2022 Q4 Commentary: The Future Is Always Uncertain

- 2022 was a year of non-linear recovery which incorporated significant political, financial, investment and human turmoil. Many of us are glad that 2022 is behind us, but time is a human construct. There is nothing that forces a reversal of events or redirection simply because we crossed over to another day, which just happens to be the first day of a new calendar year. The conditions on the ground have not shifted a bit, so the end of the fourth quarter and the beginning of the first quarter is a just a passage of time and do not materially change any factors or the path upon which the global economy has been traveling.
- Uncertainty about central banks' monetary policies in their attempt to respond and contain inflation and how the markets will anticipate and respond remain omnipresence. Will the U.S. end in a soft landing or a hard landing/recession? Perhaps a recession is a good outcome which allows the economy to cleanse and start anew. Will we be in stagflation for an extended period with elevated inflation and sub-trend growth?
- The humanitarian crisis in Ukraine and continuing economic and trade fallout can stop at any time or carry on for years to come. What is clear is that Russia's desire to contain NATO expansion has backfired with Finland and Sweden applying to join the Alliance. Nonetheless, without an offramp for Putin, it is hard to see when and how the war will end.
- Regardless of the rhetoric of supporting the One China Policy[1], the ground has shifted much since 1979 with the rise of China and the growing U.S. view of China as more than a strategic competitor (made in part as a response to a more muscular China globally, especially the South and East China Sea expansion). The words and deeds taken by the U.S. against the PRC and the significant additional support, politically and militarily, as well as trade and other exchanges for Taiwan have caused all to focus on the China-Taiwan relations. This is made more pronounced in the post Russian-Ukraine world. The geopolitical tension between the two largest world economies is adding risks and uncertainties to geopolitics, trade, finance, and alliances globally. Although both sides are not interested in erupting into a hot war, the ever ratcheting up of rhetoric and actions and counteractions are moving the world ever closer to an accidental war.

[1] The U.S. recognizes the PRC in 1979 as the sole legal government of China but only acknowledges the Chinese position that Taiwan is part of China. Thus, the U.S. maintains formal relations with the PRC and has unofficial relations with Taiwan. The "one China" policy has subsequently been reaffirmed by every new incoming U.S. administration. The existence of this understanding has enabled the preservation of stability in the Taiwan Strait, allowing both Taiwan and mainland China to pursue their extraordinary political and socioeconomic transitions in relative peace. The 1979 Taiwan Relations Act protects the significant U.S. security and commercial interest in Taiwan. https://www.csis.org/analysis/what-us-one-china-policy-and-why-does-it-matter

2022 Stocks & Bonds Performance in USD & 60/40

Index in US$	2022 TR	2021 TR
DJ Industrial Average NR USD	-7.44	8.98
S&P 500 TR (1989)	-18.11	18.40
S&P 500 Growth TR USD	-29.41	33.47
S&P 500 Value TR USD	-5.22	1.36
Russell Mid Cap TR USD	-17.32	17.10
Russell Mid Cap Growth TR USD	-26.72	35.59
Russell Mid Cap Value TR USD	-12.03	4.96
Russell 2000 TR USD	-20.44	19.96
Russell 2000 Growth TR USD	-26.36	34.63
Russell 2000 Value TR USD	-14.48	4.63
NASDAQ 100 TR USD	-32.38	48.88

Index in US$	2022 TR	2021 TR
Bloomberg US Aggregate Bond	**-13.01**	7.51
Bloomberg US Corp IG + High Yield	**-14.91**	9.42
Bloomberg Municipal	**-8.53**	5.21
Bloomberg High Yield Corporate	**-11.19**	7.11
JPM EMBI Global Diversified	**-17.78**	5.26
JPM GBI-EM Global Composite LCL	**-1.84**	8.03

US 60/40 Portfolio (US$)	2022 TR	Allocation
S&P 500	**-18.11%**	60%
Bloomberg US Aggregate Bond	**-13.01%**	40%
Total Return (no Fee)	**-16.07%**	
Global 60/40 Portfolio (US$)	2022 TR	Allocation
MSCI ACWI All Cap GR	**-18.04%**	60%
Bloomberg Global Aggrgate TR	**-16.25%**	40%
Total Return (no Fee)	**-17.32%**	

S&P 1500 Sector Index in US$	2022 TR	2021 TR
Energy	63.77	**-33.81**
Utilities	1.37	**-0.90**
Consumer Staples	**-0.74**	11.10
Health Care	**-3.31**	14.55
Industrials	**-6.43**	11.69
Financials	**-10.15**	**-1.91**
Materials	**-10.78**	19.60
S&P 1500	**-17.78**	17.92
Information Technology	**-27.91**	43.23
Media	**-30.54**	15.70
Consumer Discretionary	**-35.70**	32.88
Communication Services	**-39.66**	23.36

Index in US$	2022 TR	2021 TR
MSCI Brazil GR	14.61	**-18.87**
MSCI Canada GR	**-12.17**	6.21
MSCI China GR	**-21.80**	29.67
MSCI France GR	**-12.67**	4.70
MSCI Germany GR	**-21.62**	12.29
MSCI Hong Kong GR	**-4.71**	5.82
MSCI India GR	**-7.49**	15.90
MSCI Italy GR	**-13.42**	2.43
MSCI Japan GR	**-16.31**	14.91
MSCI Korea GR	**-28.94**	45.21
MSCI Mexico GR	**-1.64**	**-1.62**
MSCI UK All Cap GR	**-10.16**	**-8.45**

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Complexity – Rolling Exogenous and Endogenous Shocks

- The complexity of the current inflationary environment is due largely to the forced closing of our and other economies due to the COVID-19 shock and the subsequent rolling re-openings and their impacts on the global supply chain and labor. The impact was initially felt by a negative supply shock from Wuhan, China. Then, it spread to other regions as other economies closed. This then brought in the negative demand shock as people lost jobs with income insecurity. In the U.S. at least, the massive fiscal transfer payments to households and businesses turned shelter-in-place citizens into online spenders which drove demand up at a time when the world supply chains were still struggling with access to raw materials, delivery, labor, factories and shipping. Supply and delivery of goods could not possibly be met with the surge in demand. Goods inflation was an obvious outcome with more demand than supply, and the costs associated with manufacturing and delivering the goods also spiked. During this period, the service economy was in hibernation. As the economies opened with an increasing portion of the population vaccinated, the service economy had to play catch up in response to hiking demand. The shortage of labor (due to structural and temporary factors) in both goods producing and service providing sectors, evidenced by low unemployment and higher wages, further contributed to inflation. Then came the supply shock from Russia's invasion of Ukraine as the world was on a path of recovering. This shock continues to add uncertainty to energy and food supplies of the world as well as wreaks havoc on certain supply chains.
- China's draconian zero-COVID policy since Wuhan provided great protection for its people for two-years, but with the significantly more transmittable Omnicron variant (original SARS-CoV-2 has Ro ~2.79 and the Delta variant has Ro ~5.08 and the Omicron variant has Ro 7.0 or greater[1]), China had to impose rolling lockdowns, which contributed to a roll back of supply chain and economic recovery. In late November, realizing zero-COVID policy cannot reasonably contain massive transmission without future destruction to its economy and an extreme toll on its people, China abandoned its policy, resulting in a rolling wave of infection moving across China. This added pressure on its goods production and supply chain. This developing story suggests that the abandonment of zero-COVID by China, which the world has been urging for two-years, would mean normalizing demand for goods, services and raw materials. This could lead to a rise in commodity prices worldwide and work against the Fed's monetary policy objective of bringing inflation back to 2% sooner.
- Regardless if the world is deglobalizing or not, we are connected. The Fed cannot control all the shocks and factors, and as such, the China story and the possible end to the Russian invasion have shorter- or longer-term impacts on inflation and thus monetary policy implications. The bottom line is more policy uncertainty in 2023.

[1] https://vitals.sutterhealth.org/omicron-is-the-us-dominant-covid-variant-for-two-reasons/
R0 or "R naught," is a mathematical term that indicates how contagious an infectious disease is. It's also referred to as the reproduction number. It expresses the average number of cases of an infectious disease arising by transmission from a single infected individual, in a population that has not previously encountered the disease.

Chair Powell – Keeping At It[1] – 12-14-2022 Press Conference[2]

- "our overarching focus is using our tools to bring inflation back down to our 2 percent goal and to keep longer-term inflation expectations well anchored" (*credibility and resolve*)
- "the full effects of our rapid tightening so far are yet to be felt continue to anticipate that ongoing increases will be appropriate in order to attain a stance of monetary policy that is sufficiently restrictive to return inflation to 2 percent over time" (*more hikes to come*)
- "continuing the process of significantly reducing the size of our balance sheet"
- "take substantially more evidence to give confidence that inflation is on a sustained downward path" (*encouraging but not conclusive recent data on inflation*)
- "longer-term inflation expectations appear to remain well anchored"
- "financial conditions fluctuate in the short term in response to many factors, but it is important that over time they reflect the policy restraint we are putting in place to return inflation to 2 percent" (*wants more sustained evidence of financial condition restrains to combat inflation*)
- "it will take time for the full effects of monetary restraint to be realized, especially on inflation" (*the lag effects of policy actions*)
- "taking forceful steps to moderate demand so that it comes into better alignment with supply" (*higher rates*)
- "reducing inflation is likely to require a sustained period of below-trend growth and some softening of labor market conditions" (*higher rates for longer*)
- "historical record cautions strongly against prematurely loosening policy" (*fighting back the market expectation of a policy pivot soon*)

[1] "Keeping at It" is the title of the book by former Fed Chair Paul Volcker.
https://www.amazon.com/Keeping-At-Quest-Sound-Government/dp/1541788311
[2] https://www.federalreserve.gov/monetarypolicy/fomcpresconf20221214.htm

Big Issues – Known Unknowns

- The elephant in the room is global central bank policies where the Federal Reserve takes the lead. The singular focus of dialing back inflation will continue to keep the markets on edge regarding how far will the Fed raise rates, how long will the Fed keep rates high and then when will the Fed pivot and start to cut rates. Furthermore, the less well understood policy of shrinking the Fed's balance sheet (i.e., Quantitative Tightening) as to its ramifications and transmission mechanism to the financial and credit markets as well as liquidity in general, is also at play. There are lots of speculations and everyone is simply guessing.
- 2022 brought back geopolitical risks to our collective consciousness by the Russian invasion of Ukraine. Beyond human suffering, how will developing damages to food and energy supplies and global security be played out in 2023?
- Hurricanes, tornados, atmospheric rivers, rising sea levels, forest fires, bomb cyclones and many other climate related events are becoming more common, and the associated loss of lives and financial costs are increasingly significant. How should these risks and financial impacts be included in planning forward?
- The superpower competition between the U.S. and the People's Republic of China is a developing story that seems to be unidirectional – getting worse and more serious. After 40 years of globalization, the future looks likely to be more regionalized and fractured with more spending on the military and operating in a less efficient environment. Would this add a cost premium to goods and services, and would regions and alliance partners become more self-reliant and nationalistic (national security) even at a greater cost to consumers? Would this lower everyone's ability to improve on their standard of living?
- China has been clear about its red-line – Taiwan becomes an independent country. For China, unification is an emotional issue, and the realization of its dream would mark the end of 100 years of humiliation. (Taiwan was a part of China that was annexed by Japan during the Second World War.) Although it is not our base case, we cannot rule out the possibility of China invading Taiwan and getting into a hot war with Japan, Australia, and the U.S. The fallout would be incalculable to all parties since China is the second largest economy and represents a significant share of trade with many countries.

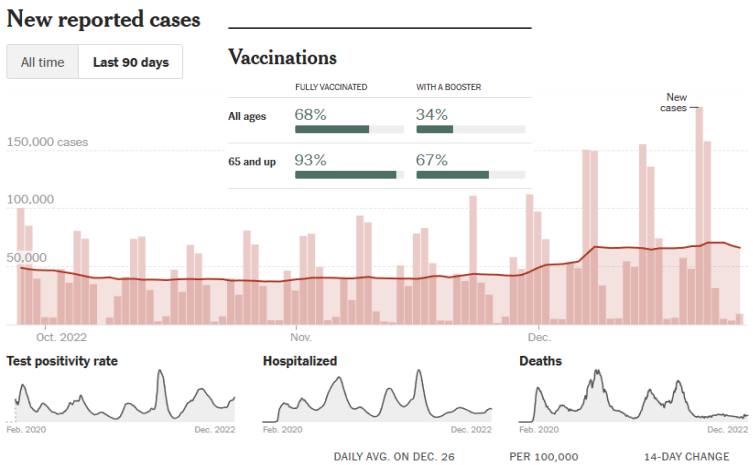
Fed Policy Language Explained

- We categorize four phases to the current monetary policy cycle

  a. PACE (SPEED) - Front loading to "speedily" raise interest rates to counter surging inflation. In 2022, the Fed hiked rates 4.25% from its March meeting through its December meeting – aggressively. This is an unprecedented PACE for rate hikes and is often referred to as "frontloading" by the Fed.
  b. SCALE - Reach the required SCALE or level of interest rate (i.e., Terminal Rate) that is deemed sufficiently restrictive to return inflation to 2% over time. Raising interest rates has wide implications in the real and financial economies, affecting stocks and bond prices, mortgage rates and all borrowing costs. By raising rates over time, the policy gradually tightens the noose on the U.S. economy by restricting financial conditions. This slows down borrowing, spending, investments, projects, acquisitions, R&D, and hiring. This dampens all economic activities and could lead to a recession due to increasing unemployment as companies let go of workers due to a reduction in revenue and profit.
  c. PAUSE – There is a time lag (6 to 12 months) from raising interest rates to observable impacts on the economy. Since the first rate hike was in March 2022 (25bp), we are now just about at the 9-month mark and more time is needed for the additional 400bp hikes to impact the economy. Continued hiking by the Fed could cause unnecessary pain to the economy, but not doing enough could be insufficient to bring back price stability at the 2% target. Without knowing where the "terminal rate" is, the Fed will PAUSE and observe the rate impact.
  d. PIVOT – If the PAUSE period shows reflation, the Fed will again raise rates. Otherwise, the Fed would PIVOT and consider lowering rates back to the appropriate neutral rate or r*. This PIVOT will likely be later than sooner due to the very tight labor market.

- Our interpretation of the sequence of events assumes the Fed will "keep at it" without deviation or succumb to political pressure (general election in 2024) to soften its resolve and stay committed to its price stability mandate of moving inflation (core PCE) back to the 2% target.

Covid is still here – Dwindling Risk to the Economy



	DAILY AVG. ON DEC. 26	PER 100,000	14-DAY CHANGE
Cases	66,014	20	−1%
Test positivity	14%	—	+14%
Hospitalized	40,156	12	+3%
In I.C.U.s	4,931	1	+11%
Deaths	426	<1	−9%

https://www.nytimes.com/interactive/2021/us/covid-cases.html

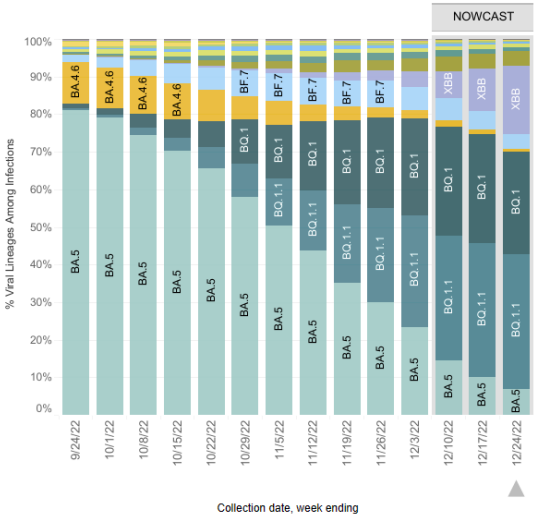
As of 12-22-2022, according to the New York Times:
Going into Christmas weekend, the key measures of the pandemic are no longer rising like they were in early December. Cases have been roughly flat nationally for the past week, and hospitalizations have begun to level off after a month of consistent growth.
Cases are rising in some states, however, and the Northeast remains a troubling hotspot. At a time of extensive holiday gatherings and lagging vaccine uptake, there are reasons to suspect that the current leveling off could be short-lived.
Case and death counts may be artificially low in the coming days as the officials who are tracking those numbers take time off. Hospitalization data is typically not subject to holiday reporting breaks and therefore should remain reliable.

