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Not the Fed Tealbook

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NOT THE FED TEALBOOK

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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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EXECUTIVE SUMMARY

As the US economy leaves the COVID-related stagflationary shock environment, there is a rich debate within policymaking circles about the future economic outlook in the US, which spans a wide breadth of issues and potential outcomes.

Heading into a new year, we tend to get into prediction mode for the year to come. However, FPAS Mark II is specifically not about making precise predictions, but rather about identifying the right policy-relevant issues and risks that can push policy in different directions based on plausible analysis using critical thinking, theory, and data that offers an *accurate* assessment of the key risks in the economy. At its core, FPAS Mark II is about creating an environment that improves analytical discussions via a *transparent and structured* framework. The transparent and structured framework allows for disagreements, but those disagreements are only useful if they are *tractable* – can people easily understand where exactly the disagreements come from and how can they be evaluated moving forward in time. This is an important reason behind the Case A and Case B scenario framework for discussing different policy implications in an uncertain world. The big question for 2023 and beyond is whether the US economy will achieve a soft or hard landing. This edition of Not the Fed Tealbook delves into the different perspectives for what exactly a soft and hard landing could mean, and we construct some scenarios based on those alternative beliefs.

Some good news came at the end of 2022 in terms of inflation decelerating without a corresponding decline in real economic activity, giving hope for a soft landing where the Fed can bring inflation back to the target without much of an output trade-off. Indeed, Lawrence Summers and many other Economists have commented on cautious optimism, and this in part is reflected in stock prices rallying since the beginning of the year under the banner of a soft landing, although analysis, especially around latent variables such as the NAIRU, Potential Output and the Neutral Interest Rate remains an important question that will have major implications on whether the Fed can achieve a soft landing.

The different scenarios presented in this edition is meant to represent an abridged version of a structured discussion where policymakers in tandem with their economic advisors bring to the table their own interpretations of current economic conditions and direct the discussion towards the policymakers' biggest risks ("fears") and steers policy towards a path of least regrets instead of relying on the folly of baseline forecasts.

REPORT STRUCTURE

The report is comprised of three distinct sections representing the three essential ingredients of scenarios in the Forecasting and Policy Analysis System (FPAS):

1. **Where is the economy today?**

   This section summarizes historical data and the near-term outlook in a concise manner, synthesizing available resources to gauge the initial position of the economy from which to begin thinking about scenarios.

2. **What are the underlying forces?**

   This section identifies key issues in today's economy that are candidates for determining the medium-term dynamics of the economy. We then take these different underlying forces and, given the inherent uncertainty, use them as motivation for generating scenarios that flesh out the important risks to the monetary policy, including situations of great uncertainty and what Olivier Blanchard terms "Dark Corners."

3. **How do we adjust policy instruments to achieve our objectives?**

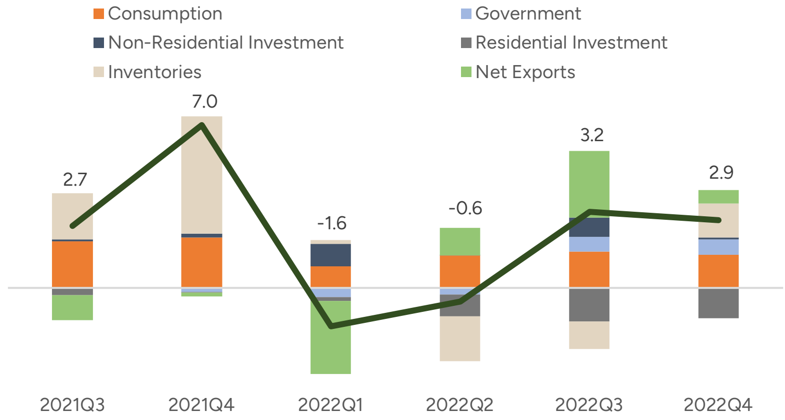
   This section synthesizes the totality of the analysis from sections 1 and 2 and describes the "policy of least regret" we believe is necessary to achieve our objectives

WHERE IS THE ECONOMY NOW?

Gross Domestic Product

The preliminary estimate for 2022Q4 came in at 2.9% QoQ. This represents another expansion in GDP (following 3.2% QoQ growth in Q3) that is higher than potential growth, signaling a relatively strong position especially given that the only component contributing negatively was fixed residential investment.
Therefore, is the bullwhip effect from COVID finally going away and are we starting to see the signs of underlying growth settling above potential going forward in the near term?

Figure 1.
Is Post-COVID Growth Settling in Above Potential?

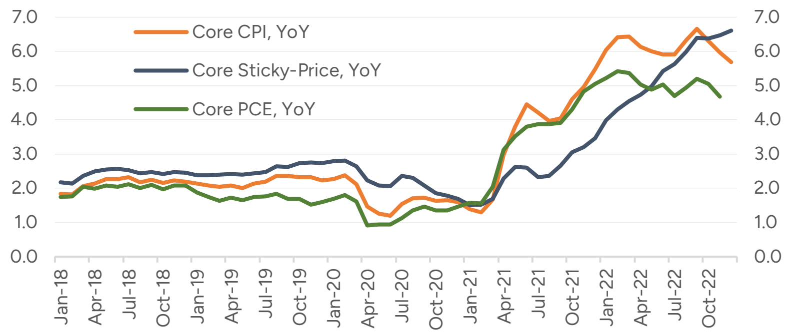


Core Inflation

The core inflation picture appeared to improve in recent months, with core CPI and PCE measures moderating. However, our preferred measure of prices,[1] "sticky price inflation" remains persistently above the 2% inflation target.[2]

We dig into some of the components of sticky prices in Box 1 to explore how broad-based inflation within the services sector has become.

Figure 2.
Which Measure Is Going to Give? "Sticky-Prices" Keep Rising



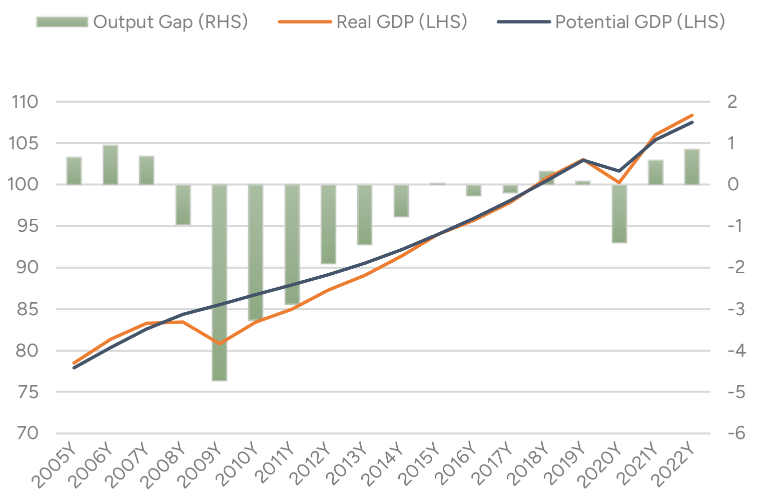
Source: FRED

Initial Position of the Economy

Given the latest GDPNow estimates for the fourth quarter and the latest signals from consumption, our evaluation of the economy in the near term remains "moderately hot" (positive output gap, i.e. demand outstrips supply leading to inflationary pressure) and labor market bottlenecks continue to emerge.

