGR of 15%/11% over FY21-FY24E on back of improved utilization and better penetration in existing & newer mkts. Limited capex over the next few years will further strengthen the balance sheet. Initiate coverage with ADD and a Mar'22 TP of Rs 781 at 34x P/E on one-year forward EPS of Rs 23.0. We await a better entry point into the stock.

Ongoing industry consolidation a mid-term tailwind for organized players: Organized players have been steadily increasing their hold with product portfolio expansion, and brand recall and distribution channel strengthening. The market share of organized pipe players has improved from ~50% in FY10 to 66-67% in FY21. This has been aided by the organized nature of RM procurement for the industry as a major portion of RM is linked with crude oil and petrochemicals; RM is either obtained domestically from larger petrochemical players or imported – both increasingly making tax evasion difficult for unorganized players. We expect consolidation to continue as tax compliance becomes more stringent and bigger players increase reach and distribution.

Fast emerging as a strong contender brand, gradually gaining market share: PRINCPIP is India's fifth largest plastic pipes & fittings manufacturer with a ~5%/8% market share in the total/organized industry and a strong foothold in North/West India (but improved contribution from East/South regions in last 3-4 years). Post its tie-up with Lubrizol, PRINCPIP has strengthened its CPVC pipe portfolio and aims to improve contribution from the private project business. It is all set to tap the increased plastic pipe demand led by GoI's focus schemes (Nal se Jal, PMKSY, farmer income improvement) as well as renewal in real estate construction/renovation. We factor in a 16%/15% volume/value CAGR over FY21-FY24E.

EBITDAM to dip in FY22 but improve over FY23/FY24: Though we believe that FY21 margins of 17.5% (inventory gains due to price volatility) are not sustainable and FY22 will see a dip, margins should gradually improve to 15-15.5% (FY20: 14%) by FY24. B/S remains strong (D/E: 0.1x) while WC days are set to increase on the back of growth plans.

View: At CMP of Rs 735, PRINCPIP is trading at a FY22E/FY23E P/E of 41x/32x. While we are constructive on the industry's and company's mid-term prospects, current valuations capture most positives. Initiate coverage with ADD and a Mar'22 TP of Rs 781. **Risks:** Higher competition from unorganized/organized players, product mix improvements not panning out, major -ve impact due to inventory losses.

Financial Summary

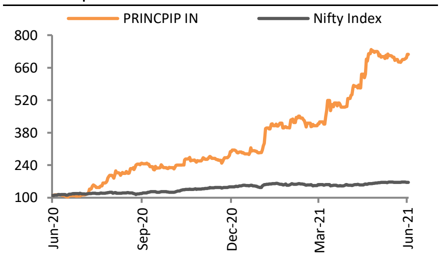
YE Mar Rs mn	Sales	EBITDA	Recurring PAT	EPS (Rs)	P/E (x)	P/B (x)	EV/ EBITDA (x)	ROE (%)	Core ROIC (%)	EBITDA Margin (%)
FY21A	20,715	3,616	2,218	20.2	36.5	7.7	30.2	23.6	26.4	17.5
FY22E	22,393	3,359	1,978	18.0	40.9	6.8	32.5	17.7	21.9	15.0
FY23E	26,564	4,144	2,528	23.0	32.0	5.8	26.2	19.5	24.8	15.6
FY24E	31,431	4,903	3,034	27.6	26.7	5.0	22.0	20.0	26.1	15.6

Source: Company, Equirus Securities

Stock Information	
Market Cap (Rs Mn)	80,869
52 Wk H/L (Rs)	795/102
Avg Daily Volume (1yr)	5,41,899
Avg Daily Value (Rs Mn)	3.8
Equity Cap (Rs Mn)	26,401
Face Value (Rs)	10
Share Outstanding (Mn)	110.0
Bloomberg Code	PRINCPIP IN
Ind Benchmark	BSETCD

Ownership (%)	Recent	3M	12M
Promoters	63.25	0.0	0.0
DII	15.6	(0.65)	(3.66)
FII	2.43	1.60	1.48
Public	18.72	(0.97)	2.18

Relative price chart



Source: Bloomberg

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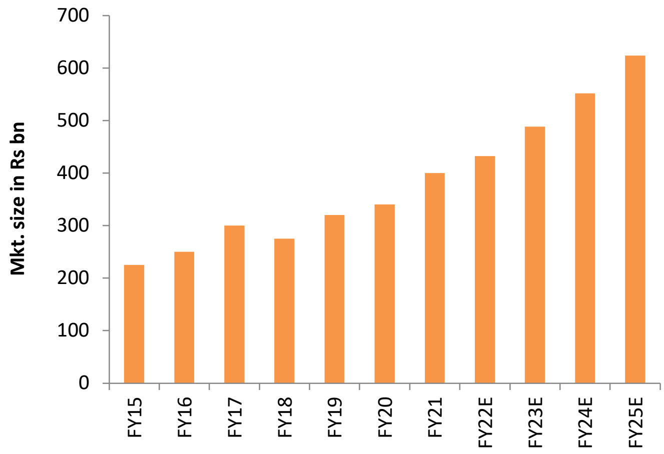
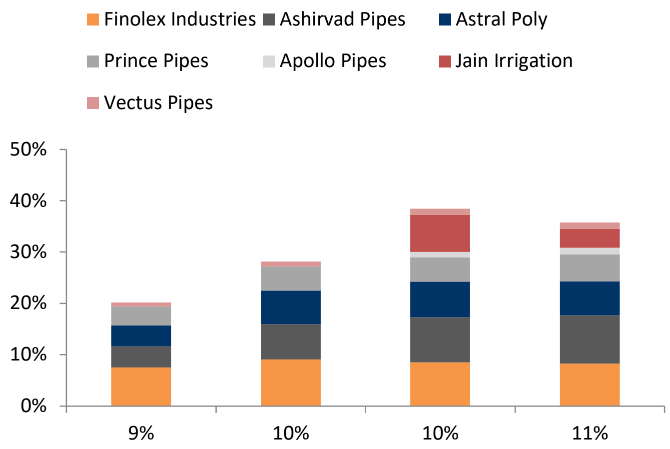
Key Charts

Exhibit 138: India's plastic pipes to clock a 11-12% CAGR over FY21-FY25E



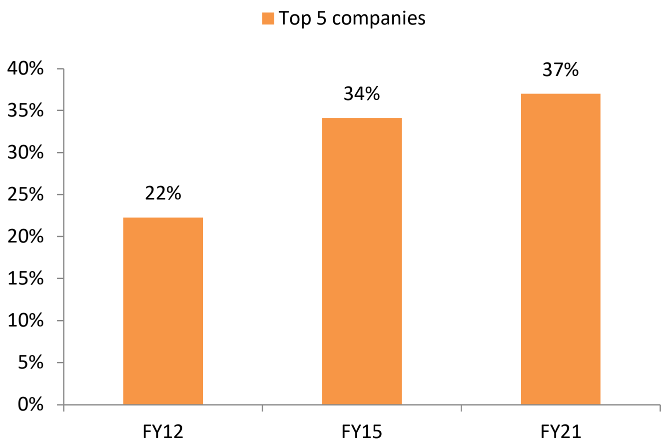
Source: Industry, Equirus Securities

Exhibit 139: PRINCPIP gradually emerges as fifth largest organized player



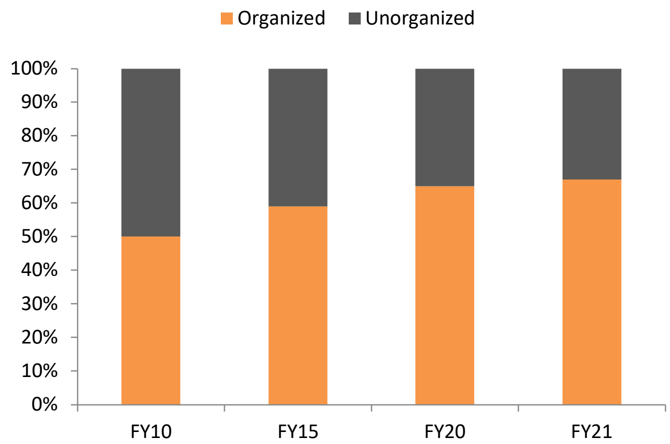
Source: Industry, Equirus Securities

Exhibit 140: Market share of top-5 players up from 22% in FY12 to 37% in FY21



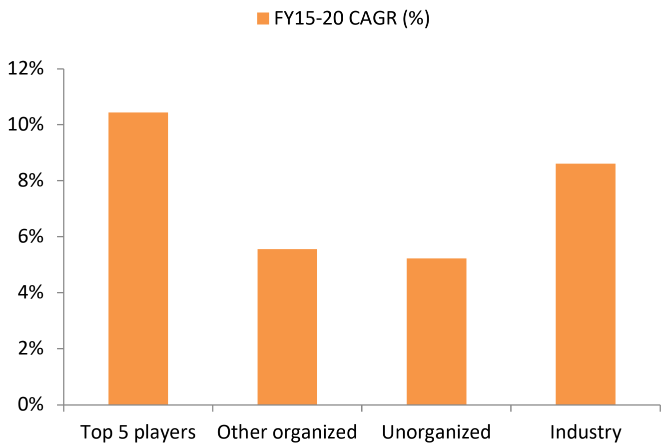
Source: Company, Equirus Securities

Exhibit 141: Organized segment share consistently improves in last decade favourable industry dynamics



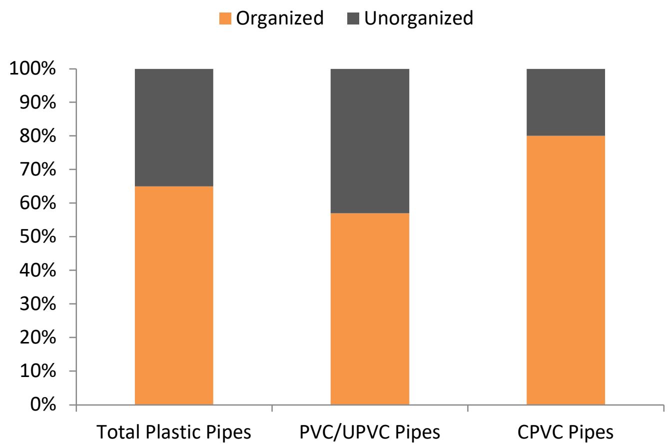
Source: Company, Equirus Securities

Exhibit 142: Top 5 players have slightly outperformed industry CAGR while growth of few regional players have been impacted



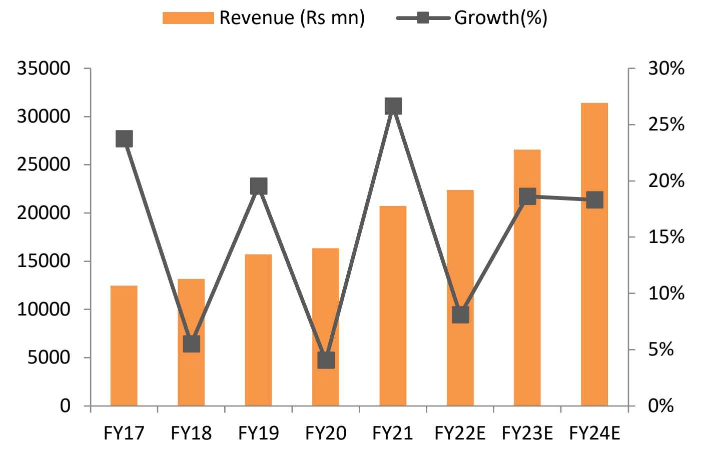
Source: Company, Equirus Securities

Exhibit 143: Unorganized players a dominant force in UPVC pipe segment; CPVC majorly organized



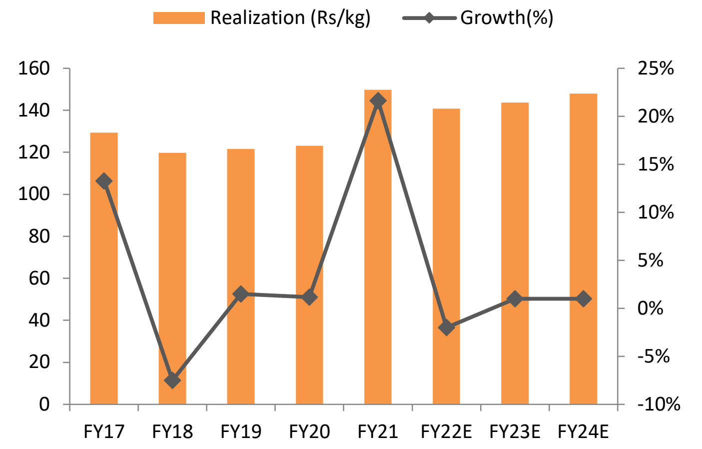
Source: Company, Equirus Securities

Exhibit 144: Expect 16%/15% volume/value CAGR over FY21-FY24E led by improved offtake from end consumer markets



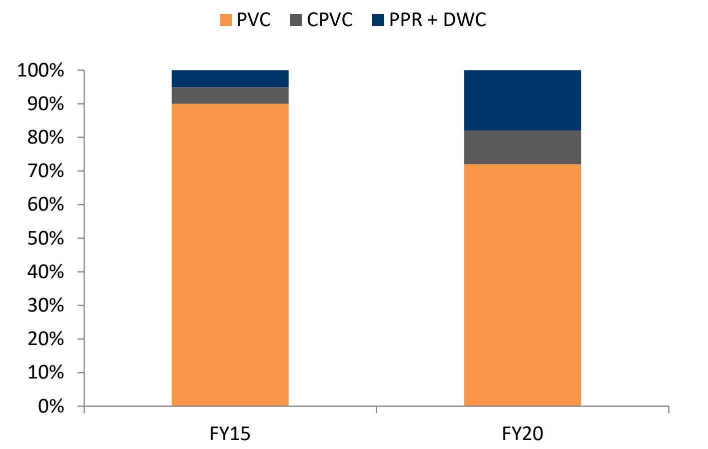
Source: Company, Equirus Securities

Exhibit 145: Expect realizations to dip in FY22 and improve thereon



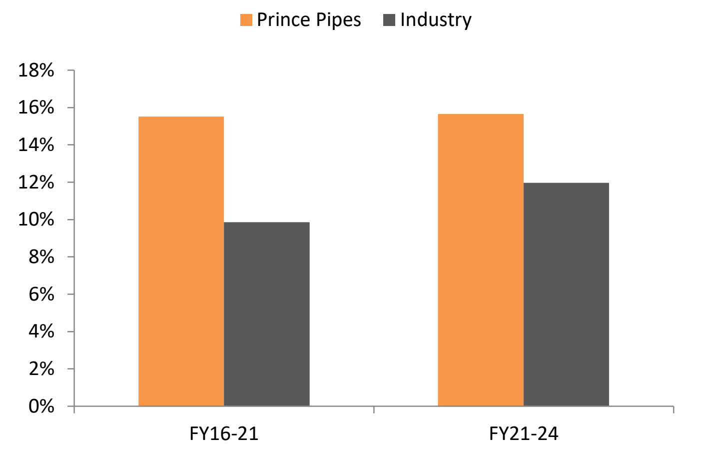
Source: Company, Equirus Securities

Exhibit 146: PRINCPIP steadily increases capacity of higher margin products over last 5 years



