



Poultry Feed



Research Team

Saniya Tauseef | Senior Manager Research
Ayesha Wajih | Supervising Senior Research
Sabeen Mirza | Research Analyst

© The Pakistan Credit Rating Agency Limited.



CONTENTS

Contents	Pg.	Contents	Pg.
Introduction	1	Business Risk Margins	12
Process Flow	2	Financial Risk Borrowing Mix	13
Global Overview	3	Financial Risk Working Capital Management	14
Feed Composition	4	Rating Curve	15
Key Inputs Maize & Soybean Dynamics	5	Duty Structure	16
Local Overview	6	SWOT Analysis	17
Local Supply Dynamics Maize	7	Outlook	18
Local Supply Dynamics Soybean	8	Bibliography	19
Local Demand Dynamics	9		
Business Risk Demand side	11		

Poultry Feed

Introduction



Starter poultry feed is a protein-dense variety of chicken feed intended to fulfill baby chicks' dietary requirements. The main ingredient in it is soybean meal. It offers a high concentration of proteins, i.e., ~40-48% proteins.



Grower poultry feed has lesser protein content than starter. It is used after 4-6 weeks of feeding with chick starter. The main ingredient in it is maize. That helps in preparing their body and reproductive organs for the egg-laying activities.

Product Portfolio



Layer poultry feed is fed after they have started their first egg laying cycle. This poultry feed mainly constitutes of wheat. It helps in development and rapid production of eggs and has a high level calcium, which is useful for egg laying poultry birds.



Broiler poultry feed has a very high volume of protein for the rapid growth of the broiler. The feed helps the broiler develop very rapidly in 2 months. The main ingredient here is fish meal. It is enriched with proteins that helps in growth.

Poultry Feed

Process Flow

Poultry Feed Sector majorly involves the following steps:

Step 1: Inputs of poultry feed both domestically produced (maize) and imported (soybean seeds and locally produced soybean meal) are first collected.

Step 2: These inputs are then sent to feed mills in order to form the mixture (poultry feed).

Step 3: This mixture is transferred to poultry farms for consumption by poultry birds.



Poultry Feed

Global | Overview

- The global market value of the feed sector in CY23 was estimated to be USD~448.6bln (CY22: USD~432.6bln). Feed sector composes of poultry (broiler and layer), cattle, pig, pet and others. In CY23, the global market value for the poultry feed sector was valued at USD~123.5bln with a growth of ~11.0% YoY. The market is expected to reach USD~218.0bln by CY31, at a CAGR of ~6.3%.
- During CY22, global feed production stood at ~1.3bln MT, broiler and layer collectively formed ~42.0% of total feed production. Although the overall global feed production declined by ~0.5% YoY, increase in feed production were reported in broiler ~1.3%, layer ~0.3% and pet food segments ~7.3%. While decreases in feed production were attributed to pig, dairy and beef segments ~3.0%, ~1.3% and ~0.3%, respectively YoY.
- China remained the largest feed-producing country in the world in CY22 (~20.6%), followed by the U.S.A and Brazil, with ~19.0% and ~6.5% shares in the global output, respectively. Vietnam's ~27.7% YoY growth (CY22) in poultry feed output can be attributed to the rising demand for poultry meat and eggs in the country that prompted a substantial investment of USD~250mln in the poultry sector.
- During CY22, challenges facing the global feed production included high raw materials costs, supply chain disruptions and changing consumer preferences. Feed production in Russia and Moldova fell ~35.0% YoY owing to the Russia-Ukraine conflict. Moreover, animal diseases like the Avian influenza also disrupted feed production in more than ~80% of the countries across the globe.
- With respect to consumption, ~63.8% of the global feed production is consumed by the top ten countries, whereas ~0.5% of the world's consumption is concentrated in four economies, namely, China, the U.S.A, Brazil and India.

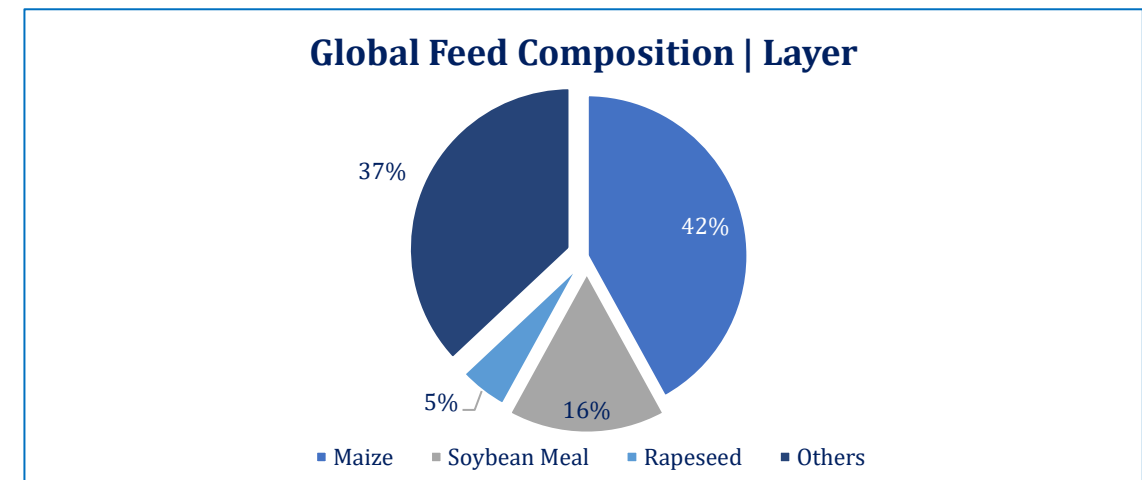
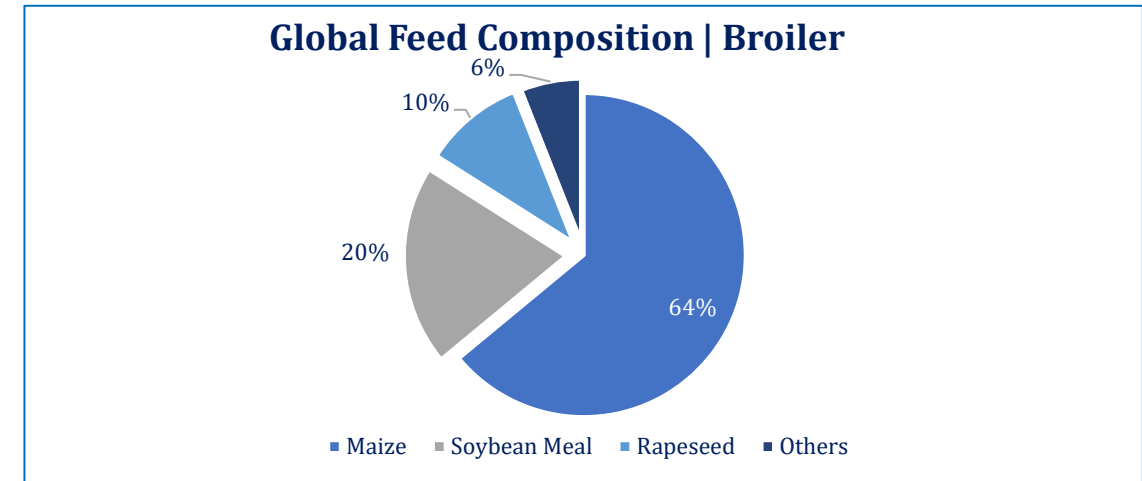
Country-wise Feed Production mln MT			
Country	CY21	CY22*	YoY Growth %
China	268.3	260.7	-2.8%
U.S.A	238.0	240.4	1.0%
Brazil	81.2	81.9	0.9%
India	44.1	43.4	-1.6%
Mexico	39.7	40.1	1.1%
Russia	33.0	34.1	3.5%
Spain	35.8	31.2	-12.9%
Vietnam	20.9	26.7	27.7%
Argentina	26.7	25.7	-3.7%
Germany	24.5	24.4	-0.5%
ROW	458.9	457.8	-0.2%
Total	1,271.7	1,266.4	-0.5%

*Latest data available.