As Charles Evans has emphasized, the convexity of the Phillips curve has important implications.[3] The larger the positive output gap becomes, the more risks accumulate with respect to more entrenched inflation, hence disinflating the economy and returning to the 2% long-term inflation target. Requires greater welfare costs—in the form of a larger cumulative output gap—to achieve.

Figure 3.
Likely Going Very Hot Into 2023 After Two Consecutive Years of Modest Excess Demand



Source: Based on GFS MPMOD United States Case A

[1] We prefer sticky prices since we believe conceptually it has more to say about inflation becoming entrenched.

[2] The previous edition pointed to the slowdown in inflation being short-lived as rising costs in rent to keep pushing up inflation.

[3] As bottlenecks increase, the Philips Curve becomes more convex.

Box 1: Inflation Dynamics

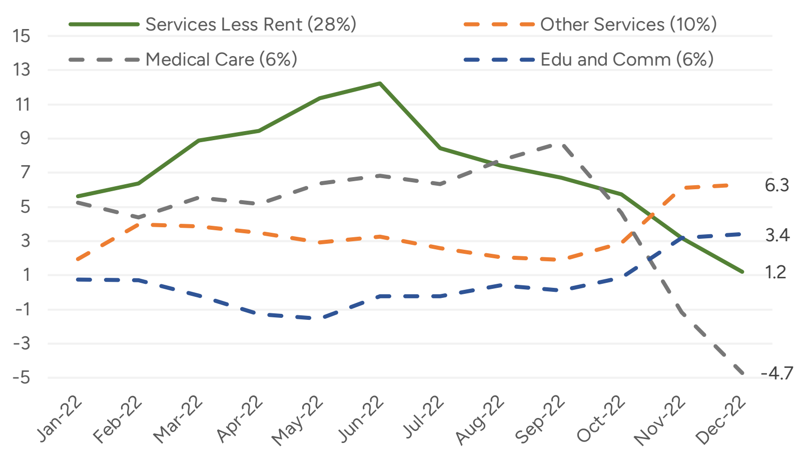
The most important question(s) facing central banks in 2023 is after a year of historically high inflation, how fast will inflation fall and to what level? The implication of this question ultimately returns to the fundamental question central banks must ask themselves everyday: is the current and expected policy setting consistent with its objectives? – In other words, will underlying inflation fall fast enough to materialize in positive real interest rates that is consistent with bringing the economy back to equilibrium. There are three important ways inflation can evolve in 2023 based on interpreting information today in different ways.

Scenario 1: Goods Disinflation Continues, Services Inflation Peaks and Moderates. For the soft landing to materialize this needs to happen. The goods market is slowing down after frenzied demand for goods during the pandemic. The scenario assumes goods inflation returns to its long run average while service inflation begins moderating towards it long run average.

Scenario 2: Goods Disinflation Stalls, Services Inflation Continues Elevated. One factor we have been keeping an eye on is excess savings (Box 2) being a key source of strength for consumption going forward and a reason why we might expect higher structural demand for goods and goods inflation until those savings are fully drawn down. If goods inflation begins re-accelerating, then this will be a harbinger that we are in a Case A world and the Fed is behind the curve. The scenario assumes goods inflation begins accelerating on a MoM basis, slightly above its long-run average.

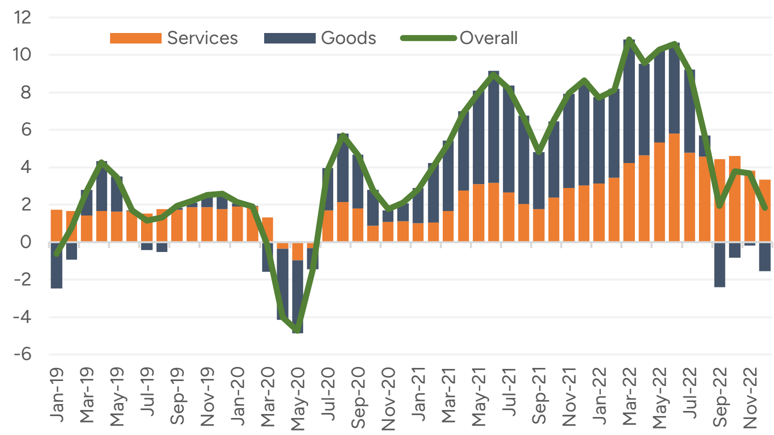
Scenario 3: Continued Goods Disinflation and Elevated Services Inflation: The combination of continued disinflation in goods while services-based inflation remains elevated. Not as bad as Scenario 2 but would still require an increase in interest rates. The scenario assumes the goods disinflation in Scenario 1 but the service inflation in Scenario 2.

Is Service Inflation Broad-based or Is There Still Some Hope?



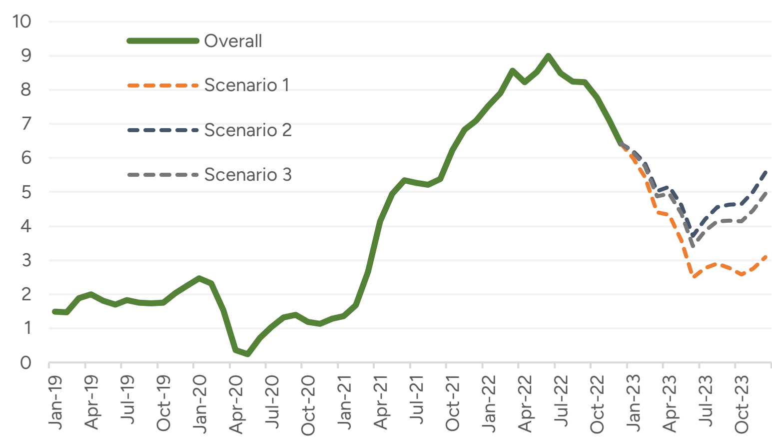
Source: FRED, CPI 3-Month Change Annualized

How Long Does Disinflation in Goods Continue?



