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Fed Pivot Analysis

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MONETARY POLICY AND THE US FEDERAL RESERVE

The US Federal Reserve has a dual mandate to stabilize price inflation at 2% YoY while ensuring maximum employment (~4%). To fulfill its mandates, the central bank uses two main levers to control monetary policy in the United States: Quantitative monetary control and Fed Funds rate control.

Quantitative monetary control occurs when the Fed buys and sells securities, often Treasury notes. QE is effectively a form of money printing used to achieve inflation goals when the economy declines. Fed Funds rate control influences the overnight borrowing rates and effectively the cost of taking on debt in the US. Shifting the rate up and down can cause either an expansion or contraction in economic activities on a national basis. These tools shape monetary policy, allowing the Federal Reserve to achieve its mandates.

As the market is forward-looking, market participants actively try to predict the next monetary policy change by the Federal Reserve. The Federal Reserve's monetary policy falls under two categories depending on the macroeconomic situation: *expansionary* or *contractionary*.

An expansionary policy is a macroeconomic policy implemented to stimulate the economy and promote growth. Suitable for the broad market as the cost of capital is cheaper, and thus more credit is circulated, spending increases, and both companies' financials and share price perform better. The opposite is valid for a contractionary policy as capital becomes more expensive.

The reason that the market pays such close attention to the hawkishness and dovishness (see sidebar) of the Fed is that they are indicators of the pace for future rate hikes by the Fed, and such pace difference would significantly impact the movement of the market.

A Fed Pivot is defined as the US federal reserve reversing its monetary policy from expansionary to contractionary, or vice versa.

Hawkish – the public's belief that a specific comment/person from the Federal Reserve is leaning towards raising rates (prioritizing cost control)

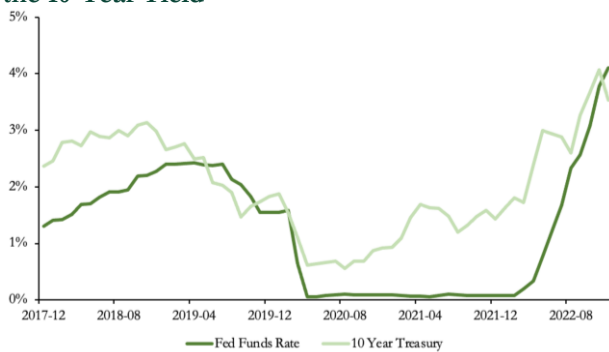
Dovish – the public's belief that the Federal Reserve is leaning towards fewer rate hikes or more rate cuts

CURRENT SITUATION

Fed Funds Rate

As the pandemic slowed the economy with unprecedented lockdowns, the Fed quickly lowered the target fed funds rate to 0% and deployed a combination of its tools and operations to bolster economic and lending activities. Ensuing, the 10-year yield saw a rapid decline due to quantitative easing.

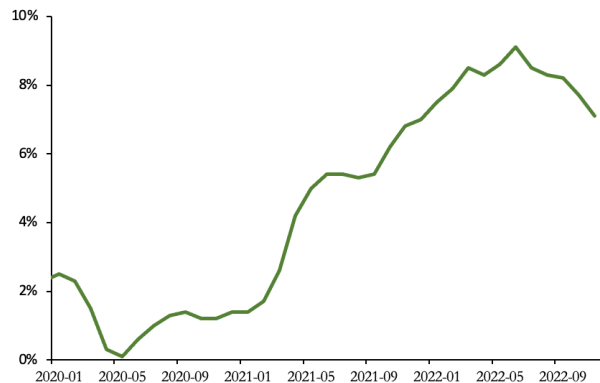
Exhibit 1: Fluctuations in the Fed Fund Rate and the 10-Year Yield



Source: Trading Economics, CNBC

The Fed increased their balance sheet by over \$3 trillion in 2020, peaking at \$7.17 trillion. However, the supply chain issues combined with a low-interest rate caused inflation to rise, reaching as high as 9% by June of 2022.