United States: 12/18/2022 – 12/24/2022 NOWCAST

USA

WHO label	Lineage #	US Class	%Total	95%PI
Omicron	BQ.1.1	VOC	35.7%	31.9-39.7%
	BQ.1	VOC	27.4%	24.0-31.1%
	XBB	VOC	18.3%	10.5-29.6%
	BA.5	VOC	6.9%	5.9-8.1%
	BF.7	VOC	3.9%	3.2-4.7%
	BN.1	VOC	3.8%	3.1-4.5%
	BA.5.2.6	VOC	1.1%	0.9-1.4%
	BA.2.75	VOC	1.0%	0.7-1.3%
	BA.4.6	VOC	0.7%	0.6-0.9%
	BF.11	VOC	0.5%	0.4-0.6%
	BA.2	VOC	0.5%	0.3-0.7%
	BA.2.75.2	VOC	0.2%	0.1-0.3%
	BA.4	VOC	0.0%	0.0-0.0%
	BA.1.1	VOC	0.0%	0.0-0.0%
	B.1.1.529	VOC	0.0%	0.0-0.0%
	BA.2.12.1	VOC	0.0%	0.0-0.0%
Delta	B.1.617.2	VBM	0.0%	0.0-0.0%
Other	Other*		0.0%	0.0-0.1%

United States: 9/18/2022 – 12/24/2022



* Enumerated lineages are US VOC and lineages circulating above 1% nationally in at least one week period. "Other" represents the aggregation of lineages which are circulating <1% nationally during all weeks displayed.
** These data include Nowcast estimates, which are modeled projections that may differ from weighted estimates generated at later dates
\# BA.1, BA.3 and their sublineages (except BA.1.1 and its sublineages) are aggregated with B.1.1.529. Except BA.2.12.1, BA.2.75, BA.2.75.2, BN.1,XBB and their sublineages, BA.2 sublineages are aggregated with BA.2. Except BA.4.6, sublineages of BA.4 are aggregated to BA.4. Except BF.7, BF.11, BA.5.2.6, BQ.1 and BQ.1.1, sublineages of BA.5 are aggregated to BA.5. For all the lineages listed in the above table, their sublineages are aggregated to the listed parental lineages respectively. Previously, XBB was aggregated with other. Lineages BA.2.75.2. XBB. BN.1. BA.4.6. BF.7. BF.11. BA.5.2.6 and BQ.1.1 contain the spike substitution R346T.

https://covid.cdc.gov/covid-data-tracker/#variant-proportions

The COVID-19 virus is constantly changing and accumulating mutations in its genetic code over time. New variants of SARS-CoV-2 are expected to continue to emerge. Some variants will emerge and disappear, while others will emerge and continue to spread and may replace previous variants. This winter, a confluence of viral infections due to respiratory syncytial virus (RSV), influenza and Covid-19 is likely to get more people sick. Many children's hospitals are overwhelmed after surges of RSV, while the level of influenza is the highest it has been at this point in the year for more than a decade. And after a lull in cases, new coronavirus infections are on the rise across the country as well. But this is not likely to impact the economy in any material way even though over 400 people die every day due to Covid. The highest risk for severe illness remains older people, newborns and people with multiple chronic medical conditions.

https://www.nature.com/articles/d41586-022-03157-x

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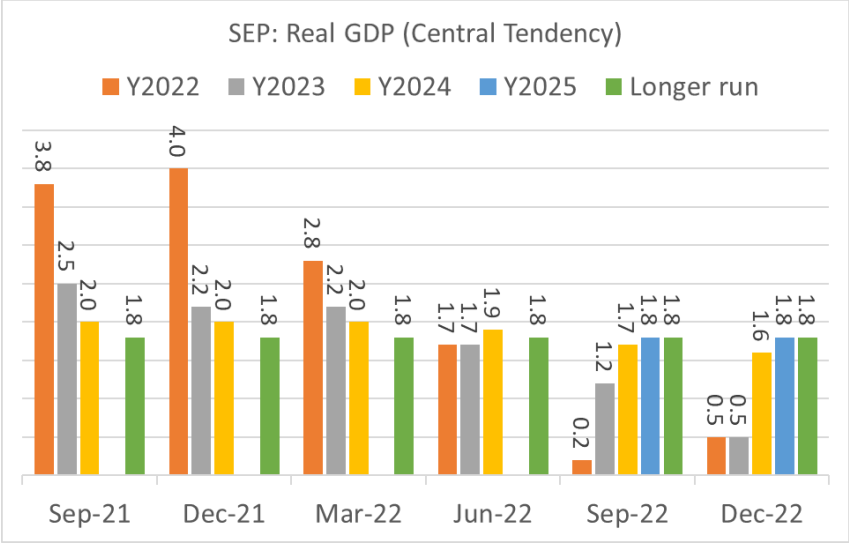
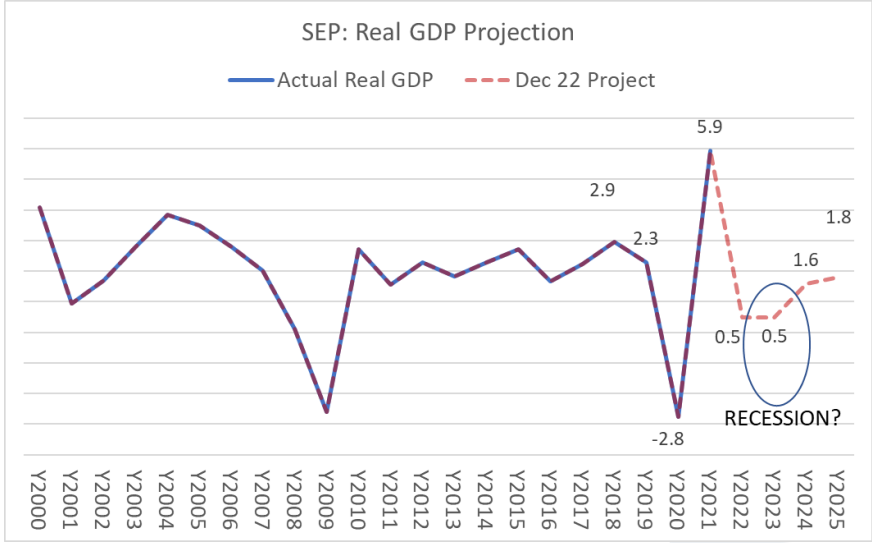
Summary of Economic Projections - GDP



https://www.federalreserve.gov/monetarypolicy/fomcprojtabl20211215.htm



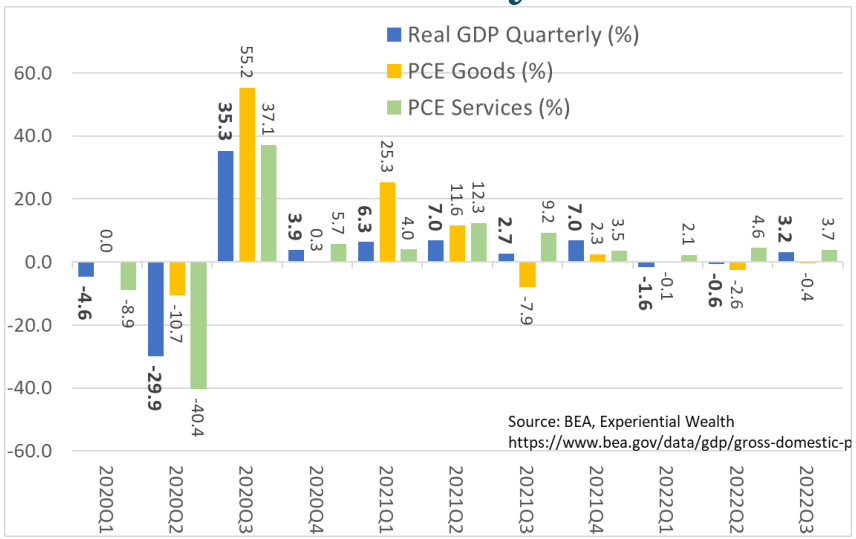
Source: FRED, FOMC SEP, Experiential Wealth

At its December meeting, the Federal Open Market Committee (FOMC) released its quarterly Summary of Economic Projections (SEP). FOMC participants submit their projections of the most likely outcomes for real gross domestic product (GDP) growth. Participant projections are based on information available at the time of the meeting together with their assessment of appropriate monetary policy and assumptions about other factors likely to affect economic outcomes. Historically, SEP projections are more reliable in terms of directionality rather than the actual projections.

The SEP should NOT be relied upon as the official position of the FOMC. The FOMC has revised downward its 2022 economic growth projection to near recession levels. This is likely in recognition of the signs of significantly slowing U.S. and global economies as well as the need to further and persistently tighten financial conditions to bring inflation back to the 2% level with "pain" to households and the economy.

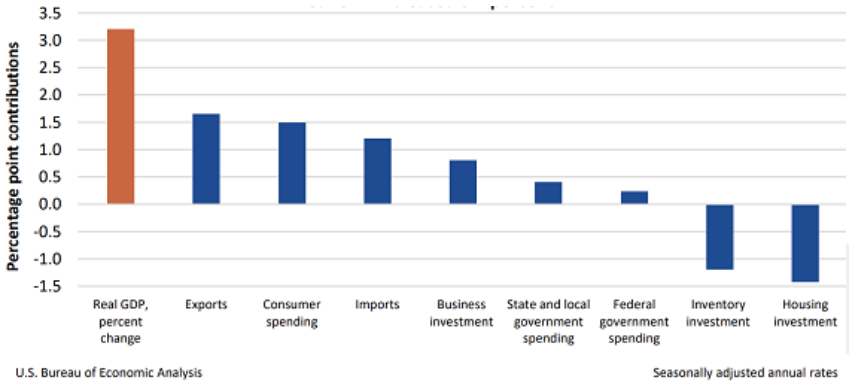
Separately, the final estimate for the third quarter Real GDP increased at an annual rate of 3.2% (revised up from 2.9% in the second estimate), in contrast to a decrease of 0.6% in the second quarter. The increase in the third estimate primarily reflected increases in exports and consumer spending that were partly offset by a decrease in housing investment. For 2022 to produce a 0.5% real GDP, the final quarter would report a 0.5% real GDP growth.

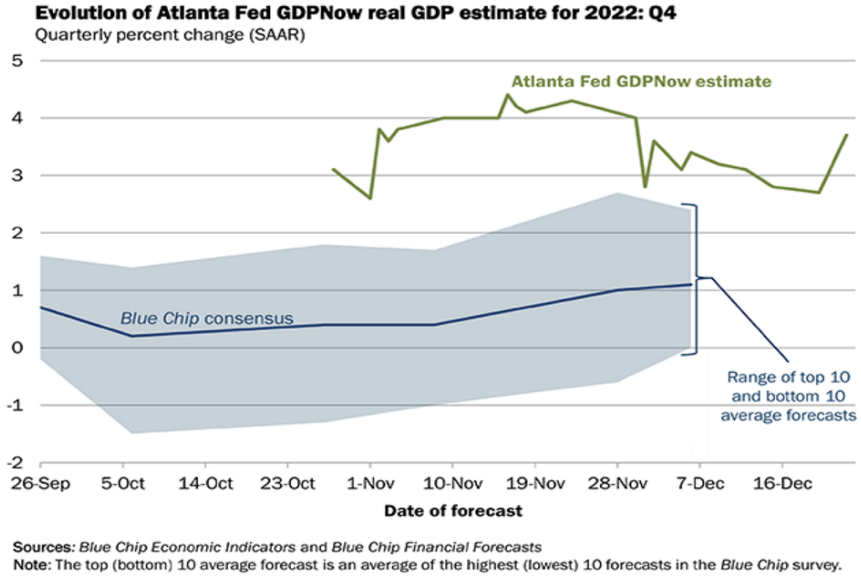
The U.S. Economy – GDP – A Slow Transition



https://www.bea.gov/data/gdp/gross-domestic-product

The final estimate of GDPs show a stronger U.S. economy at 3.7%. The updated estimates primarily reflected upward revisions to consumer spending and nonresidential fixed investment that were partly offset by a downward revision to private inventory investment.





https://www.atlantafed.org/cqer/research/gdpnow

The Atlanta Fed's GDPNow model (12-23-2022) estimate for real GDP growth (seasonally adjusted annual rate) in the fourth quarter is at 3.7%, which is much higher than the Blue Chip Economic consensus projecting to slightly above 1%. This shows clearly the uncertainty about where the economy is going in the near term.

There is quite a gap between the Nowcast projection and the Blue Chip Economist average estimate as well as the expected PCE projection for 2022. Nonetheless, the economy remains too strong and that's a signal that confirms the Fed is not done with its rate hiking. This is consistent with the Fed Chair's expectation of the terminal rate at 5.1% or higher.

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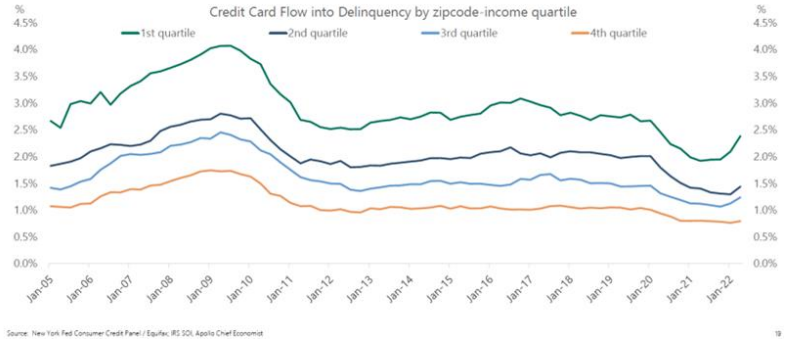
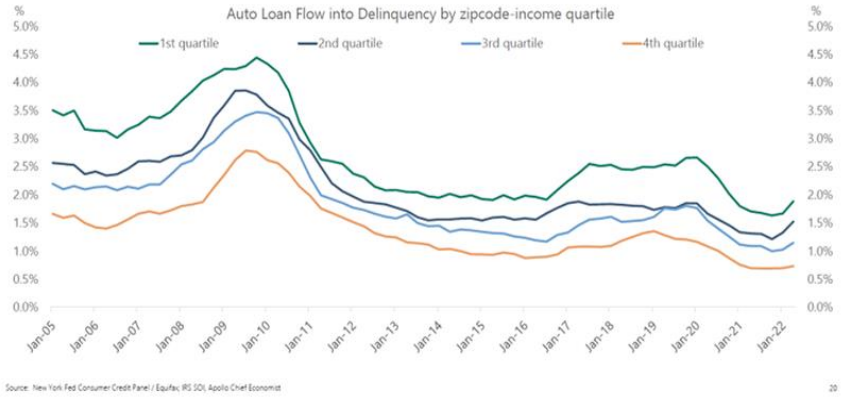
High Frequency Economic Data

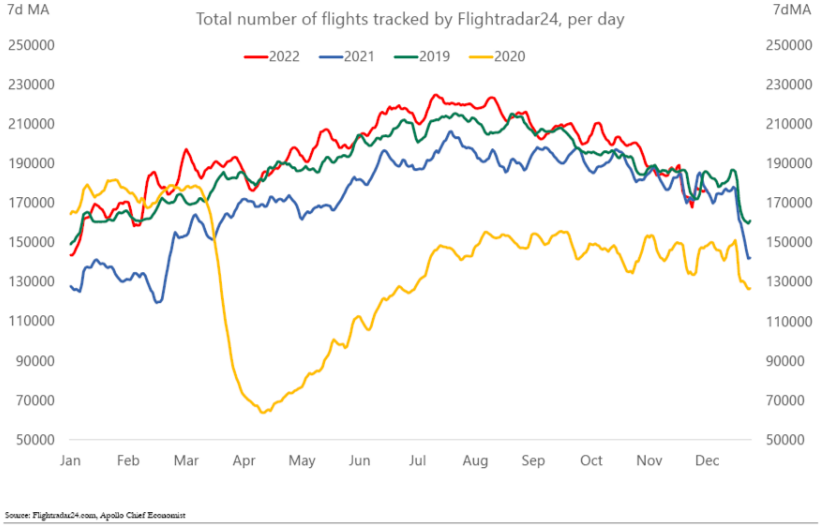
Credit card delinquency rates moving higher



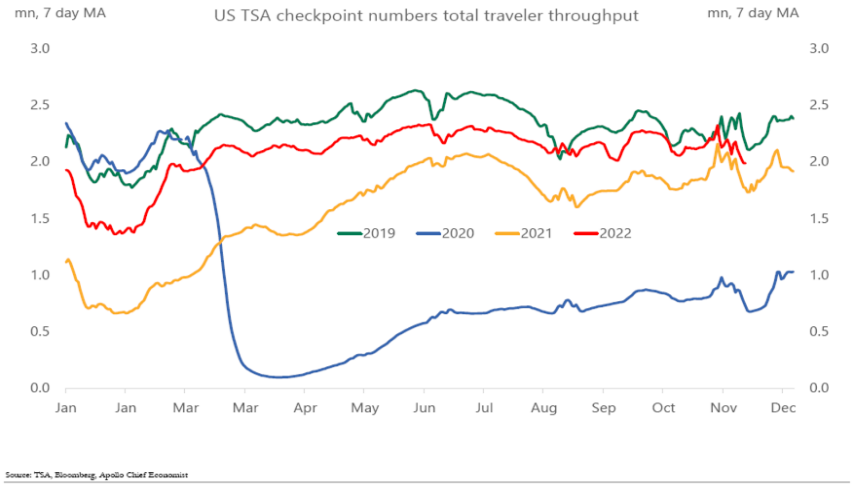
Auto loan delinquency rates moving higher



