SIFMA Research:
2022 End-Year US Economic Survey

Forecasts from the SIFMA Economist Roundtable

December 2022

SIFMA Economist Roundtable

The SIFMA Economist Roundtable brings together Chief U.S. Economists of 27 global and regional financial institutions. This semiannual survey compiles the median economic forecast of Roundtable members, published prior to the upcoming Federal Open Market Committee (FOMC) meeting. We analyze Roundtable economists' 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.

Note: The survey was populated between November 11 to 25.

Key Takeaways

- 2022 GDP growth est. +0.3%, vs. +5.7% in 2021 (median forecast, 4Q/4Q)
- 2022 unemployment rate est. +3.7%, vs. +5.4% in 2021 (4Q average)
- 2022 inflation estimate +7.4%, vs. +5.0% in 2021 (Core CPI, 4Q/4Q)

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Setting the Scene

Survey Disclaimers: Since the survey launched, there could have been changes in monetary or fiscal policy actions which are not accounted for in this report. Charts may not add to 100% due to rounding.

Setting the Scene

A Message from Our Chair

With ongoing day to day volatility, taking a 10,000 foot view, the latest growth report offered a welcome sense of optimism. The first look at Q3 GDP showed activity grew at a 2.6% annual pace, a welcome improvement from six consecutive months of negative activity at the start of the year, and the fastest pace of growth since the fourth quarter of last year. But looking under the hood, the details indicated growth remains fragile at best with the consumer, business investment, and housing all losing momentum. In fact, even on the trade side, while net exports contributed 2.8% to headline growth, the gain was reflective of a near 7% decline in imports, a sign of slower domestic demand.

So, while a welcome reprieve after back-to-back quarters of decline, the bump in third quarter growth leaves the economy essentially flat for the first nine months of the year and, furthermore, should be viewed as a temporary boost rather than an indication of sustainable upward momentum from here. Thanks to lower gas prices and renewed state and local stimulus in more than a dozen states or major cities – not to mention an increased willingness to eat through their remaining savings – consumer spending remained positive July through September, albeit at a minimal pace. And going forward, indications suggest the consumer continues to remain on modest footing heading into the final quarter, with business investment also showing signs of slowing further – far from the ideal scenario as the key holiday shopping season is now upon us.

Of course, from the Fed's perspective, the slump in housing and the increasingly apparent destruction in demand is a welcome indication that higher interest rates are having the intended impact of slowing the economy. That being said, with still positive albeit greatly reduced spending activity, a five-decade low in unemployment and a near four decade high in prices, there is still more to be done – more room for further rate hikes. In fact, while one could argue recessionary conditions are increasingly emerging in nearly every sector of the economy, the labor market remains a bright spot, allowing the Fed to maintain its focus on controlling inflation.

So, with this as a backdrop – this relentless rise in prices – the Fed has reaffirmed its commitment to reinstating price stability, the bedrock of the economy as the chairman has said time and time again. The Fed opted to raise rates another 75 bps in November, the fourth consecutive super-sized increase, taking the upper bound of the target range from 3.25% to 4.00%.

Of course, ahead of the November rate decision, the market had fully priced in the latest hike. Going forward, however, the pathway for policy remains a bit less certain. As such, the market was looking very closely at the language in the November statement and listening very closely to the Chairman for any indications of a potential reduction in future rate increases. At this point, 50 bps is the majority consensus, currently tracking above 80%.

While the broader economy is clearly losing steam in some areas, particularly in the housing market, and amid consumers struggling to stay afloat as rising prices reduce purchasing power, the labor market remains solid. And, against the backdrop of a stronger than expected rise in the third quarter activity, with inflation still elevated, the Committee does appear to have extremely firm ground to stand on to remain committed in its resolve to raise rates enough to quell inflation. The latest cooler than expected inflation report was a welcome step in the right direction towards the goal of reinstating price stability, with headline inflation down from recent highs. Of course, said another way, with already 375 bps in tightening, inflation still remains near a four-decade high, reinforcing the need for additional policy action.

In fact, at the November press conference, Chairman Powell was clear that the risk is not that the Fed does too much or overtightens. The risk is that the Committee does too little to control inflation. The Committee has, at this point, already revised up its forecast for rates by nearly 200 bps since the initial March forecast. With inflation stubbornly elevated – and well above the Fed's expected year-end level and even further above the Committee's 2% target range – the Fed will likely revise expectations higher, for both rates and inflation, a fourth time in the final Summary of Economic Projections release of 2022.

The Fed has said higher than previously expected, the question remains, exactly how much higher? With that, we invite you to dive into the results from our end-year U.S. economic survey.

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

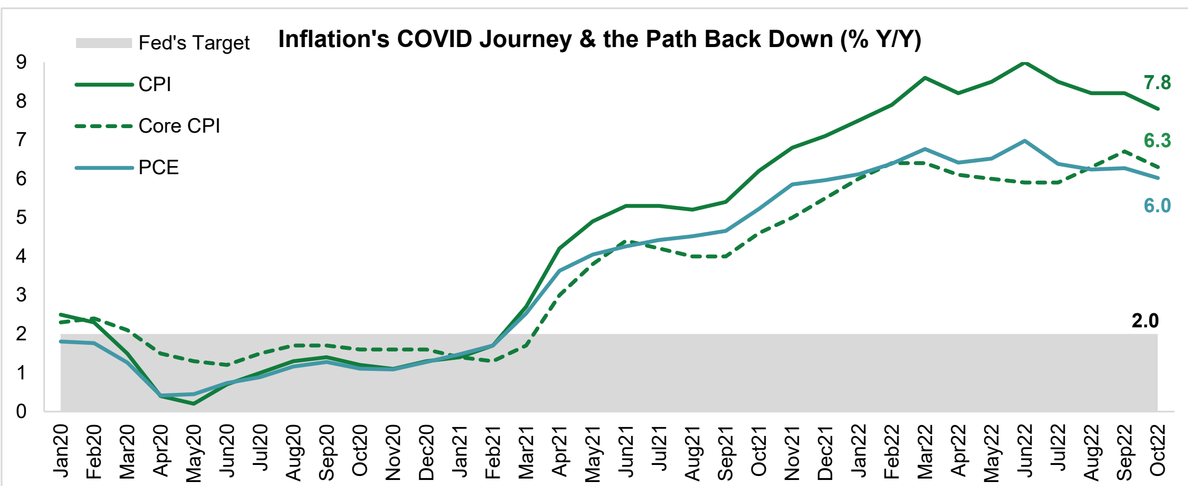
Status of the Economic Environment

Where We Are

Unless you are living at McMurdo research station in Antarctica, you most likely are discussing inflation on a daily basis. At levels not seen since the 1980s, people are feeling inflation everywhere. Markets are ebbing and flowing – mostly in the downward direction – based on inflation reports. And, importantly, the Fed is basing its monetary policy on inflation data.

The conversation has shifted from "are we at peak levels" to when will the Fed be comfortable that they are achieving their goals? And by goal, we mean reaching a 2% range on the PCE, the Fed's preferred inflation measure and the one typically used to set monetary policy. While we will dig into inflation projections and the path back down to the Fed's 2% target in our survey results later in this report, first we recap where we are, how we got here, and compare it to historical high inflation eras.

As to where we are, PCE remained elevated at 6.0% in October. This was down from the 7.0% peak in June but +4.0 pps to the target.

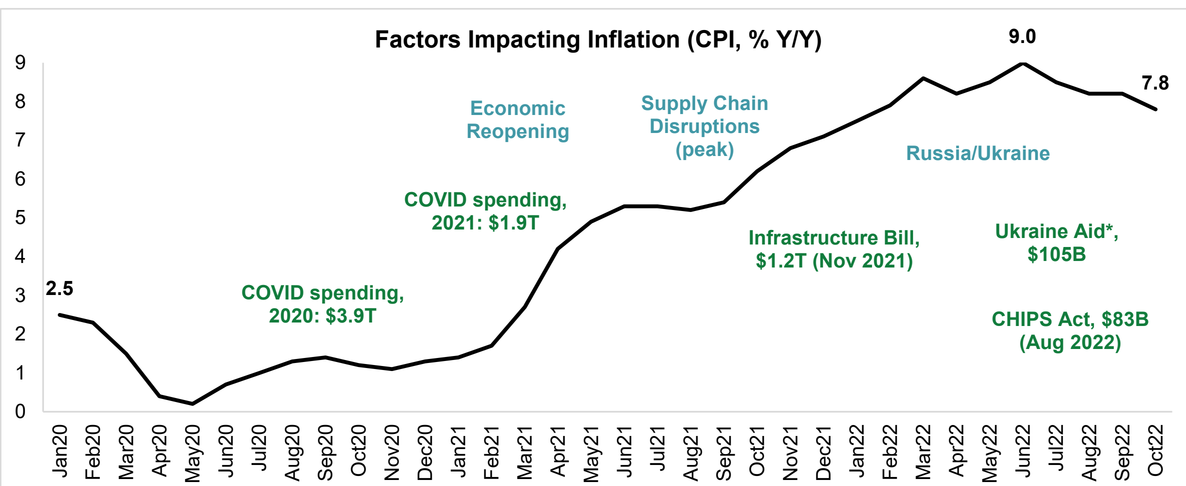


Source: FRED, SIFMA estimates

How We Got Here

Today's inflation is not your parent's inflation. Part of what is complicating monetary policy decision making is that today's inflation has many moving pieces. There are many different factors which drove the increase in inflation, not all of which can be impacted by monetary policy. As such, we thought it would be interesting to 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
    - Russia/Ukraine war
- **Monetary policy** (not depicted graphically): +$4.4 trillion added to the Fed's balance sheet since March 2020
    - 0% interest rates
    - Asset purchases/balance sheet expansion



Source: FRED, IMF, SIFMA estimates

Note: Ukraine Aid includes $37.7B the administration requested on November 15

[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 and Response Supplemental Appropriations Act and Families First Coronavirus Response Act. $1.9T COVID spending = American Rescue Plan

Inflation's COVID Journey

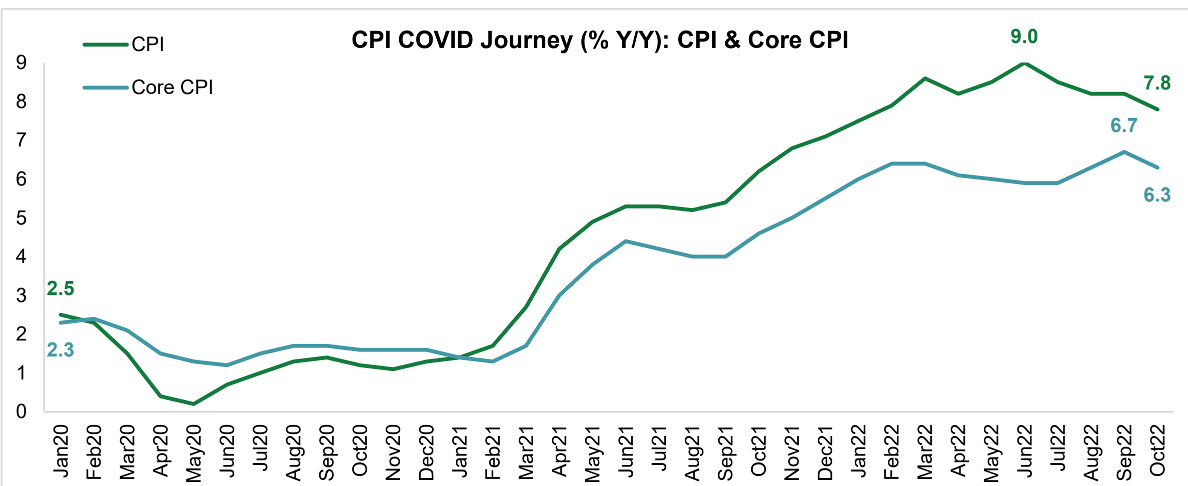
Next, we recap inflation's COVID journey. Inflation took its first real jump in April 2021, with CPI increasing to +4.2% (Y/Y change) from +2.7% the prior month (which was a slight uptick from +1.7% in February).

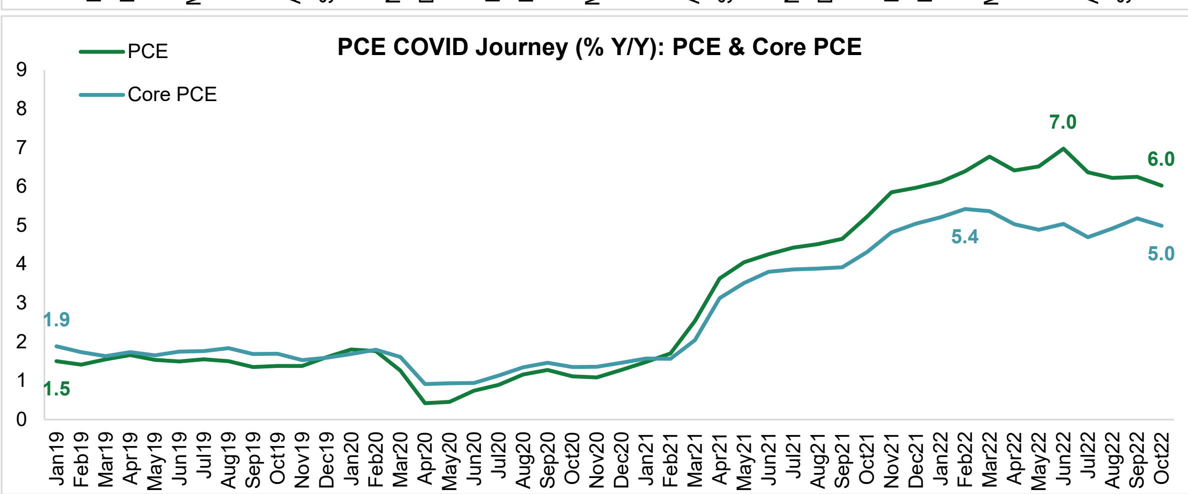
- **Spring 2021** – After vaccinations became available to the broader public, the massive economic reopening sent inflation into its first wave of increases

- **Fall 2021** – At this time, we saw the peak in global supply chain disruptions – with reports stating at one time there were over 130 ships queued up to enter the Ports of Los Angeles/Long Beach, which represent around 40% of all containers coming in/out of the U.S. – which sent inflation into another wave of increases

- **Beginning 2022** – The final wave of increases was driven by Russia's invasion of Ukraine in February 2022, spiking prices for oil and other commodities

- **Current** – Both CPI and PCE are down from their peaks. At the latest reports, CPI and core CPI had ticked down in October. Both PCE and core PCE came down in October. For core PCE, while it came down after ticking back up in September, it remains higher than the July low (+4.7%).

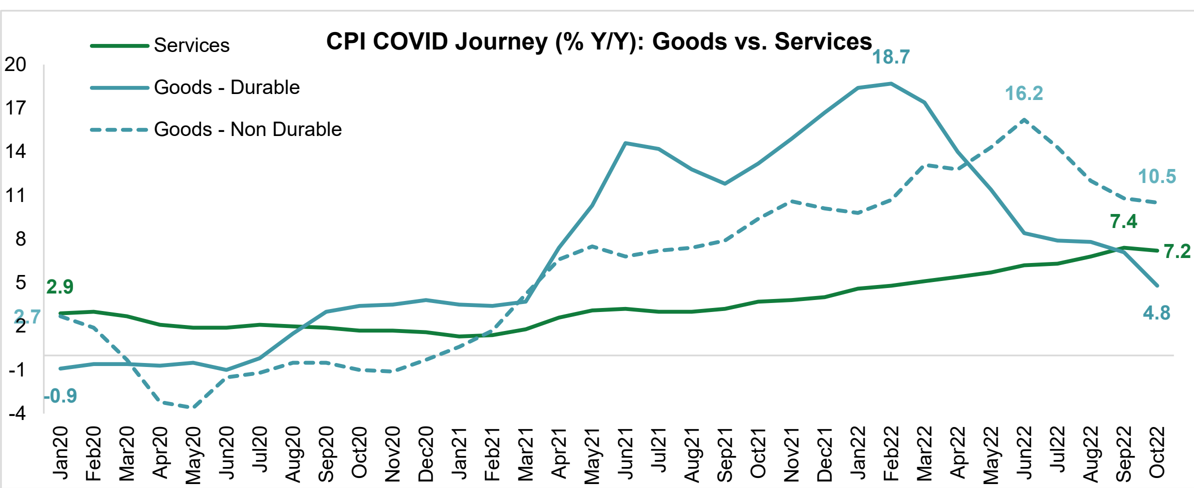




Source: FRED, SIFMA estimates

We also analyze the split across CPI between goods and services, as these segments took different paths through their COVID journey.

- **Goods**[2] – After turning negative during the start of the pandemic, goods inflation began to rise in the summer of 2020. The real sharp increase in inflation for the goods segment began in the spring of 2021.
    - Durables – As people moved to the suburbs and bought new homes, purchases for durable goods sky rocketed. At +3.4% (Y/Y change) in February 2021, inflation jumped to +14.6% by June. The peak was +18.7% in February 2022, dropping 13.9 pps in October to +4.8%
    - Nondurables – Nondurables were greatly impacted this year by the Russia/Ukraine war, causing a second spike earlier in the year. At 1.7% in February 2021, inflation jumped to +7.5% by May. The peak was +16.2% in June 2022, dropping 5.7 pps in October to +10.5%
- **Services** – This segment may not have taken the dramatic swing seen in goods, but inflation has steadily climbed up since the economic reopening. At +1.8% in March 2021, services inflation hit the 3% range by May and kept rising. It spiked further in spring 2022, hitting the 6% range. The peak was +7.4% in September, dropping 0.2 pps in October to +7.2%



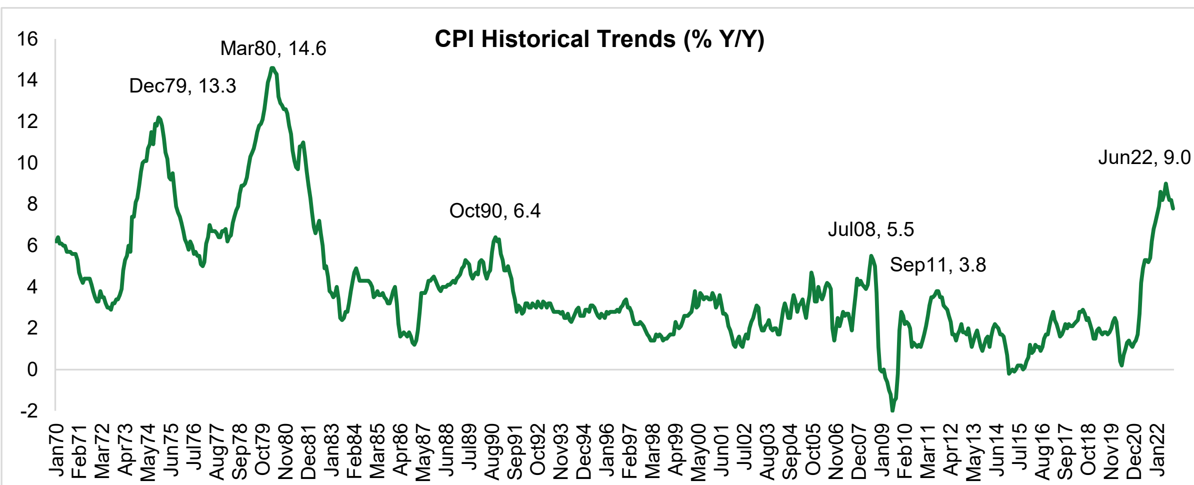
Source: FRED, SIFMA estimates

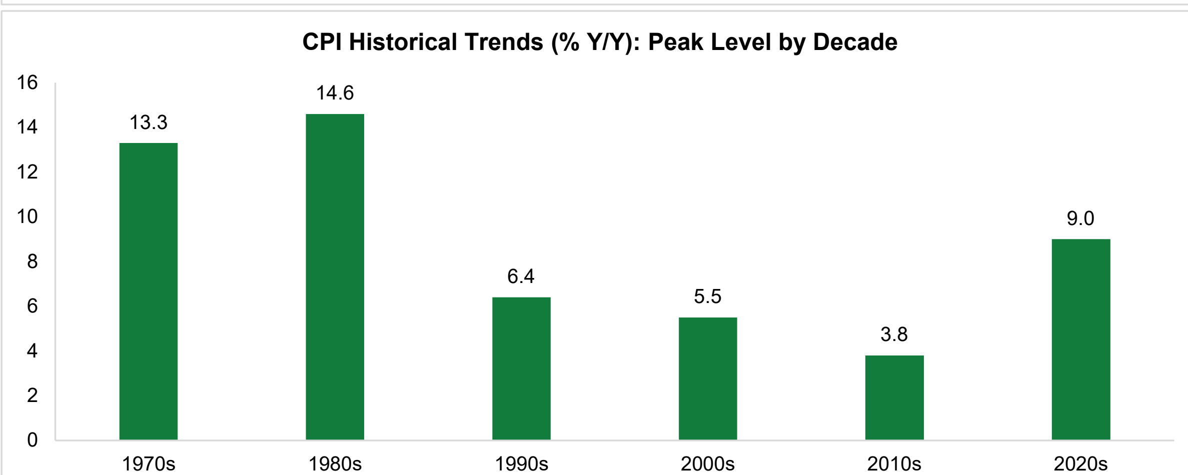
[2] Durables life span >3 years, used repeatedly over time (ex: refrigerators). Nondurables = consumed in <3 years, often used only one time (ex: packaged foods)

Lessons from History

Now the question is when and how we get back down to the Fed's 2% target? While economic environments and causes of inflation vary across historical time periods, we thought it would be interesting to assess levels of inflation (CPI, Y/Y change) over the last six decades. The charts below show the peak inflation rate for each decade.

- Highest level = +14.6% (Y/Y change), March 1980
- Second highest level = +13.3%, December 1979
- Third highest level = +9.0%, June 2022
- The three decades in the middle (1990s, 2000s, 2010s) did not even come close to the top three highs. In fact these decades produced a downward trend in inflation (until the 2020s)





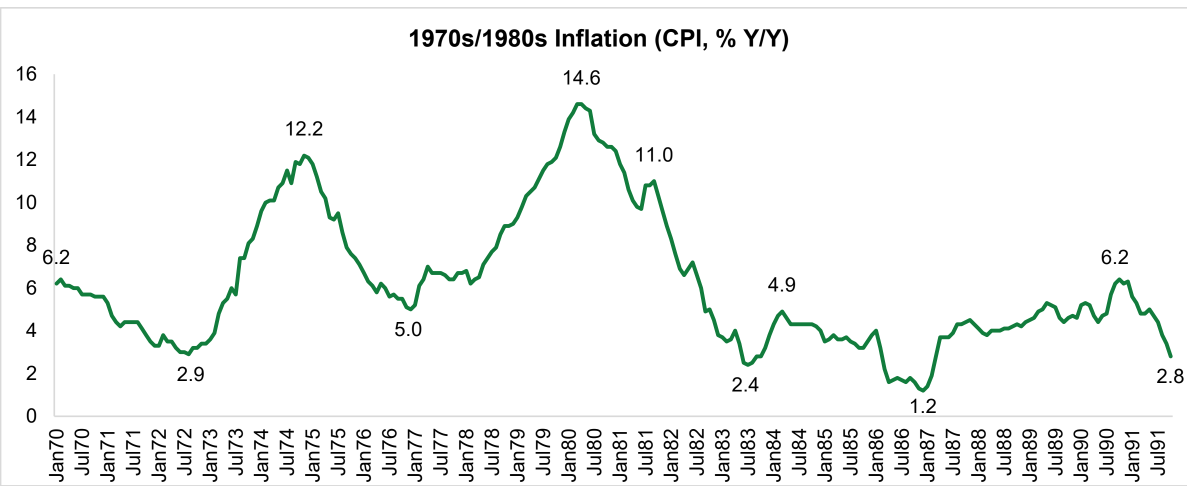
Source: FRED, SIFMA estimates

With only two decades reaching peak inflation rates in the double digit levels – and really the peak rate in the 1980s was a continuation of the 1970s inflation – we take a closer look at the 1970s/1980s inflation era.

The 1970s actually experienced stagflation, or an economic cycle with slow growth *and* a high unemployment rate accompanied by inflation (typically there is an inverse relationship between inflation and unemployment). This type of inflation is considered particularly difficult to handle, as enacting monetary policies to tackle one factor can exacerbate another factor.

The 1970s inflation had a myriad of causes, including: (a) increasing federal budget deficits for Vietnam war spending; (b) Great Society social spending programs; (c) collapse of the Bretton Woods agreement[3]; (d) tripling of crude oil prices given the Arab oil embargo, followed by another almost tripling at the end of the decade given the Iran oil embargo; and (e) cost of living adjustments in labor contracts.

Some of these factors are replicated today – replace Vietnam with COVID for our war; fiscal spending programs, replacing social welfare with green energy policy initiatives today; and oil price spikes.



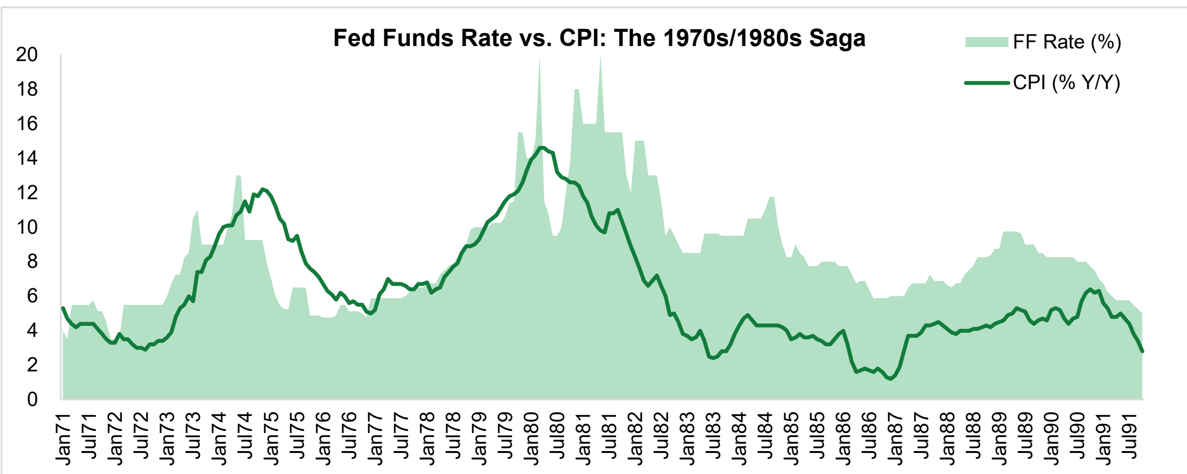
Source: FRED, SIFMA estimates

[3] In August 1971, President Nixon announced a temporary suspension of the USD's convertibility into gold, marking the breakdown of the Bretton Woods system. By March 1973 major currencies began to float against each other, instead of being pegged to the USD.

In the 1970s/1980s, the Fed had a shot at reining in inflation but arguably acted too slowly and reversed course too early. As such, the Fed failed to suppress inflation – and inflation expectations – in the early stages, and inflation continued to ebb and flow throughout the decade. In the early 1970s, as inflation increased, the Fed raised rates to counter inflation. However, they pulled back in the middle of the decade, allowing inflation to spike again in the late 1970s.

As such, the 1980s inflation began as a hangover effect from the 1970s. Then Fed Chair Paul Volcker had to raise the Fed Funds rate to 20% to curb inflation. The Fed Funds rate remained in double digit territory for almost three years as the Fed tried to tackle inflation. Eventually, this policy decision did bring CPI back down to around the 2% range in the mid-1980s, but inflation ticked up again later in the decade – although a peak near the 6% range was much better than the earlier 14% level – stabilizing in the early 1990s (the U.S. entered a recession in the early 1990s, helping to tame inflation).

In addition to monetary policy missteps, another factor driving the persistent inflation during the 1970s/1980s was letting inflation expectations become entrenched. We discuss inflation expectations further in the next section.



Source: FRED, SIFMA estimates

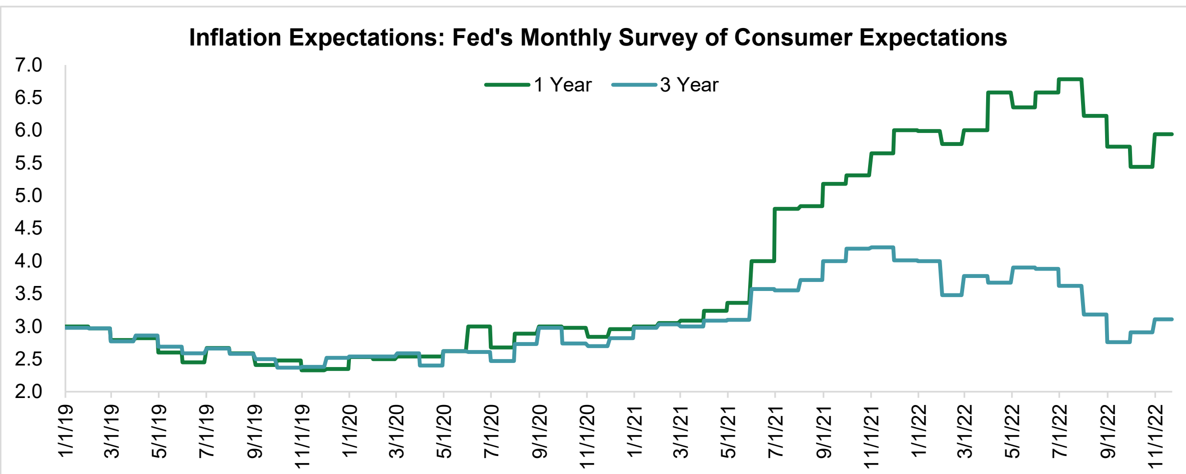
Inflation Expectations

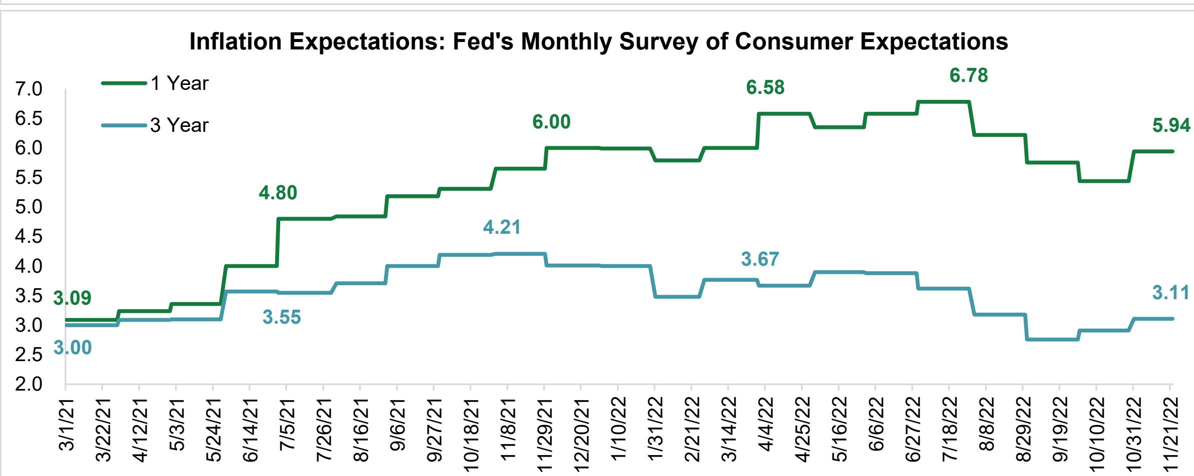
A key piece of the path back down to the Fed's 2% target is managing inflation expectations. Inflation expectations matter because prices end up reflecting not the current level of prices today but what people expect them to be tomorrow or further down the road. If consumers believe prices will rise again in the future, they often adjust purchase decisions today, potentially opting to front load consumption in order to avoid higher future prices. This increase in demand relative to supply, in turn, drives up today's prices, creating a circular effect.