Exhibit 2: Consumer Price Index 2020 – Present

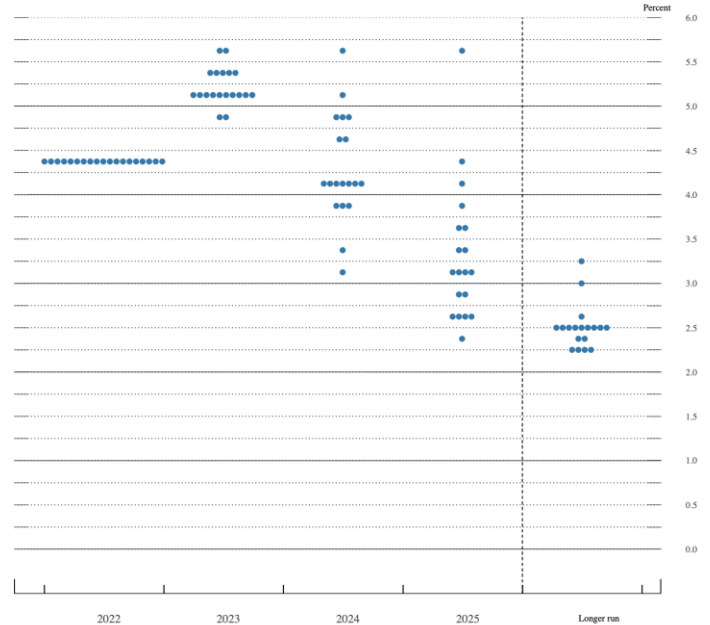


Source: Bank of Canada

The Fed began raising rates from the Effective Lower Bound of the US in January 2022. This had a phenomenal impact on the financial market – most asset classes have seen selloffs as the steep rise in borrowing costs makes many investments less lucrative.

Therefore, while rate hikes have worked to an extent, the CPI YoY figure remains elevated at 6.4% as of February 2023, and the timeline to return to 2% is unclear.

Exhibit 3: Discrepancy Between Market and the Fed



Source: Federalreserve.gov

According to the Fed’s dot plot graph, the Fed is currently projecting a terminal Fed Funds Rate of 5.1% that will be realized by the end of 2023. They are projecting the start of a series rate cuts in early 2024 that will end the year with 4.1%. Then they hope to continue cutting to 3.1% by the end of 2025, and then stabilize at 2.5% from 2026 onwards.

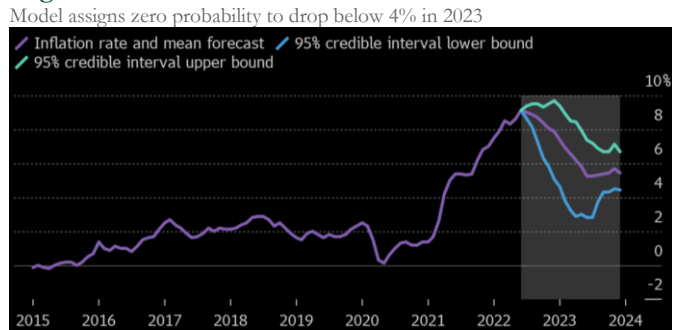
However, despite these statistics, the market is dismissing the Fed's statement, and is anticipating that the Fed will accelerate the timeline and cut sooner.

The figure below shows that the market is pricing-in lower rates for the end of 2023 in comparison to the Fed. The market believes that the Fed will pivot earlier because the Fed is too pessimistic about rapid disinflation and too optimistic about their ability to manage a recession.