Source: FRED, CPI 3-Month Change Annualized

Short-term Inflation Scenarios Based on Different Assumptions



Source: FRED, Authors' Estimates, CPI YoY

Core Sticky-Price Inflation

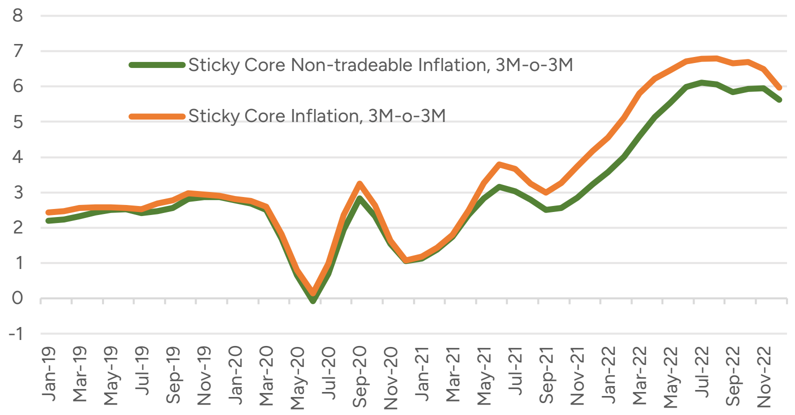
We take the concept of sticky price inflation one step further and separate out tradeable vs non-tradeable prices to control for domestically rooted inflationary pressures. This analysis suggests that while non-tradeable sticky price inflation is rising at an alarming rate, the categories responsible for the initial rise have been concentrated in a few categories (rent, transportation, and medical care). That said, the other major categories (education, communication, and other services) have been ratcheting upwards and if it continues then that would take us ever closer to the point of inflation becoming entrenched which the central bank should take particular care when the costs of such a switch become non-linear.

Supply-Chain Bottlenecks

The pandemic boom in the consumption of goods appears to have ended, and that moderating effect has made marked improvements in supply-chain bottlenecks. The New York gauge of global supply-chain pressure index (GSPCI) has subsided substantially from its all-time highs. However, it is important to note that it remains above its pre-pandemic level and has been rising in recent months.

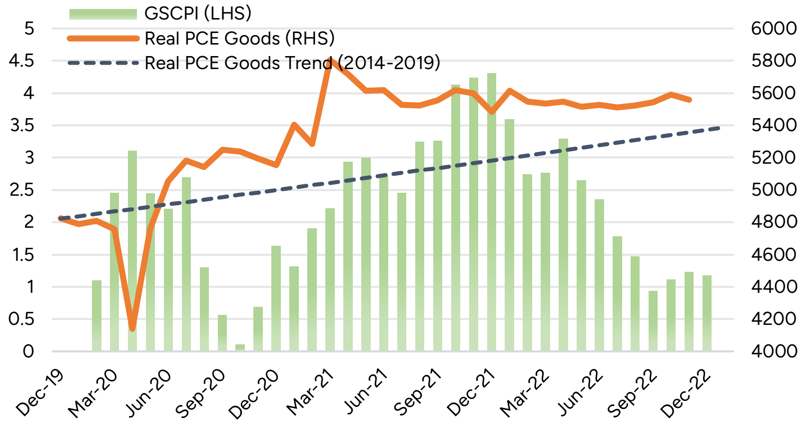
At the same time, real PCE of goods has exhibited a similar dynamic. With the consumption of goods showing signs of stabilizing above its pre-pandemic trend for sustainable output, the big fear now is that the services sector is ripe for its own boom as the goods market remains hot. If this mix materializes, continued demand pressures will create challenges for getting core inflation on a sustainable path in 2023 with the current policy setting.

Figure 4.
Non-Tradeable Sticky-Price Inflation Not Simply a Matter of Direct COVID-related Bottlenecks



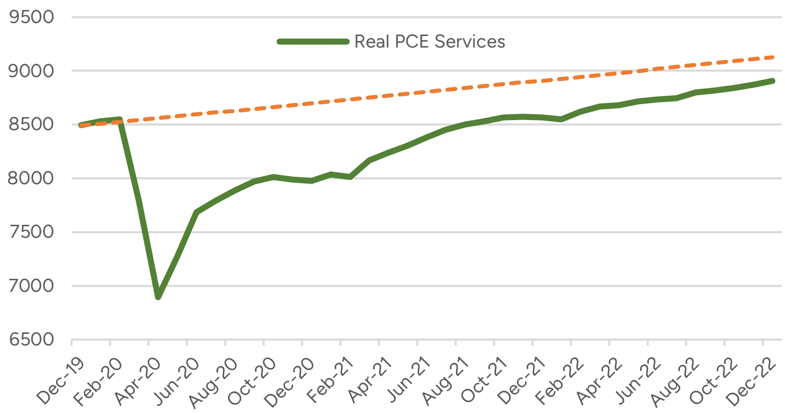
Source: FRED, Author's estimates

Figure 5.
Hints of the Goods Market Settling Above Pre-Pandemic Levels as We Enter 2023



Source: FRED, New York Fed

Figure 6.
Meanwhile, Can We See a Boom from Pent-Up Demand in Forgone Services During the Pandemic?



Source: FRED, Authors Estimates

Financial Conditions

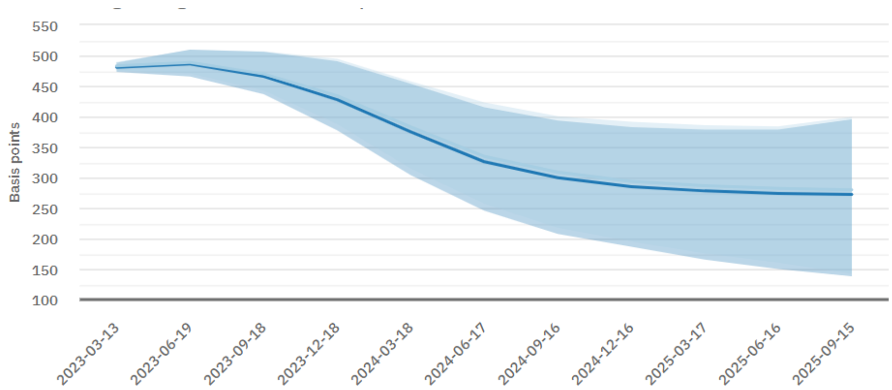
As of January 24, the future path of the Fed Funds rate is expected to reach about 5% in 2023Q1, unchanged since October. However, the 10-year bond rate has since declined from its highs of 4%, down about 50 basis points, pricing in expectations of larger rate cuts on the backend of the futures curve.

