PAKISTAN INSIGHT

FEBRUARY 01, 2021

Pakistan Fertilizers

All about "YIELDS"

Agriculture and fertilizer sector remained strong during the COVID-19 crisis. Despite challenges on supply chain front global fertilizer offtake witnessed growth of ~2% during FY20.

Agriculture sector plays an important role in Pakistan's economy. Despite being an agrarian country, Pakistan cropped area has remained stagnant over the years. Issues relate to poor crop yield and water scarcity remained big concern for the sector.

Domestic fertilizer sector showed resilience during COVID-19 pandemic. Total urea offtake for CY20 is clocked in at 6mn tons, showing meager decline of ~3% YoY, attributable to pre buying in Dec'19 due to rumors regarding increase in gas price. Our liking for the sector emanates from the following facts i) Gov't pro farmer policies, extension in timeline of GIDC payment, ii) improving farmer economics, iii) significant discount between local and international urea prices and iv) attractive dividend yield.

Stable urea demand and attractive dividend yield makes fertilizer sector a safe play. In our fertilizer universe, we like FFC, EFERT & FATIMA due to their stable business model and attractive payout ratio. In addition to this, change in earning composition, improving dynamics of subsidiary companies and investment in new ventures makes ENGRO a good investment. Furthermore, FFBL witnessed turnaround in its bottom-line due to better margins and higher dividend income. We opine that higher DAP prices, restructuring of FFL (a major drag on FFBL's profitability) and divestment of wind power plants will improve FFBL's liquidity and profitability.

Global Valuations: Pakistan's listed space trading at a discount

As per Bloomberg, Pakistan fertilizer stocks are trading at a P/E of ~6.7x Vs global average of 23x. Dividend yield of Pakistan listed space stands at ~8.2% against global average of 4%.

Global peer comparison

Company name	Mkt Cap (mn $)	P/E	P/B	ROE (%)	Dvd Yld (%)
FATIMA FERTILIZER CO LTD	379	4.91	0.73	15.35	6.03
ENGRO FERTILIZERS LTD	548	4.93	1.95	30.04	9.09
FAUJI FERTILIZER COMPANY LTD	879	6.38	1.97	33.76	9.91
CHAMBAL FERTILISERS & CHEM	1,284	7.67	2.66	38.18	1.77
SINOFERT HOLDINGS LTD	852	8.97	0.70	7.93	4.57
ENGRO CORPORATION LTD	1,118	10.62	1.22	15.25	8.02
CHINA XLX FERTILISER LTD	476	12.61	0.72	5.85	3.03
CHINA BLUECHEMICAL LTD - H	1,005	13.67	0.46	3.28	5.37
COROMANDEL INTERNATIONAL LTD	3,297	22.63	5.59	27.75	0.42
GUJARAT STATE FERT & CHEMICA	430	28.76	0.46	1.55	1.52
RALLIS INDIA LTD	768	30.43	3.99	13.72	0.86
INCITEC PIVOT LTD	3,756	35.19	0.94	2.50	1.35
NUTRIEN LTD	30,413	37.11	1.38	0.42	3.37
CF INDUSTRIES HOLDINGS INC	9,746	37.44	3.45	9.82	2.63
SOC QUIMICA Y MINERA CHILE-B	13,441	90.25	7.25	7.94	1.62
Average	4,559	23.44	2.23	14.22	3.97

Source: Bloomberg, Insight research — Data as of 18th January 2021

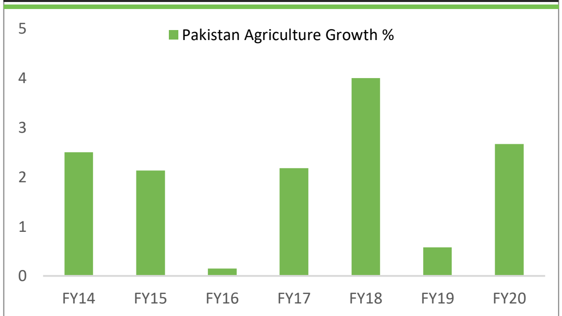
*Sorted on P/E

ISL fertilizer universe snapshot

Company	Target Price	EPS			DPS	
		CY19	CY20F	CY21F	CY20F	CY21F
FFC	141	13.4	16.4	15.7	11	13
EFERT	70	12.6	11.7	10.7	11	9
FFBL	30	(4.6)	1.7	1.3	-	-
ENGRO	397	28.7	46.8	47.7	28	32
FATIMA	41	5.8	7.1	5.6	3	4

Source: Company accounts, Insight research

Pakistan agriculture growth %



Source: Economic survey, Insight research

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Analyst certifications and important disclosures are in the end.

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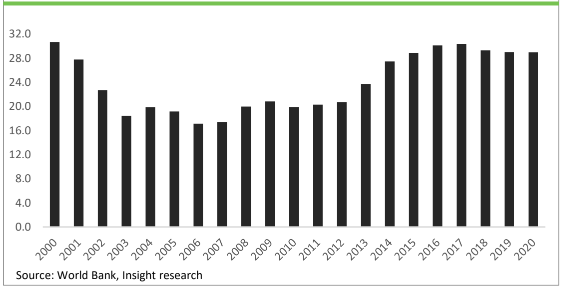
Global agriculture outlook

Stock to use ratio

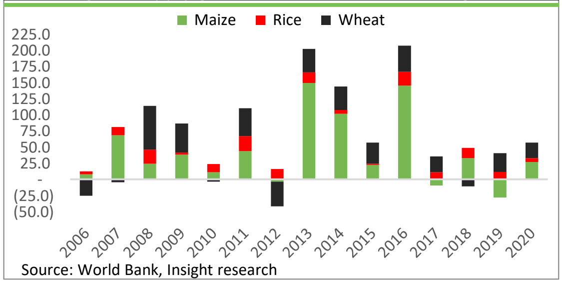


Source: World Bank, Insight research

Agriculture sector plays a vital role in world economy as farming, dairy, livestock, forestry all come under the umbrella of agriculture. The sector serves as a main source of livelihood, as ~70% of global population depends on agriculture sector. For most developing countries, this sectors is the main source of income and growth. Currently, food security is one of the major issue in the world, where increasing population growth remains a key trigger for agriculture commodities.

COVID-19 severely impacted the world in the form of nation wide lockdowns, disrupted supply chain and restricted trade flows. However, in this whole scenario agriculture and fertilizer sector remained resilient. Several governments allowed fertilizer and agriculture sector to remain operational during the pandemic to ensure food security. On the flip side, sector remained resilient but not immune as supply chain shocks across the globe, affected agriculture and fertilizer sectors.