Global air traffic still high



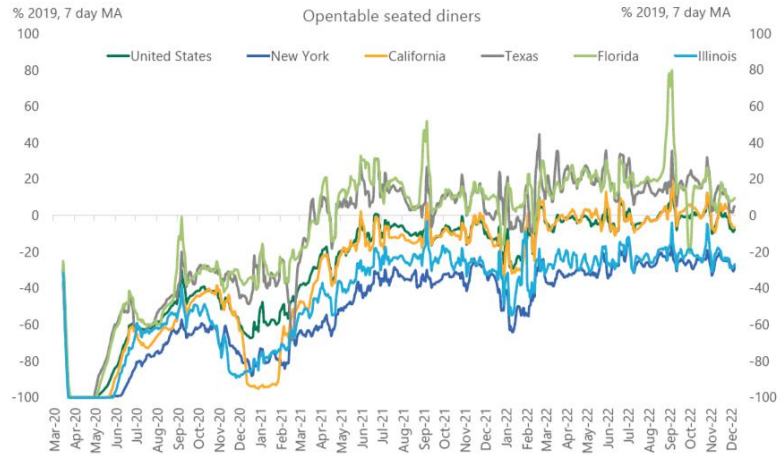
US air travel still strong



Courtesy: Apollo, 2022 October

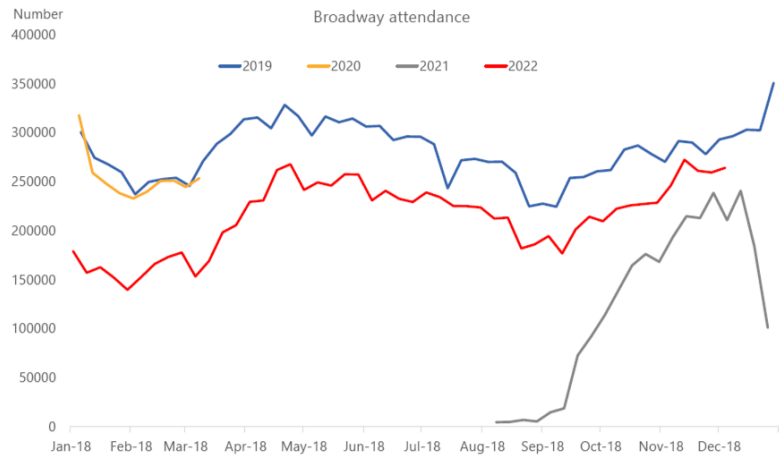
High Frequency Economic Data

Restaurant bookings still strong



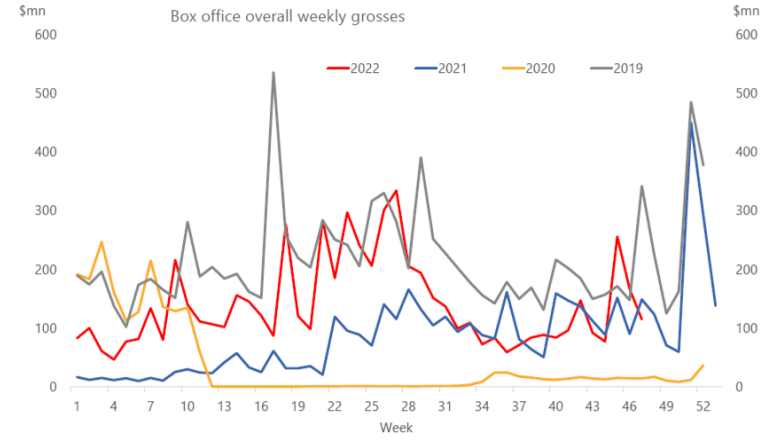
Source: OpenTable, Apollo Chief Economist

A lot of people are going to Broadway shows



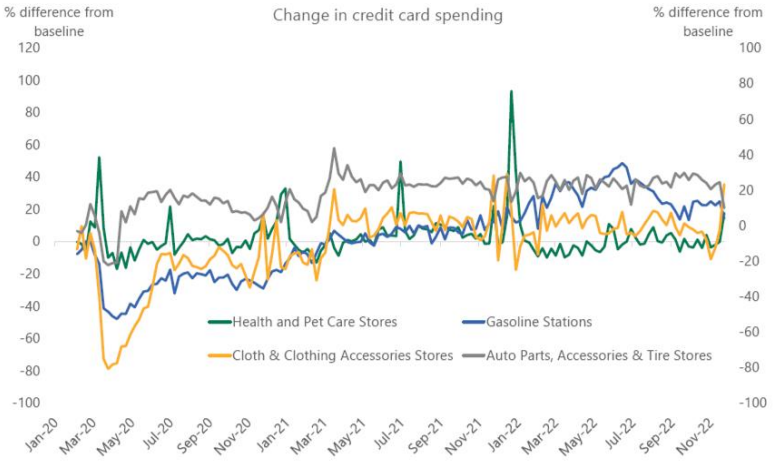
Source: Internet Broadway Database, Apollo Chief Economist

Modest increase in movie theatre visits



Source: Boxofficemojo.com, Apollo Chief Economist

US consumer still strong

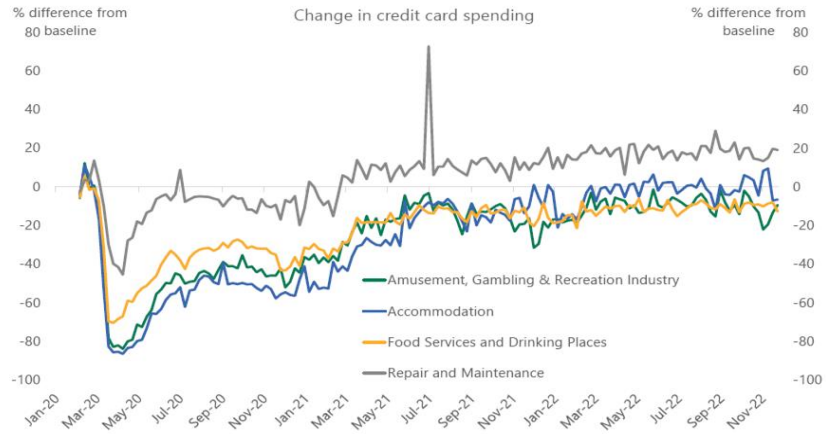


Source: BEA, Haver analytics, Apollo Chief Economist. Note: The weekly values represent the predicted percentage difference from the typical level of spending (prior to the pandemic declared by the World Health Organization on March 11, 2020) after adjusting for day-of-week, month, and year effects, based on daily data. The typical level corresponds to a value of zero.

Courtesy: Apollo, 2022 October

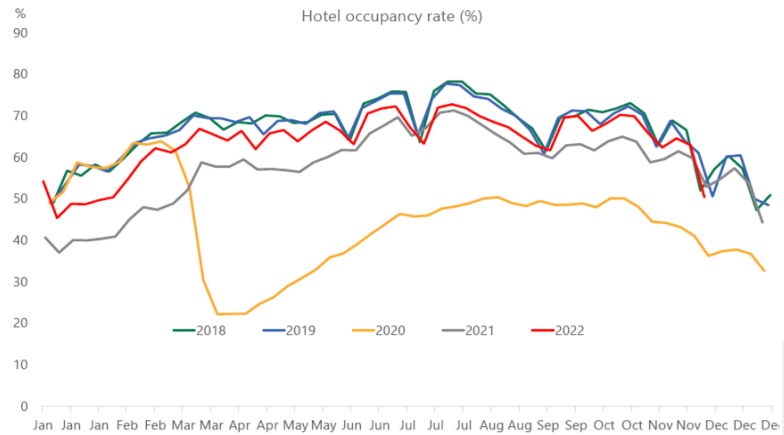
High Frequency Economic Data

US consumer still strong



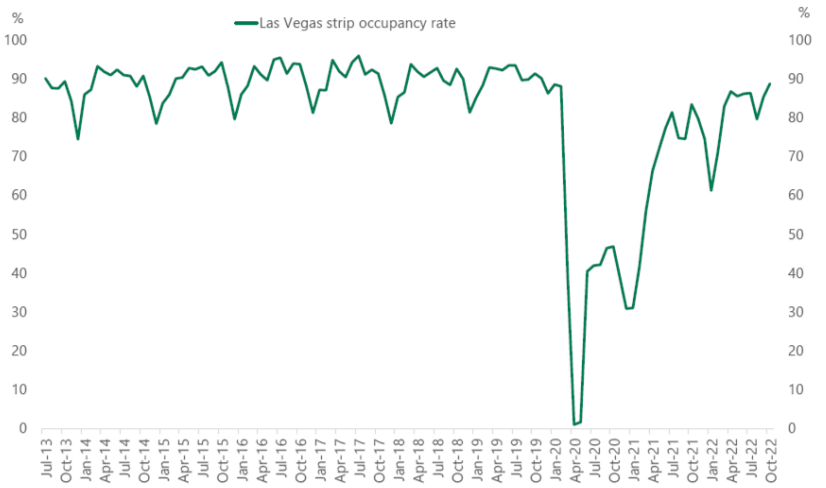
Source: BEA, Haver analytics, Apollo Chief Economist. Note: The weekly values represent the predicted percentage difference from the typical level of spending (prior to the pandemic declared by the World Health Organization on March 11, 2020) after adjusting for day-of-week, month, and year effects, based on daily data. The typical level corresponds to a value of zero.

Weekly data for hotel demand still strong



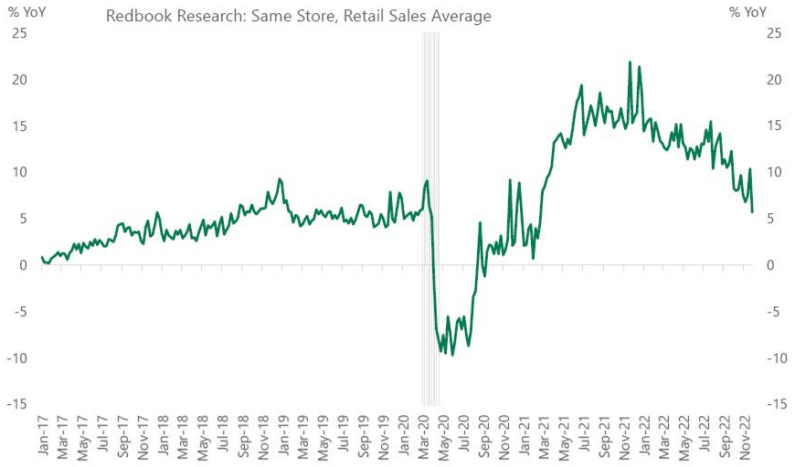
Source: STR, Haver Analytics, Apollo Chief Economist

Las Vegas occupancy rate at pre-pandemic level



Source: Bloomberg, Apollo Chief Economist

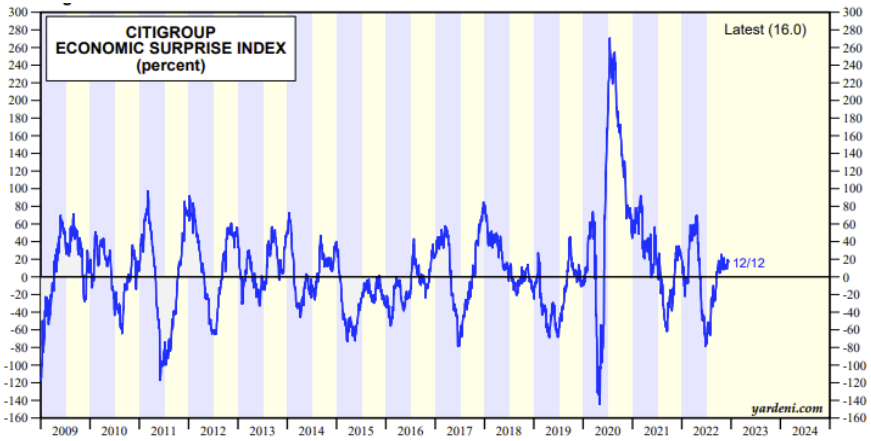
Same-store retail sales slowing down gradually



Source: Redbook, Haver Analytics, Apollo Chief Economist

Courtesy: Apollo, 2022 October

High Frequency Economic Data

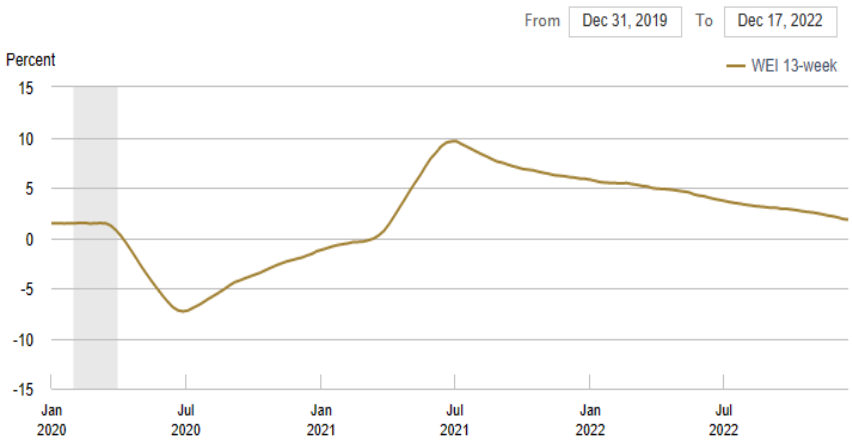


https://www.yardeni.com/pub/citigroup.pdf

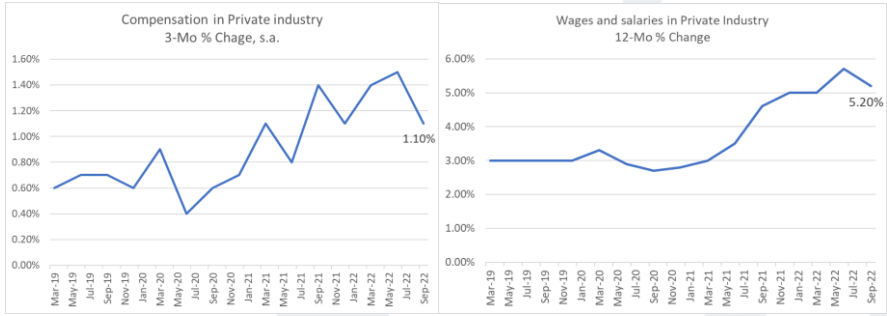
Citi's Economic Surprise Index, which measures the degree to which economic data is either beating or missing expectations, continued to positively improve in the fourth quarter.

New York Fed's Weekly Economic Index shows ten daily and weekly indicators of real economic activity. Since its peak in May 2021, the index continues to fall into December.

