

**Analysts**
**Clare Chia**

Analyst, Equity Research  
[clarechia.xf@u.nus.edu](mailto:clarechia.xf@u.nus.edu)
**Ryan Liew Bing En**

Analyst, Equity Research  
[liew.bingen@u.nus.edu](mailto:liew.bingen@u.nus.edu)
**Lucian Wee**

Analyst, Equity Research  
[lucianw@u.nus.edu](mailto:lucianw@u.nus.edu)
**Basic Information**

Last Closed Price	US\$57.23
12M Target Price	US\$97.89
+/- Potential	+71.1%
Bloomberg Ticker	TSN
GICS Sector	Consumer Staples
GICS Sub-Industry	Food Products

**1Y Price vs Relative Index**

**Company Description**

Tyson Foods Inc is the largest food processor in the US and the second largest in the world. Offering products in the Chicken, Beef, Pork, and Prepared Foods segments, Tyson operates mainly in the US, with a growing international footprint.

**Key Financials**

Market Cap	US\$20.85b
Basic Shares O/S	294.25m
Free Float	78.7%
52-Wk High-Low	US\$42.47 – US\$94.24
Fiscal Year End	3-Oct-2020

(US\$m)	FY18A	FY19A	FY20E	FY21E
Revenue	40,052	42,405	41,963	43,384
Gr Rate (%)	4.7	5.9	(1.0)	3.4
EBIT	3,032	2,827	2,777	3,163
Margin (%)	7.6	6.7	6.6	7.3
ROE (%)	23.6	14.3	10.3	10.2
ROIC (%)	14.4	8.7	7.4	8.1
D/E	0.77	0.84	0.75	0.68

**Key Executives**

Tyson, John H.	Chairman of the Board
Banks, Samuel D.	Chief Executive Officer
Glendinning, Stewart F.	Executive Vice President & Chief Financial Officer

We are initiating coverage of **Tyson Foods Inc**, (“TSN” or “Company”) with a BUY rating and a **\$97.89** 12M price target.

**3Q20 Earnings Highlights**

- Decline in YoY revenues by 7.9% to US\$10.0b
- Increase in YoY operating margins from 7.2% to 7.7%, reflecting strong Beef, Pork and Prepared Foods domestic and international performance and operating loss margin of -3.9% for Chicken
- US\$340m of direct incremental costs attributed to COVID-19
- International sales decreased from 14.2% to 12.3% QoQ

**Investment Thesis**

- Growth from international expansion** – Recognizing the large growth potential outside the US, management has embarked on an internationalisation strategy. Tyson’s pursuit of international expansion will be successful as the company capitalizes on strong footholds established during the global pandemic, and changes in Tyson’s supply which creates access to additional export markets.
- Operating margin expansion** – Tyson’s operating margins have historically underperformed its domestic and global peers. Tyson has engaged in several initiatives, such as the successful Financial Fitness program, new plants, and development and implementation of advanced technologies to the processing line. These initiatives are expected to increase operating efficiency and margins.
- Expansion of Prepared Foods segment** – The global pandemic has resulted in increased consumption of meals at home, which is expected to persist post COVID-19. Tyson’s products under its Prepared Foods portfolio effectively caters to this new demand, with continued strong performance of its existing brands and new products developed to meet growing consumption trends.

**Catalysts**

- Easing of trade restrictions between China and US will increase exports from the US. This alleviates the excess chicken supply in the US, benefitting Tyson as the largest chicken producer in the US
- Successful diversification into high growth potential alternative protein markets, allowing Tyson to hedge against this substitute
- Realized margin expansion off accelerated implementation of technological developments while responding to COVID-19 outbreak induced operational constraints

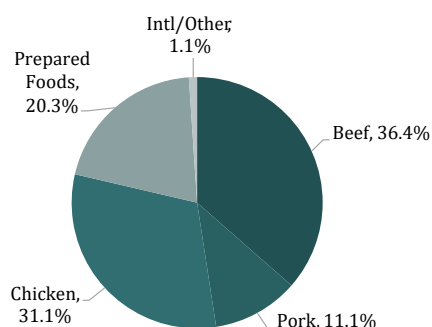
**Valuations**

Our 12M price target at the date of coverage is **US\$97.89**, based on a discounted cash flow analysis with a 5-year forecast period. A relative valuation was used as a sanity check for our DCF valuation, comparing Tyson to its industry peers based on +1FY EV/EBITDA and +1FY P/E

**Investment Risks**

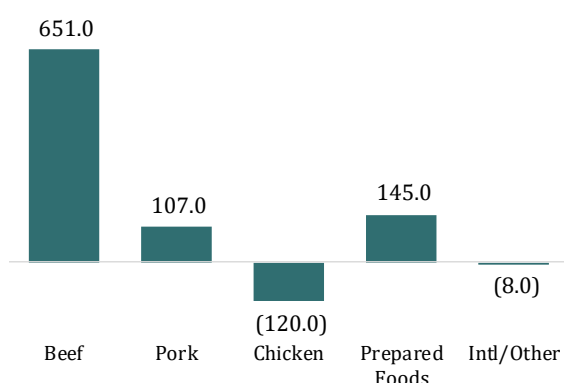
- Commodity price fluctuations:** High exposure to corn prices as a major cost input for Chicken, and exposure to open market prices of hog and cattle poses uncertainty to earnings performance
- Pandemic-induced higher labour costs and absenteeism:** Prolonged response to COVID-19 in the US will lead to extended higher operating costs, attributed to poor operational efficiency
- Import restrictions imposed by China:** An existing suspension of imports by China on foods that test positive for COVID-19 and potential worsening of trade tensions threatens Tyson’s exports

**Figure 1: Revenue Breakdown by Segment**



Source: TSN 3Q2020 Report

**Figure 2: Operating Profit by Segment (US\$m)**



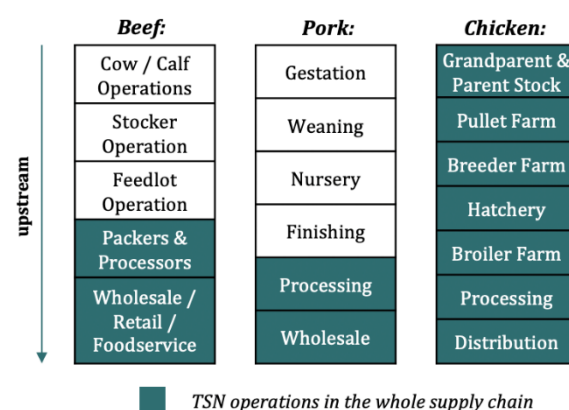
Source: TSN 3Q2020 Report

**Figure 3: Brands in TSN's Portfolio**



Source: TSN Investor Relations

**Figure 4: Supply Chain Processes**



Source: TSN Investor Relations

## Company Overview

Founded in 1935 operating primarily in the chicken business, Tyson Foods' (TSN) long history and operations in the US food processing industry has enabled the company to grow into the world's second largest food processor. The company markets beef, pork and chicken through their diverse and expanding brand portfolio that includes Tyson, Jimmy Dean, Hillshire Farm, Ball Park, Aidells, and State Fair.

## Product Segments

In the Beef and Pork product segments, TSN procures live cattle and hog from the open market through their network of trained buyers. These livestock are then transported to TSN's processing facilities, where carcasses are fabricated into different classes of cuts for further processing into a variety of products such as case-ready and value-added products. The Chicken segment largely encompasses the same processes, producing case-ready and value-added products from live broilers. However, with a vertically integrated chicken production process, these broilers are sourced from TSN's own chicken plants, involving the resource intensive process of raising live chickens, with labour and feed being major costs. Lastly, the Prepared Foods segment manufactures and markets alternative protein and frozen food products, such as ready-to-eat sandwiches and corn tortilla products.

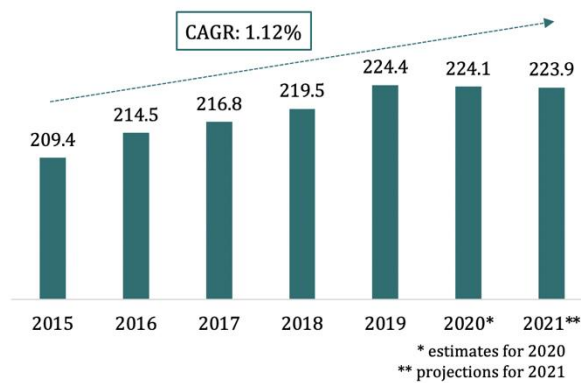
## Distribution Channels

TSN's products are distributed through the Consumer Products, Foodservice, International, and Industrial/Other channels. Consumer Products comprises sales through retailers such as grocery retailers, warehouse club stores and internet-based distributors. Food Service comprises sales to entities such as restaurant operators, schools and caterers. International comprises sales that span across TSN's presence in 145 countries which include China, Japan, Mexico and South Korea. Finally, Industrial/Other comprises sale of non-end products to other food processing companies.

## 3Q20 Earnings Review

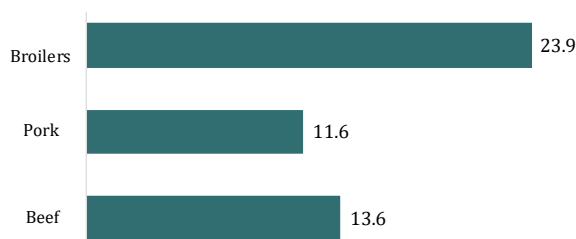
- Revenues declined 7.93% YoY, reflecting restricted local and international consumer demand due to COVID-19 restrictions, while operating margin increased from 7.18% to 7.73% YoY, due to strong operational performance of beef and pork segments
- All segments experienced an increase in percentage sales from Consumer Products with a decrease in percentage sales from Foodservice, leading to a net decrease in sales
- US\$340m of direct incremental costs incurred as part of COVID-19 prevention and recovery measures, and US\$110m of negative derivative mark-to-market adjustments
- Operating margins of Beef and Pork increased from 6.5% to 17.8%, and from 3.2% to 9.6% YoY respectively, amidst ample livestock supply, low processing capacity and strong consumer demand
- Chicken operating margins decreased from 6.90% to -3.86% YoY, due to oversupply of chickens leading to poor pricing environment
- Percentage sales from International sales decreased from 14.2% to 12.3% QoQ

**Figure 5: Total US Annual Red Meat and Poultry Consumption (Lbs/Capita)**



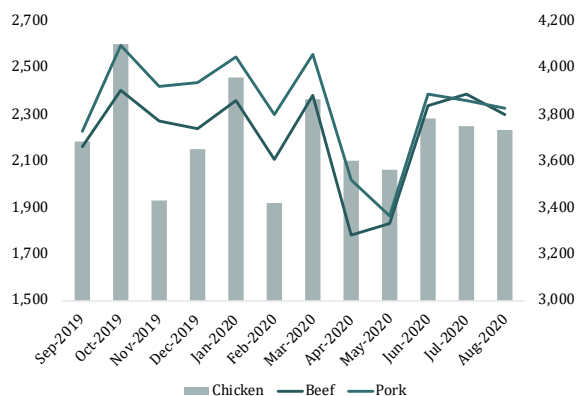
Source: USDA Economic Research Service

**Figure 6: Quarterly US Meat Consumption Per Capita for 2Q2020**



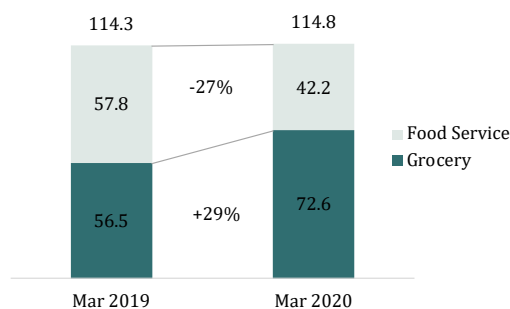
Source: USDA Economic Research Service

**Figure 7: Meat and Poultry Production In Million Pounds for Sep 2019 – Aug 2020**



Source: USDA Economic Research Service

**Figure 8: US Consumer Food Spending on Grocery and Food Service in Billions**



Source: McKinsey

## Industry Outlook

TSN operates in the meat and poultry processing industry, which processes livestock into cuts suitable for retail and foodservice sales. Key players in the industry include TSN, JBS USA, a wholly owned subsidiary of Brazilian company JBS SA, Hormel, and Cargill. Performance of the industry is closely correlated with meat consumption. Total red meat and poultry consumption has increased from 209.4lbs per capita to 223.9lbs between 2015 and 2021 according to USDA and is expected to grow 1.12% YoY.