Based on these monthly inflation forecasts, the average CPI should be 5.3% in 2023, compared

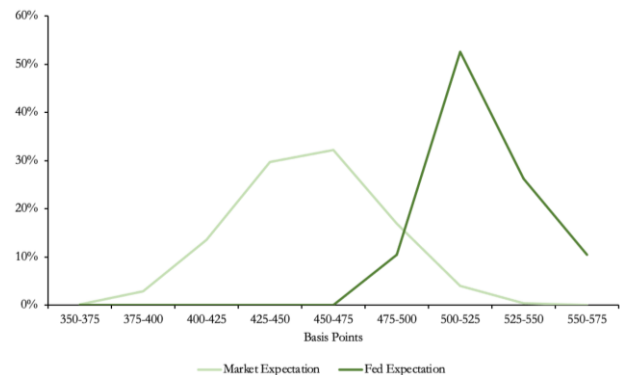
to 9.59% in 2022. In other words, the market believes that the Fed will accept “reality” with more data coming in and soon change its position. The Fed is highly unlikely to monitor the inflation back down to its target with in 2023.

Exhibit 4: US Inflation likely to stay well above Fed’s target



Source: Bureau of Labor Statistics; Bloomberg

Exhibit 5: Market Versus Fed Expectation for December 2023 Fed Fund Rate



Source: CME Group, US Federal Reserve

Heightened Energy Demands

Energy is a significant underlying factor fueling today’s inflationary environment, and there are signs that the Russia-Ukraine-fueled energy crisis may continue. This is because Europe’s turn away from Putin has increased the importance of U.S. exports of liquefied natural gas, however, America alone isn’t enough to fill the entire gap.

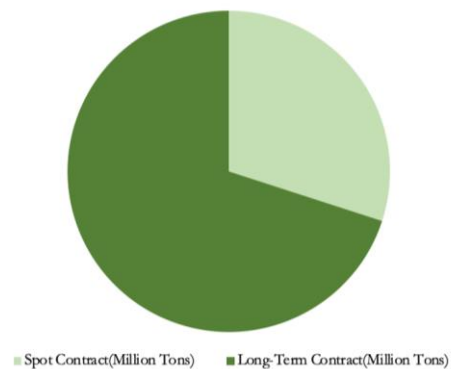
In December of 2022, China moved away from the zero-covid policy, reopening much faster than expected. Bank of America Global Research stated that Brent prices are expected to rise to \$100 per barrel in 2023, while some analysts, such as Dan Yergin, predict prices will soar as high as \$121.

Overall, it is expected that China will add over 2 million barrels of annual consumption to the demand side in 2023. The Winter combined with worsening relations with Russia continues to escalate Europe’s demand to source energy from elsewhere. The International Energy Agency predicts that Europe will face a shortfall of 30 billion cubic meters of gas supplies in 2023.

Meanwhile, Liquefied Natural Gas (LNG) supplies are running especially thin globally. While it is true that total LNG produced is expected to be 455 million tons in 2022, data from Bloomberg Intelligence shows that 70% of cargoes on the water are reserved for customers holding long-term contracts. Therefore, only the remaining 30% are sold on the global spot market, leaving 136 million tons of LNG. Meanwhile, the EU historically imports natural gas volume from Russia equivalent to 118 million tons of LNG.

This leaves a thin margin for Europe as they compete with the rest of the world for additional LNG imports. Additionally, on December 3rd, Vladimir Putin rejected the \$60 price cap on oil, reflecting the fact that the energy crunch will continue to be a problem as both sides continue to be unwilling to strike a deal.

Exhibit 6: Breakdown of Current Global LNG Supply



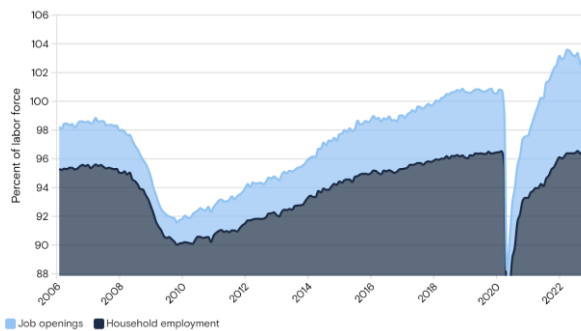
Source: Bloomberg Intelligence, The Washington Post

Inflated Wage Persistence

Based on timely job openings measures, Goldman Sachs Research estimates that the jobs-workers gap has declined from a peak of almost 6 million to just over 4 million, only half of the way to the 2 million level required to slow wage growth to a rate compatible with the Federal Reserve’s inflation target of 2%.

