

EXPERIENCED PROFESSIONALS IN COMMODITIES

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Executive Summary

- The objective of this work is to highlight the bullish and the bearish elements of the 2023 live cattle trade.
- We view tightening cattle supplies as a positive input for feeder cattle and live cattle prices.
- Demand is the other part of the price equation. As the US economy weakens, we believe that demand related pressures will originate from the packing side of the business. These demand pressures can create headwinds for live cattle prices.
- If the packer represents both supply (beef) and demand (live cattle), highlighting the leading variables that influence each portion of the live cattle price equation can help empower the feedlot operator's risk management approach in 2023.

Table Of Contents

<u>Section</u>	<u>Pages</u>
<u>Executive Summary</u>	3
<u>An Overview Of The Cattle Feeding Business In 2023: Bullish Supplies And Bearish Demand</u>	5-10
<u>Bearish Case Explained</u>	11-23
<u>Bullish Cash Explained</u>	24-31
<u>Live Cattle Price Outlook</u>	32-33
<u>Additional Information About HTS Commodities</u>	34-36
<u>Disclosure</u>	37

An Overview Of The Cattle Feeding Business In 2023: Bullish Supplies And Bearish Demand

How The Cattle Complex In 2023 Will Differ From 2015

1. The protracted drought in key western cattle producing states has caused the most aggressive liquidation of breeding stock (cows and heifers) in modern times.
2. Unlike 2015, the US cattle industry will have to navigate a plethora of macro challenges: looming global recession, intractable inflation, rising interest rates, and a strong dollar.
3. In 2023 the US cattle feeder is facing both global, domestic and regional supply shortages of corn and wheat.
4. The cost of capital and credit standards will be materially higher in 2023 than in 2015. This translates to higher lending rates for cattle feeding operations.
5. These variables can create structural headwinds for the consumer, the feedlot and the packer, but they can recalibrate the beef and cattle demand structure and dampen the price trajectories.

Live Cattle 2023: Bullish Narratives

As the US cattle complex transitions from the contraction to the expansion phase, we see three primary **bullish** narratives emerging:

1. When the US breeding herd begins to expand and cow/calf operators start retaining breeding stock the market will be structurally short supplies. Contracting supplies will support higher feeder cattle, live cattle and beef prices.
2. Despite the weakening domestic economy, the labor market remains strong, and unemployment remains low. If unemployment and wage growth do not materially collapse, aggregate domestic beef demand can remain resilient.
3. As the cattle herd expands and supplies tighten, the cattle feeder should be in a position to exert price leverage over the packer in the cash markets.

There are always two sides to a story. As the US cattle complex transitions to the expansion phase, we see three **bearish** narratives developing:

1. In 2023 the US cattle complex will start expanding at the same time as the domestic economy is slowing and interest rates are rising. Slowing economic growth can suppress domestic and export beef demand.
2. If cattle prices are rising while beef demand is slowing, packer margins can be pressured. History has shown that as packing margins contract, packers will find ways to slow the slaughter pace to help moderate price appreciation in the local cash markets.
3. Corn basis in Hereford, Dumas and other key cattle feeding areas of Texas are at or near record levels. This can limit the time which the cattle feeder wants to feed animals. If the packers start to slow the weekly slaughter pace, we see the potential for the price leverage to pivot from the feedlot operator to the packer.

The Importance Of Demand

- We believe that being bullish feeder and live cattle prices because of contracting supplies is convenient. Convenient, because the supply side data points are visible and slow moving.
- While supply represents 50% of the price equation, demand represents the other 50%.
- In 2023 the domestic macro climate, the US consumer, the health of the restaurant/food service sector, and the financial state of the feedlot are all precariously fragile. The challenge is to identify the statistically relevant demand related variables that can impact live cattle prices.
- At HTS Commodities we are focused on identifying the fundamental variables that can impact downstream consumer level beef demand and influence midstream packer demand for live cattle.
- We believe that in 2023 understanding the demand side of the equation will be critical toward understanding the price potential of live cattle.

Takeaway Points

- 2023 promises to be a fundamentally volatile year for the US cattle complex.
- The probability of a third consecutive La Nina weather pattern is declining which should help bring moisture and much needed relief to parts of the west and southwestern US that have been struggling with an acute drought.
- As the drought mitigates, the emerging supply and demand configuration will present participants throughout the cattle and beef supply chains with opportunities to potentially realize large financial gains.
- Despite the bullish supply outlook, numerous price risks are lurking in 2023 for the cattle feeding and packing industries which can threaten margins.

We believe that the fundamental construct for 2023 calls for an active and rigorous approach to hedging.

At HTS Commodities we use the prevailing fundamentals to help clients identify proper risk mitigation strategies for their business.