Poultry Feed

Global | Feed Composition

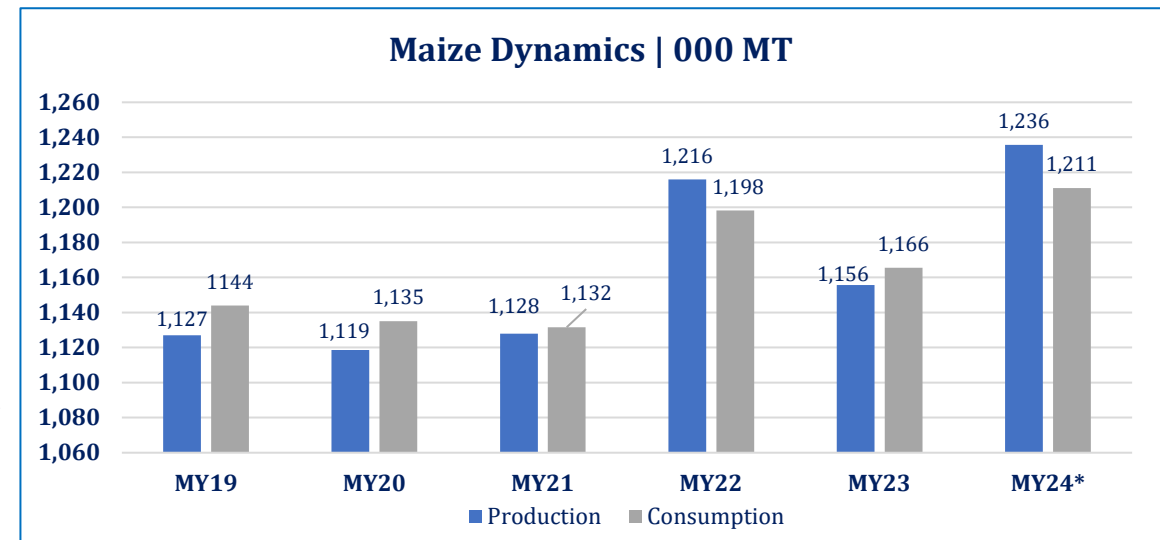
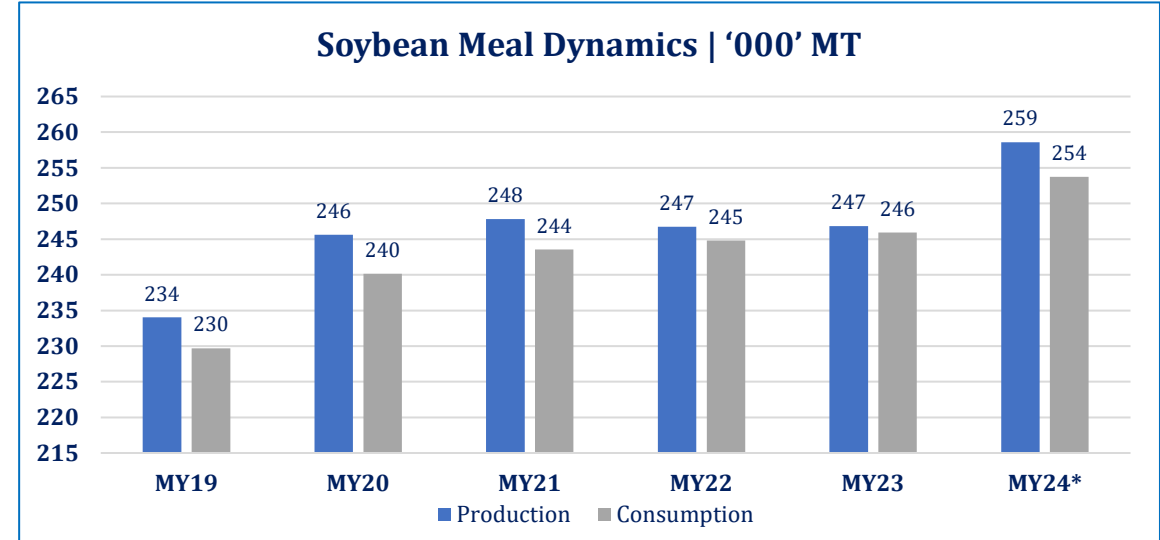
- Maize** has been globally recognized as a major energy poultry feed component. In a broiler starter diet, maize contributes ~65% of the metabolizable energy and ~20% of the protein. It is by far the most widely used cereal grain in the diets of intensively reared poultry. Market size for Maize is expected to grow from USD~139.4bln in CY23 to USD~161.7bln by CY28, at a CAGR of ~3.0%.
- Soybean Meal**, primarily used as a protein supplement, serves not only as a source of metabolizable energy but is also used as food and poultry feed. Usually, ~1 bushel of soybeans (i.e. ~60lbs. or ~27.2kg) yields ~48lbs. (~21.8kg) of meal with soybeans.
- Maize and soybean are two major components of poultry feed. Thus, changes in dynamics of both components (local/ global) have direct implications on the sector's overall performance.
- Rapeseed Meal** is used as an alternative source of protein in feed. As with the case with soybean, rapeseed is being produced as by-products in the production of rapeseed edible oil. Rapeseed has a considerable share in global oil production.
- Others:** Major other components are cotton seed, animal protein feed, vitamins, hay meal, grass meal, among others.



Poultry Feed

Global | Maize and Soybean Dynamics

- China is the largest producer as well as consumer of Soybean meal in the world, with ~30.0% share in the global production and consumption in MY23. Other prominent producers included USA, Brazil and Argentina with shares of ~19.3%, ~16.7% and ~10.0% respectively, whereas other leading consumers included USA, EU and Brazil with ~14.2%, ~10.9% and ~8.3% shares, respectively.
- For MY24, soybean meal production is forecast to increase by ~4.8% YoY, led by ~17.1% growth in Argentina’s output as it recovers from the historic drought that occurred in MY23. On the consumption side, competitive prices of Brazilian soybean meal due to the abundance of produce in the last season has raised demand from China, resulting in an increase in the forecast of global consumption for MY24.
- Global production of maize meal was down ~5.0% YoY in MY23 (USA’s production levels down ~9.1% YoY due to adverse weather conditions). Despite this, USA was the largest producer of maize meal, with ~30.0% share in total world production, followed by China and Brazil with ~24.0% and ~11.9% shares, respectively.
- For MY24, maize meal production is forecast to regain previously lost ground, increasing ~6.9% YoY, on account of larger crops in the USA, China, India, and Paraguay more than offsetting a cut to Brazil.



