Initiating Coverage | 27 February 2018
Sector: Agrochemicals

UPL

Reaping growth

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UPL

BSE Sensex	S&P CNX
34,346	10,554

Stock Info

Bloomberg	UPLL IN
Equity Shares (m)	505
52-Week Range (INR)	902 / 675
M.Cap. (INR b)	364.1
M.Cap. (USD b)	5.6
1, 6, 12 Rel. Per (%)	-1/-23/-18
Avg Val, (INR m)	1220.0
Free float (%)	72.2

Financial Snapshot (INR b)

Y/E Mar	2018E	2019E	2020E
Sales	175.8	196.1	222.3
EBITDA	35.8	40.7	47.0
NP	21.7	23.8	28.1
EPS (INR)	43.0	47.2	55.6
EPS Gr. (%)	8.9	9.7	17.9
BV/Sh. (INR)	180.7	218.2	262.4
P/E (x)	16.8	15.3	13.0
P/BV (x)	4.0	3.3	2.7
RoE (%)	26.3	23.6	23.1
RoCE (%)	19.3	18.9	19.3

Shareholding pattern (%)

As On	Dec-17	Sep-17	Dec-16
Promoter	27.8	27.9	27.8
DII	11.5	10.9	9.7
FII	39.6	40.8	51.9
Others	21.1	20.5	10.6

UPL

Reaping Growth

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~~**Please click here for Video Link**~~

CMP: INR721 TP: INR945(+31%) Buy

UPL is the second largest post-patent global player in crop protection. It has evolved from a crop protection chemicals company into a complete agro solutions provider, offering seeds, crop protection chemicals, biologicals, soil nutrients and post-harvest solutions. It is well diversified across geographies, with revenue contribution of 32% from Latin America, 20% from India, 17% from North America, 13% from Europe, and 18% from Rest of the World.

Reaping growth

Generic pesticides, backward integration to drive profitability

- **A multitude of products going off-patent would unleash a generics opportunity of ~USD3b over CY17-20. With strong R&D and integrated manufacturing facilities, UPL is in a sweet spot to grab the impending opportunity in the generics market.**
- **The company is also set to benefit from the increasing phenomenon of pest resistance across crops with its broad array of products, which enables it to launch new combinations to tackle resistance.**
- **Pest resistance to major agrochemical 'glyphosate' (market size of ~USD5b) could provide UPL with its next key growth driver – its variant, 'gluphosinate'.**
- **We expect UPL to clock ~12% revenue CAGR and ~14% PAT CAGR over FY18-20 and value the company at 17x FY20E EPS of INR55.6, arriving at a TP of INR945. Initiate coverage with Buy.**

Strong R&D, backward integration to help grab fungicide opportunity

UPL possesses in-house manufacturing expertise, reducing its dependence on third-party partners. Backward integration enables 70-75% of its manufacturing to take place in-house (50-55% in India and 20% overseas). It imports 10-15% from China and Europe (France and UK). Its gross margin was at 53% in FY17 against domestic player average of 43.6% (FY17) and global player average of 35.6% (CY16). The size of the global fungicides market is USD15b (CY17) and its share in the global agrochemicals market has increased from ~20% in CY00 to 27% in CY17. Given the high growth expected in fungicides, UPL too has aligned itself with the industry – the contribution of fungicides to its revenue has increased from 5% in FY03 to 29% in FY17. With just ~4.5% share in the global fungicides market, UPL has immense growth opportunity in the segment.

Products worth USD3b going off-patent – opportunity unleashed for UPL

Products worth USD3.7b have already gone off-patent over CY15-17. This has led to a shift from the use of high value patented products to generic agrochemicals, enabling 16% CAGR for UPL over FY15-17. The multitude of products going off-patent is expected to create ~USD3b opportunity for the generics industry over CY17-20. UPL is adept at identifying and registering products attracting robust demand even after going off-patent and is therefore expected to leverage the impending opportunity well. The generics opportunity has been supported by subdued farm income, which should continue, as higher closing stocks would keep prices of agricultural commodities in check.

'Gluphosinate' herbicide likely to be a boon for UPL

In CY14, UPL launched two brands of the herbicide, gluphosinate in the USA for soybean and corn to fill gaps in its portfolio both from a crop and regional perspective. One brand, *Lifeline* is targeted at regions outside the Midwest. The other brand, *Interline* is solely for the Midwest, given the quantum of area under soybean and corn cultivation in the region. The company has gradually established presence of gluphosinate in markets across geographies and now competes directly with glyphosate, the size of which is estimated at ~USD5b. Additionally, glyphosate has been facing headwinds, as the targeted herbs have gradually developed resistance against it and the active ingredient is also under evaluation by WHO for being carcinogenic in nature. Given the headwinds surrounding glyphosate, gluphosinate could be the next key growth driver for the company.

New launches and branded products to drive growth

UPL has been continuously investing in brand building and innovation, and this has paid rich dividends. Its EBITDA margin has improved from 15-16% over FY09-10 to 19-20% over FY16-17. Branded and innovative products command higher margins than commoditized products. The revenue share of branded products has gradually increased from 75% in FY14 to 86% in FY17. The company has launched over 240 products and filed 195 patents over FY15-17. Its global product registrations have increased from 4,692 in FY15 to 5,934 in FY17. The revenue contribution from innovative products launched in the past three years has grown from 5% in FY15 to 15% in FY17. Revenue from innovative products is likely to improve further, aided by products launched in the last 2-3 years and by planned product launches across the globe in the next 2-3 years. Rising contribution of new products is likely to improve the revenue mix; higher share of value-added products will aid revenue growth.

Valuation and view

We believe UPL is one of the best bets on the global agrochemicals industry, as it offers (a) a robust product pipeline, (b) an integrated business model (backward integration of 70-75%), (c) a broad product portfolio covering various crops across seasons, (d) geographical diversification, and (e) scope to gain further market share (from the current ~4%). The stock has re-rated from a one-year forward P/E of 7x (FY14) to a one-year forward P/E of 16x (FY18E). We expect the re-rating to continue on improving fundamentals coupled with healthy earnings growth. At the current market price, average free cash flow yield works out to 4.3% over FY18-20 against the last three years' average of 4%. We estimate ~12% CAGR in sales and ~14% CAGR in PAT over FY18-20, with EBITDA margin expanding 80bp to 21.2%. We value UPL at 17x FY20E EPS of INR55.6, arriving at a TP of INR945. We initiate coverage with **Buy**.

Offering a complete basket of agro solutions

Not just a crop protection chemicals company

Has transformed from a local to a global generics player

UPL has transformed its business over the years from crop protection chemicals to comprehensive agro solutions. It has evolved from a crop protection chemicals company with narrow application relevance into a complete Agro solutions provider offering seeds, crop protection chemicals, biologicals, soil nutrients and post-harvest solutions. It has created a product basket targeting multiple crops, fruits and vegetables, insulating itself from excessive dependence on any one segment. It is the second largest post patent global player in crop protection market.

Incorporated in 1969, UPL started manufacturing phosphorous-based industrial chemicals. Over 1980-2000, it diversified into agrochemicals and specialty chemicals. Over 1980-2017, it transformed itself from a local to global player, with over 25 acquisitions across the globe. It has focused on identifying and registering products with robust demand even after going off-patent across geographies. Currently, UPL markets products in more than 130 countries.

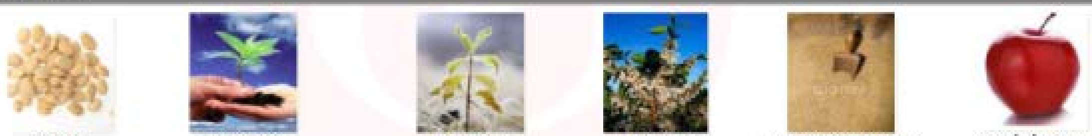
UPL has evolved from an India-based manufacturer of generic products to a global player. Its manufacturing operations have expanded from three units in India to 33 manufacturing units (14 in India and 19 international) in 12 countries. UPL has been strategically keeping manufacturing plants close to markets for maximizing its global logistical efficiency and market responsiveness.

Over the past four decades, it has created a strong presence across the sectoral value chain – R&D, registration, manufacturing, packaging and marketing. Presence across the value chain has helped the company to emerge as one of the most holistic generic agrochemical companies in the world.

Exhibit 1: UPL – presence across the value chain of agro solutions

Seeds & Seeds Treatment | Crop protection | Storage | Post Harvest

Full suite of crop solutions



	Seeds	Herbicide	Insecticide	Fungicide	Fumigants & Storage	Speciality Post Harvest
Primary use	Provide added value to farmers through superior genetics	Prevent or reduce weeds which hamper crop growth and harvest	Control insect pests which reduce crop yields and quality	Prevent and cure fungal plant diseases	Pest control	Technical applications like special coatings
Key products	Sorghum,Corn, Canola, Sunflower, Vegetables	Propanil, Asulam, Metribuzin, Glutocir, Pendimethalin, S-Met	Acephate, Mono, Imida, Sympyrothin	Mancozeb, Copper, Sulphur	Aluminum Phosphide (ALP); Magnesium Phosphide	Natural coatings; CIPC
Key brands	Advanta, Alta, Pacific, Golden, Nutrisun	Stam, Devrinol Tricor, Asulax, Lifeline, Satellite, Lagaam, Saathi, Mocasin	Lancer Gold, Ulala, Phoskill, Batus Gold, Banter	Manzate, Vondozeb, Microthiol, Unizeb Gold, Glory, BB20, TBCS40, Saaf	Weevilcide, Quickphos	Oorja

Source: Company

Exhibit 2: UPL's businesses-a synopsis

	India	Latin America (Incl. Brazil)	Europe	North America	ROW
Revenue contribution-FY17 (%)	20%	32%	13%	17%	17%
Key Crops	❖ Rice-25%, cotton-31%, fruits & vegetables-16% of sales	❖ Soybean, oil crops, cotton, coffee, corn, sugarcane, fruits & vegetables (Soybean and oil crops contribute 53% of revenue in Brazil and 26% in rest of Latin America)	❖ Sugar beet, fruits (Grapes) & vegetables, and oil crops	❖ Fruits & vegetables, rice, tree nut and aquatic (fruits and vegetables contribute ~60% in USA)	❖ Rice, cotton, wheat, sugarcane, fruits & vegetable and pulses (fruits & vegetables contribute ~66% of sales in Africa & Middle East)
key countries		❖ Brazil (over 60% of sales*), Mexico, Argentina, Columbia, Paraguay, Chile, Uruguay, Bolivia	❖ France, Italy, Spain, Netherlands, Germany, and UK contribute more than 60% of sales*	❖ USA and Canada contribute over 80% of sales*	❖ Indonesia, Thailand, Japan, Australia, Pakistan, China and Africa
Agrochemical Market size (USD b)	4.5	14.5	11.6	9.4	16
UPL Sales (USD m)	452.6	646.4	291.2	395.2	384.6
UPL Market share (%)	10.1%	4.5%	2.5%	4.2%	2.4%
Currency exposure (Sales & Raw material)	❖ Net Exporter	❖ Sales in the northern part of Brazil (~50%) are made in Brazilian Real but pegged to USD. Sales in the southern part (~50%) are in Brazilian Real. Products are imported from India and China in USD. Company uses plain vanilla forward cover.	❖ Sales in EUR and raw material majorly in EUR (natural hedge)	❖ Sales and raw material in USD (natural hedge)	❖ Major sales and raw material in USD (natural hedge)
Sales & Marketing (Employee)	❖ Sales-480, Marketing-72	❖ Sales-181, Marketing-49	❖ Sales-66, Marketing-15	❖ Sales-31, Marketing-5	❖ Sales-50, Marketing-18
Branded/Generic sales mix (%)	78%/22%	95%/5%	90%/10%	94%/6%	75%/25%
Market Growth CAGR FY12-17 (%)	9%	5%	-1%	2%	0%
UPL sales CAGR FY12-17 (%)	14%	22%	9%	15%	19%
Key Brands	❖ Ulala, Phoskill, Lancer Gold, Saaf, Saathi, Starthene, Atabron, Disect, Wuxal, Avancer Glow and Cuprofix, Iris,Lagam,Patela	❖ Manzate, Vondozeb, Unizeb, Lancer, Quickphos, Unizeb Gold, Clorin, Zartan, Danado, Imida Gold, LancerGold, Manzate, Vondozeb, Unizeb, Lancer, Quickphos, Unizeb Gold, Clorin, Zartan, Danado, Imida Gold, LancerGold, Glory	❖ Devrinol, Microthiol, Penncozeb, Cuprofix, Metafol, BeetUp	❖ Manzate, Microthiol, Cuprofix, Weevilcide, Super Tin, Blazer, Surflan, Tricor, Banter	❖ Penncozeb, Kinalux, Quickphos, Asulox
Growth Drivers	❖ Ulala, Saaf and Phoskill brands joined the INR1b club ❖ India continues to grow at healthy pace with balanced product portfolio across crops ❖ Greater customer engagement ❖ Introduction of biological and nutritional products ❖ Strategic focus on vegetables and fruits	❖ Successful launch of eight new products (six herbicides, fungicides and insecticides) ❖ Growing need to address weed resistance ❖ Soybean and oil crops continue to drive growth in Latin America	❖ Higher acreage of sugar beet to drive Europe sales	❖ Fruits & vegetables continue to drive growth in North America. ❖ Launched three products (two herbicides and a fungicide). ❖ Launched two aquatic business products	❖ Established distribution partnership in Nigeria. ❖ Created a regional base in Kenya. ❖ Expansion into China

Source: Company, *MOSL estimates, USD/INR-66.1

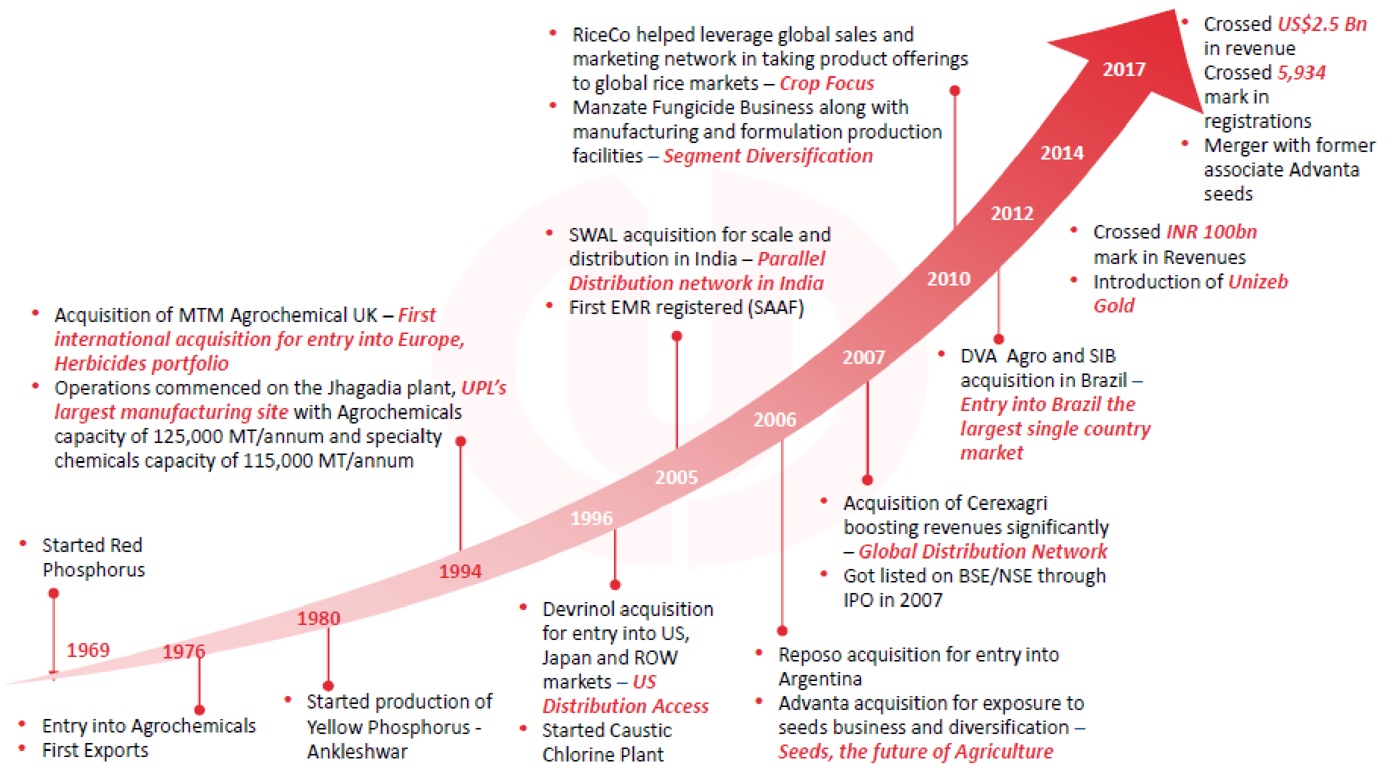
Exhibit 3: UPL – successfully transformed itself from a local to a global player

