16 July 2018

HSBC Global Research

Finolex Industries Limited (FNXP IN)

Initiate at Buy: Play the pipes

EQUITIES
CHEMICALS

India

- India's only company that makes both PVC resin and pipes
- Policy, capacity and improving margins all flowing through
- We initiate at Buy with a PE-based target price of INR750

In the business of changing lives. Polyvinyl chloride (PVC) is playing a big part in the modernisation of India. Irrigation pipes, affordable homes, and millions of toilets are going into government policies aimed at accelerating India's growth and improving the lives of its citizens. Finolex not only makes a large share of the pipes and fittings used to do this, but it also manufactures the PVC resin that goes into making them. It is India's only PVC company with such 'backward integration' and that means it is doubly well-placed to benefit from the country's transformation.

India-sized potential. India's per capita PVC usage is one of the lowest globally – Chinese demand is more than 5x larger. However, India's demand has grown at a CAGR of c10% in the last decade (Chinese at 6%). We think this is all good news for Finolex's commoditised PVC resin (70% of EBIT, 45% of revenues, and 60% of the valuation), as well as its consumer-focused pipes and fittings (30%, 55% and 40%, respectively). We expect resin earnings to grow at a CAGR of 8% over FY18-22e.

Margins to recover in the company's growth engine. The company's push to gain market share in the pipes segment in FY18 impacted profits – with margins declining to 5.8% in FY18 vs 8.2% on average since 2015. This was one of the reasons why the company has underperformed its peers Supreme (SUPI.BO, Not Rated) (-10%) and Astral (ASPT.NS, Not Rated) (-60%) in the last 12 months – a short-term factor, in our view. However, we expect Finolex's margins to recover gradually (1ppt per year) to historical levels because of: 1) strong demand; 2) limited spare capacity; and 3) the introduction of higher margin cPVC products. Driven by capacity additions and margin recovery, we expect pipe earnings to grow at a CAGR of 30% from FY18-22e. Overall, we are 3% above consensus on FY19e net profit and target price, implying that we don't expect a materially higher multiple.

Initiate at Buy. Finolex trades at a steep discount to Supreme, despite a similar growth profile and stronger balance sheet, mainly due to margin volatility. We expect the discount to close as: 1) PVC resin fundamentals improve; and 2) the weighting of the more stable pipes business increases – making the company's margins less volatile overall. We value Finolex at a 25.4x FY19e PE, an average of Finolex's last 12 months' PE and its closest peer Supreme, and initiate at Buy with a PE-based target price of INR750. Potential share price catalysts include: 1) improving PVC-EDC spread; and 2) a healthy monsoon, resulting in better farmer incomes. Key downside risks include: 1) concerns about a possible corporate restructuring, given family-related disputes; 2) low liquidity of the stock; and 3) unplanned resins plant shutdowns.

INITIATE AT BUY

TARGET PRICE (INR)	PREVIOUS TARGET (INR)
750.00	–

SHARE PRICE (INR)	UPSIDE/DOWNSIDE
551.60	+36.0%

(as of 12 Jul 2018)

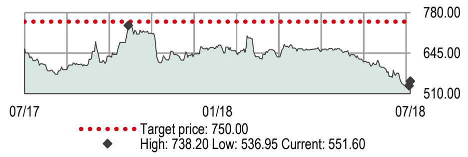
MARKET DATA

Market cap (INRm)	68,451	Free float	42%
Market cap (USDm)	1,000	BBG	FNXP IN
3m ADTV (USDm)	1	RIC	FINX.NS

FINANCIALS AND RATIOS (INR)

Year to	03/2017a	03/2018e	03/2019e	03/2020e
HSBC EPS	28.59	24.69	29.34	36.68
HSBC EPS (prev)	-	-	-	-
Change (%)	-	-	-	-
Consensus EPS	24.74	23.26	28.97	34.00
PE (x)	19.3	22.3	18.8	15.0
Dividend yield (%)	2.1	1.8	2.3	2.9
EV/EBITDA (x)	10.0	10.9	9.0	7.0
ROE (%)	18.2	12.0	12.6	14.5

52-WEEK PRICE (INR)



Source: Thomson Reuters IBES, HSBC estimates

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Disclosures & Disclaimer

This report must be read with the disclosures and the analyst certifications in the Disclosure appendix, and with the Disclaimer, which forms part of it.

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Financials & valuation: Finolex Industries Limited

Buy

Financial statements

Year to	03/2017a	03/2018e	03/2019e	03/2020e
Profit & loss summary (INRm)				
Revenue	29,876	28,314	32,896	38,476
EBITDA	5,630	4,839	5,798	7,299
Depreciation & amortisation	-550	-606	-656	-696
Operating profit/EBIT	5,080	4,233	5,142	6,603
Net interest	-153	-98	-54	-48
PBT	5,251	4,542	5,517	7,002
HSBC PBT	5,251	4,542	5,517	7,002
Taxation	-1,703	-1,479	-1,876	-2,451
Net profit	3,548	3,063	3,642	4,551
HSBC net profit	3,548	3,063	3,642	4,551
Cash flow summary (INRm)				
Cash flow from operations	2,342	2,497	3,380	4,217
Capex	-936	-1,250	-1,250	-1,000
Cash flow from investment	479	-1,250	-1,250	-1,000
Dividends	-1,474	-1,241	-1,551	-1,986
Change in net debt	-111	-96	-579	-1,231
FCF equity	1,307	1,794	1,880	2,967
Balance sheet summary (INRm)				
Intangible fixed assets	35	26	26	26
Tangible fixed assets	9,504	11,323	11,917	12,220
Current assets	7,758	8,081	9,941	12,622
Cash & others	729	890	1,369	2,501
Total assets	29,940	35,060	37,514	40,499
Operating liabilities	4,242	4,551	5,014	5,533
Gross debt	942	1,007	907	807
Net debt	213	117	-462	-1,694
Shareholders' funds	23,148	27,951	30,042	32,608
Invested capital	12,325	13,988	15,499	16,834

Ratio, growth and per share analysis

Year to	03/2017a	03/2018e	03/2019e	03/2020e
Y-o-y % change				
Revenue	5.1	-5.2	16.2	17.0
EBITDA	39.2	-14.0	19.8	25.9
Operating profit	43.6	-16.7	21.5	28.4
PBT	37.2	-13.5	21.5	26.9
HSBC EPS	37.7	-13.7	18.9	25.0
Ratios (%)				
Revenue/IC (x)	2.6	2.2	2.2	2.4
ROIC	30.2	21.7	23.0	26.5
ROE	18.2	12.0	12.6	14.5
ROA	13.6	9.6	10.1	11.7
EBITDA margin	18.8	17.1	17.6	19.0
Operating profit margin	17.0	15.0	15.6	17.2
EBITDA/net interest (x)	36.7	49.3	106.5	150.7
Net debt/equity	0.9	0.4	-1.5	-5.2
Net debt/EBITDA (x)	0.0	0.0	-0.1	-0.2
CF from operations/net debt	1100.2	2135.5		
Per share data (INR)				
EPS Rep (diluted)	28.59	24.69	29.34	36.68
HSBC EPS (diluted)	28.59	24.69	29.34	36.68
DPS	11.50	10.00	12.50	16.00
Book value	186.53	225.24	242.09	262.76

Key forecast drivers

Year to	03/2017a	03/2018e	03/2019e	03/2020e
PVC price (USD/t)	1,026	1,071	1,049	1,099
EDC price (USD/t)	249	272	250	250
Ethylene price (USD/t)	1,194	1,318	1,149	1,049
VCM price (USD/t)	730	778	749	799
FX	67	64	67	67

Valuation data

Year to	03/2017a	03/2018e	03/2019e	03/2020e
EV/sales	1.9	1.9	1.6	1.3
EV/EBITDA	10.0	10.9	9.0	7.0
EV/IC	4.5	3.8	3.4	3.0
PE*	19.3	22.3	18.8	15.0
PB	3.0	2.4	2.3	2.1
FCF yield (%)	2.3	3.4	3.6	5.6
Dividend yield (%)	2.1	1.8	2.3	2.9

* Based on HSBC EPS (diluted)

Issuer information

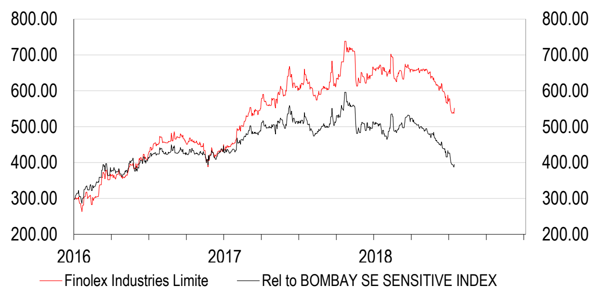
Share price (INR)	551.60	Free float	42%
Target price (INR)	750.00	Sector	Chemicals
Reuters (Equity)	FINX.NS	Country	India
Bloomberg (Equity)	FNXP IN	Analyst	Prateek Bhatnagar, CFA
Market cap (USDm)	1,000	Contact	+91 80 4555 2757

ESG metrics

Environmental Indicators		**Governance Indicators**	
GHG Intensity (kg/USD)	NA	No. of board members	10
Energy Intensity (kWh/USD)	0.09	Average board experience (years)	11
CO2 reduction policy	Yes	Female board members (%)	10
Social Indicators		Board members Independence (%)	60
Employee costs as % of sales	3.5		
Employee turnover (%)	NA		
Diversity policy	NA		

Source: Company data, HSBC

Price relative



Source: HSBC

Note: Priced at close of 12 Jul 2018

Contents

Investment summary

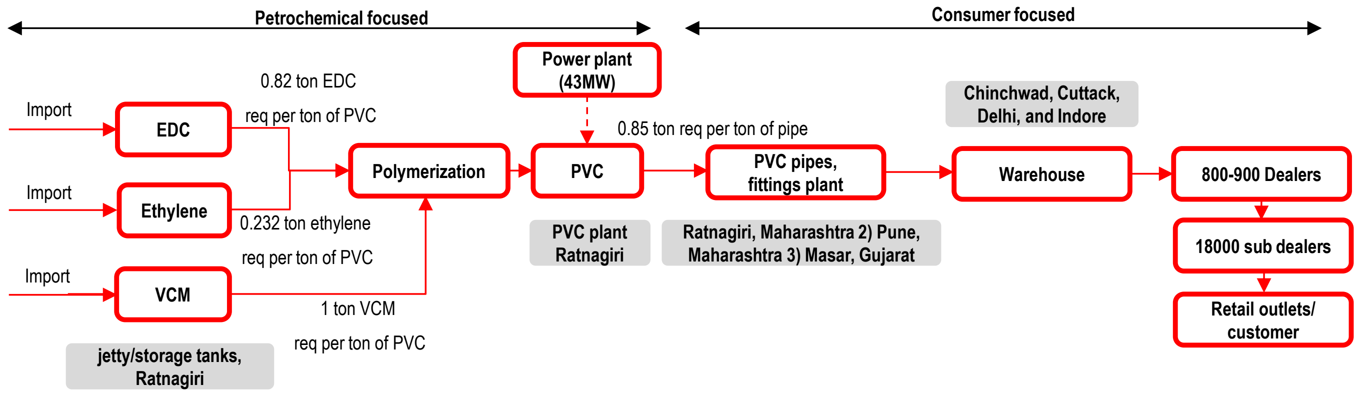
- We see the improving PVC cycle as sustainable and the feedstock outlook as benign – all good news for the company's resin business
- Strong demand and a lack of spare capacity are likely to lead margins for pipes back to historical levels; already at 7.3% in 2HFY18
- We initiate at Buy with a PE-based target price of INR750

Finolex is the only PVC pipes player in India that also manufactures PVC resin

In India, a PVC pipe can change many lives. Almost 50% of arable land is still rain water fed rather than irrigated, and the demand for new homes (and proper toilets everywhere) is growing strongly, partly driven by government policy. Finolex Industries not only makes the pipes and fittings that are going into this modernisation and acceleration of India's agricultural and construction sectors, it also produces the polyvinyl chloride (PVC) resin that those pipes and fittings are made from. This means that, unlike its peers – Supreme and Astral – it is a 'backward integrated' company and the only one in the market. The company is also expected to increase its consumer-focussed pipes and fittings capacity by a CAGR of 10% over the next five years. While, in our view, pipes and fittings will drive future volume growth, the bulk of the profits are presently driven by the commoditised PVC resin business.

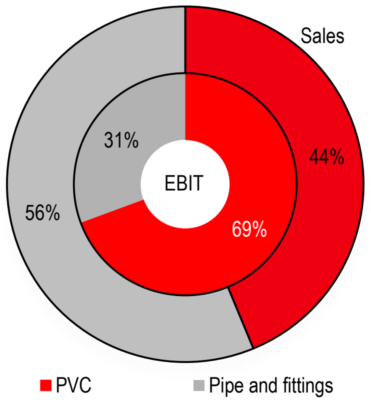
We believe that the market is not appreciating the benefits of a better PVC resin cycle and that there is scope for a re-rating. In this report we argue that a tight PVC supply-demand balance, along with recovering pipes and fittings margins, will drive Finolex's earnings and make its margins stable – setting the stage for a re-rating.

Ex 1: Finolex at a glance



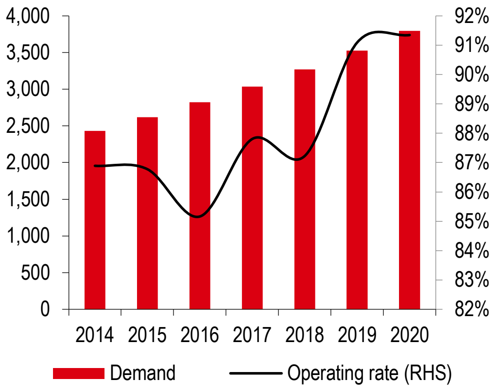
Source: Company data, HSBC estimates

Ex 2: Earnings snapshot: Resin business – the key earnings contributor (since 1QFY17)



Source: Company data

Ex 3: India's PVC demand and industry operating rates (ktpa)



Source: IHS Chemical, HSBC estimates

Improving PVC resin fundamentals (70% of total EBIT)

India's key PVC resin player – Finolex has 20% of national capacity through a 272ktpa PVC resin plant in Ratnagiri

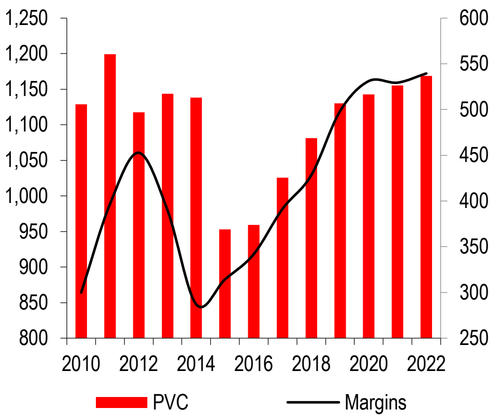
Strong demand makes India a key PVC player globally. India's PVC demand has grown at a CAGR of c10% for the last decade – the highest globally – and we expect it to drive 20% of global demand from 2017-21e. **India is the largest importer of PVC resins in the world – sourcing more than 50% of its needs overseas.** We believe that its dependence on imports should only increase going forward as the chart below (Exhibit 5) shows. Later in this report we discuss the drivers of India's demand – in agriculture for irrigation, in construction, and in increased sanitation.