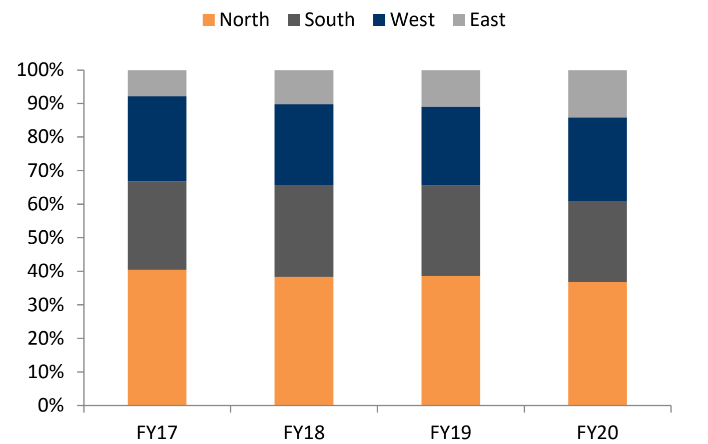
Source: Company, Equirus Securities

Exhibit 147: PRINCPIP tops industry growth over FY16-FY21 and expects the trend to continue over next 3 years



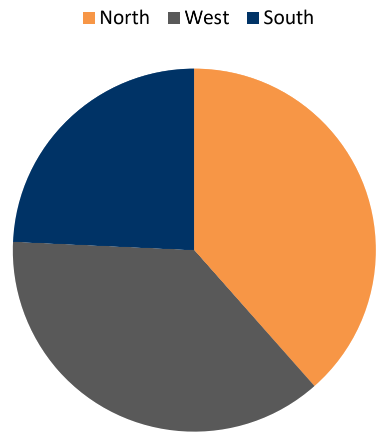
Source: Company, Equirus Securities

Exhibit 148: North & West historically dominant regions for PRINCPIP



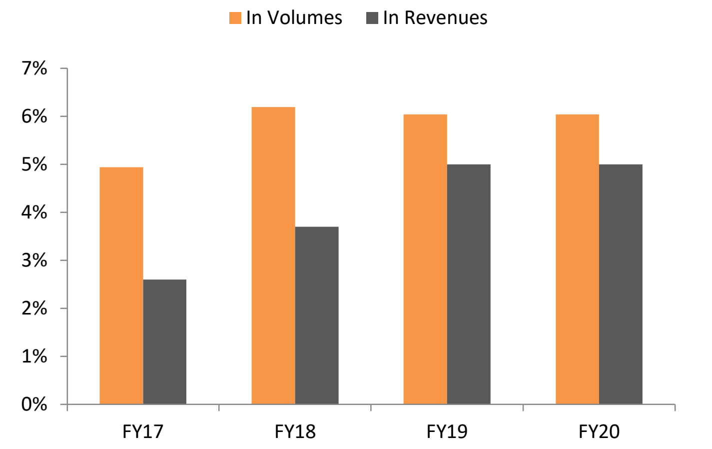
Source: Company, Equirus Securities

Exhibit 149: Bulk capacity in North & West; South's contribution to increase post Telangana commissioning



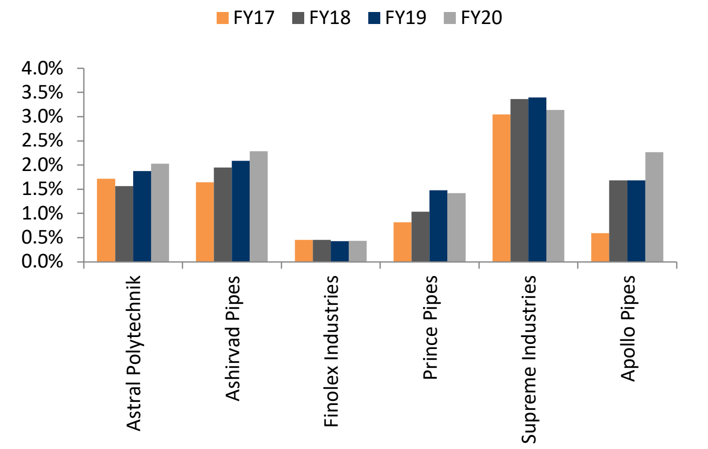
Source: Company, Equirus Securities

Exhibit 150: Contribution from contract manufacturing to sales/revenue



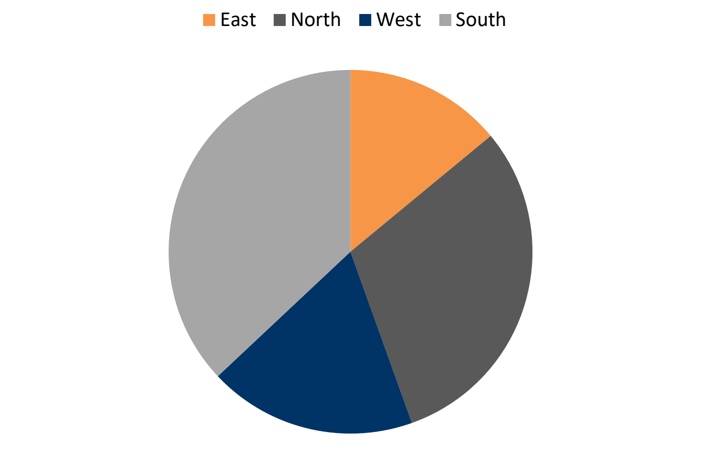
Source: Company, Equirus Securities

Exhibit 151: Avg. logistics costs for industry at 2-3% of sales



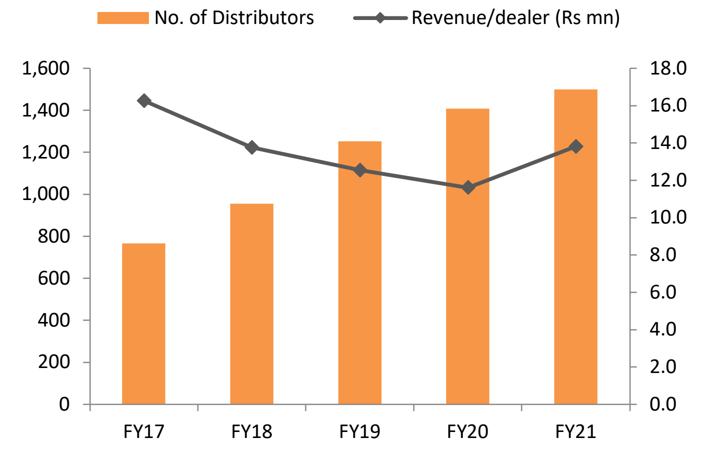
Source: Company, Equirus Securities

Exhibit 152: PRINCPIP has more dealers in North and South regions



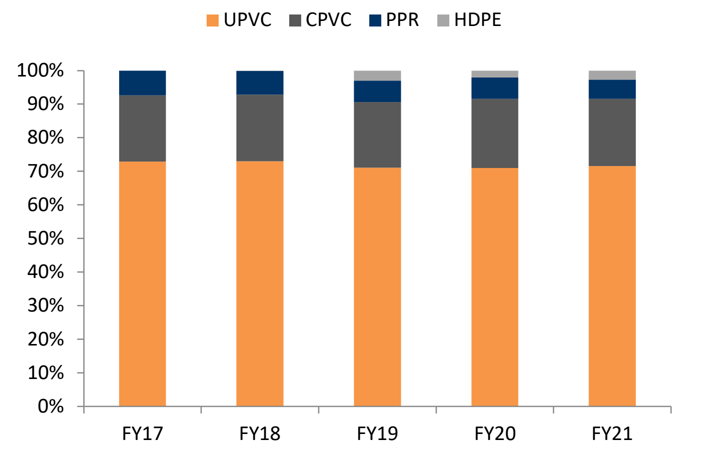
Source: Company, Equirus Securities

Exhibit 153: Revenue/dealer slips over FY17-FY20 due to continued dealer addition; strategy to bear fruit ahead



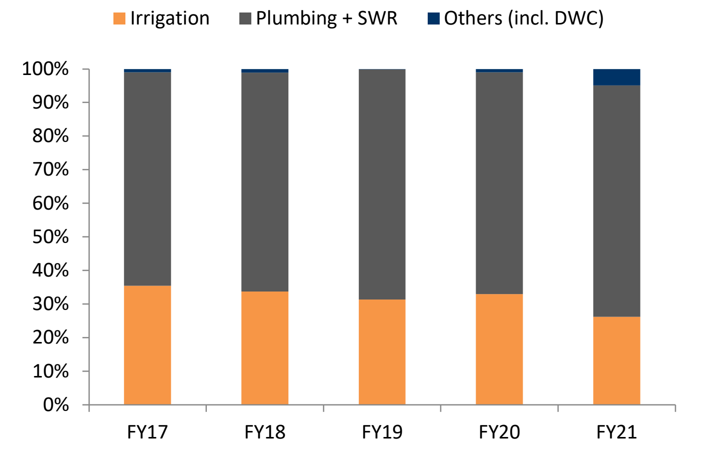
Source: Company, Equirus Securities

Exhibit 154: CPVC contribution rising for PRINCPIP over last 4 years



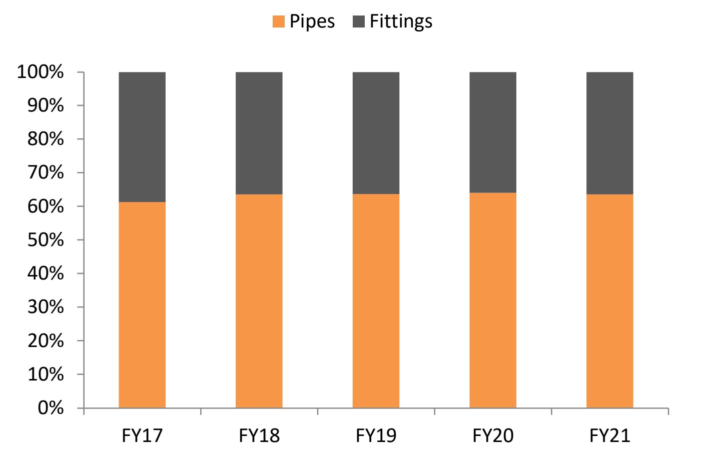
Source: Company, Equirus Securities

Exhibit 155: Focus on plumbing & SWR due to better industry dynamics



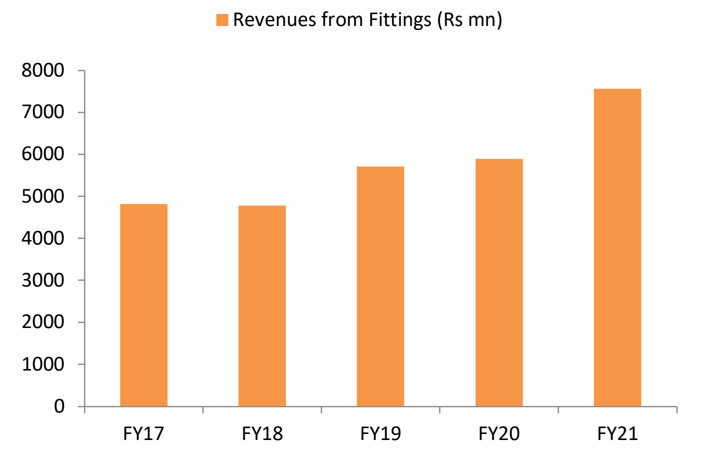
Source: Company, Equirus Securities

Exhibit 156: Contribution from fittings business steady for PRINCPIP



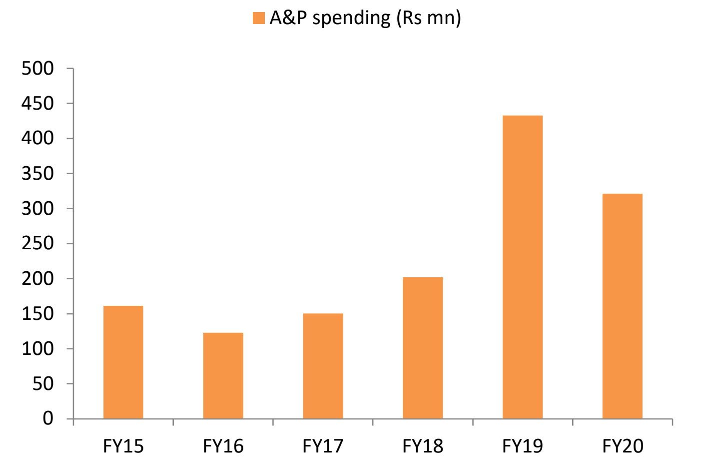
Source: Company, Equirus Securities

Exhibit 157: Absolute revenues from fittings business on an uptrend



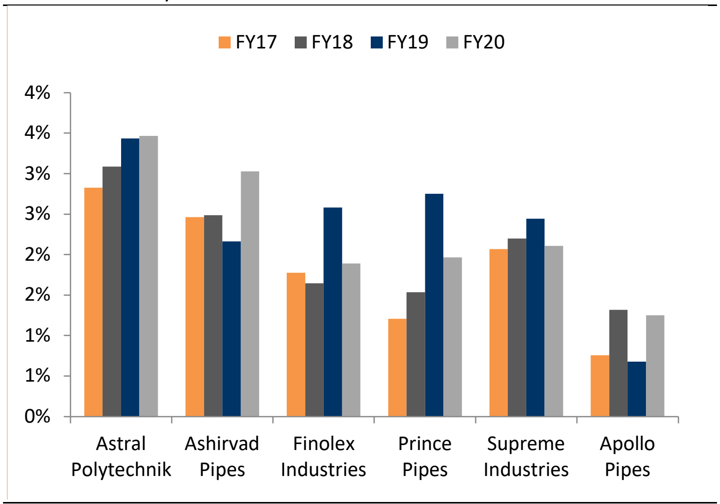
Source: Company, Equirus Securities

Exhibit 158: A&P spending up ~15% over FY15-FY20



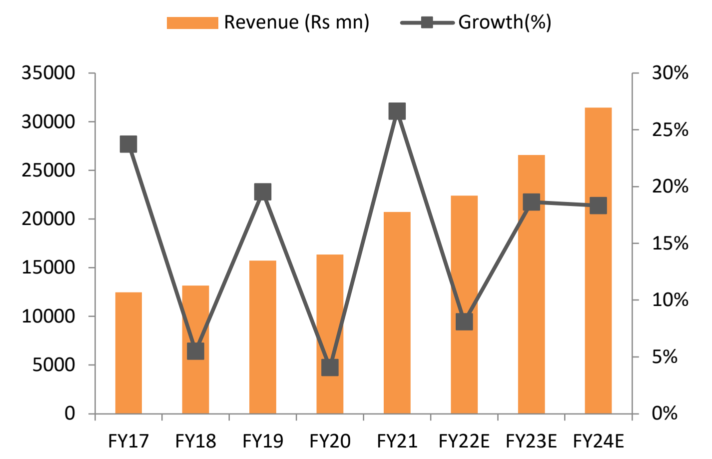
Source: Company, Equirus Securities

Exhibit 159: A&P spends by major pipe players at 1-3% of sales in last few years



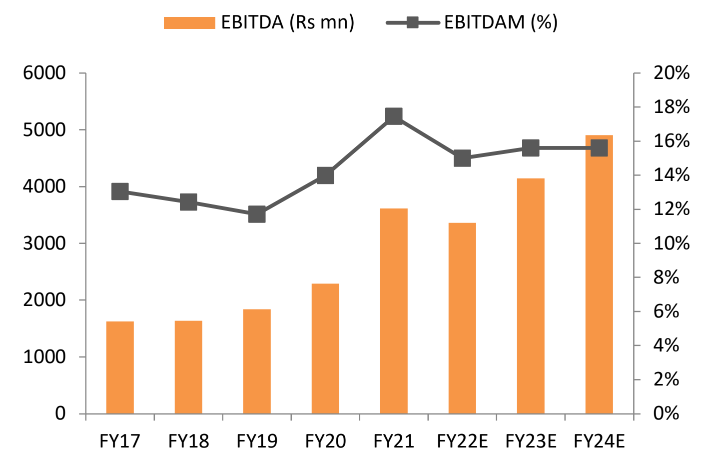
Source: Company, Equirus Securities

Exhibit 160: Expect 15% revenue CAGR over FY21-FY24 on market share gains and commissioning of new Telangana plant