	1969 – The beginning	1980 – Growth through product diversification	2000–2017 – End to end global agri input presence
Product portfolio	• Phosphorus based industrial chemicals	• Diversified into agrochemicals and specialty chemicals • Post patent portfolio	• Patented, proprietary, post-patent • Seeds to pre and post harvest • Products across segments: Herbicides, Insecticides and Fungicides
Strategy	• Import substitution	• Global manufacturing • Cost competitiveness • Achieving market share • Exports	• Focus on innovative formulations • Creating brands • Customer engagement • Market expansion through own registrations
Presence	• Presence only in the protected Indian market	• Exports to 63 countries	• Exports to over 130 countries • Direct presence in major markets with own distribution & sales force in > 40 nations
Revenues	• c. $4mm in 1979-80	• c. $200mm 1999-2000 • 39% International revenues	• c. $2.5 bn 2016-17 • 80% International revenues

UPL has successfully transformed into a global player in the crop protection space

Source: Company

Exhibit 4: The journey of UPL



Source: Company

Integrated business model in agrochemicals

Over the years, UPL has built a robust business model through backward and forward integration. This approach has enabled it to secure reliable raw materials for multi-site manufacturing through an extensive downstream range of products and services. UPL has pioneered 'backward integration' in agrochemicals and is one of the few companies in the world to manufacture complex organo-phosphorus compounds starting from the basic raw material, rock phosphate ore. It has successfully extended this strategy to other products – it has set up an integrated plant for caustic chlorine, which is the basic building block for agrochemicals and specialty chemicals. Backward integration enables 70-75% of its manufacturing to take place in-house (50-55% in India and 20% overseas). It imports 10-15% from China and Europe (France and UK). The backward integration enables UPL to command better gross margin than not just domestic players but also global peers (refer exhibit-5).

UPL possesses in-house manufacturing expertise, reducing its dependence on third-party partners thereby providing customized flexibility and moderated costs. UPL's formulation plants are located around the world while its synthesis plants are located in India, as formulation plants require lower capex while synthesis plants are capex intensive. India has the advantage of 30-40% lower capex than required for equivalent facilities in western countries.

Exhibit 5: UPL's higher gross margin indicates its manufacturing efficiency

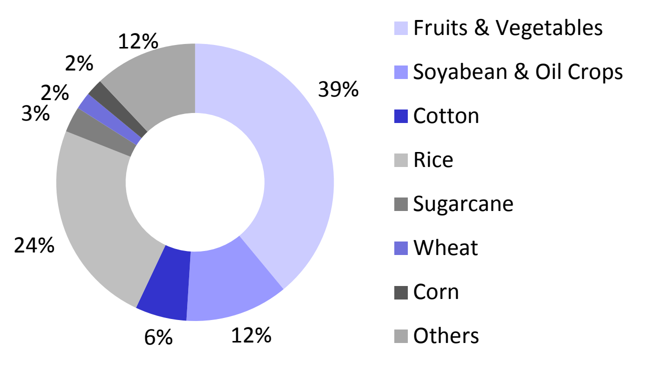
International					
Gross margins (%)	**CY12**	**CY13**	**CY14**	**CY15**	**CY16**
Adama	31.7	31.4	31.8	31.6	33.6
American Vanguard	44.0	44.9	38.3	38.6	41.1
Bayer Cropscience	52.0	51.4	52.0	54.3	56.6
BASF	24.8	24.9	24.9	27.1	31.8
Bayer	52.1	51.4	52.0	54.3	56.6
China National Chemical Corp	12.0	10.1	11.4	14.1	16.3
DuPont			40.1	39.9	41.2
FMC Corp	37.1	38.3	37.1	32.8	36.5
Ishihara Sangyo Kaisha	29.8	24.1	24.4	33.3	30.4
Lier chemical	22.6	22.2	22.0	24.1	23.9
Monsanto	52.2	51.5	54.1	54.5	52.0
Nufarm	27.4	25.5	26.2	28.7	29.4
Nippon Soda	24.1	24.1	25.1	24.5	25.9
Sumitomo Chem	27.1	25.7	26.9	27.3	33.1
Shenzhen Noposion	41.0	40.8	38.7	44.3	36.4
Syngenta	49.1	45.6	45.8	47.4	49.1
Sharda Cropchem		39.6	33.1	35.8	35.9
Global Average	**33.3**	**32.6**	**33.0**	**34.9**	**35.6**
Domestic					
Gross margins (%)	**FY13**	**FY14**	**FY15**	**FY16**	**FY17**
Excel crop care	34.0	41.2	40.9	45.4	46.3
Dhanuka Agritech	34.6	37.7	37.3	39.0	42.9
Insecticides India	32.8	30.4	32.8	31.8	33.0
PI Industry	41.2	42.0	42.4	44.7	48.9
Rallis India	43.5	45.5	48.4	47.2	46.7
Domestic Average	**37.2**	**39.4**	**40.4**	**41.6**	**43.6**
UPL Gross Margin (%)	**49.0**	**49.5**	**50.2**	**52.7**	**53.1**

Source: Company and Bloomberg

Presence across crops

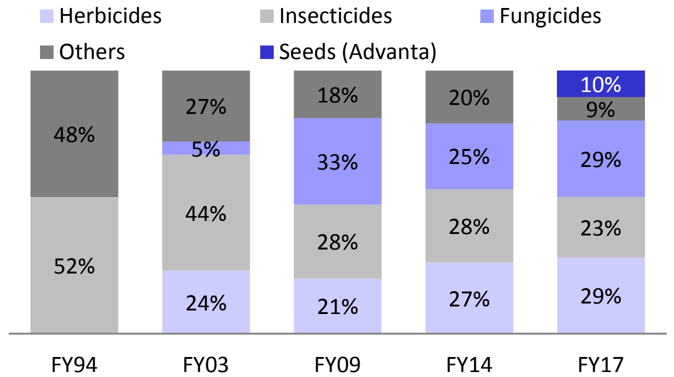
UPL has a broad portfolio, with products catering to more than 10 major crop sectors. Its product range, covering crops across seasons, de-risks it from seasonality.

Exhibit 6: Well diversified across crops, globally



Source: Company

Exhibit 7: Balanced product portfolio across agrochemicals



Source: Company

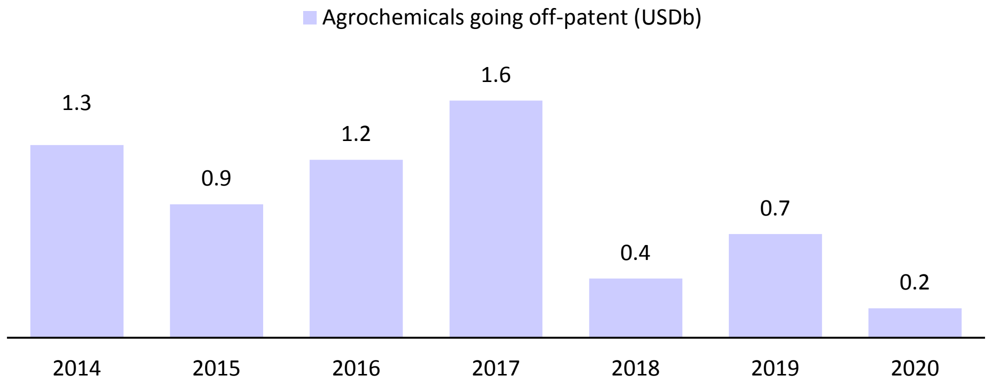
Tapping the generics opportunity

Products worth ~USD3b to go off-patent over 2017-20

Sizable opportunity for generic pesticides…

Generic pesticides account for ~60% of the global crop protection market, while proprietary off-patent and patented pesticides account for the remaining share. Of late, falling agricultural commodity prices, and in turn, falling profitability have been driving US and Latin American farmers towards less expensive generic products. The US and Latin American markets account for ~27% and ~17% of the global agrochemicals market, respectively, and the shift to generic agrochemicals coupled with multitude of products going off-patent is expected to create an attractive opportunity (estimated to be worth ~USD3b over CY17-20) for the generics industry. Products worth USD3.7b have already gone off-patent over CY15-17. While this would result in a contraction in the US and Latin American markets in value terms, it would open a plethora of opportunities for Indian agrochemical companies.

Exhibit 8: ~USD3b opportunity size as products go off-patent over 2017-2020



Source: FICCI & Tata Strategic & Management report

Exhibit 9: Key products going off patent over CY18-22 and their market size

Name	Patentee	Expiry	Type	Globle Sales (USD mn)
Flubendiamide	Nihon Nohyaku	2019	Insecticide	~445
Pinoxaden	Syngenta	2019	Herbicide	~400
Aminopyralid	Dow AgroSciences	2019/2021	Herbicide	350-400
Spirotetramat	Bayer CropScience	2017/2022	Insecticide	~150
Tembotrione	Bayer CropScience	2021	Herbicide	~200

Source: Agropages, Industry data

Exhibit 10: Products going off patent over CY18-22

Active Ingredient	Inventor Company	Category
Aminopyralid	Dow AgroSciences	Herbicide
Amisulbrom	Nissan Chemical Industries	Fungicide
Chlorantraniliprole	DuPont	Insecticide
Cyprosulfamide	Bayer CropScience	Safener
Fenpyrazamine	Sumitomo Chemical	Fungicide
Flubendiamide	Nihon Nohyaku	Insecticide
Flucetosulfuron	LG Chem Investment	Herbicide
Fluopicolide	Bayer CropScience	Fungicide
Isotianil	Bayer CropScience	Fungicide
Mandipropamid	Syngenta	Fungicide
Metamifop	Dongbu Hannong Chemicals	Herbicide
Metofluthrin	Sumitomo Chemical	Insecticide
Metrafenone	BASF	Fungicide
Orthosulfamuron	Isagro	Herbicide
Penflufen	Bayer CropScience	Fungicide
Pinoxaden	Syngenta	Herbicide
Pyrasulfotole	Bayer CropScience	Herbicide
Pyrifluquinazon	Nihon Nohyaku	Insecticide
Pyrimsulfan	Ihara Chemical Industry	Herbicide
Pyroxasulfone	Kumiai Chemical Industry	Herbicide
Pyroxsulam	Dow AgroSciences	Herbicide
Saflufenacil	BASF	Herbicide
Tembotrione	Bayer CropScience	Herbicide
Thiencarbazone	Bayer CropScience	Herbicide
Topramezone	BASF	Herbicide
Valifenalate	Isagro	Fungicide

Source: Agropages, Industry data

Exhibit 11: Key off-patent fungicides (2015-2017)

Name	Patentee	Expire Date	Global Sales (million dollars)	Main Crops
Pyraclostrobin	BASF(E.U)	2015	800	Soybean, corn, cereal, non-agricultural use, fruits and vegetables
Fluoxastrobin	Bayer	2017	165	Cereal, non-agricultural use
Prothioconazole	Bayer	2015	625	Cereal
Metalaxyl-M	Syngenta	2015	345	Corn, potatoes, vegetables and fruits

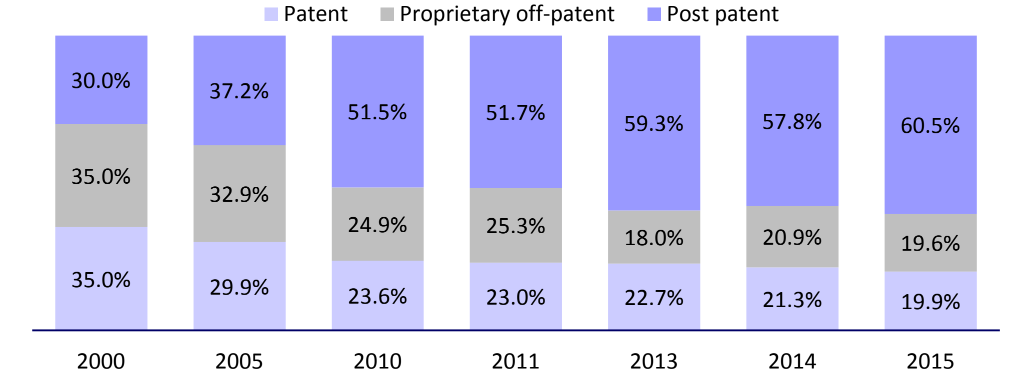
Source: Agropages, Industry data

Exhibit 12: Key off-patent herbicides (2014-2016)

Name	Patentee	Expire Date	Global Sales (million dollars)	Main Crops
Mesosulfuron	Bayer	2014	290	Corn
Foramsulfuron	Bayer	2015	130	Corn
Penoxsulam	Dow	2016	250	Rice