The latest third quarter data reflecting labor economy strength from escalating wages is showing some signs of slowing wage growth. This is a welcome sign for the Fed because slowing wage growth slows demand growth which leads to disinflation.



https://www.newyorkfed.org/research/policy/weekly-economic-index#/interactive



https://www.bls.gov/news.release/eci.nr0.htm

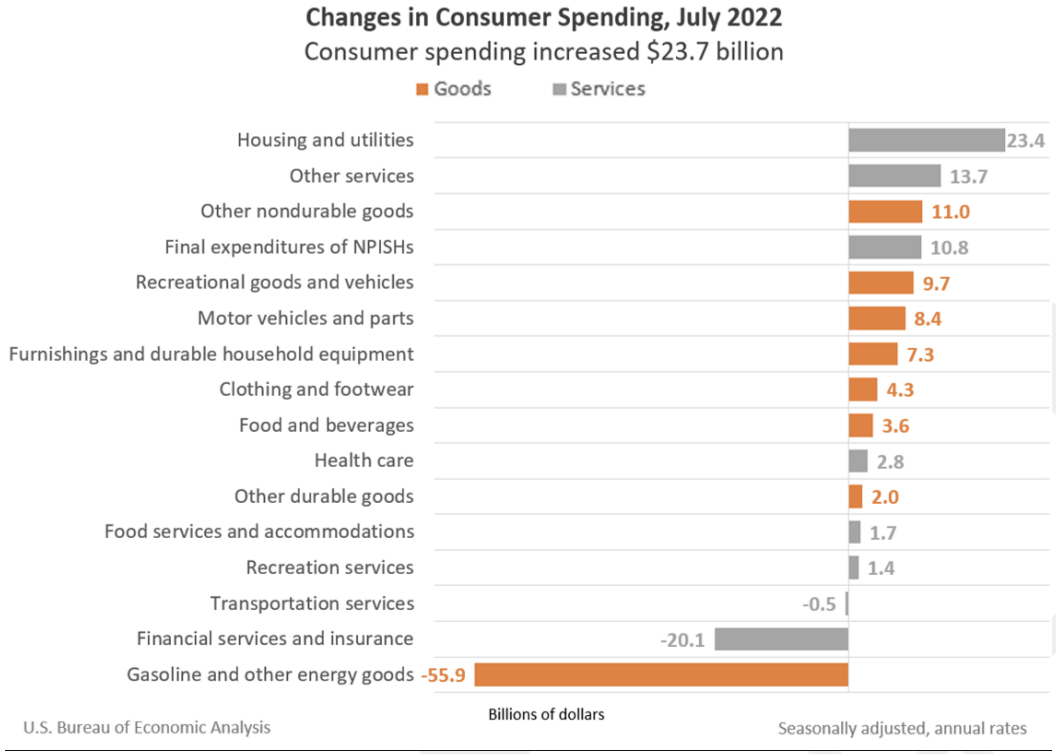
Consumer Spending Pattern – Still Spending Away

Mastercard SpendingPulse™
Anticipated U.S. Retail Sales

	Traditional Holiday Season Nov. 1-Dec. 24	
	2022 vs. 2021	2022 vs. 2019
Total Retail (ex. auto)	+7.1%	+18.8%
Total Retail (ex. auto and gas)	+6.2%	+16.5%
E-commerce sales	+4.2%	+69.2%
In-store sales	+7.9%	+10.4%
Apparel	+4.6%	+25.3%
Department Stores	+0.3%	+15.2%
Electronics	+3.5%	+25.6%
Jewelry	+2.2%	+33.4%
Luxury (ex. Jewelry)	+4.4%	+29.6%

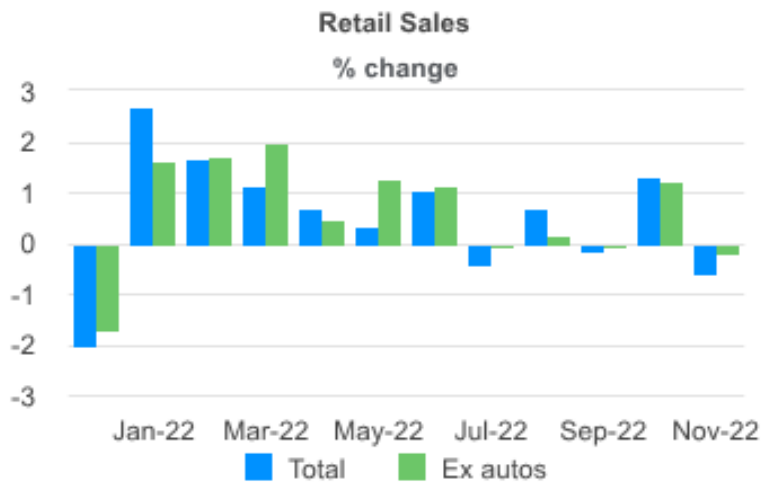
Source: Mastercard SpendingPulse, which measures overall retail sales across all payment types, including cash and check

https://www.mastercard.com/news/press/2022/september/mastercard-spendingpulse-u-s-retail-sales-expected-to-grow-7-1-this-holiday-season/



https://www.bea.gov/taxonomy/term/706

Signs of a General Economic Slowdown



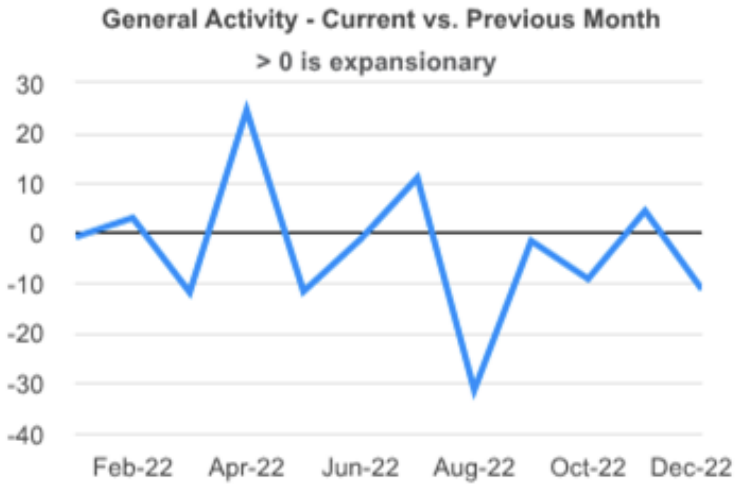
U.S. manufacturing activity contracted in November for the first time since May 2020. The ISM manufacturing index fell from 50.2 in October to 49 in November, The details were mostly weak across the board. New orders, production and employment all declined. The U.S. nonmanufacturing sector expanded in November for the 30th month in row, and the breadth of growth was greater than in the prior month. The ISM nonmanufacturing survey's composite index rose from 54.4 to 56.5. The details in the report were largely favorable. Business activity surged, while the employment index edged higher into expansion territory.

Retail sales sputtered in November, falling after broad-based strong growth in October. Vehicle sales fell, and Thanksgiving weekend sales were uninspiring. Total November sales fell 0.6% after rising 1.3% in October (unrevised) and falling 0.2% in September (unchanged before revision). Excluding auto dealers, sales fell 0.2%. Large declines, outside of vehicle dealers, included department, furniture and building supply stores. Non-store retailer sales also declined coming off Amazon's new Prime Early Access Sale in October. Gains were led by restaurants, grocery stores and drug stores.

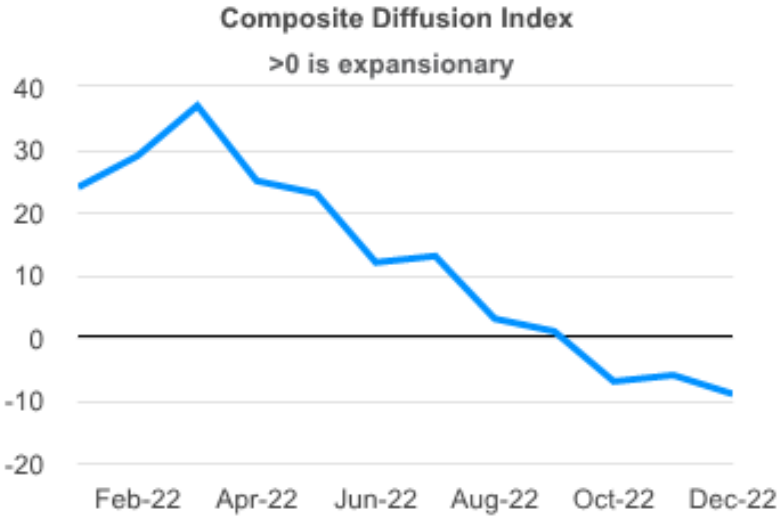
Source: Moody's Economics

Signs of a General Economic Slowdown

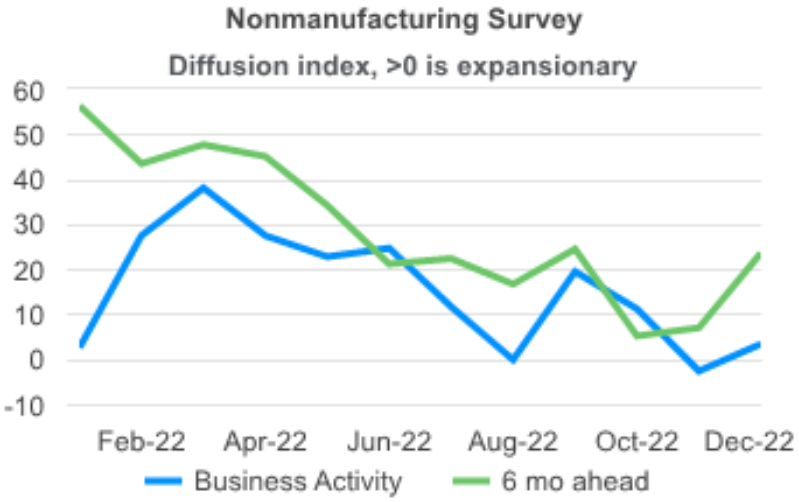
New York Empire State Manufacturing Survey



Kansas City Fed Manufacturing Survey



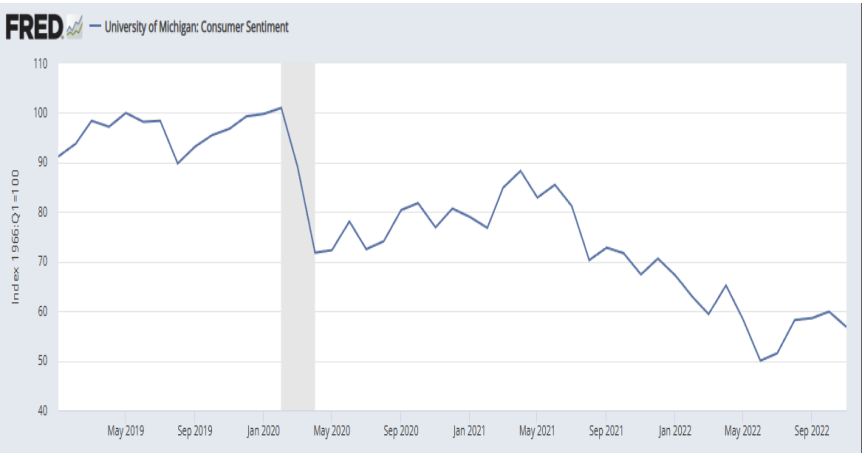
Philadelphia Fed Non-Manufacturing Survey



Source: Moody's economics

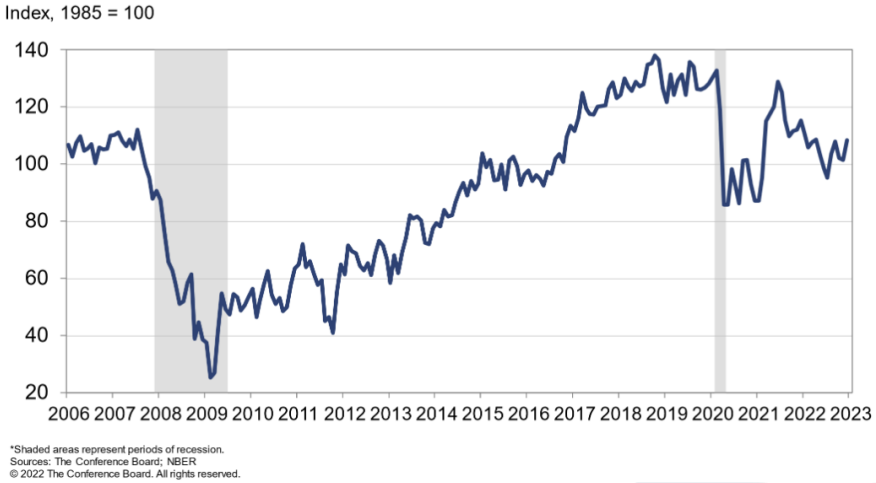
What are People Thinking: Consumer & Business Mixed

UMich Consumer Sentiment
11-2022

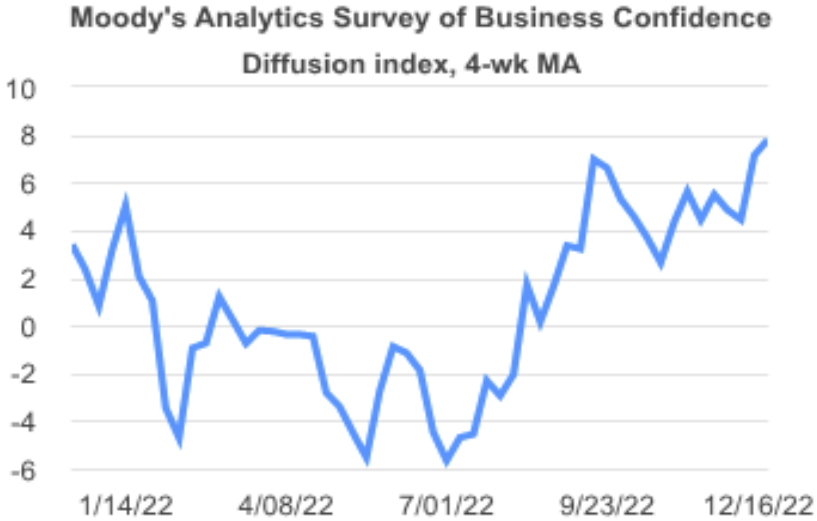


https://fred.stlouisfed.org/series/UMCSENT#

Conference Board Consumer Confidence Survey
12-21-2022



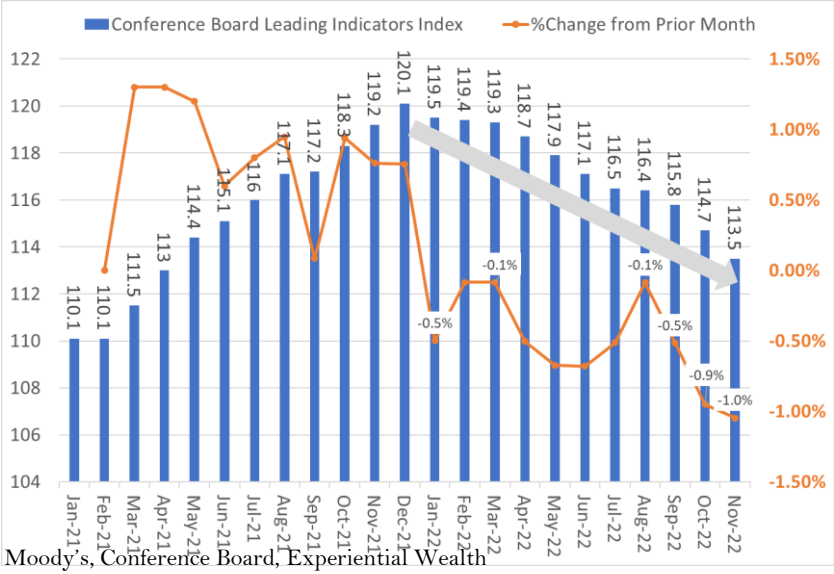
https://www.conference-board.org/topics/consumer-confidence



https://www.economy.com/economicview/indicator/usa_dsbc/5ACCE990-B6C9-4E5D-A4FA-14B8A15F6A13/World-Moodys-Analytics-Survey-of-Business-Confidence

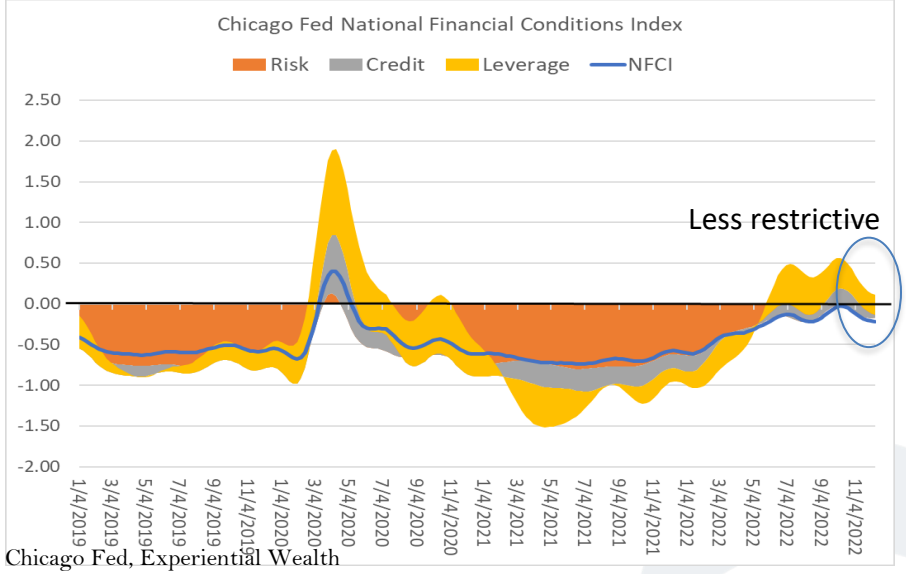
UMich Sentiment remains relatively downbeat at 15% below a year ago, but consumers' extremely negative attitudes have softened this month because of easing pressures from inflation. Assessments of personal finances, both current and future, are essentially unchanged from November. The Conference Board Consumer Confidence Index increased in December following back-to-back monthly declines. The Index now stands at 108.3, up sharply from 101.4 in November. The Present Situation Index—based on consumers' assessments of current business and labor market conditions—increased to 147.2 from 138.3 last month. The Expectations Index—based on consumers' short-term outlooks for income, business, and labor market conditions—improved to 82.4 from 76.7. However, Expectations are still lingering around 80—a level associated with recession.

