Economic Developments

Wells Fargo economists maintain that lending will remain tighter in the wake of the second and third largest bank failures in U.S. history during Q1 2023. This is despite the fact that financial market conditions appear to have stabilized, and economic growth as measured by U.S. real GDP expanded at annualized rated of 1.8%, a full percentage point higher than original expectations.

A modest recession is still in the outlook to the order of peak-to-trough decline of real GDP about 1.2%, from Q3-2022 to Q1-2024. Goods and equipment spending are expected to remain weak, with indications that the labor market is also slowing. Consumer price inflation remains stubborn, albeit with signs of moderating. The FOMC is described as fine-tuning this current tightening cycle. Even if the May 3 meeting sees another 25bps increase, the longer-term outlook is linked to how the economy responds and how far and fast indicators swing. If economic growth begins to buckle, then 2024 may usher in quantitative easing, anticipated to bring rates lower.

While steady hiring is underpinning the labor market and unemployment dipped back to 3.5%, the full effect of the Fed’s tightening and corporate profit pressure leads economists to project material weakening before year-end.

The global growth outlook is resilient, with global GDP growth expected to be 2.2% in 2023 and 2.36% in 2026. Most major central banks are ending monetary tightening by the end of Q2-2023. Both domestic and global factors are underlying a forecast of the trade-weighted dollar against advanced foreign currencies to depreciate by 3% by year end.

Key Industry Highlights

- Agriculture and food interests are actively lobbying legislators regarding the 2023 Farm Bill. While nutrition (SNAP) remains 75%+ of total outlays, the three other leading programs involve crop insurance at 9%, commodities 7%, and conservation 7%.¹ The 2023 omnibus multiyear law governs programs expected to outlay $1.4 trillion over the next 10 years.² Conservation, trade, credit, energy, and crop insurance programs will have material impact on U.S. agriculture.

- Agriculture’s role in carbon capture continues to expand. The intersection of mainstream investment in carbon and emissions tech and agtech is expected to grow. Climate investment is increasing even with Q1 2023 closing with a 36% decline in total VC deal value globally from the previous quarter; startups in carbon tech are expected to continue to grow given legislative focus.³ McKinsey estimates the trade in voluntary carbon credits to be worth $50 billion by 2030; at the food and ag level, AgFunder is tracking 75+ startups that are focusing on regenerative ag.

- On the topic of technology, investment in plant efficiencies and automation is incented by low unemployment numbers influencing both labor availability and cost to food manufacturers.

- In ag water news, the extraordinary rainy season on the West Coast provided relief (at least short term) for surface water deliveries, and yet the speed of the snowmelt season is bringing additional threat of flooding to processing tomatoes, tree nut, cotton, forage farming ground and many Central Valley dairies. In the Colorado River basin, the Federal government continues to seek options due to lack of progress in the seven-state negotiations regarding water usage cuts required to protect both hydropower and water allocations, including irrigation. Threats to senior water rights along the Colorado, including California’s Imperial Irrigation District will mean substantial reductions in future crops. Meanwhile, the April U.S. Drought monitor still shows a stubborn swath of extreme drought upwards from Texas, Oklahoma, and north to the High Plains.
The March consumer price index versus the producer price index is showing a return to some normalcy. At-home (retail) price inflation is slowing against a more steady trend of price growth for food-away-from-home. The surge in the producer price index that started during the pandemic including the volatility of cost inflation over the last year, also appears to have taken a solid move downwards. With February’s producer price index at 6.3%, this is territory food producers have not seen since Spring of 2021.

**Consumer Price Index vs Producer Price Index, U.S. Food**

- Wage growth in food manufacturing and restaurants is highly regional, however the U.S. Bureau of Labor Statistics data is showing moderation, and perhaps a return to longer term trends. See below.

**Food manufacturing and restaurant wages**

production and nonsupervisory employees, avg hourly earnings growth

- The Food Institute continues to track data analytics and technology, and reports ‘as predicted (pun intended)’ that artificial intelligence is gaining ground in retail strategy. A recent survey by Grocery Doppio reports that 67% of growers say that ChatGPT is being discussed at senior level meetings, and that deployment of AI capabilities are expected to increase 13x in 2025 compared to 2022. Applications include customer service, product discovery, and in-store merchandising. Results will likely create even greater linkages to vendors that can dovetail forecasting and order-response time to real-time data.
Beverage highlights

- According to CGA-NIQ, imports are driving total beer category volume in on-premise consumption of beer. As of the latest 52 weeks (ending 2/25/23) over half of total beer category growth is being driven by imported brands. Mexico-originated beer dominates with 79% of growth, followed by Ireland (10%), Italy (2%) Japan (2%), Holland (1%).

