US Economic Survey: Mid-Year 2023

Forecasts from the SIFMA Economist Roundtable
Assessing the Economic Landscape and Monetary Policy

June 2023

Key Takeaways

- **The Economy**:
  - 2023 real GDP growth estimate +0.5%, vs. +0.9% 2022 (median forecast, 4Q/4Q)
  - 2023 unemployment rate estimate +4.1%, vs. +3.6% in 2022 (4Q average)
  - 2023 inflation estimates
    - CPI/Core CPI +3.0%/+3.8%
    - PCE/Core PCE +3.1%/+3.5%

- **Monetary Policy**
  - Fed Funds rate action at June FOMC meeting: Pause, 92.9% of respondents
  - Peak Fed Funds rate estimate: 500-525 bps, 78.6% of respondents
  - Timing of peak Fed Funds rate: 2Q23, 78.6% of respondents
  - Timing of Fed pause: 2Q23, 91.7% of respondents
  - Timing of Fed Funds rate cut: 1Q24, 71.4% of respondents
  - Amount of Fed Funds rate cut: >100 bps, 76.9% of respondents

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Setting the Scene

A Message from Our Chair

The Fed opted to raise rates for the tenth time in fifteen months an additional 25 bps to an upper bound of 5.25%. While the policy announcement was widely anticipated, the unknown was the language in the statement potentially offering guidance to future policy directives. The biggest, or most notable, change was around the need for future policy adjustments. In March, the statement noted the Committee anticipates that "*some additional policy firming may be appropriate."* After the May meeting, that wording was replaced with *"in determining the extent to which additional policy firming may be appropriate.*" A small but important distinction, as the Fed now appears to be unclear as to the extent of how much additional policy action will be needed – if any – to tame inflation, giving itself additional wiggle room to pause, stop, or continue with rates and essentially offering little, if any, guidance for market investors.

Acknowledging more recent volatility in the banking sector, particularly in the aftermath of SVB and more recently First Republic's failure and subsequent purchase by JP Morgan, the Committee remains acutely aware of market metrics. "*Tighter credit conditions*," are likely to weigh on economic activity, hiring, and inflation. Of course, the extent of these effects is extremely uncertain. And above all, the Committee remains "*highly attentive to inflation risks*."

In other words, should tighter credit conditions do some of the Fed's work in terms of taming inflation, there may be less of a need for further rates hikes. However, if tighter credit conditions do *not* do enough to tame inflation, the Fed is willing to continue its fight with a further backup in rates. It will all depend on the evolution of the data, lagged effects in monetary policy, and financial market developments, as it always has. The difference now, however, is that the Committee appears less certain as to the direction and extent of policy adjustments needed to tame inflation. As such, **it may be increasingly willing to pause and assess**, as opposed to an earlier plan of raising rates while assessing.

Last month's policy decision was unanimous. Yet, June is far from solidified. While the Fed is clearly not opposed to raising rates further, the Committee is not yet convinced that they will need to take further action or how much higher rates will need to rise. Of course, while some Committee members may be inclined to move to the sideline – at least temporarily – and assess the full impact of an earlier 500 bps in tightening, a pause may be difficult to justify particularly in the wake of a seemingly still strong economic performance.

Headline GDP rose 1.3% in the first quarter, down from a 2.6% pace in the fourth quarter. The weakness, however, was concentrated in a drawdown of inventories with an arguably overly pessimistic downturn in production. Thus, excluding inventories and trade, real final sales to domestic purchasers rose an impressive 3.3%, significantly more than the 0.7% rise at the end of last year. And, going forward, should the consumer maintain this reduced yet still positive pace of expenditures, either businesses will need to step up activity and spending adding significantly to Q2 GDP or with a shortfall of supply relative to demand, inflationary pressures may pick up – or at least lead to less disinflationary pressures – over the coming months.

Meanwhile, the labor market remains persistently tight with the latest employment report showing a gain of 339,000 in May, the largest monthly gain since January. Additionally, as the U.S. labor market continues to put hundreds of thousands of Americans back to work on a monthly basis, the unemployment rate broadly remains at a multi decade low – although more recently rising from 3.4% to 3.7% – still keeping pressure on wages. Average hourly earnings rose 0.3% in May and 4.3% over the past 12 months.

Of course, while the labor market clearly remains very tight, there are at least *some* indications that it is beginning to come back into balance, including a reduction in the number of job vacancies dropping from a recent peak of 12.0 million in March of last year to 10.1 million in April. That being said, while off earlier peak levels of dislocation, by the Fed's own description, labor demand still substantially exceeds the supply of labor, maintaining pressure on wages and more broadly inflation. This is a disconnect that will arguably keep the Fed's hands somewhat tied in terms of forcing further policy tightening and limiting the Committee's ability to pause and wait – or hope – for a more organic adjustment to tackle prices pressures.

All along the Fed has been focused on inflation. And with the nominal level of prices still elevated – consumer and producer prices are more than double the Committee's 2% target – coupled with a lack of meaningful downward momentum – meaning an *unimpressive* pace of disinflation, well above earlier expectations – it is not yet clear if the goal of price stability has or will be met. The Committee has indicated a willingness to move to the sidelines and still may do so in June or July. However, the latest price data does not make the case for the Fed. Rather, any decision to pause would be made in spite of the latest still elevated inflation data.

In fact, even in areas of emerging weakness like manufacturing and housing, inflation appears to be an ongoing pressure point. The ISM Manufacturing Index, for example, has been trending in contractionary territory since November, and the prices paid component surged four points in April alone, reaching a nine-month high.

Even in the housing market – arguably the hardest hit sector as the rising rates undermine affordability – price pressures remain. Isolating shelter in the CPI, costs remained at a high of 8.2%, with core services excluding shelter – a proxy for the wage price spiral – rising roughly 5%.

So, in fact, the Fed's latest – and somewhat novel – adjustment to its policy guidance appears to be a bit tongue in cheek. With the country largely bypassing the impact of default, and with relative calm restored to market metrics – if maintained – and if the Fed remains committed to reinstating price stability, given the strength in the consumer and broader economy, there appears to be more work to be done before policy reaches a "*sufficiently restrictive*" level. However, the question remains will additional firming come from organic measures and/or earlier policy tightening given the lagged effects?

Meanwhile, despite ample evidence the Fed may have more work to be done, the May FOMC statement and the Fed Chair's press conference comments – along with more recent two-sided commentary from various officials – highlights a seemingly unsteady level of conviction to stay the course. Rather, the Fed is seen as opening the door for a pause or at the very least casting doubt on the Committee's resolve to entirely slay the inflation dragon.

At this point market expectations for a pause in June, while volatile, have increased as of late. The market has been early to call an end of Fed action before, but this time the Fed appears increasingly willing to entertain the notion as well. With that, we invite you to dive into the results from our SIFMA Economist Roundtable U.S. economic survey.

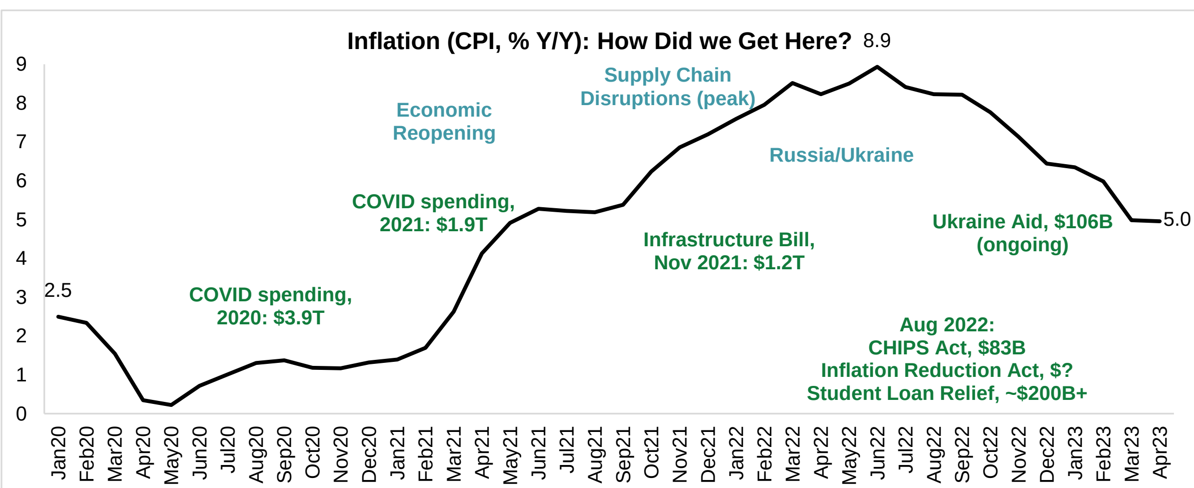
-- Dr. Lindsey Piegza, Ph.D., Chief Economist and Managing Director at Stifel Financial Corporation and Chair of the SIFMA Economist Roundtable

Inflation: Status

Before we dive into the survey results, we wanted to set the scene on where we are in inflation, the economy, and the Fed's conundrum in setting monetary policy – interest rate hike, pause (or the new term, skip), or pivot. To begin, we analyze the inflation situation – how we got here and the current status of inflation metrics. There are many different factors which drove the increase in inflation, not all of which can be impacted by monetary policy to bring levels back down to the Fed's 2% target.

We recap the drivers of inflation:

- **Fiscal spending**[1]**:** >$7 trillion since March 2020
    - COVID associated
    - Administration policies
    - Ukraine aid
- **Other factors:**
    - Post-COVID economic reopening
    - Supply chain disruptions (domestic issues, China's zero COVID policy)
    - Russia/Ukraine war (impact on commodity prices)
- **Monetary policy** (not depicted graphically): $4.2 trillion added to the Fed's balance sheet since March 2020
    - 0% interest rates
    - Asset purchases/balance sheet expansion



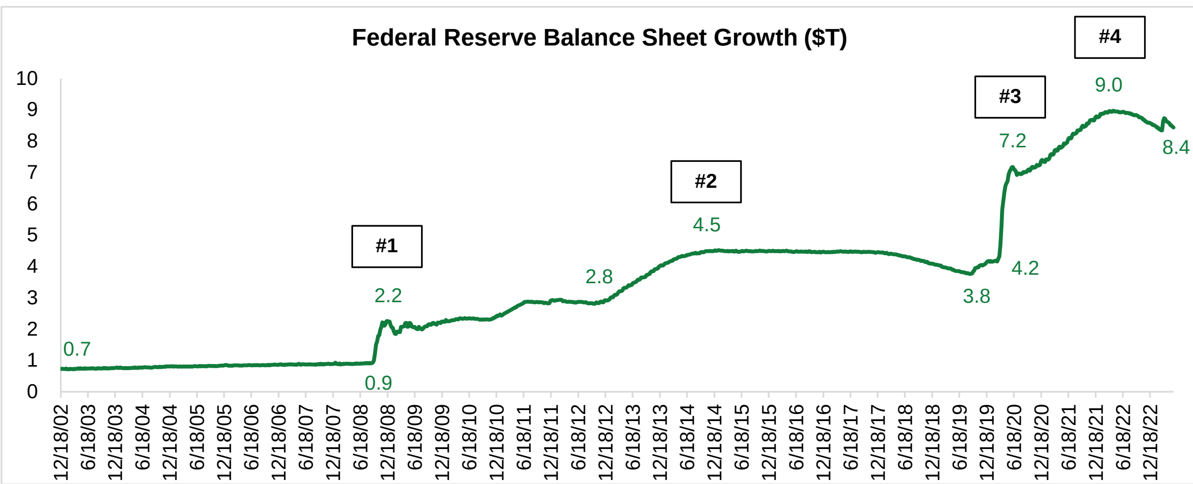
Source: FRED, IMF, SIFMA estimates

[1] $3.9T COVID spending = Consolidated Appropriations Act of 2021; executive orders to address expiration of COVID reliefs; Paycheck Protection Program and Health Care Enhancement Act; Coronavirus Aid, Relief and Economy Security Act (CARES Act); Coronavirus Preparedness & Response Supplemental Appropriations Act and Families First Coronavirus Response Act. $1.9T COVID spending = American Rescue Plan. Inflation Reduction Act (IRA) = touted to be net neutral on spending, but the actual cost remains undetermined. Student loan relief = A Federal Reserve Bank of New York report estimated the cost to already be ~$200B since the start of COVID; the debt ceiling bill came with a condition that the student loan payment pause end after August 30, and President Biden's program remains with the Supreme Court.

On the monetary policy side, we have seen a massive expansion of the Fed's balance sheet (BS) since the early 2000s:

1. After the global financial crisis (GFC), the BS grew 205%
2. There was another pop from the GFC to the mid-2010s, +103%
3. The BS grew 72% with the COVID funding, from the start of 2020 to mid-2020
4. Then the government kept spending, increasing the BS another 25%, from the COVID increase to the $9.0 trillion peak

The BS has come down from the peak as the Fed moved from QE into QT[2], -6%. However, this still represents a 1,072% increase in the Fed's BS since 2002.



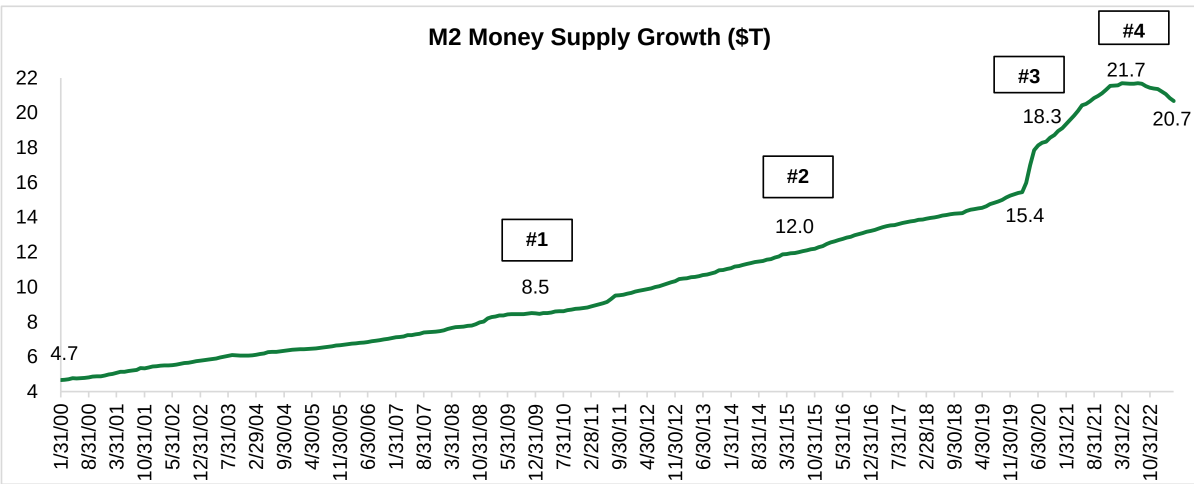
Source: FRED, SIFMA estimates

[2] QE = quantitative easing, used to stimulate borrowing and spending when the economy is in a recession or experiencing slow growth. QT = quantitative tightening, used to cool down the economy and prevent inflation from rising too much if inflation is high or the economy is overheating.

As the Fed kept printing money, we also saw a significant expansion in the M2 money supply[3] since the early 2000s:

1. After the GFC, M2 grew 82%
2. Then, M2 increased another 41% from the GFC to the mid-2010s
3. From the start of 2020 to mid-2020, COVID funding caused a 19% increase in M2
4. As the government kept spending, M2 increased another 19%, from the COVID increase to the $21.7 trillion peak

With the move to QT, M2 has come down from the peak, -5%. Yet, M2 is still up 343% since 2000.



Source: Bloomberg, SIFMA estimates

[3] Estimate of the total money supply including all cash people have on hand plus all of money deposited in checking accounts, savings accounts, and other short-term saving vehicles (ex: certificates of deposit). Excludes retirement account balances and time deposits above $100,000.

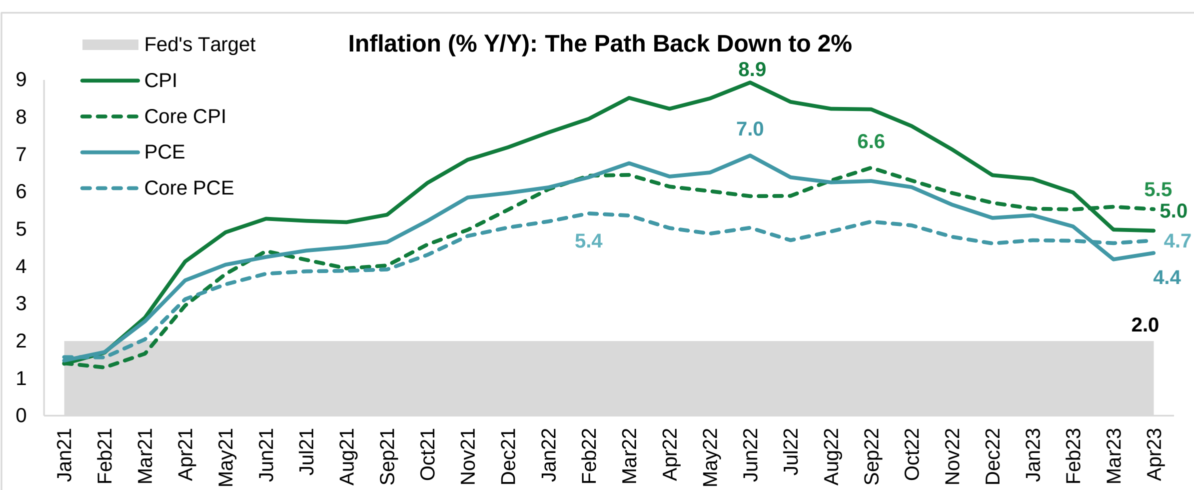
Monetary policy. Fiscal spending. Economic reopening post COVID. Supply chain disruptions. A war. That was already a lot for an economy to digest. Then we added on the regional bank turmoil and the debt ceiling debate (now resolved). It is no wonder the economy and inflation are where they stand today. We highlight where we are with inflation metrics (Y/Y change, as of April) and how this compares to peak levels. We also show the path back down to the Fed's target of around 2%. We pay close attention to the Personal Consumption Expenditures Price Index (PCE), the preferred metric used by the Fed to set monetary policy.

- **Consumer Price Index (CPI) +5.0%**
    - Prior month +5.0%
    - Peak +8.9% in June 2022
    - Path to 2% = -3.0 pps

- **Core CPI +5.5%**
    - Prior month +5.6%
    - Peak +6.6% in September 2022
    - Path to 2% = -3.5 pps

- **PCE +4.4%**
    - Prior month +4.2%
    - Peak +7.0% in June 2022
    - Path to 2% = -2.4 pps

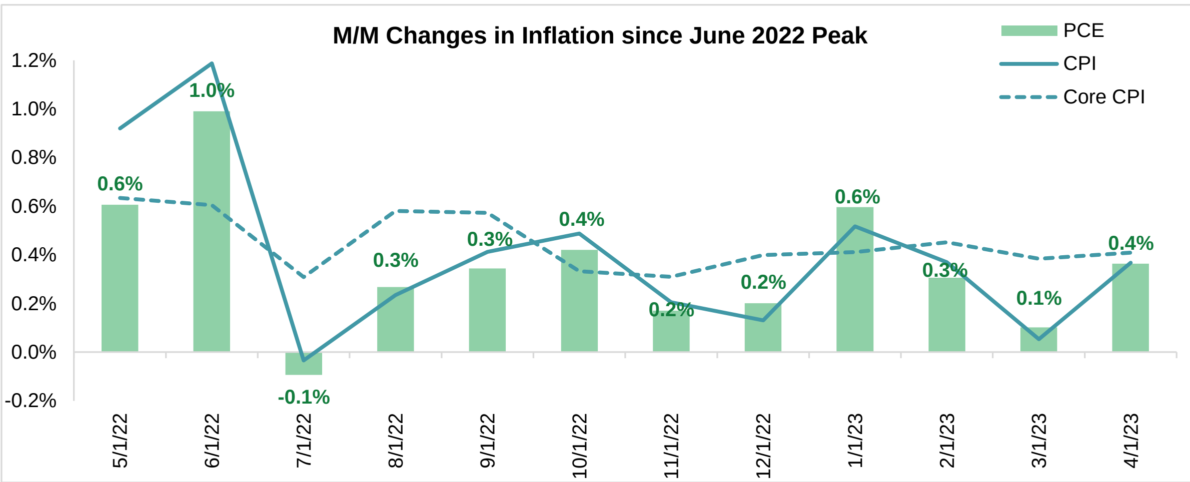
- **Core PCE +4.7%**
    - Prior month +4.6%
    - Peak +5.4% in February and March 2022
    - Path to 2% = -2.7 pps



Source: FRED, SIFMA estimates

On a M/M basis, there does not appear to be a discernable pattern. Looking at the last twelve months, directional shifts for PCE – posting a monthly percent change that was higher/lower than that for the preceding month – were higher five times, lower four times, and flat two times.

This lack of pattern has people wondering whether it means inflation is stickier than hoped or if it means just that, i.e. no pattern.



Source: FRED, SIFMA estimates

Inflation: Components

Part of what is complicating monetary policy decision making is that inflation has many moving pieces, with multiple components building the inflation equation:

At peak inflation, all of the pieces were pushing on aggregate inflation rate. The same cannot be said today. We asked our Economist Roundtable to rank which factor is having the biggest impact on the aggregate inflation rate:

- Demand side: 70% ranked this component #1, followed by 20% for #2 and 10% for #3
- Labor component: 40% ranked this component #2 or #3 each, with 20% for #1
- Supply side: 50% ranked this component #3, followed by 40% for #2, and 10% for #1

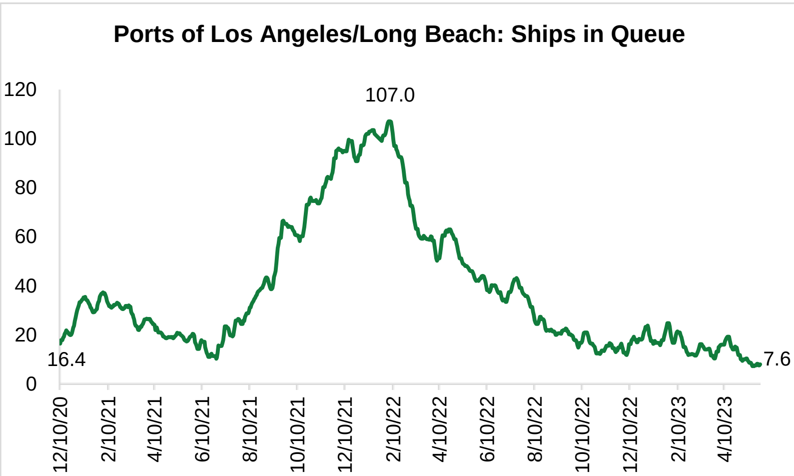
This compares to our December 2022 results of:

- Demand side: 90% ranked this component #1, followed by 10% for #3
- Labor component: 50% ranked this component #2 or #3 each (no #1s)
- Supply side: 50% ranked this component #3, followed by 40% for #2, and 10% for #1

Looking across surveys, demand remains the top factor, but with less conviction as the #1 spot. Labor has grown in concern in economists' minds.

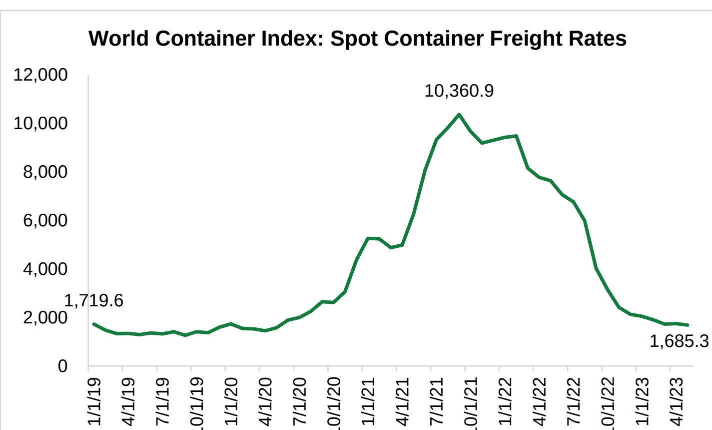
Inflation: Supply Side

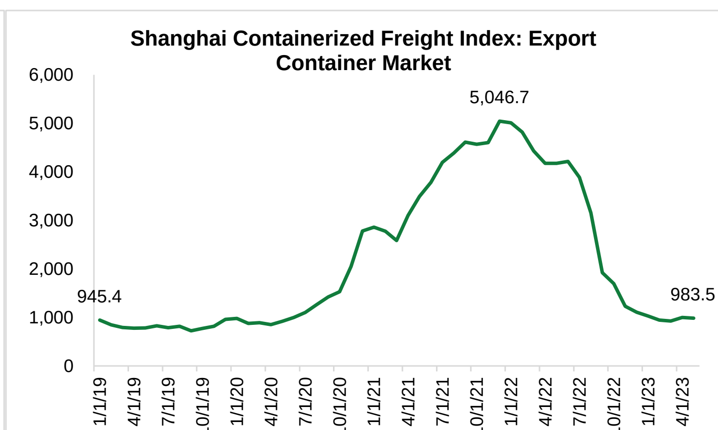
While supply chain disruptions were a major factor driving inflation in 2021, this is no longer the case. Remember when we used to count ships in queue off the Ports of Los Angeles and Long Beach? This number is now well below pre-COVID levels, -51.2% from 2020 through May 2023. The current level of 7.6 ships at the end of May is -92.5% from the 107 peak.



Source: BofA Global Research estimates
Note: 1-week moving average of at berth and outside of 40m (loitering)

Spot container freight rates are also below pre-COVID levels. The World Container Index shows rates 2.0% below the start of 2019 levels and down 83.7% from the peak. Looking to the world's largest container port for further details, spot rates for the Shanghai export container transport market – while slightly elevated to the start of 2019, +4.0% – are also down significantly from peak levels, -80.5%.





Source: Bloomberg, SIFMA estimates
Note: The Drewry World Container Index reports actual spot container freight rates, calculated as USD per 40 foot container using a weighted average of 8 shipping routes by volume. The Shanghai Shipping Exchange Containerized Freight Index (SCFI) reflects the spot rates of the Shanghai export container transport market, including freight rates of 15 individual shipping routes and a composite index. Shanghai is the world's largest container port.

That said, as we neared publication of this report, we experienced a workers strike at the Ports of Los Angeles and Long Beach – which handle approximately 40% of containers coming into the U.S. – amid a stall in labor negotiations. Similar work stoppages occurred across other west coast ports, such as Oakland and Seattle. This comes at a time when alternate shipping routes to east coast ports – a decision shippers made during the height of bottlenecks at west coast ports – may be in jeopardy, or at least delayed or limited. Over the last few weeks, news emerged that severe drought coupled with El Niño – which typically brings drier than normal weather conditions – at the Panama Canal forced shipping restrictions.

Additionally, the recent OPEC+[4] meeting announced no changes to its planned oil production cuts for this year as announced in April: around 1.16 million barrels per day (bpd), bringing the total volume of cuts to 3.66 million bpd, roughly 3.7% of global demand. Further, Saudi Arabia announced an additional voluntary one-month 1 million bpd cut starting in July which could be extended further, bringing its total voluntary declines to 1.5 million bpd. Some analysts estimate this could put the price of Brent Crude Oil at $80-$90 for an extended period.

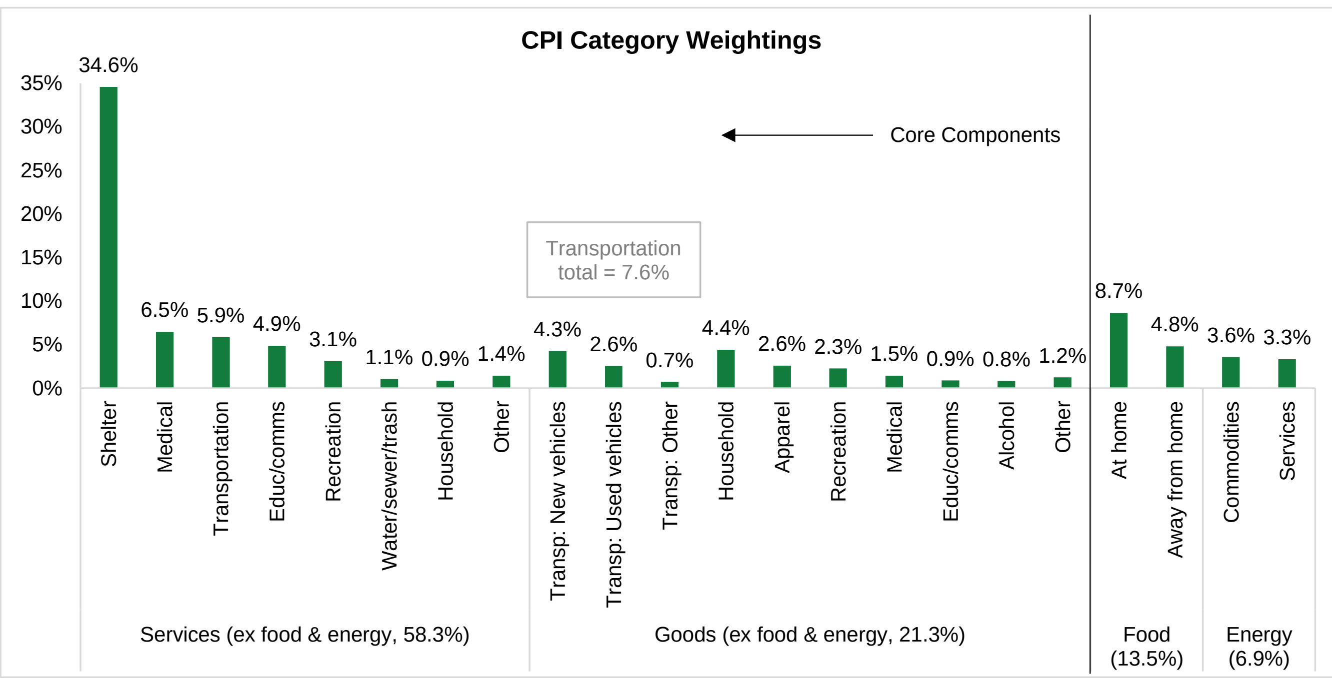
Perhaps we should stay tuned for more on the supply side component of inflation.

[4] OPEC = Organization of the Petroleum Exporting Countries = Algeria, Angola, Congo, Equatorial Guinea, Gabon, Iran, Iraq, Kuwait, Libya, Nigeria, Saudi Arabia, United Arab Emirates, and Venezuela. OPEC+ = OPEC + allies led by Russia; control ~40% of the world's crude oil production and thereby essentially control the price of oil

Inflation: Demand Side

Moving on to analyze the demand side of inflation, we begin by breaking down the components measured by the Consumer Price Index (CPI; % of total index):

- Non-core components, food and energy, represent 20.4%
- Core components, excluding food and energy, represent 79.6%
    - **Services** 58.3%
        - Shelter 34.6%
        - Medical 6.5%
        - Transportation 5.9%
    - **Goods** 21.3%
        - Total transportation 7.6%; new vehicles 4.3%, used vehicles 2.6%
        - Household 4.4%
        - Apparel 2.6%



Source: Bureau of Labor Statistics, SIFMA estimates

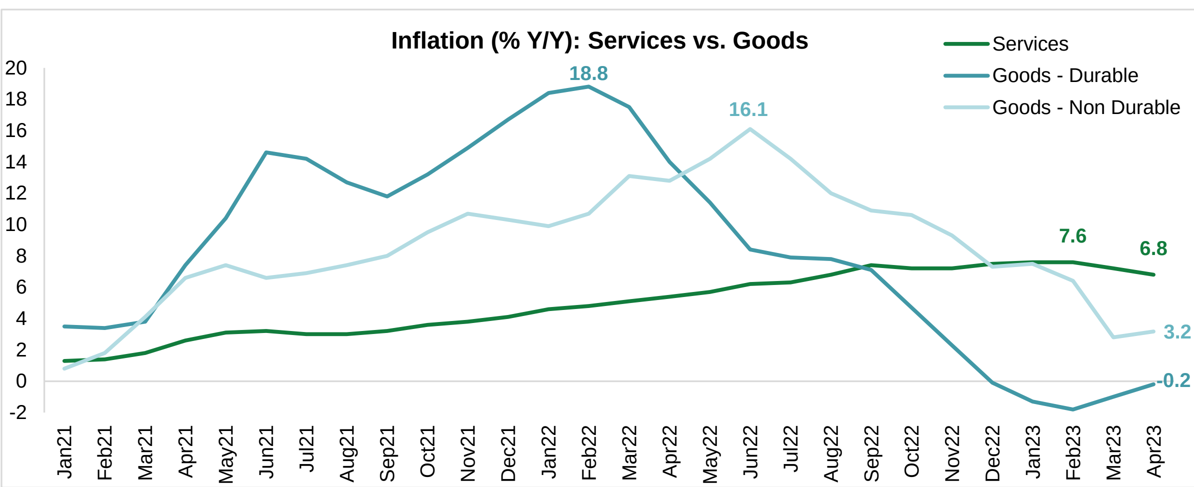
The focus of monetary policy is on the core components. After all, the Fed cannot control the price of oil, which is a global market. The Fed can impact consumer demand for goods and services. All eyes have been on services, which had continued on an upward trajectory while goods inflation declined. That said, services inflation ticked down in April. Goods inflation has declined significantly from peaks. In fact, durable goods have been in a deflationary cycle since December 2022. However, both durable and non-durable goods ticked up in April.

We highlight the following trends for these inflation components: (CPI Y/Y change, as of April)

- **Services +6.8%**
  - Prior month +7.2%
  - Peak +7.6% in January and February 2023, -0.8 pps from peak

- **Goods – Durable[5] -0.2%**
  - Prior month -1.0%
  - Peak +18.8% in February 2022, -19.0 pps from peak

- **Goods – Non Durable 3.2%**
  - Prior month +2.8%
  - Peak +16.1% in June 2022, -12.9 pps from peak

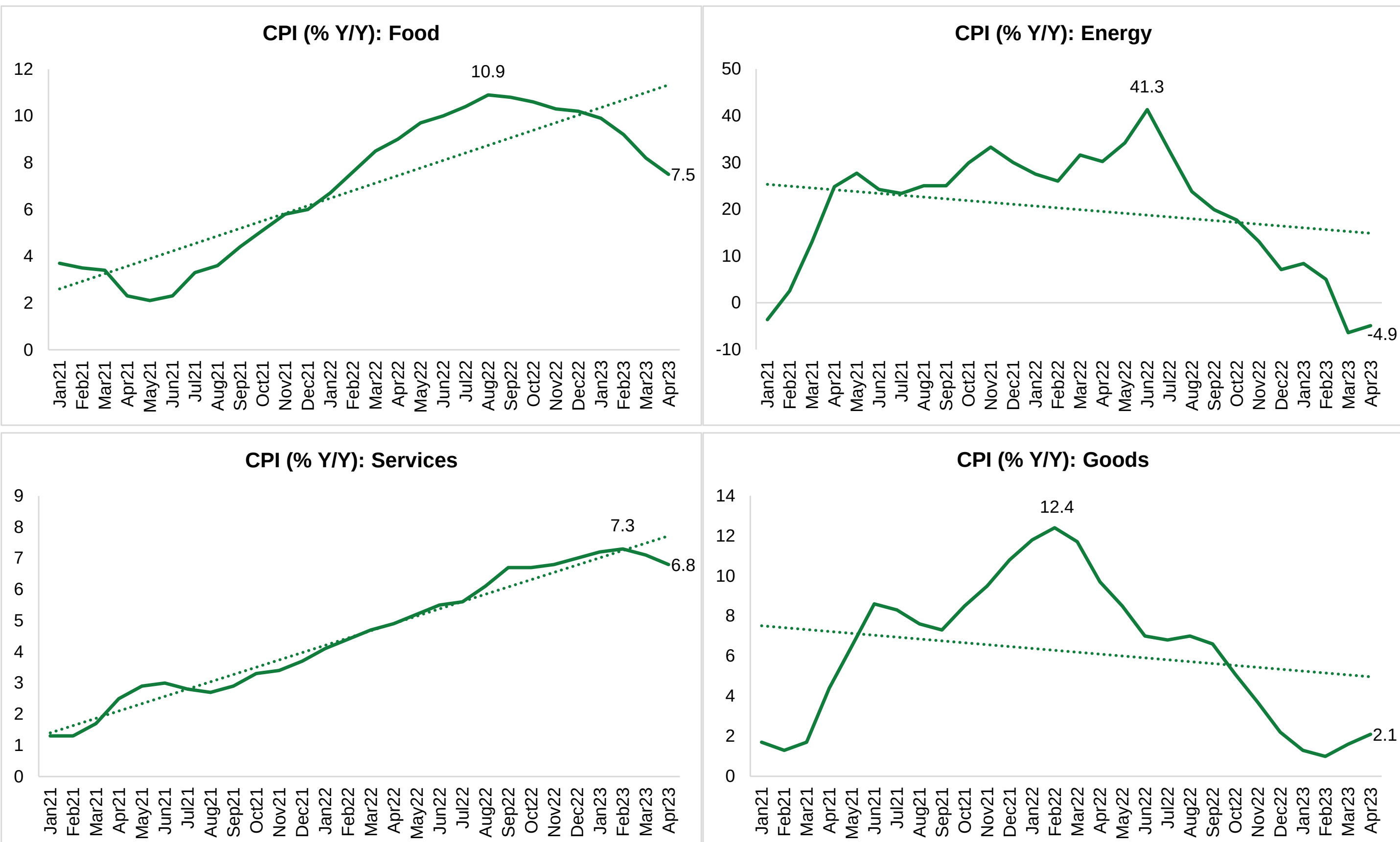


Source: Bureau of Labor Statistics, SIFMA estimates

[5] Durable goods – or hard goods (can be purchased or rented) – yield utility over time instead of being consumed in one use and have long periods between successive purchases, i.e. last >3 years; ex: cars, home appliances, consumer electronics, furniture, sports equipment, and toys. Non-durable goods – or soft goods or consumables (generally not rented) – tend to be consumed immediately in one use or have a lifespan of <3 years; ex: cosmetics, cleaning products, food, fuel, beer, cigarettes, paper products, rubber, textiles, clothing, and footwear.