*MY: Most countries are on an October/September Marketing Year (MY). The United States, Mexico, and Thailand are on a September/August MY. Canada is on an August/July MY. Paraguay is on a Jan/Dec MY, **MY24 forecast values.

Poultry Feed

Local | Overview

- Pakistan’s poultry feed turnover increased by ~29% YoY in FY23 to clock in at PKR~827bln. At present, the animal feed mill segment in Pakistan is relatively unorganized with sales being dependent solely on the poultry and livestock sectors and primarily generated via shops/household premises.
- The sector’s overall market structure can be classified as competitive, with ~150 registered feed mills and ~200 unregistered feed mills that are producing poultry feed and operating with ~10-13mln MT installed capacity. Average utilized capacity for FY23 is estimated at ~56% (~55% in FY22).
- One of the key ingredients of poultry feed, maize, is grown in the province of Punjab, which is highly dependent on the nature of climate whereas other key inputs, like soybean seed, are mostly imported.
- Poultry feed is mostly used in controlled sheds where ~90% of the sales are made on credit, thus sector players are subject to credit risk from their customers. Moreover, any fluctuations in the demand for poultry products can directly impact the production and import of poultry feed.

Industry Snapshot	FY22	FY23
Revenue (PKR bln)	643	827
YoY Growth (%)	43.5%	28.6%
Contribution to GDP*	1.0%	1.0%
Maize Production (mln MT)	9.5	10.2
Soybean Seed Import (mln MT)	2.8	0.3
Soyabean Meal Production (mln MT)	1.5	0.2
Regulatory Body	Pakistan Poultry Association (PPA)	
Feed Conversion Ratio	1.5	1.5
Installed Annual Capacity (mln MT)	~10-13	
Market Structure	Competitive	

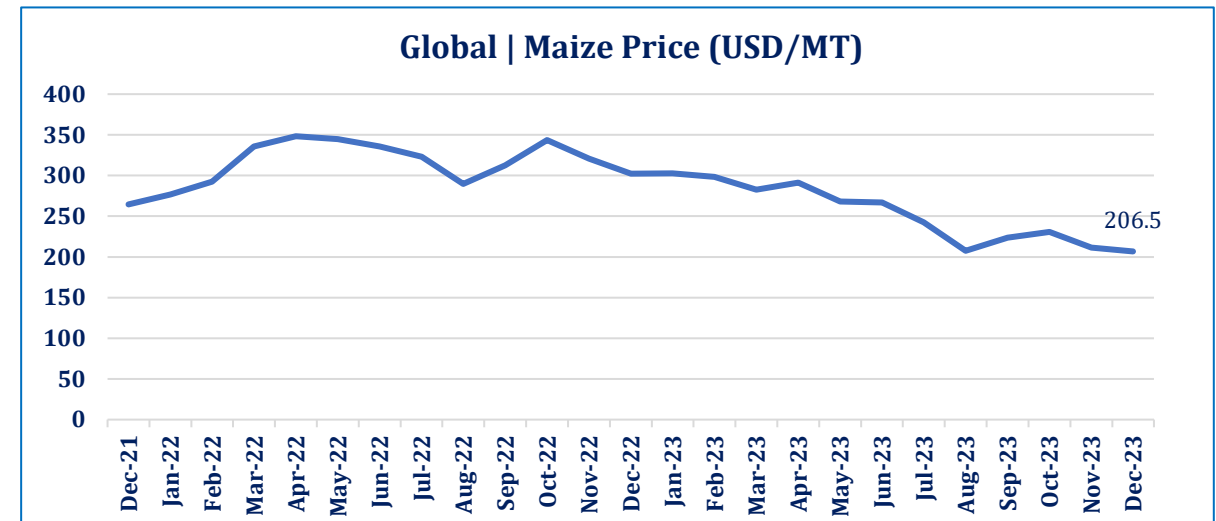
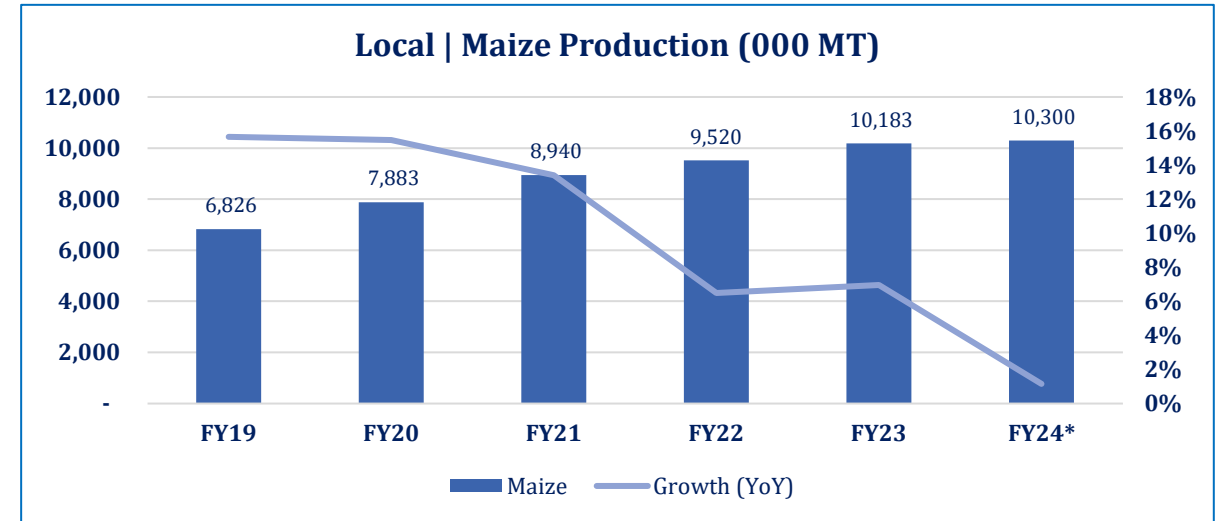
Note: Feed conversion ratio (FCR)= Amount of feed eaten/Weight of one chicken.

*Contribution to GDP has been calculated using sector’s gross revenue as a percentage of nominal GDP of the respective year.

Poultry Feed

Local | Supply Dynamics | Maize

- Maize is the third important cereal crop of Pakistan after wheat and rice. During FY23, it contributed ~3% to the value added in agriculture and ~0.7% to the GDP. Pakistan is entirely self-sufficient in meeting its maize demand. The commodity is a multi-purpose crop as it is used for food, feed and fodder.
- During FY23, area under cultivation for maize grew by ~4.4% YoY (~1.7mln hectares). Moreover, the crop suffered the least damages due to floods of Aug'22 (~84% of the maize is grown in Northern and Central Punjab areas). Subsequently, its production registered a YoY growth of ~6.9% during the year. In FY24, maize production is expected to increase ~1.1% YoY to reach ~10.3mln MT, due to good returns relative to other crops, such as cotton and sugarcane. Additionally, the use of imported maize seeds from USA will continue to drive higher yields (~6.4mln/Ha in FY24).
- The GoP initiated, in Feb'22, EWRF (Electronic Warehouse Receipt Financing) for farmers growing maize crop, a form of credit extended by the banks to farmers, traders and processors against agricultural produce stored in accredited warehouses for preservation of the quality available for poultry feed supply.
- Global maize price has been falling since Oct'23 due to an increased production of maize especially in Brazil, one of the largest exporters of maize. Considering encouraging production forecasts, prices are expected to remain rangebound in FY24.