Global grain supply growth (mn tons annual change)



Source: World Bank, Insight research

Agriculture commodity prices are expected to remain stable in short term as agriculture products are less sensitive to economic slowdown. In addition to this, production levels and stock for most staple food are at all time high according to World Bank Report. According to OECD and FAO, global food demand will grow at lower pace over the next decade as compare to the past years. The growth in global food demand will be derived by growth in population where, per-capita food expenditure is expected to increase globally but will decrease as a percentage of income.

According to FAO, global agriculture industry might face few challenges in addition to Covid-19 such as spread of pest, locust invasion, diseases, regulatory challenges and adverse impact of climate change. However, growth in global crop output will be primarily driven by improvement in yields, resulting from better input use, efficient use of technology and better cultivation practices.

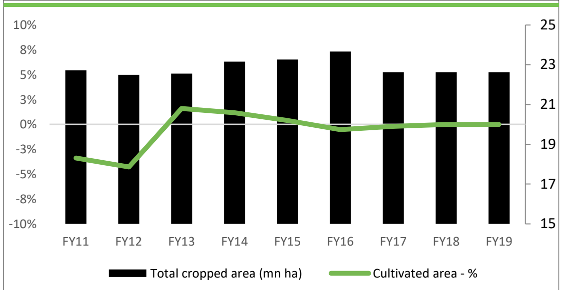
Commodity index changes

Source: World Bank, Insight research

Pakistan's agriculture environment

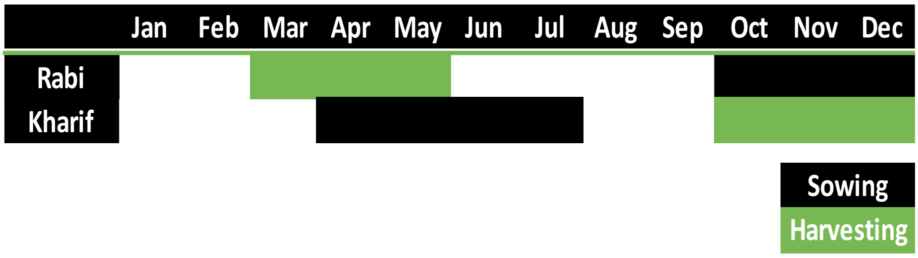
Agriculture plays an important role in the economy of Pakistan as it contributes ~19% to the GDP of Pakistan and providing employment to ~40% labor force of the country. The sector is providing major raw materials to various sectors of the economy, along with playing major role in food security. Pakistan's cropped area over the years remained flat with average cropped area of ~22mn hectares while demand for agriculture products is rising due to rapid increase in population. Area under cultivation also remained stagnant in last 10 years, according to Food and Agriculture Organization (FAO) of the United Nations, area under agricultural crops in Pakistan has been stagnant and no expansion is foreseen due to dwindling water resources and declining crop yield. We believe major factors which have kept cropped area stagnant are dwindling water resource, floods, rapid urbanization, higher input cost, lack of training & resources.

Stagnant growth in cropped and cultivated area



Source: Insight research

Crop season in Pakistan

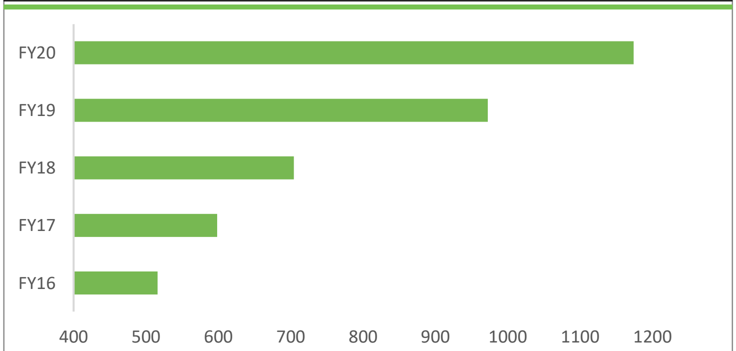


Major crops	
Kharif	**Rabi**
Rice	Wheat
Suger cane	Gram
Cotton	Tobacco
Maize	Barley
Millet	Mustard

Source: Insight research

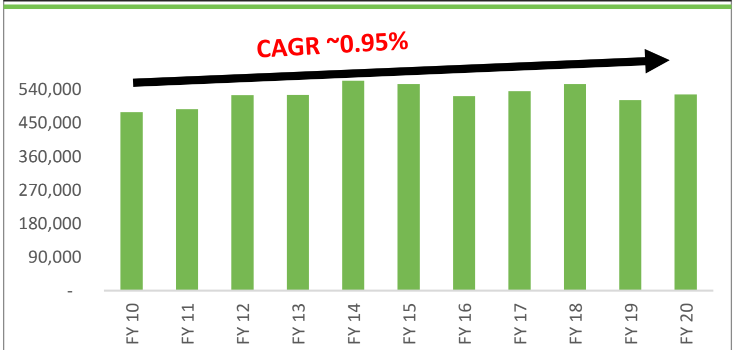
Agri credit: Disbursement of Agriculture credit has increased over time due to government's efforts to improve farmer agronomics and increase agriculture output. In FY20, total outstanding amount by agriculture lending institutions stood at PKR 1,173bn, which is 25% higher as compared to SPLY. Although this is not visible in output as the performance of sector remained subdued during the year, where meager growth has been witnessed. We believe better credit accessibility to farmers along with awareness and training programs will improve crop output.

Agriculture Credit Disbrusment (PKR bn)



Source: SBP, Insight research

Value of Important crops - Constant price (PKR mn)

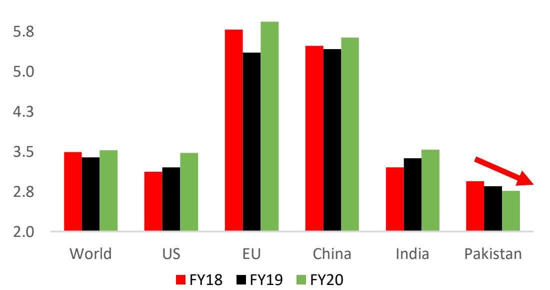


Source: Economic survey, Insight research

Shift towards technology can improve Agri Output: The methods of farming are very old and aren't at par with modern farming techniques which is clearly evident from the agriculture output. A shift towards modern technology, better irrigation networks, awareness and training programs for farmers, improved agriculture credit policy, better support prices, construction of new water reservoirs, addressing challenges in governance & policy framework coupled with availability of affordable input material will improve the performance of agriculture sector.

