



Poultry

Sector Study



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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 chicks (DOC), farm eggs and meat.
- Poultry products are distributed through a variety of channels including wholesale, retailers, corner shop retailers and hawkers etc.
- **Global Market size:** In CY21, the global turnover of poultry sector is estimated to reach USD~337bln (CY20: USD~329bln), with a YoY increase of ~2%. The global per capita turnover is estimated around USD~43/person (USD~42/person), with a YoY increase of ~2%. The global sector's share to GDP has remained constant from CY19 to CY21 at ~0.4%.

Global Industry Snapshot	CY19	CY20	CY21*
Turnover (USD bln)	319	329	337
Turnover per Capita (USD)	41	42	43
Share to GDP	0.4%	0.4%	0.4%
Growth Rate (Annual)	3.0%	3.1%	2.3%

*Estimated

Parent flock of birds



Parent flocks are owned by integrated broiler farms or hatcheries. The female and male birds are bought from a major breeding farm at day-old (DO). The birds are placed on specialist rearing farms until around eighteen weeks of age and are then transferred to production farms.

Poultry feed



Conventional poultry food usually includes many cereals like maize, rice, wheat, oat, barley; and a few cereal byproducts such as wheat-bran or rice polish, animal and vegetable protein sources like fish-meal, meat-meal, soybean-oil-meal, groundnut-cake, etc. according to their availability. 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.

Outputs

Day Old Chicks



The newly-hatched chick is the "day-old chick" (DOC) . Day old chicks are obtained from the eggs laid by the healthy parent flocks of different breeds.

Farm Eggs



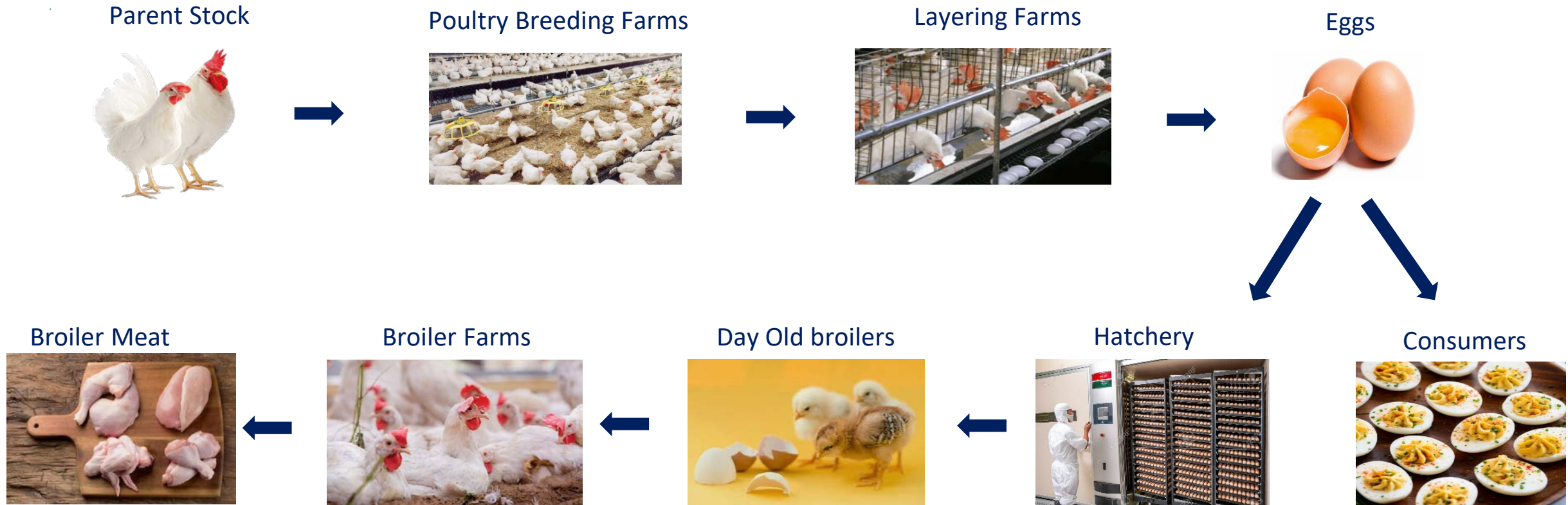
In the shape most common to customers, fresh and in-the-shell, are table eggs or shell eggs. Although commercial table eggs may come from a range of birds, many of the procedures are the same.

Broiler Meat



A broiler is any chicken that is bred and raised specifically for meat production. Most commercial broilers reach slaughter weight between four and seven weeks of age, although slower growing breeds reach slaughter weight at approximately 14 weeks of age. Typical broilers have white feathers and yellowish skin.

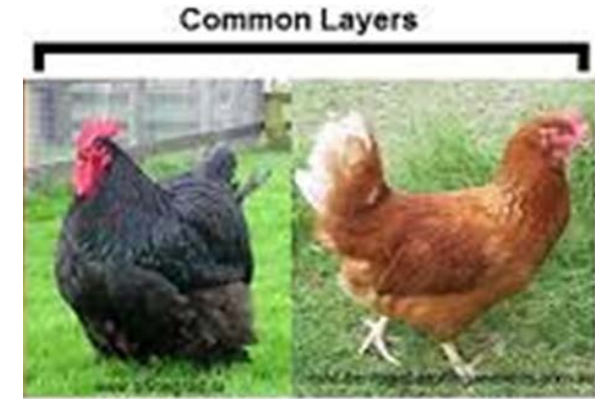
Process Flow



Poultry

Types of Poultry Farming

- Layer Poultry Farming:** Poultry birds that are used for egg production are involved in this method of farming. Generally, at 18-19 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, some of which are explained below:



Australorp

Iso 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

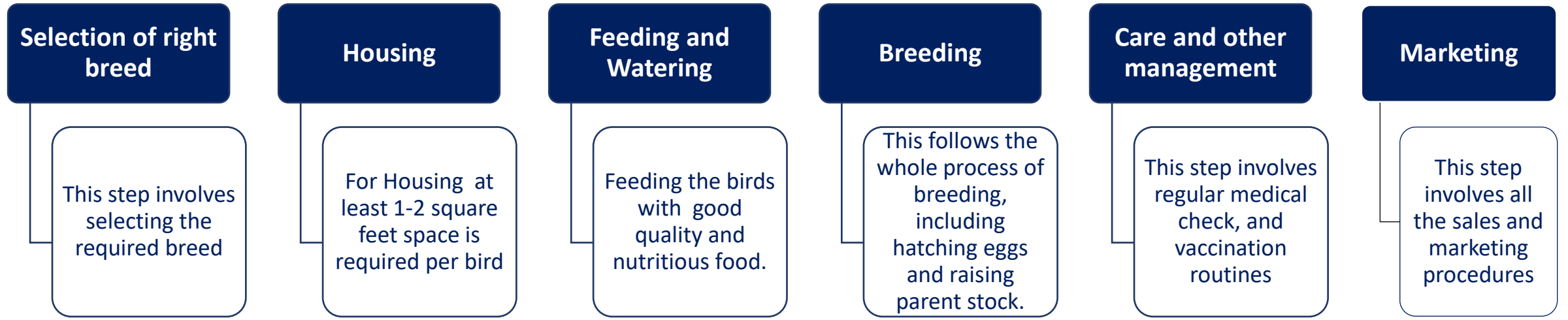
Here, 3-8 poultry birds are raised in metal cages and eggs are collected on conveyer belt of the cage.

Furnished Case Method

Transformed version of battery cage with better space and facilities.

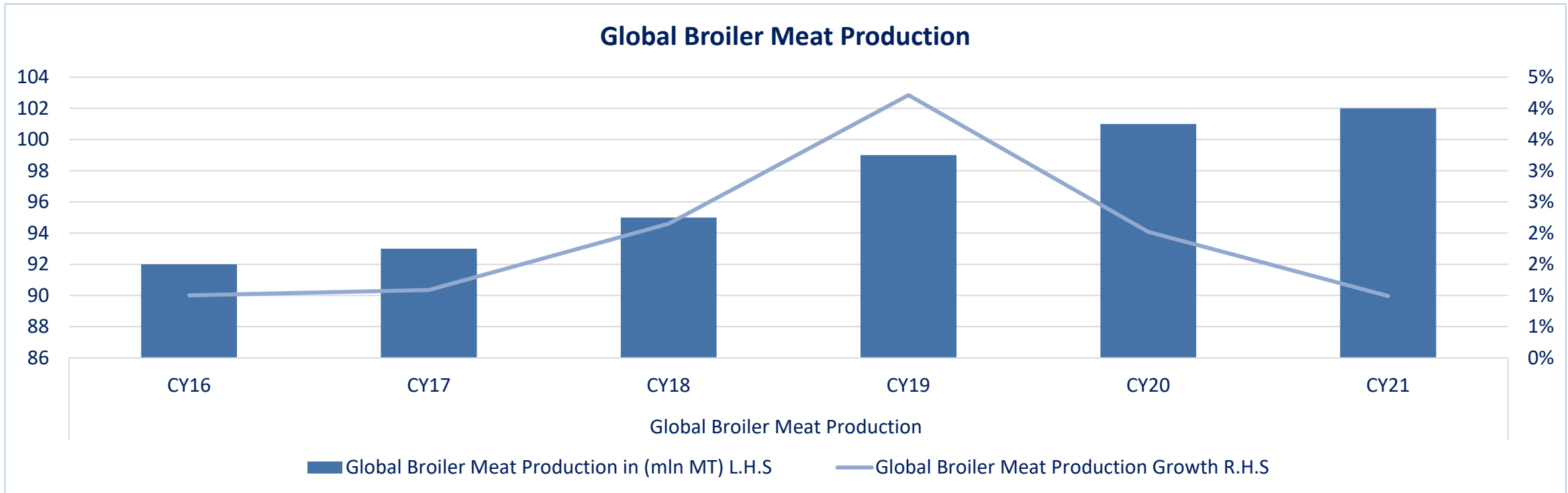
Types of Poultry Farming

- Broiler Poultry Farming:** In this type of farming, 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 as low degree of activity. The typical boiler poultry framing raising systems includes:



Global Industry

- Global Poultry Sector’s revenue is estimated to reach at USD~337bln in CY21 (USD~329bln in CY20), a modest increase of ~2% YoY basis. In CY20, the global turnover saw a slight decrease of 3% due to lockdown restrictions that led to a decline in the demand of foodservice.
- Growth in CY21 is expected to be driven largely by the two markets, USA and China, having global meat production share of ~20% and ~15% respectively.
- The global broiler meat production is estimated around ~102mln MTs in CY21 (CY20:~101mln MT).



Global | Production

- In terms of global broiler meat production, USA is leading the market, with a production of ~20mln MTs (CY19:~19mln MTs) while China ranks the second with a production of about ~15mln MTs (CY19:~14mln MT).
- Pakistan ranks at number 11 in terms of broiler meat production, which is recorded at ~2mln MTs in CY20 (CY19: ~2mln MT).

Broiler Meat Production (mln MTs)					
Sr no.	Country	CY20		CY21*	
		Amount	% Share of World Market	Amount	% Share of World Market
1	USA	20	20%	20	20%
2	China	15	15%	15	15%
3	Brazil	14	14%	14	14%
4	European Union	12	12%	13	12%
5	Russia	5	5%	5	5%
6	India	4	4%	4	4%
7	Mexico	4	4%	4	4%
8	Thailand	3	3%	3	3%
9	Turkey	2	2%	2	2%
10	Argentina	2	2%	2	2%
11	Pakistan	2	2%	2	2%
12	Malaysia	2	2%	2	2%
	Others	16	16%	16	16%
	Total	101	100%	102	100%

*Estimated

Global | Consumption

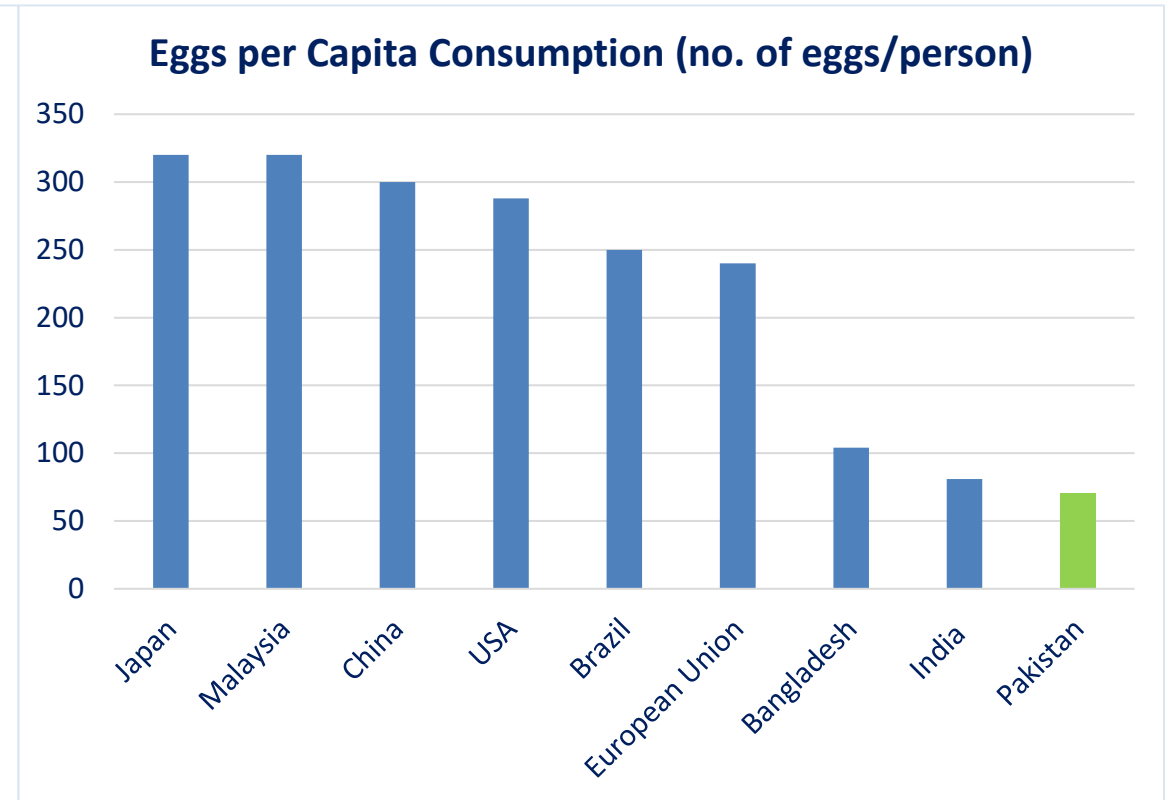
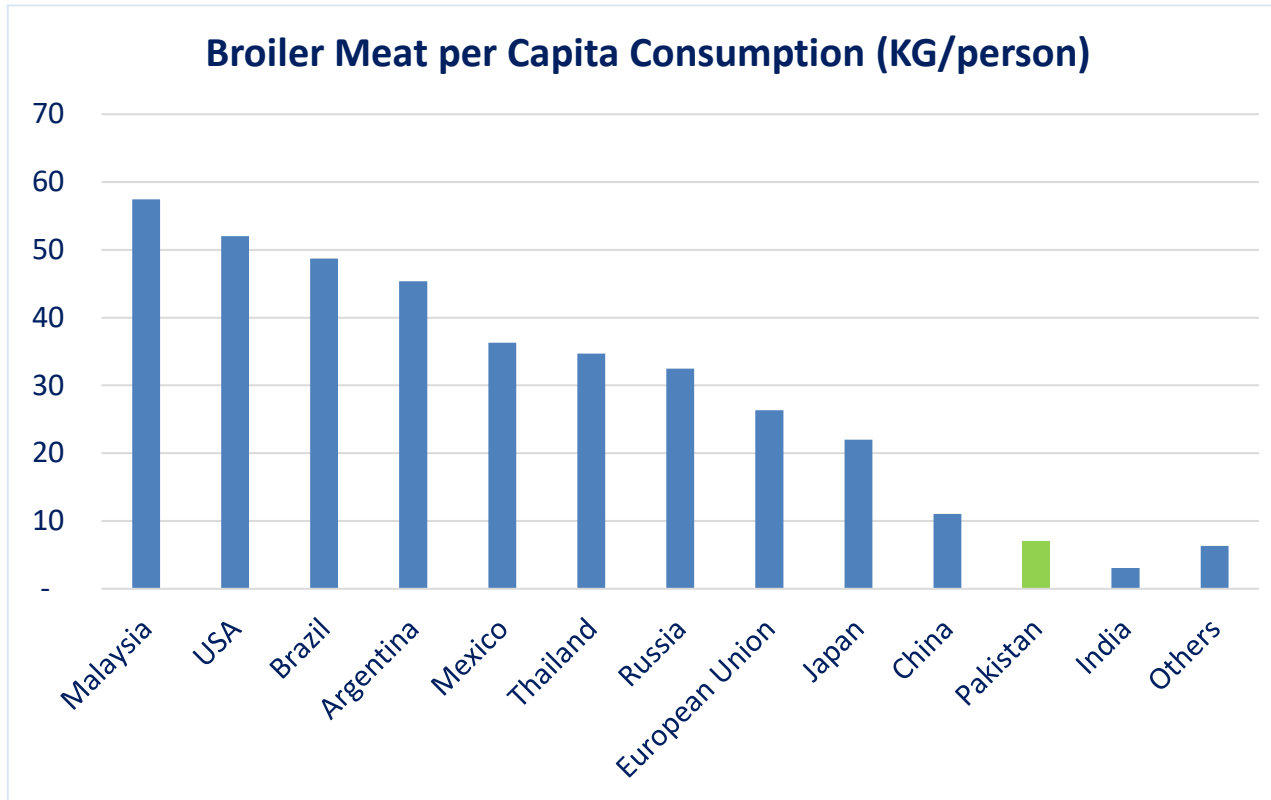
- In terms of broiler meat consumption, USA leads the market with a production of ~17mln MTs in CY20 (CY19: ~16mln MTs), while China ranks the second with a consumption of about ~15mln MTs (CY19: ~13mln MTs). The increase in consumption of broiler meat in China is related to less availability of pork meat and a rise in price of fish meat in China.
- Pakistan ranks at number 12 in terms of broiler meat consumption, which is estimated to reach at ~2mln MT in CY21.