Bearish Case Explained

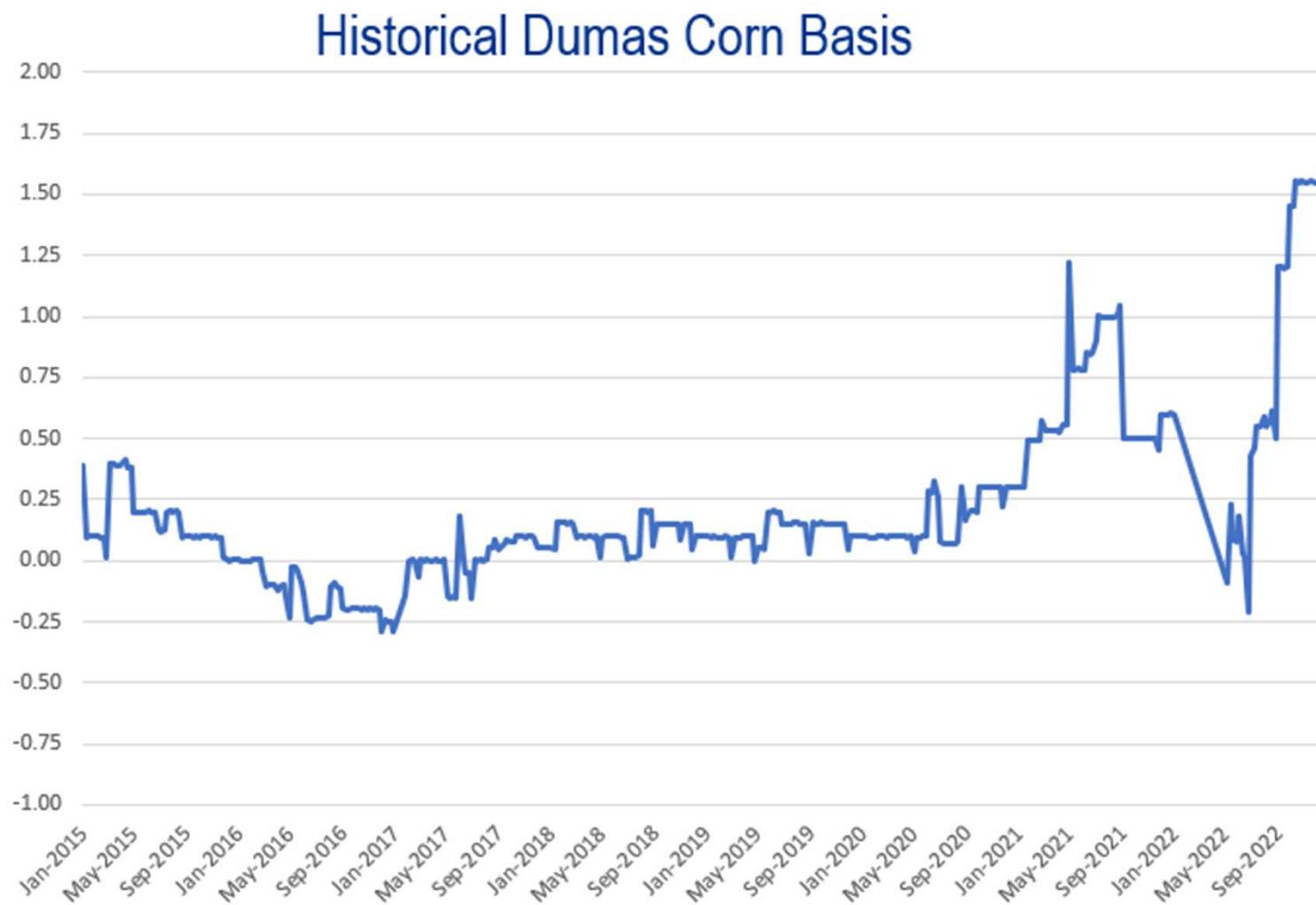
2023 Threats To The Cattle Feeder: Summary

1. **Tight corn and wheat supplies will keep regional basis strong and pressure feeding margins.** Tight feed supplies limits the ability of the cattle feeder to slow the marketing pace and help support cash prices.
2. **Weakening Domestic Economy.** As the US economy weakens and inflation persists, food service demand for beef is expected to soften. Reduced restaurant traffic can pressure the cutout which can cause the packer to slow the slaughter pace. A slowing slaughter pace can dampen the appreciation of local cash cattle prices.
3. **Rising borrowing costs.** As interest rates in the US rise so does the cost of borrowing capital to procure feeder cattle. In 2023, credit standards are likely to tighten. High borrowing costs, appreciating feeder cattle prices, amid elevated corn and operating costs can be a recipe for balance sheet volatility.
4. **Softening US exports.** US dollar strength combined with record large forecast Brazilian beef exports and growing Australian exports will create headwinds for US beef in the global market.

Tight corn and wheat supplies will keep regional basis strong

- The protracted drought in the western corn belt has suppressed wheat, sorghum and corn production.
- Logistic issues on the Mississippi River are slowing US corn exports. To offset the loss of ocean vessel exports, merchandizers are shipping corn on rail to Mexico. This is further constricting upstream supplies for cattle feeders in the Panhandle.
- Industry estimates point the strong probability of declining hard red winter wheat acres for MY '22/23. The MY '21/22 HRW ending stocks figures are the smallest since MY '13/14 and are limiting wheat in the ration.
- **Result:** Supply related price pressures are lingering inside key cattle feeding states which will keep corn and wheat basis elevated.

Tight Corn Supplies Keeps Basis Strong (Cont'd)