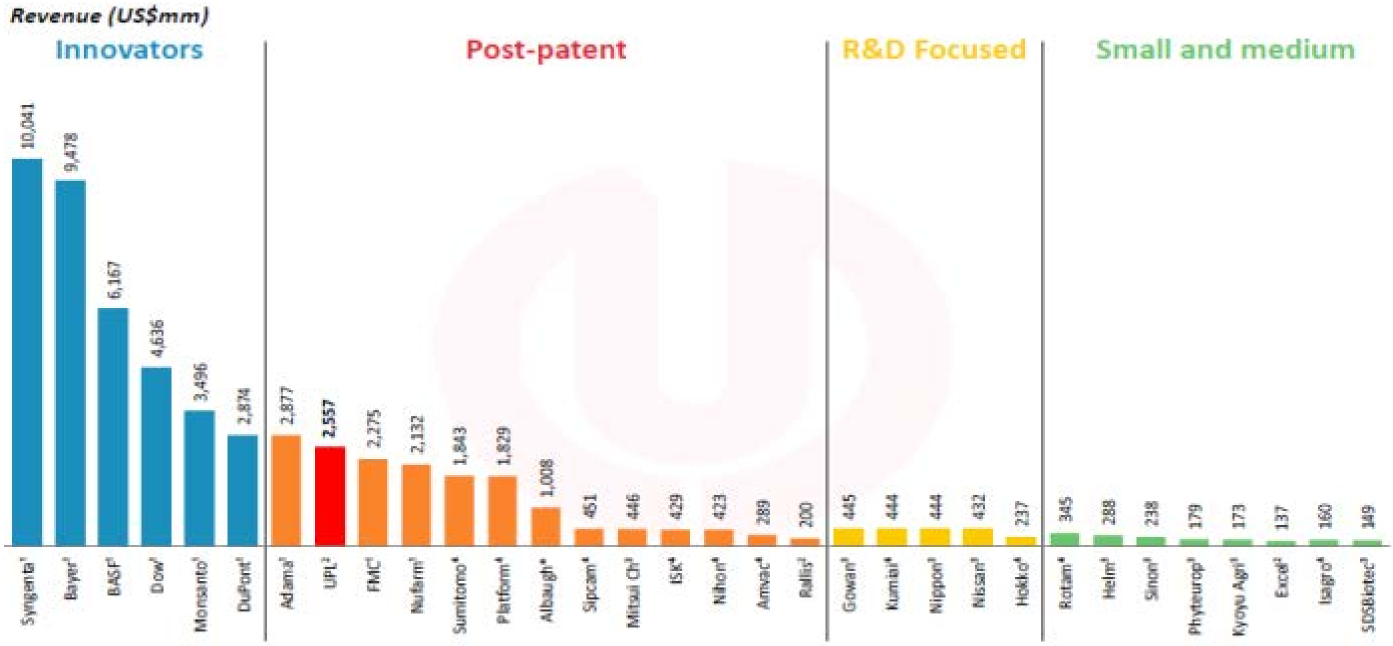
Source: Agropages, Industry data

Exhibit 13: Market share of post-patent products has been increasing steadily



Source: Company

Exhibit 14: UPL holds strong position in post-patent crop protection market



Source: Philip McDougall, Company

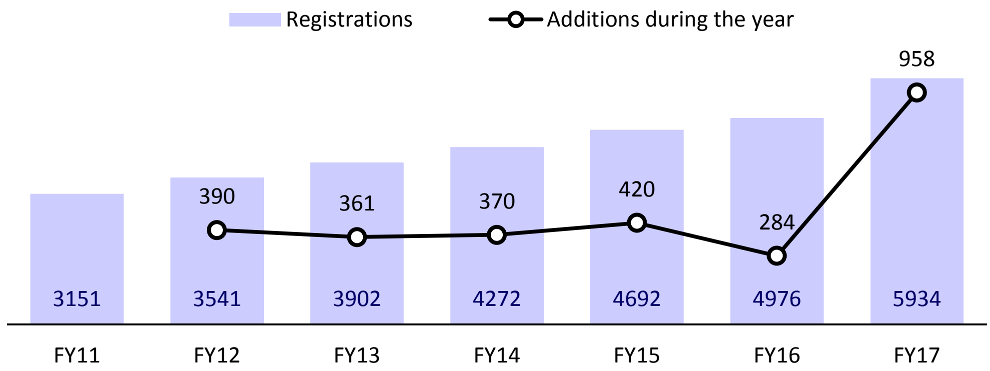
… and UPL is in a sweet spot to tap this opportunity

Ahead of the curve in product registrations

UPL has been a frontrunner in identifying and registering products with robust demand even after they go off-patent, and this is reflected in the continuous rise in its number of registrations across geographies. It has built a strong team of professionals who possess in-depth knowledge and expertise in the registration requirements across countries, which helps reduce the time to go-to-market with new products.

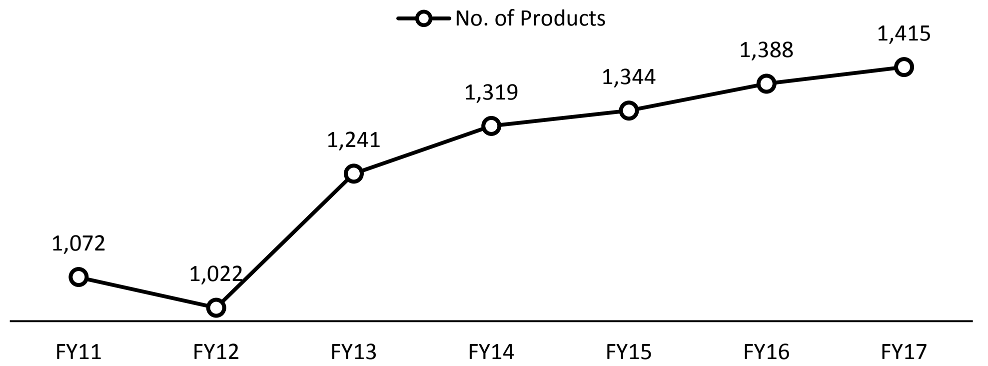
In CY14, UPL launched two brands of gluphosinate for soybean and corn in North America to fill gaps in its portfolio both from the crop and regional perspective. Gluphosinate directly competes with glyphosate, to which the targeted herbs have developed resistance. Given the headwinds surrounding glyphosate, gluphosinate could turn out to be the next key growth driver for UPL. Timely identification and registration of potential products coupled with strong R&D capabilities and cost advantage augurs well for UPL. In FY17, it incurred R&D expenditure of INR3.9b, 2.4% of sales. Its superior network of dealers and distributors enables it to grow faster than the industry.

Exhibit 15: Registrations growing at healthy rate



Source: Company

Exhibit 16: Product portfolio (formulations) continuously improving

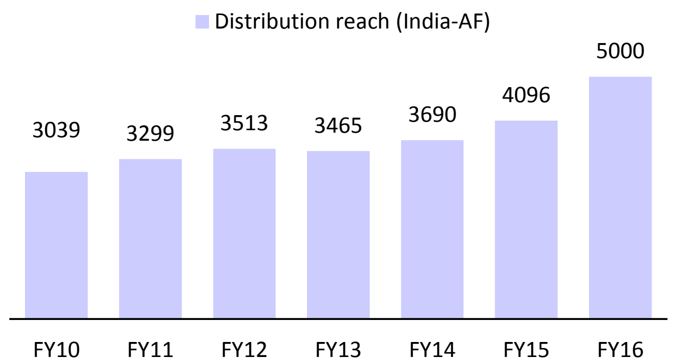


Source: Company

Strong dealers & distribution network enables superior reach

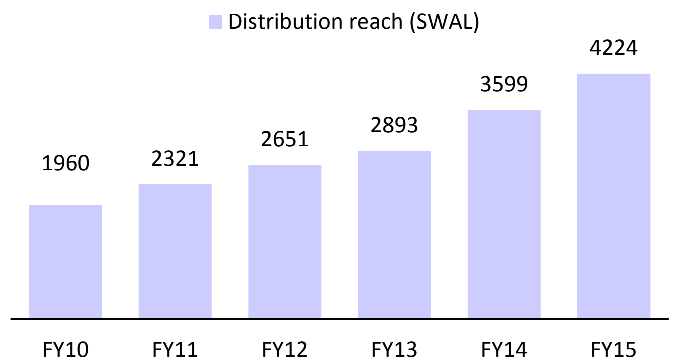
Despite the dominance of existing MNCs in the key markets of LATAM, Europe and North America, UPL has been able to make significant inroads in these markets on the back of its unique product offerings not existing in the distributors' basket. UPL has been able to engage with many large distributors with established channels, trade clout and ability to push inventory through the system, giving UPL deeper penetration for its brands. Another way of growing distribution network has been through acquisitions, wherein UPL has been able to leverage the existing distribution linkages of the acquired companies, giving it a ready market to tap.

Exhibit 17: Distribution reach (India-AF)



Source: Company, MOSL, Note: AF-Agrochemical formulation

Exhibit 18: Distribution reach (SWAL)



Source: Company, MOSL, Note: SWAL Corporation Limited (formerly known as Shaw Wallace Agrochemicals Limited)

Subdued farm incomes to drive preference for generics

Increasing usage of generic products due to subdued farm income

The global crop protection industry declined at a compounded annual rate of 2.7% over CY13-16 on declining farm income due to 3-8% compounded annual decline in the prices of key cereals. Yet, UPL grew at a CAGR of 15% over FY13-17, primarily driven by volume growth. Post the last acquisition of DVA Agro and Sipcam Isagro Brazil (SIB) in Brazil in CY12, UPL has been reporting robust volume growth of 10-17% over FY13-16. Assuming moderate price increases due to higher closing inventory, the demand for cost effective generic pesticides is likely to grow at a healthy pace and UPL would be a key beneficiary.

Agricultural commodity prices likely to moderate on higher closing stocks

According to the Agricultural Market Information System (AMIS), the overall trends in global markets for the four AMIS crops (maize, rice, soybeans and wheat) still point to ample supplies in CY17/18, supported by above-average to record crops in most countries and large closing stocks (refer exhibit-19). Price volatility in international markets remained subdued, although tightening supplies of high quality wheat and brisker world demand for rice in recent months resulted in firmer export quotations. Argentine soybean prices received support from continued hot and dry weather conditions. While the CY18/19 season is still some months away, early indications point to only modest declines in wheat and maize production.

Exhibit 19: Higher closing stocks across key crops

mn tones	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018E
Maize	169	154	165	160	194	232	231	236	248
Rice (milled)	121	127	142	157	166	169	167	168	170
Soybeans	32	34	28	28	33	44	44	52	47
Wheat	209	202	199	175	187	205	224	248	270

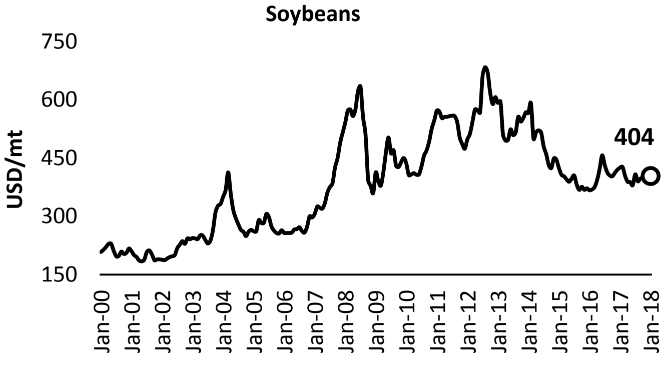
Source: Agricultural Market Information System

Exhibit 20: Global Agri commodity annual price trend

	2010	2011	2012	2013	2014	2015	2016	2017	CAGR 2005-11	CAGR 2012-17	CAGR 2013-16
Soybean oil (USD/mt)	1,005	1,299	1,226	1,057	909	757	809	846	15.6	-6.0	-4.4
Maiz USD/mt	186	292	298	259	193	170	159	155	19.8	-10.4	-7.8
Rice, Thai 5% (USD/mt)	489	543	563	506	423	386	396	399	11.3	-5.6	-4.0
Wheat, US HRW (USD/mt)	224	316	313	312	285	204	167	174	12.9	-9.3	-9.9
Sugar, world (USD/mt)	0.5	0.6	0.5	0.4	0.4	0.3	0.4	0.4	17.5	-4.8	0.3
Cotton, A Index (USD/kg)	2.3	3.3	2.0	2.0	1.8	1.6	1.6	1.8	18.3	-1.1	-3.2

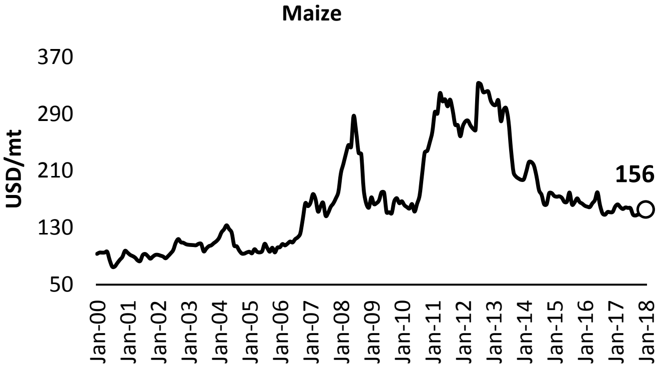
Source: World bank

Exhibit 21: Soybeans price trend



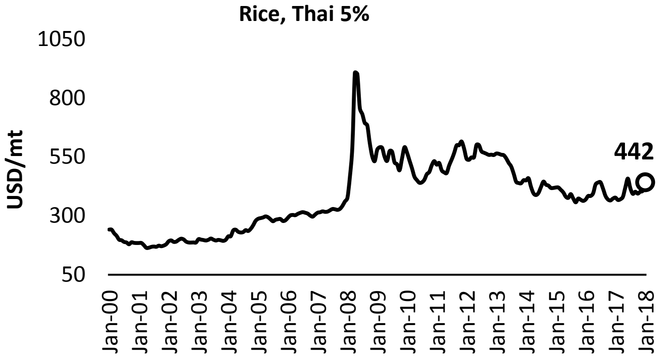
Source: World Bank

Exhibit 22: Maize price trend



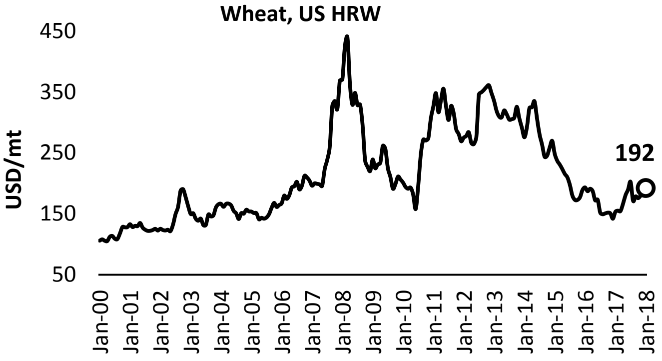
Source: World Bank

Exhibit 23: Rice (Thai 5%) price trend



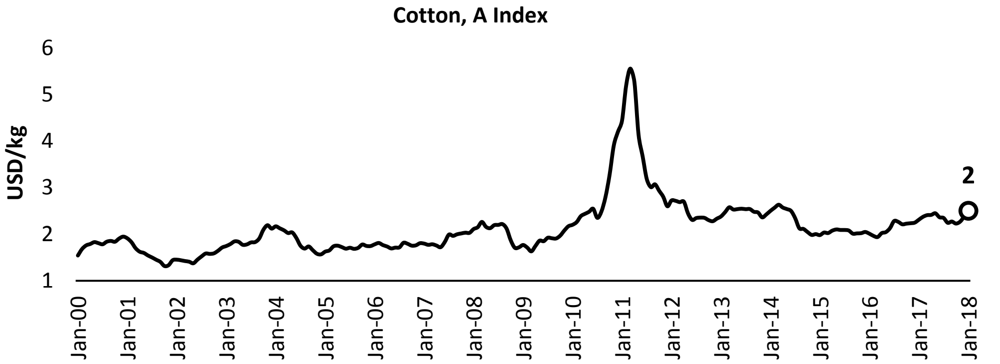
Source: World Bank

Exhibit 24: Wheat (US HRW) price trend



Source: World Bank

Exhibit 25: Cotton (A Index) price trend



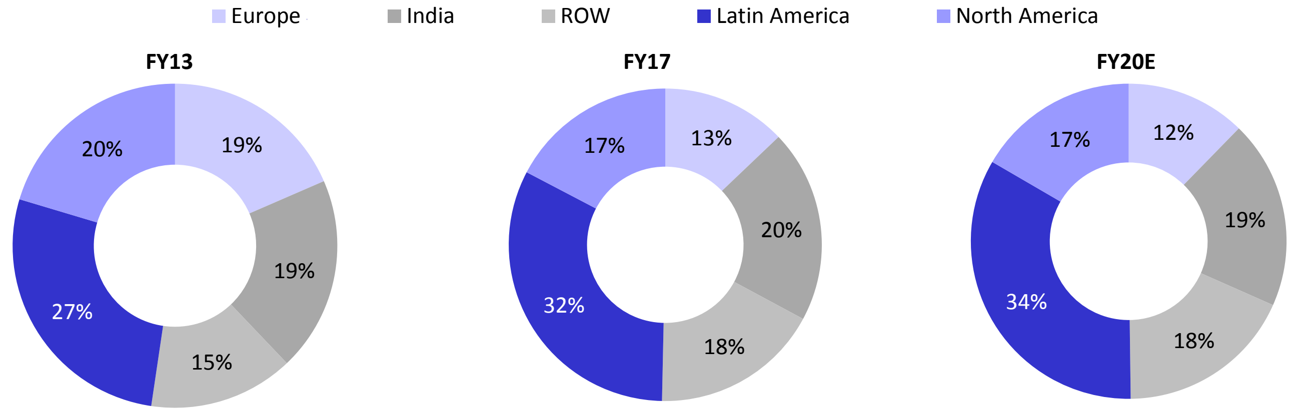
Source: World Bank

Robust growth across geographies to continue

UPL to outperform industry in all major markets

UPL is present in over 130 countries, categorized into five geographies – North America (excluding Mexico), Europe, Latin America (including Mexico), India, and RoW (Rest of the world). Such geographical diversification enables the company to mitigate the risk of slowdown in a particular market. UPL has registered robust growth across geographies, with presence in major crops in each geography.

