



POULTRY

An Overview

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Poultry - Snapshot

- Poultry farming is one of the key components of agricultural sector. It is divided into three distinct segments including breeding, production and processing.
- There are commonly two different types of poultry farming, i.e., broiler poultry farming & layer poultry farming
- Finished products from poultry farming consists of day old broilers (DOC), table eggs and broiler meat.
- Poultry products are distributed through a variety of channels including wholesale, retailers, corner shop retailers and hawkers etc.

Parameters	CY19	CY20
Turnover – Global (USD bln)	319	329
Turnover – Domestic (PKR bln)	1,168	1,082
Turnover per Capita – Global (USD)	41	42
Turnover per Capita- Domestic (USD)	34	31
Share in GDP- Global	0.2%	0.2%
Share to GDP- Domestic (Nominal)	1.4%	1.1%
Growth Rate (Annual) – Global	3%	3%
Growth Rate (Annual) – Domestic	8-10%	8-10%

Poultry - Inputs

Parent stock of birds



Parent flocks are either owned or contracted to on a long-term basis by integrated broiler firms or hatcheries. The female and male birds are bought from a major breeding firm at day-old (DO). The vast majority are placed on specialist rearing farms until around eighteen weeks of age (they will be listed as lay-point (POL) birds at the time of travel for the purposes of this report) and are then transferred to production farms.

Poultry feed



Modern poultry feed is primarily composed of corn, protein supplements such as soybean oil meal, mineral supplements, and vitamin supplements. The quantity of feed and the nutritional needs of the feed depend on the weight and age of the poultry, the rate of growth of the poultry, the rate of development of eggs, the weather (cold or wet weather induces higher expenditure of energy) and the quantity of nutrients received by the poultry from foraging.

Poultry - Outputs

Day Old Chicks



"The newly-hatched chick is the "day-old chick" (DOC) (Gallus). It should be taken into account in the hatchery, and before a broiler, a laid hen, or a breeding cock or hen is fed to the farm where it will be kept.

Table Eggs



In the shape most common to customers, fresh and in-the-shell, table eggs or shell eggs are eggs. Although commercial table eggs may come from a range of birds, many of the procedures are the same.

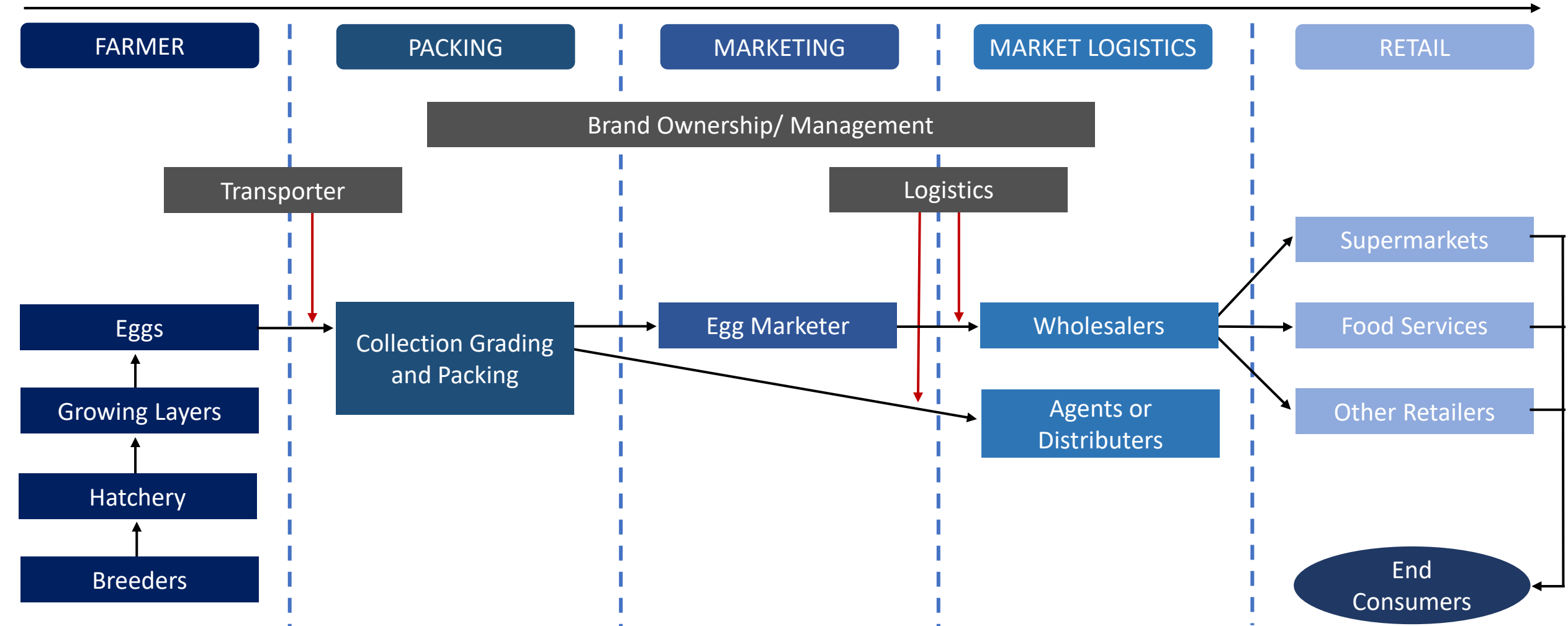
Broiler Meat



An extremely relevant protein type is broiler meat. Poultry manufacturing has shifted into large-scale, almost entirely automated killing and dressing processes in industrial communities since the 1970s. Dressed birds are frozen in water to near the freezing point in such installations, after which they are typically sliced into retail pieces and wrapped in case-ready form.



POULTRY | SUPPLY CHAIN

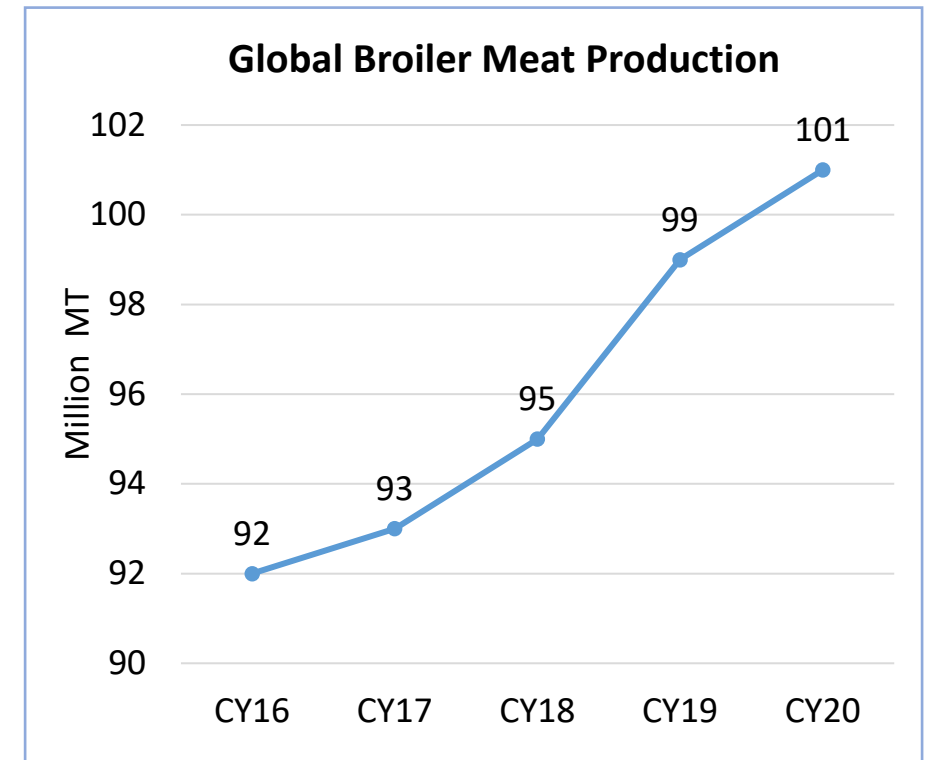


Note: Poultry products can be supplied through various channels.