Supply looks constrained – there are no plans for PVC capacity additions in India and next to none globally (0.4% CAGR through 2020e). It usually takes 2-3 years to construct a PVC plant, which means there is decent visibility on the capacity outlook.

We believe improving PVC margin and constructive PVC supply-demand balance bodes well for Finolex as the company immediately passes global PVC price movements on to its customers.

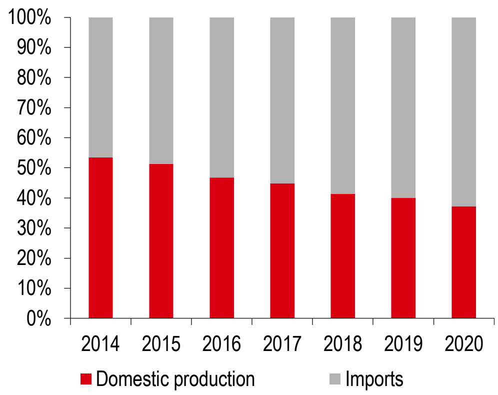
What's driving PVC tightness globally? Higher coal prices and pollution-related production curtailments in China have led to lower utilisation rates for China's PVC supply and a decline in China's net exports of PVC. China has long been responsible for the largest capacity overhang

Ex 4: PVC Margins (USD/t)



Source: IHS Chemical, HSBC estimates

Ex 5: India's PVC demand on imports to increase



Source: IHS Chemical, HSBC estimates

on the global PVC market, with 45% of global supply, mid-60% operating rates, a coal-based cost structure, and a propensity to export when prices become attractive. Now, with China's supply being cut back, that overhang has been lifted, driving PVC ethylene spreads in Asia to their highest levels since 2011-12.

We see global PVC operating rates as close to mid-80% at the moment and heading towards 90% over the next couple of years

We believe high coal prices and continued enforcement of anti-pollution norms will likely continue. **In the absence of China's PVC swing volumes, there is very limited additional global PVC capacity being built over the next 3-4 years,** which should mean a very positive cycle for pricing and margins.

Raw material tailwinds: Chemicals ethylene, EDC (ethylene di chloride) and VCM (vinyl chloride monomer) are the key raw materials that Finolex imports to make PVC resin. We expect ethylene prices to decline, EDC prices to remain at a subdued level, and VCM to track PVC prices. **Ethylene** prices are close to their cyclical peak presently. We expect prices to decline as multiple ethylene plants come online in the US, adding c5% to global capacity in 2018e. It should reduce downstream PE operating rates by 300bp, which should, in turn, put pressure on merchant ethylene prices because of reduced affordability. **EDC** looks oversupplied from a global SD perspective with operating rates at c75% lately. Unlike PVC, only 10% of EDC capacity is based outside China and is, therefore, less exposed to environmental-related shutdowns, which has impacted other chemicals in the chlor-alkali chain like PVC and caustic soda.

Recent PVC-EDC spreads decline temporarily; may not impact Finolex proportionally. The recent 15% decline in spreads since the start of the year has been primarily driven by high EDC prices, which have increased to cUSD325/t vs USD200/t in January. This has been due to both planned and unplanned outages, as well as seasonality. We expect EDC prices to come down and average USD250/t in FY18e.

Pipes EBIT margins to increase as well (contributing 30%)

Finolex's pipes and fittings capacity has more than doubled in the last six years and is expected to increase at a CAGR of 10% from 2017-22e. The company has also been focusing on gaining market share in the pipes and fittings segment – increasing sales volume 20% y-o-y in FY18. Management wanted to take advantage of the market disruption caused by the implementation of the goods and services (GST) tax. However, this also has had a direct impact on margins. EBIT margins for the pipes and fittings division have declined to an average 5.8% in FY18, a clear shift from averaging 8.2% in the three years before that.

EBIT margins already recovered to 7.3% in 2HFY18

We expect margins to recover slowly (1ppt per year) to their historical levels as the higher production gets absorbed by strong demand. As we have already noted, India's PVC pipe demand has grown at a CAGR of 10% in the last decade and is expected to grow at c8% going forward, driven by irrigation, construction of toilets, and low but increasing per capita usage.

We do not believe that Finolex can ramp up production again to capture market share (at the cost of margins) as the pipes operating rate in FY18 was already at c85%.

EBIT margins have already recovered to 7.3% in 2HFY18 – and we expect the trend to continue.

Ex 6: Finolex: HSBC estimates vs consensus

	HSBC estimates			Consensus estimates			HSBC vs Consensus		
INRm	**2019e**	**2020e**	**2021e**	**2019e**	**2020e**	**2021e**	**2019e**	**2020e**	**2021e**
Sales	32,896	38,476	43,021	32,203	36,812	NA	2%	5%	NA
EBITDA	5,798	7,299	7,964	5,570	6,453	NA	4%	13%	NA
NET	3,642	4,551	4,987	3,550	4,198	NA	3%	8%	NA

Source: Bloomberg, HSBC estimates. NA – Not applicable.

Financials, share price performance, and valuation

Profitability reversal: Finolex's EBIT declined 17% y-o-y in FY18 – the bulk of which was due to lower margins in the pipes business and the resin plant shutdown. However, we expect FY19e EBIT to increase c20% on better volumes and margins.

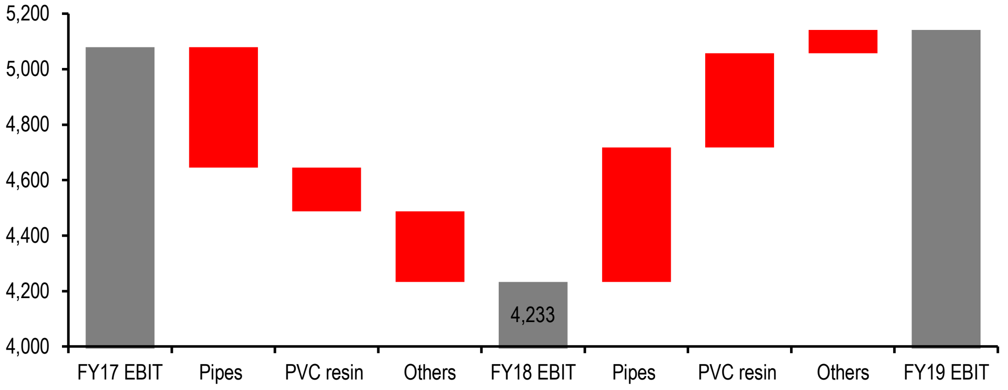
Financials: We expect Finolex's sales to increase at a CAGR of 14% from FY18-22e. The main driver of our revenue growth estimates remains the capacity addition in the pipes and fittings segment, which we expect to grow at a CAGR of c10%, in line with the company's guidance. EBITDA should also recover from 17.1% in FY18 to 19% in FY20e (not materially different from FY17 margins of 18.8%). Our EBITDA margins estimates of FY19-21e averaging 18.3% are in fact lower than FY17 levels. We estimate EBITDA to increase at a CAGR of 16% from FY18-22e.

Balance sheet strength: Finolex does not have any long-term debt with FY18 net debt/EBITDA of 0.02x. The company has consistently paid out dividends over the years. Despite its capex plans, the company should generate strong cash flows over the next three years and this should result in higher dividends, in our view.

Share price performance: Finolex's share price in the last 12 months has declined by 8% and has underperformed the broader market by 18% and also its peers Supreme (-12%) and Astral (-63%). In the last month, the share price has declined 11%, despite the company posting strong 4Q earnings. This was mainly due to concerns about the declining PVC-EDC spread. The EDC price increase, however, is temporary, in our view. It also only impacts Finolex as its peers are not 'backward integrated' into manufacturing PVC resin.

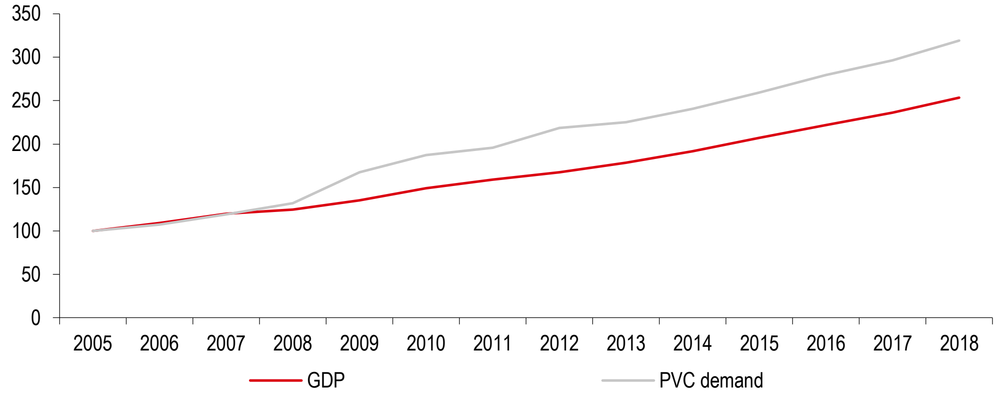
Valuation: In the last 12 months, Finolex has been trading at 21.5x 12-month forward consensus earnings. Finolex announced its current capacity expansion plan – of increasing pipes capacity to 370ktpa by FY19 from 290ktpa in FY17 (c40ktpa increase per year) only in May 2017 – setting it up on a strong growth path, in our view.

Ex 7: Finolex: EBIT bridge (INRm)



Source: Company data, HSBC estimates

Ex 8: PVC demand broadly in line with GDP growth lately (indexed)



Source: IHS Chemical, HSBC estimates

As such, we believe that the earnings multiples before May 2017 are not representative of the current growth profile of the company.

The multiple is at a steep discount to other PVC pipes manufacturer, such as Supreme Industries (-27%) – **despite a similar growth profile – mainly due to margin volatility.** We expect the discount to close as PVC resin fundamentals improve and also the weighting of the more stable pipes business increases – making the company's margins less volatile overall. **We believe that the market is not appreciating the benefits of a better PVC resin cycle and the scope for a re-rating.**

We value Finolex at a 25.4x FY19e PE, an average of Finolex's last 12 months' PE and its closest peer Supreme, and initiate at Buy with a PE-based target price of INR750 – which is also backed by a DCF analysis. We choose Finolex's multiple based on Supreme and not Astral, as it is the closest peer in terms of margin volatility (better off) and profit growth (broadly similar). Astral, on the other hand, is better on both these aspects (much higher growth and more stable margins).

Key downside risks include: 1) concerns about a possible corporate restructuring, given family-related disputes; 2) low liquidity of the stock; and 3) PVC plant shutdowns.

Themes to play/share price catalysts: 1) PVC-ethylene/EDC spread: resin is the most profitable part of Finolex and its key driver is the PVC-EDC spread; 2) monsoon: pipe and fittings demand in both agriculture and construction segments slows down during the monsoon each year. However, a good monsoon increases farmers' purchasing power and pushes up earnings for the rest of the year; and 3) strong construction activity: while only 20-30% of Finolex's sales is related to the housing/construction sector, it is expected to grow, given the introduction of the cPVC portfolio.

A play on improving PVC

- Finolex generates 70% of its earnings from its PVC resin business, which is directly levered to the strength in prices globally
- Limited supply additions, high coal prices in China, and environmental concerns all contribute to PVC tightness
- We expect the PVC cycle to be sustainable and the feedstock outlook to be benign – which bodes well for Finolex

Improving PVC fundamentals point the way

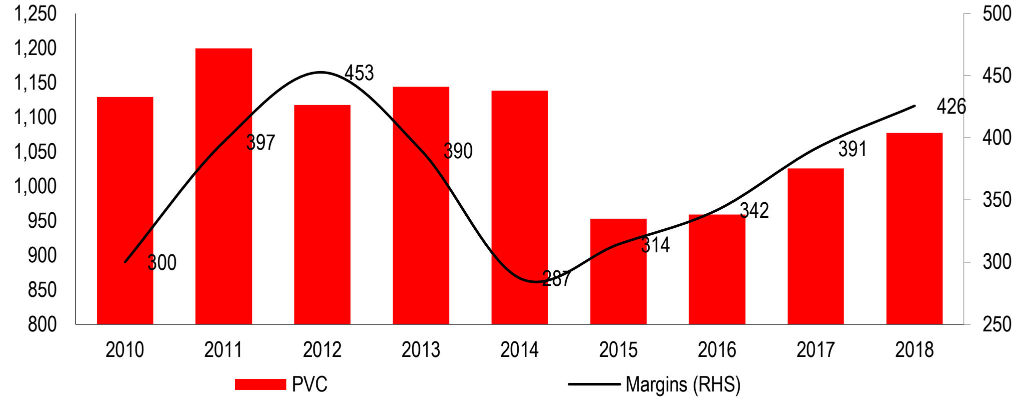
Finolex generates almost 70% of its earnings from the PVC resin business and is, therefore, highly levered to improving PVC prices and margins. PVC margins have been increasing steadily in the last three years, as the chart below (Exhibit 9) shows, mainly driven by PVC supply tightness. Finolex immediately passes PVC price movements on to its customers and is, therefore, positively levered to the improving market supply-demand balance.

As we discuss in more detail later in this report, a 5% increase in PVC price increases Finolex EPS by 13%.

What's driving PVC tightness?
In *Global Chemicals: This PVC cycle has legs*, 15 March 2017, we discussed why the current strong market conditions are likely to continue.

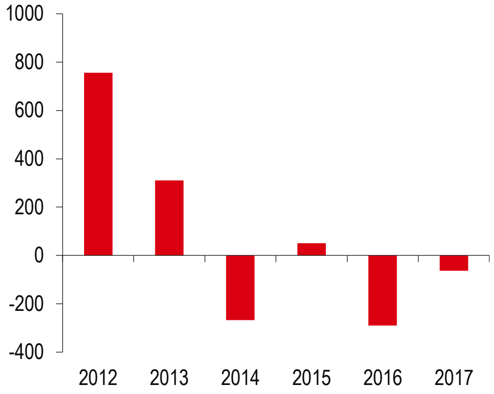
The PVC story has long been about limited supply growth globally and strong demand but also about a high amount of latent capacity in China. Despite the fact that there has been next to no global capacity additions (0.4% CAGR through 2020e), PVC has not had much of a cycle; China accounts for roughly half of global PVC capacity and has operating rates in the mid-60% range.