- Volume growth of beer and FMB/Cider/Seltzer sales at U.S. retail mirrors on-premise trends. Imported beer is leading volume growth again at a backdrop of volume declines and continued price inflation. In most cases, the trending 12-weeks of price growth outpaced the 52-week view. This will be an interesting base case to measure Spring demand dynamics and as the market heats up into the Summer holidays and beer drinking season.

Beer at U.S. Retail Q3 2023

<table>
<thead>
<tr>
<th></th>
<th>Avg Case Price</th>
<th>Volume YOY %</th>
<th>Price YOY %</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Latest 12 Wks</td>
<td>Latest 52 Wks</td>
<td>Latest 12 Wks</td>
</tr>
<tr>
<td>Beer</td>
<td>$26.11</td>
<td>$25.68</td>
<td>(2.4%)</td>
</tr>
<tr>
<td>Craft</td>
<td>$41.32</td>
<td>$40.09</td>
<td>(9.7%)</td>
</tr>
<tr>
<td>Import</td>
<td>$33.25</td>
<td>$32.28</td>
<td>0.7%</td>
</tr>
<tr>
<td>Domestic Super Premium</td>
<td>$26.05</td>
<td>$25.78</td>
<td>0.2%</td>
</tr>
<tr>
<td>Domestic Premium</td>
<td>$22.09</td>
<td>$21.53</td>
<td>(3.6%)</td>
</tr>
<tr>
<td>Malt Liquor</td>
<td>$21.34</td>
<td>$20.76</td>
<td>(2.6%)</td>
</tr>
<tr>
<td>Below Premium</td>
<td>$17.70</td>
<td>$17.16</td>
<td>0.2%</td>
</tr>
<tr>
<td>FMB/Cider/Seltzer</td>
<td>$37.24</td>
<td>$36.21</td>
<td>(12.6%)</td>
</tr>
<tr>
<td>Cider</td>
<td>$46.86</td>
<td>$45.79</td>
<td>(5.1%)</td>
</tr>
<tr>
<td>Flavored Malt Beverage</td>
<td>$37.52</td>
<td>$36.71</td>
<td>12.6%</td>
</tr>
<tr>
<td>Hard Seltzer</td>
<td>$35.69</td>
<td>$34.75</td>
<td>(25.7%)</td>
</tr>
</tbody>
</table>

Source: Nielsen IQ
Commodity highlights

Crop Inputs

• Plunging natural gas prices, lower crop prices, and fears of oversupply continue to weigh on the NOLA barge market for urea. Spot prices slid lower last month, down to $315/ton, but have recovered to $350/ton as planting season and higher demand arrive.4

• Chinese/Russian export levels are key components in the phosphate market. As the number one and four global exporters of DAP/MAP, the Russian invasion of Ukraine and fear that China could do similar in Taiwan has stoked concerns that supplies may become limited pushing prices higher.5

• Average Midwest retail potash prices have declined to the lowest level since September of 2021, down over $200/ton in the past year. Manufacturers are beginning to slow/stop production to offset reduced market demand.4

• Overall demand for crop inputs are down across North America due in large part to bad weather conditions keeping farmers out of the fields. This is especially true in the upper Midwest, where winter conditions hang on. This is important to follow in terms of cropping decisions as projections are for an increase of corn acres in this portion of the country.5