POULTRY | GLOBAL OVERVIEW

Regional Market | Production

- Global poultry sector was recorded at USD~329bln in CY20 (USD~319bln in CY19), a modest increase of ~3% YoY basis.
- This growth was driven largely by the two markets, China and Vietnam, where production is projected to grow by 15% and 5.2% respectively in CY21. There has been a rise in production, but also pressure on prices, because of massive investments in these countries.
- In CY20, global lockdowns led to a decline in the demand in foodservice, with significant effect on the international markets. Moreover, oversupply and high stocks of poultry products have also led to differences in availability and prices.
- Decline in tourism activities led to a slowdown in Thai market while a decline in EU imports has had an impact on profitability, as alternate markets typically pay much lower rates for breast meat. This had forced down demand as well.
- The EU and UK have had further difficulties due to ongoing pressure on foodservice and inconsistent wholesale demand. Between April and August'20, placements fell, albeit with significant variability between months and countries.
- Among the regional markets, India is the most seriously affected. This added up due to soft demand (Q1 Covid-19 rumor and decrease in demand for food service) and problems with labor supply.



Broiler Meat | Production vs Consumption

Broiler Meat Production			
Sr No.	Country	Amount (1000 MT)	% Share of World Market
1	USA	20,263	20.1%
2	China	14,850	14.7%
3	Brazil	13,880	13.8%
4	European Union	12,360	12.3%
5	Russia	4,715	4.7%
6	India	4,000	4.0%
7	Mexico	3,700	3.7%
8	Thailand	3,250	3.2%
9	Turkey	2,200	2.2%
10	Argentina	2,190	2.2%
11	Malaysia	1,790	1.8%
12	Pakistan	1,657	1.6%
13	Others	15,972	15.8%
#	Total	100,827	100.0%

Broiler Meat Consumption			
Sr No.	Country	Amount (1000 MT)	% share of World Market
1	USA	17,021	17.3%
2	China	15,460	15.7%
3	European Union	11,560	11.7%
4	Brazil	10,023	10.2%
5	Russia	4,715	4.8%
6	Mexico	4,575	4.6%
7	India	3,999	4.1%
8	Japan	2,813	2.9%
9	Thailand	2,350	2.4%
10	Argentina	2,040	2.1%
11	Malaysia	1,836	1.9%
12	Pakistan	1,459	1.5%
13	Others	20,798	21.1%
#	Total	98,649	100.0%

Top Countries Trading During CY20

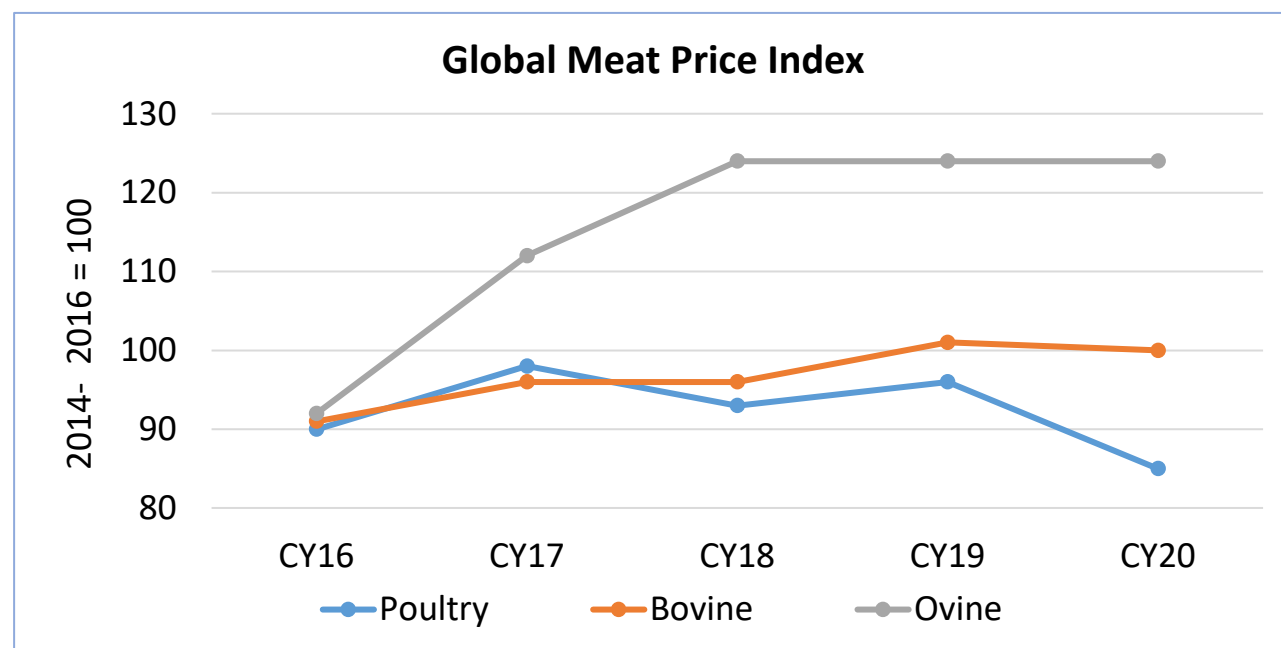
- Japan, China, Mexico & EU are few of the key importers of poultry products i.e. broiler meat. The imports in these countries were greatly influenced by COVID-19 pandemic.
- In Japan, imports were 10% below in CY20 than CY19.
- In China, imports of broiler were significantly lower in 4QCY20, down 12% from 1QCY20 and down 25% year-on-year basis. Due to the disruption associated with Covid-19 and a weaker peso, sharply lower demand contributed to the decline.
- Continued weak demand for food services in the European Union kept its imports low in 1HCY20 by ~12%, which has also negatively affected Brazil exports by ~10% and Thailand's by ~7% in particular.
- USA, Brazil, European Union and Thailand are few of the key exporters of poultry products i.e. broiler meat.