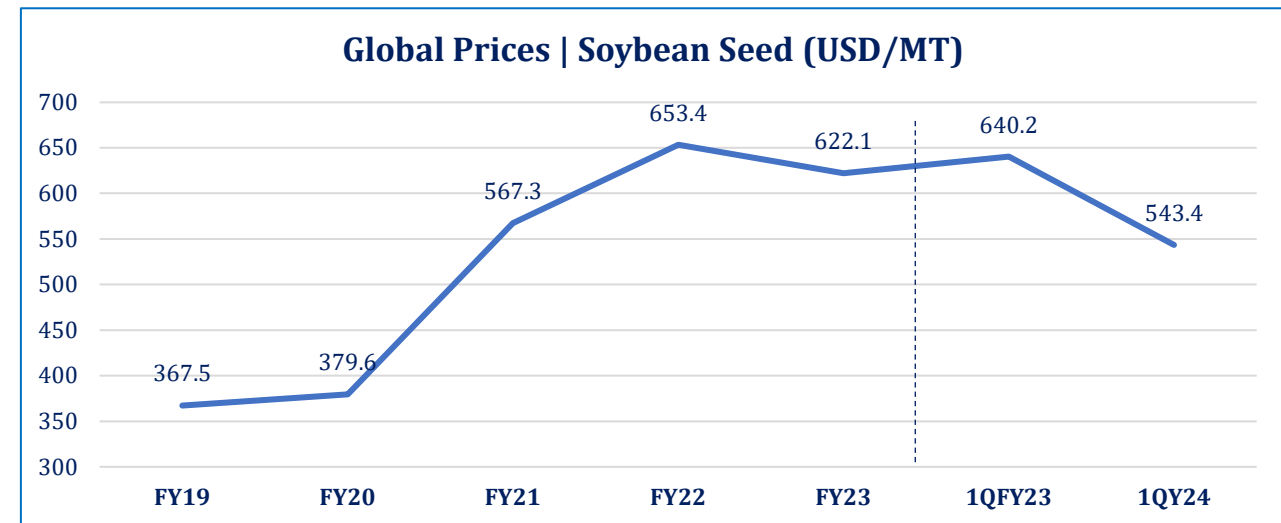
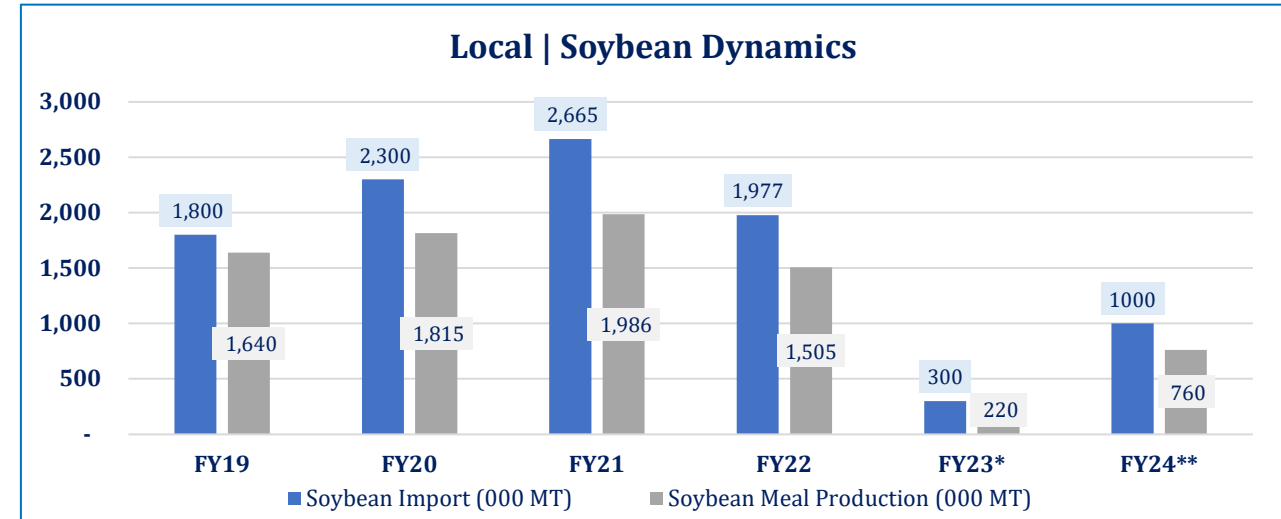


*Forecast value.

Poultry Feed

Local | Supply Dynamics | Soybean

- Pakistan meets the local demand of soyabean meal majorly through imports of soybean seeds. The imports increased at a CAGR of ~10% during FY19-22 but declined ~84.8% YoY in FY23 due to import restrictions on genetically modified organisms (GMOs). However, in Nov'23, as per amendments in the National Biosafety Rules, genetically engineered soybean imports were set to be resumed in 1HCY24. Hence, forecast of soybean meal production has risen to ~0.8mln MT for FY24.
- Production levels of soybean meal registered an upward trend during FY19-21 with a CAGR of ~7.7%. In FY22, due to ambiguity in the import policy for genetically modified soybeans (GMOs), crushers reported reduced soybean inventories, resulting in a scarcity of soybean meal. During FY23, soybean meal produced declined by ~85.4% YoY owing to lower imports of soybean seed.
- Global soybean seed prices increased during FY22 due to supply chain disruptions (Russia-Ukraine war) as well as global production concerns. However, in FY23, owing to a bumper crop in Brazil, soybean seed prices fell ~4.8% YoY and are expected to moderate further in FY24 as global production forecast is higher than FY23 levels.



Note: MY =FY. HS code : 1201.1000 (Soybean Seeds). **Forecast as per Dec'23.

Poultry Feed

Local | Demand Dynamics

- Local poultry production has traced an upward trajectory over the past years (FY19-23), exhibiting a CAGR of ~8% during this period. Local poultry output, including domestic and commercial, reached ~3,666mln during FY23 (FY22: ~3,342mln), recording a YoY increase of ~10%.
- Poultry production is influenced by the quality and quantity of the poultry feed available for consumption by the poultry birds. Poultry feed accounts for ~65% of the total maize produced while wet milling and dairy feed comprise ~15% and ~10% respectively (the main products of wet milling are industrial starches, liquid glucose and dextrose) of the total maize production. The remainder ~10% of the maize produced is maize milled for flour for human consumption.
- The composition of poultry feed affects the conversion ratio of poultry birds and in turn affects the time it takes for the poultry bird to enter the supply chain for commercial and domestic usage.