However, it remains up for debate in terms of what can be considered tight, when core inflation is elevated and subject to significant uncertainty. Monetary policy should be situated so that a fundamental re-evaluation of the "neutral" rate or the equilibrium real rate does not cause unnecessary pain. Underestimating upward shifts in the equilibrium real rate, or neutral short-term rate, could be another source of uncertainty facing the Fed.

Systematically falling behind such upward shifts could be another source of stagflationary risk and might require a much larger adjustment in interest rates at some future date (Case X-type Scenario).

Figure 7.

Expected Future Path of the 3-Month Average Fed Funds Rate Remains Intact Reaching About a 5% Peak



Source: Atlanta Fed

Figure 8.

Market Yield on U.S. Treasury Securities at 10-Year Constant Maturity Has Fallen Since the Last Update. What is the Bond Market Thinking? Soft Landing?

Source: FRED

The Labor Market & Wages

Consumers whose real incomes have declined substantially because prices have risen more than wages clearly have the incentive to demand higher wages to embody higher expectations of underlying inflation. The empirical evidence suggests that prices are a mark-up over wages, so higher wages will likely result in higher prices. Whether or not this turns into an ongoing wage-price spiral will hinge to a large extent on whether the Fed is behind the curve or not.

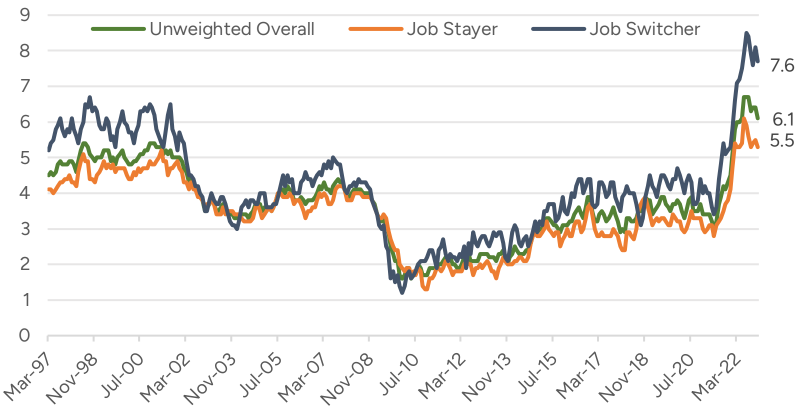
An alternative view is that the Beveridge curve shifts right back to where it was before Covid, workers stop demanding higher inflation premium in their wage increases, and the economy experiences a "soft landing." Such a view would be in line with what the Fed had been implicitly communicating in its September projection.

We see these factors as the primary motivation driving Case A-type scenarios, where monetary policy would need to react more aggressively, because with the further tightness of the labor market, core inflation remains elevated unless there is a further increase in the policy rate.

The labor market will likely be one of the deciding factors that will drive the medium-term dynamics of the economy. Currently, there are many reasons to suggest that the labor market is exerting upward pressure on core prices:

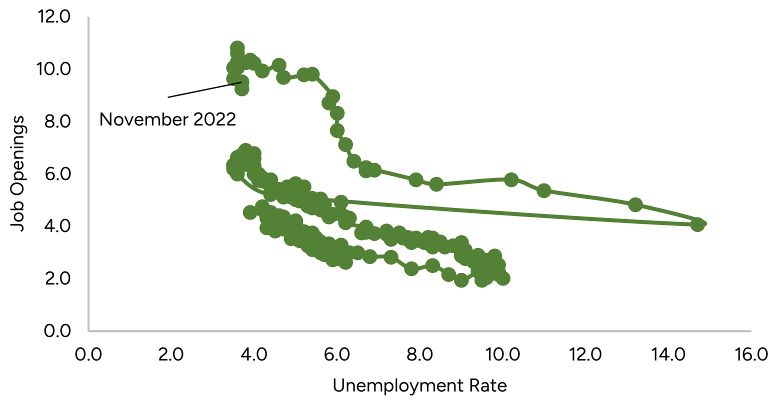
- Unemployment rate below most estimates for the NAIRU
- Strong wage gains, particularly for job switchers
- Beveridge curve shifted outward
- Labor market bottlenecks from more intense labor disputes

Figure 9.
Wages Between Job Switchers vs Job Stayers Lends Credence to a Hot Labor Market and Upward Pressure on Wages



Source: Atlanta Fed Wage Tracker

Figure 10.
Optimism About the Beveridge Curve Shifting Back Have Yet to Materialize



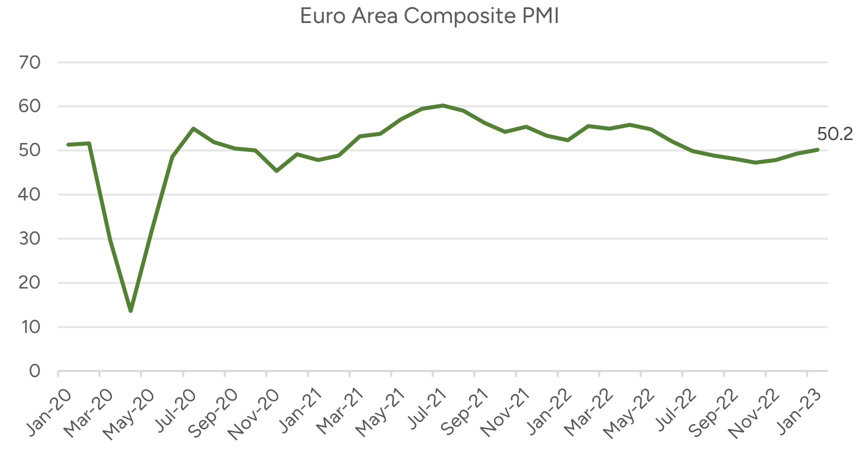
Source: FRED

External & Domestic Demand

Weakness in the global economy could be an important source of deteriorating conditions that can weigh on domestic activity.

The European economies are going through a tumultuous period, given the war in Ukraine that has halted gas supplies from Russia, sharply driving up energy prices and disrupting industrial production. Many observers expect that the EU is on the precipice of a recession although this has not really shown up in hard data in any material way. And now the soft data is beginning to turn over into positive territory.

Figure 11.
Euro Area Avoiding a Recession? More "Good" News



Source: S&P Global

Slowing economic growth could be induced from abroad by the slowdown in China despite the zero-Covid policy being scrapped. Other secular forces, including a slowdown in the housing market, in combination with a perception that the authorities will not try to sustain growth with expansionary fiscal policy, could also be at play.