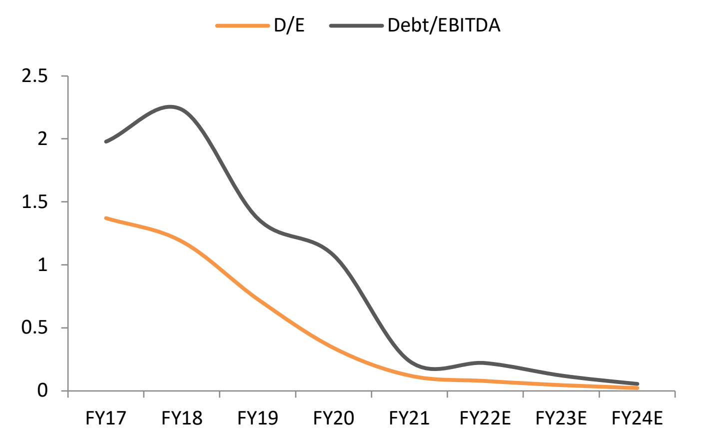
Source: Company, Equirus Securities

Exhibit 161: EBITDAM to correct in FY22 as PVC prices decline, but improve gradually in FY23-FY24



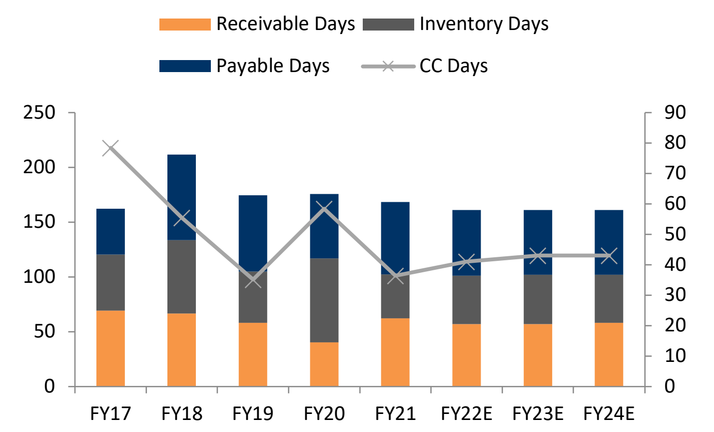
Source: Company, Equirus Securities

Exhibit 162: D/E & debt/EBITDA to improve on better cash flows, limited capex



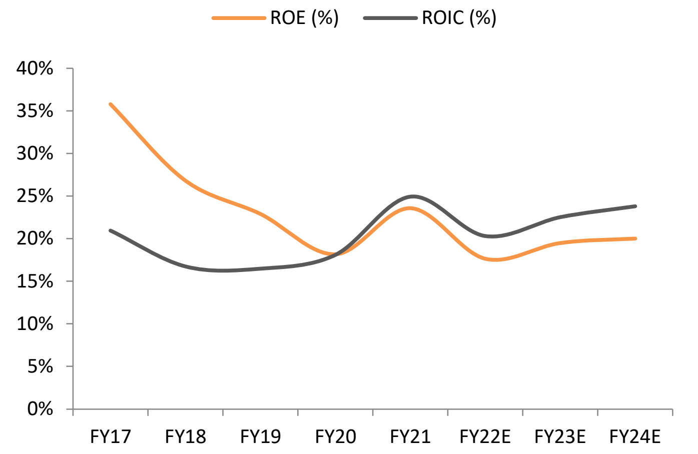
Source: Company, Equirus Securities

Exhibit 163: Cash conversion cycle to improve as PRINCPIP continues to streamline receivable & inventory days



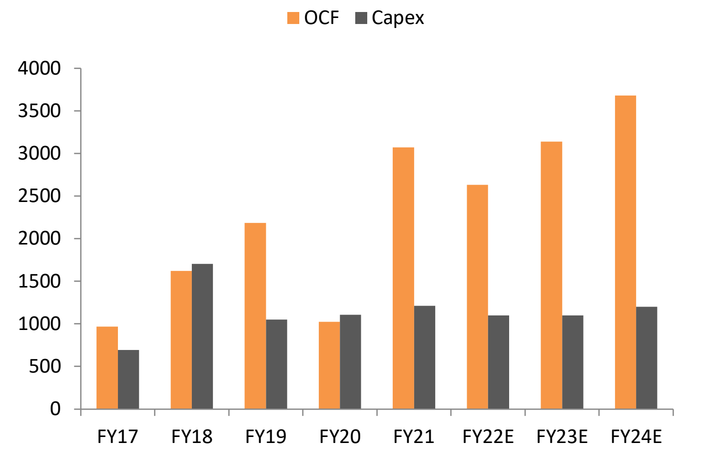
Source: Company, Equirus Securities

Exhibit 164: ROE/ROIC to soften in FY22 and inch up post that



Source: Company, Equirus Securities

Exhibit 165: Operating cash flow to remain strong while capex to be minimal post Telangana plant



Source: Company, Equirus Securities

Investment Rationale

Fifth largest player in pipes industry

Industry consolidation & tie-up with Lubrizol to help gain further share

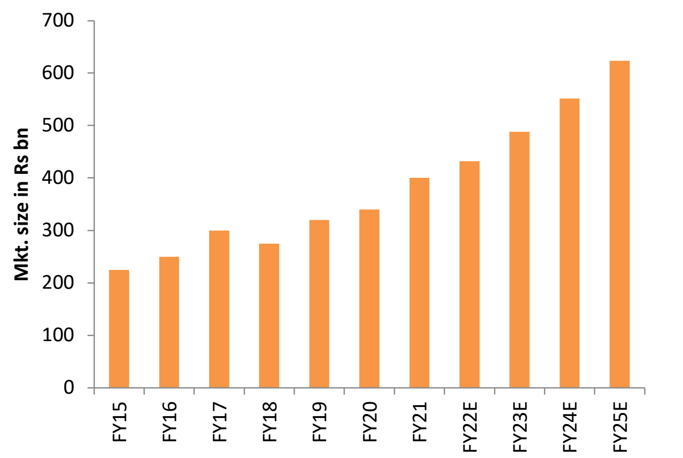
PRINCPIP gradually increases market share to become the fifth largest organized players from a tier-2 player

- Over FY16-FY21, PRINCPIP outperformed (16% CAGR) most of its larger peers (12% CAGR) in revenue terms. The company is now the fifth largest player in the pipes industry from a tier-2 player 5-7 years back.
- During the period, PRINCPIP expanded its product portfolio and manufacturing capabilities, improved its product mix and brand visibility, as well as strengthened its distribution channel to become a pan-India player.
- PRINCPIP is a pure play on the Indian piping sector, while its larger listed peers have exposure to other sectors. Ex: Supreme Industries (packaging & furniture; 35% of revenues), FNXP (PVC resin; 24% of revenues), and ASTRAL (adhesives; 24% of revenues).
- We observe that PRINCPIP's revenue and operating profits outpaced its major listed pipe peers over the last 7 years (FY14-FY21). Besides, its incremental ROIC over last 7 years is similar to major listed pipe peers.
- Lubrizol tie-up: Before Aug'20, PRINCPIP imported a large quantity of CPVC resin from Korea and China as company was focussing more on capturing volume share in the mkt. As per our understanding, the quality of resin imported from these two countries was inferior to that supplied by Lubrizol, Sekisui and Kaneka Corporation. However, post ADD imposition from both countries in Aug-Sep'19, PRINCPIP first switched its CPVC resin sourcing to Japan, Europe and other countries. From late Aug'20, it tied up with US-based Lubrizol – a leading techno innovator and manufacturer of CPVC compounds worldwide – for a period of 3 years. PRINCPIP has now started selling CPVC pipes under the *FlowGuard Plus* brand. Post this tie-up, PRINCPIP has become the second Indian brand (Ashirwad Pipes being the other licensee) to have access to Lubrizol's FlowGuard Plus (technology + product).

Only second Indian brand to have access to Lubrizol technology and product, FlowGaurd Plus

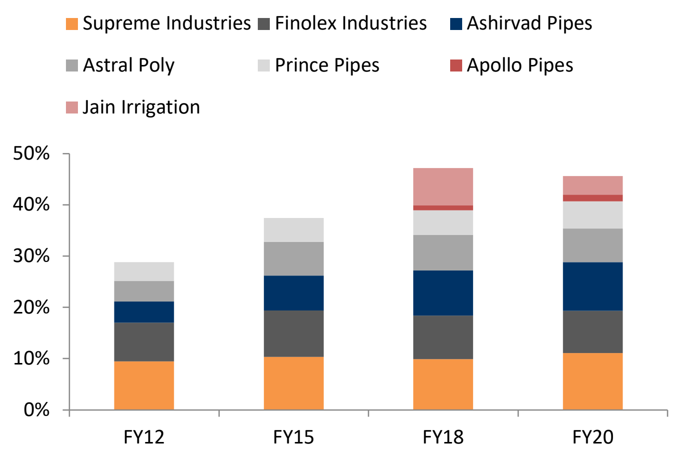
- As per our understanding, the *FlowGuard Plus* brand enjoys good recall and acceptability among the institutional/builder community in India, especially metros/T1 cities. This should give the company easier access for strengthening its private project business reach, which as per management is lagging larger peers (10-15% of topline). Additionally, with this tie-up, PRINCPIP's brand visibility has started improving in the industry distribution channel; this has helped it add dealers as it can now provide distributors/retailers all piping solutions along quality assurance – offered by only a few select industry peers.
- We expect PRINCPIP to post a 16%/15% volume/value CAGR over FY21-FY24E on improving industry dynamics, continued thrust by the company for making inroads in newer/ historically weaker markets and distribution channel strengthening.

Exhibit 166: India's plastic pipe to grow at 11-12% CAGR over FY21-FY25E



Source: Industry, Equirus Securities

Exhibit 167: PRINCPIP now the fifth largest organized player



Source: Industry, Equirus Securities

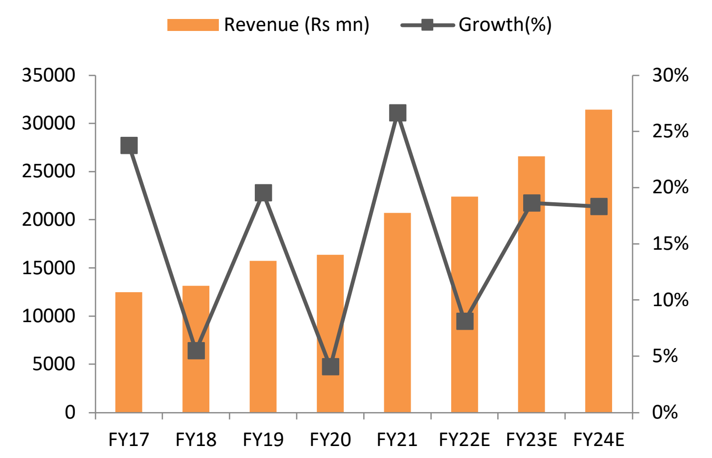
Comparative analysis of key players

Particulars	Ashirvad Pipes*	Astral Pipes	Finolex Industries	Prince Pipes	Supreme Industries	Apollo Pipes	Jain Irrigation	Kisan Mouldings
Capacity in MT	2,00,000	2,57,946	3,70,000	2,59,000	5,09,000	1,18,000	NA	50,000
Sales Volume in MT	1,49,532	1,36,590	2,12,060	1,38,289	2,94,357	47,333	NA	NA
Utilization (%)	74.8%	53.0%	57.3%	53.4%	57.8%	40.1%	NA	NA
No. of Manufacturing Facilities	2	7	3	7	8	4	NA	5
Manufacturing Location	Karnataka and Rajasthan	Gujarat, Tamil Nadu, Rajasthan, Maharashtra & Uttarakhand	Maharashtra and Gujarat	Maharashtra, Tamil Nadu, Uttarakhand, Dadra & Nagar Haveli, Rajasthan and Telangana	Maharashtra, Telangana, Uttar Pradesh, Madhya Pradesh and West Bengal	Uttar Pradesh, Chhattisgarh, Gujarat, Karnataka	NA	Maharashtra, Madhya Pradesh, Dadra & Nagar Haveli
FY21 Pipes Revenues (Rs bn)	29	25	26	21	41	5	11	2
FY16-21 Pipes Revenue CAGR	16%	12%	5%	16%	13%	20%	-7%	-15%
% of revenues from Plastic pipes & fittings	100%	76%	76%	100%	65%	90%	20%	NA
Other revenue contributors in FY21	0%	24%	24%	0%	35%	10%	80%	NA
Other product segment	None	Adhesives	PVC resins	None	Packaging, Industrials and Consumer	Plastic Bath Fittings & storage tanks	Hitech Agri Inputs, Agro and Others	Irrigation systems, Moulded Furniture
Mkt. share in overall industry	9%	6%	7%	5%	10%	1%	3%	0.5%
Mkt. share in organized industry	13%	9%	10%	8%	15%	2%	4%	1%

** Ashirvad Pipes numbers are for FY20*

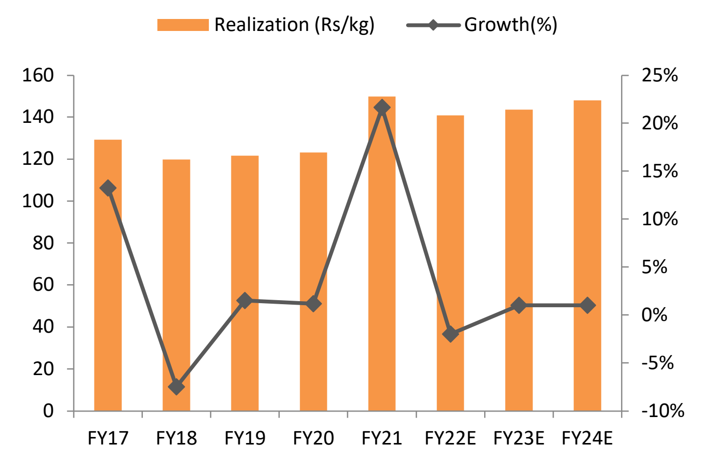
Source: Industry

Exhibit 168: Expect 16%/15% volume/value CAGR over FY21-FY24E led by improved offtake from end consumers



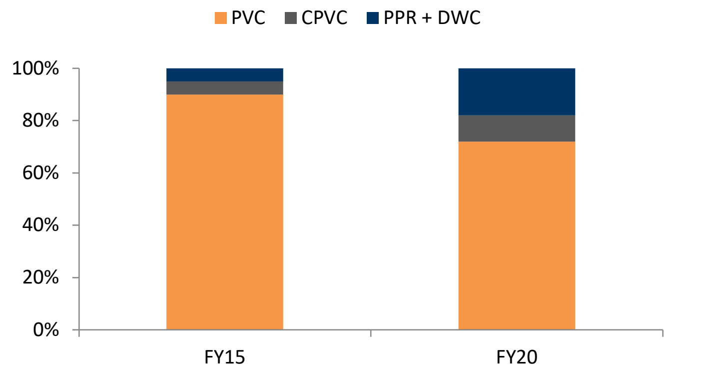
Source: Company, Equirus Securities

Exhibit 169: Expect realizations to soften in FY22 and improve thereon



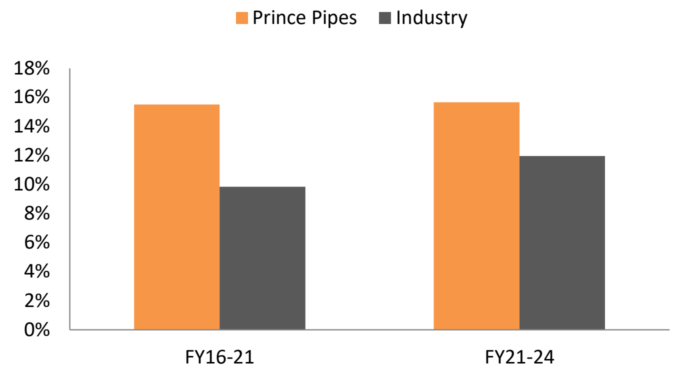
Source: Company, Equirus Securities

Exhibit 170: Steadily increases capacity of higher margin products over last 5 years