Broiler Meat (Imports)			
Sr No.	Country	Amount (1000 MT)	% Share of World Market
1	Japan	1,060	8.87%
2	China	985	8.24%
3	Mexico	880	7.36%
4	European Union	640	5.36%
5	Saudi Arabia	550	4.60%
6	Iraq	475	3.97%
7	South Africa	390	3.26%
8	Philippines	375	3.14%
9	Cuba	250	2.09%
10	Canada	185	1.55%
11	Others	6,161	51.55%
#	Total	11,951	100%

Broiler Meat (Exports)			
Sr No.	Country	Amount (1000 MT)	% Share of World Market
1	Brazil	3,860	32.30%
2	USA	3,391	28.37%
3	European Union	1,440	12.05%
4	Thailand	890	7.45%
5	China	375	3.14%
6	Canada	130	1.09%
7	South Korea	53	0.44%
8	South Africa	50	0.42%
9	South Arabia	30	0.25%
10	Mexico	5	0.04%
11	Others	1,727	14.45%
#	Total	11,951	100%

Price Dynamics

- The prices of poultry sector have been volatile in CY20 due to the shocks in supply and demands of poultry products. These shocks were caused due to the COVID-19 pandemic.
- The prices of poultry products have fallen more than other meat products because of its high dependence on sales in food services because these services generally comprise 20%-50% of the sales in most markets.
- Since global economy still has not recovered from the COVID-19 pandemic, it is expected that prices will continue to be influenced by the depressed consumer buying power. This may shift consumers preference from buying expensive meat products to cheaper poultry products.



Poultry Index USA: broiler Cuts And Edible Offal (Fresh, Chilled Or Frozen), export unit value
Bovine Index USA : Meat of bovine (Fresh, Chilled Or Frozen), export unit value
Ovine Index New Zealand: Lamb 17.5kg NZ\$/kg

An Overview

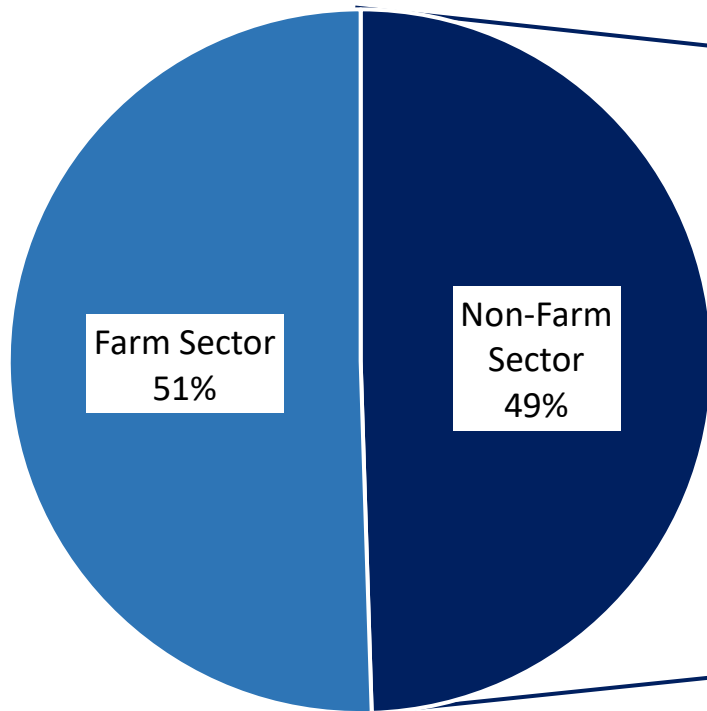
- Pakistan’s poultry market was recorded at PKR~1,082bln in FY20 (PKR~1,168bln FY19) down by ~7.4% YoY majorly because of slowdown in demand due to Covid-19 impact.
- Poultry is one of the largest agro based segments of Pakistan with a contribution to nominal GDP of around ~1.4% FY20 (~1.1% FY19).
- The sector occupies a share of ~39% in FY20 (~24% FY19) within the non-farm agricultural sector. Moreover, it has been progressing at a impressive growth rate of ~8%-10% per year in the past few years.
- With a production of ~1,163mln broilers annually, Pakistan has become the 11th largest poultry producer in the world, offering jobs (direct/indirect) to over ~1.5mln individuals.
- The sector consists of around 350 players. Since there is no single company which can wield enough power to shift the market in a certain direction, the sector structure is considered fragmented.
- From Karachi to Peshawar, there are over 15,000 poultry farms across the country in rural areas. Farms vary in capacity from 5,000 to 500,000 broilers.

Factors	FY19	FY20
Turnover	PKR~1,168bln	PKR~1,082bln
Turnover per Capita	PKR~5,840	PKR~5,410
Share to Nominal GDP	~1.1%	~1.4%
Growth Rate	~8%	~8%

POULTRY | DOMESTIC MARKET

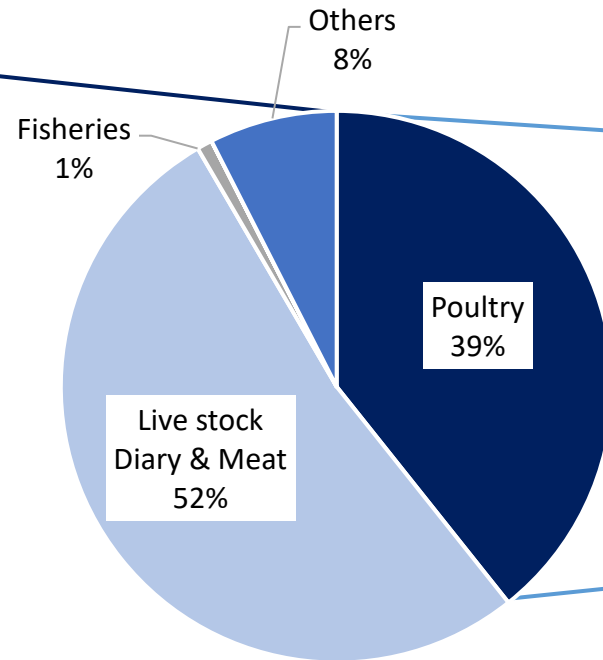
An Overview – Percentage share within Sector

Agriculture | Farm vs Non-Farm Sector



Non- Farm sector share in FY19 = 51%

Composition of Non-Farm Sector



Poultry share in FY19 = 24%

Poultry

Total Poultry	Production (FY19)	Production (FY20)
Day Old Chicks - mln Nos	1,248	1,370
Poultry Birds - mln Nos	1,321	1,443
Eggs - mln Nos	19,052	20,133
Poultry Meat - 000 Tons	1,518	1,657

Different Aspects of Poultry Farming

- Pakistan’s poultry sector includes mainly two types of poultry farming i.e. Broiler poultry farming and layer poultry farming.
- **Broiler Poultry Farming:**
- In this form of agriculture, poultry birds are raised for the processing of commercial meat. These birds are generally referred to as broilers and are bred before becoming suitable for consumption in just 5-6 weeks to achieve a weight of 2kgs. Most of these broilers are artificially picked and bred on a large scale and have white feathers and yellowish eyes. These birds are observed to have a high rate of growth but a low degree of activity. The typical boiler poultry framing raising systems include:



Poultry Housing

Poultry Feed

Care & Management

Marketing

Different Aspects of Poultry Farming

Layer Poultry Farming:

- Poultry birds that are used for egg production are involved in this method of farming. Generally, at 25 weeks of age, a commercial hen begins laying eggs. When these broilers drop in age brackets of 70-72 weeks, they reduce producing eggs. Producers typically hold hens from the first laying cycle for around 12 months and then transfer these hens to the slaughter house. Months of warming for poultry birds laying eggs are favored over cooler months. Layer poultry is raised by a range of techniques, such as:

Common Layers



Australorp

Isa Brown

Free Range Method

Allowing all poultry birds to freely roam for a certain period of day

Organic Method

Allowing certain number of poultry birds to freely roam for a certain period of day

Yarding Method

Allowing poultry birds to be raised together with cattle.