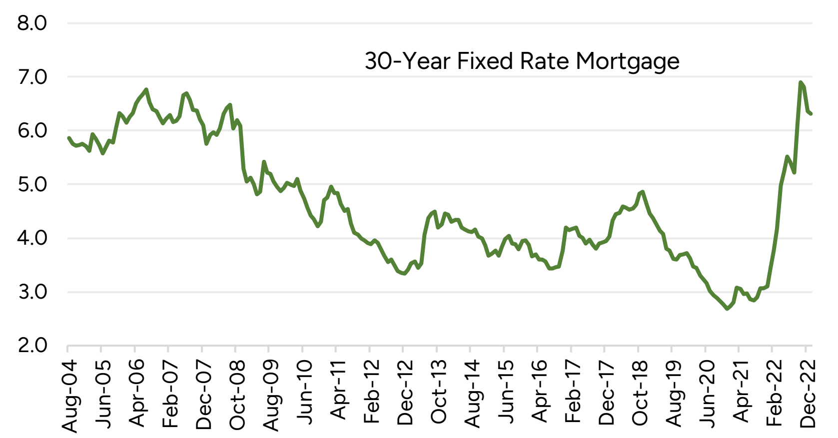
Figure 12.
China Entering a Growth Slowdown but the End of the Zero-COVID Policy Looms

Source: S&P Global

On the domestic front, the housing sector and equity markets have experienced significant corrections in the face of monetary policy tightening expectations. Year-on-year existing home sales in December 2022 are down 34%, according to NAR data.

We see these factors as the primary motivation undergirding Case B-type scenarios, where monetary policy would need to change course to incorporate the tightening in financial markets (credit standards and risky spreads) that would obviously occur in a downside scenario. In particularly adverse versions of a Case B-type scenario, the Fed would potentially need to revert to being a lender of last resort ease monetary conditions to keep financial markets functioning properly.

Figure 13.
Tighter Financial Conditions Can Be Well Observed in the Mortgage Market



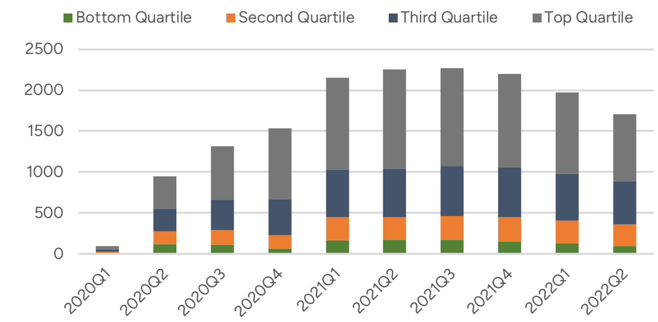
Source: FRED

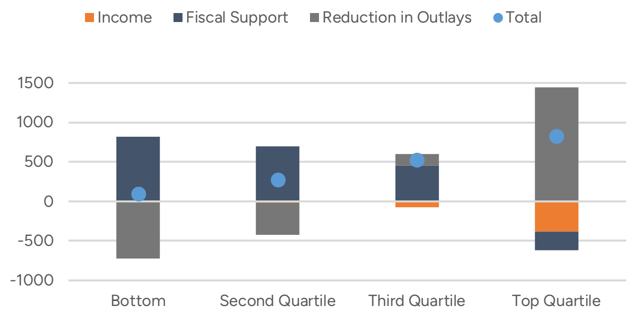
Box 2: Excess Savings

As long as households remain relatively cash-rich compared to their pre-pandemic levels, then it is entirely possible that they could maintain a level of spending that will keep the economy running hot, while already in a state of excess demand. This, in turn, could feed back into maintaining a stronger labor market for longer and exacerbate the bottlenecks emerging in that sector, thus requiring a stronger reaction by the Fed (Case A-type Scenario). The alternative is that that disinflation/deflation in large swaths of the economy is in full effect and the Beveridge curve shifts back to its pre-pandemic state, thus not requiring much of an increase in unemployment to reach a sustainable path for inflation (Case B-type Scenario).

A recent note by the Fed points to the magnitude of excess savings at around $1.7 trillion in 2022Q2. Given the low saving rate in the second half of the year, we can probably expect a further drawdown in household excess savings. However, it is highly likely that we will enter 2023 with excess savings remaining well above their pre-pandemic level and the concerning issue is how effective of monetary tightening will be under such conditions and when can we expect a material impact on consumption.

Decomposition of Excess Savings Across Income Quartiles ($BN)

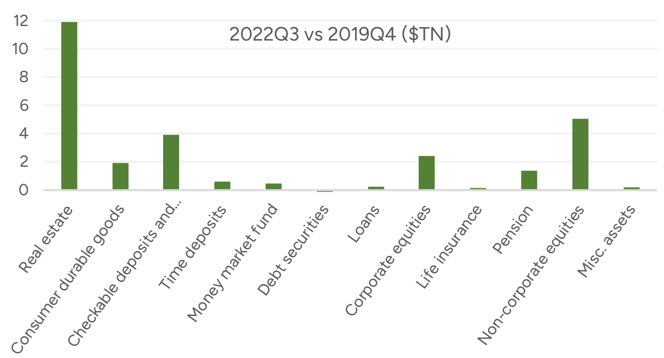


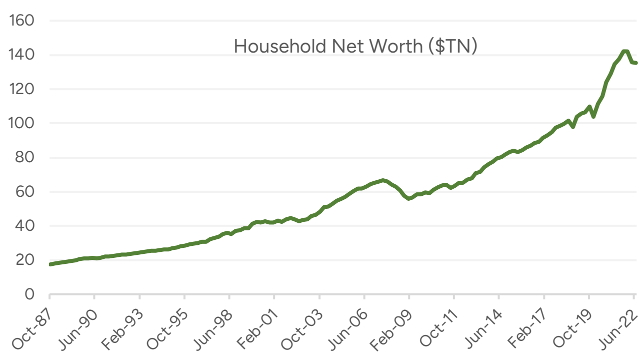


Source: Aladangady, Cho, Feiveson, and Pinto

The Fed note also points to alternative datasets such as the Distributional Financial Accounts that also show a sizeable rise in excess savings across the different income distributions, although the data may have methodological issues that make it less reliable than the flow analysis provided.

Besides highly liquid assets, as of 2022Q3, there has also been a substantial increase in household wealth accumulated during the pandemic. Despite the correction in both equity and real estate markets up to this point, household wealth remains uncomfortably high, given how one would expect wealth to evolve during a global pandemic where the economy was only temporarily shut down but still incurred a permanent loss of output.





Source: Fed

The accumulation of real wealth during the pandemic is yet another force that will make the Fed's job of slowing the economy down to control inflation more difficult. In a forthcoming paper we generate results for the consumption function using real wealth as an input for explaining household expenditures and elucidate the concept of pent-up demand during the pandemic and what it may mean for consumption as we exit the COVID affected economy (see Tchanturia and others (2023)).