### Impact Of COVID-19 On Food Processing Operations

Meat production was significantly impacted in April and May due to COVID-19. Poor initial response as well as limited social distancing efforts due to tight spaces in production lines led to high numbers of reported COVID-19 cases amongst employees. Food processors were forced to idle or operate plants at reduced capacity, leading to an overall decrease in processing capacity and output in the industry. In May, several grocers, including Krogers and Costco, placed limits on the amount of meat shoppers could purchase in anticipation of shortages. However, the industry has recovered earlier than expected, and production volumes in June have returned to historical levels.

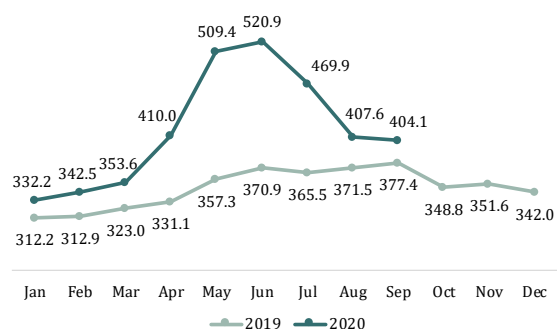
At the same time, food processors also experienced elevated operating costs which are expected to persist in the near-term, albeit at a lower run rate. Elevated operating costs are attributed to COVID-19 precautionary and recovery measures, labour shortages, and non-optimal production levels. In 3Q2020, TSN reported US\$340m of direct incremental costs related to COVID-19. These costs include the procurement of personal protection equipment, installation of thermal scanning systems and plexiglass shields between workers on factory lines, and US\$114m of thank-you bonuses for employees.

### Foodservice and Retail Channels

Foodservice is an important distribution channel for meat processing companies, accounting for roughly 40% of sales pre-COVID. As most restaurants in the US were forced to close, this resulted in a sharp decline in orders from foodservice distributors. While restaurants have adapted their operations towards takeout and drive-through models, success has been limited, with most barely covering their fixed costs. Recovery of foodservice sales is contingent on COVID-19 vaccine development and reopening, though it will be mitigated by the federal extension of child nutrition waivers till June 2021, guaranteeing a minimum level of demand from school meal operators.

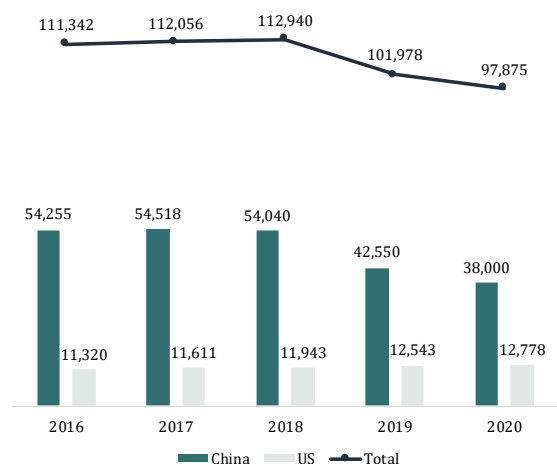
The decline in sales from foodservice channels was partially mitigated by strong performance of retail channels, though there was a net decrease in total sales. Food processors have adapted their foodservice plants to produce products for retail, but not entirely. Different operating and packing processes impede the diversion of supplies meant for foodservice distributors to retailers, with an overall decrease in production efficiency. Inefficiencies include repackaging bulk foodservice products into individual and family suitable servings, requiring additional capital and time, resources that the industry lack due to the perishable nature of fresh meat.

**Figure 9: US Beef Price Spread in Cents Per Pound of Retail Equivalent**



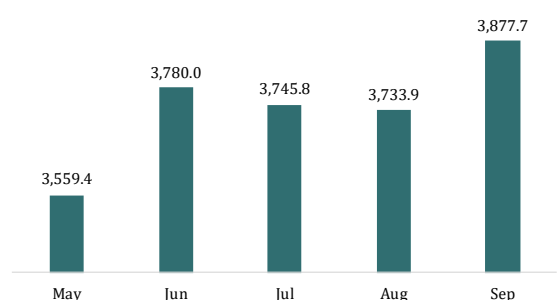
Source: USDA Economic Research Service

**Figure 10: Annual Pork Production in 1,000 Metric Tons (Carcass Weight Equivalent)**



Source: USDA Foreign Agricultural Service

**Figure 11: Monthly US Broiler Production in Million Pounds for May – Sep 2020**



Source: USDA Economic Research Service

**Figure 12: Alternative Protein Brands**



Source: Research Compilation

## Beef

The USDA projects production of beef to increase by approximately 9%, with prices increasing by approximately 0.3%, in 2H 2020. Beef production is expected to increase by approximately 0.8%, with prices increasing by approximately 2.7%, in 2021. Large supplies of market-ready livestock and continued strong demand for beef have resulted in higher beef price spreads. Factory closures in April and May have caused a backlog in processing of cattle, with approximately 1 million backlog in cattle in 2Q20. However, as processing facilities returned to more than 95% of their operating capacity YoY and livestock production largely rebounding to pre-COVID activity in 3Q20, slaughter rates have quickly rebounded.

## Pork

The USDA projects production of pork to increase by approximately 5.0%, with prices increasing by approximately 25.9%, in 2H 2020. Pork production is expected to increase by approximately 1.3%, with prices increasing by approximately 8.7%, in 2021. Similarly, the combination of large supplies of livestock and limited industry processing capacity has led to a backlog of 3 million hogs in 2Q20, leading to an expected increase in hogs processed in the next 3 to 6 months. Livestock production has also return to pre-COVID levels.

Global markets continue to grapple with the effects of African Swine Fever (ASF), with global hog supply reduced by upwards of 25% since initial outbreak. As ASF continues to spread but at a lower rate, global swine herds are gradually being rebuilt with economies bouncing back from COVID-19 and improving food service demand. With the current global shortage of pork, this presents opportunities for US pork exports and other proteins to fulfil international demand.

## Chicken

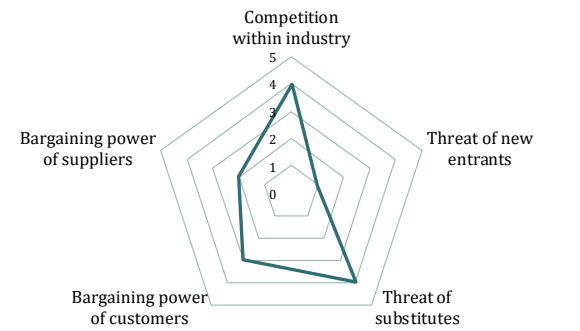
The USDA projects production of broilers to increase by approximately 1.1%, with prices increasing by approximately 1.0%, in 2H 2020. Broiler production is expected to increase by approximately 1.0%, with prices increasing by approximately 11.6%, in 2021. The chicken industry has grappled with a very poor pricing environment 2020, with a decline in broiler price by 16.9% from 2019 lows. This can be attributed to excess supply, associated with favourable weather and grow outs, and poor demand due to limited foodservice sales.

## Alternative Protein

The alternative protein market is expected to grow at a CAGR of 9.5% through 2025. Major companies operating in this space include Beyond Meat and Impossible Foods, as well as traditional meatpackers offering their own lines of alternative protein such as Hormel, Tyson, JBS and Cargill. Consumer consumption and positive reception towards alternative protein has accelerated recently with increased consumer interest in health and ethical considerations. Meat shortages as a result of COVID-19 has also reintroduced conversations surrounding meat supply and food security, highlighting alternative protein as a strong complement to current food supply.



Figure 13: Porter’s Five Forces



Source: NUS Investment Society Estimates

Figure 14: Top US Protein Producers

Beef:

Company Name	Market Share (%)
Tyson Foods	22
JBS	23
Cargill	18
Leucadia	10
Others	27

Pork:

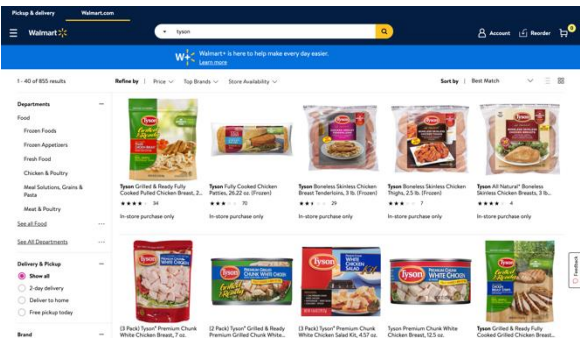
Company Name	Market Share (%)
Tyson Foods	16
Smithfield	26
JBS	19
Hormel	6
Others	33

Chicken:

Company Name	Market Share (%)
Tyson Foods	21
Pilgrim’s Pride	17
Sanderson Farms	9
Perdue Farms	7
Koch Foods	6
Others	40

Source: TSN Investor Relations

Figure 15: Sale of Tyson Branded Products via Walmart



Source: Walmart

Porter’s Five Forces

Competition within industry – High

High competition within the food processing industry can be attributed to minimal product differentiation of meat, which also introduces competition from international imports. Companies within this space actively seek areas for differentiation, such as branding, pricing, and quality. TSN has also strived to increase product and brand differentiation over their competitors. Apart from increasingly offering premium cuts of beef and pork, TSN has also acquired several brands to augment their Prepared Foods segment, which has greater potential for product differentiation.

Threat of new entrants - Low

Barriers to entry and exit of the food processing industry are high, with high initial capital expenditure for construction of processing plants. Established competitors within the industry also have strong economies of scale following decades of operations and expansion, leaving new entrants at a cost disadvantage. New entrants will also have difficulty in capturing market share, when retailers and foodservice customers prefer to stock produce from well-established brands, with concerns over quality and safety of products

Threat of substitutes - High

Apart from provision of value-added products, meats are marginally differentiated since they are commodities in nature. With low switching costs and low consumer involvement, customers’ purchase decision will be driven primarily by availability and, to a lesser extent, branding. Alternative protein, which has seen significant growth in the past few years, has also established itself as a growing substitute to meat-based protein. Recognition of this threat has led traditional food processors to offer their own line of alternative protein products.

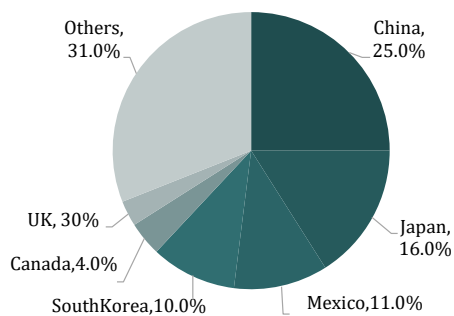
Bargaining power of customers - Moderate

In the retail sales channel, a large proportion of sales go through major grocery chains such as Walmart and Target, as is the case with TSN where Walmart accounts for 16.9% of total sales. Grocery chains have immense bargaining power over pricing and shelf space. Customers in the foodservice channel are more fragmented, with a broad range of entities served from restaurants to schools. However, collective agreements can still be drafted for customers to establish bargaining power, especially with entities such as schools and healthcare facilities that operate under a single governing body.

Bargaining power of suppliers - Low

Suppliers to food processors are mainly livestock producers, and to a lesser extent, commodity producers of materials such as corn and flour. On top of being commodities, there are little alternatives for use of these livestock since they are grown mainly to produce meat and related food products. Therefore, livestock producers are inclined to sell their livestock to buyers, the majority of whom are food processors, regardless of current market prices. The lack of bargaining power of suppliers is further compounded by the small number of large food processors that account for majority of purchases.