To gauge consumers' inflation expectations, we look to the Fed's monthly Survey of Consumer Expectations.[4] Historically, inflation expectations for both a one-year and three-year forward looking view ranged in the 2.5% to 3% range. Then in mid-2021 – when CPI actually took its first spike up – expectations began to rise.

We highlight the following on consumers' expectations for inflation:

- **1-year**: First spike to 4.80%, peaked this summer at 6.78%; had come down from the peak, now at 5.94%
- **3-year**: First spike to 3.55%, peaked last fall at 4.21%; has actually ticked back up a bit peak, now at 3.11%





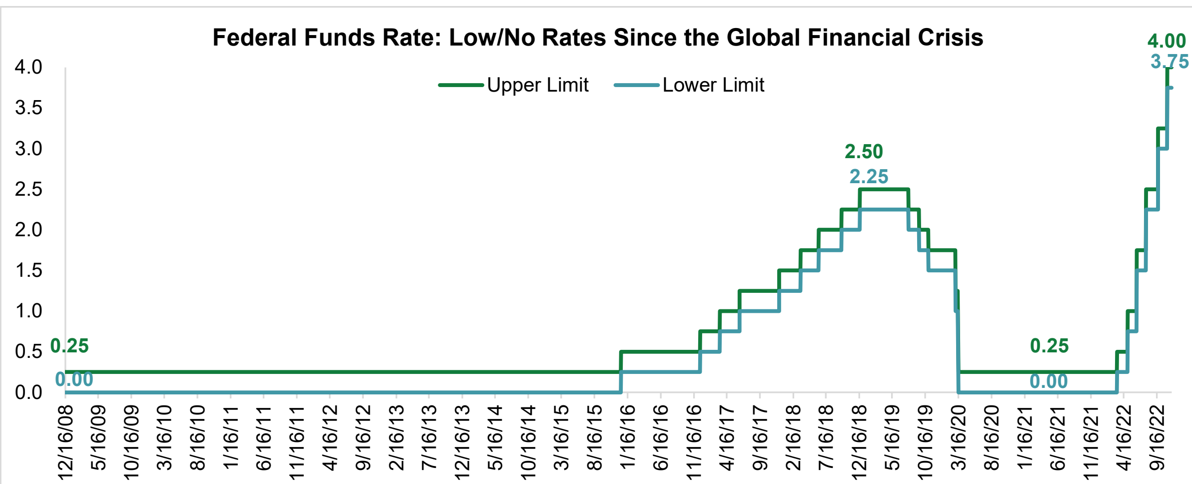
Source: Bloomberg, SIFMA estimates

[4] 1,200 US consumers surveyed for expectations on: inflation, future earnings, household income, house prices, access to credit, layoff risk/reemployment prospects, US economic conditions. Quarterly surveys focus on special topics: household finances, labor & housing market, etc.

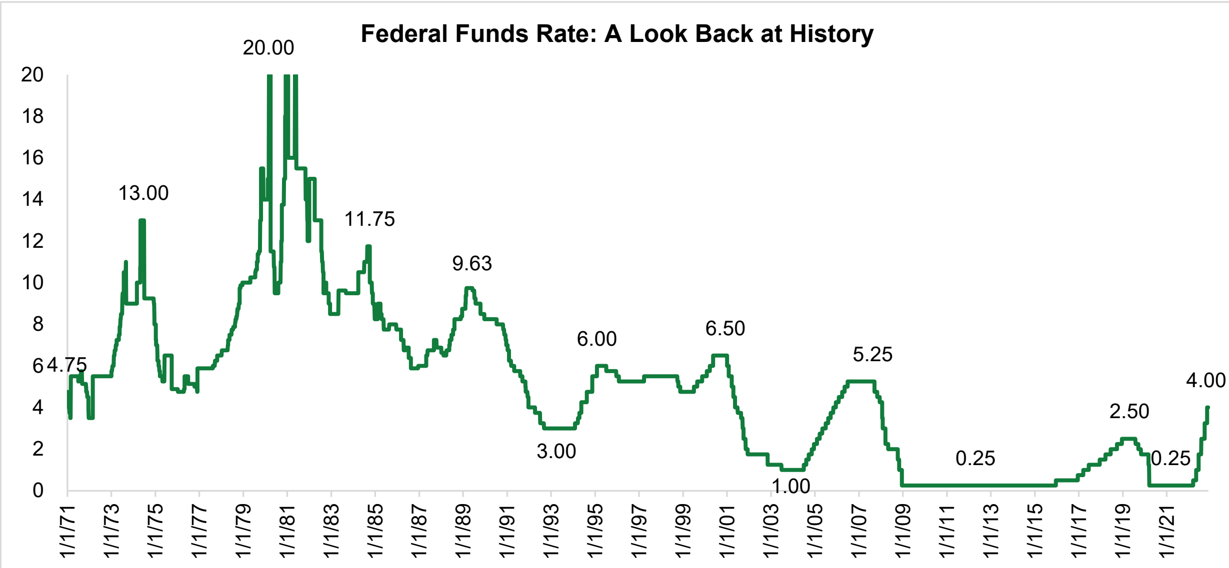
How High Will Rates Have to Go

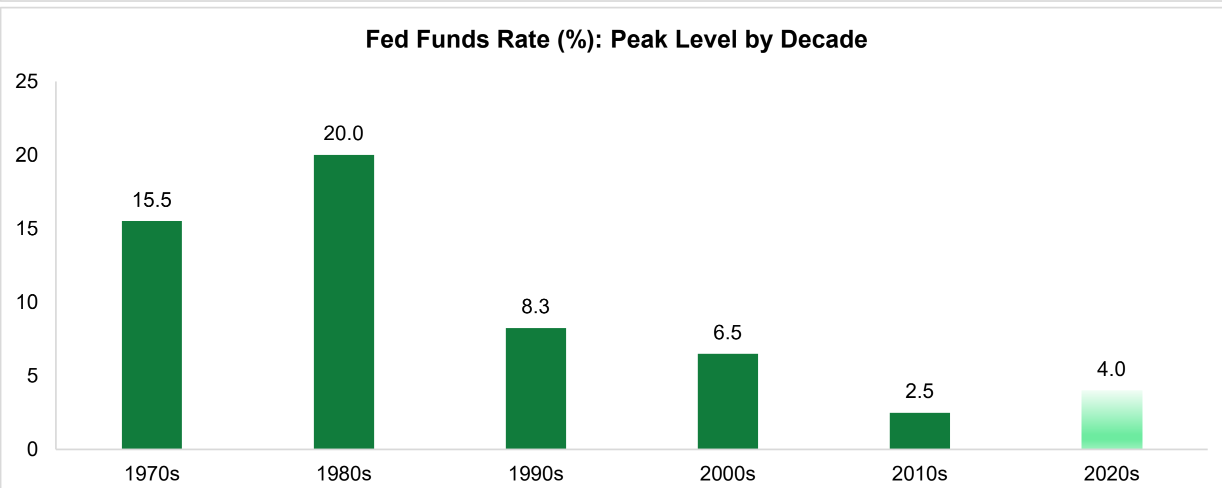
For much of the 1970s and 1980s, the Fed Funds rate ran in double digits, peaking at 20.00%. To fight 1990s and 2000s inflation, the rate only had to be raised to the 6% range. However, the inflation rate was much lower than both prior decades and what we see today. Then, ever since the global financial crisis, we experienced a long, long period of 0% – or near 0% – rates. Note: The Fed only began using ranges in 2008. As such, the top chart shows the upper limit for the time series. When it says 0.25%, that is the upper limit – the lower limit of the Fed Funds rate would be 0%, i.e. 0% rate environment.

It is interesting to note the sharp uptick we have seen this year, as the Fed raised rates at an unprecedented rate. Rate hikes used to have a slow and steady stop pattern. This year, the slope of the increases looks more like climbing the summit of K2. This is what makes the current environment so unique – coming off of a no/low rate environment for over a decade plus the rapid increase in rate hikes.



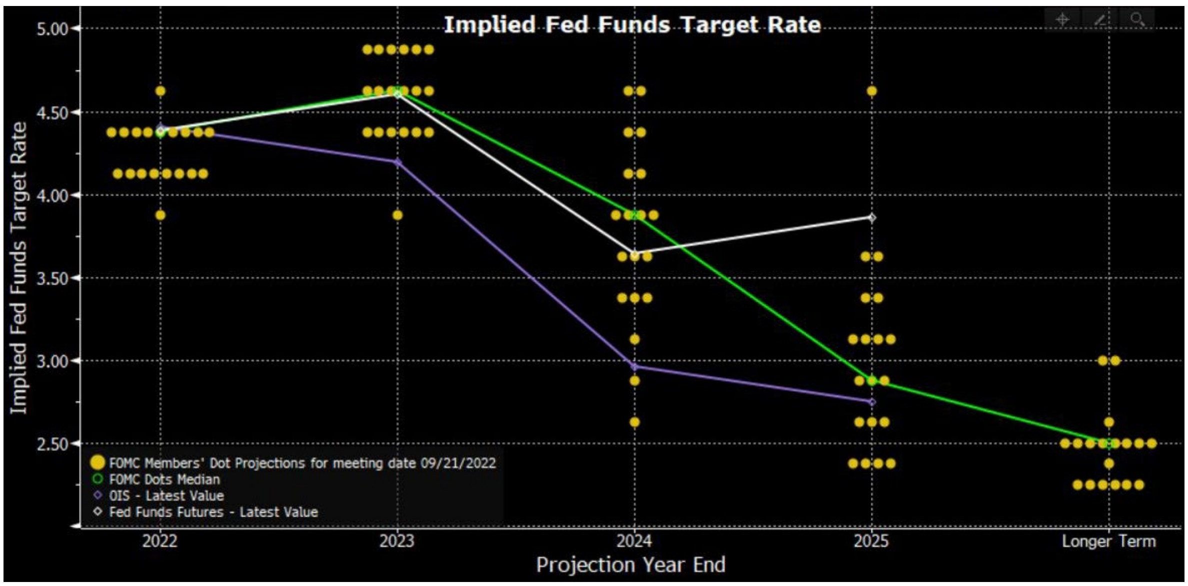
Source: Bloomberg, SIFMA estimates

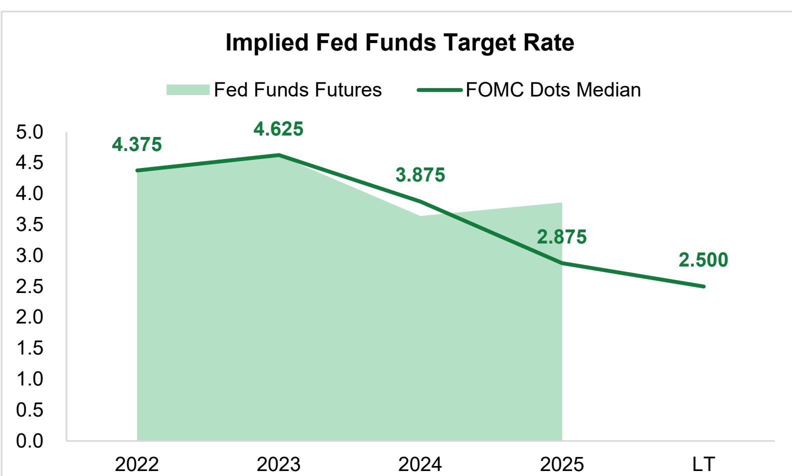




Source: Bloomberg, SIFMA estimates

Where will the Fed have to go from here. Let's just say it – we're not in the 1980s and do not expect the Fed to raise the Fed Funds rate into double digits. The more modern era of rate hikes went into the 5% to 6% range. The Fed's dot plot signals its outlook for the path of interest rates, showing the median year-end projection for the Fed Funds rate. A dot plot visually groups the number of data points in a data set based on the value of each point. In this case, it shows how many Federal Open Market Committee (FOMC) members select a specific target rate for each year. At last publishing, the median FOMC dot was for Fed Funds to peak in 2023 at 4.625%. No one had selected 5.000%, with the highest rate selected was 4.875% (6 out of 19 respondents). Although, we note that the Fed has already revised higher its expectations 200 bps since the initial March forecast.





Source: Bloomberg, SIFMA estimates

Consensus for market expectations shows a 4.75% to 5.00% target range. (Our Roundtable economists expect the Fed Funds rate to reach 4.375% to end 2022 and then 5.125% in 2023.) We note that the Fed could update its Summary of Economic Projections and the dot plot chart at the December meeting, meaning we will get a better estimate for peak rate.

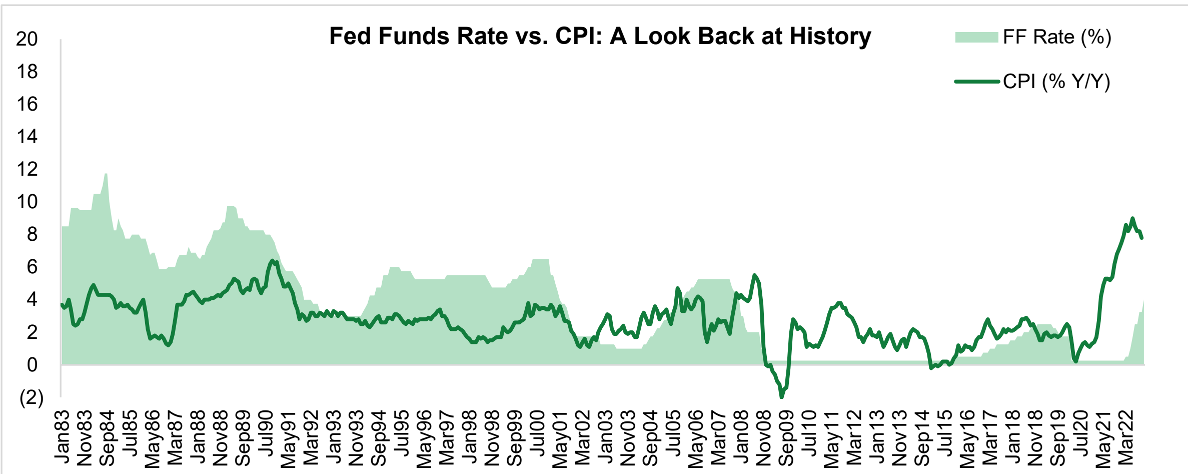
The Policy Time Lag

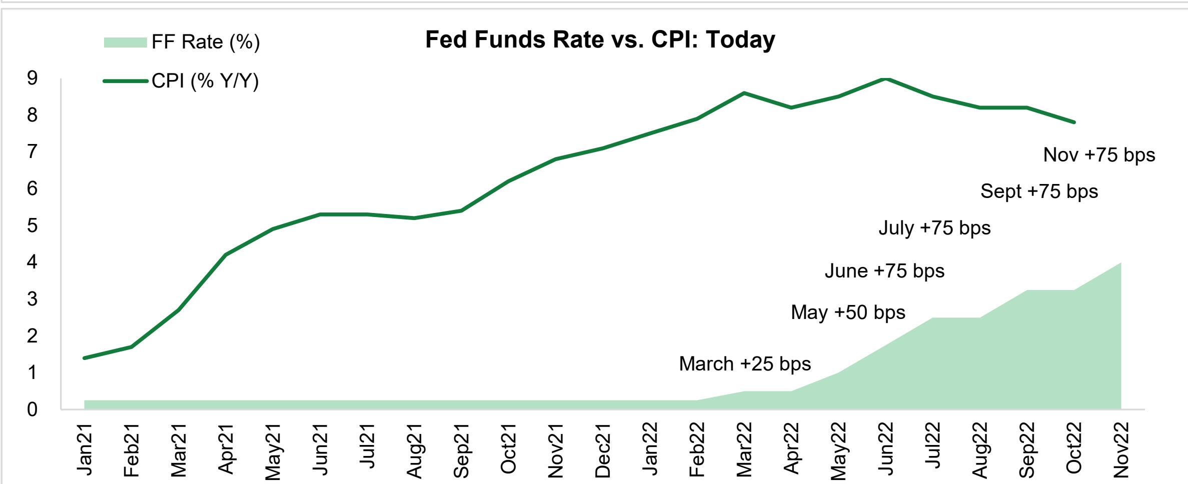
Finally, when setting monetary policy, the Fed must contend with policy lags. There is a dynamic relationship between monetary policy – increasing the overnight cash rate, Fed Funds – and final policy objectives – inflation. Bank for International Settlement economists identified multiple channels through which changes in interest rates affect the economy, including: effects on other asset prices (today, think rising mortgage rates and slowing of the housing market impact on the economy), cash-flow effects on liquidity constrained borrowers, credit supply effects, and the direct effect of changes in monetary policy on expectations of growth. Each channel and the interaction between them contribute differently to lags in monetary policy.

Additionally, there are different types of lags:

- **Recognition** – time delay between an economic problem arising and policy makers becoming aware of it; stems from data collection issues (timing of publication, revisions, different interpretations) and could be several months
- **Implementation** – time delay between problem recognition and monetary policy enactment; this is typically short, as the FOMC meets regularly (8 times per annum) and can discuss policies in between meetings
- **Impact** – time delay between policy enactment and the policy actually impacting the economy

Looking at historical patterns, you see the lag between rate hikes and declining inflation. In the 1990s, it took years for rate hikes to push inflation back down. More recently, during the late 2010s, monetary policy took only months to impact inflation. With today's unique environment – 0% rate environment for over a decade, rapid pace of rate hikes – it will be interesting to see what the lag time will be for today's Fed actions. (Our Roundtable economists estimated the lag at 9-12 months, 36% of respondents.)





Source: Bloomberg, FRED, SIFMA estimates

Executive Summary

Comparing the Current and Prior Surveys

Inflation. Rates. Recession. Inflation remains at historical highs – headline CPI +7.7% Y/Y as of October – and the path back down to normalized levels, around +2.0%, seems like a long road. Recession questions – timing, length – grow louder, and more CEOs are sounding cautious on the environment as we close out the year. The end game seems to be the question, for inflation, the economy, and the terminal interest rate.

In our semiannual economic surveys (published every June and December), we ask our Roundtable of economists 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	2H22 Survey (current)	1H22 Survey
Economic Indicators: (TY/NY)		
Real GDP (4Q/4Q)	+0.3%/-0.3%	+1.5%/+1.7%
Unemployment Rate (4Q average)	3.7%/4.5%	3.5%/3.5%
Labor Force Participation Rate (4Q average)	62.3%/62.6%	62.5%/62.7%
CPI (4Q/4Q)	7.4%/3.1%	6.3%/2.5%
Core CPI (4Q/4Q)	6.1%/3.3%	5.0%/2.8%
PCE (4Q/4Q)	5.8%/2.9%	5.1%/2.6%
Core PCE (4Q/4Q)	4.8%/2.9%	4.2%/2.7%
Rates (monthly averages, Dec. 2022)		
Federal Funds Rate (midpoint)	4.375%	2.625%
2-Year UST Yield	4.52%	2.93%
10-Year UST Yield	4.00%	3.16%
30-Year Fixed Mortgage Rate	6.90%	5.19%
Changes in Curves/Spreads: (TY/NY)		
Fed Funds Rate vs.10Y UST yield curve	55% invert slightly more/38% invert markedly more	92% flatten
TED spread (T-bill to Eurodollar)	50% remain ~ the same/100% widen	43% widen
IG corporates to Treasury spread	75% widen/100% widen	80% widen
HY corporates to Treasury spread	100% widen/100% widen	80% widen

Note: TY = this year, NY = next year

THE ECONOMY	2H22 Survey (current)	1H22 Survey
What factors will have the greatest impact on U.S. economic growth this year	Inflation, tight labor market, U.S. monetary policy	Inflation, U.S. monetary policy, tight labor market
What factors will have the greatest impact on U.S. economic growth next year	U.S. monetary policy, inflation, recession threat	Inflation, U.S. monetary policy, tight labor market
What is your estimate of the long-term potential growth rate of the U.S. economy	>1.5-2% (83% of respondents)	>1.5-2% (100% of respondents)
Has your estimate of the long-term potential growth rate of the US economy changed post-COVID	No, temporary impact (64% of respondents)	No, temporary impact (73% of respondents)
Top risks to economic forecasts - upside	Inflation – demand side, monetary policy, and inflation	Increase in consumer spending, resolution of geopolitical tensions, and supply chain recovery
Top risks to economic forecasts - downside	Inflation – supply side, monetary policy, and inflation	Monetary policy overcorrection, escalation of geopolitical tensions, and higher inflation
US to enter a recession	83% yes	18% of respondents each: no recession, recession in 2H22, 2H23, 2024, and beyond

2H22 Survey

- Upside: inflation – demand side = consumer spending, fiscal stimulus
- Downside: inflation – supply side = energy crisis in EU, Russia/Ukraine, supply chain disruptions, China’s Zero COVID policy, energy shock

LINGERING COVID IMPACTS	2H22 Survey (current)	1H22 Survey
When do you expect the labor force participation rate to return to the ~63% pre-COVID average	Beyond 2023 (64% of respondents)	Beyond 2023 (63% of respondents)
Factors continuing to drive the labor supply gap	Health concerns around long COVID, the Great Retirement, and childcare issues	The Great Retirement, childcare issues, and health concerns around long COVID
Have consumers returned to pre-COVID behaviors	Yes, because of COVID fatigue (55% of respondents)	Yes, because of fatigue/frustration with earlier COVID policies (56% of respondents)
When do you expect work-from-office to return to pre-COVID norms	Never, hybrid work is here to stay (82% of respondents)	Never, hybrid work is here to stay (100% of respondents)
Factors limiting return to offices to historical levels	Not want to commute/time freed up from not commuting, choose to continue working at home, and because WFH option is available	Choose to continue working at home, not want to commute/time freed up from not commuting, and childcare issues

INFLATION	2H22 Survey (current)	1H22 Survey
Did the Fed wait too long to raise rates and "allow" inflation to get out of control	Yes (82% of respondents)	Yes (93% of respondents)
Have prices pressures become structural/ broad-based throughout the economy	Yes (73% of respondents)	Yes (87% of respondents)
What are the most important factors in your outlook for core inflation	Historically hot labor market, consumer spending on services, domestic supply chain issues	Supply chain issues, monetary policy, economic slack/unemployment
Confident the Fed can achieve its 2% goal in a sustainable way: -- Fed's commitment to the fight -- Effectiveness of the Fed's policy	-- Fed's commitment to the fight: very confident (78% of respondents) -- Effectiveness of the Fed's policy: somewhat confident (91% of respondents)	Somewhat confident (67% of respondents; the question was not split into two parts in this survey)
Inflation to reach Fed's preferred 2% target	Beyond 2024 (55% of respondents)	1H24 (33% of respondents)
Probability of the US experiencing structurally higher inflation over the longer run (>3 years)	15-25% (55% of respondents)	15-25% (64% of respondents)
What factors do you believe could push long-term inflation higher	Stickiness of wage increases, reversal of globalization, and sustained breakdown of supply chains	Sustained breakdown of supply chains, stickiness of wage increases, increased costs as we move supply chains back to the U.S.
Concern of disinflation	Not concerned at this time (82% of respondents)	>50% probability get disinflation (40% of respondents)
The significant amount of government spending poses a risk to inflation	Yes, moderate upside risk (64% of respondents)	A significant upside risk (53% of respondents)
Greater long-term risk to the economy	Stagflation (78% of respondents)	Stagflation (80% of respondents)

MONETARY POLICY	2H22 Survey (current)	1H22 Survey
Peak Federal Funds rate estimate	500-550 bps (46% of respondents)	250-300 bps (29% of respondents)
Timing of peak Federal Funds rate	Mid 2023 (92% of respondents)	End of 2023 (59% of respondents)
Fed to accelerate the pace of balance sheet reduction	No (83% of respondents)	No (87% of respondents)
What is the expected size of the Fed's balance sheet by the end of this year*	$8.5T (73% of respondents)	>$7T (100% of respondents)
What is the expected size of the Fed's balance sheet by the end of next year*	>$7T (64% of respondents)	>$7T (69% of respondents)
Which of the following factors do you think are the most important to the Fed's decision making	Inflation – wage increases, inflation – supply chain issues, stronger U.S. consumer spending	Inflation – supply chain issues, inflation – tight labor market, inflation – Russia/Ukraine conflict
In general, how do you rate the efficiency of the Fed's communication with markets around its timeline for shifting monetary policy	Ok, somewhat murky but decipherable (64% of respondents)	Excellent, very clear (60% of respondents)
Factors having the greatest impact on expectations for long-term Treasury yields	Inflation/inflation expectations, U.S. economic conditions, and U.S. monetary policy	FOMC policy, inflation/inflation expectations, and U.S. economic conditions

*Ranges may change survey to survey

FISCAL POLICY	2H22 Survey (current)	1H22 Survey
Inflation should deter further fiscal spending	Yes (82% of respondents)	Yes (71% of respondents)
Russia/Ukraine impact on fiscal spending policy	Cause more international aid and therefore more spending? Yes (70%) of respondents	Deter further spending? No (85% of respondents)
Impact on 2022 GDP of ~$1 trillion infrastructure package	No impact (40% of respondents)	No impact (38% of respondents)
Should the government take more steps to alleviate the burden on consumers	No (100% of respondents)	No (58% of respondents)
Steps should include	Other: No as this could be counterproductive, providing consumers with more discretionary income than in the base case	Other (31% of respondents; stop spending/no further fiscal stimulus, government restraint, encourage more energy production, increase food stamps)
Bigger risk to the economy, government does	Too much, further pressuring inflation (70% of respondents)	Too much, economy overheats (67% of respondents)
Consider the debt/GDP level when considering additional stimulus	Yes, a further rise could impede long-term growth or incite inflation (57% of respondents)	Yes, a further rise could impede long-term growth or incite inflation (62% of respondents)
China's handling of COVID to have a lasting impact on trade relations	Yes (67% of respondents)	Yes (85% of respondents)
Expect a meaningful shift to domestic production	Yes (60% of respondents)	Yes (62% of respondents)

Additional Survey Results Highlights: 2H22 (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 November 11 to 25):

The Economy

- Recession expectations
  - None of the respondents believe the U.S. is already in a recession, while 83% of respondents believe the U.S. will enter in a recession
  - If the U.S. enters a recession, 89% of respondents believe it will be mild and 60% of respondents believe it will occur in 1H23
- Lingering COVID impacts
  - 67% of respondents indicated they have personally returned to the office on a hybrid/part-time schedule

Monetary Policy

- Fed Actions
  - 100% of respondents expect the Fed to raise the target Federal Funds rate by 50 bps in December
  - 36% of respondents believe the lag time for monetary policy to impact the economy is 9-12 months
  - 58% of respondents think the Fed should pause and assess the impact of earlier rates hikes, with 50% of respondents indicating this pause should take place in 2Q23
  - 80% of economists responded replied that the Fed should not be considering global monetary policy responses when making its decisions on its own policy moves
  - In the aftermath of the November press conference with Chair Powell emphasizing a return to meeting-by-meeting policy decisions, 91% of respondents replied there has been no change in their view of the Fed's communications
- Inflation expectations
  - 55% of respondents indicated the Fed is poised to make another mistake in tackling inflation, by overshooting
  - 75% of respondents believe the price pressures are at their peak but will remain elevated for some time
  - For 2022, the inflation rate – in terms of the PCE – is expected to be 5-6% (90% of respondents), and 2-3% or 3-4% (45% of respondents each) in 2023
  - Ranking the factors having the biggest impact on the aggregate inflation rate in order, economists replied: (1) demand side, (2) supply side, and (3) the labor component

- 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% of respondents expect domestic supply chain disruptions to dissipate by 1H23
  - 64% of respondents believe President Xi will end China's Zero COVID policy, with 57% 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% 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
  - 64% of respondents believe all of the fiscal stimulus was not necessary, and became a main driver of inflation
  - 30% of respondents expect goods prices on an aggregate level to return to normal levels by 1H23 and another 30% by 2H23
  - 50% of respondents expect services prices on an aggregate level to return to normal levels by 2H23
- Labor component: 80% of respondents believe we are not in a wage-price spiral
  - With wages +4.7 in October (vs. +5.0% in September), 72% of respondents believe we have reached a peak in wage pressures
  - With wages accelerating ~5% for some time, 67% of respondents expect this to return to the historical +3.0% level (three-year pre-COVID average) by 2H23
  - 45% of respondents believe the U3 unemployment rate needs to increase to 4.50-5.00% to meaningfully impact inflation; to be reached by 2H23 (80% of respondents)
- None of respondents believe inflation expectations are unanchored, and none of respondents expect inflation expectations will become unanchored
- Unlike in the 1970s, all of respondents believe the Fed's strong rhetoric has kept inflation expectations in check

- Rate Estimates, Yield Curves, and Spreads
    - 36% of respondents expect the 10Y yield to end 2022 at 4.00-4.25%, and 40% expect the 10Y yield to end the 2023 at 3.50-3.75%
    - 67% of respondents expect the 30Y mortgage rate to end 2022 at <7.00%, and all expect the 30Y mortgage rate to end 2023 at <7.00%
    - For the 2-year Treasury vs. 10-year Treasury (2s/10s) yield curve: 55% of respondents believe it will invert slightly more in 2022, while 38% of respondents believe it will invert markedly more in 2023
    - For the 3-month T-bill vs. 10-year Treasury yield curve: 50% of respondents believe it will invert slightly more in 2022, while 38% of respondents believe it will invert markedly more in 2023

Fiscal Policy

- Fiscal stimulus
    - 70% of respondents believe the (potentially) impending recession should deter further fiscal spending
    - 67% of respondents believe the government does not want to spend more to boost the economy, given the (potentially) impending recession
    - Looking at the so-called Inflation Reduction Act (IRA)
        - 71% of respondents believe it will not be budget deficit reducing
        - 80% of respondents believe it will not help lower inflation
    - 70% of respondents believe the government has already done too much, as fiscal (over)spending has been a main driver of inflation
    - 80% of respondents are concerned about another debt ceiling debate; all of respondents believe a divided government will increase the probability of debt ceiling debates
    - 90% of respondents do not believe either party is focused on reinstating a balanced budget
    - 91% of respondents believe the U.S. government could <u>not</u> actually default
    - Given the divided government, all of respondents expect further fiscal initiatives to be limited in nature
- Tax policy
    - None of respondents believe the Inflation Reduction Act will have a material impact on economic growth