Ex9: PVC: Improving prices and margins (USD/t)



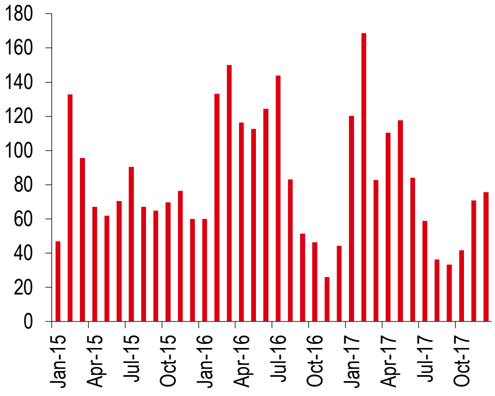
Source: IHS Chemical, HSBC estimates

Ex 10: Declining Chinese PVC exports: Overcapacity has lower global impact (000t)



Source: IHS Chemical, HSBC estimates

Ex 11: China: Monthly PVC exports (000t)



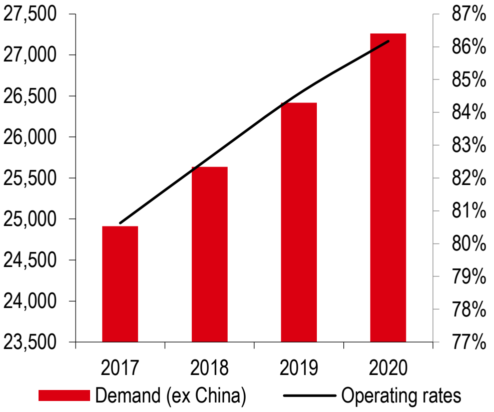
Source: IHS Chemical, HSBC estimates

This capacity 'overhang' in China has prevented any sustained tightness from developing in the global PVC markets. China, in theory, has enough excess PVC capacity to meet the import demand of the rest of Asia. Export volumes are a function of relative competitiveness. China primarily uses coal to make PVC, unlike the rest of the world, which uses ethylene; high oil prices relative to coal over the last few years have improved China's PVC competitiveness, raised domestic operating rates and export volumes, and kept a lid on pricing.

However, a combination of changing competitiveness and pollution-related cutbacks has started to have a major impact on the PVC market.

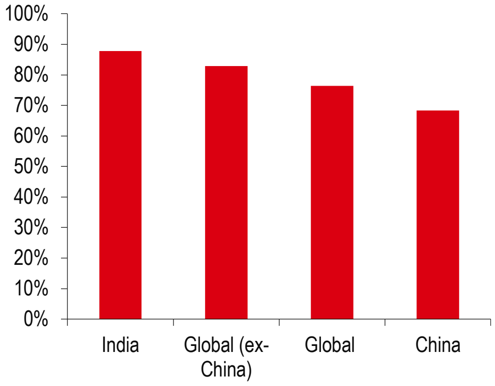
- First, coal prices have risen sharply relative to oil prices in China since late 2016, something we discussed at length in *GEM Chems: China coal price impact*, November 2016.
- Second, there has been a clear trend towards lower operating rates at the carbide-based PVC plants in China as a result of stricter environmental regulations. The severe pollution produced by the acetylene-carbide route of production of PVC was the primary reason why the rest of the world phased out the technology in the first place. The process, which uses mercury catalysts, generates large quantities of solid waste in the form of carbide slag and toxic waste in the form of spent mercury catalysts. It also generates significant air pollution, if emission control measures are not implemented.

Ex12: PVC: Improving supply-demand balance (demand – LHS, ktpa)



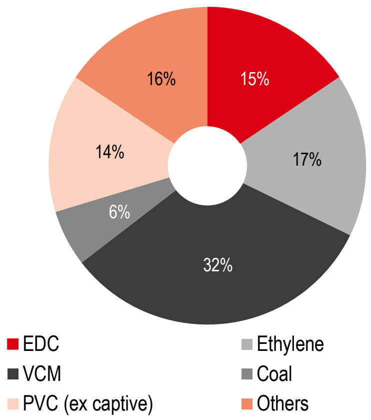
Source: IHS Chemical, HSBC estimates

Ex 13: PVC: Regional operating rates



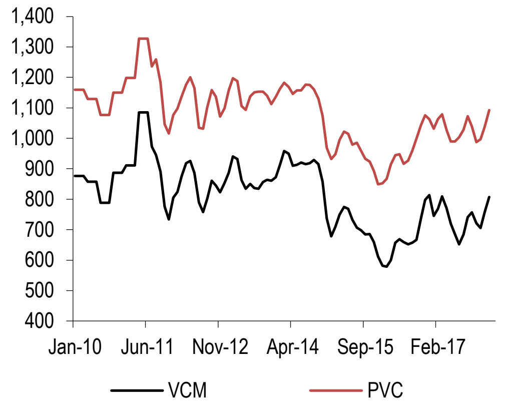
Source: IHS Chemical, HSBC estimates

Ex 14: Finolex – raw material cost mix (2012-16)



Source: Company data

Ex 15: VCM – tracking PVC price (USD/t)



Source: IHS Chemical, HSBC estimates

- As China's regulators have enforced stricter environmental norms, we have seen a decline in China's net exports of PVC.

Why we see the PVC cycle as sustainable?

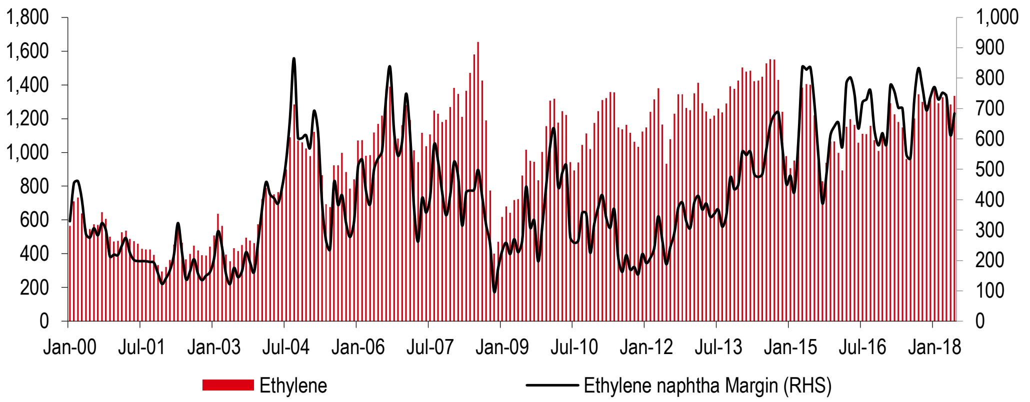
PVC spreads relative to ethylene in 4Q16 reached their highest levels since 2011-12 on the back of lower export volumes out of China. We are positive on the outlook for PVC and believe that the PVC cycle is sustainable.

- **Higher coal prices are likely here to stay:** As highlighted by HSBC's metals and mining research team's *Metals Quarterly: Trick of trade wars*, 18 April 2018, supply discipline remains a top policy agenda item for China's government in 2018. This should keep coal prices stable at RMB590/t levels – which should continue to put pressure on the costs for carbide-based production.

China's pollution controls are not going away anytime soon

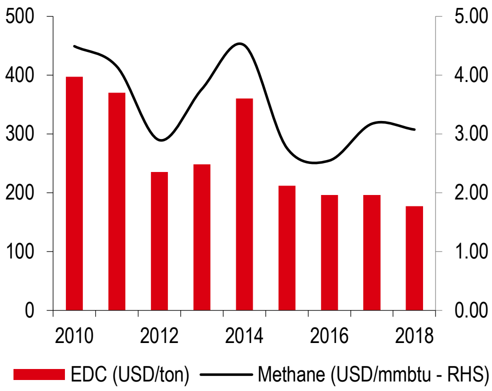
- **We expect to see continued enforcement of pollution control regulations** in line with the State Council's antipollution plan through 2020e, which should further curtail PVC output. At the same time, there has been a lack of supply response from the rest of the world: in the absence of China's PVC swing volumes, there is very limited additional global PVC capacity being built up over the next 3-4 years. In fact, excluding China, we see global PVC operating rates as being close to mid-80% at the moment and heading towards 90% over the next couple of years, which should drive a very positive cycle for pricing and margins.

Ex 16: Ethylene – close to cyclical peak (USD/t)



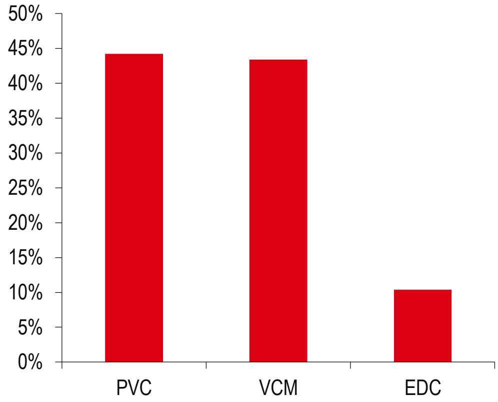
Source: IHS Chemical, HSBC estimates

Ex 17: US EDC: Broadly tracking lower energy costs



Source: IHS Chemical, HSBC estimates

Ex 18: China as a percentage of global capacity (2017)



Source: IHS Chemical, HSBC estimates

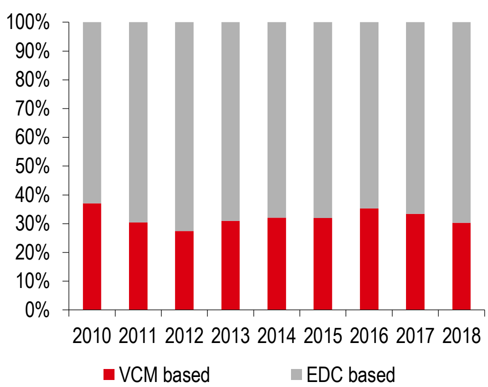
- **The swing market is India** – and demand there continues to be very strong. Unlike other polymers, such as PE, where the swing import market is China, in PVC, the largest net import market is India – accounting for c20% of total global traded volumes. Demand growth for PVC in India continues to be quite strong, driven by housing and infrastructure spending and a replacement cycle in window frames vs aluminium. With no new domestic PVC capacity planned in India through 2020e, we expect to see continued growth in imports (11% CAGR through 2020e), which will likely support global prices.

We continue to remain positive on global Chlor-alkali chain (see *Global Chemicals: Chain profitability; over/under earning*, 13 July 2018).

Feedstock outlook benign

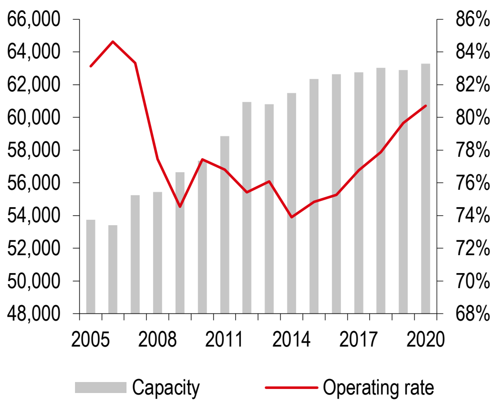
As the chart on the previous page (Exhibit 14) shows**,** VCM ethylene and EDC are the key raw materials for the company – all of which are imported – mostly from the Middle East and the US. Finolex manufactures PVC through two processes: 1) EDC-ethylene, and 2) directly from VCM. The EDC-ethylene route is the most profitable part of Finolex's business, in our view, and is expected to remain so. This is because pricing of EDC is expected to remain benign, while turning favourable for ethylene.

Ex19: PVC resin segment: Margin split



Source: IHS Chemical, HSBC estimates

Ex 20: EDC: Oversupplied (ktpa)



Source: IHS Chemical, HSBC estimates

Ex 21: North America new ethylene capacity builds

ktpa	2016	2017	2018	2019	2020
Braskem/Idesa (Mexico)	200	800			
Dow		500	1000		500
CP Chem			1,125	375	
Exxon			1,500		
Sasol			150	1,350	
Formosa				1250	
Oxy		400	150		
Lotte/Axiall				250	750
IVL			320	100	
Shin-Etsu				500	
Total	**200**	**1,700**	**4,245**	**3,825**	**1,250**

Source: Company data, HSBC estimates

EDC: Chlorine is a key component of EDC. Manufacturing chlorine is an energy-intensive process with electricity costs typically accounting for 40-50% of the production costs. With the decline in US energy costs accompanying the advent of shale gas, EDC prices have fallen significantly over the year and are expected to remain so, in our view.

EDC looks oversupplied from a global SD perspective

Reduced demand due to the Global Financial Crisis (GFC) and capacity additions in 2011-12 have resulted in operating rates dropping to 75% lately. As a rule of thumb, the pricing power in a chemical starts when its operating rates are close to 90%. While there is limited capacity addition going forward, we expect EDC operating rates to increase only to close to 80% by 2020e.

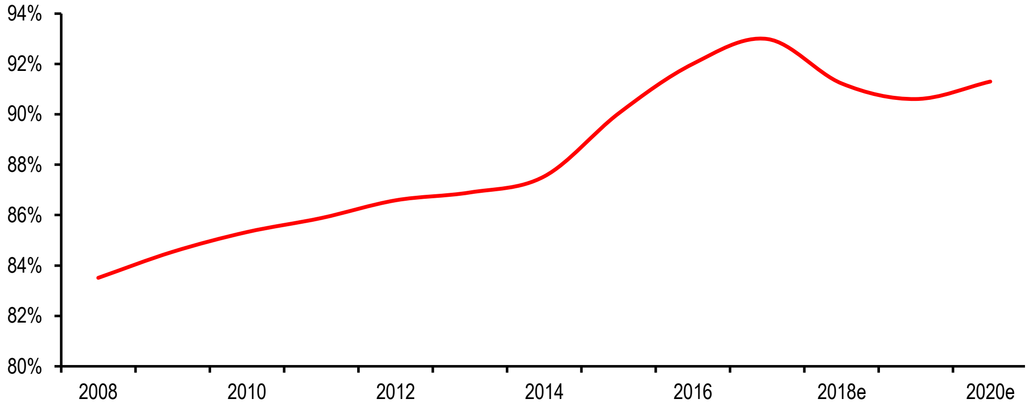
Lastly, unlike PVC and VCM, only 10% of EDC capacity is based outside China and, therefore, is less exposed to environmental-related shutdowns, which have impacted other chemicals in the chlor-alkali chain, such as PVC and caustic soda. Therefore, overcapacity in EDC should continue to dampen prices.

