

Not the Fed Tealbook, August 2023

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Not the Fed Tealbook

August 2023



The Central
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Abstract

“Not the Fed Tealbook” simulates a state-of-the-art macroeconomic analysis and streamlined monetary policy note with limited resources. This provides a simple and accessible application of the Forecasting and Policy Analysis (FPAS) Mark II framework that incorporates uncertainty, nonlinearities, and Alan Greenspan’s 2004 formulation of “monetary policy as a risk management exercise.” This conceptual and analytical approach is applied to the US, given its importance in the global macroeconomy and the ready accessibility of data and analysis. The analysis features the key aspects of current stage monetary policy discussions, namely important nonlinearities in economic behaviors and the significance of endogenous policy credibility. The report also highlights the importance for central banks to be transparent about how they are effectively managing the inflation-output (employment) tradeoff in calibrating monetary policy.

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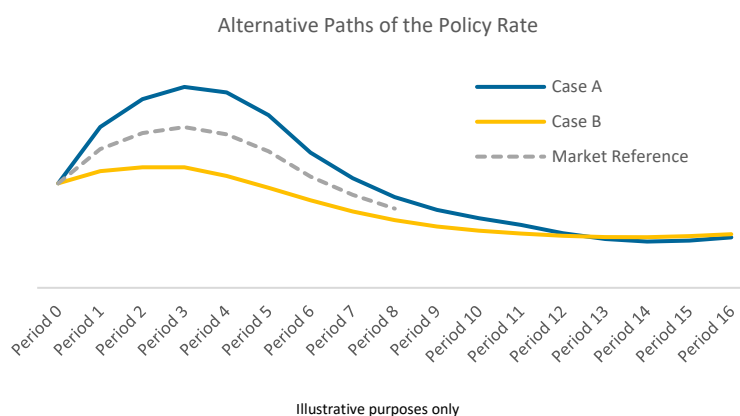
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Monetary Policy as Risk Management Framework

Our framework for monetary policy is through a lens of risk management to analyze and communicate the uncertainty surrounding the economic outlook more effectively. Our approach is to consider alternative scenarios for the evolution of the economy that have important implications for monetary policy. Elevated uncertainty is a reality that central banks must manage, and we do this by explicitly incorporating it into our analytical process and communication. We develop and analyze two or more illustrative scenarios that would imply a higher or lower path for interest rates than what is currently priced in financial markets. These scenarios should not be interpreted as pure risk scenarios but are meant to represent plausible paths for policy rate that could be in an individual's baseline scenario.

- **Market Reference** is the expected path of the policy rate that is currently priced in financial markets.
- **Case A** reflects a scenario that incorporates economic and financial developments that would require a higher interest rate path than what is currently priced in financial markets that is consistent with guiding the economy back to its long-run equilibrium.
- **Case B** reflects a scenario that incorporates economic and financial developments that would require a lower interest rate path than what is currently priced in financial markets that is consistent with guiding the economy back to its long-run equilibrium.



Why a scenario-based approach to risk management?

To conduct monetary policy in a highly uncertain environment, we believe that Board decision making, and communication are more effective when this uncertainty is recognized at the beginning of the process and incorporated throughout, rather than starting with competing baseline forecasts offered by different Board members and attempting to reconcile them to achieve a consensus decision.

Since the primary mechanism for the transmission of monetary policy is through the expected path of the policy rate, our alternative scenarios are constructed around the market reference path. We believe the approach will lead to a more constructive discussion among Board members because they will focus on whether the market interest rate path needs to be nudged in a particular direction to best achieve the objective of price stability. Case A and B scenarios will be plausible but will differ from the scenario underlying the market reference path because they will illustrate the impact of different risks and uncertainties.

These alternative illustrative scenarios will provide a consistent and useful backdrop that will allow Board members to express their views flexibly and qualitatively about the appropriate path for the policy interest rate given the uncertain outlook.

Through the presentation of multiple scenarios relative to the market expectation, the central bank will not only be able to better communicate the uncertainty they are confronting, but also more effectively nudge market rates in the direction of the scenario that better balances these risks and uncertainties.

Statement of the Mock Monetary Policy Committee

The Mock Monetary Policy Committee (MMPC) seeks to achieve an inflation rate of 2 percent over the medium term. In support of this goal, the MMPC decided to raise the target range of the federal funds rate by 25 basis points to 5.50-5.75%. While annual CPI inflation declined sharply to 3.1% in June, the MMPC remains concerned about robust economic activity and underlying inflationary pressure posing upside risks to inflation, which outweighed financial instability concerns and bank lending tightness. In the view of the MMPC, we believe given the strength of the real economy that it must take primacy when thinking about monetary policy setting and achieving long-run macroeconomic stability. In the meantime, there are other tools to deal with backstopping the financial system to prevent contagion from forming. Giving up on our macroeconomic objectives too soon may present an even greater threat to the financial system if not dealt with in a timely manner. That said, we are cognizant of tighter credit standards that may simply take more time to feed through the system given distortions around household balance sheets, namely excess savings, and real wealth accumulation during COVID.

In order to feel confident that we are on the path towards achieving our objectives of sustainable full employment and inflation target, we need to see a material slowdown in demand When the MMPC began raising interest rates in March 2022, we were hopeful that by this time we would start to see a material slowdown in broad economic activity and labor market that is consistent with bringing inflation back to 2% i.e. below potential growth. Even though interest rates have clearly impacted sectors such as housing, the economy continues to grow at or above potential.

We find it hard to believe that wages can fall without a substantial cooling of the labor market. The labor market remains secularly tight with an unemployment rate of 3.7% in an environment where there are more than 1.3 job vacancies for every unemployed person. Wage inflation continues to be stubbornly high and poses the main challenge for bringing down underlying inflation in the economy that is consistent with the target.

Long-term inflation expectations remain anchored; however, the longer inflation remains elevated the greater the risk of de-anchoring becomes. The disinflationary forces in goods and commodity markets in the second half of 2022 was a strong motivating factor for being optimistic about lower underlying inflation and the belief that the Fed Funds rate was positioned sufficiently tight, however, different measures for core inflation have had a more difficult time to disinflate and remain uncomfortably elevated and therefore likely require a higher policy rate than what is priced in financial markets barring any systemic risk to the banking sector that goes beyond the recent troubles at Silicon Valley Bank.

The MMPC considers a host of different scenarios and that are guided in part by a policy strategy of least regrets that avoids more punitive interest rate increases in the future that would jeopardize our ability to engineer a smooth return of output and inflation back to their long-run objectives. Weighing the risks between inflation becoming entrenched or financial hardness triggering prolonged recession, the MMPC has voted to move policy in a tighter direction to reach the terminal rate that we believe is necessary to achieve our objectives sooner rather than later and will re-evaluate policy based on the scenarios presented in this report whether rates need to continue to rise or not.

Monetary Policy Outlook in a Nutshell

Preface: Looking at the data today, one can come up with different interpretations to derive plausible scenarios for the economy that move in very different directions, in other words, uncertainty around the future path of policy interest rates required to achieve our objectives remains substantially high. Therefore, the choices and magnitudes behind the different case scenarios are meant to reflect the range of plausible scenarios that different policymakers would consider as their “most likely” path of the economy. These scenarios are meant to play a role for managing these different risks in real time depending on which mix of risks materialize. Furthermore, by taking these alternative viewpoints seriously and developing them in a structured way, we hope it will help policymakers and analysts have more productive discussions and help financial markets manage uncertainty more accurately.