Additional Survey Results Highlights: 1H22 (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 May 9 to 23): https://www.sifma.org/wp-content/uploads/2022/06/SIFMA-US-Economic-Survey-1H22.pdf

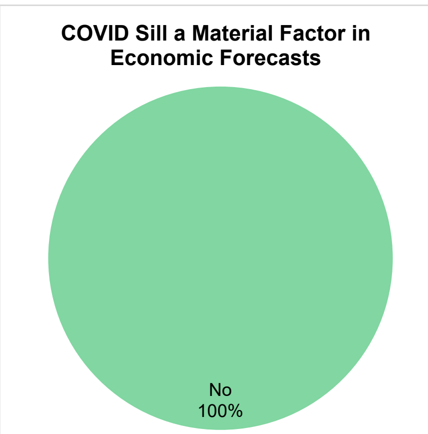
- **Economic Forecasts**
  - 40% of respondents are doubtful that the Fed can navigate a soft-landing, followed by 33% replying somewhat confident
- **Inflation Forecasts**
  - 93% of respondents believe we are at peak inflation levels (in terms of PCE)
  - 56% of respondents believe inflation is largely a supply driven problem and 44% demand driven
  - 50% of respondents expect supply chain disruptions to dissipate by 2H22, followed by 29% replying 1H23
  - With international conflict adding an additional layer of pressure to inflation, 47% of respondents expect relief from this pressure by 1H23, followed by 27% replying 2H23
- **Life after COVID**
  - In terms of approaching high-density activities, 69% of Roundtable economists expect them to return to pre-COVID norms while 25% expect them at increased but nowhere near pre-COVID levels
  - When gauging long lasting or permanent negative impacts from changed behaviors on the heavily COVID-impacted activities, 82% of respondents selected movie theatres, followed by 55% indicating public transportation and 36% hotels, airlines and plays/musicals
  - 70% of respondents believe proof of vaccination should be required for crowded events followed by return to offices (60% of respondents)
  - After states removed their general mask mandates for public spaces, some cities maintain mask requirements for public transportation. 62% of respondents believe the remaining cities will remove the latest safety protocols in 2H22 while 15% believe 1H22
  - 93% of respondents believe the Biden administration's appeal of the removal of federal mask requirements on planes and other public transportation will not be successful
  - 57% of Roundtable economists believe the development of the Merck and Pfizer antiviral pills will somewhat help accelerate the return to normal
- **Fed Actions**
  - All respondents expect the Fed to raise the target Federal Funds rate by 50 bps in June
  - 54% of respondents expect the Fed to raise the target Federal Funds rate by <200 bps by year end, followed by 38% expecting a 200 bps hike

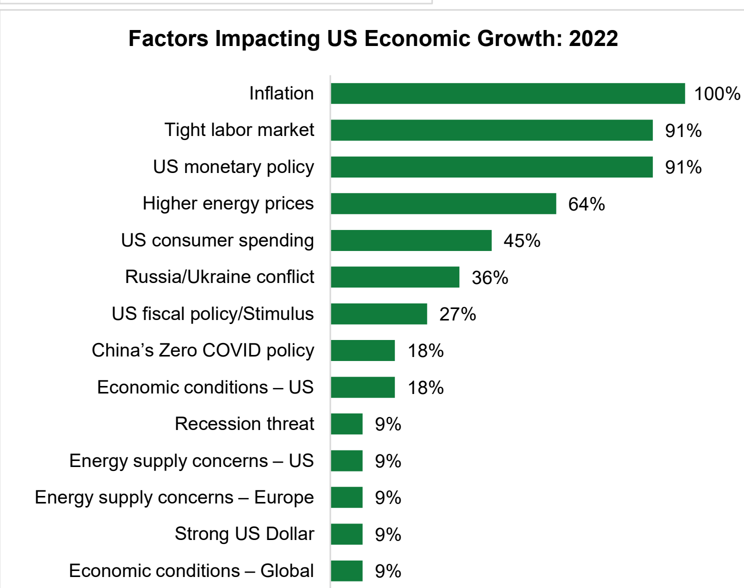
The Economy

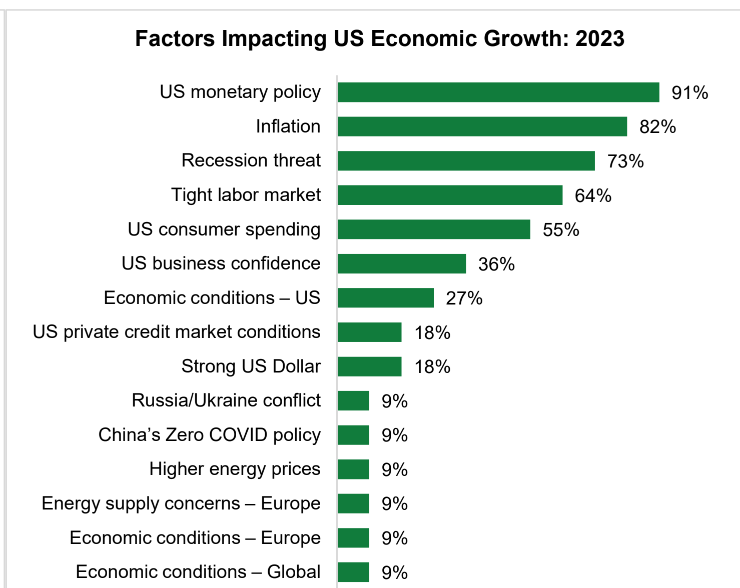
GDP Growth Expectations

As COVID moves out of pandemic to endemic stage – think annual boosters, like with flu shots – we surveyed our Roundtable on COVID's impact on economic estimates, as well as other factors driving economic models.

- None of respondents indicated COVID is still a material factor impacting their economic forecasts
- Key factors impacting economic growth, 2022: 100% inflation, 91% tight labor market, 91% monetary policy
- Key factors for economic growth, 2023: 91% U.S. monetary policy, 82% inflation, 73% recession threat



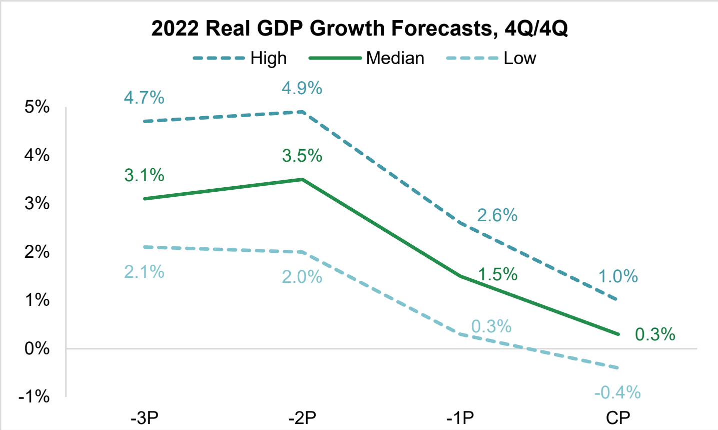


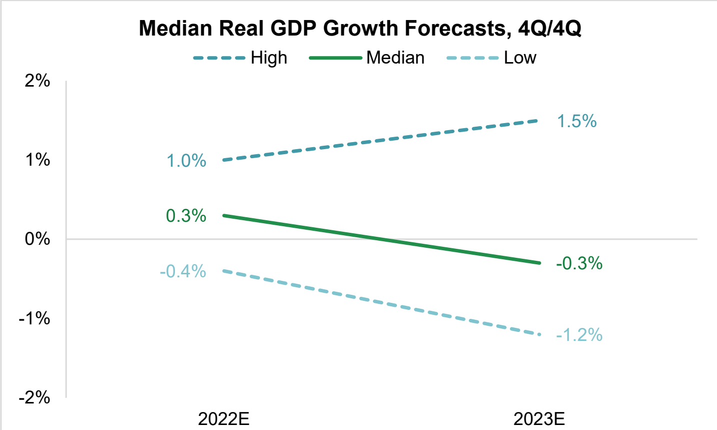


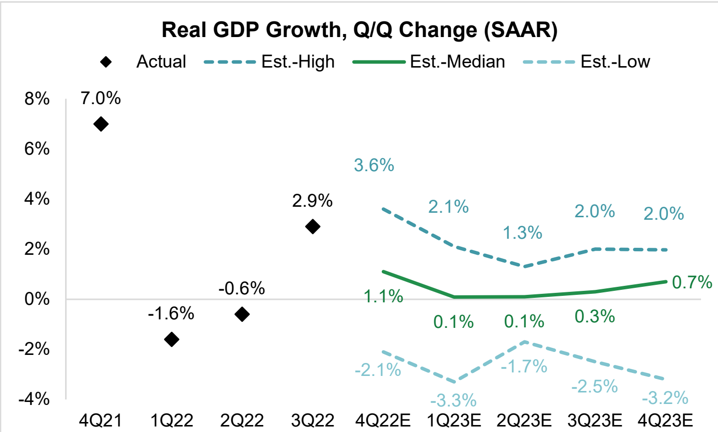
Full Questions: Is COVID still a material factor impacting your economic forecasts? What factors will have – or have already had – the greatest impact on US economic growth in full year 2022/2023? (ranked by % that listed a factor). Not selected: ('22) Nov elections, US priv credit market conditions, US bus confidence, Econ conditions–EU, Econ cond–China / ('23) Nov elec, energy supply concerns–US, US fiscal pol/stimulus, Econ cond–China

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

- Annual real GDP growth to finish 2022 at +0.3% (median forecast, 4Q/4Q), shifting to -0.3% in 2023
- On a quarterly basis, respondents forecast +1.1% real GDP growth in 4Q22, +0.1% in 1Q23, +0.1% in 2Q23, +0.3% in 3Q23, and +0.7% in 4Q23 (Q/Q, SAAR)



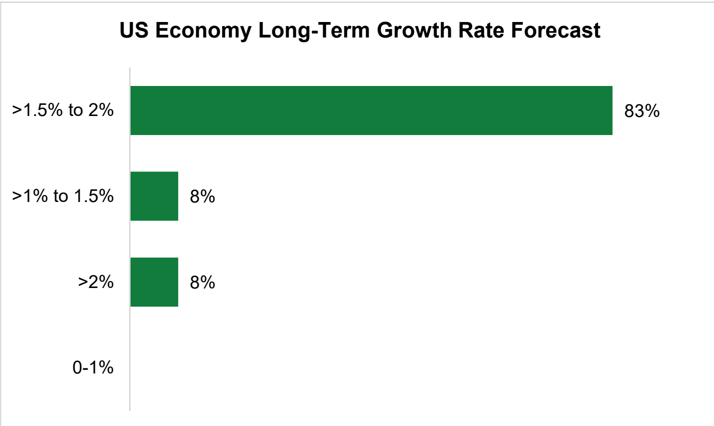


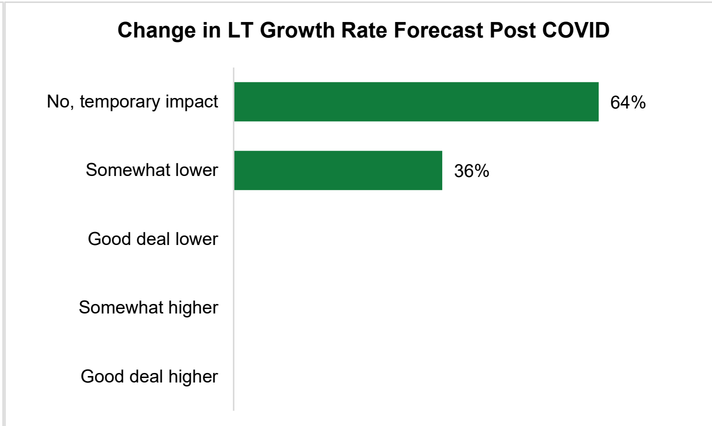


Source: Bureau of Economic Analysis, SIFMA Economic Advisory Roundtable
Note: SAAR = seasonally adjusted annual rate

The Economy

- In terms of the long-term GDP growth rate, 83% of respondents replied 1.5-2.0%
- 64% of respondents stated that their estimate had not changed post COVID



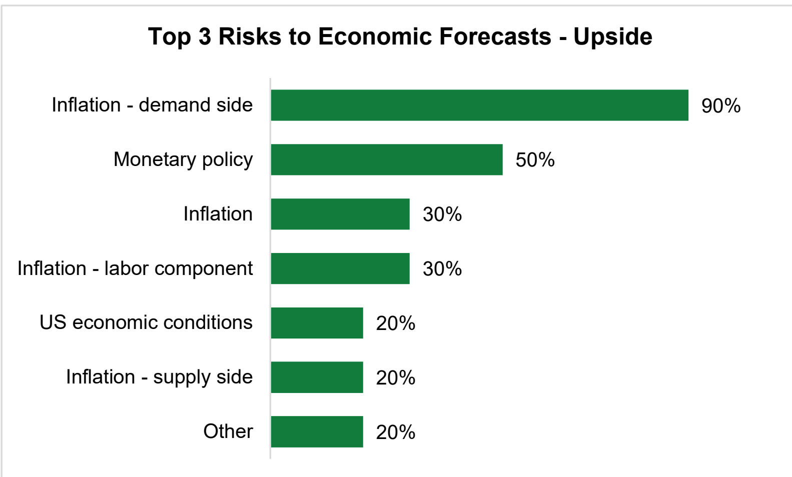


Full Question: What is your estimate of the long-term potential growth rate of the US economy?
Full Question: Has your estimate of the long-term potential growth rate of the US economy changed post-COVID?

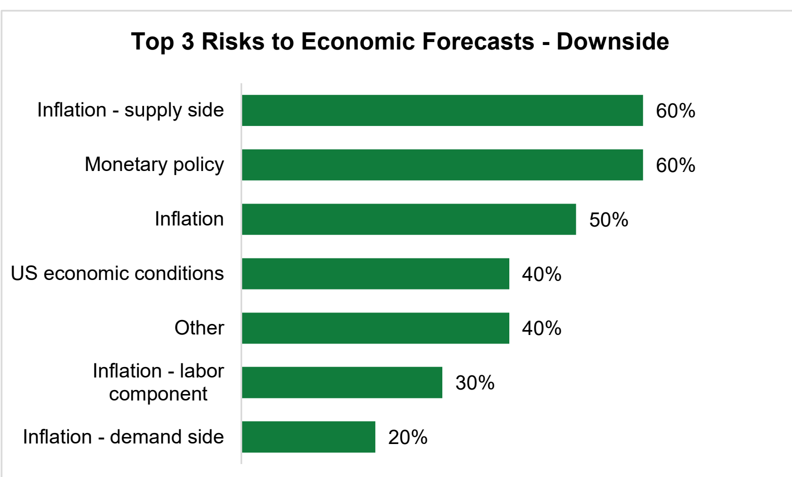
Risks to Economic Forecasts

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

- **Upside:** Inflation – demand side, monetary policy, and inflation



- **Downside:** Inflation – supply side, monetary policy, and inflation

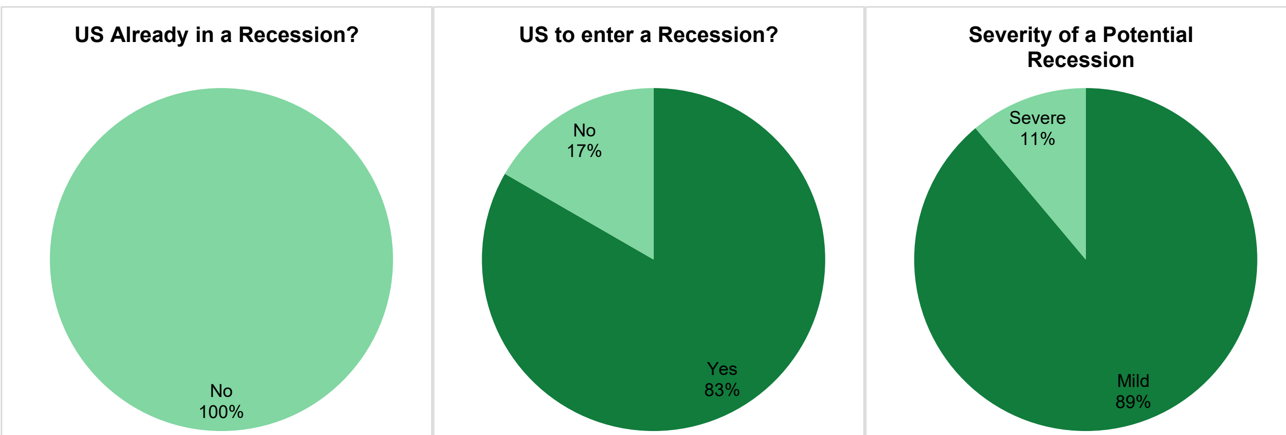


Full Question: Please list your top three upside/downside risks to your economic forecasts
Upside: inflation – demand side = consumer spending, fiscal stimulus; inflation – labor component = labor market, labor supply, wages/income; inflation – supply side = China's Zero COVID policy, Russia/Ukraine; US economic conditions = productivity growth, business investment; other = China reflates housing bubble, stronger equity market
Downside: inflation – supply side = energy crisis in EU, Russia/Ukraine, supply chain disruptions, China's Zero COVID policy, energy shock; US economic conditions = business investment, housing market, corporate profits; inflation – labor component =layoffs, unemployment; inflation – demand side = consumer spending; other = China geopolitical tensions/drag on global growth, financial system tensions

Recession Expectations

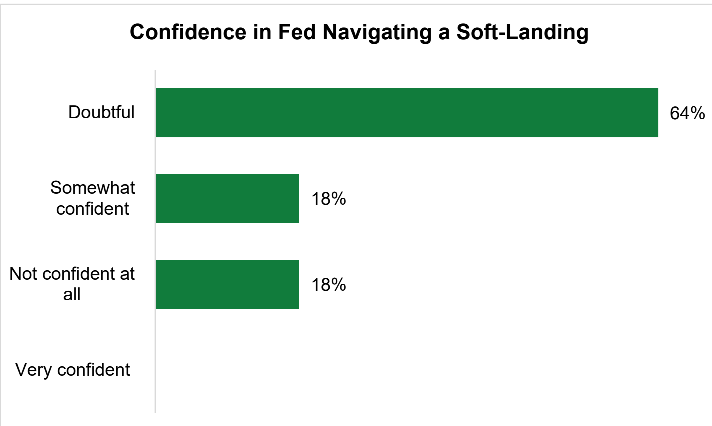
As detailed further in this report, the Fed will have to slow the economy to fight inflation. With that could come some pain, a Fed term for recession. As such, we asked our Roundtable economists their thoughts around a potential recession, if the Fed cannot navigate a soft landing (achieve its 2% inflation target without causing a recession).

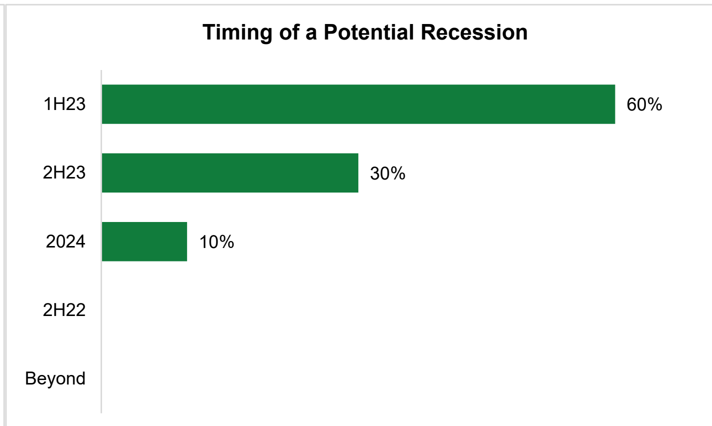
- None of respondents believe the U.S. is already in a recession
- 83% of respondents believe the U.S. will enter a recession
- If the U.S. enters a recession, 89% of respondents believe it will be mild

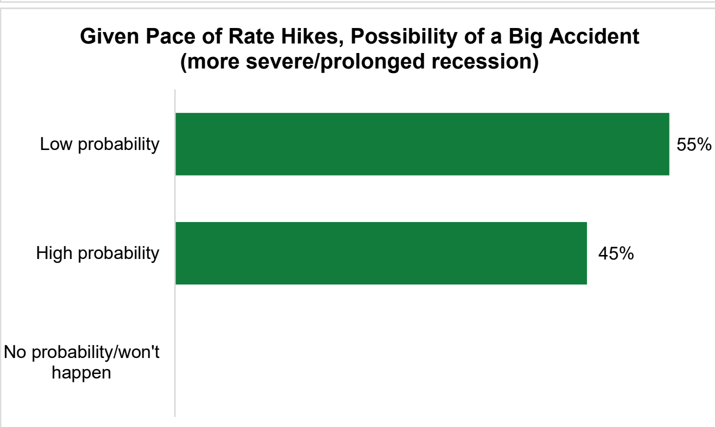


Full Question: Do you believe the U.S. is in a recession currently?
Full Question: Do you believe the U.S. will enter a recession?
Full Question: If you expect the U.S. to enter a recession, will it be mild or severe?

- The majority of respondents (82%) have low confidence in the Fed navigating a soft-landing – 64% doubtful, 18% not confident at all
- If the U.S. enters a recession, 90% of respondents believe it will occur in 2023 – 60% in 1H23, 30% in 2H23
- With the Fed raising rates at an unprecedented pace, respondents were a bit mixed on the probability of risking a big accident (a more severe or prolonged recession) – 55% low, 45% high







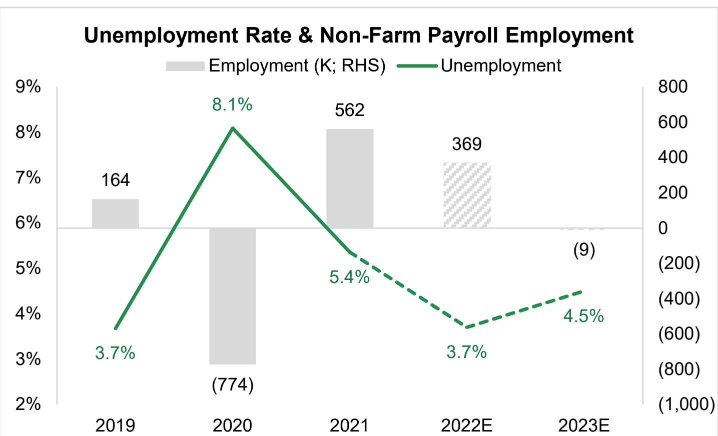
Full Question: How confident are you that the Fed can navigate a soft-landing, meaning achieve its inflation goal without causing a recession (or “pain” as referred to in Fed officials’ speeches)?
Full Question: If you expect the U.S. to enter a recession, when?
Full Question: With the Fed raising rates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

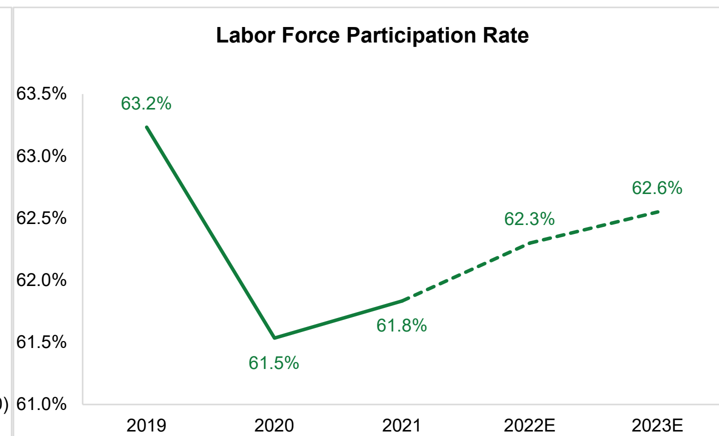
Employment and the Consumer

While we see life returning to "*normal*" post COVID, there are some lingering impacts on economic activity. One such impact is on the labor market, which the Fed is trying to cool. As of September, there were 10.7 million job vacancies, up from 10.3 million in August, +4.3% M/M. As of October, there were 6.06 million Americans reporting a position of unemployment, up from 5.75 million in September, +5.4% M/M. The unemployment rate ticked up to 3.7% in October – which may be a sign of monetary policy having its intended effect – from 3.5% in September. However, we have seen this story before when unemployment reversed course in August, only to decrease the following month.

And the labor force participation rate is also failing to show ongoing improvement, slowing to a three month low in October. At 62.2%, however, this is a marked improvement from a low of 60.2% in the aftermath of the COVID shutdown (April 2020). Nevertheless, there is more work to be done to return the rate to the pre-COVID 63% average. As such, we asked our Roundtable economists their expectations for the employment and consumer landscape.

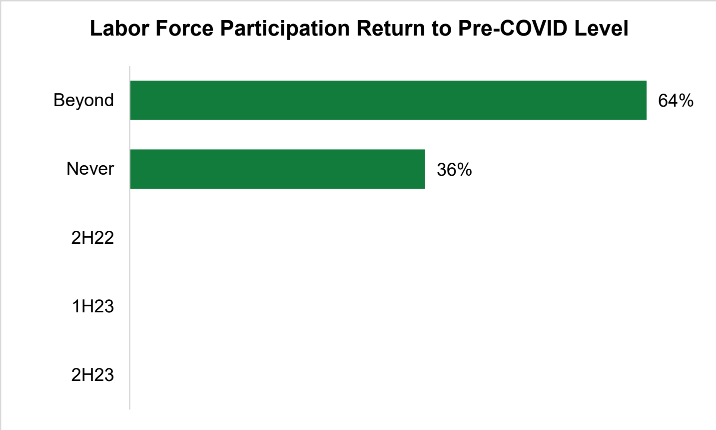
- Economists expect the unemployment rate to end 2022 at 3.7% and increase to 4.5% in 2023 (4Q average)
- Employment growth (average monthly change in non-farm payroll employment) is expected to average 369,000 in 2022 and -9,000 in 2023
- Respondents expect the labor force participation rate to increase to 62.3% in 2022 and 62.6% in 2023

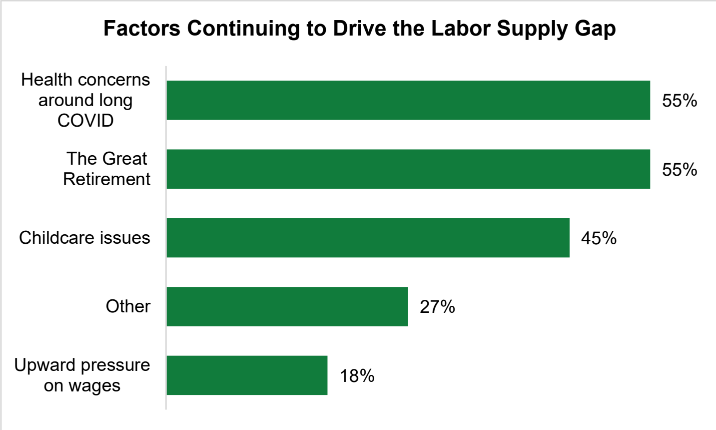


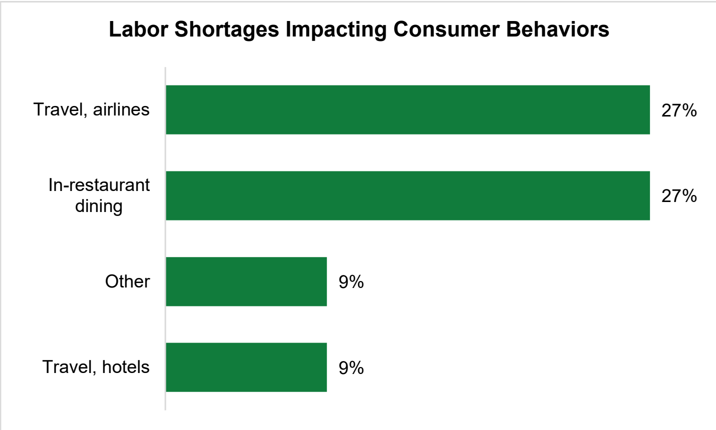


Source: Bureau of Labor Statistics, SIFMA Economic Advisory Roundtable
Note: Average monthly change for non-farm payroll employment, 4Q average for unemployment rate

- 64% of respondents expect the labor force participation rate to return to the ~63% pre-COVID average beyond 2023, with another 36% responding never
- The factors respondents believe continue to drive the labor supply gap are: health concerns around long COVID (55%), The Great Retirement (55%), and childcare issues (45%)
    - Other: Demographics/aging population, changes to legal immigration curtailed skilled foreign labor supply
- 27% of respondents believe labor shortage are impacting consumer behavior towards travel - airlines with another 27% indicating in-restaurant dining
    - Other: Hard to say whether impact is significant



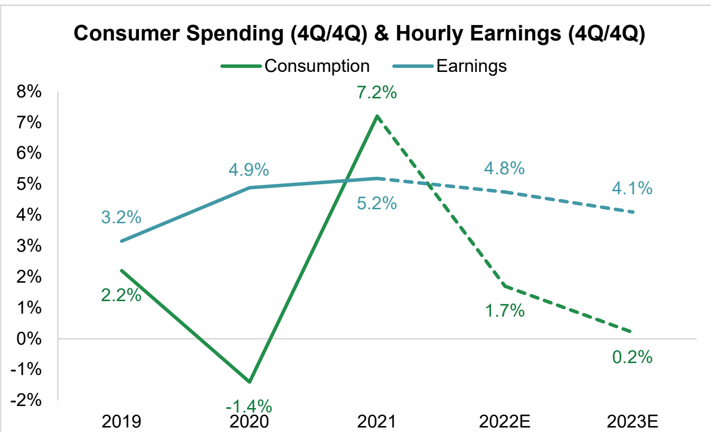


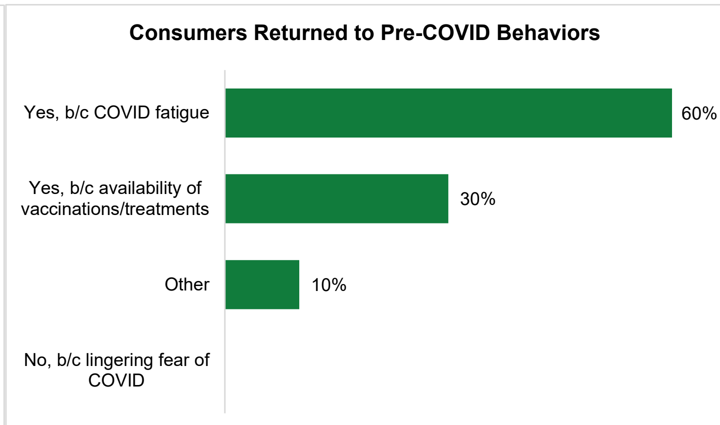


Full Question: When do you expect the labor force participation rate to return to the ~63% pre-COVID average? (62.2% in October 2022, 63.4% in February 2020)
Full Question: With 10.1 million job vacancies and 5.75 million Americans reporting a position of unemployment, what factors do you believe continue to drive the labor supply gap?
Full Question: Do you believe labor shortages are impacting consumer behavior towards?