Corn Belt Wholesale Fertilizer Prices as of Mid April

-100 0 100 200 300 400 500 600 700 800 900 1,000 1,100 1,200 1,300 1,400 1,500

Source: Green Markets

• Growers and Retailers continue to look for ways to limit costs, become more efficient with labor and effective with their resources. A method gaining interest is See and Spray Technology which involves in-season targeted spray application. Cameras and processors mounted on a boom utilize the combined power of computer vision and machine learning to detect weeds from crop plants. There is one camera mounted every one meter across the width of the boom, which equates to 36 cameras scanning more than 2,100 square feet at once. The cameras are the eyes of this system. The processors are the brains. The eyes are looking down to determine what’s a weed, what’s a crop, and the processors are then sending a signal down to the nozzle to turn on the nozzle just where the weeds are. The process from scanning to identification to spraying is about 0.2 seconds or the blink of an eye at a speed of up to 12 miles per hour. This system can work in corn, soybeans and cotton and has shown success in lowering the volume of chemicals being applied.6
Sugar

- The USDA in its April 11th WASDE report raised its forecast of 2022/23 sugar supply from March as higher imports offset lower beet sugar production while deliveries were unchanged resulting in a jump in the stocks-to-use ratio to 14.9% vs 13.5% forecast in March. The most significant change in the April WASDE report was a 181,000 ton increase in imports from March from both reallocation of unused TRQ quota and a 69,000 ton increase in high-tier tariff imports by a refiner during March. Total U.S. sugar production forecast of 9.3 million short tons, raw value is down slightly (4,000 tons) due to slightly lower recovery on beet sugar. If this production is realized, it would be the third highest on record for beet producers and the highest on record for cane production.7

**USDA Sugar Supply and Use**

<table>
<thead>
<tr>
<th>(1,000 STRV)</th>
<th>April 2021/22</th>
<th>April 2022/23</th>
<th>Change from March</th>
<th>Change from 2021/22</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raw Value</td>
<td>2021/22</td>
<td>2022/23</td>
<td>Tons</td>
<td>%</td>
</tr>
<tr>
<td>Begin. Stocks</td>
<td>1,705</td>
<td>1,820</td>
<td>-</td>
<td>0.0%</td>
</tr>
<tr>
<td>Production</td>
<td>9,157</td>
<td>9,310</td>
<td>(4)</td>
<td>0.0%</td>
</tr>
<tr>
<td>Beet</td>
<td>5,155</td>
<td>5,160</td>
<td>(10)</td>
<td>-0.2%</td>
</tr>
<tr>
<td>Cane</td>
<td>4,002</td>
<td>4,150</td>
<td>6</td>
<td>0.1%</td>
</tr>
<tr>
<td>Imports</td>
<td>3,646</td>
<td>3,330</td>
<td>181</td>
<td>5.4%</td>
</tr>
<tr>
<td>T.R.Q.</td>
<td>1,579</td>
<td>1,618</td>
<td>112</td>
<td>6.9%</td>
</tr>
<tr>
<td>Other Prog.</td>
<td>298</td>
<td>250</td>
<td>-</td>
<td>0.0%</td>
</tr>
<tr>
<td>Mexico</td>
<td>1,379</td>
<td>1,306</td>
<td>-</td>
<td>0.0%</td>
</tr>
<tr>
<td>High tier</td>
<td>390</td>
<td>156</td>
<td>69</td>
<td>44.2%</td>
</tr>
<tr>
<td>Total Supply</td>
<td>14,508</td>
<td>14,460</td>
<td>177</td>
<td>1.2%</td>
</tr>
<tr>
<td>Exports</td>
<td>29</td>
<td>35</td>
<td>-</td>
<td>0.0%</td>
</tr>
<tr>
<td>Deliveries</td>
<td>12,578</td>
<td>12,705</td>
<td>-</td>
<td>0.0%</td>
</tr>
<tr>
<td>Food</td>
<td>12,470</td>
<td>12,600</td>
<td>-</td>
<td>0.0%</td>
</tr>
<tr>
<td>Other Prog.</td>
<td>107</td>
<td>105</td>
<td>-</td>
<td>0.0%</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>81</td>
<td>-</td>
<td>-</td>
<td>0.0%</td>
</tr>
<tr>
<td>Total Use</td>
<td>12,688</td>
<td>12,740</td>
<td>-</td>
<td>0.0%</td>
</tr>
<tr>
<td>Ending Stocks</td>
<td>1,820</td>
<td>1,720</td>
<td>177</td>
<td>10.3%</td>
</tr>
<tr>
<td>Stocks-to-use</td>
<td>14.3%</td>
<td>13.5%</td>
<td>+1.4</td>
<td>+0.5</td>
</tr>
</tbody>
</table>