**Figure 16: Revenue Breakdown by Geography for FY2019**



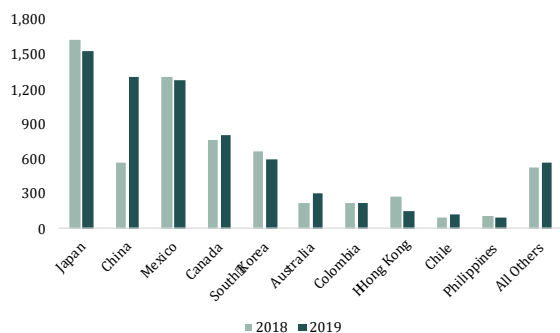
Source: TSN FY2019 Annual Report

**Figure 17: TSN Foreign Geographical Footprint**



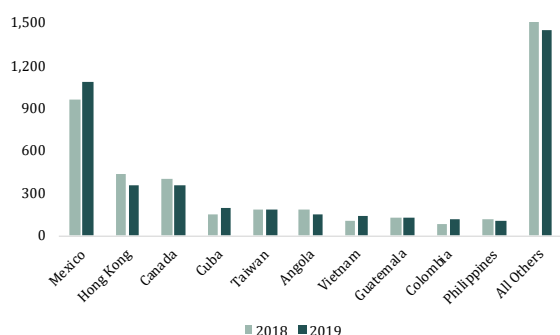
Source: TSN Investor Relations

**Figure 18: Top 10 Export Markets for US Pork in USD millions**



Source: U.S. Census Bureau Trade Data

**Figure 19: Top 10 Export Markets for US Poultry in USD millions**



Source: U.S. Census Bureau Trade Data

## Investment Thesis

### 1. Successful international expansion to drive market share gains

Tyson's long operating history in the US has enabled the company to achieve a wide domestic reach and economies of scale. However, maturing US-centric operations now limit the company's revenue growth potential, with poultry and red meat consumption in the US expected to account for 5% of global protein-consumption growth. Recognizing stagnating growth opportunities, TSN revised their overall strategy in 2017, towards "sustainably [feeding] the world with the fastest growing protein brands". As part of a long-term succession plan established by the Board, Dean Banks, who previously served as CTO and a member of the strategy and acquisitions committee, was appointed as CEO as of October 3, 2020. Initial comments indicate that he intends to pursue long-term growth and strengthen the company's commitment towards global expansion.

Tyson has recently engaged in several global acquisitions in FY2019 to expand their geographical footprint. They include the Thai and Europe operations of BRF S.A., and Keystone Foods, which is a major supplier to global foodservice industry with extensive sales and distribution networks in Asia. These international operations are expected to reach critical mass in international operations in FY2021, allowing TSN to capitalize on the high-growth markets served by these subsidiaries and further expand their geographical reach.

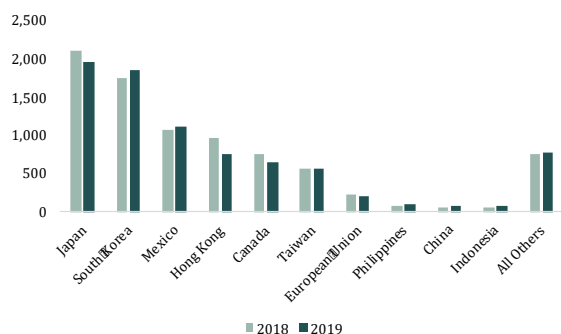
TSN's international operations have also posted strong performance in FY2020, establishing a strong foothold for future increase in international sales. While TSN's strong pork exports can be partially attributed to pork shortages due to ASF, it is also in part due to TSN's transition towards ractopamine-free hog supplies. The animal feed additive, which increases meat yield while requiring lesser feed, is banned in more than 100 countries, including major export markets of China and the EU. Transitioning towards ractopamine-free hog supplies allows TSN to access these new export markets, increasing pork exports even after global hog herds are rebuilt.

TSN will also have an edge over US competitors in export markets, having successfully penetrated these markets. With strong export sales in FY2020 achieved by fulfilling shortages in these markets, TSN has successfully established its brand to consumers. Since brand recognition is central to consumers' purchase decision of these low involvement commodities, TSN will carry this growth momentum forward as consumers associate TSN's products with quality.

### 2. Operating margin expansion with Financial Fitness program and improving poultry pricing environment

TSN's operating margins has historically underperformed its food processing peers, with a 5-year average operating margin of 7.0%, against its US peers of 13.3% and global peers of 8.6%. Such underperformance can partially be attributed to TSN's vertically integrated Chicken segment, which achieved operating margins of 4.7% in FY2019, down from 2015 highs of 12.0%. TSN's overall operating margins have also been negatively impacted by a poor chicken pricing environment and one-off COVID related costs in

**Figure 20: Top 10 Export Markets for US Beef in USD millions**



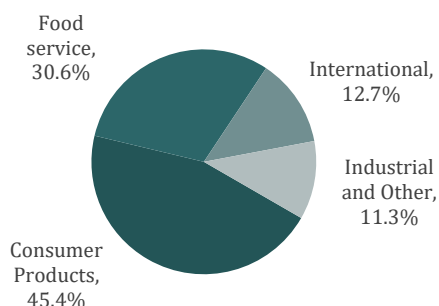
Source: U.S. Census Bureau Trade Data

**Figure 21: Construction in Progress for Humboldt Processing Plant**



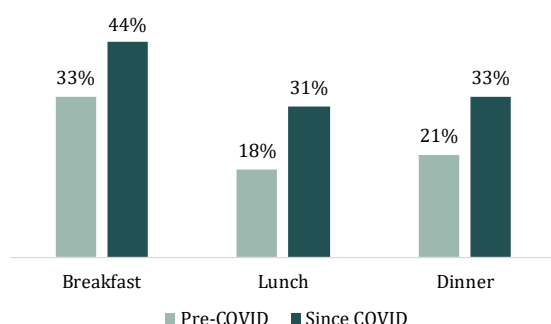
Source: WBBJ 7 Eyewitness News Staff

**Figure 22: Revenue Breakdown by Distribution Channel for FY2019**



Source: TSN FY2019 Annual Report

**Figure 23: Changes in Proportion of US Consumers Having Meals at Home (%)**



Source: Acosta Research

FY2020. Despite historical underperformance, TSN will succeed in increasing its operating margins towards industry averages.

TSN has established a credible pathway towards increasing its operating margins since the start of FY2020. However, margin expansion has been momentarily stunted by the offsets of the global pandemic. The Financial Fitness program, which was initiated in 2017 to create cost savings for the Chicken and Prepared Foods segments, was fully integrated into the company following several quarters of integration efforts and costs along the way. The Financial Fitness program has proven to be capable of providing US\$200m of annual savings to the company, representing an increase in operating margin by 0.5% based on FY2019 figures.

Chicken prices are also expected to increase by 11.6% in 2021, creating more favourable pricing conditions for TSN to increase its top line in the Chicken segment, thereby achieving a wider margin spread between production costs and price sold. TSN is also expected to benefit from current excess chicken supply, with construction of the new Humboldt plant in Tennessee expected to be operational by December 2020. Apart from improved operational efficiency with updated fixed assets and implementation of latest technology, TSN will see an increase in processing capacity of up to 1.6m chickens a week, accelerating the decrease in excess chicken supply and move towards a more favourable pricing environment.

Furthermore, as the new CEO, Dean Banks has also indicated his commitment towards employing technology to increase operational efficiency. Previously appointed as CTO of TSN, and holding leadership roles at X and SEED Ventures, it is expected that TSN will engage in increased research and development as well as capital expenditure to increase operational efficiency, thereby increasing operating margins.

Finally, TSN's internationalisation efforts will also lead to an increase in revenues with marginal increase in costs, increasing operating margins. International expansion has enabled TSN to market products not consumed by Americans, leading to greater optimization of livestock use.

### 3. Well-positioned to capture market share of the growing Prepared Foods segment

Due to the pandemic and resulting lockdowns, a change in food consumption habits has been witnessed. According to Acosta, 55% of American shoppers are increasingly having meals at home since the start of the pandemic. Some of these habits are likely to persist – with an estimated 47% of consumers planning to continue consuming breakfast more frequently at home, similarly for lunch and dinner at 33% and 29% respectively. Key reasons for this lasting change in consumption habits include affordability and safety concerns.

TSN's Prepared Foods segment is well-poised to capture this industry tailwind, with a strong emphasis on product innovation which enhances product differentiation. This is contributed by TSN's strong brand portfolio in the Prepared Foods segment, including Jimmy Dean breakfast sausage, Ball Park Hot Dogs, Hillshire Farm Lunchmeat, State Fair, AdvancePierre. Its strong brand portfolio has translated into well-performing products with recent product releases, including a line of on-the-go breakfast foods under its Jimmy Dean brand. The products marketed under this line include Breakfast Cups, Egg'wiches

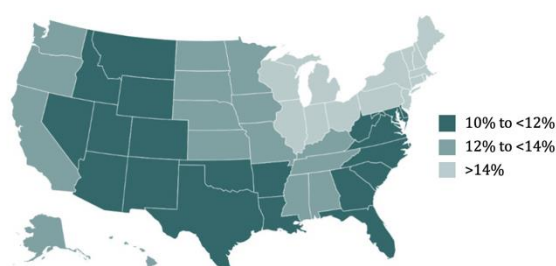


**Figure 24: New Product Launches in Europe**



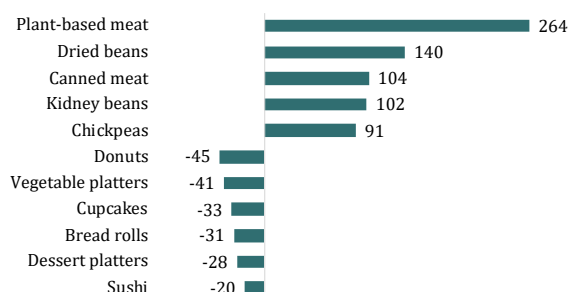
Source: Food Navigator

**Figure 25: Sales Growth of Alternative Proteins in US 2019 (%)**



Source: TSN Investor Relations, Nielsen

**Figure 26: Sales Growth for Selected Foods for 9 Weeks Through May 2, 2020 (%)**



Source: Bloomberg, Nielsen

**Figure 27: Tyson Manufacturing Automation Centre in Springdale**



Source: TSN

and Casserole Bites. Having demonstrated a keen sense of consumer trends, where TSN correctly identified consumers' preference for comfort foods such as Mac n Cheese, coupled with a constantly refreshing product pipeline, TSN will be able to continue evolve with changing consumer demand.

As TSN captures market share in the Prepared Foods segment, increased product differentiation within the segment will lead to higher margins, translating into higher operating margins for TSN. While TSN's operating margin for Prepared Foods was 7.1% in 3Q2020, the 11.0% decrease in YoY operating margins can be attributed to lower demand from food service distribution channels and higher operating costs that were partially offset by higher average sales price. Despite higher raw material costs in recent quarters, TSN has not fully passed on the costs to consumers, suggesting the pursuit of a volume maximization strategy. As raw material prices return to average historical prices, operating margins should recover.

TSN's focus on international expansion in recent months will also enable its Prepared Foods segment to reach a larger, global market. This comes on the back of a realization of synergies from its recent acquisitions – the Thai and European operations of BRF S.A. In July, TSN launched 28 frozen chicken products in Europe and each product has 13 languages to cater to customers across the continent. The company also has 2 innovation centres in Europe, extending its focus on innovation from its US operations to meet the regional preferences of European consumers.

## Catalysts

### • Easing trade restrictions

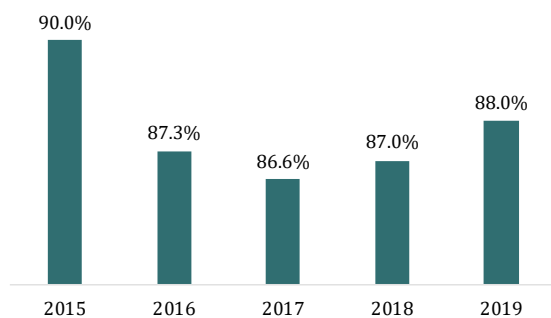
China lifted a 4-year embargo on US chicken imports in early 2020. As the second largest chicken producer in the world and the largest in US, TSN will see increased chicken exports to China, while also alleviating the excess chicken supply experienced in the US poultry market, allowing for stronger domestic pricing.

### • Success of Raised and Rooted product lines driving diversification into alternative protein

TSN has also returned to the alternative protein space following a divestment of its 6.5% stake in Beyond Meat in 2019, possibly indicative of the company's confidence in their own product line, of the brand name Raised and Rooted. Product mix includes plant-based and blended products such as nuggets and tenders. TSN's competitive advantage against other rivals in the alternative protein space such as Impossible Food and Plantible Foods is its robust supply chain and economies of scale, enabling the company to bring Raised and Rooted to market quickly. A strong focus on alternative proteins is crucial for TSN to ride on the momentum of increasing popularity of plant-based meat which saw sales growth of 264% in the 9 weeks ended May 2. As alternative protein becomes a source of protein consumers turn to, it is imperative that TSN establish a strong presence in this field and leverage on its operating efficiency to reach a large consumer base.