Ethylene: Ethylene prices are close to their cyclical peak. Ethylene naphtha spreads, which are the primary indicator of cyclical strength of the chemical, are currently at over USD750/t. This corresponds to two standard deviations over normalised spreads of USD400/t.

This strength was primarily because of the supply vacuum during 2013-16, when the US ethylene capacity was still under construction and China's coal-based capacity got delayed/cancelled as it did not make economic sense in a low-oil price environment.

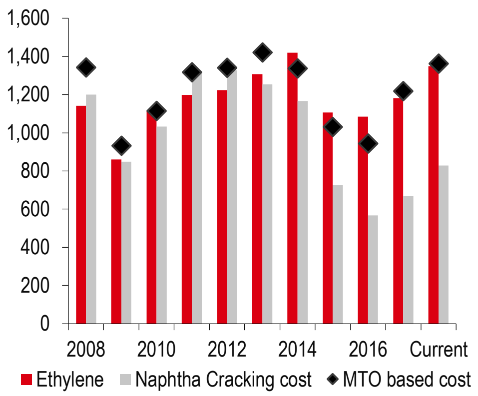
Also in a low-oil supply-constrained environment, MTO (methanol to olefins) plants became the marginal cost producers of ethylene, supporting and driving ethylene prices, as seen in the chart (Exhibit 23) – something that we first discussed extensively in *Advantage Naphtha*, 12 October 2015.

Ex 22: Ethylene: Operating rate estimates



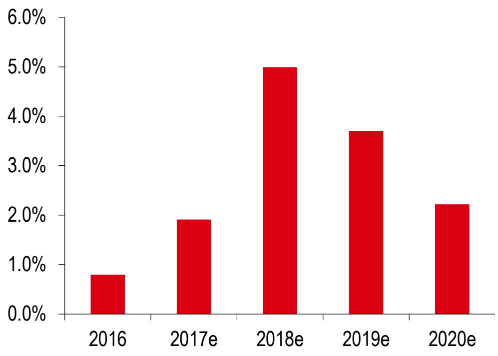
Source: IHS Chemical, HSBC estimates

Ex 23: MTO driving ethylene cost (USD/t)



Source: IHS Chemical, HSBC estimates

Ex 24: Ethylene capacity growth (2016-20e)



Source: Company data, HSBC estimates

US capacity should put pressure on merchant ethylene price

However, after multiple delays, the US capacity is finally coming online and it should reduce downstream PE operating rates by 300bp, which, in turn, should put pressure on the merchant ethylene price.

VCM – to continue tracking PVC: VCM is the key precursor for the production of PVC through both the ethylene-EDC route as well as the acetylene route. Almost all the VCM produced globally is used for the production of PVC and, therefore, its prices have very closely tracked PVC historically as seen in Exhibit 15.

PVC-VCM has maintained a broadly constant spread and we don't expect this to change.

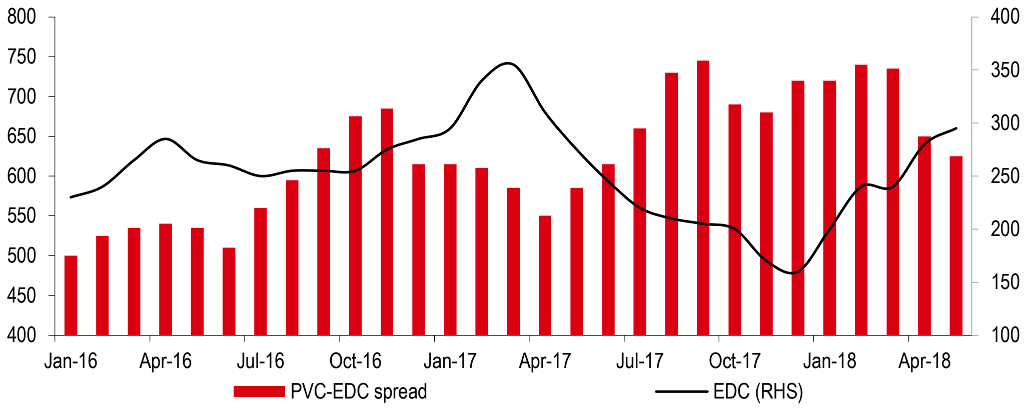
In summary, almost 60% of Finolex's capacity is feedstock EDC-Ethylene based, the outlook for which is benign. Therefore, Finolex's PVC resin business looks well placed in terms of profitability.

Price pressure short term, in our view

PVC-EDC spreads in the last couple of months have been under pressure as a result of higher EDC prices. Spreads have fallen 13% from the start of the year. The increase in EDC prices is primarily for three reasons – all of them short term, in our view.

1) An unplanned outage at Braskem's (BRKM5.SA, BRL52.53, TP BRL58.00, Buy) Chlor Alkali complex starting in January 2018 impacted availability. The complex has an EDC capacity

Ex 25: Spreads declining on higher EDC price (USD/t)



Source: Bloomberg, HSBC estimates

of 800ktpa, 1.5% of global demand (25% of global EDC trade). The plant started slowly from mid-March but faced some operational issues. It has now, however, ramped up operations.

2) Planned shutdown at Olin's (OLN.N, Not Rated) EDC plants at Freeport and Plaquimine, US (1.2m tonnes) and also impacted availability.

3) Seasonality: EDC prices tend to be seasonal, higher at the start of the year and lower in 2H when demand is lower, as highlighted by Olin, one of the leading manufacturers of EDC globally. Olin is cautious on EDC pricing for the rest of the year and expects 2018 average prices to be lower than in 2017. Presently, EDC prices are cUSD300/t, while they were USD250/t on average in 2017.

More important, the recent EDC price increase also may not fully impact Finolex. This is because, according to the company's guidance, purchase orders of EDC are usually placed two months in advance. During monsoon (May to August) the company's jetty at Ratnagiri does not operate and four months of feedstock is stored in advance. So, the effective price of feedstock stored for these months should be at the March level – when the EDC price was USD240/t.

Therefore, while the current price of EDC has increased, the effective price that the company will be paying during May-August will be lower.

Pipe margins to recover

- Resin capacity constant; however, that for pipes and fittings has more than doubled in six years with a CAGR of 10% likely from 2017-22e
- Higher sales volumes push in FY18 to gain market share, led to a margin decline to 3.7% in 1HFY18 vs an 8.2% average in the past
- Strong demand and lack of spare capacity should help margins recover to historical levels – 2HFY18 margins are already back to 7.3%

Focus on pipes & fittings

Pipes and fittings capacity has more than doubled in the last six years and is expected to increase at a CAGR of 10% from FY17-22e

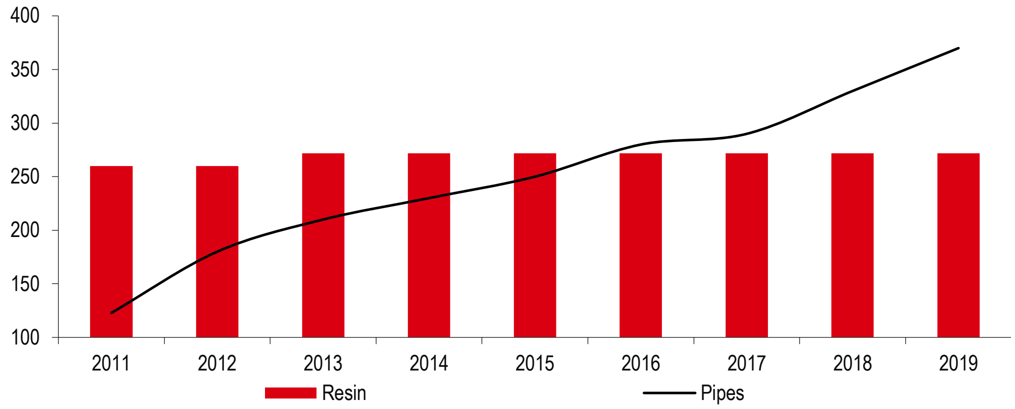
Move towards predictability: All of Finolex's volume growth is expected to come from this business over the next few years. As the chart below (Exhibit 26) shows, while resin capacity has remained constant, that of pipes and fittings has more than doubled in the last six years and is expected to increase at a CAGR of 10% from 2017-22e.

Management has been focussing on the pipes and fitting segment as its margins have been relatively less volatile in the past compared to the resin business. The PVC resin's segment margins have been volatile because of the commoditised and global nature of the business. Weak PVC margins and inventory losses in the past have been driven by excess supply globally and the sharp oil price decline, respectively, over which the company has little control.

The pipes segment margins can be controlled by the price premium that Finolex sets for its products vs the market. They are also dependent on the company's product mix – factors the Finolex can control to an extent. The pipes and fittings segment is also less capital-intensive than the resin, which has resulted in the company shifting its focus to the pipes and fittings segment.

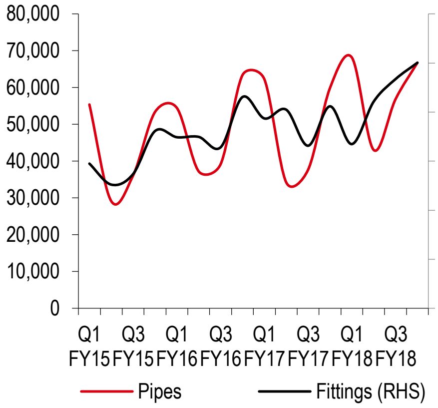
Push towards gaining market share has impacted margins: With the increase in production capacity, the company has been focussing on gaining market share in the pipes and fittings

Ex 26: Management focuses on pipes and fittings capacity (ktpa)



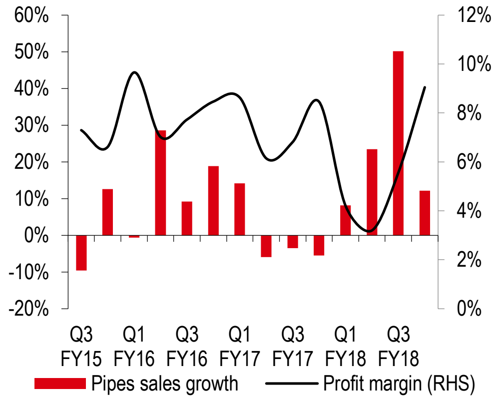
Source: Company data, HSBC estimates

Ex 27: Finolex: Pipes and fittings (t)



Source: Company data

Ex 28: Pipes and fittings segment: short-term margin compression



Source: Company data

segment. The company has achieved this by giving discounts and through a stronger marketing push – increasing sales volume 21% y-o-y in FY18. Management wanted to take advantage of the market disruption caused by the implementation of the GST. However, this has had a direct impact on margins. EBIT margins for the pipes and fittings division declined to an average 3.7% in 1HFY18, a clear shift from averaging 8.2% in the previous three years.

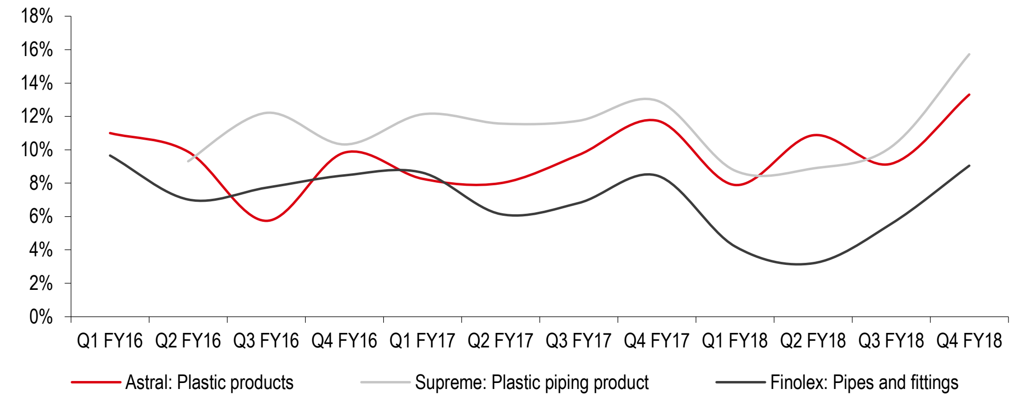
EBIT margins have already recovered to 7.3% in 2HFY18

Margins to recover. We believe Finolex's push to increase pipes capacity will not result in a market overhang – and, therefore, lower margins – as India's PVC pipes market itself has been growing at a CAGR of 10% in the last 10 years and is expected to grow at 8% in the future. This is not materially different from the 10% annual increase in capacity that Finolex is targeting over the next five years.

We expect the margin to increase gradually as the higher production gets absorbed from strong demand – driven by irrigation in agriculture, the drive for the construction of toilets, and low per capita usage (see section below). Finolex has also complemented its construction sector offering with the cPVC pipes and fittings offerings in collaboration with Lubrizol (Not listed).

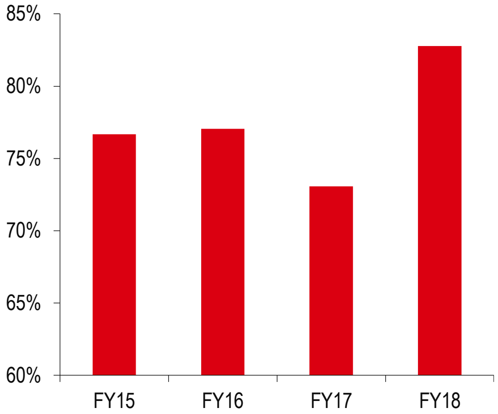
Lower spare capacity: We do not believe that Finolex can ramp up production again to capture market share (at the cost of margins) as the pipes operating rate in FY18 was already at c85% – up from c75% average in the last three years. Run rates of c90% are considered close to the optimum level in the chemicals industry and, therefore, production cannot be further ramped up materially to push volumes. Margins have already recovered to 7.3% in 2HFY18.