Battery Cage Method

Here, 3-8 poultry birds are raised in metal cages and eggs are collected on conveyer belt of the cage.

Furnished Case Method

Transformed version of battery cage with better space and facilities.

POULTRY | DOMESTIC MARKET

Inputs – Parent stocks of birds & Poultry Feed

- The two major inputs used to produce poultry products are parent stock of birds and poultry feed.
- Parent flocks are either owned or leased to on a long-term basis by integrated broiler firms or hatcheries. Parent flocks are used to produce table eggs and broiler meat.
- Poultry feed is used for poultry birds mainly comprising soyabean, soybean meal and maize. In Pakistan, maize is domestically produced whereas most of the soybean seeds and soybean meal are imported from other countries.

Production of Global & Domestic Inputs					
Domestic Inputs:	FY16	FY17	FY18	FY19	FY20
Cocks – mln Nos	11	12	12	12	13
Hens – mln Nos	41	42	42	43	44
Maize – 000 MT	5,271	6,134	5,902	6,826	7,236
Global Inputs	CY16	CY17	CY18	CY19	CY20
Soybean seeds – mln MT	316	328	342	360	336
Soybean meal – mln MT	216	226	232	233	237



Prices of Inputs – Poultry

- Maize, locally produced, had its prices soar up by ~23% due to hoarding by farmers during 1HFY21. Maize crop is grown twice a year. The uncertainty in demand from poultry segment forced most growers to stay on the sidelines and move to more profitable crops (with support prices).
- Soybean seed prices have spiked by ~22.7% over the period of 1HFY21, while prices of final poultry feed witnessed an increase of ~14.4% in the same period.
- Maize prices are expected to rise further due to hoarding of maize by farmers. International soybean seeds and soybean meal prices are also expected to continue growth due to lower USA stocks and increasing demand from China.

Inputs - \$/MT	FY19	FY20	1QFY21	2QFY21
Maize	217	168	156	192
Soybeans seed	371	377	396	486
Soybeans meal	347	371	380	483
Fish meal	1,487	1,441	1,479	1,459
Sunflower Meal	768	802	867	890

Input Price Change -1HFY21	
Maize	+23.1%
Soybean Seeds	+22.7%
Soybean Meal	+27.1%

Note: The exchange rate have remained constant

Price Increase – 1HFY21	
Poultry Feed	14.4%

Supply Dynamics

- Pakistan's major poultry product is meat and it contributes around 35% (1.7mln tons) of the total meat production (4.7mln tons) in Pakistan.
- Poultry meat and eggs production have been showing a growth of 9.1% and 5.6% respectively in FY20.
- The quantity and quality of poultry products have been rising over the past few years mainly due to 6,500 formation of environmental friendly controlled shed system leading to direction of modernization.
- However, COVID-19 pandemic posed threat to poultry sector. The farmers were being forced to close their farms as demand was low. This had a change impact and resulted in lower chick prices. These have subsequently recovered as production dropped.

Domestic and Commercial Poultry Supply					
	FY16	FY17	FY18	FY19	FY20
Domestic Poultry					
Cocks-mln Nos	11	12	12	12	13
Hens-mln Nos	41	42	42	43	44
broiler-mln Nos	32	33	33	33	33
Eggs-mln Nos	4,090	4,164	4,239	4,315	4,393
Meat-mln Tons	0.12	0.12	0.12	0.12	0.13
Duck, Drake & Ducklings					
Eggs-mln Nos	21	19	19	18	17
Meat	600	600	600	500	500
Commercial Poultry					
Layers-mln Nos	46	49	52	56	60
Broilers-mln Nos	874	962	1,058	1,163	1,280
Breeding Stock-mln Nos	11	12	12	13	14
Day Old Chicks-mln Nos	913	1,004	1,105	1,215	1,337
Eggs-mln Nos	12,077	12,900	13,779	14,719	15,723
Meat-mln Tons	1.1	1.2	1.3	1.4	1.5
Total Poultry					
Day Old Chicks-mln Nos	945	1,037	1,138	1,248	1,370
Poultry Birds	1,016	1,108	1,210	1,321	1,443
Eggs-mln Nos	16,188	17,083	18,037	19,052	20,133
Poultry Meat-000 Tons	1,170	1,276	1,391	1,518	1,657

Demand Dynamics

- Poultry product consumption is subject to usual economic forces associated with a competitive sector.
- Broiler meat consumption is strongly correlated with the actual broiler price, beef and mutton consumption per capita, and income per capita. Meanwhile, table egg prices are substantially correlated with fluctuations in egg consumption, with slight effect of seasonality, and income shifts.
- COVID-19 not only impacted the availability of poultry goods, but also the market, contributing to the disruption of the entire food supply chain. Owing to this pandemic there was a full ban on large events (banquet halls) and restaurants in 4QFY20, which were the major buyers of the meat. This led to a decline in poultry meat demand to ~1.5mln tons in FY20 (~1,6mln tons in FY19) down ~7% YoY.