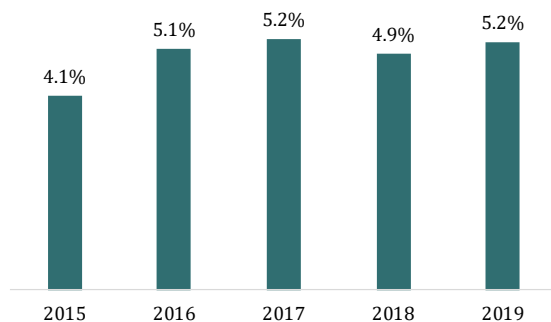


**Figure 28: Production Efficiency (COGS as a % of Revenue)**



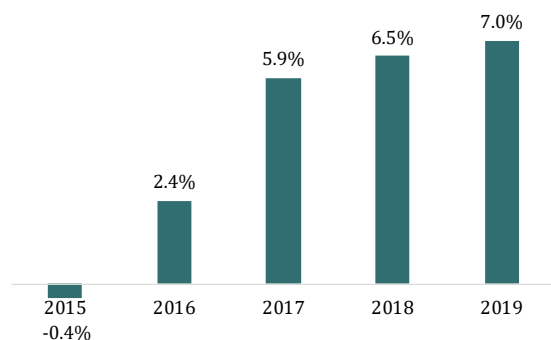
Source: Capital IQ

**Figure 29: Production Efficiency (SG&A as a % of Revenue)**



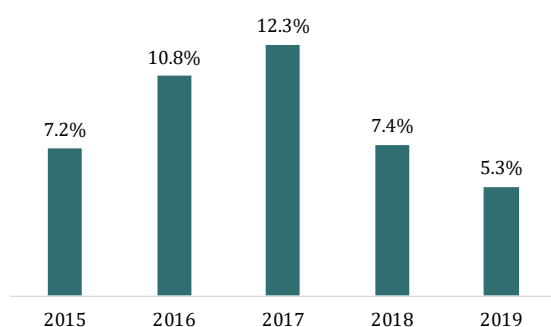
Source: Capital IQ

**Figure 30: Profit Margins for Beef**



Source: Capital IQ

**Figure 31: Profit Margins for Pork**



Source: Capital IQ

- **COVID-19 induced acceleration of technological developments**

TSN opened its Manufacturing Automation Centre in 2019, which seeks to adapt advanced automation, robotics and machine learning to enhance TSN's operational efficiency and operating margins. Due to worker health concerns and absenteeism, TSN has accelerated its efforts to further automate production processes while improving employees' work environment. Some processes that have been developed as a result include the implementation of computer vision to automate deboning of poultry.

## Financial Analysis

(US\$m)	2019A	2020E	2021E	2022E
Revenue	42,405	41,963	43,384	46,855
Operating Income	2,827	2,777	3,163	3,560
OI Gr Rate (%)	(6.7%)	(1.8%)	13.9%	12.6%
Operating Profit Margin (%)	6.7%	6.6%	7.3%	7.6%
ROA (%)	6.1%	4.8%	4.8%	5.1%
ROE (%)	14.2%	10.3%	10.2%	10.7%
ROIC (%)	8.7%	7.4%	8.1%	8.7%
D/E	0.84	0.75	0.68	0.63

## Overview

The chart above reveals TSN's financial condition prospects for the next five years, highlighting our assumptions. Most indicators are supportive of the overall BUY recommendation.

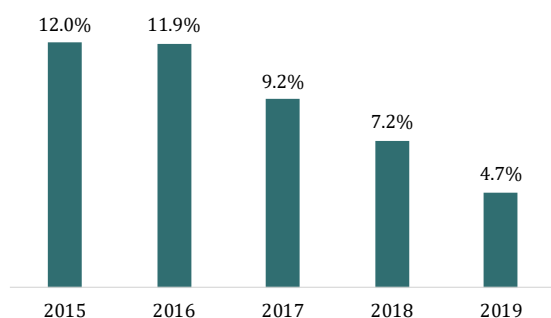
## Improving Margins

Operating margins are expected to decline in FY2020, due to difficult operating conditions. However, a recovery is expected post-FY2020, as operational efficiencies begin to take effect, allowing TSN's operating margins to transition towards industry averages.

TSN's major cost components are Cost of Goods Sold (COGS) and Selling, General and Administrative (SG&A) expenses. TSN has improved production efficiency in the last 5 years, lowering COGS as a percentage of revenues from 90.0% in FY2015 to 86.6% in FY2017, and an increase to 88.0% in FY2019. The increase in COGS from FY2017 to FY2019 can be attributed to declining Pork and Chicken margins, due to greater industry Pork processing capacity and high Chicken feed prices. Moving forward, the combination of greater efficiency, pursuit of higher margin Prepared Foods segment will increase top line, with a less than proportionate increase in COGS.

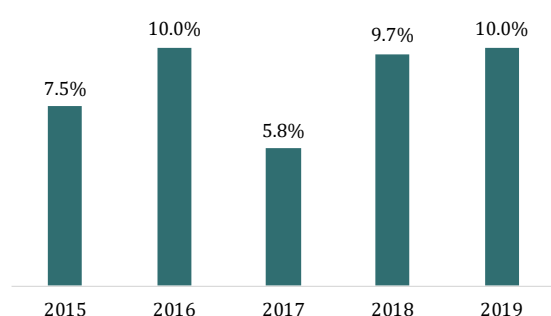
TSN's SG&A expenses have increased marginally over a 5-year period, from 4.1% in FY2015 to 5.2% in FY2019. This increase can be attributed to more aggressive advertising expenditure as TSN underwent a series of brand acquisitions within this period. Advertising expenditure as a percentage of SG&A has increased from 10.4% in FY2015 to 12.6% in FY2019. Moving forward, SG&A expenses are expected to remain elevated at 5.0%, reflecting TSN's strategy to promote their products to an international market.

**Figure 32: Profit Margins for Chicken**



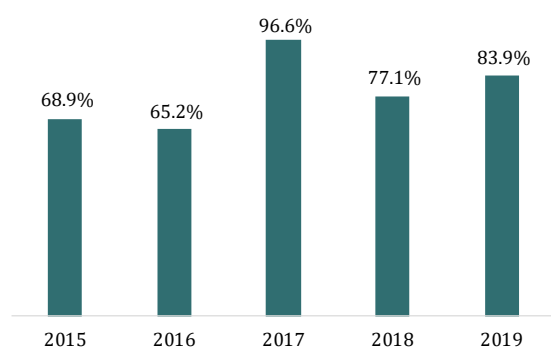
Source: Capital IQ

**Figure 33: Profit Margins (%) for Prepared Foods**



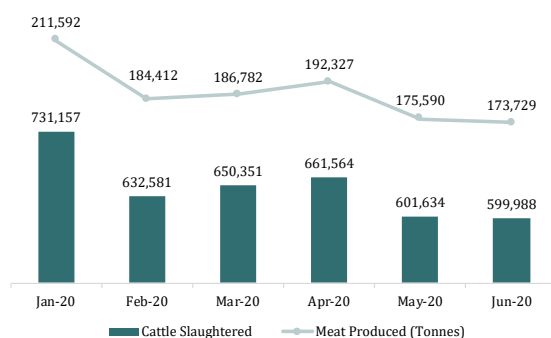
Source: Capital IQ

**Figure 34: Debt to Equity Ratio**



Source: Capital IQ

**Figure 35: Australian Cattle Numbers**



Source: Australian Bureau of Statistics

## Improving Returns

Return on assets ("ROA") and return on equity ("ROE") are expected to decline slightly in FY2020 in response to difficult operating conditions, with slight increases in ROA and ROE post-FY2020.

As higher revenues and operational efficiencies take effect, TSN's retained earnings will increase, alongside management's commitment to consistent dividend pay-out ratios. As a result, total assets and equity will increase with increased cash and cash equivalents. At the same time, some cash will be employed to fund more research and development ("R&D") to enhance production efficiency. Since net income, assets and equity are expected to increase in tandem, ROA and ROE are projected to increase marginally over the forecast period.

## Stable Gearing Ratios

TSN has experience increased financial leverage, from 0.69 in FY2015 to 0.84 in FY2019. However, this is the result of several acquisitions undertaken by management to expand TSN's product portfolio, paid for in cash where TSN raised debt, as opposed to a share-based transaction that would have diluted equity holder's holdings. These acquisitions have since been successfully integrated into the Group. Moving forward, management has stated their commitment to reducing the company's debt holdings, as part of their capital allocation strategy. This is further supported by a stated commitment to share repurchases, which management has historically engaged in after hitting net debt: EBITDA targets. The combination of a reduction in debt and increasing in equity with increase in retained earnings will therefore result in declining financial leverage. A low gearing ratio will be beneficial for TSN moving forward, providing it financial flexibility to respond to new opportunities for expansion and allows more returns to flow to equity holders.

## Valuation

Valuation Price Target: US\$97.89

We executed a discounted cash flow analysis to estimate the intrinsic value of Tyson Foods. The model adopts a 5-year forecast period, considering revenue growth across each business segment.

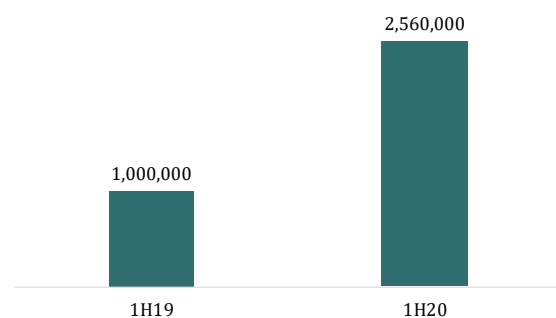
## Revenue Growth

Tyson Foods' operates in several different segments, each with its own dynamics and driving forces. Furthermore, the company sells its products across multiple sales channels. Thus, projecting revenues requires consideration of a multitude of factors. However, broadly speaking, future revenue is affected by the demand for food, seasonality, livestock levels and the spread between livestock prices and the prices offered for the company's products.

## Beef

The beef segment continues to see overall strong consumer demand, both from domestic sales and exports. Premium programs continue to show strong growth. This will result in continued revenue growth in the long term. New retail applications for traditional foodservice products will benefit the beef segment post COVID. Short term beef exports are also expected to rise due to winter weather in the Midwest

**Figure 36: Chinese Pork Imports**



Source: Reuters

**Figure 37: Weighted Average Cost of Capital**

Cost of Equity	
Risk Free Rate	0.9%
Equity Risk Premium	5.8%
Beta	1.1
Cost of Equity	7.4%
Cost of Debt	
Pre-Tax Cost of Debt	3.9%
Tax Rate	22.7%
After-Tax Cost of Debt	3.0%
WACC Calculation	
Total Debt (USD '000,000)	12,029
Market Capitalisation (USD '000,000,000)	20.8
Debt as proportion of current capital structure	36.6%
Equity as proportion of current capital structure	63.4%
<b>WACC</b>	<b>5.8%</b>

Source: NUS Investment Society Estimate

**Figure 38: Perpetual Growth Method**

Perpetual Growth	
Present Value of Cumulative FCF	9,522
Present Value of Terminal Value	36,946
Implied Enterprise Value	46,468
Terminal Value as % of Implied Enterprise Value	80%
Less: Debt	(12,029)
Plus: Cash	1,365
Less: Minority Interest	(146)
Less: Preferred Shares	-
<b>Implied Equity Value</b>	<b>35,658</b>
<b>Implied Share Price</b>	<b>97.89</b>
% Upside/Downside	71.0%

Source: NUS Investment Society Estimates

**Figure 39: Sensitivity Analysis for Terminal Value**

WACC	Implied Share Price						
	Perpetual Growth Rate						
	0%	0.3%	0.6%	0.9%	1.2%	1.5%	
5.2%	94.72	100.58	107.65	115.70	124.95	135.69	
5.5%	87.88	93.04	99.23	106.22	114.17	123.32	
5.8%	81.75	86.33	91.78	97.89	104.80	112.67	
6.1%	76.22	80.30	85.13	90.52	96.57	103.41	

Source: NUS Investment Society Estimates

and wildfires in Australia. Export demand is also expected to remain strong in the long term.