Exhibit 26: Well diversified across geographies



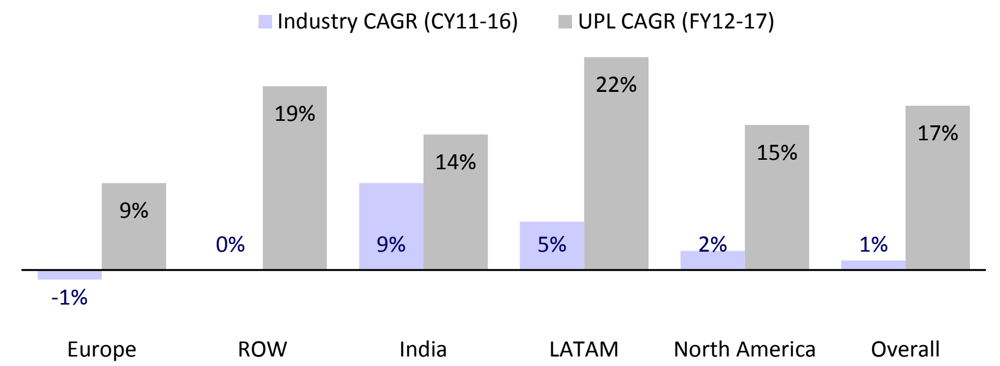
Source: Company

In FY17, UPL grew 26% in the Latin American market, while the industry contracted by 6.6%. In Europe too, the market contracted 1.9% in FY17, but UPL grew 12%. Similar was the case in North America, where UPL grew 11% in FY17, outperforming the market growth of 1.1%. UPL's robust growth across geographies in FY17 was primarily volume-driven, aided by cost advantage and distribution strength. UPL grew at a CAGR of ~16% over FY12-17 on organic as well as inorganic growth against global agrochemicals industry growth of 1% over CY11-16.

Exhibit 27: UPL – market share improves from 3% to 4% over 2014-16

Source: Company

Exhibit 28: UPL has consistently beaten industry growth rate

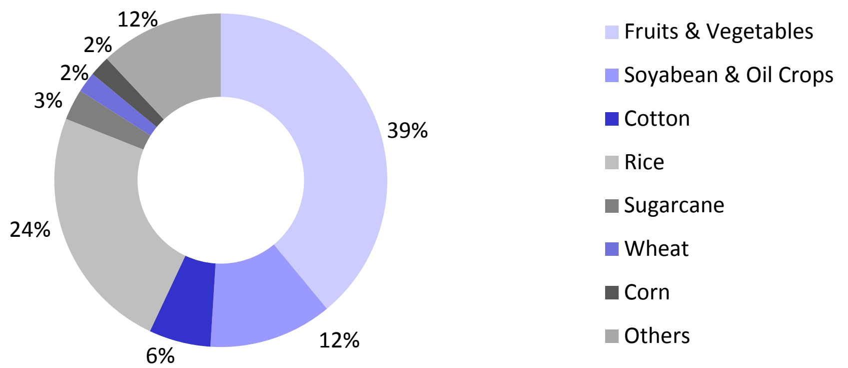


Source: Company

Apart from an even presence across the globe, UPL also has a diversified portfolio of crops, with products catering to more than 10 major crop sectors. In Brazil, the major crop segments are soybean and oil crops, and they contribute ~53% of UPL's overall revenue from the region. In the rest of Latin America, the two crop segments contribute ~26% to the company's revenues from the region. Similarly, in the US the maximum product sales (~60% of company's revenues from the region) are derived from the prominent crop sector of fruits and vegetables. India, on the other hand has a balanced prominence of crops with cotton and rice being two of the most widely sown. Therefore, UPL has significant presence in cotton and rice in India with a contribution of 31% and 25% respectively to the company's revenue from the region.

Going forward, the company's focus would be on identifying gaps in terms of crops or regions and plugging them.

Exhibit 29: UPL has well diversified presence across crops



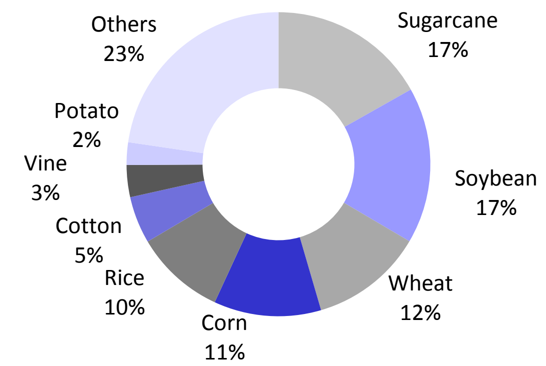
Source: Company, MOSL

Exhibit 30: Global opportunity crop-wise (USD b)

Key Crops	Key Regions	Global Market Opportunity
Soybean	LATAM (Brazil)	USD8.3b
Rice	India, ROW (China), North America (USA), LATAM (Brazil)	USD4.8b
Wheat	Europe (Germany, France, Ukraine), India, ROW (China), North America (USA, Canada)	USD6b
Corn	North America (USA, Mexico), India, LATAM (Brazil, Argentina), Europe (Ukraine, France)	USD5.7b
Cotton	India, ROW (China), North America (USA, Mexico), LATAM (Brazil)	USD2.5b
Potato	India, Europe (Ukraine), North America (USA)	USD1.2b
Sugarcane	LATAM (Brazil), India, ROW (China, Pakistan, Thailand), North America (USA, Mexico)	USD8.4b
Vine	Europe (Italy, France, Spain, Germany), North America (USA), LATAM (Argentina, Brazil)	USD1.7b

Source: Company, MOSL

Exhibit 31: Global agrochemical opportunity mix (crop-wise; %)



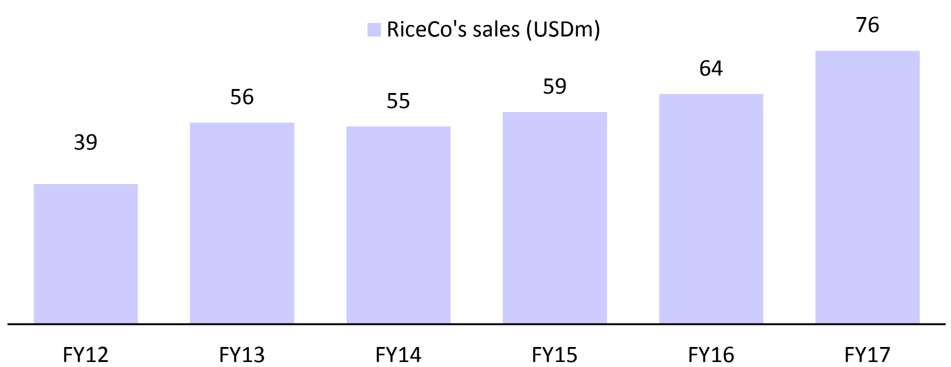
Source: Company, MOSL

North America: Fruits and vegetables to remain key crop segments

Revenue from North America, which accounted for 17% of UPL's overall revenue in FY17, has grown at a CAGR of 11% over FY13-17. UPL has a strong presence in key crops of the region like rice, fruits and vegetables. The company also has a strong foothold in the acquatics (agrochemicals used to counter weeds in fresh water lakes), horticulture, and post-harvest segments.

UPL has a subsidiary, Riceco in North America, which focuses only on rice herbicides, providing UPL a cutting edge in the crop. The estimated size of this crop segment is USD5.9b and UPL serves all key markets – US, Columbia, Thailand, Indonesia, China, India and Nigeria through its key brands, Eros Gold, Stam and Londax.

Exhibit 32: RiceCo has grown at a CAGR of 14% over FY12-17

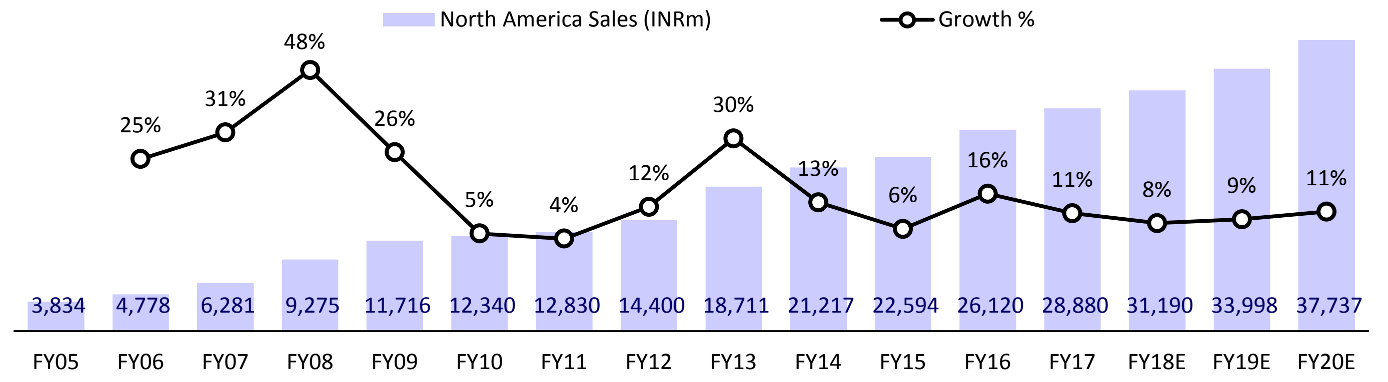


Source: Company, MOSL

In CY14, UPL launched two brands of the herbicide, gluphosinate for soybean and corn to fill gaps in its portfolio both from a crop and regional perspective. One brand, *Lifeline* is targeted at regions outside the mid-west. The other brand, *Interline* is focused at the mid-west, given the quantum of area under soybean and corn cultivation in the region. Gluphosinate competes directly with glyphosate. The size of the market for glyphosate is estimated at USD4.5b-5b. As the targeted herbs have developed resistance to glyphosate, the prospects for gluphosinate appear bright. Besides, the WHO is evaluating whether glyphosate is carcinogenic. Given the headwinds surrounding glyphosate, gluphosinate could drive growth for UPL.

With new product introductions and persistent focus on bridging gaps in crops and regions, we expect UPL to post revenue CAGR of 10% over FY18-20 in North America, with the region's share in overall revenue remaining steady at 17.3%.

Exhibit 33: Expect 10% revenue CAGR in North America over FY18-20



Source: Company, MOSL

LATAM: Soybean and oil crops to continue to drive growth

UPL has a rich presence in Latin America (LATAM), especially in soybeans, oil crops, corn, cotton, coffee, sugarcane and fruits & vegetables. The key countries in the region are Brazil, Argentina, Columbia and Mexico. The LATAM region, which contributed 32% of UPL's overall revenue in FY17, has grown at a healthy CAGR of 21% over FY13-17.

UPL's growth strategy in the region has been to tap the resistant weed market and continue launching new product combinations to maintain effectiveness. This is reflected in the successful launch of 8 new products in the market (six herbicides, one fungicide, and one insecticide) in FY17. The company is also considering the launch of its gluphosinate brands in Latin America – it is awaiting success in North America and gauging the potential to replace glyphosate in the longer run.

The largest revenue contributor from the geography is Brazil. The company doesn't export from Brazil (sales denominated in Brazilian Real); however, the raw materials are imported (cost denominated in USD), making it susceptible to currency risks. Volatility in exchange rates had recently resulted in volatility in revenue.

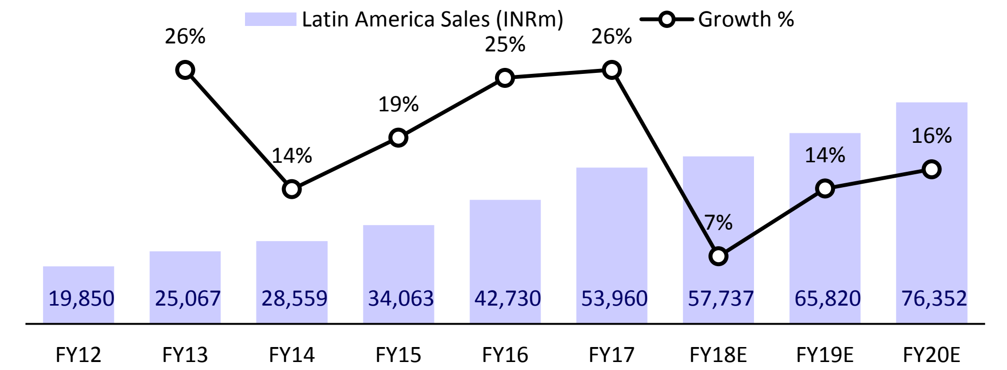
50% of Brazil sales exposed to currency volatility

We dig further into UPL's revenue in Brazil and find a 50:50 mix between the North and the South. Most farmers in the northern part of Brazil export their produce in USD. Though their sales are in BRL, they are pegged to USD, thus creating a natural hedge. However, sales in the southern part of Brazil are in BRL, while products are imported from India and China in USD. Thus, 50% of UPL's sales in Brazil are exposed to currency volatility. The company uses plain vanilla forward cover.

Tie-up with Bayer in Brazil to drive sales of Unizeb (Mancozeb)

Recently, UPL has entered into a collaboration with Bayer to jointly promote fungicides targeted at Asian Rust in Brazil. While UPL will cross-market Bayer's *FOX*, Bayer will cross-market UPL's *Unizeb* (Mancozeb). When applied together, these products work better, giving the farmers better control. The tie-up will benefit UPL, as it will gain access to Bayer's robust distribution network – though demand for *Unizeb* (Mancozeb) has been good, limited distribution constrained sales.

Exhibit 34: Expect 15% revenue CAGR over FY18-20 in LATAM



Source: Company, MOSL

Europe: Higher acreage of sugar beet to drive sales

Europe, which contributed 13% of UPL's overall revenue in FY17, has grown at a CAGR of 6% over FY13-17. Of late, the region has been affected by extremities of wet weather in the North, resulting in high disease pressure on potatoes, and dry weather in the South, with low disease pressure on vine and vegetable crops, impacting the consumption of fungicides. Despite the market declining 1.9%, UPL posted a steady growth of 12% in revenue from Europe in FY17.

UPL has diversified presence across countries in the geography, with Germany, France, Italy, Spain, UK and Netherlands contributing over 60% of revenue. The company also has strong presence in major corps of the geography – sugar beet, oilseeds, and fruits (grapes and others) & vegetables. However, there exists a gap to bridge as far as cereals are concerned.

Europe is one of the toughest markets from the perspective of registration approval. AIs are first evaluated by the European Food Safety Authority (EFSA) whose findings are put to vote to the European Commission for the AI to be added to a positive list. The product then needs to be approved by national authorities of individual member states and most require 1-2 years to grant approval. The entire process required a total timeframe of 4-5 years; hence, UPL has already started applying for registrations for various fungicides and herbicides focusing on cereals. The company expects to get approvals for some of the applied registrations by FY20.