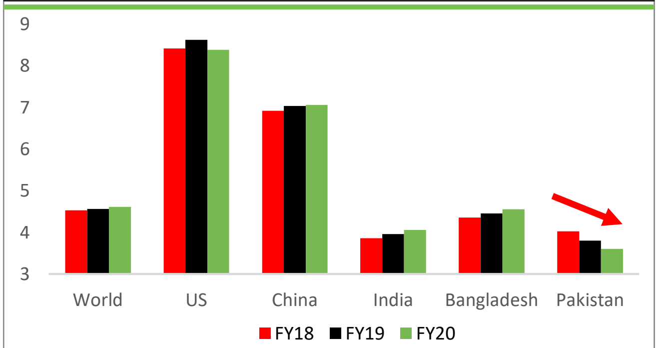
Declining crop yield; a worrying sign: Crop yield of Pakistan's major crops is not very satisfactory as evident in the charts. Lower water availability, poor financial position of farmers and lower spending towards research and modernization of agriculture system are main culprits of this unsatisfactory crop yield.

Wheat: Yield (Metric tons per hectare)



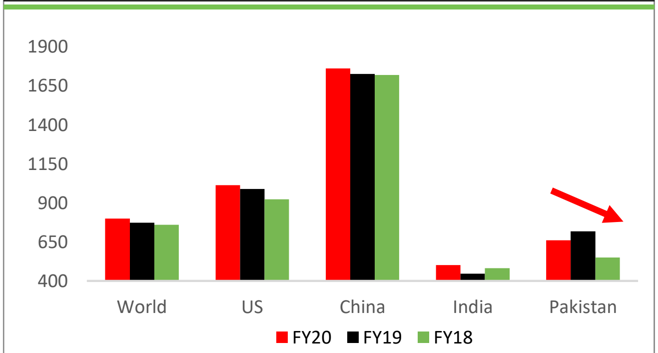
Source: USDA, Insight research

Rice: Yield (Metric tons per hectare)



Source: USDA, Insight research

Cotton: Yield (Kilograms per hectare)



Source: USDA, Insight research

Water scarcity: A pressing issue

Agriculture sector is highly dependent on water availability. As per reports, 70% of world's freshwater is consumed in agricultural production. Changing weather patterns, heavy flooding and water scarcity in certain areas pose big challenge to global agriculture production and food security. Pakistan is one of the country where water shortage is a major threat for both human/ commercial and irrigation needs. Increase in irrigatable land and decrease in water storage capacity is badly affecting irrigation systems. Inefficiencies in water management due to improper canal systems is one of the major problem of irrigation system. As per the estimates of world bank, water logging and salinity affects 4.5mn hectares of irrigated land and reduces agricultural production by 25%. Ironically, Pakistan's four major crops (Wheat, Rice, Sugarcane, Cotton) consumes around 80% of total agricultural water consumption and contributes less than 5% of total GDP.

Possible measure to tackle this problem: Improving overall efficiency of the irrigation system is important to mitigate risk to economic growth arising from water shortage. We believe that focus towards better policy making, innovation and investment holds the key to tackle this problem. In case of Pakistan, diversion of water supply from low value, high water-use crops towards high value, low water use crops can dilute the impact on economic growth. In addition to this, construction of new dams in Pakistan is one of the building blocks to solve this problem. However, it does not provide a complete solution. Investment in modern technology on water distribution network, like drip irrigation system will improve water consumption. As per reports, use of drip irrigation for agriculture can reduce water consumption by ~50% and also reduce consumption of fertilizer.

Water stress by country

Country	Overall	Agricultural
Brazil	Low	Low
Canada	Low	Low/Medium
Russia	Low/Medium	Low/Medium
United States	Low/Medium	Medium/High
Austrailia	Medium/High	Medium/High
China	Medium/High	Medium/High
Turkey	High	High
Pakistan	Extremely high	Extremely high
India	Extremely high	Extremely high

Source: Fitch Ratings,Insight research

Recommendations by World Bank for Water Resource Management

- Strengthen water data, information, mapping, modeling, and forecasting
- Establish a multistakeholder process of basin-scale water resource planning for strategic basin planning
- Establish provincial water planning & intersectoral mechanisms
- Accelerate increases in agricultural water productivity
- Adopt conjunctive planning and management of surface water and groundwater
- Construct limited new storage and review reservoir operations

Global Fertilizer: Exhibiting strength despite crisis

Fertilizer industry showed some resilience during COVID19 crisis. However, several headwinds on logistics front and closure of production facilities affected fertilizer consumption. During the financial crisis of 2008, global fertilizer consumption fell by ~8%, while it is estimated to increase by ~1.6% in 2020 according to a report by IFA. The report also emphasized that the financial implications of the current crisis is higher than the financial crisis of 2008, but currently volatility in crops and fertilizer prices is less when compared to what we witnessed in 2008.

Fertilizer demand during FY20 is expected to settle at 189.9 mt, up by 1.6% YoY. IFA expects, growth of ~2% in global fertilizer consumption in 2021. COVID-19 will put some pressure on fertilizer logistics, while volatility in economic recovery and consumer demand patterns can affect fertilizer offtake.

Global nitrogen supply is expected to record an increase of ~2.5% to clock in at 158MT in 2021. During 2020, world urea production witnessed growth of ~2.8% to clock in at ~182MT. Urea demand for 2021 is expected to grow by ~2.2% to clock in at ~185MT. On pricing front, urea prices are expected to increase by ~3% during 2021.

After two years of contraction, global phosphate supply is expected to increase by meager 1% in 2020. While global phosphoric acid production is expected to clock in at 48MT. As per IFA, global phosphoric acid capacity is expected to reach 59MT in 2021. Increase in global capacity is mainly due to additions in Morocco, Brazil, Tunisia and India. However, these capacity addition might face slight delays due to the pandemic and cross border movements.

Global potash production is expected to clock in at 42MT in 2020. Global potassium demand (for both fertilizer use and industrial applications) is projected to increase by 1.7% in 2021.