Source: USDA, WASDE April 2023
Sugar (cont’d)

• In conjunction with the WASDE report, the USDA announced an increase in the overall allotment quantity (OAQ) for domestic beet and cane producers as well as revised individual producer allocations. This was driven by the projected 75,000 ton increase to 12.6 million tons of total domestic consumption for 2022/23 in the March WASDE report which required an adjustment in the OAQ to equal 85% of increased consumption. The revised beet allotment is 5.6 million tons and the only beet processors to end up with a higher final allocation were Michigan Sugar and Minn-Dak Farmers Coop. On the cane side, the final allotment of 4.4 million tons and a higher final allocation was assigned to Louisiana Sugar Cane Products and M.A. Patout & Sons.8

• The market, however, reacted opposite of what a 14.9% stocks-to-use ratio would imply. Following the release of the April WASDE, the No. 16 domestic raw sugar futures soared to a 13-year high of 41₵/lb. in heavy trading. Spot and 2023/24 cane sugar prices also increased and beet sugar prices remained firm with limited supplies available. Cane prices for 2023/24 were mostly 1₵/lb. higher at 60₵/lb Northeast and West coast and 56₵-58₵/lb. Gulf and Southeast while beet sugar continued to be priced at 55₵-58₵/lb. Most of the beet processors are selling selectively for 2024 at this time to avoid getting oversold before any beets are planted.9

# 16 Domestic Raw Sugar Futures

<table>
<thead>
<tr>
<th>Cents/lb.</th>
<th>April 12</th>
<th>1 week</th>
<th>1 Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>July</td>
<td>41.00</td>
<td>1.75</td>
<td>4.50</td>
</tr>
<tr>
<td>September</td>
<td>41.00</td>
<td>1.51</td>
<td>4.55</td>
</tr>
<tr>
<td>November</td>
<td>39.00</td>
<td>0.59</td>
<td>2.85</td>
</tr>
<tr>
<td>January 2024</td>
<td>39.45</td>
<td>0.71</td>
<td>3.30</td>
</tr>
<tr>
<td>March</td>
<td>39.35</td>
<td>0.61</td>
<td>3.20</td>
</tr>
<tr>
<td>May</td>
<td>39.25</td>
<td>0.51</td>
<td>3.10</td>
</tr>
<tr>
<td>July</td>
<td>39.00</td>
<td>0.55</td>
<td>2.85</td>
</tr>
</tbody>
</table>

Grain and Oilseeds

• The grain complex has become driven by acreage forecasts and weather. The latest USDA Supply and Demand Report estimated 2023 corn acreage at 92 million acres and soybean acreage at 89 million acres. These are strong acre estimates coming at the expense of cotton acreage, which has not had the recent price strength of grain. Adverse weather through mid-May could push more acres from corn to soybeans, which are planted later.10

• Wheat futures have been under pressure as the USDA estimates acreage near 50 million acres which is an increase from recent years. The outlook for new-crop supplies is bearish as long as weather forecasts remain “normal.” Additionally, the Russia/Ukraine safe-transit accord is easing the markets supply concerns.10
Grain and Oilseeds (cont’d)

• The world trade continues to be strong as Argentina’s soybean production is forecast to be 38 percent lower than last year’s production. Continuously dry conditions have trimmed the yields as well as the acreage harvested. This harvest will likely be Argentina’s lowest soybean crop since 1999/2000. The U.S. will continue to see more domestic soybean processing and less exports as soy oil is increasingly used in diesel fuel.12

Dairy

• Cheese prices had been strong this spring resulting in a higher Class III milk prices. Class III has hovered around $18.50/cwt. Blocks of cheddar cheese prices reached $2.10/pound but have since retreated to $1.76/pound as cheese production has been heavy. Regardless, the USDA is forecasting milk production to only increase slightly in 2023. The continued high feed and input costs have resulted in tight margins for dairy producers. The USDA forecasts the average number of cows in 2023 will be 30,000 higher than a year ago.13

• Dairy exports reached a new record in 2022. USDA is forecasting a decline in exports for 2023. This is because U.S. will face more competition for markets as milk production is improving in Western Europe and New Zealand, the two leading dairy exporters. Compared to January of last year exports were up 15% for nonfat dry milk/skim milk powder, 12% for whey products and 16% for cheese.14