Broiler Meat Consumption (mln MTs)					
Sr no.	Country	CY20		CY21*	
		Amount	% Share of World Market	Amount	% Share of World Market
1	USA	17	17%	17	17%
2	China	15	15%	15	15%
3	European Union	12	12%	12	12%
4	Brazil	10	10%	10	10%
5	Russia	5	5%	5	5%
6	Mexico	5	5%	5	5%
7	India	4	4%	4	4%
8	Japan	3	3%	3	3%
9	Thailand	2	2%	2	2%
10	Argentina	2	2%	2	2%
11	Malaysia	2	2%	2	2%
12	Pakistan	2	2%	2	1%
	Others	21	21%	22	22%
	Total	100	100%	101	100%

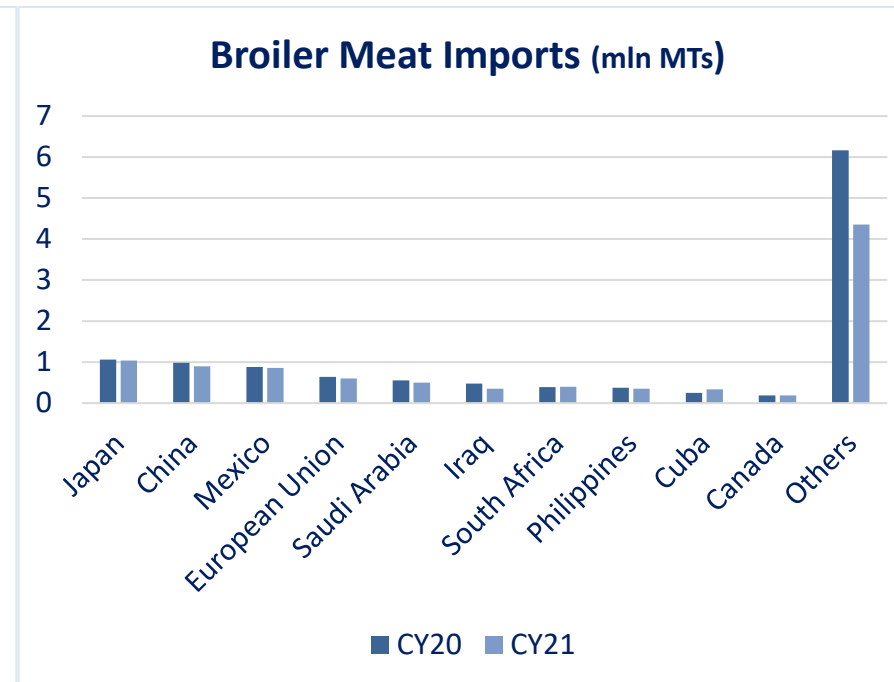
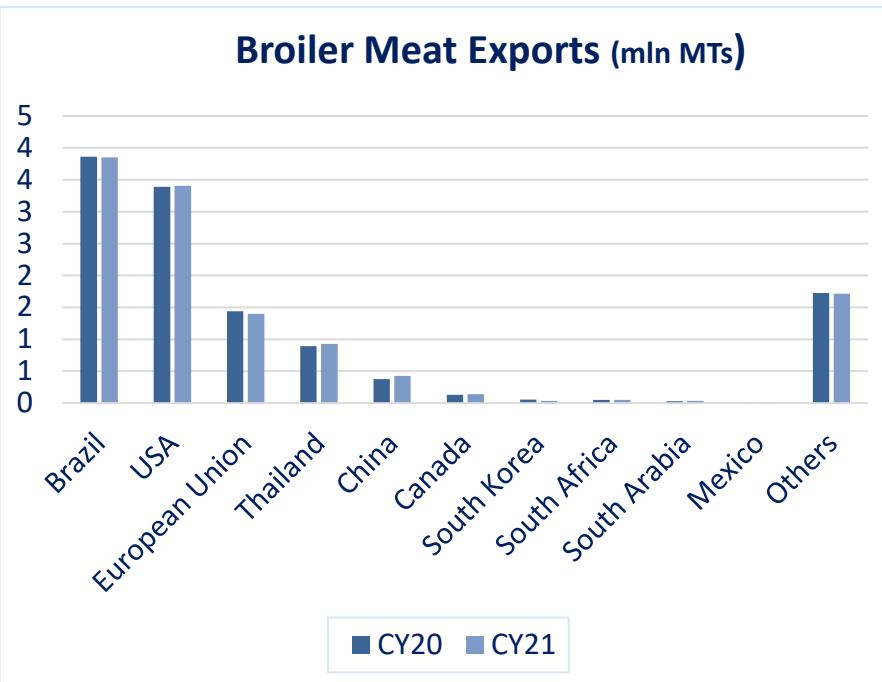
*Estimated

Global | Per Capita Consumption

- World average broiler meat per capita consumption is around ~13 Kgs/person. Malaysia has the highest per capita consumption of ~57Kgs/person, while USA ranks the second with a per capita consumption of ~52 Kgs/ person.
- Pakistan ranks at 11th, while India ranks at 12th in terms of per capita broiler meat consumption.
- In terms of egg consumption, Japan and Malaysia have the highest per capita consumption of ~320 eggs/person. Per capita consumption in Pakistan is very low around ~70 eggs/person, while in India it is ~81 eggs/person.



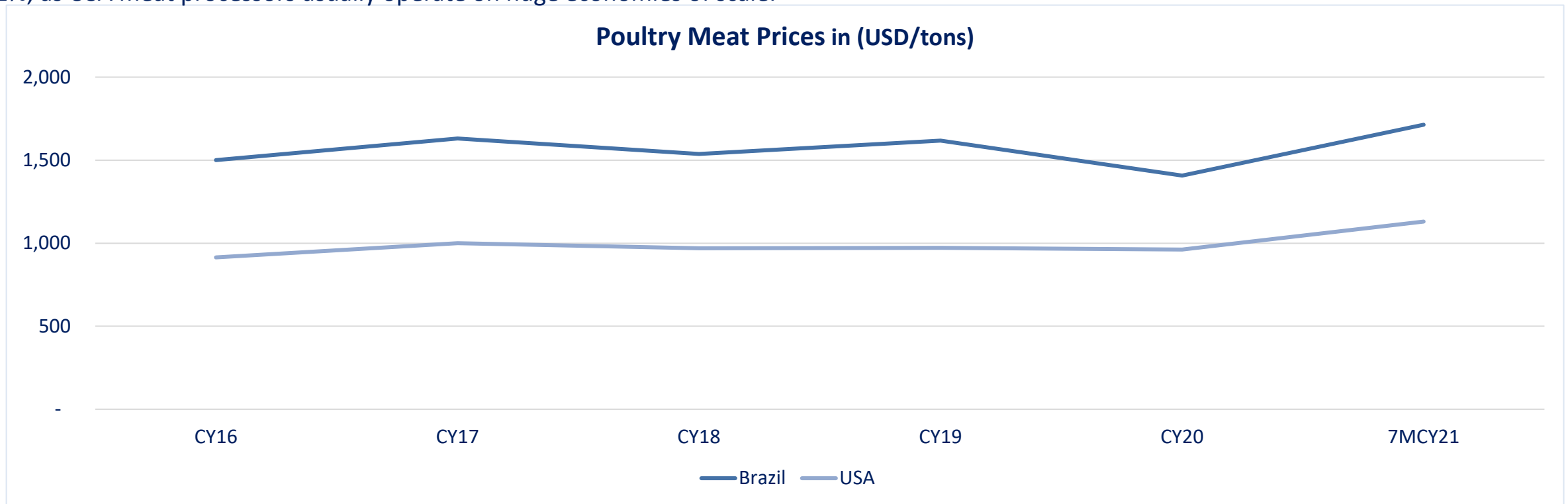
- Total global trade:** In CY21, the total quantum of broiler meat trade is estimated around ~12mln MTs (CY20:~12mln MTs). In terms of exports of broiler meat, Brazil leads the market, with an export of ~4.0mln MTs in CY20 (CY19: ~3.9mln MTs), with a YoY increase of ~2%, attributing to global restrictions. USA ranks the second in terms of global trade. Moreover China, South Africa, Canada and Mexico are net importers, while European Union is the net exporter.
- On imports side, Japan was ranked the highest with around ~1.0mln MTs of imports in CY20 (CY19:~1.1mln MTs) , a YoY decrease of ~10%, which is attributable to lockdown restrictions across borders. China ranked the second with ~0.9mln MTs imports in CY20 (CY19:~0.5mln MTs) , with a YoY increase of ~80%. The rise in imports is associated with shortage of pork meat in Chinese market and rise in price of fish meat.



Exporter vs Importer			
mln MTs	Export	Import	Net Trade
China	0.4	0.9	-0.5
South Africa	0.1	0.4	-0.4
European Union	1.4	0.6	0.8
Canada	0.1	0.2	-0.1
Mexico	0.0	0.8	-0.9

Global | Price Dynamics

- Global poultry prices experienced an upsurge in 7MCY21 following a contraction in CY20 owing to recovery in poultry feed prices and global demand. Poultry prices are highly dependent on the price behavior of major feed components.
- On a historical basis, poultry prices have remained moderately volatile based on last five years. Supply shocks and demand contraction led to a downfall in Brazilian poultry prices. Meanwhile the USA market demonstrated relative resilience during COVID-19 with price dropping by only ~1%, as USA meat processors usually operate on huge economies of scale.