Global Economy: The GDP growth outlook is expected to slow as growth prospects in advanced countries remains poor as energy and productivity shocks stemming from the conflict in Ukraine continues to weigh on growth in 2023, especially in the Euro Area. At the same time, although after ending the zero-COVID policy China was projected to apply some upward support to global growth, the unexpected slowdown of economic activity in recent months point towards a more fundamental structural issues in the second-biggest economy in the world. The uncertainty in the global economy increases the volatility in the commodity markets such as oil. The strategy by which the OPEC is controlling the output puts a downward risk on the supply side of the oil market. Given that the oil market is relatively balanced, modest changes to demand or supply could easily begin outstripping the other and apply pressure on oil prices in either direction.

Domestic Economy: GDP growth measured in 2.4% in 2023Q2 largely driven by investment while consumption showed some signs of deceleration. Residential fixed investment continues to be the major drag on the economy since tightening policy, and both export and import have declined in this quarter reflecting the significance of the demand issues at the trading partners (especially in EU and China). While consumer spending showed some signs of deceleration, the strong household balance sheet and high wage growth are expected to further support private consumption and domestic demand. If consumption rebounds and continues it would suggest that the economy is operating above capacity, while the risks of a recession in the upcoming quarters remain elevated on the back of the tighter financial conditions.

Labor Market: Wage growth that is around 6% YoY over the past several months which if sustained would present a problem for monetary policy to bring inflation back to target as it supports underlying inflation to be substantially higher. Furthermore, the high number of job vacancies to each unemployed person makes it reasonable to expect wage inflation could remain elevated until the labor market cools much more than it has either through announced layoffs materializing or tighter credit conditions.

Inflation: Headline inflation is decelerating at higher rates driven by goods inflation. The latter reflect the deflationary trends in the global food and energy markets where the shock from the war in Ukraine peters out. Furthermore, China’s reopening and general mitigation of global supply disruptions will continue to have positive disinflationary impact on the price of imported goods and products. The major concern at this point continues to come from the labor market, where the higher wages are expected to contribute to the sticky prices of the consumer basket, namely the service sector. Meanwhile, some housing market indicators signal the possibility of expected gradual decline in the rent prices. However, the forces driving down the goods inflation may have begun to evaporate suggesting core inflation could remain elevated in the near term. How fast core inflation disinflates is of the utmost importance to monetary policy so that inflation expectations do not begin to ratchet upwards despite a slowing economy, making the pain of disinflation worse.

Financial Markets: After the steps taken by authorities to backstop the banking system in the wake of the Silicon Valley Bank collapse, the concerns with regard the possible banking contagion abate substantially. This is reflected in a rebound of the expected path of the Fed funds rate back to almost pre-SVB levels. Issues connected to the possible tradeoff of whether the financial sector is prepared to the higher interest rate while the macroeconomic

disbalances continue to jeopardize the price stability have moderated but continue to describe the policymaker's main fears.

Monetary Policy: Despite a decline in annual CPI inflation to 3.1% in June, many signs point to the need for keeping the tighter monetary policy for a longer horizon (Case A). Economic strength and underlying inflationary pressures outweighed concerns about financial instability and tight bank lending conditions. High wage inflation and challenges in reducing underlying inflation persist, leading to a tighter policy direction to achieve objectives. Despite high uncertainty about the possible scenarios how most of the discussed factors would evolve in the future monetary policy should emphasize the importance of prioritizing the real economy for long-term macroeconomic stability, while also acknowledging the need for tools to address financial system stability.

Global Economy

Case A-type Considerations

Expansionary Demand: Stronger economic recovery in China and Europe in 2023 relative to the headwinds (zero-COVID and Ukraine conflict) that impacted growth in 2022.

Contractionary Supply: OPEC's decision to reduce production is putting a floor and upward pressure on oil prices.

Case B-type Considerations

Contractionary Demand: Persistent credit contraction in Europe and continuing concerns about China's financial system.

Expansionary Supply: Global commodity prices such as food have declined since the Ukraine conflict began and China's reopening could help ease supply-chain issues further.

Global Growth

2022 was marred by the war in Ukraine and zero COVID policy in China. Recent forecasts by the IMF and the European Commission expect energy and productivity shocks to continue to weigh on global growth and inflation in 2023. However, the removal of these shocks sooner than expected could bring forward upside potential for both growth and inflation.

However, optimism of China's economic recovery is hitting a snag resulting in the PBOC to cut interest rates at the latest meeting suggesting underlying growth could be in serious trouble.

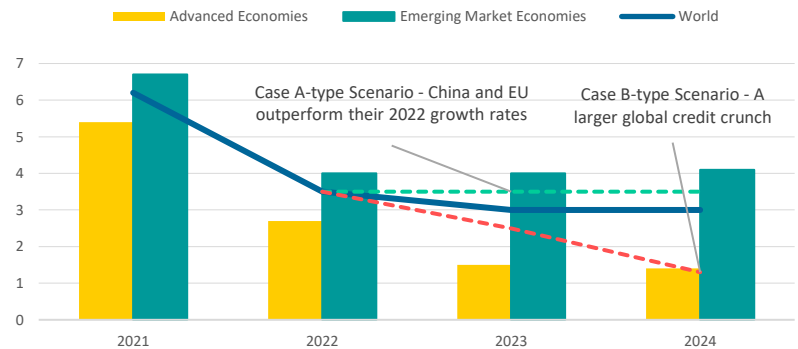
Commodity Prices

Oil prices are expected to rise moderately over the next several months. The seeds of demand outstripping supply might be taking hold and if sustained based on stronger than expected economic activity could pose upside risk to oil prices and threaten the recent rapid speed of disinflation back to target.

Furthermore, the decision and strategy by OPEC to reduce output puts an upward bias on prices.

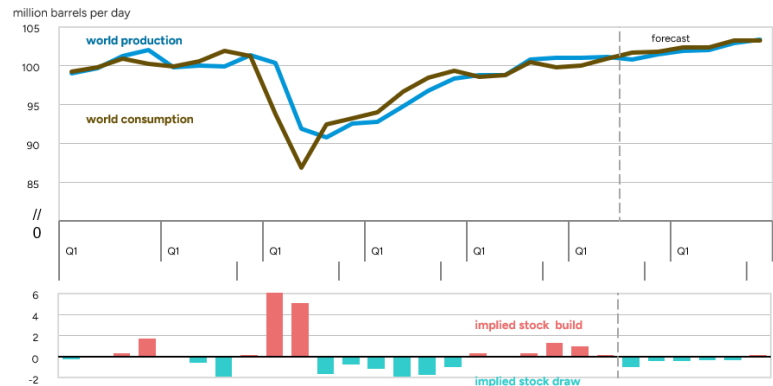
The international food prices (FAO) and especially those of wheat and vegetable oil would be driven by renewed uncertainties about the exportable supplies from the Black Sea region following the decision taken by Russian to terminate the implementation of the Black Sea Grain Initiative. This, in parallel to continued dry conditions in the US and Canada might put additional inflationary pressure on food prices.

Figure 1: A More Resilient Global Growth Environment Could Complicate the Speed of Disinflation While Still Mindful of Potential Financial Instability



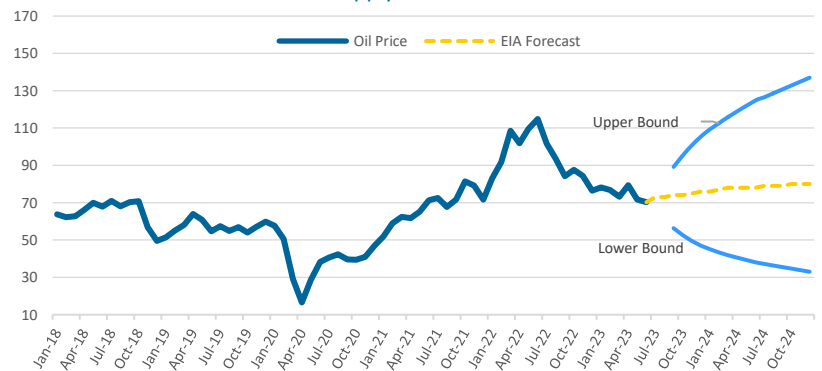
Source: IMF, July WEO

Figure 2: Global Oil Demand Remains Strong but China's Economic Recovery Poses Some Downside Risks



Data source: EIA, STEO, July 2023

Figure 3: Oil Prices Expected to Rise and Risks to the Upside are More Pronounced Given Risks to Growth and OPEC Supply Constraints



Source: EIA STEO July 2023

Domestic Output

Case A-type Considerations

Expansionary Demand: Consumer demand remains strong and net exports move back towards pre-pandemic levels as global trade normalizes with the reopening of China.