Source: Company, Equirus Securities

Exhibit 171: Beats industry growth over FY16-FY21 and expects trend continue over next 3 years



Source: Company, Equirus Securities

Ongoing consolidation to aid market share gains for organized players

CPVC to see higher domination from organized players

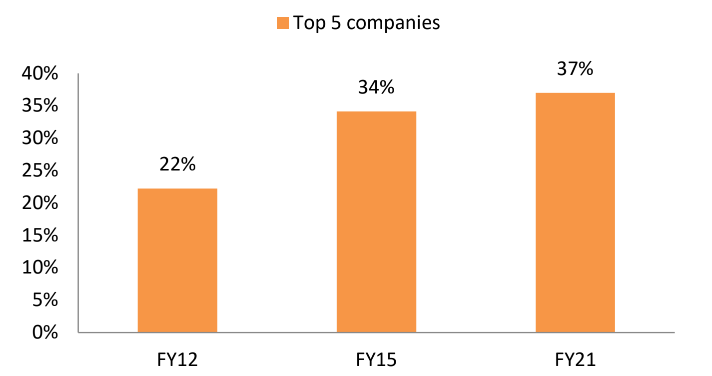
Market share of organized pipe players improves from ~50% in FY10 to 66-67% in FY21

- As per our understanding, **organized players have been steadily increasing their hold** on the piping industry due to product portfolio expansion and brand recall and distribution channel strengthening. The market share of organized pipe players has improved from ~50% in FY10 to 66-67% in FY21.
- This has been further aided by the organized nature of RM procurement. A **major portion of RM is linked with crude oil and petrochemicals**, and is either obtained domestically from larger petrochemical players or imported. Both these sourcing routes are increasingly making tax evasion difficult for the unorganized players. As against this, supply chains in some other home improvement segments such as tiles (clay) and plywood (plantation timber) remain largely unorganized. Consequently, these segments have a higher proportion of mid-to-small sized unorganized manufacturers who typically operate via intense pricing or cheaper product quality by cutting corners and not passing on RM inflation in last 5 years.
- Supreme Industries, Ashirvad Pipes, FIL, APTL and PRINCPIP are the top-5 players in the plastic pipes industry. Their market share has jumped from ~22% in FY12 to ~37% in FY21. We believe these **organized companies are better placed to surpass industry growth**, benefiting from market consolidation, led by: (a) strong brand, (b) a wide manufacturing base leading to lower logistics costs, (c) a pan-India distribution network (d) a comprehensive product range serving diverse end-user applications, and (e) higher share of fittings.
- Introduction of GST, stricter E-way Bill implementation, and tightening of BIS execution (in pipes) has gradually **increased the compliance costs** of unorganized and semi-organized players, while also setting a base standard for product quality.
- As per our understanding**, sourcing of quality resins is a strong entry barrier in CPVC pipes** vis-à-vis other plastic pipes segments as there are only 3-4 quality RM global suppliers. Most top Indian plastic manufacturers have tied up / source from either Lubrizol, Sekisui, Kaneka Corporation or Kem One for their CPVC resin needs. In contrast, most semi-organized and unorganized players in the piping industry are dependent on imports of CPVC resins from smaller manufacturers mainly from China, South Korea, Japan and Europe.

  Pandemic-induced supply chain disruptions and consistent rise in global PVC prices hits sourcing capabilities of unorganized/semi-organized players

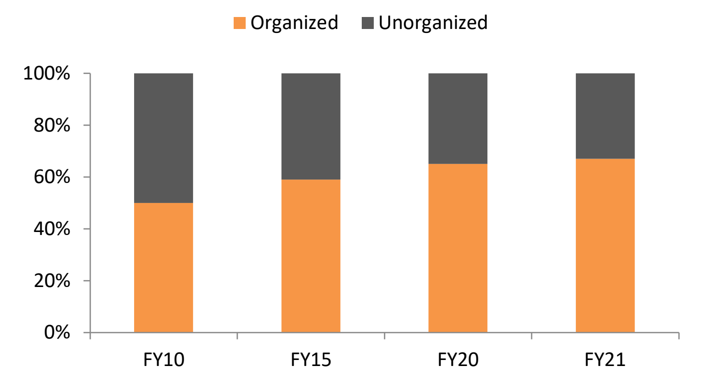
  In Aug'19, GoI imposed ADD of 10% on CPVC resin/compound imports from China and Korea with a base rate of US$ 2,000/MT, making imports from here uncompetitive and prohibitive for smaller players. As per industry estimates, ~30% of India's CPVC resin/ compound imports originated from China and Korea. The industry saw a shift in CPVC resin sourcing to other countries (Japan, Europe, US) post ADD imposition. However, the supply chain disruption caused by COVID-19 and continuous increase in PVC prices worldwide due to RM shortage has hit sourcing capabilities of unorganized and semi-organized players. This in turn has affected their market shares as well as profitability and B/S metrics.

Exhibit 172: Mkt. share of top-5 players up from 22% in FY12 to 37% in FY21



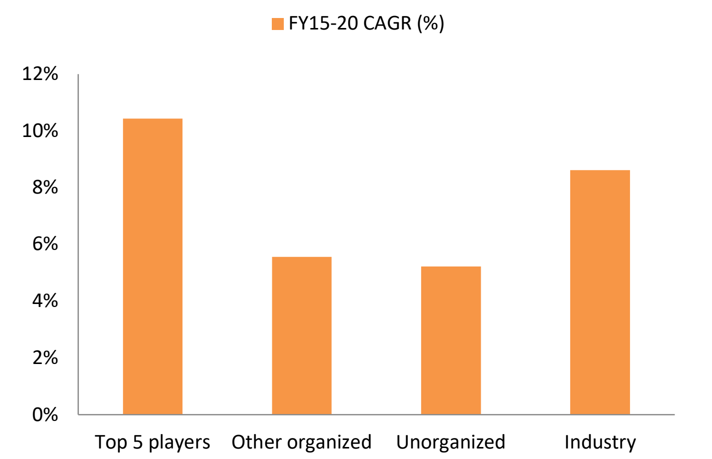
Source: Company, Equirus Securities

Exhibit 173: Organized segment share consistently improves in last decade due to favourable industry dynamics



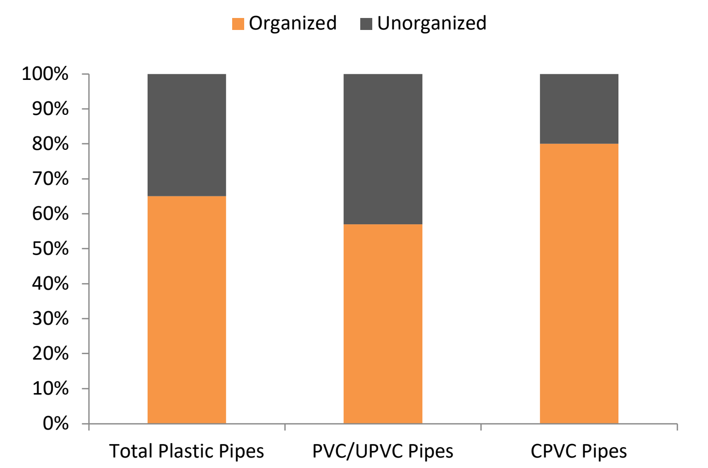
Source: Company, Equirus Securities

Exhibit 174: Top-5 players slightly outperform industry CAGR; growth of few regional players affected



Source: Company, Equirus Securities

Exhibit 175: Unorganized players to dominate UPVC pipe segment; CPVC majorly organized



Source: Company, Equirus Securities

Manufacturing presence across regions

Increased reach, lower distribution freight costs, better company & dealer inventories

- PRINCPIP has historically been **aggressive in adding new manufacturing plants across regions** to strengthen presence in newer geographies and support its distribution channel. This strategy will continue to be the core growth driver for the company. since on-time delivery will help lower WC requirement of the distribution channel and also reduce secondary freight cost for the channel. Currently, PRINCPIP has 7 manufacturing plants (with Telangana plant partially operational) with 2 plants in Maharashtra, 1 plant each in Gujarat, Rajasthan, Uttarakhand and Tamil Nadu; this gives the company reach in northern, western and southern India markets.

7 manufacturing plants ensure reach in northern, western & southern markets

- PRINCPIP was **the first mover in North India**, and had set up a plant in Haridwar for manufacturing pipes and pipe fittings. In 2012, the company acquired two plants in Kolhapur and Chennai from Chemplast Sanmar, including the acquisition of *Trubore* brand. Going forward, PRINCPIP will be very selective in inorganic acquisitions; this is because, in pipes, just acquiring existing plants doesn't make any meaningful sense and brand marketing has to be undertaken by the acquiring company. Therefore, it makes more sense to install own manufacturing plant unless the stressed asset has a very good asset base.

- **In East India, PRINCPIP is currently following a unique asset-light strategy** via outsourcing (Hajipur plant, Bihar, commenced from FY14; Balasore plant, Odisha, commenced from FY19) mainly for non-pressure PVC pipes – a commoditized and highly freight-sensitive product. Rest of the product portfolio (CPVC pipes, PVC fittings) is catered through the company's Haridwar plant. PRINCPIP is currently the no. 2 player in this market. It supplies contract manufacturers with raw materials, and they charge an agreed amount per kilo to manufacture the pipes. In the near term, we expect the company to continue with this asset light strategy. However, in the mid-to-long-term, PRINCPIP will look at establishing its own capabilities as East remains one of the growth markets for all building material products.

- PRINCPIP is also setting up a plant in Sangareddy, Telangana, at a total project cost of Rs1.96bn mainly funded through IPO proceeds. The plant is expected to have total installed capacity of ~51,943 tonnes/annum (to be commissioned in phases) for manufacturing of UPVC, CPVC, DWC pipes, and UPVC/CPVC fittings. Asset turnover would be 2.5-3x. Around 30%+ of the work has been completed. All necessary approvals are broadly in place and company has already entered into contracts for construction of the plant and purchase, installation and commissioning of plant & machinery. Commencement of commercial operations has already begun and should get scaled up in next 2-3 quarters.

Telangana plant to bring down freight costs and lead to margin gains

- Once the **Telangana plant gets commissioned, the company will further improve its supply and product reach in South India**. This will bring down its freight costs, leading to some margin improvement. Currently, PRINCPIP manufactures CPVC for North and West India in its already existing plants; for South India, CPVC is sourced from other facilities which increases freight costs. Besides, fittings for the southern market – catered to from the company's Haridwar plant – will also be manufactured at Telangana. This facility will also service eastern regions of Odisha and West Bengal – currently serviced by the Haridwar plant.

- PRINCPIP plans to leverage its multi-location manufacturing network to become **the first one to manufacture DWC** at all plants across the country. This will significantly help it scale up its competitive advantage and product reach.

- In pipes, transportation costs play a critical role due to bulkiness of the product. Therefore proximity of manufacturing plants to RM sources and end consumer markets becomes very important for maintaining cost efficiencies and WC, as well as in improving dealer inventory and ROI. PPFL **currently sells its products on a consignee basis**, which means the customer is required to arrange for and pay to pick up products from manufacturing plants or warehouses.

Exhibit 176: Manufacturing facilities for major players

Name of the Company	Manufacturing Location
Supreme Industries	Maharashtra, Madhya Pradesh, West Bengal, Uttar Pradesh
Finolex Industries	Maharashtra, Gujarat
Astral	Gujarat, Tamil Nadu, Rajasthan, Maharashtra, Uttarakhand
Prince Pipes	Maharashtra, Tamil Nadu, Uttarakhand, Dadra and Nagar Haveli, Rajasthan, Telangana
Jain Irrigation	Maharashtra, Gujarat, Tamil Nadu, Rajasthan, Andhra Pradesh
Ashirvad Pipes	Karnataka, Rajasthan
Apollo Pipes	Uttar Pradesh, Chhattisgarh, Gujarat, Karnataka

Source: Company, Equirus Securities

Exhibit 177: Manufacturing facilities of PRINCPIP

Plant	State	Product	Installed Capacity (TPA)	Production Capacity (TPA)	FY21 Capacity Utilization (%)
Athal plant	Maharashtra	Fittings	15,982	13,555	71%
Dadra plant	Dadra Nagar & Haveli	Pipes	56,381	41,854	60%
Haridwar plant	Uttarakhand	Pipes & Fittings	82,224	64,199	70%
Chennai plant	Tamil Nadu	Pipes	55,836	41,411	49%
Kolhapur plant	Maharashtra	Pipes	20,045	15,334	69%
Jaipur plant	Rajasthan	Pipes	28,166	21,547	60%
Sangareddy plant	Telangana	Pipes & Fittings	4,000	3,200	61%
Total			2,62,634	2,01,100	

**Installed capacity is the rated capacity by machine supplier. Production capacity is the actual production capability of the company and there is always 20-25% difference between Installed and production capacity due to downtime related to changing of mouldings, cleaning etc.*

Source: Company, Equirus Securities

Exhibit 178: Outsourcing tie-ups

Name of Manufacturer	Product	Date of Contract	Location
Shree Tel-Fab Industries Pvt. Ltd	UPVC	Sep'14	Hajipur, Bihar
Ohm Pipes	UPVC	Oct'19	Balasore, Odisha

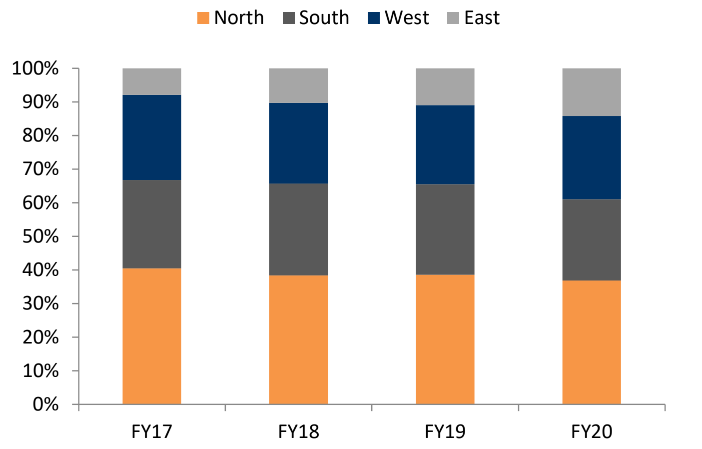
Source: Company, Equirus Securities

Exhibit 179: Capex breakup for Telangana plant

Particulars	Investment (Rs mn)	% of cost
Land Cost	121	6%
Civil & Electrical	691	35%
Plant & Machinery	643	33%
Utility	166	8%
Moulds & Dyes	315	16%
Office Equipment	25	1%
Total	1,961	