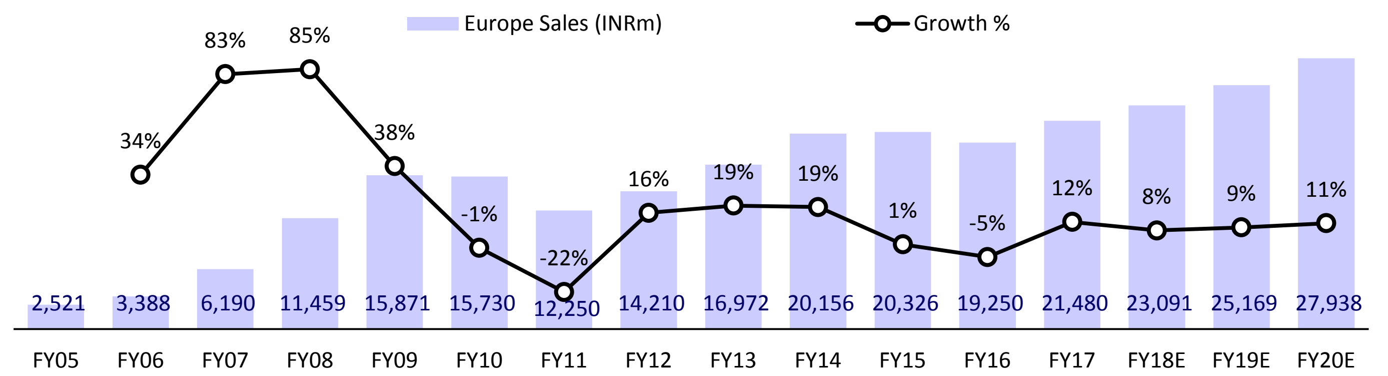
Abolition of quota system to lift sugar beet acreage; UPL likely to benefit

From 30 September 2017, the EU (European Union) has abolished the quota system for sugar. Under new policy, the EU will lift restrictions on production and exports of sugar as part of the process of making European agriculture more market-orientated. To support European growers and processors, the sugar sector was originally subject to production quotas and a minimum price. Sugar beet is a key crop for UPL; hence, the policy change will drive UPL's Europe revenue.

Most of the EU's sugar beet is grown in the northern half of Europe, where the climate is more suited to growing beet. The most competitive producing areas are in northern France, Germany, the United Kingdom and Poland. The EU also has an important refining industry that processes imported raw cane sugar.

Going forward, we expect the growth in the geography to remain steady. The registrations required to bridge the gap in cereal crops where UPL isn't present will take time, as it will have to go through the process of approvals. We expect modest revenue CAGR of 10% from Europe over FY18-20.

Exhibit 35: Expect 10% revenue CAGR over FY18-20 in Europe



Source: Company, MOSL

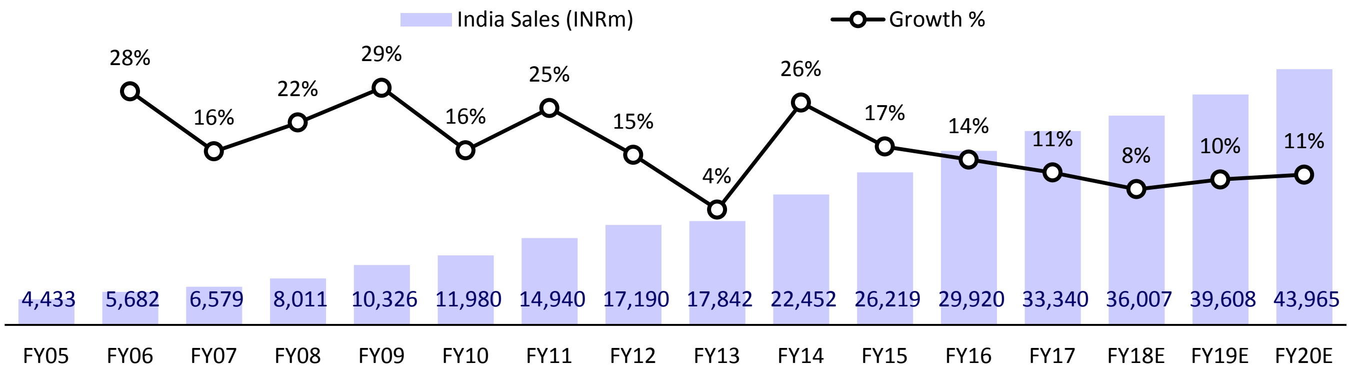
India: Growth to remain healthy with balanced product portfolio

India is the second largest revenue contributor for UPL after Latin America, contributing 20% of overall revenue as of FY17. India has also been one of the fastest growing regions for UPL, growing at a CAGR of 17% over FY13-17.

The Indian agrochemicals market is characterized by high share of insecticides, contrary to the trends globally, where herbicides form the largest share. India is a country of tropical climate, which is ideal for fungi and insecticide attack, and owing to the traditional farm practice, where majority of the farms are self-labored, the usage of herbicides is low (~16% in India compared to the global average of ~42%). Farmers usually tend to pull out weeds rather than using herbicides. However, with changing farm practices in the country, the usage of herbicide is on the rise and this is expected to be a key segment for growth in India.

For UPL, India is one of the geographies, where it has a presence across all crops and across all regions. Rice pesticides contribute 25% to its revenue, cotton pesticides 31%, and fruits & vegetables 16%. UPL's brands *Ullala*, *Saaf* and *Phoskill* have crossed a turnover of INR1b, and going forward, its strategic focus on fruits & vegetables is expected to deliver sustainable growth. We expect a modest 10% revenue CAGR over FY18-20.

Exhibit 36: Expect 10% revenue CAGR over FY18-20 in India



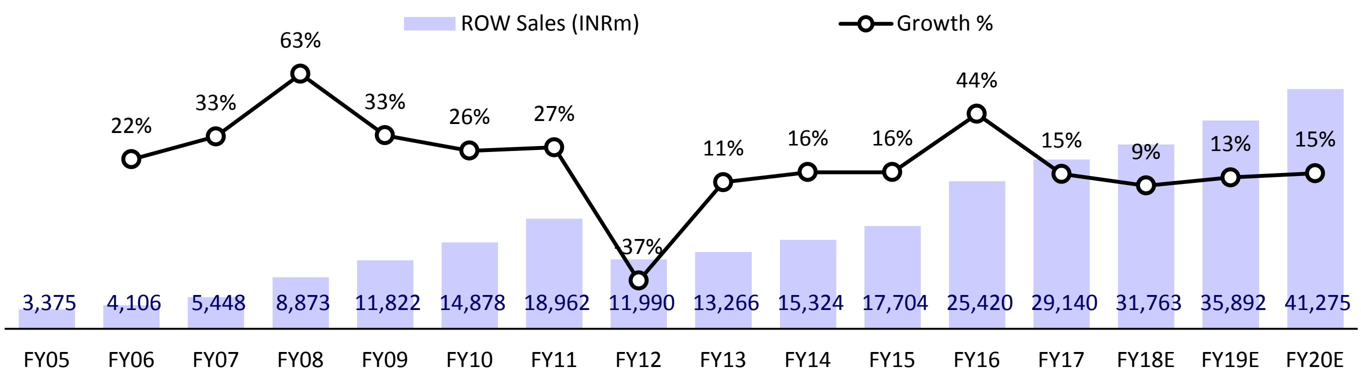
Source: Company, MOSL

ROW: AME and Asia to drive momentum

The major countries constituting this geography are Australia, Turkey, Japan, Indonesia and China. Historically, UPL has maintained a strong base across countries and has experienced strong revenue CAGR of 22% over FY13-17. Recently, it has been benefitting from revival in rains after several years of drought in Australia and recovery in the rice crop. The company has grown in different countries owing to its strong distribution network. Of late, UPL has created a regional base in Kenya, with a focus to improve its presence in the African continent.

The company has a presence across key crops – rice across Asia; cotton, wheat and sugarcane in South Asian countries; and pulses in Africa. Strengthening distribution network to penetrate deeper into existing markets and establishing presence in new markets are key areas of focus for UPL. We expect UPL to experience strong revenue CAGR of 14% in this geography over FY18-20.

Exhibit 37: Expect 14% revenue CAGR over FY18-20 in ROW



Source: Company, MOSL

Resistance market holds promising growth

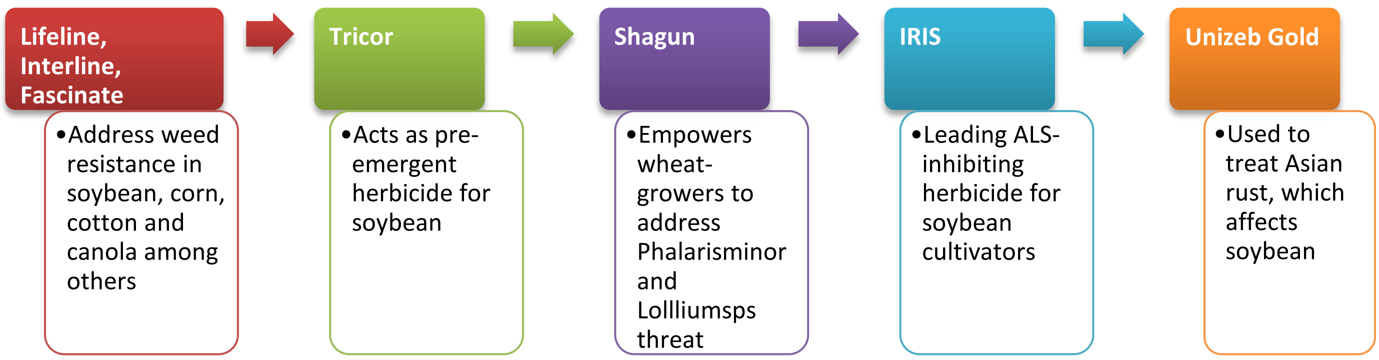
UPL likely to gain market share

Strong R&D and broad product basket to help grab impending opportunity

Despite a variety of solutions available, ~13% of all crops globally are lost due to pest attacks. One of the major reasons for this is the growing resistance of pests to available solutions. Usually, pests have a life cycle not spanning more than a few days or weeks. In just one season of a crop, the pests go through generations, and over time, develop immunity to the agrochemicals being used on the crop. As a result, despite persistent use of pesticides, the farmer ends up with damaged crops.

UPL's strong R&D capabilities and its broad product basket help it to keep changing molecules or formulations to launch combination products that overcome resistance across crops. Sensing the opportunity presented by growing pest resistance, UPL has been continuously altering the combination and mode of action (MoA) of its products to allow them to tackle pest resistance. UPL's product basket has several such products. It has innovated products with new MoA to address sucking pests. *Ullala* has proved to be an excellent defense against the whitefly attack that threatened cotton farms in Punjab recently. *Unizeb Gold*, which was used for late and early blight on fruits and vegetables, is now used to treat Asian rust, which affects soybeans. Another 'gluphosinate' based brand *Interline* has tackled the issue of glyphosate-resistant weeds.

Exhibit 38: UPL's presence in counter-pest strategy



Source: Company

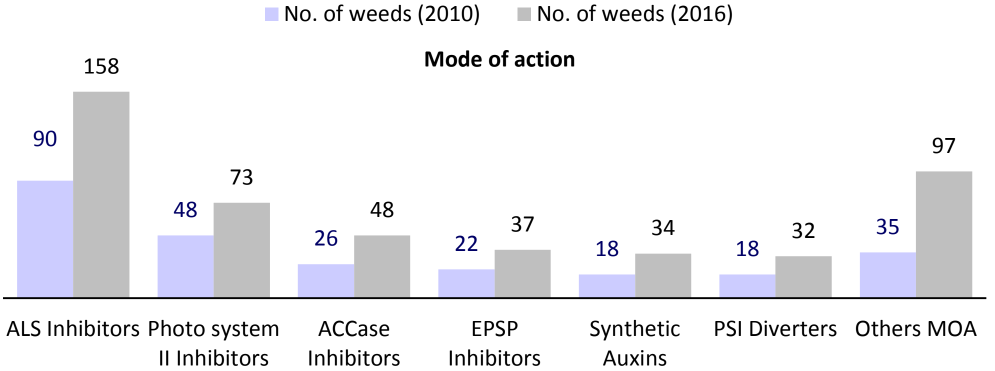
Increasing weed resistance to provide room for growth

The menace of weed resistance is spread across the globe, with 479 unique herbicide resistance cases across 91 crops in 69 countries. Most weeds have developed resistance against 23 of 26 known herbicide sites of action and 162 herbicides.

UPL has a broad array of products focused at tackling weed resistance:

- *Lifeline*, *Interline* and *Fascinate* address the issue in soybeans, corn, cotton, canola and TNV crops.
- *TRICOR* addresses most resistant weeds in soybeans, globally.
- *Shagun*, an emerging brand in India and other wheat-growing markets, controls resistance to Phalarisminor and Lolliumsps.
- *IRIS*, a leading brand in India for soybeans, controls weed resistance to ALS (Acetolactate synthase) MOA.

Exhibit 39: Increasing number of weeds becoming resistant to different modes of action



Source: Company, MOSL

Strategy in place to tap fungicide resistance market

Crops are being impacted by fungi that have become immune to triazoles, strobilurins and succinate dehydrogenase inhibitors. The key crops getting affected by this include soybeans, cereals, vines and potatoes.

UPL has addressed the issue by making pre-mixes from its own portfolio as well as through strategic alliances, and is targeting the resistance market with its Mancozeb and Copper products. The focus going forward would be to keep changing molecules or formulations and getting them registered to overcome resistance across crops.

Going forward, growth in the global agrochemicals industry is likely to be driven by fungicides, which are key to delivering the crop yield and quality improvement the market is demanding. The share of fungicides in the global agrochemicals market has increased from ~20% in CY00 to 27% in CY17.

Given the high growth expected in fungicides, UPL too has aligned itself with the industry – the contribution of fungicides to its revenue has increased from 5% in FY03 to 29% in FY17. The size of the fungicide market is USD15b.With just ~4.5% share in the global fungicides market, UPL has immense growth opportunity in the segment.

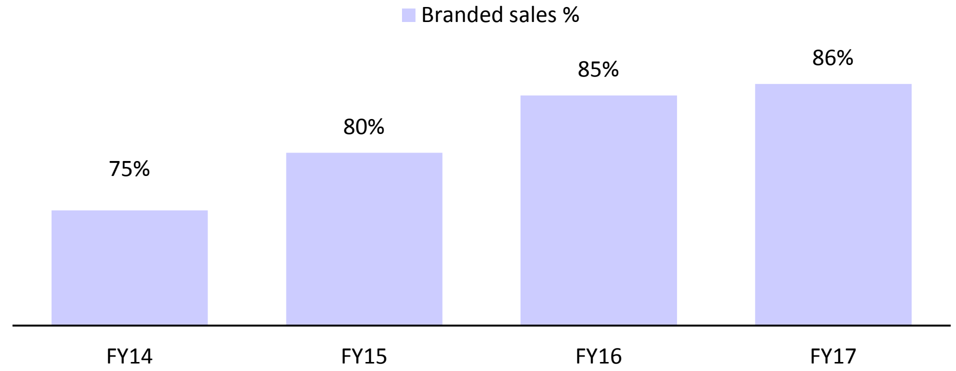
Focus on brand building to aid margin expansion

Expect margin expansion of 80bp over FY18-20 to 21.2%

Steady rise in contribution from branded sales

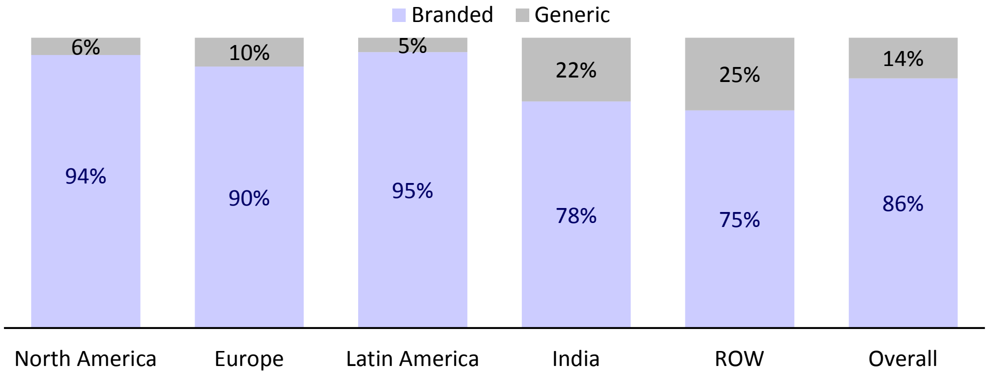
UPL has managed to amass significant share of branded sales in all geographies it is present in, the highest being in Latin America (95%) and North America (94%). The overall share of branded products has increased from 75% of sales in FY14 to 86% in FY17.