Contractionary Supply: The semiconductor shortage continues to impact the production of new vehicles that could revert the recent disinflation in used and new vehicle prices.

Case B-type Considerations

Contractionary Demand: The rise in the net percentage of banks tightening credit standards may lead to a sizable credit crunch that would have recessionary effects.

Expansionary Supply: Manufacturing production ramping up again after a year of decline as the goods sector normalizes post-COVID.

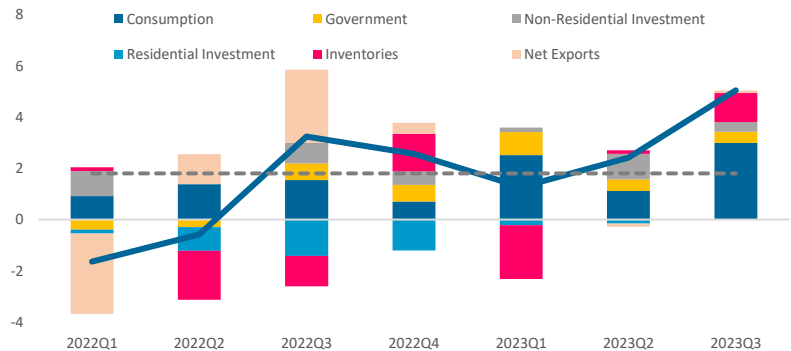
Real GDP

Growth came in at 2.4% in 2023Q2 with most sectors of the economy contributing positively to output.

The Case A-type of world reflects consumption remaining strong and the inventory drag reverts as manufacturers scramble to respond to the recession that has yet to materialize.

Case B will broadly revolve around tight bank lending conditions taking hold once important distortions such as excess savings or revenge spending get absorbed and household balance sheets return to a more normal state.

Figure 4: GDPNow Expects 2023Q3 GDP Growth to Accelerate to 5.0% on the back of Strong Consumption



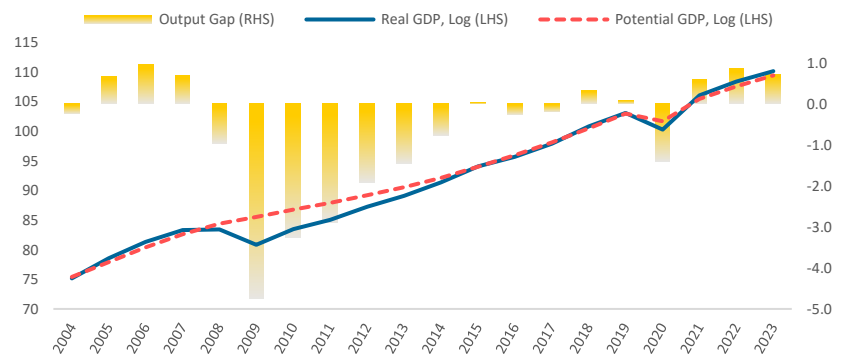
Source: FRED, Atlanta Fed GDPNow

Output Gap

The initial position of the economy remains in a relatively hot position with aggregate demand continuing to outstrip aggregate supply so far in 2023 and applying upward pressure on prices.

Until the risks from recent banking fragilities are realized it is difficult to anticipate bank lending tightness compared to previous credit crunch induced cycles given the unique position of the economy today that is still rebalancing post-COVID.

Figure 5: The Output Gap is Estimated to be Positive as Long as Growth Remains at or Above 1.8%

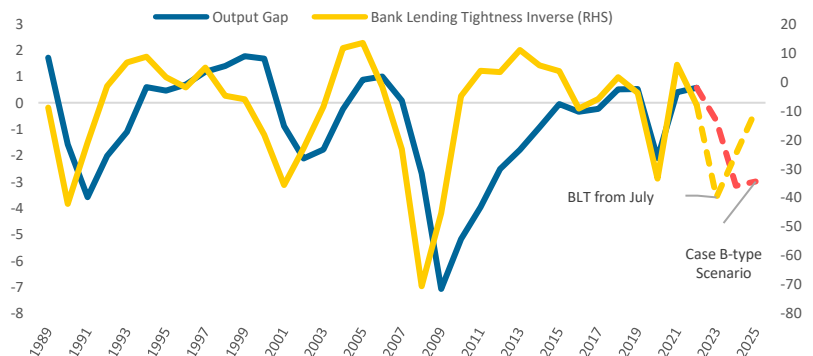


Source: Staff projections, MPMOD Case A, June 2023

Bank Lending Tightness

Historically, the bank lending tightness index has been a reliable leading indicator of economic downturns, however again the uniqueness of the current situation could be confounding the usefulness of this variable. For instance, it may simply be reflecting the rapid rise of nominal interest rates despite real rates remaining subdued. At the same time, given the usual lag that financial conditions impact economic activity, one can expect significant deceleration in the upcoming quarters on the back of continuous tightness in the bank lending standards typically describing and motivating for a Case B scenario.

Figure 6: The Bank Lending Tightness Indicator Could be a Harbinger for What is to Come and Undergirds Our Case B-type Scenarios



Source: Staff projections, MPMOD Case B, June 2023

Box 1: Consumption Outlook

Brief History of COVID-related Government Spending

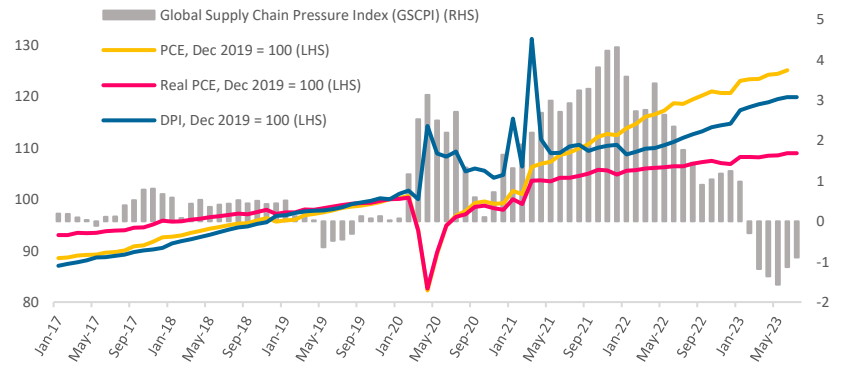
2020	
<p>March 27 CARES Act authorized EIP 1</p>	<p>March 13 US declares COVID-19 a national emergency</p>
	<p>April 10 EIP begins issuance</p> <ul style="list-style-type: none"> Up to \$1,200/adult and \$500/child 168.2 million payments totaling \$280 billion
<p>December 27 Consolidated Appropriations Act, 2021 authorized EIP 2</p>	<p>December 29 EIP 2 begins issuance</p> <ul style="list-style-type: none"> Up to \$600/person 152.4 million payments totaling \$147.9 billion
2021	
<p>March 11 American Rescue Plan Act of 2021 authorized EIP 3 and Advance Child Tax Credit Payments</p>	<p>March 17 EIP 3 begins issuance</p> <ul style="list-style-type: none"> Up to \$1,400/person 175.8 million payments totaling \$409.6 billion
	<p>July 15 Advance Child Tax Credit payments begin</p> <ul style="list-style-type: none"> Up to \$250-300/child 216.8 payments totaling \$93.5 billion

Soon after the most intense months of the COVID pandemic we observed that demand had largely recovered to its pre-pandemic level (Real PCE) supported by large fiscal stimulus at a time when there were persistent supply constraints from periodic lockdowns (GSCPI). To summarize, aggregate demand initially fell by more than aggregate supply but recovered much more quickly than supply and as a result sticky price inflation saw a marked increase during this time.