Leading Indicators and Financial Conditions – a mixed bag



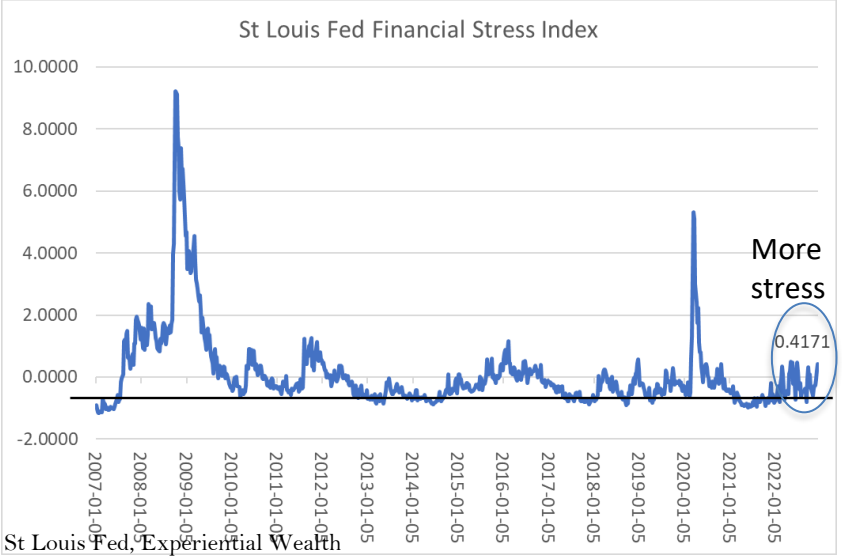
Moody's, Conference Board, Experiential Wealth

https://www.economy.com/economicview/indicator/usa_leading/Conference-Board-Leading-Indicators



Chicago Fed, Experiential Wealth

https://www.chicagofed.org/publications/nfci/index



St Louis Fed, Experiential Wealth

https://fred.stlouisfed.org/series/STLFSI3

Rising interest rates, a slumping housing market, and recessionary fears are weighing heavily on the Conference Board's Leading Economic Index. The LEI slid 1% in November, marking an acceleration from October's revised 0.9% decline (previously -0.8%). The latest reading marks the ninth consecutive month of decline for the LEI.

The St. Louis Federal Reserve Bank's Financial Stress Index This index measures the degree of financial stress in the markets and is constructed from 18 weekly data series: 7 interest rate series, 6 yield spreads and 5 other indicators. Each of these variables captures some aspect of financial stress. Accordingly, as the level of financial stress in the economy changes, the data series are likely to move together.

The Chicago Fed's National Financial Conditions Index (NFCI) provides a comprehensive weekly update on U.S. financial conditions in money markets, debt and equity markets, and the traditional and "shadow" banking systems. The NFCI was unchanged at –0.21 in the week ending December 9. Risk indicators contributed –0.02, credit indicators contributed –0.10, and leverage indicators contributed –0.09 to the index in the latest week. Negative values have been historically associated with looser-than-average financial conditions.

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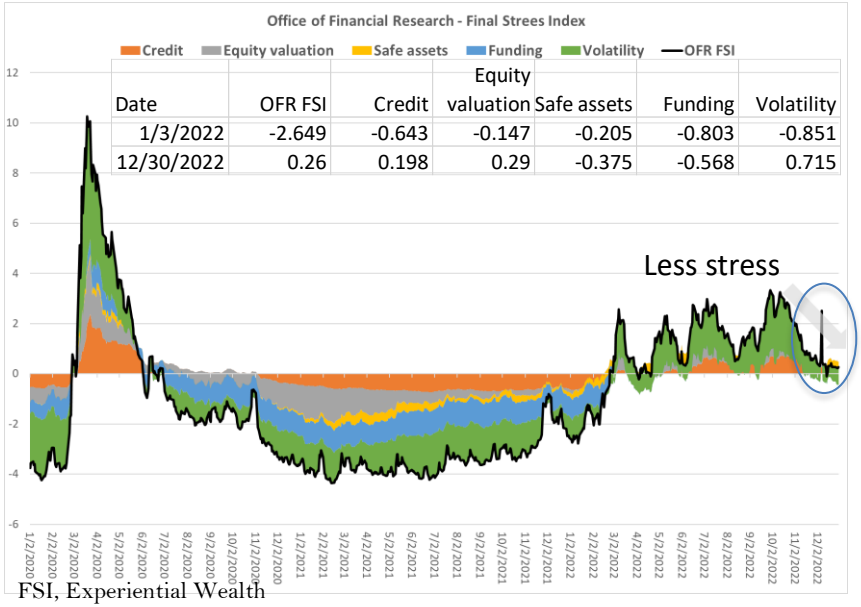
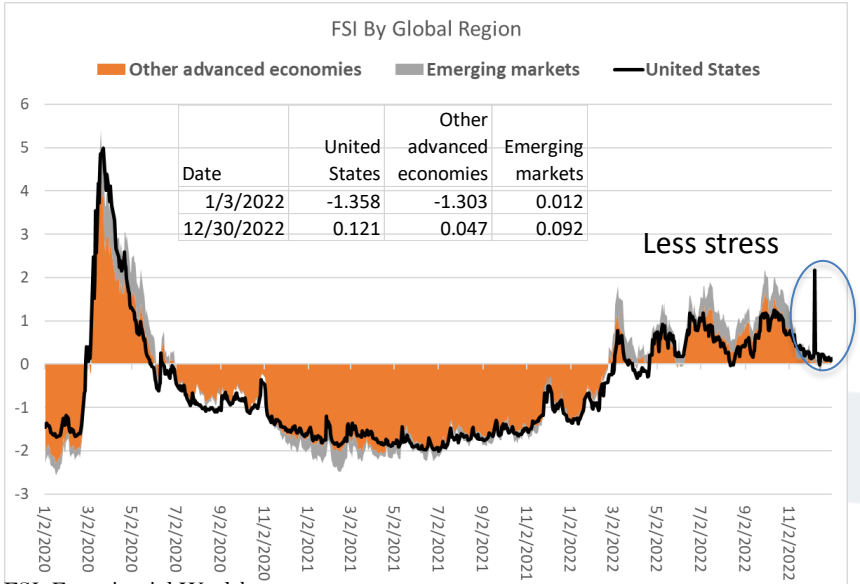
Financial Stress – less in the last two months of 2022



Date	OFR FSI	Credit	Equity valuation	Safe assets	Funding	Volatility
1/3/2022	-2.649	-0.643	-0.147	-0.205	-0.803	-0.851
12/30/2022	0.26	0.198	0.29	-0.375	-0.568	0.715

FSI, Experiential Wealth



Date	United States	Other advanced economies	Emerging markets
1/3/2022	-1.358	-1.303	0.012
12/30/2022	0.121	0.047	0.092

FSI, Experiential Wealth

https://www.financialresearch.gov/financial-stress-index/#ae

The OFR Financial Stress Index (OFR FSI) is a daily market-based snapshot of stress in global financial markets. It is constructed from 33 financial market variables, such as yield spreads, valuation measures, and interest rates. The OFR FSI is positive when stress levels are above average, and negative when stress levels are below average. The OFR FSI incorporates five categories of indicators: **credit, equity valuation, funding, safe assets** and **volatility**.

Overall, financial stress in the U.S. is coming down. This is counter to restrictive financial conditions.

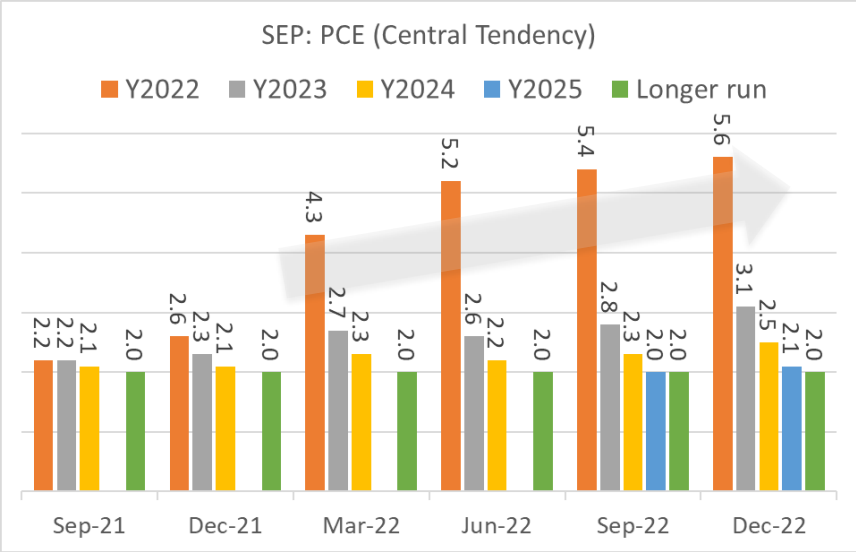
The FSI also shows stress contributions by three regions: United States, other advanced economies, and emerging markets.

Other advanced economies: Variables measuring stress from advanced economies other than the United States, including primarily the eurozone and Japan.

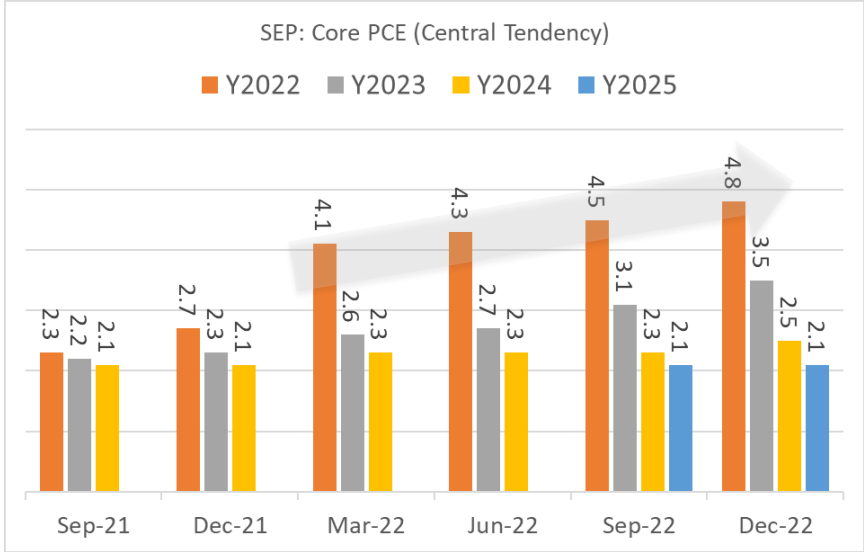
Emerging markets: Variables measuring stress from emerging markets.

Overall, financial stress globally is coming down. This is counter to restrictive financial conditions.

Summary of Economic Projections – Inflation (Core PCE)



FOMC, Experiential Wealth



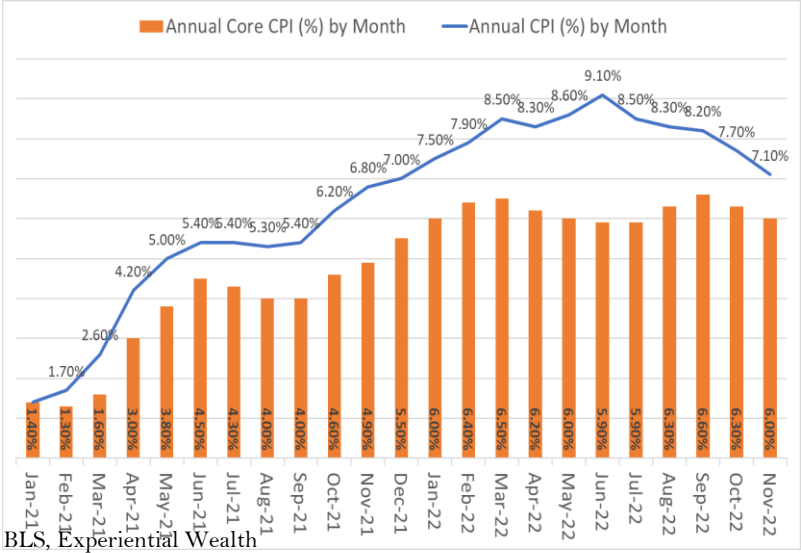
FOMC, Experiential Wealth

In the latest SEP, it is clear that FOMC members continue to see inflation moving higher. For 2022, the projected annual PCE moved up from September's meeting at 5.4% to the Dec meeting at 5.6%. The projection also suggests that the Fed's current hiking in rates and QT is not over, and more hikes are likely as the PCE is projected to be at 3.1% instead of 2.8% in the September SEP. At the same time, projections for Core PCE (ex-food and energy) inflation do <u>not</u> mirror those of PCE projections. The Core PCE has moved up from 3.1% in September for 2023 to 3.5% in December. This means that the FOMC members are expecting headline inflation (PCE) to come down faster than the all-important core PCE for 2023. In fact, this PCE projects higher PCE and Core PCE for this and the next two years over the September projection..

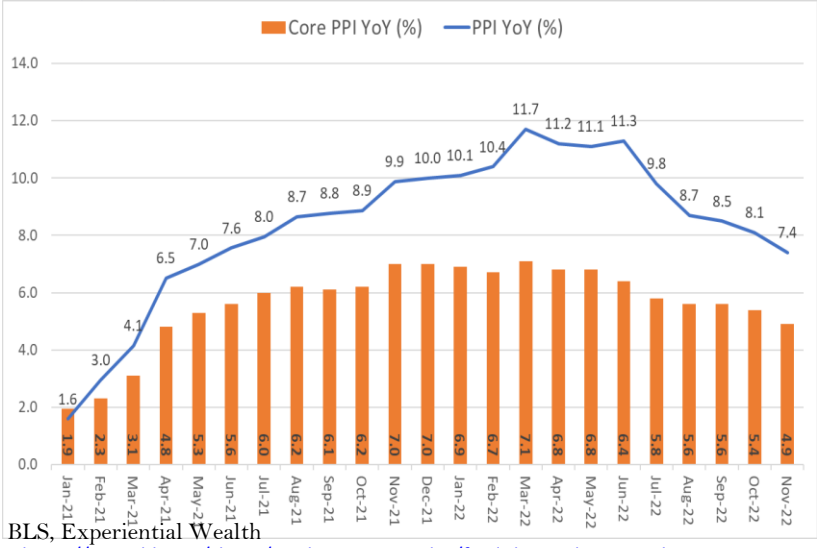
According to the Bureau of Economic Analysis, the increase in current-dollar personal income in November primarily reflected increases in compensation and personal income receipts on assets. The increase in compensation reflected increases in private wages and salaries in both services-producing industries and goods-producing industries.

From the preceding month, the PCE price index for November increased 0.1%. Prices for goods decreased 0.4% and prices for services increased 0.4%. Food prices increased 0.3% and energy prices decreased 1.5%. Excluding food and energy, the PCE price index increased 0.2%.

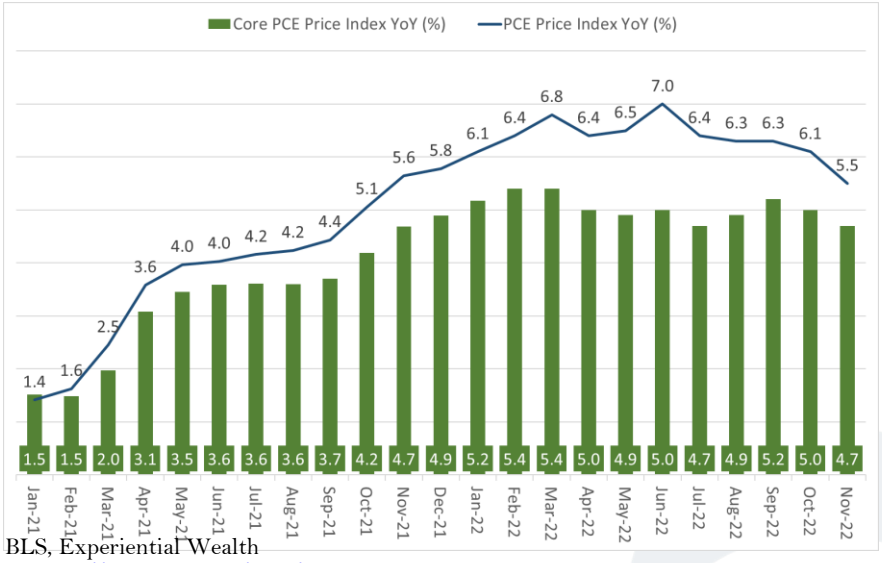
Inflation Alphabet Soup – CPI, PCE and PPI



BLS, Experiential Wealth
https://www.bls.gov/charts/consumer-price-index/consumer-price-index-by-category-line-chart.htm



BLS, Experiential Wealth
https://www.bls.gov/charts/producer-price-index/final-demand-12-month-percent-change.htm



BLS, Experiential Wealth
https://www.bea.gov/data/personal-consumption-expenditures-price-index

The Consumer Price Index for All Urban Consumers (CPI-U) rose 0.1% in November on a seasonally adjusted basis, after increasing 0.4% in October. The index for shelter was by far the largest contributor to the monthly all items increase, more than offsetting decreases in energy indexes. The food index increased 0.5% over the month with the food at home index also rising 0.5%. The energy index decreased 1.6% over the month. The core CPI rose 0.2% in November, after rising 0.3 percent in October. The indexes for shelter, communication, recreation, motor vehicle insurance, education, and apparel were among those that increased over the month. In November, most of the increase in the PPI index for final demand is attributable to a 0.4% advance in prices for final demand services. The good news is that headline and core indicators are all showing disinflation.