Ex 29: Finolex: Pipes and fittings – trailing its peers



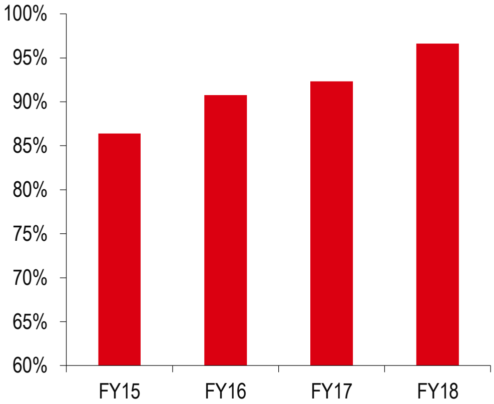
Source: Company data

Ex 30: Finolex: Pipes and fittings – limited scope to increase production



Source: Company data, HSBC estimates

Ex 31: Finolex: Resin segment – running at optimum rates



Source: Company data, HSBC estimates

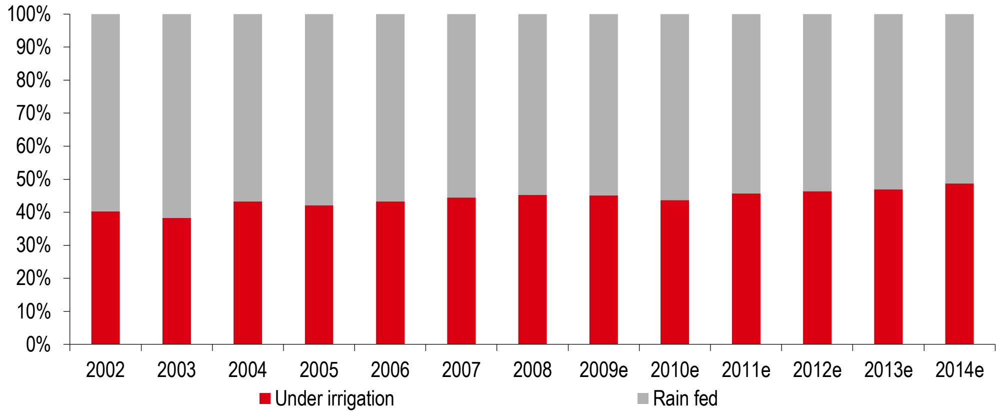
The cPVC booster: As we mentioned, Finolex tied up with Lubrizol in 2017 to manufacture and sell cPVC pipes and fittings in India. Finolex's offering until then was limited to uPVC pipes and fittings, which are not designed for hot water transportation. Because of these added benefits, cPVC pipes and fittings are priced at a premium and, therefore, favourably impact margins. We believe the introduction will help Finolex in the construction and plumbing segment where it will be able to complement its existing offering and increase its customer reach – especially to homes, hotels, and hospitals, as well as manufacturing plants where hot water transportation is required. It will also be able to diversify its exposure away from the agri-business from where it derives 70% of its sales.

cPVC margins are c12%, in our view, vs 8-9% for uPVC. cPVC pipes and fittings volumes are currently small (2%); however, they are growing materially, with sales volumes up 42% y-o-y.

Finolex's margins vs peers: Finolex's margins have been lower than its closest peers Astral and Supreme pipes, even before the present underperformance. Most of the difference we believe was because of differences in product offerings. Finolex products were limited to uPVC, while Astral and Supreme have broader offerings of cPVC, as well as HDPE pipes – increasing their reach to urban customers and delivering higher margins.

With the introduction of cPVC, Finolex has started to fill the gaps in its portfolio. However, it is still early days, in our view. We do not expect Finolex's margins to increase to the levels enjoyed by its peers in our forecast period.

Ex 32: India: Most arable land still dependent on rain for irrigation



Source: Ministry of Statistics and programme implementation, India. Note: Data from 2008 onwards are provisional data.

Demand drivers

Around 70% of Finolex's sales are derived from the agriculture sector and are, therefore, highly levered to improvements in the sector

Agriculture sector to be the catalyst for demand

PVC pipes are extensively used in the agricultural sector for field irrigation. They are used to transport water from canals and bore wells to fields.

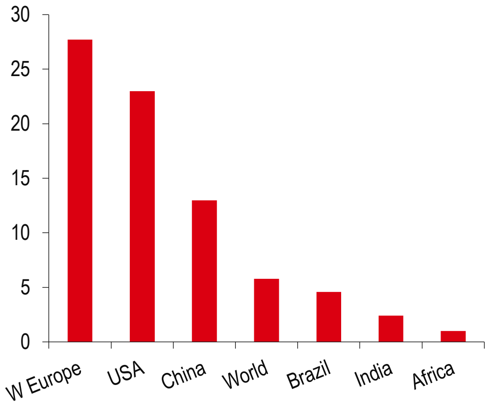
India's agriculture sector is a key pillar of the country's economy, contributing 18% to GDP. However, it suffers from low yields. One of the key reasons is that almost 50% of the arable land is still not irrigated and has to depend on seasonal rains and the monsoon, which are irregular and uneven.

However, there is an increased focus on irrigation, in our view. A national mission to improve farm irrigation (*Pradhan Mantri Krishi Sinchai Yojna*) was launched in 2015-16 and its budget allocation in 2018-19 was increased by 20% to INR32bn.

A total of INR14.34 lakh crore (USD215bn) was allocated for the improvement of livelihoods and infrastructure in rural areas with the aim of doubling farmers' incomes by 2022. It was also announced that the 'Minimum Support Price' for all major crops will be at least 1.5x their production cost.

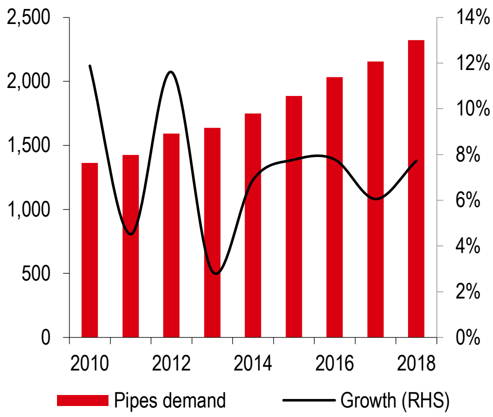
All these measures should drive long-term demand for Finolex's pipes from the agriculture sector.

Ex 33: Per capita PVC consumption in 2018e (kg/person)



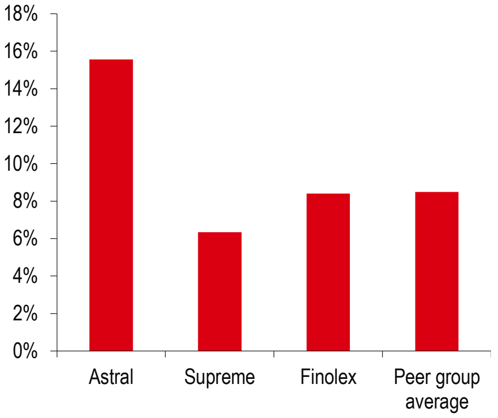
Source: HS Chemical, HSBC estimates

Ex 34: India's PVC demand for pipes (ktpa)



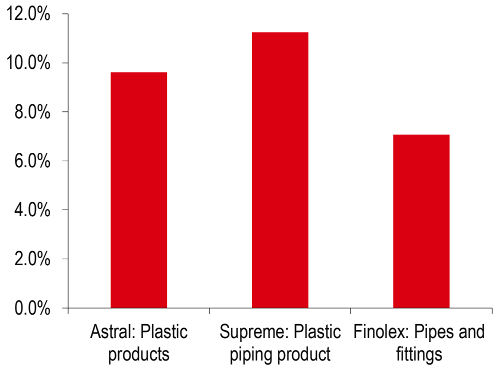
Source: IHS Chemical, HSBC estimates

Ex 35: Pipes capacity additions CAGR (FY13-17)



Source: Company data, HSBC estimates

Ex 36: Pipes and fittings – average EBIT margins



Source: Company data, HSBC estimates

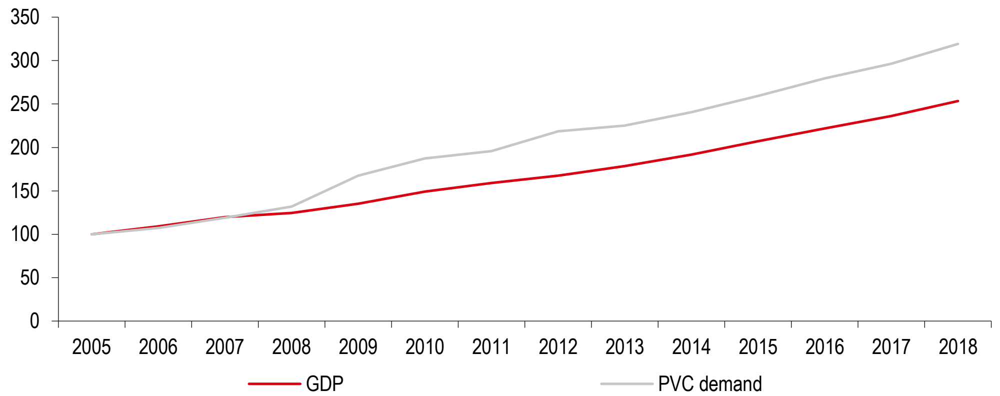
India's per capita PVC usage is one of the lowest globally – China's demand is more than 5x. However, India's demand has been growing well at a CAGR of c10% in the last 10 years, one of the highest globally (China's demand is growing at 6%). Most of this demand is met through imports as there is limited PVC capacity being constructed and, therefore, should help Finolex, which is the third largest PVC manufacturer in India.

According to the national census in 2011 (the latest), c69% of rural households did not have toilets in their houses. A government drive regarding sanitation is boosting the construction of toilets. It plans to construct 12m toilets in rural India by October 2019 at a projected cost of USD26bn. Given that pipes are used extensively in toilets, demand for sewage, waste and rain (SWR) applications should rise considerably. The government's drive for affordable housing should also drive consumption.

Replacement demand: Apart from the base demand as discussed above, there is also additional demand to replace galvanised iron pipes, which were traditionally used in the past. PVC pipes are almost 25-30% cheaper with more lifespan as conventional galvanised iron pipes corrode over time. Jain Irrigation (JAIR.NS, Not Rated), a key player in India's pipes market estimates that replacement demand accounts for c35% of the total demand.

GST: The introduction of the goods and services tax (GST) in 2017 aimed at creating an effective indirect tax regime by removing the cascading effect of taxes and a similar tax structure across the states, among other things. The greater transparency under the GST

Ex 37: Indian PVC demand – broadly in line with GDP growth (indexed)



Source: IHS Chemical, HSBC estimates

Ex 38: Financial snapshot for piping business of Finolex's peers

	Supreme			Astral		
INRm	**FY16**	**FY17**	**FY18**	**FY16**	**FY17**	**FY18**
Revenues	21,513	24,670	27,272	14,113	15,855	15,727
Growth		15%	11%		12%	-1%
EBIT	2,488	3,366	3,136	1,223	1,531	1,669
EBIT margin	12%	14%	12%	9%	10%	11%

Source: Company data, HSBC calculations. Note: Supreme FY16 numbers have been adjusted for year ending, excise duty.

regime is expected to create a uniform terrain for the organised sector as well as unorganised sector – where competition will be based on the quality of products. We believe that Finolex stands to benefit from this change because its pipes are usually regarded as being of high quality and, therefore, priced at a premium vs its peers. The company also runs a cash-and-carry model because better product quality creates customer pull.

Growing broadly in line with GDP: Demand for commodity chemicals, such as PVC, usually grows at 1.0-1.2x times that of GDP growth – as seen in Exhibit 37. We expect PVC demand to grow broadly in line with GDP growth.

Commentary from industry peers: The outlook from key industry PVC pipes players is bullish (Exhibit 39) with all of them guiding to a 10-15% CAGR in the next few years on the back of the reasons discussed above.

Competitive landscape

India's PVC pipes demand was c2m tonnes in 2017 with 60% of the market dominated by the organised sector. Finolex, with 290ktpa of pipes capacity, has almost 25% of the market share of the organised sector. Other companies active in pipes and fittings include:

Supreme Industries: a USD2.2bn market cap plastics company active not only in the pipes segment but also in consumer products (plastic chairs and tables), packaging products (plastic protective films and packaging products), and industrial products (material handling like soft drink and vegetable transportation trays). More than 50% of the earnings are derived from the pipes segment, as seen in Exhibit 40.

In this segment, its key products include, uPVC pipes and fittings, PP pipes and fittings, HDPE pipe systems, and cPVC fire sprinkler systems.

Astral Poly Technik: a USD1.9bn market cap company active primarily in the pipes and adhesives business. In pipes and fittings, it is a strong player in the cPVC segment and, therefore, primarily has an urban presence. It also manufactures uPVC pipes and fittings and adhesives.

Growth: Competition and strategy

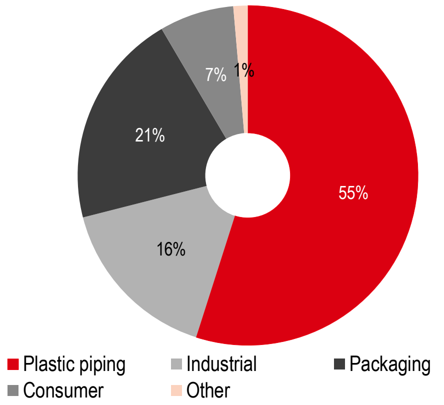
Finolex's management wants to add capacity only in the pipes and fittings segment in the future – to cater to the increasing demand in India. We expect capacity to grow at a CAGR of 10% in the next five years. The company also wants to increase its exposure to the construction segment, which currently accounts for 30% of pipes sales.

Ex 39: PVC pipes growth: Industry expectations

Company	Growth outlook
Supreme Industries*	Volumes to grow at a CAGR of 12-15% by 2020-21
Jain Irrigation	PVC pipes volumes to grow at a 12-15% CAGR over the next five years
Astral	India's piping industry is expected to grow at a CAGR of 14% from FY18-22
Finolex Industries	Double-digit volume growth in the next 3-4 years in the pipes and fittings segment

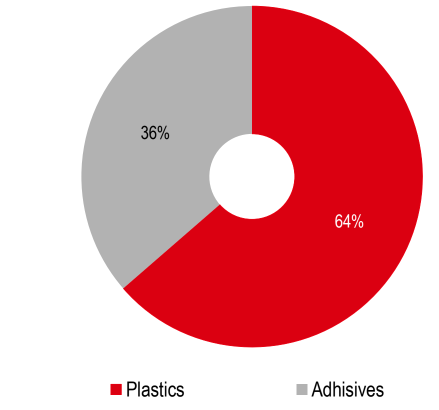
Source: Company data. Note: *For the whole company (pipes are 55% of the revenues).

Ex 40: Supreme Industries: 2018 EBITDA split



Source: Company data

Ex 41: Astral: 2018 EBITDA split



Source: Company data

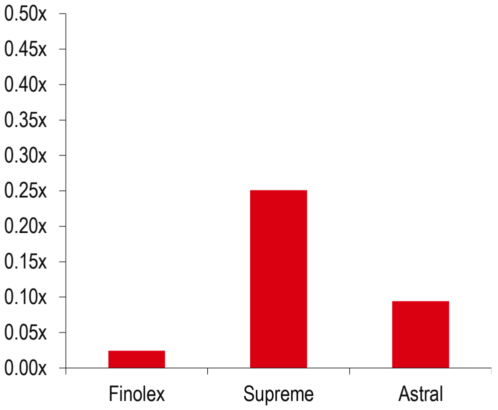
Its peers, especially Astral, have been very aggressive in adding capacity – at a CAGR of 15% in the last four years – albeit from a lower base. Astral has at the same time been able to maintain its margins -- which explains why it commands a higher multiple vs Finolex and Supreme.