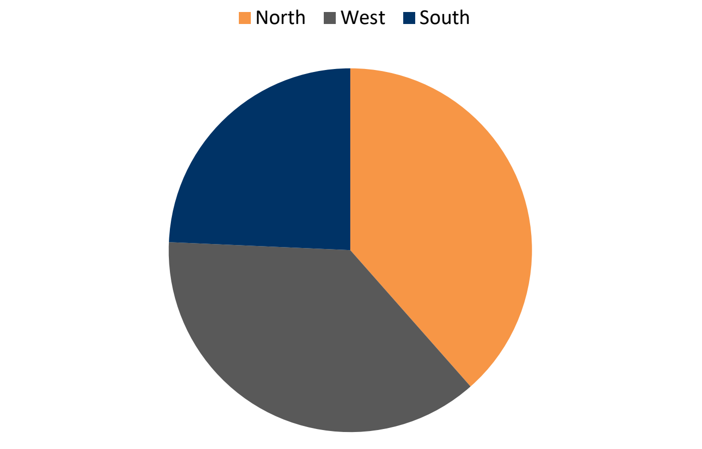
Source: Company RHP, Equirus Securities

Exhibit 180: North & West historically dominant regions for PRINCPIP



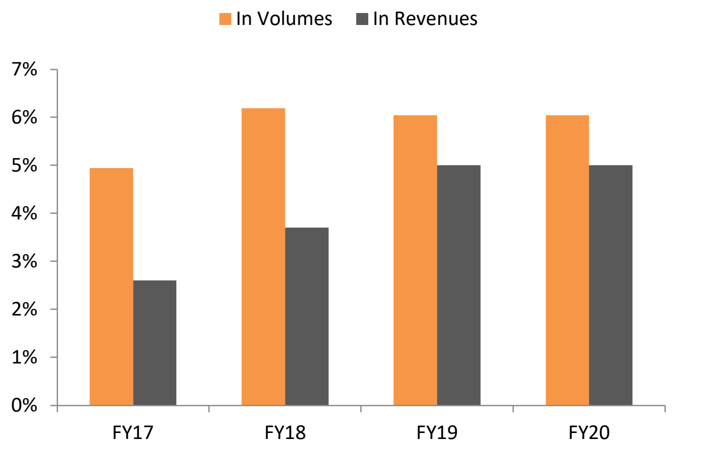
Source: Company, Equirus Securities

Exhibit 181: Bulk capacity in North & West; South's contribution to increase post Telangana commissioning



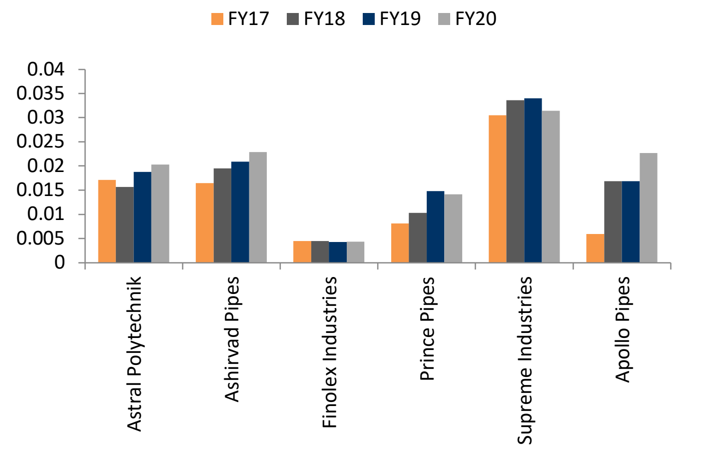
Source: Company, Equirus Securities

Exhibit 182: Contribution of contract manufacturing to sales, revenues



Source: Company, Equirus Securities

Exhibit 183: Avg. logistics costs for industry at 2-3% of sales



Source: Company, Equirus Securities

Focus on strengthening distribution channel to aid market share gains

- A major factor contributing to PRINCPIP's growth over last five years has been its **focus on enhancing brand presence** on regional and pan-India basis. At present, the company has a dealer/distributor network of 1,500+ (FY17: 766) – highest in the pipe industry. PRINCPIP has continuously focussed on expanding its product reach by putting up manufacturing units closer to growth markets and increasing the number of distributors and retail touchpoints. It added 250+ distributors in FY21, with most of these in markets wherein its presence was relatively weak. PRINCPIP will focus on the East – a fast-growing market – for increasing its distribution channel. It will also strengthen its presence in Central and South India.

Adds 250+ distributors in FY21

- **Operating model:** Normally, PRINCPIP sells its products to distributors, who in turn resell to wholesalers, retailers, and plumbers. It sells its Trubore products directly to wholesalers and retailers. The company has been focusing on expanding its presence across urban, semi-urban (T-2/3 cities & towns) and rural markets, and claims to have strong presence in North and West India. Trubore brand has a presence in South India while PRINCPIP's brand has pan India presence. The company's online and social media marketing strategy for the next five years is to popularize its brands by increasing digital footprint, such as by developing separate websites for Prince Piping Systems and *Trubore* brands.

- PRINCPIP **currently has 11 warehouses,** located in Bhubaneswar (Odisha), Ghaziabad (UP), Tiruchirappalli (TN), Palakkad (Kerala), Hubli (Karnataka); Howrah (West Bengal), Siliguri (West Bengal); Vijayawada (Andhra Pradesh); Chennai (Tamil Nadu), Nagpur (Maharashtra) and Hyderabad.

Dealer loyalty programme 'Prince Udaan' aims to strengthen connect with channel partners and plumbers

- **Dealer loyalty programme:** Since 2HFY16, PRINCPIP has been operating a dealer loyalty programme under the name of 'Prince Udaan'; the programme aims to strengthen connect with channel partners and plumbers, and to motivate them by giving reward points on every purchase against which they can redeem gifts later. This loyalty programme is currently operational in North India (except Madhya Pradesh), West India, South India and East India (only Bihar, Jharkhand and West Bengal). PRINCPIP has designed a new digitized model to track buying behaviour trends of its channel partners, and this entire activity is managed on a technology platform by Loyalty Program Partners. PRINCPIP also conducts Parivaar and Mitra Meets (incl. dealer/plumber meets).

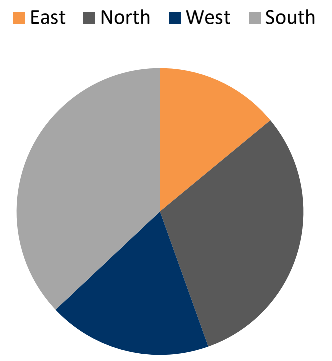
- **Channel financing**: PRINCPIP uses channel financing to optimise WC requirements and improve collections/debtor days. Channel partners or key distributors get an access to WC financing at better rate, helping them take up large projects. The facility is provided by banks to channel partners based on the strength of their business relationship with the company. Currently, 20-25% of the company's sales would be through channel finance. Total outstanding for channel financing stood at 730mn as on Mar'21. Additionally, it is working towards gradually moving recourse from the company to the distributors.

Exhibit 184: Distribution status of major industry players

Name of the Company	Distributors
Supreme Industries	1,368
Finolex Industries	1,000
Astral	850
Prince Pipes	1,500+
Ashirvad Pipes	1,100
Apollo Pipes	600

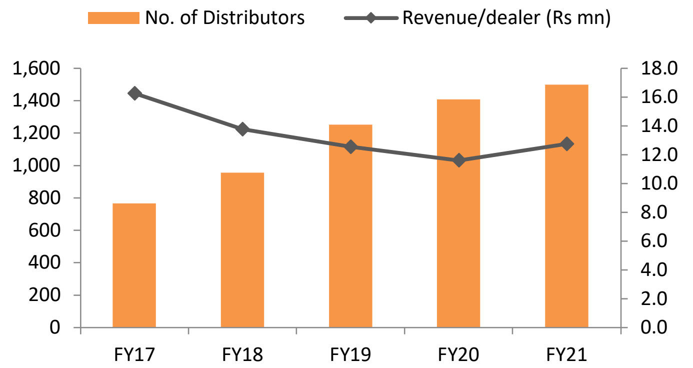
Source: Company, Equirus Securities

Exhibit 185: PRINCPIP has more dealers in North and South regions



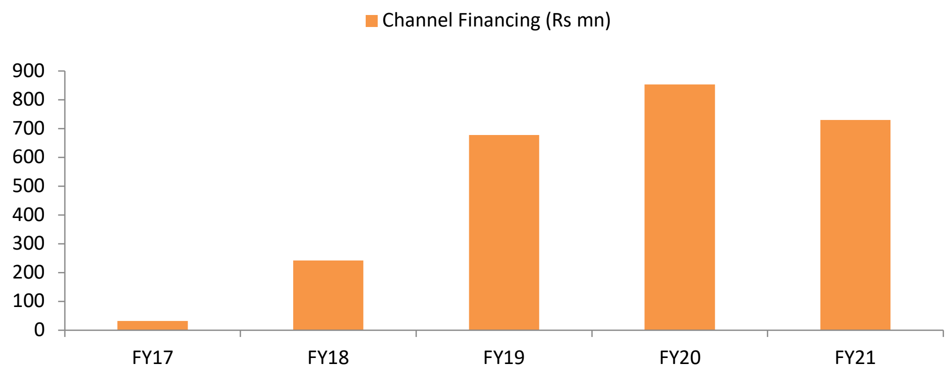
Source: Company, Equirus Securities

Exhibit 186: Revenue/dealer slips over FY17-FY20 due to continued dealer addition; strategy to bear fruit ahead



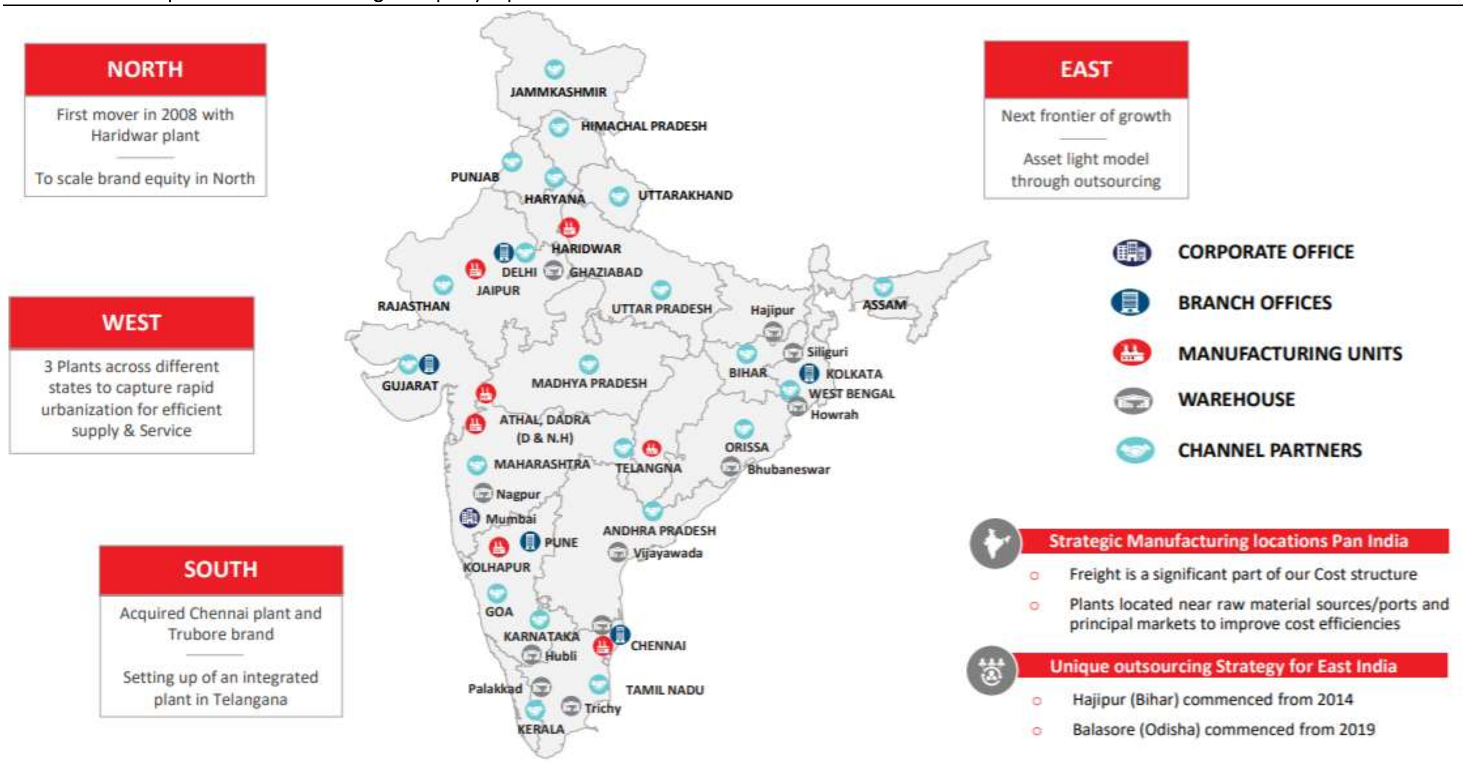
Source: Company, Equirus Securities

Exhibit 187: Company is focussing on rationalizing channel financing



Source: Company, Equirus Securities

Exhibit 188: Map of India showcasing company's presence



Source: Company

Diversified product portfolio, brand investments, improved product mix to buoy margins

- Comprehensive & diversified product portfolio: PRINCPIP's product portfolio comprises 7200+ SKUs with applicability in plumbing, irrigation, sewage disposal and underground drainage. The company has also recently added overhead tanks to its portfolio and will roll out the produce gradually on a pan-India basis. It currently is amongst the few domestic pipe manufacturers with offerings for all product applications related to piping & plumbing.

Focus on improving manufacturing capabilities and product portfolio towards value-added products like solvents and valves

- Improving product mix, margins: PRINCPIP continues to improve its product mix towards higher margin segments like plumbing and underground draining systems (HDPE/DWC). Normally, fittings earn better margins vs. core piping as its application is of specialized nature and work involves precision and semi-skilled workmanship. Hence, many branded players have sharpened focus on expanding fittings capacities, with PRINCPIP being amongst the aggressive companies to move into this segment. It will focus on improving manufacturing capabilities and product portfolio towards value-added products like solvents and valves in addition to piping.

  Fittings requirements for South India is catered to from the company's Haridwar facility, leading to higher logistics costs. With Telangana plant commercialization, de-centralization benefits will flow through, aiding segment margins. For DWC, PRINCPIP has had the first mover and provides a wide product range and designs which have worked as a brand differentiator in the category. The company plans to leverage its multi-location manufacturing network to become the first one to manufacture DWC at all its plants across the country.

- Brand monetization: As per management, the industry is heavily skewed towards retail sales; hence, the company has been increasing focus on marketing and branding through various initiatives. It had appointed Mr. Akshay Kumar as its brand ambassador since 2018, which has helped it improve its brand perception among channel partners and differentiate it from a competitor of a similar name. Additionally, apart from doing branding via hoardings and shop boards, the company has used multi-state single strategy of transit media to build the brand. Going forward, A&P will continue to be 2-3% of sales.

- Move towards premiumization: PRINCPIP aims to balance pricing and volumes but has been channelizing its efforts from being a value focussed player to becoming a premium player. The Lubrizol tie-up is another step in this direction; this has helped the company rationalize its CPVC pricing strategy and attract better distributors as it can offer the entire product range with industry-best quality parameters. In the last 2-3 quarters, PRINCPIP has attempted to eliminate the pricing difference vs. peers in some markets. It may charge a premium vs. peers in markets where it has strong foothold while still being able to increase penetration.

- No plans of RM security and improving margins via backward integration: PRINCPIP is not looking at backward integration into manufacturing of PVC resins, since it is very capital-intensive and because there is enough supply of PVC globally. For CPVC resin supply, management believes that the tie-up with Lubrizol is more than sufficient for meeting company's future requirements. Lubrizol is one of the strongest global brands and plans to improve its supply security in India further by setting up a manufacturing unit at Dahej.

Eyeing a mix of in-house production and outsourcing to produce tanks, and will look at gradually increasing coverage and scale over 18-24 months

- Diversification into overhead tanks: As per industry estimates, India's overhead tank market is Rs 50bn-55bn in size, of which ~30% is organized and the rest unorganized. The market is highly fragmented wherein a strong manufacturing network is required to minimize freight costs and a right distribution network to sell this product; this is because competition is mostly with regional players, who don't give consistent quality products and hence undercut organized manufacturers in terms of pricing by 15-25%. With one of the bigger companies facing challenges in this segment, a vacuum has been created at the top of the pyramid.