Next, we look at trends across inflation the four major components of CPI since the start of 2021:

- Food and services have upward trajectories; energy and goods have downward trajectories
- Food and services came down in April; energy and goods ticked up
- While services only peaked in February 2023, the others are down substantially from their peaks in 2022; energy has been deflationary for the last two months



Source: Bureau of Labor Statistics, SIFMA estimates

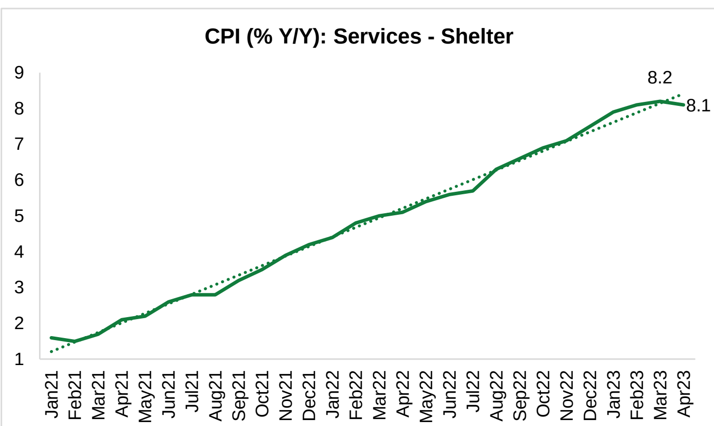
Services Segments

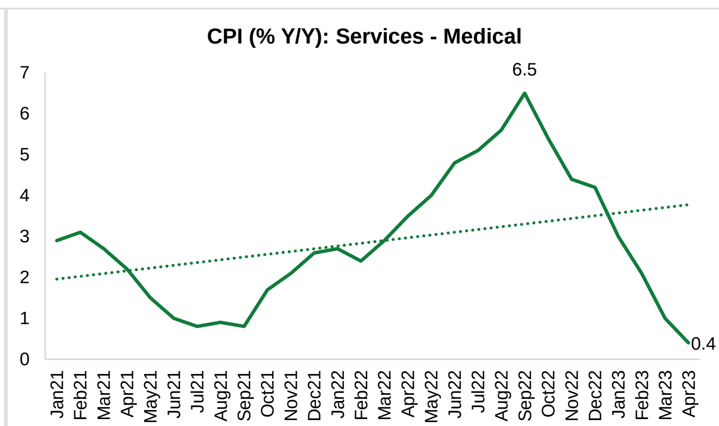
At 58.3% of the total inflation equation, the Fed needs services to come down in order to fully tackle inflation. Importantly, at over a third of the total inflation equation, the Fed needs shelter to come down. Looking at trends across the headline CPI categories in services inflation, we note the following since the start of 2021:

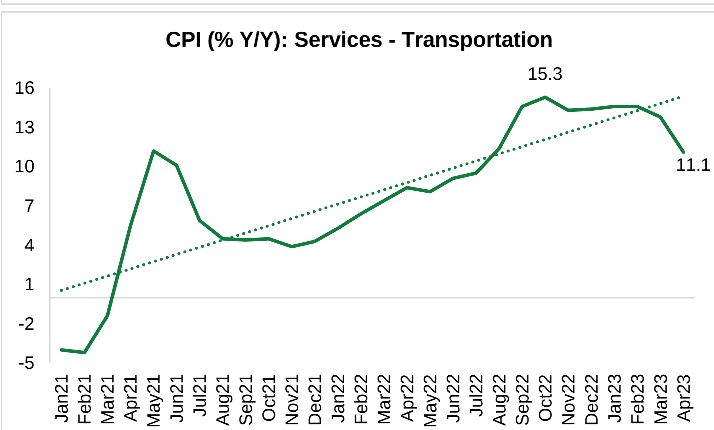
- All segments have upward trajectories for the full time period

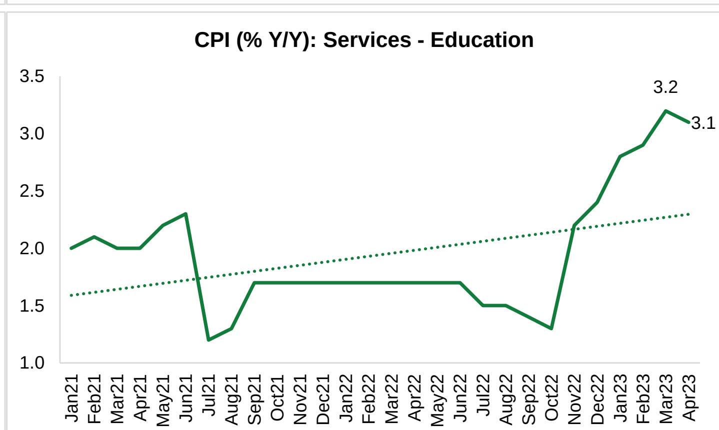
- April versus peak level
  - Down = medical -6.1 pps, household (operations) -4.9 pps, transportation -4.2 pps, other -0.4 pps, and shelter and education -0.1 pps each
  - Flat = recreation, water/sewer/waste

- April trend versus the prior month
  - Decline = shelter, medical, transportation, education, and household
  - Flat = water/sewer/waste
  - Increase = recreation and other

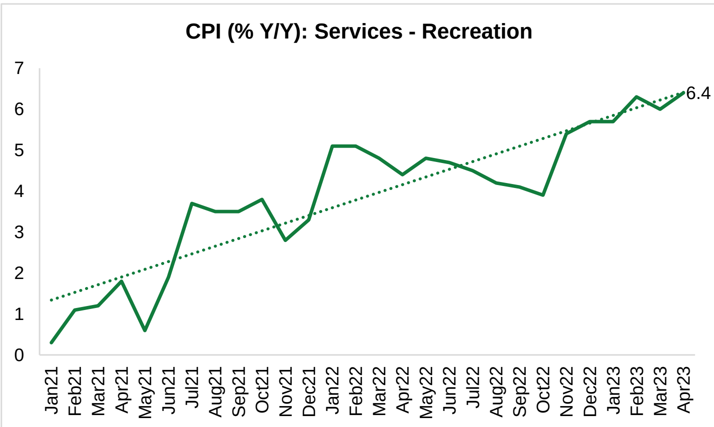


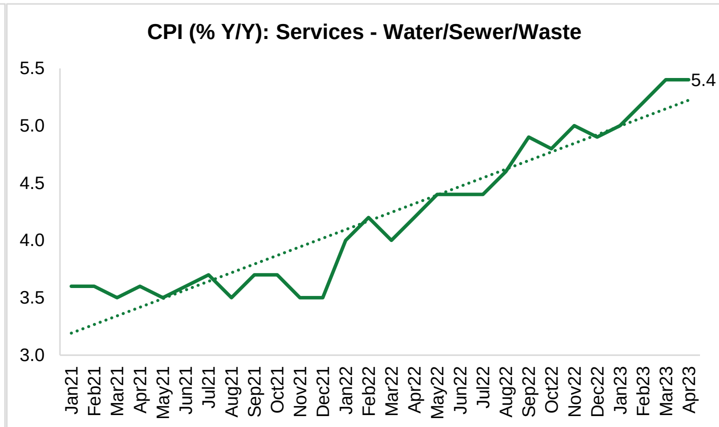


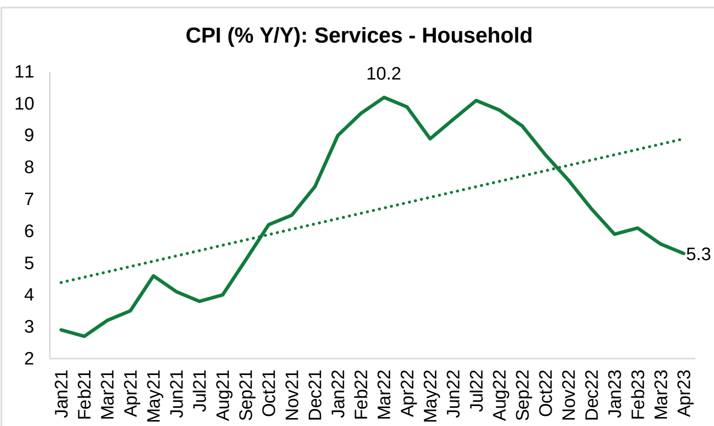


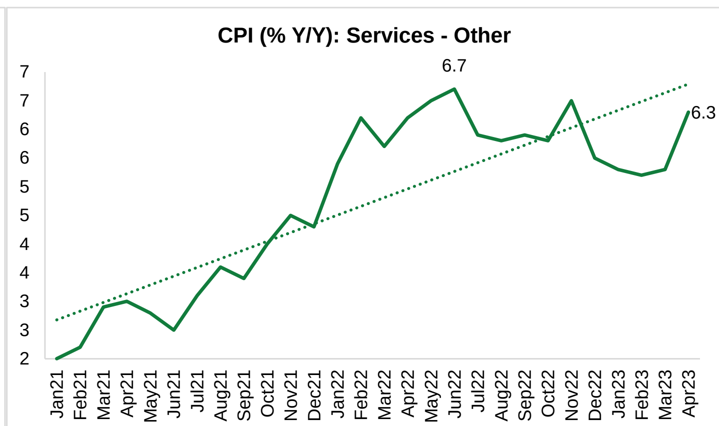


Source: Bureau of Labor Statistics, SIFMA estimates









Source: Bureau of Labor Statistics, SIFMA estimates

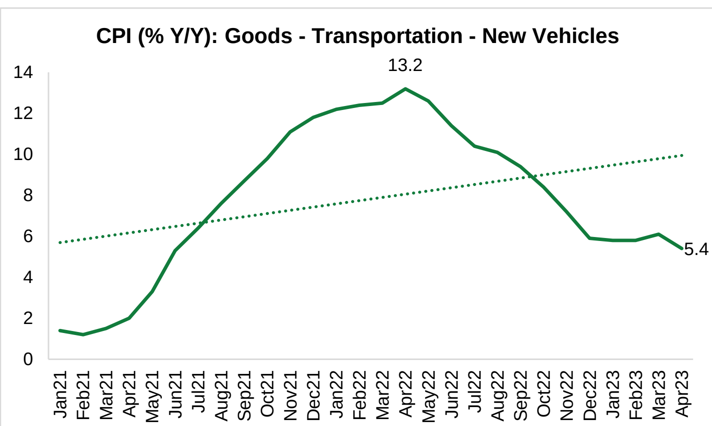
Goods Segments

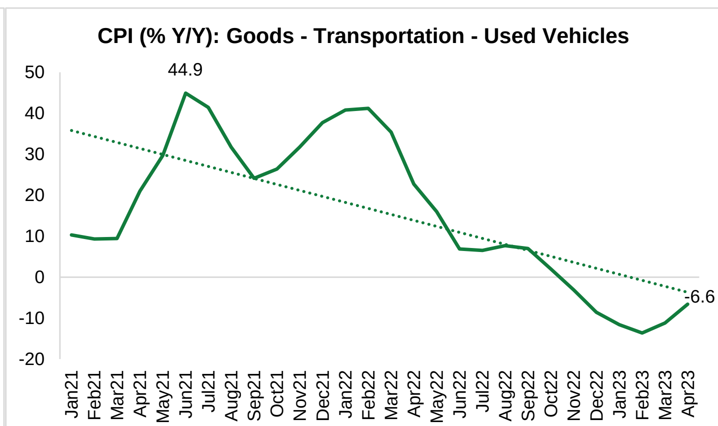
While smaller than services at 21.3% of the total inflation equation, the segments of inflation still matter to the overall picture. We look at trends across the headline categories in goods inflation. Given the scrutiny transportation has received, we break this category out into its subcategories to show those more nuanced trends as well. We note the following since the start of 2021:

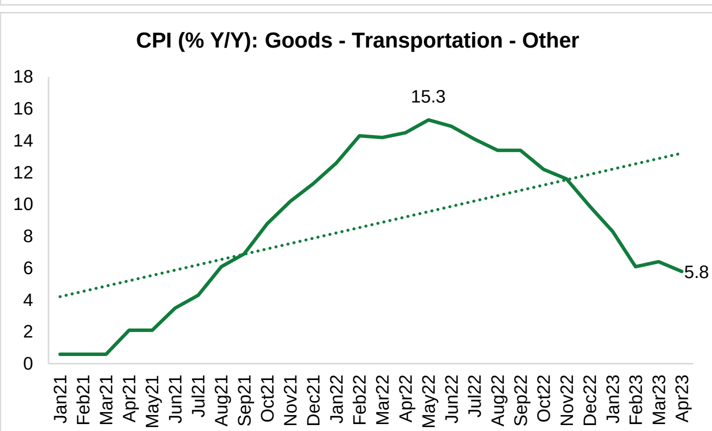
- All segments have upward trajectories for the full time period except for used vehicles and education, which are both in deflationary territory

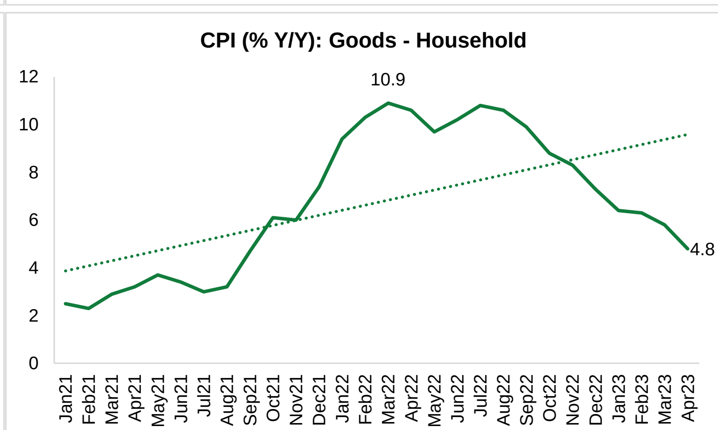
- April versus peak level – all segments are down from peak levels to varying degrees
    - Down = transportation – used vehicles -51.5 pps, education -10.9 pps, transportation – other -9.5 pps, transportation – new vehicles -7.8 pps, household -6.1 pps, apparel -3.1 pps, recreation -1.8 pps, alcohol -1.2 pps, other -1.1 pps, and medical -0.1 pps

- April trend versus the prior month
    - Decline = household, transportation – new vehicles, transportation – other, recreation, and other
    - Increase = apparel, alcohol, transportation – used vehicles, medical, and education

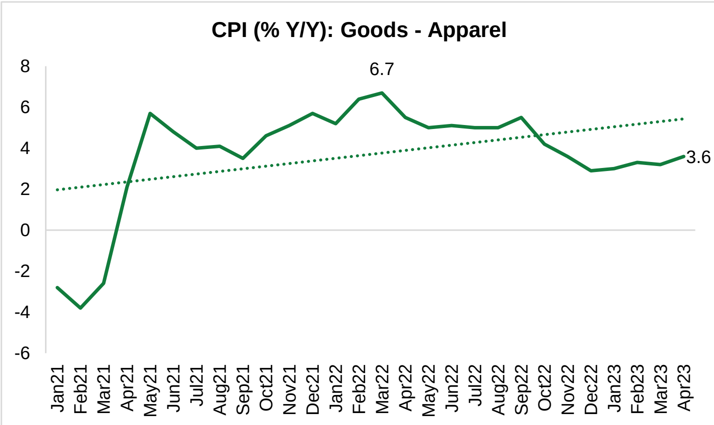


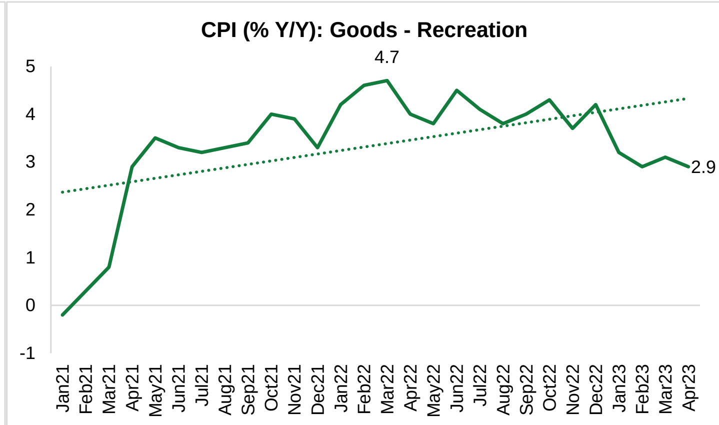


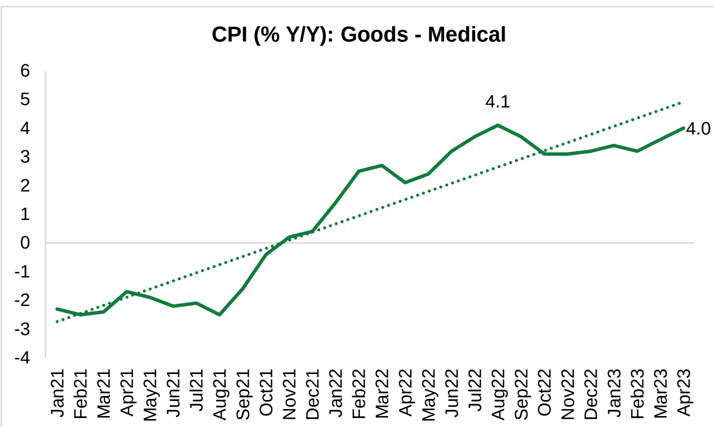


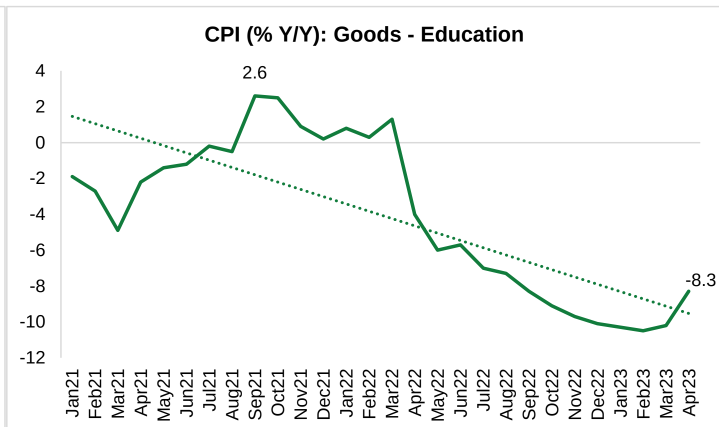


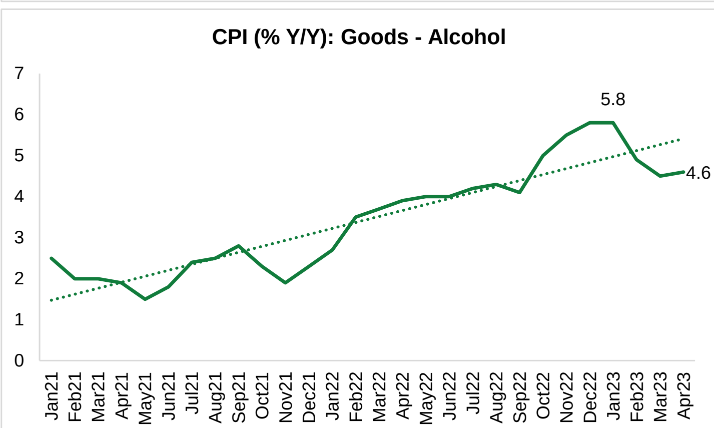
Source: Bureau of Labor Statistics, SIFMA estimates

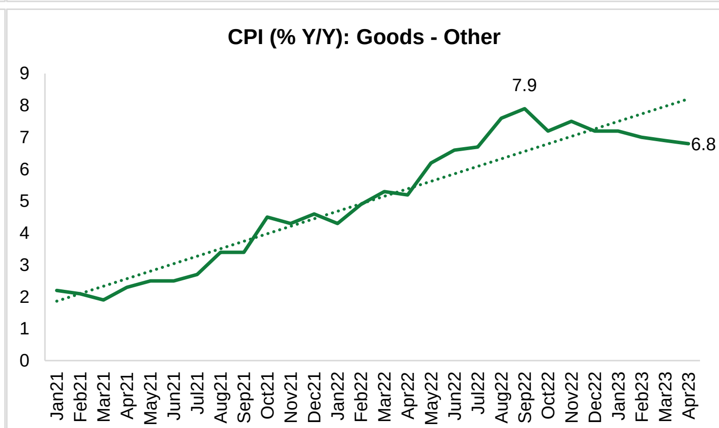










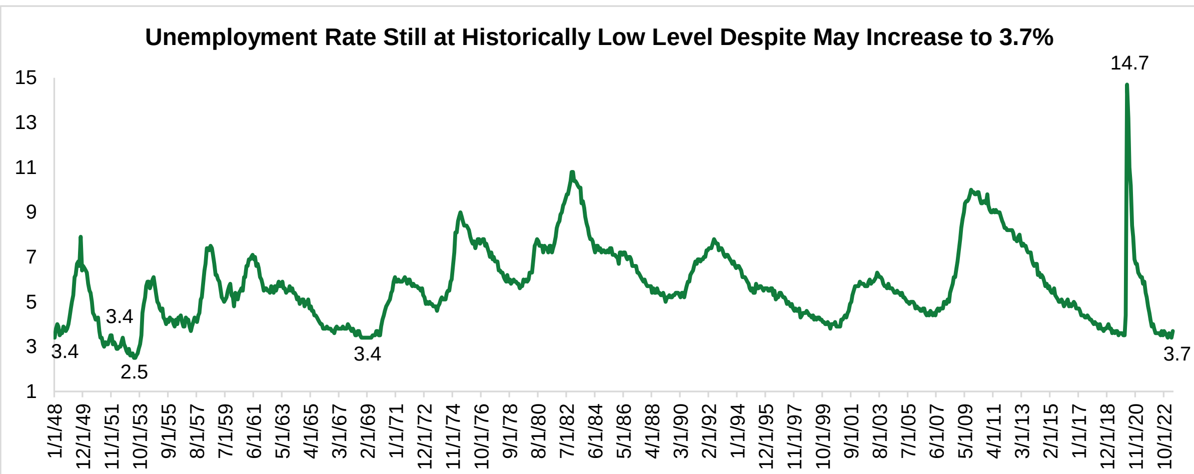


Source: Bureau of Labor Statistics, SIFMA estimates

Inflation: Labor Component

The final – and what some market participants might call stubborn – component of the inflation equation is the labor market. We begin with the employment picture. Despite increasing in May, the unemployment rate[6] remains at historically low levels, sitting at 3.7%. This translates to 6.1 million unemployed people. While down 11.0 pps since the COVID peak, it is still considered too low to assist in the Fed's inflation fight.

Our Economist Roundtable estimated that a 4.0-4.5% level of unemployment is needed to meaningfully impact inflation. Unfortunately, the earlier trend in 2023 was a flat or declining path rather than increasing: January 3.4%, February 3.6%, March 3.5%, and April 3.4%. We did get an increase in May to 3.7%.



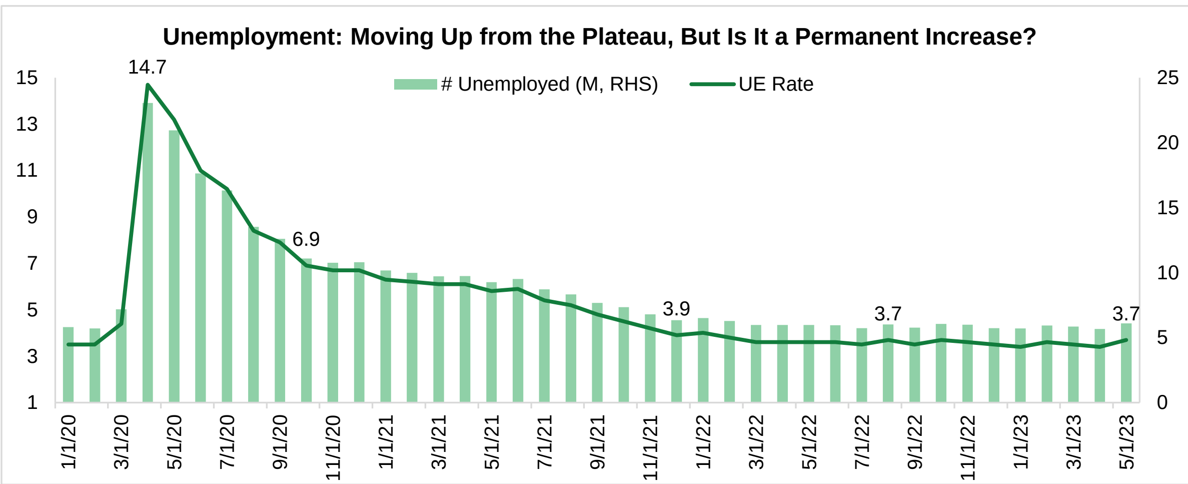
Source: FRED, SIFMA estimates

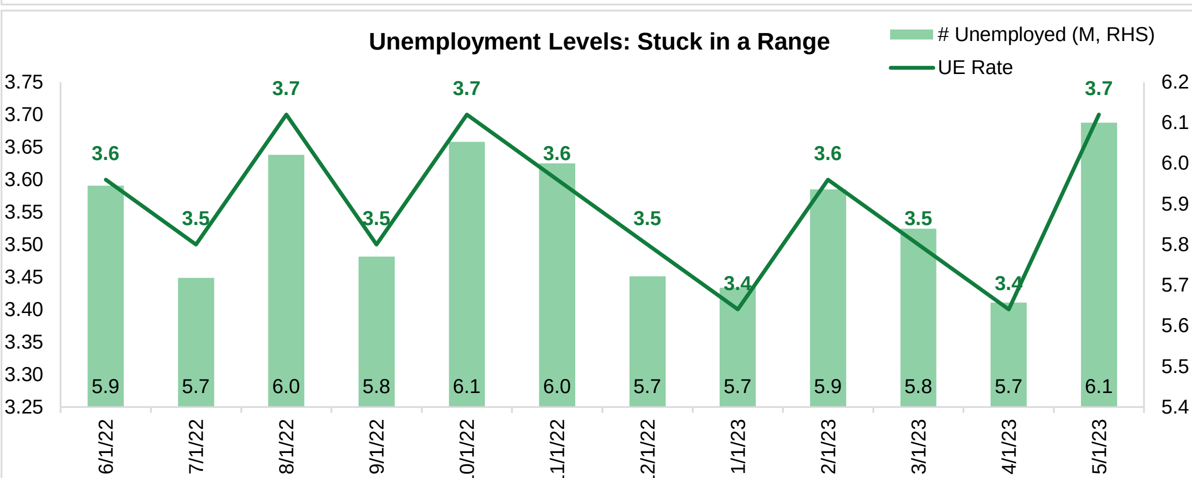
[6] U3 unemployment rate, measuring the number of people who are jobless but actively seeking employment

Looking more closely at the trend since the COVID peak, the unemployment rate had declined, which was the intent at the time. There was a large drop from April 2020 to later that fall, -7.8 pps, followed by another sizable drop by the end of 2021, -3.0 pps. However, once it became clearer that inflation was embedded and the Fed began its unprecedented rate hike path in 2022, the objective shifted to increasing the unemployment rate.

Unfortunately, the unemployment rate appeared to have plateaued. Then came the May report – the rate increased to 3.7%. While viewed as a positive sign for a rate hike pause in June, some economists wonder if the increase is a blip or a sign of the beginning of a consistent upward path.

Regardless, over the last twelve months, the rate has averaged 3.6% and appears stuck in the 3.4% to 3.7% range.

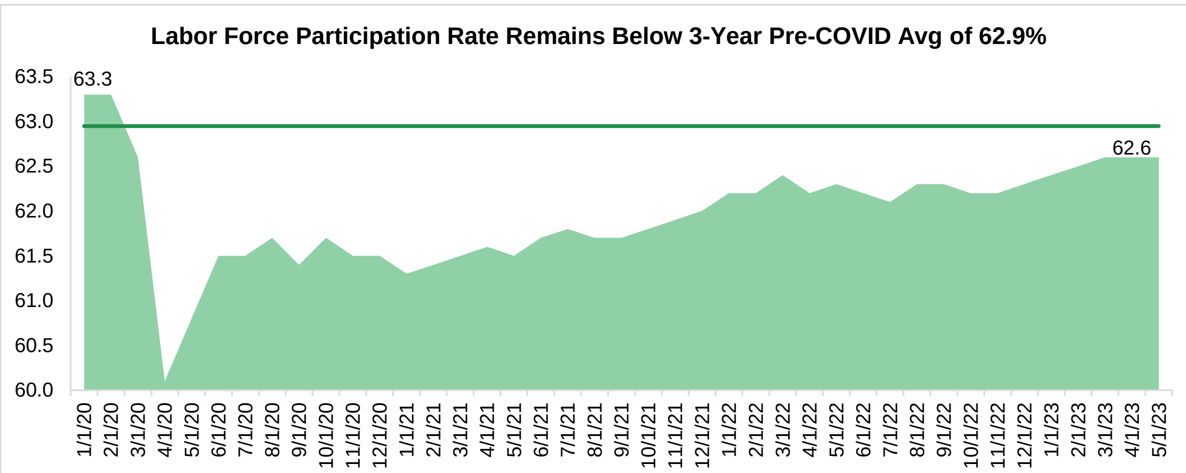


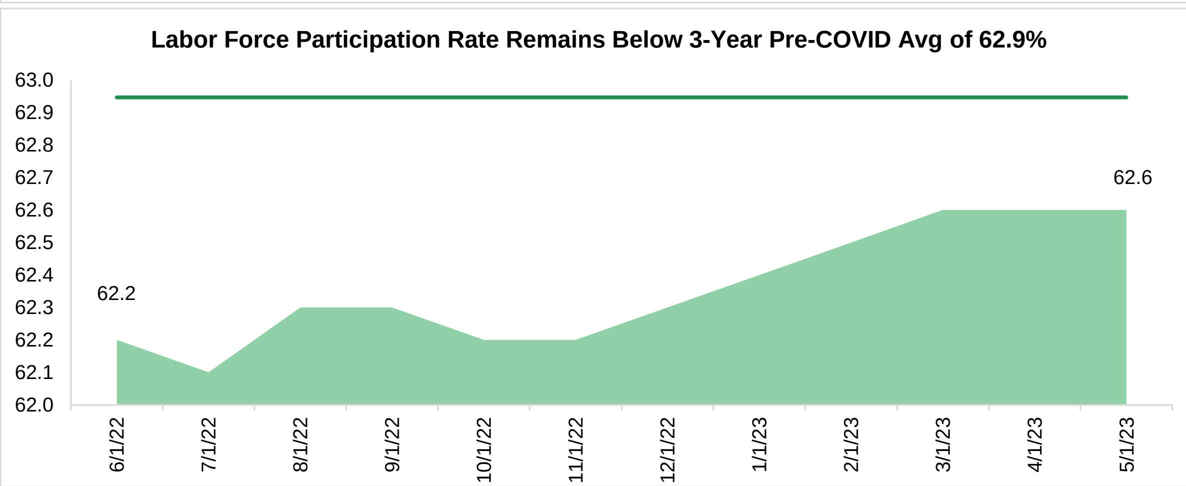


Source: FRED, SIFMA estimates

As to the labor force participation rate, before COVID began, we were at 63.3% to start 2020, +0.4 pps to the three-year pre-COVID average of 62.9%. As of May, we were at 62.6%, -0.3 pps to the average. Over the last twelve months, the rate had improved, increasing 0.4 pps from 62.2% in June 2022. There was no change in the rate from April to May.

A lower than historical labor force participation rate and historically low unemployment rate have combined to keep labor markets tight.



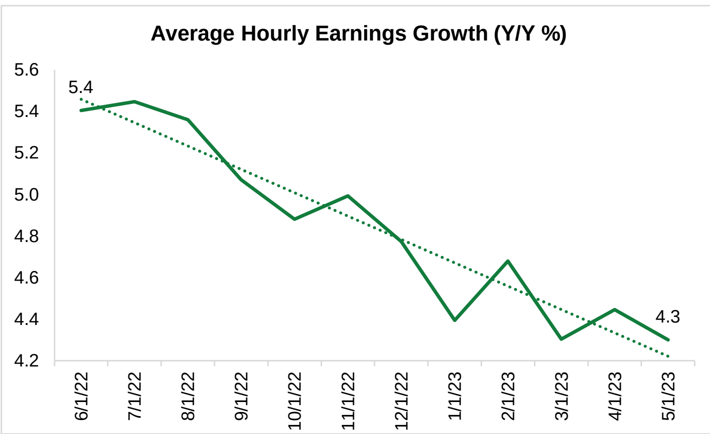


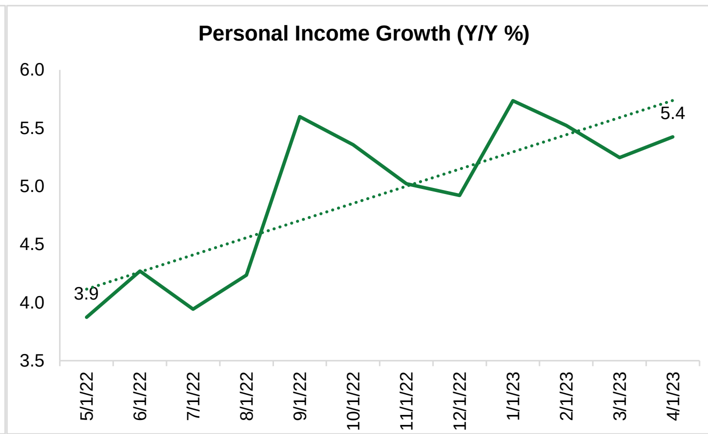
Source: FRED, SIFMA estimates

The other piece of the puzzle is that while the average hourly earnings growth has declined over the last twelve months – the Y/Y growth rate was 5.0% or greater for ten out of twelve months in 2022 – it remains 1.3 pps above the three-year pre-COVID average of 3.0%, at +4.3% in May. While still elevated, it does appear pressures have eased somewhat.

Additionally, personal income growth continues its upward trajectory. At 5.4% Y/Y change in April, it is +0.4 pps above the three-year pre-COVID average of 4.9%.

The consumer remains employed and financially strong, based on this data.

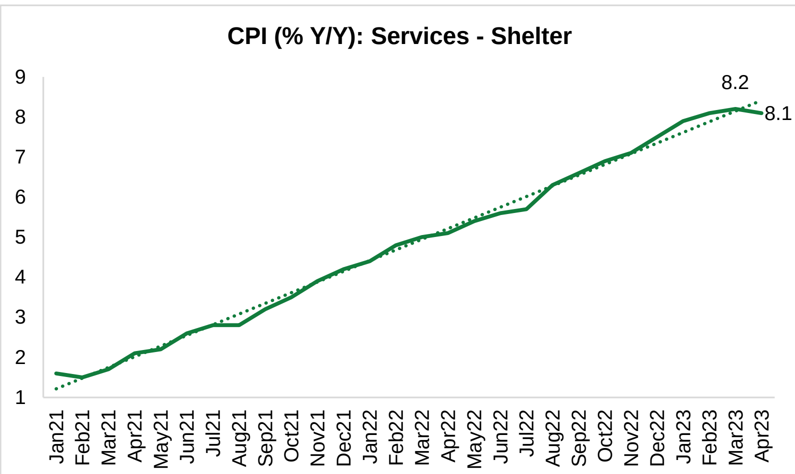




Source: FRED, SIFMA estimates

Inflation: Differences in Data Sets

We ended the last section using the phrase “based on this data”. For our final section on inflation, we look at differences in data sets, with a focus on shelter. In the CPI, shelter represents 34.6% of the total inflation equation, clearly important to driving down the aggregate inflation rate. According to CPI data, shelter was +8.1% Y/Y in April. This was -0.1 pps from its March 2023 peak, but significantly elevated to the +1.6% level at the start of 2021, +6.5 pps. According to CPI data, shelter inflation has remained on a strong upward sloping trajectory, only ticking down in April.

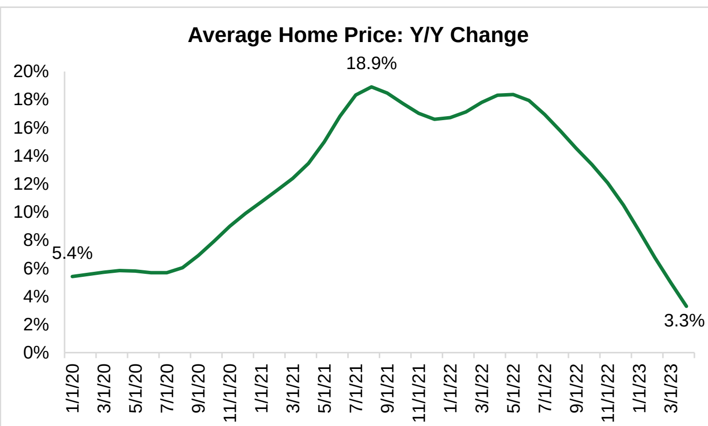


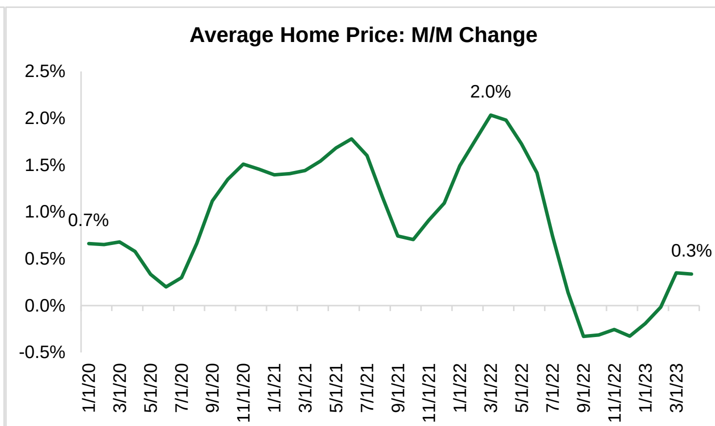
Source: Bureau of Labor Statistics, SIFMA estimates

However, some market participants have argued that the CPI – and PCE for that matter – data sets have a lag time and are, therefore, not indicative of the current inflation environment. According to Zillow data, home prices and rents have come down significantly from their peaks, differing from CPI data.