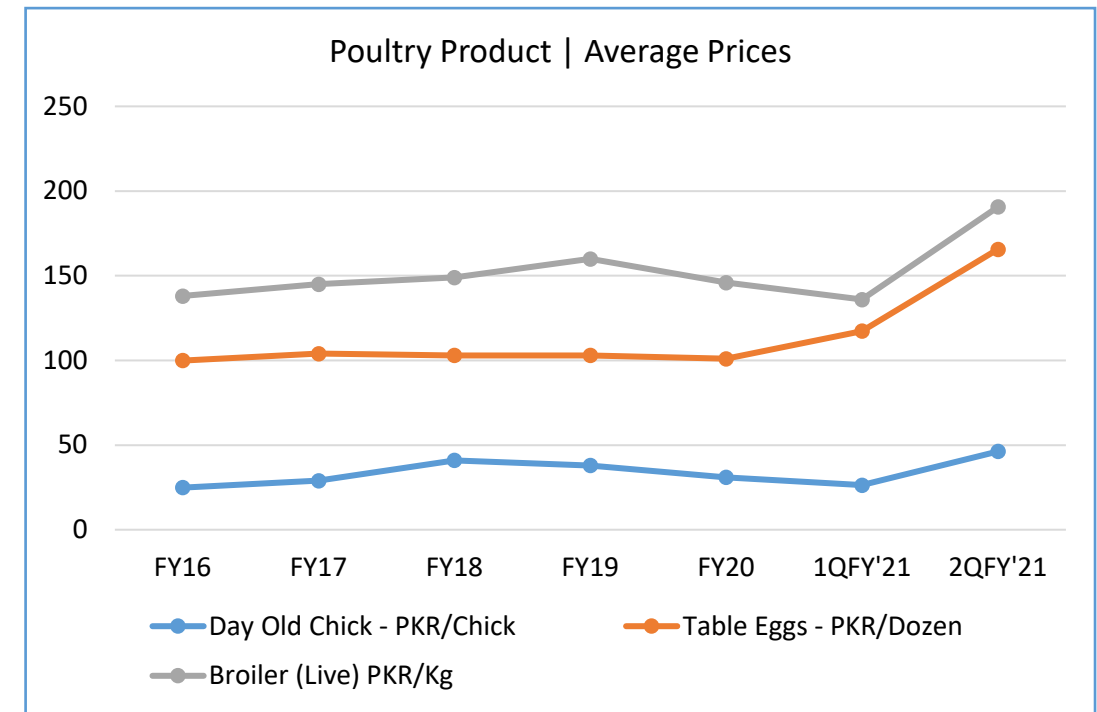
Pakistan's Poultry Products Consumption (Million)					
	FY16	FY17	FY18	FY19	FY20
Eggs Consumption - Nos	15,284	16,129	17,030	19,096	19,448
Poultry Meat Consumption - Kg	1,428	1,456	1,484	1,562	1,459

Note: Eggs consumption is estimated on the previous years' average growth rate.

POULTRY | DOMESTIC MARKET

Price Dynamics

- Average prices of both Day Old Chicks (DOC) and dozen eggs faced a downfall in FY20 i.e. PKR~31/DOC (PKR~38/DOC - FY19) and PKR~101/Dozen (PKR~103/Dozen in FY19) respectively. There has been a steady rise in prices of these two products after Aug'20.
- However, average price of broiler (Live) has remained quite vibrant in the recent times. The average price of broiler (Live) during FY20 fell to PKR~146/Kg (PKR~160/Kg in FY19). Following FY20, average prices of broiler (Live) has continued to show fluctuations.
- During 2QFY21, the table eggs prices increased because of the seasonal variation and increase in demand as result of cold weather.
- Poultry products are considered a perishable commodity due to non-availability of holding centers across the country. If a bird is ready on the field, it has to be put on the market and sold, without taking account of the prevailing open market price of the animal.

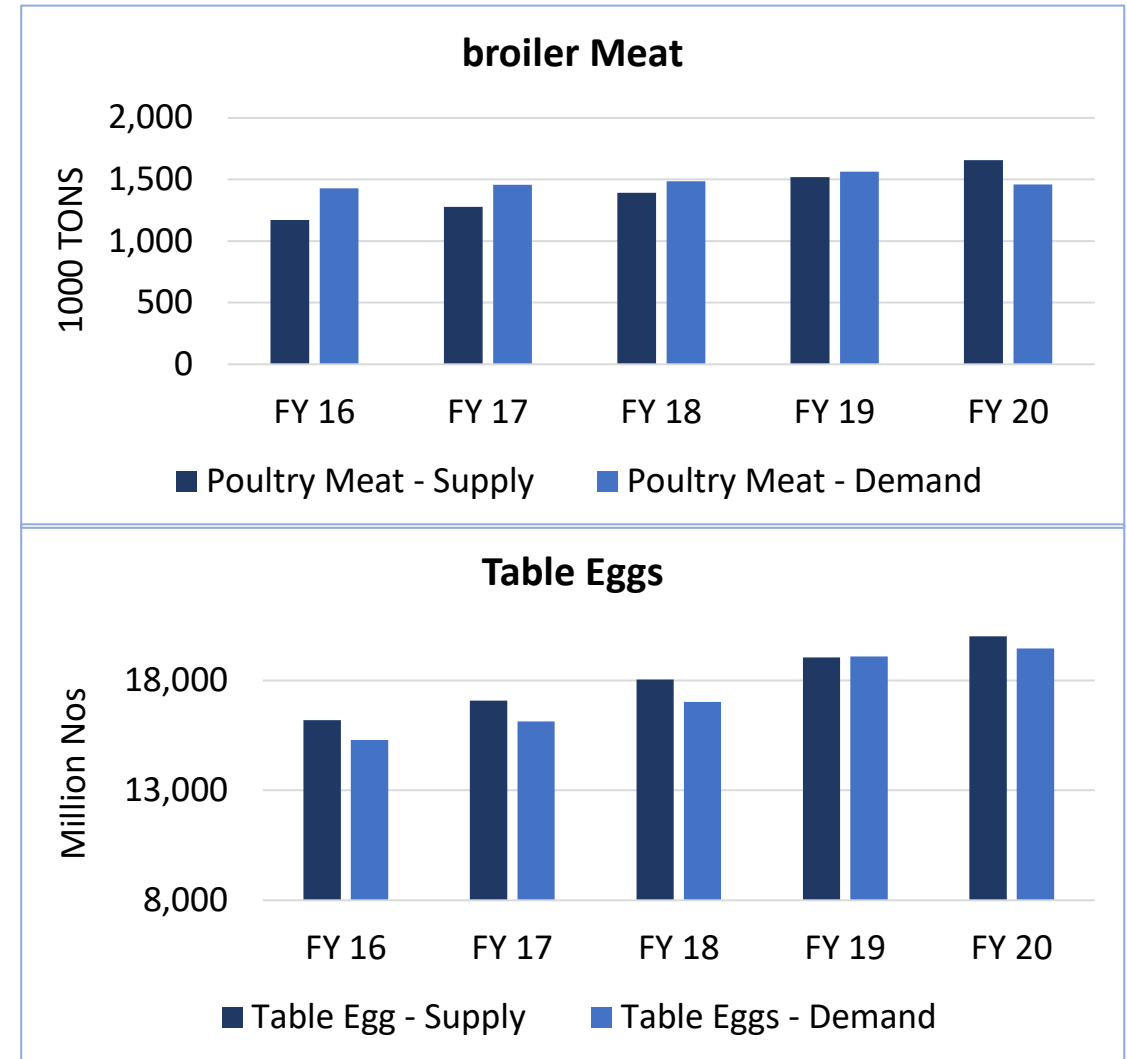


Price Increase 1HFY'21	
Day Old Chick	76%
Table Eggs	41%
Broiler (Live)	40%

Business Risk | Demand Side

The business risk of poultry sector can be divided into operating risk and sales risk.