Domestic Market

- Local Market Size:** Pakistan’s poultry sector revenue was recorded around PKR~1,092bln in FY21 (PKR~1,082bln in FY20), a YoY increase of ~10%. The increase is associated with relaxed pandemic restrictions and low base effect of FY20 as the Sector’s topline dropped by ~7% in FY20 YoY basis. The drop was majorly attributed to COVID-19 induced lockdown restrictions hampering the poultry demand.
- With a population of around ~220mln, Pakistan’s placement in global poultry sector is also at a prominent position. Pakistan ranks at the 11th position among the largest poultry producers of the world, providing employment to more than 1.5 million people in the country.
- Sector Structure:** The sector can comfortably be termed as fragmented since there is a large number of players and no single company exerts influence on the sector prices. The sector consists of around 350 players.
- Pakistan’s poultry sector is one of the largest agri-based sectors of the economy with over ~15,000 poultry farms spread across the country. The capacity of farms ranges from 5,000 – 500,000 broilers.

Industry Snapshot	FY19	FY20	FY21
Turnover - Domestic (PKR bln)	1,168	1,082	1,092*
Growth Rate	10%	-7%	10%
Turnover per Capita- Domestic (PKR)	5,840	5,152	5,200
Egg production- mln nos	19,052	20,113	21,185
Poultry Meat 000 Tons	1,518	1,657	1,809
Players	~350 players		
Structure	Fragmented		
Association	Pakistan Poultry Association - PPA		

*growth rate is based upon PACRA rated clients

Domestic Production

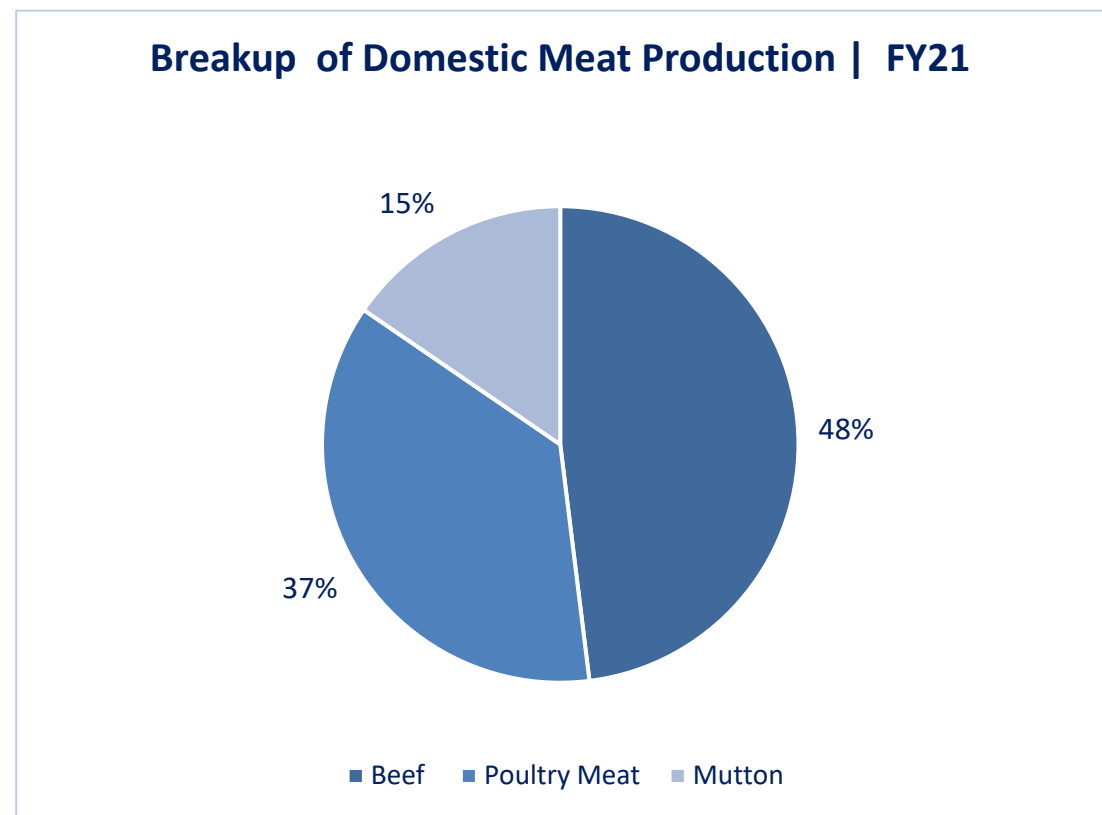
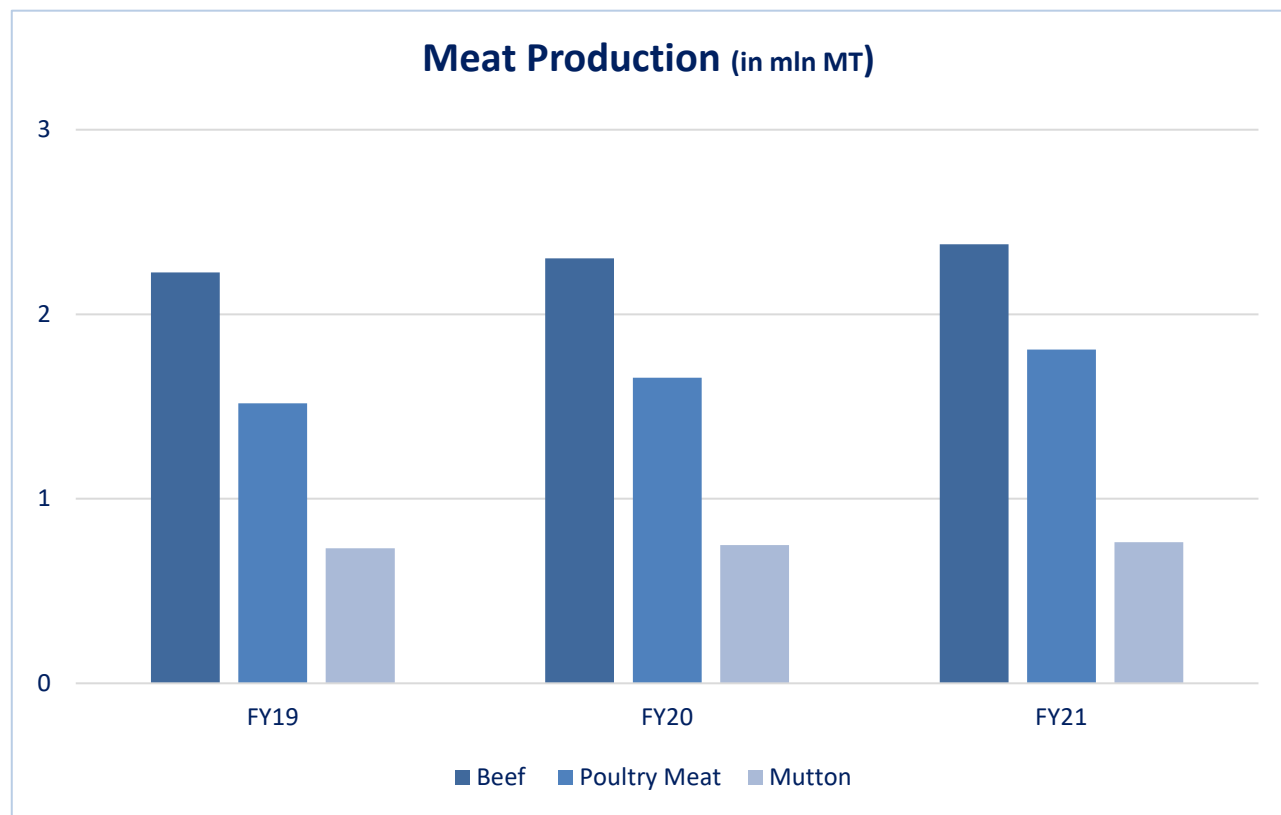
- Pakistan’s major poultry product is meat and it contributes around 37% (1.8mln MTs) to the total meat production of the country (4.9mln MTs).
- In FY21, Poultry meat and eggs production have recorded a growth of ~11.4% (FY20:~6.7%) and 5.7% (FY20:~5.6%), respectively.
- The quantity and quality of poultry products have been rising over the past few years mainly due to formation of around ~6,500 environmental friendly controlled shed system leading to direction of modernization.
- The COVID-19 pandemic posed some serious threats to the poultry sector, mainly to the small players. Small farmers were propelled to close their farms as poultry demand was low while feed prices were top high. The situation was largely turned around in FY21 with eased lockdown restrictions fostering poultry demand and international price stability of poultry input.