We begin by looking at average national home prices according to Zillow, highlighting the following:

- Average home price in April was $339,048.20, +3.3% Y/Y
  - Peaked at +18.9% Y/Y in August 2021; April was -15.6 pps to the peak
  - On a Y/Y basis, the growth rate has been coming down since May 2022; now below the start of 2020 level by 2.1 pps
- On a M/M basis, after going deflationary at the end of 2022, it had ticked up some but then stabilized
  - March +0.4% M/M
  - April +0.3% M/M

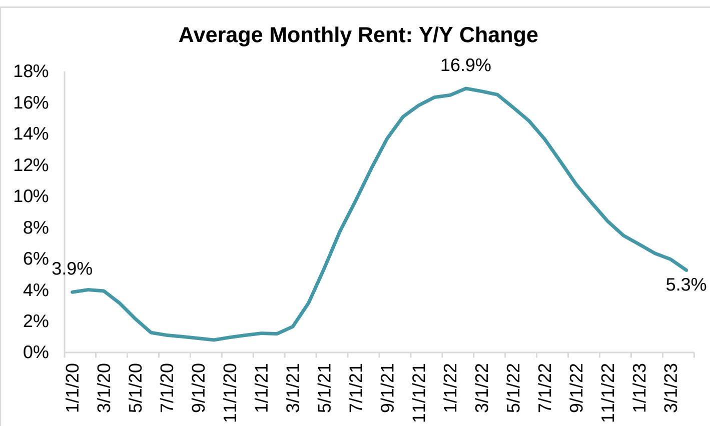


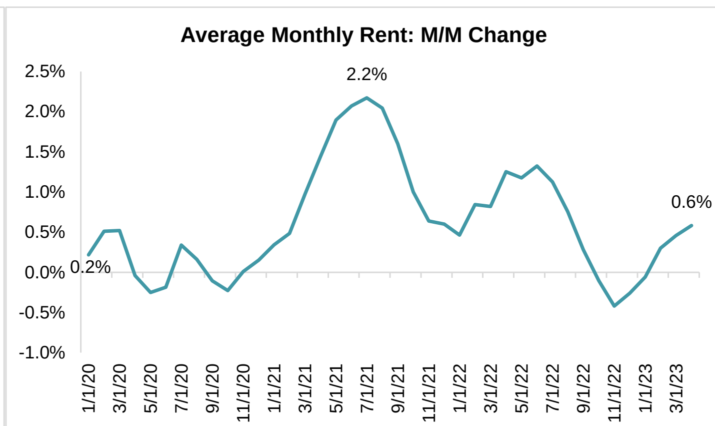


Source: Zillow, SIFMA estimates

Turning to average national rents as per Zillow, we highlight the following:

- Average rent in April was $2,018.06, +5.3% Y/Y
    - Peaked at +16.9% Y/Y in February 2022; April -11.6 pps to the peak
    - On a Y/Y basis, the growth rate has been coming down since the peak; yet remains above the start of 2020 level by 1.4 pps
- On a M/M basis, after going deflationary at the end of 2022, it has ticked up of late
    - March +0.5% M/M
    - April +0.6% M/M

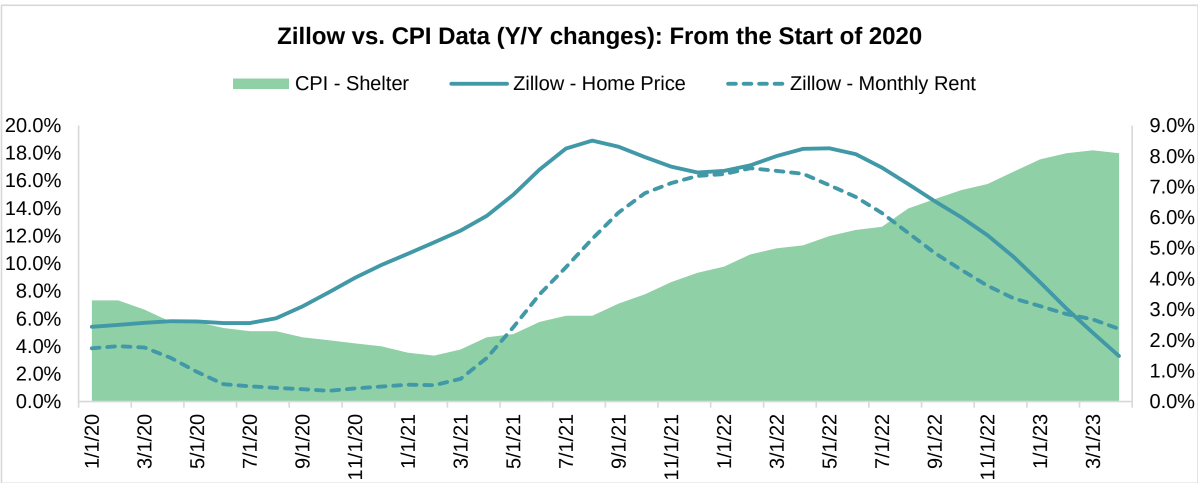


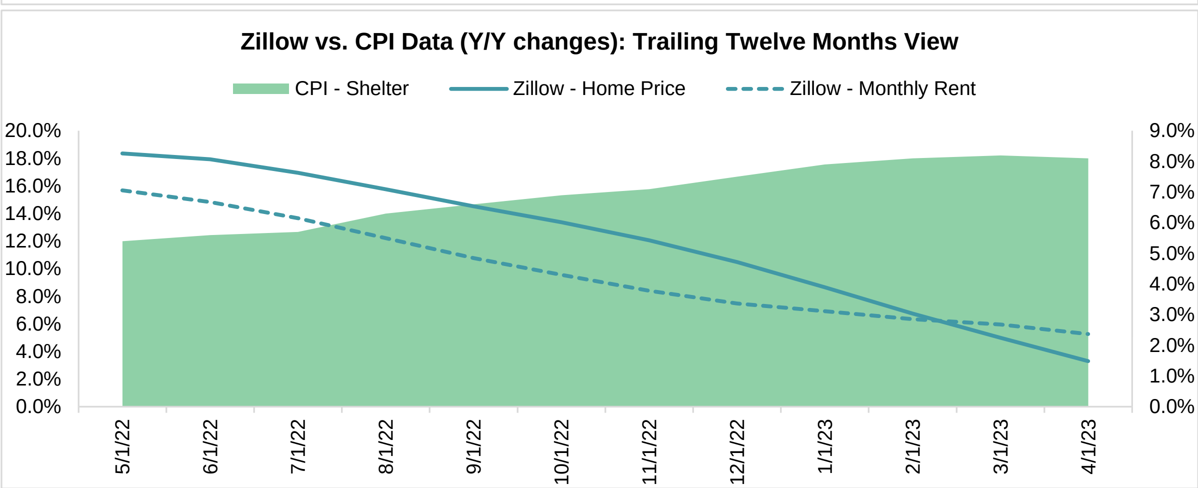


Source: Zillow, SIFMA estimates

The Zillow data set shows the aforementioned lag in CPI/PCE that some market participants have identified. (We acknowledge that indexes have different compositions and methodologies and will, therefore, never be identical.) Looking at the full time series, from the start of 2020, and the more recent trailing twelve months view, Zillow and CPI have directional differences. In the top chart, at the start of 2020, you see Zillow data (blue lines) beginning to increase while CPI (green area) was trending down.

Importantly – and what some market participants have pointed to – in the bottom chart, the more recent view, Zillow began to decline while CPI continued to trend up. These differences in data sets feed into the Fed's policy conundrum (discussed later in this note).

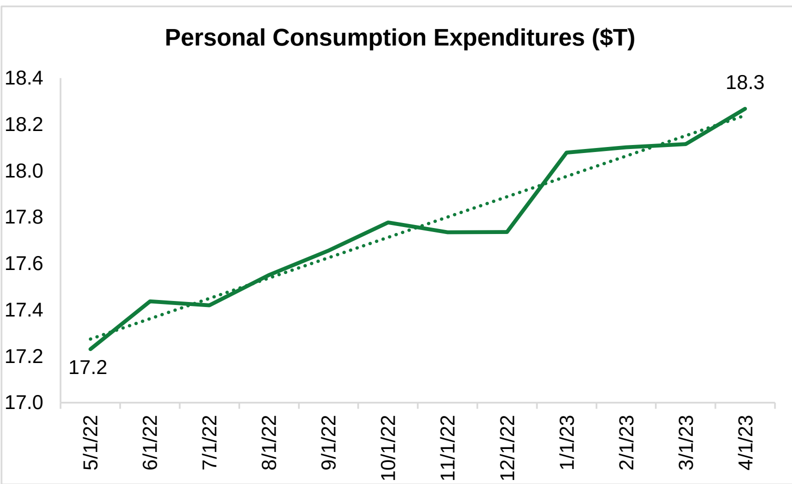




Source: Bureau of Labor Statistics, Zillow, SIFMA estimates

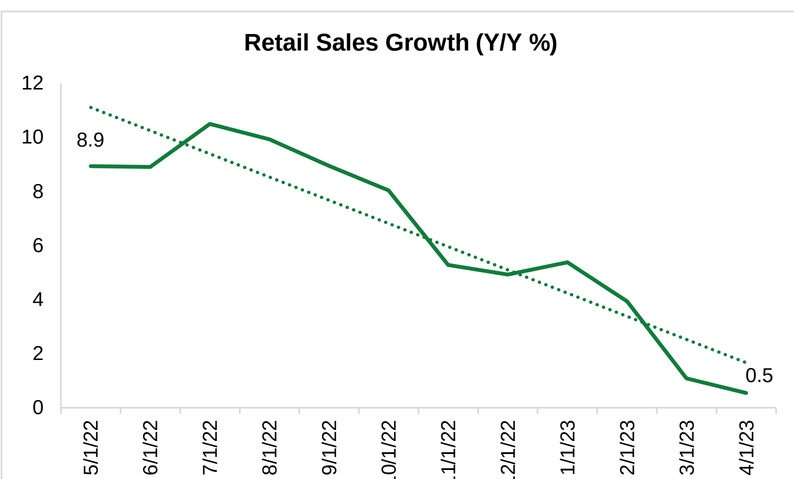
Economy: The Consumer

As the Fed works to slow demand, it is monitoring consumers and their spending behaviors. According to personal consumption data – a measure of how much of household earned income is being spent on goods and services – the consumer continues to spend. Over the last twelve months, the trajectory remains upward sloping, and there were only two months with a negative M/M trend and one flat month. From start to finish over this time period, the level of spending grew 6.0%.



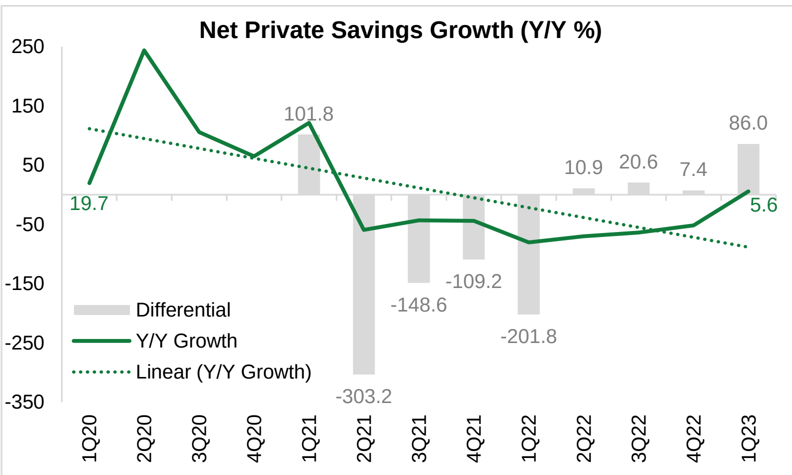
Source: FRED, SIFMA estimates

However, over the last twelve months, retail sales have been on a downward trajectory. For this metric, there were eight months with a negative M/M trend and one flat month – the opposite of the spending data above.



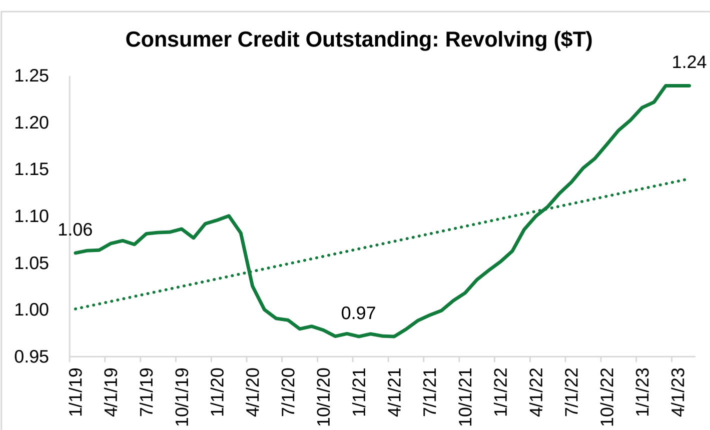
Source: FRED, SIFMA estimates

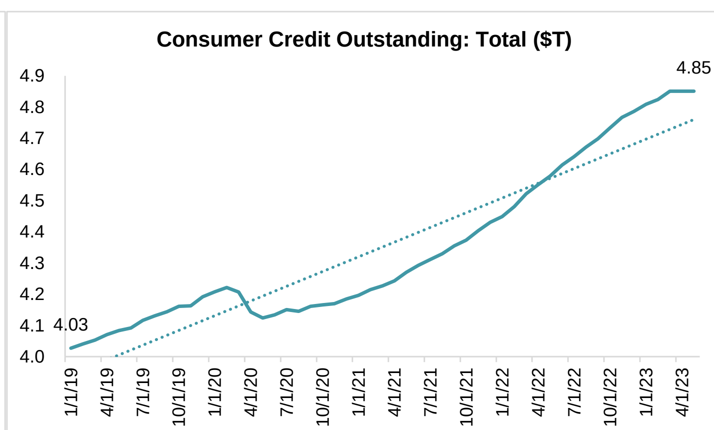
Additionally, savings growth has started to trend back up. The quarterly chart below shows the full journey. In 2020, savings growth skyrocketed as COVID lockdowns and then the lack of willingness to go to crowded public spaces cramped spending but grew bank accounts (savings). 2021 saw the economic reopening and corresponding spending bursts – declining savings – and the data trends suffered tough comparisons to the prior year. Savings growth remained negative in 2022, even after moving past tough comparisons. However – potentially a result of growing recession fears among consumers – savings growth ticked up in 1Q23.



Source: FRED, SIFMA estimates
Note: Differential = the aggregate of the prior and current year's growth in that quarter, i.e. the full direction change

Spending up – sales down – savings up. How do these data points fit together? One link is that consumer credit has been growing. Since the plateau in 2021, revolving credit is up 16.5% while total consumer credit outstanding is up 19.7%. Growth has stabilized over the past three months for both accounts.

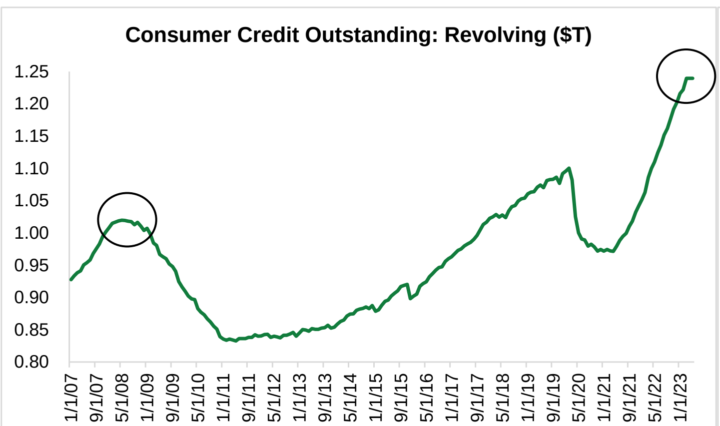


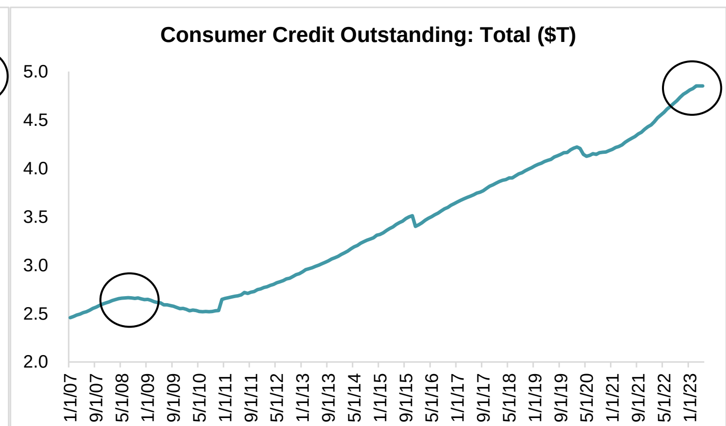


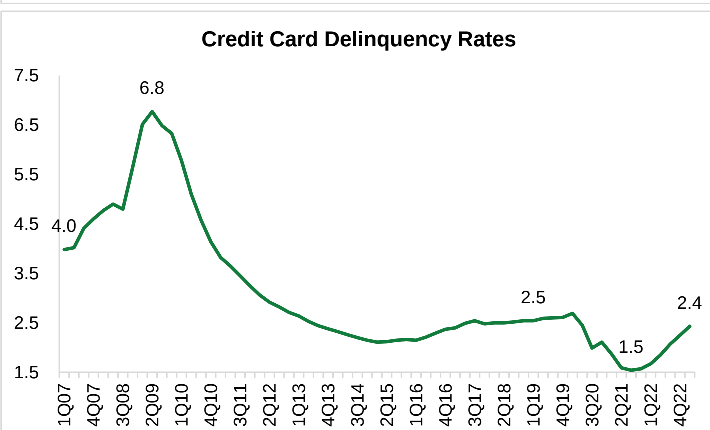
Source: Bloomberg, SIFMA estimates
Note: Revolving includes credit cards, home equity lines of credit (HELOC), personal lines of credit, etc. Total includes revolving plus all other (motor vehicle loans, loans for mobile homes, education, boats, trailers, or vacations, etc.).

We saw this pattern during the global financial crisis as well – consumer credit builds, plateaus as the economy weakens, and then turns downward. Although, we note that this is not a prediction that the possible impending recession will be like that of the global financial crisis. Expectations are quite the opposite actually, given today's economy is entirely different than in 2008 – banks and consumers have stronger balance sheets. Just look at delinquency rates for credit cards during the global financial crisis versus today. Back then delinquencies were 4.0% heading into the crisis, peaking at 6.8%. Today, delinquencies were 2.5% before COVID hit, dropping to 1.5% at the trough. We ended 1Q23 at 2.4%, barely back at pre-COVID levels and substantially below global financial crisis levels.

More evidence to not experiencing a severe recession like in 2008, 100% of our Economist Roundtable members expect the recession to be mild. However, the charts do show the pattern of plateau before the decline in consumer credit growth.



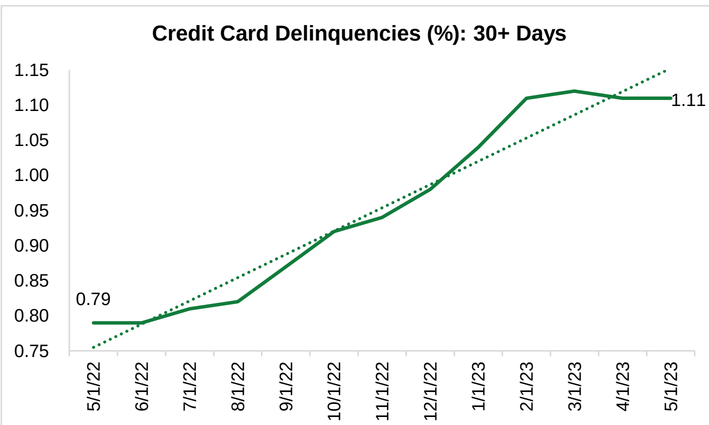


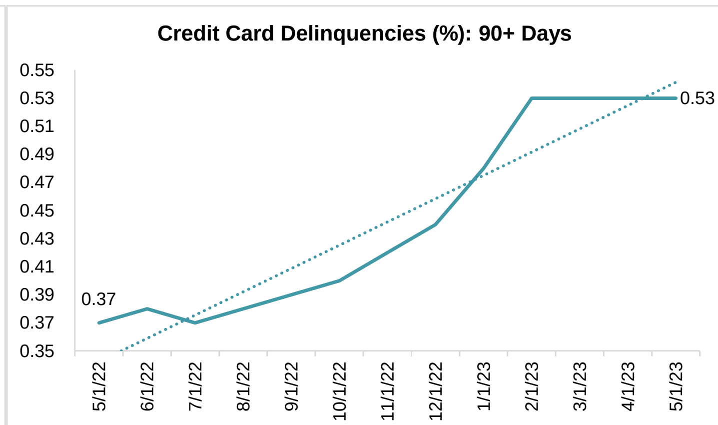


Source: Bloomberg, SIFMA estimates

That said, delinquencies could curtail consumer spending, much of which appears to have been done on credit. Over the last twelve months, 30+ day credit card delinquencies increased 0.32 pps, while 90+ day delinquencies increased 0.16 pps. Both types of delinquencies have been on a sharp upward trend, albeit plateauing over the last few months.

The health of the consumer shown in the spending data may be an illusion given delinquency rates. As delinquencies increase, consumers' credit scores decline, making it harder to obtain additional loans. This can curtail consumer spending. Additionally, as delinquencies increase, lenders tend to tighten standards to curb losses from non-performing loans, i.e. credit tightening.





Source: Bloomberg, SIFMA estimates

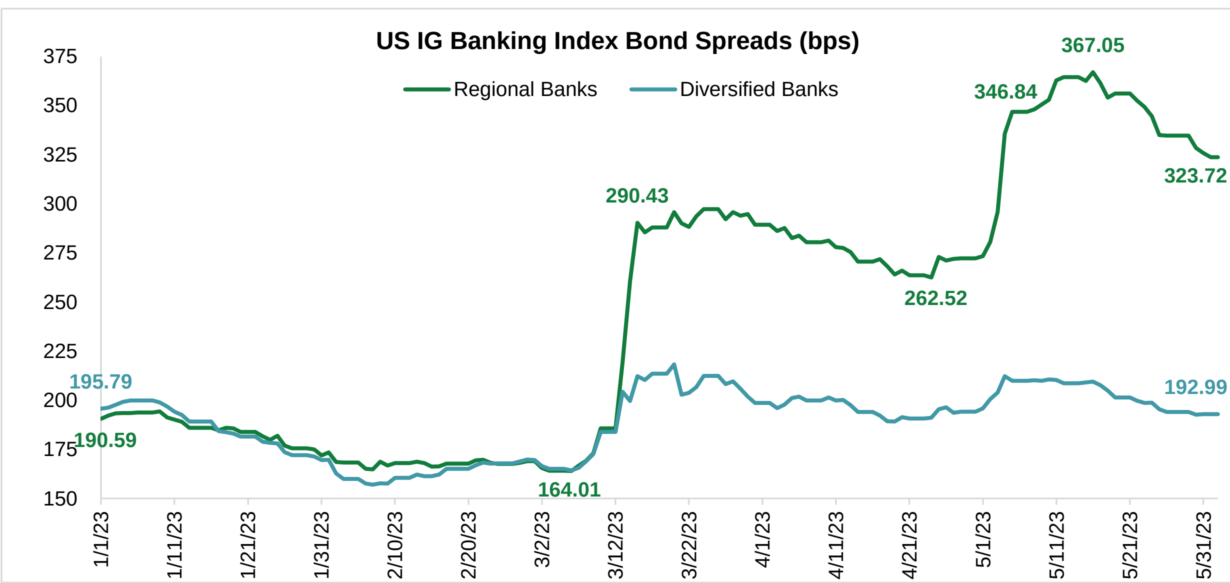
Economy: Credit Tightening

Speaking of credit tightening, the regional bank turmoil that began in March led to credit tightening for corporate and consumer borrowers. Some market participants have estimated that the credit tightening is equivalent to 100 bps of Fed rate hikes. After the collapse of SVB, investment grade credit spreads widened, widening further after the sale of First Republic. Spreads remain elevated today.

This increases the cost of borrowing, thereby limiting lending. Lending is further hindered as banks tighten credit standards for borrowers, shrinking the borrowing pool. We show the rate hike equivalency calculation below: (using 30-day averages for current spreads and the pre-SVB level)

1. Regional bank spreads increased 179.2 bps, diversified (large) banks 39.0 bps
2. Multiplying by percentage of loans performed by these groups, we get 80.2 bps for regionals and 21.5 bps for diversified
3. This totals 101.8 bps of spread widening for the entire system
   (this is down from peak spreads, representing 124.7 bps for the entire system)

With a roughly 100 bps equivalency hikes, this would put the implied Fed Funds rate at 6.00-6.25% instead of the actual 5.00-5.25%. This is well ahead of what people expect to be the peak rate, in the range of 5.00-5.50%.

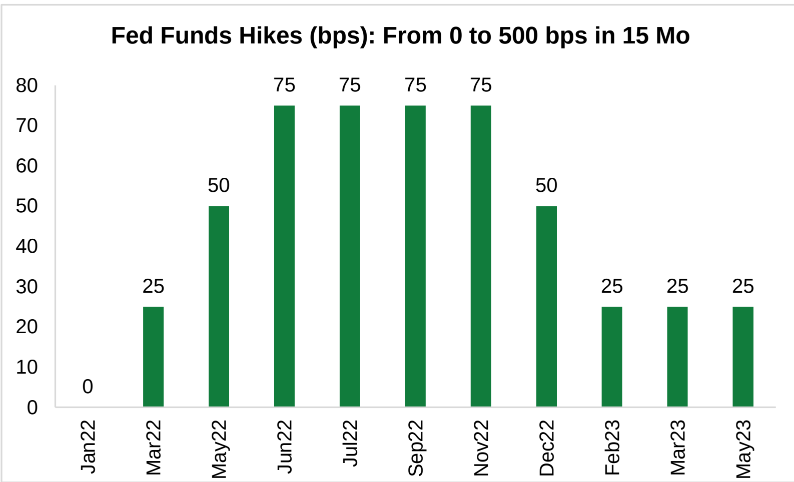


Source: Apollo Chief Economist, Bloomberg

We note that 66.7% of our Economist Roundtable respondents believe the corresponding credit tightening after the regional bank turmoil in March is equivalent to 50 bps of additional Fed rate hikes, while 33.3% replied 25 bps. Using these figures, the implied Fed Funds rate would be: 5.50-5.75%, ahead of expected peak rate; or 5.25-5.50%, at expected peak rate.

The Fed's Policy Conundrum

This leads us to our final section, the Fed's policy conundrum. The Fed Funds rate stands at 5.00-5.25%, after increasing 500 bps in fifteen months, an unprecedented rate.



Source: Federal Reserve

As we move forward, economists and markets continue to anticipate the Fed's next move. The Fed has repeatedly stated that it will be data dependent. Unfortunately, the tone of the data is continuously changing and can even send opposing signals on the same day (see the May jobs report). With the data all over the map, so must be the Fed when analyzing its next move.

Inflation remains stubborn, ticking up again 0.2 pps in April. The economy has held up, but economic data shows mixed signals, as discussed above. Pressure on average hourly earnings has eased somewhat, coming down from the peak but still elevated to historical levels. The unemployment rate ticked up in May – from 3.4% to 3.7% – but the permanency of that path is unclear. The May employment report showed a gain of 339,000 jobs, the largest monthly gain since January. The consumer has held up but has also been living beyond their means for the last few years, which they will not be able to do going forward, at least not to the same extent as in the past.

With economic factors continuing to change quickly and the absence of a clear positive or negative trend, the data may justify a pause, or at least not argue against one.

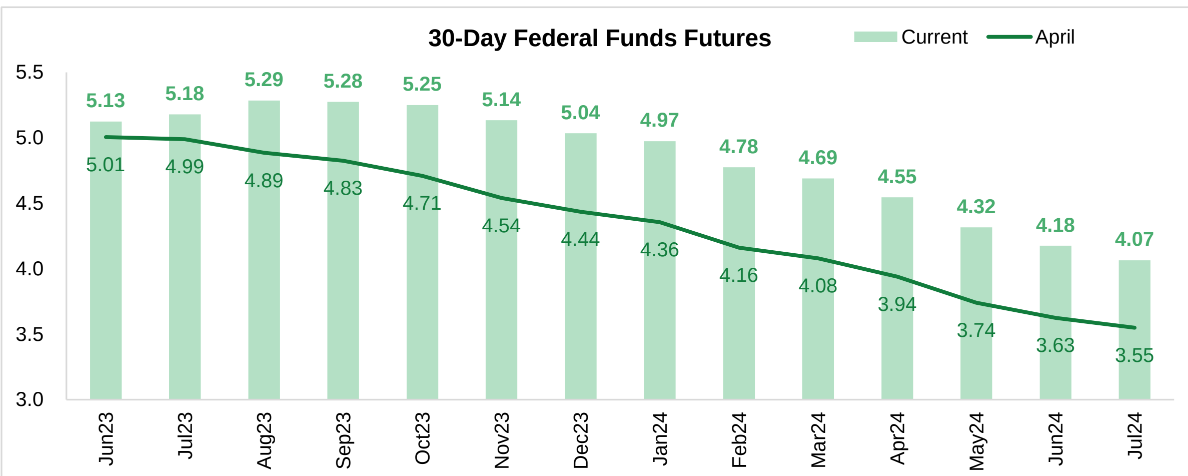
There are other factors to consider as well. The impact of the credit tightening remains unclear, as does the future state of commercial real estate and what that could mean for the economy. The U.S. Treasury needs to refill its coffers and increase the percentage of T-bills to a targeted 20% of total outstanding, estimated around 16% as of April. Analysts estimate this issuance might be $1.1 trillion in new T-bills in just over half a year, considered a large amount in a short time period. This Treasury issuance will take liquidity out of the system, but will it come from the real economy – taking money from savings or stocks – or a shifting of Treasury's accounts, moving money from one account to another? The answer is not clear.

These factors appear to justify a pause.

Such is the Fed's policy conundrum:

- Continue hiking?
- Pause to assess the monetary policy lag and other factors?
- When to begin the pivot (rate cuts)?

What are markets saying? Fed Funds futures have increased since April. At the short end of the curve, the shift is small – markets still expect a June pause. However, the shift is showing less chance of a cut and higher rates than previously expected through the fall.



Source: Bloomberg, SIFMA estimates

We note that our Economist Roundtable expects the Fed to pause in June (92.9% of respondents). 78.6% of respondents expect the peak rate will be 500-550 bps, to be achieved by 2Q23.

Executive Summary

Comparing the Current and Prior Surveys

In our semiannual economic surveys (published every June and December), we ask our Economist Roundtable to provide their best assessment of the current economic environment and where we could be headed. We begin by comparing results from the current and prior surveys for questions that were repeated in each survey, to gauge changes in estimates of the economic outlook. For questions where responses were ranked, we show the top answer for each survey. As not all questions are repeated – we adapt the survey to the current economic environment each time – we include additional highlights from the current and prior survey later in this section.

Economic Forecasts	Current Survey	Flash Poll	Last Survey
Economic Indicators:	**(2023E/2024E)**	**(2023E)**	**(2023E)**
Real GDP (4Q/4Q)	+0.5%/+1.7%	+0.2%	-0.3%
Unemployment Rate (4Q average)	+4.1%/+4.4%	4.4%	4.5%
Labor Force Participation Rate (4Q average)	+62.7%/+62.7%	n/a	62.6%
CPI (4Q/4Q)	+3.0%/+3.0%	3.1%	3.1%
Core CPI (4Q/4Q)	+3.8%/+2.6%	3.8%	3.3%
PCE (4Q/4Q)	+3.1%/+2.2%	3.0%	2.9%
Core PCE (4Q/4Q)	+3.5%/+2.3%	3.3%	2.9%
Rates (monthly averages):	**(Dec '23E/Jun '24E)**	**(Dec 2023E)**	**(Dec 2023E)**
Federal Funds Rate (midpoint)	+5.125%/+4.410%	5.125%	4.375%
2-Year UST Yield	+3.850%/+3.570%	n/a	4.520%
10-Year UST Yield	+3.390%/+3.293%	n/a	4.000%
30-Year Fixed Mortgage Rate	+6.000%/+5.658%	n/a	6.900%
Changes in Curves/Spreads:	**(2023E/2024E)**	n/a	**(2023E)**
Fed Funds Rate vs.10Y UST yield curve	71.4% invert slightly more/57.1% steepen markedly	n/a	37.5% invert markedly more
2Y vs. 10Y UST yield curve	83.3% invert slightly more/50% each steepen slightly & steepen markedly	n/a	37.5% steepen slightly
3M vs. 10Y UST yield curve	62.5% invert slightly more/57.1% steepen markedly	n/a	37.5% invert markedly more
TED spread (T-bill to Eurodollar)	50.0% remain the same/50.0% remain the same	n/a	100.0% widen
IG corporates to Treasury spread	50.0% remain the same/50.0% remain the same	n/a	100.0% widen
HY corporates to Treasury spread	50.0% remain the same/ 50.0% remain the same	n/a	100.0% widen

Note: Current survey May 15-26, 2023, flash poll March 27-April 7, past survey November 11-25, 2022.

Economic Outlook	Current Survey	Last Survey
What factors will have the greatest impact on U.S. economic growth: 2023	Inflation, tight labor market, regional bank turmoil/credit tightening, US monetary policy	U.S. monetary policy, inflation, recession threat
What factors will have the greatest impact on U.S. economic growth: 2024	US monetary policy, US consumer spending, recession threat, tight labor market	n/a
What is your estimate of the long-term potential growth rate of the U.S. economy	1.5% to 2% (92.3% of respondents)	>1.5-2% (83.3% of respondents)
Has your estimate of the long-term growth rate changed in the last 12 months	No (100.0% of respondents)	No (63.6% of respondents)
Top risks to economic forecasts - upside	Inflation, labor market, recession/economy	Inflation – demand side, monetary policy, and inflation
Top risks to economic forecasts - downside	Credit tightening, inflation, debt ceiling/rating downgrade	Inflation – supply side, monetary policy, and inflation
US already in a recession	No (100.0% of respondents)	No (100.0% of respondents)
US to enter a recession	Yes (69.2% of respondents)	Yes (83.3% of respondents)
Severity of a potential recession	Mild (100.0% of respondents)	Mild (88.9% of respondents)
Timing of a potential recession	4Q23 (36.4% of respondents)	1H23 (60.0% of respondents)

Employment & The Consumer	Current Survey	Last Survey
Labor force participation rate to return to the ~63% pre-COVID average	Never (41.7% of respondents)	Beyond (63.6% of respondents)
Factors driving the labor supply gap	The Great Retirement (76.9% of respondents)	Health concerns around long COVID & The Great Retirement (each 63.6% of respondents)
Labor shortages impacting consumer behavior	In-restaurant dining (60.0% of respondents)	Travel, airlines & in-restaurant (each 50.0% of respondents)
Work-from-office return to pre-COVID norms	Never, hybrid work is here to stay (84.6% of respondents)	Never, hybrid work is here to stay (81.8% of respondents)
Have you personally returned to the office	Hybrid/part-time (50.0% of respondents)	Hybrid/part time (66.7% of respondents)
Factors limiting return to offices to historical levels	Choose to continue working at home; unwilling to commute; WFH option is available	Not want to commute/time freed up from not commuting; choose to continue working at home; b/c the WFH option is available (did not ask but it was offered)

Note: Current survey May 15-26, 2023, past November 11-25, 2022. Questions and/or ranges may change across surveys

Inflation	Current Survey	Last Survey
Fed poised to make a mistake in tackling inflation	Yes, overshooting & no (45.5% of respondents each)	Yes, overshooting (54.5% of respondents)
Are prices pressures structural/broad-based	Yes, have been for some time (54.5% of respondents)	Yes, for some time & yes, recently (36.4% of respondents each)
Assessment of prices pressures	On our way back down, but disinflation momentum will slow (83.3% of respondents)	Passed peak, remain elevated for some time (75.0% of respondents)
Fed will materially revise higher its inflation expectations in the next SEP	No (66.7% of respondents)	No (72.7% of respondents)
PCE by the end of: 2023	3.0-3.5% & >4.0% (each 40.0% of respondents)	2-3% & 3-4% (each 45.5% of respondents)
PCE by the end of: 2024	2.0-2.5% & 3.0-3.5% (each 40.0% of respondents)	n/a
What are the most important factors in your outlook for core inflation	Consumer spending – services, stickiness of wage increases, historically hot labor market	Historically hot labor market, consumer spending on services, domestic supply chain issues
Confident the Fed can achieve its 2% goal in a sustainable way: commitment to the fight	Very confident (63.6% of respondents)	Very confident (77.8% of respondents)
Confident the Fed can achieve its 2% goal in a sustainable way: effectiveness of policy	Somewhat confident (54.5% of respondents)	Somewhat confident (90.9% of respondents)
Inflation to reach Fed's preferred 2% target	2H24 (50.0% of respondents)	Beyond 2024 (54.5% of respondents)
Probability of the US experiencing structurally higher inflation over the longer run (>3 years)	15-25% (54.5% of respondents)	15-25% (54.5% of respondents)
What factors do you believe could push long-term inflation higher	Reversal of globalization, increased costs as we move supply chains back to the U.S., stickiness of wage increases	Stickiness of wage increases, reversal of globalization, and sustained breakdown of supply chains
Which component has the greatest impact on the level/peak or sticky nature of inflation	Demand side (70.0% of respondents ranked this #1)	Demand side (90% of respondents ranked this #1)
Do you believe we are in a wage-price spiral	No (81.8% of respondents)	No (80.0% of respondents)
Reached a peak in wage pressures	Yes (91.7% of respondents)	Yes (72.7% of respondents)
Expect acceleration of wage growth to slow to the historical +3.0% level	2024 (70.0% of respondents)	2H23 (66.7% of respondents)
What level of unemployment is needed to meaningfully impact inflation	4.0-4.5% (58.3% of respondents)	4.5-5.0% (45.5% of respondents)
When can reach this unemployment rate	2024 (58.3% of respondents)	2H23 (80.0% of respondents)

Note: Current survey May 15-26, 2023, past November 11-25, 2022. Questions and/or ranges may change across surveys. SEP = Summary of Economic Projections

Inflation (cont.)	Current Survey	Last Survey
Inflation expectations currently unanchored	No (90.9% of respondents)	No (100.0% of respondents)
Inflation expectations to become unanchored	No (100.0% of respondents)	No (100.0% of respondents)
Fed's strong rhetoric has kept inflation expectations in check	Yes (90.9% of respondents)	Yes (100.0% of respondents)
Fed can navigate a soft-landing (meet inflation goal without causing a recession)	Doubtful (66.7% of respondents)	Doubtful (63.6% of respondents)
Possibility of risking a big accident (a more severe or prolonged recession)	Low probability (72.7% of respondents)	Low probability (54.5% of respondents)
Concern of disinflation at this time	No (91.7% of respondents)	No (81.8% of respondents)
The significant amount of government spending (>$7T) poses a risk to inflation	Yes, moderate upside risk (50.0% of respondents)	Yes, moderate upside risk (63.6% of respondents)
Greater long-term risk to the economy	Stagflation (90.9% of respondents)	Stagflation (77.8% of respondents)

Note: Current survey May 15-26, 2023, past November 11-25, 2022. Questions and/or ranges may change across surveys

Rates & Credit Markets	Current Survey	Last Survey
Factors having the greatest impact on long-term Treasury yields	Inflation/inflationary expectations; U.S. monetary policy; U.S. economic conditions	Inflation/inflationary expectations; U.S. economic conditions; U.S. monetary policy
10Y UST to end: 2023	3.25-3.50% (50.0% of respondents)	3.50-3.75% (40.0% of respondents)
10Y UST to end: 2024	3.00-3.25% (37.5% of respondents)	n/a
30Y mortgage rate to end: 2023	5.50-6.00%, 6.00-6.50% & 6.50-7.00% (each 28.6% of respondents)	<7.00%(100.0% of respondents)
30Y mortgage rate to end: 2024	5.00-5.50% (42.9% of respondents)	n/a
Expect the Treasury yield curve to return to a normal upward sloping curve	Beyond 2024 (45.5% of respondents)	2024 (55.6% of respondents)

Note: Current survey May 15-26, 2023, past November 11-25, 2022. Questions and/or ranges may change across surveys. At the time of the survey, the 10Y UST was: 1H23 survey = 3.6738%, 2H22 survey = 3.7742%. At the time of the survey, the 30Y mortgage rate was: 1H23 survey = 7.04%, 2H22 survey = 6.86%.