• Cheese consumption has been steadily growing for many years. The market continues to expand and shift milk production. A large, new conversion facility opened in Central Texas in December. This new plant has been ramping up and driving milk demand in this region. Furthermore, a large, new plant will open in Dodge City, Kansas in the near future which will further command additional dairy expansion.
Cotton

• The USDA is estimating the 2022/23 U.S. cotton crop at nearly 14.7 million bales. This estimate is 16% below the 2021 crop but similar in size to 2020. This production estimate, and adding beginning stocks of 3.8 million bales, the 2022/23 cotton supply totals 18.4 million bales, which would be the lowest in seven years. Similarly, U.S. cotton demand in 2022/23 is projected at 14.3 million bales, the lowest since 2015/16, as economic uncertainties hinder purchases. The U.S. continues to be competitive internationally as the U.S. share of global trade is forecast at 31%.16

• While total production is estimated to be roughly average, the total U.S. cotton acreage is projected 18% lower in 2023. This dynamic is based on the USDA’s estimate of a return to normal yields after widespread drought in 2022. Based on the National Agricultural Statistics Service’s Prospective Plantings report there will be 11.3 million acres of cotton in 2023. This is 2.5 million acres below 2022 plantings, which is a result of more favorable prices for competing crops to producers.

Cotton Prices Received

![Cotton Prices Received chart]

Fresh Produce

• Wet weather in California has created some supply gaps in spring vegetable crops. Fields have been too wet to work, and some plantings have been delayed.10 Near-term pricing may be impacted as crops are late to produce.

• Strawberries are a major California fruit crop also delayed due to weather. Oxnard was late to begin their season with cold and wet weather, and Santa Maria and Watsonville have also been delayed. Berry prices will remain volatile until a steady supply is achieved.11 The Fall months should be favorable for Salinas/Watsonville growers.

• Overall, several produce items have experienced near-term retail price increases as the wet season in California has created some supply and production challenges. Mexican imports have been helpful to fulfill demand, but prices may not feel relief until California farms stabilize their production.12
Tree Nuts

- The shipping challenges of 2021/22 are making monthly YOY export numbers look extra exciting, but the good news is that in absolute terms both almond and pistachio exports are at 5-year highs for the last several months. Total pistachio shipments of 529M lbs YTD are at record levels, up 7.3% YOY. Total almond shipments of nearly 1.8B lbs YTD (6.8% YOY) is positive. If this trend continues, the industry is optimistic that this year can quickly carve away at the supply issue weighing on pricing. Almond pricing has already improved, especially as adverse spring weather conditions in CA were widespread, not just regional.

- Nut-set is the next major benchmark for upcoming crop forecasts; USDA will release their first objective estimates in mid-May. Patient sellers expect healthy shipments and lower yields as supportive to moderate almond price improvement. Marginal orchard removals for both almond and walnuts are also continuing, and upcoming reports will provide additional insight in how these removed acres may impact future supply.

- Domestic shipments and demand for both pistachios and almonds are uncharacteristically low. Almond shipments to domestic customers are off nearly (6%) YOY, while pistachios of off nearly (8%) YOY. At retail, see NielsenIQ shows these two market share leaders with YOY volume declines against price increase.

<table>
<thead>
<tr>
<th>Nut types</th>
<th>Dollarshare</th>
<th>Volume</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pistachio</td>
<td>38.5%</td>
<td>-8.2</td>
<td>4.9</td>
</tr>
<tr>
<td>Almond</td>
<td>29.6%</td>
<td>-5.5</td>
<td>2.1</td>
</tr>
<tr>
<td>Pecan</td>
<td>18.6%</td>
<td>21.4</td>
<td>-10.1</td>
</tr>
<tr>
<td>Walnut</td>
<td>13.1%</td>
<td>4.6</td>
<td>1.4</td>
</tr>
<tr>
<td>Hazelnut/filbert</td>
<td>0.3%</td>
<td>10.5</td>
<td>-17.41</td>
</tr>
</tbody>
</table>

Source: Nielsen IQ

Citrus

The USDA’s most recent citrus crop forecast for 2022/23 suggests that total U.S. citrus production is projected to decline 15% over the prior crop year as follows:

- Oranges - down 25% due primarily to an unprecedented YoY decrease in Florida’s orange crop, as California's combined orange crop is forecast up by 14%.
- Grapefruit - down 12%
- Lemons-down 9%
- Tangerines – up 23%, the only citrus commodity that is projected to have higher production. The California tangerine crop continues to see strong demand with plentiful production.13
Citrus

- According to the USDA NASS crop forecast dated 4/11/2023, Florida’s total orange crop for the 2022/23 season is forecast at 725,000 tons, the smallest since the 1936/37 season. If realized, this will also be the first season that Florida’s combined orange crop (early/mids and Valencia) is smaller than that of California. The largest YoY decline this season is in early and mid-season volume as the actual harvest, which was completed in March, was 275,000 tons or 67% below last season’s harvest. Florida’s Valencia crop, which is 60% harvested as of end of March, is forecast at 450,000 tons, a 56% percent decline from last year’s historic low crop. The projected declines for both early/mids and Valencia fruit for the 2022/23 season is a result of the significant crop damage incurred from Hurricane Ian in the Fall of 2022. The March 2023 USDA survey measured fruit droppage at 76% for early/mids and 70% for Valencias - - the highest ever recorded since collection of this data began for the 1960/61 season.14

Florida Citrus Production - Volumes and Values

- An estimated 57% of U.S. grown oranges are expected to go to processing for the 2022/23 season. Historically, Florida has been the main supplier of oranges for the domestic processing market; however, with Florida orange production levels estimated at an 85-year low, domestic orange juice production levels are also estimated to be lower this season. As a result, U.S. orange juice imports are expected to increase over last year reaching more than 550 million (SSE) gallons. If realized this will be the highest import quantity of orange juice in at least 50 years. Mexico and Brazil are expected to remain the main suppliers of orange juice imports into the United States, accounting for a combined 90% in 2021/22. 15

Forest Products

- Softwood framing lumber prices have been slowly climbing since hitting a low in January 2023, rising about 10% to date.16 Right now, the framing lumber market at $422/MBF is uncertain but wagering on the upside. The near-month May 2023 SPF lumber futures price is roughly an $80/MBF premium over cash as of mid-April (up +20%). Nonetheless, several major lumber producers have instituted production curtailments due to “market conditions” in several regions across North America. Since they represent ~65% of COGS, timber costs are a major consideration in operating decisions.
• Structural panel prices are following the same pattern, rising about 7% since hitting a low point in January 2023. The nominal structural panel composite value of $509/MSF has been trading in a narrow range for several weeks demonstrating a market hesitancy. Yet, prices for OSB have climbed out of a red-ink basement, and softwood plywood prices are holding-up compared to softening veneer costs, which helps producer margins.

U.S. Framing Lumber and Structural Panel Composite Prices

![Graph showing U.S. Framing Lumber and Structural Panel Composite Prices](image)

Source: Random Lengths, thru Mar 2023

• In April 2023, The Wells Fargo Economics Group adjusted its U.S. housing starts forecast further downward to 1,250,000 total starts in 2023, which now stands as a 19.5% YOY decline from 2022. Headwinds remain the high cost of housing and high mortgage rates, although 30-year fixed conventional rates have come off about 80 bps since peaking over 7.1 in November 2022. Mortgage rates dipped down to 6.3% last week, rekindling housing market activity, and the inventory of available houses is low. The housing market has a lot of mixed signals right now, creating greater uncertainty.

U.S. Annual Housing Starts, 1,000s

![Graph showing U.S. Annual Housing Starts, 1,000s](image)

Source: U.S. Dept. of Commerce, Forecast by Wells Fargo Securities
Protein

- February 2023 CPI data for meat, fish and poultry was up 4.3% YoY, but remains significantly below peak levels in early 2022. Poultry had the largest increase (+7.5% YoY), while beef experienced softening (-1.9% YoY).19

![Year over Year Percent Change in Food Inflation](image)

Source: BLS March 2023 release

- Chicken processors experienced margin compression in 4Q22 and 1Q23 on lower chicken part prices and elevated feed costs. Chicken production was 5.3% higher YoY in January and February on both higher slaughter numbers and heavier bird weights.20 USDA is forecasting prices to improve in the 3rd and 4th quarters of 2023 with production moderating in the Q4.21

![Chicken Packer Margin](image)

Sources: USDA, CME, Calculations by Wells Fargo
Protein (cont’d)

- Total U.S. meat and poultry production is forecasted to decline in 2023, driven by solely on lower beef production (-5.4% YoY). Beef production is down on lower weights and reduced slaughter numbers from high cow liquidation in 2022. Liquidation was caused by drought conditions and low hay stocks. The result has been the 5 area fed cattle prices climbing to record high levels, boosting feeder margins.