Global Fertilizer Demand (mt)

	N	P2O5	K20	Total
2017/18	106	47	38	190
2018/19	104	46	37	187
2019/20 (e)	107	47	36	190
2020/21 (f)	108	49	37	194
2021/22 (f)	110	49	37	196

Source: Insight research

World Urea Supply/Demand

mt	2019	2020	2021
Supply	186	190	197
Demand	178	181	185
Balance	7.9	9.0	11.3

Source: IFA, Insight research

World Phosphoric acid Supply/Demand

mt	2019	2020	2021
Supply	50.0	50.7	51.2
Demand	47.0	48.3	49.3
Balance	3.0	2.4	1.9

Source: IFA, Insight research

World Potassium Supply/Demand

mt	2019	2020	2021
Supply	47.6	48.4	50.1
Demand	41.6	42.1	42.9
Balance	6.0	6.3	7.2

Source: IFA, Insight research

Essential mineral nutrient for plants

N — Nitrogen increases the protein content of the plant which accelerate the plant growth and gives color to the plant.

P — Phosphorous gives strength to the roots which helps in healthy root development and aids in seeds formation.

K — Potassium increases plants immunity to fight with diseases and helps in plant growth and development.

Pakistan Fertilizer

Pakistan is an agrarian state, where agriculture sector is the largest sector in terms of labor participation. The growth in agriculture sector is heavily dependent on smooth operations of fertilizer industry. Sector has evolved over the decade, initially, the industry was short of supply but with time new investment and technologies resulted in significant increase in industry capacity. Plants generally needs several nutrient which can be obtained by either soil, animal waste or other organic and mineral fertilizer. For better yields, three essential macronutrient which are required by plants in large quantities are Nitrogen (N), Phosphorus (P) and Potassium (K).

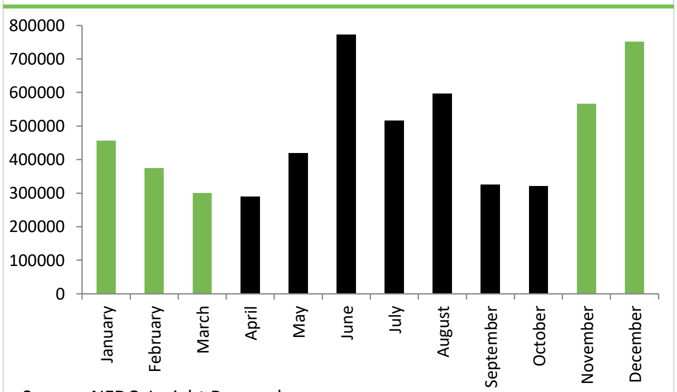
Capacity & Location Of Fertilizer Plants

Capacity & Location Of Fertilizer Plants ('000 tons)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Location
UREA													
FFC													
Plant I	695	695	695	695	695	695	695	695	695	695	695	695	Goth Maachi
Plant II	635	635	635	635	635	635	635	635	635	635	635	635	Goth Maachi
Plant III	718	718	718	718	718	718	718	718	718	718	718	718	Mirpur Mathelo
EFERT													
Old Plant	975	975	975	975	975	975	975	975	975	975	975	975	Daharki
EnVen Plant				650	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300	Daharki
FATIMA	-	375	500	500	500	500	500	500	500	500	500	500	Saqidabad
FFBL	551	551	551	551	551	551	551	551	551	551	551	551	Port Qasim
FATIMA FERT.	445	445	445	445	445	445	445	445	445	445	445	445	Sheikhupura
AGL	346	346	360	433	433	433	433	433	433	433	433	433	Mianwali
PAK ARAB	92	92	92	92	92	92	92	92	92	92	92	92	Multan
Total	**4,458**	**4,833**	**4,972**	**5,695**	**6,345**	**6,345**	**6,345**	**6,345**	**6,345**	**6,345**	**6,345**	**6,345**	
DAP													
FFBL	650	650	650	650	650	650	650	650	650	650	650	650	Port Qasim
CAN													
FATIMA	-	315	420	420	420	420	420	420	420	420	420	420	Saqidabad
PAK ARAB	450	450	450	450	450	450	450	450	450	450	450	450	Multan
Total	**450**	**765**	**870**	**870**	**870**	**870**	**870**	**870**	**870**	**870**	**870**	**870**	
NP													
FATIMA	-	-	210	360	360	360	360	360	360	360	360	360	Saqidabad
PAK ARAB	304	304	304	304	304	304	304	304	304	304	304	304	Multan
Total	**304**	**304**	**514**	**664**	**664**	**664**	**664**	**664**	**664**	**664**	**664**	**664**	
NPK													
EFERT	160	160	100	100	100	100	100	100	100	100	100	100	Port Qasim

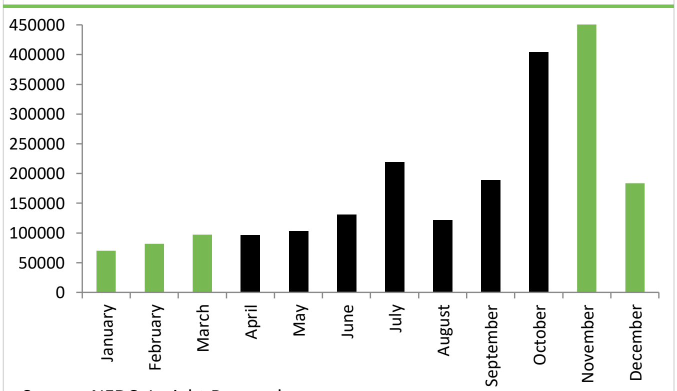
Source: Company Accounts, Insight research

Average Monthly Urea Off-take (2015-2020) (Tons)



Source: NFDC, Insight Research

Average Monthly DAP Off-take (2015-2020) (Tons)

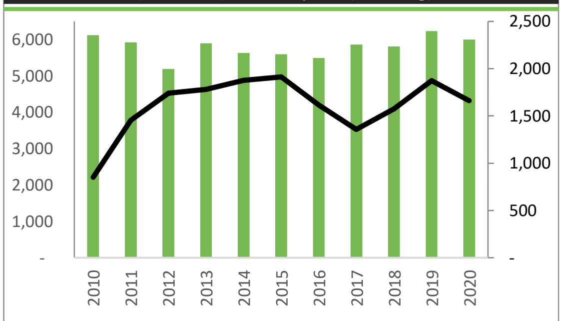


Source: NFDC, Insight Research

Suitable dynamics to support fertilizer sector

Domestic fertilizer sector showed strong resilience during COVID-19 pandemic. Total urea offtake for CY20 clocked in at 6.0 mn tons, showing meager decline of ~3% YoY. The decline is attributable to heavy buying in Dec'19 due to rumors regarding increase in gas price. We expect that fertilizer sector will outperform the market given Gov't pro farmer policies, extension in timeline of GIDC payment, improving farmer economics, significant discount between local and international urea price and attractive payout ratio.