Despite consumer demand recovering quickly, demand for services has been slower to return to its pre-pandemic levels suggesting some slack or pent-up demand for services which could pose upside risk to underlying demand that would complicate a timelier disinflation process back to the target.

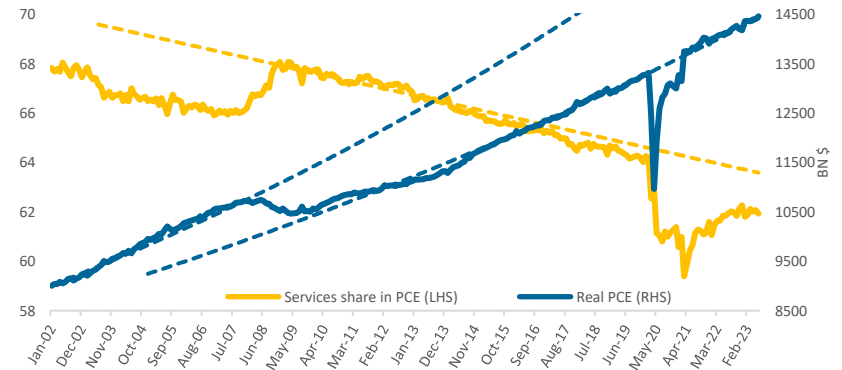
On the other hand, the desired stock of durable goods relative to services could be structurally higher today as work-from-home policies remain structurally higher relative to their pre-pandemic levels and therefore be another source of underlying demand that could keep inflation from returning to 2% in the medium term.

Figure 1a: One-time Pandemic-related Paychecks Boosted Demand Strongly Amid Constrained Supply



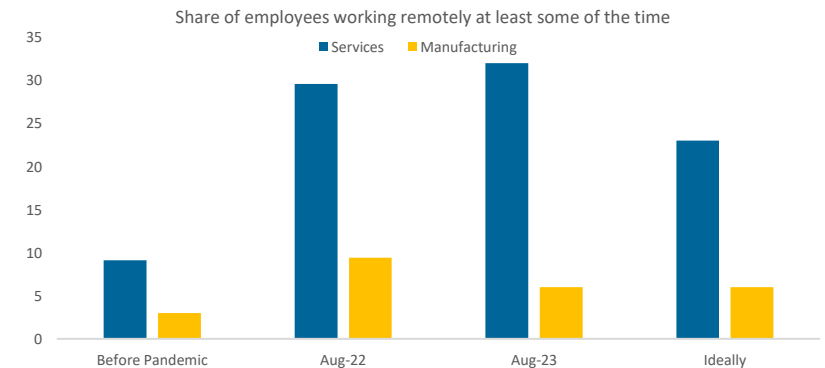
Source: Fred, NY Fed

Figure 1b: Services Consumption Keeps Recovering Boosting Underlying Economic Growth but Still Remains Lower than Before the Pandemic



Source: Fred

Figure 1c: Staying Home and Accumulated Wealth Has Kept Spending on Durables High Reflecting Some Behavioral Changes



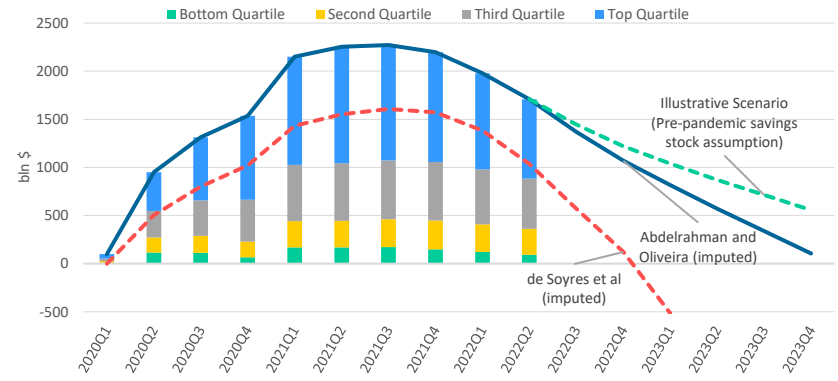
Source: NY Fed

Box 1: Consumption Outlook

Excess Savings

Analysis around excess savings remains relevant today, however there is substantial uncertainty about its current state. A recent update by Abdelrahman and Oliveira of the San Francisco Fed agree that based on past savings rate that aggregate excess savings is likely to remain positive into 2023Q4 as we illustrate in Figure 1b. On the other hand, de Soyres et al. (2023) provide an alternative methodology for computing excess savings which suggests the excess had already been removed in 2023Q1. Given the current state of the economy, we tend to believe that excess savings are still present and supporting consumption.

Figure 1d: Excess Savings Are Expected to Remain Positive and Therefore, Continues to Complicate the Efficacy of Monetary Policy

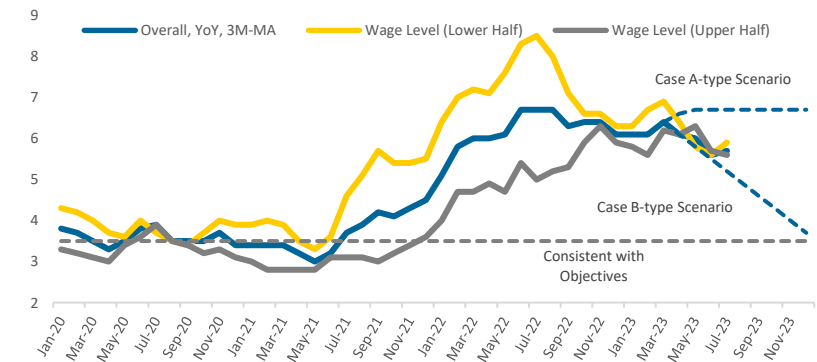


Source: Staff estimates, Fed

Wage Distribution

Despite the bottom quartile of the income distribution having drawn down a sizeable portion of their excess savings during the pandemic period, it has been the lower income levels that have benefited most from the pandemic labor market. Whereby the lower income levels have seen their wages rise substantially more than those in the upper half of the income distribution, however, that gap has since closed. Given that during the pandemic, it was the lower paying jobs most associated with labor shortages and bottlenecks makes this recent deceleration of wage growth especially interesting for those that believe we could see a material decline in inflation via lower wage growth without a large increase in the unemployment rate. In fact, since the previous update, wages have followed more closely this type of scenario (Case B).

Figure 1e: Are COVID-related Labor Bottlenecks Subsiding Without a Rise in Unemployment?