## Pork

The pork segment will see strong demand growth, with exports markets, being the primary driver. African Swine Fever (ASF) in Asia has reduced the global hog herd by about 25%, causing an increase in demand for imports in Asia and especially China. Q12020 saw a nearly 600% y-o-y increase in orders to China. Tyson Foods has recently transitioned to a ractopamine-free hog supply, which will allow the company to export to more global markets. This will allow them to leverage on this increase in pork demand arising from ASF.

## Chicken

Chicken demand has been the most affected by COVID-19 due to high exposure to the foodservice segment. Demand from foodservice had declined in the first half of the year due to foodservice closures arising from national lockdowns. Foodservice demand has somewhat recovered, and we expect this recovery to continue into Q42020. Chicken prices are expected to remain soft due to an expected oversupply in the chicken market in the second half of FY2020. However, as mentioned before, prices are expected to recover in FY2021. In the long term, international sales are expected to increase on the back of China ending an embargo on US imports five years ago.

## Prepared Foods

A surge in retail demand coupled with raw material shortages arising from COVID-19 is expected to affect the prepared foods segment in Q42020. However, recovery is expected next year, and the long-term growth prospects of this segment is strong. Pre-COVID, the segment experienced eight consecutive quarters of volume and dollar share growth. Management is focused on growing this segment and this can be seen through their efforts on building a leading portfolio of plant protein products through its 'Raised and Rooted' line.

## Margins

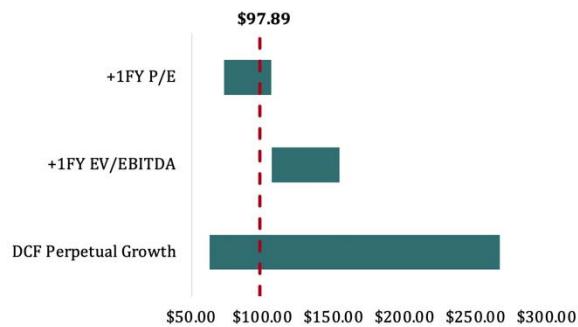
Over the long term, we are forecasting higher operating margins in the Beef segment due to premiumisation efforts. Growth in the Prepared Foods segment will also aid in overall margin expansion as Prepared Foods is the company's highest margin segment. However, margin expansion will be somewhat offset lower margins from the chicken segment. Thus, we are forecasting moderate expansion in the company's operating margins over the forecast period.

## Weighted Average Cost of Capital (WACC)

The Capital Asset Pricing Model ("CAPM") was used to estimate Cost of Equity. The 10 Year Treasury Rate (0.9% as of 30/10/20) was used as a proxy for the Risk-free rate. Beta of 1.13 was calculated by levering an industry average unlevered beta from Damodaran. Equity market risk premium of 5.8% was used. Cost of equity was calculated to be 7.4%.

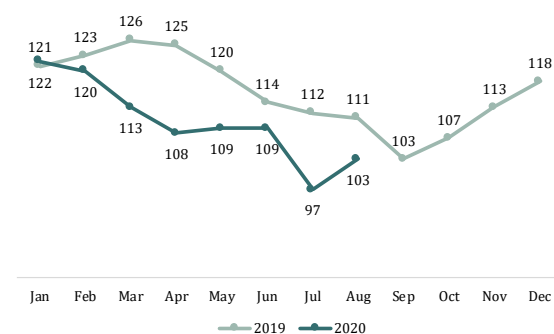
Cost of debt was calculated by taking the weighted average interest rate of all of the company's interest-bearing debt. This gives a cost of debt of 3.0%.

**Figure 40: Valuation Football Field**



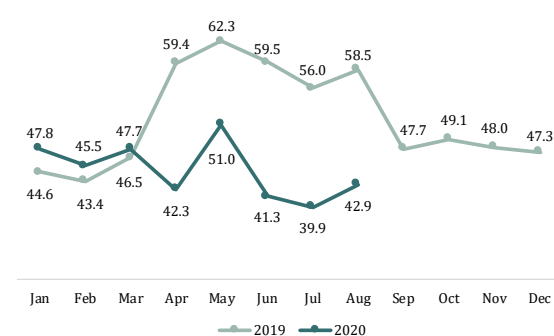
Source: NUS Investment Society Estimates

**Figure 41: US Prices for Cattle (\$/cwt)**



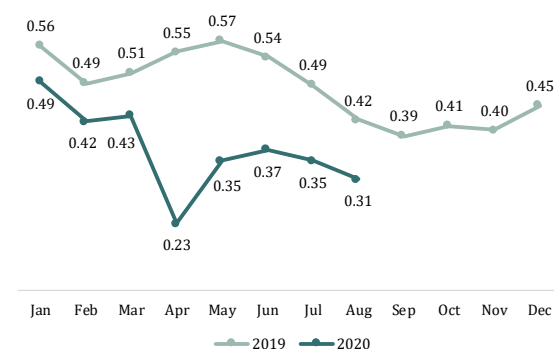
Source: USDA

**Figure 42: US Prices for Hog (\$/cwt)**



Source: USDA

**Figure 43: US Prices for Broilers (\$/lb)**



Source: USDA

The company has a WACC of 5.8% based on its current capital structure.

## Terminal Value

We used the terminal growth rate approach to calculate the terminal value of the company. The risk-free rate of 0.79% was used as a proxy for the terminal growth rate. In the long-term, the real growth rate of an economy cannot be lower than the real interest rate. Since an economy approaches maturity over time, it is also impossible that the real growth rate of an economy exceeds the real interest rate in perpetuity. Thus, the risk-free rate is used as a proxy for the terminal growth rate.

## Relative valuation

We conducted a relative valuation to sanity check our primary DCF valuation. We compared Tyson Foods to its industry peers operating in the same business segments. Our valuation metrics were the +1FY EV/EBITDA multiple and the +1FY P/E ratio. Using the median value, we arrived at a +1FY EV/EBITDA target price of US\$122.66 and a +1FY P/E target price of \$81.31.

Our target price of US\$97.91 falls within the 50<sup>th</sup>-75<sup>th</sup> percentile of the +1FY P/E price range and slightly below the 25<sup>th</sup> percentile of the +1FY EV/EBITDA. This is expected given that Tyson Foods has a lower EBITDA margin compared to its peers. Thus, our target price of US\$97.89 is validated by our relative valuation.

## Investment Risks

### Commodity Price Risk

#### Fluctuations in prices of commodities affect gross margins

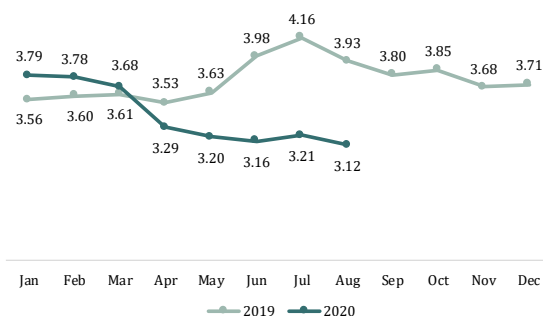
In 2Q 2020, TSN incurred net derivative losses of \$102 million. This cost arose primarily from mark-to-market open derivative losses and primarily impacted Beef, Chicken and Prepared Foods segments. In 3Q 2020, that figure declined to a net loss of \$12 million due to offsetting impacts from physical possession of the commodities.

As TSN is not fully vertically integrated for Beef and Pork segments, the company is at risk of increasing cattle and hog prices from producers. While there is excess supply currently due to a temporary halt in production in April and May – price of cattle fell dramatically to a low of \$97/cwt in July 2020 – any supply shock arising from external factors in future will affect input costs, which cannot be entirely passed on to consumers. This will have a spill over effect into the Prepared Foods segment which are predominantly pork-based. Price adjustments have to be managed carefully with considerations of trade-offs between sales volume and profitability. Nonetheless, this can be partially mitigated through brand differentiation and premiumisation, conferring TSN with greater pricing power.

As for Chicken, as a vertically integrated producer, TSN is subject to feed prices. Corn, soybean meal and other feed ingredients accounted for approximately 55% of cost of rearing chickens in 2019. Since April, TSN has benefitted from lower corn prices, though the sale price of broilers has been experiencing downward price pressures for some



**Figure 44: US Prices for Corn (\$/bushel)**



Source: USDA

time and fell to a new low of \$0.226. As chicken products are priced using a cost-plus formula, this has limited top-line revenues.

## **Business Risks**

### **Pandemic-induced higher labour costs and absenteeism**

Several production plants have been forced to stop operations due to outbreaks of COVID-19 cases. This includes its Columbus Junction and Waterloo plants in Iowa. TSN faces risks of more COVID-19 outbreaks despite preventive measures. Proactive and mandatory facility closures as well as varying absenteeism rates will adversely impact their operating margins.

### **Import restrictions by China due to COVID-19 concerns**

In August, China banned chicken shipments TSN's Arkansas plant after workers in that plant tested positive for COVID-19. Later in September, China announced that it will suspend imports from companies if frozen food products test positive for COVID-19. Though there is no conclusive evidence of COVID-19 transmission from food products as of yet, the threat of import bans imposed by other countries remains. Additionally, increasing tests on imported frozen food cargoes may slow down trade volumes, crimping international revenues. This will counter tailwinds from increasing food demand from China which is still reeling from supply shocks due to ASF.

## **Disclaimer**

This research material has been prepared by NUS Invest. NUS Invest specifically prohibits the redistribution of this material in whole or in part without the written permission of NUS Invest. The research officer(s) primarily responsible for the content of this research material, in whole or in part, certifies that their views are accurately expressed and they will not receive direct or indirect compensation in exchange for expressing specific recommendations or views in this research material. Whilst we have taken all reasonable care to ensure that the information contained in this publication is not untrue or misleading at the time of publication, we cannot guarantee its accuracy or completeness, and you should not act on it without first independently verifying its contents. Any opinion or estimate contained in this report is subject to change without notice. We have not given any consideration to and we have not made any investigation of the investment objectives, financial situation or particular needs of the recipient or any class of persons, and accordingly, no warranty whatsoever is given and no liability whatsoever is accepted for any loss arising whether directly or indirectly as a result of the recipient or any class of persons acting on such information or opinion or estimate. You may wish to seek advice from a financial adviser regarding the suitability of the securities mentioned herein, taking into consideration your investment objectives, financial situation or particular needs, before making a commitment to invest in the securities. This report is published solely for information purposes, it does not constitute an advertisement and is not to be construed as a solicitation or an offer to buy or sell any securities or related financial instruments. No representation or warranty, either expressed or implied, is provided in relation to the accuracy, completeness or reliability of the information contained herein. The research material should not be regarded by recipients as a substitute for the exercise of their own judgement. Any opinions expressed in this research material are subject to change without notice.

