# Scenario Analysis of US Beef Plant Closures

## Beef packing margins are under pressure and no relief appears to be in sight

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## Background

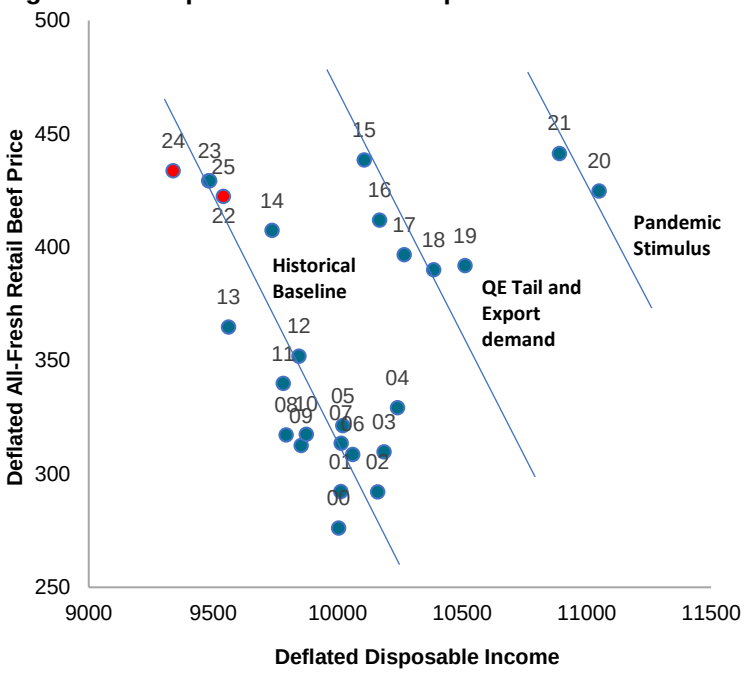
Beef packer margins have been compressing since the middle of 2023. This follows extraordinary margin delivery from 2020-2022 due to many factors. The global pandemic caused meat shortages due to reduced packer efficiency to comply with social distancing rules. The impact of stimulus payments kept overall US beef demand flowing at historical highs, therefore expanding packer margin to levels never seen in history. But now, as global inflation remains elevated, pressure on consumer at-home balance sheets is slowing demand growth. The supply-side economics are not friendly to processing margins either. The US cattle herd stands at 70-year lows which is slowly and gradually impacting cattle supplies that supply the processing plants. There is evidence that mild heifer retention has occurred in regionalized areas of the US, but broad rebuilding of the herd is not underway. That will not only leave the market available supply tighter in 2025 but will have implications for supply availability into 2026 and beyond. S&P Global Commodity Insights (SPGCI) believes that between the sharp reduction of cow slaughter this year and mild heifer retention will lead to a stabilization of the US herd level into 2025, but the prospects for meaningful gains in cattle supplies still appear to be further in the future. SPGCI estimates that, on average, US beef packers have been operating with negative margins for four consecutive quarters since the middle of last year. Included in that stretch has been the longest stint of losses without a major capacity adjustment and the worst Q2 (peak seasonal demand) results in history. With more trouble ahead, it is becoming increasingly likely that the industry will have to adjust capacity. In the last cycle low during the 2011-2014 era, multiple plant closures occurred and included major reductions from the cessation of the Brawley, Denison, and Plainview plants. In total, the daily capacity reduced approximately 13,000 head over that period and plant utilization dropped to inefficient levels. Since those closures, plant capacity has gradually increased for both fed and non-fed sectors but never back to the levels of the late 2000s and early 2010s. Yet, in recent years attractive margins and USDA grant funding have attracted new participants into the industry at a time where supply could drive utilization rates to modern historical lows. While most of these greenfield projects appear to be increasingly unlikely to open, there will be at least 2,000 head increase to daily capacity coming from new plants in 2025. SPGCI currently estimates US federally inspected steer and heifer slaughter at 23.2 million head in 2023, a 6.4% reduction from 2024 and the lowest since 2015. Total commercial slaughter is estimated to be close to 29.5 million head in 2025, again a sharp reduction from 2024 and lowest since 2015. As margins have compressed, packers have reduced weekly harvest

schedules, mostly eliminating Saturday production. On an annualized basis, the Saturday adjustment accounts for about 2 million head but has caused national utilization to slip below 90% for the first time in a decade. Given the supply outlook and the addition of new capacity, national utilization would be at risk of slipping into the low 80% range, implying an excess capacity of 4-5 million head annually. To adjust utilization rates back to normalized levels in the low 90% range, this would be the closure of multiple plants across the US. On top of this, current labor agreements limit the packers' ability to reduce working hours much lower than what is already playing out. Furthermore, any additional run reduction would result in paying labor for hours not worked, increasing per head variable cost. Below, we evaluate probable scenarios that we can reasonably expect in 2025 and compare against a base scenario.