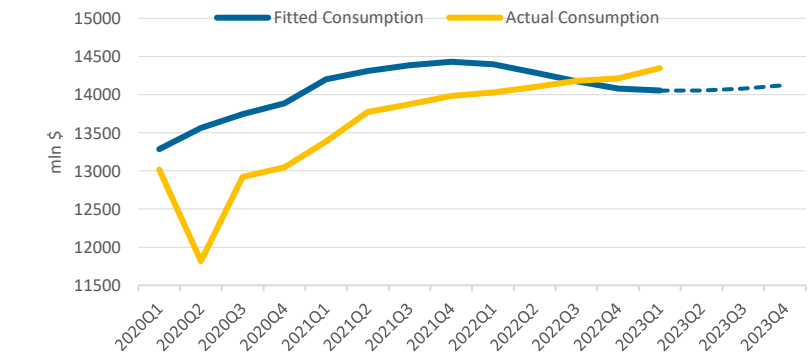


Source: Atlanta Wage Tracker, staff illustrative examples

Consumption Function

Using optimistic assumptions for real disposable income and wealth, we are likely in a period where actual consumption will outstrip underlying consumption. Under typical circumstances, this would lead us to believe that consumption would begin to slow to close the gap between actual and the underlying one. However, after a period of forgone consumption during COVID, consumers may begin to enter an extended period of "revenge spending" before fitted consumption starts reflecting actual consumption once again.

Figure 1f: Will Consumption Slow or Are We in a Period of Revenge Spending?



Source: Staff estimates

Labor Market

Case A-type Considerations

Expansionary Demand: A tight labor market persists, and wage inflation remains elevated especially among the lower income quartile whose excess savings have become depleted.

Contractionary Supply: Bottlenecks persist especially among the lower income half of the wage distribution keeping upward pressure on wage growth.

Case B-type Considerations

Contractionary Demand: Unemployment rises rapidly. The WARN act layoff announcements are realized.

Expansionary Supply: Beveridge curve shifts back to its pre-pandemic position suggesting a lower estimate for NAIUR than what is currently assumed.

Unemployment Rate

Regardless of one's estimate of the NAIUR, the current unemployment rate of 3.5% is well below most estimates. This presents a key risk for policymakers if the NAIUR is indeed much higher than is currently judged.

However, signs of the labor market cooling have become evident with the steady rise of continuing jobless claims and this momentum would need to continue to relieve pressure on wages.

Beveridge Curve

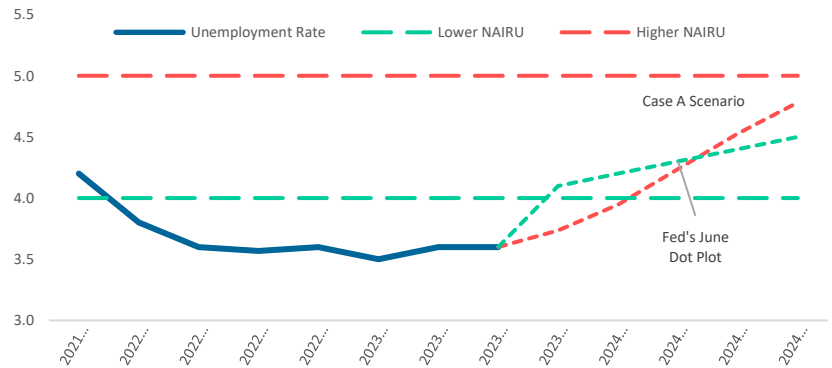
The case for a higher NAIUR in part reflects developments in the labor market associated with the ratio of job openings and unemployed. A noticeable outward shift occurred during the COVID-pandemic. Although it is known that Beveridge Curve's tend to shift out during recovery phases, we also know that they can become stuck which under a Case A-type scenario would be associated with a higher NAIUR and unemployment to bring the economy to equilibrium.

Wages

During COVID, the demand for workers among the lower half of the income distribution increased substantially, this pulled up overall wages and those in the upper half of the income distribution ended up benefiting as well. There are these types of dynamics throughout the labor market i.e. job switchers vs job stayers are another good example from Figure 9.

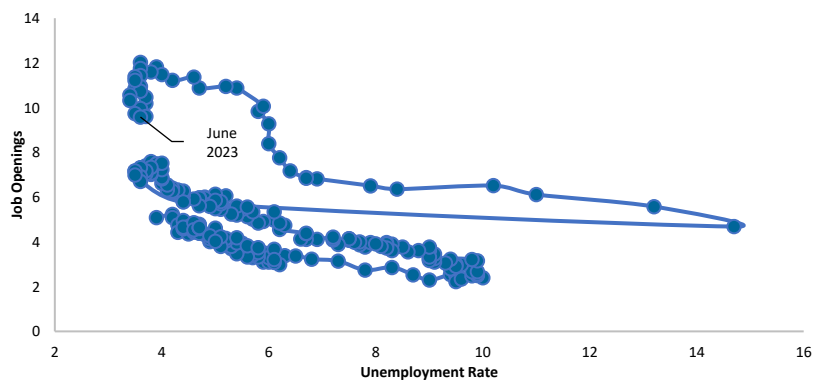
We have had elevated wage inflation for several months now and the question is will wage inflation begin to moderate where we can be confident that the labor market is consistent with the inflation target? Obviously, understanding the size of the relative tightness in the labor market, along with the implications of the mitigating supply disruptions on the Philipps curve, would describe the relative scenarios with regard the future dynamics of wage inflation.

Figure 7: The Future Unemployment Rate is Dependent on Where the NAIUR is Which is Highly Uncertain



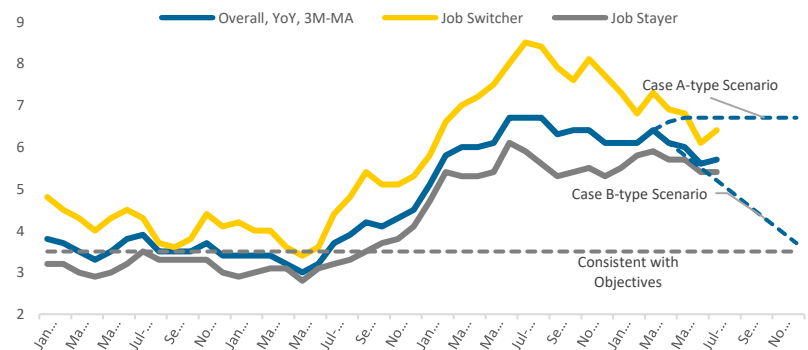
Source: FRED, Staff projections

Figure 8: The Beveridge Curve Inching Closer to Its Pre-pandemic Position but Progress is Slow



Source: FRED

Figure 9: Several Months of Elevated Wage Growth. Critical for Wages to Moderate to More Sustainable Levels



Source: Atlanta Fed Wage Tracker

Inflation

Case A-type Considerations

Wage-price spiral: past wage inflation feeds back into consumer prices, especially for services and we have an old-fashioned wage-price spiral.

Higher underlying inflation: underlying inflation without further tightening in credit conditions will converge to ATL Fed's measures for sticky price or wage inflation.

Case B-type Considerations

Disinflation process is smooth: concerns about higher underlying inflation are misplaced. The system is well anchored to the 2% target. Moving the system back to target is relatively painless not requiring major output loss to compensate for inflation remaining above target for as long as it has.

Overall Inflation

Food and energy shocks from the Ukraine conflict are likely to continue to disinflate while as long as wage growth persists then service sector inflation would also be expected to remain elevated.

Goods inflation was expected to contribute to the disinflation process in 2023 but an earlier than expected rebound on demand for durables could be problematic for policy getting ahead of underlying inflation.