Total Poultry	FY16	FY17	FY18	FY19	FY20	FY21
Poultry Birds-mln Nos.*	1,016	1,108	1,210	1,321	1,443	1,578
Eggs-mln Nos	16,167	17,064	18,018	19,034	20,116	21,269
Day Old Chicks-mln Nos	945	1,037	1,138	1,248	1,370	1,504
Poultry Meat-000 tons	1,220	1,320	1,420	1,522	1,624	1,809

*Poultry birds include layers, broilers, hens and cocks

Domestic Production

- Pakistan's total meat production was recorded around ~4.9mln MTs in FY21 (FY20: 4mln MT) with a YoY increase of ~4%. Domestic meat production includes ~48% beef, ~37% poultry meat and ~15% mutton.



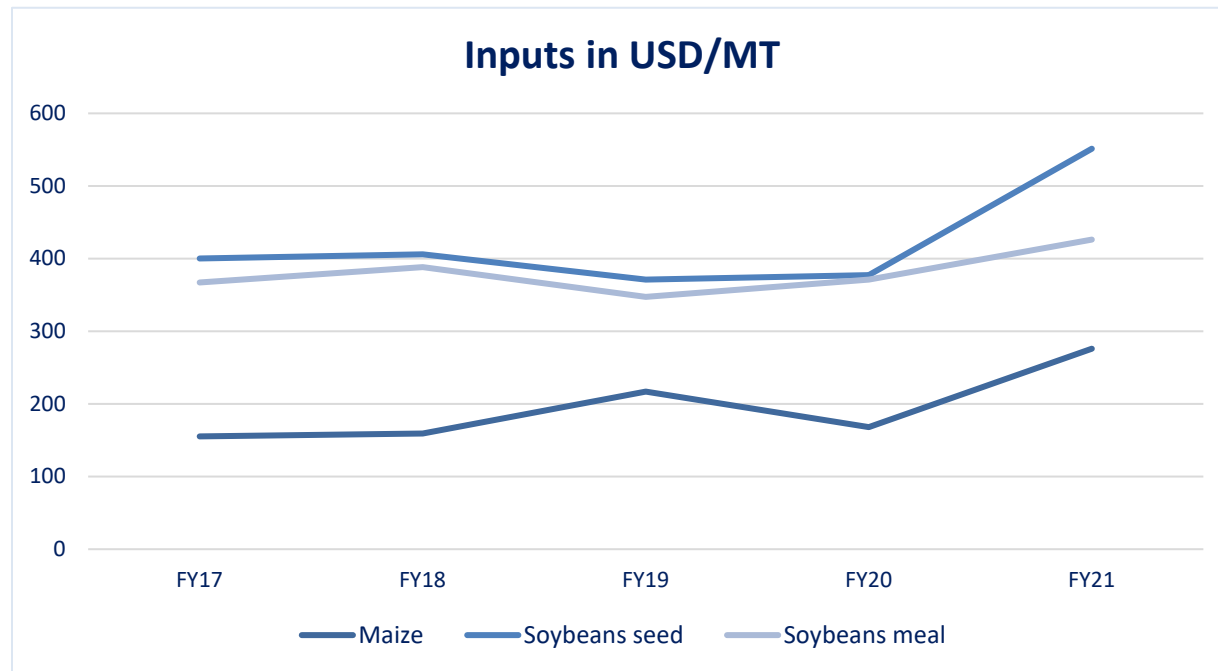
Supply Dynamics | Input

- The input of the sector is produced both domestically and commercially. On a domestic scale, cocks and hens are produced. While layers, breeding stock and Day Old Chicks are commercially produced. Broilers are majorly produced at commercial level with a very small production on domestic scale too.
- Total commercial Poultry birds' – including Layers, Broilers, Breeding Stocks and DOCs was recorded at ~2,990mln birds in FY21 (~2,724mln in FY20), a YoY growth of ~10%. Domestic Poultry birds produced during the period were recorded at ~92mln (~90mln in FY20). Resultantly, total poultry birds' production for FY21 was recorded at ~3,082mln (~2,814mln in FY20), a YoY growth of ~10%.

Domestic and Commercial Poultry Inputs (mln units)						
	FY16	FY17	FY18	FY19	FY20	FY21
Domestic Poultry						
Hens	41	42	42	43	44	45
Broilers	32	33	33	33	33	34
Cocks	11	12	12	12	13	13
Total Domestic Input	84	87	87	88	90	92
Commercial Poultry						
Day Old Chicks	945	1,037	1,138	1,248	1,370	1,504
Broilers	874	962	1,058	1,163	1,280	1,408
Layers	46	49	52	56	60	64
Breeding Stock	11	12	12	13	14	14
Total Commercial output	1,867	2,060	2,260	2,480	2,724	2,990
Total Poultry Input	1,951	2,147	2,347	2,568	2,814	3,082

Prices of Input

- In FY21, maize, locally produced, had its prices soar up by ~64% (FY20:~-22%) due to supply shortages as the farmers switched to producing other profitable crops. 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 ~40% over the period of FY21 (FY20:~1%).



Input Price Change – FY21	
Maize	+64%
Soybean Seeds	+46%
Soybean Meal	+15%
Fish Meal	+4%
Sunflower Meal	14%

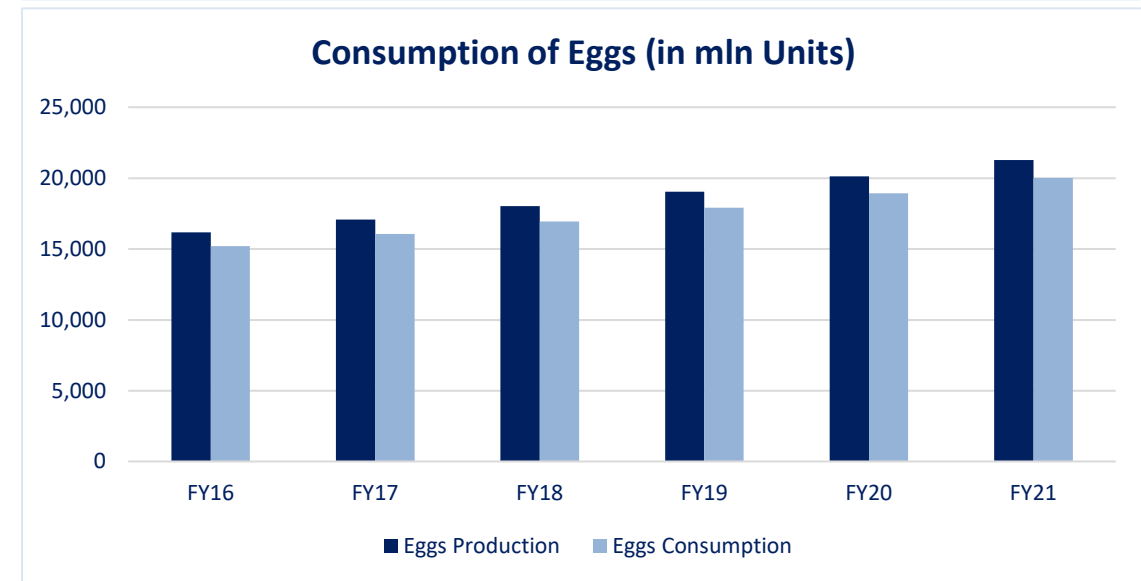
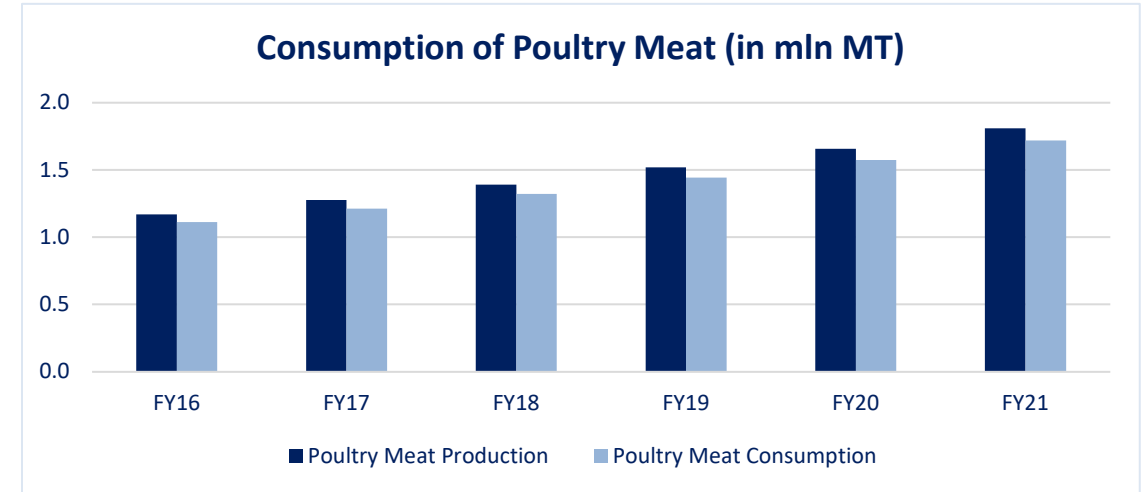
Supply Dynamics | Output

- The output of the sector comprises Eggs, Meat and DOCs, which are produced both commercially and domestically.
- The number of eggs produced are increasing over the years, with an increase in population. At domestic scale, the egg output has increased to ~2% in FY21, while Commercial egg output increased to ~7%.
- In FY21 Domestic Poultry meat production showed a growth of 2%, while Commercial poultry meat production increased by ~12%