Source: Bloomberg, Hilltop Securities

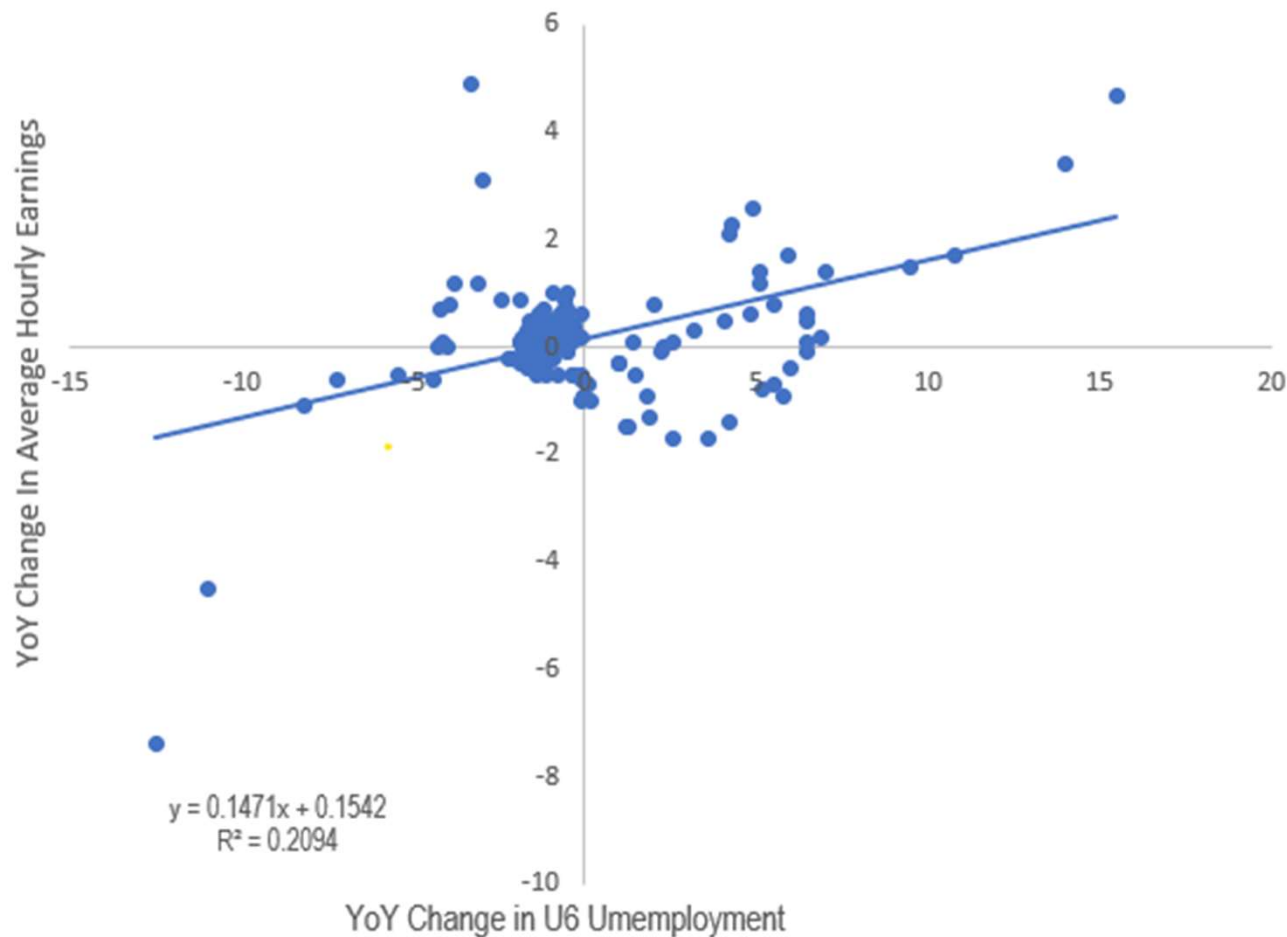
2023 Threats To The Cattle Feeder - 2/4

Weakening Domestic Economy

- To help reduce inflationary pressures the Federal Reserve Bank is trying to slow domestic economic, wage, and job growth by raising interest rates.
- Changes in the domestic unemployment rate and hourly wages can impact the type of beef demanded.
- During a recession consumers tend to “trade down”. Diner traffic at quick service restaurants (QSR) rises while traffic at upscale casual and fine dining restaurants declines.
- As the beef demand structure pivots towards QSR, the type of beef demand changes which can stress the choice cutout value.
- As the choice cutout value declines packer margins can weaken.
- If packing margins weaken while live cattle prices are rising, the packer will be incentivized to reduce the weekly slaughter pace.
- If live cattle prices are weakening while feeder cattle prices are climbing this can expose financial vulnerabilities of the cattle feeder.
- **Result: In 2023 the US economy is at risk of a recession which we view as a potential threat to packer and feedlot margins.**

Weakening Domestic Economy (Cont'd)

Rising Unemployment Can Lead To Soft Wage Growth.....



Source: Bureau of Labor Statistics, Hilltop Securities

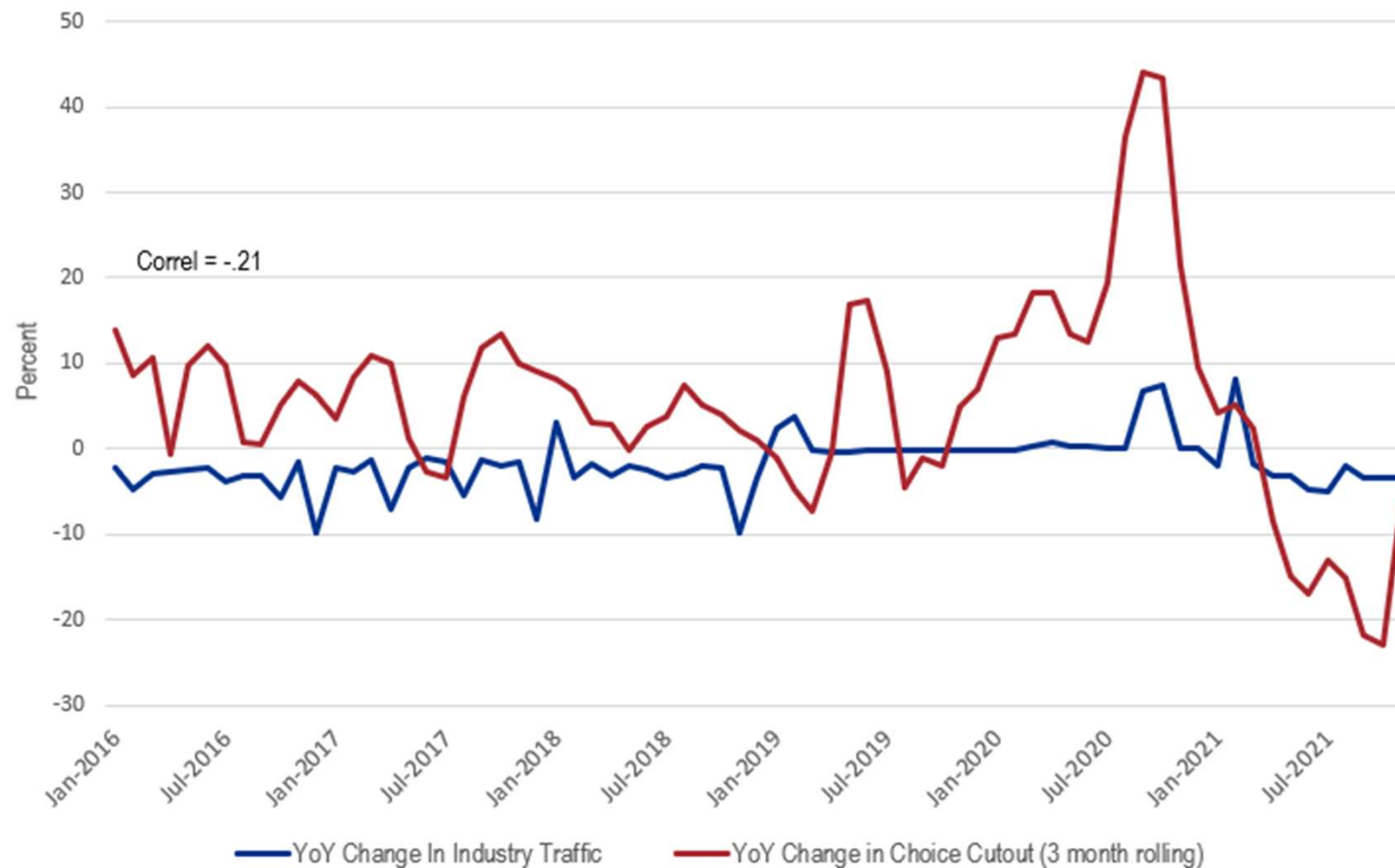
Weakening Domestic Economy (Cont'd)



Source: Bloomberg, Hilltop Securities

Weakening Domestic Economy (Cont'd)