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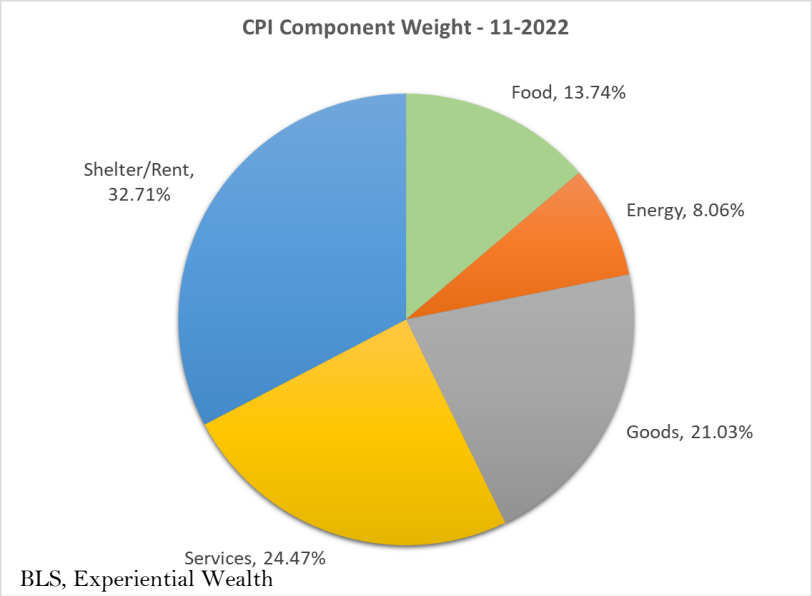
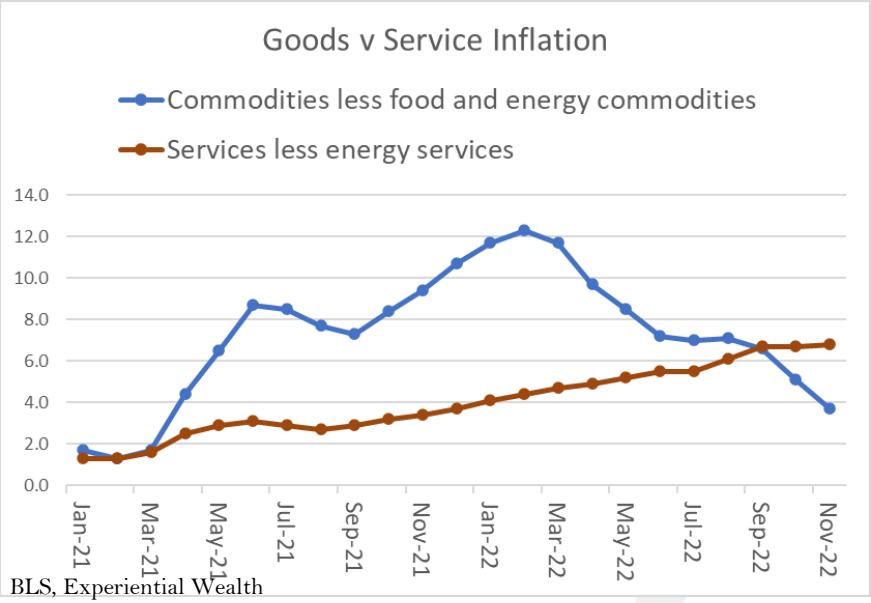
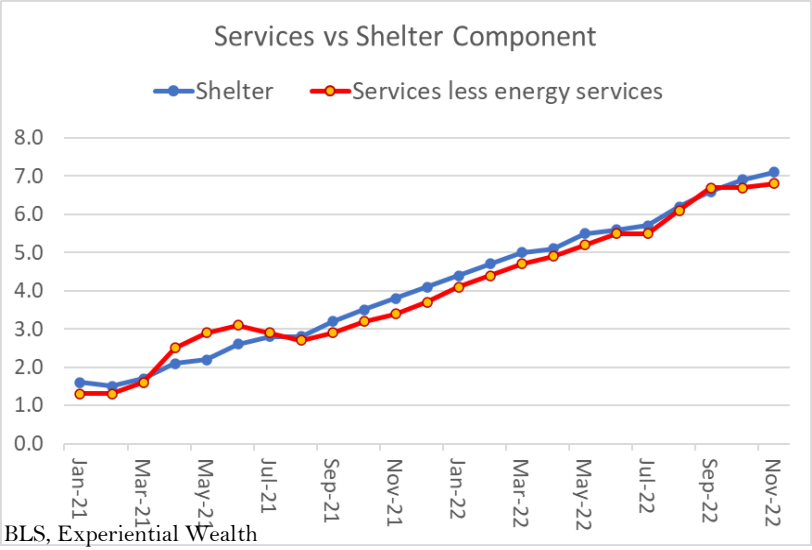
CPI Components; Goods, Services and Shelter

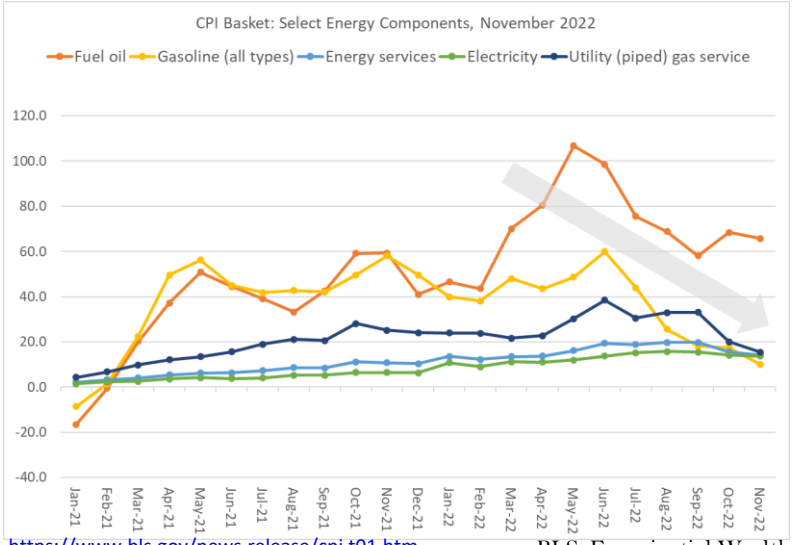






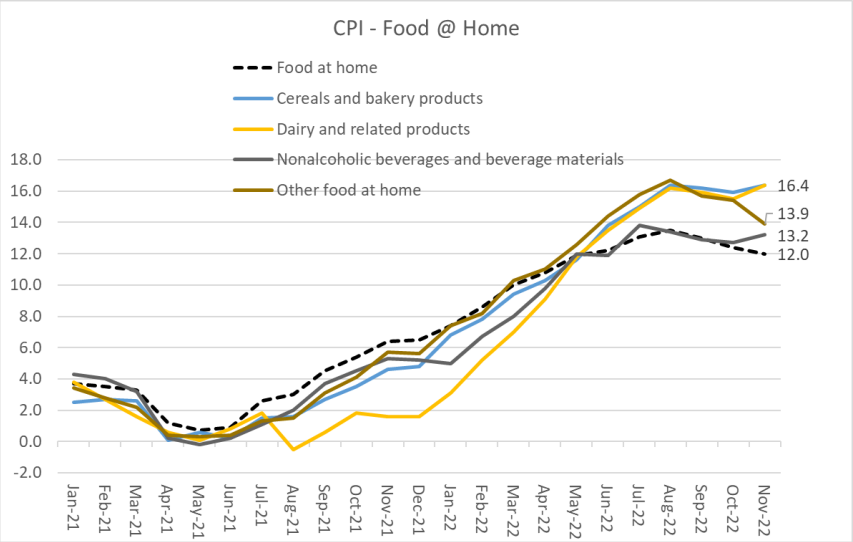
Almost 60% of the CPI basket is made up of services and 21% is made up of goods while the rest is made up of food and energy. Since the March peak in goods inflation, it has steadily declined as supply chain challenges and Covid-related factors dissipate. However, service sector, including shelter costs, becomes the larger contributor to inflation. Revenge spending – travel, hotel, entertainment, and dinning out – is contributing to price inflation. Although the Shelter components are expected to continue to slow, it is not clear when the remaining services will. A part of the inflation is coming from wage increases as the service sector is experiencing wage growth which not only drives service sector inflation higher, as higher wages for the service sector contribute to a multiplier effect for overall consumption as well.

CPI Components – Food, Energy & Commodity



https://www.bls.gov/news.release/cpi.t01.htm

BLS, Experiential Wealth



BLS, Experiential Wealth

The S&P Goldman Sachs Commodity Index up 24.48% in 2022

https://tradingeconomics.com/commodity/gsci#:~:text=GSCI%20Commodity%20Index%20is%20expected,3832.85%20in%2012%20months%20time.

Almost 60% of the CPI basket is made up of services; 21% is made up of goods while the rest is made up of food and energy. Since the March peak in goods inflation, it has steadily declined as supply chain challenges and Covid-related factors dissipate. However, the service sector, including shelter costs, becomes the larger contributor to inflation. Revenge spending – travel, hotel, entertainment, and dinning out – is contributing to price inflation. Although the Shelter component is expected to continue to slow, it is not clear when the remaining services will. Part of the inflation is coming from wage increases as the service sector is experiencing wage growth which not only drives service sector inflation higher, but higher wages for the service sector contribute to a multiplier effect for overall consumption.

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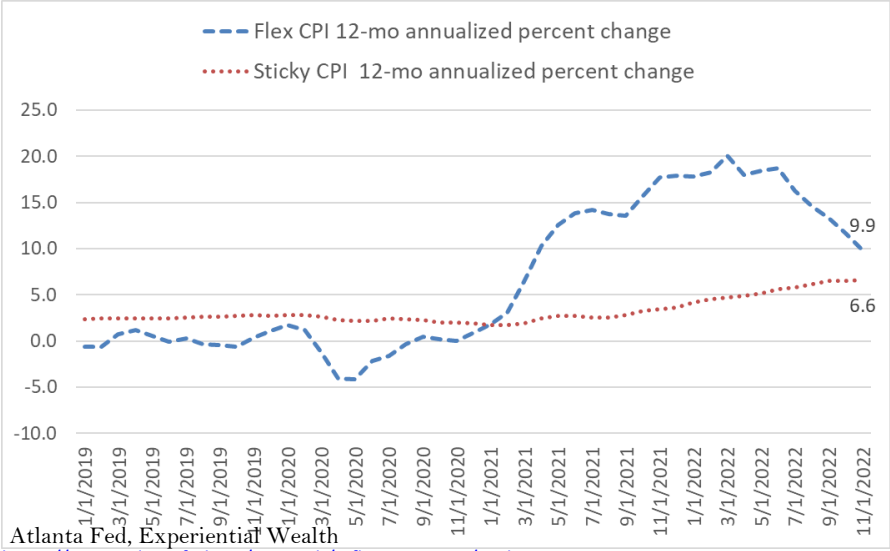
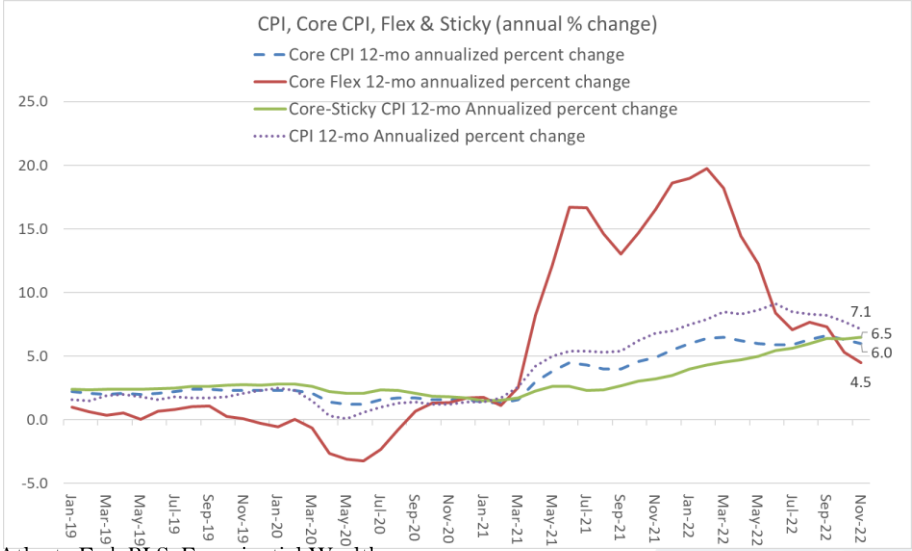
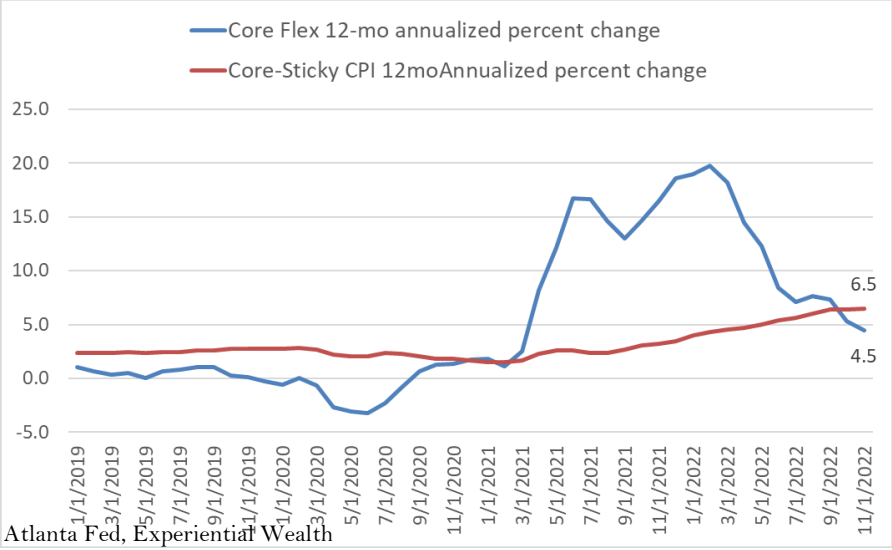
CPI – Flexible vs Sticky CPI



Atlanta Fed, Experiential Wealth
https://www.atlantafed.org/research/inflationproject/stickyprice



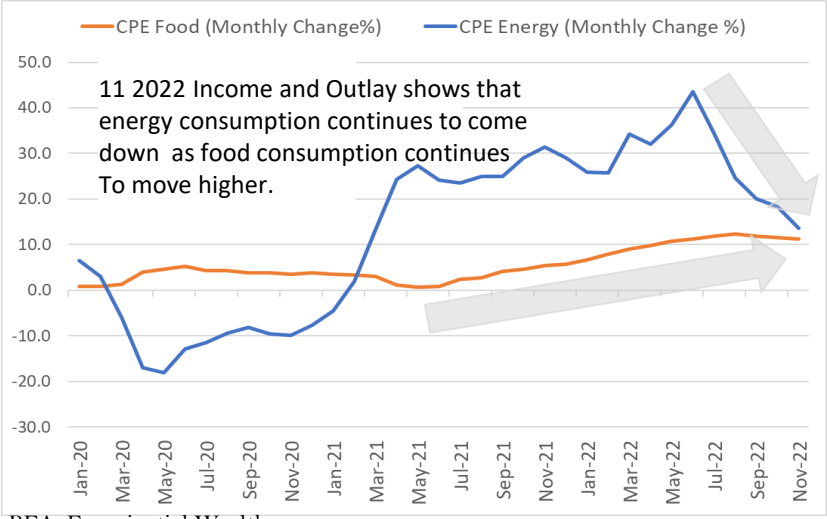
Atlanta Fed, BLS, Experiential Wealth



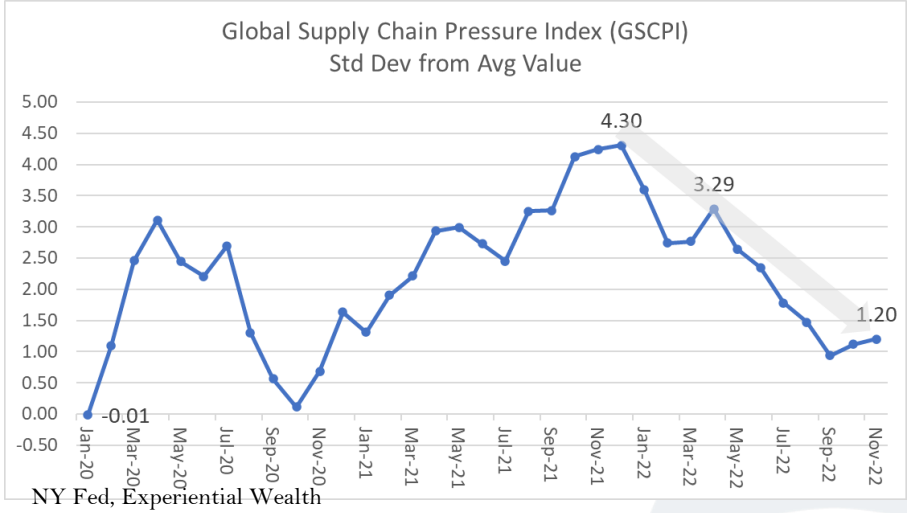
Atlanta Fed, Experiential Wealth

The Atlanta Fed constructs and reports on two subindexes to the CPI: a sticky-price composite and a flexible-price composite CPI. The flexible-price components are much more responsive to changes in the economic environment while the sticky-price components appear to be more forward looking. While a sticky price component may not be as responsive to economic conditions as a flexible price, it may do a better job of incorporating inflation expectations. Since price setters understand that it will be costly to change prices, they will want their price decisions to account for inflation over the periods between their infrequent price changes. Core Sticky is now the only component still trending higher. The more volatile Core Flex continues to drop, which brings down the headline CPI as well as the core CPI. At this level and trajectory, the Core Sticky CPI would be one data point that supports more Fed rate hikes into 2023.