Domestic and Commercial Poultry Output						
	FY16	FY17	FY18	FY19	FY20	FY21
Domestic Poultry						
Eggs (in mln Nos)	4,090	4,164	4,239	4,315	4,393	4,472
Meat ('000' tons)	120	120	120	122	124	127
Commercial Poultry						
Eggs (in mln Nos)	12,077	12,900	13,779	14,719	15,723	16,797
Meat ('000' tons)	1,100	1,200	1,300	1,400	1,500	1,682
Day Old Chicks (in mln Nos)	945	1,037	1,138	1,248	1,370	1,504

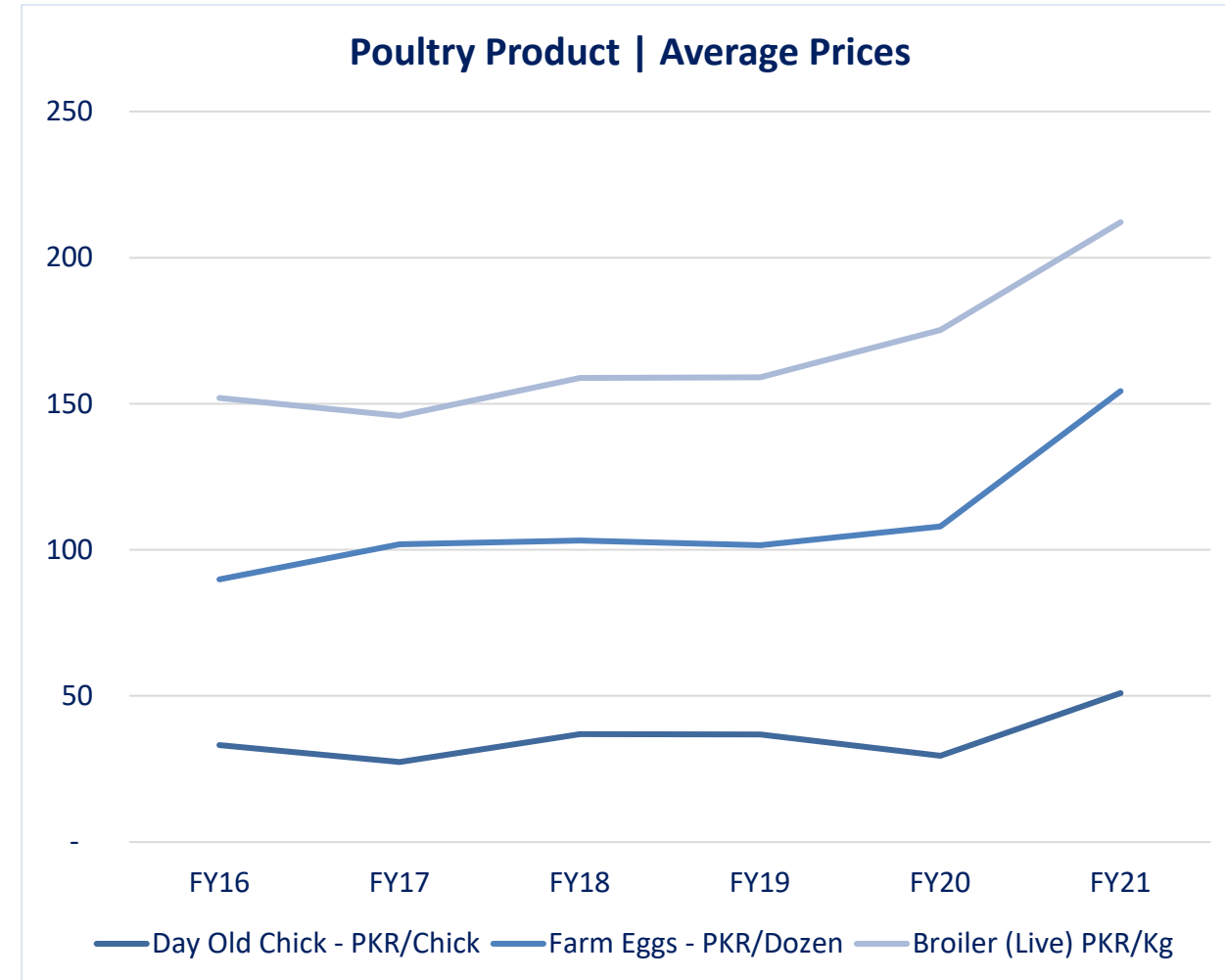
Demand Dynamics

- For Poultry meat, the consumption to production ratio remains above ~95%. In FY21, the poultry meat consumption stood at ~1.7mln MTs (FY20:~1.6mln MTs)
- For eggs, the consumption to production remains around~94%, and the consumption has increased over the years, with better capacity utilization and growing population. In FY21, total egg consumption stood at ~20,008mln units (FY20:~18,925mln units)
- Since Eggs and Meat are one of the most essential food items both at domestic and commercial scale, the consumption to production ratio usually remains high.
- Another reason contributing to the high consumption to production is that poultry products are perishable food items, therefore their sales run on continuing bases.



Local | Price Dynamics

- In FY21, the average price of Day Old Chicks, farm eggs and broiler (live) increased at the rate of 73%, 43% and 21% respectively because of revived demand after FY20 dip.
- 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.
- **Day Old Chicks:** Average prices of Day Old Chicks (DOC) increased by 73% i.e., FY21: PKR~51/chick (FY20: PKR~30/chick).
- **Farm Eggs:** Average prices of farm eggs grew by 43%, i.e., FY21: PKR~154/dozen (FY20: PKR~108/dozen).
- **Broiler (Live):** Average price of broiler (Live) has remained quite vibrant in the recent times. The average price of broiler (Live) during FY21 increased around 21%, i.e., FY21: ~PKR~212/Kg (FY20: ~PKR~175/Kg).

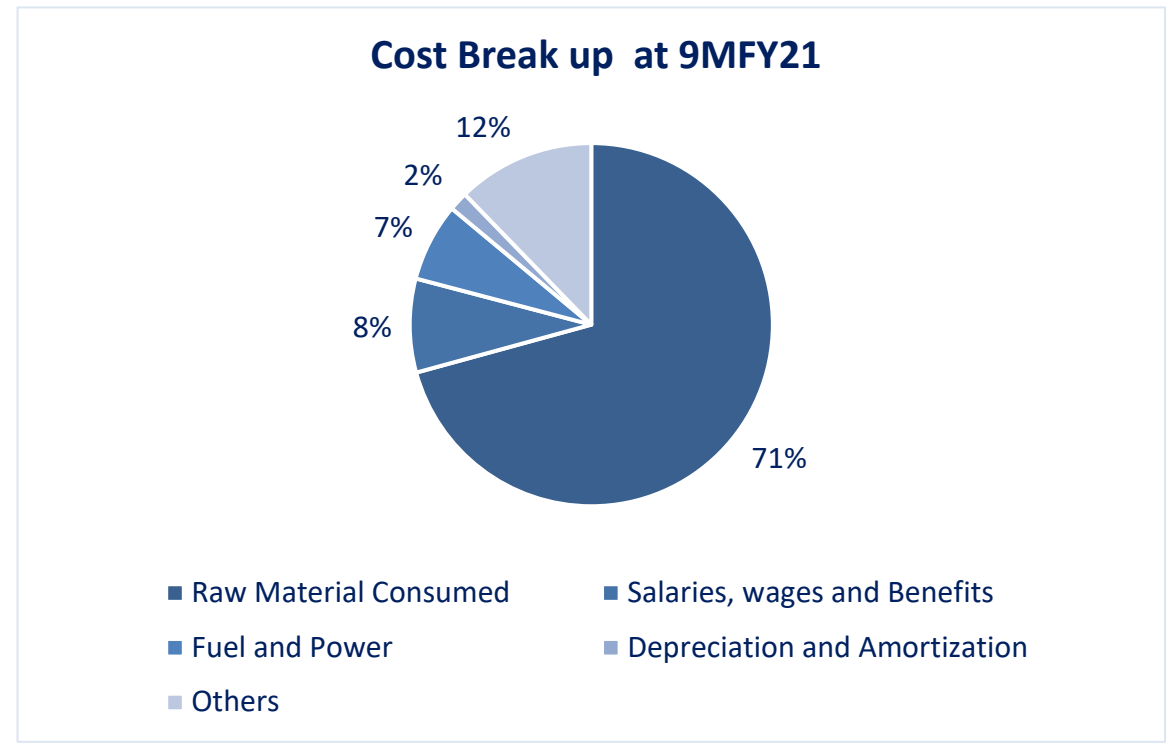
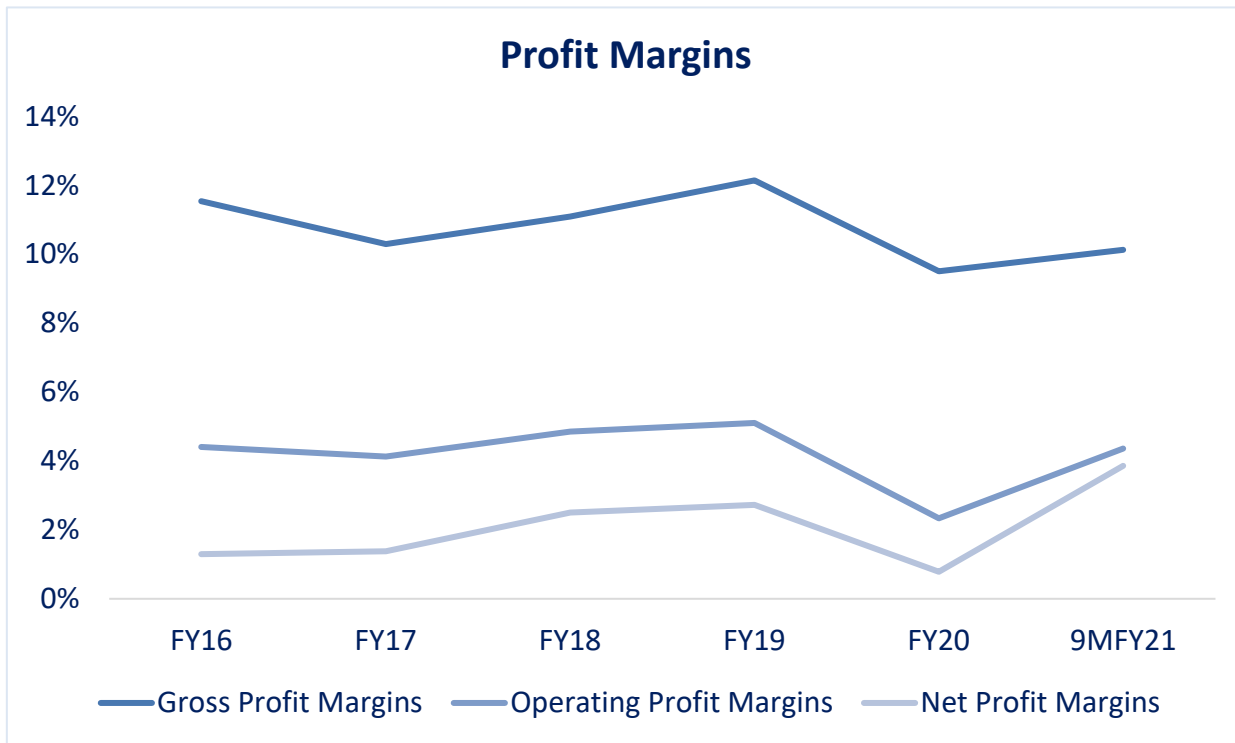