On average, the organised players have added capacity at a CAGR of c8% in the last four years – broadly in line with India's demand, which has grown by 7%. Despite the capex spent, all three players have healthy balance sheets with net debt/EBITDA of less than 0.3x in each case.

Finolex's competitive advantage: Finolex is the only pipe manufacturer that is 'backward integrated' into making PVC resin. It can, therefore, maintain PVC pipes material quality – evident by the fact that the company runs a cash-and-carry model because better product quality is able to create customer pull.

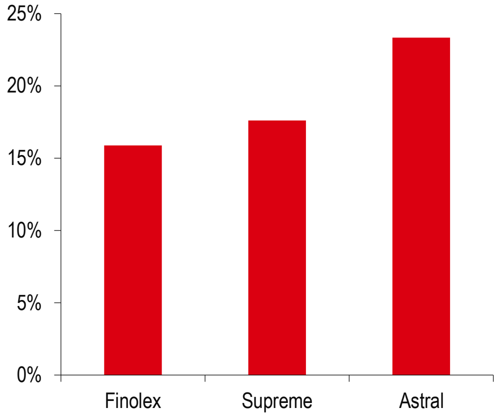
Having a captive resin capacity also gives it access to feedstock in India's undersupplied PVC resin market. As discussed previously, India's dependence on PVC imports should only increase going forward giving Finolex an advantage over peers.

Ex 42: Balance sheet strength (2018 net debt/EBITDA)



Source: Company data

Ex 43: Pipes and fittings – EBITDA growth estimates (2018-20e)



Source: Bloomberg, HSBC estimates

Valuation

- Finolex trades at a 21.5x PE, a steep discount to its peers Supreme (-27%) and Astral (-50%), despite a similar growth profile, mainly due to margin volatility
- We expect the discount to close as PVC fundamentals and the weighting of the pipes business increases – making margins stable
- We initiate at Buy with a PE-based target price of INR750 – which is also backed by a DCF analysis

Share price performance

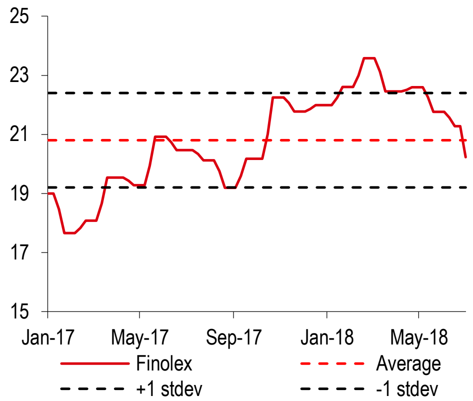
Finolex's share price is 8% below where it was a year ago and has underperformed the broader market by 18%, as well as its peers Supreme (-12%) and Astral (-63%). In the last month, the share price has declined 11%, despite posting strong 4Q earnings mainly due to concerns on a declining PVC-EDC spread. The EDC price increase, however, is temporary, in our view, as discussed earlier. It also only impacts Finolex as its peers are not 'backward integrated' into manufacturing PVC resin.

Valuation

Finolex has traded at a discount because of earnings volatility in the past, in our view

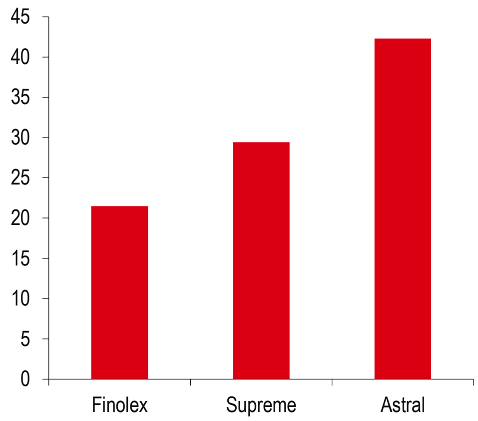
In the last 12 months, Finolex has been trading at 21.5x 12-month forward consensus earnings. This is a steep discount to other PVC pipes manufacturer, such as Supreme Industries (-30%) – despite a similar profit growth outlook. We believe Finolex has traded at a discount because of earnings volatility in the past. Supreme and Astral are not integrated to the feedstock PVC resin and, therefore, have much more stable margins, as seen in the chart below (Exhibit 48).

Ex 44: Finolex: One-year forward multiple



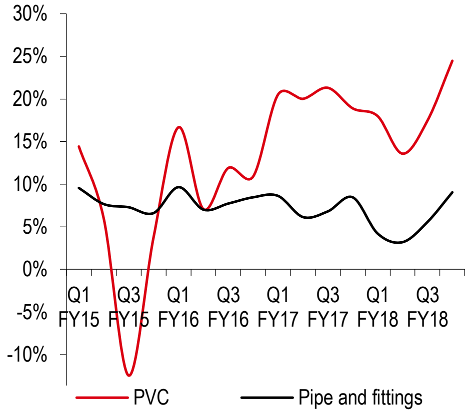
Source: Thomson Reuters Datastream, HSBC estimates

Ex 45: Peer: One-year forward PE multiple (since 2017 average)



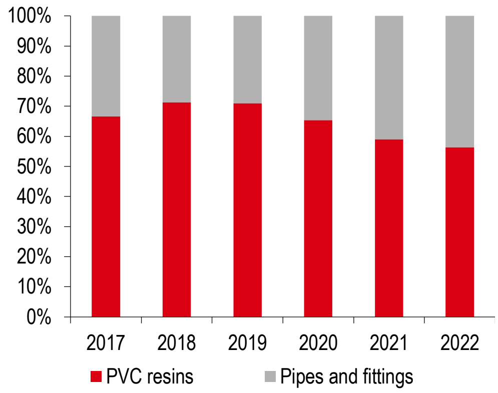
Source: Thomson Reuters Datastream

Ex 46: Finolex: PVC segment margins have been volatile in the past



Source: Company data

Ex 47: Finolex: Earnings contribution of pipes and fittings segment to increase



Source: Company data, HSBC estimates

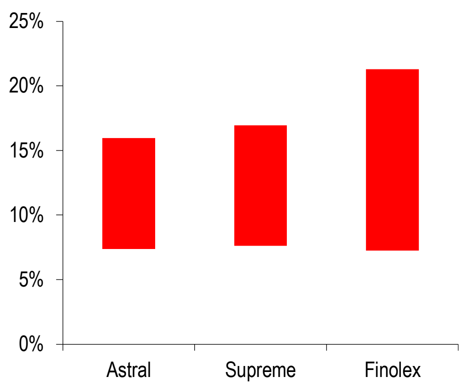
We believe that the market is not giving Finolex due credit for benefits from the PVC resins market. In the past, PVC resins – the commodity part of the business – had volatile margins and was ascribed a lower multiple. However, we believe that should change as the PVC market improves – resulting in stable/improving margins – and, therefore, a re-rating.

Finolex should also re-rate, in our view, as the earnings contribution from the pipes and fittings segment increases, making its margins even more stable.

We value Finolex at a 25.4x 2019e PE, an average of Finolex's last 12 months' PE and its closest peer, Supreme. Finolex announced its current capacity expansion plan – of increasing capacity to 370ktpa by FY19 from 290ktpa in FY17 (c40ktpa increase per year) only in May 2017 – setting it up on a strong growth path. As such, we believe that the earnings multiples before May 2017 are not representative of the current growth profile of the company.

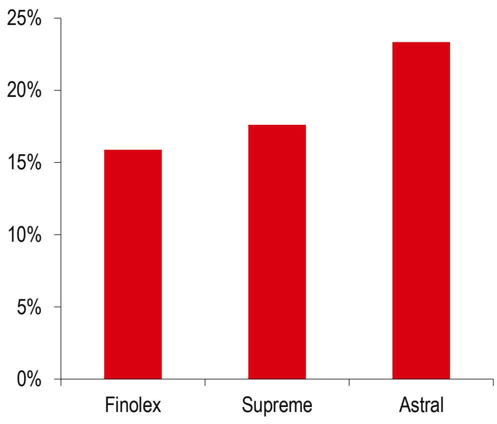
We choose Finolex's multiple based on Supreme and not Astral because it is the closest peer in terms of margin volatility (better off) and profit growth (broadly similar). Astral on the other hand is much better on both these aspects (higher growth and stable margins). We do not expect Finolex's margin profile to emulate Astral's in the foreseeable future – and, therefore, match its multiples.

Ex 48: EBIT margin divergence (since 2QFY16)



Source: Company data

Ex:49 Broadly similar EBITDA growth estimates for Finolex and Supreme (2018-20e)



Source: Bloomberg

Ex 50: Finolex Industries target price-based valuation

Finolex valuation	
Finolex Industries 12-month forward PE	21.5x
Supreme Industries 12-month forward PE (from Thomson Reuters Datastream)	29.4x
Average	25.4x
Implied discount to supreme	-14%
Finolex 2019e EPS (INR)	29.3
Target price (rounded)	750

Source: HSBC estimates

The PE multiple of 25.4x which we use to value Finolex is still at a c30% discount to other chemical peers in India.

We also believe that Finolex is well positioned for strong earnings growth, based on the following forecasts:

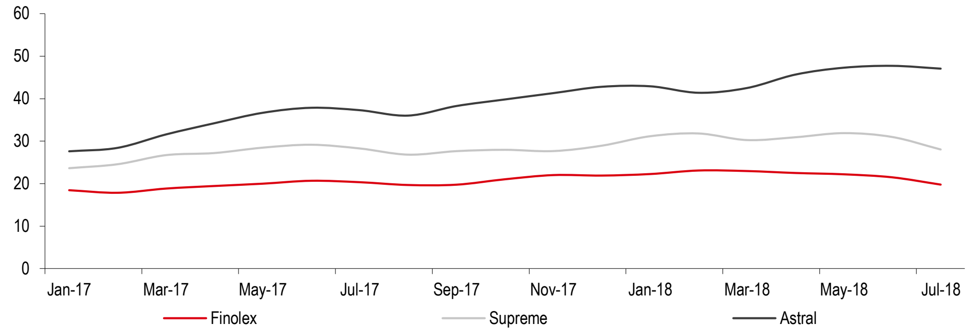
- Finolex is planning to increase its PVC pipes and fittings capacity by a CAGR of 10% from 2017-22.
- The pipes and fittings EBIT margins should recover to historical levels slowly as Finolex reduces discounts on its products and also due to better product offerings after the cPVC pipes and fittings portfolio launch.
- The new pipes and fittings expansion should increase the ROCE of the company – as shown in the table towards the end of this section.
- EBIT margins in the resin business should improve to 19.8% by 2020e vs 19.1% in 2018 on a better PVC supply-demand balance.

We estimate 2019e EPS of INR29.3, which gives us a target price of INR750 – that is also backed by our DCF analysis (see Appendix). Our target price implies upside of 36% from the current share price and we, therefore, initiate coverage with a Buy rating. Our DCF valuation is based on a WACC of 9% (RFR: 2.5%, ERP 6.5%, cost of debt of 12%, and a tax rate of 35%).

Other assets not included in the valuation

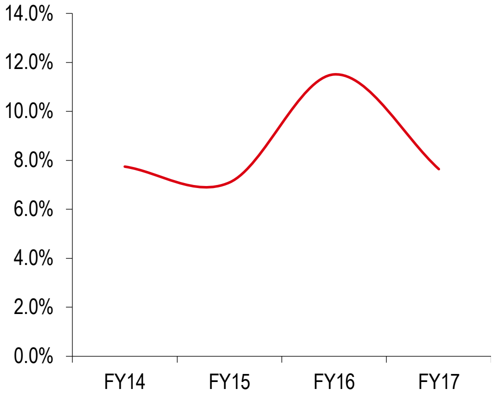
- **Stake in Finolex Cables:** Finolex Industries has a 14.5% stake in Finolex Cables, earnings/value of which is not captured in the income statement as it is included in other consolidated income. Based on Finolex Cables' current market cap, the stake is worth INR12.9bn, c20% of Finolex Industries' current market cap. Finolex Cables has in turn a 32% stake in Finolex Industries – having a value of INR21bn. There is uncertainty as to whether the present corporate structure will change, and if Finolex will be able to monetise the stake in the foreseeable future. We, therefore, do not include this in our valuation.

Ex 51: 12-month forward PE multiple



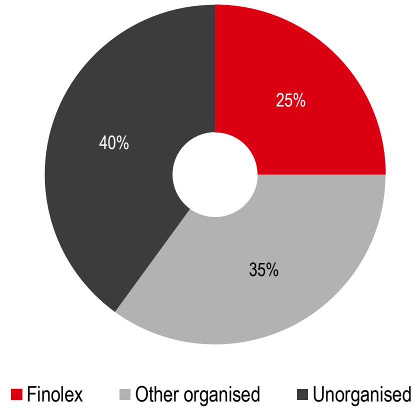
Source: Thomson Reuters Datastream, HSBC estimates

Ex 52: Pipes capacity growth from Finolex, Supreme and Astral



Source: Company data, HSBC estimates for Finolex

Ex 53: uPVC Pipes market share (2016)



Source: Company data

- **Land bank:** Finolex owns 70 acres of land in Pune of which 15 acres are used for offices and warehousing. The cost of land in the area is INR90-100m per acre, according to the company's guidance. Finolex has been in talks regarding the sale of the land for years now, but there has not been any progress. We, therefore, do not include the land in our valuation because of the uncertainty regarding timing of any sale. The land is valued at INR5.2bn (8% of the Finolex's current market cap). Separately, Finolex also owns 600 acres of seafront land in Ratnagiri. However, it is not looking to sell that land and wishes to keep it for future expansion.

Key downside risks

- **Corporate governance:** There have been issues raised in the past questioning the independence of an 'independent director' – common to the board of both Finolex Cables and Finolex Industries, (*Economic Times*, 4 May 2018). Any escalation of the conflict between the management teams of the two companies and any resulting re-organisation would be a downside risk.
- **Low liquidity:** Finolex has a relatively lower average daily trading volume of USD1m – which may result in higher price volatility and execution costs.
- **Lower-than-expected PVC demand:** PVC is primarily used in the construction and agriculture sectors. Lower-than-expected demand due to any slowdown in the sectors can impact PVC prices.