Poultry Supply (mln No.)	FY19	FY20	FY21	FY22	FY23
Domestic Poultry					
Cocks	12	13	13	13	14
Hens	43	44	45	46	46
Broiler	33	33	34	34	34
Total Domestic Poultry	88	90	91	93	94
Commercial Poultry					
Layers	56	60	64	68	73
Broilers	1,163	1,280	1,408	1,549	1,703
Breeding Stock	13	14	14	15	16
Day Old Chicks	1,215	1,337	1,470	1,617	1,779
Total Commercial Poultry	2,447	2,691	2,956	3,249	3,572

Poultry Feed

Local | Demand Dynamics

- In FY23, the total feed usage recorded a decline of ~8.0% YoY, owing to a lower demand from the poultry sector.
- Among poultry birds, broiler has the highest consumption of feed (~59.2% in FY23). While poultry feed consumption for broiler is quoted ~3.5mln MT in FY23 (SPLY: ~3.9mln MT), poultry feed consumption by commercial layer was ~1.6mln MT (FY22: ~6.4mln MT).

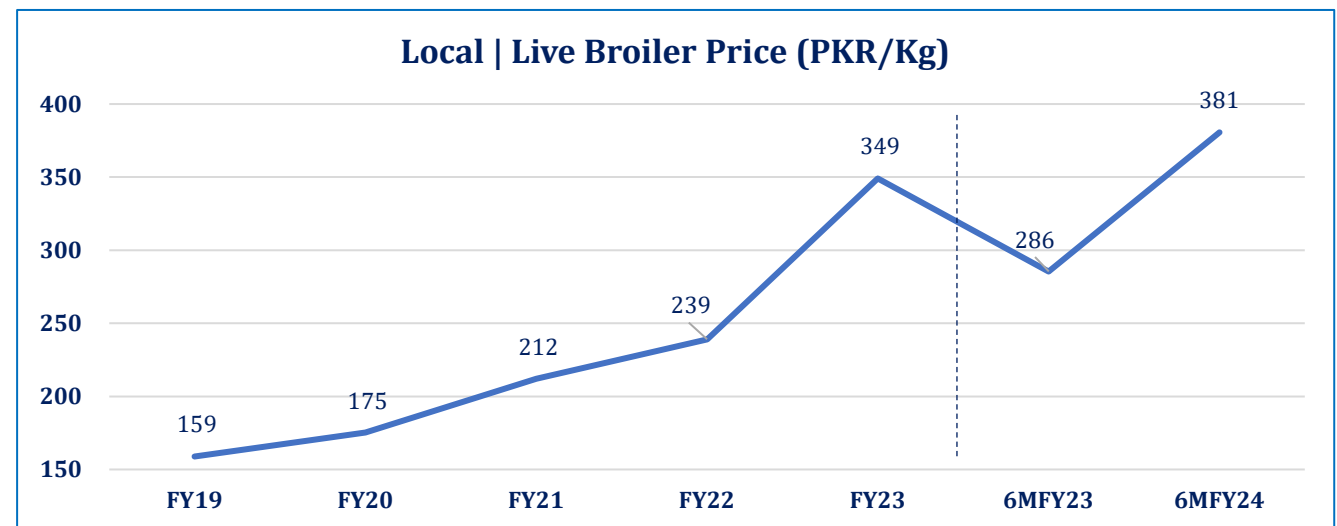
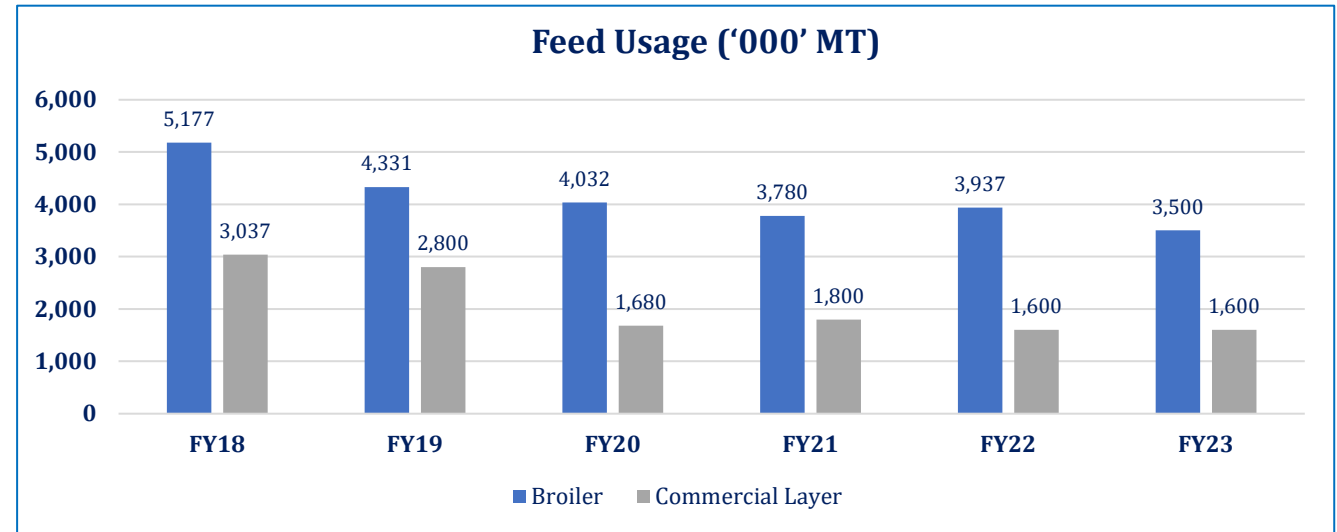
Feed Usage ('000' MT)						
Broiler Farming	FY18	FY19	FY20	FY21	FY22	FY23*
Grand Parent Stock	35	33	38	25	30	16
Parent Stock	787	800	820	768	832	768
Broiler	5,177	4,331	4,032	3,780	3,937	3,500
Layer Farming						
Parent Stock	38.7	32	34	36	32	28
Commercial Layer	3,037	2,800	1,680	1,800	1,600	1,600
Total Feed	9,075	7,996	6,604	6,409	6,430	5,912

*Latest available data.