US Job Worker Gap Set to Narrow From Widest in Post-War History

Exhibit 7: Total labour demand minus total labour supply

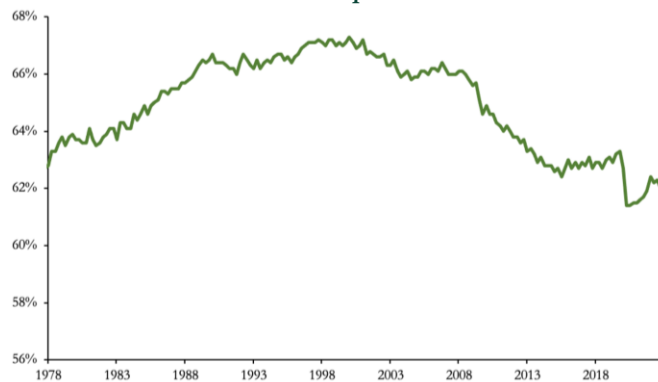


Source: Haver Analytics, Goldman Sachs Research

This means that wage inflation and labor shortage continue persisting, slowing down the Fed's efforts in curbing inflation.

Furthermore, post-COVID employment has tended to be more sticky and unlikely to weaken even as the economy performs poorly. According to ManpowerGroup, companies are inclined to keep employees even as sales drop due to exceptionally hiring difficulty in the past period.

Exhibit 8 Labour Force Participation Rate

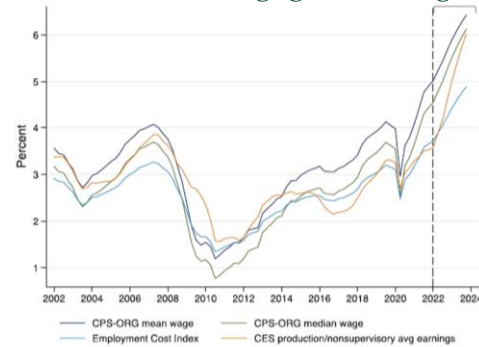


Source: Bureau of Labor Statistics; National Bureau of Economic Research

Covid took over 6 million lives, and the US labour force participation rate is 62.3%, lower than the 63.5% pre-covid mark. The onset of the pandemic drove many baby boomers towards early retirement, causing the available labor force to drop, and thus current unemployment is less comparable to the unemployment rate in the past.

It is less likely to see unemployment rates rise this time as in previous hawkish environments. Overall, low unemployment reduces the chance of a recession, therefore delaying a Fed pivot.

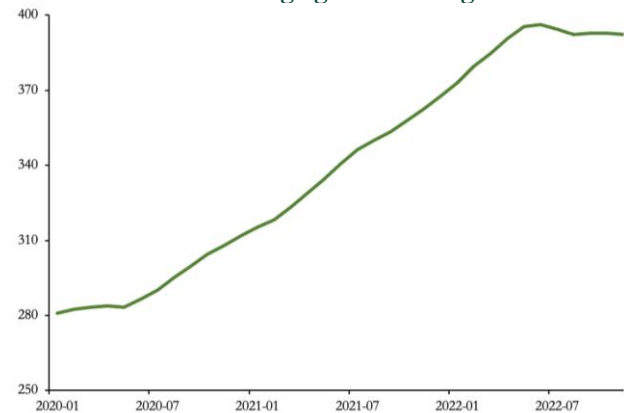
Exhibit 9: Nominal wage growth through 2023



Source: Macrohive

Meanwhile, the elevated wages driven by labor shortage will likely prove to be a key obstacle standing against the Fed’s efforts in controlling inflation. Both factors make a Fed pivot that sooner than what the Fed announced unlikely.