Exhibit 40: Consistent increase in branded sales over the years



Source: Company, MOSL

Exhibit 41: Significant share of branded sales across geographies

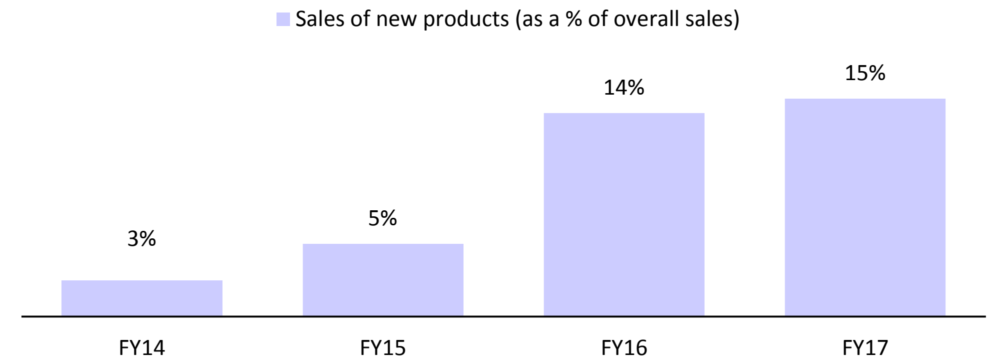


Source: Company, MOSL

Increased contribution from new launches & branded products has improved profitability

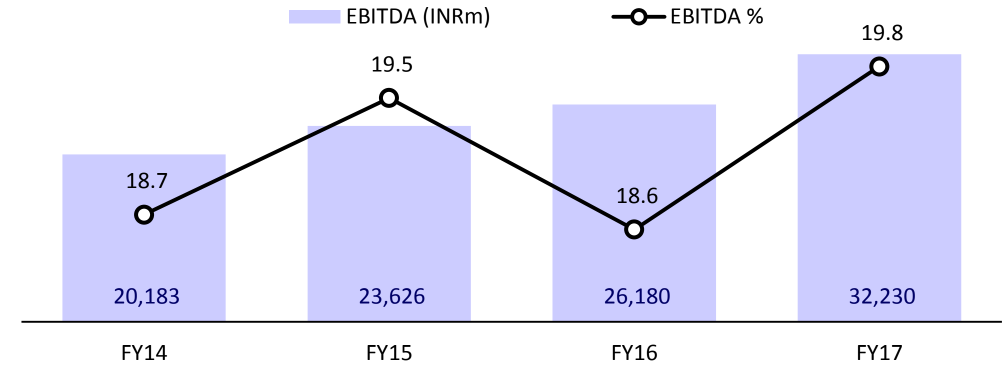
UPL has been investing continuously in brand building, which has paid rich dividends. Its EBITDA margin has improved from 15-16% over FY09-10 to 19-20% over FY16-17. Branded products command higher margins than commoditized products, and with increasing share of branded products, UPL's margins have expanded. UPL has been strengthening its branded business through increasing marketing and promotion activities globally. It has taken initiatives such as setting up marketing structures across geographies and continuous new product introduction under premium brands.

Exhibit 42: Growing contribution from sale of new products



Source: Company, MOSL

Exhibit 43: Increase in branded sales has led to margin expansion



Source: Company, MOSL

Robust growth in contribution from new products to aid margins

Its strong R&D capabilities and in-depth knowledge of the registration requirements across countries have helped UPL to consistently roll out new products every year. It built its product innovation capabilities by combining different molecules to create more efficient products. It has launched over 240 products and filed 195 patents over FY15-17. Its registered products have increased from 4,692 in FY15 to 5,934 in FY17. The contribution of innovative products launched in the last three years to its revenue has increased from 5% in FY15 to 15% in FY17.

Revenue from innovative products is expected to improve further, driven by launches in the last 2-3 years and in the next 2-3 years. Rising contribution from new products is likely to improve the revenue mix towards higher value-added products, which will lead to value growth for the company resulting in a margin expansion of 80bp over FY18-20 to 21.2%.

Expect ~14% earnings CAGR over FY18–20

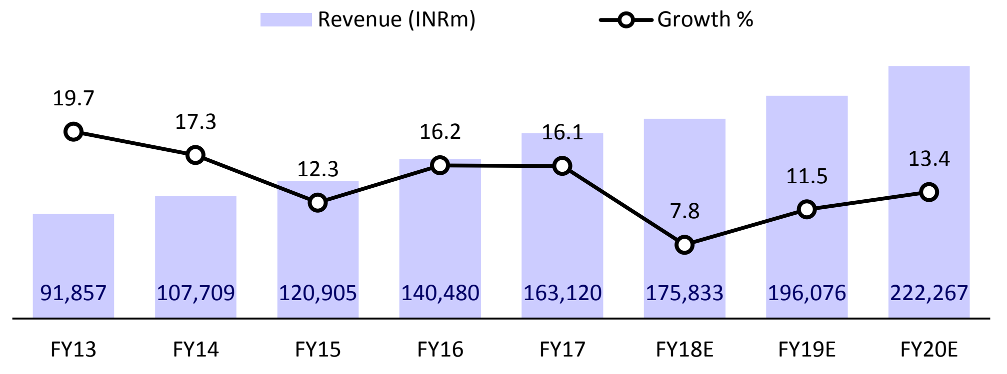
Balanced growth expected across geographies

Expect ~12% revenue CAGR over FY18-20

UPL is set to leverage the impending opportunity in the generics industry, as a multitude of products (worth ~USD3b) are going off-patent over CY17-20. Despite the dominance of existing MNCs in the key markets of LATAM, Europe and North America, UPL has been able to make significant inroads in these markets on the back of its unique product offerings and strong distribution network.

Assuming moderate price increases due to higher closing inventory, the demand for cost-effective generic pesticides is likely to grow at a healthy pace and UPL would be key beneficiary. Geographical diversification and a balanced product portfolio de-risk the company. Over FY13-17, UPL posted revenue CAGR of 11% in North America, 6% in Europe, 21% in Latin America, 17% in India, and 22% in ROW. It has been riding high on its growth curve, with a CAGR (FY13-17E) of 15.4% in revenue and 26% in PAT. We expect UPL's revenue to grow at a CAGR of 12.4% over FY18-20, driven by Latin America and ROW. Latin America is expected grow at a CAGR 15%, ROW at 14%, and North America, Europe and India at 10% over FY18-20.

Exhibit 44: Revenue to post 12.4% CAGR over FY18-20



Source: Company, MOSL

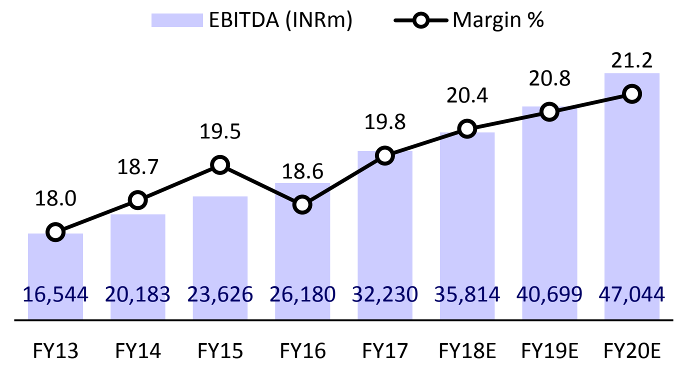
Exhibit 45: Sales growth estimates by geography

INR mn	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18E	FY19E	FY20E
North America	12,830	14,400	18,711	21,217	22,594	26,120	28,880	31,190	33,998	37,737
Growth %	4.0%	12.2%	29.9%	13.4%	6.5%	15.6%	10.6%	8.0%	9.0%	11.0%
Europe	12,250	14,210	16,972	20,156	20,326	19,250	21,480	23,091	25,169	27,938
Growth %	-22.1%	16.0%	19.4%	18.8%	0.8%	-5.3%	11.6%	7.5%	9.0%	11.0%
Latin America	0	19,850	25,067	28,559	34,063	42,730	53,960	57,737	65,820	76,352
Growth %	0.0%	0.0%	26.3%	13.9%	19.3%	25.4%	26.3%	7.0%	14.0%	16.0%
ROW	18,962	11,990	13,266	15,324	17,704	25,420	29,140	31,763	35,892	41,275
Growth %	27.4%	-36.8%	10.6%	15.5%	15.5%	43.6%	14.6%	9.0%	13.0%	15.0%
India	14,940	17,190	17,842	22,452	26,219	29,920	33,340	36,007	39,608	43,965
Growth %	24.7%	15.1%	3.8%	25.8%	16.8%	14.1%	11.4%	8.0%	10.0%	11.0%
Gross Sales	58,982	77,640	91,857	107,709	120,905	143,440	166,800	179,788	200,487	227,267
Growth %	7.4%	31.6%	18.3%	17.3%	12.3%	18.6%	16.3%	7.8%	11.5%	13.4%

EBITDA margin to expand on better product mix and operating efficiency

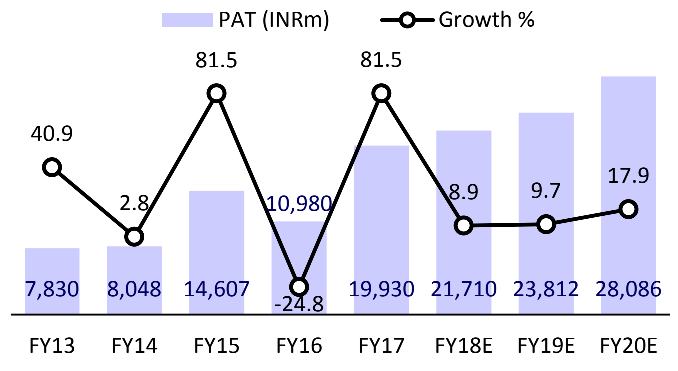
UPL has improved its EBITDA margin gradually by 175bp over FY13-17 to 19.8%, led by (1) better product mix, and (2) cost rationalization and operating efficiency in manufacturing, sourcing of raw material and distribution. We expect further EBITDA margin expansion of 80bp over FY18-20 to 21.2%.

Exhibit 46: EBITDA margin to expand 80bp over FY18-20



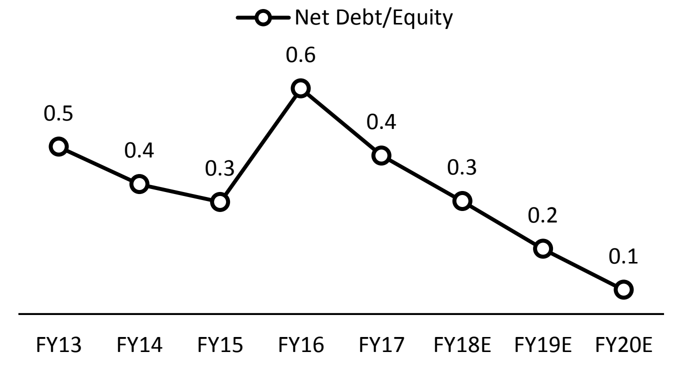
Source: Company, MOSL

Exhibit 47: PAT to post CAGR of ~14% over FY18-20



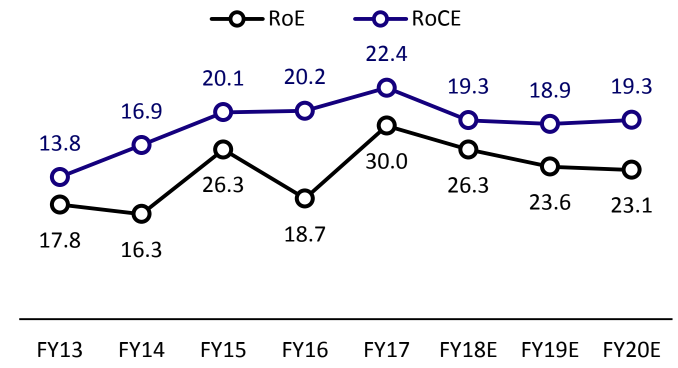
Source: Company, MOSL

Exhibit 48: Net-debt-to-equity to decline further



Source: Company, MOSL

Exhibit 49: RoCE on upward trajectory



Source: Company, MOSL

Valuation and view

Initiating with Buy rating

We believe UPL is one of the best bets on the global agrochemicals industry, as it offers (a) a robust product pipeline, (b) an integrated business model (backward integration of 70-75%), (c) a broad product portfolio covering various crops across seasons, (d) geographical diversification, and (e) scope to gain further market share (from the current ~4%).

Strong free cash flow generation to improve balance sheet

UPL generated free cash flows of INR55.5b over FY13-17. Net-debt-to-equity was 0.4x at the end of FY17. We expect free cash flows of INR46b over FY18-20 and net debt to decline from INR31.6b in FY17 to INR8.6b in FY20.

Return ratios to remain healthy

Margin expansion and 12.4% sales CAGR over FY18-20 should help UPL's RoCE to remain stable at 19.3% in FY20 and to drive RoIC from ~25% in FY18 to ~26% in FY20. Net worth has grown at a CAGR of ~12% over FY13-17 and is expected to grow at a CAGR of ~21% over FY18-20.

Re-rating to continue on back of multiple drivers

Over FY14-18, UPL has been re-rated (refer exhibit-51) on geographical expansion as well as robust growth in those geographies, better product portfolio covering various crops across seasons, robust product pipeline, moving up the value chain with focus on adjacent technology (sales of new products surged from 3% in FY14 to 15% of consolidated sales in FY17), and consistent increase in branded sales (from 75% in FY14 to 86% in FY17). Extensive distribution network coupled with farmer connect has created strong entry barriers in critical geographies. The stock has re-rated from a one-year forward P/E of 7x (FY14) to a one-year forward P/E of ~16x (FY18E). We expect the re-rating to continue on improving fundamentals coupled with healthy earnings growth.

Value UPL at 17x P/E multiple on FY20E EPS

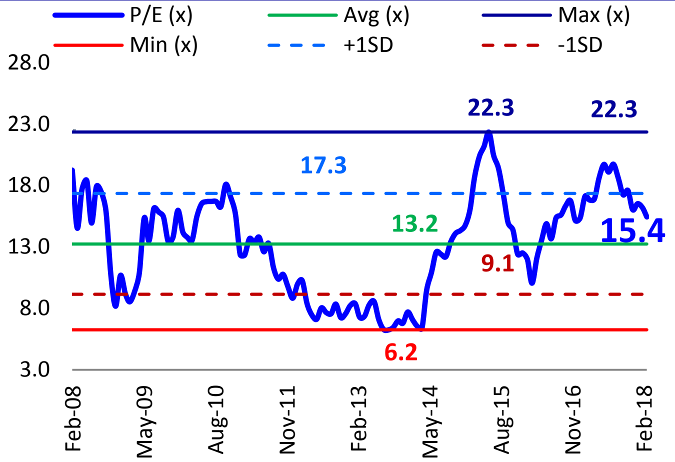
At the current market price, average free cash flow yield of UPL is estimated to be 4.3% over FY18-20E (as compared to an average of 4% over FY15-17). We estimate 12.4% sales CAGR and ~14% PAT CAGR over FY18-20, with EBITDA margin expansion of 80bp to 21.2%. We value UPL at 17x FY20E EPS of INR55.6, arriving at a TP of INR945. We initiate coverage with **Buy**.