Case A: Soft Landing with Higher Interest Rates

The Fed Needs to Stay the Course to Ensure Sticky-Price Inflation Returns to the Target

Inspiration: December Fed Dot Plots

Shock: Elevated Inflation Shock in 2023H2.

Narrative: A soft landing can still be achieved but not in the immediate future, based on the risk of the labor market remaining persistently tight, which keeps underlying inflation above the target. In this scenario, the Fed can simply stay the course with relatively high interest rates for longer. This scenario incorporates many of the Fed's talking points such as "higher for longer," which suggests the current setting of policy remains intact for an extended period. As inflation falls (below the policy rate), policy naturally becomes more restrictive and perhaps truly restrictive as positive real interest rates become realized.

Discussion: This scenario depends on inflation falling below the policy rate in a relatively short amount of time via disinflation from goods and commodities. However, there is a substantial risk that the disinflation process could hit a wall, not because of another supply-driven shock but from strong demand via high wage growth and excess savings pushing consumption higher. At this point in time, given the current position of the economy, this would pose a far greater threat to monetary policy objectives.

Case X: Hard Landing with Higher Interest Rates

Fed Falls Further behind the Curve, as Economy & Labor Markets Remain Hot

Inspiration: GFS Team Worst Fear

Shock: Positive Demand Shock in 2023H1

Narrative: GFS students' prevailing belief is that *if* a hard landing were to occur, that it would be on account of the Fed falling behind the curve. The Fed has been slow to react to the initial inflation shock, and this has allowed inflation to permeate to other areas of the economy without making much of an impact on consumer behavior. Despite a wave of supply-side disinflation on the horizon in 2023H1, the combination of a tight labor market putting upward pressure on wages, as well as residual fiscal impulse that allowed households to build excess savings, would keep demand strong and consequently inflation from falling materially below the current setting of the policy rate. Real growth remains at or above potential growth in 2023H1 and sticky-price inflation could very well start re-accelerating in 2023H2 as the disinflationary forces dissipate and underlying service-driven inflation begins to dominate the inflationary outlook.

Discussion: This scenario mainly concerns the uncertainty around the perception of latent variables where it makes it difficult to confidently craft policy. This view really hinges on a NAIRU being materially higher than the pre-pandemic world; therefore, the current position of the labor market at sub-4% unemployment is putting tremendous pressure on wage and price inflation over the medium-term. However, we recognize that the COVID shock was unprecedented, which may mean that large shifts in variables such as the Beveridge curve that have worked in the past could be flawed this time around and shift quickly back to their pre-pandemic position. This latter view would be consistent with views of policymakers such as Charles Evans.

Case B: Soft Landing with Lower Interest Rates

The Economy is on a Path Back to its Equilibrium Position

Inspiration: Financial Market Bulls

Shock: None

Narrative: A soft landing is in the books. The Fed has maneuvered policy perfectly, slowing the economy just enough without a full-blown recession that is enough to slow prices in the broader economy, mainly the services industry. The disinflation process in 2023H1 is maintained in the second half of the year and the Fed gets within striking distance of its inflation target and therefore can already consider normalizing policy to the long run neutral rate later this year.

Discussion: This perspective hinges on some luck and requires some important variables such as the Beveridge curve to shift back to pre-COVID levels relatively quickly, so that wage pressures do not persist and remain inconsistent with long-run inflation of 2% for much longer. Otherwise, tighter policy would likely be needed to further disinflate the economy.

Case Y: Hard Landing with Lower Interest Rates

Large Contraction in Growth Coming Requiring a Large Fed Pivot

Inspiration: Financial Market Bears

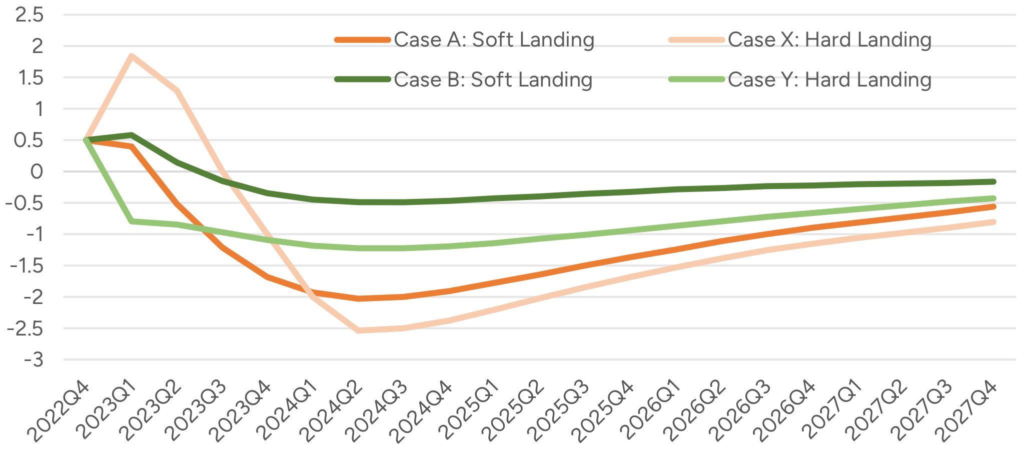
Shock: Negative Demand Shock in 2023H1

Narrative: A hard landing is unavoidable and imminent. Fed policy has overdone it, raising interest rates excessively in the face of a supply shock that would have reverted completely on its own without any secondary effects or pass-through into sectors not immediately affected by the different shocks (COVID and Ukraine) on energy, food, and goods prices. An imminent slowdown hitting the industrial and retail sectors will start showing up in job losses and we enter a major recession sometime in 2023H1.

Discussion: We have evidence of inflation feeding into other sectors, namely services, and that inflation looks broad-based. Also, seasoned macroeconomists that lived through the 70/80s inflation spell find it hard to believe that real interest rates IF positive have not been sufficiently high enough to severely weaken the economy in a way as prescribed by this scenario. Furthermore, GDPNow for 2022Q4 is showing strong growth and if that is maintained in 2023Q1 then it suggests the impact from tighter monetary policy up until this point has been muted.