© 2020 NUS Investment Society

# Appendix:

## Pro-Forma Financial Statements

Tyson Foods Financial Statements										
Figures in '000,000 USD	Historical				Forecasted					
	2017A	2018A	2019A	3Q 2020A	Q4 2020E	2021E	2022E	2023E	2024E	2025E
<b>Income Statement</b>										
Revenues	38,260	40,052	42,405	31,725	10,238	43,384	46,855	48,515	50,036	51,620
Cost of Sales	(33,198)	(34,956)	(37,383)	(27,951)	(9,020)	(37,918)	(40,951)	(42,403)	(43,732)	(45,116)
Gross Profit	5,062	5,096	5,022	3,774	1,218	5,466	5,903	6,112	6,304	6,504
SG&A	(2,141)	(2,064)	(2,195)	(1,672)	(544)	(2,303)	(2,343)	(2,426)	(2,502)	(2,581)
Operating Income	2,921	3,032	2,827	2,102	675	3,163	3,560	3,687	3,802	3,923
Other Income (Expense)										
Interest Income	7	7	11	9	45	49	67	86	105	125
Interest Expense	(279)	(350)	(462)	(361)	(556)	(974)	(1,057)	(1,008)	(1,081)	(1,157)
Net Interest	(272)	(343)	(451)	(352)	(512)	(925)	(990)	(922)	(976)	(1,031)
Other, net	(21)	56	55	133	-	-	-	-	-	-
Total Non-Operating Income (Loss)	(293)	(287)	(396)	(219)	(512)	(925)	(990)	(922)	(976)	(1,031)
Pretax Income (Loss)	2,628	2,745	2,431	1,883	163	2,238	2,570	2,765	2,826	2,891
Abnormal Losses (Gains)	-	-	-	-	-	-	-	-	-	-
Pretax Income, GAAP	2,628	2,745	2,431	1,883	163	2,238	2,570	2,765	2,826	2,891
Income Tax (Expense) Benefit	(850)	(282)	(396)	(428)	(37)	(535)	(645)	(777)	(777)	(795)
Net Income Inc. MI	1,778	3,027	2,035	1,455	126	1,703	1,925	2,038	2,049	2,096
Minority Interest	4	3	13	7	-	-	-	-	-	-
Net Income	1,774	3,024	2,022	1,448	126	1,703	1,925	2,038	2,049	2,096
<b>Balance Sheet</b>										
<b>Assets</b>										
Current Assets:										
Cash & cash Equivalents	318	270	484	1,365	1,516	2,166	2,869	3,597	4,348	5,122
Accounts Receivable	1,675	1,723	2,173	2,064	1,931	1,996	2,156	2,232	2,302	2,375
Inventories	3,239	3,513	4,108	3,915	3,795	3,892	4,204	4,353	4,489	4,631
Other current assets	219	182	404	355	277	286	309	320	330	341
Assets held for sale	807	-	-	-	0	0	0	0	0	0
Total Current Assets	6,258	5,688	7,169	7,699	7,519	8,341	9,538	10,502	11,469	12,469
Net PPE	5,568	6,169	7,282	7,515	7,632	8,126	8,660	9,214	9,784	10,372
PPE	11,942	13,035	14,650	15,380	15,687	16,989	18,394	19,850	21,351	22,899
Accumulated Depreciation	(6,374)	(6,866)	(7,368)	(7,865)	(8,055)	(8,862)	(9,734)	(10,636)	(11,567)	(12,527)
Goodwill	9,324	9,739	10,844	10,890	10,890	10,890	10,890	10,890	10,890	10,890
Intangible Assets	6,243	6,759	7,037	6,842	7,409	7,802	8,261	8,764	9,293	9,847
Gross Intangible Assets	2,500	3,217	3,686	3,705	4,334	4,985	5,688	6,416	7,166	7,941
Accumulated amortization	(335)	(536)	(727)	(941)	(1,003)	(1,261)	(1,505)	(1,730)	(1,951)	(2,172)
Unamortizable Intangibles	4,078	4,078	4,078	4,078	4,078	4,078	4,078	4,078	4,078	4,078
Other Assets	673	754	765	1,612	186	788	651	691	808	897
Total Non-Current Assets	21,908	23,421	25,928	26,859	26,117	27,606	28,662	29,748	30,875	32,046
TOTAL ASSETS	28,066	29,109	33,097	34,558	33,636	35,947	38,200	40,250	42,345	44,515
<b>Liabilities</b>										
Current Liabilities:										
Current Debt	906	1,911	2,102	750	-	718	843	992	1,195	1,422
Account Payables	1,698	1,694	1,926	1,743	1,862	1,910	2,063	2,136	2,203	2,273
Other Current Liabilities	1,424	1,426	1,485	1,780	1,508	1,560	1,684	1,744	1,799	1,856
Liabilities held for sale	4	-	-	-	-	-	-	-	-	-
Total Current Liabilities	4,032	5,031	5,513	4,273	3,371	4,188	4,590	4,872	5,196	5,550
LT Debt	9,297	7,962	9,830	11,279	11,279	11,279	11,279	11,279	11,279	11,279
Deferred Income Tax	2,979	2,107	2,356	2,370	2,602	2,680	2,905	3,008	3,103	3,201
Other Liabilities	1,199	1,198	1,172	1,632	1,243	1,295	1,398	1,437	1,483	1,539
Total Non-Current Liabilities	13,475	11,267	13,358	15,281	15,124	15,255	15,573	15,725	15,864	16,009
Total Liabilities	17,507	16,298	18,871	19,554	18,495	19,442	20,163	20,597	21,060	21,560
<b>Shareholder's Equity</b>										
Common Stock:										
Class A	45	45	45	45	45	45	45	45	45	45
Convertible Class B	38	38	38	38	38	38	38	38	38	38
Capital in excess of par value	7	7	7	7	7	7	7	7	7	7
Retained Earnings	4,378	4,387	4,378	4,400	4,400	4,400	4,400	4,400	4,400	4,400
Accumulated other comprehensive gain (loss)	9,776	12,329	13,787	14,709	14,870	16,240	17,788	19,426	21,073	22,759
Treasury Stock	16	(15)	(117)	(217)	(217)	(217)	(217)	(217)	(217)	(217)
Total Tyson's Shareholder Equity	(3,674)	(3,943)	(4,101)	(4,139)	(4,104)	(4,109)	(4,125)	(4,147)	(4,163)	(4,178)
Non-controlling interest	10,541	12,803	14,862	14,894	14,964	16,359	17,881	19,507	21,138	22,809
Total Equity	10,559	12,811	14,226	15,004	15,140	16,505	18,037	19,653	21,284	22,955
TOTAL LIABILITIES AND EQUITY	28,066	29,109	33,097	34,558	33,636	35,947	38,200	40,250	42,345	44,515
Balance Check	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok
<b>Statement of Cashflows</b>										
Operating Activities										
Net Income	1,778	3,027	2,035	1,455	126	1,703	1,925	2,038	2,049	2,096
Adjustments										
Depreciation	642	723	819	662	190	807	871	902	931	960
Amortization	119	220	279	279	62	258	244	225	221	221
Deferred Income Taxes	(39)	(865)	92	27	232	88	215	103	94	98
Gain on dispositions of businesses	-	(42)	(17)	-	-	-	-	-	-	-
Impairment of assets	214	175	94	-	-	-	-	-	-	-
Stock-based compensation	92	69	77	-	51	217	234	243	250	258
Other, net	(57)	(58)	(20)	(7)	844	(518)	142	68	62	65
Accounts receivables	(79)	(42)	(64)	(485)	133	(65)	(160)	(76)	(70)	(73)
Inventories	(246)	(207)	(214)	(214)	120	(97)	(311)	(149)	(136)	(142)
Accounts Payable	61	(44)	(55)	-	119	48	153	73	67	70
Income taxes payable/receivable	55	111	(254)	-	-	-	-	-	-	-
Interest payable	16	(3)	47	-	-	-	-	-	-	-
Net changes in other operating assets and liabilities	19	(141)	(144)	-	-	-	-	-	-	-
Cash from Operating Activities	2,599	2,963	2,513	2,708	1,878	2,440	3,314	3,426	3,468	3,553
Investing Activities										
Additions to property, plant and equipment	(1,069)	(1,200)	(1,259)	(907)	(307)	(1,302)	(1,406)	(1,455)	(1,501)	(1,549)
Purchases of marketable securities	(79)	(42)	(64)	(485)	0	0	0	0	0	0
Proceeds from sale of marketable securities	61	37	63	41	0	0	0	0	0	0
Acquisitions, net of cash acquired	(3,081)	(1,474)	(2,462)	-	-	-	-	-	-	-
Proceeds from sale of businesses	-	797	170	29	-	-	-	-	-	-
Other, net	4	(24)	88	(247)	(629)	(651)	(703)	(728)	(751)	(774)
Cash from Investing Activities	(4,164)	(1,906)	(3,464)	(1,143)	(937)	(1,952)	(2,108)	(2,183)	(2,252)	(2,323)
Financing Activities										
Proceeds from issuance of debt	5,444	1,148	4,634	1,589	2,104	1,568	1,568	1,759	1,759	1,759
Payments on debt	(3,159)	(1,307)	(3,208)	(485)	(2,104)	(1,568)	(1,568)	(1,759)	(1,759)	(1,759)
Borrowings on ST Debt	9,948	22,773	18,857	15,526	718	718	843	992	1,195	1,422
Payments on ST Debt	(9,470)	(22,952)	(18,392)	(16,597)	(750)	-	(718)	(843)	(992)	(1,195)
Payment of AdvancePierre TRA liability	(223)	-	-	-	-	-	-	-	-	-
Purchases of Tyson Class A common stock	(860)	(427)	(252)	(200)	(16)	(221)	(250)	(265)	(273)	(273)
Dividends	(319)	(431)	(537)	(451)	(25)	(334)	(377)	(399)	(402)	(411)
Stock options exercised	154	102	99	29	-	-	-	-	-	-
Other Charges	15	(14)	(30)	(7)	-	-	-	-	-	-
Cash from Financing Activities	1,530	(1,102)	1,171	(594)	(791)	163	(502)	(515)	(465)	(456)
FX effect	4	(3)	(6)	(8)	-	-	-	-	-	-
Net Change in Cash	(31)	(48)	214	963	151	651	703	728	751	774

# Revenue Projections

Tyson Foods Revenue Model											
	Historical					Forecasted					
Figures in '000,000 USD	2017A	2018A	2019A	3Q 2020A	Q3 2020A	Q4 2020E	2021E	2022E	2023E	2024E	2025E
Tyson Foods Revenues	38,260	40,052	42,405	31,725	10,022	10,238	43,384	46,855	48,515	50,036	51,620
Beef	14,437	15,053	15,417	11,185	3,565	3,744	15,833	16,556	17,134	17,677	18,238
Pork	4,272	4,062	4,039	3,160	922	911	4,105	4,683	4,976	5,190	5,414
Chicken	11,349	11,964	13,242	9,760	3,098	3,169	13,410	14,353	14,540	14,713	14,889
Prepared Foods	7,853	8,668	8,418	6,255	2,035	2,005	8,236	9,249	9,779	10,304	10,860
Other	349	305	1,289	1,365	402	410	1,801	2,015	2,086	2,151	2,220
	Historical					Forecasted					
Figures in '000,000 USD	2017A	2018A	2019A	3Q 2020A	Q3 2020A	Q4 2020E	2021E	2022E	2023E	2024E	2025E
Retail			7,420	5,956	2,192	2,256	8,140	8,384	8,635	8,894	9,161
% growth						2.9%	2.8%	3%	3%	3%	3%
Foodservice			4,151	2,699	650	669	4,070	4,192	4,318	4,447	4,581
as % of retail			56%	45%	30%	29.7%	50.0%	50.0%	50.0%	50.0%	50.0%
International			2,426	1,563	444	533	2,305	2,490	2,639	2,745	2,855
% growth						20.0%	10.0%	8.0%	6.0%	4.0%	4.0%
Industrial and Other			1,420	967	279	286	1,318	1,490	1,542	1,591	1,641
as % of other segments			10.1%	9.5%	8.5%	8.3%	9.1%	9.9%	9.9%	9.9%	9.9%
Total	14,437	15,053	15,417	11,185	3,565	3,744	15,833	16,556	17,134	17,677	18,238
	Historical					Forecasted					
Figures in '000,000 USD	2017A	2018A	2019A	3Q 2020A	Q3 2020A	Q4 2020E	2021E	2022E	2023E	2024E	2025E
Retail			1,415	1,191	408	424	1,601	1,663	1,727	1,793	1,862
% growth						4.0%	3.8%	3.8%	3.8%	3.8%	3.8%
Foodservice			400	301	85	88	386	449	467	485	503
as % of retail			28.3%	25.3%	20.8%	20.8%	24.1%	27.0%	27.0%	27.0%	27.0%
International			890	768	214	223	1,189	1,367	1,504	1,579	1,658
% growth						4.0%	20.0%	15.0%	10.0%	5.0%	5.0%
Industrial and Other			1,334	900	215	176	929	1,203	1,279	1,334	1,391
as % of other segments			49.3%	39.8%	30.4%	23.9%	29.3%	34.6%	34.6%	34.6%	34.6%
Total	4,272	4,062	4,039	3,160	922	911	4,105	4,683	4,976	5,190	5,414
	Historical					Forecasted					
Figures in '000,000 USD	2017A	2018A	2019A	3Q 2020A	Q3 2020A	Q4 2020E	2021E	2022E	2023E	2024E	2025E
Retail			5,637	4,420	1,481	1,516	6,106	6,167	6,228	6,291	6,354
% growth						2.3%	3.7%	1.0%	1.0%	1.0%	1.0%
Foodservice			5,138	3,592	1,046	1,067	4,846	5,606	5,662	5,719	5,776
as % of retail			91.1%	81.3%	70.6%	70.4%	79.4%	90.9%	90.9%	90.9%	90.9%
International			690	479	151	158	701	757	802	834	868
% growth						4.7%	10.0%	8.0%	6.0%	4.0%	4.0%
Industrial and Other			1,777	1,269	420	428	1,757	1,823	1,847	1,869	1,891
as % of other segments			15.5%	14.9%	15.7%	15.6%	15.1%	14.6%	14.6%	14.6%	14.6%
Total	11,349	11,964	13,242	9,760	3,098	3,169	13,410	14,353	14,540	14,713	14,889
	Historical					Forecasted					
Figures in '000,000 USD	2017A	2018A	2019A	3Q 2020A	Q3 2020A	Q4 2020E	2021E	2022E	2023E	2024E	2025E
Retail			4,793	3,758	1,322	1,291	5,016	5,267	5,530	5,807	6,097
% growth						2.4%	1.3%	5.0%	5.0%	5.0%	5.0%
Foodservice			3,270	2,275	651	645	2,866	3,511	3,687	3,871	4,065
as % of retail			68.2%	60.5%	49.2%	50.0%	57.1%	66.7%	66.7%	66.7%	66.7%
International			104	95	24	31	184	267	347	399	459
% growth						30.0%	60.0%	45.0%	30.0%	15.0%	15.0%
Industrial and Other			251	127	38	38	169	203	215	227	239
as % of other segments			3.1%	2.1%	1.9%	1.9%	2.1%	2.2%	2.2%	2.2%	2.2%
Total	7,853	8,668	8,418	6,255	2,035	2,005	8,236	9,249	9,779	10,304	10,860
	Historical					Forecasted					
Figures in '000,000 USD	2017A	2018A	2019A	3Q 2020A	Q3 2020A	Q4 2020E	2021E	2022E	2023E	2024E	2025E
Others	349	305	1,289	1,365	402	410	1,801	2,015	2,086	2,151	2,220
as % of other segments	0.9%	0.8%	3.1%	4.5%	4.2%	4.2%	4.3%	4.5%	4.5%	4.5%	4.5%
Total	349	305	1,289	1,365	402	410	1,801	2,015	2,086	2,151	2,220