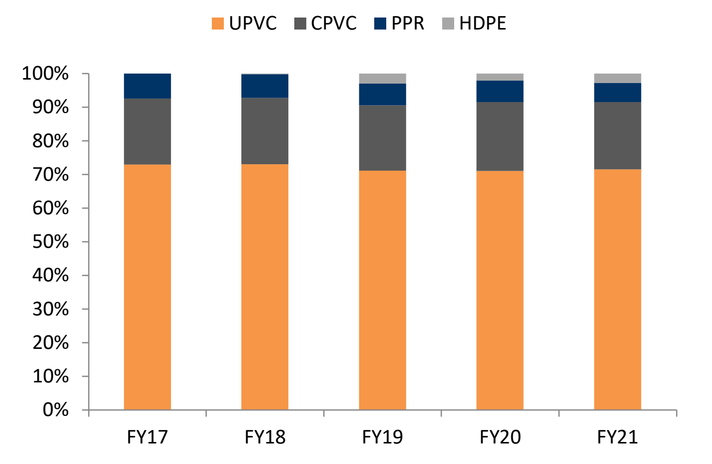
  PRINCPIP does not wish to focus only on volume growth but on supplying consistent quality products and innovative designs. It is eyeing a mix of in-house production and outsourcing to produce tanks, and will look at a gradual improvement in coverage and scale over next 18-24 months. Management intends to incur an investment of Rs 150mn-200mn (excluding WC investment) over the next 18 months. This is a cash-and-carry business wherein money is recovered from the channel in 3-4 days – an industry norm.

Exhibit 189: Product portfolio of major players

Product Presence	PVC (Agri, ASTM, Column pipe, SWR)	CPVC	HDPE	PPR	Overhead Tanks
Supreme Industries	Y	Y	Y	Y	Y
Finolex Industries	Y	Y	N	N	N
Astral	Y	Y	Y	N	Y
Prince Pipes	Y	Y	Y	Y	Y
Jain Irrigation	Y	Y	Y	Y	N
Ashirvad Pipes	Y	Y	N	N	Y
Vectus	Y	Y	Y	Y	Y
Kisan Mouldings	Y	Y	Y	N	Y
Plasto	Y	Y	Y	N	Y

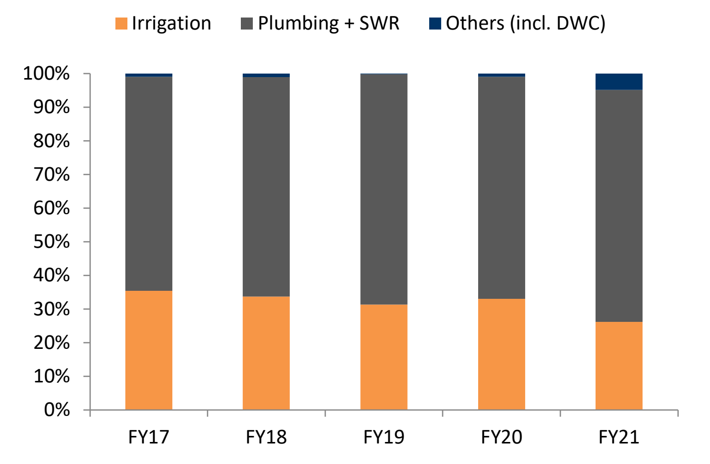
Source: Company, Equirus Securities

Exhibit 190: Contribution from CPVC steadily rising over last 4 years



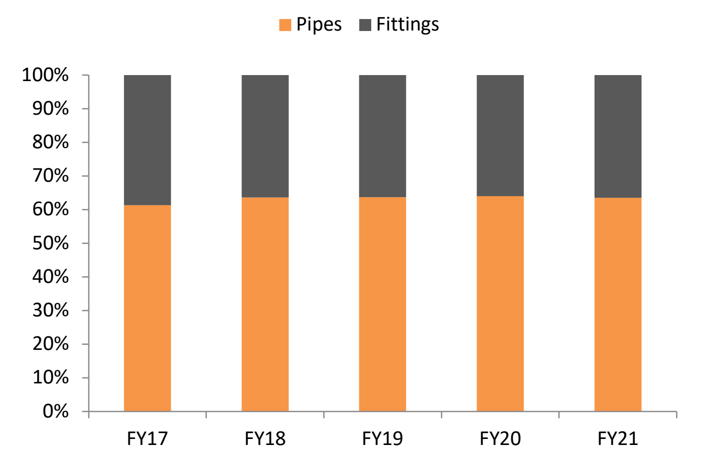
Source: Company, Equirus Securities

Exhibit 191: Focus on plumbing & SWR given better industry dynamics



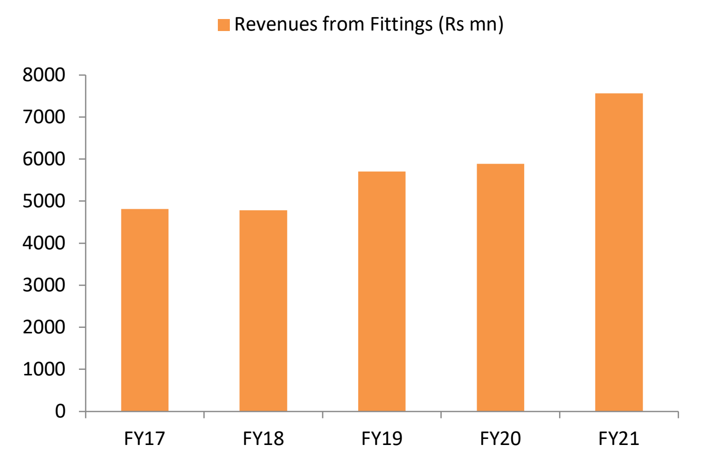
Source: Company, Equirus Securities

Exhibit 192: Contribution from fittings to remain steady for the company



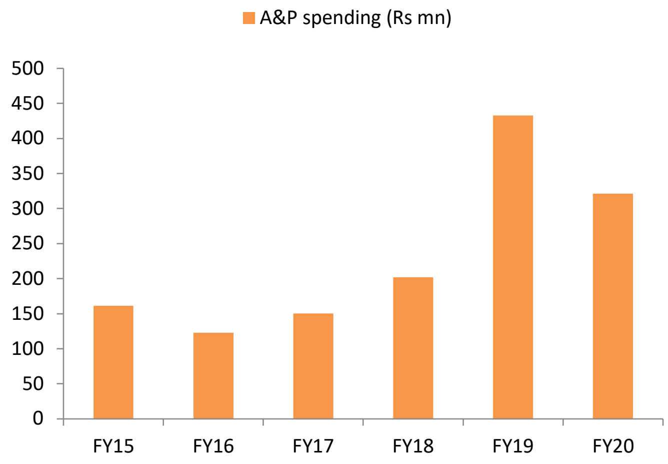
Source: Company, Equirus Securities

Exhibit 193: Absolute revenues from fitting business on an uptrend



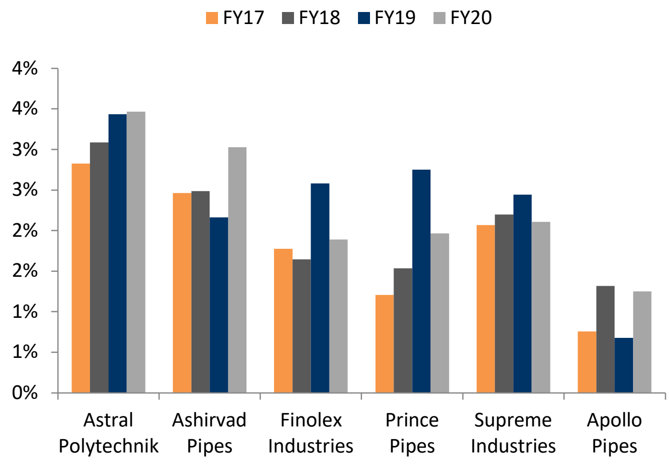
Source: Company, Equirus Securities

Exhibit 194: A&P spends up ~15% over FY15-FY20 on celebrity tie-ups, branding focus



Source: Company, Equirus Securities

Exhibit 195: A&P spends by major pipe players at 1-3% of sales



Source: Company, Equirus Securities

Financial Profile To Strengthen

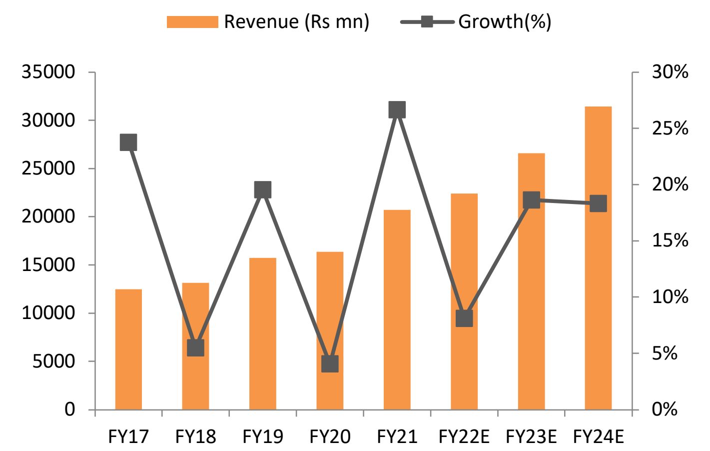
Capacity addition to aid growth momentum; balance sheet, return ratios to improve

- PRINCPIP posted a 16% revenue CAGR over FY16-FY21 despite pandemic-induced lockdowns hurting the industry over last one year. With gradual commercialization of the Telangana plant in FY22 and FY23, along with increased capacity utilization at other plants, we expect company to continue growing at a healthy 16% CAGR over FY21-FY24E. Near-term demand will again be hit by the second wave related lockdowns; we however expect strong recovery to set in by 2QFY22 led by improved traction from urban, semi-urban and rural areas and govt's infra thrust on irrigation and providing drinking water to most Indians.

Growth to be driven by Telangana plant commercialization and higher capacity utilization at other plants

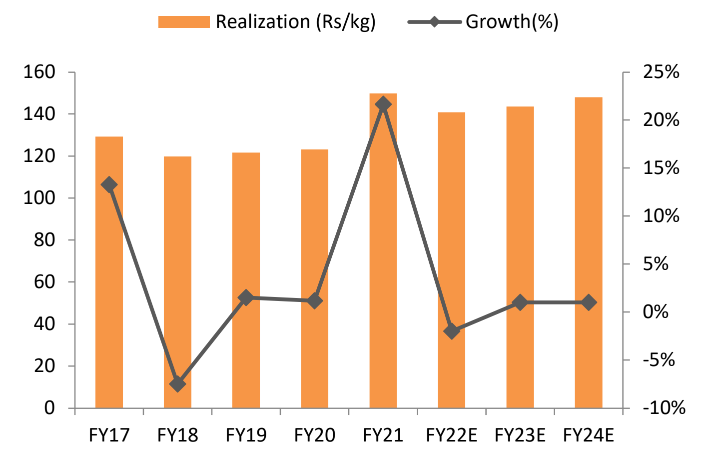
- EBITDAM has shot up to 16.5-17% in FY21 on inventory gains related to uptrend in PVC prices and an improvement in operating efficiencies/cost cutting. Though margin improvement related to inventory gains should reverse in FY22, operating efficiencies and structural cost cutting initiatives along with product mix improvements should help the company post a 15-15.5% EBITDAM by FY24.
- The company's gross debt stood at Rs 852mn in FY21 with the D/E ratio at ~0.1x and debt/EBITDA at 0.2x. We expect the D/E to improve to 0.0x by FY24 and debt/EBITDA to 0.1x as better cash flows and limited capex plans facilitate debt recovery.
- Over FY14-FY20, PRINCPIP's cash conversion days improved from a peak of 104 in FY14 to 77 in FY19 on a reduction in receivable days and an increase in payable days. Receivable days should continue to go down as the company streamlines its operations. Payable days may also reduce vs. historical average with PRINCPIP changing its sourcing mix.

Exhibit 196: Expect 15% revenue CAGR over FY21-FY24 led by market share gains and Telangana plant commissioning



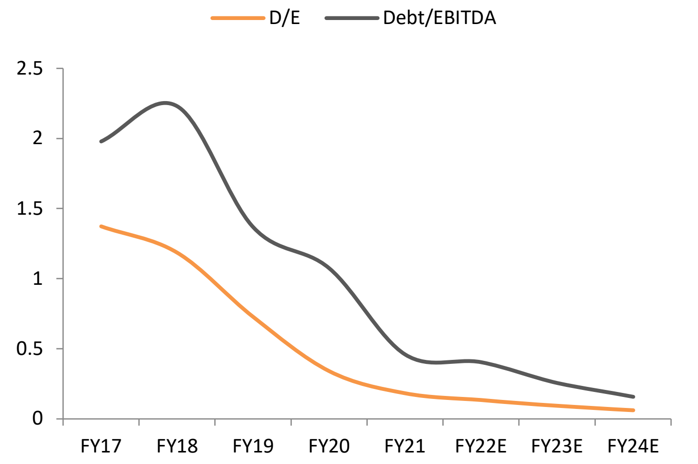
Source: Company, Equirus Securities

Exhibit 197: EBITDAM to soften in FY22 as PVC prices correct; margins to gradually improve in FY23-FY24



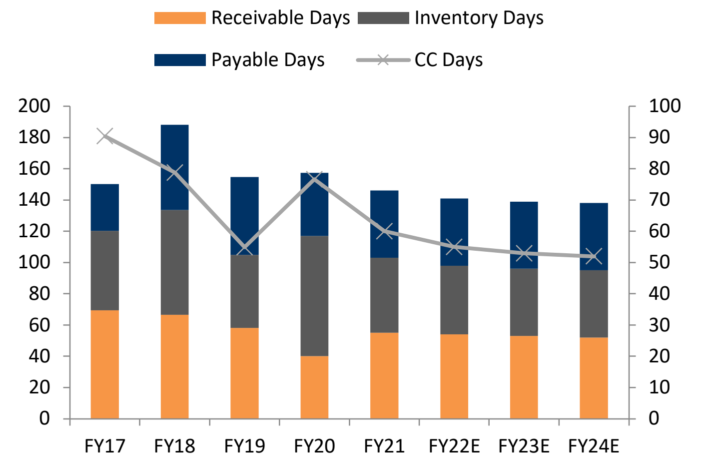
Source: Company, Equirus Securities

Exhibit 198: Expect D/E and Debt/EBITDA to improve on improved cash flows, limited capex



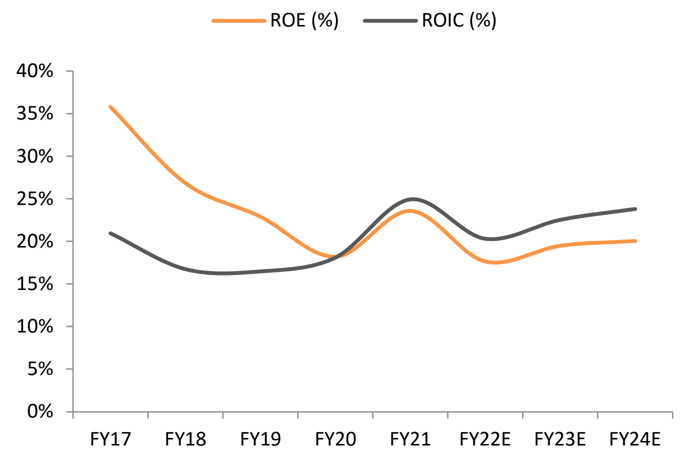
Source: Company, Equirus Securities

Exhibit 199: Cash conversion cycle to improve as company continues to streamline receivable and inventory days