Sticky Price Inflation

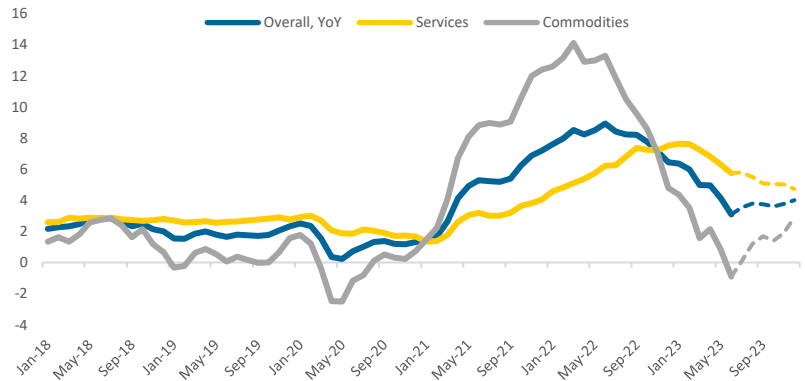
Sticky prices are changed infrequently and therefore must consider some expectation about where prices may be headed when those prices are changed. These types of prices help us better understand in real-time the inflation mentality pervasive in the economy that contributes to a wage and price spiral forming and inflation becoming entrenched. These prices have decelerated recently but remain elevated. A deflationary drag has been observed in medical services which could mean sticky prices are understated moving forward.

Underlying Inflation

There is no clear consensus around what underlying inflation is and how to measure it. This uncertainty needs to be incorporated into how we view our different scenarios for what "restrictive" policy means to achieve the central bank's objectives.

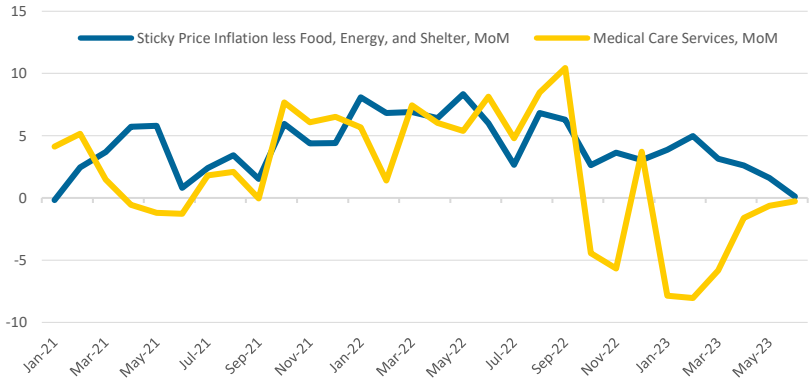
The estimates range from 2.5 to 5.8%. Conceptually, we prefer both the Atlanta Fed's measures for sticky prices and wage tracker that deals with important compositional and seasonal issues with wages. Both happen to be on the upper end of the distribution and feature prominently in our risk assessment for inflation.

Figure 10: YoY Inflation Decomposition with Short-term Outlook that Assumes Elevated Service Inflation and Rebound in Oil Prices



Source: FRED, Illustrative staff projections

Figure 11: Core Sticky Price Inflation Less Shelter Continues to Fall but Might Be Understated by Continued Deflation in Medical Services



Source: FRED

Figure 12: Where is Underlying Inflation?

Price Data	Wage Data	Survey Data
Core PCE 3.4-4.1%	Average Hourly Earnings 4.0-4.4%	Cleveland Fed, 1Y 2.5%
Core CPI 4.1-4.9%	Employment Cost Index 2.8-3.3%	Krugman Embedded Inf ~3.2%
Sticky Price 3.9-5.8%	Atlanta Wage Tracker 3.9-4.3%	Michigan Survey 1Y 3.4%

Box 2: Inflation Outlook – Long view

Wage and Sticky price Inflation

The relationship between wages and sticky price inflation underscores the pivotal role of the labor market as a crucial mechanism for explaining how demand conditions translate into production costs and subsequently influence prices. The recent surge in wages, driven by a relatively tighter labor market, has pushed up the inflation of goods and services. As a result, the state of the labor market becomes a critical prerequisite for addressing subsequent corrections in the inflation landscape.

Importantly, it's worth noting that a conventional (by historical standards) unemployment gap has led to a notable acceleration in wage growth during the recent period. The potential explanations here point to the uncertainties surrounding scenarios in the near-term future.

One possible interpretation could stem from the uncertainty in estimates of the NAIRU. This could suggest a higher NAIRU and consequently, a larger level of unemployment gap.

Another interpretation might be linked to the underlying macroeconomic conditions. Between 2021 and 2023, two factors—specifically the destabilization of inflation expectations and disruptions in the supply side (leading to a shift in the Phillips curve)—could have magnified the impact of demand on wages in a non-linear manner.

Depending on the interpretation and given the relatively stable positive unemployment gap, there are both inflationary risks (stemming from a higher NAIRU) and deflationary risks (stemming from the mitigation of supply issues) in the near future.

Figure 2a: Unemployment rate and the estimate of NAIRU. Will labor market tightness stay to contribute to the inflationary environment?

Source: FRED, Staff estimates

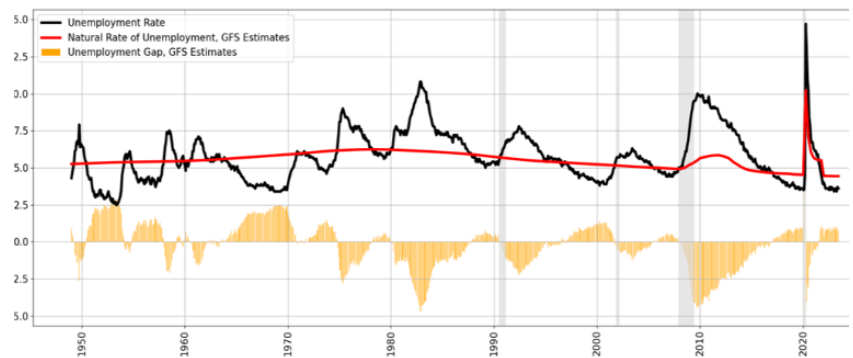
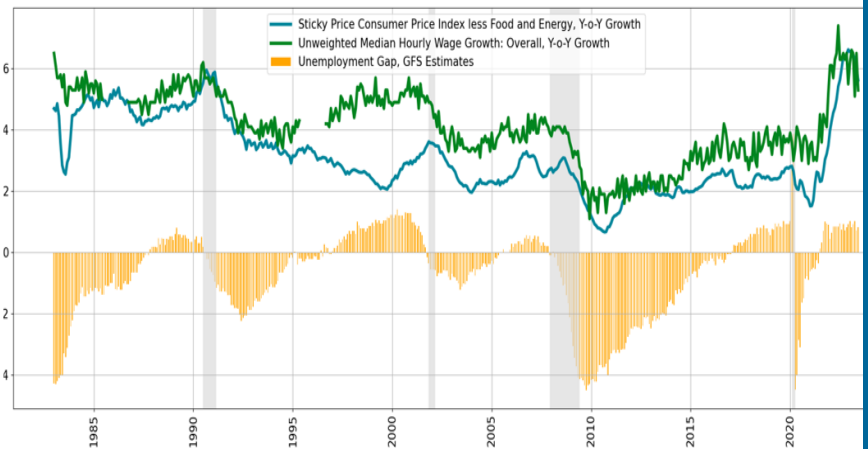


Figure 2b: Sticky price and wage inflation. Which one is driving the other?



Source: ATL Fed, Staff estimates

Box 3: Rent Inflation

Rent of Shelter (BLS)

Given its importance in the CPI and PCE basket, having an idea about rent inflation will be a critical determinant for how quickly core measures of inflation will fall. The BLS measure of rent prices is meant to capture the entire market of rents which means new price increases tend to take time (about 12 months) to be incorporated into all contracts.

So far, rent of shelter as calculated by the BLS has not slowed down much since it started reflecting the rise in new rent prices during the pandemic. However, many observers looking at other measures of rent (Zillow) noted that Rent of Shelter in the CPI was poised to peak.