# Financial Projections

Tyson Foods Financial Projections										
Figures in '000,000 USD	Historical				Forecasted					
	2017A	2018A	2019A	3Q 2020A	Q4 2020E	2021E	2022E	2023E	2024E	2025E
Revenue	38,260	40,052	42,405	31,725	10,238	43,384	46,855	48,515	50,036	51,620
Revenue Growth		4.7%	5.9%		-1.0%	3.4%	8.0%	3.5%	3.1%	3.2%
Gross Profit	5,062	5,096	5,022	3,774	1,218	5,466	5,903	6,112	6,304	6,504
Operating Income	2,921	3,032	2,827	2,102	675	3,163	3,560	3,687	3,802	3,923
Pretax Income	2,628	2,745	2,431	1,883	163	2,238	2,570	2,765	2,826	2,891
Net Income	1,774	3,024	2,022	1,448	126	1,703	1,925	2,038	2,049	2,096
OP growth			-6.8%		-1.8%	13.9%	12.6%			
OP Margin	7.6%	7.6%	6.7%		6.6%	7.3%	7.6%	7.6%	7.6%	7.6%
ROE			14.2%		10.4%	10.3%	10.7%	10.4%	9.6%	9.1%
ROA			6.1%		4.7%	4.7%	5.0%	5.1%	4.8%	4.7%
ROIC			8.7%		7.4%	8.1%	8.7%	8.5%	8.4%	8.4%
D/E			0.84		0.74	0.73	0.67	0.62	0.59	0.55
<b>Cost Build</b>										
Cost of sales	(33,198)	(34,956)	(37,383)	(27,951)	(9,020)	(37,918)	(40,951)	(42,403)	(43,732)	(45,116)
as % of Revenue	86.8%	87.3%	88.2%	88.1%	88.1%	87.4%	87.4%	87.4%	87.4%	87.4%
SG&A	(2,141)	(2,064)	(2,195)	(1,672)	(544)	(2,303)	(2,343)	(2,426)	(2,502)	(2,581)
as % of Revenue	5.6%	5.2%	5.2%	5.3%	5.3%	5.3%	5.0%	5.0%	5.0%	5.0%
Dividend Payout	(319)	(431)	(537)	(451)	(25)	(334)	(377)	(399)	(402)	(411)
as % of Net Income	18.0%	14.3%	26.6%	31.1%	19.6%	19.6%	19.6%	19.6%	19.6%	19.6%
Income Tax Expense	(850)	282	(396)	(428)	(37)	(535)	(645)	(727)	(777)	(795)
Effective Tax Rate	32.3%	-10.3%	16.3%	22.7%	22.7%	23.9%	25.1%	26.3%	27.5%	27.5%
<b>Net Working Capital</b>										
Account Receivable	1,675	1,723	2,173	2,064	1,931	1,996	2,156	2,232	2,302	2,375
as % of Revenue	4.4%	4.3%	5.1%	6.5%	4.6%	4.6%	4.6%	4.6%	4.6%	4.6%
Inventory	3,239	3,513	4,108	3,915	3,795	3,892	4,204	4,353	4,489	4,631
as % of COGS	9.8%	10.0%	11.0%	14.0%	10.3%	10.3%	10.3%	10.3%	10.3%	10.3%
Other Current Assets	219	182	404	355	277	286	309	320	330	341
as % of Revenue	0.6%	0.5%	1.0%	1.1%	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%
Assets held for Sale	807	0	0	0	0	0	0	0	0	0
as % of Revenue	2.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accounts Payable	1,698	1,694	1,926	1,743	1,862	1,910	2,063	2,136	2,203	2,273
as % of COGS	5.1%	4.8%	5.2%	6.2%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Other Current Liabilities	1,424	1,426	1,485	1,780	1,508	1,560	1,684	1,744	1,799	1,856
as % of Revenue	3.7%	3.6%	3.5%	5.6%	3.6%	3.6%	3.6%	3.6%	3.6%	3.6%
Liabilities held for sale	4	0	0	0	0	0	0	0	0	0
as % of Revenue	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Net Working Capital	2,011	2,298	3,274	2,811	2,632	2,705	2,922	3,025	3,120	3,219
Change in NWC		287	976	(463)	(179)	73	216	104	95	99
<b>Non-Current Accounts</b>										
Other Assets	673	754	765	1,612	186	788	851	881	908	937
as % of revenue	1.8%	1.9%	1.8%	5.1%	1.8%	1.8%	1.8%	1.8%	1.8%	1.8%
Deferred Income Tax	2979	2107	2356	2370	2,602	2,690	2,905	3,008	3,103	3,201
as % of revenue	7.8%	5.3%	5.6%	7.5%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%
Other Liabilities	1,199	1,198	1,172	1,632	1,243	1,285	1,388	1,437	1,483	1,529
as % of Revenue	3.1%	3.0%	2.8%	5.1%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
<b>Equity</b>										
Common Stock:	83	83	83	83	45	45	45	45	45	45
Class A										
Beginning Balance	36	38	38	38	38	38	38	38	38	38
Issuance	2	0	0	0	0	0	0	0	0	0
Ending Balance	38	38	38	38	38	38	38	38	38	38
Class B										
Beginning Balance	7	7	7	7	7	7	7	7	7	7
Issuance	0	0	0	0	0	0	0	0	0	0
Ending Balance	7	7	7	7	7	7	7	7	7	7
Capital in Excess of Par Value										
Beginning Balance	4355	4378	4387	4378	4,400	4,400	4,400	4,400	4,400	4,400
Stock-based compensation	23	9	(9)	22	-	-	-	-	-	-
as % of Revenue	0.1%	0.0%	0.0%	0.1%	0%	0%	0%	0%	0%	0%
Ending Balance	4,378	4,387	4,378	4,400	4,400	4,400	4,400	4,400	4,400	4,400
Retained Earnings										
Beginning Balance	8,348	9,776	12,329	13,787	14,769	14,870	16,240	17,788	19,426	21,073
Net Income	1,774	3,024	2,022	1,448	126	1,703	1,925	2,038	2,049	2,096
Dividends	(346)	(458)	(564)	(466)	(25)	(334)	(377)	(399)	(402)	(411)
Reclassification	-	(13)	-	-	-	-	-	-	-	-
Ending Balance	9,776	12,329	13,787	14,769	14,870	16,240	17,788	19,426	21,073	22,759
Treasury Stock										
Beginning Balance	(3,093)	(3,674)	(3,943)	(4,011)	(4,139)	(4,104)	(4,109)	(4,125)	(4,147)	(4,163)
Stock Repurchases	(860)	(427)	(252)	(200)	(16)	(221)	(250)	(265)	(266)	(273)
as % of Net Income	48.5%	14.1%	12.5%	13.8%	13.0%	13.0%	13.0%	13.0%	13.0%	13.0%
Stock-based compensation	279	158	184	72	51	217	234	243	250	258
as % of Revenue	0.7%	0.4%	0.4%	0.2%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
Ending Balance	(3,674)	(3,943)	(4,011)	(4,139)	(4,104)	(4,109)	(4,125)	(4,147)	(4,163)	(4,178)
<b>PPE Build</b>										
CAPEX	1,069	1,200	1,259	907	307	1,302	1,406	1,455	1,501	1,549
as % of Revenue	2.8%	3.0%	3.0%	2.9%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Depreciation Expense	642	723	819	662	190	807	871	902	931	960
as % of CAPEX	60.1%	60.3%	65.1%	73.0%	62.0%	62.0%	62.0%	62.0%	62.0%	62.0%
Accumulated Depreciation	(6,374)	(6,866)	(7,368)	(7,865)	(8,055)	(8,862)	(9,734)	(10,636)	(11,567)	(12,527)
PPE										
Land	138	154	198	197	204	221	239	258	278	298
as % of Total PPE	1.2%	1.2%	1.4%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%
Buildings and leasehold improvements	3,878	4,115	4,747	4,856	5,051	5,470	5,923	6,392	6,875	7,374
as % of Total PPE	32.5%	31.6%	32.4%	31.6%	32.2%	32.2%	32.2%	32.2%	32.2%	32.2%
Machinery and equipment	7,111	7,720	8,607	8,959	9,287	10,057	10,889	11,751	12,640	13,556
as % of Total PPE	59.5%	59.2%	58.8%	58.3%	59.2%	59.2%	59.2%	59.2%	59.2%	59.2%
Land improvements and others	323	357	385	409	424	459	497	536	576	618
as % of Total PPE	2.7%	2.7%	2.6%	2.7%	2.7%	2.7%	2.7%	2.7%	2.7%	2.7%
Buildings and equipment under construction	492	689	713	959	753	815	883	953	1,025	1,099
as % of Total PPE	4.1%	5.3%	4.9%	6.2%	4.8%	4.8%	4.8%	4.8%	4.8%	4.8%
Total Gross PPE	11,942	13,035	14,650	15,380	15,687	16,989	18,394	19,850	21,351	22,899
Net PPE					7,632	8,126	8,660	9,214	9,784	10,372

## Financial Projections Continued

### Intangibles Build

Purchases	1,223	717	469	19	629	651	703	728	751	774
as % of revenue	3.2%	1.8%	1.1%		1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Amortization Expense	107	210	267	214	62	258	244	225	221	221
Accumulated Amortization	(335)	(536)	(727)	(941)	(1,003)	(1,261)	(1,505)	(1,730)	(1,951)	(2,172)
Intangible Assets										
Brands and trademarks	738	950	945		1,149	1,321	1,507	1,700	1,899	2,104
as % of gross	29.5%	29.5%	25.6%		26.5%	26.5%	26.5%	26.5%	26.5%	26.5%
Customer relationships	1,639	1,793	2,389		2,687	3,091	3,527	3,978	4,443	4,923
as % of gross	65.6%	55.7%	64.8%		62.0%	62.0%	62.0%	62.0%	62.0%	62.0%
Supply Arrangements	-	358	310		433	499	569	642	717	794
as % of gross	0.0%	11.1%	8.4%		10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
Patents, intellectual property and other	114	107	34		52	60	68	77	86	95
as % of gross	4.6%	3.3%	0.9%		1.2%	1.2%	1.2%	1.2%	1.2%	1.2%
Land use rights	9	9	8		13	15	17	19	21	24
as % of gross	0.4%	0.3%	0.2%		0.3%	0.3%	0.3%	0.3%	0.3%	0.3%
Total gross amortizable intangible assets	2,500	3,217	3,686	3,705	4,334	4,985	5,688	6,416	7,166	7,941
Net amortizable intangible assets	2,165	2,681	2,959	2,764	3,331	3,724	4,183	4,686	5,215	5,769
Unamortizable Brands and Trademarks	4,078	4,078	4,078	4,078	4,078	4,078	4,078	4,078	4,078	4,078
Total Intangible Assets	6,243	6,759	7,037	6,842	7,409	7,802	8,261	8,764	9,293	9,847
<b>Total Depreciation and Amortization Expense</b>					252	1,065	1,115	1,127	1,152	1,181