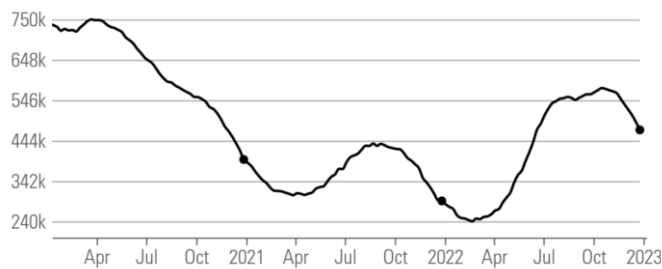
Exhibit 10: Nominal wage growth through 2023



Source: Federal Housing Finance Agency

Home sales in the United States declined for the eleventh month in December of 2022. Mainly due to the stagnant surge of costs, surging mortgage rates and high prices pushed buyers out of the market. The US real estate market hinges on a difficult equilibrium. The continuous rate hikes from the US Fed have dampened housing demand considerably, with the mortgage rate increasing from 3% to 7% in the ten months between Jan-Oct 2022.

Exhibit 11: U.S Housing Inventory seeing noticeable drop

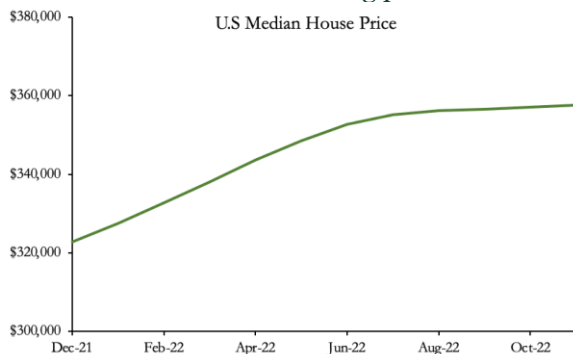


Source: Alto Research; Generated on Jan 08.

However, real estate prices are remaining steady due to the abnormally low supply of real estates for sale. For instance, the supply of unsold existing homes dropped to 1.14 million in November 2022, down 6.6% from the previous month.

Real estate is the sector that most currently view as the first sector that will see significant weakness. However, the strength it has displayed thus far actually serves as a counter to the recessionary fears in the market, leaving more room for the Fed in terms of preventing a serious recession.

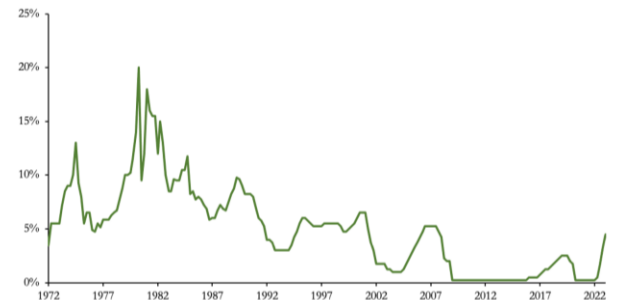
Exhibit 12: U.S. Median Housing prices



HISTORICAL OVERVIEW

Observing the context behind each pivot since 1980 led to the recognition that the decision is based on the dynamics of three factors: inflation, economic projections, and any systematic risks in the market. Each historical pivot was announced due to changing macroeconomic indicators.

Exhibit 12: Historical Fed Funds Rate



Source: Trading Economics

Modern Era

The most recent pivot in the beginning of 2019 was due to a deterioration in economic projections. The three factors played as follows:

- Short-term inflation expectations remained the same.
- There was minimal systematic risk present.
- The economic outlook turned more negative as Trump inflicted a **trade war**.

In 2018, the Fed thought that Trump's tax cut meant an increase in economic activities and inflation causing hawkishness. When the risk of economic slowdown increased in 2019 following the trade war, the Fed pivoted to reflect this change in sentiment.

Subprime Mortgage Crisis

This pivot hinged more on systematic risk. Systematic failures of major financial institutions would have crushed any remaining liquidity in bond markets, making it difficult for the

government's borrowing activities. Every Fed fears such a situation. Notably, the Fed is less concerned with equity market downturns. In the first half of 2007, the Fed was getting mixed signals about the underlying strength of the economy and proposed to leave rates unchanged until systematic risk hit.