## What is ahead?

In our current base scenario, we do not account for capacity adjustments on the premise that nothing is guaranteed, and the timing of capacity adjustments is unpredictable. Nonetheless, capacity adjustments to the beef supply chain will have less of an impact on slaughter levels and more on utilization rates at the plant level over the long run. Evaluating history, slaughter levels after major plant closures during the last cycle resulted in immediate drops in production for 30-60 days. Quickly after that period, the reduction was absorbed by other plants in the system to result in smaller than initial production losses. Evaluating the initial Plainview, TX plant closure that occurred on February 1, 2013, cattle slaughter dropped instantly for the months of February and March by 8% year-over-year. After adjusting for the difference of days between the years, cattle slaughter was down 4% versus the prior year in those months –which is approximately the capacity contribution that Plainview held at the time. Once the system realigned with lower shackle space after that two-month period, slaughter only ended up being 1% lower for the year as a whole.

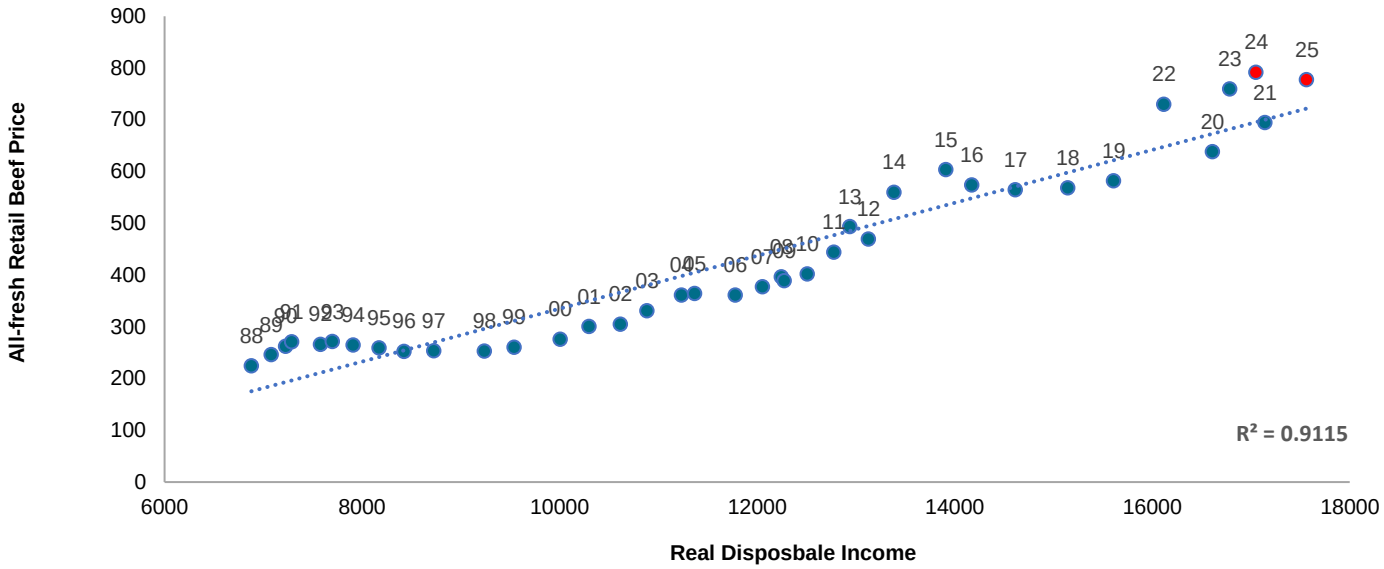
**Figure 1. Beef prices relative to disposable income**