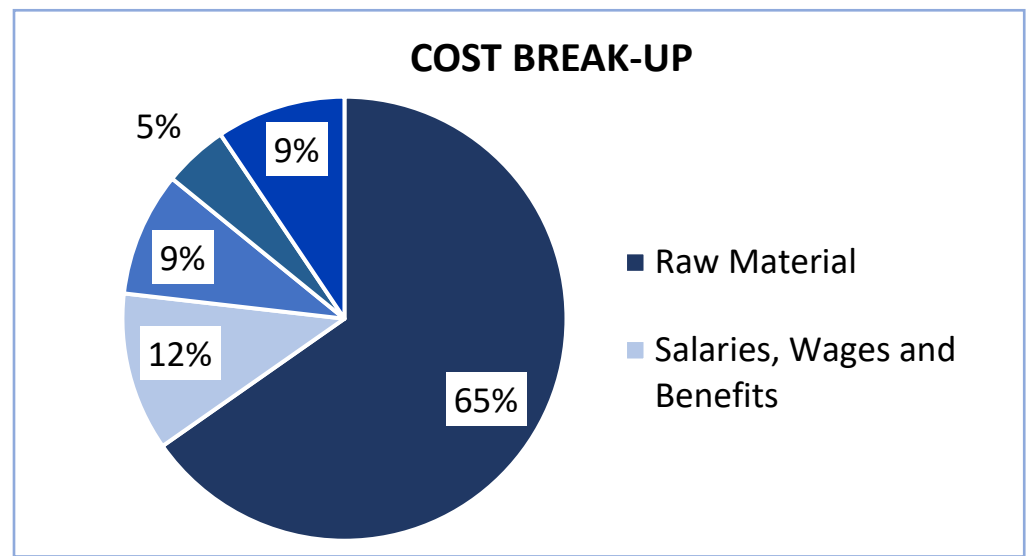
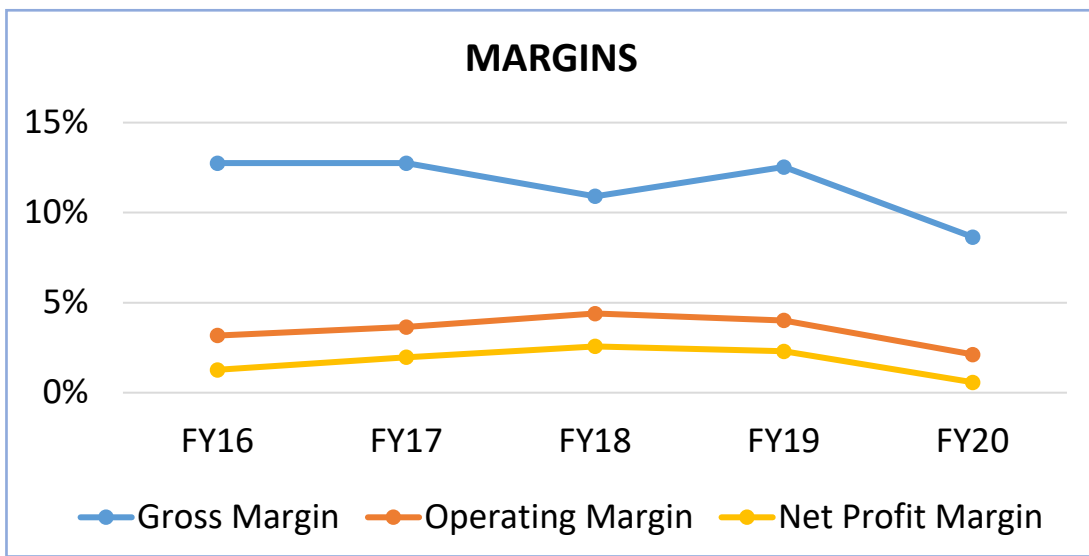
- Operating Risk:** This risk particularly refers to the difficulties relating to the operations of the poultry players which can hamper the profitability and performance of the Sector. Poultry Sector inputs include both local inputs and imported inputs. The Sector's costs are therefore subject to Exchange Rate volatility and International 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. This risk is further discussed in detail in the next sheet.
- Sales Risk:** This risk is focused on the demand side of the poultry chain. The poultry sector mainly receives its demand from the fast food sector. Any disruption in demand from festive activities, restaurants, hotels or marriage halls can hamper the demand of the Sector significantly. Therefore, closure of restaurants, hotels and marriage halls amid Covid-19 induced lockdown, had a direct and substantial effect on the sale of poultry products.



POULTRY | DOMESTIC MARKET

Business Risk: Margins & Cost Structure

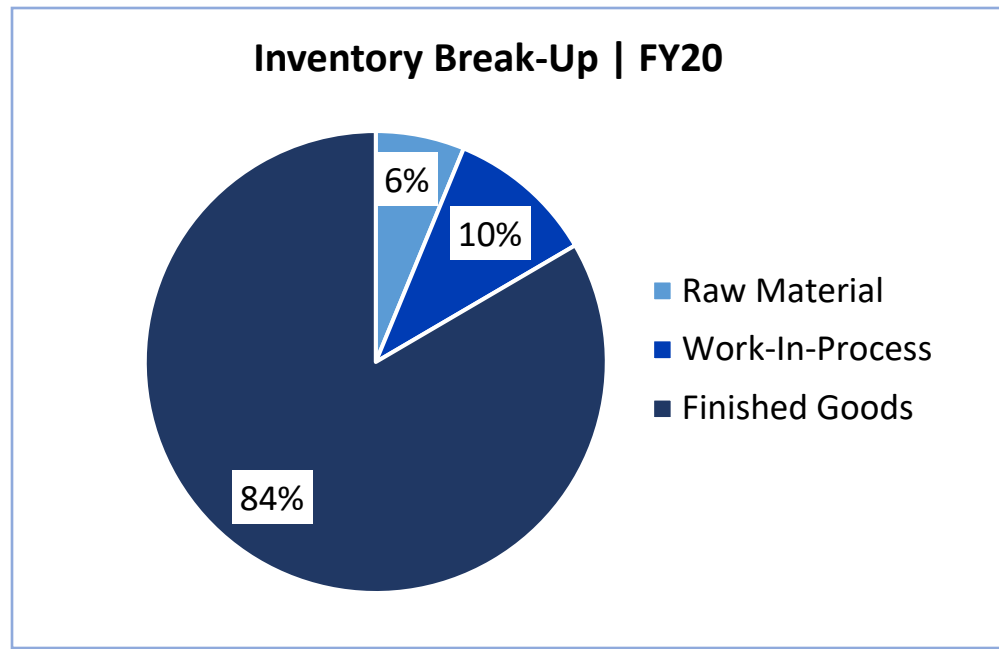
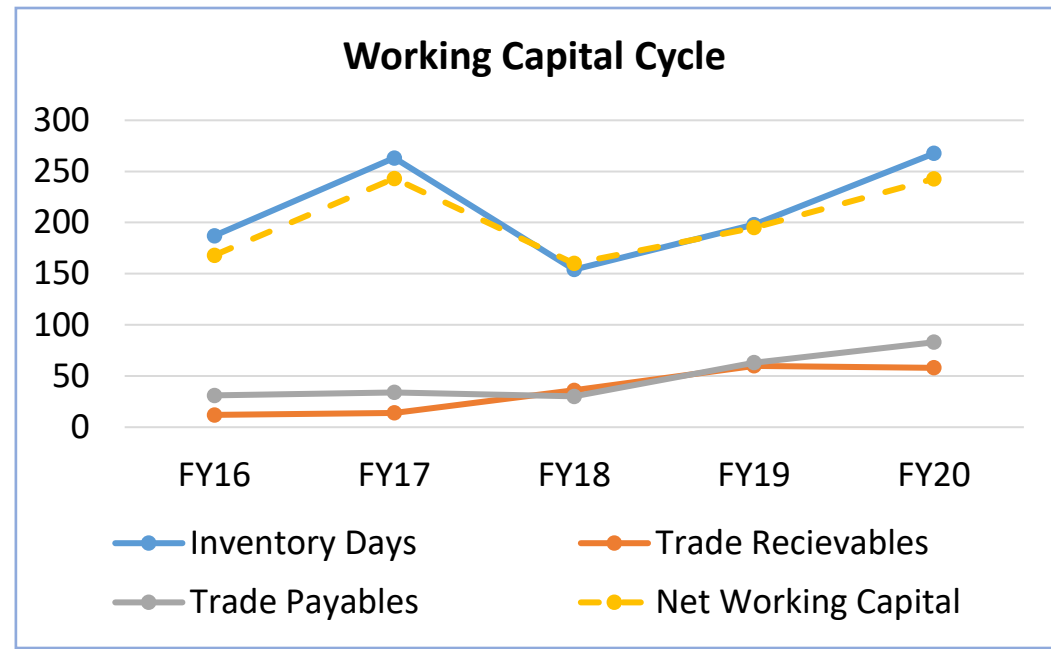
- Prior to FY20, the poultry sector’s margins had been steadily improving, with slight increase in net margin i.e. ~1.3% in FY16 to ~2.3% in FY19.
- However, during FY20, margins declined significantly with net profit margin declining to 0.6% (FY19: ~2.3%) and gross margin declining to 8.6% (FY19: ~12.5%). The decline in margins occurred majorly due to the to demand contraction and rising cost of sales and rising cost of raw materials
- The largest component within direct costs is raw material comprising ~65% of the total manufacturing cost. The major raw material for this sector is poultry feed and has been impacted by the decline local poultry fee production and rising prices of its components, both locally and internationally, in the aftermath of COVID-19 pandemic.