In light of these unemployment expectations and lingering impacts on consumer behavior, our survey dug down further into consumer behavior and spending patterns.

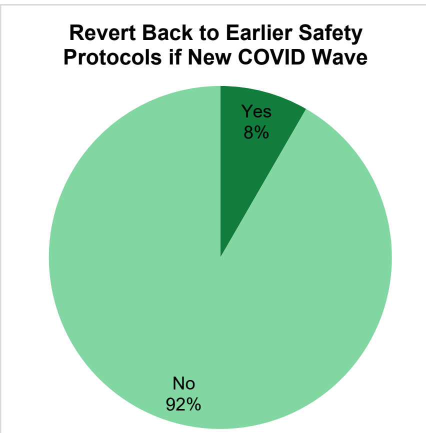
- Respondents expect real personal consumption growth to end 2022 at +1.7% and +0.2% in 2023 (4Q/4Q)
- Average hourly earnings growth is expected to decrease +4.8% in 2022 and +4.1% in 2023 (4Q/4Q)
- 60% of respondents believe consumers have returned to pre-COVID behaviors because of COVID fatigue, followed by 30% because of the availability of vaccines and treatments
    - Other: Combination of vaccination/treatment availability and COVID fatigue

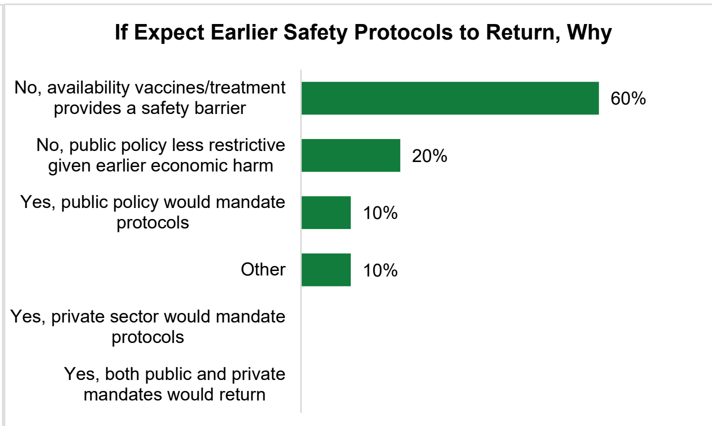




Source: Bureau of Economic Analysis, SIFMA Economic Advisory Roundtable
Full Question: Have consumers returned to pre-COVID behaviors?

- 92% of respondents are <u>not</u> concerned that another significant wave of COVID would send us back to earlier safety protocols (mask requirements, vaccine passports, etc.), negatively impacting consumer behavior
- Explaining the above, 60% of respondents replied no, as vaccines/treatments provide a safety barrier
  - Other: People coming around to the fact masks are ineffective in prevention of the spread of COVID – government needs to step back and let people decide the best course of action for themselves



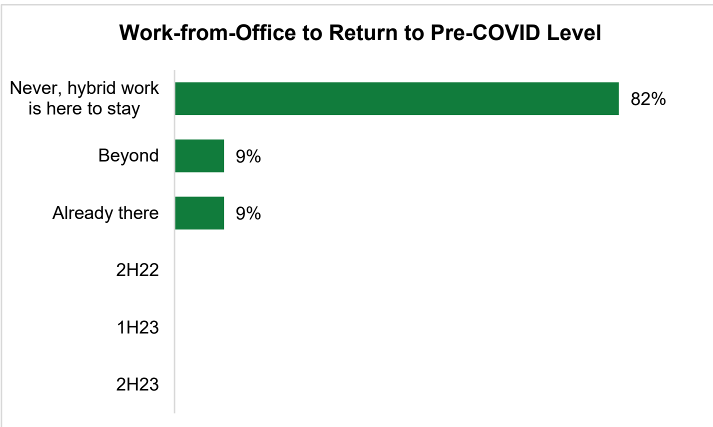


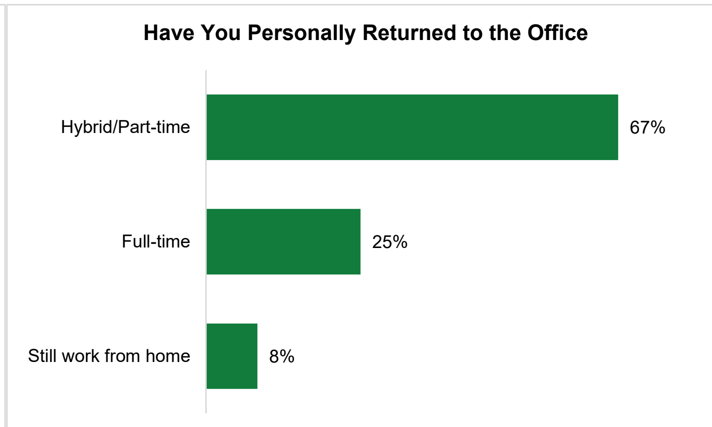
Full Question: Are you concerned that another significant wave of COVID would send us back to earlier safety protocols (mask requirements, vaccine passports, etc.), which would once again negatively impact consumer behavior?
Full Question: Based on your response above, please explain why you chose your response

Lingering COVID Impacts

While we have passed through the worst of COVID (knock on wood), lingering impacts on economic activity remain. As such, we polled Roundtable economists on a few areas still in search of normalcy.

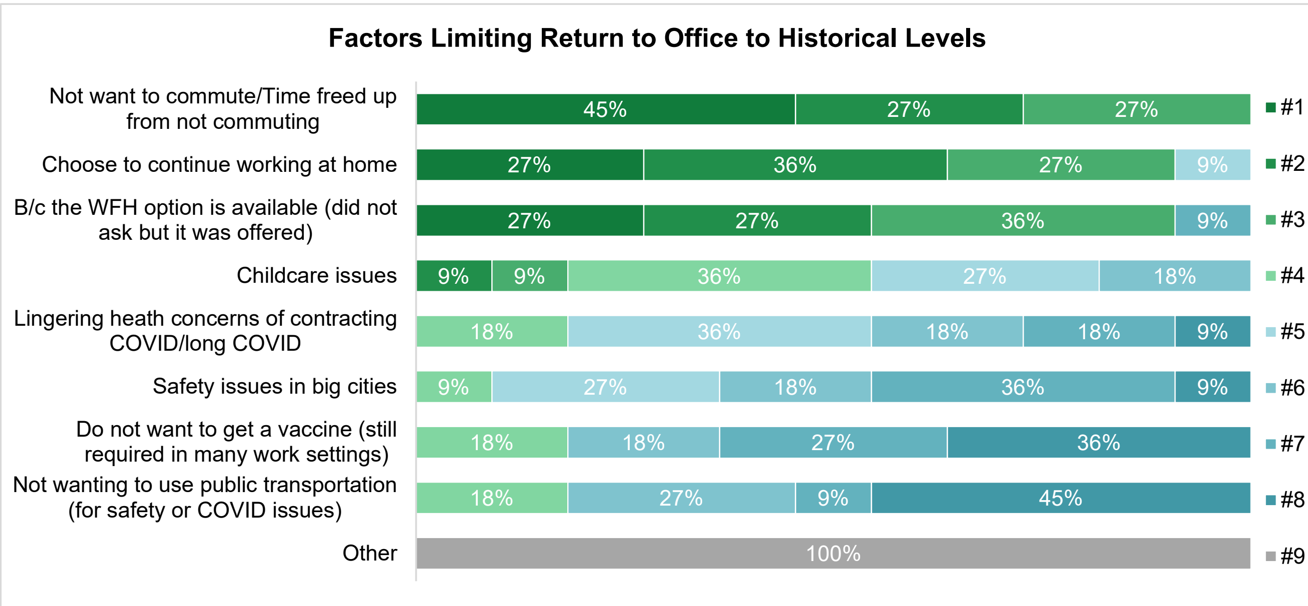
- 82% of respondents never expect work-from-office to return to pre-COVID norms, indicating hybrid work is here to stay
- 67% of respondents indicated they have personally returned to the office on a hybrid/part-time schedule





Full Question: When do you expect work-from-office to return to pre-COVID norms?
Full Question: Have you personally returned to the office?

- The key factors limiting return to offices to historical levels: not want to commute/time freed up from not commuting, choose to continue working at home, and because WFH option is available (did not ask but it was offered)



Full Question: Which factors do you believe are limiting return to offices to historical levels? (Factors listed in order of average rank)

Monetary Policy

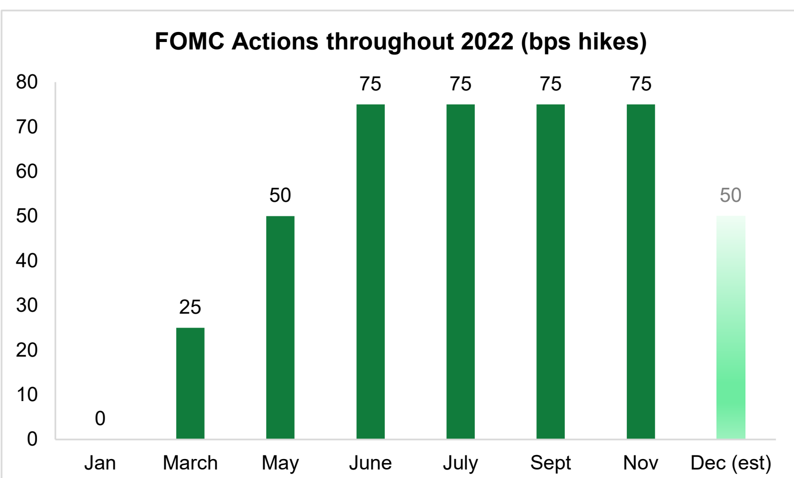
Fed Actions

As market participants often say, it is all about the Fed. After the latest November FOMC meeting, Chair Powell said, “The Committee anticipates that ongoing increases in the target range will be appropriate in order to attain a stance of monetary policy that is sufficiently restrictive to return inflation to 2% over time. In determining the pace of future increases in the target range, the Committee will take into account the cumulative tightening of monetary policy, the lags with which monetary policy affects economic activity and inflation, and economic and financial developments.”

What does this mean for actions and timing?

In this section, we asked our Roundtable economists to drill down into everything monetary policy – rate hikes, recession probability, inflation (and inflation, and more on inflation), and long-term rate expectations. Just as inflation remains at a near four-decade high (headline CPI +7.7% Y/Y in October), the Fed’s actions have been unprecedented. Since the start of the year, the Fed has raised rates at six of the past seven FOMC meetings for a total of 375 bps in tightening, taking the upper bound of the Federal Funds rate to 4%. Looking out to the final meeting of the year, the majority of investors anticipate a smaller rate hike of 50 bps come December 13-14.

This would make the tally seven rate hikes for a total of 425 bps in one year.



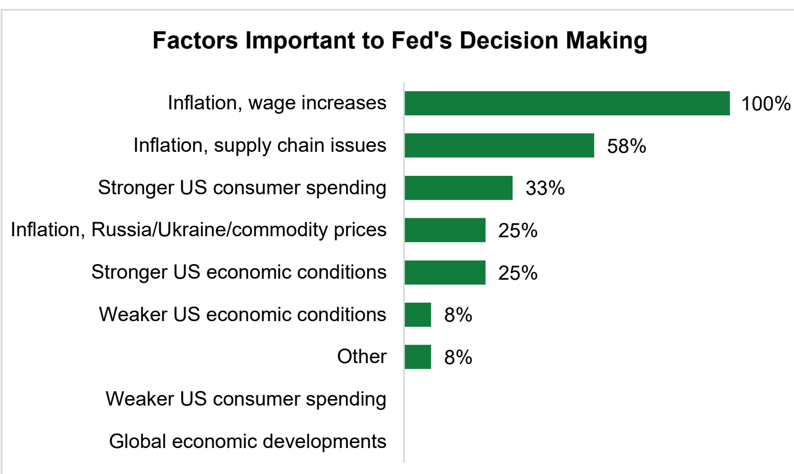
Source: Bloomberg

This activity – and volatility – brings markets to think about the future in terms of: pause, pivot, and/or pain. While U.S. economic activity has remained “modest”, as our Roundtable Chair says, growth remains fragile at best with the consumer, business investment, and housing all losing momentum. The ongoing pathway to higher rates has already had an impact on the real economy, squeezing borrowing costs and pressuring consumers. This leaves economists and markets wondering what the Fed will do not only at the December meeting but throughout 2023.

- Will the Fed pivot, i.e. slow it’s aggressive pace? It seems like consensus believes this will happen in December.
- Will the Fed pause? The first FOMC meeting in 2023 will be on January 31 to February 1.[5] Will, and if so when will, the Fed take a break and not raise rates during one of the meetings?
- When will the pain begin? Of note, when you hear a Fed representative say pain, it means recession. Unfortunately for us, the Fed needs to slow the economy to bring down inflation.

We asked our Roundtable economists the most important factors to the Fed’s decision making. The top factors were:

- Persistently higher inflation, due to wage increases and the tight labor market (100%)
- Persistently higher inflation, due to supply chain issues (58%)
- Stronger U.S. consumer spending (33%)

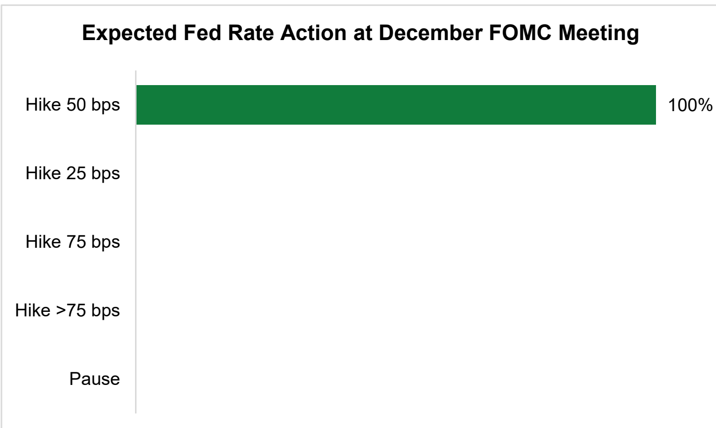


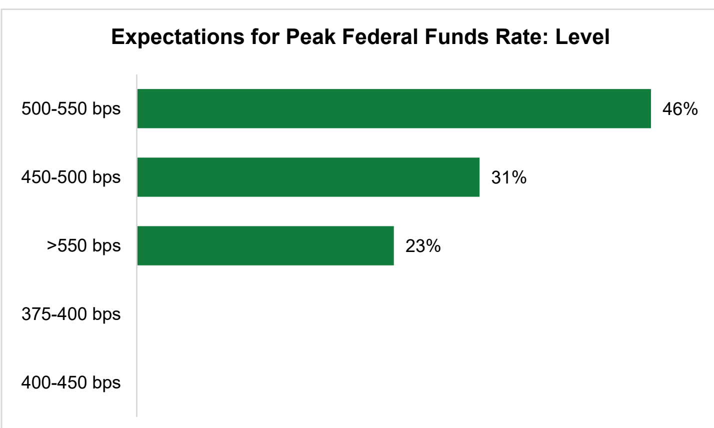
Full Question: Which of the following factors do you think are the most important to the Fed’s decision making? (Factors listed in order of average rank)

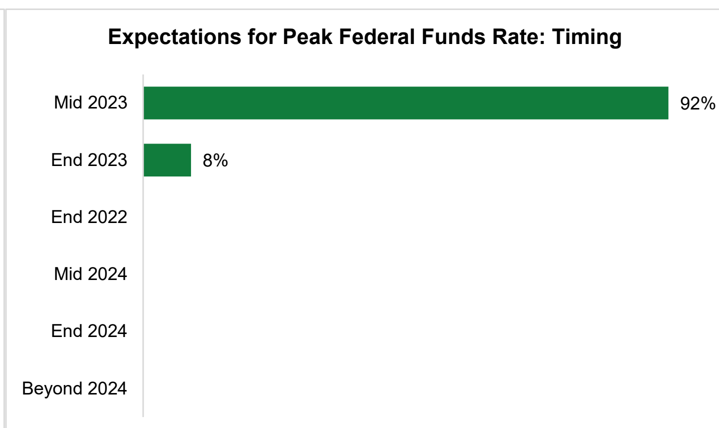
[5] FOMC 2023 meeting schedule: Jan 31-Feb 1, March 21-22, May 2-3, June 13-14, July 25-26, Sept 19-20, Oct 31-Nov 1, Dec 12-13

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

- All of respondents expect the Fed to raise the target Federal Funds rate by 50 bps in December
- 46% of respondents expect the peak rate will be 500-550 bps
- 92% of respondents expect the peak rate to be achieved by mid 2023





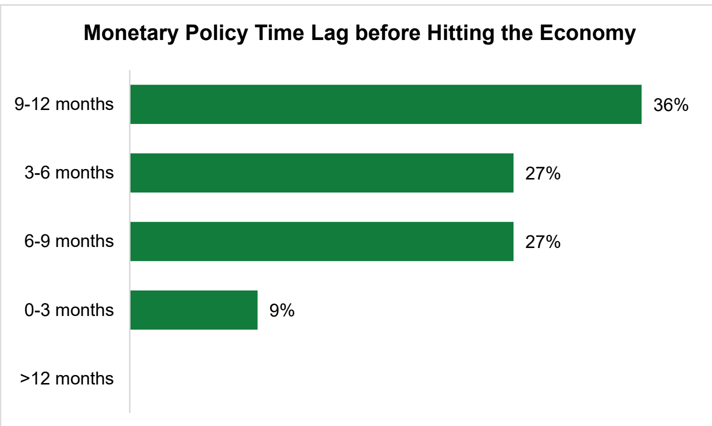


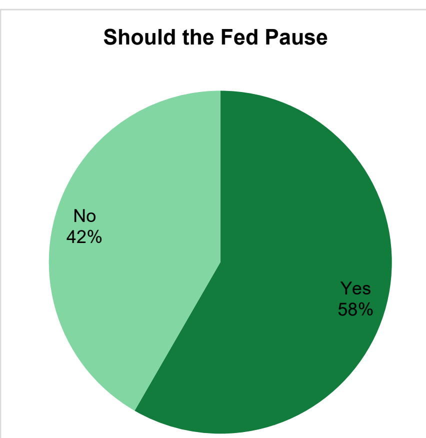
Full Question: After another 75 bps move in November, the Fed has raised the Federal Funds rate 6 times for an aggregate of 375 bps, what action do you expect the Fed to take in December?
Full Question: What do you believe will be the peak rate?
Full Question: When do you expect that will be achieved?

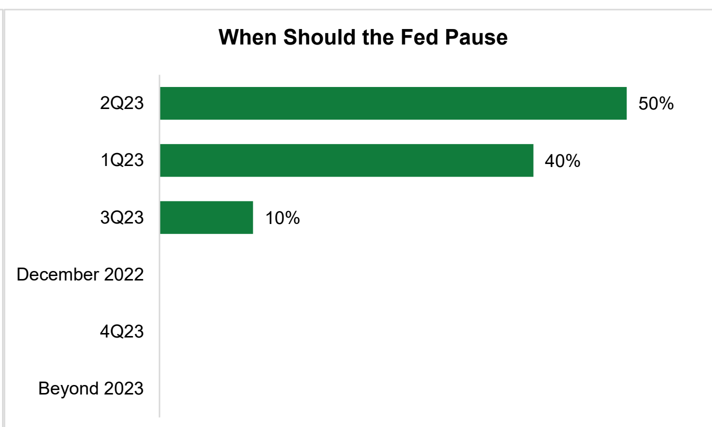
Monetary Policy

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

- 36% of respondents believe the lag time is 9-12 months
- 58% of respondents think the Fed should pause and assess the impact of earlier rates hikes
- 50% of respondents believe this pause should take place in 2Q23



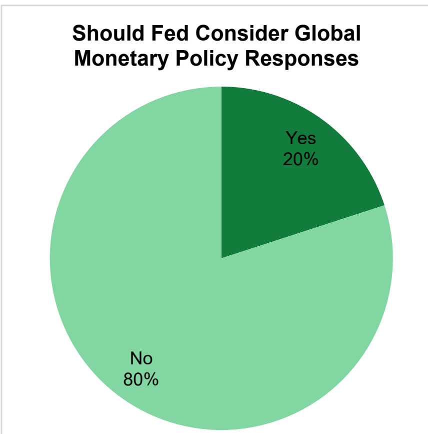




Full Question: Monetary policy comes with a lag time before working its way into the economy. What is that lag time?
Full Question: Should the Fed pause and assess the impact of earlier rate hikes?
Full Question: When should they take this pause?

Given the moves by the Bank of England and European Central Bank as examples – both hiked rates 75 bps last month – we asked our Roundtable economists if the Fed should be considering global monetary policy responses when making its decisions on its own policy moves.

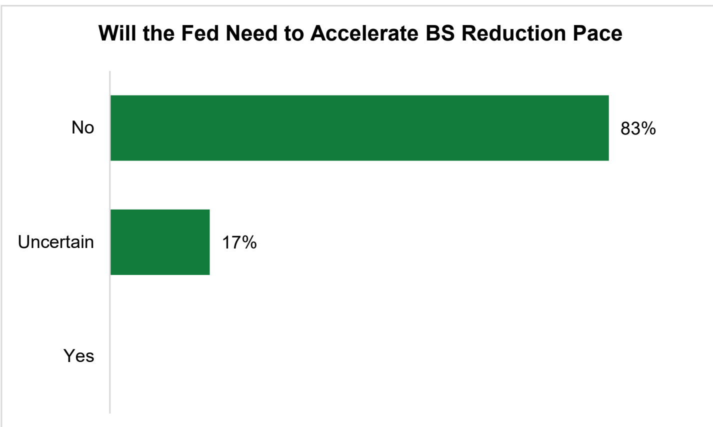
- 80% of respondents replied no

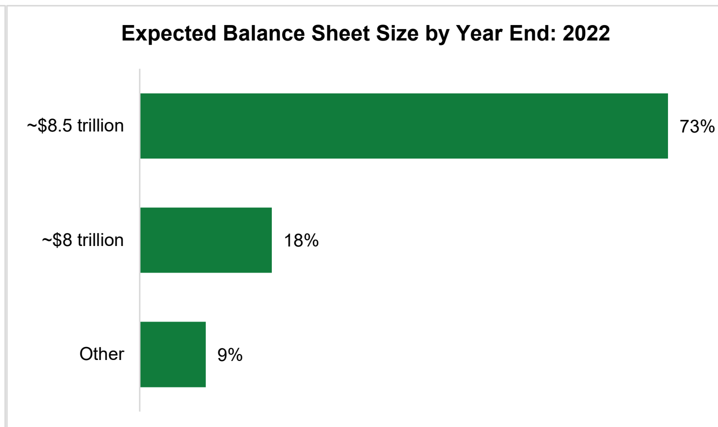


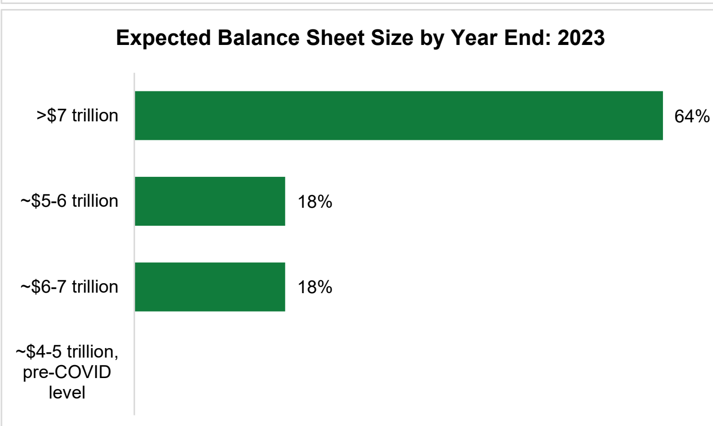
Full Question: Given the moves by the Bank of England and European Central Bank as examples – both hiked rates 75 bps – should the Fed be considering global monetary policy responses when making its decisions on its own policy moves?

The Fed continues the drawdown of the balance sheet, beginning in June. At the writing of the survey, the Fed's balance sheet was at $8.7 trillion (up from $4.2 trillion in February 2020). We gathered our economists' thoughts on the reduction of and the end game for the balance sheet.

- 83% of respondents expect the Fed will not need to accelerate the pace of balance sheet reduction
- 73% of respondents expect the balance sheet to be roughly $8.5 trillion by the end of 2022
- 64% of respondents expect the balance sheet to still be over $7 trillion by the end of 2023



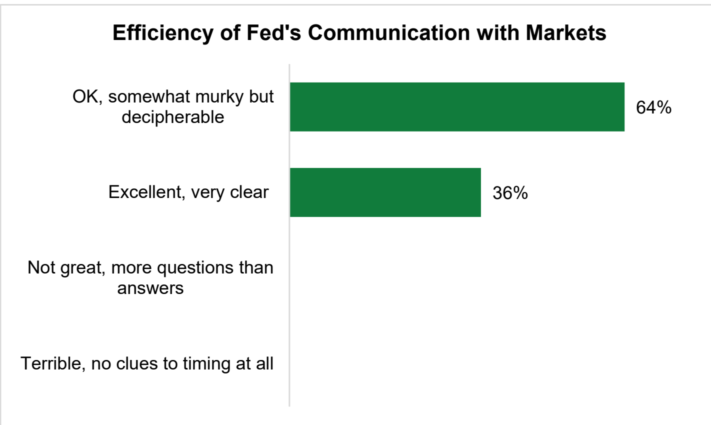


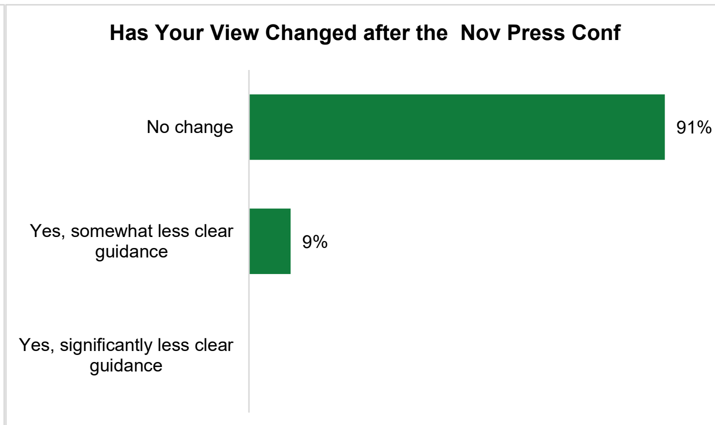


Full Question: As the Fed continues its drawdown of the balance sheet, do you expect the Fed to accelerate the stated pace of reductions
Full Question: Given your earlier expectations, what do you expect the size of the balance sheet to be at the end of: 2022/2023 (currently $8.7 trillion, up from $4.2 trillion in February 2022)

Finally, we asked respondents to rate the efficiency of the Fed's communication with markets around its timeline for monetary policy adjustments. We also asked if their view has changed since the November FOMC meeting, where Chair Powell emphasized a return to meeting-by-meeting policy decisions.

- 64% of respondents indicated the communication is somewhat murky but decipherable
- 91% of respondents replied no change to their view of the effectiveness of the Fed's communication



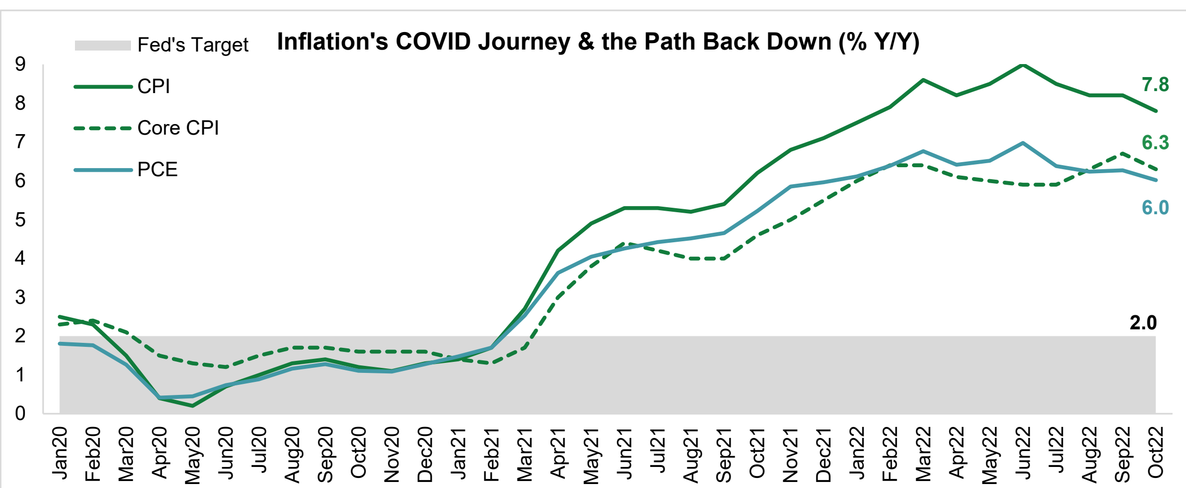


Full Question: In general, how do you rate the efficiency of the Fed's communication with markets around its timeline for monetary policy adjustments (raising rates, size of rate increases, selling assets)?
Full Question: In the aftermath of the November press conference with Chair Powell emphasizing a return to meeting-by-meeting policy decisions, has your view of the Fed's communications changed?

Inflation Expectations

Inflation. Rates. Recession. But really, it is inflation, inflation, inflation. Before we recap what our Roundtable economists had to say on inflation, we remind readers of the current state of inflation in the U.S. We highlight where we are with inflation metrics and how this compares to peak levels, as well as show the (long) path back down to the Fed's target of around 2%.