Inflation Contributors & Detractors

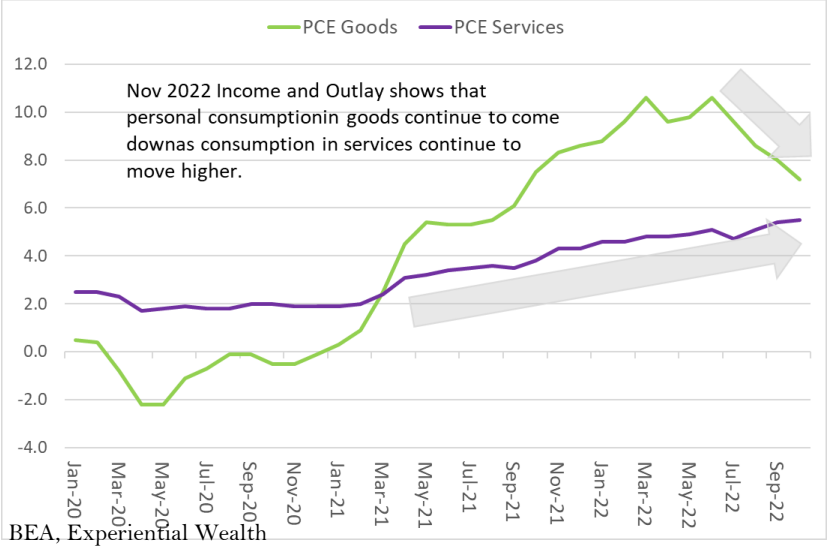


BEA, Experiential Wealth



NY Fed, Experiential Wealth

https://www.newyorkfed.org/research/policy/gscpi#/interactive



BEA, Experiential Wealth

https://www.bea.gov/news/2022/personal-income-and-outlays-november-2022

The GSCPI integrates a number of commonly used metrics with the aim of providing a comprehensive summary of potential supply chain disruptions. Global transportation costs are measured by employing data from the Baltic Dry Index (BDI) and the Harpex index, as well as airfreight cost indices from the U.S. Bureau of Labor Statistics. The GSCPI also uses several supply chain-related components from Purchasing Managers' Index (PMI) surveys, focusing on manufacturing firms across seven interconnected economies: China, the euro area, Japan, South Korea, Taiwan, the United Kingdom, and the U.S.

As of the end of November 2022, global supply chain pressures increased moderately, continuing a trend seen in October, albeit at a lower rate. The largest contributing factor to the rise in supply chain pressures was Chinese delivery times, though improvements were shown in U.S. delivery times and Taiwanese purchases. The GSCPI's recent movements suggest that developments in Asia are slowing down the return of the index back to historical levels.

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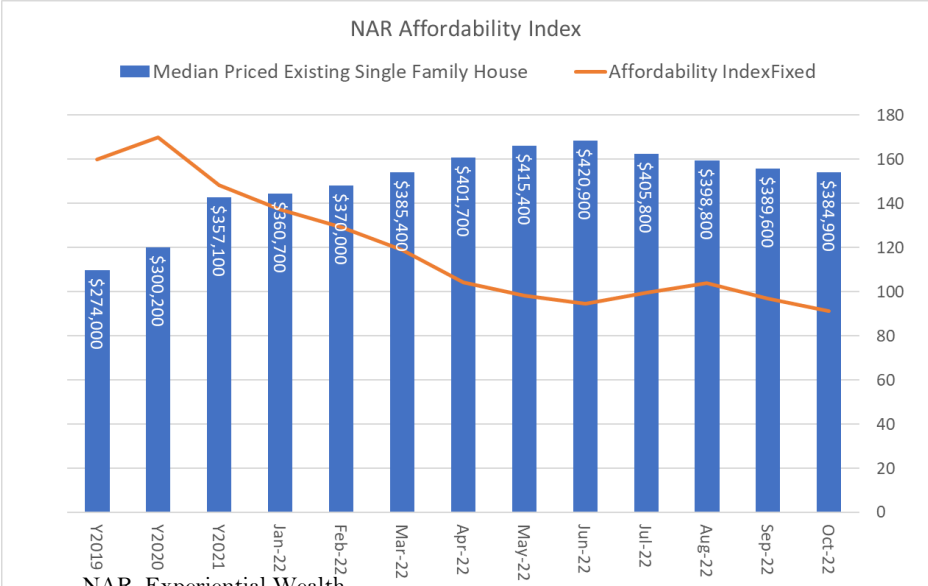
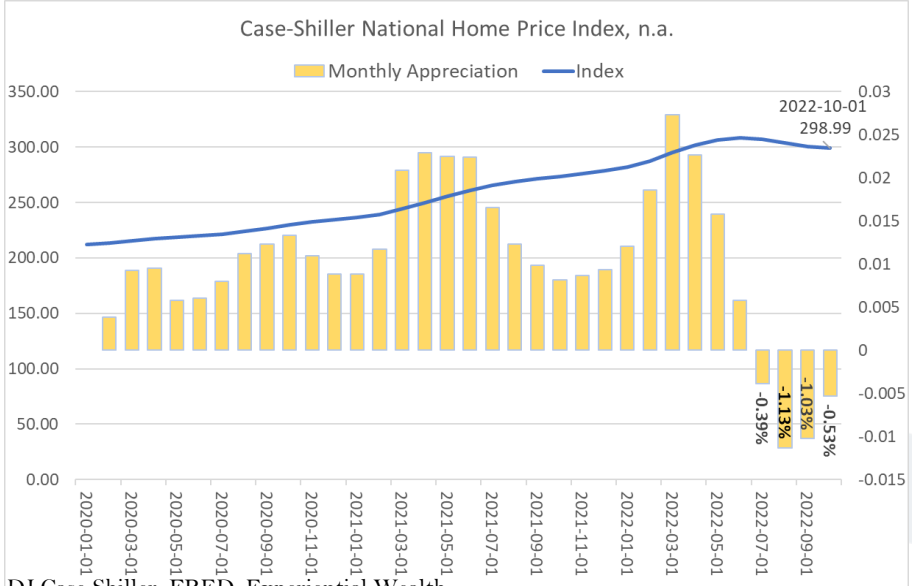
Housing – A Clear Slowdown in Price & Activities



NAR, Experiential Wealth

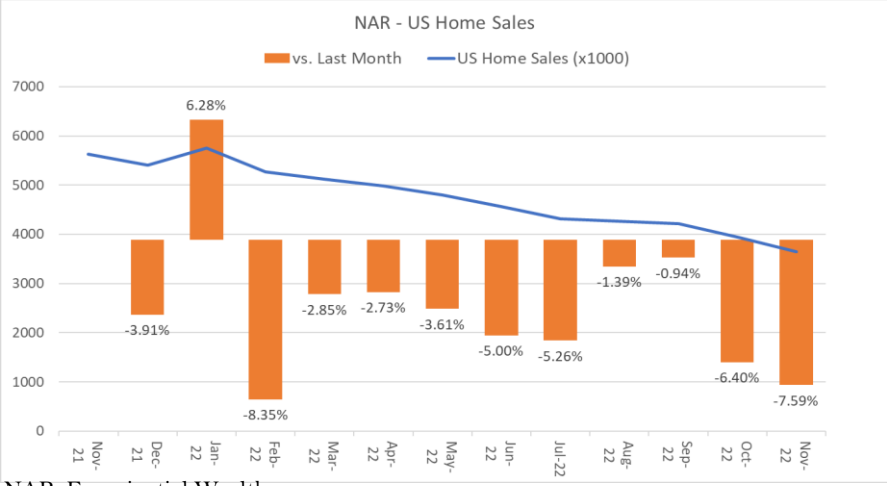
https://cdn.nar.realtor/sites/default/files/documents/hai-10-2022-housing-affordability-index-2022-12-09.pdf



DJ Case Shiller, FRED, Experiential Wealth

Source: https://fred.stlouisfed.org/series/CSUSHPINSA
https://www.spglobal.com/spdji/en/indices/indicators/sp-corelogic-case-shiller-us-national-home-price-nsa-index/#overview

Affordability value of 100 means that a family with the median income has exactly enough income to qualify for a mortgage on a median-priced home. An index above 100 signifies that a family earning the median income has more than enough income to qualify for a mortgage loan on a median-priced home, assuming a 20% down payment. The latest (Oct 2022) index shows a decreasing medium priced, existing, single-family house and also a decreasing affordability index value. Initially, the drop in affordability comes from the Covid-driven housing price boom. More recently, this is driven by an increase in mortgage interest rates. The combination of rising rates and higher housing prices has made housing less affordable.

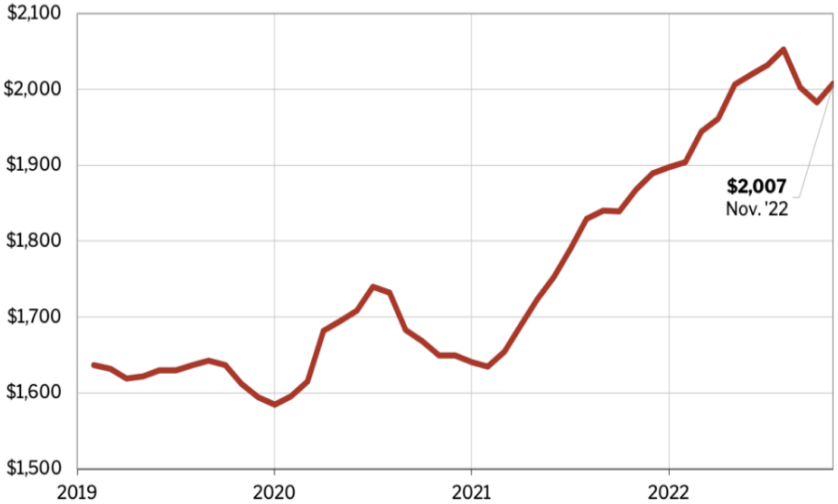


NAR, Experiential Wealth

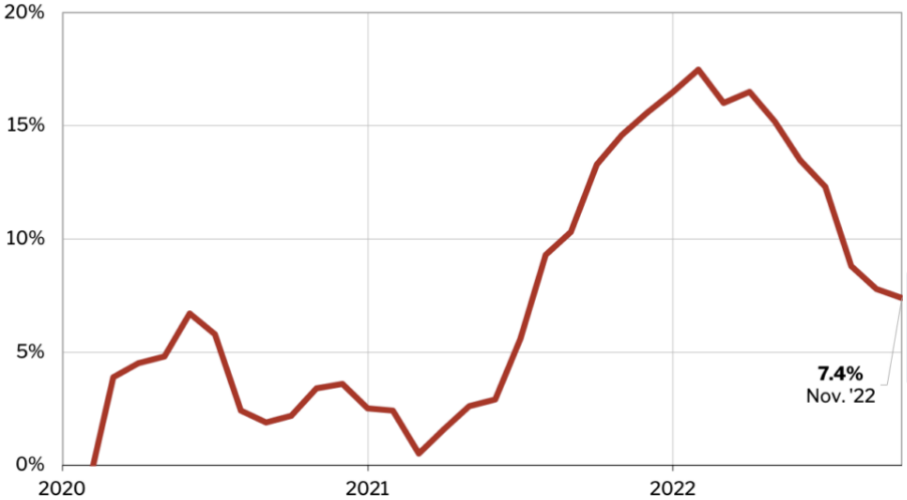
Rent – Peak Increase is Behind Us

Rental Market Summary	November 2022	Month-Over-Month	Year-Over-Year
Median Asking Rent	$2,007	1.2%	7.4%

Median U.S. asking rent



Year-over-year change in median U.S. asking rent



https://www.redfin.com/news/redfin-rental-report-november-2022/

Redfin analyzed rent prices from Rent.com across the 50 largest U.S. metro areas. This analysis used data from more than 20,000 apartment buildings across the country. It is important to note that the prices in this report reflect the current costs of new leases during each time period. In other words, the amount shown as the median rent is not the median of what all renters are paying, but the median cost of apartments that were available for new renters during the report month. Currently, data from Rent.com includes only median rent at the metro level. This latest information supports the idea that owners' equivalent rent of residences (OER) and rent of primary residence (rent) have seen their peak. Rent is typically one of the last components to show disinflation.

Rents Fell in 14 Major U.S. Metro Areas Y/Y Nov 2022	
Milwaukee, WI (-13.1%)	Atlanta, GA (-1.8%)
Houston, TX (-6.3%)	Dallas, TX (-1.8%)
Austin, TX (-5.3%)	Jacksonville, FL (-1.8%)
Baltimore, MD (-4.4%)	Boston, MA (-1.7%)
Minneapolis, MN (-4.1%)	Los Angeles, CA (-1.3%)
Chicago, IL (-3.8%)	Las Vegas, NV (-0.7%)
Denver, CO (-2.9%)	New Orleans, LA (-0.3%)

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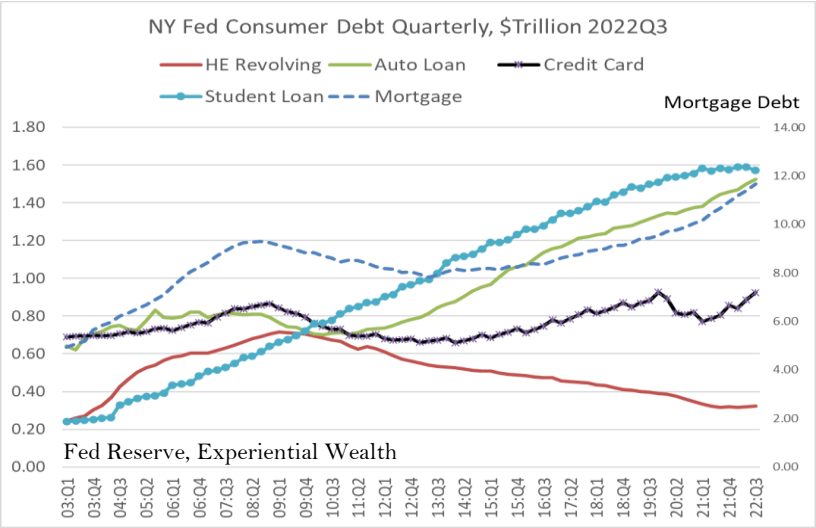
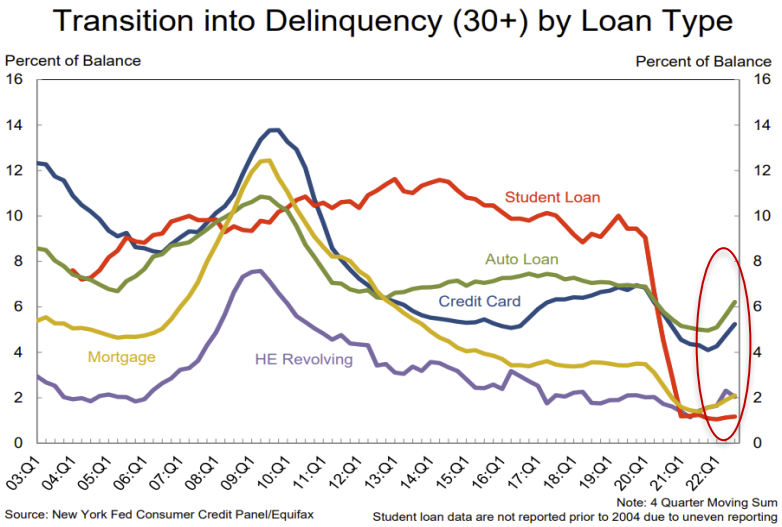
Consumer Credit and Performance