### Cash Holdings

Cash at Year End	318	270	484	1,365	1,516	2,166	2,869	3,597	4,348	5,122
Mean Cash Balance		294	377	925	1,682	1,841	2,518	3,233	3,972	4,735
Interest Income	7	7	11	9	45	49	67	86	105	125
% Interest on Cash Holdings		2.4%	2.9%	1.0%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%

### Debt Schedule

	Year	Principal	Interest	Weighted Average Interest Rate
Long Term Debt				
2.25% Notes due August 2021	2021	500	2.25%	0.10%
4.50% Senior notes due June 2022	2022	1,000	4.50%	0.40%
Term loan facility due March 2022	2022	1,500	1.69%	0.23%
3.90% Notes due September 2023	2023	400	3.90%	0.14%
3.95% Notes due August 2024	2023	1,250	3.95%	0.44%
4.00% Notes due March 2026 ("2026 Notes")	2026	800	4.00%	0.28%
3.55% Notes due June 2027	2027	1,350	3.55%	0.43%
7.00% Notes due January 2028	2028	18	7.00%	0.01%
4.35% Notes due March 2029 ("2029 Notes")	2029	1,000	4.35%	0.39%
6.13% Notes due November 2032	2032	161	6.13%	0.09%
4.88% Notes due August 2034	2034	500	4.88%	0.22%
5.15% Notes due August 2044	2044	500	5.15%	0.23%
4.55% Notes due June 2047	2047	750	4.55%	0.30%
5.10% Notes due September 2048 ("2048 Notes")	2048	1,500	5.10%	0.68%
Total Long Term Debt		11,229		
<b>Weighted Cost of Debt</b>		<b>3.94%</b>		

	2017A	2018A	2019A	Q3 2020A	2020E	2021E	2022E	2023E	2024E	2025E
--	-------	-------	-------	----------	-------	-------	-------	-------	-------	-------

### Interest Repayment Schedule

Interest Payments	(451)	(829)	(829)	(707)	(707)	(707)
Principal Repayment	(2,104)	(1,568)	(1,568)	(1,759)	(1,759)	(1,759)

### ST & LT Debt

<b>Short Term Debt</b>										
Beginning Balance	906	1,911	2,102	750	-	718	843	992	1,195	1,195
Additions				-	718	843	992	1,195	1,422	1,422
Repayment	906	1,911	1,911	(750)	-	(718)	(843)	(992)	(1,195)	(1,195)
Ending Balance	906	1,911	2,102	750	-	718	843	992	1,195	1,422
<b>Interest Rate on ST Debt</b>					3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Interest Paid				(23)	-	(22)	(25)	(30)	(36)	(36)
<b>Long Term Debt</b>										
Beginning Balance	9,297	7,962	9,830	11,279	11,279	11,279	11,279	11,279	11,279	11,279
Additions				2,104	1,568	1,568	1,759	1,759	1,759	1,759
Repayments			-	(2,104)	(1,568)	(1,568)	(1,759)	(1,759)	(1,759)	(1,759)
Ending Balance	9,297	7,962	9,830	11,279	11,279	11,279	11,279	11,279	11,279	11,279
<b>New LT Debt Additions</b>										
Balance	-	-	-	2,104	3,672	5,240	6,999	8,758	10,517	10,517
Interest Expense on New Debt	-	-	-	(83)	(145)	(206)	(275)	(345)	(414)	(414)
<b>Total Interest Expense</b>				(556)	(974)	(1,057)	(1,008)	(1,081)	(1,157)	(1,157)
Cash & Cash Equivalents	318	270	484	1,365	629	651	703	728	751	774
Cash as % of Revenue	0.8%	0.7%	1.1%	3.3%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Minimum Target Cash Balance										
Minimum Target Cash Balance as % of Revenue										
<b>Revolver</b>										
Cash available at beginning of period				1,365	-	-	-	-	-	-
Cash generated during current year				901	(67)	578	579	548	547	547
Minimum cash desired				629	651	703	728	751	774	774
<b>Cash Surplus (Deficit)</b>				1,636	(718)	(125)	(149)	(202)	(227)	(227)

# Valuation

## Tyson Foods DCF

### Model Assumptions

Terminal Growth Rate	0.9%
Effective Tax Rate	22.7%
Discount Rate	5.8%
Valuation date	31/10/2020
Current Share Price	57.23
Basic Shares Outstanding ('000,000)	364.3

### Model Output

Perpetual Growth	
Present Value of Cumulative FCFF	9,522
Present Value of Terminal Value	36,946
Implied Enterprise Value	46,468
Terminal Value as % of Implied Enterprise Value	80%
Less: Debt	(12,029)
Plus: Cash	1,365
Less: Minority Interest	(146)
Less: Preferred Shares	-
Implied Equity Value	35,658
Implied Share Price	97.89
% Upside/Downside	71.0%

Exit Multiple	
Present Value of Cumulative FCFF	9,522
Present Value of Terminal Value	50,749
Implied Enterprise Value	60,271
Terminal Value as % of Implied Enterprise Value	84%
Less: Debt	(12,029)
Plus: Cash	1,365
Less: Minority Interest	(146)
Less: Preferred Shares	-
Implied Equity Value	49,461
Implied Share Price	135.78
% Upside/Downside	137.3%

### Tyson Foods

#### WACC Build

#### Cost of Equity

Risk Free Rate	0.9%
Equity Risk Premium	5.8%
Beta	1.1
Cost of Equity	7.4%

#### Cost of Debt

Pre-Tax Cost of Debt	3.9%
Tax Rate	22.7%
After-Tax Cost of Debt	3.0%

#### WACC Calculation

Total Debt (USD '000,000)	12,029
Market Capitalisation (USD '000,000,000)	20.8
Debt as proportion of current capital structure	36.6%
Equity as proportion of current capital structure	63.4%

WACC	5.8%
------	------

### Free Cash Flow Calculation

Figures in '000,000 USD	Historical					Forecasted				
	2017A	2018A	2019A	3Q 2020A	Q4 2020E	2021E	2022E	2023E	2024E	2025E
<b>Revenue</b>	38,260	40,052	42,405	31,725	10,238	43,384	46,855	48,515	50,036	51,620
% Growth		4.7%	5.9%		-1.0%	3.4%	8.0%	3.5%	3.1%	3.2%
<b>EBIT</b>	2,921	3,032	2,827	2,102	675	3,163	3,560	3,687	3,802	3,923
% Growth		3.8%	-6.8%		-1.8%	13.9%	12.6%	3.5%	3.1%	3.2%
Margin %	7.6%	7.6%	6.7%	6.6%	6.6%	7.3%	7.6%	7.6%	7.6%	7.6%
<b>Tax</b>	(850)	282	(396)	(428)	(34)	(529)	(646)	(728)	(778)	(796)
Tax Rate %	32.3%	-10.3%	16.3%	22.7%	22.7%	23.9%	25.1%	26.3%	27.5%	27.5%
<b>Tax Shield on Net Interest</b>	(88)	35	(73)	(80)	(119)	(227)	(248)	(242)	(268)	(283)
<b>Tax-Adjusted EBIT</b>	1,983	3,349	2,358	1,594	522	2,407	2,667	2,717	2,757	2,844
<b>Add: Depreciation and Amortisation</b>	761	943	1,098	662	252	1,065	1,115	1,127	1,152	1,181
% of Revenue	2.0%	2.4%	2.6%	2.1%	2.5%	2.5%	2.4%	2.3%	2.3%	2.3%
<b>EBITDA</b>	3,682	3,975	3,925	2,764	927	4,228	4,676	4,814	4,954	5,104
<b>Less: CAPEX</b>	(1,069)	(1,200)	(1,259)	(907)	(307)	(1,302)	(1,406)	(1,455)	(1,501)	(1,549)
% of Revenue	2.8%	3.0%	3.0%	2.9%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
<b>Less: Change in Net Working Capital</b>	-	(287)	(976)	463	179	(73)	(216)	(104)	(95)	(99)
% of Revenue	0.0%	-0.7%	-2.3%	1.5%	1.7%	-0.2%	-0.5%	-0.2%	-0.2%	-0.2%
<b>Unlevered FCFF</b>	1,675	2,805	1,221	1,812	646	2,097	2,160	2,285	2,312	2,378
% Growth		67.5%	-56.5%			-14.7%	3.0%	5.8%	1.2%	2.8%
<b>Period</b>					2020	2021	2022	2023	2024	2025
Year Frac					0.00	0.93	1.93	2.93	3.93	4.93
Discount Factor					0.00	0.95	0.90	0.85	0.80	0.76
Present Value of Unlevered FCFF					0	1,991	1,938	1,938	1,853	1,801

### Terminal Value Calculation

#### Exit Multiple

Exit EV/EBITDA Multiple	13.13x
Implied Perpetual Growth Rate	2.17%
Terminal Year EBITDA	5,103.71
Terminal Value (EV)	66,986.19
Present Value of Terminal Value	50,748.91

#### Terminal Growth Method

Perpetual Growth Rate	0.9%
Terminal Year FCFF	2,377.62
Terminal Value	48,767.25
Present Value of Terminal Value	36,946.20

## Sensitivity Analysis

### Implied Share Price

#### Perpetual Growth Rate

WACC

	0%	0.3%	0.6%	0.9%	1.2%	1.5%
5.2%	94.72	100.58	107.65	115.70	124.95	135.69
5.5%	87.88	93.04	99.23	106.22	114.17	123.32
5.8%	81.75	86.33	91.78	97.89	104.80	112.67
6.1%	76.22	80.30	85.13	90.52	96.57	103.41
6.4%	71.21	74.87	79.18	83.96	89.29	95.27

### Implied Share Price

#### Exit EV/EBITDA Multiple

WACC

	12.23x	12.53x	12.83x	13.13x	13.43x	13.73x
5.2%	130.35	133.62	136.90	140.17	143.45	146.72
5.5%	128.27	131.50	134.73	137.96	141.19	144.42
5.8%	126.23	129.41	132.60	135.78	138.97	142.15
6.1%	124.22	127.36	130.50	133.64	136.78	139.92
6.4%	122.24	125.34	128.44	131.54	134.63	137.73

## Tyson Foods

Relative Valuation (Comparable Company Analysis)

Company Name	Market Capitalization USD\$	+1FY	
		P/E	EV/EBITDA
Tyson Food	21,652	8.02x	11.12x
Mondelez International, Inc.	81,158	21.50x	18.09x
Hormel Foods Corporation	26,619	28.04x	18.70x
Pilgrim's Pride Corporation	4,034	10.15x	6.87x
Sanderson Farms, Inc.	2,803	34.51x	11.99x
Conagra Brands, Inc.	18,393	15.54x	12.27x
Kellogg Company	22,756	17.58x	14.20x
General Mills, Inc.	37,481	17.20x	13.98x
The Kraft Heinz Company	38,181	12.33x	10.56x
Campbell Soup Company	14,482	16.40x	11.64x
The Hershey Company	30,255	23.36x	16.39x
<b>Screening Criteria:</b>	Consumer Staples		

	+1FY P/E	+1FY EV/EBITDA
25th Percentile	15.76x	11.73x
Median	17.39x	13.13x
75th Percentile	22.90x	15.84x
90th Percentile	28.69x	18.15x
Max	34.51x	18.70x

### Relative Valuation (EV/EBITDA)

Median +1FY EV / EBITDA	13.13
2021 EBITDA	4,227.84
Implied Enterprise Value	55,490.42
Less: Debt	(12,029.00)
Add: Cash	1,365.00
Less: Minority Interest	(146.00)
Implied Equity Value	44,680.42

Share Count	364.26
<b>Implied Share Value</b>	<b>122.66</b>

### Relative Valuation (P/E)

Median +1FY P/E	17.39
2021 Earnings	1,703.25
Implied Equity Value	29,619.45
Share Count	364.26
<b>Implied Share Value</b>	<b>81.31</b>