Source: S&P Global Commodity Insights

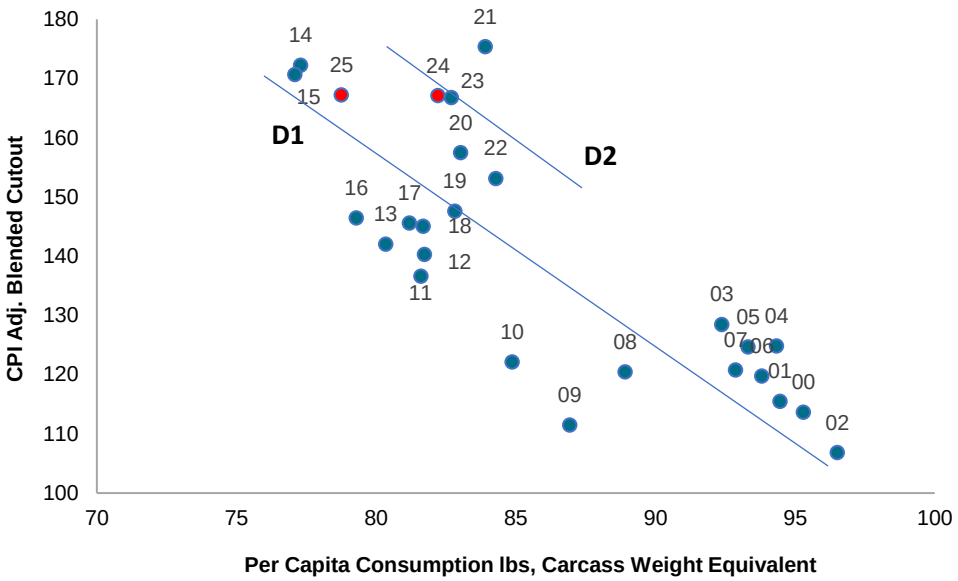

Using the above scenario as a test case, it is reasonable to expect immediate price impacts due to production loss until the system can absorb the lost capacity. Yet, perception sometimes is just as important as the facts. Buyers could perceive plant closures as extreme future tightness in the beef market, thus driving short-term demand higher to cover needs, readjust supplier diversification and realign logistical points. The magnitude of that perception will be the most difficult to quantify. In general, beef demand in the US remains strong. The impacts of the 2020-2023 period found demand at new heights and it still lies within that realm today. This is because disposable income remains robust for the US consumer on a historical basis (Figure 2). But, with prolonged inflation, growth in discretionary spending could slow as the disposable income prospects slow, thus mildly reversing the recent growth in overall beef demand. While a slowdown in beef demand is not welcome news to everyone, the production assumptions for next year would imply a pullback would be healthy for the market to avoid greater demand erosion down the road. However, if one were to evaluate consumer spending on retail beef prices (Figure 1), you would find that inflation has already taken its toll. From that perspective, spending may already be back at baseline levels relative to real disposable income, which further solidifies the fact that consumers will not pay higher prices for the anticipated supply cuts expected in 2025.

**Figure 2. Nominal US Real Disposable Income and All-fresh Retail Beef Prices**




Source: S&P Global Commodity Insights


**Figure 3. US Beef Demand 2000-2023 and Projections**




Source: S&P Global Commodity Insights

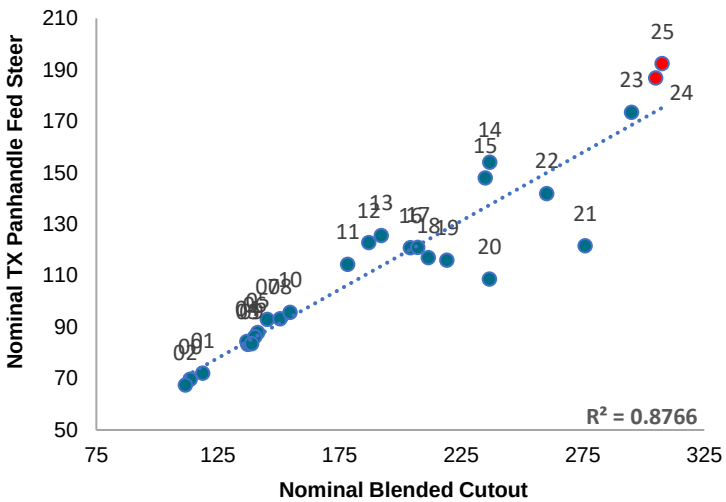

Cutout values have a negative relationship with per capita consumption (Figure 3), as is fundamental to any demand curve. Since the late 1990s when beef demand pivoted out of a long-term downtrend, that relationship has translated into an average one-pound change in per capita consumption resulting in about a deflated $24/cwt move in the opposite direction on the blended cutout value. In the last cattle cycle low period, that relationship narrowed to a $13/cwt move. At a demand base like 2020-2023, the relationship would imply a blended cutout value near $345, but factoring in our overall lower demand assumption computes a blended cutout average for 2025 in the $305-$315 range. Yet, because the inelastic nature of beef demand, a sudden plant closure would cause a temporary sharp steepening of the demand curve and potentially add $5/cwt to $15/cwt (monthly basis) of upside risk to the blended cutout in the immediate term depending on the time and size of the closure. Annually, the contribution would be $0 to $5/cwt of upside risk to the annual cutout price average.