Exhibit 13: U.S. CPI 2006-2008



Source: U.S Bureau of Labor Statistics

Inflation at the start of 2007 had already peaked, sitting around the 2% target. Ben Bernanke, the Fed Chair back then, left the rate unchanged at 5.25% for the next eight months because of uncertainty of economic strength and fearing inflation resurging. During that period, the Fed had been vigilant about the potential mortgage crisis, cutting the economic growth forecast, and stepped in with cash to help stabilize the market along with other central banks.

Mid-August was when the systematic risk grew more certain - the mortgage crisis led to bank failures and a bond market crisis. This was the straw that caused the Fed to pivot from a neutral rates stance to rapid cuts. In Ben Bernanke's Nobel Prize winning paper, *Non-Monetary Effects of the Financial Crisis in the Propagation of the Great Depression*, he proposed that bank failures lead to recession and must be avoided before the situation turns into a stagflation, which is harder to combat.

Dot-com Era

The Fed pivoted at the beginning of 2001 due to similar reasons: the Dot-com bubble, 9-11, and the Afghanistan War brought the economy into a recession. Although inflation at the time didn't yet show signs of coming down from its average of 3.73%, the Fed decided the economy should be stimulated given the sudden change in economic projection. A key takeaway is that the Fed does not need to see PCE inflation figures fall under 2% to pivot.

1990s

In the 1990s, a minor Fed pivot occurred in late 1995 due to **economic projection**. In the span of six months, the Fed cut rates three times by 25 bps after working hard against inflation in 1994 and early 1995. They wrote: "as a result of the monetary tightening initiated in early 1994, inflationary pressures have receded enough to accommodate a modest adjustment in monetary conditions." Inflation at the time stayed just under 3% while the Fed funds was at 6%. The Fed deemed the unemployment rate of 5.6% to be too high and saw signs of retail sales weakness.

70s Inflationary Period

The 70s and early 80s inflationary period can be characterized as two distinct periods of accelerating inflation rates. The first period is between 1974 to 1976 where inflation peaked at ~12%. According to Alan Blinder in his *Analysis of Double Digit Inflation in the 70s*, Alan remarked that the period between 1974 and 1976 was marked by a series of supply shocks that gave rise to the inflationary period.

Meat prices were the main drivers in the rapid increase of food prices as seen in Figure 4 where food prices rose double-digits. The Oil Embargo led to the price of oil quadrupling from \$2.90 a barrel to \$11.65 a barrel in January 1974. In

addition to those supply shocks, Nixon ended his Wage-Price control program within that period. The combination of those three factors led to a rapid increase in inflation, but also a rapid deceleration of inflation as those shocks eased throughout time.

Exhibit 14: U.S. CPI 1970-1990



Source: National Bureau of Economics and Research

A similar set of supply shocks can characterize the inflationary periods between 1978 and 1982, where food and energy supply shocks contributed to an imbalance of aggregate demand and supply. However, the Fed's monetary policy during the 70s had an impact as well. The Nixon administration pressured Arthur Burns to pursue a low interest policy to keep unemployment low and thus garner more votes. This brings to question whether the 1978 to 1982 inflationary period was due to a mix of supply shocks and monetary policy.

When Volcker took the position of chair of the Federal Reserve, he raised rates in 1980 subsequently causing a recession in which he was forced to lower rates shortly thereafter to ease the impacts. As soon as the rates were lifted, CPI inflation rose again. Volcker took a very contemporary view that the expectation of future inflation entrenched inflation even further. This was seen when inflation fell from 10% in 1982 to 6% in 1983 however 10Y bond yield grew from 13% to 14% in the same period implying that investors believed inflation would continue to rise.

To ensure the credibility of the Federal Reserve, Volcker kept rates high during the 1982-1983 recession which saw a further drop in inflation and greater credibility behind the reserve's actions. A possible contributing factor to the decrease in inflation is when the Carter Administration announced stricter credit controls on March 14, 1980, which caused a sharp 13% decrease in MoM consumer credit installments effectively changing consumer spending habits.

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