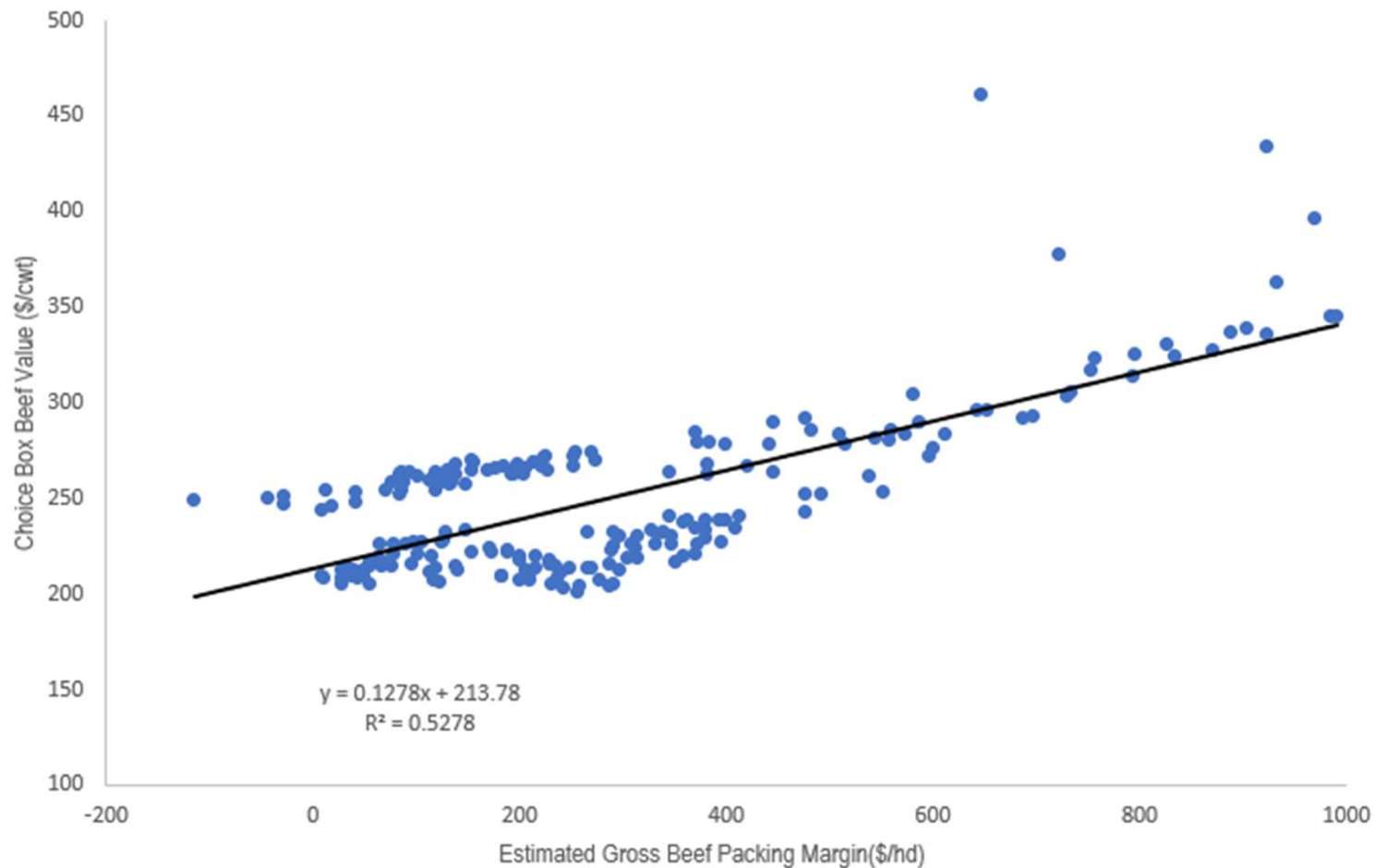
Restaurant Traffic Falls When The Choice Cutout Rises.....



Source: Bloomberg, Hilltop Securities

Weakening Domestic Economy (Cont'd)