Longer-term, there are implications for supply tightness as a function of capacity but until the US cattle herd is growing again, at a rate greater than capacity, that is not a true statement. In any scenario, we forecast supply tightness in 2025 as a function of fed cattle supplies adjusting lower on an accelerated pace to account for overall herd supplies. Non-fed slaughter levels have already made significant adjustments to the downside and are still on pace to hit our yearly forecast of 14% below 2023. Next year, there is projected to be a much milder pullback of 4-5% as cow availability starts to stabilize. The larger declines in fed supplies will be the biggest hit to production in 2025 with year-to-date contribution to overall production sitting at 84% and recent metrics closer to the 85-87% range.

For live cattle, near-term pricing will be pressured as sellers scramble to move cattle to another facility, but overall will lead to initial increases in spot availability of fed cattle. However, historically, initial plant closures have not significantly pressured prices over the medium term. In fact, the underlying fundamentals that caused capacity adjustments continued to support prices higher. Historically, it was not until capacity adjusted back to a historical relationship to supply along with herd rebuilding did the market post long-term trend reversals. Plainview closed its doors in February 2013 followed by two more major plant closures in Denison and Brawley in the following years. The collective reduction in capacity of those three plants combined with the herd rebuilding that was occurring concurrently is what caused the market to collapse in 2015 and into 2016.

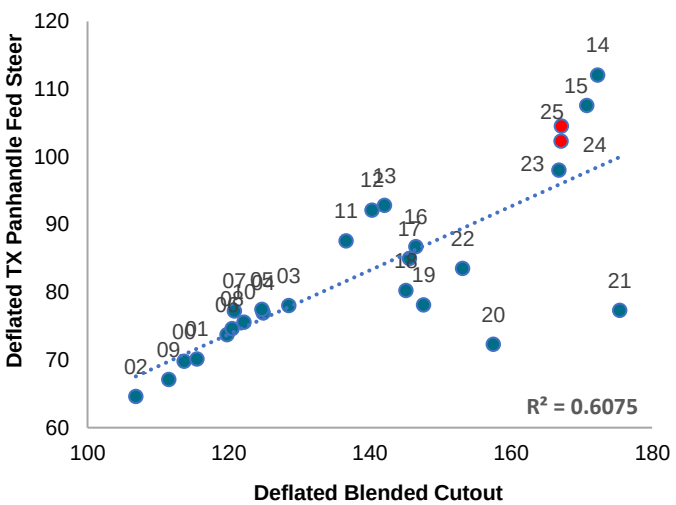
Converse to the demand curve, if you compare cutout values to fed cattle prices, they show a strong positive relationship (Figure 4). Using the same time span as earlier and on a deflated basis (Figure 5), the relationship of the blended cutout value increasing by $1 resulted in an increase of $1.27/cwt in Texas panhandle fed steer prices. As plants began to shutter as a function of supply in the last cycle, that pricing relationship over the 2013-2015 period became closer to a 1:1 move due to improved capacity utilization. As mentioned earlier, a plant closure scenario has historically led to just short-lived pressure on the cattle market on better spot availability, but the underlying fundamentals continued to support higher prices. Currently, SPGI forecasts Texas Panhandle fed steer prices at $192/cwt for 2025. The assumption of initial downside risk would have a limited impact on the annual average while the assumption that the price relationship would narrow closer towards 1:1 would imply minimal upside medium and long-term risk as well. The relationship historically moves closer to a 1:0.5-0.75 relationship in periods where capacity utilization is trending higher. In this scenario, cattle feeders are losing market leverage, and this is the primary risk. However, it takes months if not years to develop the shift back to trend.

**Figure 4. Nominal Blended Cutout and TX Panhandle Fed Steer Prices 2000-2023 and Projections**




Source: S&P Global Commodity Insights


**Figure 5. Deflated Blended Cutout and TX Panhandle Fed Steer Prices 2000-2023 and projections**




Source: S&P Global Commodity Insights

## Conclusion and Risk Mitigation

SPGCI sees capacity reduction as an inevitable action in the supply chain for the above reasons. The timing of plant closures will remain unpredictable. From a beef buyer perspective, now is the time to seek supplier diversification and evaluate logistical disruption risks. Market price risk remains to the upside but, in relation to annual price averages, has more to do with overall declining supplies feeding into smaller beef production levels on a rolling basis in 2025. For beef sales departments, contingency plans for sales mix disruptions would be prudent along with being prepared to pick up market share if a competing plant closes are the primary action steps to think about. Fed cattle sellers have risks to begin planning for as well. In our findings, market downside risk was minimal historically with initial plant closures over short and medium term. But, as a consequence of sequential capacity reductions in previous cycles, the market responded with long-term trend changes over time as capacity realigned with more historical relationship of supply and historical utilization rates.

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