Note: Margins and Cost break-up calculated from companies having a share of more than 25% within the sector

Financial Risk: Working Capital Management

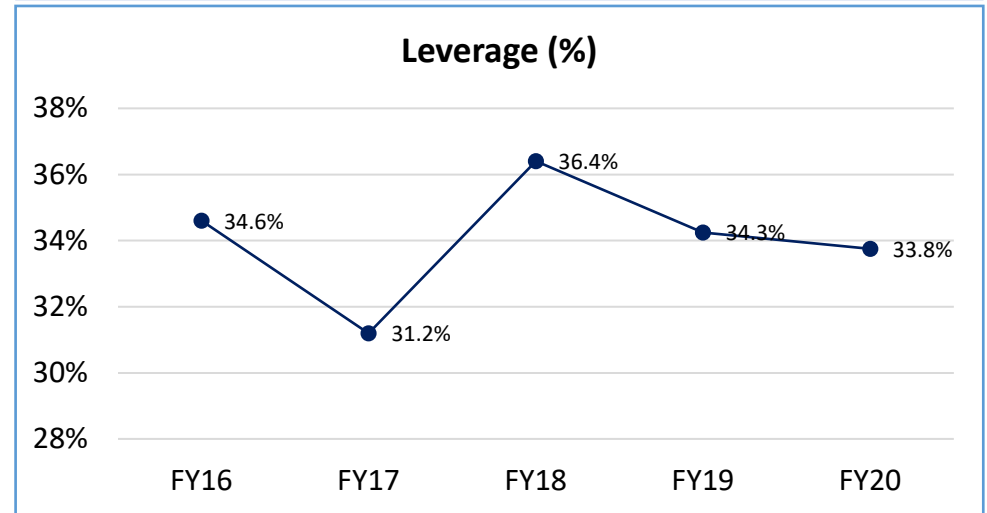
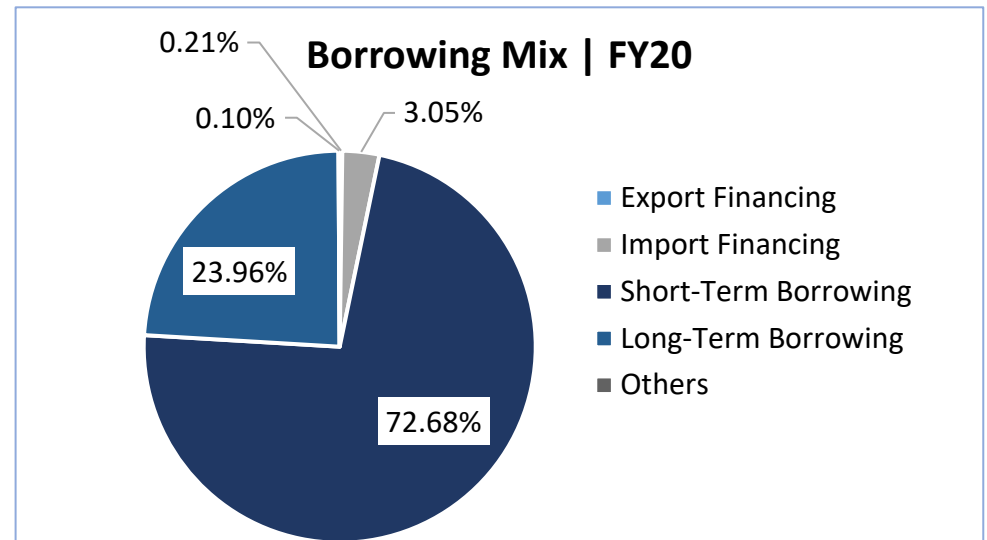
- Net (average) working capital cycle of poultry sector increased to 243 days in FY20 from 195 days in FY19. This is due to the significant decline in demand in the period resulting from the COVID-19 pandemic.
- Restrictions on Fast food restaurants and export by government contributed to increase in inventory levels during FY20.
- Trade receivable days decreased slightly to ~58 days in FY20 (~60 days in MY19) whereas trade payable days increased to ~83 days in FY20 (~63 days in FY19).