A Weakening Choice Cutout Value Erodes Packer Margins



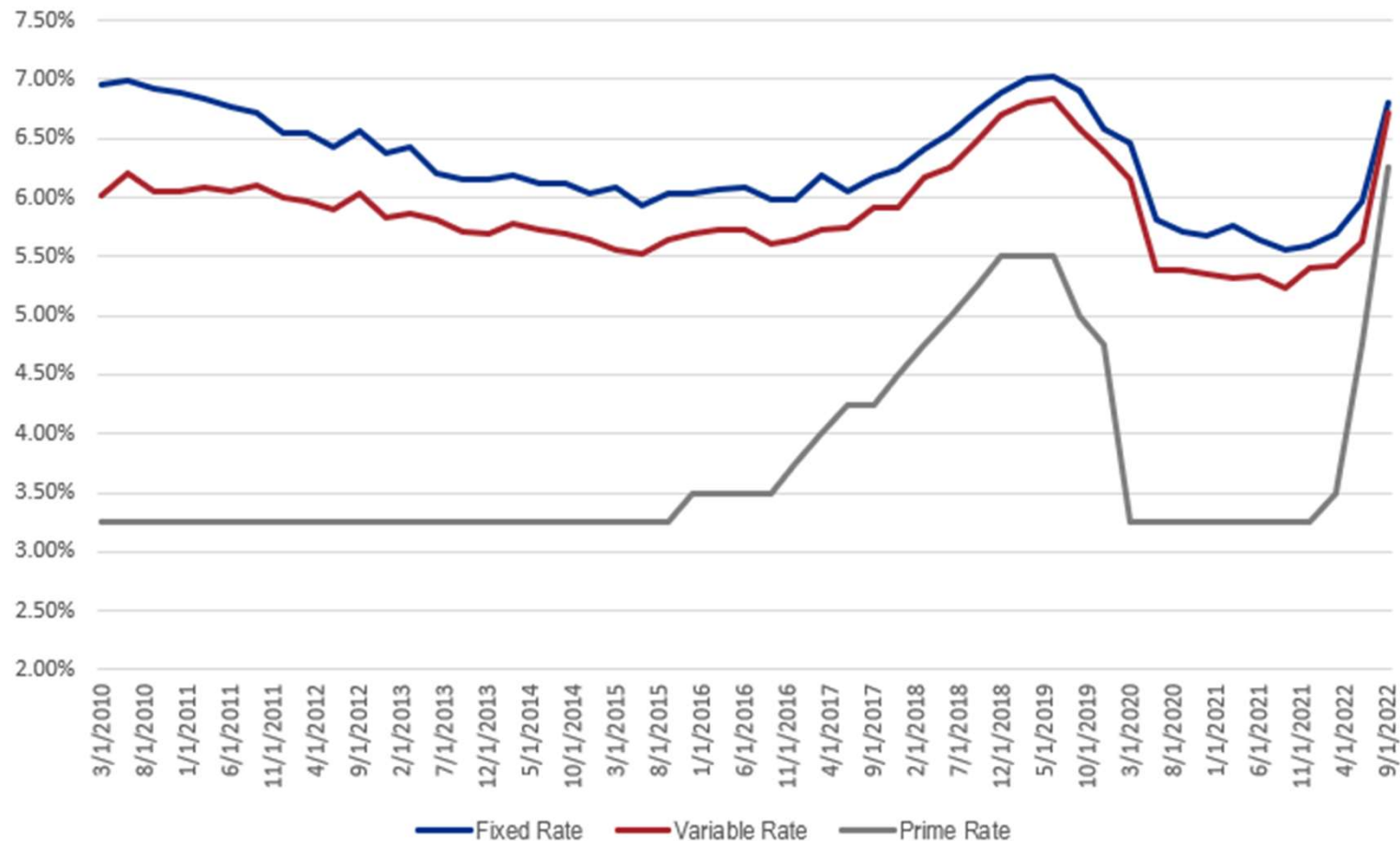
Source: Bloomberg, Hilltop Securities

Tightening Commercial Credit

- Domestic interest rates have experienced a precipitous rise over the last 9 months. Until annualized US inflation reaches 2% the Fed will keep raising interest rates which pushes borrowing costs higher.
- Historically, expansion of the US beef cattle herd has not coincided with aggressively rising interest rates and borrowing costs. This rate environment has the potential to dampen the expansion pace.
- Since 2010 the quarterly fixed feeder cattle loan rate has averaged +2.5% above the prime rate. The variable feeder cattle loan rate has averaged +2.4% above prime.
- On 12/19/22 we see the 3-, 6- and 9-month variable feeder cattle loans rates at: 10.61%, 10.59% and 9.02%.
- **Result:** Increasing borrowing costs can inflict balance sheet pressures which raises questions about solvency. High feed and operating costs combined with appreciating feeder cattle prices can create financial volatility.

Tightening Commercial Credit (Cont'd)

Eleventh District Quarterly Feeder Cattle Loan Rates



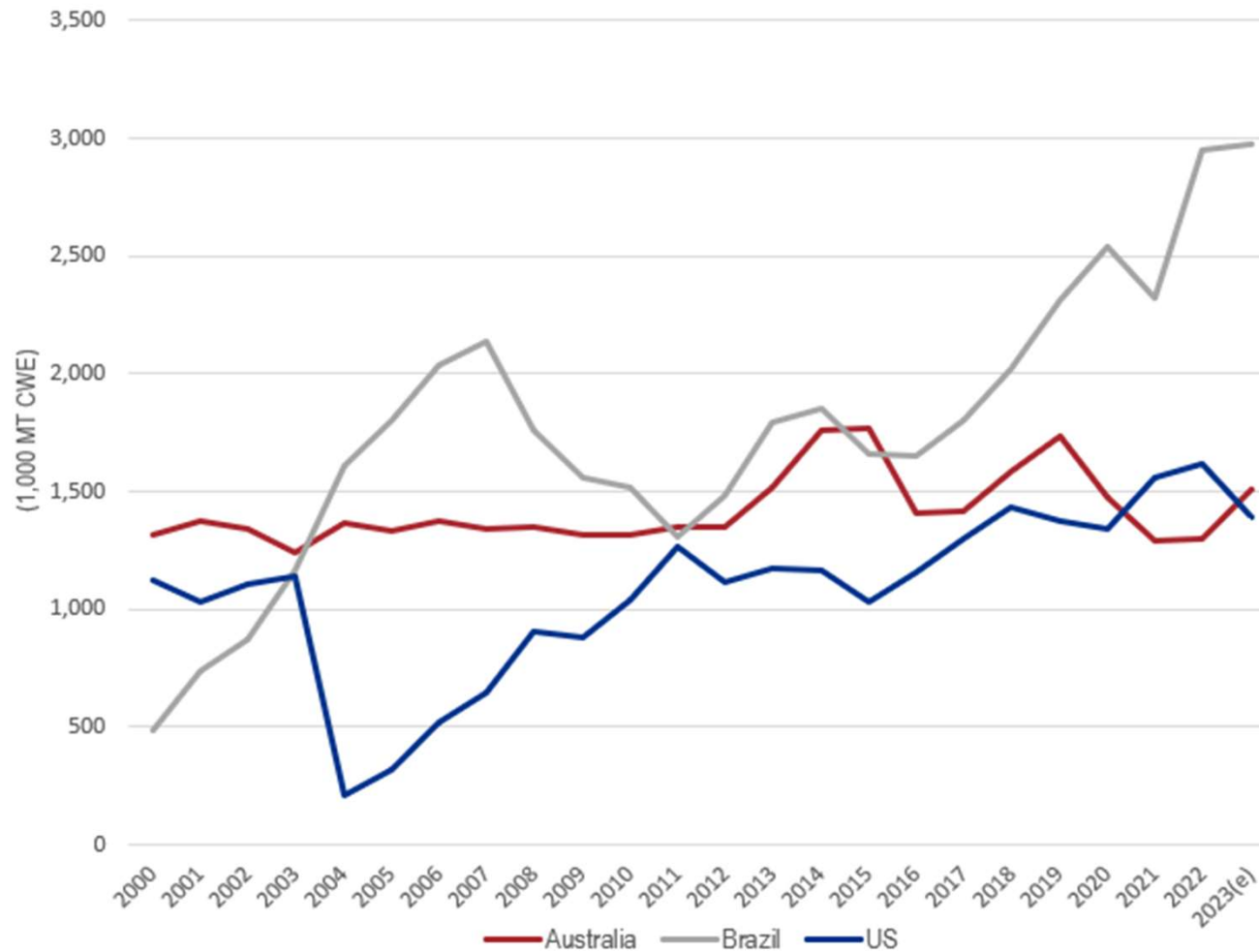
Source: Federal Reserve Bank of Dallas, Hilltop Securities

Export Headwinds

- As domestic beef supplies contract, prices will move higher. Higher beef prices inside of a strong US dollar regime makes US beef less competitive inside the global export markets.
- 2023 Brazilian beef exports are forecast at a record high. Australian beef exports are estimated to be the second largest in 5 years.
- While US beef is close to inelastic in Japan, South Korea, Mexico and Taiwan, the 2023 US beef export program will lose marginal business.
- Strong US dollar = strong beef imports which can reduce potential domestic price pressures and help fill supply gaps.
- **Result:** In 2023, the commercial feeder should not rely on export sales to help support cash cattle prices. Beef imports can also mitigate some domestic supply concerns.