Urea Offtake (000' tons) Vs Urea price (PKR/bag)



Source: NFDC, Zakheera Insight Research

Urea offtake to remain stable amid improving farmer economics

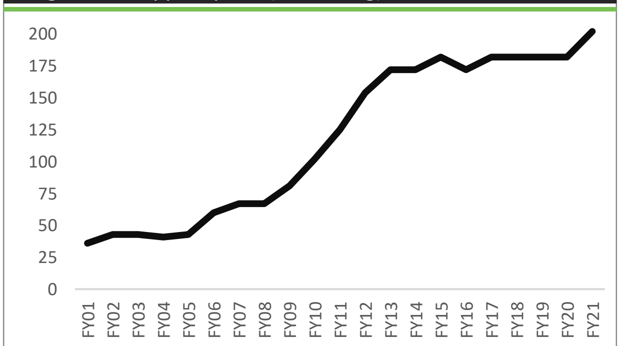
Country's total urea demand has remained flat at ~5.8 mn tons over the years due to stagnant area under cultivation. We expect that urea offtake to remain stable around ~6 mn tons during CY21 amid Gov't pro farmer policies.

Gov't has announced PKR 50bn package for the agriculture sector to provide relief to farmers. The package involves reduction of import duties on fertilizers, reduction in electricity cost for tube-wells, reduction of markup on agri loans and subsidy on fertilizers. Similarly, Provincial Gov't increased support price of wheat (from ~PKR 1,400 to ~PKR 1,650-2,000 /40kg) and sugarcane (from ~PKR182 to ~PKR 192-202 /40kg) to support farmers. In addition to this, Gov't has also announced sales tax discounts to tractor manufacturers which may improve farmer economics. We believe that these measures will improve farmer's income, which will positively impact demand for fertilizers.

Cost of fertilizer as % total cost of production (Cost/Acre)	%
Wheat	~20%
Sugarcane	~13%

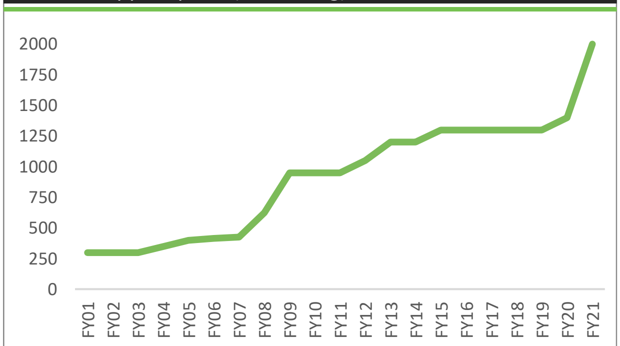
Source: Insight research

Sugarcane support price (PKR/40 kg)



Source: Insight research

Wheat support price (PKR/40 kg)

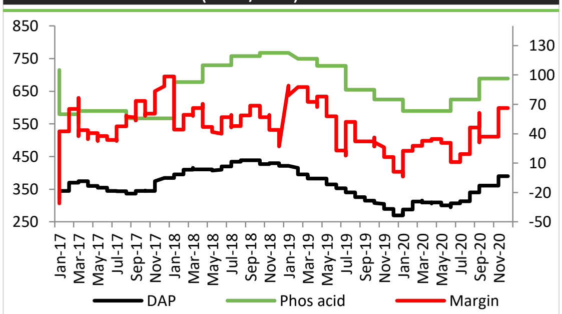


Source: Insight research

Higher intl. price and delay in on ground implementation of subsidy will keep DAP offtake in check

DAP is most commonly used phosphate fertilizer which helps in better seed formation and root development. Pakistan's total DAP demand stands around ~ 2.2mn tons. DAP demand is heavily dependent on prices, as opposed to urea demand which is inelastic in nature. Due to shortage in international market, international DAP price is hovering around ~USD 390/ton which translates into ~PKR 4,200/bag. In past, different Gov't announced subsidies on DAP to promote the use of phosphate fertilizer. The current Gov't also announced subsidy on DAP to the tune of PKR 1,000/bag which is yet to materialized. We believe that further delays in implementation process of subsidy coupled with higher international DAP prices will keep DAP offtake in check during the year.

DAP Vs Phos Acid (USD/ton)



Source: Bloomberg, Insight Research

NP & CAN offtake showing improvement

CAN & NP are referred as substitutes for urea & DAP. Price of CAN strongly follow price of urea, while NP follows price of DAP. Offtake for both products is dependent on availability of product and pricing difference between urea/ CAN & DAP/NP. Operations of Pak-Arab fertilizer plant during the year have resulted in adequate availability of CAN and NP in the market. NP & CAN markets are set to witness volumetric growth of ~30% YoY in CY20. Tight supply of DAP in international market coupled with higher prices will benefit FATIMA & Pak-Arab Fertilizer.

Urea price: A happening year ahead

Urea prices are latest talk of the town due to significant discount between international and local urea prices, increase in crops support price and closure of RLNG based urea plants. Urea offtake is inelastic and Pakistan's annual urea demand hovers around ~5.8 mn tons. In most industries prices are determined by market forces but this doesn't apply to fertilizer industry. Urea prices are "DE-REGULATED" but Gov't actively monitors domestic urea prices, as Gov't provides natural gas (major raw material for urea) at subsidized rates to fertilizer industry to ensure availability of cheap nutrient to farmers.

However, we expect some volatility in domestic urea prices in 2HCY21 due to expiry of concessionary gas agreement in Jun'21. Urea market is highly concentrated where three manufacturers (FFC, EFERT, FATIMA) cumulatively captures ~85% of the market. As per our back of envelop working gas cost per bag for FFC, EFERT & FATIMA stands at ~PKR 628/508/380, respectively. We expect that post expiry of concessionary gas agreement, FATIMA & EFERT will increase urea price to maintain their margins. FFC will be the sole beneficiary of the said development, if our hypothesis materializes.

As per industry sources, few fertilizer plants have planned shutdown during CY21, which might effect fertilizer supply during the year. This will create an imbalance in urea demand/supply in local market, which might put upward pressure on urea price.