  **SLAUGHTER STEER PRICES**
  **5 Market Weighted Average, Weekly**

  ![Graph showing slaughter steer prices]
  Source: USDA-AMS

- Pork production is forecast to increase 2% YoY in 2023, the first increase in pork production in two years. However pork production has been negatively impacted in 1Q23 by lower hog weights. Lower hog weights are being driven by producers marketing animals early due to feed costs, disease pressure, and uncertainty on consumer pork demand. Strong exports have been a bright spot for the industry up 6% YoY the first two months of 2023.

Seafood

- The 2023 outlook for the seafood industry is mixed. According to a February 2023 IBISWorld report, per capita seafood consumption is anticipated to continue to rise by 0.6% annually while prices are expected to rise at an annualized 1.1% driven by growth in demand. However, IRI data shows a pattern of slowing seafood sales and values across the entire retail sector for the Q1-2023. Out of the top ten retail seafood items, seven had lower volume and dollar sales than in Q1-2022. Based on this data, it appears the industry has reached an inflection point as the current economic climate of rising food price inflation coupled with the end of a sustained period of stable prices and near-zero interest rates has shifted seafood consumption patterns at both retail and food service establishments.

- The U.S. shrimp market has experienced a 17% decline in prices over the past 15 months as indicated by the Urner Barry’s White Shrimp Index and was driven primarily by a YoY increases in the volume of imported shrimp in 2020 (+6.8%) and 2021 (+19.8%). The highest annual YoY increase in shrimp consumption in the U.S. was 11.9% in 2014; thus, given over 85% of all shrimp consumed in the U.S. is imported and U.S. consumption has never increased 20% YoY, this significant volume of imported shrimp had to go somewhere, and the logical assumption is that inventory in cold storage continued to grow as we entered 2022.
Seafood (cont’d)

Urnar Barry Farm-Raised White Shrimp Index
Monthly Avg - $/lb

$5.00
$4.74
$4.50
$4.12
$4.00
$3.84
$3.64
$4.55
$3.78
$3.00
$4.50
$4.00
$3.50

Jan-17 May-17 Sep-17 Jan-18 May-18 Sep-18 Jan-19 May-19 Sep-19 Jan-20 May-20 Sep-20 Jan-21 May-21 Sep-21 Jan-22 May-22 Sep-22 Jan-23

Source: Urner Barry - Comtell

Growth in U.S. Shrimp Consumption

Source: National Marine Fisheries Service, U.S. Census Bureau
Seafood (cont’d)

• As a result, the market began experiencing price corrections and shrimp prices began to adjust lower. Faced with a softening market, U.S. importers were forced to make significant cutbacks on imports given the headwinds of lower pricing, limited storage capacity, higher freezer costs, and increasing costs of capital. With demand projected to remain at current levels, expectations are that global producers will seek to adjust production in an effort to bring pricing higher. 29