Poultry Feed

Business Risk | Demand Side

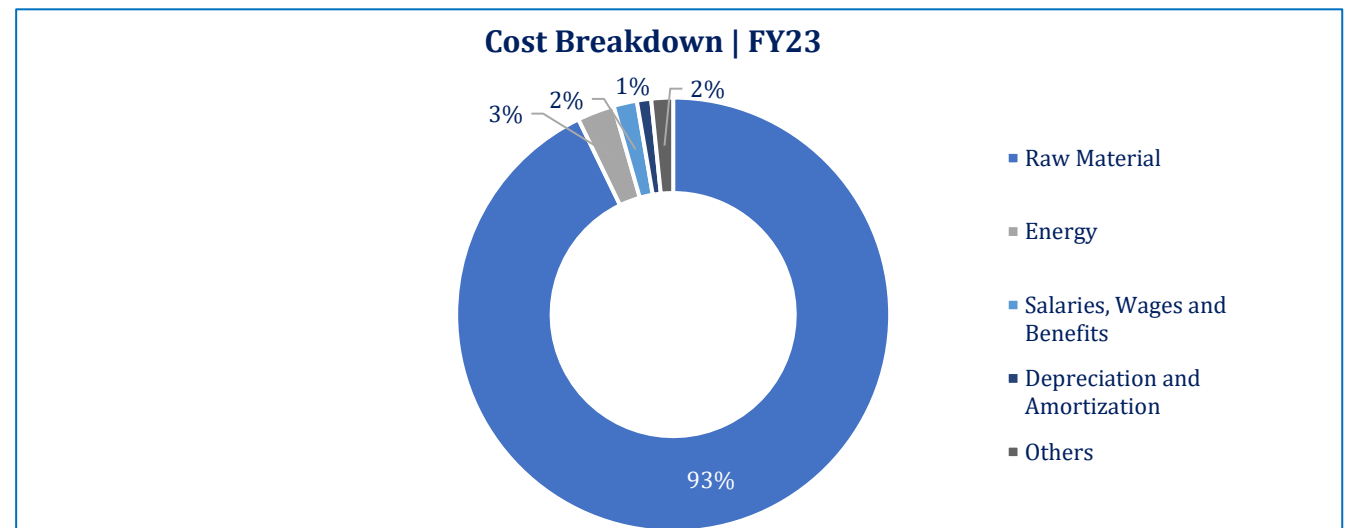
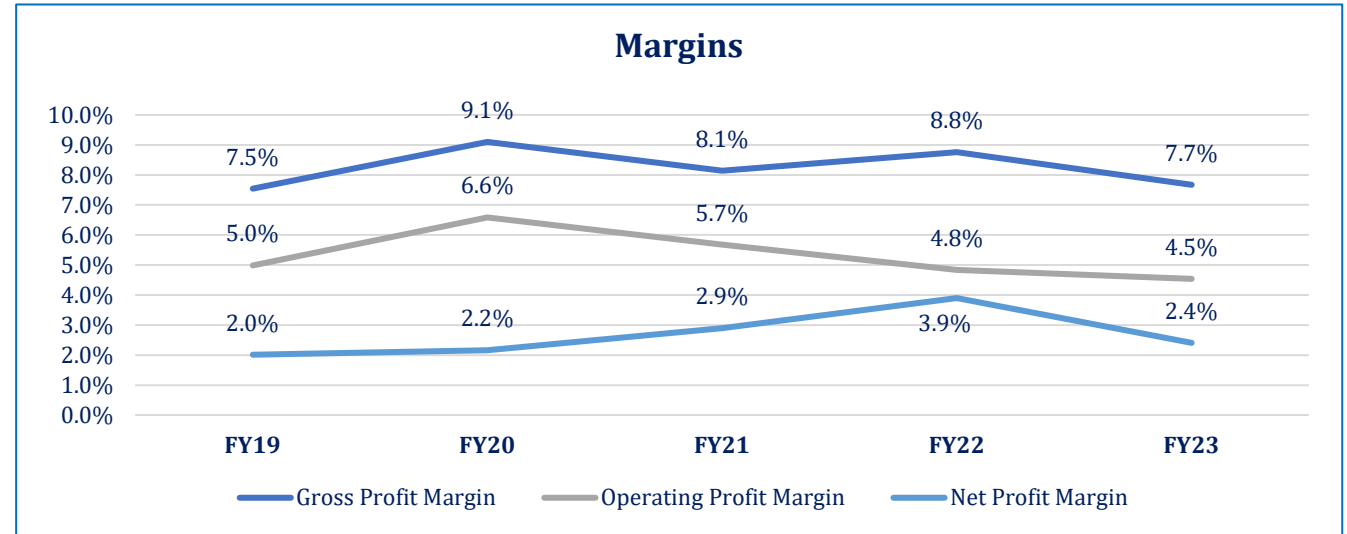
- Operating Risk** refers to difficulties relating to the operations of sector players which can hamper their profitability. Inputs for the sector include both local and imported products.
- The Sector's costs are subject to exchange rate volatility and global poultry feed prices to the extent of the imported raw materials. Other unavoidable factors include rising inflation rates alongside import duties and sales tax structure of the sector which also indirectly impacts the profit making capacity of the sector players.
- Sales Risk:** The sector mainly derives its demand from the local poultry sector. Any disruption in demand from the poultry sector can hamper the demand of this sector significantly.
- Feed usage by broiler chicken fell ~10.3% during FY23, whereas the demand for commercial layer remained steady at ~1.6mln MT. However, the prices of broiler are not much impacted by the reduction in demand of poultry products as it is considered to be an essential commodity.
- Average price of broiler during 6MFY24 reached PKR~381/Kg compared to the average price of PKR~286/Kg during SPLY, owing to the food related inflationary spike.



Poultry Feed

Business Risk | Margins

- Average gross profit margins of the sector were recorded at ~7.7% during FY23 (FY22: ~8.8%; FY21: ~8.1%). In FY23, despite a decrease in import price of the soybean seeds, gross margins declined on the back of a decline in sales by a greater percentage than the fall in the cost of sales.
- Raw materials constitute a significant portion of the sector's production costs and comprise majorly maize and soybean meal. The availability of both is essential for the sector's business cycle. Price linkages to international market also have an impact on the costs borne by the feed millers. In case the rise in international prices of raw materials is not passed on to the customers of poultry feed, the whole impact is borne by the sector players.
- Going forward, the prices of major raw material (soybean seed and maize) are expected to fall further due to increased production levels in FY24, which this is likely to support the sector's gross profit margins.
- The average net margins dipped to ~2.4% in FY23 (FY22: ~3.9%) due to a decline in non-operating income (~24.1%). The sector's average finance cost reduced marginally due to lower borrowings in FY23.



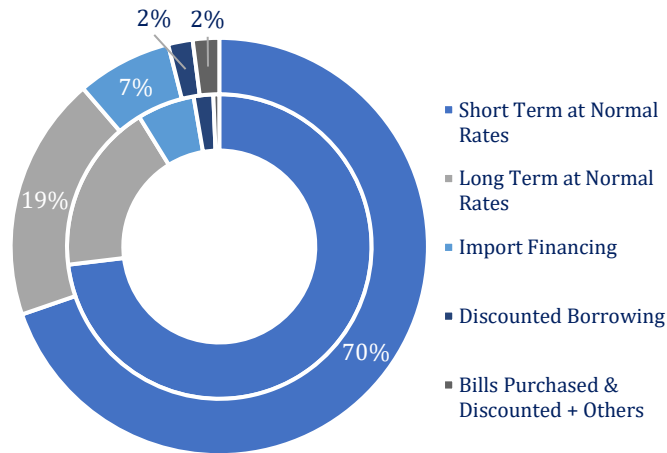
Note: Calculations are based on financials of PACRA-rated clients. FY20 margins include data of 7 clients, FY21 shows data of 6 clients, FY22 shows data of 3 clients. Whereas, FY23 shows data of 4 clients.