Export Headwinds (Cont'd)

Annual Beef Exports



Source: USDA, Hilltop Securities

Bullish Case Explained

2023 Tailwinds For The Cattle Feeder: Summary



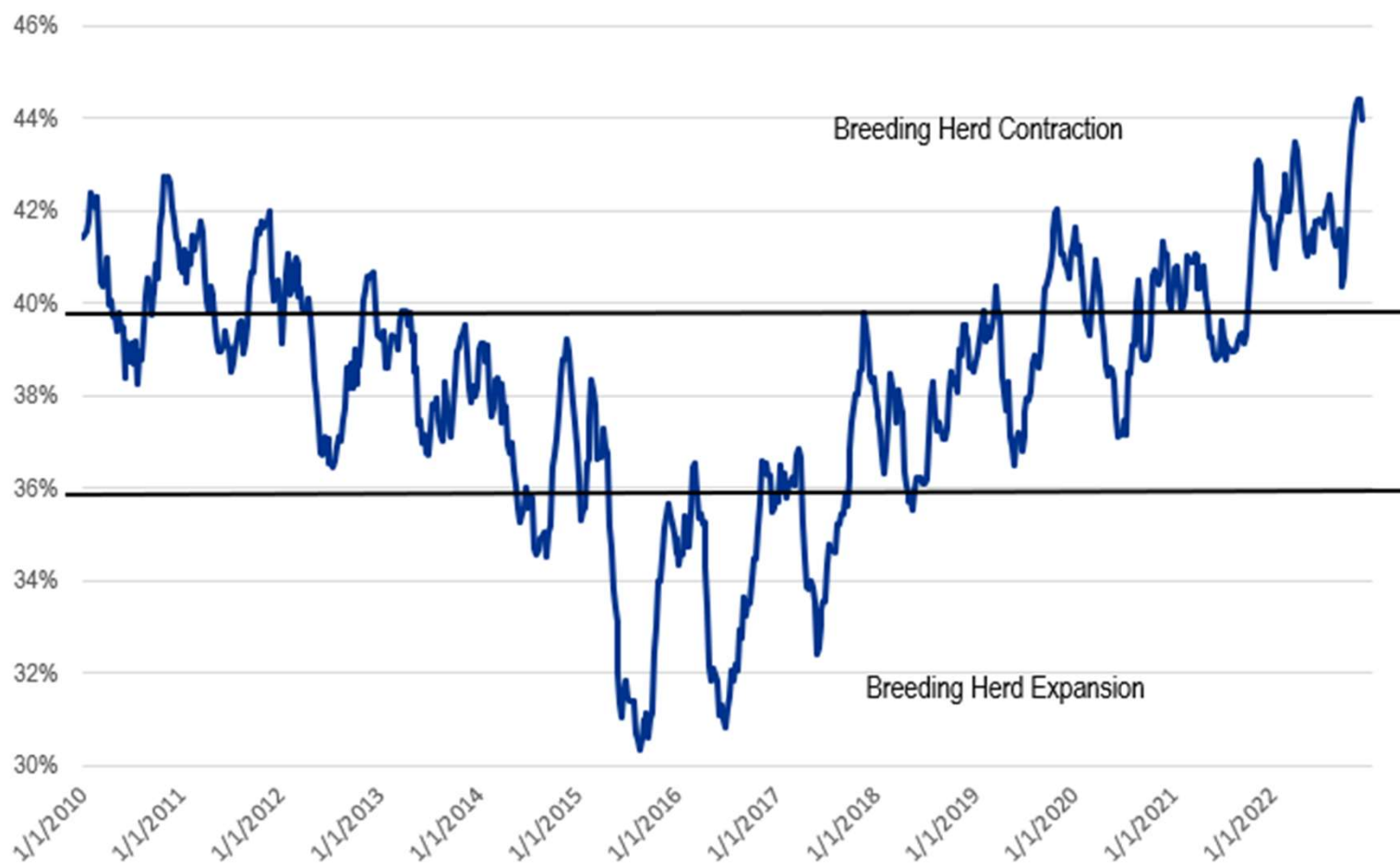
1. **The US is structurally short cattle supplies.** The single and most important variable that will support fed cattle prices in 2023 will be the structural shortage of feeder and live cattle supplies. As heifer retention hastens and beef cow slaughter slows, feeder cattle and fed cattle supplies will contract leave the market structurally short.
2. **A white-collar recession.** Despite the ambiguous outlook of the US labor market, recent job data shows structural resiliency. Hourly wage earners are in strong demand. This reduces concerns about softening food service beef demand.
3. **A softer US dollar** can limit slowing US beef export sales to critical markets.

Contracting Cattle Supplies

- As the cattle herd rebuilds breeding stock supplies for slaughter will contract.
- The latest USDA data illustrates expansionary “greenshoots” remain nascent. Heifers as a percentage of total weekly feedlot purchases are slowing. However, cows + heifers as a percentage of the weekly slaughter have not started to decline.
- Reduced feeder and live cattle supplies will likely force cash and futures prices higher.
- If packer margins do not stagnate and downstream consumer demand remains resilient, live cattle prices will increase and support feeding margins.
- **Result:** The 2023 feeder and live cattle market are all about supplies. Reduced supplies will force feeder cattle and live cattle prices higher and will support feedlot margins.

Contracting Cattle Supplies (Cont'd)