- **CPI +7.8%** (Y/Y, as of October)
    - Prior month +8.2%
    - Peak +9.0% in June
    - Path to 2% = -5.8 pps
- **Core CPI +6.3%** (Y/Y, as of October)
    - Prior month +6.7%
    - Peak +6.7% in September
    - Path to 2% = -4.3 pps
- **PCE** (the metric used by the Fed to set monetary policy) **+6.0%** (Y/Y, as of October)
    - Prior month +6.2%
    - Peak +7.0% in June
    - Path to 2% = -4.0 pps

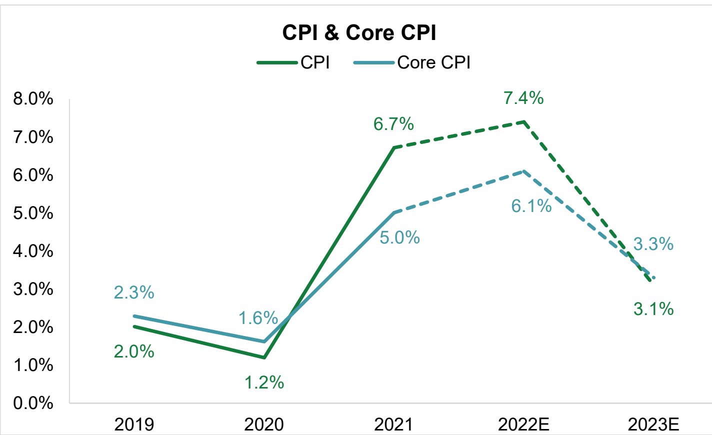


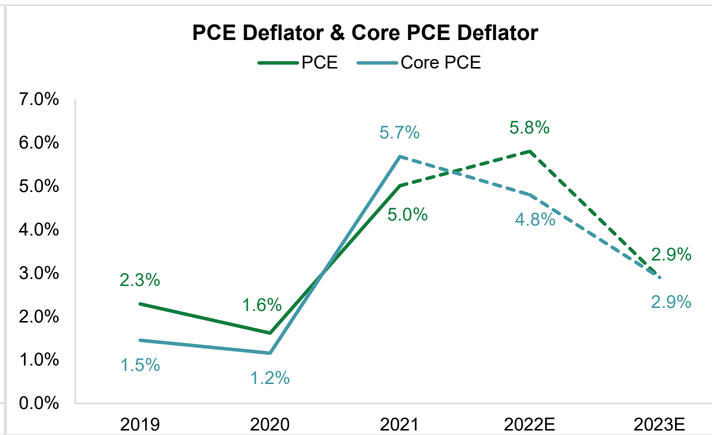
Source: Bloomberg, SIFMA estimates

Economists and market participants – and really every single person on the street – continue to watch inflation reports (next release dates: CPI, Core CPI December 13; PCE in January). Inflation is the metric the Fed is watching to determine when it should shift its policy actions.

Our Roundtable had the following expectations for inflation forecasts:

- CPI: +7.4% to end 2022, +3.1% to end 2023 (2021 actual 6.7%)
- Core CPI: +6.1% to end 2022, +3.3% to end 2023 (2021 actual 5.0%)
- PCE: +5.8% to end 2022, +2.9% to end 2023 (2021 actual 5.5%)
- Core PCE: +4.8% to end 2022, +2.9% to end 2023 (2021 actual 4.6%)



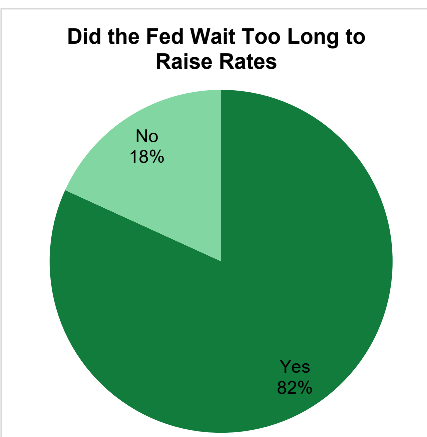


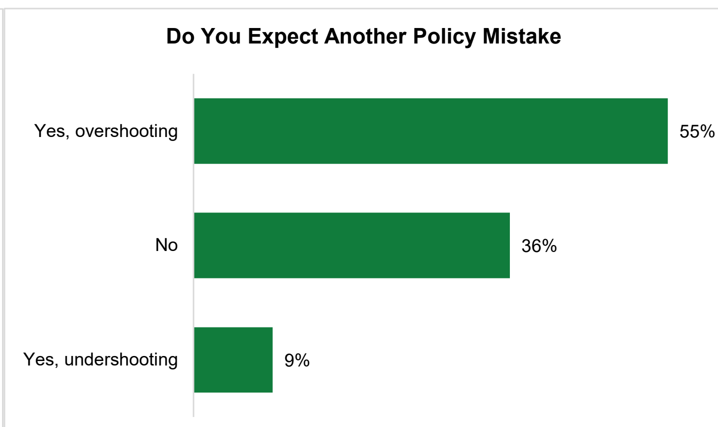
Source: Bureau of Economic Analysis, SIFMA Economic Advisory Roundtable

Many economists and market participants have been discussing whether or not inflation has peaked. Our economic panel representatives – all members of this Economist Roundtable, including our Chair – at our Annual Meeting took a different stance. They were not placing a lot of weight on whether inflation has peaked or not but whether inflation remains elevated beyond the Fed's earlier expectations. Headline CPI has come down from 9.0% a few months ago to 7.8% in October; Core CPI now at 6.2% versus its 6.7% peak in September (but September had actually ticked up from the prior month, making it difficult to call Core CPI's down path a sustainable trend). PCE stood at 6.0% in October, down from its 7.0% peak. We may not be at peak levels, but these levels are still extremely high. Not quite Cabbage Patch Dolls-MTV-shoulder pads-1980 high, but at decade high levels.

The point the economic panel was making is that the peak or not discussion misses the mark. The inflation rate needs to come down from decade highs to the Fed's 2% target. As such, we asked our economists about inflation levels and the Fed's actions.

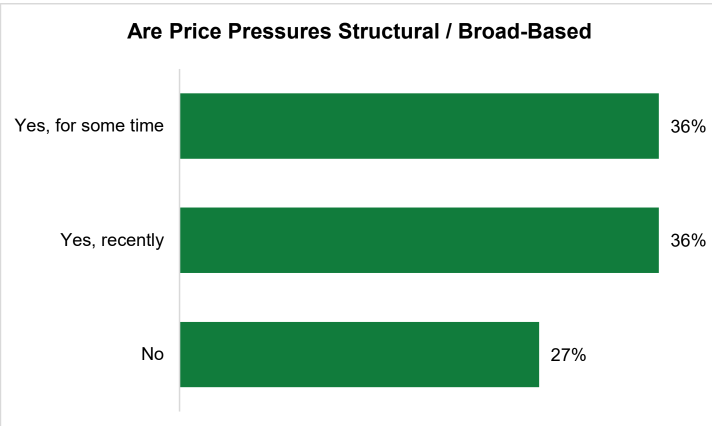
- 82% of respondents believe the Fed waited too long to raise rates, allowing inflation to get out of control
- 55% of respondents indicated the Fed is poised to make another mistake in tackling inflation, by overshooting

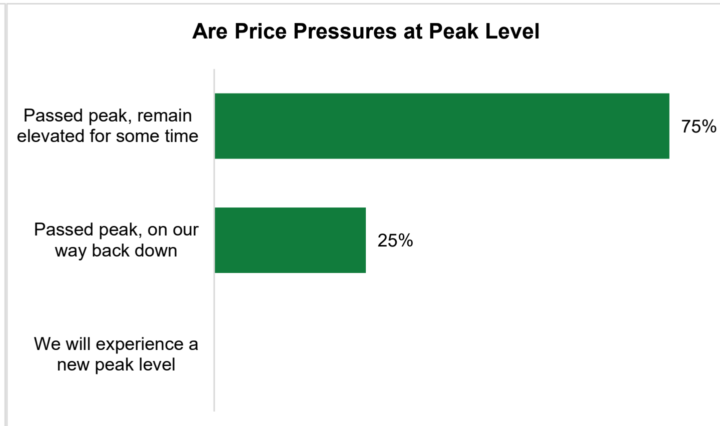




Full Question: Did the Fed wait too long to raise rates and "allowed" inflation to get out of control?
Full Question: Are you concerned the Fed is poised to make another mistake when it comes to tackling inflation?

- 73% of respondents believe price pressures have become more structural or broad-based throughout the economy, but are split whether this has been the case for some time or a more recent event, 36.4% each
- 75% of respondents note price pressures have passed peak levels but will remain elevated for some time

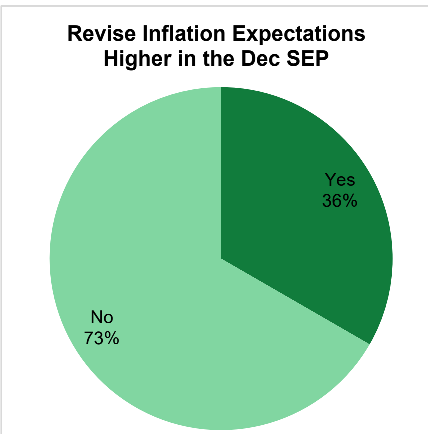


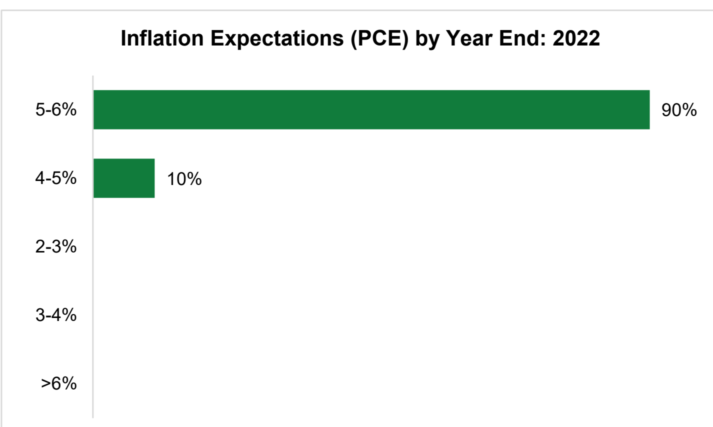


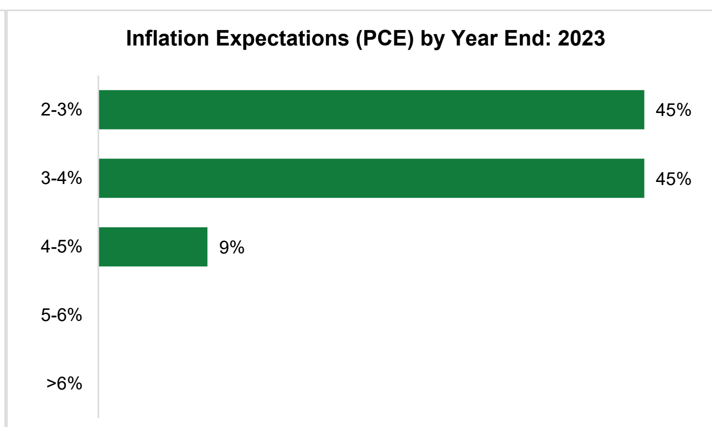
Full Question: With inflation pressures at a near four-decade high (CPI 7.7% as of October), the Fed is concerned prices pressures have become more structural or broad-based throughout the economy. Do you agree?
Full Question: With the PCE at 6.2% as of September – down from the June high of 7.0% but still at levels not seen since the early 1980s – how do you asses price pressures?

Yes, the Fed waited too long. Yes, we're down from the peaks but still have a long way to go. Where do we go from here? We asked our Roundtable economists.

- 73% of respondents believe the Fed will not materially revise higher its expectations for inflation in the December Summary of Economic Projections (SEP)
- For 2022, the inflation rate – in terms of the PCE – is expected to be 5-6% (90% of respondents)
- For 2023, the inflation rate – in terms of the PCE – is expected to be 2-3% or 4-3% (45% of respondents each)



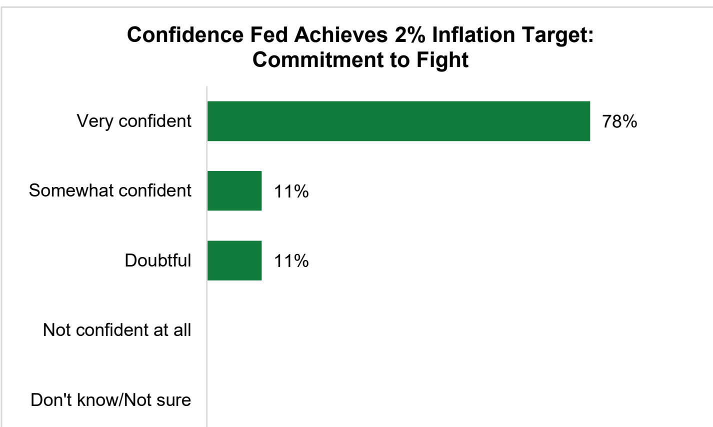


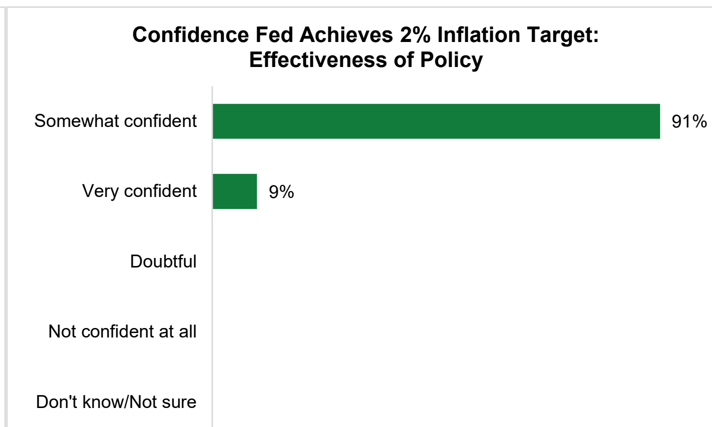


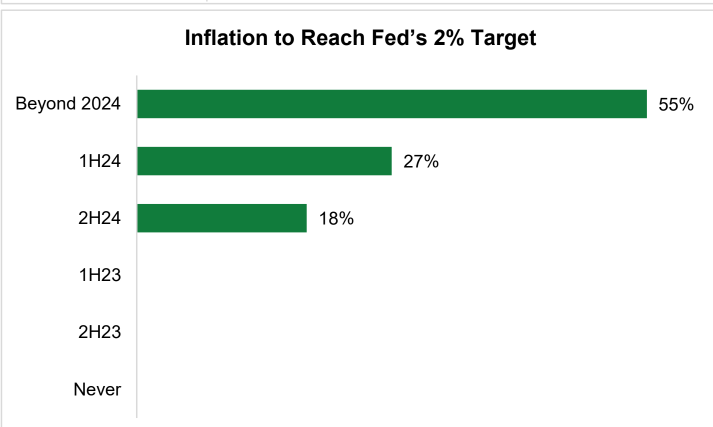
Full Question: Given the current level of inflation, will the Fed materially revise higher its expectations for inflation in the December Summary of Economic Projections?
Full Question: Given your assessment above, where do you see the inflation rate, in terms of the PCE figure, by the end of: 2022/2023

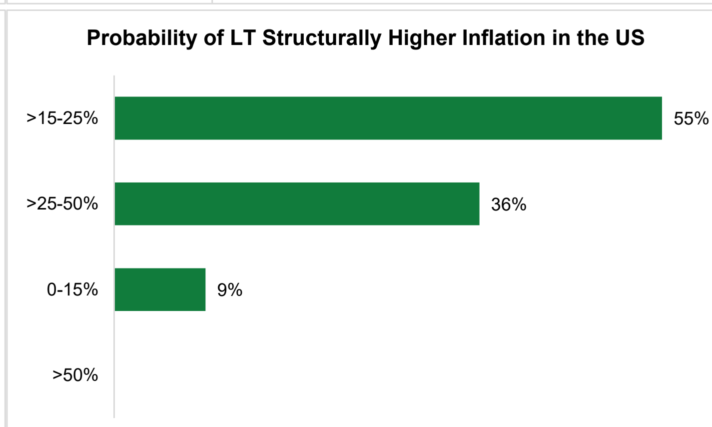
The Fed has vowed to do whatever it takes to rein in inflation. Are our Roundtable economists confident the Fed can achieve its 2% goal in a sustainable way?

- Based on the Fed's commitment to the fight, 78% of respondents are very confident
- Based on the effectiveness of the Fed's policy, 91% of respondents are somewhat confident
- 55% of respondents expect inflation will not reach the Fed's preferred 2% target until beyond 2024
- 55% 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)





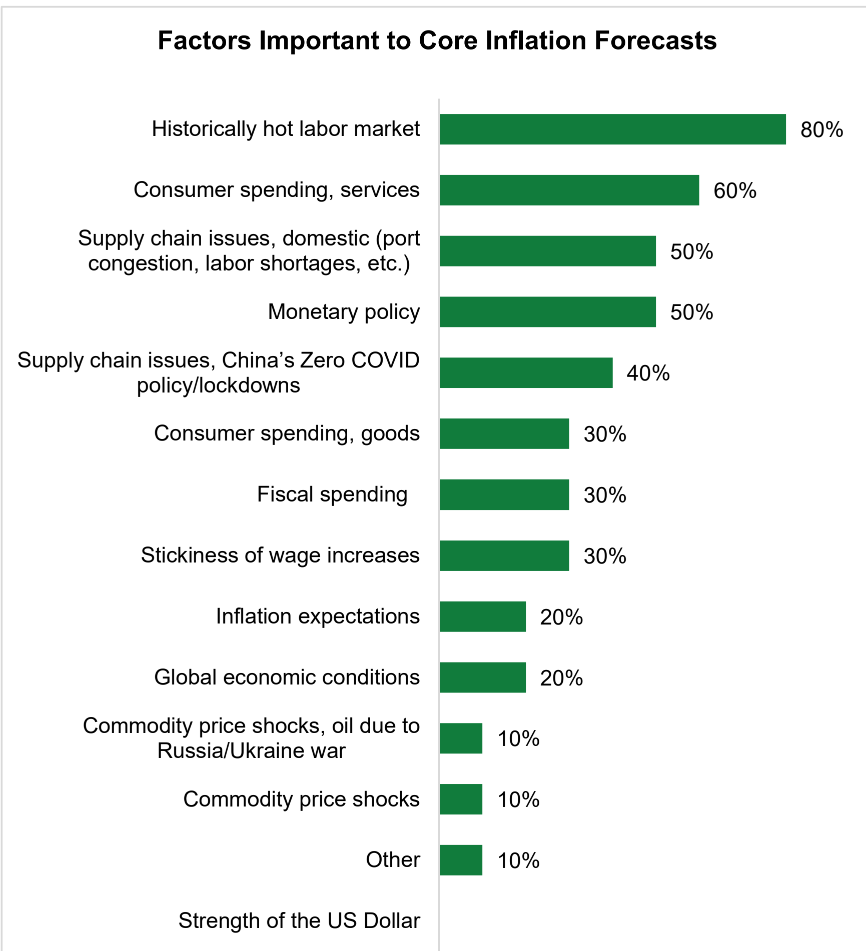




Full Question: The Fed has vowed to do whatever it takes to rein in inflation. How confident are you the Fed can achieve its 2% goal in a sustainable way? Given: (a) the Fed's commitment to the fight and (b) the effectiveness of the Fed's policy
Full Question: When do you expect inflation to reach the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

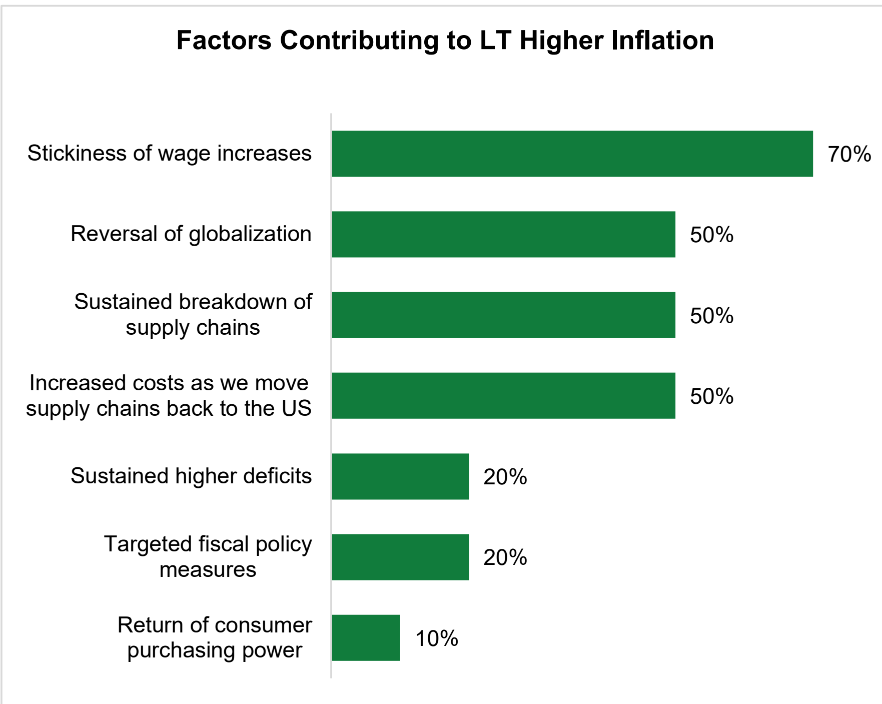
- Historically hot labor market, 80%
- Consumer spending on services, 60%
- Domestic supply chain issues (port congestion, labor shortages, etc.), 50%
- Monetary policy, 50%
- Other: Rent and owners' equivalent rent (OER) inflation to exert upward pressure on core inflation



Full Question: What are the most important factors in your outlook for core inflation?

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

- Stickiness of wage increases, 70%
- Reversal of globalization, 50%
- Sustained breakdown of supply chains, 50%
- Increased costs as we move supply chain back to the U.S., 50%

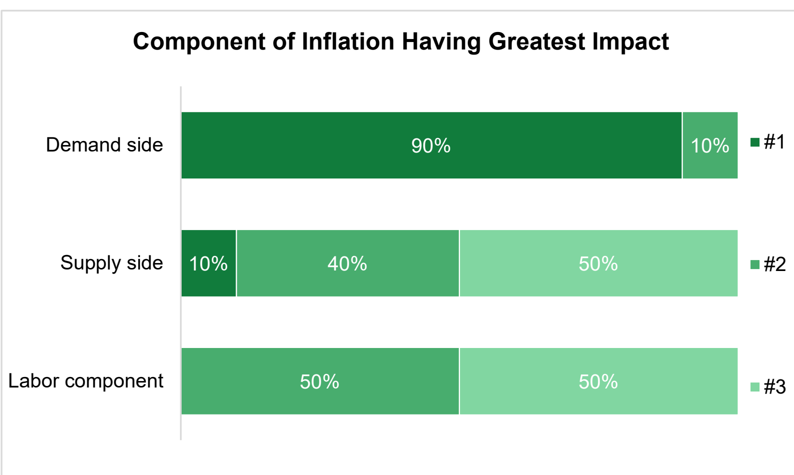


Full Question: What factors do you believe could push long-term inflation higher? (Ranked by percentage of economists that listed a factor)

Inflation is tricky. There are multiple components that go into the inflation equation, and, unfortunately, all are pushing on the aggregate inflation rate today. The complication for the Fed is that traditional monetary policy measures are less effective in impacting some aspects of inflation, particularly the supply side components. For example, Fed officials cannot go to the Ports of Los Angeles and Long Beach (LA/LB) and unload boxes to speed up the supply chain. In this next section, we attempt to break down the inflation equation, analyzing each of the three components:

Before we begin, we asked our Roundtable economists 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: 90% responded #1 factor
- Supply side: 50% responded #1 or #2 factor
- Labor component: split between #2 and #3 factors



Full Question: Which component of inflation do you believe has had the greatest impact?

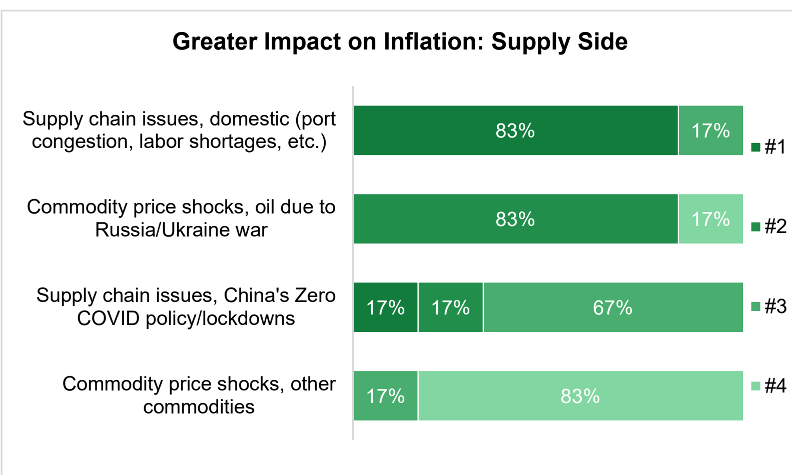
The Supply Side

We first look at the supply side component of inflation. What has not gone wrong here? First came COVID. This caused domestic supply chain issues – labor shortages for truck drivers, in warehouses, and at the ports – causing shipping delays, port congestion (remember we when used to count the ships in queue off of the Ports LA/LB?), and inventory shortages. COVID also brought to light our reliance on China for almost everything. President Xi's Zero COVID policy – leading to consistent lockdowns of key supply chain cities with no warning – caused and continues to cause ongoing supply chain disruptions. The surge in consumer demand from the reopening of economies post the COVID peak drove price shocks in multiple commodities. Then, Russia invaded Ukraine at the start of this year, causing oil and gas price shocks across the globe.

Not all of these aspects have been solved, nor do they appear to be facing near term resolution. And the Fed cannot fix supply chain issues or end the Russia/Ukraine war. The Fed can indirectly impact parts of this side of the equation by slowing down consumer demand and therefore runs on commodities.

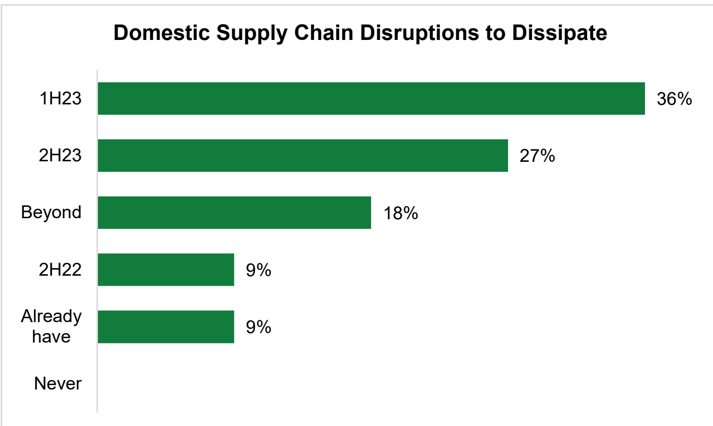
We asked our Roundtable economists to rank which supply side factor is having the biggest impact on this piece of the inflation rate. Looking at each factor, we calculate the number of times they were ranked #1 and #2, ranking them accordingly:

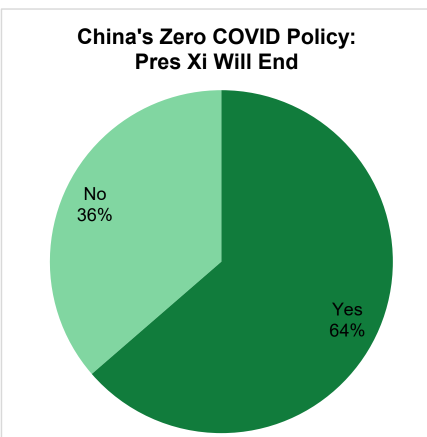
- Domestic supply chain issues (port congestion, labor shortages): 83% responded #1 factor
- Oil price shocks (due to Russia/Ukraine war): 83% responded #2 factor
- China's Zero COVID policy impact on supply chains: 67% #3 factor
- Other commodity price shocks: 83% #4 factor

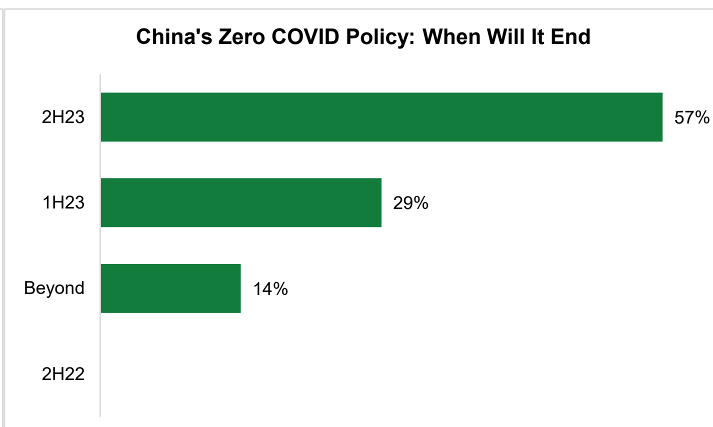


Full Question: As to the supply side component of inflation, which do you believe has had a greater impact?

- 36% of respondents expect domestic supply chain disruptions to dissipate by the 1H23
- 64% of respondents believe President Xi will end China’s Zero COVID policy
- They expect this to happen by 2H23 (57% of respondents)



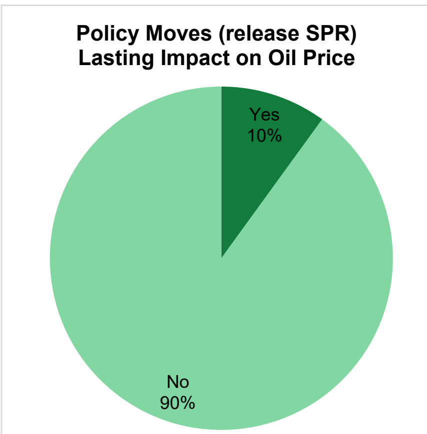


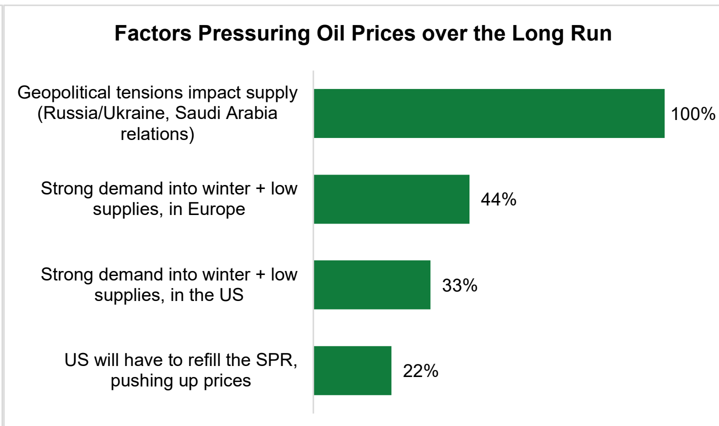


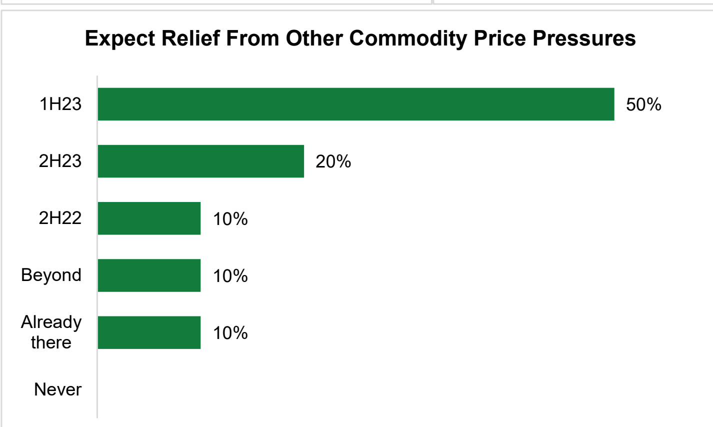
Full Question: When do you expect domestic supply chain disruptions to dissipate?
Full Question: Do you believe President Xi will end China’s Zero COVID policy?
Full Question: If you answered yes, when do you believe President Xi will end the policy?