Ex: 54 Peer valuation table

			Current	Mkt cap	Mkt cap	EV/Sales (x)		EV/EBITDA (x)		PE (x)		Div Yield	
Companies	**RIC**	**Curr**	**Price**	**(USDbn)**	**(LCbn)**	**2019e**	**2020e**	**2019e**	**2020e**	**2019e**	**2020e**	**2019e**	**2020e**
Finolex Industries	FINX.NS	INR	551.6	1.0	68.2	2.0	1.9	11.6	10.6	19.0	16.2	2.5%	2.9%
Supreme Industries	SUPI.NS	INR	1,182.4	2.2	149.7	2.6	2.2	16.5	13.6	29.5	24.4	1.2%	1.4%
Astral Poly Technik	ASPT.NS	INR	1,069.4	1.9	127.7	4.9	4.0	32.0	25.6	54.4	43.1	0.1%	0.2%
Jain Irrigation Systems	JAIR.NS	INR	83.6	0.6	42.4	0.9	0.8	6.8	5.8	12.1	8.5	1.4%	1.6%
Median						**2.3**	**2.1**	**14.1**	**12.1**	**24.3**	**20.3**	**1.3%**	**1.5%**
BASF India	BASF.NS	INR	1,899	1.2	82.0	1.3	1.2	16.5	13.8	35.4	25.6	0.1%	0.1%
Akzo Nobel India	AKZO.NS	INR	1,875	1.3	87.2	2.7	2.4	22.8	18.9	34.6	28.9	1.3%	1.4%
Kansai Nerolac Paints	KANE.NS	INR	495	3.9	266.2	4.8	4.2	28.0	23.7	44.7	38.0	0.7%	0.8%
Pidilite Industries	PIDI.NS	INR	1,085	8.0	549.3	7.6	6.5	34.8	29.4	51.7	43.4	0.7%	0.8%
Navin Fluorine	NAFL.NS	INR	652	0.5	32.1	3.3	2.8	13.4	11.6	18.6	16.1	1.4%	1.7%
Gujarat Fluorochem	GFLR.NS	INR	743	1.2	81.4	4.0	3.7	13.8	12.3	20.9	18.2	0.7%	0.7%
Median						***3.7***	***3.3***	***19.7***	***16.4***	***35.0***	***27.3***	***0.7%***	***0.8%***

Source: Thomson Reuters Datastream, HSBC estimates
Note: Prices as on 12 July 2018.

Ex 55: ROCE from new capacity addition is higher than existing operations

ROCE calculation			Assumptions		
Capacity increase	80	ktpa	Assumptions		USD/ton
Total capex for two years (company guidance)	2,500	INRm	USD INR	67	
Maintenance capex per year	350	INRm	Pipes price	1,598	
Growth capex	1,800	INRm	Margins	8%	
			Tax	35%	
Sales	8,503	INRm			
EBIT	702	INRm			
NOPLAT	456	INRm			
Incremental ROCE	25%				
Historical (2012-17) ROIC					
Resin	19%				
Pipes and fittings	21%				

Source: HSBC estimates

- **Shutdown:** The bulk of Finolex's profitability comes from the resin segment, which can be impacted because of any unplanned shutdown in the plant, jetty or the captive power plant.
- **Increased competition:** Finolex has recently started offering discounts to increase its volume off-take. If Finolex's competition follows the same strategy for an extended period of time, then it will likely hurt profitability.
- **Higher feedstock costs:** If the ethylene capacity in the US is delayed and prices continue to remain high, then it will likely impact earnings.

Sensitivity

As we discussed earlier, Finolex is highly levered to improving PVC fundamentals. A 5% increase in PVC price increases Finolex's EPS by 13%.

EDC/ethylene price movements too have an impact on earnings, albeit – to a much lesser extent. A 5% decrease in either of EDC/ethylene price increases EPS by 2%, in our view.

Financials

A word on 4QFY18 results: On a reported basis**,** Finolex's net profit of INR1.21bn was the second highest ever, marginally below its 4QFY17 net profit of INR1.23bn. However, the y-o-y decline was due to lower unallowable income. **The total EBIT and earnings from each of its key segments – pipes and resins – was the highest ever reported by the company.**

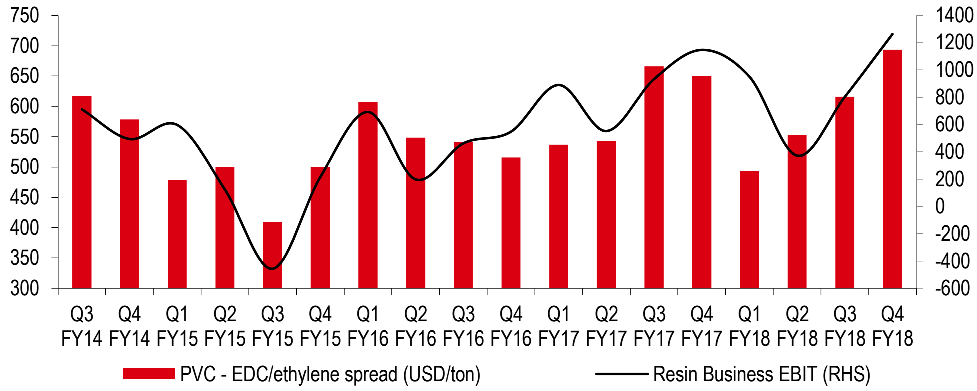
Sales outlook: We expect Finolex Industries' sales to increase at a CAGR of 14% from FY18-22e. The main driver of our revenue growth estimates remains the capacity addition in the pipes and fittings segment – which we expect to grow at a CAGR of c10% from FY17-22e.

Ex 56: Finolex: EPS sensitivity to PVC and feedstock prices (USD/t)

	PVC						
EDC	**950**	**1000**	**1050**	**1100**	**1150**	**1200**	**1250**
350	16.6	19.6	22.7	25.7	28.7	31.7	34.8
330	17.4	20.5	23.5	26.5	29.5	32.6	35.6
310	18.3	21.3	24.3	27.3	30.4	33.4	36.4
290	19.1	22.1	25.1	28.2	31.2	34.2	37.3
270	19.9	22.9	26.0	29.0	32.0	35.0	38.1
250	20.7	23.8	26.8	29.8	32.8	35.9	38.9
230	21.6	24.6	27.6	30.6	33.7	36.7	39.7
210	22.4	25.4	28.4	31.5	34.5	37.5	40.6
190	23.2	26.2	29.3	32.3	35.3	38.3	41.4
170	24.0	27.1	30.1	33.1	36.1	39.2	42.2
150	24.9	27.9	30.9	33.9	37.0	40.0	43.0

Source: HSBC estimates

Ex 57: Finolex: PVC spread vs PVC resin profits



Source: Company data, IHS Chemical, HSBC estimates

We do not expect the capacity addition to have a long-term detrimental effect on PVC pipes pricing at the industry level as India's domestic demand for PVC pipes itself has been growing at c10% in the last 10 years, as we noted earlier. In addition, Finolex's growth should also be driven by a better product mix.

The three key players in the organised pipes and fittings market – Finolex, Supreme and Astral – have been growing capacity at a similar 9% rate in the last 4-5 years.

Shutdown of PVC resin and power plant impacted earnings in 2QFY17

EBITDA margins outlook: We expect EBITDA margins to recover from 17.1% in FY18 to 19% in FY20e (not materially different from FY17 margins of 18.8%). FY18 margins were lower mainly because of the shutdown of the PVC resin and power plants, as well as a lower PVC-EDC spread in 2QFY17 when margins dropped to 10.5%.

A chemical plant usually shuts down once in 2-3 years and, therefore, the next maintenance shutdown should only be in FY21e, in our view. Also as PVC markets get better, we should see lower margin volatility. Our EBITDA margins estimates of FY19-21e, averaging 18.3%, are in fact lower than FY17 levels.

Key things to watch:

1) **PVC-ethylene/EDC spread:** As discussed above, the key driver of the resin segment's earnings is the PVC-ethylene/EDC spread – the most profitable part of Finolex's business. As seen in the chart above (Exhibit 57), the spread has broadly been an indicator of segment earnings.

2) **Monsoon:** Pipes and fittings demand in both the agriculture and construction sectors slow down during the monsoon each year and, therefore, an extended monsoon season can have a significant impact on Finolex's earnings. However, a good monsoon increases farmers' purchasing power and pushes up earnings for the rest of the year.

3) **Strong construction activity:** While only 20-30% of Finolex's sales are related to the housing/construction sector, this is expected to grow, given the introduction of the cPVC portfolio. Strong construction activity can drive pipes demand and margins.

Finolex's PVC peers

Mexichem (MEXCHEM.MX, MXN59.78, TP MXN84.00, Buy) is one of the largest PVC producers in the world with capacity of approximately 1.2mtpa. Its PVC production is ethylene-based, giving it a cost advantage over coal- and naphtha-based producers. We expect to see continued margin expansion in an environment of higher prices, along with increasing demand from a growing construction sector in the Americas (*Mexichem – Buy: A non-chemical reaction*, 17 May 2018).

Formosa Plastics (1301.TW, TWD110, TP TWD123, Buy) (FPC) is the second-largest PVC company in the world in terms of total production capacity. The company has PVC capacity located in Taiwan, China and the US, all ethylene-based PVC production, which is benefiting from stronger PVC margins. We expect PVC and caustic soda to see margin expansion, given robust demand and limited supply additions (*Taiwan Petrochemicals: Revenues and product margins both up in April*, 7 May 2018).

Appendix – Company profile

Finolex Industries is a PVC pipes and fittings manufacturer, which, unlike its peers – Supreme and Astral – is 'backward integrated' into PVC resin manufacturing as well. PVC pipes are extensively used in agriculture for transportation of water from bore wells and canals for field irrigation. PVC pipes are also used in housing and construction for management of potable, rain or waste water. Around 70-80% of Finolex's PVC pipes sales are driven by the agriculture business.

The company is investing to increase its pipes and fittings capacity by c30% vs FY17 to 370ktpa by FY19. However, the main profitability driver lately has been the 272ktpa PVC resin plant in Ratnagiri (c20% of its capacity in India).

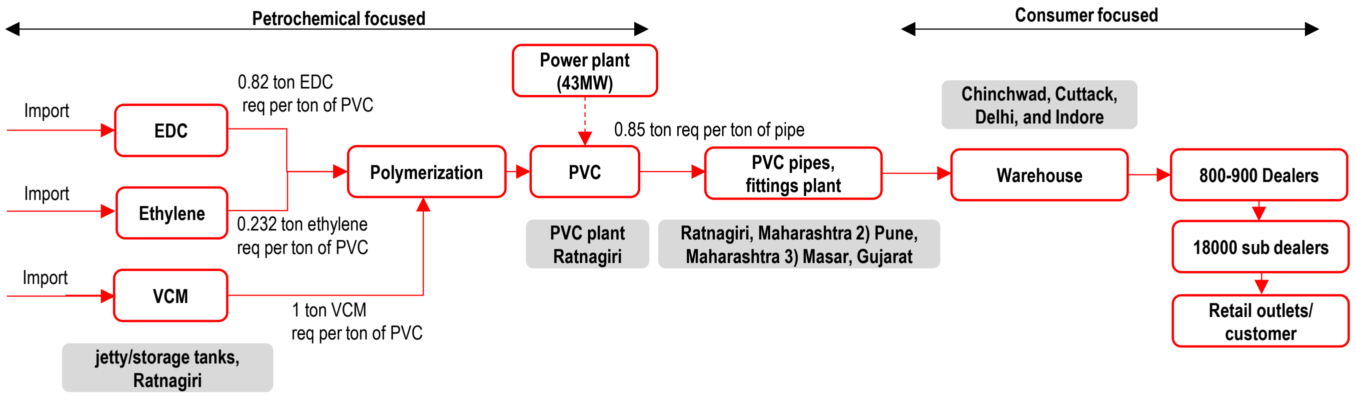
Finolex's segments are bifurcated on the basis of products sold.

Segments
Finolex has two main segments: PVC resin, and PVC pipes and fittings.

PVC resin business: 45% of Finolex's sales and 70% of profits are generated from the PVC resin business. Finolex has a total PVC resin manufacturing capacity of 272ktpa through two production processes – the EDC ethylene route (c155ktpa) and the VCM route (c115ktpa). PVC production from the EDC-ethylene route is significantly more profitable than the VCM route and, therefore, the main profit driver. The resin is sold both internally to the pipes and fitting business – at market prices – as well as to external customers. Finolex does not have any plans to increase its resin capacity and management's focus remains on increasing pipes and fittings capacity. Given that resin is sold internally at market prices, increasing pipes and fittings capacity would not have any impact on the profitability of its PVC resins business.

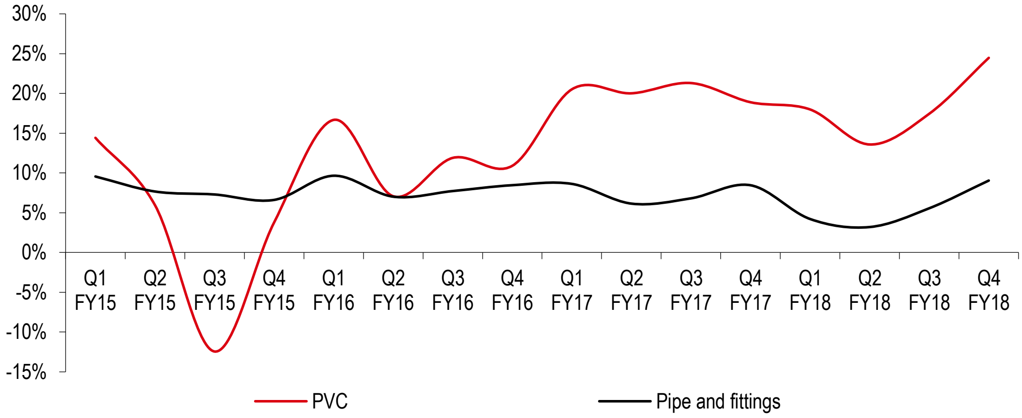
PCV pipes and fittings business: Generating 55% of sales and 30% profits, this segment is less profitable than the resin business. However, its margins are relatively more stable. Unlike the resin business, Finolex is actively investing in growing its pipes and fittings capacity. From FY12-17 capacity has grown more than 60% and the company plans to increase this by 30% to 370ktpa by FY19 with capex of INR25bn.

Ex58: Finolex: At a glance



Source: Company data, HSBC estimates

Ex 59: Resin vs Pipes and fitting margins



Source: Company data

Key customers: Around 70-80% of Finolex's pipes sales is for the agriculture market, while the remainder is for the housing/construction sector. As a policy, the company does not take part in government tenders and relies solely on retail sales. It has one of the best rural penetration rates in the pipes segment through a network of 800-900 dealers, as well as 18,000 sub dealers, selling 1,500 SKUs. The strength of the brand name/quality is evident by the fact that it does not extend any credit to its customers, following a cash-and-carry model for its entire product range (except for its recently launched cPVC pipes and fittings segment).