Figure 14. Output Gap

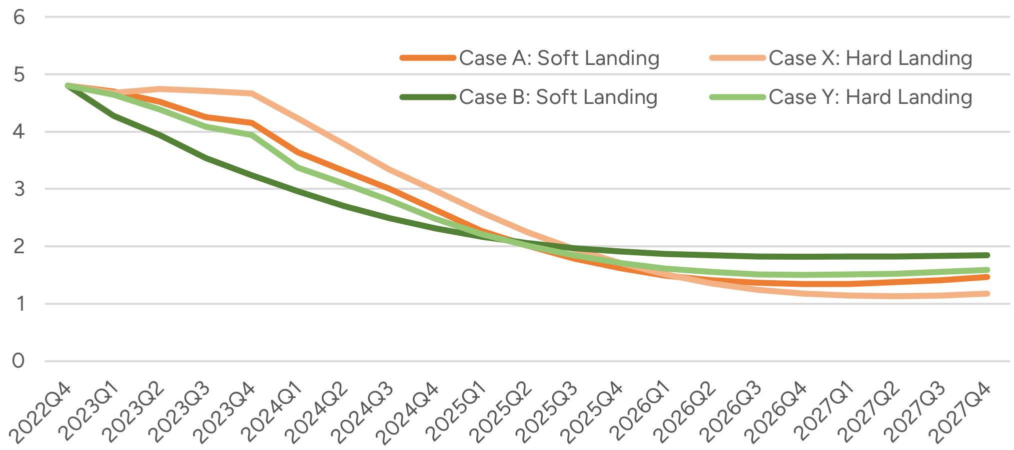
Output Gap Reflects the Need for Below Trend Growth Regardless of Why to Achieve the Policy Objective



Source: GFS ENDOCRED United States

Figure 15. Core PCE Inflation, YoY

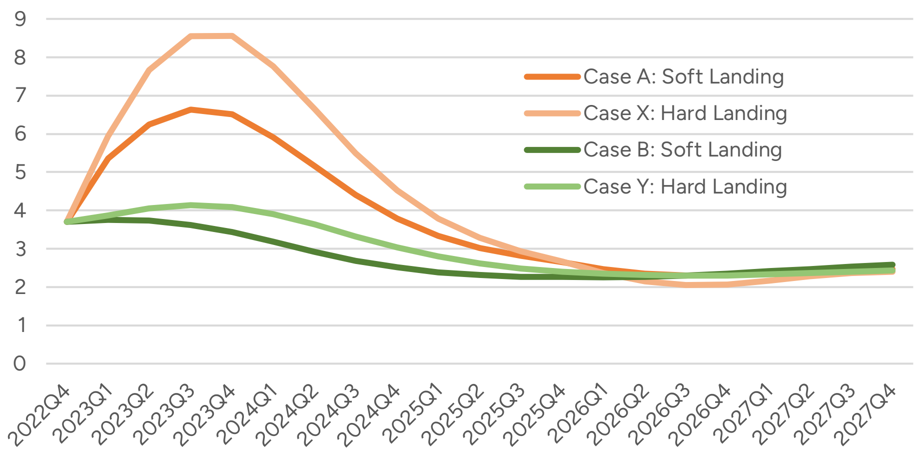
Core Inflation Either Remains Elevated from Persistent Labor Market Bottlenecks or Comes Down as Fast as COVID-related Bottlenecks Appeared and Now Disappear



Source: GFS ENDOCRED United States

Figure 16. Fed Funds Projected Path

Our Case X Scenario Reflects Avoiding the Dark Corner of Inflation Becoming Entrenched Given the Current Position of the Economy and the Inflation Situation Underpinning the Bias in the Policy Setting



Source: GFS ENDOCRED United States

HOW TO ADJUST POLICY SUFFICIENTLY TO ACHIEVE THE FED'S OBJECTIVES?

Considering the totality of the circumstances across the different scenarios presented in this report, our "mock open-market committee" (MOMC) believes it is more prudent to have policy on a more hawkish footing. Given present economic conditions (with demand continuing to outstrip supply) as well as the underlying forces (tight labor market, wage inflation, etc.), the risks to policy being too loose outweigh the risks of being overly tight. This is because the risks of not acting sufficiently aggressively today could cause a catastrophic entrenchment of inflation and inflation expectations, significantly increasing the costs of having to react much more aggressively at a future date. In any case, regardless of whether interest rates need to rise or fall to bring inflation back to the target, one thing is clear: below-trend growth will be required to achieve the dual mandate of full employment and inflation on its 2% target, as was also stated by Chairman Powell during his Jackson Hole speech,.

> The MOMC considers it appropriate for the Fed to <u>take advantage of market pricing of the terminal rate and raise</u> the policy rate by 50 basis points to 4.75%

Such an increase, instead of a more gradual approach, would guard against the risk that medium-term inflation expectations will become entrenched and long-term inflation expectations will ratchet up, requiring a much higher terminal rate in the future.[4] It also helps guard against the Fed underestimating the neutral interest rate, which is another source of significant uncertainty in the Fed's dot plot. Finally, because the market has already priced-in a terminal Fed Funds rate of 4.9% in early 2023, getting there faster could be expected to not meaningfully disrupt financial markets. The move does not necessarily imply a shift up in the expectations of the Fed Funds rate as in the Case A-type scenarios, but simply a faster progression to the terminal rate so that the central bank can better evaluate the impact it is having on the economy, given long and variable lags in the transmission.