Monetary Policy

- 90% of respondents believe current policy moves – specifically releasing 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 impacting supply (100%), strong demand heading into winter months on top of low supplies pressures prices – in Europe (44%) and in the U.S. (33%)
- 50% of respondents expect relief from other commodity price pressures by 1H23







Full Question: Will current policy moves – specifically releasing strategic petroleum reserves (SPR) – have a lasting impact on the price of oil?
Full Question: What factors do you believe will keep pressure on the price of oil over the long run? (Select all that apply)
Full Question: When do you expect relief from other commodity price pressures?

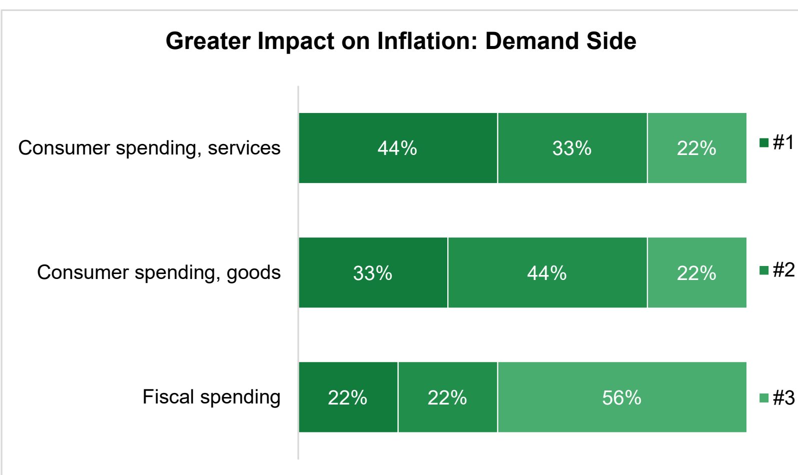
The Demand Side

Next, we move onto the demand side component of inflation. During the peak of COVID, there was a surge in consumer demand for goods – furniture, appliances, used cars, etc. – as people spent their way through lockdowns. Once lockdowns ended – and people had squirreled away savings by altering or slowing consumption patterns (not going out to eat or on vacation) – there was a massive surge in consumer demand for services (still shocked by some airfares we paid). Compounding the equation, the federal government dropped over $7 trillion into the economy. In the beginning, the fiscal stimulus was putting more money into consumers' pockets, further driving up spending on goods and services. To quote that great philosopher The Notorious B.I.G., "Mo Money Mo Problems".

The Fed can, and is attempting, to fix some of this through more restrictive monetary policy, potentially slowing investment and hiring. Higher levels of unemployment, after all, mean less spending in to the economy. The Fed cannot prevent further fiscal spending (can anyone stop them?).

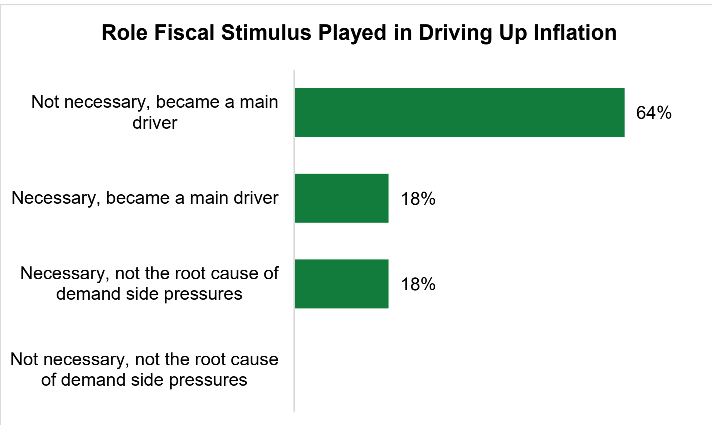
We asked our Roundtable economists to rank which demand side factor is having the biggest impact on this piece of the inflation rate. Looking at each factor, we calculate the number of times they were ranked #1 and #2, ranking them accordingly:

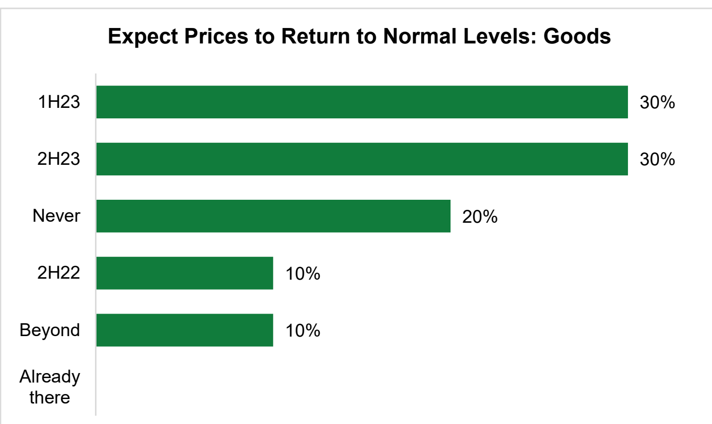
- Consumer spending on services: 44% responded #1 factor
- Consumer spending on goods: 44% responded #2 factor
- Fiscal spending: 56% responded #3 factor

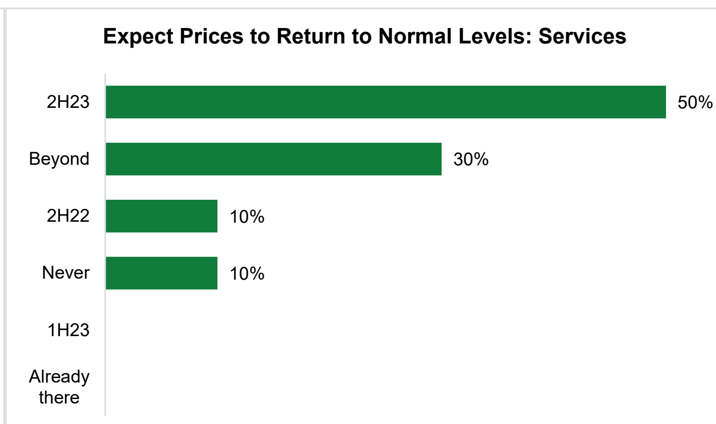


Full Question: As to the demand side component of inflation, which do you believe has had a greater impact?

- 64% of respondents believe all of the fiscal stimulus was not necessary, and became a main driver of inflation
- 30% of respondents expect goods prices on an aggregate level to return to normal levels by 1H23 and another 30% by 2H23
- 50% of respondents expect services prices on an aggregate level to return to normal levels by 2H23







Full Question: What role did all of the stimulus – $6 trillion during COVID, $1 trillion infrastructure package, $53 billion CHIPs Act, Inflation Reduction Act – play in driving up inflation?
Full Question: When do you expect goods prices on an aggregate level to return to normal levels?
Full Question: When do you expect services prices on an aggregate level to return to normal levels?

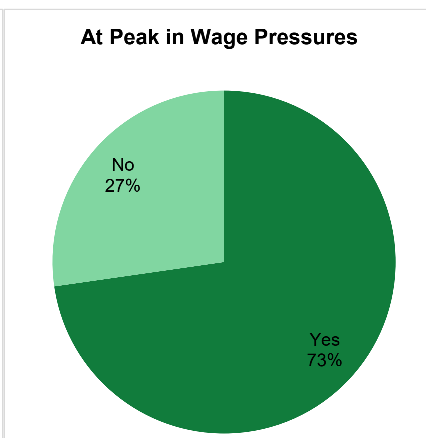
The Labor Component

When we were studying economics in school, we learned that two quarters of negative GDP growth was the "*technical*" definition of a recession. We saw that at the start of this year: 1Q22 real GDP growth rate -1.6% Y/Y, 2Q22 rate -0.6%. Then, the latest data for 3Q22 brought a rebound, +2.6% Y/Y. For a while, we were arguably in recession, but the strength in the labor market complicated a technical call. After all, how can you call a recession when you have a five-decade low in unemployment?

Typically, there is ample job destruction during recessions. In today's cycle, however, hiring has remained robust with employers still adding more than 400 thousand new payrolls on average since the start of the year, and the unemployment rate is only 3.7% (as of October). While we can debate whether or not the U3 unemployment rate accurately accounts for the level of unemployed, many economists have stated that the Fed will need to push up this rate to aid its inflation fight.

As such, we asked our Roundtable economists to breakdown labor component impacts on inflation.

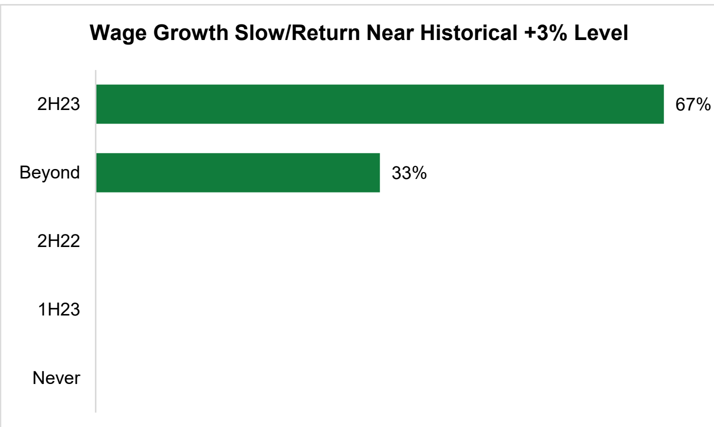
- 80% of respondents believe we are not in a wage-price spiral[6]
- With wages +4.7% in October (vs. +5.0% in September), 73% of respondents believe we have reached a peak in wage pressures

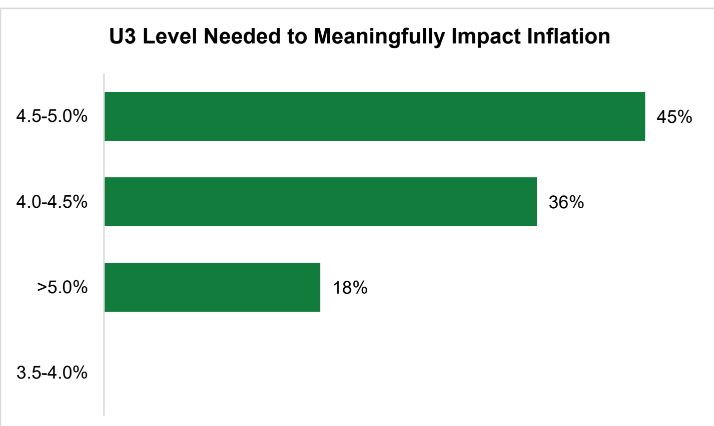


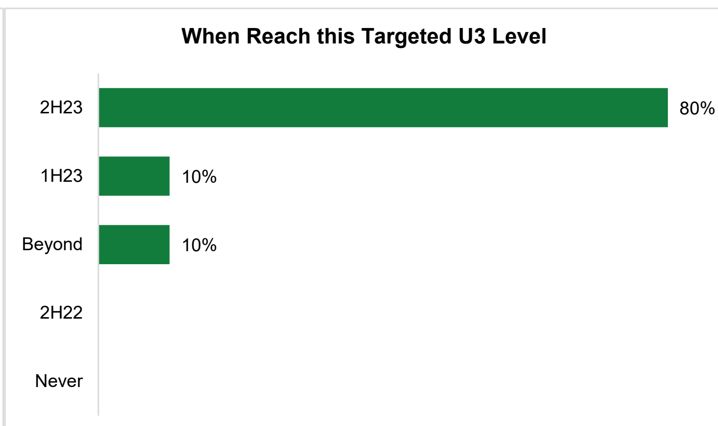
Full Question: As to the labor component of inflation, do you believe we are in a wage-price spiral?
Full Question: With wages +4.7 in October (versus +5.0% in September), have we reached a peak in wage pressures?

[6] 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.

- With wages accelerating ~5% for some time, 67% of respondents expect this to return to the historical +3.0% level (three-year pre-COVID average) by 2H23
- 45% of respondents believe the U3 unemployment rate needs to increase to 4.5-5.0% to meaningfully impact inflation
- 80% of respondents expect to reach this U3 target rate by 2H23



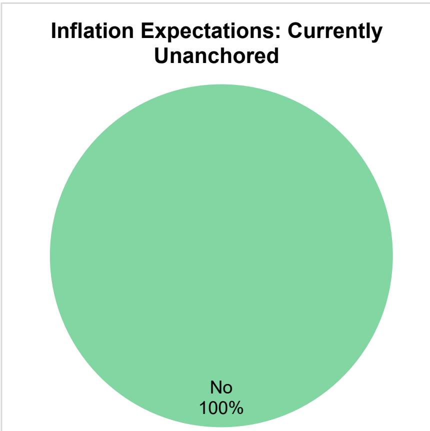


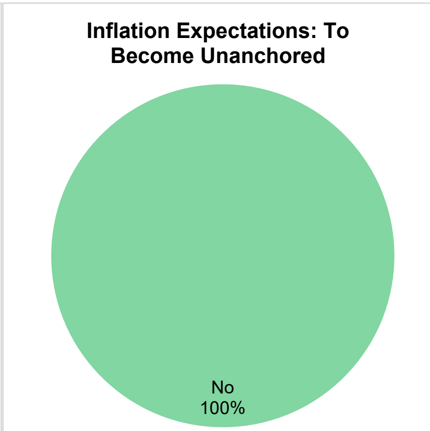


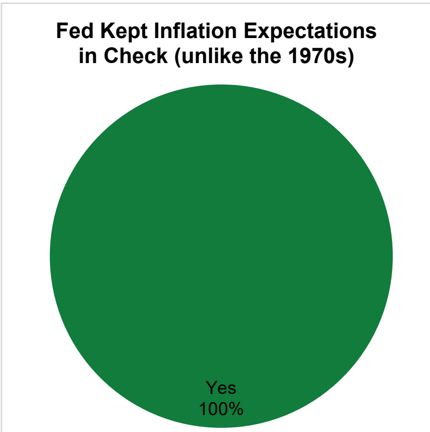
Full Question: Wages have been accelerating at a near 5% pace for some time. When do you expect the acceleration to slow in a meaningful way, i.e. closer to the historical +3.0% level (three-year pre-COVID average)?
Full Question: While we can debate whether or not the U3 unemployment rate accurately 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 3.7% in October (versus 3.5% in September), 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 Roundtable economists about their thoughts on inflation expectations.

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



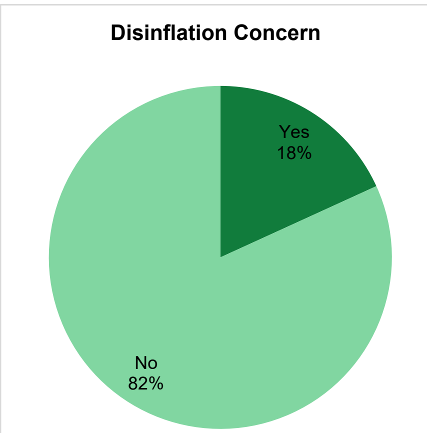


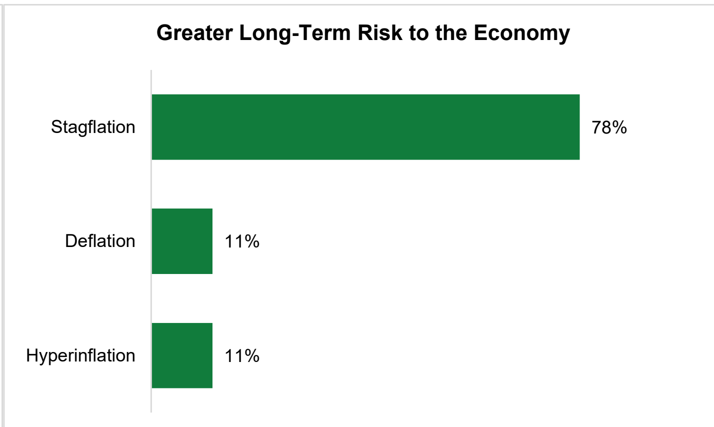


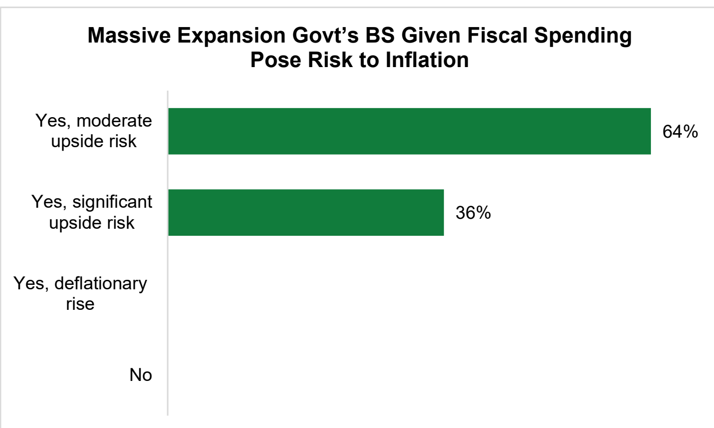
Full Question: Rising inflation can become a self-fulfilling prophecy by boosting inflation expectations. Are inflation expectations unanchored?
Full Question: Do you believe inflation expectations will become unanchored?
Full Question: Do you believe, unlike in the 1970s, the Fed's strong rhetoric has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

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

- 82% of respondents do <u>not</u> see any concern of disinflation at this point in time
- 78% of respondents believe the greater long-term risk to the economy is stagflation
- 64% of respondents view the massive expansion of the government's balance (>$7 trillion in fiscal spending) does poses a risk to inflation in terms of a moderate upside risk





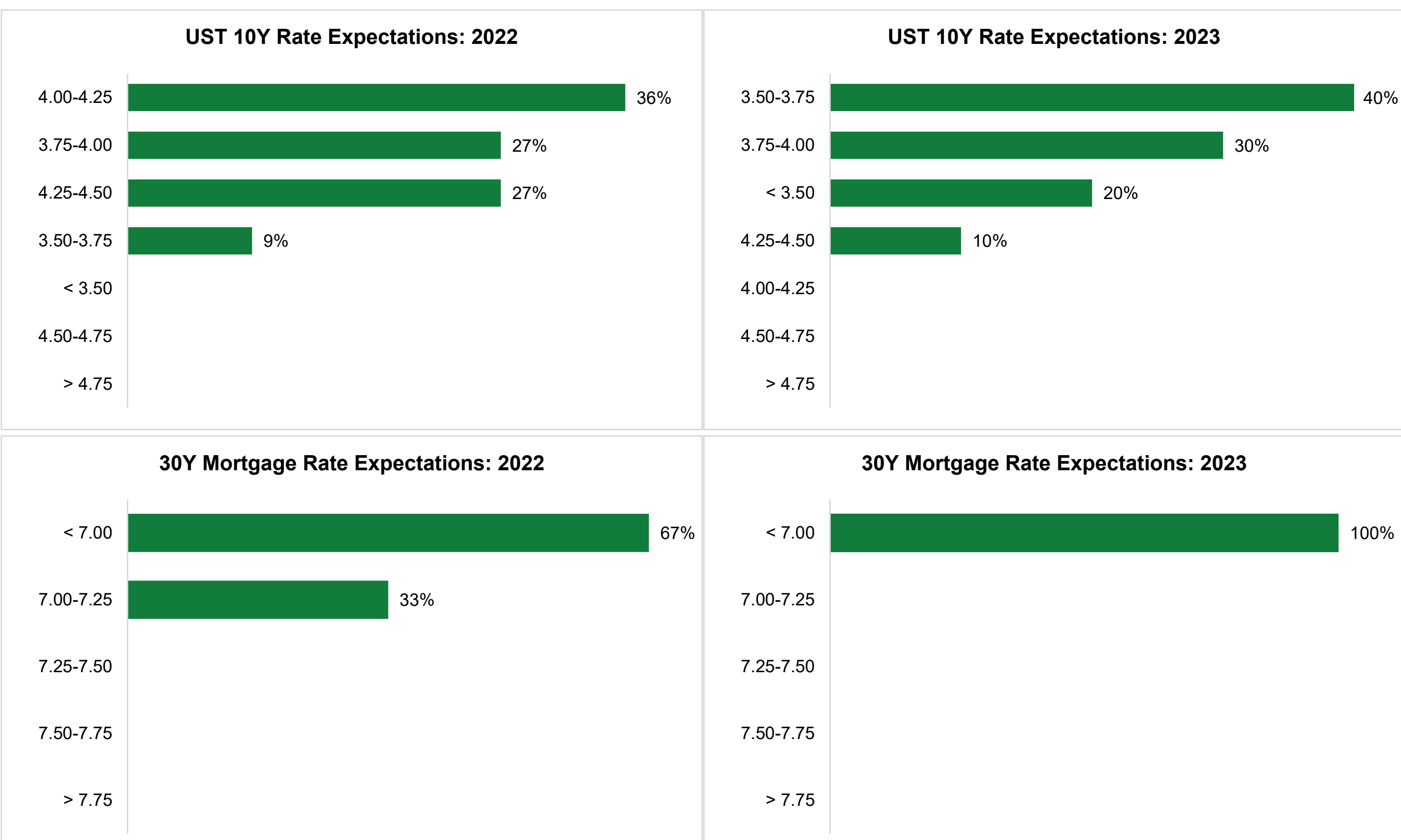


Full Question: Is there any concern of disinflation at this point in time?
Full Question: What is the greater long-term risk to the economy?
Full Question: Does the massive expansion of the government's balance sheet given over $7 trillion in fiscal spending pose a risk to inflation?

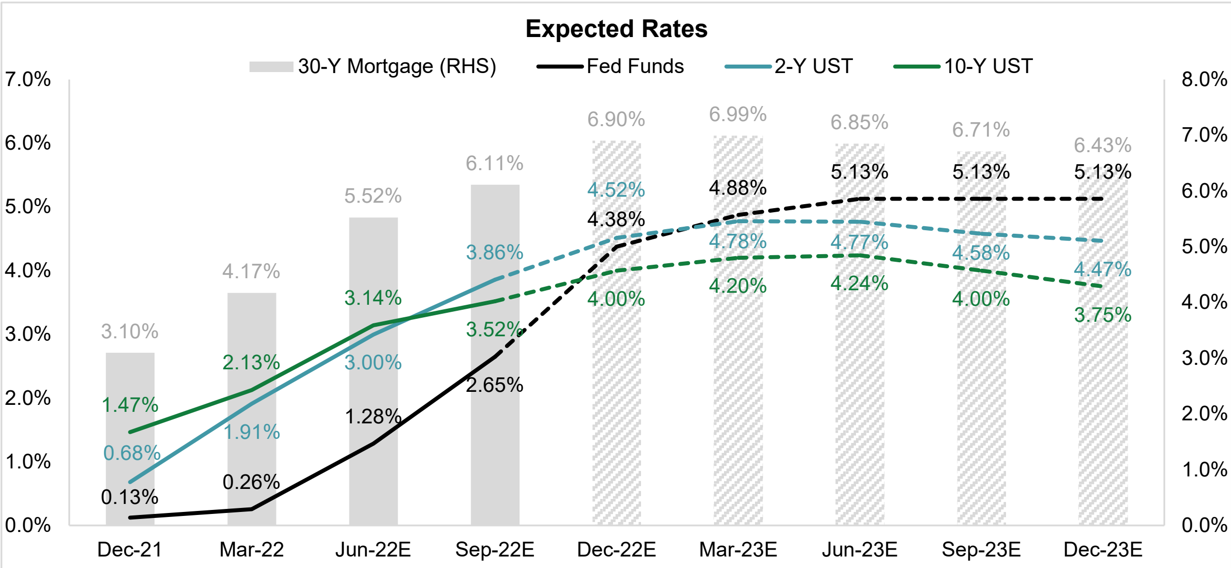
Rate Estimates, Yield Curves, and Spreads

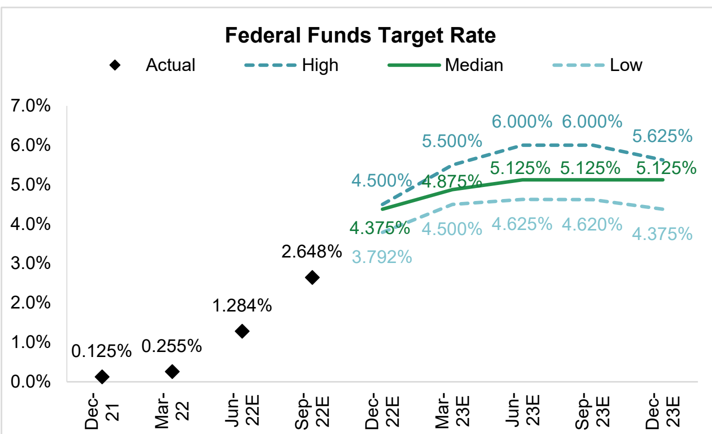
Putting together all of the above, in this section we gauge Roundtable economists' expectations on Treasury yields, mortgage rates, yield curves and spreads. At the writing of the survey, the ten year Treasury was just over 4%. The thirty-year mortgage rate was just over 7%. As such, we polled our economists on their expectations for rates by the end of this year and next.

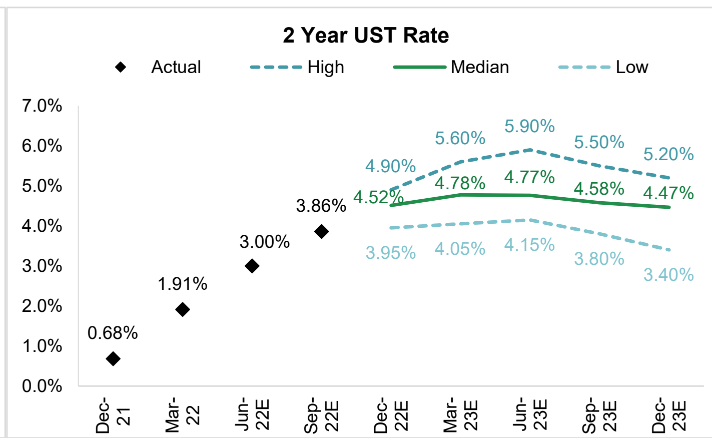
- 36% of respondents expect the 10Y yield to end 2022 at 4.00-4.25%
- 40% of respondents expect the 10Y yield to end 2023 at 3.50-3.75%
- 67% of respondents expect the 30Y mortgage rate to end 2022 at below 7.00%
- 100% of respondents expect the 30Y mortgage rate to end 2023 at below 7.00%
- Overall rates expectations
    - Fed Funds = 4Q22 4.375%, 1Q23 4.875%, 2Q23 5.125%, 3Q23 5.125%, 4Q23 5.125%
    - 2-Year UST = 4Q22 4.52%, 1Q23 4.78%, 2Q23 4.77%, 3Q23 4.58%, 4Q23 4.47%
    - 10-Year UST = 4Q22 4.00%, 1Q23 4.20%, 2Q23 4.24%, 3Q23 4.00%, 4Q23 3.75%
    - 30-Year Mortgage = 4Q22 6.90%, 1Q23 6.99%, 2Q23 6.85%, 3Q23 6.71%, 4Q23 6.43%

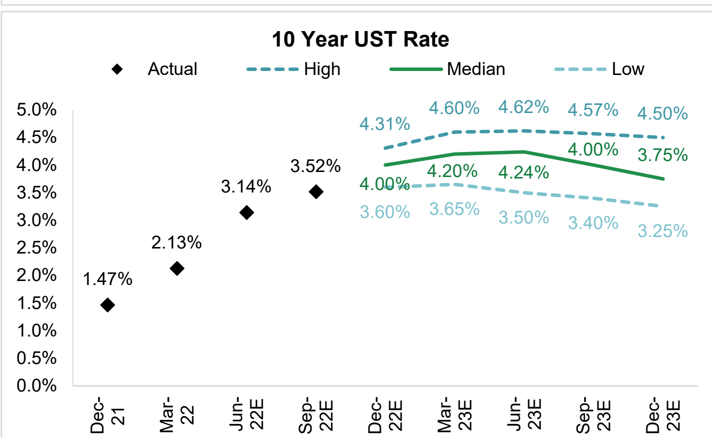


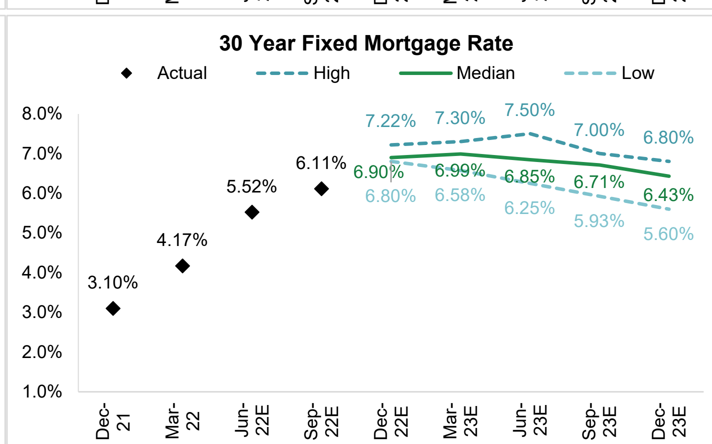
Full Question: At the writing of this report, the ten year was just over 4%, where do you expect it to end: 2022/2023
Full Question: At the writing of this report, the thirty year mortgage rate was just over 7%, where do you expect it to end: 2022/2023







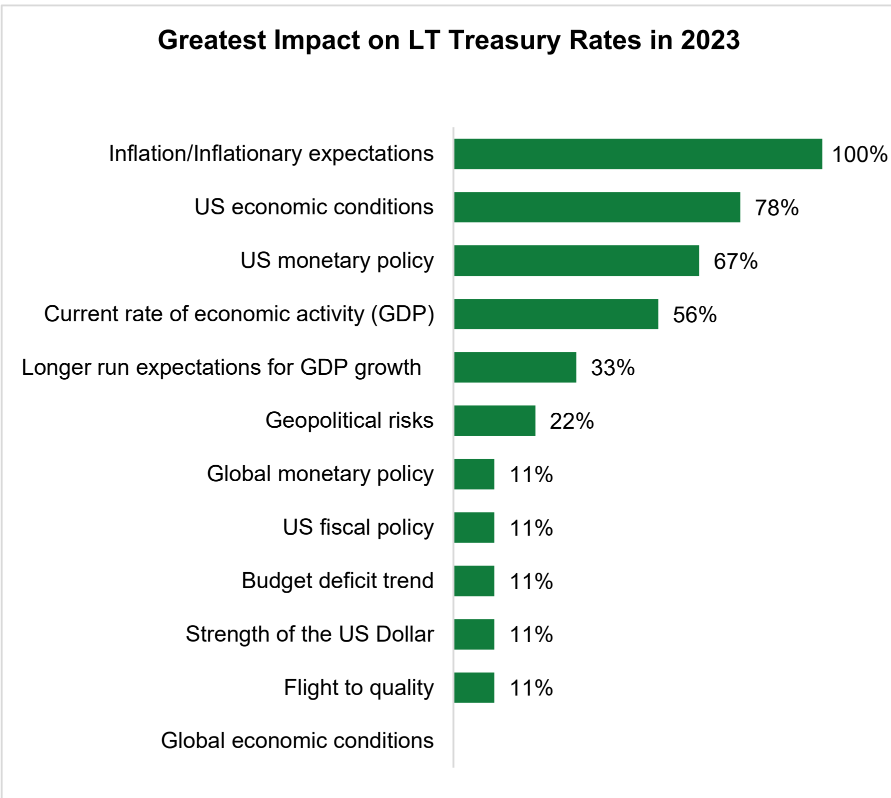




Source: Federal Reserve, Bloomberg, SIFMA Economic Advisory Roundtable
Note: Monthly averages. Fed funds = midpoint of target rate range