Monetary Policy	Current Survey	Flash Poll	Last Survey
Fed Funds Rate:			
Fed Funds rate action at next FOMC meeting	Pause (92.9% of respondents)		Raise 50 bps (100.0% of respondents)
Peak Federal Funds rate estimate	500-525 bps (78.6% of respondents)	500-525 bps (66.7% of respondents)	500-550 bps (46.2% of respondents)
Timing of peak Federal Funds rate	2Q23 (78.6% of respondents)	2Q23 (66.7% of respondents)	Mid 2023 (91.7% of respondents)
Length of monetary policy lag time	9-12 months (38.5% of respondents)	n/a	9-12 months (91.7% of respondents)
Should the Fed pause rate hikes to account for lag time of monetary policy	Yes (92.3% of respondents)	n/a	Yes (58.3% of respondents)
When should the Fed pause to account for this lag	2Q23 (92.3% of respondents)	2Q23 (83.3% of respondents)	2Q23 (50.0% of respondents)
When will the Fed begin cutting rates?	1Q24 (71.4% of respondents)	1Q24 (83.3% of respondents)	n/a
Fed should consider global monetary policy in its own policy decisions	No (100.0% of respondents)	n/a	No (80.0% of respondents)
Fed Balance Sheet:			
Fed to accelerate the pace of balance sheet reduction	No (84.6% of respondents)	n/a	No (83.3% of respondents)
What is the expected size of the Fed's balance sheet: 2023	>$8T (70.0% of respondents)	n/a	>$7T (63.6% of respondents)
What is the expected size of the Fed's balance sheet: 2024	$5-6T (71.4% of respondents	n/a	n/a
General Monetary Policy:			
Which of the following factors do you think are the most important to the Fed's decision making	Tight labor market/elevated wage growth, persistently higher inflation, credit tightening	n/a	Inflation – wage increases, inflation – supply chain issues, stronger U.S. consumer spending
How do you rate the efficiency of the Fed's communication with markets	Excellent, very clear & ok, somewhat murky but decipherable (each 50.0% of respondents)	n/a	Ok, somewhat murky but decipherable (63.6% of respondents)

Note: Current survey May 15-26, 2023, past November 11-25, 2022. Questions and/or ranges may change across surveys

Fiscal Policy	Current Survey	Last Survey
Fiscal Stimulus:		
Sustained higher inflation should deter further fiscal spending	Yes (70.0% of respondents)	Yes (81.8% of respondents)
Russia/Ukraine increase fiscal spending policy	No (60.0% of respondents)	Yes (70.0% of respondents)
(Potential) impending recession deter fiscal spending policy	Yes (60.0% of respondents)	Yes (70.0% of respondents)
Or will the government want to do more to boost the economy	Yes (60.0% of respondents)	No (66.7% of respondents)
Will the Inflation Reduction Act (IRA) be: budget deficit reducing	No, will pressure budget (50.0% of respondents)	Not at all (71.4% of respondents)
Will the IRA be: help lower inflation	Not at all (70.0% of respondents)	Not at all (80.0% of respondents)
Bigger risk to the economy, government does too:	Much, further pressuring inflation (62.5% of respondents)	Much, further pressuring inflation (70.0% of respondents)
Has the government already done too much? (>$7T in spending)	Yes, but not to a significant extent (54.5% respondents)	Yes, fiscal (over)spending main inflation driver (70.0% respondents)
Consider the debt/GDP level when considering additional stimulus	Yes, further rise impede LT econ growth & no, govt needs to invest in the economy (each 36.4% respondents)	Yes, further rise impede LT econ growth & yes, further rise incite inflation (each 57.1% respondents)
If responded no, what level of debt to GDP is concerning	150-175% (80.0% of respondents)	150-175% (100.0% of respondents)
Would the U.S. government actually ever default	No (72.7% of respondents)	No (90.9% of respondents)
Either party is focused on reinstating a balanced budget	No (90.0% of respondents)	No (90.0% of respondents)
Tax Policy:		
IRA 15% corp. minimum tax have material impact on econ. growth	No (100.0% of respondents)	No (100.0% of respondents)
If responded yes, impact on 2023 GDP estimates	n/a	n/a
Trade Policy:		
Geopolitical tensions/COVID policies have lasting impact on trade relations with China	Yes (100.0% of respondents)	Yes (66.7% of respondents)
Geopolitical tensions/COVID policies cause a meaningful shift to domestic production	Yes (90.0% of respondents)	Yes (60.0% of respondents)

Note: Current survey May 15-26, 2023, past November 11-25, 2022. Questions and/or ranges may change across surveys. Corp = corporate, econ = economic growth

Additional Survey Results Highlights: 1H23 (Current)

For questions that were not repeated or changed substantially, i.e. not listed in the comparison tables above, we highlight the following from the current survey (populated between May 15-26, 2023).

Monetary Policy

- Fed actions
  - 71.4% of respondents expect a rate cut in 1Q24; once the Fed begins cutting rates, 76.9% of respondents believe it will have to cut rates by over 100 bps before stabilizing
  - As to whether regulatory authorities took appropriate actions in response to the March regional bank turmoil, respondents indicated:
    - The Fed: Yes, 100.0%
    - FDIC: Yes, 91.7%
  - 50.0% of respondents believe all bank deposits should be insured, but up to a certain amount
    - For those responding “yes, but up to a certain amount”, 50.0% replied the amount should be $500,000 and 50.0% replied $1,000,000
  - As to whether the regional bank turmoil will cause lasting damage to confidence in banking sector, 58.3% responded yes, but confidence will return over time
  - 66.7% of respondents believe the corresponding credit tightening after the regional bank turmoil in March is equivalent to 50 bps of additional Fed rate hikes
  - As to whether credit tightening be a factor in the Fed’s decision making for further rate hikes, respondents indicated:
    - Should be: Yes, 91.7%
    - Is/will be: No, 91.7%
  - Given the aforementioned credit tightening and its impact on the economy, 63.6% of respondents indicated they are somewhat worried about the commercial real estate sector but it’s “too early to model”
  - As to whether the Fed can get its balance sheet back down to historical levels, respondents indicated:
    - The pre-COVID level, ~$4 trillion: No, 84.6%
    - The post-GFC level, ~$2 trillion: No, 92.3%
- Inflation
  - As to whether respondents’ positions changed about the Fed making a mistake in tackling inflation after the regional bank turmoil, 45% responded yes, somewhat more concerned
  - 50.0% of respondents believe the Fed will tolerate an above 2% inflation level
    - For those that answered yes to the above question, 100.0% responded that a 2.0-2.5% level would be acceptable

Macro Policy

- Fiscal Stimulus
    - 70.0% of respondents believe debt ceiling increases should be procedural only (not tied to alternative measures)
    - 72.7% of respondents believe the debt ceiling debate is <u>not</u> doing material damage to the global perception of the USD
    - With a movement to dethrone the US Dollar (USD), including Yuan denominated purchase of natural gas and regional trade agreements in local currencies, 77.8% of respondents do <u>not</u> believe the USD is losing credibility as the dominant currency

Additional Survey Results Highlights: 2H22 (Prior)

For questions that were not repeated or changed substantially, i.e. not listed in the comparison tables above, we highlight the following from the prior survey (populated between November 11-25, 2022): https://www.sifma.org/wp-content/uploads/2022/12/SIFMA-US-Economic-Survey-2H22.pdf

Monetary Policy: Inflation Expectations

- Ranking supply side inflation components, economists replied: domestic supply chain issues (port congestion, labor shortages), commodity price shocks (oil due to Russia/Ukraine war), and supply chain issues (China's Zero COVID policy)
  - 36.4% of respondents expect domestic supply chain disruptions to dissipate by 1H23
  - 63.6% of respondents believe President Xi will end China's Zero COVID policy, with 57.1% responding this will happen by 2H23
  - 90% of respondents believe current policy moves – specifically releasing the strategic petroleum reserves (SPR) – will not have a lasting impact on the price of oil
  - The key factors keeping pressure on the price of oil over the long run include: geopolitical tensions impact supply (Russia/Ukraine war, Saudi Arabia relations); strong demand heading into winter months on top of low supplies in Europe; and strong demand into winter/low supplies in the U.S.
  - 50.0% of respondents expect relief from other commodity price pressures by 1H23

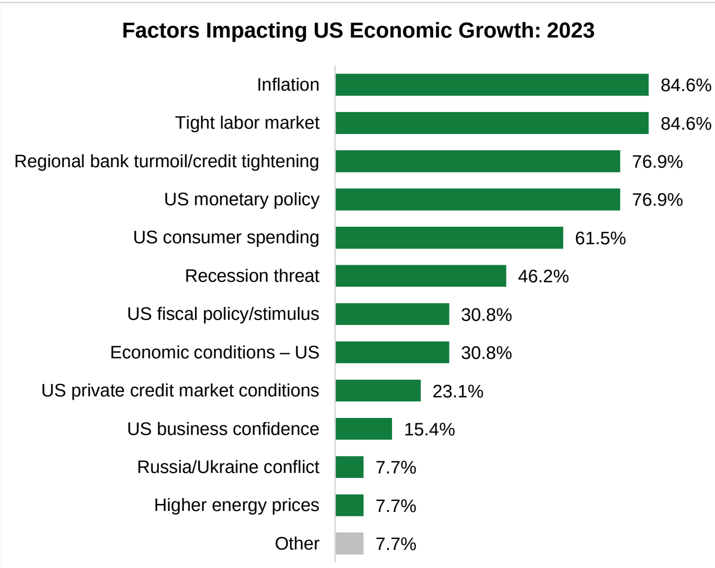
- Ranking demand side inflation components, economists replied: consumer spending on services, consumer spending on goods, and fiscal spending
  - 63.6% of respondents believe all of the fiscal stimulus was not necessary, and became a main driver of inflation
  - 30.0% of respondents expect goods prices on an aggregate level to return to normal levels by 1H23 and another 30.0% by 2H23
  - 50.0% of respondents expect services prices on an aggregate level to return to normal levels by 2H23

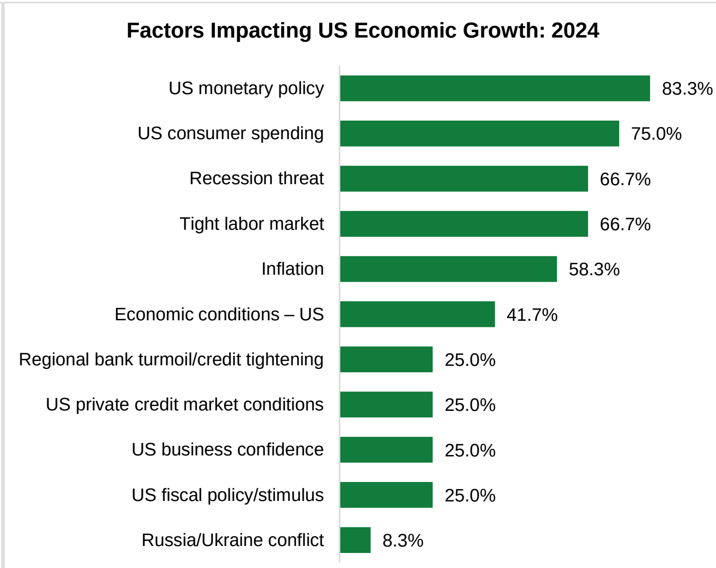
Economic Outlook

GDP Growth Expectations

With COVID in the rear-view mirror – in terms of modeling economic forecasts – we surveyed our Economist Roundtable on the key factors driving economic models.

- Key factors impacting economic growth, 2023: 84.6% inflation, 84.6% tight labor market, 76.9% regional bank turmoil/credit tightening, 76.9% U.S. monetary policy
- Key factors for economic growth, 2024: 83.3% U.S. monetary policy, 75.0% U.S. consumer spending, 66.7% recession threat, 66.7% tight labor market

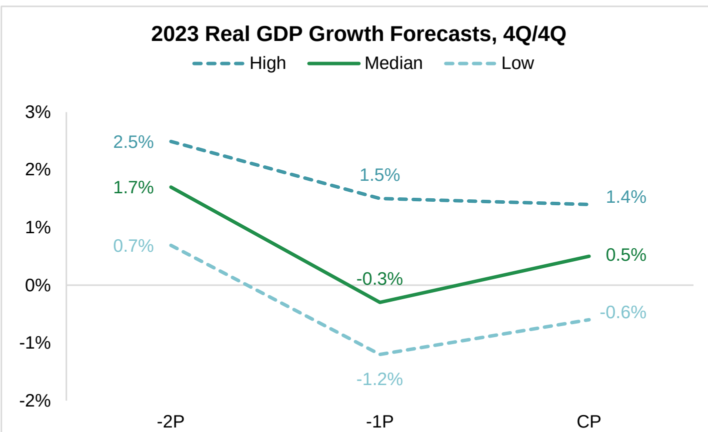


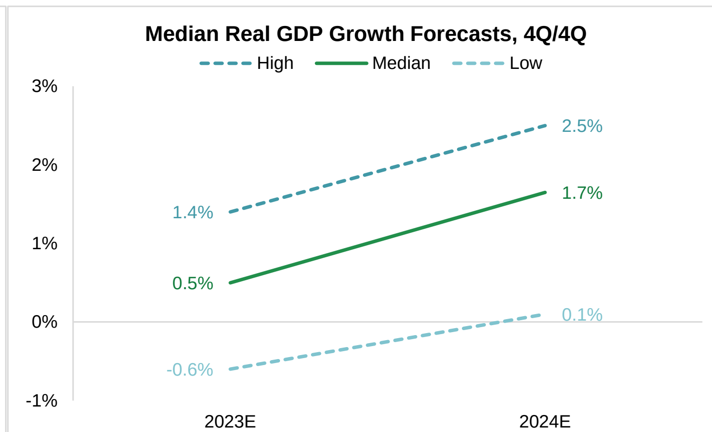


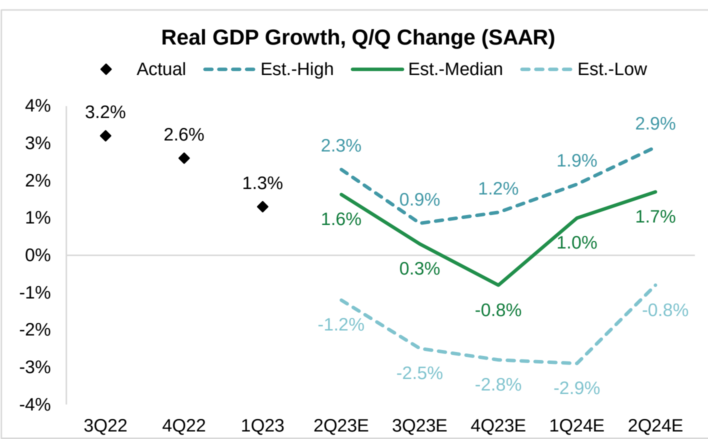
Full Questions: What factors will have – or have already had – the greatest impact on US economic growth in full year 2023/2024? (Ranked by % that listed a factor). Other: ('23) Mortgage rates; Not selected: ('23) energy supply concerns – US, energy supply concerns – Europe, strong US Dollar, economic conditions – Europe, economic conditions – China, economic conditions – global / ('24) higher energy prices, energy supply concerns – US, energy supply concerns – Europe, strong US Dollar, economic conditions – Europe, economic conditions – China, economic conditions – global

We asked our Economist Roundtable their expectations for GDP growth, as well as their expectations for the long-term growth rate potential.

- Annual real GDP growth to finish 2023 at +0.5% (median forecast, 4Q/4Q), shifting to +1.7% in 2024
- On a quarterly basis, respondents forecast +1.6% real GDP growth in 2Q23, +0.3% in 3Q23, -0.8% in 4Q23, +1.0% in 1Q24, and +1.7% in 2Q24 (Q/Q, SAAR)

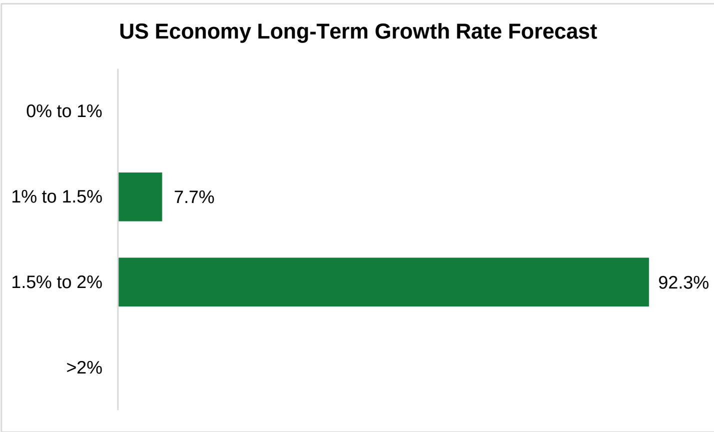


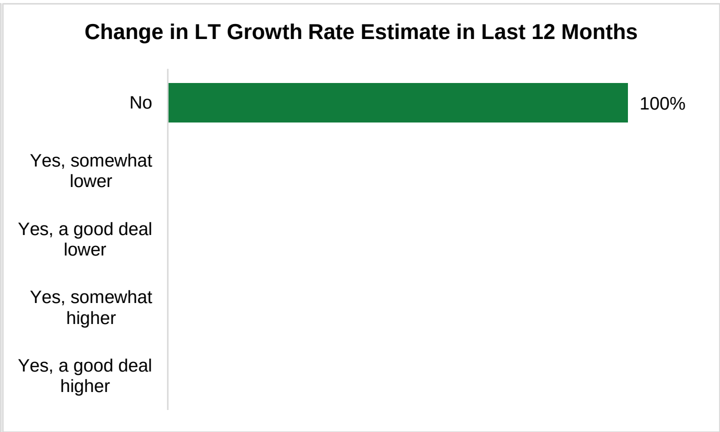




Source: Bureau of Economic Analysis, SIFMA Economist Roundtable
Note: SAAR = seasonally adjusted annual rate

- In terms of the long-term GDP growth rate, 92.3% of respondents replied 1.5-2.0%
- 100.0% of respondents stated that their estimate had not changed in the last twelve months



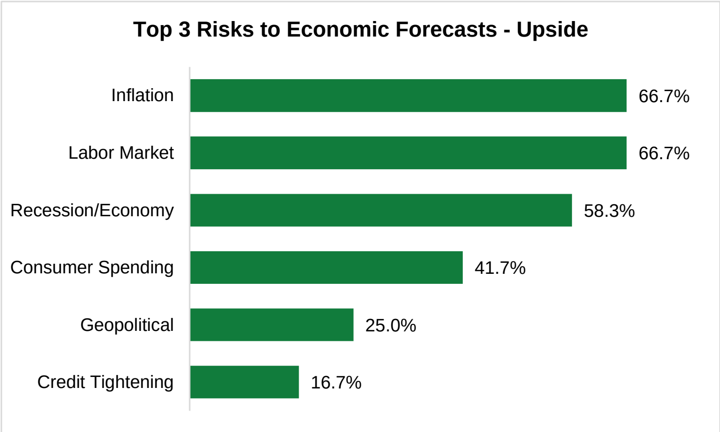


Full Question: What is your estimate of the long-term potential growth rate of the US economy?
Full Question: Has your estimate of the long-term potential growth rate of the US economy changed over the last twelve months?

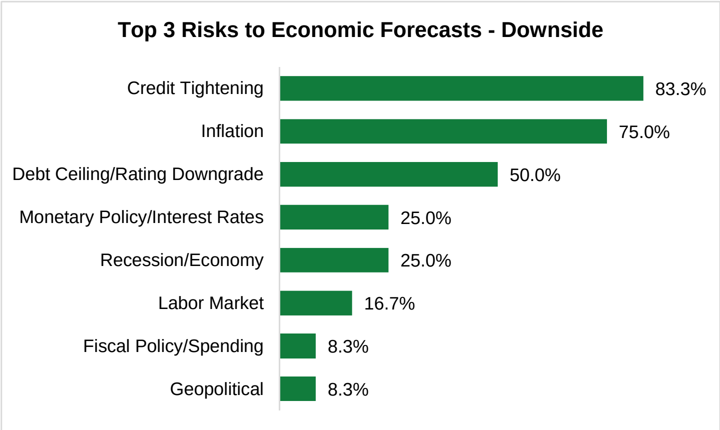
Risks to Economic Forecasts

We asked our Economist Roundtable to list their top risks to their economic forecasts, highlighting the following:

- **Upside:** Inflation, labor market, and recession/economy



- **Downside:** credit tightening, inflation, and debt ceiling/rating downgrade

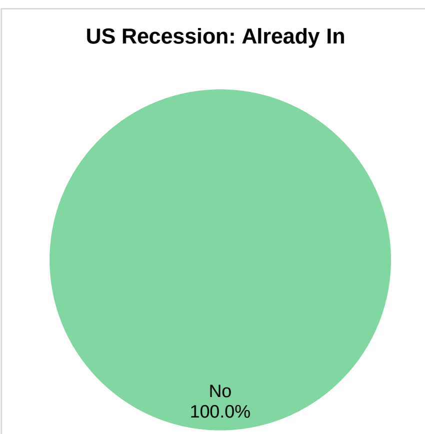


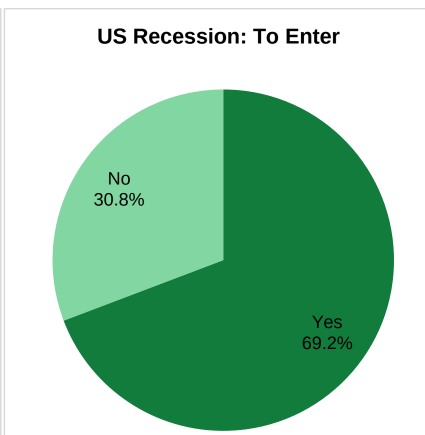
Full Question: Please list your top three upside/downside risks to your economic forecasts
Upside: Inflation = supply side pressures; Labor Market = job growth, resilient wages; Recession/Economy = housing market rebound, productivity increase, domestic investment in energy, stronger capex; Consumer Spending = resilient consumer; Geopolitical = Russia/Ukraine, foreign relations improvement; Credit Tightening = banking sector stress relief
Downside: Credit Tightening = escalation of regional bank stress, banking turmoil; Inflation = sticky; Debt Ceiling/Rating Downgrade = debt limit breach, US default; Recession/Economy = energy prices, commodity crisis, fear of recession; Labor Market = weak job market, labor market deterioration; Fiscal Policy/Spending = fiscal stimulus; geopolitical = global turmoil

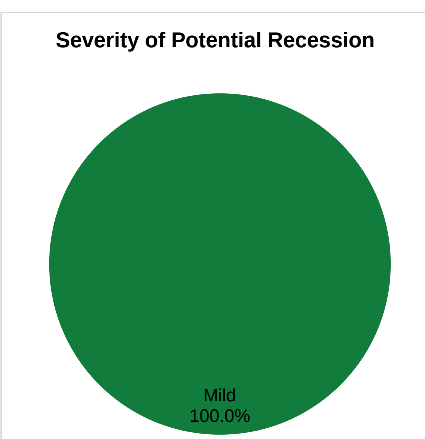
Recession Expectations

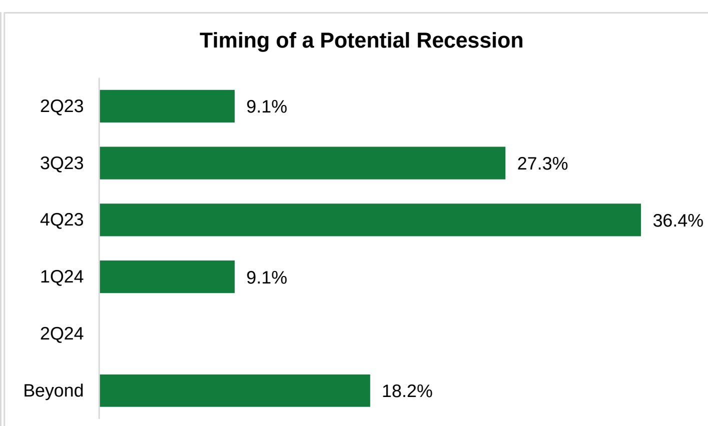
As the Fed continues its inflation fight, economists and market participants continue to assess whether or not the U.S. economy will enter a recession, and, if so, how severe that recession could be. As such, we asked our Economist Roundtable their thoughts around a potential recession and if the Fed can navigate a soft landing (achieve its 2% inflation target without causing a recession).

- None of respondents believe the U.S. is already in a recession
- 69.2% of respondents believe the U.S. will enter a recession
- If the U.S. enters a recession, 100.0% of respondents believe it will be mild
- If the U.S. enters a recession, 36.4% of respondents believe it will occur in 4Q23, 27.3% in 3Q23, 18.2% beyond 2024



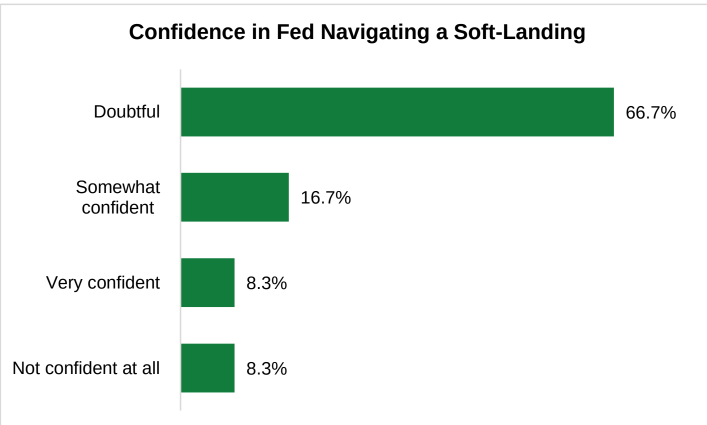


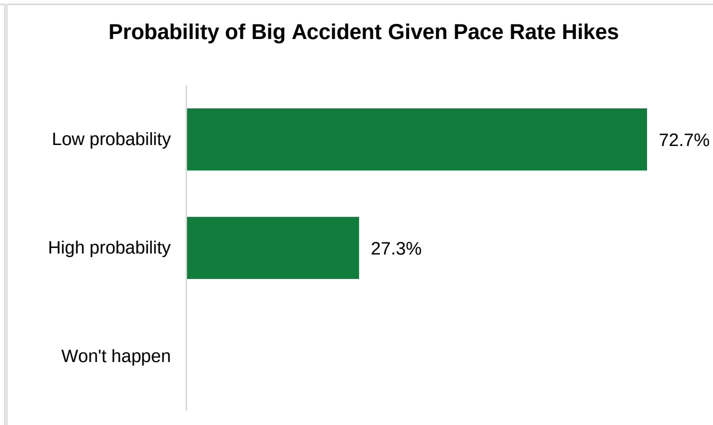




Full Question: Do you believe the U.S. is in a recession currently?
Full Question: Do you believe the U.S. will enter a recession in this cycle (~two years)?
Full Question: If you expect the U.S. to enter a recession, will it be mild or severe?
Full Question: If you expect the U.S. to enter a recession, when?

- The majority of respondents (66.7%) are doubtful the Fed can navigate a soft-landing (achieve its 2% inflation target without causing a recession): 16.7% somewhat confident, 8.3% very confident, 8.3% not confident at all
- With the Fed raising rates at an unprecedented pace, 72.7% of respondents put low probability of risking a big accident (a more severe or prolonged recession), 27.3% high



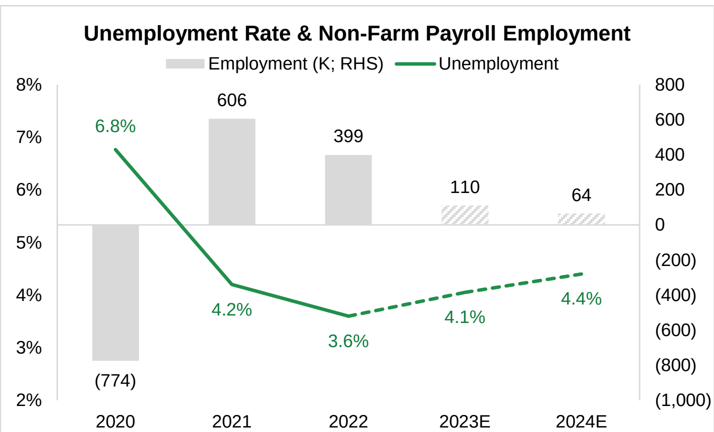


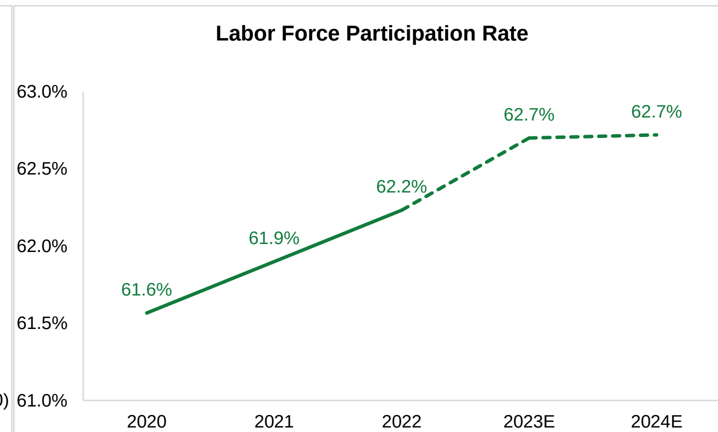
Full Question: How confident are you that the Fed can navigate a soft-landing, meaning achieve its inflation goal without causing a recession (or "pain" as referred to in Fed officials' speeches)?
Full Question: With the Fed raising rates at an unprecedented pace, what is the possibility of risking a big accident (a more severe or prolonged recession)?

Employment and the Consumer

As a key component in the inflation battle, we asked our Economist Roundtable their expectations for employment and the consumer landscape.