Poultry Feed

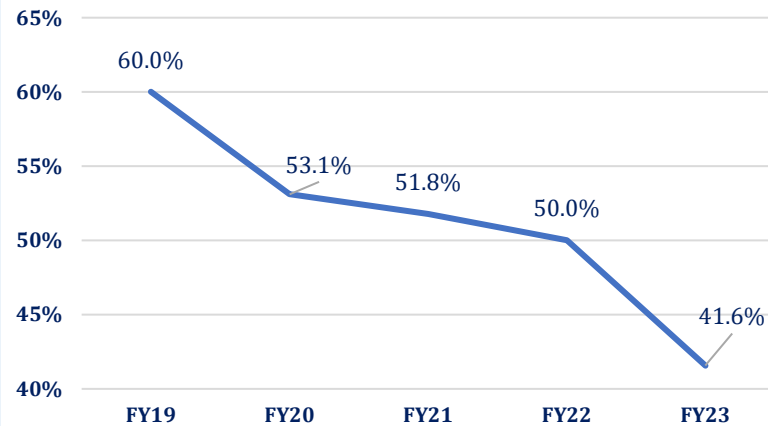
Financial Risk | Borrowing Mix

- Total borrowings of the sector were recorded at PKR~52.bln as at Nov'23 with a YoY increase of ~7.7%. Short-term borrowings constitute a significant portion of sector's total borrowings, with ~80.7% share in total borrowing mix as of Nov'23, and are utilized to finance working capital needs of the sector. In Nov'23, the sector's import financing increased by ~33% to reach PKR~4bln (Nov'23: PKR~3bln), likely due to removal of import restrictions imposed by SBP during May'22-Jun'23.
- The sector is moderately leveraged, with leverage declining to ~41.6% during FY23, indicating lower reliance on borrowings. However, this may also be reflective of slowdown in business activity.
- During FY23, average interest coverage of the sector clocked in at ~4.5x (FY22: ~8.3x), indicating sector player's difficulty in meeting their financial obligations. This may also be linked with aggressive policy rate hikes by the SBP during the said period. Going forward, it is expected that there will be no reduction in interest rates in 2HFY24 and is most likely to remain stable as it has been since Jul'23.

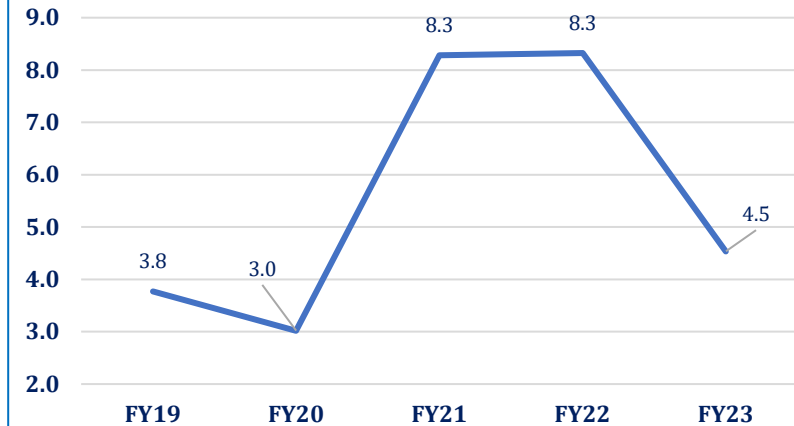
Borrowing Mix | Nov'22 (Inner), Nov'23 (Outer)



Leverage Ratio



Interest Coverage (times)

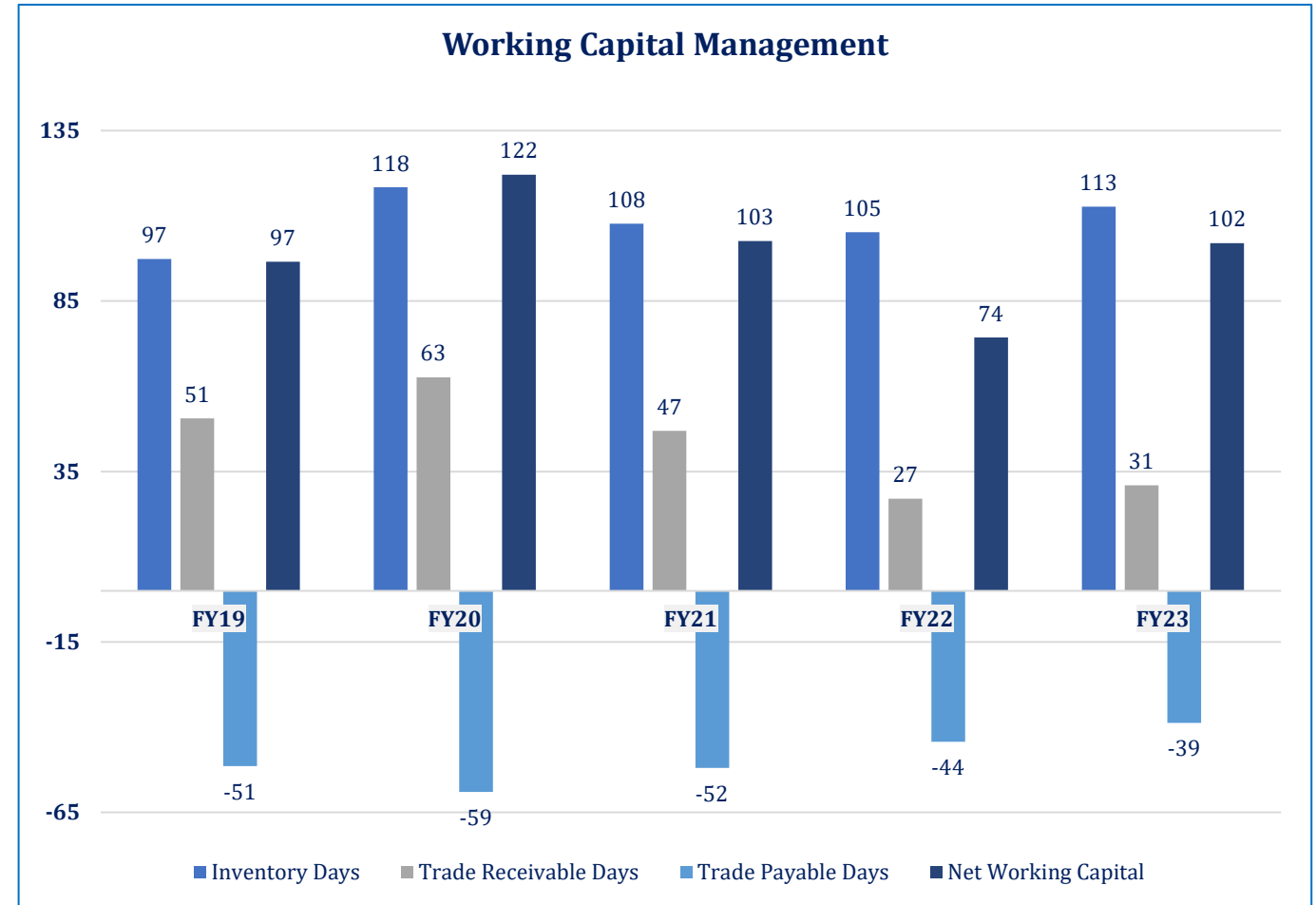


Note: Calculations are based on financials of 4 PACRA rated clients.

Poultry Feed

Financial Risk | Working Capital Management

- The working capital cycle of the sector is generally characterized by high inventory and trade receivable days.
- The sector significantly relies on short-term borrowings to finance its working capital needs that include purchasing and storage of feed, chick, incubators, farms equipment's and construction of sheds and vaccination of poultry birds, short term borrowings constitute a significant portion of the sector's borrowing.
- Average working capital days of the sector declined from ~122 days in FY20 to ~74 days in FY22. In FY23, however, the working capital cycle deteriorated by ~28 days on the back of higher inventory and receivable days.
- The increase in inventory days is likely an indication of slow business activity. Also, it is noteworthy that the receivable days are lower than the payable days, that fulfills partial financing needs to pay short term liabilities.