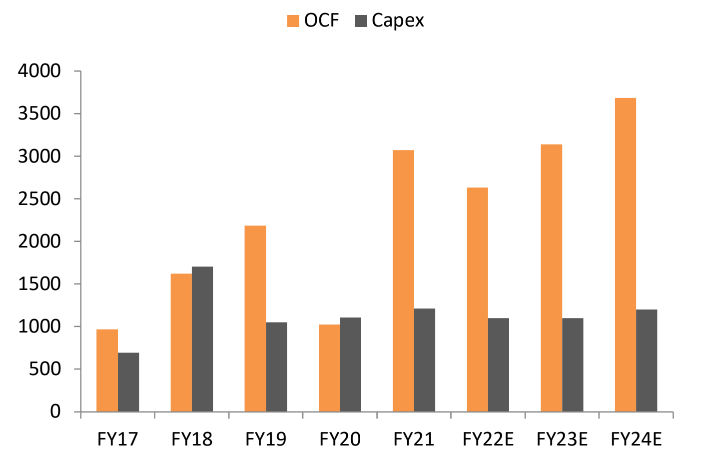
Source: Company, Equirus Securities

Exhibit 200: ROE & ROIC to soften in FY22, gradually inch up post that



Source: Company, Equirus Securities

Exhibit 201: Operating cash flows to remain strong, capex to be minimal post Telangana plant



Source: Company, Equirus Securities

Valuation & View

Initiate with ADD, Mar'22 TP of Rs 781

Ideally positioned to benefit from demand resurgence

- The pipes segment has been amongst the few industries to see an unorganized-to-organized shift post major structural changes like GST/E-Way Bill. This has been further aided by the pandemic-induced supply chain disruptions leading to RM sourcing challenges for unorganized/regional players.
- PRINCPIP has been consistently adding capacities across regions and gradually improving market share to become the fifth largest player in the piping industry.
- The company has been focussing on improving its product mix, investing in branding and enhancing its distribution reach.
- PRINCPIP remains ideally positioned to benefit from the demand resurgence expected to be driven by continued market share shift from unorganized to organized players, government focus on development of agriculture/irrigation infrastructure and 'Housing for All' as well as gradual recovery in residential real estate demand.
- As utilization levels pick up, operating leverage will drive EBITDA gains. We build in a sales/EBITDA CAGR of 15%/11% over FY21-FY24E.
- With enhanced cash flows and low capex requirement, balance sheet should remain strong going ahead as well.

Mid-term story intact but positives priced in; await a better entry point into the stock

- At CMP of Rs 735, PRINCPIP is trading at a FY22E/FY23E P/E of 41x/32x. Though we remain constructive on the industry and the company's mid-term prospects, current valuations seem to capture most positives. Initiate coverage with ADD and a Mar'22 TP of Rs 781 set at 34x P/E on 1yr forward EPS of Rs 23.0. We await a better entry point into the stock.

Exhibit 202: Valuation snapshot

Valuation	TP
Target P/E multiple (x)	34
1-year Forward EPS (Rs)	23.0
Target price per share (Rs)	**781**
No. of shares (mn)	110.0
Target Mkt. cap (Rs mn)	85,910

Source: Company, Equirus Securities

Key risks

- Continued slowdown in residential and commercial construction will directly impact the demand for plumbing and sewerage infrastructure (combinedly contribute ~68% of Prince's topline).
- Any slowdown in agriculture sector due to bad monsoons will have a direct impact on consumption of UPVC pipes thereby hurting company's business. Similarly, lower than expected spending by GoI on various schemes/initiatives for infrastructure development will also negatively impact the growth rate of the industry and the company. Agriculture/Irrigation segment contributes ~29% to Prince's topline.
- Volatility in Raw material prices like PVC or CPVC resins or depreciation of INR will also negatively impact the profitability of the company.
- Resurgence in increased competitive intensity among larger national and regional players.

Company Background

- PRINCPIP is among the leading domestic polymer pipes and fittings manufacturer and is currently the 5th largest player in terms of revenues with a mkt. share of 5%. It has 30+/20+ years of experience in polymer pipes/in pipe fittings. Company's products are sold under 2 brands – 'Prince' (Pan India) and 'Trubore' (South India and predominantly Tamil Nadu).
- Company has 7 manufacturing facilities (Telangana partially operational) spread across India and its product portfolio caters to plumbing solutions, sewage and underground drainage solutions and irrigation solutions. It has one of the largest product baskets across multi polymers domestically (7,200+ SKUs) which consists of UPVC, CPVC, PPR, HDPE/DWC and Overhead tanks (launched in Jun'20). Company was the 1st mover in Northern India and was among the early entrants in East India.
- In 2012, company had taken over 2 plants in Kolhapur and Chennai from Chemplast Sanmar which also consisted acquisition of Trubore brand. In Eastern India, company is currently following a unique asset light strategy via outsourcing (Hajipur plant, Bihar which commenced from FY14 and Balasore plant, Odisha which commenced from FY19).
- Distribution network: Total number of Distributors 1,500+ as of Mar'21 which is among the highest in the industry. In FY21, company was able to add 250 new distributors (gross). Company currently has 11 warehouses given on lease. Locations: Bhubaneswar (Odisha); Ghaziabad (Uttar Pradesh); Tiruchirappalli (Tamil Nadu); Palakkad (Kerala); Hubli (Karnataka); Howrah (West Bengal); Siliguri (West Bengal); Vijayawada (Andhra Pradesh); Chennai (Tamil Nadu), Nagpur (Maharashtra) and Hyderabad.
- Manufacturing Capacity

Plant	State	Product	Installed Capacity (TPA)	Production Capacity (TPA)	FY21 Capacity Utilization (%)
Athal plant	Maharashtra	Fittings	15,982	13,555	71%
Dadra plant	Dadra Nagar & Haveli	Pipes	56,381	41,854	60%
Haridwar plant	Uttarakhand	Pipes & Fittings	82,224	64,199	70%
Chennai plant	Tamil Nadu	Pipes	55,836	41,411	49%
Kolhapur plant	Maharashtra	Pipes	20,045	15,334	69%
Jaipur plant	Rajasthan	Pipes	28,166	21,547	60%
Sangareddy plant	Telangana	Pipes & Fittings	4,000	3,200	61%
Total			2,62,634	2,01,100	

** Telangana plant became partially operational in 3Q21 with 4,000tpa capacity*

***Installed capacity is the rated capacity by machine supplier. Production capacity is the actual production capability of the company and there is always 20-25% difference between Installed and production capacity due to downtime related to changing of mouldings, cleaning etc.*

Source: Company, Equirus Securities

- Outsourcing: Company supplies all two contract manufacturers with the raw materials and they charge an agreed amount per kilo to manufacture the pipes. Company employee is stationed at each plant to check that our quality standards are maintained.
- Outsourcing Capacity

Name of Manufacturer	Product	Date of Contract	Location
Shree Tel-Fab Industries Pvt. Ltd	UPVC	Sep'14	Hajipur, Bihar
Ohm Pipes	UPVC	Oct'19	Balasore, Odisha

- Hiring of professionals: Company has done professional hiring in last 2 years in order to strengthen its mid to senior level management band-with and experience.

Name of Person	Designation	Previous Organization	Experience	Year of Hiring
Mr. Vininder Baweja	COO	HUL, Volvo Eicher	15+	2019
Mr. Ashok Mehra	VP - Sales & Mktg.	Jaquar P. Ltd, Pidilite Industries	30+	2017
Mr. Anand Gupta	Deputy CFO	ACC	14	2020

- In Aug'20, company has tied-up with Lubrizol (for a period of 3 years) to manufacture and sell CPVC pipes under the brand 'FlowGuard plus'. This has given the company access to World's most preferred range of CPVC Pipes and Fittings with 50 years of Life span and extreme temperature resistance for use up-to 93 degree Celsius. Through this collaboration, Prince is looking to scale up its presence in B2B market, wherein it has historically lagged industry peers, as FlowGuard plus brand enjoys strong recall and enjoys preference among builder community in Metro/Tier 1 cities. This tie-up has also improved company's brand visibility among distribution channel as now company can offer/cross-sell its entire product basket to its distributors and help them in becoming a one stop solution provider for piping solutions.

- In Jul'20, Prince entered into a technical collaboration with Tooling Holland which has 40+ years of experience in mould making and tooling and is one of the global leaders in mould manufacturing. This technical partnership will enable the company gain excess to state-of-the-art technology in mould making and follow best practices of production processes leading to cost optimization and improve overall equipment efficiencies from its existing capacities. Prior to this, Prince had a technical tie-up since 2015 with Wavin Overseas B.V. ("Wavin"), which had been providing it with the technology and know-how in the manufacture of its products to improve the quality and improve manufacturing efficiency.

- Use of Prince brand by few 3rd parties: Prince family business was restructured in early 1990s with ownership of Prince Pipes going to Mr. Jayant Chheda while other group companies like were given to his brothers. None of these promoters have any cross holdings in each of these group companies. A company that is in the same line of business of manufacturing and trading in PVC pipes uses the brand Prince Platinum, which created confusion in the minds of Prince Pipe's consumers. In July 2014, Prince changed its logo to Prince Piping Systems in order to distinguish itself from the other player. Company has also appointed Akshay Kumar as its brand ambassador from 208 which has further helped in alleviating the confusion among its consumers.

  The Bombay High Court on 10th March 2021 granted an ad-interim injunction against Prince Platinum Pipes and Fittings, Vigor Plast India Private Limited and Dhananjay Brass Products from using a deceptive mark, Prince Platinum. Besides the injunction, the Bombay High Court also appointed court receiver to carry out search and seizure at the business premises of the Prince Platinum Pipes and Fittings, Vigor Plast India Private Limited and Dhananjay Brass Products situated in Jamnagar, Gujarat.
  Source: Business Wire

- Before GST, Prince pipes used to procure ~25-30% of its RM through two of its group companies namely Prince Marketing and Ace Polyplast to avail a 4% special additional duty benefit. However, under new GST guideline, such benefit are no longer available and so in last 2 years, company has almost bought down its sourcing from these companies to Nil.

Name of Entity (Rs mn)	Type of Transaction	FY16	FY17	FY18	FY19	FY20
M/s Prince Marketing	Purchase of Goods	979	1,039	642	36	0
M/s Ace Polyplast Pvt. Ltd.	Purchase of Goods	1,004	1,646	1,276	66	193
M/s Ace Polyplast Pvt. Ltd.	Outstanding Trade Receivables	0	84	0	147	0
M/s Prince Marketing	Outstanding Advance against Property	0	0	345	400	400

* Prince marketing has paid up all the outstanding advance in FY21

- **Litigation case filed by Montana developers:** As per company's RHP, Mr. Jayant Chheda, Promoter and Managing Director of Prince pipes and Mrs. Heena Parag Chheda, one of the promoters of the company are partners in M/s. Aditya developers (Aditya) with a combined 20% stake. Montana developers had filed a complaint against Aditya and its partners, in relation to a joint venture agreement between Montana developers and Aditya developers dated December 30, 2010. The dispute is over a piece of land in Vasai and the total claim by Montana stood at Rs 9,046mn along with interest at 27% per annum to be paid by Aditya and its partners. Aditya and its partners have filed a counter claim dated January 15, 2014, refuting the claim on the basis of a letter from Montana, countersigned by two of the partners of Aditya on behalf of Aditya, mutually terminating the JV Agreement. Montana, in its statement of claim dated November 30, 2013, and rejoinder dated February 18, 2014, denied the execution of the said letter. The matter is currently pending. As Mr. Jayant Chheda and Mrs. Heena Chheda each hold 10% share in profit and losses of Aditya developers, any liability arising out from final judgement will be to the extent of 20% share of total litigation. Since Aditya developers is a JV partnership, any inability of other partners to meet the liability will shift the burden of payment onto Mr. Jayant and Mrs. Heena.

- **Channel financing with recourse option**: Prince has been supporting ~20-25% of its major distributors under channel financing scheme which has a recourse option. As on Mar'20/Mar'21, 2021, the company had outstanding channel financing amount of Rs 854mn/Rs 730mn for which company has given guarantees to banks for loans taken by its distributors with recourse option. Management has indicated that going forward they want to remain very selective in giving this option to only a handful of dealers and is also working on gradually moving recourse from the company to the distributors.

Company's journey

Exhibit 203: Key milestones

1987	Company was incorporated as a Pvt. Ltd. firm
1995	Setup large scale plastic injection molding & extrusion unit in Athal, Dadra and Nagar Haveli (Western India)
2000	New plant setup at Dadra for pipe manufacturing
2008	New plant setup at Haridwar for pipes & fittings manufacturing giving access to Northern India mkt.
2012	Acquisition of 2 plants in Chennai & Kolhapur from Sanmar Chemplant along-with 'Trubore' brand
2016	Among the first players to launch dealer loyalty program in the industry called 'Prince Udaan' to reward its value chain
2018	Company appointed Akshay Kumar as brand ambassador to increase visibility via different mktg. mediums
2019	New pipe manufacturing plant commercialized in Jaipur
2020	Got listed on BSE & NSE with an IPO of Rs 5bn
2021	Tie-up with Lubrizol to transform plumbing products through PRINCE FLOWGUARD PLUS; Entered in overhead water tank segment via 'STOREFIT' brand; partially commercialized Telangana plant

Source: Company, Equirus Securities

Key Management and Board of Directors

Exhibit 204: Key Management Personnel

Name	Designation	Age	Qualification and Experience
Mr. Jayant Shamji Chheda	Chairman and MD	74	He is the founder promoter of the company with 3 decades of experience in the plastic industry. He has passed the Senior Secondary Certificate Examination. Was awarded with 'Lifetime Achievement Award' at the Vinyl India Conference, 2014 for his extensive contribution to the piping industry.
Mr. Parag Jayant Chheda	JMD	49	Elder son of Jayant Chheda and has been associated with the company since Apr'96. Holds an associate degree in business administration from Oakland Community College and has 21+ years of experience in the piping industry. Was awarded with 'Inspiring Business Leader Award' at the Economic Times Summit, 2016 for the 'Business and Industry' sector.
Mr. Vipul Jayant Chheda	ED	45	Younger son of Jayant Chheda and has been associated with the company since Mar'97. He holds a higher secondary certificate from the Maharashtra State Board and has over 20 years of experience in the piping industry.
Mr. Shyam Sharda	CFO	49	A commerce graduate from Jodhpur (Rajasthan) University and an associate of the Institute of Chartered Accountants of India. Has 20 years of experience in finance, accounts and taxation, he has previously worked with S. Kumar Nationwide Ltd as Senior Vice-President (Finance & Group Accounts) and United Phosphorus Ltd as DGM (Finance).
Mr. Vininder Singh Baweja	COO	40	An IIT Roorkee graduate in MBA and Marketing & IT, with B.Tech in Electronics from Punjab Technical University. Has served in Hindustan Unilever Ltd., Volvo Eicher and has 15+ years of experience.
Mr. Ashok Mehra	VP- Sales & Mktg.		An engineer qualified from KJ Somaiya and MMM from NMIMS. Has 30+ years of experience and has worked with Jaguar P. Ltd. and Pidilite Industries Ltd.
Mr. Hemant Kumar	GM – Mktg. & New product development	62	Has completed his B.Sc. in Chemistry from Pune University and PGDBM in Marketing from IGNOU. Has 35+ years of experience and has worked with Pidilite Industries Ltd. in the past.
Mr. Umesh Pillai	National Head Sales & Mktg. - Trubore	46	Has 20+ year of industry experience and has worked with Asian Paints Ltd. in the past. He completed his B.E. in Electricals from VCE Orissa and MBA in Marketing from NMIMS.