Exhibit 50: Peer comparison

Company Name	Market Cap. (USD m)	PE CY18E	PE CY19E	RoE % CY18E	RoE % CY19E	EV/EBITDA CY18E	EV/EBITDA CY19E	Sales CAGR CY17-19E	PAT CAGR CY17-19E
Global player									
Bayer AG	99,907	14.2	12.9	16.0	16.3	8.7	8.2	3.3%	8.4%
BASF SE	98,889	13.5	12.6	16.3	16.1	7.3	7.1	3.6%	2.1%
Monsanto Co	54,174	21.6	19.8	34.9	31.4	13.2	12.2	5%	13%
Domestic Player									
PI Industries Ltd*	1,882	30.8	25.9	22.3	22.1	22.3	18.9	9%	1%
Dhanuka Agritech Ltd*	485	25.3	22.1	22.0	21.7	17.8	14.9	11%	9%
Bayer CropScience Ltd/India*	2,314	42.5	34.5	16.7	18.7	34.6	28.0	13%	17%
UPL Ltd*	**5,652**	**16.8**	**15.3**	**26.3**	**23.6**	**10.9**	**9.4**	**9.6%**	**9.3%**

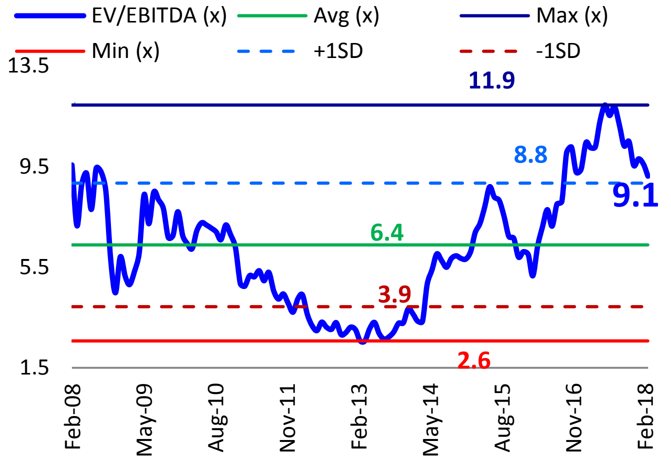
Note: * denote FY Source: Company, MOSL

Exhibit 51: P/E



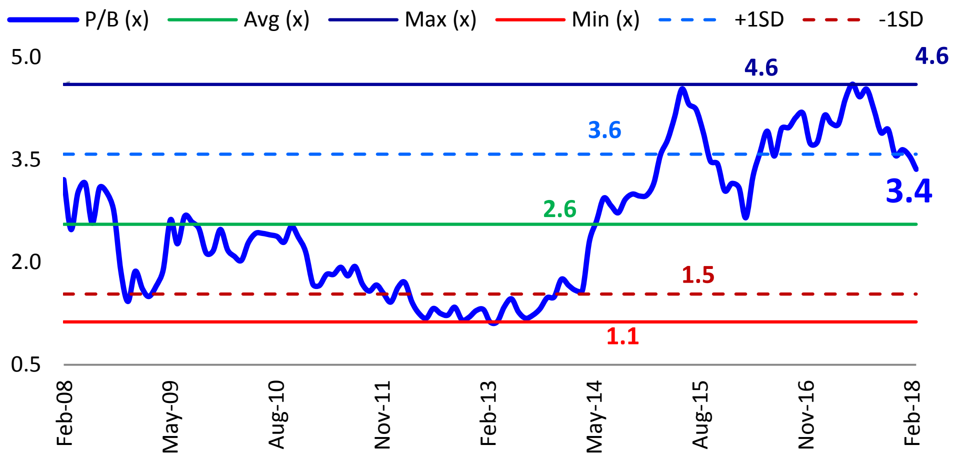
Source: Company, MOSL

Exhibit 52: EV/EBITDA



Source: Company, MOSL

Exhibit 53: P/B



Source: Company, MOSL

SWOT analysis

Strength

- ☑ Global manufacturing facilities
- ☑ Better supply chain
- ☑ Strong R&D
- ☑ Strong product portfolio
- ☑ Better quality control
- ☑ Strong backward integration
- ☑ Deep marketing reach

Weakness

- ☑ Competitive market
- ☑ Higher working capital
- ☑ Cumbersome product registration process

Opportunity

- ☑ USD3b worth of agrochemicals to go off-patent by 2020
- ☑ Labor shortages to drive herbicide demand
- ☑ New genetically-modified crops to drive herbicide demand

Threats

- ☑ Unfavorable change in government policies
- ☑ Lower commodity prices
- ☑ Volatility in currency
- ☑ Climate change and drought
- ☑ Fewer pest infestations

Bull & Bear case

Bull case

- In the bull case, we assume strong growth in LATAM, North America, ROW and India. We assume revenue CAGR of 14.5% (12.4% in base case), EBITDA CAGR of ~18% (~15% in base case) and PAT CAGR of ~19.2% (~14% in base case) over FY18-20.
- We assume strong performance in LATAM (sales CAGR at 16% against 15% in base case), and ROW (sales CAGR at 15% against 14% in base case) over FY18-20. We also expect robust sales CAGR of 14% (10% in base case) in India and North America over FY18-20. Sales CAGR in Europe is likely to be 11% (10% in base case) over FY18-20.
- We assume that the company will see higher margin expansion on higher sales of innovative products.
- Accordingly, we assume 140bp EBITDA margin expansion (80bp in base case) to 21.8% over FY18-20. This will lead to EPS CAGR of 19% over FY18-20.
- Assuming a target multiple of 20x in the bull case against 17x in the base case, we get a bull case target price of INR1,213 (upside of 68%) against the base case target price of INR945 (upside of 31%), based on FY20E EPS.

Bear case

- In the bear case, we assume lower growth in North America, Europe and India. We assume revenue CAGR of 10% (12.4% in base case), EBITDA CAGR of ~9% (~15% in base case) and PAT CAGR of ~6% (~14% in base case) over FY18-20.
- We assume sales CAGR of 11% in LATAM (15% in base case) and 10% in ROW (14% in base case) over FY18-20. We also assume sales CAGR of 9% in India and 8% each in North America and Europe over FY18-20 (against 10% in base case).
- We assume that the company will see higher margin contraction on higher raw material cost.
- Accordingly, we assume ~30bp EBITDA margin contraction (80bp expansion in base case) to 20% over FY18-20. This will lead to EPS CAGR of ~6% over FY18-20.
- Assuming a target multiple of 15x, we get a bear case target price of INR728 (upside of 1%) instead of the base case target price of INR945 (upside of 31%), based on FY20E EPS.

Exhibit 54: Scenario Analysis – Bull Case

	FY18E	FY19E	FY20E
Sales (INR m)	1,75,833	1,99,680	2,30,532
Sales growth (%)	7.8	13.6	15.5
EBITDA (INR m)	35,814	42,059	50,208
EBITDA Margin (%)	20.4	21.1	21.8
EBITDA growth (%)	11.1	17.4	19.4
PAT (INR m)	21,710	24,900	30,617
PAT Margin (%)	12.3	12.5	13.3
PAT growth (%)	8.9	14.7	23.0
EPS (INR)	43.0	49.3	60.6
Target multiple (x)			20
Target price (INR)			1,213
Upside/downside (%)			68%

Source: Company, MOSL

Exhibit 55: Scenario Analysis – Bear Case

	FY18E	FY19E	FY20E
Sales (INR m)	1,75,833	1,92,567	2,12,516
Sales growth (%)	7.8	9.5	10.4
EBITDA (INR m)	35,814	38,592	42,590
EBITDA Margin (%)	20.4	20.0	20.0
EBITDA growth (%)	11.1	7.8	10.4
PAT (INR m)	21,710	22,127	24,522
PAT Margin (%)	12.3	11.5	11.5
PAT growth (%)	8.9	1.9	10.8
EPS (INR)	43.0	43.8	48.6
Target multiple (x)			15
Target price (INR)			728
Upside/downside (%)			1%

Source: Company, MOSL

Industry overview

Historical growth pattern in global agrochemicals industry

Steady growth from 1980 to 1998

The global agrochemicals industry witnessed steady growth over 1980-1998, with a couple of hiccups in 1983 and 1991-93, which saw the implementation of the Payment in Kind scheme in the USA (1983) and the introduction of set-aside in the EU following CAP reform (1991-93).

Introduction of GM crops led to a decline from 1998 to 2006

The market experienced a decline phase from 1998 to 2006 on account of introduction of GM crops. The period saw an increase in uptake of GM technology, particularly in key markets of North America and Latin America, where a rapid switch to crop varieties containing traits conferring glyphosate tolerance and insect resistance led to a decline in selective herbicide and insecticide applications in cotton, canola, soybean and maize. The situation was worsened by flattish crop prices, which further subdued the demand for agrochemical products.

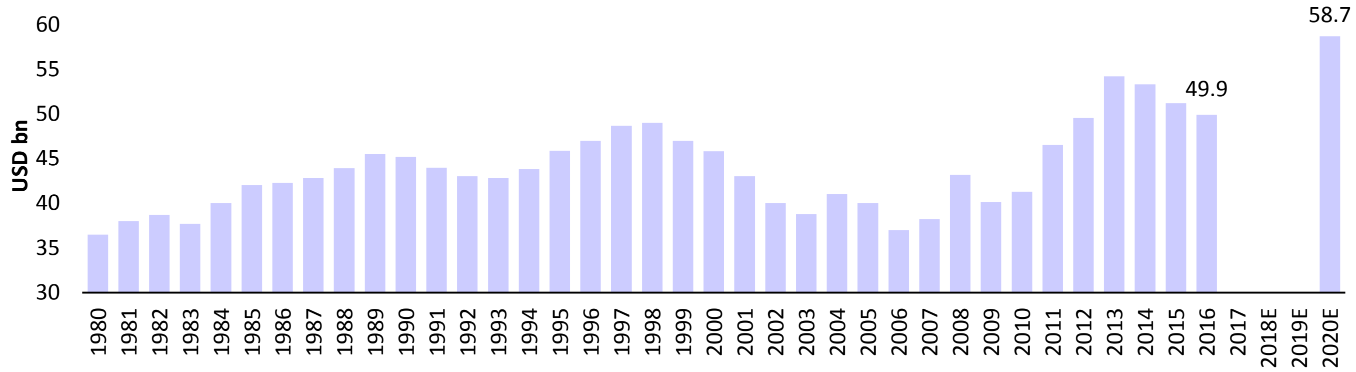
Turnaround in industry in 2007

The turnaround came in 2007, when crop prices began to grow and spiked in 2008, leading to a major demand revival in the agricultural economy. However, in 2009, following the financial crisis, crop prices fell yet again, as the global economy experienced severe downturn. Additionally, the fall in glyphosate prices on account of increased supply from Chinese companies led to an overall decline in value of the global agrochemicals industry. Thereafter, although glyphosate prices remained steady, the overall industry was kept afloat by improving crop prices, which further led to a significant rise in agrochemical demand (10% growth in 2013).

Witnessed a slump again in 2015

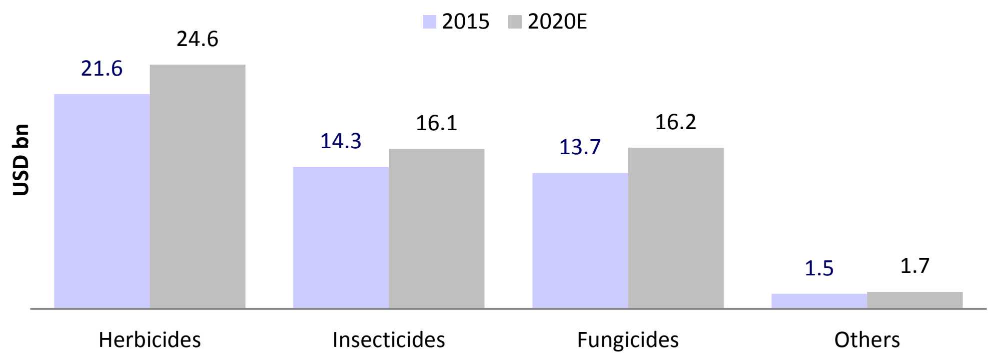
The industry again witnessed a slump in 2015, when crop protection chemical sales declined in almost all regions, with the sharpest fall occurring in Europe and Latin America. Weakening herbicide prices and varying weather patterns (including El Nino phenomenon and weak monsoons) caused the decline. The decline continued in 2016, when the crop protection chemicals industry witnessed a decline of 2.5%, primarily owing to adverse weather conditions in many markets and poor farm profitability due to low crop prices. In addition, performance was affected by high distributor inventory in many markets, glyphosate overcapacity and low crop prices.

Exhibit 56: Global crop protection market expected to grow at a CAGR of 4% over 2016-2020



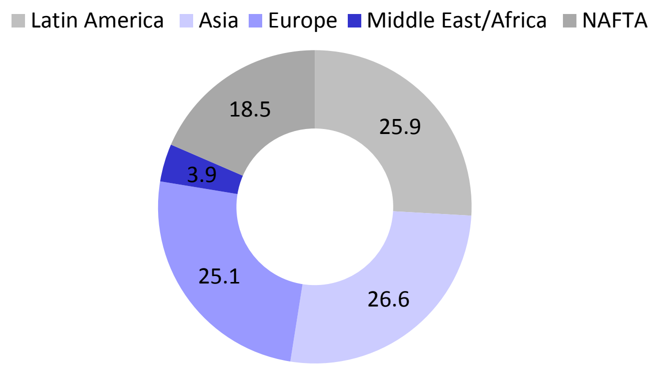
Source: Philip McDougall

Exhibit 57: Segment-wise global crop protection outlook



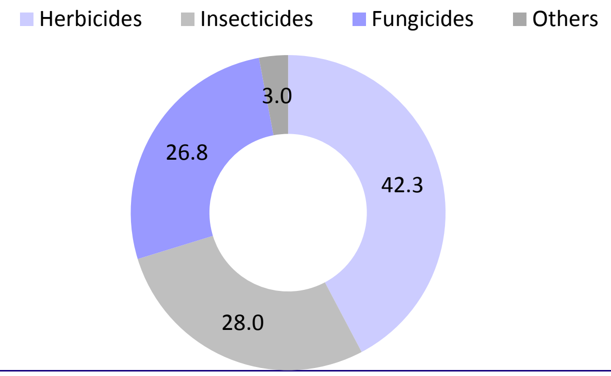
Source: Philip McDougall

Exhibit 58: Region-wise global crop protection market mix



Source: Philip McDougall

Exhibit 59: Segment-wise global crop protection mix



Source: Philip McDougall

Key risks

Currency fluctuation impacts earnings

The company has businesses across globe. Its agrochemicals are marketed in 130 countries. Its import bill is also significant. It is exposed to almost all the currencies of the world. Volatility in exchange rates can result in huge losses for the company. To mitigate this risk, UPL takes adequate insurance cover for open exposures. Its huge exports act as natural hedge against imports. It carries out its business in major currencies such as USD, EUR, JPY and GBP. These currencies are comparatively more stable. Hence, UPL is usually adequately protected.