Poultry Feed

SWOT Analysis



Poultry Feed

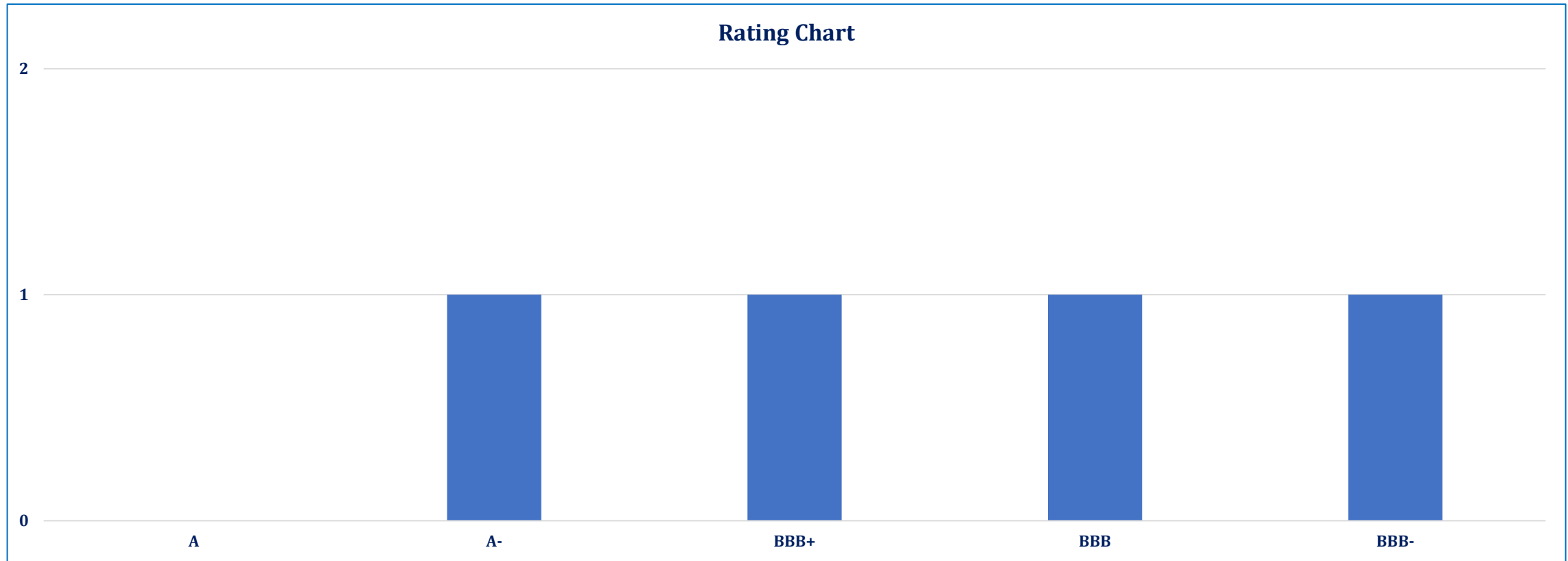
Duty Structure

PCT Code	Description	Custom Duty		Additional Custom Duty		Regulatory Duty		Sales Tax		Income Tax	
		FY23	FY24	FY23	FY24	FY23	FY24	FY23	FY24	FY23	FY24
1201.100	Soyabean Seed	3%	3%	2%	2%	-	-	17%	18%	11%	12%
1005.900	Maize	11%	11%	2%	2%	30%	30%	17%	18%	11%	12%
1103.1300	Meal of Maize	16%	16%	4%	4%	-	-	17%	18%	11%	12%
1208.1000	Meal of Soyabean	11%	11%	2%	2%	-	-	17%	18%	11%	12%

Poultry Feed

Rating Curve

- PACRA rates four companies in the poultry feed sector. The rating bandwidth stretches from A- to BBB-.



Poultry Feed

Outlook | Stable

- In FY23, Pakistan's economy posted a real GDP contraction of ~0.17% (FY22: ~6.1% growth). Meanwhile, the LSM shrunk by ~10.3% (FY22: ~11.8%), owing majorly to supply-chain disruptions which resulted from SBP-imposed import restrictions, along with the flash floods of Aug'22 and consequent sluggish demand across major industrial sectors of the country. In 1QFY24, however, the real GDP growth stood at ~2.1% (SPLY: ~0.96%). Meanwhile, the SBP estimates the GDP growth at ~2-3% for FY24. The year was also marred by significantly high levels of inflation with average national CPI recording at ~29.4% (SPLY: 21.3%), while the increasing trend has persisted in 1HFY24, with national CPI in Dec'23 recording at ~29.7% (Nov'23: ~29.2%).
- Poultry feed sector is important for the country's food security, with maize and soybean meal being the major components of the feed. Pakistan is entirely self-sufficient in meeting its maize demand. In FY24, maize production is expected to increase ~1.1% YoY to reach ~10.3mln MT (FY23: ~10.2mln MT) owing to healthy returns relative to other crops (such as cotton). In terms of the other major input, i.e., soybean meal, Pakistan is dependent on imports to meet its demand which exposes the sector to change in international prices and exchange rate fluctuations.
- Average gross profit margins of the sector were recorded at ~7.7% during FY23 (FY22: ~8.8%), despite a decline in import price of soybean seeds, owing to a greater drop in sales. Average net margins dipped to ~2.4% in FY23 (FY22: ~3.9%) due to a decline in non-operating income (~24.1%) (average finance cost reduced due to lower borrowings in FY23 but the decline was negligible).
- Import restrictions on GMOs in FY23, ~39% PKR depreciation and high inflationary levels comprised few of the major risks facing the sector during the year. However, in Nov'23, as per amendments in the National Biosafety Rules, genetically engineered soybean imports are set to resume in 1HCY24. Hence, forecast of soybean meal production has risen to ~0.8mln MT for FY24. Additionally, soybean prices are forecast to fall further in FY24 owing to improved global production levels of soybean seed. Meanwhile, the PKR has registered ~1.4% recovery in 1HFY24, with inflation expectations forecast to remain anchored by End-FY24.
- Going forward, the sector's performance is expected to remain rangebound, owing to the aforementioned factors. Nonetheless, there is a need for the sector players to shift to alternatives for soybean meal such as cotton seed, rapeseed, mustard seed, sunflower seed and canola seed, which will serve to lower the sector's vulnerability to international prices & import restrictions.

Poultry Feed

Bibliography

- Pakistan Poultry Association
- PACRA Internal Database
- Food and Agriculture Organization
- United States Department of Agriculture
- The Economic Survey of Pakistan
- World Bank
- State Bank of Pakistan
- Financial Statements

Research Team	Saniya Tauseef <i>Senior Manager</i> saniya.tauseef@pacra.com	Ayesha Wajih <i>Supervising Senior</i> ayesha.wajih@pacra.com	Sabeen Mirza <i>Research Analyst</i> sabeen.mirza@pacra.com
Contact Number: +92 42 35869504			

DISCLAIMER

PACRA has used due care in preparation of this document. Our information has been obtained from sources we consider to be reliable but its accuracy or completeness is not guaranteed. The information in this document may be copied or otherwise reproduced, in whole or in part, provided the source is duly acknowledged. The presentation should not be relied upon as professional advice.