Extension in timeline of GIDC payment

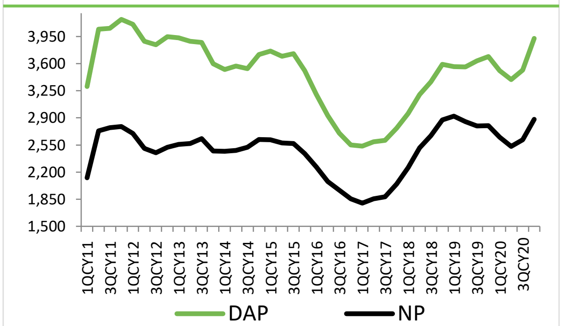
The long awaited GIDC decision was announced by Supreme Court in Aug'20. Initially, SC ordered payment of outstanding GIDC in 24 equal monthly payments. However, companies submitted their review petition against the decision which was rejected by SC, and court ordered to extend GIDC collection time from 24 months to 48 months. We believe that extension in timeline of GIDC will ease liquidity pressure on the manufactures.

The matter of GIDC payable on concessionary gas plant is still in litigation. Any adverse decision on that front will negatively impact EFERT & FATIMA.

Natural gas: Smooth availability is essential

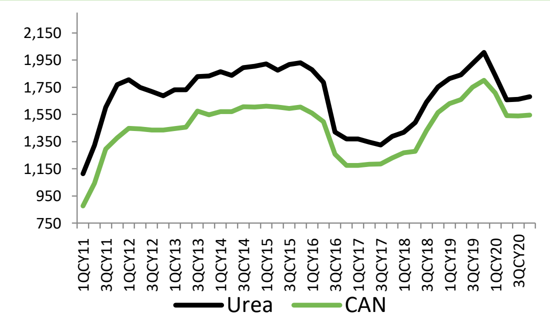
Issues related to gas curtailment and availability is major problem for local fertilizer industry because natural gas is the basic raw material for the industry. In terms of gas availability, 2020 was a good year for fertilizer industry where total urea production for the year is expected to clock in at ~6.13 mn tons, up by 7% YoY. 90% of country's fertilizer plants are dependent on Mari gas field.

DAP Vs NP Price in PKR



Source: NFDC, Insight Research

Urea Vs CAN Price in PKR



Source: NFDC, Insight Research

Per bag cost of gas for Urea (PKR)

	Current pricing	Assuming RLNG for EFERT & FATIMA post concessionary gas	Assuming system gas tariff for EFERT & FATIMA post concessionary gas
FFC	628	628	628
EFERT	508	1255	639
FATIMA	380	1625	598

Source: Insight research

Impact of urea price increase

CY21F EPS Impact	PKR 50/bag increase	PKR 100/bag increase
FFC	1.27	2.54
EFERT	0.93	1.85
FFBL	0.28	0.56
FATIMA	0.20	0.41

Source: Insight Research

GIDC payable (PKR mn)

Company	GIDC payable	Per month payment	Cash & short term investment
FFC	62,643	1,305	66,003
EFERT	19,581	408	20,762
FFBL	22,200	463	8,299
FATIMA	5,822	121	3,090

Source: Insight research, Company accounts

*Excluding GIDC onconcessionary gas

Mari field has recoverable reserve of ~2,974 bcf. As per our estimates, Mari field's reserves may last till 2035.

As per news flows, Gas Supply Agreement for Fauji Fertilizer Bin Qasim plant expires on December 31, 2020. Continued supply will require new allocation by the cabinet, the determination of whether subsidized gas should be continued or not needs to be decided. Given the importance of sector in ensuring food security of the country, we don't expect issues related to system gas curtailment in fertilizer sector during CY21. However, natural depletion of indigenous gas reservoir will negatively impact operations of fertilizer manufacturers.

Potential increase in gas price

Cost of natural gas (Feed + Fuel) makes up almost ~70% of total manufacturing cost of fertilizer. Gov't has increased gas price only once (Sep'20) in last 1.5 year to provide relief to the pandemic hit economy. We expect increase in gas price in 1QCY21, amid talks related to resumption of IMF program and minimal increase in gas tariff in 2020. This will negatively impact the profitability of fertilizer players (as shown in table). However, given the significant discount between international and local urea prices, manufacturers can easily pass on the impact to the end user.

Water scarcity and effective rainfall

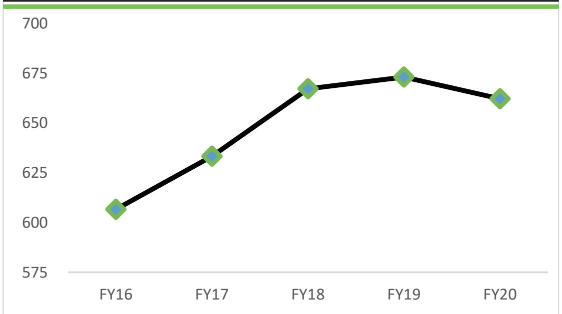
Water scarcity is a major issue for Pakistan's agriculture sector. Therefore, efficient use of available water is important. Gov't has been working on many projects to increase overall water availability. However, lower availability of water during important stages of plant development will negatively impact fertilizer offtake. Effective rainfall (utilizable rainfall) is also necessary for betterment of agriculture output which is important source of water supply to agriculture sector. The amount, time and duration of rainfall vary from region to region.

Average surface water availability

	Kharif	Rabi	Total
FY11	53.4	34.6	88.0
FY12	60.4	29.4	89.8
FY13	57.7	31.9	89.6
FY14	65.5	32.5	98.0
FY15	69.3	33.1	102.4
FY16	65.5	32.9	98.4
FY17	71.4	29.7	101.1
FY18	70.0	24.2	94.2
FY19	59.6	24.8	84.4
FY20	65.2	29.2	94.4

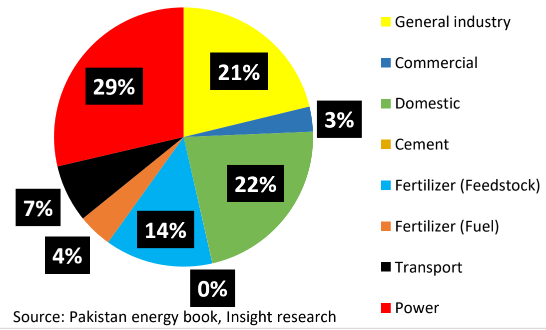
Source: Economic survey

Production from MARI field (mmcfd)



Source: Insight research

Gas consumption by sector (mmcfd)



Source: Pakistan energy book, Insight research

Impact of feed gas price increase

CY21F EPS Impact (PKR/sh)	10% increase in feed gas price	15% increase in feed gas price
FFC	(0.95)	(1.43)
EFERT	(0.27)	(0.40)
FFBL	(0.34)	(0.51)
FATIMA	(0.10)	(0.14)

Source: Insight Research

Impact of fuel gas price increase

CY21F EPS Impact (PKR/sh)	10% increase in fuel gas price	15% increase in fuel gas price
FFC	(0.67)	(1.01)
EFERT	(0.51)	(0.76)
FATIMA	(0.12)	(0.18)

Source: Insight Research

Investment theme

Fauji Fertilizer Company Limited (TP ~141/sh)

Stable business model coupled with investment in multiple sectors and lower risk as compare to peers makes FFC a good stock. FFC's 5-year average payout ratio stood at 83% along with 5-year average dividend yield of ~9.3%. With stable outlook of urea demand going forward, we expect payouts to remain on same trajectory. Being the market leader, FFC retains strong ability to pass on any cost side pressure. In addition, turnaround in FFBL's profitability will positively impact FFC.