Droughts and reduced pest attacks can lower demand for agrochemicals

The demand for UPL's products depends majorly on weather patterns and pest attacks. Demand for agrochemicals is adversely impacted by drought and fewer pest attacks, resulting in inventory buildup. To mitigate this risk, UPL has strengthened its supply chain and product portfolio, and has diversified across geographies. Its product portfolio has expanded year after year, ensuring regular supply of products for diverse applications.

Resistance development reduces life of product

The effective life of agrochemicals gets reduced over time, as the targeted pests develop resistance to them. Constant innovation and regular introduction of newer agrochemicals is essential for effectively eliminating pest attacks. To mitigate this risk, UPL has set up a big R&D team, consisting of chemists, chemical engineers and other experts to work constantly on developing new products and processes. The company protects some of its products by getting them patented.

Management overview

Mr Rajnikant Shroff, Executive Chairman & Managing Director

Mr Rajnikant Shroff is the Executive Chairman & Managing Director of the company. He is a graduate in Chemistry from the Bombay University. He established a novel process of manufacturing mercury salts in a plant at UK and was paid royalty for it by the British company. He mastered red phosphorous and quickly moved on to the production of other chemicals like aluminum phosphide (fumigant) and zinc phosphide (rodenticide) for agriculture.

Mr Jaidev Shroff, Group CEO, Promoter-Director

Mr Jaidev Shroff is the Global CEO of UPL and Vice-Chairman of Advanta. He has over 28 years of experience in the Agri-Inputs industry in India and internationally. Mr Shroff holds a Bachelor's Degree in Chemistry from Bombay University. He primarily looks after development of new products, global business and strategic alliances with various parties in different markets.

Mr Vikram Shroff, Executive Director, Promoter-Director

Mr Vikram Shroff is Executive Director of the company. He is a Chemistry graduate from the University of Mumbai, with a professional post-graduate degree from the Harvard Business School of Management. He is instrumental in making strategic decisions for the company, leads many of the functions, and has been responsible for the execution of several projects of the group.

Mr Arun Ashar, Director - Finance

Mr Arun Ashar is Director - Finance of the company. He is Chartered Accountant, with a rich experience of 42 years. He is a member of The Institute of Chartered Accountants of India. He completed his graduation from the University of Mumbai.

Mr Vinod Sethi, Independent Director

Mr Vinod Sethi served as Managing Director of Morgan Stanley Investment Management Inc until February 2001 and served as its Chief Investment Officer and Portfolio Manager for 12 years. He has been a Non-Executive & Independent Director of UPL since January 30, 2006. He has served as an Additional Director of Uniphos Enterprises since January 30, 2006. He is a graduate in Chemical Engineering and also holds a BTech from Indian Institute of Technology (IIT), Mumbai and an MBA in Finance from Stern School of Business, New York University.

Mr Pradeep Goyal, Independent Director

Mr Pradeep Goyal is an engineer. He completed his BTech (Metallurgy) from Indian Institute of Technology, Kanpur (1978) and obtained his SM (Materials Science and Engineering) from the world-renowned Massachusetts Institute of Technology, Cambridge, MA, USA, (1980).

Financials and valuations

Consolidated - Income Statement (INR Million)

Y/E March	FY14	FY15	FY16	FY17	FY18E	FY19E	FY20E
Total Income from Operations	**107,709**	**120,905**	**140,480**	**163,120**	**175,833**	**196,076**	**222,267**
Change (%)	17.3	12.3	16.2	16.1	7.8	11.5	13.4
Raw Materials	54,408	60,164	67,800	78,160	83,925	93,226	105,906
Employees Cost	9,482	10,428	14,340	16,270	17,260	19,046	21,363
Other Expenses	23,636	26,687	32,160	36,460	38,834	43,105	47,953
Total Expenditure	**87,526**	**97,279**	**114,300**	**130,890**	**140,019**	**155,377**	**175,223**
% of Sales	81.3	80.5	81.4	80.2	79.6	79.2	78.8
EBITDA	**20,183**	**23,626**	**26,180**	**32,230**	**35,814**	**40,699**	**47,044**
Margin (%)	18.7	19.5	18.6	19.8	20.4	20.8	21.2
Depreciation	4,069	4,245	6,760	6,720	7,045	8,100	8,946
EBIT	**16,113**	**19,381**	**19,420**	**25,510**	**28,769**	**32,599**	**38,098**
Int. and Finance Charges	4,853	5,170	7,040	7,350	6,273	6,490	6,130
Other Income	1,239	911	3,160	4,440	4,300	4,000	3,500
Exchange difference on trade rec. & payables	-75	939	2,230	2,380	0	0	0
PBT bef. EO Exp.	**12,574**	**14,182**	**13,310**	**20,220**	**26,796**	**30,110**	**35,469**
EO Items	-853	-30	-1,290	-810	0	0	0
PBT after EO Exp.	**11,721**	**14,153**	**12,020**	**19,410**	**26,796**	**30,110**	**35,469**
Total Tax	2,217	2,440	1,650	1,890	4,823	6,022	7,094
Tax Rate (%)	18.9	17.2	13.7	9.7	18.0	20.0	20.0
Prior Period Items - Income / (Expenses) - Net	156	49	0	0	0	0	0
Share of (profit)/loss of ass. & JV	-221	-209	850	190	200	209	220
Minority Interest	72	433	120	60	63	66	69
Reported PAT	**9,498**	**11,440**	**9,400**	**17,270**	**21,710**	**23,812**	**28,086**
Adjusted PAT	**8,048**	**14,607**	**10,980**	**19,930**	**21,710**	**23,812**	**28,086**
Change (%)	2.8	81.5	-24.8	81.5	8.9	9.7	17.9
Margin (%)	7.5	12.1	7.8	12.2	12.3	12.1	12.6

Consolidated - Balance Sheet (INR Million)

Y/E March	FY14	FY15	FY16	FY17	FY18E	FY19E	FY20E
Net Worth	**52,474**	**58,603**	**58,890**	**73,970**	**91,243**	**110,181**	**132,518**
Minority Interest	1,721	444	440	330	330	330	330
Total Loans	28,610	27,815	47,710	60,580	55,580	52,580	49,580
Deferred Tax Liabilities	813	446	-3,900	-5,010	-5,010	-5,010	-5,010
Capital Employed	**83,617**	**87,307**	**103,140**	**129,870**	**142,143**	**158,081**	**177,418**
Gross Block	64,646	65,352	93,150	96,060	108,146	120,013	131,987
Less: Accum. Deprn.	38,560	39,537	58,700	59,540	66,585	74,685	83,631
Net Fixed Assets	**26,086**	**25,815**	**34,450**	**36,520**	**41,561**	**45,328**	**48,356**
Goodwill on Consolidation	12,124	14,493	4,170	4,190	4,190	4,190	4,190
Capital WIP	2,278	5,831	4,840	7,920	7,334	7,467	7,493
Total Investments	**7,373**	**7,636**	**3,350**	**3,780**	**3,780**	**3,780**	**3,780**
Curr. Assets, Loans&Adv.	**79,731**	**89,064**	**117,980**	**144,700**	**157,526**	**177,656**	**204,812**
Inventory	24,801	29,376	37,870	41,560	45,986	51,083	58,031
Account Receivables	32,085	37,930	51,000	56,560	62,625	69,835	79,164
Cash and Bank Balance	10,228	10,098	11,890	28,950	27,814	33,208	40,945
Loans and Advances	12,618	11,659	17,220	17,630	21,100	23,529	26,672
Curr. Liability & Prov.	**43,973**	**55,532**	**61,650**	**67,240**	**72,248**	**80,340**	**91,213**
Account Payables	26,919	32,177	39,620	48,850	52,425	58,235	66,155
Other Current Liabilities	13,373	19,207	20,990	17,300	18,648	20,795	23,573
Provisions	3,681	4,148	1,040	1,090	1,175	1,310	1,485
Net Current Assets	**35,757**	**33,532**	**56,330**	**77,460**	**85,278**	**97,316**	**113,599**
Appl. of Funds	**83,617**	**87,307**	**103,140**	**129,870**	**142,143**	**158,081**	**177,418**

E: MOSL Estimates

Financials and valuations

Ratios

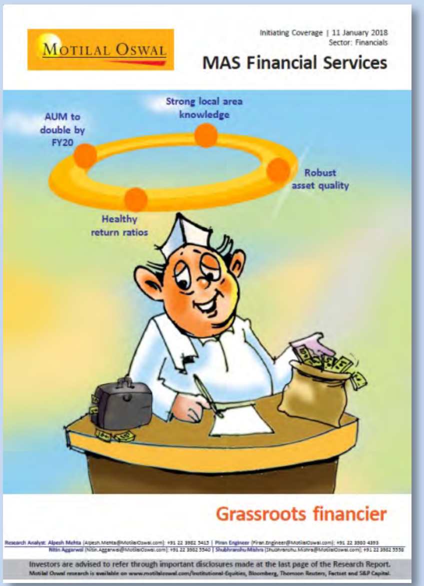
Y/E March	FY14	FY15	FY16	FY17	FY18E	FY19E	FY20E
Basic (INR)							
EPS	**15.9**	**28.9**	**21.7**	**39.5**	**43.0**	**47.2**	**55.6**
Cash EPS	24.0	37.3	35.1	52.8	56.9	63.2	73.3
BV/Share	103.9	116.0	116.6	146.5	180.7	218.2	262.4
DPS	3.4	4.2	5.0	7.0	8.8	9.7	11.4
Payout (%)	21.1	22.6	26.9	20.5	20.5	20.5	20.5
Valuation (x)							
P/E		24.9	33.1	18.3	16.8	15.3	13.0
Cash P/E		19.3	20.5	13.7	12.7	11.4	9.8
P/BV		6.2	6.2	4.9	4.0	3.3	2.7
EV/Sales		3.2	2.8	2.4	2.2	2.0	1.7
EV/EBITDA		16.2	15.3	12.3	10.9	9.4	7.9
Dividend Yield (%)	0.5	0.6	0.7	1.0	1.2	1.3	1.6
Return Ratios (%)							
RoE	16.3	26.3	18.7	30.0	26.3	23.6	23.1
RoCE	16.9	20.1	20.2	22.4	19.3	18.9	19.3
RoIC	21.4	25.2	22.8	26.9	24.7	24.2	25.7
Working Capital Ratios							
Fixed Asset Turnover (x)	1.7	1.9	1.5	1.7	1.6	1.6	1.7
Inventory (Days)	84	89	98	93	95	95	95
Debtor (Days)	109	115	133	127	130	130	130
Creditor (Days)	91	97	103	109	109	108	109
Leverage Ratio (x)							
Net Debt/Equity	0.4	0.3	0.6	0.4	0.3	0.2	0.1

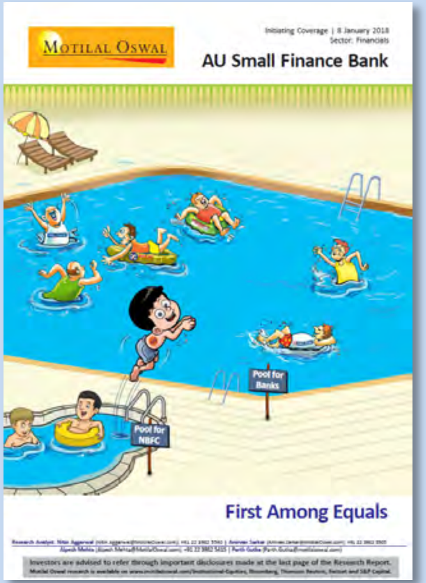
Consolidated - Cash Flow Statement **(INR Million)**

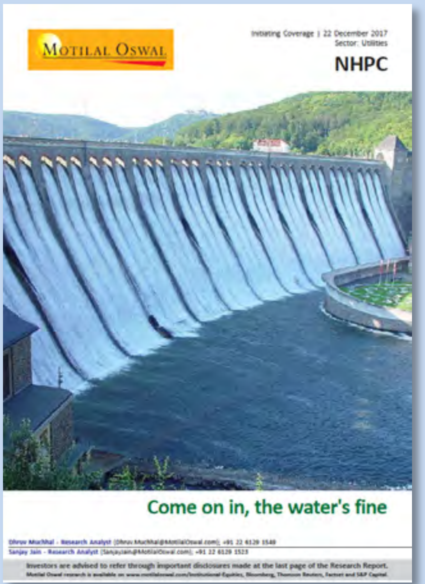
Y/E March	FY14	FY15	FY16	FY17	FY18E	FY19E	FY20E
OP/(Loss) before Tax	12,574	14,182	13,310	20,220	26,796	30,110	35,469
Depreciation	4,069	4,245	6,760	6,720	7,045	8,100	8,946
Interest & Finance Charges	4,323	4,576	6,350	5,850	1,973	2,490	2,630
Direct Taxes Paid	-1,913	-2,826	-5,030	-4,040	-4,823	-6,022	-7,094
(Inc)/Dec in WC	-3,970	-5,529	-7,040	-1,210	-8,954	-6,643	-8,546
CF from Operations	**15,083**	**14,648**	**14,350**	**27,540**	**22,036**	**28,034**	**31,405**
Others	-675	-558	-390	-850	0	0	0
CF from Operating incl EO	**14,408**	**14,090**	**13,960**	**26,690**	**22,036**	**28,034**	**31,405**
(Inc)/Dec in FA	-5,664	-5,311	-6,930	-8,270	-11,500	-12,000	-12,000
Free Cash Flow	**8,744**	**8,780**	**7,030**	**18,420**	**10,536**	**16,034**	**19,405**
(Pur)/Sale of Investments	1,791	-1,982	800	120	0	0	0
Others	1,010	2,986	-10,728	-2,040	4,300	4,000	3,500
CF from Investments	**-2,863**	**-4,307**	**-16,858**	**-10,190**	**-7,200**	**-8,000**	**-8,500**
Inc/(Dec) in Debt	-11,444	-689	12,840	10,790	-5,000	-3,000	-3,000
Interest Paid	-4,254	-7,395	-5,860	-7,950	-6,273	-6,490	-6,130
Dividend Paid	-1,102	-1,830	-2,290	-2,280	-4,444	-4,874	-5,749
CF from Fin. Activity	**-16,800**	**-9,913**	**4,690**	**560**	**-15,972**	**-14,639**	**-15,168**
Inc/Dec of Cash	**-5,255**	**-130**	**1,792**	**17,060**	**-1,136**	**5,394**	**7,737**
Opening Balance	15,482	10,228	10,098	11,890	28,950	27,814	33,208
Closing Balance	**10,228**	**10,098**	**11,890**	**28,950**	**27,814**	**33,208**	**40,945**

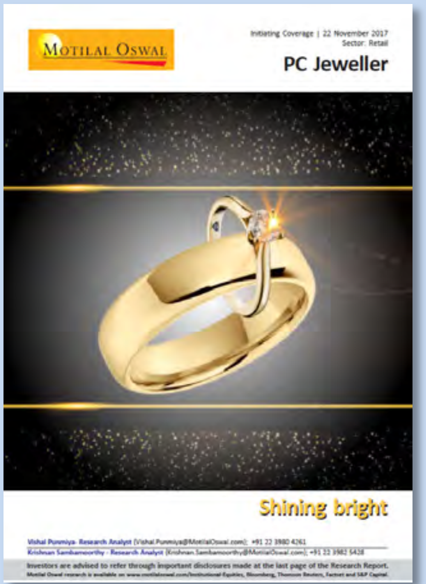
REPORT GALLERY

RECENT INITIATING COVERAGE REPORTS









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Investment Rating	Expected return (over 12-month)
BUY	>=15%
SELL	< - 10%
NEUTRAL	> - 10 % to 15%
UNDER REVIEW	Rating may undergo a change
NOT RATED	We have forward looking estimates for the stock but we refrain from assigning recommendation

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