Business Risk

- The business risk of poultry sector can be divided into operating risk and sales risk.
- The sector is highly influenced by the input dynamics of poultry supply chain, as major raw material is imported and the supply fluctuates with price ranges. This was evident in COVID-19 times, when smaller players in sector got wiped out, because of their inability to meet with the changing market trends.
- **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. 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 food services. 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. However, since poultry products are considered essential, the demand dip of the sector is short-lived, with eggs and meat consumption resuming again upon the easing of lockdown restrictions.
- Moreover the sector is vulnerable to price volatility. Seasonality, market demand, consumer preference and high input cost are the factors affecting the output price. 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.

Business Risk

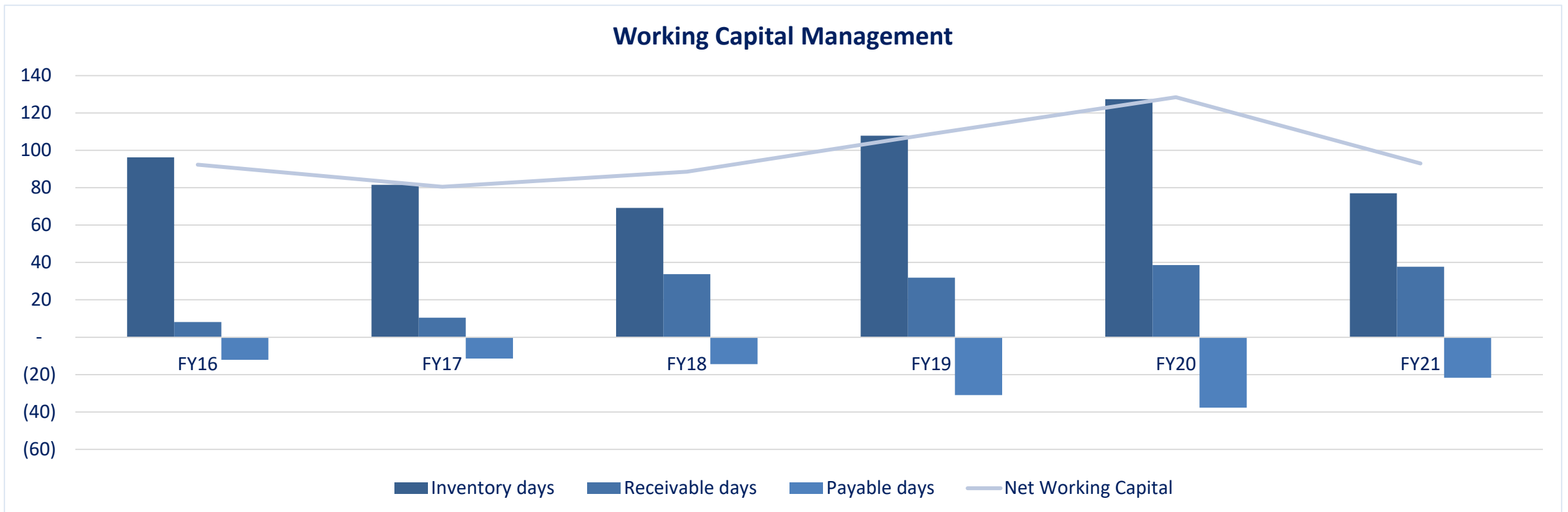
- Gross margins:** The average gross margins of the sector (FY16-FY20) have recorded around ~11%. In 9MFY21, the sector’s gross margins clocked in at ~10%, continuing with the historical trend. This is attributed to the increase in prices of poultry products as a result of increase in input prices.
- Operating & Net Margins:** The sector operates on thin operating and net margins. Average operating and net margins of the sector (FY16-FY20) have recorded around ~4% and ~2% respectively. In 9MFY21, operating margins continued with the historical trend to record around ~4.4% while net margins improved to ~3.9% primarily on account of low finance cost.
- Cost Breakup:** The largest component within direct costs is raw material comprising ~71% of the total manufacturing cost. The major raw material for this sector is poultry feed whose prices have been on a continuous rise since FY20 in the aftermath of COVID-19 pandemic.



Note: Figures are estimated based upon PACRA rated clients

Financial Risk

- Working Capital Management:** The average working capital days of the sector (FY16-FY20) have recorded ~100days. The sector’s inventory comprises of flock and feed. In FY21, the net working capital days decreased to ~93 days (~128 days). The decrease is associated with reduced inventory days, that is, ~77days in FY21(FY20: ~127days). In FY20, the inventory days hiked up because of the slow turnover due to the over supply of stocks in the market. Moreover in FY21, The payable days reduced to ~22days (~38 days), while receivable days reduced to ~38days (~39 days).