Breeding Herd (Beef Cow + Heifer) Slaughter As Percent of Total



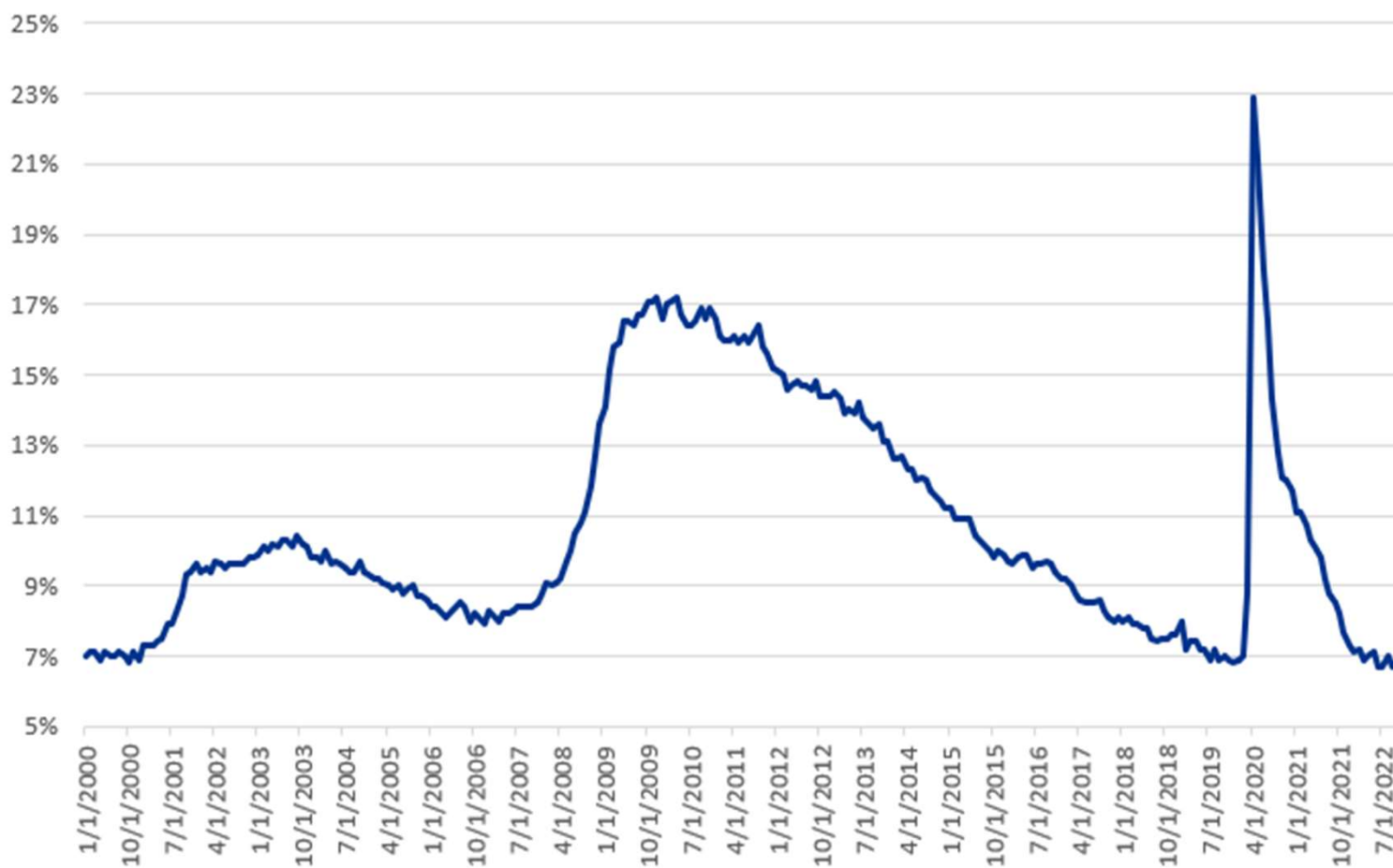
Source: Hilltop Securities

Labor Market Resiliency

- As the Fed is raising interest rates the labor market continues to be resilient. Weekly jobless claims and continuing jobless claims data shows low unemployment levels and minimal slack.
- At 6.7% US unemployment, per the U6 definition, is historically low.
- Job data illustrates continued labor market strength in lower paying services sector which is a positive for beef demand.
- Hourly wage data has been expressing some softness, but the growth pace is robust. The post-COVID wage growth rate is the fastest on record.
- **Result:** The US labor market remains resilient. Unemployment is low and wages are firm. Our models illustrate causality between the labor market and the choice cutout. If the labor market remains firm, this can limit the choice cutout's depreciation.

Labor Market Resiliency (Cont'd)

U6 Unemployment Rate



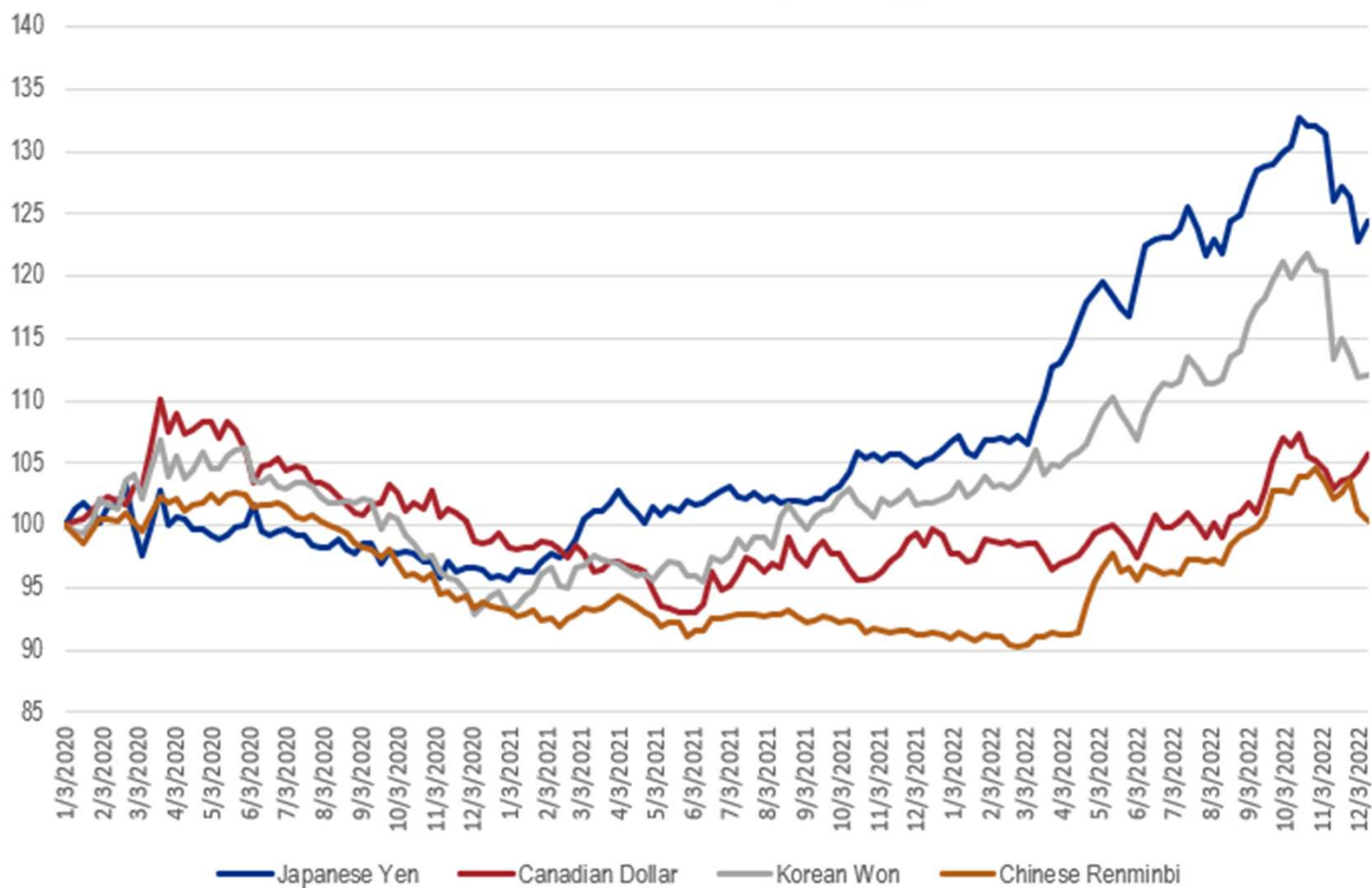
Source: Bureau of Labor Statistics, Hilltop Securities