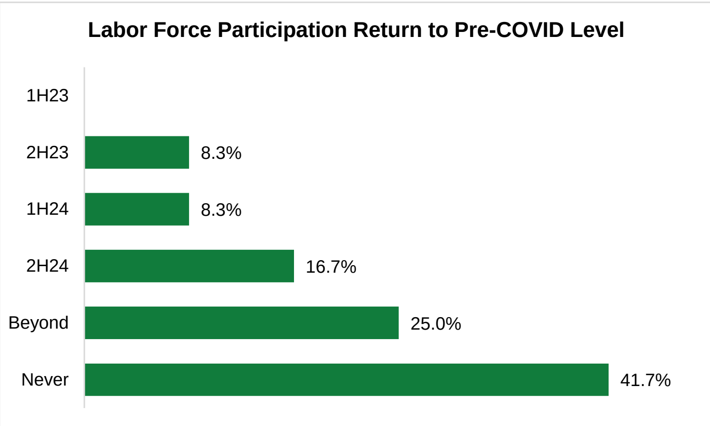
- Economists expect the unemployment rate to end 2023 at 4.1% and increase to 4.4% in 2024 (4Q average)
- Employment growth (average monthly change in non-farm payroll employment) is expected to average 110,000 in 2023 and 64,000 in 2024
- Respondents expect the labor force participation rate to increase to 62.7% in 2023 and remain at 62.7% in 2024

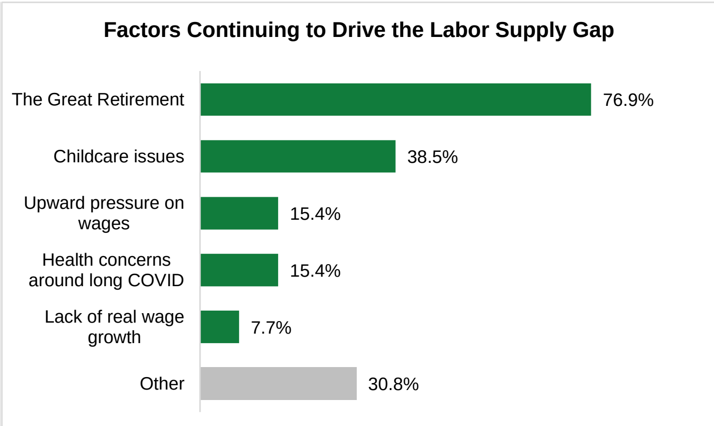


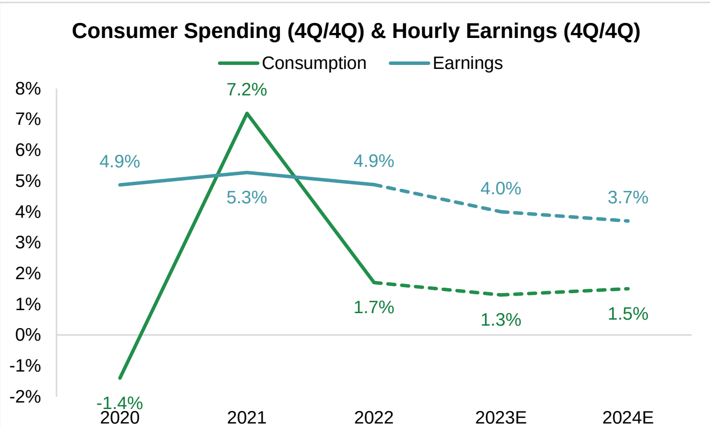


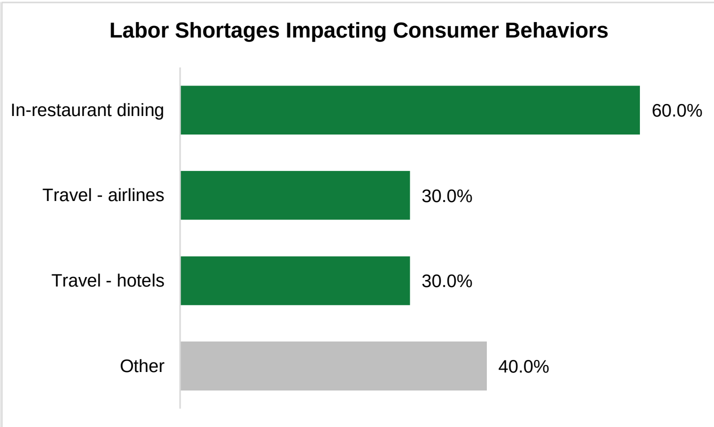
Source: Bureau of Labor Statistics, SIFMA Economist Roundtable
Note: Average monthly change for non-farm payroll employment, 4Q average for unemployment rate

- 41.7% of respondents expect the labor force participation rate to never return to the ~63% pre-COVID average, with another 25.0% responding beyond 2023
- The factors respondents believe continue to drive the labor supply gap are: The Great Retirement (76.9%), childcare issues (38.5%), upward pressure on wages (15.4%), and health concerns around long COVID (15.4%)
  - Other: Skill mismatches, accumulation of savings, robust demand, residual of immigration shortfall during pandemic
- Respondents expect real personal consumption growth to end 2023 at +1.3% and +1.5% in 2024 (4Q/4Q)
- Average hourly earnings growth is expected to decrease to +4.0% in 2023 and +3.7% in 2024 (4Q/4Q)
- 60.0% of respondents believe labor shortage are impacting consumer behavior towards in-restaurant dining with 30.0% indicating travel – airlines and another 30.0% travel - hotels





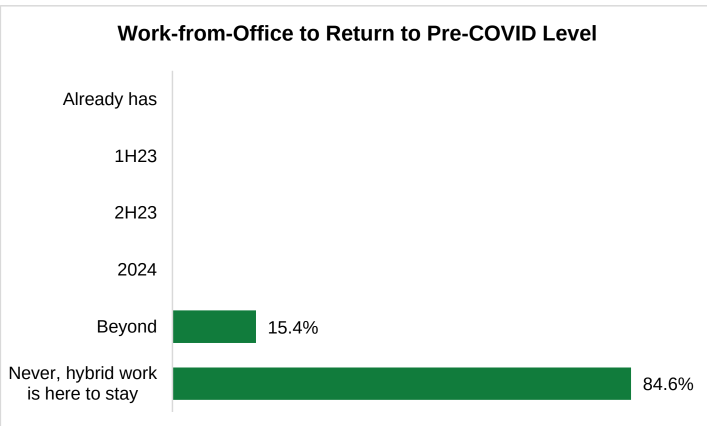


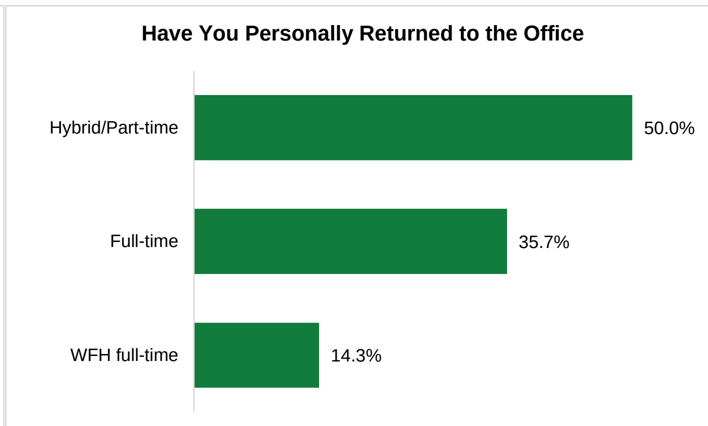


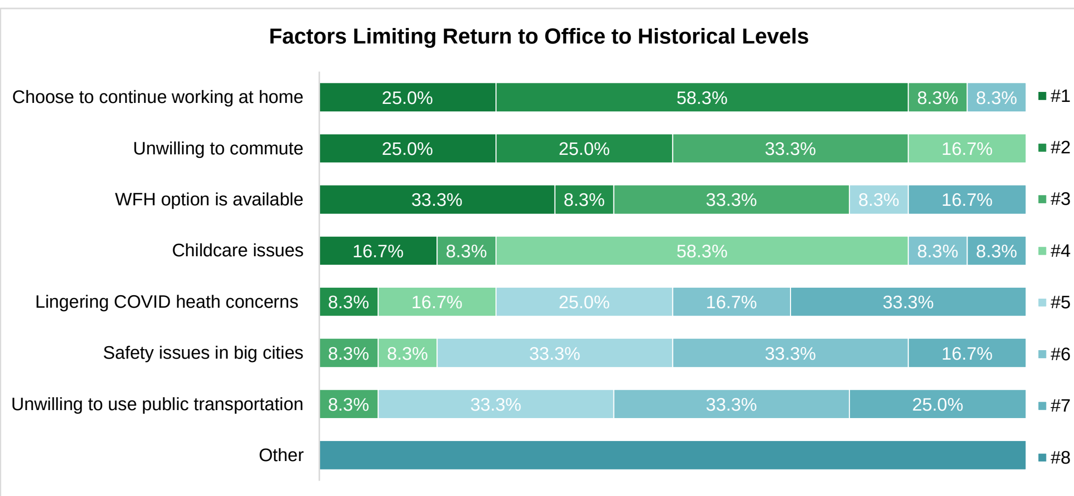
Source: Bureau of Economic Analysis, SIFMA Economist Roundtable
Full Question: When do you expect the labor force participation rate to return to the ~63% pre-COVID average? (62.6% in April 2023, unchanged M/M; 63.4% in February 2020)
Full Question: With 9.6 million job vacancies and 5.7 million Americans reporting a position of unemployment, what factors do you believe continue to drive the labor supply gap?
Full Question: Do you believe labor shortages are impacting consumer behavior towards?

Finally, we asked our Economist roundtable their thoughts on the return to offices.

- 84.6% of respondents never expect work-from-office to return to pre-COVID norms, indicating hybrid work is here to stay
- 50.0% of respondents indicated they have personally returned to the office on a hybrid/part-time schedule
- The key factors limiting return to offices to historical levels: choose to continue working at home, not want to commute/time freed up from not commuting, and because WFH option is available (did not ask but it was offered)







Full Question: When do you expect work-from-office to return to pre-COVID norms?
Full Question: Have you personally returned to the office?
Full Question: Which factors do you believe are limiting return to offices to historical levels? (Factors listed in order of average rank)

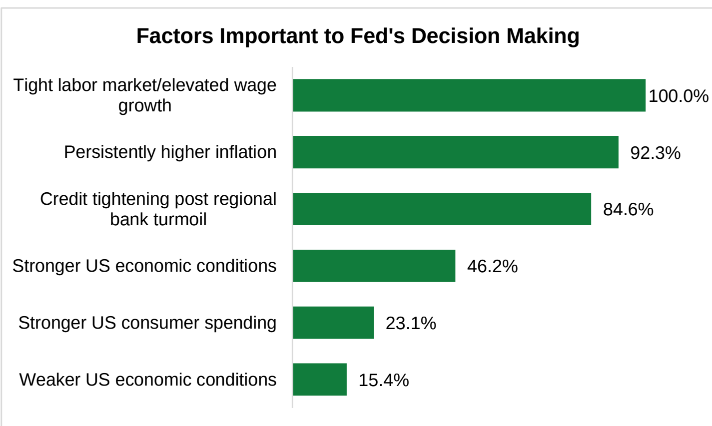
Monetary Policy

Fed Actions

In this section, we drill down into everything monetary policy – rate hikes/pauses/cuts, recession probability, inflation, and long-term rate expectations. The Fed has indicated that they remain data dependent when making policy decisions. Yet, the data seems to point to a different outcome every week. This leaves economists and markets wondering what the Fed will do not only at the June meeting but throughout the rest of 2023.

We asked our Economist Roundtable the most important factors in the Fed's decision making. The top factors were:

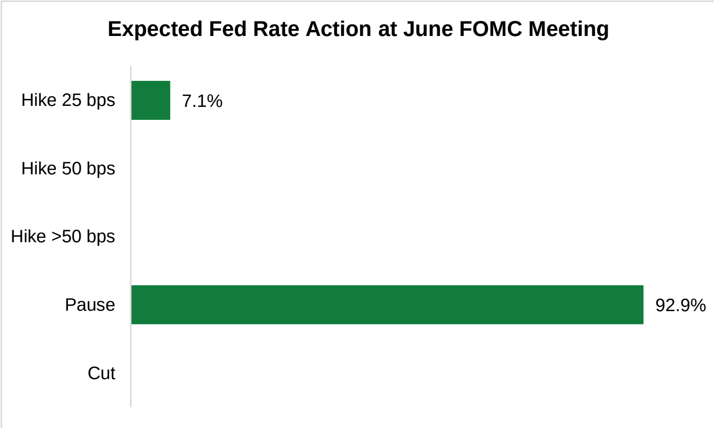
- Tight labor market/elevated wage growth (100.0%)
- Persistently higher inflation (92.3%)
- Credit tightening post regional bank turmoil (84.6%)

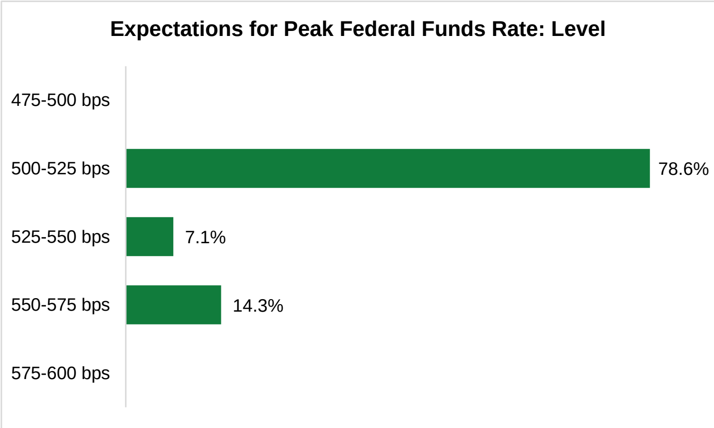


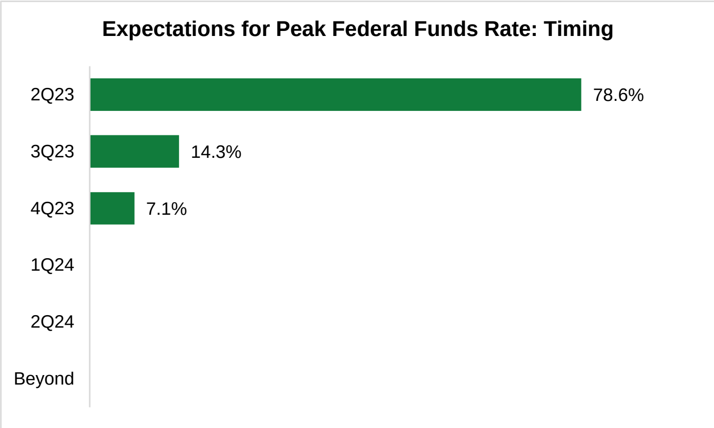
Full Question: Which of the following factors do you think are the most important to the Fed's decision making? (Factors listed in order of average rank)

To begin, we asked our Economist Roundtable about their expectations for Fed actions.

- 92.9% of respondents expect the Fed to pause rate hikes in June
- 78.6% of respondents expect the peak rate will be 500-550 bps
- 78.6% of respondents expect the peak rate to be achieved by 2Q23



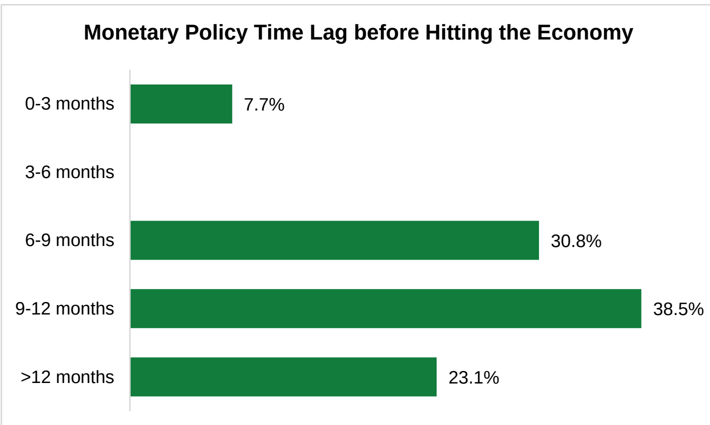


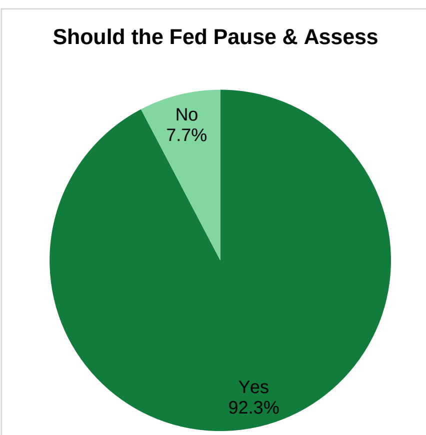


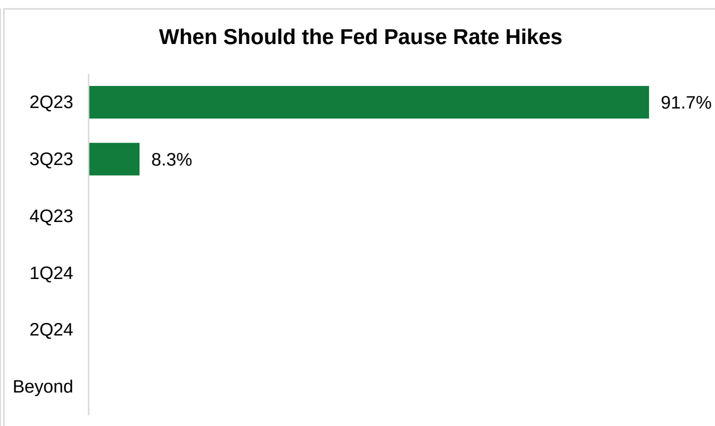
Full Question: Now in the 5.00%-5.25% range – +500 bps in around 15 months –, what action do you expect the Fed to take in June?
Full Question: What do you believe will be the peak rate?
Full Question: When do you expect that will be achieved?

Monetary policy comes with a lag time before working its way into the economy. As such, we asked our Economist Roundtable how they view this lag and what it could mean for the Fed actions.

- 38.5% of respondents believe the lag time is 9-12 months
- 92.3% of respondents think the Fed should pause and assess the impact of earlier rates hikes
- 91.7% of respondents believe this pause should take place in 2Q23



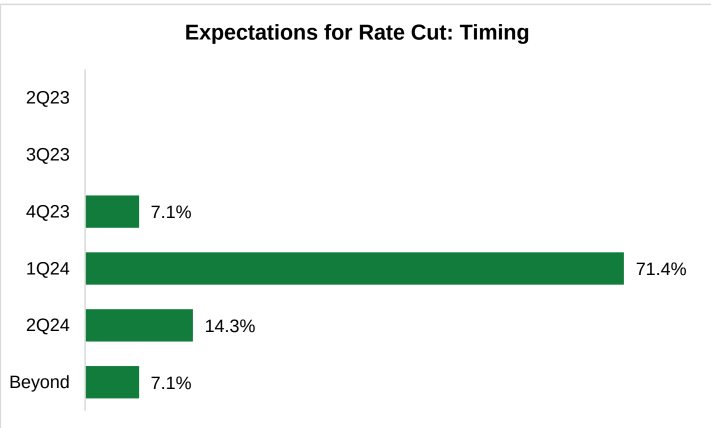


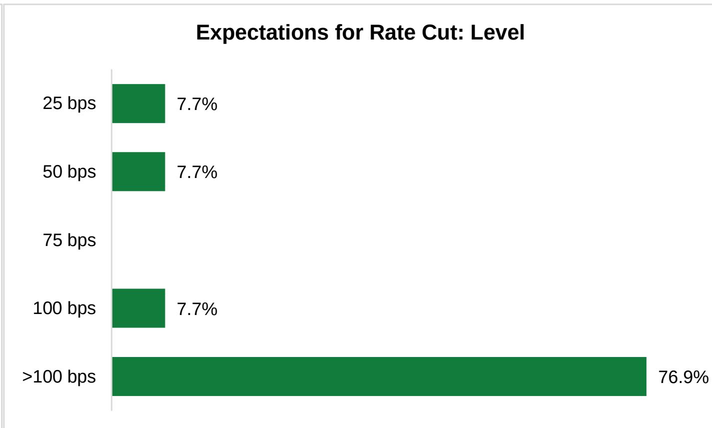


Full Question: Monetary policy comes with a lag time before working its way into the economy. What do you believe is the lag time?
Full Question: Should the Fed pause and assess the impact of earlier rate hikes?
Full Question: When should they take this pause?

Hike. Pause. Pivot. We had multiple hikes, at an unprecedented rate. The expected timing of the pause is 2Q23, at the June meeting. When will we get the cuts?

- 71.4% of respondents expect the Fed to cut rates in 1Q24
- Once the Fed begins cutting rates, 76.9% of respondents think it will take over 100 bps of cuts before stabilizing



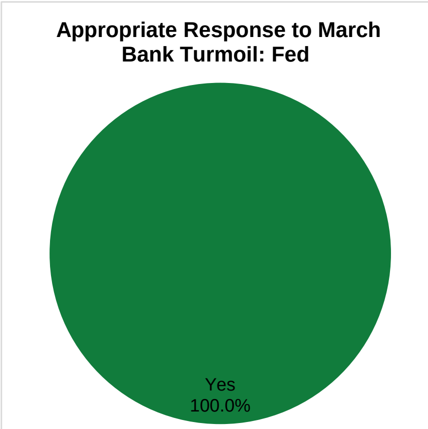


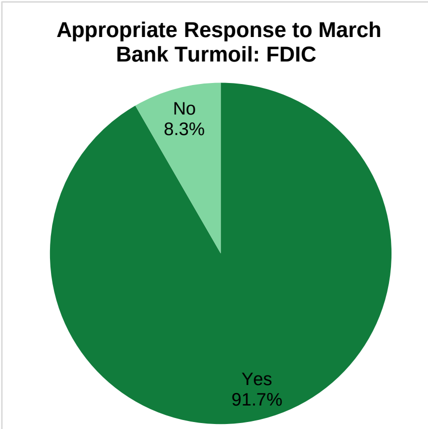
Full Question: Do you expect a rate cut any time soon, and if so when?
Full Question: Once the Fed begins cutting rates, how many bps do you think they will have to cut before stabilizing?

The regional bank turmoil that began in March was viewed by many as a sign that monetary policy had worked its way into the economy. Markets are still digesting what the credit tightening that stemmed from this event will mean for the economy and the Fed's policy moves. For example, prior to these events, markets had expected a 50 bps rate hike at the March FOMC meeting, after signs that the labor market remained hot. The regional bank turmoil led markets to revise down expectations and the FOMC ultimately vote to hike only 25 bps.

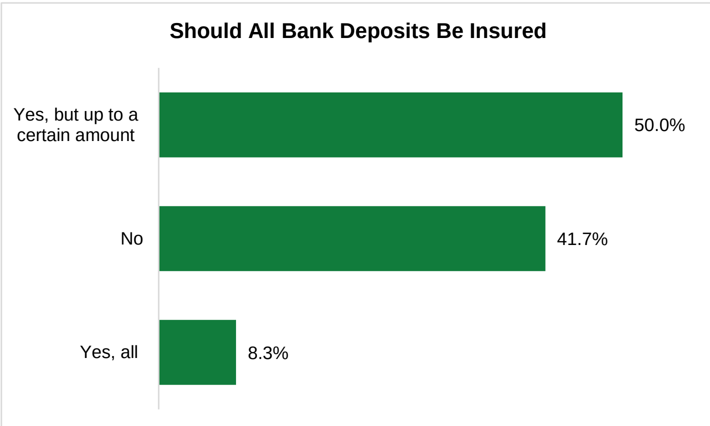
We asked our Economist Roundtable their thoughts on the regulatory response to the regional bank turmoil and potential changes to the deposit insurance regime.

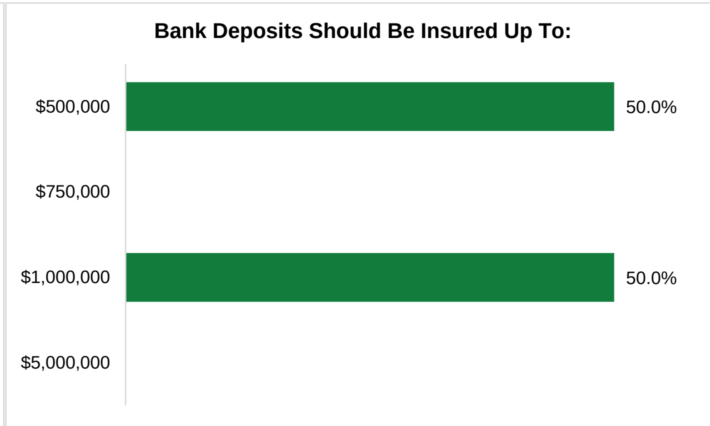
- As to whether regulatory authorities took appropriate actions in response to the March regional bank turmoil, 100.0% of respondents believe the Fed did
- As to whether regulatory authorities took appropriate actions in response to the March regional bank turmoil, 91.7% of respondents believe the FDIC did
- As to whether all bank deposits be insured (i.e. drop the $250,000 cap), 50.0% of respondents replied yes, but up to a certain amount
- Respondents were evenly split on the amount deposits should be insured up to: 50.0% said $500,000 and 50.0% $1,000,000





Full Question: Do you believe regulatory authorities took appropriate actions in response to the March regional bank turmoil: (a) The Fed? (b) The FDIC?

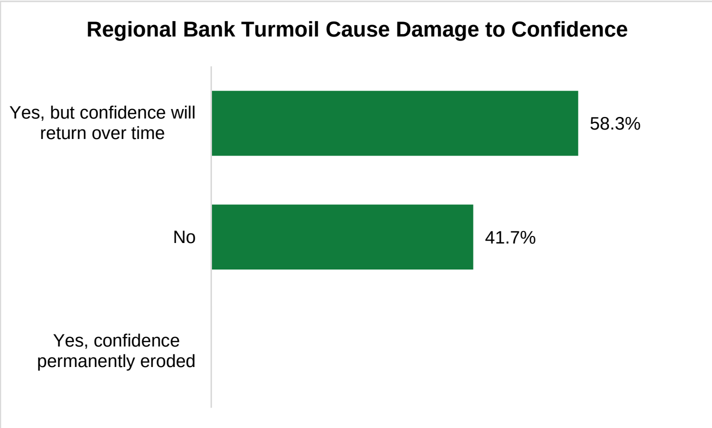


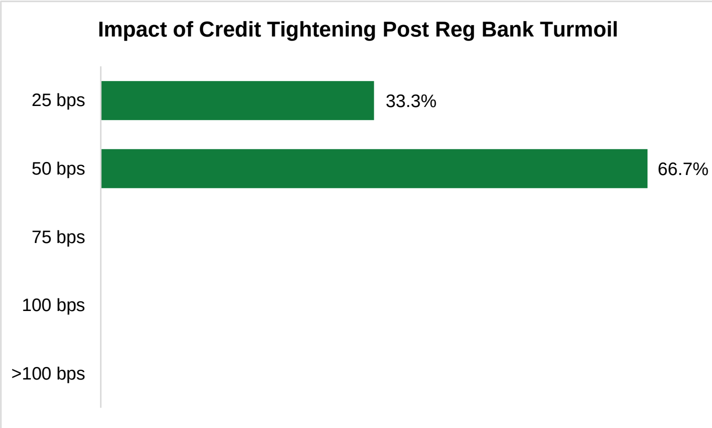


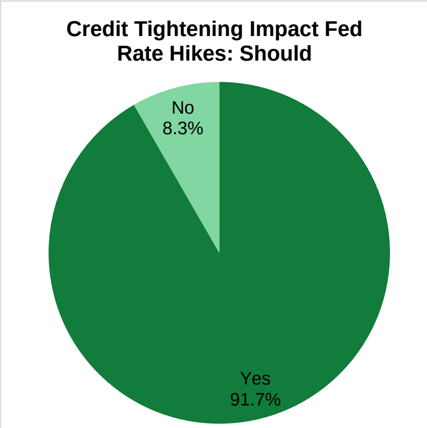
Full Question: Should all bank deposits be insured (i.e. drop the $250,000 cap)?
Full Question: If you responded “yes, but up to a certain amount”, what amount? Up to?

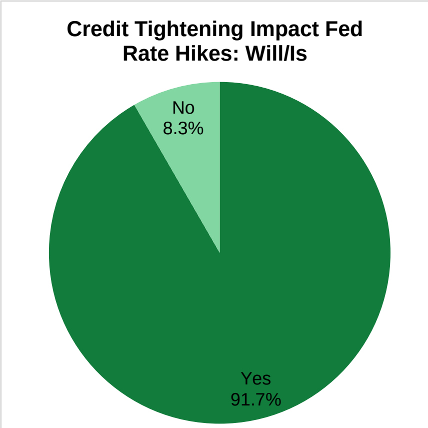
We then asked our Economist Roundtable how they expect the regional bank turmoil to impact the Fed's rate decisions.

- 58.3% of respondents believe the regional bank turmoil will cause temporary damage to confidence in banking sector
- 66.7% of respondents estimate the corresponding credit tightening post the regional bank turmoil is equivalent to 50 bps of additional Fed rate hikes
- As to whether this credit tightening should be a factor in the Fed's decision making for further rate actions:
  - 91.7% of respondents said it should be
  - 91.7% of respondents said it is/will be





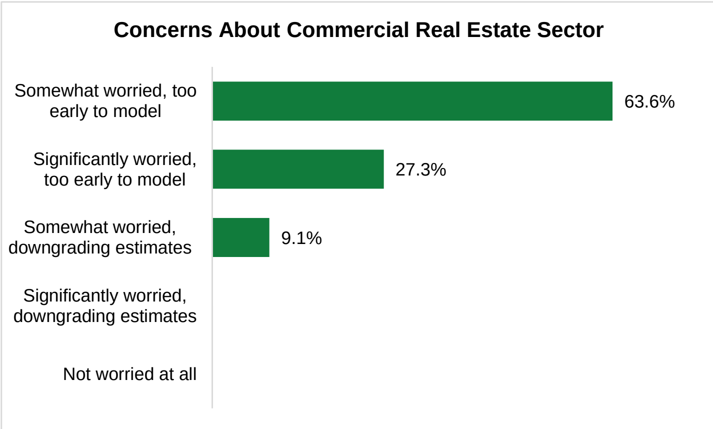


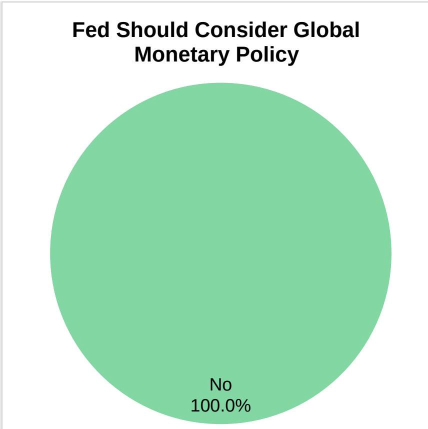


Full Question: Will the regional bank turmoil cause lasting damage to confidence in banking sector?
Full Question: After the regional bank turmoil in March, many consider the corresponding credit tightening – for both consumers and businesses – as equivalent to additional Fed rate hikes. What do you believe could be the impact of credit tightening?
Full Question: Should this credit tightening be a factor in the Fed's decision making for further rate hikes: (a) Do you believe it should be? (b) Do you believe it is/will be?

Finally, we asked our Economist Roundtable their thoughts on commercial real estate and whether the fed should be assessing other central bank actions in its own policy decisions.

- Given the aforementioned credit tightening, 63.6% responded they are “somewhat worried, but too early to model” the impact on the commercial real estate sector
- Despite the continued inflation battle and corresponding monetary policy actions in the UK and EU, 100.0% of respondents do not believe the Fed should be considering global monetary policy responses when making its decisions on its own policy moves

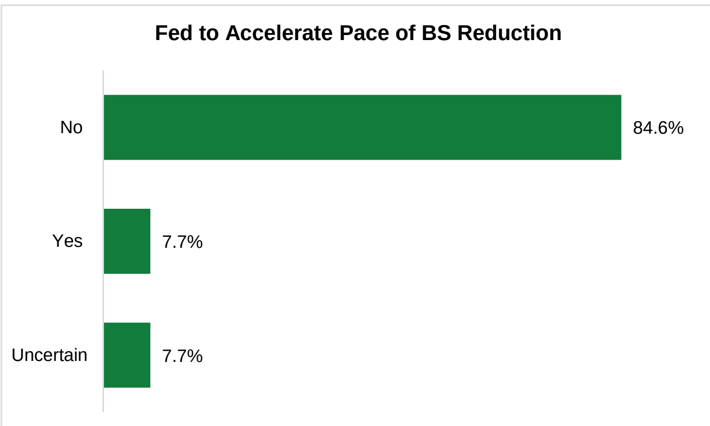


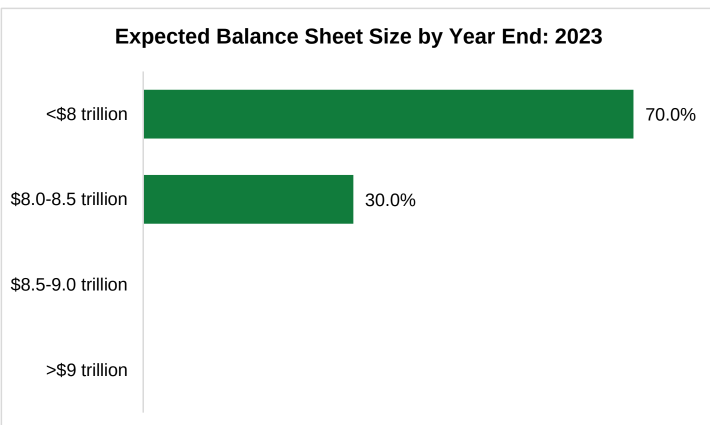


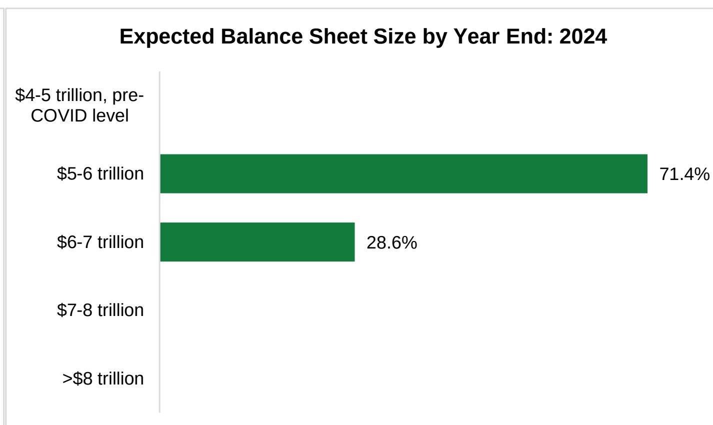
Full Question: Given the aforementioned credit tightening and its impact on the economy, how worried are you, in particular, about the commercial real estate sector?
Full Question: Given the continued inflation battle and corresponding monetary policy actions in the UK and EU, should the Fed be considering global monetary policy responses when making its decisions on its own policy moves?

The Fed continues the drawdown of the balance sheet. At the writing of the survey, the Fed's balance sheet was at $8.5 trillion (up from $4.2 trillion in February 2020). We gathered our Economist Roundtable's thoughts on the reduction of and the end game for the balance sheet.

- 84.6% of respondents expect the Fed will <u>not</u> need to accelerate the pace of balance sheet reduction
- 70.0% of respondents expect the balance sheet to be below $8 trillion by the end of 2023
- 71.4% of respondents expect the balance sheet to still be $5-6 trillion by the end of 2024



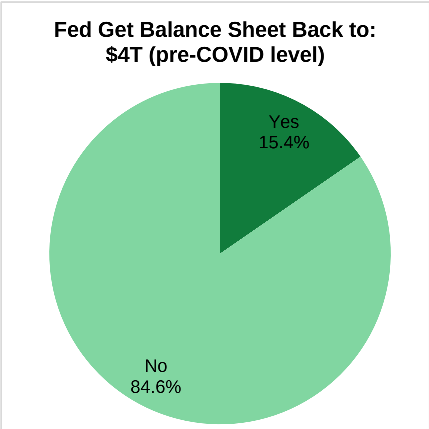


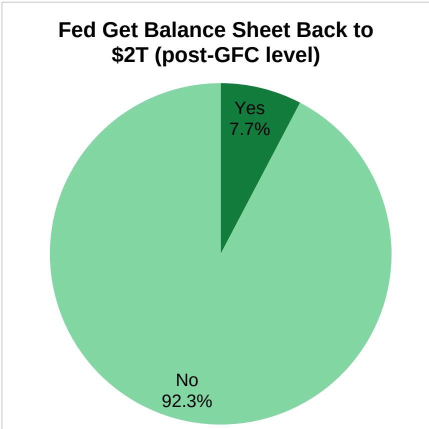


Full Question: As the Fed continues its drawdown of the balance sheet, do you expect the Fed to accelerate the stated pace of reductions?
Full Question: Given your earlier expectations, what do you expect the size of the balance sheet to be at the end of: 2023/2024 (currently $8.5 trillion, up from $4.2 trillion in February 2020)

As to whether the Fed will ever get its balance sheet back down to historical levels, respondents indicated:

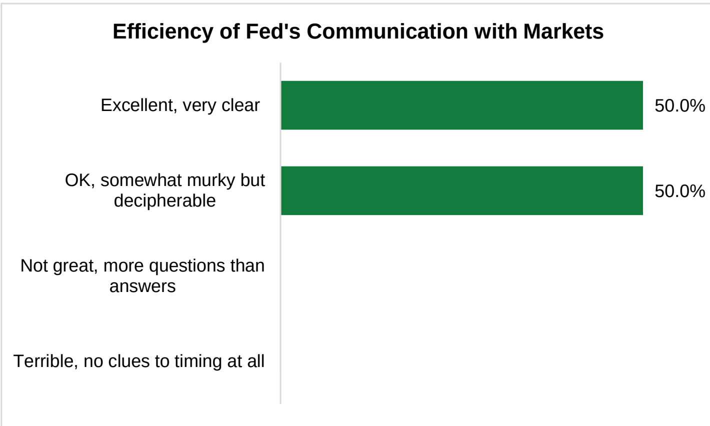
- The pre-COVID level, ~$4 trillion: No 84.6%
- The post-GFC level, ~$2 trillion: No 92.3%





Full Question: Will the Fed ever get its balance sheet back down to: (a) The pre-COVID level, ~$4 trillion? (b) The post-GFC level, ~$2 trillion?

Finally, we asked respondents to rate the efficiency of the Fed's communication with markets around its timeline for monetary policy adjustments. respondents were equally split between the communication being very clear (50.0%) and somewhat murky but decipherable (50.0%).



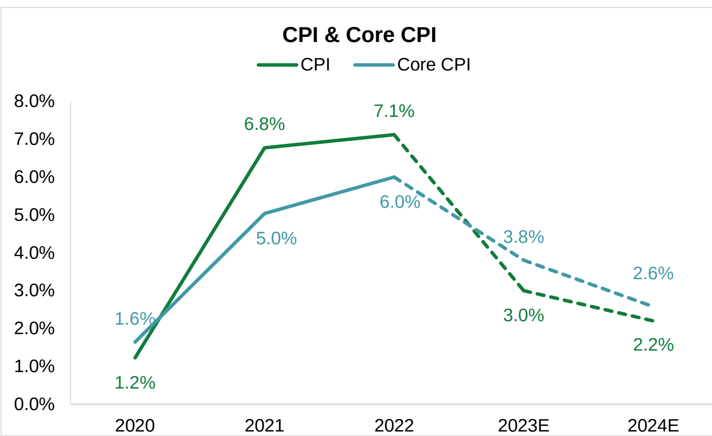
Full Question: In general, how do you rate the efficiency of the Fed's communication with markets around its timeline for monetary policy adjustments (rate moves, balance sheet draw down)?

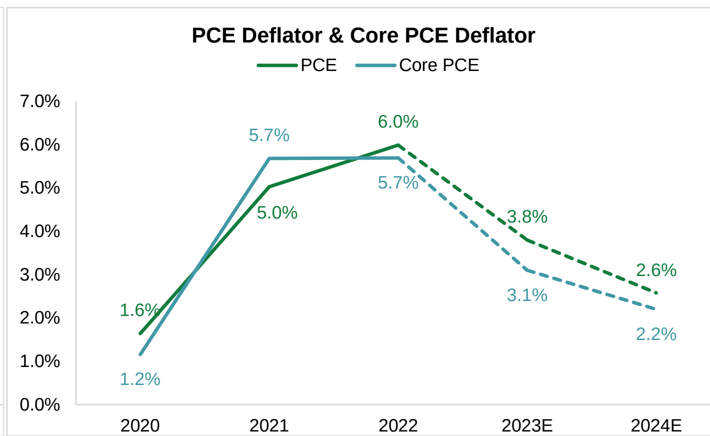
Inflation Expectations

Economists and market participants – and really every single person on the street – continue to watch inflation reports[7]. More importantly, inflation is the main metric the Fed is watching to determine when/if it should shift its policy actions.