Note: Margins and Cost break-up calculated from ~2 companies having a share of more than 25% within the sector

Financial Risk: Borrowing Mix

- The poultry sector's total borrowing as at End-Nov'20 stood at PKR~31,438mln (PKR~31,654mln – End'June'19) a spike of ~22% YoY basis.
- The adjacent graph shows the sector's average borrowing mix. The largest component in this borrowing mix is represented by short term borrowings (STBs) that make up ~73% for FY20 (~59% in FY19) of the total borrowings. This increase is corroborated by the fact that average inventory position of poultry players was recorded at an inventory of ~268 days as at End-June'20, which is an alarmingly high level, due to shortage of demand amid Covid-19 induced lockdown. Reliance on STBs were necessitated to manage Working capital needs.
- During FY20, the long term borrowing occupied a portion of ~24% in borrowing mix, lesser than the previous year ~38%



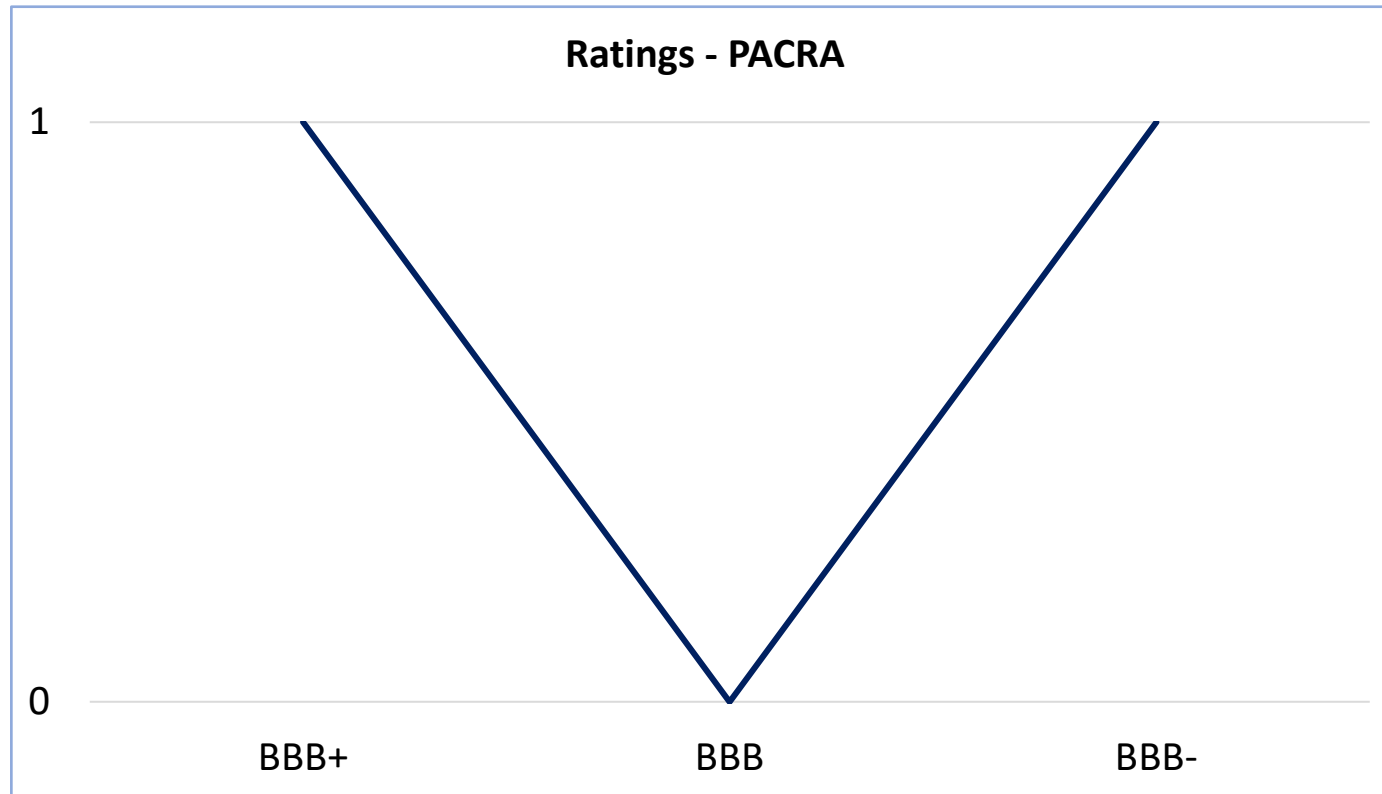
Note: Total borrowing includes figure classified as 'raising of poultry' in SBP's report.

POULTRY | DUTY & SALES TAX STRUCTURE

PCT Code	Description	Custom Duty	
		2018-2019	2019-2020
1.05	Live poultry, that is to say, fowls of the species (broiler)	3%	3%
2.07	Meat and edible offal of the poultry, fresh, chilled or frozen.	20%	20%
04.07	Birds' eggs, in shell, fresh, preserved or cooked. (Fertilized eggs for incubation)	11%	11%
4.08	Birds' eggs, not in shell, and egg yolks, fresh, dried, cooked by steaming or by boiling in water	16%	16%
16.02	Other prepared or preserved meat, meat offal or blood. Of fowls of the species (broiler)	20%	20%
84.36	Other agricultural, horticultural, forestry, poultry- keeping, poultry incubators and brooders.	3%	0%
94.06	Prefabricated buildings.	20%	20%

Description	Sale Tax	
	2018-2019	2019-2020
Local - Poultry Sheds, Incubators, Brooders and other Poultry Equipment	7%	7%
Electricity used in Poultry	16%	16%
Import of Poultry machinery & Equipment	Exempt	Exempt

- There is no change in other duty structure of the sector since the previous Sector Research.
- Pakistan Poultry Association (PPA) has appealed to the GoP to take necessary actions to curb the current poultry crisis. Until any action plan is devised, the Sector's credit risk is expected to remain high.



- PACRA rates two of the players of poultry sector - Sadiq Poultry & Islamabad Farms.
- No change has occurred in the ratings of both of the players.


POULTRY | SWOT ANALYSIS



Sector Outlook: Negative

- The first wave of Covid-19 had hit hard on poultry prices, due to lockdown situation creating a supply glut as marriage halls and restaurants were closed across the country. Prices of day-old chick (DOP), eggs and broiler posted a dip (down by over 20%) during Mar'20-June'20 period.
- However, in 1HFY21, poultry prices have spiked rapidly due to recovered demand, supply dip (many farmers who suffered losses in the previous three months, did not replenish their sheds) and increase in input prices.
- Maize prices are expected to rise further due to hoarding of maize by farmers. International soybean and soybean meal prices are also expected to continue growth due to lower USA stocks and increasing demand from China.
- The Sector is highly leveraged, while average net margins of the sector are around ~4% in normal circumstances. Therefore, the credit risk of sector players is expected to remain on the higher side on the backdrop of declining inventories and cash flows amid increasing prices and demand uncertainty. On the contrary, an interest rate cut by 625bps is expected to provide relief to the Sector's bottom-line margins through reduction in finance cost.
- In the absence of any reforms or package scheme, the increasing input prices of poultry feed with the current duty and tax regime may continue to pressure the margins of the Sector players, particularly of the small farmers whose buying power is limited.
- Despite the prevailing challenges, Pakistan's overall economic position is on a trajectory to improvement. Overall industrial activity has started to recover to pre-COVID levels with the output of Large Scale Manufacturing Industries (LSMI) increasing by ~7.41% during July to November'21 as compared to same period last year. Moreover, the target GDP growth given by SBP for FY21 is ~2.1%.

- Pakistan Poultry Association
- DEFRA
- Sciencedirect
- PACRA Database
- The Big Book Project
- RaboBank 2020
- AGBRO Group
- Indexmandi
- The Poultry World
- State Bank of Pakistan
- Federal Internal Board of Revenue
- Punjab Board Investment and Trade
- Ministry of National Food Security & Research
- The Economic Survey of Pakistan
- Food and Agriculture Organization of United Nations
- US Department of Agriculture

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