Annual U.S. Shrimp Imports, All Types

<table>
<thead>
<tr>
<th>Year</th>
<th>Million lbs</th>
<th>Import Avg $/lb</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>1,165.9</td>
<td>$3.11</td>
</tr>
<tr>
<td>2006</td>
<td>1,301.4</td>
<td>$3.15</td>
</tr>
<tr>
<td>2007</td>
<td>1,227.8</td>
<td>$3.16</td>
</tr>
<tr>
<td>2008</td>
<td>1,243.9</td>
<td>$3.26</td>
</tr>
<tr>
<td>2009</td>
<td>1,299.3</td>
<td>$3.42</td>
</tr>
<tr>
<td>2010</td>
<td>1,268.2</td>
<td>$3.80</td>
</tr>
<tr>
<td>2011</td>
<td>1,112.4</td>
<td>$4.04</td>
</tr>
<tr>
<td>2012</td>
<td>1,251.2</td>
<td>$4.66</td>
</tr>
<tr>
<td>2013</td>
<td>1,292.5</td>
<td>$4.23</td>
</tr>
<tr>
<td>2014</td>
<td>1,330.7</td>
<td>$4.26</td>
</tr>
<tr>
<td>2015</td>
<td>1,454.1</td>
<td>$4.45</td>
</tr>
<tr>
<td>2016</td>
<td>1,532.9</td>
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<tr>
<td>2017</td>
<td>1,598.0</td>
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<tr>
<td>2018</td>
<td>1,644.6</td>
<td>$3.91</td>
</tr>
<tr>
<td>2019</td>
<td>1,970.1</td>
<td>$4.03</td>
</tr>
<tr>
<td>2020</td>
<td>1,847.3</td>
<td>$4.22</td>
</tr>
<tr>
<td>2021</td>
<td>1,776.4</td>
<td>$4.04</td>
</tr>
<tr>
<td>2022</td>
<td>1,745.2</td>
<td>$3.88</td>
</tr>
</tbody>
</table>

Source: Urner Barry - Comtell

Canadian Snow Crab
Monthly Avg – U.S. $/LB

Source: Urner Barry - Comtell

• Canadian snow crab shipments and prices have declined since hitting all-time highs at the end of 2021 due to the carry over excess high-priced inventory coupled with flood of Russian crab imports in 1H 2022 before sanctions took effect. At the end of August prices on 5-8oz and 8 oz & up snow crab were down over 50% from December 2021 highs. Prices have since adjusted up from the August lows although sales still lag, and U.S. imports are down -8% compared to 2021. 29
Seafood (cont’d)

- As a result of the continued increase in retail food prices, data from a recently released report by FMI showed fresh seafood sales in 2022 dropped 7.1% to $6.5 billion while frozen seafood sales also fell 2.8% to $7.1 billion. Seafood sales recent survey by Information Resources, Inc. for the 12-months ending 12/4/2022 reported that 21% of shoppers have reduced the amount of fresh fish and meat that they are buying as well as trading down from premium products to cheaper alternatives.30

- Canadian snow crab shipments and prices have declined since hitting all-time highs at the end of 2021 due to the carry over excess high-priced inventory coupled with flood of Russian crab imports in 1H 2022 before sanctions took effect. At the end of August prices on 5-8oz and 8 oz & up snow crab were down over 50% from December 2021 highs. Prices have since adjusted up from the August lows although sales still lag, and U.S. imports are down -8% compared to 2021.29

- Based on an analysis of IRI POS scan data for the 52 weeks ending 12/4/2022, shelf stable seafood sales rose in 2022 over the prior year; however, inflation and increased away-from-home spending took its toll on fresh and frozen seafood sales. Buyers are viewing premium shellfish as still “too expensive” and are being more selective in purchases or trading down to finfish which has a lower price point. Salmon continues to lead finfish sales with a 6.6% increase in dollar sales and only a 3.5% decline in unit sales (versus an overall finfish unit sale decline of 12%). Shelffish sales for 2022 posted an 19% overall decline in unit sales compared to the prior year with crab and other high value shellfish dropping at the highest rate. Crab was down -18%, shrimp down -21%, scallops down 36%, and lobster -8% compared to the same period in 2021 last year.30

**Change in Seafood Retail Unit Sales**

<table>
<thead>
<tr>
<th></th>
<th>2021</th>
<th>2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frozen</td>
<td>-7.90%</td>
<td></td>
</tr>
<tr>
<td>Fresh</td>
<td>-14.50%</td>
<td></td>
</tr>
<tr>
<td>Shelf Stable</td>
<td>-2.10%</td>
<td></td>
</tr>
</tbody>
</table>

Source: IRI, Integrated Fresh, Mulo, L-52 through WE 12/4/2022

**Specialty Crops**

- World coffee production is expected to be up 1.7% to 171.3 million bags in 2022/23 with consumption increasing to 178.5 million bags. As a result, the world coffee market is expected to undergo a second consecutive year of deficit with a shortfall of 7.2 million bags. Prices remain stable.31
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