Our Economist Roundtable had the following expectations for inflation forecasts:

- CPI: +3.0% to end 2023, +2.2% to end 2024 (2022 actual 7.1%)
- Core CPI: +3.8% to end 2023, +2.6% to end 2024 (2022 actual 6.0%)
- PCE: +3.8% to end 2023, +2.6% to end 2024 (2022 actual 6.0%)
- Core PCE: +3.1% to end 2023, +2.2% to end 2024 (2022 actual 5.7%)



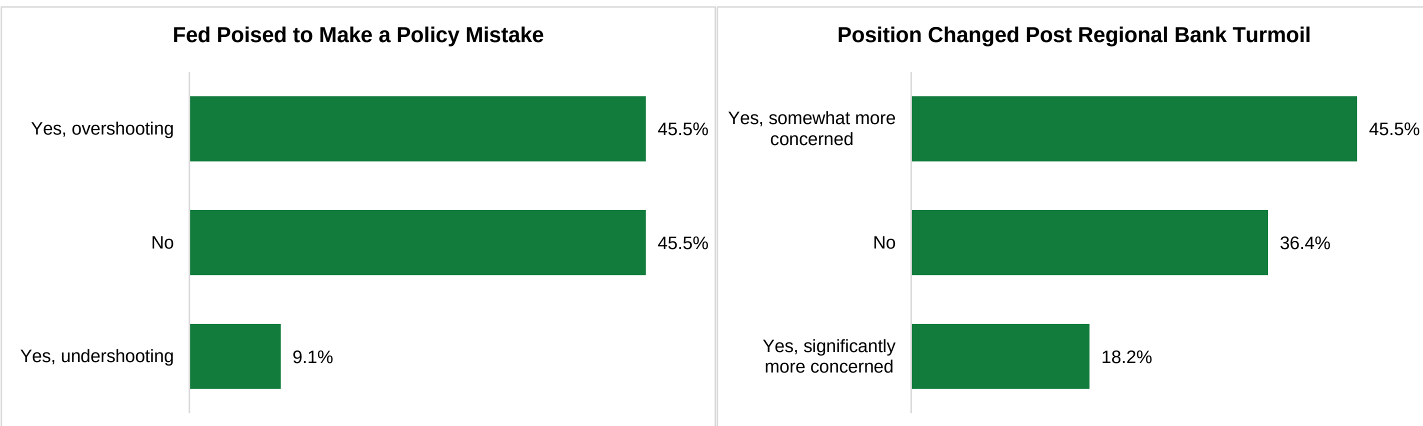


Source: Bureau of Economic Analysis, SIFMA Economist Roundtable

[7] Release dates: For May data. CPI/Core CPI June 13; PCE/Core PCE June 30.

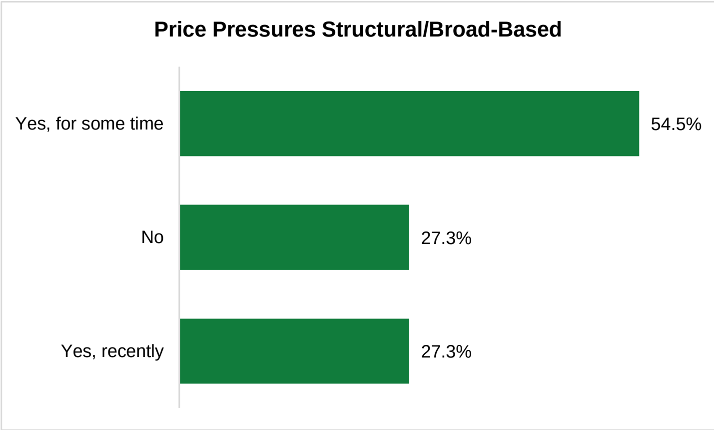
Despite having come down significantly from the peak – PCE +4.4% Y/Y change in April, -2.6 pps from the June 2022 peak of 7.0% – the inflation rate still has a long path to the Fed's 2% target. On the other hand, we are seeing signs of slowing in the economy and economists continue to analyze the impact of credit tightening on the economy. As such, we asked our economists about inflation levels and the Fed's actions.

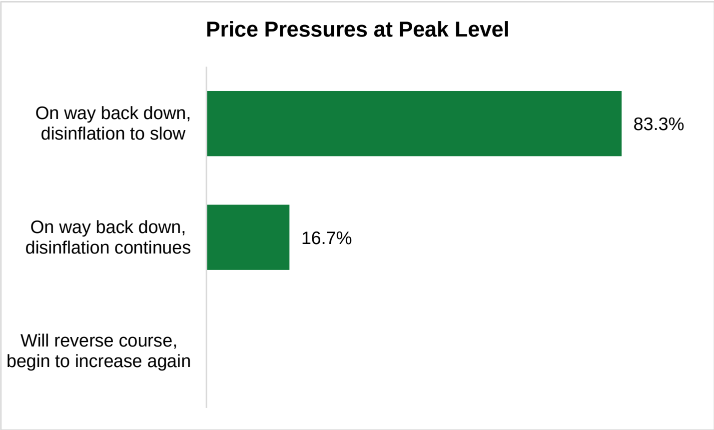
- 45.5% of respondents indicated the Fed is poised to make a mistake in tackling inflation by overshooting, while another 45.5% do not expect a mistake
- 45.5% of respondents noted their view has changed after the regional bank turmoil to somewhat more concerned

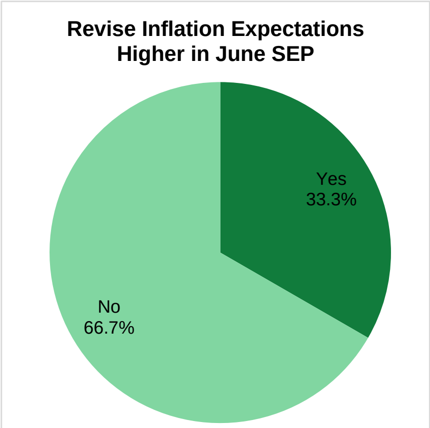


Full Question: Are you concerned the Fed is poised to make a mistake when it comes to tackling inflation?
Full Question: Has your position changed after the regional bank turmoil?

- 54.5% of respondents believe price pressures have become more structural or broad-based throughout the economy for some time
- 83.3% of respondents note price pressures on the way back down, but disinflation momentum will slow
- Given the current level of inflation, 66.7% of respondents believe the Fed will not materially revise higher its expectations for inflation in the June Summary of Economic Projections



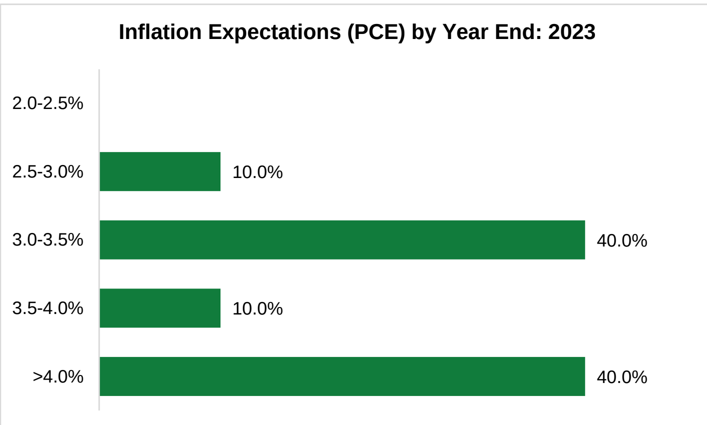


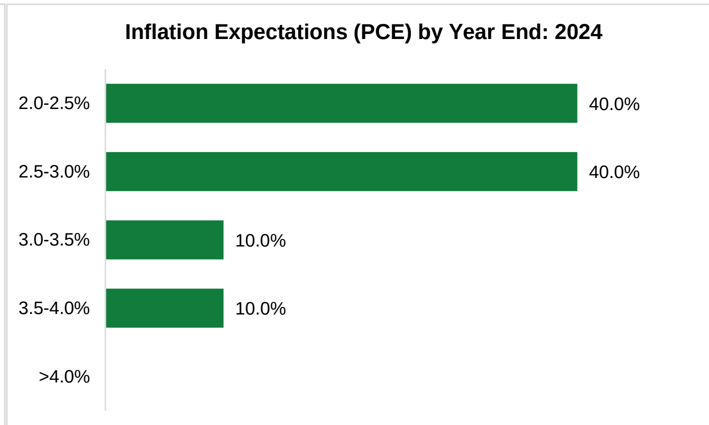


Full Question: The Fed continues to be concerned that price pressures have become more structural or broad-based throughout the economy. Do you agree?
Full Question: With the PCE at 4.2% as of March – down from the June 2022 high of 7.0% but still above the Fed's 2% target – how do you assess price pressures?
Full Question: Given the current level of inflation, will the Fed materially revise higher its expectations for inflation in the June Summary of Economic Projections?

We then asked our Economist Roundtable where they expect PCE to end:

- 2023 expected to be 3.0-3.5% or over 4.0% (40.0% of respondents each)
- 2024 is expected to be 2-2.5% or 2.5-3% (40.0% of respondents each)

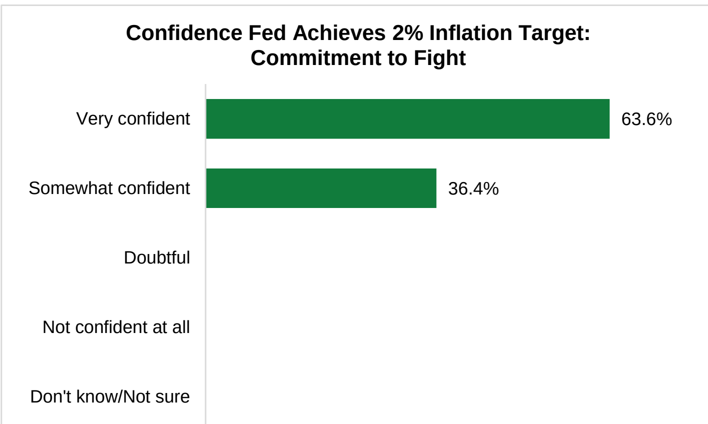


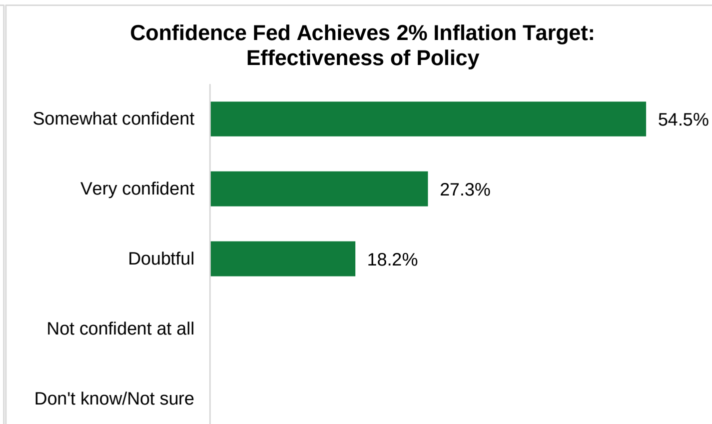


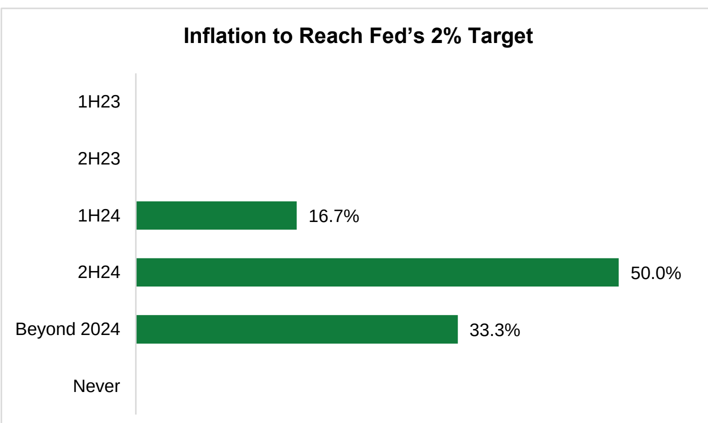
Full Question: Given your assessment above, where do you see the inflation rate, in terms of the PCE figure, by the end of: 2023/2024

The Fed has vowed to do whatever it takes to rein in inflation. Is our Economist Roundtable confident the Fed can achieve its 2% goal in a sustainable way?

- Based on the Fed's commitment to the fight, 63.6% of respondents are very confident
- Based on the effectiveness of the Fed's policy, 54.5% of respondents are somewhat confident
- 50.0% of respondents expect inflation will not reach the Fed's preferred 2% target until 2H24



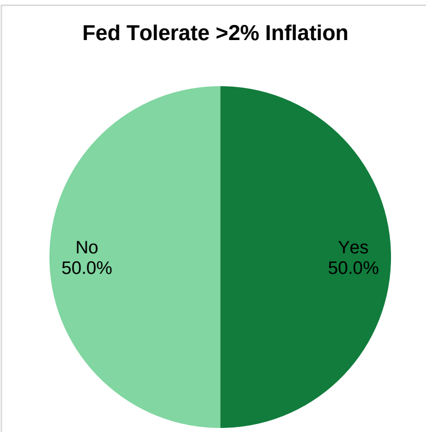


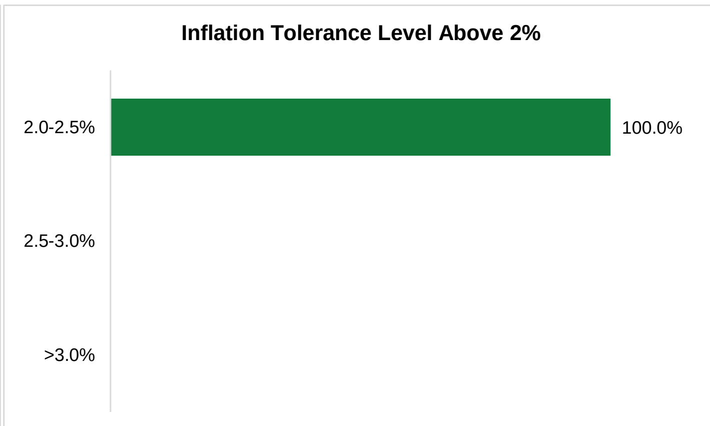


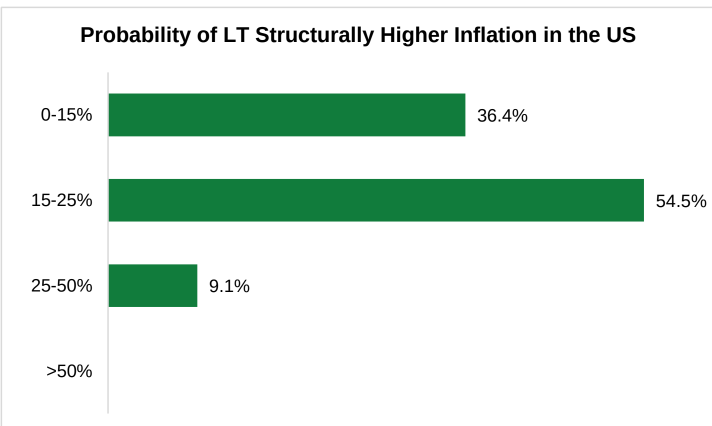
Full Question: The Fed has vowed to do whatever it takes to rein in inflation. How confident are you that the Fed can achieve its 2% goal in a sustainable way? Given: (a) the Fed's commitment to the fight and (b) the effectiveness of the Fed's policy
Full Question: When do you expect inflation to reach the Fed's preferred 2% target?

And will 2% remain the magic number? According to our Economist Roundtable:

- As to whether the Fed will tolerate an above 2% inflation level, respondents were evenly split between yes and no
- The higher level was estimated at 2.0-2.5%, 100.0% of respondents
- 54.5% of respondents expect a 15% to 25% probability the U.S. will experience structurally higher inflation over the longer run (defined as longer than three years from now)



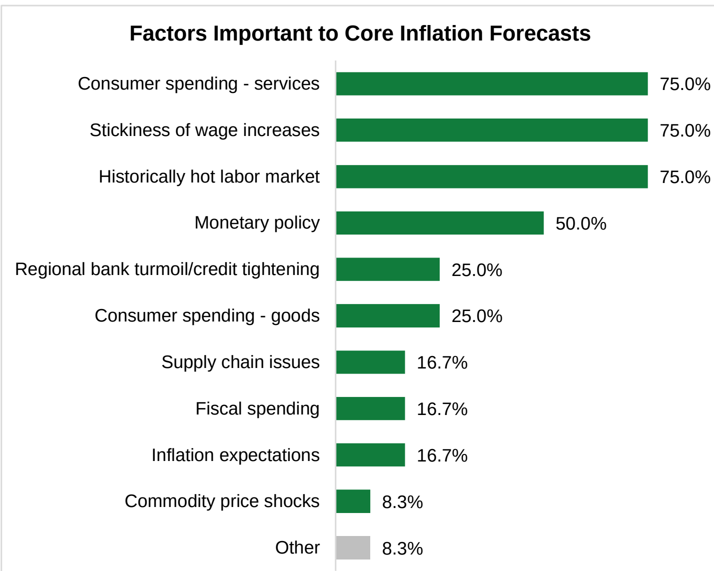




Full Question: Do you believe the Fed will tolerate an above 2% inflation level?
Full Question: If yes, at what level?
Full Question: Looking further out, what probability would you place on the U.S. experiencing structurally higher inflation over the longer run (defined as longer than three years from now)?

The top factors listed as most important to core inflation forecasts include:

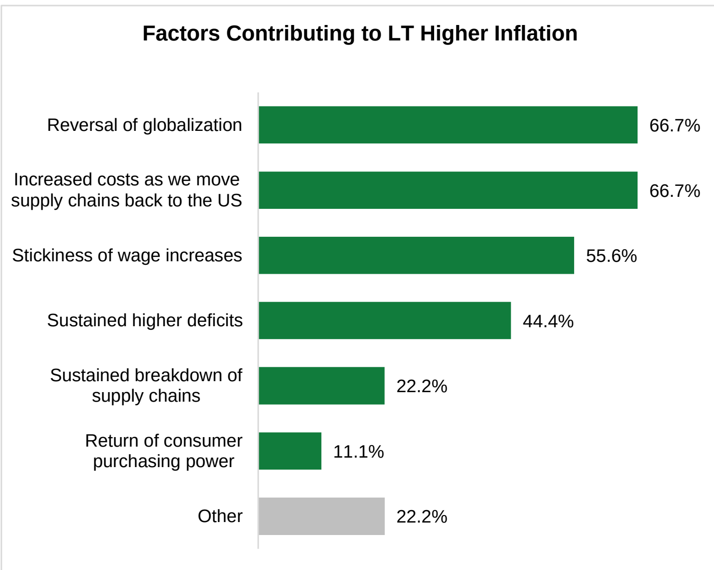
- Consumer spending on services, 75.0%
- Stickiness of wage increases, 75.0%
- Historically hot labor market, 75.0%
- Monetary policy, 50.0%
- Other: Softening in housing market



Full Question: What are the most important factors in your outlook for core inflation? (Ranked by percentage of economists that listed a factor)

The top factors to push long-term inflation higher include:

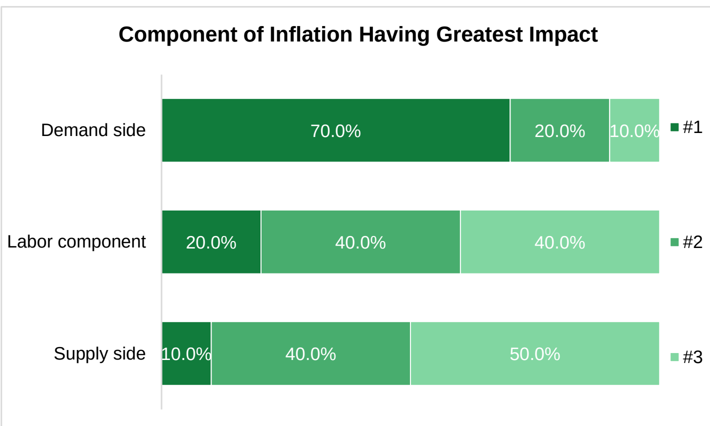
- Reversal of globalization, 66.7%
- Increased costs as we move supply chain back to the U.S., 66.7%
- Stickiness of wage increases, 55.6%
- Sustained breakdown of supply chains, 44.4%
- Other: Greenflation, unanchoring of inflation expectations



Full Question: What factors do you believe could push long-term inflation higher? (Ranked by percentage of economists that listed a factor)

When analyzing inflation, it can be broken out into three sections: demand side, supply side, and labor component. We asked our Economist Roundtable to rank which factor is having the biggest impact on the aggregate inflation rate. Looking at each component of inflation, we calculate the number of times they were ranked #1 and #2, ranking them accordingly:

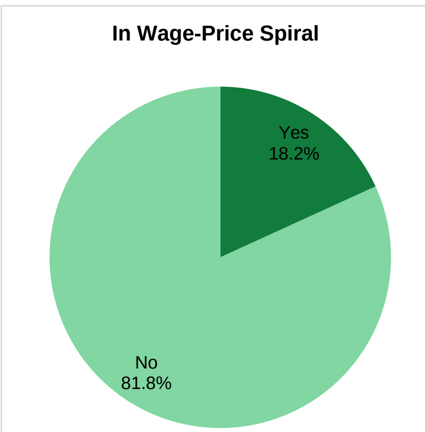
- Demand side: 70.0% responded #1 factor
- Labor component: 60.0% responded #1 or #2 factor
- Supply side: 50.0% responded #3 factor

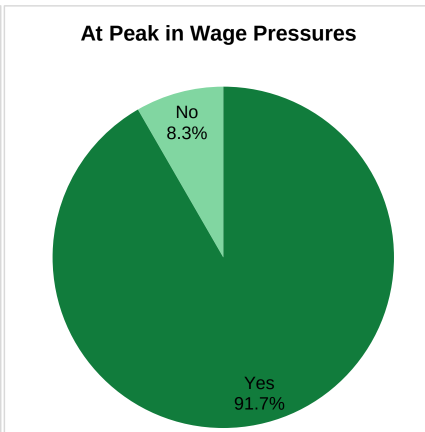


Full Question: Which component do you believe has had the greatest impact on the level/peak or the sticky nature of inflation?

As it has been noted that the Fed will need to push up the unemployment rate to aid in its inflation fight, we asked our Economist Roundtable to breakdown the labor component impacts on inflation.

- 81.8% of respondents believe we are <u>not</u> in a wage-price spiral[8]
- With wages +4.3% in May, versus +5.5% a year ago, 91.7% of respondents believe we have reached a peak in wage pressures

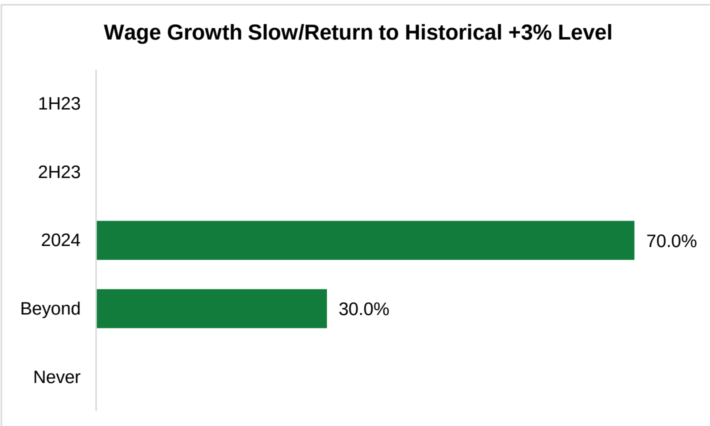


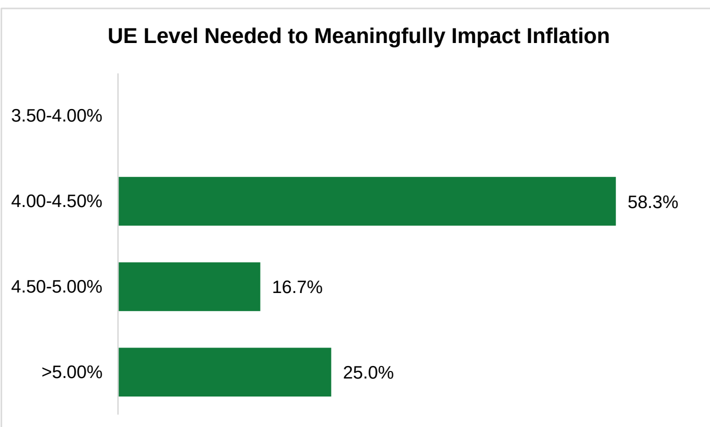


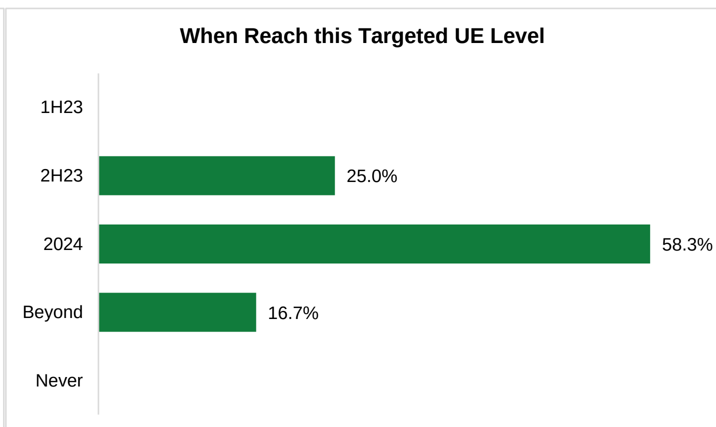
Full Question: Do you believe we are (still) in a wage-price spiral?
Full Question: With wages +4.4% in April, versus +5.7% a year ago, have we reached a peak in wage pressures?

[8] Price increases as a result of higher wages – when workers receive a wage hike, they demand more goods and services. This, in turn, causes prices to rise. The wage increase then increases business expenses that are passed on to the consumer through higher prices. This creates a perpetual loop of consistent price increases.

- While wage growth averaged +5.3% per month in 2022, year-to-date through May the trend is down to +4.4%. As such, 70.0% of respondents expect growth to return to the historical +3.0% level (three-year pre-COVID average) by 2024
- 50.0% of respondents believe the U3 unemployment rate needs to increase to 4.0-4.5% to meaningfully impact inflation
- 58.3% of respondents expect to reach this U3 target rate by 2024





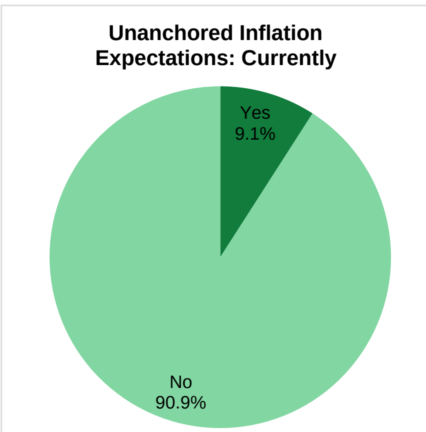


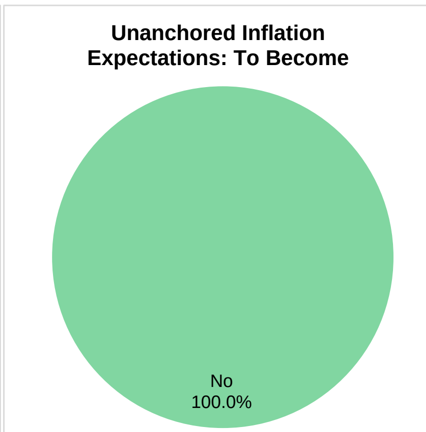
Full Question: While wage growth averaged +5.3% per month in 2022, year-to-date through March the trend is down to +4.4%. When do you expect the acceleration to slow closer to the historical +3.0% level (three-year pre-COVID average)?
Full Question: While we can debate whether or not the U3 unemployment rate accurately accounts for the level of unemployed, many have stated that the Fed will need to push up this rate to aid its inflation fight. At 3.5% in March – up from 3.4% in January but down from 3.6% in February – what level do we need to reach to meaningfully impact inflation?
Full Question: Based on your answer above, when do you believe we can reach this targeted U3 unemployment rate?

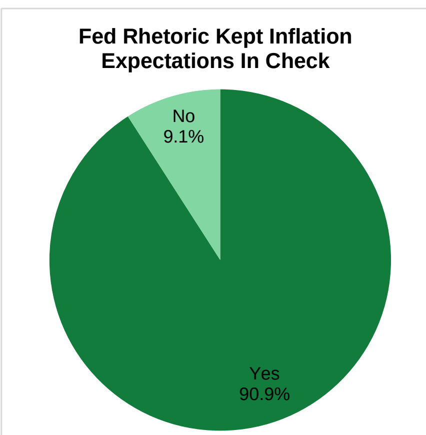
Next, we move on to address inflation expectations, an important factor driving the inflation rate. With rising inflation, if consumers believe prices will rise again in the future, this can create a self-fulfilling prophecy. Expected higher prices push employees to demand wage increases and consumers to not delay today's purchases. At the same time, businesses increase prices to accommodate higher wages and consumer demand. This further drives up inflation.

As such, we asked our Economist Roundtable about their thoughts on inflation expectations.

- 90.9% of respondents believe inflation expectations are not currently unanchored
- All of respondents expect inflation expectations will not become unanchored
- Unlike in the 1970s, 90.9% of respondents believe the Fed's strong rhetoric has kept inflation expectations in check



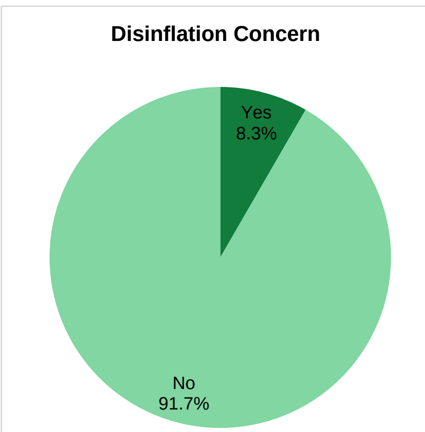


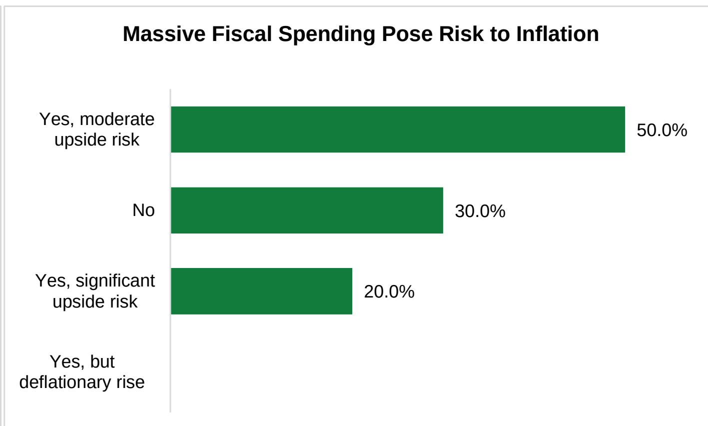


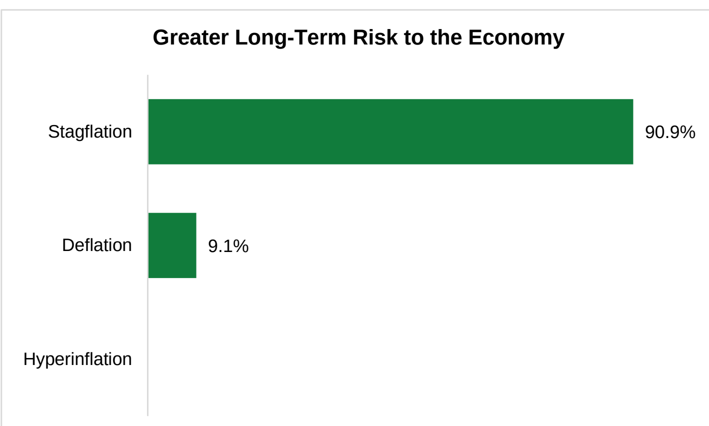
Full Question: Rising inflation can become a self-fulfilling prophecy by boosting inflation expectations. Are inflation expectations unanchored?
Full Question: Do you believe inflation expectations will become unanchored?
Full Question: Do you believe, unlike in the 1970s, the Fed's strong rhetoric has kept inflation expectations in check?

Finally, we close out the inflation section by looking to the future.

- 91.7% of respondents do not see any concern of disinflation at this point in time
- 50.0% of respondents view the massive expansion of the government's balance (>$7 trillion in fiscal spending) does pose a risk to inflation in terms of a moderate upside risk
- 90.9% of respondents believe the greater long-term risk to the economy is stagflation





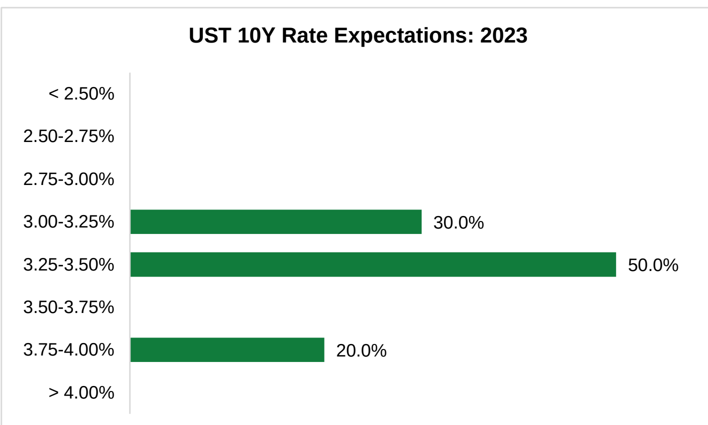


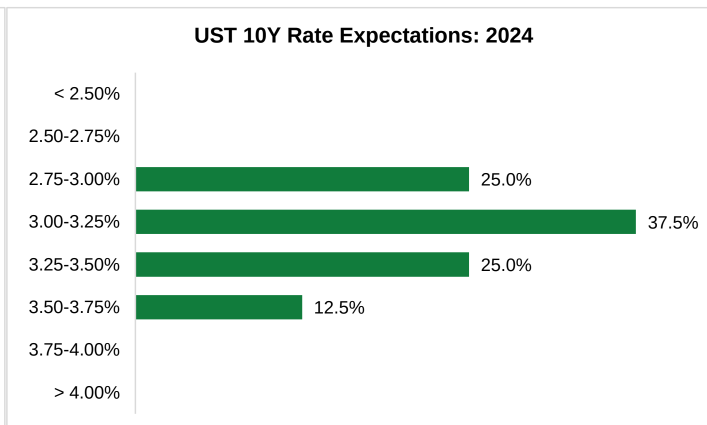
Full Question: Is there any concern of disinflation at this point in time?
Full Question: Does the massive expansion of the government's balance sheet given over $7 trillion in fiscal spending pose a risk to inflation?
Full Question: What is the greater long-term risk to the economy?

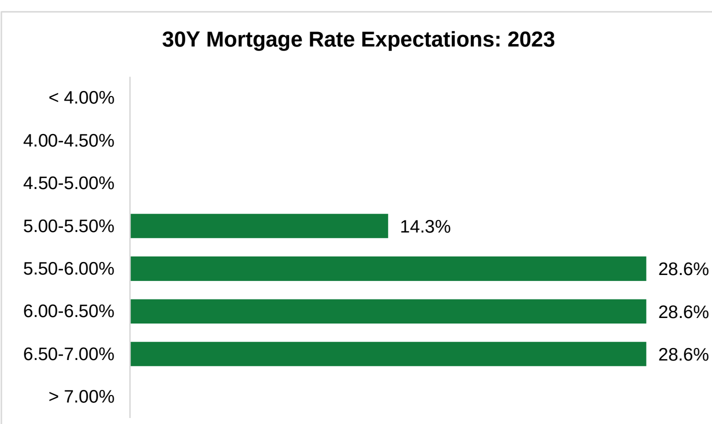
Rate Estimates, Yield Curves, and Spreads

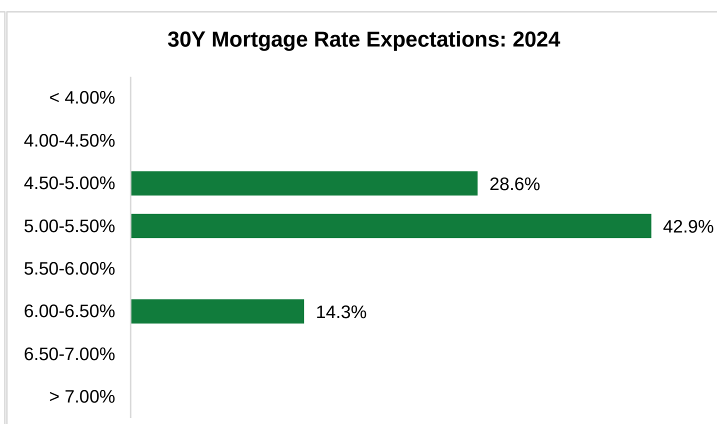
Putting together all of the above, in this section we gauge our Economist Roundtable's expectations on Treasury yields, mortgage rates, yield curves and spreads. At the time of the survey, the ten year Treasury was 3.6738%. The thirty-year mortgage rate was 7.04%. Based on these figures, we polled our economists on their expectations for rates by the end of this year and next.