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

- Inflation/inflation expectations, 100%
- U.S. economic conditions, 78%
- U.S. monetary policy, 67%



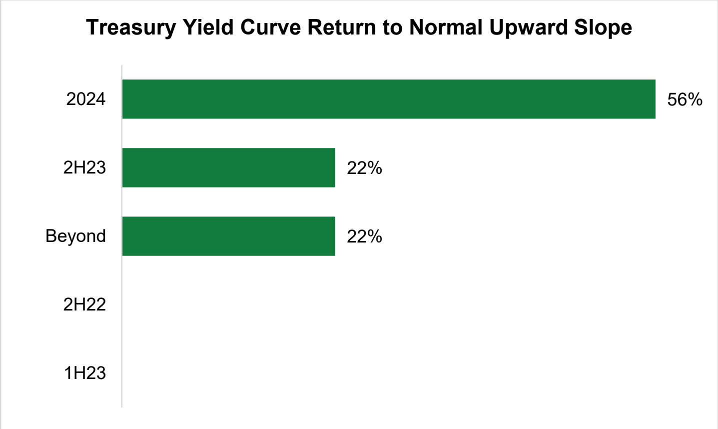
Full Question: Which of the following will have the greatest impact on long-term Treasury yields in 2023? (Ranked by percentage of economists that listed a factor)

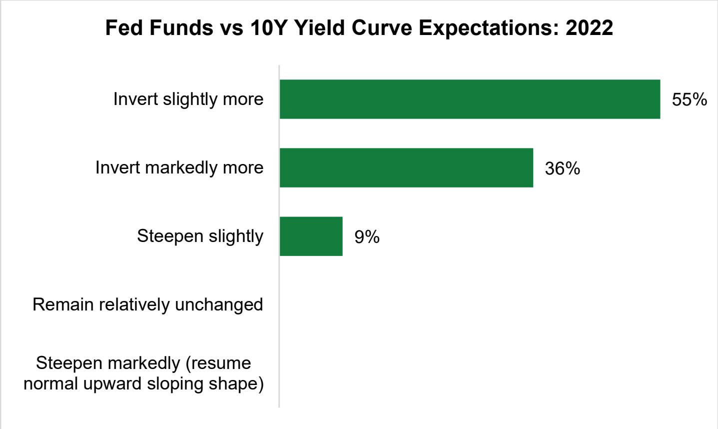
Yield Curves: Economic Indicators

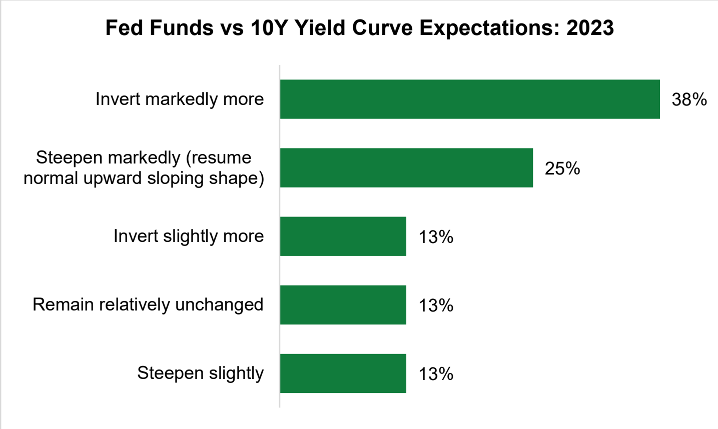
Yield curves can act as good economic indicators – in particular, historically, they have been predictors of economic weakness or recessions. A normal yield curve slopes up and to the right as yields increase with maturity, indicating that the economy is healthy and functioning normally. A steep yield 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 (slopes down to the right instead of up), an inverted yield curve exists, indicating market dysfunction and a rising likelihood of recession.

As the Fed pushes forward, we asked our Roundtable economists for their expectations for yield curves. Respondents expect the following movements in key rates:

- 56% of respondents expect the Treasury yield curve to return to a normal upward sloping curve by 2024
- As to how the Fed Funds Rate vs.10-year Treasury yield curve will change in 2022, 55% of respondents believe it will invert slightly more
- As to how the Fed Funds Rate vs.10-year Treasury yield curve will change in 2023, 38% of respondents believe it will invert markedly more



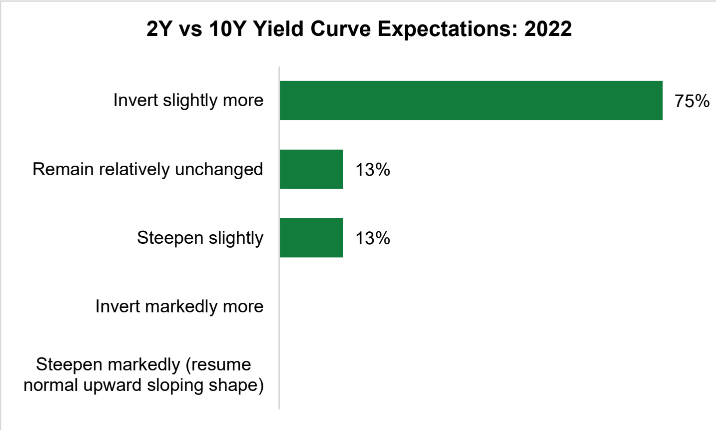


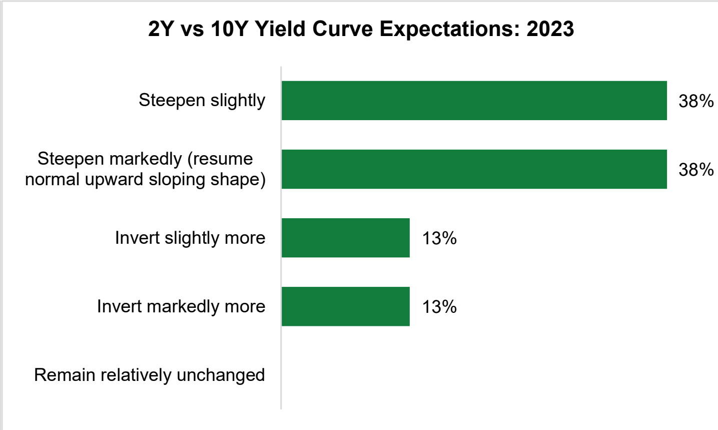


Full Question: In general, when do you expect the Treasury yield curve to return to a normal upward sloping curve?
Full Question: As the Fed pushes forward, how do you expect the Fed Funds Rate vs.10-year Treasury yield curve to change in: 2022/2023?

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

- For 2022, 75% of respondents believe it will invert slightly more
- For 2023, 38% of respondents each believe it will steepen slightly or steepen markedly (resume a normal upward sloping shape)

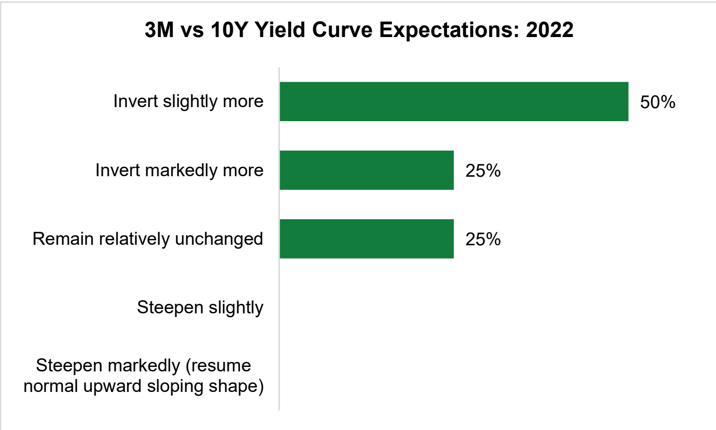


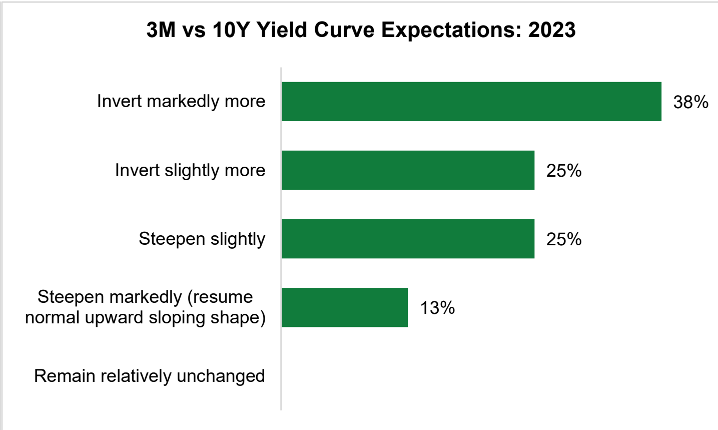


Full Question: Historically a predictor of recession, the 2-year Treasury vs.10-year Treasury curve has been inverted since July. How do you expect the 2s/10s curve to change in: 2022/2023?

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

- For 2022, 50% of respondents believe it will invert slightly more
- For 2023, 38% of respondents believe it will invert markedly more





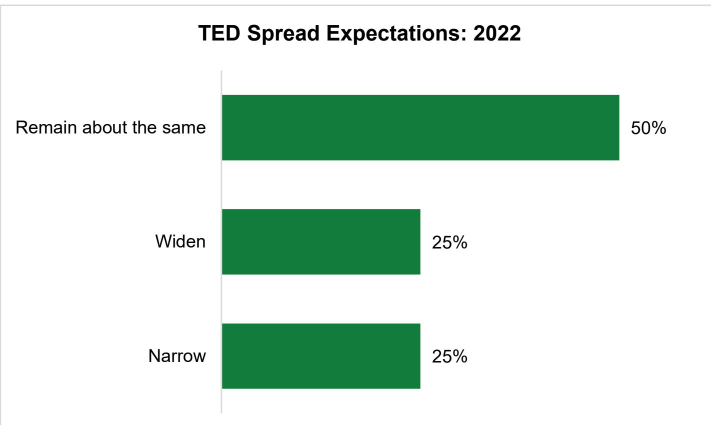
Full Question: After showing signs of inversion in late October, how do you expect the 3-month T-bill vs.10-year Treasury yield curve to change in: 2022/2023?

Spreads: Price Gauges

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.

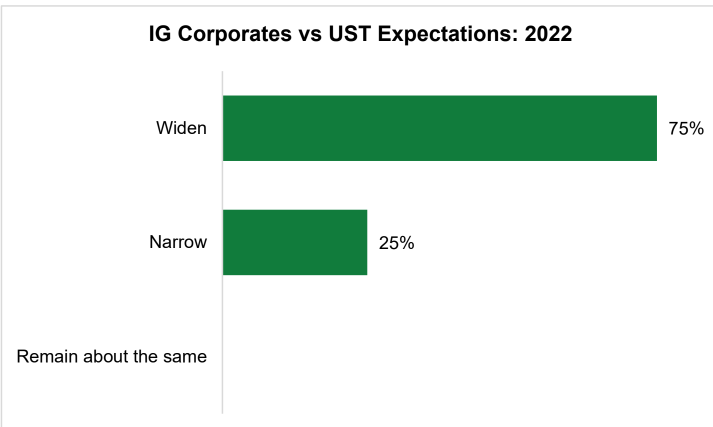
We asked our Roundtable economists for their expectations on how these spreads will change.

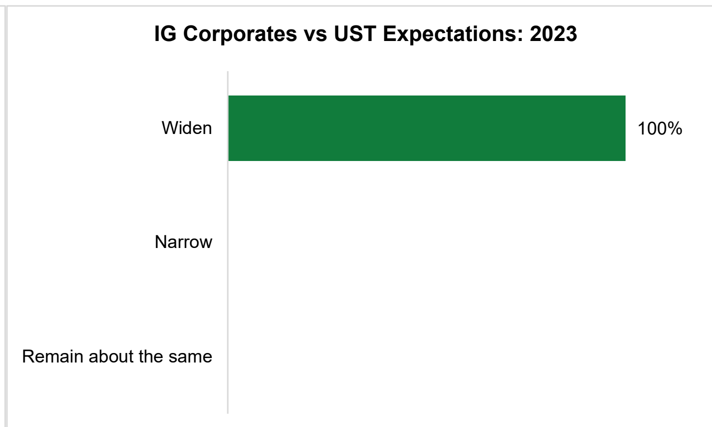
- TED spread (T-bill to Eurodollar)
    - For 2022, 50% of respondents believe it will remain about the same
    - For 2023, 100% of respondents believe it will widen

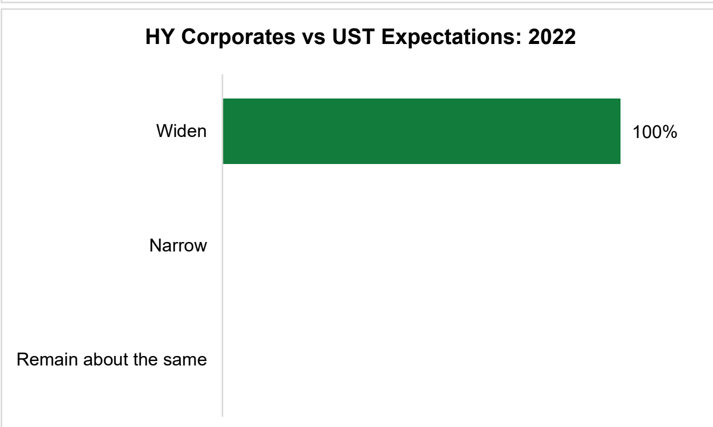


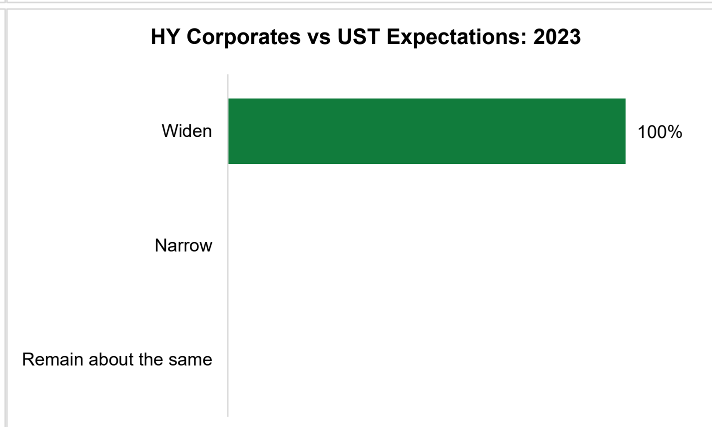
Full Question: How do you expect the TED spread (T-bill to Eurodollar) to change in: 2022/2023

- Investment grade corporates to Treasury spread
  - For 2022, 75% of respondents believe it widen
  - For 2023, 100% of respondents believe it widen
- High yield corporates to Treasury spread
  - For 2022, 100% of respondents believe it widen
  - For 2023, 100% of respondents believe it widen









Full Question: How do you expect the investment grade corporates to Treasury spread to change in: 2022/2023?
Full Question: How do you expect the high yield corporates to Treasury spread to change in: 2022/2023?

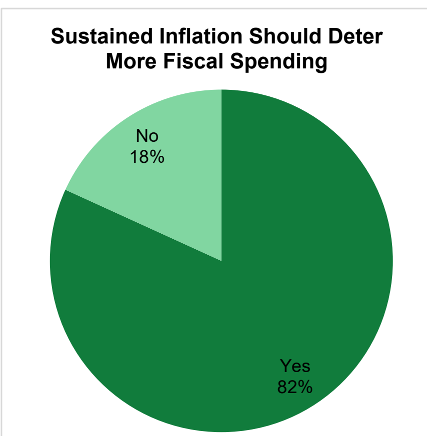
Macro Policy

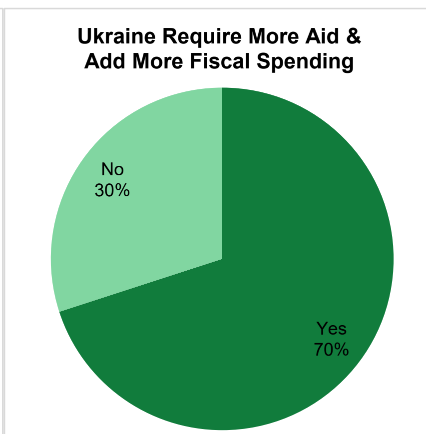
Fiscal Stimulus

Originally to help the U.S. economy recover from COVID, monetary policy tools were complemented by substantial fiscal spending. The government spent around $6 trillion dollars directly and loosely related to COVID. Then in November 2021, Congress passed the around $1 trillion infrastructure bill. In August of this year, President Biden signed the (only) $53 billion CHIPS and Science Act into law.

As the overspending continues, questions and concerns remain around the impact on inflation. We asked our Roundtable economists about the impact of fiscal spending, as well as how the results of the midterm elections could shape future spending practices.

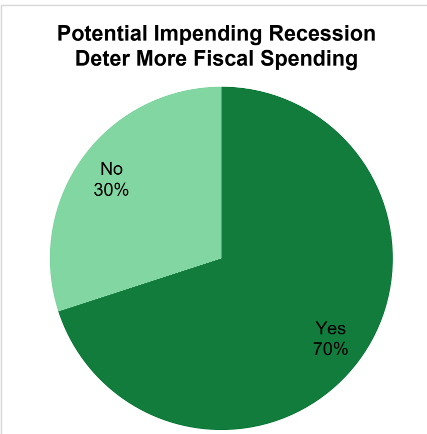
- 82% of respondents believe sustained higher inflation should deter further fiscal spending
- 70% of respondents believe the Russia/Ukraine conflict will cause further international aid and therefore more U.S. fiscal spending

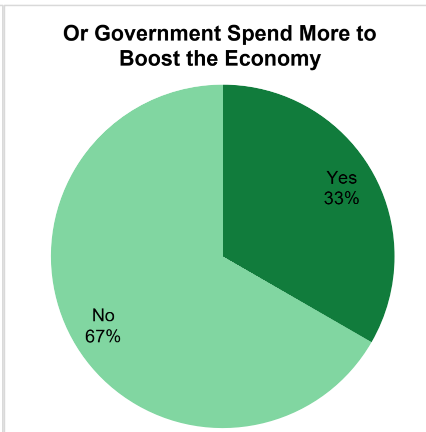




Full Question: Do you believe sustained higher inflation should deter further fiscal spending packages?
Full Question: Do you believe the Russia/Ukraine conflict will cause further international aid and therefore more U.S. fiscal spending?

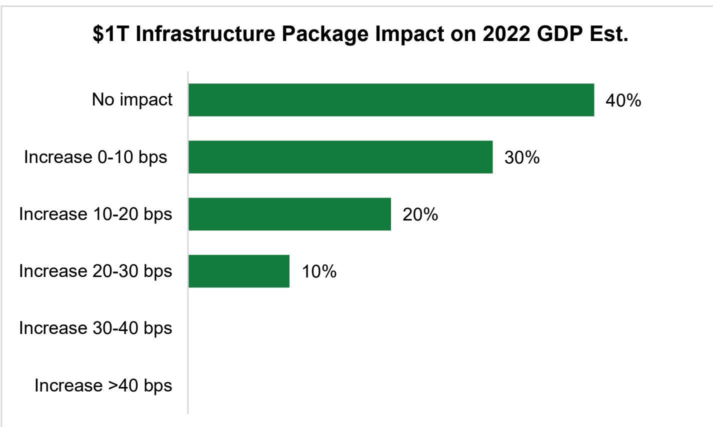
- 70% of respondents believe the (potentially) impending recession should <u>deter</u> further fiscal spending
- 67% of respondents believe the government does <u>not</u> want to spend more to boost the economy, given the (potentially) impending recession

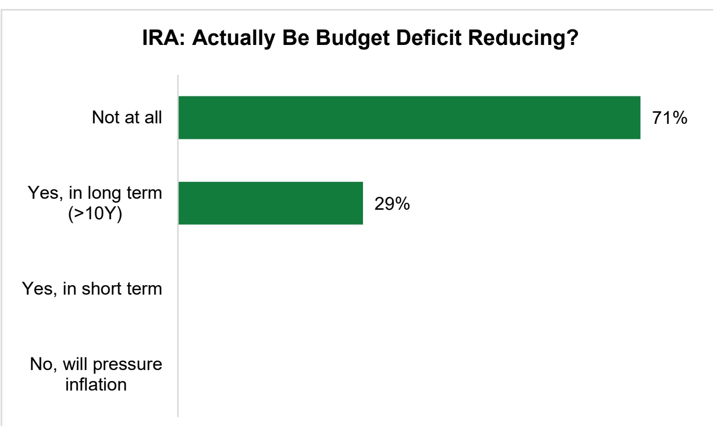


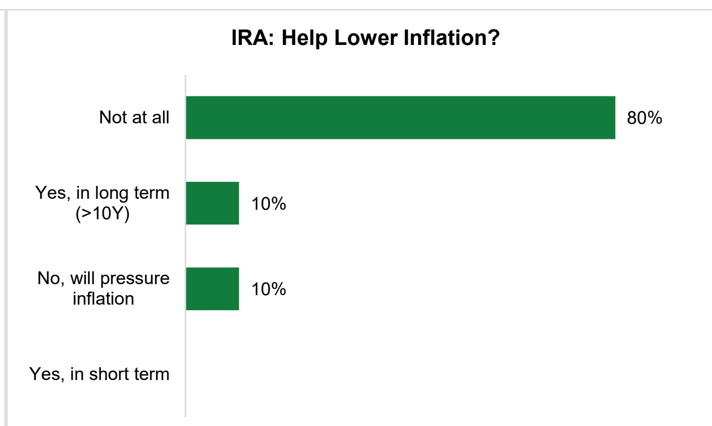


Full Question: Do you believe the (potentially) impending recession should deter further fiscal spending packages?
Full Question: Or will the government want to spend more to boost the economy, given the (potentially) impending recession?

- 40% responded that the ~$1 trillion infrastructure package did not have an impact on 2022 GDP estimates, while 30% believe it increased GDP of 0-10 bps
- 71% of respondents believe the so-called Inflation Reduction Act (IRA) will not be budget deficit reducing at all (in the short term or long run)
- 80% of respondents believe the IRA will not help lower inflation at all (in the short term or long run)

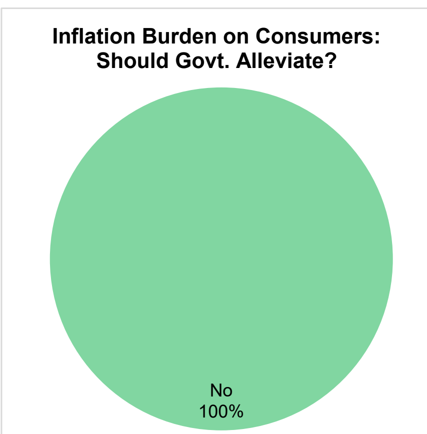


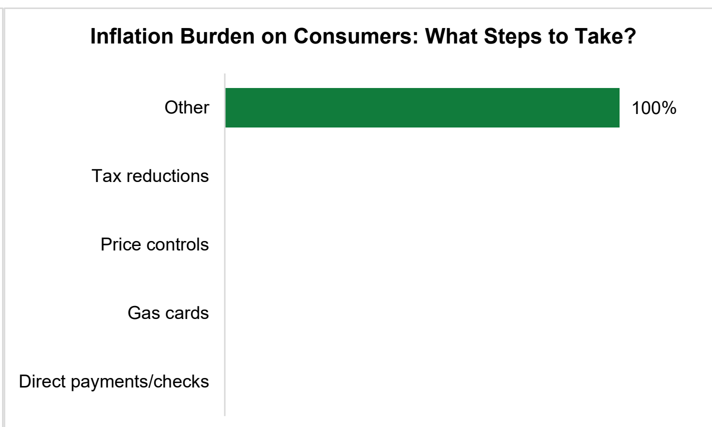


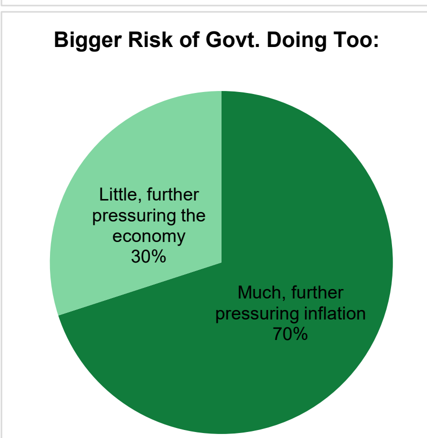


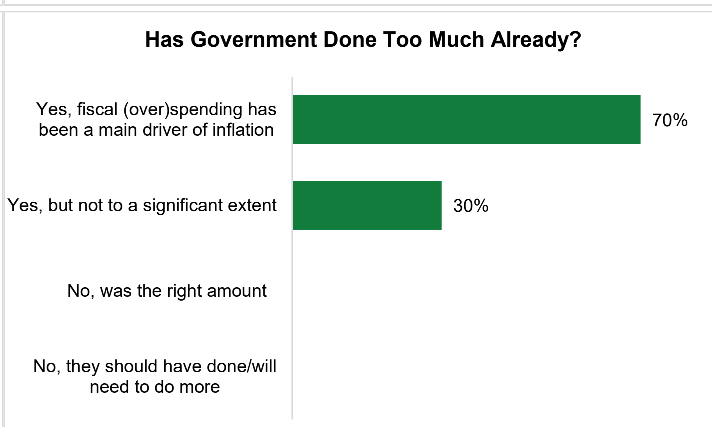
Full Question: What impact do you expect the $1 trillion infrastructure package to have/has had on 2022 GDP estimates?
Full Question: Do you believe the so-called Inflation Reduction Act (IRA) will actually be budget deficit reducing?
Full Question Do you believe the IRA will help lower inflation?

- All of respondents believe the government should not be taking more steps to alleviate the burden on consumers (high prices for gasoline and groceries)
- Steps to alleviate the burden on consumers include only other write in responses, which were actually reasons not to take further steps to assist consumers: No steps, as they could be counterproductive, providing consumers with more discretionary income than in the base case
- 70% of respondents view the bigger risk to the economy is the government doing too much, therefore further pressuring inflation
- 70% of respondents believe the government has already done too much, as fiscal (over)spending has been a main driver of inflation



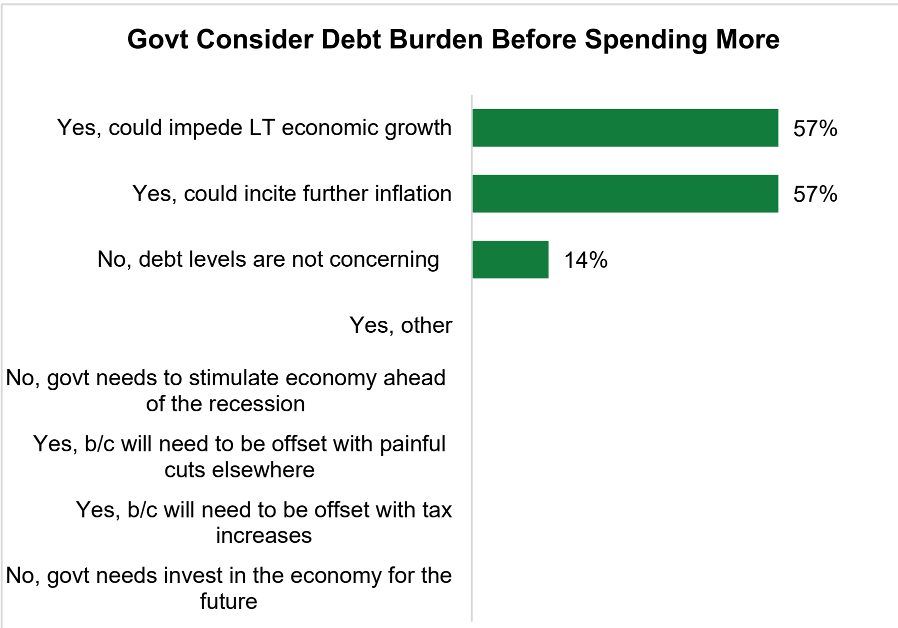






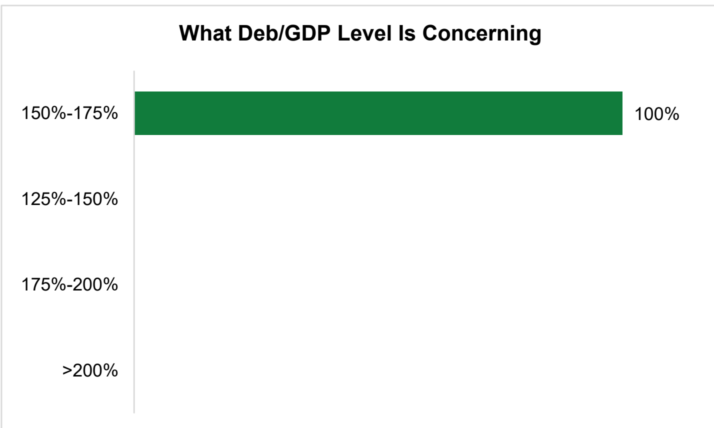
Full Question: Given the rising cost of nondiscretionary goods, including gasoline and groceries, do you feel the government should be taking more steps to alleviate the burden on consumers?
Full Question: If yes, what steps would you prefer?
Full Question: What do you view is the bigger risk? The government 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)

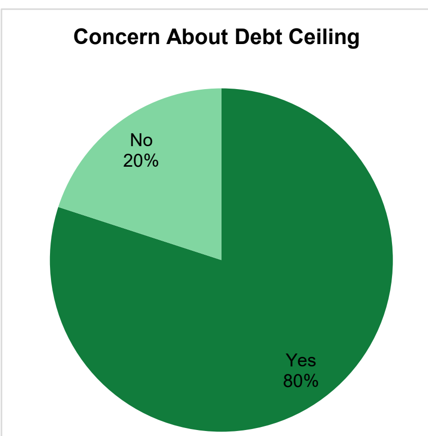
- When considering additional stimulus, 57% of respondents each indicated the government should consider the debt level as it could impede long-term growth or it could incite further inflation

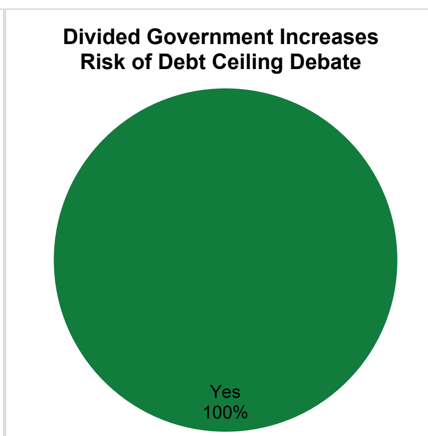


Full Question: With the debt/GDP ratio already above 100% (121.1% as of 2Q22, source: FRED), should the government be considering the debt burden when proposing additional spending?