Weakening US Dollar

- The US dollar has recently been softening against key beef export market currencies: Canada, China, Japan, Mexico and South Korea.
- Aided by Chinese import demand, US beef exports have been historically strong during 2022. China's post-COVID reopening can help reignite US beef exports.
- The weakening US dollar can generate positive tailwinds for live cattle futures.
- **Result:** While US exports are broadly expected to decline in 2023, a weakening US dollar can help exports sales which is a positive for cattle demand and prices.

Weakening US Dollar (Cont'd)

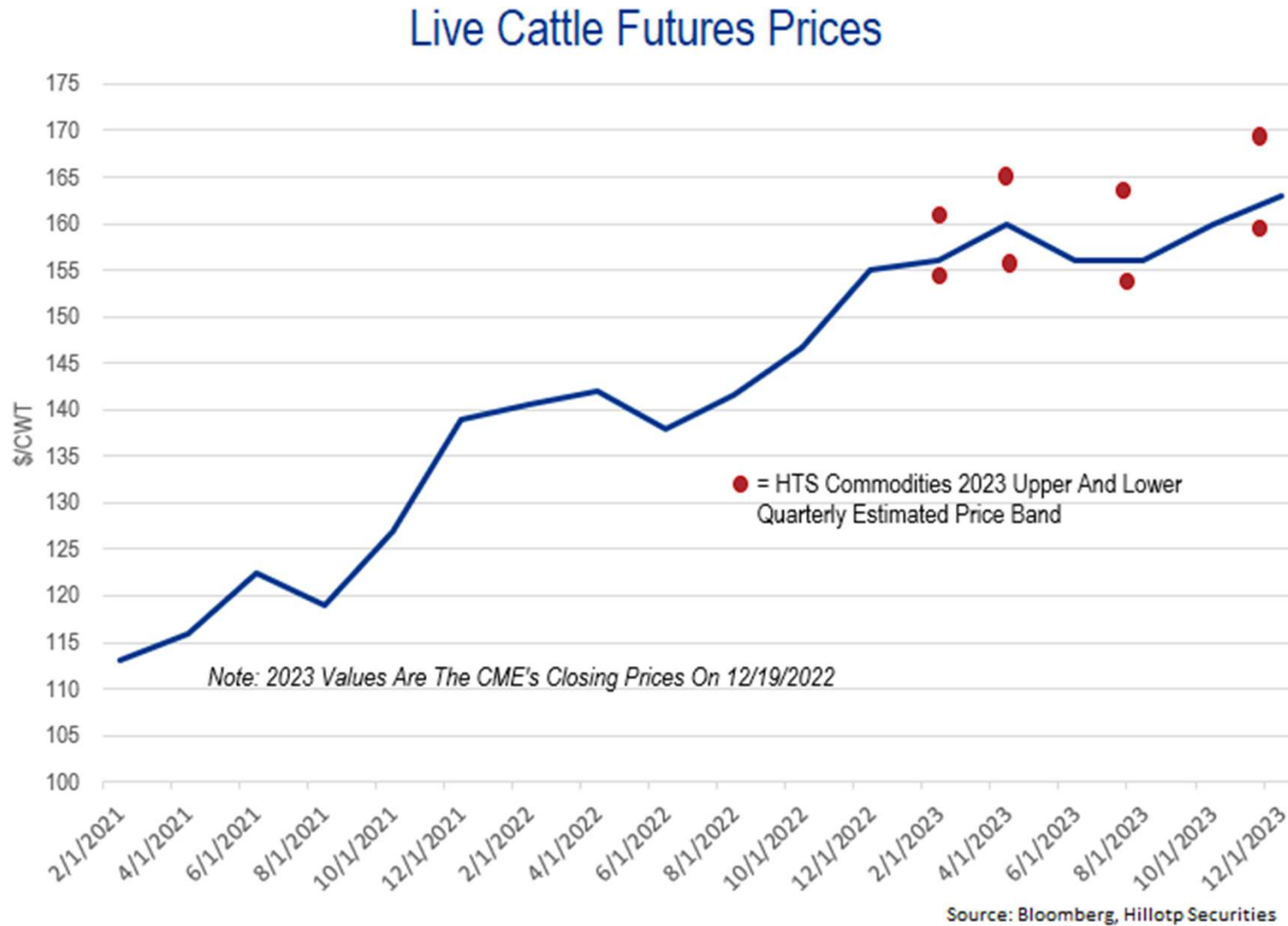
US Dollar Performance Of Beef Importing Countries Currencies



Source: Bloomberg, Hilltop Securities

Live Cattle Price Outlook

2023 Estimated Live Cattle Price Scenarios



Additional Information About HTS Commodities

About HTS Commodities



- HTS Commodities is a division of Hilltop Securities based in Dallas, Texas.
- Our office in Amarillo, TX has a long history of helping clients throughout the cattle supply chain successfully navigate market volatility.
- We listen to and work with clients to create personalized risk management solutions.
- We work with a diverse group of commodity producers, processors, and end users across the United States and cover the breadth of the commodities complex. This includes: energy, livestock, grains, oilseeds, oilseed derivatives, softs, and metals.
- We provide custom risk solutions to some of the largest multinationals but pride ourselves on working with midmarket firms.
- Please contact us with any questions about this presentation and to learn more about how HTS Commodities can solve your commodity risk management needs.

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