FFC snapshot

	CY19	CY20	CY21F
EPS	13.5	16.4	15.7
DPS	10.8	11.2	12.6

Source: Company accounts, Insight research

Fauji Fertilizer Bin Qasim Limited (TP ~30/sh)

Improvement in DAP business, restructuring of management team and lower interest rates have turned the tides for FFBL. Divestment of wind power projects, issuance of right share and extension in GIDC payment timeline will further improve company's liquidity position.

FFBL snapshot

	CY19	CY20	CY21F
EPS	(4.6)	1.7	1.3
DPS	-	-	-

Source: Company accounts, Insight research

*Based Post right no. of shares

Engro Fertilizer Limited (TP ~70/sh)

Our liking for the stock is based on attractive dividend yield, stable demand of urea and potential investment in new venture. Expiry of concessionary gas agreement will hurt company's margins. However, given the industry dynamics, we expect company to increase urea price to partially offset the negative repercussions.

EFERT snapshot

	CY19	CY20F	CY21F
EPS	12.6	11.7	10.7
DPS	13.0	11.0	9.0

Source: Company accounts, Insight research

Engro Corporation Limited (TP ~397/sh)

ENGRO is one of the largest conglomerate with investment in fertilizer, chemical, terminal operations, food/dairy, technology, power and mining sectors. Company's diversification, growth potential, attractive payouts and ample cash on balance sheet makes ENGRO's investment case strong. ENGRO has been doing feasibilities on multiple projects. Recently, company entered in telecom tower sharing business "ENFRASHARE" with investment of ~PKR 7.5bn. Sizeable cash on company's balance sheet will help company to undertake new projects. Improving contribution from EPCL is another positive for ENGRO.

ENGRO snapshot

	CY19	CY20F	CY21F
EPS	28.7	46.8	47.7
DPS	24.0	28.0	32.0

Source: Company accounts, Insight research

Fatima Fertilizer Company Limited (TP ~41/sh)

Our liking for the stock is premised on fact that FATIMA is the market leader of NP and CAN market. Acquisition of Pak Arab will make Fatima group sole producer of CAN in the industry which will result in better pricing control. We believe that declining debt level and acquisition of fertilizer plants from Pak-Arab will improve FATIMA's dividend paying capacity, despite expiry of concessionary gas agreement in Jun'21.

FATIMA snapshot

	CY19	CY20F	CY21F
EPS	5.8	7.1	5.7
DPS	2.0	3.0	3.8

Source: Company accounts, Insight research

Key risk

> Demand and supply imbalance in urea market

> Abrupt disruption in intl. urea & DAP price

> Weak agronomics

> Inability to past cost side pressures

> Unfavorable tax regulations / changes in duty structures

Fauji Fertilizer Company (PKR mn)

Income statement	CY19	CY20	CY21F	CY22F
Net Sales	105,783	97,655	100,260	102,603
Cost of sales	75,046	66,071	63,770	65,523
Gross profit	30,737	31,583	36,490	37,080
Selling & distribution expenses	8,288	7,848	9,282	9,375
Other operating income	7,191	6,429	5,366	5,033
Other operating expense	3,409	4,626	2,644	2,680
Finance cost	2,477	1,874	1,812	1,521
Remeasurement of GIDC	-	5,927	-	-
Profit before taxation	23,754	29,591	28,117	28,536
Taxation	6,643	8,772	8,154	8,276
Profit after taxation	17,111	20,819	19,963	20,261
EPS - Basic	**13.4**	**16.4**	**15.7**	**15.9**
DPS	10.8	11.2	12.6	12.7

Source: Company account, Insight research

Balance sheet	CY19	CY20F	CY21F	CY22F
Property, plant & equipment	22,212	22,996	23,807	24,409
Stores, spares and loose tools	3,811	3,662	3,760	4,058
Stock in trade	6,795	5,431	5,241	5,385
Trade debts	13,460	6,336	6,115	6,283
Cash & cash equivalents	53,735	52,004	36,742	23,365
Total assets	**153,390**	**147,774**	**133,091**	**121,384**
Long term loans	6,473	3,285	1,190	595
Trade and other payables	76,009	73,913	59,058	44,429
Current portion of borrowings	4,711	3,188	2,095	595
Short term borrowings	21,803	16,570	16,239	17,051
Unappropriated profit	22,698	29,268	33,197	37,304
Total liabilities and equity	**153,390**	**147,774**	**133,091**	**121,384**

Source: Company account, Insight research

Key ratios	CY19	CY20F	CY21F	CY22F
Gross margin	29%	32%	36%	36%
Net margin	16%	21%	20%	20%
Debt	32,987	23,043	19,524	18,241
Debt to asset	22%	16%	15%	15%
ROA	11%	14%	15%	17%
ROE	48%	49%	43%	40%
BVPS	27.96	33.13	36.22	39.45

Source: Company account, Insight research *Unconsolidated

Engro Fertilizer Limited (PKR mn)

Income statement	CY19	CY20F	CY21F	CY22F
Net Sales	121,355	103,425	110,551	113,466
Cost of sales	81,815	69,313	76,281	78,611
Gross profit	39,540	34,112	34,271	34,854
Selling & distribution expenses	8,736	8,519	9,249	9,755
Adminstration Expenses	1,248	1,564	1,363	1,431
Other operating income	4,352	1,417	659	374
Other operating expense	2,623	2,290	2,579	2,616
Finance cost	3,887	3,182	1,570	908
Profit before taxation	27,398	19,976	20,169	20,518
Taxation	10,526	4,318	5,849	5,950
Profit after taxation	16,871	15,658	14,320	14,568
EPS - Basic	**12.6**	**11.7**	**10.7**	**10.9**
DPS	13.0	11.0	9.0	9.5