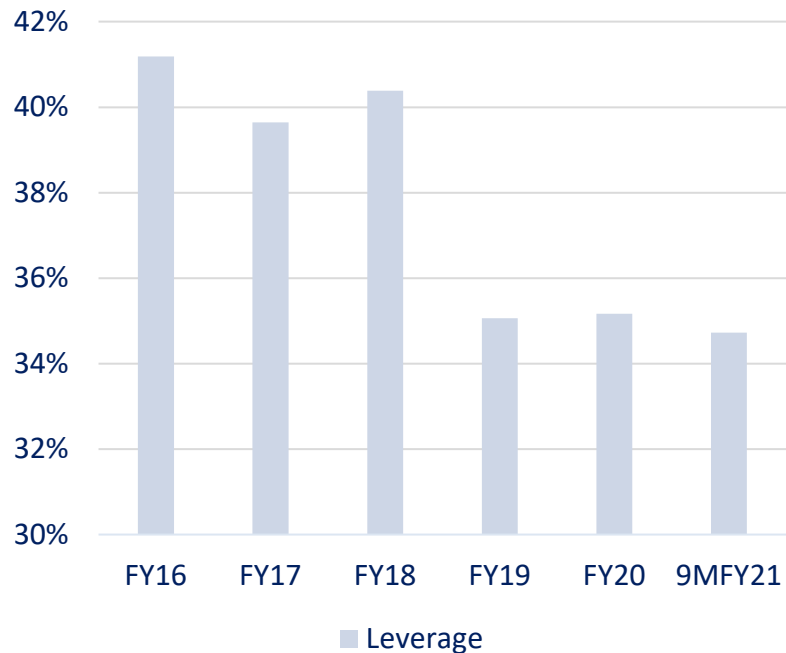


Note: Figures are estimated based upon PACRA rated clients

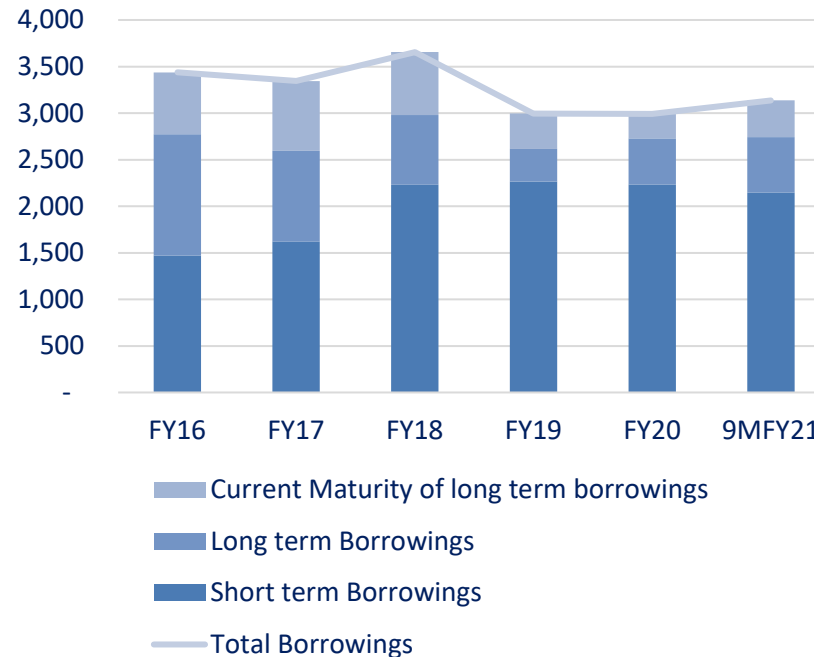
Financial Risk

- **Borrowing Mix:** The poultry sector’s total borrowing as at End-Mar’21 stood at PKR~31,137mln (FY20 : PKR~29,992mln) a spike of ~4% YoY basis.
- The largest component in this borrowing mix is represented by short term borrowings (~68% for 9MFY21 and ~75% in FY20). This is associated with the fact that the poultry sector majorly relies on external capital to meet their operational needs due to their small size and nature of business.
- **Leverage:** The average leverage of the sector is recorded around ~37% (historical 5 years) , which slightly reduced in FY21: ~34.7% (FY20:~35.2%), due to improved capital structure.

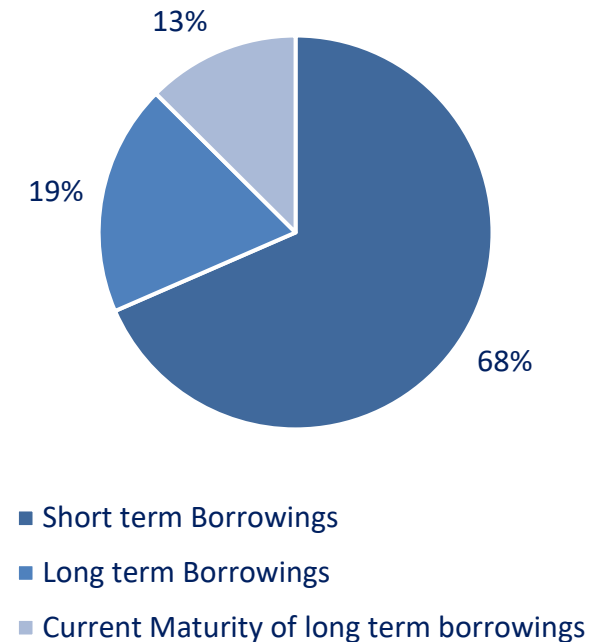
Leverage (Debt/Debt + Equity)



Borrowings (in PKR mln) | 5 year Trend

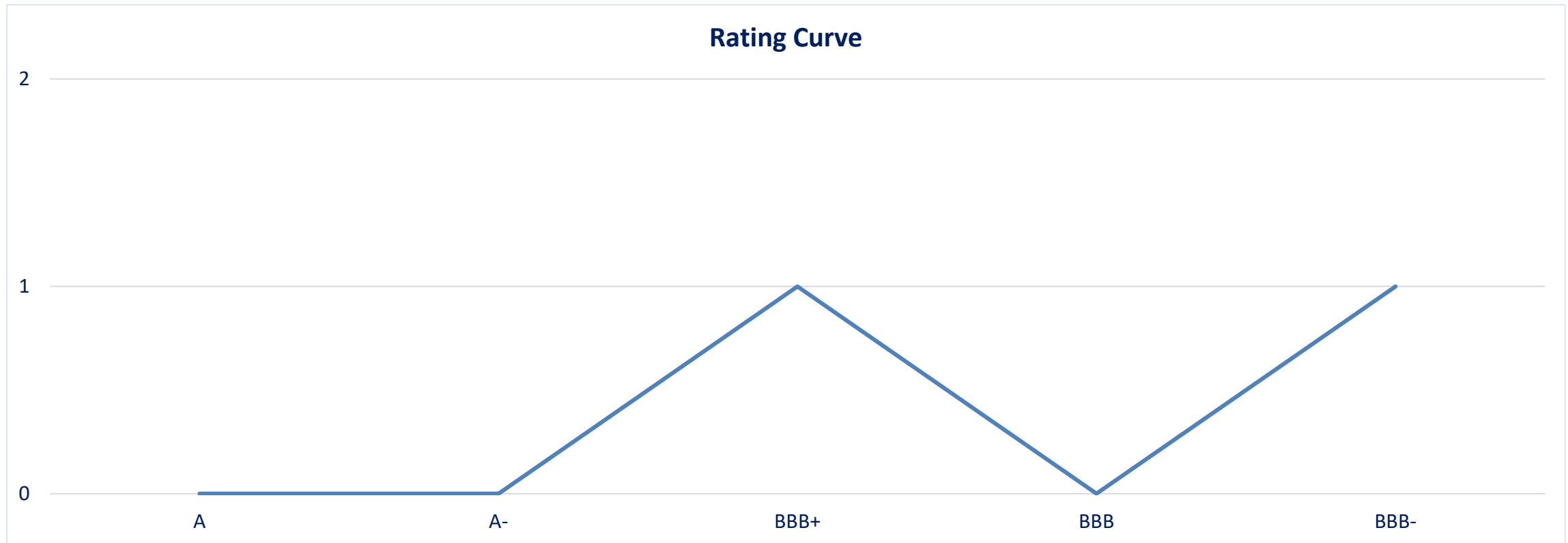


Borrowing Mix as at End- Mar’21



Rating Curve

- PACRA rates 2 clients in the Poultry sector.
- Rating category of the Sector is BBB.



Poultry

Taxes & Duties

PCT Code	Description	Custom Duty		Sales Tax Description	Sales Tax	
		FY20	FY21		FY20	FY21
1.05	Live poultry, that is to say, fowls of the species (broiler)	3%	3%	Local - Poultry Sheds, Incubators, Brooders and other Poultry Equipment	7%	7%
2.07	Meat and edible offal of the poultry, fresh, chilled or frozen.	20%	20%	Electricity used in Poultry	16%	16%
4.07	Birds' eggs, in shell, fresh, preserved or cooked. (Fertilized eggs for incubation)	11%	11%	Import of Poultry machinery & Equipment	Exempt	Exempt
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.	0%	0%			
94.06	Prefabricated buildings.	20%	20%			

- There is no change in duty structure of the sector since the previous Sector Research.

SWOT



Outlook: Stable

- Although the COVID-19 pandemic has hit hard on the poultry sector, when marriage halls and restaurants were closed across the country, but living with it is becoming the new normal now. And despite the emergence of the 4th Wave of the disease, most of the business and leisure activities have resumed now with new protocols and restrictions. Moreover, the speedy vaccination drive is also on the go, expected to lower the possibility of stringent lockdowns in the future.
- The key business risk of the Sector rests on the cost side; where management of input cost is a challenge, due to vulnerability of feed prices. However, since the output of the Sector is an essential food item, the demand of the poultry sector remains largely inelastic to price changes. Also, poultry meat costs the lowest in comparison to beef and mutton meat, so is the cheapest source of protein for human body.
- The financial risk of the Sector can be categorized in medium to high category. Poultry is a fragmented business, conducted across a broad range of scale. Small farmers get the most impacted by fluctuations in cost due to their inability to absorb any major cost rise.
- Although Pakistan has a huge potential for the poultry sector, its growth has historically remained subdued in the absence of any sustainable development plan and policy framework. Poultry feed, whose ingredients are majorly imported, are subject to duties and taxes at import stage which further increases their cost impacting both the feed and poultry sectors. Moreover, lack of R&D for better farming techniques and improved meat quality, persists to remain an obstacle in the Sector's long term growth.
- In conclusion, although prevailing challenges exist, Pakistan's overall economic profile has shown explicit signs of recovery following FY20. The economic recovery is exhibited by the GDP growth of ~3.9% during FY21 (based on provisional figures). Among the contributors of GDP growth is industrial activity which has picked up in various sectors with the Large Scale Manufacturing Industries output increasing ~15% YoY during FY21.
- The decision taken by the State Bank of Pakistan (SBP) to lower the policy rate by 625bps to 7% in the last quarter of FY20 has lowered the finance costs for the sector. Moreover, the interest rate is also not expected to witness any major hike in the short-term.

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