- 50.0% of respondents expect the 10Y UST yield to end 2023 at 3.25-3.50%
- 37.5% of respondents expect the 10Y UST yield to end 2024 at 3.00-3.25%
- 28.6% of respondents each expect the 30Y mortgage rate to end 2023 at 5.5-6.0%, 6.0-6.5% or 6.5-7.0%
- 42.9% of respondents expect the 30Y mortgage rate to end 2024 at 5.0-5.5%
- Overall rates expectations
    - Fed Funds = 2Q23 5.125%, 3Q23 5.125%, 4Q23 5.125%, 1Q24 4.875%, 2Q24 4.410%
    - 2-Year UST = 2Q23 4.25%, 3Q23 4.10%, 4Q23 3.85%, 1Q24 3.74%, 2Q24 3.57%
    - 10-Year UST = 2Q23 3.60%, 3Q23 3.50%, 4Q23 3.39%, 1Q24 3.34%, 2Q24 3.29%
    - 30-Year Mortgage = 2Q23 6.30%, 3Q23 6.14%, 4Q23 6.00%, 1Q24 5.5.77%, 2Q24 5.66%

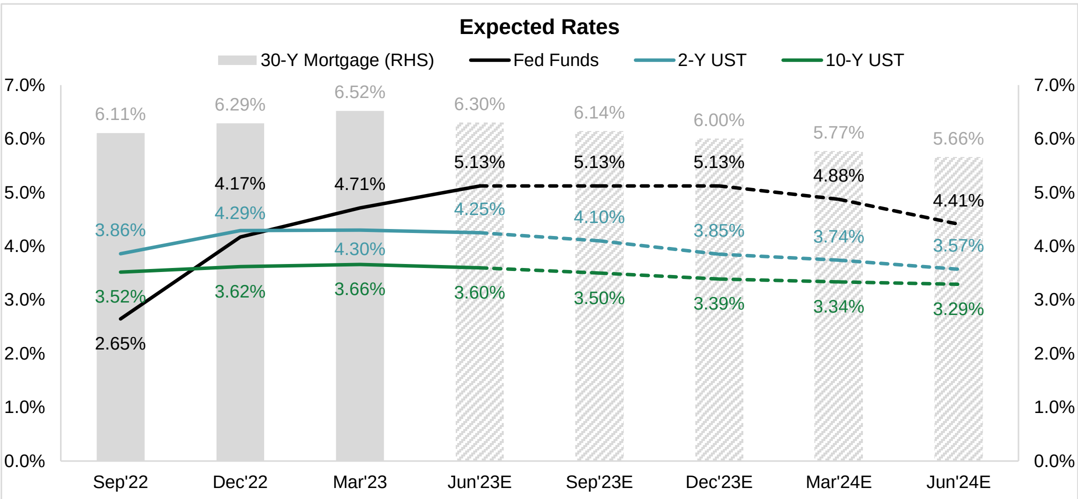


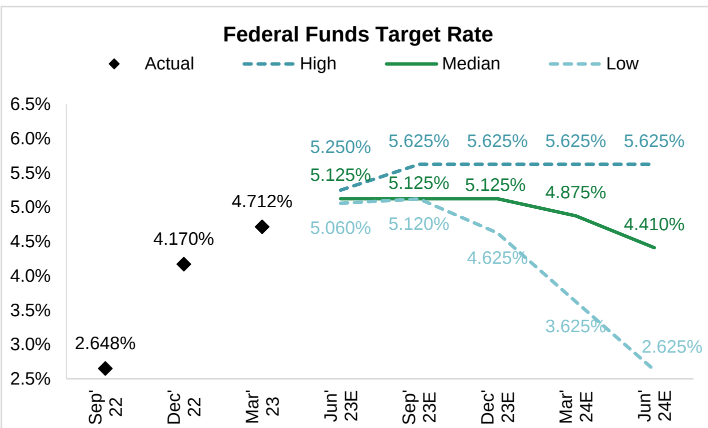


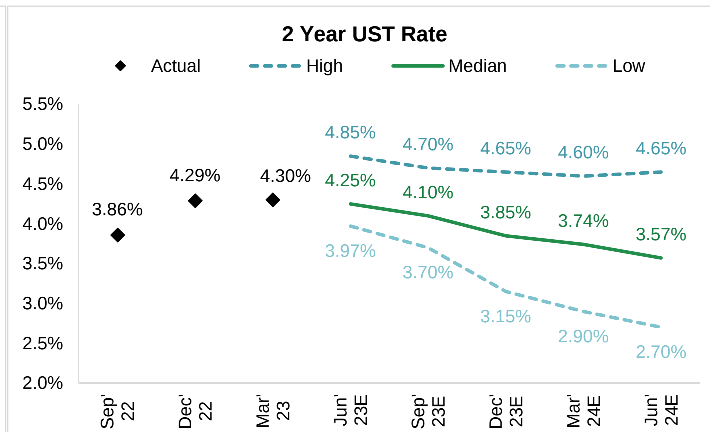


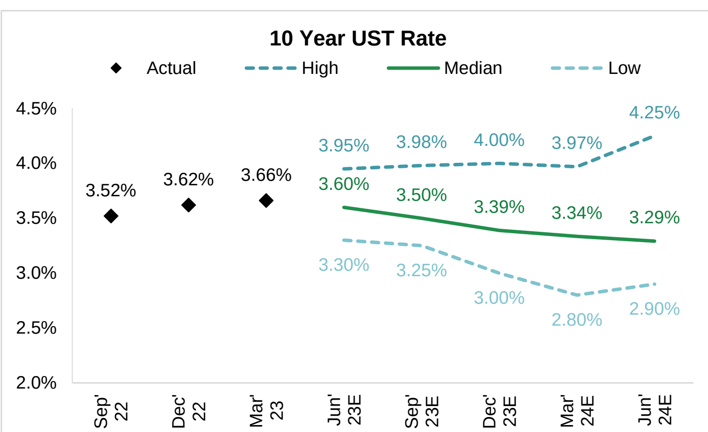


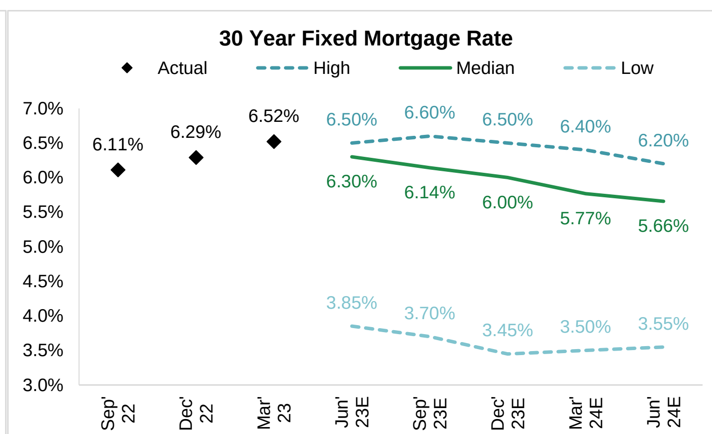
Full Question: At the writing of this report, the ten year was just over 4%, where do you expect it to end: 2023/2024
Full Question: At the writing of this report, the thirty-year mortgage rate was just over 7%, where do you expect it to end: 2023/2024







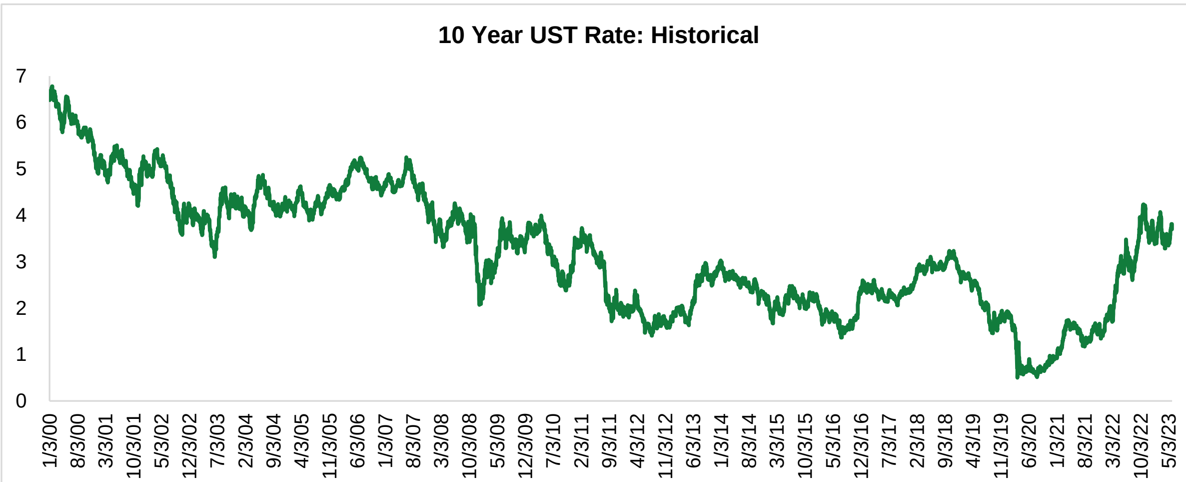


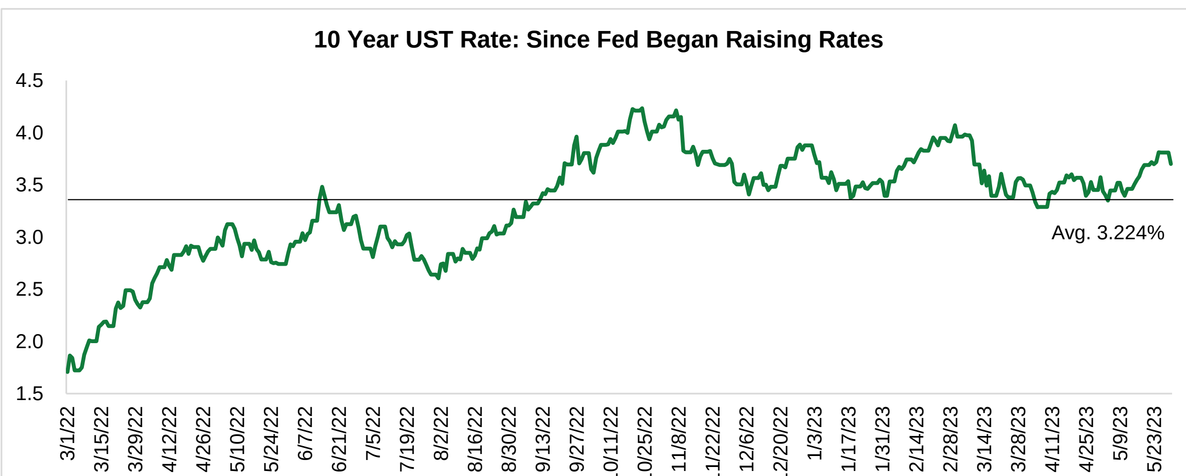


Source: Federal Reserve, Bloomberg, SIFMA Economist Roundtable
Note: Monthly averages. Fed funds = midpoint of target rate range

Historical Rates: 10 Year UST and 30 Year Mortgage

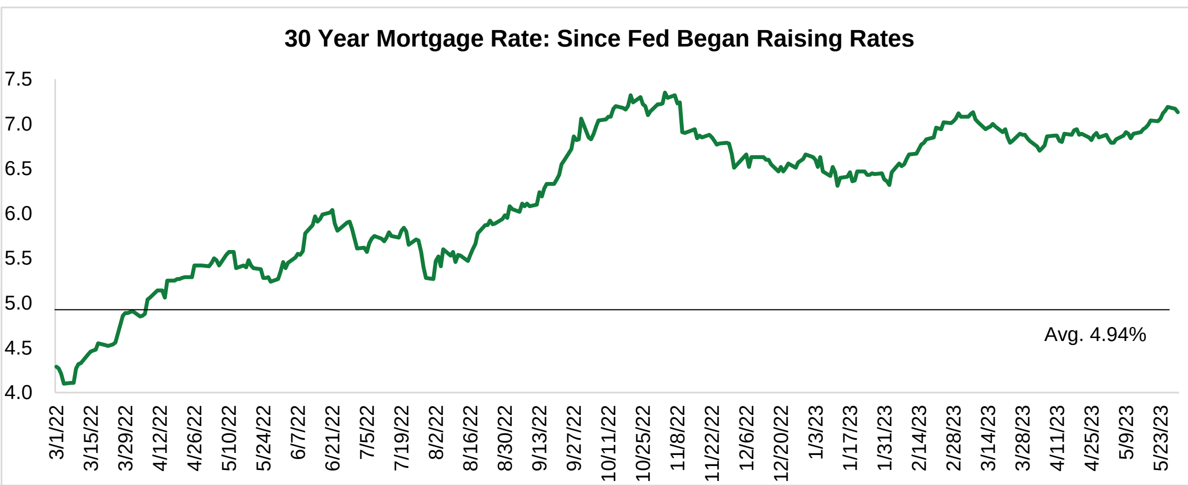
10-Year UST Rate





Source: US Treasury, SIFMA Economist Roundtable

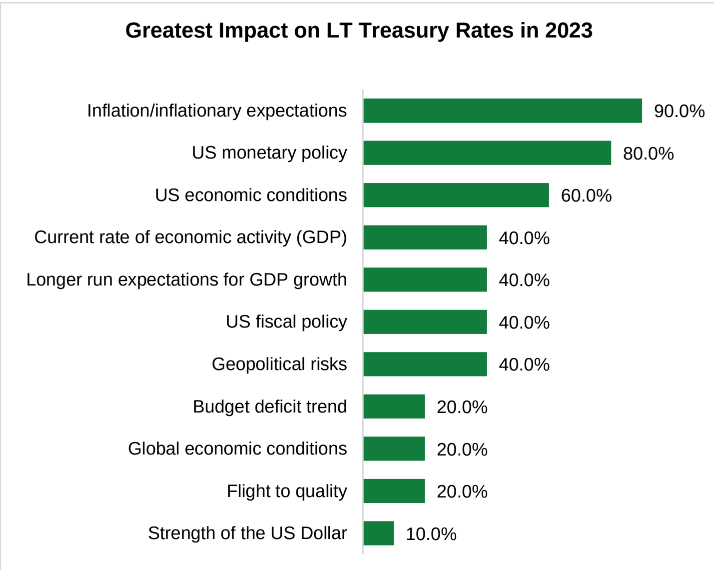
30-Year Mortgage Rate



Source: Bloomberg, SIFMA Economist Roundtable

Then, we asked our Economist Roundtable to explain the factors that have the greatest impact on their expectations for long-term Treasury yields in 2023.

- Inflation/inflation expectations, 90.0%
- U.S. monetary policy, 80.0%
- U.S. economic conditions, 60.0%



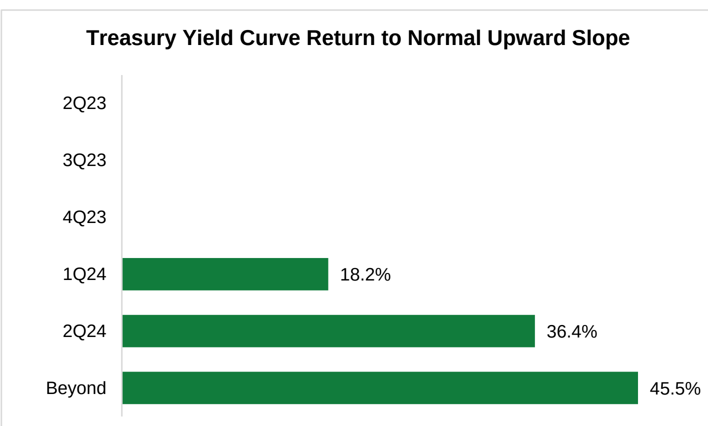
Full Question: Which of the following will have the greatest impact on long-term Treasury yields in 2023? (Ranked by percentage of economists that listed a factor)

Yield Curves: Economic Indicators

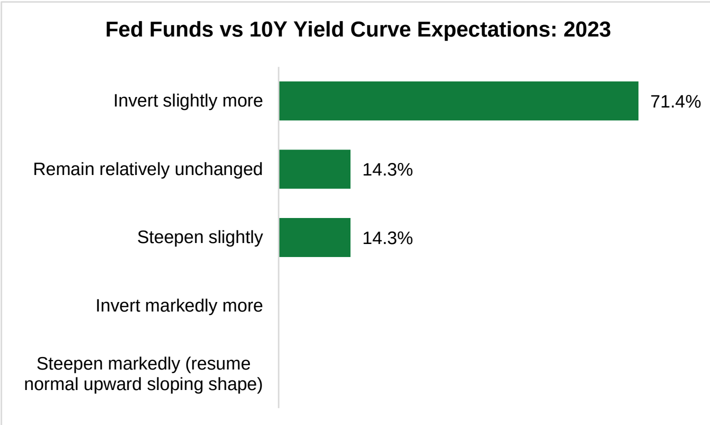
Yield curves can act as good economic indicators – in particular, historically, they have been predictors of economic weakness or recessions. A normal yield curve slopes up and to the right as yields increase with maturity, indicating that the economy is healthy and functioning normally. A steep yield curve looks like a normal upward sloping yield curve but with a steeper slope, suggesting better market conditions are expected to prevail over the longer term. When the rates for short-term maturities are higher than those for longer-term maturities – the curve slopes down and to the right instead of up – an inverted yield curve exists, indicating market dysfunction and a rising likelihood of recession.

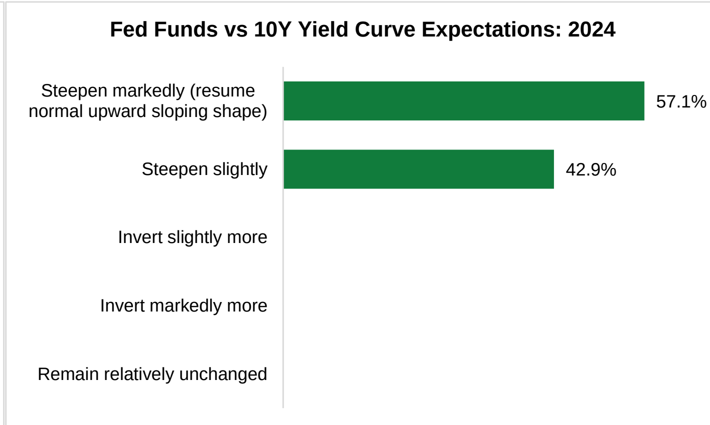
We asked our Economist Roundtable for their expectations for yield curves. Respondents expect the following movements in key rates:

- 45.5% of respondents don't expect the Treasury yield curve to return to a normal upward sloping curve until beyond 2024
- As to how the Fed Funds Rate vs.10-year Treasury yield curve will change in 2023, 71.4% of respondents believe it will invert slightly more
- As to how the Fed Funds Rate vs.10-year Treasury yield curve will change in 2024, 57.1% of respondents believe it will steepen markedly (resume normal upward sloping shape)



Full Question: In general, when do you expect the Treasury yield curve to return to a normal upward sloping curve?

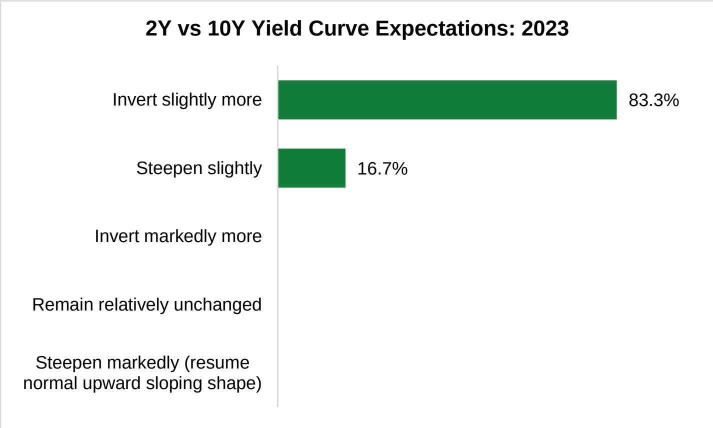


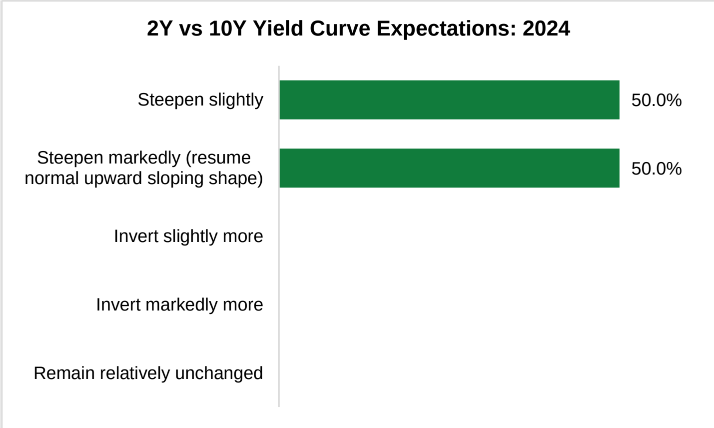


Full Question: As the Fed pushes forward, how do you expect the Fed Funds Rate vs.10-year Treasury yield curve to change in: 2023/2024?

Historically a predictor of recession, the 2-year Treasury versus 10-year Treasury (2s/10s) curve has been inverted since July 2022. As such, we asked our Economist Roundtable for their expectations on how it will change.

- For 2023, 83.3% of respondents believe it will invert slightly more
- For 2024, 50.0% of respondents each believe it will steepen slightly or steepen markedly (resume a normal upward sloping shape)

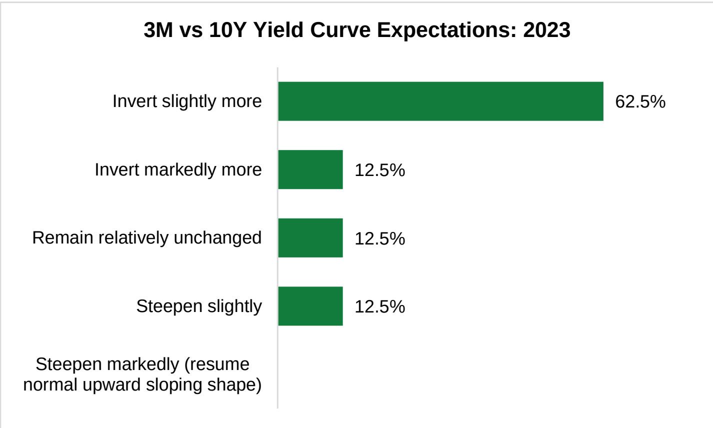


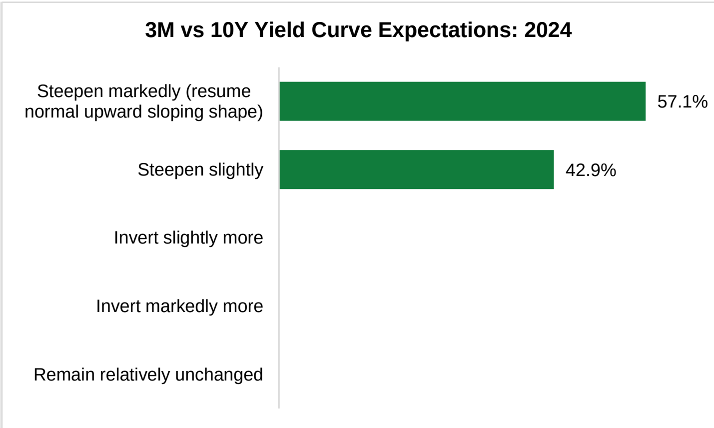


Full Question: Historically a predictor of recession, the 2-year Treasury vs.10-year Treasury curve has been inverted since July 2022. How do you expect the 2s/10s curve to change in: 2023/2024?

After showing signs of inversion in late October 2022, we asked our economists for their expectations on how the 3-month T-bill versus 10-year Treasury yield curve will change.

- For 2023, 62.5% of respondents believe it will invert slightly more
- For 2023, 57.1% of respondents believe it will invert markedly more (resume normal upward sloping shape)



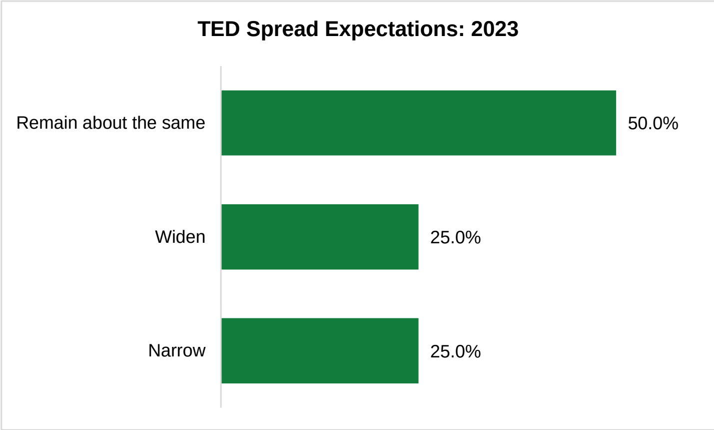


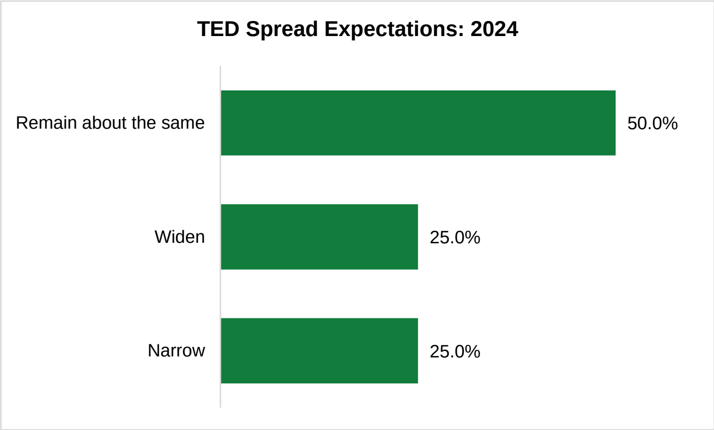
Full Question: After showing signs of inversion in late October, how do you expect the 3-month T-bill vs.10-year Treasury yield curve to change in: 2023/2024?

Yield spreads can be used as key metrics to estimate valuations for fixed income assets. When yield spreads expand or contract, it can signal changes in the underlying economy or financial markets. Fixed income investors use the following three spreads (and others) to triangulate the right prices to pay for different assets. This becomes particularly useful in markets where there is a lot of volatility, such as today.

We asked our Economist Roundtable for their expectations on how these spreads will change.

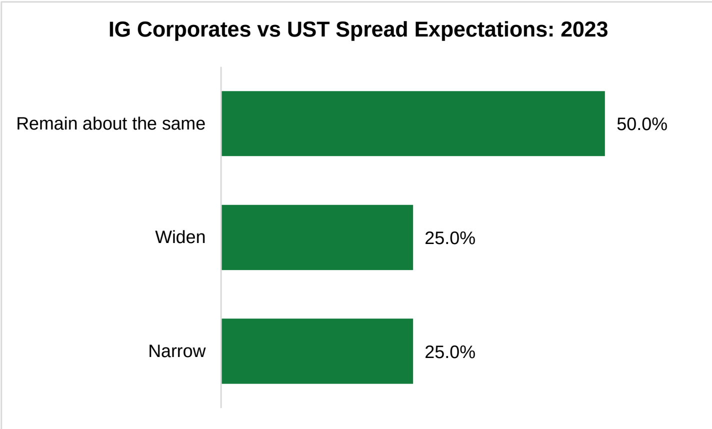
- TED spread (T-bill to Eurodollar)
    - For 2023, 50.0% of respondents believe it will remain about the same
    - For 2024, 50.0% of respondents believe it will remain about the same

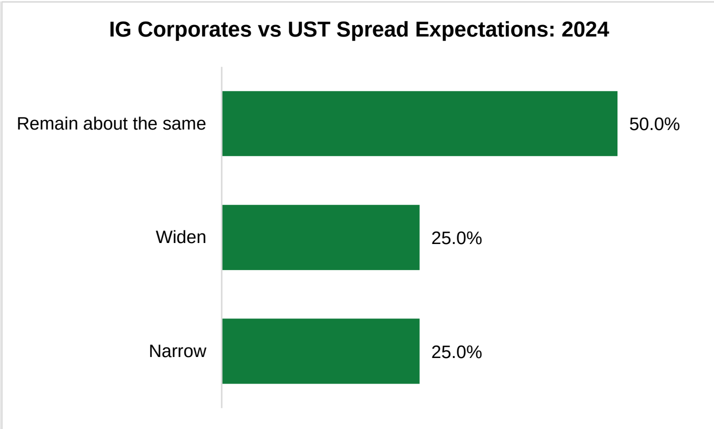


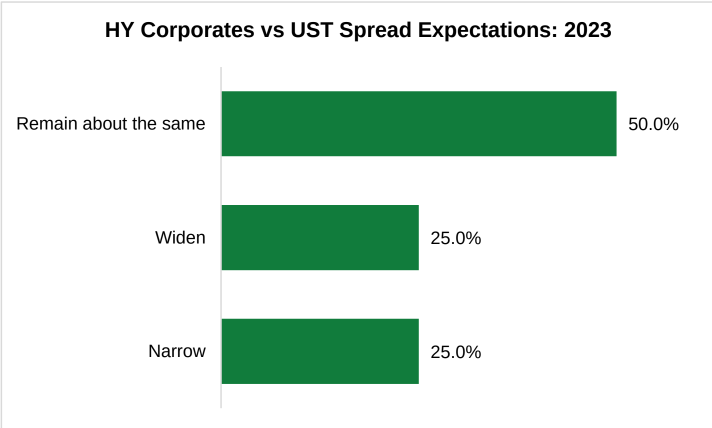


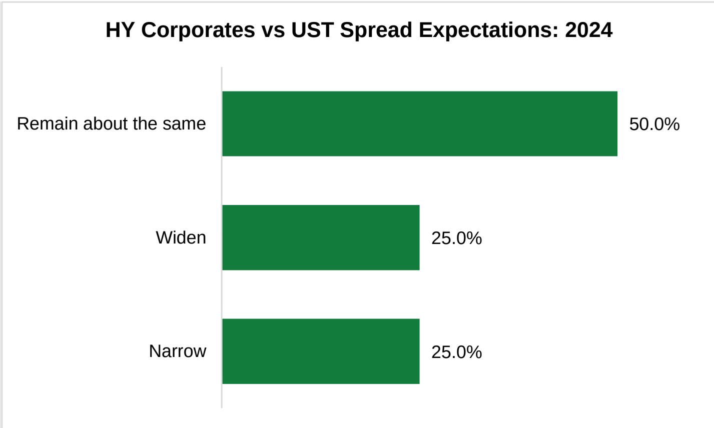
Full Question: How do you expect the TED spread (T-bill to Eurodollar) to change in: 2023/2024

- Investment grade corporates to Treasury spread
  - For 2023, 50.0% of respondents believe it will remain about the same
  - For 2024, 50.0% of respondents believe it will remain about the same
- High yield corporates to Treasury spread
  - For 2023, 50.0% of respondents believe it will remain about the same
  - For 2024, 50.0% of respondents believe it will remain about the same









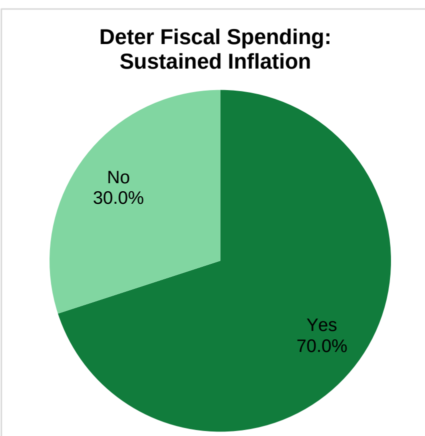
Full Question: How do you expect the investment grade corporates to Treasury spread to change in: 2023/2024?
Full Question: How do you expect the high yield corporates to Treasury spread to change in: 2023/2024?

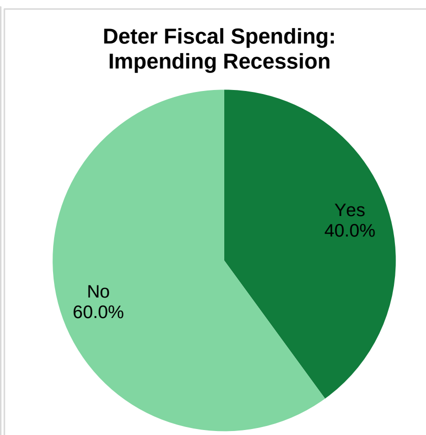
Macro Policy

Fiscal Stimulus

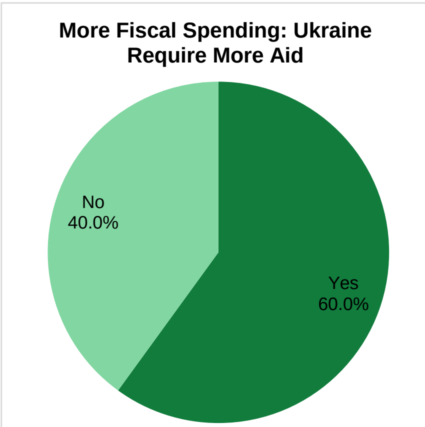
With over $7 trillion in fiscal spending since the spring of 2020 – and what appears to be an appetite to continue spending – questions and concerns remain around the impact on inflation and the ever growing government debt burden, now $31 trillion (particularly concerning with the rise in interest rates, which increases interest payments due on this debt). We asked our Economist Roundtable about the impact of fiscal (over)spending and the role the country's financial position should play in making spending decisions. We also asked the group about potential lingering impacts from the debt ceiling debate.

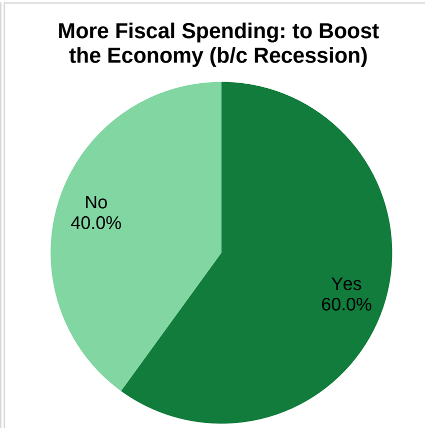
- 70.0% of respondents believe sustained higher inflation should deter further fiscal spending
- 60.0% of respondents believe the (potentially) impending recession should not deter further fiscal spending
- 60.0% of respondents believe the Russia/Ukraine conflict will cause further international aid and therefore more U.S. fiscal spending
- 60.0% of respondents believe the government does want to spend more to boost the economy, given the (potentially) impending recession





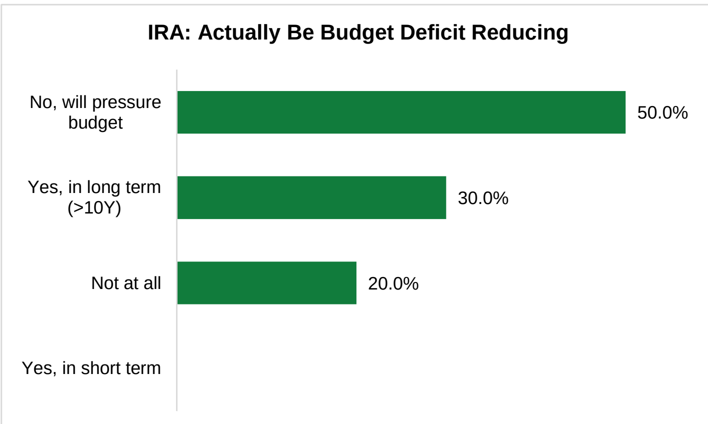
Full Question: Do you believe sustained higher inflation should deter further fiscal spending packages?
Full Question: Do you believe the (potentially) impending recession should deter further fiscal spending packages?

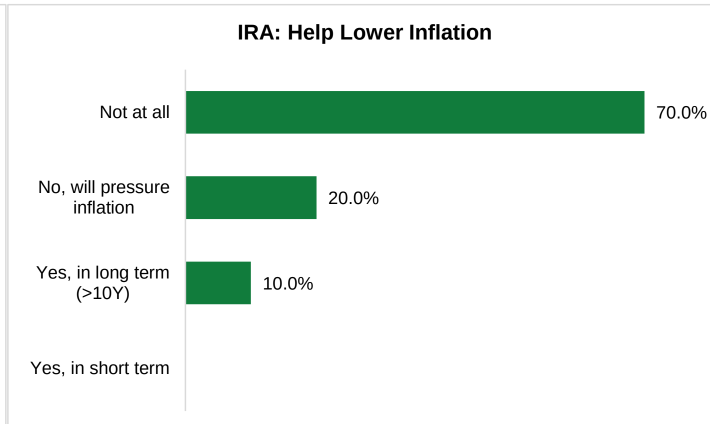


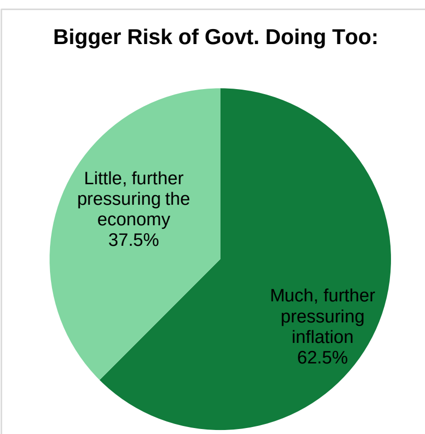


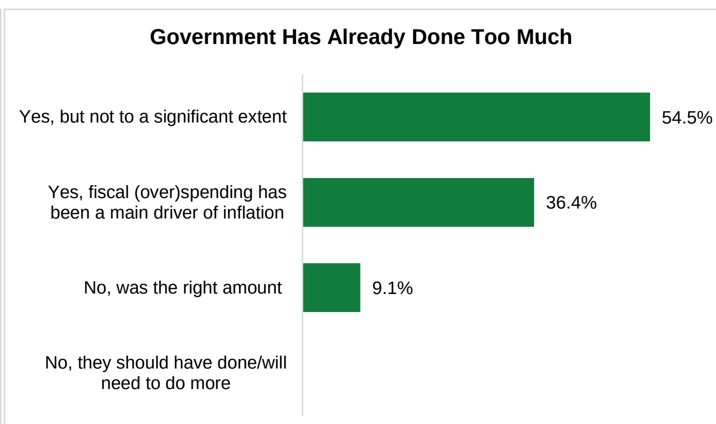
Full Question: Do you believe the Russia/Ukraine conflict will cause further international aid and therefore more U.S. fiscal spending?
Full Question: Or will the government want to spend more to boost the economy, given the (potentially) impending recession?