Plant location, geographic reach: Most of Finolex's plants are located in Went India. Finolex has a 272ktpa PVC resin production plant in Ratnagiri, Maharashtra, powered by a captive 43MW plant. It has three pipes and fittings plants, all in the western part of India: 1) Ratnagiri, Maharashtra, 2) Pune, Maharashtra, and 3) Masar, Gujarat. Not surprisingly, as the chart (Exhibit 66) shows, most of its sales are in the West and South India.

The company also has four warehouses to supply its distributors quickly in Chinchwad (Maharashtra), Cuttack (Odisha), Delhi, and Indore (Madhya Pradesh).

Feedstock: Finolex imports all of its feedstock – VCM, EDC and ethylene, primarily from the Middle East and the US. It has an in-house cryogenic jetty next to its resin plant in Ratnagiri, Maharashtra, through which the feedstock is transported to the plant from the importing ships. The jetty closes for four months in a year during the monsoon – from mid-May to mid-September – and, therefore, the feedstock for these months is stored in tanks next to the jetty.

Ex 60: Finolex: Product portfolio

Pipes and fittings: Product portfolio

Agricultural	**Description**
uPVC pipes	Unplasticised, rigid pipes, most commonly used for the transportation of water
Casing pipes	Mostly used in bore wells to provide protection and stability
Column pipes	Also known as riser or drop and are used in the submersible pumps/borehole pumps
Solvent cement	Used to join PVC pipes together or with fittings
Construction/Plumbing	**Description**
uPVC/ASTM pipes	Unplasticised, rigid pipes, most commonly used for the transportation of water
cPVC pipes	Chlorinated PVC pipes can better withstand temperature, pressure vs uPVC pipes
SWR pipes	For soil, waste and rain water management, used for non-pressure applications
Fittings	Used to connect pipes: valves, bends, tees, coupler, elbow

Source: Company data, HSBC estimates

Ex 61: Finolex: Timeline

Year	Events
1981	FIL was incorporated; set up its first rigid PVC pipes manufacturing plant in Pune, Maharashtra
1994	Set up a 130ktpa PVC resin plant in Ratnagiri, Maharashtra
1999	Commenced manufacture of PVC pipes at Ratnagiri
2006	Expanded PVC resin capacity from 130ktpa to 260ktpa
2009	Set up an agriculture pipes and casing pipes unit at Urse, Pune
2012	Set up a new pipe and fittings manufacturing plant at Masar, Gujarat
2014	Set up a warehouse at Cuttack, Odisha, to cater to the eastern India market
2015	Set up warehouses at Delhi and Indore, Madhya Pradesh, to cater to the northern and central India markets
2017	Tie-up with Lubrizol to manufacture and sell Finolex FlowGuard Plus pipes and fittings (cPVC) in India

Source: Company data

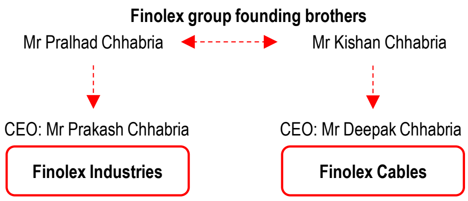
Shareholder structure

Ownership of Finolex group companies is considered to be convoluted – mainly due to the cross-holdings of companies within the group. Finolex Cables holds 32% of Finolex Industries, and Finolex Industries, in turn, holds 14.5% of Finolex Cables. Privately owned Orbit Electricals is also managed by the promoters of the group.

Currency impact: Finolex is exposed to FX movements as it imports most of its feedstock priced in USD. However, product PVC pricing is on an import parity basis and the import parity value of sales of the company approximately equates to the USD payables on a six-month rolling basis due to which a natural hedge exists. Therefore, Finolex does not generally hedge FX by way of forward contracts or options but is exposed to currency movements in the short term.

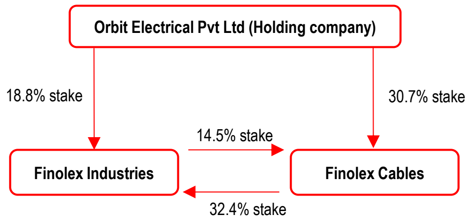
Balance sheet strength: Finolex has a very strong balance sheet. Driven by strong cash generation and limited capex in the last 2-3 years, the company has been paying down debt with net debt declining to INR117m in FY18 from INR5.7bn at the end of 2015. We see scope to increase dividends despite the present capex plans, given the strong cash generation of the company.

Ex 62: Finolex group: Key people



Source: Company data

Ex 63: Finolex group: Holding structure



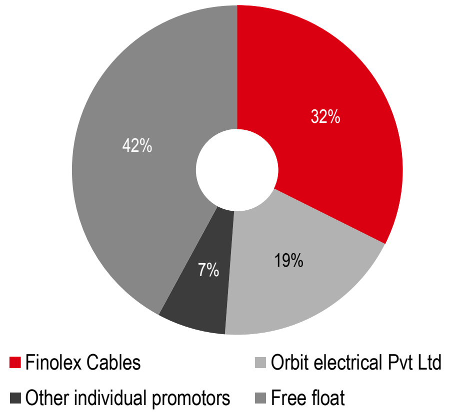
Source: Company data

Ex: 64 Finolex: Income statement: key line items

Income statement (INRm)	2017	2018	2019e	2020e	2021e	2022e
PVC Resin	17,567	17,784	18,857	19,756	19,527	20,191
PVC Pipes and fittings	22,169	23,288	27,022	32,776	37,705	43,017
Power	1,449	1,423	1,423	1,423	1,423	1,423
Elimination	-11,308	-14,181	-14,406	-15,480	-15,635	-16,578
Total Revenue	**29,876**	**28,314**	**32,896**	**38,476**	**43,021**	**48,053**
COGS	19,948	18,580	22,015	25,865	29,559	33,699
Gross profit	**9,928**	**9,734**	**10,881**	**12,611**	**13,462**	**14,354**
Employee cost	1,049	1,161	1,349	1,578	1,765	1,971
Other operational cost	3,249	3,733	3,733	3,733	3,733	3,733
EBITDA	**5,630**	**4,839**	**5,798**	**7,299**	**7,964**	**8,650**
Depreciation	550	606	656	696	717	736
EBIT	**5,080**	**4,233**	**5,142**	**6,603**	**7,247**	**7,914**
Income from associates	93	163	180	198	218	239
Finance cost (net)	153	98	54	48	42	36
Others	232	244	250	250	250	250
PBT	**5,251**	**4,542**	**5,517**	**7,002**	**7,672**	**8,367**
Tax	1,703	1,479	1,876	2,451	2,685	2,928
Net income	**3,548**	**3,063**	**3,642**	**4,551**	**4,987**	**5,438**
EPS	**28.6**	**24.7**	**29.3**	**36.7**	**40.2**	**43.8**
DPS	**11.5**	**10.0**	**12.5**	**16.0**	**18.5**	**21.0**
Growth						
Sales	5.1%	-5.2%	16.2%	17.0%	11.8%	11.7%
EBITDA (recurring)	39.2%	-14.0%	19.8%	25.9%	9.1%	8.6%
EBIT (recurring)	43.6%	-16.7%	21.5%	28.4%	9.8%	9.2%
Net income	37.7%	-13.7%	18.9%	25.0%	9.6%	9.1%
EPS (recurring)	47.1%	-13.7%	18.9%	25.0%	9.6%	9.1%
Profitability						
Gross profit margin	33.2%	34.4%	33.1%	32.8%	31.3%	29.9%
Rec EBITDA margin	18.8%	17.1%	17.6%	19.0%	18.5%	18.0%
Rec EBIT margin	17.0%	15.0%	15.6%	17.2%	16.8%	16.5%
Reported Net Income margin	11.9%	10.8%	11.1%	11.8%	11.6%	11.3%

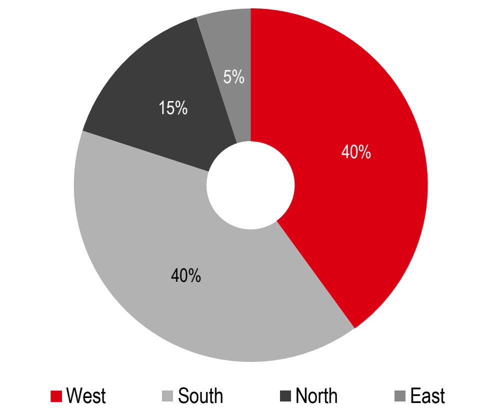
Source: Company data, HSBC estimates

Ex 65: Finolex Industries: ownership structure



Source: Company data

Ex 66: Finolex: regional sales split (2017)



Source: Company data, HSBC estimates

Ex 67: Finolex: Cash flow: Key line items

Cash Flow (INRm)	2017	2018	2019e	2020e	2021e	2022e
PBT	**5,251**	**4,542**	**5,517**	**7,002**	**7,672**	**8,367**
Depreciation	550	606	656	696	717	736
Tax	-1,752	-1,479	-1,876	-2,451	-2,685	-2,928
Cash from operation	**2,342**	**2,497**	**3,380**	**4,217**	**4,699**	**5,054**
Capex	**-936**	**-1,250**	**-1,250**	**-1,000**	**-1,000**	**-1,000**
(Purchase) and sale of financial instruments	1,229	0	0	0	0	0
Cash from investing	**479**	**-1,250**	**-1,250**	**-1,000**	**-1,000**	**-1,000**
Repayment of debt	-1,174	65	-100	-100	-100	-100
Dividends	-1,474	-1,241	-1,551	-1,986	-2,296	-2,606
Cash from financing	**-2,761**	**-1,176**	**-1,651**	**-2,086**	**-2,396**	**-2,706**
Net increase in CACE	**59**	**71**	**479**	**1,131**	**1,303**	**1,348**
CACE at the beginning of the year	104	163	234	714	1,845	3,148
CACE at year end	**163**	**234**	**714**	**1,845**	**3,148**	**4,495**
Cash Flow Ratios						
Capex/Sales	3%	4%	4%	3%	2%	2%
Depreciation/Sales	59%	48%	52%	70%	72%	74%

Source: Company data, HSBC estimates

Ex 68: Finolex: Balance Sheet: Key line items

Balance Sheet (INRm): Key line items	2017	2018	2019e	2020e	2021e	2022e
Property, plant and equipment	8,517	8,817	9,411	9,714	9,998	10,262
Financial Investments	12,070	15,412	15,412	15,412	15,412	15,412
Non-current assets	**22,182**	**26,979**	**27,573**	**27,877**	**28,160**	**28,425**
Inventories	5,574	6,116	7,246	8,513	9,729	11,092
Financial Investments	566	656	656	656	656	656
Trade receivables	525	431	501	586	655	732
Cash and cash equivalents	163	234	714	1,845	3,148	4,495
Current assets	**7,758**	**8,081**	**9,941**	**12,622**	**15,427**	**18,454**
Total assets	**29,940**	**35,060**	**37,514**	**40,499**	**43,588**	**46,878**
Deferred tax liabilities (net)	1,496	1,416	1,416	1,416	1,416	1,416
Borrowings	613	644	644	644	644	644
Non-current liabilities	**2,225**	**2,198**	**2,198**	**2,198**	**2,198**	**2,198**
Borrowings	942	1,007	907	807	707	607
Trade payables	2,275	2,505	2,968	3,487	3,985	4,543
Current liabilities	**4,567**	**4,911**	**5,274**	**5,693**	**6,091**	**6,549**
Equity share capital	1,241	1,241	1,241	1,241	1,241	1,241
Other equity	21,907	26,710	28,801	31,367	34,058	36,890
Total equity	**23,148**	**27,951**	**30,042**	**32,608**	**35,299**	**38,131**
Total equity and liability	**29,940**	**35,060**	**37,514**	**40,499**	**43,588**	**46,878**
BS ratios						
Gross Debt	942	1,007	907	807	707	607
Net Debt	213	117	-462	-1,694	-3,097	-4,544
Net Debt/EBITDA	0.04	0.02	-0.08	-0.23	-0.39	-0.53
Accounts Receivable Turnover	56.9	65.6	65.6	65.6	65.6	65.6
Inventory Turnover	3.6	3.0	3.0	3.0	3.0	3.0
Accounts Payable Turnover	8.8	7.4	7.4	7.4	7.4	7.4

Source: Company data, HSBC estimates

Ex 69: Finolex: DCF summary (INRm)

DCF calculation		2017	2018	2019e	2020e	2021e	2022e	2023e	2024e	Terminal
Sales		**29,876**	**28,314**	**32,896**	**38,476**	**43,021**	**48,053**	**50,216**	**52,476**	
Sales growth %		5%	-5%	16%	17%	12%	11.7%	4.5%	4.5%	
EBIT		5,080	4,233	5,142	6,603	7,247	7,914	8,270	8,642	
EBIT margin		17%	15%	16%	17%	17%	16%	16%	16%	
Total EBIT		**5,080**	**4,233**	**5,142**	**6,603**	**7,247**	**7,914**	**8,270**	**8,642**	
Tax		1,703	1,479	1,876	2,451	2,685	2,928	3,060	3,198	
Zakat as a % of EBIT		33.5%	34.9%	36.5%	37.1%	37.1%	37.0%	37.0%	37.0%	
NOPAT		**3,377**	**2,754**	**3,266**	**4,152**	**4,562**	**4,985**	**5,210**	**5,444**	
Depreciation		550	606	656	696	717	736	769	804	
Gross Cash flow		**3,927**	**3,360**	**3,922**	**4,848**	**5,278**	**5,721**	**5,979**	**6,248**	
Increase in Working Capital		(1,531)	(218)	(737)	(833)	(787)	(881)	(356)	(372)	
Chg in WC as a % of inc sales		106%	-14%	16%	15%	17%	18%	16%	16%	
Capex		(936)	(1,250)	(1,250)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	
Income from Associates		105	163	180	198	218	239	250	261	
Free Cash Flow		**1,565**	**2,056**	**2,115**	**3,213**	**3,709**	**4,079**	**4,873**	**5,137**	**132,791**
Year			0	1	2	3	4	5	6	7
Cost of Capital	9%									
PV of Cash Flow			0	1,944	2,716	2,883	2,915	3,202	3,104	73,771
NPV of Cash Flows	**93,543**									
Number of shares	124.1									
Long Term Growth rate	4.5%									
NPV of Cash Flows	93,543									
Net Debt	213									
Equity Value	93,330									
Number of shares	124.1									
Price per share	**750.0**									
WACC Calculation										
Cost of Debt	12.0%									
Risk free rate	2.5%									
Risk premium	6.5%									
Adjusted Bloomberg beta	1.0									
Cost of Equity	9.0%									
Marginal tax rate	35%									
Target Equity ratio	0.8									
Target Debt ratio	0.2									
WACC	**9%**									

Source: Company data, HSBC estimates

Disclosure appendix

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