Exhibit 205: Board Members

Name	Designation
Mr. Jayant Chheda	Founder, Chairman & MD
Mr. Parag Chheda	JMD
Mr. Vipul Chheda	ED
Mr. Rajesh Pai	Nominee Director
Mr. Satish Chawa	Nominee Director
Mr. Ramesh Chandak	Independent Director
Mr. Mohinder Bansal	Independent Director
Mr. Dilip Deshpande	Independent Director
Mr. Rajendra Gogri	Independent Director
Mrs. Uma Mandavgane	Independent Director

Source: Company, Equirus Securities

Company Snapshot

How we differ from Consensus

-		Equirus	Consensus	% Diff	Comment
Sales	FY22E	22,393	21897	2%	
	FY23E	26,564	25471	4%	
EBITDA	FY22E	3,359	3254	3%	
	FY23E	4,144	4000	4%	
PAT	FY22E	1,978	2048	-3%	
	FY23E	2,528	2522	0%	

Key Drivers

Particulars	FY21	FY22E	FY23E	FY24E
Volume (mtpa)	1,38,289	1,59,032	1,84,955	2,14,547
y/y growth (%)	4%	15%	16%	16%
Realization (Rs/kg)	150	147	148	150
y/y growth (%)	22%	-2%	1%	1%
Revenues (Rs mn)	20,715	22,393	26,564	31,431
y/y growth (%)	27%	8%	19%	18%

Our Key Investment arguments:

- Potential to become a strong challenger brands over next 3-4 years with focus on gaining mkt. share in CPVC segment.
- Operating leverage together with continued branding investments to improve visibility and reach across regions while tie-up with Lubrizol to help gain traction in the Institutional segment.
- B/s to remain strong and while capex intensity to remain moderate post commissioning of Telangana plant in FY22.

Risks to Our View

- Resurgence of unorganized players once RM supply constraints ease out.
- Competitive intensity increasing among the organized players.
- Lower than expected volume offtake from various govt. schemes due to less spending by govt.

Key drivers

- Sustained consolidation in the piping industry and PPFL continuing gaining mkt. share.
- Improvement in product mix leading to gradual improvement in EBITDA.

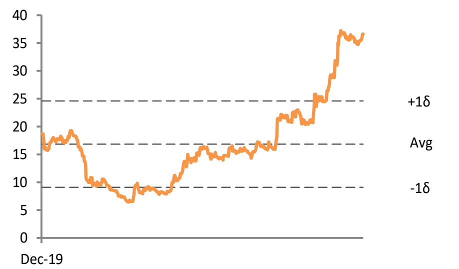
Company Description:

Prince Pipes and Fittings Limited is the 5th largest piping solutions & multi polymer manufacturer in India, based in Mumbai, Maharashtra. Company was incorporated in 1987. In Aug'20, the company announced its association with Lubrizol and thereafter launched Prince Flowguard Plus CPVC plumbing systems. Company has 7 manufacturing units located across the country (barring East) - Haridwar (Uttarakhand), Athal (Dadra and Nagar Haveli), Dadra (Dadra and Nagar Haveli), Kolhapur (Maharashtra), Chennai (Tamil Nadu), Jobner (Rajasthan) and Sangareddy (Telangana). and has a network of 1,500+ distributors.

Comparable valuation

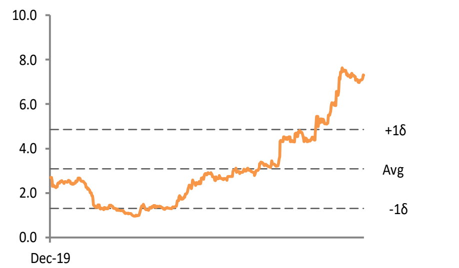
Company	Reco.	CMP	Mkt Cap Rs. Mn.	Price Target	Target Date	P/E			EV/EBITDA			P/B			RoE			Div Yield
						FY21A	FY22E	FY23E	FY21A	FY22E	FY23E	FY21A	FY22E	FY23E	FY21A	FY22E	FY23E	FY22E
Finolex Industries	ADD	185	114,726	198	Mar'22	15.7	17.4	20.0	11.6	12.3	13.8	3.7	3.4	3.1	29%	20%	16%	3%
Supreme Industries	ADD	2,172	275,902	2,321	Sep'22	34.7	40.1	32.2	21.1	24.0	19.4	9.7	8.4	7.1	32%	22%	24%	1%
Astral	SELL	2,025	406,838	1447	Sep'22	96.7	90.3	80.7	58.6	54.8	48.8	20.6	17.2	14.6	24%	21%	20%	0%
Prince Pipes	ADD	735	80,869	781	Mar'22	36.5	40.9	32.0	30.2	32.5	26.2	7.7	6.8	5.8	24%	18%	20%	1%
Apollo Pipes	BUY	1,038	13,607	1,253	Mar'22	31.1	29.8	21.9	18.4	17.4	13.0	3.9	3.5	3.0	14%	12%	15%	0%

Price to earning chart



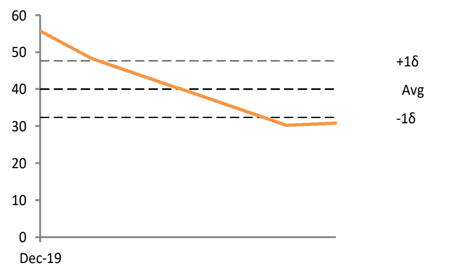
Source: Company, Equirus Research

Price to book chart



Source: Company, Equirus Research

EV-EBITDA chart



Source: Company, Equirus Research

Quarterly performance

Y/E Mar (Rs mn)	1QFY21A	2QFY21A	3QFY21A	4QFY21A	1QFY22E	2QFY22E	3QFY22E	4QFY22E
Revenue	3,025	4,587	5,490	7,614	4,479	5,374	5,710	6,830
COGS	2,196	3,068	3,564	4,961	3,045	3,655	3,883	4,801
Employee Cost	222	225	275	275	269	322	343	253
Other Expenses	291	491	622	910	502	602	628	732
EBITDA	316	803	1,029	1,468	663	795	857	1,044
Depreciation	140	152	151	151	193	193	200	74
EBIT	176	650	879	1,317	470	602	657	971
Interest Exp.	68	54	35	50	48	47	46	14
Other Income	0	0	0	0	0	0	0	0
Profit before Tax	108	597	843	1,267	422	555	610	957
Tax Expenses	47	164	222	340	109	142	156	252
Profit After Tax	60	433	622	927	313	413	454	704
Minority Interest	0	0	0	0	0	0	0	0
Profit/(Loss) from Associates	0	0	0	0	0	0	0	0
Recurring PAT	60	433	622	927	313	413	454	704
Exceptional Items	0	0	0	0	0	0	0	0
Reported PAT	60	433	622	927	313	413	454	704
Other comprehensive income.	0	0	0	0	0	0	0	0
PAT after comp. income.	60	433	622	927	313	413	454	704
FDEPS	0.5	3.9	5.7	8.4	2.8	3.8	4.1	6.4
Cost items as % of sales								
RM expenses	72.6	66.9	64.9	65.2	68.0	68.0	68.0	70.3
Employee expenses	7.3	4.9	5.0	3.6	6.0	6.0	6.0	3.7
Other expenses	9.6	10.7	11.3	12.0	11.2	11.2	11.0	10.7
Margin (%)								
Gross Margin	27.4	33.1	35.1	34.8	32.0	32.0	32.0	29.7
EBITDA Margin	10.5	17.5	18.8	19.3	14.8	14.8	15.0	15.3
PAT Margin	2.0	9.4	11.3	12.2	7.0	7.7	8.0	10.3
YoY Growth (%)								
Sales	(20.4)	6.9	38.7	76.7	48.1	17.2	4.0	(10.3)
EBITDA	(36.8)	23.3	93.0	154.7	109.7	(0.9)	(16.8)	(28.9)
EBIT	(53.9)	23.5	119.5	204.5	167.2	(7.5)	(25.3)	(26.3)
PAT	(74.1)	31.9	164.4	301.1	418.2	(4.6)	(26.9)	(24.0)

Key Financials (Consolidated)

Income Statement

Y/E Mar (Rs mn)	FY18A	FY19A	FY20A	FY21A	FY22E	FY23E	FY24E
Revenue	13,150	15,719	16,357	20,715	22,393	26,564	31,431
COGS	9,214	11,274	11,264	13,789	15,384	18,143	21,373
Employee Cost	726	817	902	997	1,187	1,355	1,666
Other Expenses	1,577	1,788	1,903	2,313	2,463	2,922	3,489
EBITDA	1,633	1,841	2,288	3,616	3,359	4,144	4,903
Depreciation	369	436	520	594	660	732	820
EBIT	1,264	1,405	1,768	3,022	2,699	3,412	4,083
Interest Exp.	354	363	332	207	155	140	141
Other Income	0	0	0	0	0	0	0
Profit before Tax	971	1,113	1,506	2,991	2,638	3,370	4,045
Tax Expenses	218	292	381	773	659	843	1,011
Profit After Tax	753	821	1,125	2,218	1,978	2,528	3,034
Minority Interest	0	0	0	0	0	0	0
Profit/(Loss) from Associates	0	0	0	0	0	0	0
Recurring PAT	753	821	1,125	2,218	1,978	2,528	3,034
Exceptional Items	0	0	0	0	0	0	0
Reported PAT	753	821	1,125	2,218	1,978	2,528	3,034
Other comprehensive income.	0	0	0	0	0	0	0
PAT after comp. income.	753	821	1,125	2,218	1,978	2,528	3,034
FDEPS	6.8	7.5	10.2	20.2	18.0	23.0	27.6
DPS	0	0	1	2	4	5	6
BVPS	29	36	76	95	109	127	148

YoY Growth (%)	FY18A	FY19A	FY20A	FY21A	FY22E	FY23E	FY24E
Sales	5.5	19.5	4.1	26.6	8.1	18.6	18.3
EBITDA	0.4	12.7	24.3	58.1	(7.1)	23.4	18.3
EBIT	(3.4)	11.1	25.8	70.9	(10.7)	26.4	19.7
PAT	(1.6)	9.1	37.0	97.2	(10.8)	27.8	20.0

Key Ratios

Profitability (%)	FY18A	FY19A	FY20A	FY21A	FY22E	FY23E	FY24E
Gross Margin	29.9	28.3	31.1	33.4	31.3	31.7	32.0
EBITDA Margin	12.4	11.7	14.0	17.5	15.0	15.6	15.6
PAT Margin	5.7	5.2	6.9	10.7	8.8	9.5	9.7
ROE	26.8	22.9	18.2	23.6	17.7	19.5	20.0
ROIC	19.9	20.3	19.5	26.4	21.9	24.8	26.1
Core ROIC	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dividend Payout	0.0	0.0	9.8	9.9	22.2	21.8	21.8

CAGR (%)	1 year	2 years	3 years	5 years	7 years	10 years
Revenue	26.6	14.8	16.4	15.5	10.9	0.0
EBITDA	58.1	40.2	30.3	29.8	19.7	0.0
PAT	97.2	64.3	43.4	49.6	36.5	0.0

Valuation (x)	FY18A	FY19A	FY20A	FY21A	FY22E	FY23E	FY24E
P/E	107.5	98.5	71.9	36.5	40.9	32.0	26.7
P/B	25.4	20.3	9.7	7.7	6.8	5.8	5.0
P/FCFF	24.3	25.0	38.0	18.9	21.7	19.1	16.6
EV/EBITDA	67.9	76.6	48.4	30.2	32.5	26.2	22.0
EV/Sales	8.4	9.0	6.8	5.3	4.9	4.1	3.4
Dividend Yield (%)	0.0	0.0	0.1	0.3	0.5	0.7	0.8

Balance Sheet

Y/E Mar (Rs mn)	FY18A	FY19A	FY20A	FY21A	FY22E	FY23E	FY24E
Equity Capital	900	900	1,100	1,100	1,100	1,100	1,100
Reserves	2,278	3,089	7,277	9,335	10,873	12,850	15,224
Net Worth	**3,178**	**3,989**	**8,377**	**10,435**	**11,973**	**13,951**	**16,324**
Total Debt	3,646	2,514	2,461	852	740	489	267
Other long term liabilities	127	388	392	408	221	172	94
Minority Interest	0	0	0	0	0	0	0
Account Payables	1,970	2,152	1,808	2,491	3,681	4,294	5,081
Other Current Liabilities	799	1,296	1,065	1,874	2,036	2,415	2,857
Total Liabilities	**9,720**	**10,339**	**14,102**	**16,061**	**18,650**	**21,320**	**24,623**
Gross Fixed Assets	4,033	4,707	6,458	7,197	8,297	9,397	10,597
Acc. Depreciation	(665)	(1,074)	(1,573)	(2,167)	(2,826)	(3,558)	(4,378)
Net Fixed Assets	3,368	3,634	4,886	5,030	5,471	5,839	6,219
Capital WIP	147	615	75	765	0	0	0
long term investments	7	8	6	15	15	15	15
Others	0	743	687	394	2,019	2,951	3,971
Inventory	2,415	2,011	3,445	2,273	2,699	3,275	3,789
Receivables	2,394	2,504	1,797	3,534	3,497	4,148	4,994
Loans and advances	3	2	11	41	49	58	69
Other current assets	0	0	0	0	2,670	2,548	2,578
Cash & Cash Equivalents.	96	223	2,570	2,299	2,231	2,487	2,989
Total Assets	**8,430**	**9,739**	**13,478**	**14,351**	**18,650**	**21,320**	**24,623**
Non-Cash WC	2,043	1,069	2,380	1,483	3,199	3,321	3,492
Cash Conv. Cycle	55.4	35.2	58.4	36.4	13.7	15.6	15.2
WC Turnover	6.4	14.7	6.9	14.0	7.0	8.0	9.0
Gross Asset Turnover	3.3	3.3	2.5	2.9	2.7	2.8	3.0
Net Asset Turnover	3.7	3.7	3.3	3.6	4.1	4.5	5.1
Net D/E	1.1	0.6	0.0	(0.1)	(0.1)	(0.1)	(0.2)

Days (x)	FY18A	FY19A	FY20A	FY21A	FY22E	FY23E	FY24E
Receivable Days	66	58	40	62	57	57	58
Inventory Days	67	47	77	40	44	45	44
Payable Days	78	70	59	66	87	86	87
Non-cash WC days	57	25	53	26	52	46	41

Cash Flow

Y/E Mar (Rs mn)	FY18A	FY19A	FY20A	FY21A	FY22E	FY23E	FY24E
Profit Before Tax	952	1,113	1,506	2,991	2,638	3,370	4,045
Depreciation	381	436	520	594	660	732	820
Others	415	331	450	261	0	0	0
Tax paid	163	305	372	626	659	843	1,011
Change in WC	37	611	(1,081)	(149)	(6)	(121)	(172)
Operating Cashflow	**1,622**	**2,186**	**1,023**	**3,071**	**2,631**	**3,138**	**3,682**
Capex	(1,703)	(1,051)	(1,106)	(1,210)	(1,100)	(1,100)	(1,200)
Change in Invest.	0	0	(2,570)	355	0	0	0
Others	0	0	0	0	0	0	0
Investing Cashflow	**(1,703)**	**(1,051)**	**(3,676)**	**(855)**	**(1,100)**	**(1,100)**	**(1,200)**
Change in Debt	407	(689)	(371)	(1,746)	(112)	(251)	(222)
Change in Equity	0	0	3,394	(6)	0	0	0
Others	(352)	(360)	(457)	(380)	(628)	(599)	(738)
Financing Cashflow	**55**	**(1,049)**	**2,565**	**(2,131)**	**(740)**	**(850)**	**(960)**
Net Change in Cash	**(26)**	**86**	**(87)**	**85**	**791**	**1,188**	**1,522**

Source: Company, Equirus Research