Balance sheet	CY19	CY20F	CY21F	CY22F
Property, plant & equipment	65,924	63,645	61,444	59,294
Stores, spares and loose tools	5,301	4,396	4,698	4,822
Stock in trade	12,478	9,495	9,613	9,692
Trade debts	14,175	8,545	8,777	8,400
Cash & cash equivalents	8,925	11,826	4,444	3,587
Total assets	**127,047**	**118,221**	**109,469**	**106,466**
Long term loans	22,192	10,469	4,485	833
Trade and other payables	37,685	37,251	36,227	36,911
Current portion of borrowings	8,760	10,892	5,985	3,651
Short term borrowings	1,986	2,085	2,815	3,097
Unappropriated profit	26,598	27,568	29,870	31,753
Total liabilities and equity	**127,047**	**118,221**	**109,469**	**106,466**

Source: Company account, Insight research

Key ratios	CY19	CY20F	CY21F	CY22F
Gross margin	33%	33%	31%	31%
Net margin	14%	15%	13%	13%
Total debt	32,938	23,446	13,284	7,581
Debt to asset	26%	20%	12%	7%
ROA	13%	13%	13%	14%
ROE	39%	35%	31%	30%
BVPS	32.41	33.14	34.86	36.27

Source: Company account, Insight research

Fauji Fertilizer Bin Qasim Limited (PKR mn)

Income statement	CY19	CY20	CY21F	CY22F
Net Sales	66,839	83,234	77,166	80,105
Cost of sales	60,955	70,655	66,113	68,357
Gross profit	5,885	12,579	11,053	11,748
Selling & distribution expenses	5,345	5,518	5,885	6,005
Adminstration Expenses	1,422	1,255	1,496	1,536
Other operating income	4,370	5,184	3,403	3,277
Other operating expense	2,158	4,394	768	827
Finance cost	5,199	4,444	2,479	2,005
Remeasurement of GIDC	-	2,741	-	-
Profit before taxation	(3,869)	4,893	3,828	4,652
Taxation	2,052	2,700	2,113	2,568
Profit after taxation	(5,921)	2,192	1,715	2,085
EPS - Basic	**(4.6)**	**1.7**	**1.3**	**1.6**
DPS	-	-	-	0.5

Source: Company account, Insight research

Balance sheet	CY19	CY20F	CY21F	CY22F
Property, plant & equipment	10,428	10,011	9,610	9,226
Stores, spares and loose tools	2,989	3,703	3,472	3,605
Stock in trade	14,756	9,701	7,240	7,112
Trade debts	8,607	7,761	5,792	5,615
Cash & cash equivalents	6,303	5,206	6,363	3,721
Total assets	**91,167**	**83,484**	**79,828**	**76,871**
Long term loans	13,792	7,179	3,944	1,458
Trade and other payables	34,993	37,672	33,939	32,146
Current portion of borrowings	4,567	5,631	3,235	2,485
Short term borrowings	28,227	21,170	20,112	20,514
Unappropriated profit	(2,507)	(315)	1,401	3,018
Total liabilities and equity	**91,167**	**83,484**	**79,828**	**76,871**

Source: Company account, Insight research

Key ratios	CY19	CY20F	CY21F	CY22F
Gross margin	9%	15%	14%	15%
Net margin	NM	3%	2%	3%
Debt	46,585	33,981	27,291	24,458
Debt to asset	51%	41%	34%	32%
ROA	NM	3%	2%	3%
ROE	NM	24%	11%	12%
BVPS	5.29	6.99	12.19	13.44

Source: Company account, Insight research *Unconsolidated

Adjusted for post right no. of shares

Fatima Fertilizer Comapny Limited (PKR mn)

Income statement	CY19	CY20F	CY21F	CY22F
Net Sales	74,964	64,581	70,700	72,334
Cost of sales	47,065	32,103	44,141	47,140
Gross profit	27,899	32,478	26,559	25,195
Selling & distribution expenses	3,800	3,825	4,949	5,063
Adminstration Expenses	2,779	3,631	3,535	3,978
Other operating income	1,090	1,704	871	647
Other operating expense	1,480	1,904	1,446	1,292
Finance cost	3,761	3,702	913	401
Profit before taxation	17,193	21,121	16,587	15,107
Taxation	5,123	6,167	4,810	4,381
Profit after taxation	12,070	14,954	11,777	10,726
EPS - Basic	**5.75**	**7.12**	**5.61**	**5.11**
DPS	2.0	3.0	3.8	3.8

Source: Company account, Insight research

Balance sheet	CY19	CY20F	CY21F	CY22F
Property, plant & equipment	100,721	97,276	96,775	96,312
Stores, spares and loose tools	7,713	5,736	7,196	8,395
Stock in trade	11,518	9,069	10,400	11,236
Trade debts	7,207	4,364	5,036	5,549
Cash & cash equivalents	4,287	9,431	8,691	7,620
Total assets	**155,117**	**147,292**	**149,603**	**150,851**
Long term loans	6,254	4,754	3,254	1,754
Trade and other payables	26,484	20,461	23,078	21,568
Current portion of borrowings	6,225	1,500	1,500	1,500
Short term borrowings	16,265	8,946	4,473	2,236
Unappropriated profit	57,008	67,256	74,098	80,624
Total liabilities and equity	**155,116**	**147,292**	**149,602**	**150,850**

Source: Company account, Insight research

Key ratios	CY19	CY20F	CY21F	CY22F
Gross margin	37%	50%	38%	35%
Net margin	16%	23%	17%	15%
Debt	28,744	15,199	9,227	5,490
Debt to asset	19%	10%	6%	4%
ROA	8%	10%	8%	7%
ROE	15%	17%	12%	11%
BVPS	37.15	42.27	45.48	48.58

Source: Company account, Insight research

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- Discounted cash flow (DCF)
- Relative Valuation (P/E, P/Bv, P/S etc.)
- Equity & Asset return based methodologies (EVA, Residual Income etc.)

Frequently Used Acronyms

TP	Target Price	**DCF**	Discounted Cash Flows	**FCF**	Free Cash Flows
FCFE	Free Cash Flows to Equity	**FCFF**	Free Cash Flows to Firm	**DDM**	Dividend Discount Model
SOTP	Sum of the Parts	**P/E**	Price to Earnings ratio	**P/Bv**	Price to Book ratio
P/S	Price to Sales	**EVA**	Economic Valued Added	**BVPS**	Book Value per Share
EPS	Earnings per Share	**DPS**	Dividend per Share	**DY**	Dividend Yield
ROE	Return on Equity	**ROA**	Return on Assets	**CAGR**	Compounded Annual Growth Rate

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