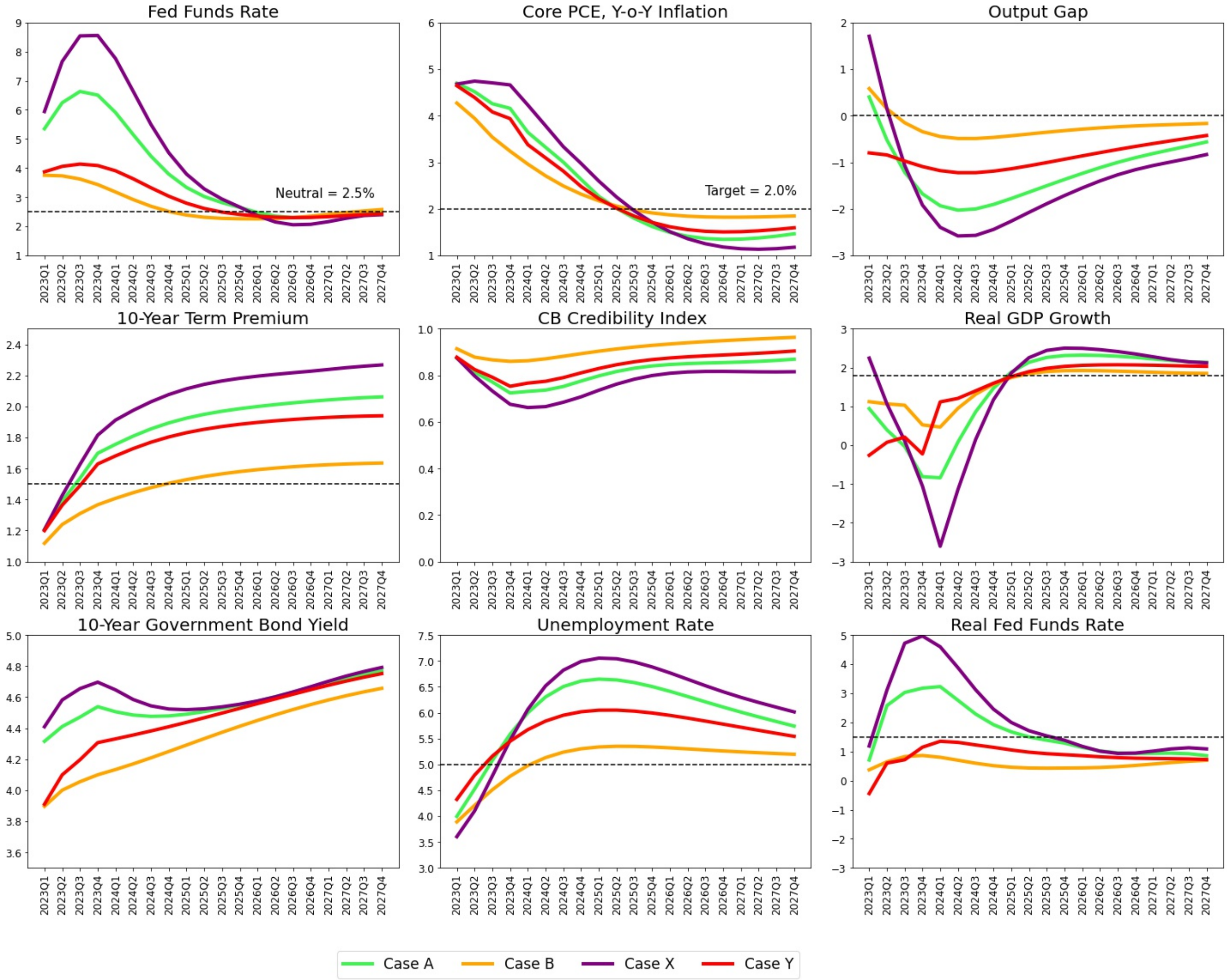
If there is no material decline in consumption or core inflation heading into the March meeting, a more aggressive policy stance would likely be necessary under such conditions. We reiterate the commitment to achieving the objectives of the central bank of full employment and inflation on target in the welfare of its constituents.

[4] This view emphasizes the importance of measures of sticky-price inflation rather than survey-based measures.

APPENDIX

ENDOCRED US RESULTS

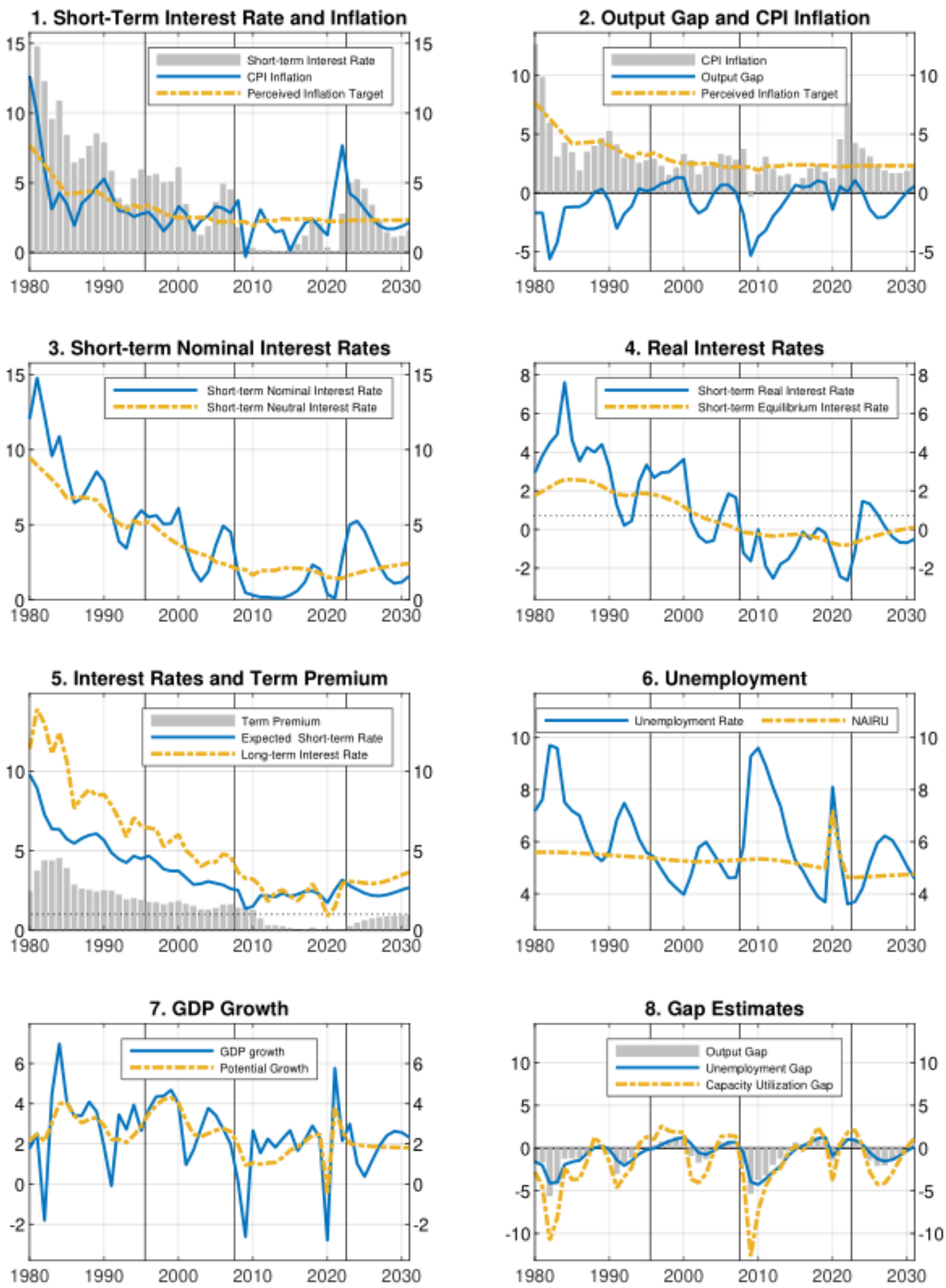
Figure 17.



Source: GFS ENDOCRED United States

MPMOD US RESULTS

Figure 18.
MPMOD US Annual Historical Interpretation Report, Case A



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