Private Measures of Spot Rent Prices (Zillow)

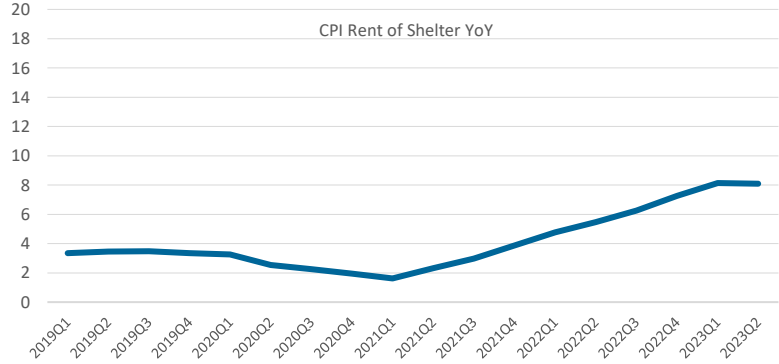
Private measures of rent prices such as Zillow try to capture where rent prices are today and therefore it has some leading quality (about 12 months) before they are fully reflected in the BLS measure.

These private measures have been consistently showing steep disinflation in the past several months which have led many to believe that we are about to see a similar pattern in the BLS data.

Rent of New Vacant Units (Census)

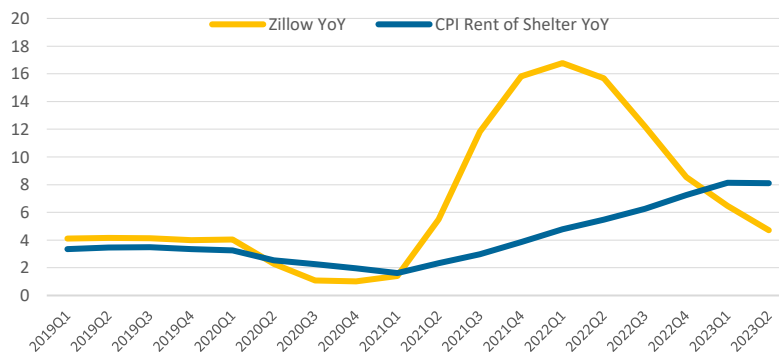
However, recent data published by the Census Bureau saw a large uptick in the median asking rent of new vacant units in 2023Q1 suggesting a sustained disinflation outlook for new rent prices might be premature at this point and if this uptick holds then another wave of new rent inflation could be on the horizon that keeps rent of shelter inflation elevated for too long that would threaten inflation expectations becoming de-anchored from 2%.

Figure 3a: CPI Rent of Shelter Peaking. Will it Stay Elevated or Begin Disinflating?



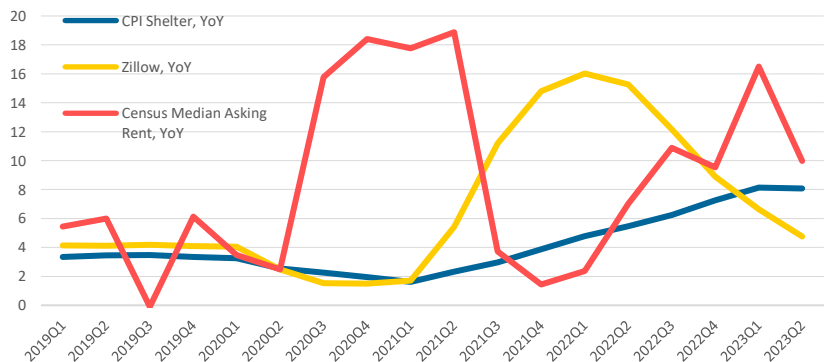
Source: FRED

Figure 3b: CPI Rent of Shelter Peaking. Will it Stay Elevated or Begin Disinflating?



Source: FRED, Zillow

Figure 3c: Is There Another Rent Inflation Wave on the Horizon?



Source: FRED, Zillow, Census

Financial Markets

Fed Funds Path

The market pricing of the Fed Funds rate has experienced substantial volatility as markets grapple with the potential of a stronger than expected economy on the one hand and a credit crunch on the other.

Our scenarios try to reflect these different regimes depending on how the data evolve to develop a comprehensive strategy for dealing with extreme uncertainty presented by these competing underlying forces.

As of now the markets expect that the current high levels of the policy rate will remain there up until the end of this year reflecting the current view in the financial market with regard the effective balancing of above risks.

Recession Watch

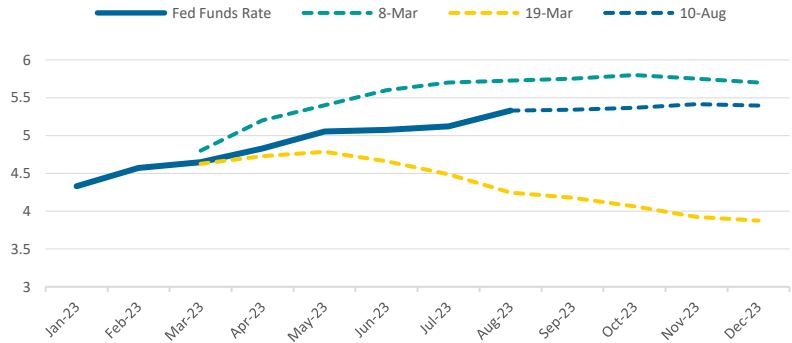
The banking fragilities that have surfaced could exacerbate a financial system that was already tightening lending conditions at a rapid pace. It is still unclear whether the current tightening in lending standards will have the same impact as in previous cycles. At the same time, given the existing lags in how the credit conditions translate into the real economy the current levels of BLT index signals about the possibly higher risk of rescission in the upcoming quarters. Furthermore, the work by Harding and Wouters that explores the potential of a financial accelerator once a crisis emerges is a key motivation for our Case B scenario that we want to be prepared for if those risks materialize.

Corporate Bond Market

Risky corporate bond spreads, on the other hand, will be an important real-time indicator that will corroborate whether the credit crunch is upon us or not. At this point in time, high yield corporate bond rates are contained, and risky spreads remain historically low relative to prior recessionary episodes.

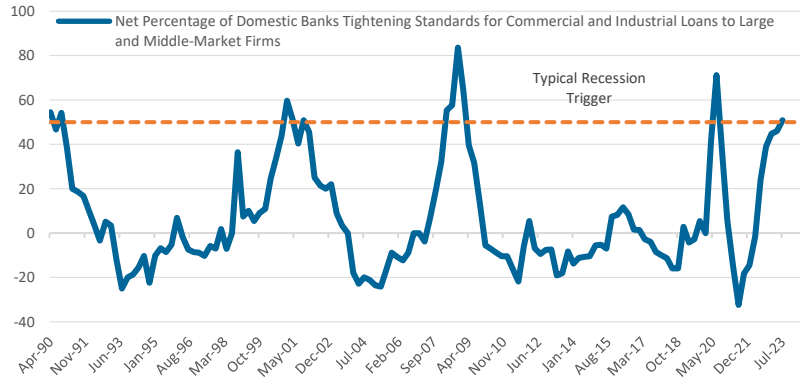
We will be paying close attention to these market movements and sensitive to its changes from here on out as it will serve as an early warning signal that will likely require swift action to prevent serious deterioration and financial contagion.

Figure 13: The Market Pricing of the Fed Funds Rate. Strong Real Economy or Looming Credit Crunch?