- 50.0% of respondents believe the so-called Inflation Reduction Act (IRA) will not be budget deficit reducing but will pressure budget
- 70.0% of respondents believe the IRA will not help lower inflation at all (in the short term or long run)
- 62.5% of respondents view the bigger risk to the economy is the government doing too much, therefore further pressuring inflation
- 54.5% of respondents believe the government has already done too much, but not to a significant extent



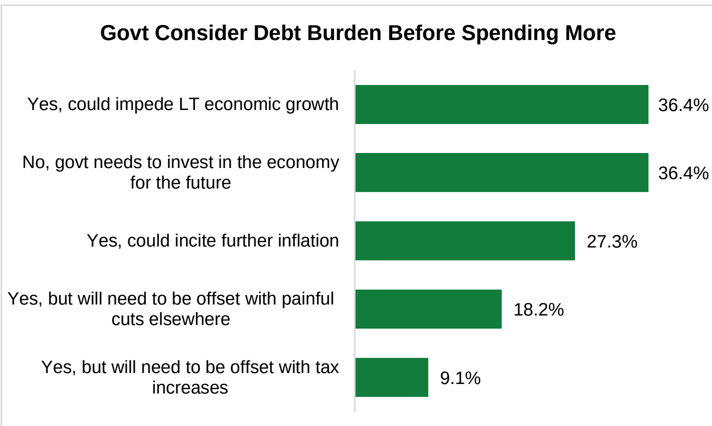


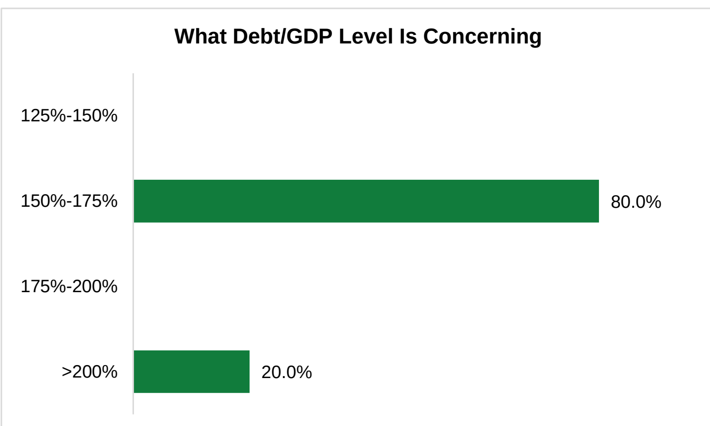


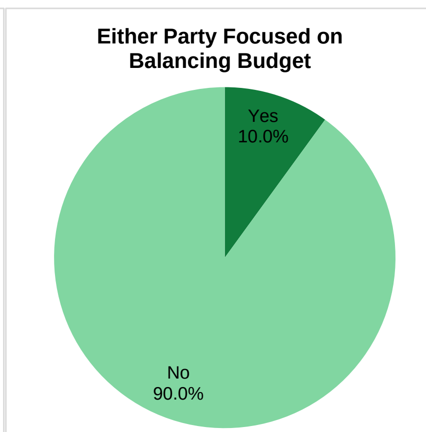


Full Question: Do you believe the so-called Inflation Reduction Act (IRA) will actually be budget deficit reducing?
Full Question: Do you believe the IRA will help lower inflation?
Full Question: What do you view is the bigger risk? The government does:
Full Question: Do you believe the government has already done too much? (fiscal spending: ~$6T directly and loosely related to COVID, ~$1T infrastructure package, "only" $53B CHIPS act)

- When considering additional stimulus, 36.4% of respondents each indicated the government should consider the debt level as it could impede long-term growth while another 36% indicate government should not consider the debt level as it needs to invest in the economy for the (Debt/GDP ratio 121.1% for 2022)
- 80.0% of respondents believe a Debt/GDP level of 150%-175% would be concerning
- 90.0% of respondents do not believe either party is focused on reinstating a balanced budget

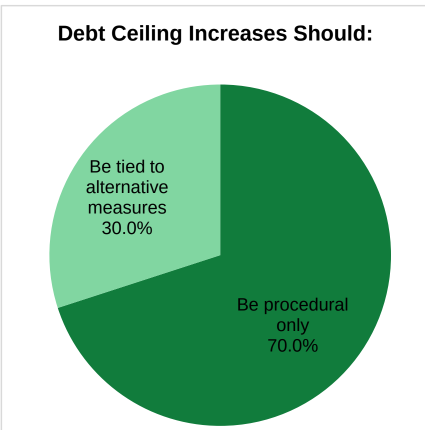


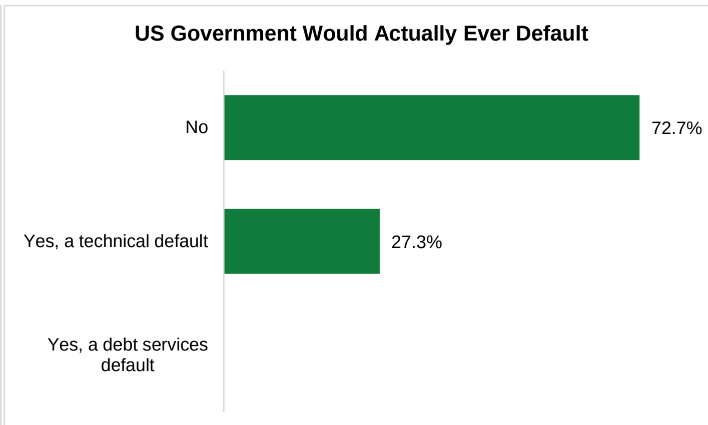


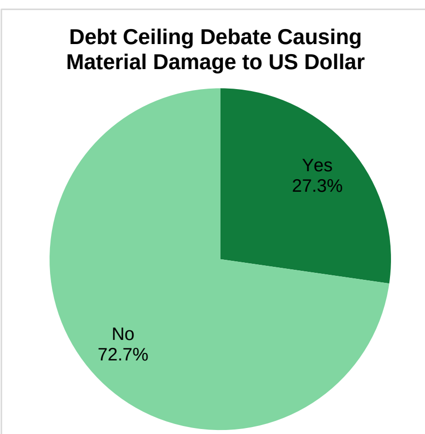


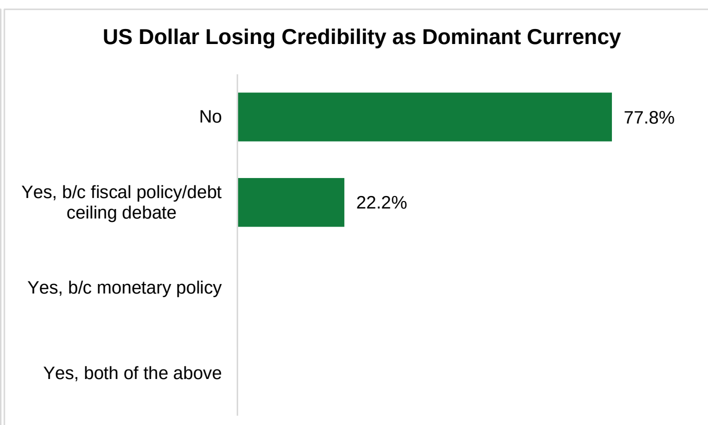
Full Question: With the debt/GDP ratio already above 100% (120.2% as of 4Q22, source: FRED), should the government be considering the debt burden when proposing additional spending?
Full Question: If you responded no above, what level of debt to GDP is concerning?
Full Question: Do you believe either party is focused on reinstating a balanced budget?

- 70.0% of respondents believe debt ceiling increases should be procedural only
- 72.7% of respondents believe the U.S. government would <u>not</u> actually default
- 72.7% of respondents believe the debt ceiling debate is <u>not</u> doing material damage to the global perception of the US Dollar (USD)
- With a movement to dethrone the USD, including Yuan denominated purchase of natural gas and regional trade agreements in local currencies, 77.8% of respondents believe the USD is <u>not</u> losing credibility as the dominant currency





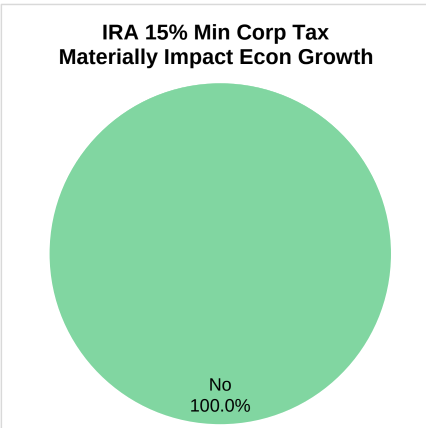




Full Question: Should debt ceiling increases be procedural or tied to alternative measures/requirements?
Full Question: Do you believe the US government would actually ever default?
Full Question: Is the debt ceiling debate doing material damage to the global perception of the USD?
Full Question: With a movement to dethrone the US Dollar(USD) including Yuan denominated purchase of natural gas and regional trade agreements in local currencies, what is the impact on the strength of the USD?

Tax Policy

We asked our Economist Roundtable about the potential impacts of the Inflation Reduction Act (IRA). All of respondents believe the IRA will not have a material impact on economic growth.

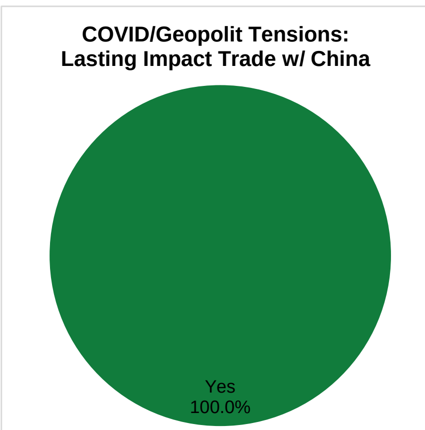


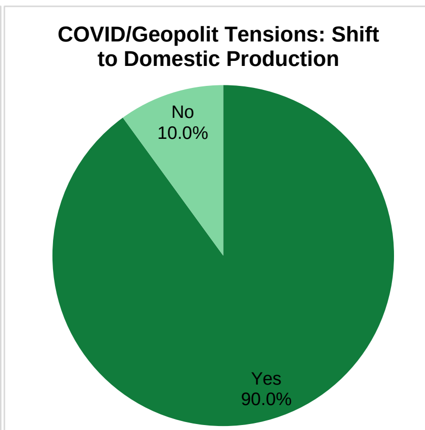
Full Question: The Inflation Reduction Act included a 15% corporate minimum tax rate. Do you believe this will have a material impact on economic growth?

Trade Policy

We asked our Economist Roundtable about the impact of geopolitical tensions and past COVID policies as it relates to future U.S.-China trade relations.

- When asked if geopolitical tensions and memories of China's COVID policies will have a lasting impact on trade relations with China, 100.0% responded yes
- In light of this, 90.0% of respondents expect a meaningful shift to domestic production, thereby reducing U.S. reliance on overseas production





Full Question: Will geopolitical tensions and memories of its COVID policies have a lasting impact on trade relations with China?
Full Question: Will geopolitical tensions and memories of China's COVID policies cause a meaningful shift to domestic production, reducing the country's reliance on overseas production in terms of a replacement scenario not a nominal increase?

SIFMA Economist Roundtable Forecasts

Economic Indicators – Annual

(%, unless indicated)	2020	2021	2022	2023E	2024E
Real GDP (4Q/4Q)	-1.5	5.7	0.9	0.5	1.7
Real Personal Consumption (4Q/4Q)	-1.4	7.2	1.7	1.3	1.5
Nonresidential Fixed Investment (4Q/4Q)	-3.5	5.0	4.5	-0.5	1.4
Residential Fixed Investment (4Q/4Q)	16.4	-0.3	-18.8	-2.3	2.8
Real Federal Government Spending (4Q/4Q)	5.4	0.4	0.1	2.1	0.9
Real State and Local Government Spending (4Q/4Q)	-1.6	0.6	1.3	1.8	1.0
Non-Farm Payroll Employment (K, avg. monthly change)	-774.1	605.6	399.4	110.0	64.0
Unemployment Rate (4Q average)	6.8	4.2	3.6	4.1	4.4
Labor Force Participation Rate (4Q average)	61.6	61.9	62.2	62.7	62.7
Average Hourly earnings (4Q/4Q)	4.9	5.3	4.9	4.0	3.7
Real Disposable Income (4Q/4Q)	3.7	-0.4	-1.9	3.0	2.3
Personal Savings Rate (annual average)	16.8	11.9	3.5	4.8	5.7
CPI (4Q/4Q)	1.2	6.8	7.1	3.0	2.2
Core CPI (4Q/4Q)	1.6	5.0	6.0	3.8	2.6
PCE deflator (4Q/4Q)	1.2	5.7	5.7	3.1	2.2
Core PCE deflator (4Q/4Q)	1.4	4.7	4.8	3.5	2.3
Industrial Production Index (annual % change)	-7.2	4.4	3.4	-0.5	0.2
Housing Starts (K, annual average)	1,397	1,606	1,551	1,300	1,364
S&P Corelogic Case-Shiller Home Prices (Y/Y)	6.1	17.1	14.8	-3.6	-2.3
New Home Sales (K, annual average)	833	769	637	619.0	645.0
Motor Vehicle Sales (M, annual average)	14.4	14.9	13.7	15.2	15.9
Federal Budget ($B, FY)	-3,132	-2,776	-1,375	-1,520	-1,504
Current Account Deficit ($B)	-619.7	-846.4	-943.8	-858.3	-925.0

Economic Indicators – Quarterly

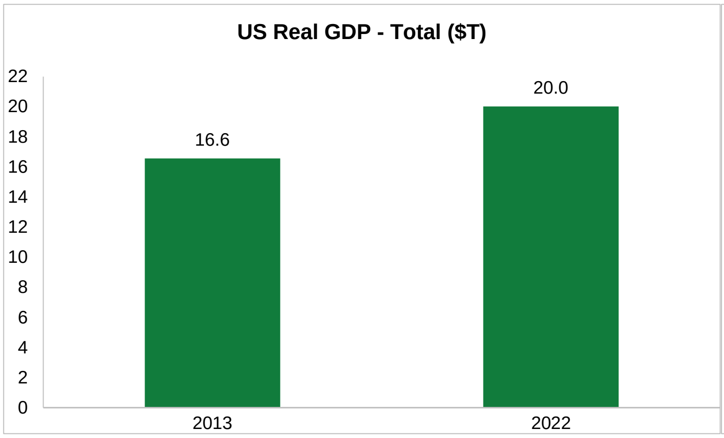
(%)	3Q22	4Q22	1Q23	2Q23E	3Q23E	4Q23E	1Q24E	2Q24E
Real GDP (Q/Q, annualized)	3.2	2.6	1.3	1.6	0.3	-0.8	1.0	1.7
Real Personal Consumption (Q/Q, annualized)	2.3	1.0	3.8	1.2	0.5	-0.1	1.2	1.7
Nonresidential Fixed Investment (Q/Q, annualized)	6.2	4.0	1.4	0.5	-1.6	-2.2	1.0	1.6
Residential Fixed Investment (Q/Q, annualized)	-27.1	-25.1	-5.4	-3.5	-2.8	1.0	1.5	2.4
Unemployment Rate	3.6	3.6	3.5	3.5	3.7	4.1	4.6	4.6
CPI (Y/Y)	8.3	7.1	5.8	4.1	3.3	3.0	2.7	2.5
Core CPI (Y/Y)	6.3	6.0	5.6	5.2	4.5	3.8	3.2	2.8
PCE Deflator (Y/Y)	6.3	5.7	4.9	3.8	3.4	3.2	2.8	2.5
Core PCE Deflator (Y/Y)	4.9	4.8	4.7	4.4	4.0	3.6	2.9	2.7

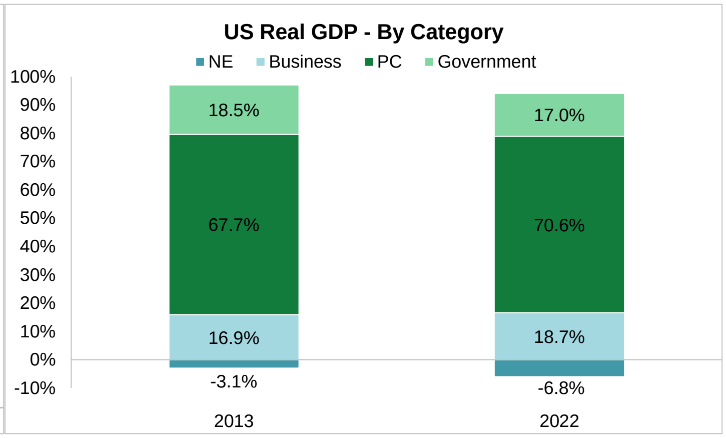
Interest Rates

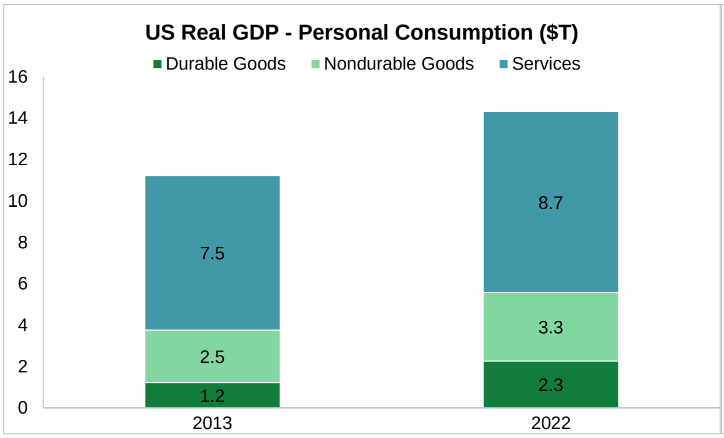
(%, monthly averages)	Sep'22	Dec'22	Mar'23	Jun'23E	Sep'23E	Dec'23E	Mar'24E	Jun'24E
Federal Funds Target Rate (midpoint)	2.648	4.170	4.712	5.125	5.125	5.125	4.875	4.410
2-Year UST Yield	3.86	4.29	4.30	4.25	4.10	3.85	3.74	3.57
10-Year UST Yield	3.52	3.62	3.66	3.60	3.50	3.39	3.34	3.29
30-Year Fixed Mortgage Rate	6.11	6.29	6.52	6.30	6.14	6.00	5.77	5.66

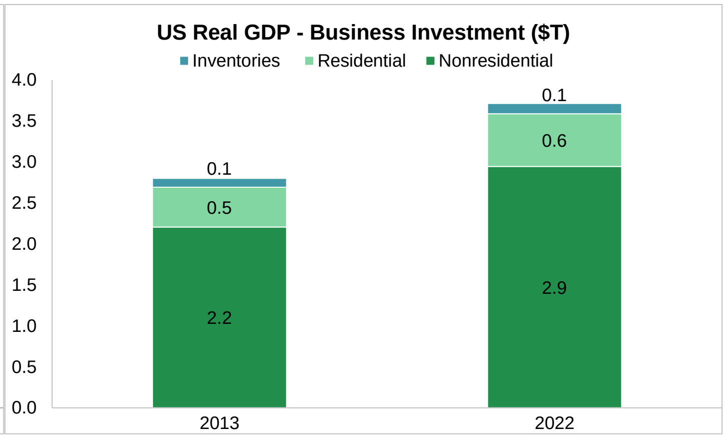
Reference Guide: Economic Landscape

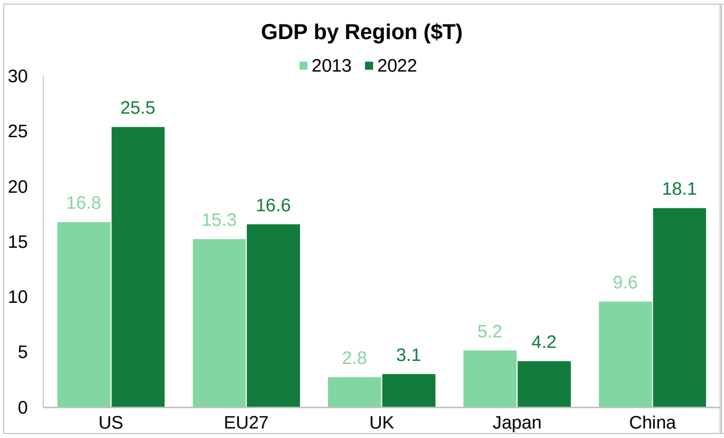
GDP Breakout

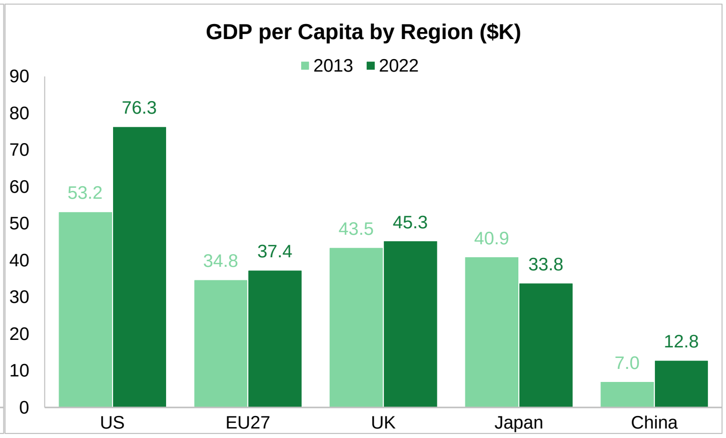




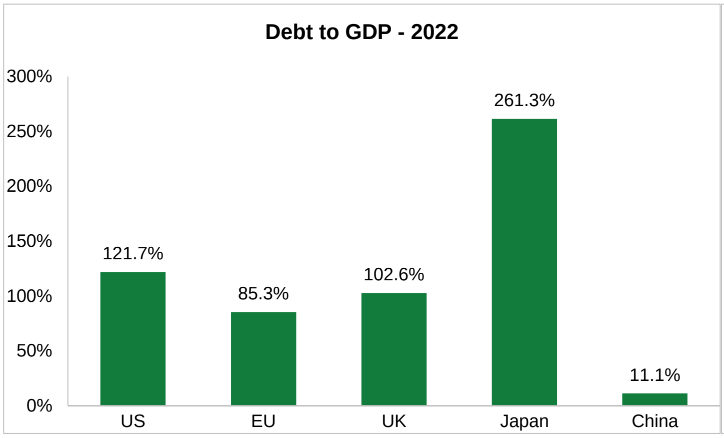


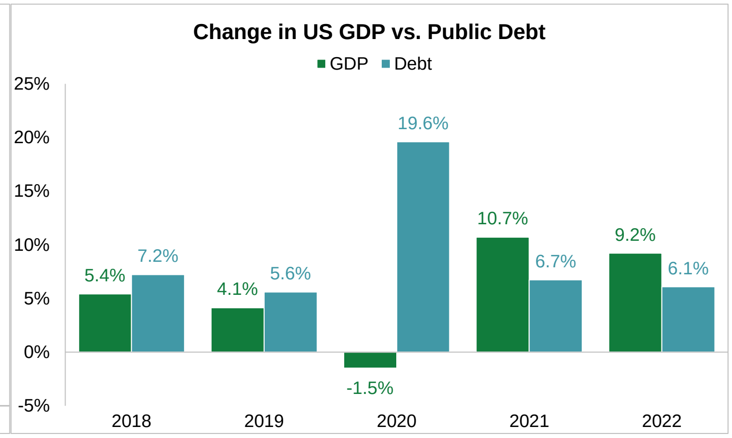


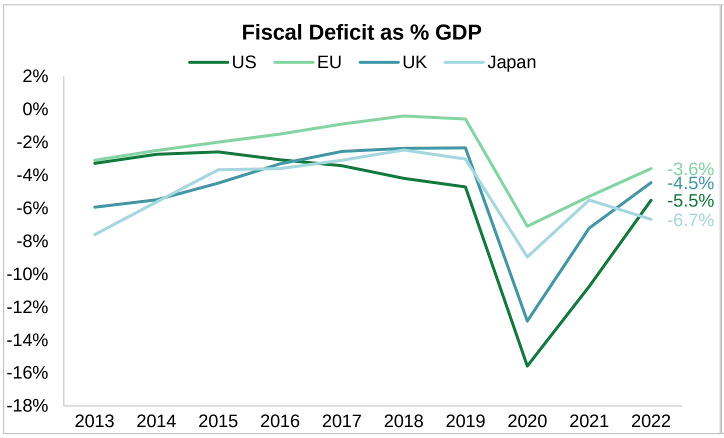


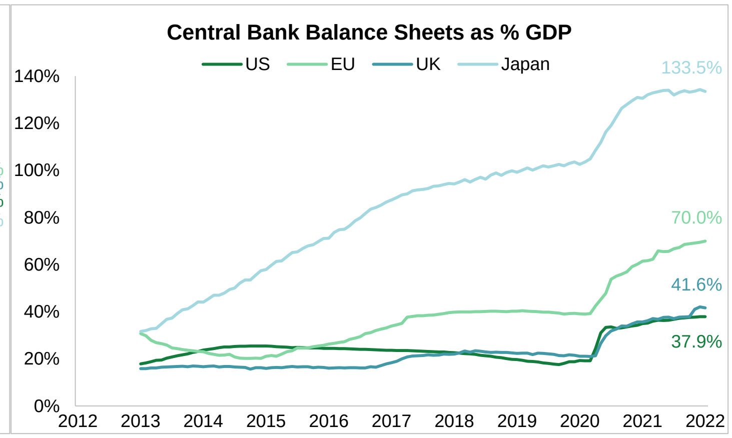


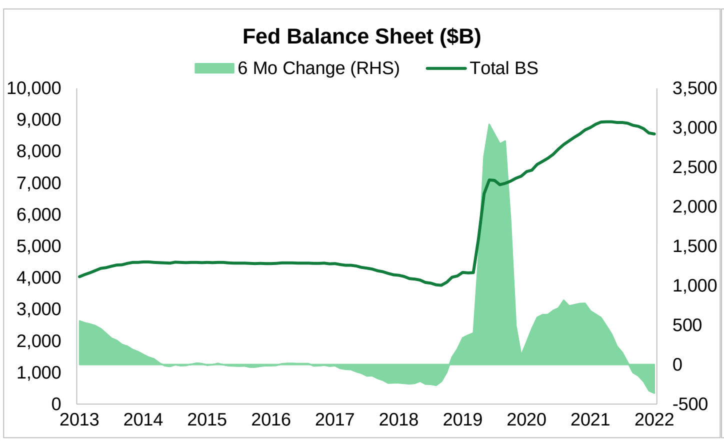
Debt and Fed Balance Sheet

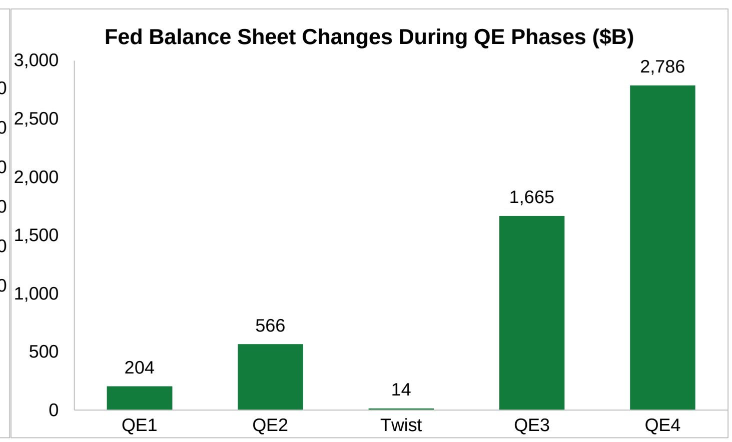




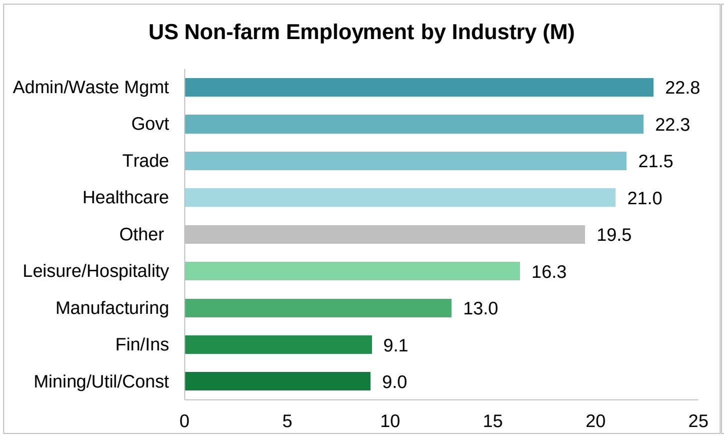


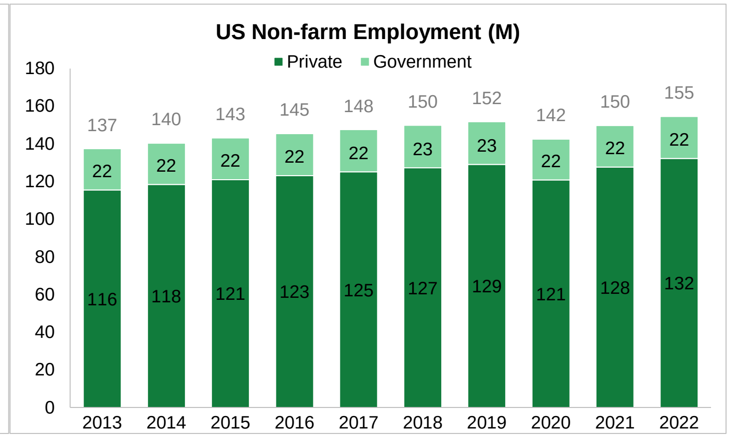


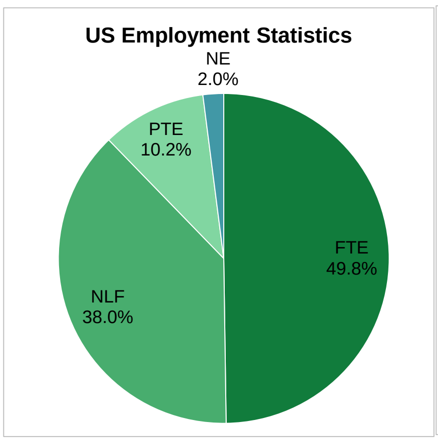


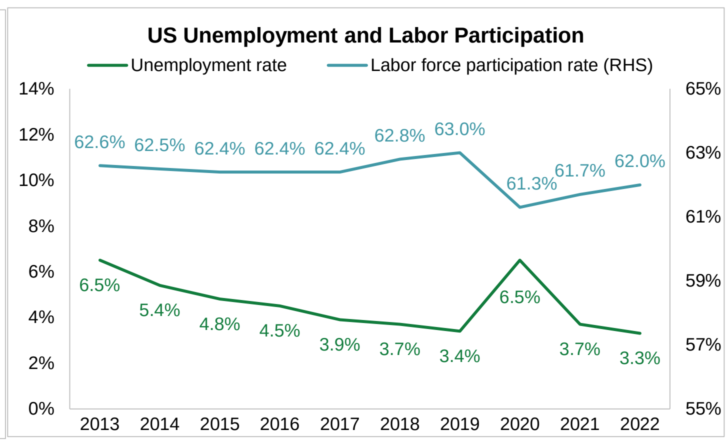


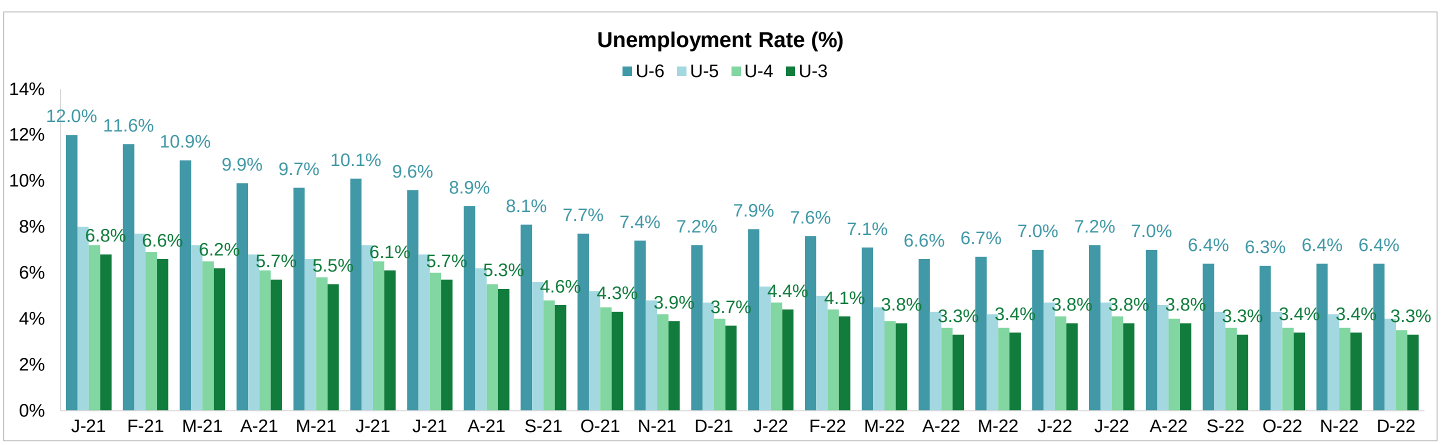
Employment Breakout











Appendix: Terms to Know

- **Statistical analysis**
    - M/M – month-over-month change
    - Q/Q – quarter-over-quarter change
    - Y/Y – year-over-year change
    - Bps – basis points
    - Pps – percentage points

- **Gross Domestic Product (GDP)**: A comprehensive measure of U.S. economic activity, indicating the value of the final goods and services produced without double counting the intermediate goods and services used up to produce them. GDP data are seasonally adjusted to remove the effects of yearly patterns – winter weather, holidays, or factory production schedules – to reflect true patterns in economic activity. The Bureau of Economic Analysis (BEA) releases new statistics every month, as it estimates GDP three times:
    - Advance estimate – This comes out around one month after the quarter's end, an early look based on the best information available at that time
    - Second estimate – Incorporates additional source data that were not available the month before, improving accuracy
    - Third estimate – Incorporates even more source data that were not available the month before, considered the most accurate estimate

- **Federal Funds Rate (Fed Funds)**: The interest rate at which banks and other depository institutions lend money to each other, typically on an overnight basis. An important monetary policy tool is the Fed's open market operations, consisting of buying and selling U.S. Treasury securities on the open market, with the aim of aligning the actual Fed Funds rate with the Federal Open Market Committee's (FOMC) target rate.

- **Unemployment**: The unemployment rate represents the number of unemployed people as a percentage of the labor force, which is the sum of the employed and unemployed: (Unemployed ÷ Labor Force) x 100. According to the Bureau of Labor Statistics Current Population Survey, people are classified as not in the labor force if: (a) they were not employed during the survey reference week; and (b) they had not actively looked for work (or been on temporary layoff) in the last 4 weeks. People not in the labor force are those who do not meet the criteria to be classified as either employed or unemployed as defined above and can be classified into several subgroups: (a) people who want a job now; (b) people marginally attached to the labor force (not in the labor force but currently want a job); and (c) discouraged workers (not actively searched for work in the last four weeks).

- **Inflation**: It is reflected quantitatively by an increase in the average price level of a basket of selected goods and services in an economy and represents the rate of decline of purchasing power of a given currency over some period of time. There are multiple components that go into the inflation equation. Pressure points can be bucketed as: supply side, demand side, and the labor component.
  - Consumer Price Index (CPI) – headline inflation; measures the change in direct expenditures for all urban households for a defined basket of goods and services (three largest components are housing, transportation, and food/beverages)
  - Personal Consumption Expenditures (PCE) – the metric the Fed monitors for monetary policy – measures the change in the prices of goods and services consumed by all households and nonprofit institutions serving households
  - Core CPI or PCE – makes adjustments to remove the source of the noise in the price data, i.e. food and energy, to get a measure of the underlying component of inflation
  - Differences between CPI and PCE include (among others): Basket composition – CPI based on household purchases (includes imports) versus PCE based on what businesses are selling (includes capital goods); calculation methodologies – expenditure weights assigned to categories of basket items (housing a main difference); accounting for basket changes (PCE allows substitution, CPI is always the same basket); CPI covers only out-of-pocket expenditures, PCE includes expenses paid by employers and federal programs; seasonal adjustment differences; PCE includes rural and urban consumers, CPI only urban; PCE includes expenditures from non-profit institutions serving households, CPI households only

Appendix: About the SIFMA Economist Roundtable

The SIFMA Economist Roundtable brings together chief U.S. economists from nearly 30 global and regional financial institutions. SIFMA Research undergoes a semiannual U.S. Economic Survey with this group, analyzing the median economic forecasts of Roundtable members, published prior to the upcoming Federal Open Market Committee (FOMC) meetings in June and December. In those reports, we analyze the Economist Roundtable's expectations for: GDP, unemployment, inflation, interest rates, etc. We also review expectations for policy moves at the upcoming FOMC meeting and discuss key macroeconomic topics and how these factors impact monetary policy.

SIFMA Research also produces Quarterly Flash Polls to update key Economist Roundtable forecasts and select monetary policy questions on the off quarters from the main survey. The latest flash poll can be found here: https://www.sifma.org/wp-content/uploads/2023/04/SIFMA-Economist-Roundtable-Flash-Poll-1Q23.pdf.

This survey was conducted between May 15-26, 2023.

Appendix: SIFMA Economist Roundtable Members

Chair

Lindsey Piegza, Ph.D.
Stifel Financial

Members

Michael Gapen
Bank of America

Marc Giannoni
Barclays Capital

Nathaniel Karp
BBVA Compass

Mickey Levy
Berenberg

Douglas Porter
BMO Financial

Andrew Hollenhorst
Citigroup

Nicholas Van Ness
Credit Agricole

Nannette Hechler-Fayd'herbe
Credit Suisse

Peter Hooper
Deutsche Bank Securities

Christopher Low
FTN Financial

Jan Hatzius
Goldman Sachs

Michael Feroli
J.P. Morgan

Thomas Mills
Jefferies

Mark Zandi
Moody's Analytics

Ellen Zentner
Morgan Stanley

Kevin Cummins
NatWest

Lewis Alexander
Nomura

Carl Tannenbaum
Northern Trust

Augustine Faucher
PNC Financial

Eugenio Alemán
Raymond James

Stephen Gallagher
Société Générale

Jonathan Pingle
UBS Securities

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