- All of respondents believe a debt/GDP level of 150%-175% would be concerning
- 80% of respondents are concerned about another debt ceiling debate
- All of respondents believe a divided government will increase the probability of debt ceiling debates

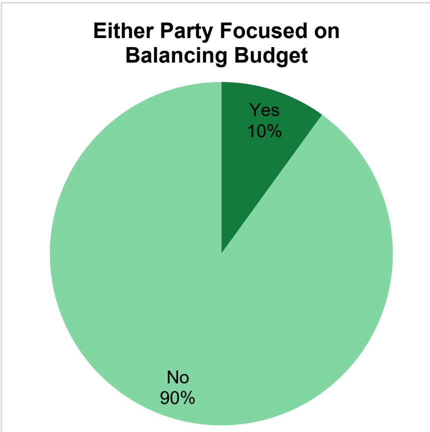


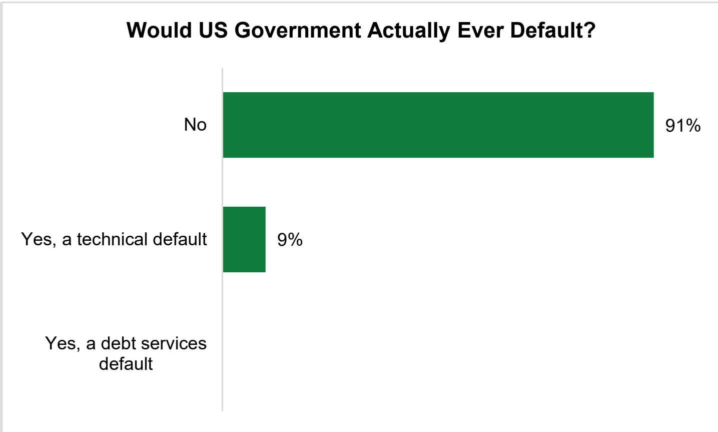


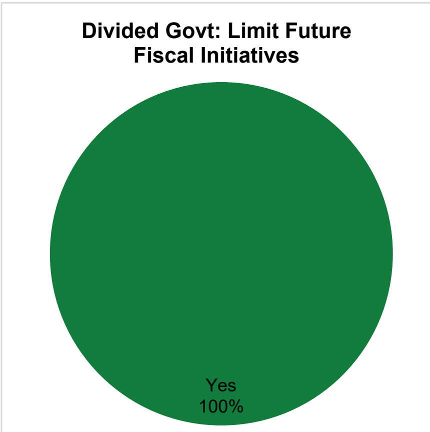


Full Question: If you responded no above, what level of debt to GDP is concerning?
Full Question: Even though it is about a year away, are you once again concerned about another debt ceiling showdown?
Full Question: Based on the evidence we have at the writing of this survey, it is presumed we will have a divided government. Does this increase the probability of debt ceiling debates?

- 90% of respondents do not believe either party is focused on reinstating a balanced budget
- 91% of respondents believe the U.S. government would not actually default
- Given the divided government, all of respondents expect further fiscal initiatives to be limited in nature





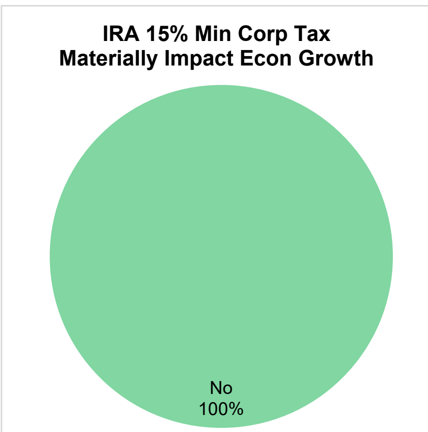


Full Question: Do you believe either party is focused on reinstating a balanced budget?
Full Question: Do you believe the US government would actually ever default?
Full Question: Based on the evidence we have at the writing of this survey, it is presumed we will have a divided government. Do you expect further fiscal initiatives to be (very) limited in nature?

Tax Policy

For most of this year, tax policy was not as top of mind as in 2021. Then, the so-called Inflation Reduction Act (IRA) was passed, which included a 15% minimum tax rate for corporations. We asked our Roundtable economists about the impact of the IRA on economic growth.

- All of respondents believe the IRA will not have a material impact on economic growth

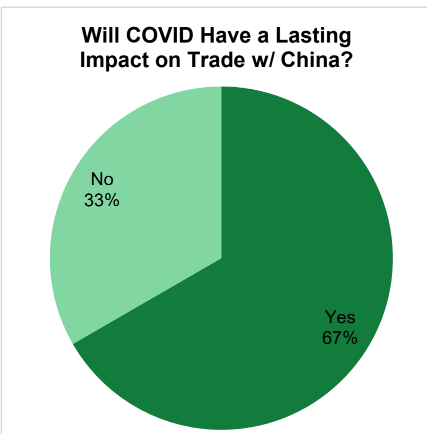


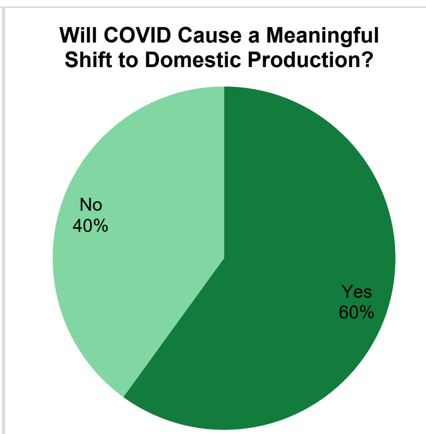
Full Question: The Inflation Reduction Act included a 15% corporate minimum tax rate. Do you believe this will have a material impact on economic growth?

Trade Policy

In the trade policy section of the survey, we have shifted the focus to relations just as it pertains to China. We asked Roundtable economists about the impact of COVID as it relates to U.S.-China trade relations.

- When asked if the negative sentiments around China's handling of COVID will have a lasting impact on trade relations with China, 67% responded yes
- In light of this, 60% of respondents expect a meaningful shift to domestic production, thereby reducing U.S. reliance on overseas production





Full Question: Will COVID have a lasting impact on trade relations with China?
Full Question: Will COVID 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)	2019	2020	2021	2022E	2023E
Real GDP (4Q/4Q)	2.6	-1.5	5.7	0.3	-0.3
Real Personal Consumption (4Q/4Q)	2.2	-1.4	7.2	1.7	0.2
Nonresidential Fixed Investment (4Q/4Q)	2.6	-3.5	5.0	3.4	-0.1
Residential Fixed Investment (4Q/4Q)	2.0	16.4	-0.3	-16.5	-2.1
Real Federal Government Spending (4Q/4Q)	4.0	5.4	0.4	-1.0	0.9
Real State and Local Government Spending (4Q/4Q)	4.0	-1.6	0.6	0.5	1.1
Non-Farm Payroll Employment (K, avg. monthly change)	164.0	-774.3	561.9	369.3	-8.8
Unemployment Rate (4Q average)	3.7	8.1	5.4	3.7	4.5
Labor Force Participation Rate (4Q average)	63.2	61.5	61.8	62.3	62.6
Average Hourly earnings (4Q/4Q)	3.2	4.9	5.2	4.8	4.1
Real Disposable Income (4Q/4Q)	3.0	3.7	-0.4	-2.1	1.5
Personal Savings Rate (annual average)	8.8	16.8	11.9	3.5	4.2
CPI (4Q/4Q)	2.0	1.2	6.7	7.4	3.1
Core CPI (4Q/4Q)	2.3	1.6	5.0	6.1	3.3
PCE deflator (4Q/4Q)	1.5	1.2	5.7	5.8	2.9
Core PCE deflator (4Q/4Q)	1.6	1.4	4.7	4.8	2.9
Industrial Production Index (annual % change)	-0.7	-7.0	4.9	4.4	0.4
Housing Starts (K, annual average)	1,291	1,395	1,605	1,560	1,380
S&P Corelogic Case-Shiller Home Prices (Y/Y)	3.5	6.1	17.1	12.9	-5.8
New Home Sales (K, annual average)	683	831	769	639.0	580.7
Motor Vehicle Sales (M, annual average)	16.9	14.4	14.9	14.0	15.0
Federal Budget ($B, FY)	-984	-3,132	-2,776	-1,375	-1,075
Current Account Deficit ($B)	-446.0	-619.7	-846.4	-980.0	-950.0

Economic Indicators – Quarterly

(%)	1Q22	2Q22	3Q22	4Q22E	1Q23E	2Q23E	3Q23E	4Q23E
Real GDP (Q/Q, annualized)	-1.6	-0.6	2.9	1.1	0.1	0.1	0.3	0.7
Real Personal Consumption (Q/Q, annualized)	1.3	2.0	1.7	2.2	0.9	0.5	0.9	1.1
Nonresidential Fixed Investment (Q/Q, annualized)	7.9	0.1	3.7	3.8	1.2	0.4	-0.3	0.7
Residential Fixed Investment (Q/Q, annualized)	-3.1	-17.8	-26.4	-19.4	-7.9	-3.0	-2.0	0.9
Unemployment Rate	3.8	3.6	3.6	3.7	3.9	4.1	4.7	5.0
CPI (Y/Y)	8.0	8.6	8.3	7.4	6.1	4.2	3.4	3.1
Core CPI (Y/Y)	6.3	6.0	6.3	6.1	5.5	4.7	3.8	3.3
PCE Deflator (Y/Y)	6.4	6.6	6.3	5.9	4.9	3.8	3.5	3.1
Core PCE Deflator (Y/Y)	5.3	5.0	4.9	4.9	4.4	4.0	3.6	3.0

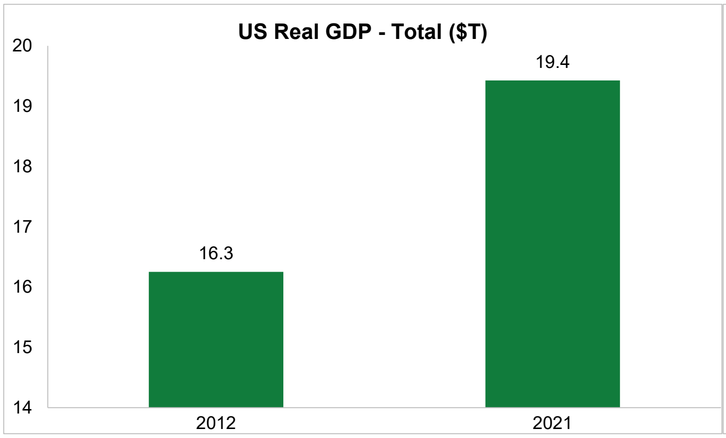
Interest Rates (Monthly Average)

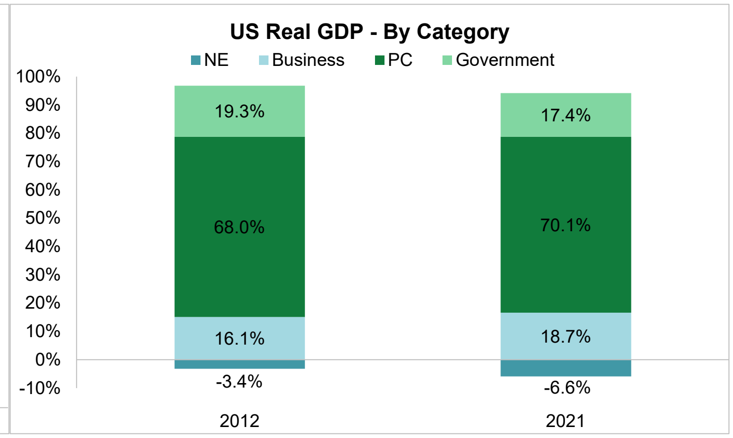
(%)	Mar'22	Jun'22	Sep'22	Dec'22E	Mar'23E	Jun'23E	Sep'23E	Dec'23E
Federal Funds Target Rate (midpoint)	0.255	1.284	2.648	4.375	4.875	5.125	5.125	5.125
2-Year UST Yield	1.91	3.00	3.86	4.52	4.78	4.77	4.58	4.47
10-Year UST Yield	2.13	3.14	3.52	4.00	4.20	4.24	4.00	3.75
30-Year Fixed Mortgage Rate	4.17	5.52	6.11	6.90	6.99	6.85	6.71	6.43

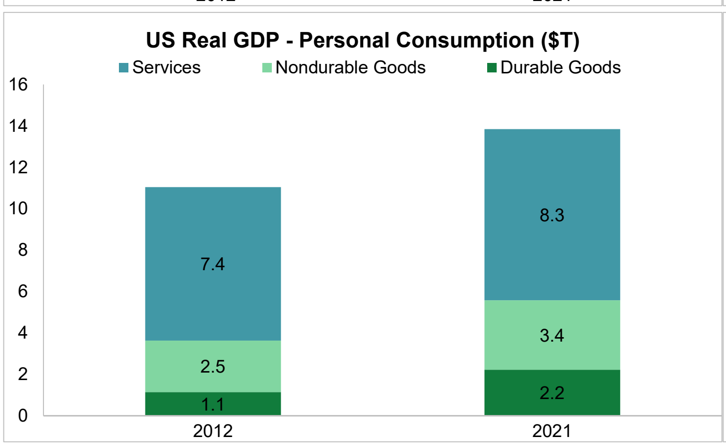
Source: Bureau of Economic Analysis, Bureau of Labor Statistics, Federal Reserve, Bloomberg, SIFMA Economic Advisory Roundtable

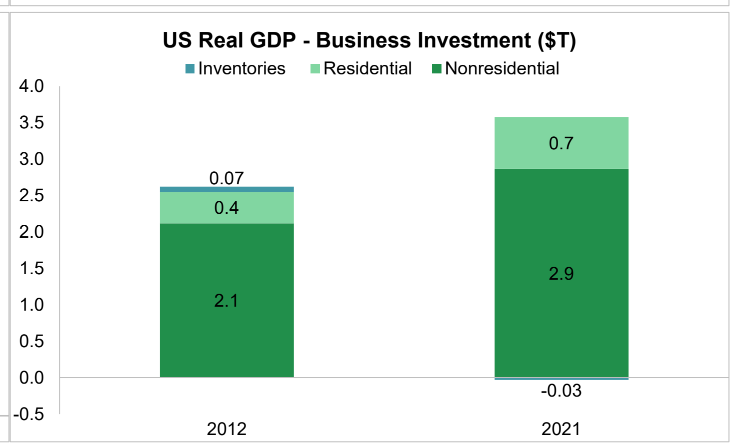
Reference Guide: Economic Landscape

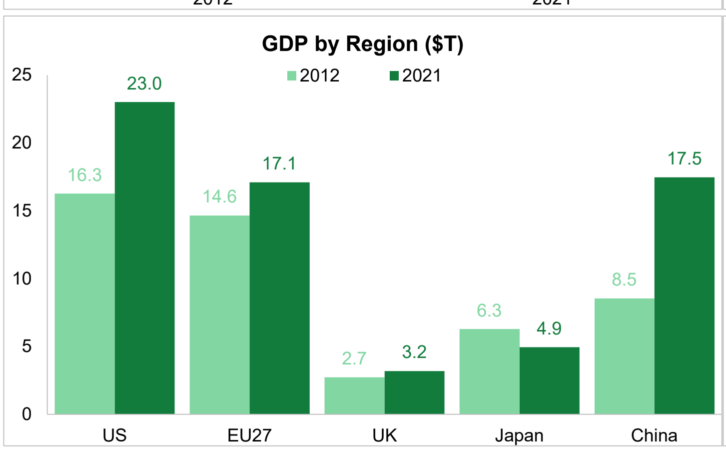
US GDP Growth and Comparison Across Regions

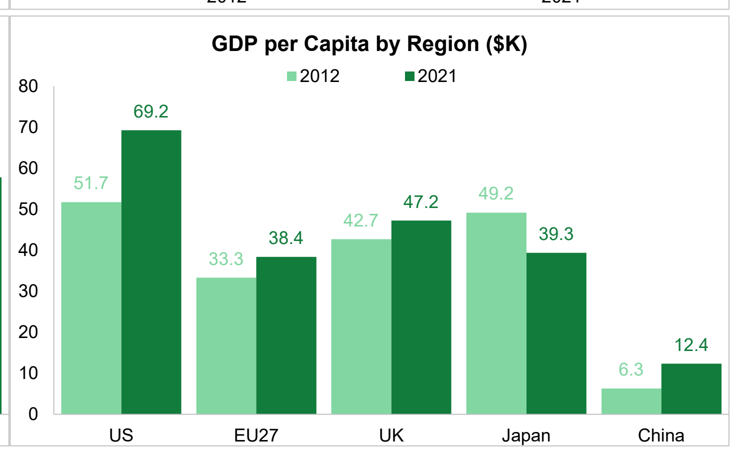








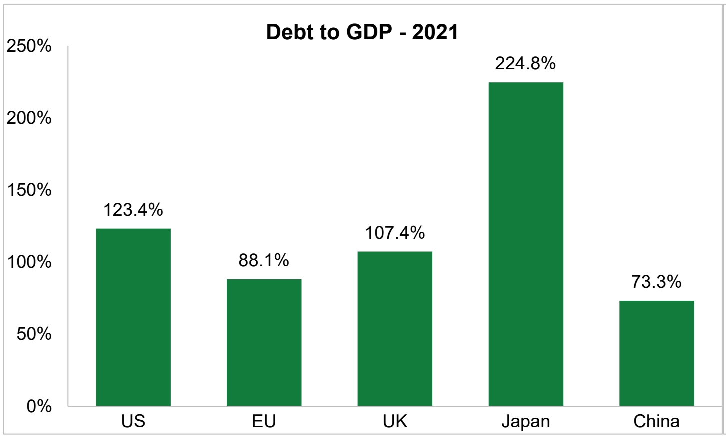


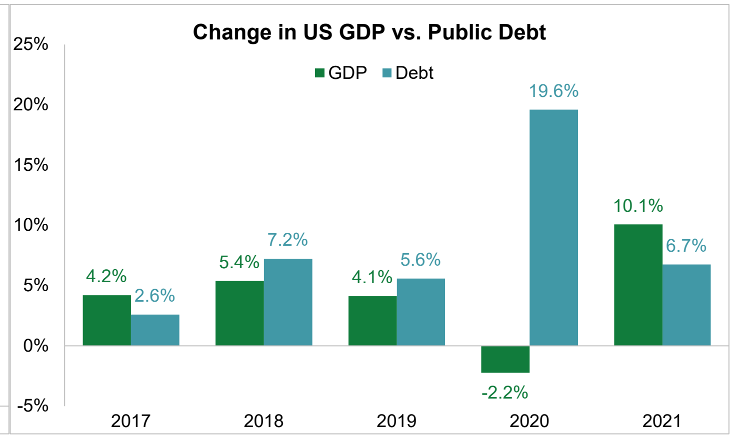


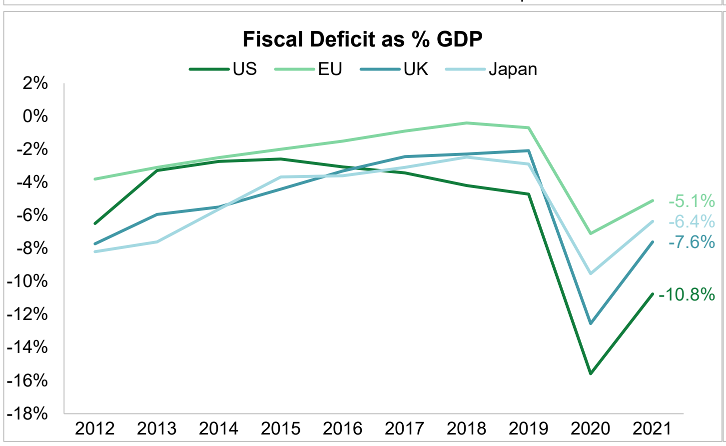
Source: Bureau of Economic Analysis, International Monetary Fund

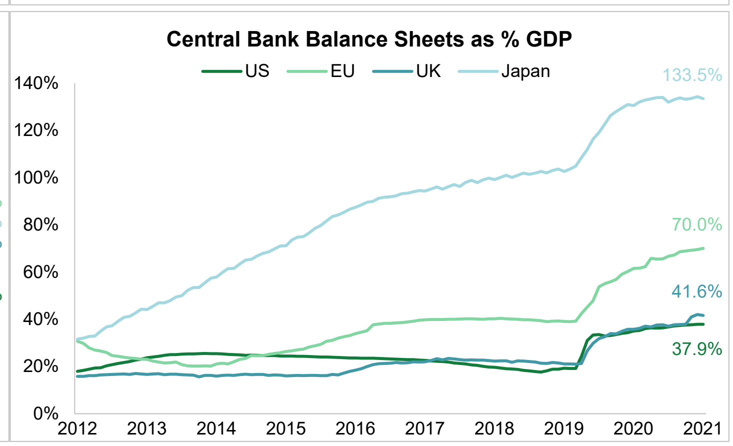
Note: NE = net exports, Business = business investment, Government = govt consumption & investment, PC = personal consumption expenditure

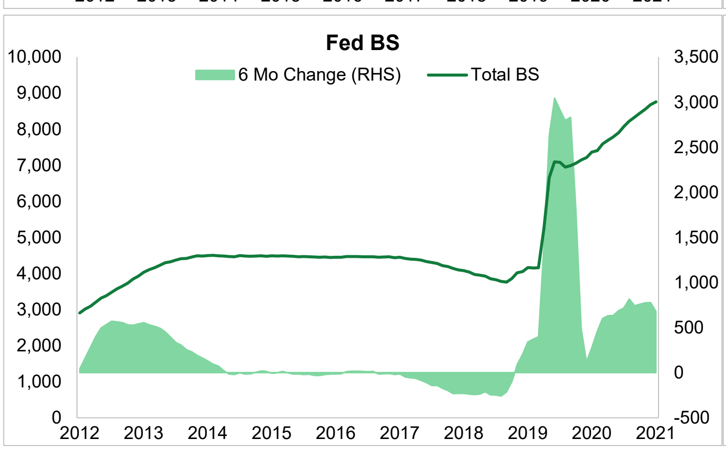
US Debt and Fed Balance Sheet and Comparison Across Regions

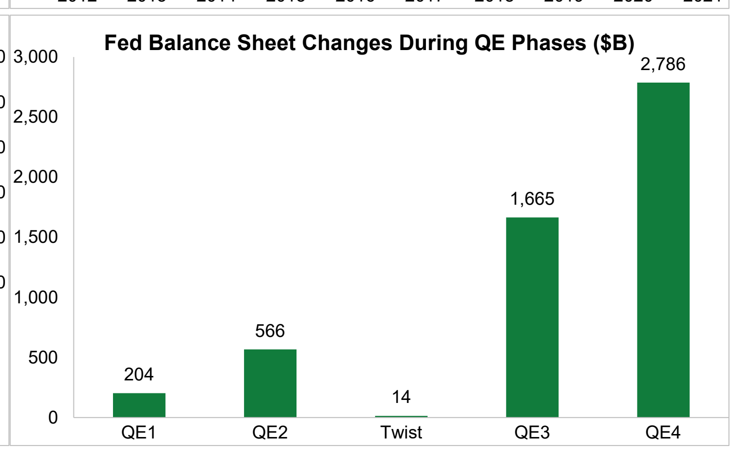








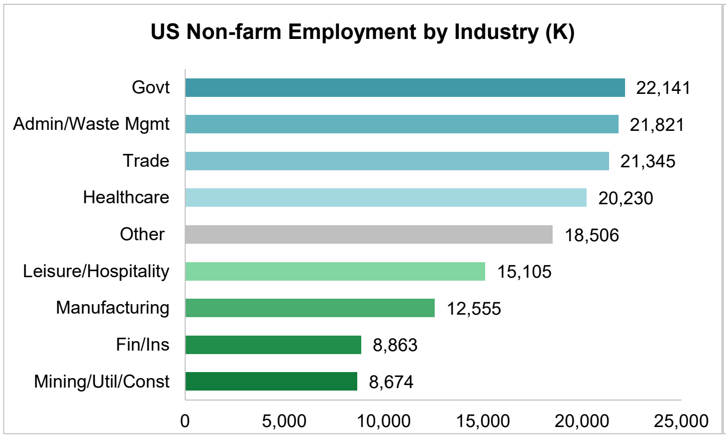


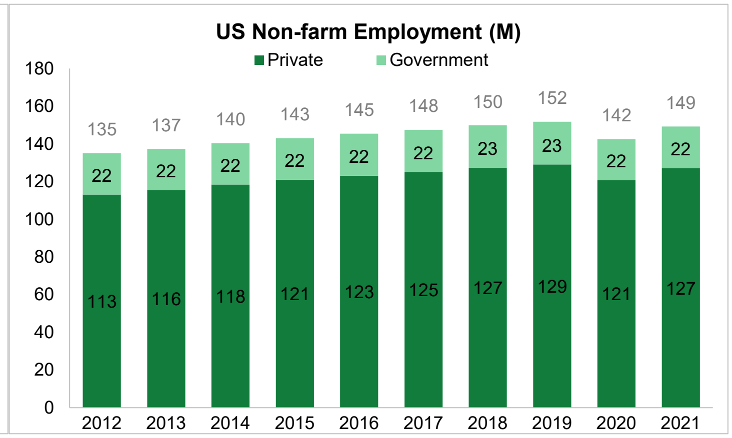


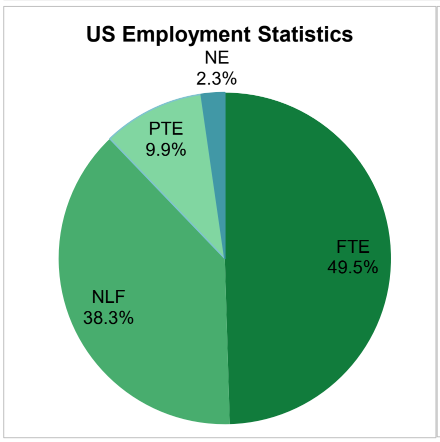
Source: Bloomberg, Bureau of Economic Analysis, Eurostat, Statista, US Treasury

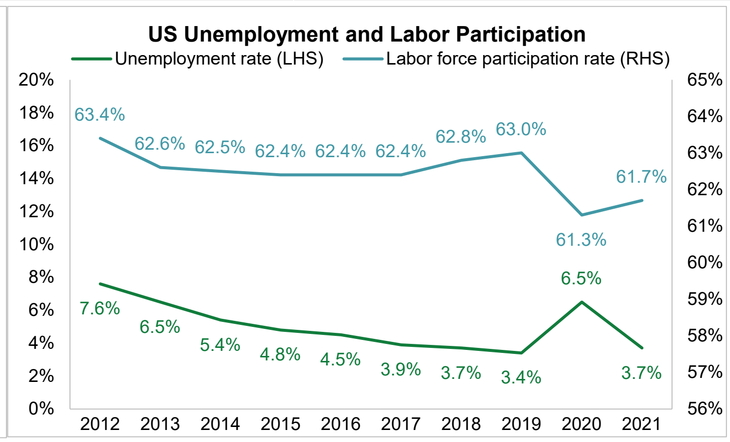
Note: QE = Quantitative easing is a monetary policy when a central bank purchases financial assets to inject money into the economy; Twist = monetary policy when a central bank buys long-term and sells short-term bonds to flatten the yield curve without expanding the balance sheet; QE1: Nov'08-Mar'10, QE2: Nov'10-Jun'11, Twist: Sep'11-Jun'12, QE3: Sep'12-Oct'14, QE4: Mar'20-May'20

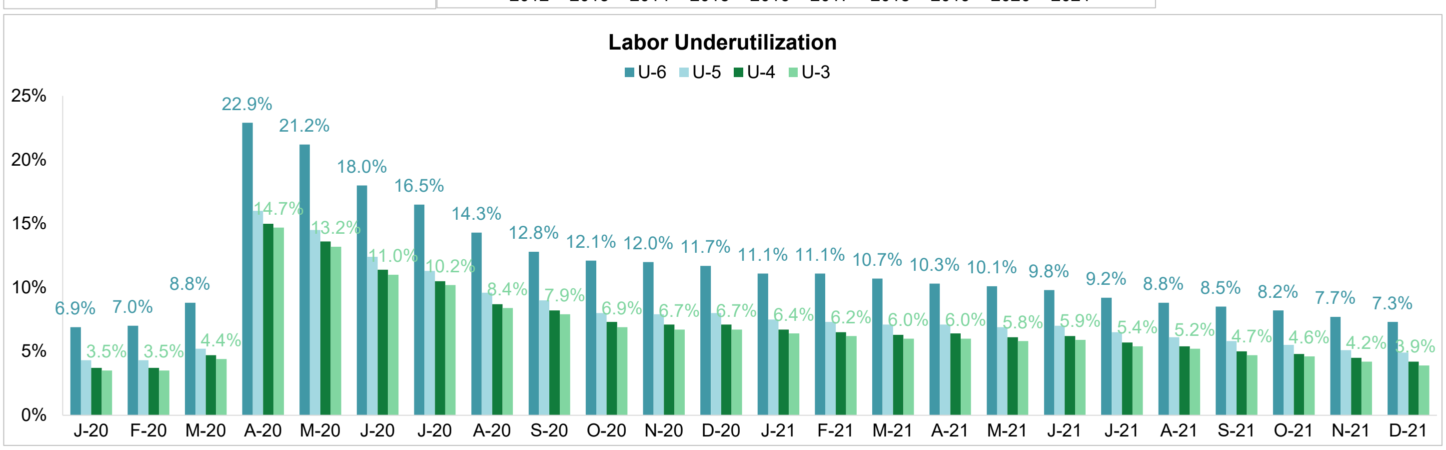
US Employment Landscape











Source: Bureau of Labor Statistics

Note: NE = not employed (unemployed), FTE = full time employment, NLF = not in labor force, PTE = part time employment. Employment statistics based on civilian population 16 years or over

SIFMA Economic Advisory Roundtable Members

SIFMA Economist Roundtable Members

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