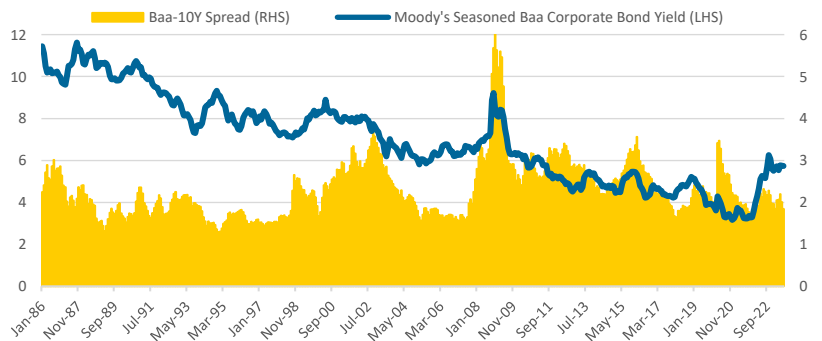
Source: FRED, CME Futures

Figure 14: Banks are Tightening Lending Standards, Could the Recent Banking Turmoil Exacerbate the Current Situation?



Source: FRED

Figure 15: Are Financial Markets Pricing in a Recession? High Yield Corporate Bond Rate Still Relatively Low by Historical Standards



Source: FRED

Monetary Policy

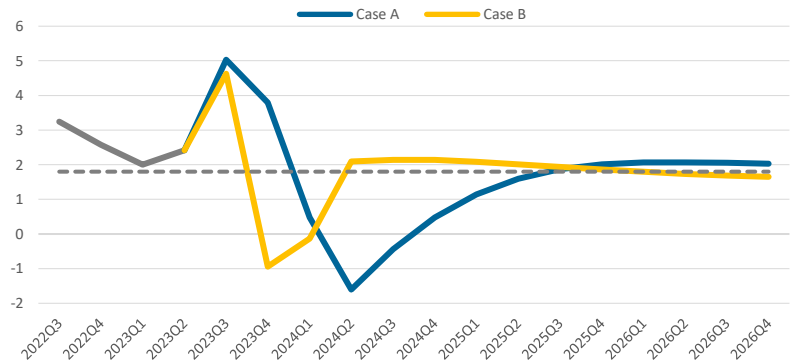
Monetary Policy Outlook

Case A-type scenarios depend on real growth staying at or above potential in the near term, mainly driven by strong consumer demand in part fueled by excess savings and revenge spending. As a result, core inflation remains stubbornly high and labor market conditions do not materially cool and remain inconsistent with the inflation objective. This mix would likely require a higher path for interest rates to ensure policy gets ahead of inflation once and for all. In many respects this type of scenario reflects the market pricing for the Fed Funds path prior to the collapse of Silicon Valley Bank. If the recent turmoil blows over and a strong real economy reasserts itself, then perhaps an even higher terminal rate will be required to compensate for a less aggressive policy stance in the interim.

Case B-type scenarios reflect tighter credit conditions that begin to feed through into the real economy generating a slowdown in activity that helps accelerate the disinflation process back to the 2% target. This will be accompanied with material adjustments in the stock and bond markets reflecting the entrenched fears about the future of economic growth. If those risks were to materialize, then they would likely require an abrupt switch in the policy stance as monetary policy has done enough to tighten financial conditions and it has to manage an orderly landing of the economy.

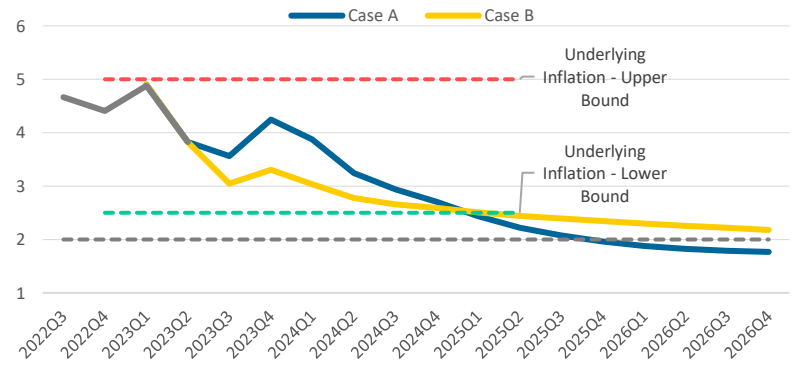
Due to the uniqueness of the economy today and the juxtaposition of a potentially strong underlying economy and financial instability, uncertainty is undoubtedly heightened.

Figure 16: Real Growth, QoQ Annualized, Resilient Consumer or Crisis in Confidence?



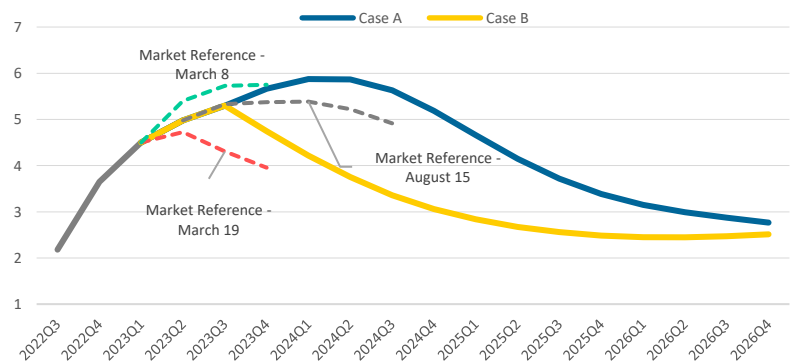
Source: Staff projections, ENDOCREd US August 2023

Figure 17: Core PCE Inflation, QoQ Annualized. Core Inflation Remains Elevated or Disinflation Continues as Real Economy Drag Takes Hold



Source: Staff projections, ENDOCREd US August 2023

Figure 18: The Endogenous Interest Rate Path for Both Case A and Case B Scenarios Relative to Market Pricing



Source: Staff projections, ENDOCREd US August 2023

Appendix

Summary of Risk Issues

Case A-type Scenarios	Case B-type Scenarios
Global economy	
China and European economies grow faster than expected in 2023 from zero-COVID policy and Ukraine-related energy shortfall headwinds being removed.	We are underestimating the effects that monetary policy tightening will have on major advanced economies in 2023 leading to a more abrupt slowdown in growth.
Domestic Output	
Consumers prove to be more resilient on account of a large stock of excess savings where consumption continues to grow at elevated levels.	A regional banking crisis and tighter financial conditions transmits quickly into slower economic growth.
Labor Market	
Labor bottlenecks persisting well into 2023 with no material softening of the labor market and putting upward pressure on wage inflation.	The spike in layoff announcements is at a magnitude where if they materialize could be sufficient to cool the labor market and put wage inflation on a path that is more consistent with the inflation target.
Inflation	
Underlying inflation reflects higher bound estimates based on the Atlanta Fed measures for sticky price and wage inflation.	Underlying inflation reflects lower bound estimates based on Average Hourly Earnings or the Employment Cost Index etc.
Financial Markets	
The Silicon Valley Bank collapse has been addressed through financial stability policies, but the experience may make policymakers balk at their price stability objectives by opting to choose a more gradual approach for policy interest rate increases.	The Silicon Valley Bank collapse is a sign of larger vulnerabilities to the banking sector that could prove more systemic and a series of bank runs starting with other regional banks begin to foment i.e. First Republic.

Appendix

Table 1: US Core Economic Projections

- Case A | Case B -

	2022	2023		2024		2025	
<i>Real GDP Growth</i>	2.1	2.7	2.3	1.3	1.3	0.9	2.1
<i>Output Gap</i>	0.5	0.9	0.6	0.3	-0.1	-0.7	0.2
<i>Unemployment Rate</i>	3.6	3.6	3.7	4.4	4.6	5.2	4.8
<i>Core PCE Inflation</i>	5.0	4.1	3.8	3.8	2.8	2.2	2.4
<i>Fed Funds Rate</i>	1.7	5.1	4.9	5.6	3.6	4.0	2.6

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