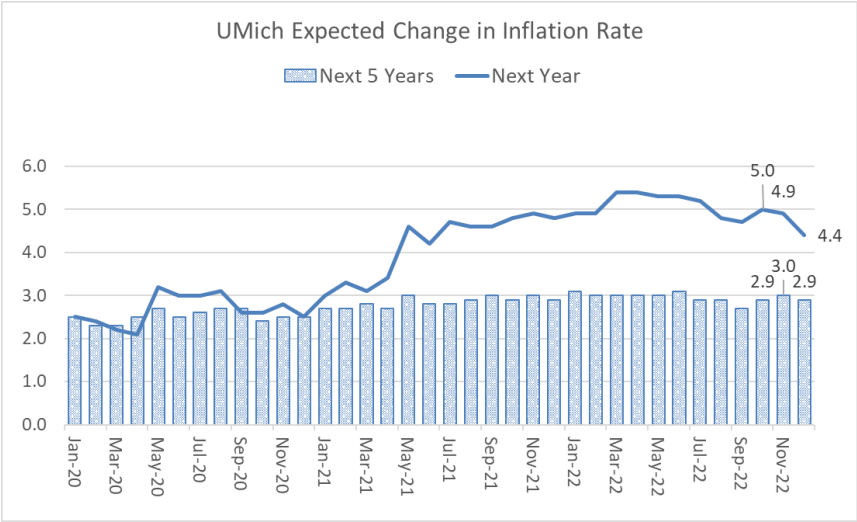




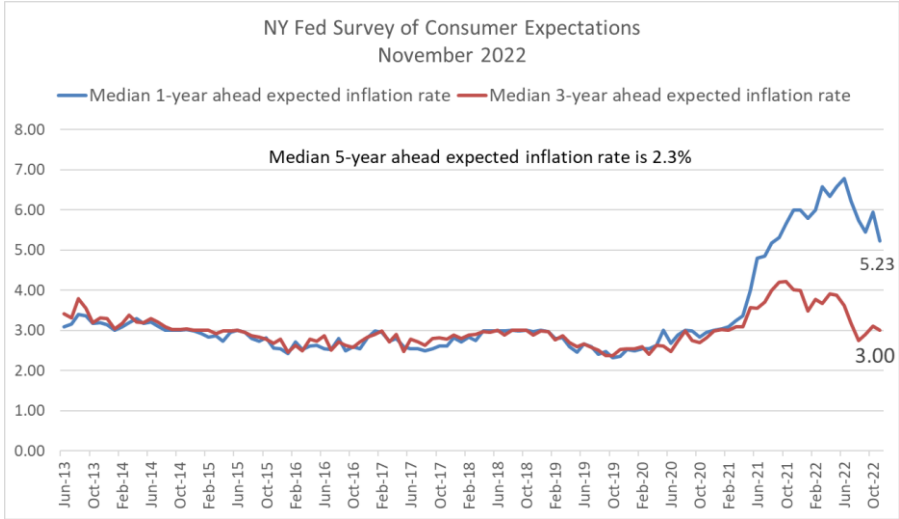
Household Debt Rises to $16.51 Trillion on Higher Mortgage, Credit Card Balances Total household debt rose by $351 billion, or 2.2%, to reach $16.51 trillion in the third quarter of 2022, according to the latest Quarterly Report on Household Debt and Credit. Mortgage balances—the largest component of household debt—climbed by $282 billion and stood at $11.67 trillion at the end of September. The 15% year-over-year increase in credit card balances marked the largest in more than twenty years. In part, the growth in each debt type reflects increased borrowing due to higher prices. Prices for both homes and motor vehicles have been rising, and the borrowing amounts have risen in tandem. In fact, the average dollar amount for new purchase originations of both autos and homes is up 36 percent since 2019. Purchase mortgage origination volume is up 7% in the second quarter, driven primarily by increased borrowing amounts.

Although debt balances are growing rapidly, households in general have weathered the pandemic remarkably well, due in no small part to the expansive programs put in place to support them. Further, household debt is held overwhelmingly by higher-score borrowers, even more so now than it has been in the history of our data. Mortgages represent the largest household debt product, and their balances dominate the overall total. Since the financial crisis, mortgage underwriting has been tight, and the vast majority of mortgage balances are now held by borrowers with high credit scores. But delinquencies appear to be on the rise.

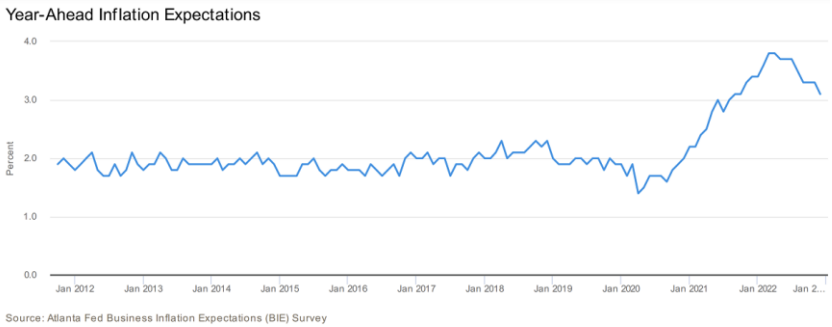
Inflation Expectation – Survey-Based



http://www.sca.isr.umich.edu/tables.html



https://www.newyorkfed.org/microeconomics/sce#/inflexp-1



Inflation expectations: Firms' year-ahead inflation expectations continue to drop to 3.1% in December from 3.3% in November.

https://www.atlantafed.org/research/inflationproject/bie

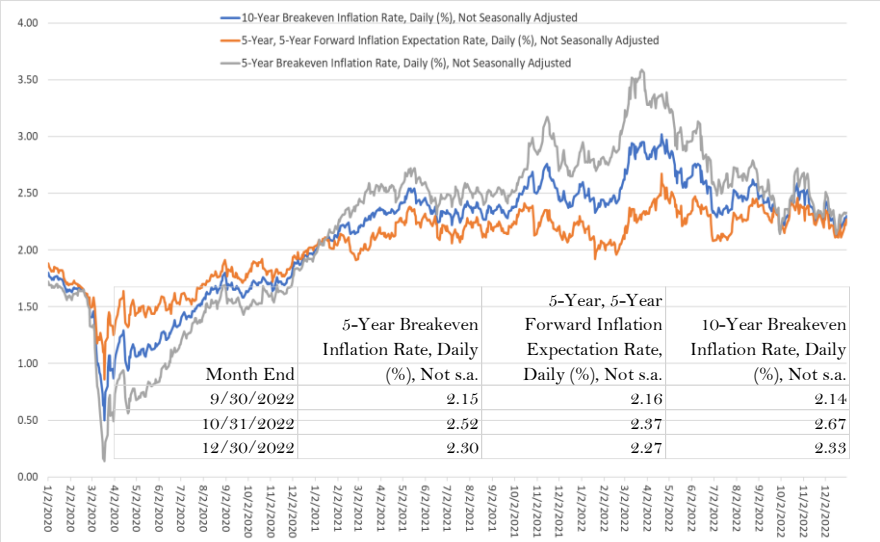
UMich consumer survey: Consumers' concerns over high prices have softened somewhat over the last month, though these concerns still remain substantially higher than a year-and-a-half ago prior to the onset of elevated inflation. The share of consumers reporting that their living standards are being eroded by inflation fell slightly in December, though it remained over 40% for the seventh straight month.

New York Fed survey: Median one-, three-, and five-year-ahead inflation expectations decreased to 5.2 percent, 3.0 percent, and 2.3 percent, respectively, according to the November Survey.

Atlanta Fed survey: Firms' year-ahead inflation expectations decreased significantly to 3.1 percent, on average. Firms' long-term (per year, over the next five to 10 years) inflation expectations remain relatively unchanged at 3.1 percent, on average.

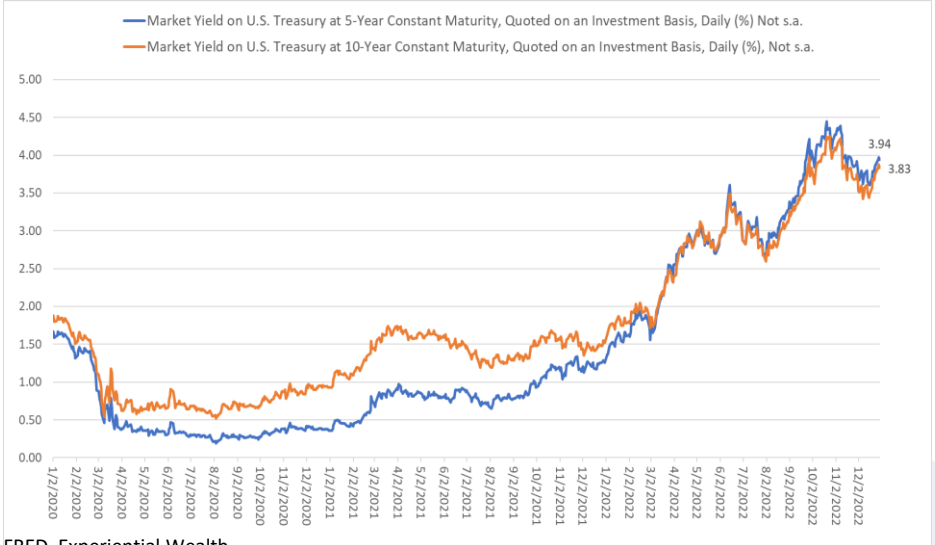
Inflation expectation is a leading indicator for future inflation. Thus far, survey-based data suggest that consumers and businesses, over the past quarter have lowered their expectations. The trends for both short- and long-term inflation expectations are moving lower, which is welcome news to the Fed.

Inflation Expectation – Market-Based



Month End	5-Year Breakeven Inflation Rate, Daily (%), Not s.a.	5-Year, 5-Year Forward Inflation Expectation Rate, Daily (%), Not s.a.	10-Year Breakeven Inflation Rate, Daily (%), Not s.a.
9/30/2022	2.15	2.16	2.14
10/31/2022	2.52	2.37	2.67
12/30/2022	2.30	2.27	2.33

FRED, Experiential Wealth



FRED, Experiential Wealth

5-Year, 5-Year Forward Inflation Expectation Rate is a measure of expected inflation (on average) over the five-year period that begins five years from today - **@ 2.27%**

10-Year Breakeven Inflation Rate is a measure of expected inflation derived from 10-Year Treasury Constant Maturity Securities and 10-Year Treasury Inflation-Indexed Constant Maturity Securities. The latest value implies what market participants expect inflation to be in the next 10 years, on average - **@ 2.33%**

5-Year Breakeven Inflation Rate is the measure of expected inflation derived from 5-Year Treasury Constant Maturity Securities and 5-Year Treasury Inflation-Indexed Constant Maturity Securities. The latest value implies what market participants expect inflation to be in the next 5 years, on average - **@ 2.30%**

Expectations remain well anchored at or around 2% in the long run.

5-Year Constant Maturity Rate is the nominal rate of the 5-Year U.S. Treasury. The latest value is the current yield on the 5-Year Treasury - @ **3.94%**

10-Year Constant Maturity Rate is the nominal rate of the 10-Year U.S. Treasury. The latest value is the current yield on the 10-Year Treasury - @ **3.83%**

These Rates have all increased since January. Current rates show inversion between the 5- and 10-year Treasury.

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Global Inflation Check – Is the Peak Behind Us?

Country	Last	Previous	Reference
China	1.60	2.10	22-Nov
Saudi Arabia	2.90	3.00	22-Nov
Switzerland	3.00	3.00	22-Nov
Japan	3.80	3.70	22-Nov
South Korea	5.00	5.00	22-Dec
Indonesia	5.51	5.42	22-Dec
Spain	5.80	6.80	22-Dec
India	5.88	6.77	22-Nov
Brazil	5.90	6.47	22-Nov
France	6.20	6.20	22-Nov
Singapore	6.70	6.70	22-Nov
Canada	6.80	6.90	22-Nov
United States	7.10	7.70	22-Nov
Australia	7.30	6.10	22-Sep
South Africa	7.40	7.60	22-Nov
Mexico	7.80	8.41	22-Nov
Germany	8.60	10.00	22-Dec
Netherlands	9.90	14.30	22-Nov
Euro Area	10.10	10.60	22-Nov
United Kingdom	10.70	11.10	22-Nov
Italy	11.80	11.80	22-Nov
Russia	12.00	12.60	22-Nov
Turkey	64.27	84.39	22-Dec
Argentina	92.40	88.00	22-Nov

Source: Trading Economics, Experiential Wealth
https://tradingeconomics.com/country-list/inflation-rate

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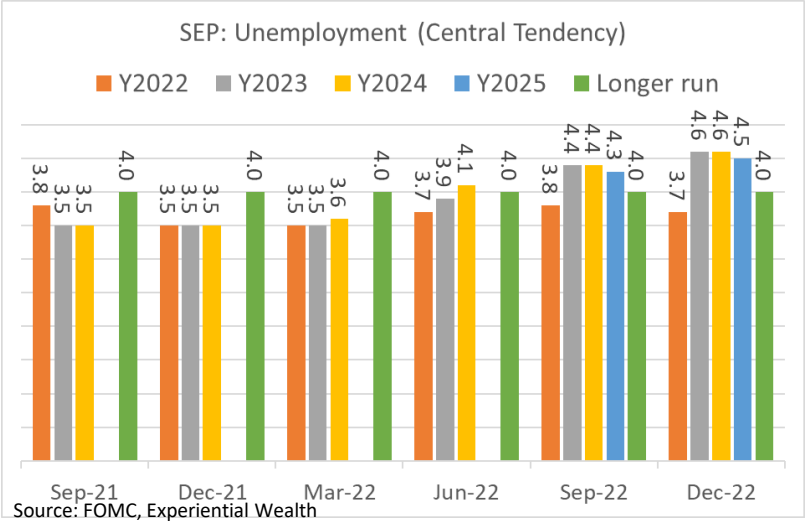
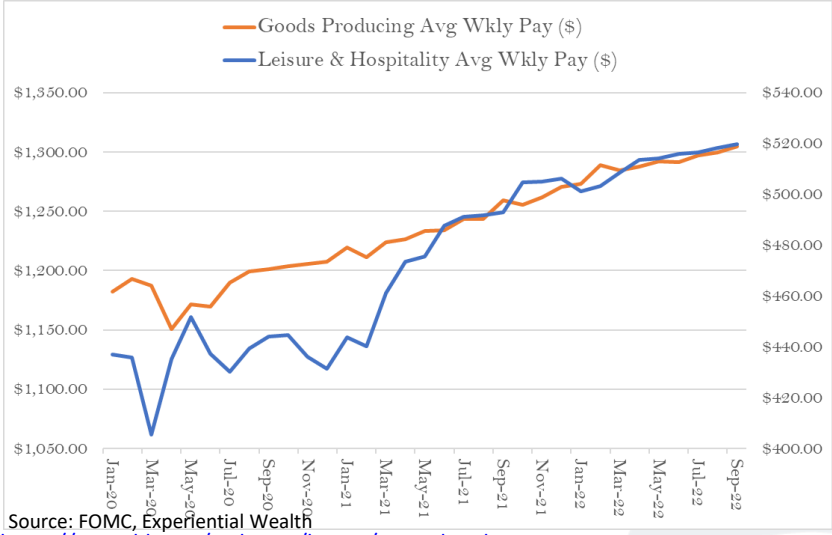
Summary of Economic Projections – Unemployment (U3)



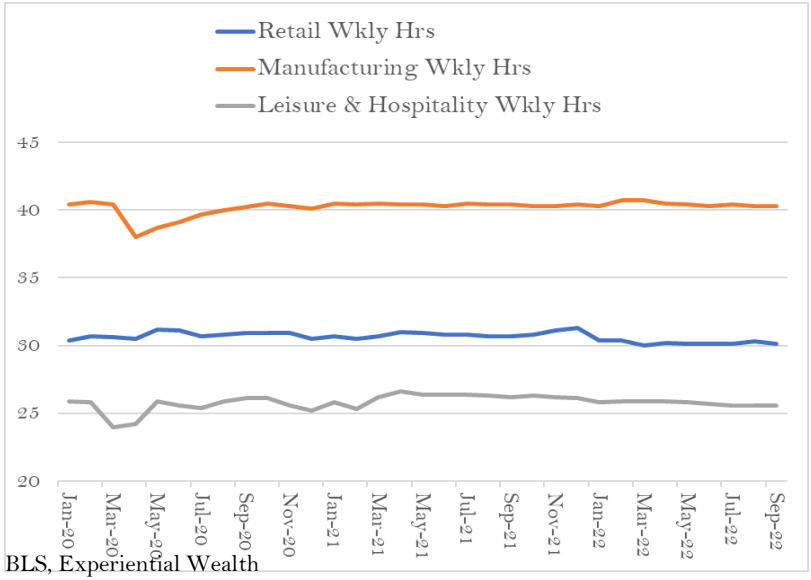
Source: FOMC, Experiential Wealth

https://www.federalreserve.gov/monetarypolicy/fomcprojtabl20221214.htm



Source: FOMC, Experiential Wealth

https://www.bls.gov/webapps/legacy/cpsatab11.htm



BLS, Experiential Wealth

https://www.bls.gov/ces/data/employment-situation-table-download.htm

The Federal Reserve expects the unemployment to move up from its 3.5% historical low to 3.8% this year and up to 4.4% for the next couple of years. It is well known that there remains a post-Covid labor shortage, and the Fed is trying to bring the supply and demand of labor into balance – to fight inflation. The SEP shows that the Fed expects a 4.4% unemployment rate next year.

Since the reopening of the economy, we see a steady rise of average weekly wages for goods producing as well as leisure and hospitality workers in the chart above. At the same time, the number of hours worked for retail, manufacturing and leisure-hospitality remain fairly constant. This shows businesses have to pay more to keep the workers, and higher wages mean further support for inflation.

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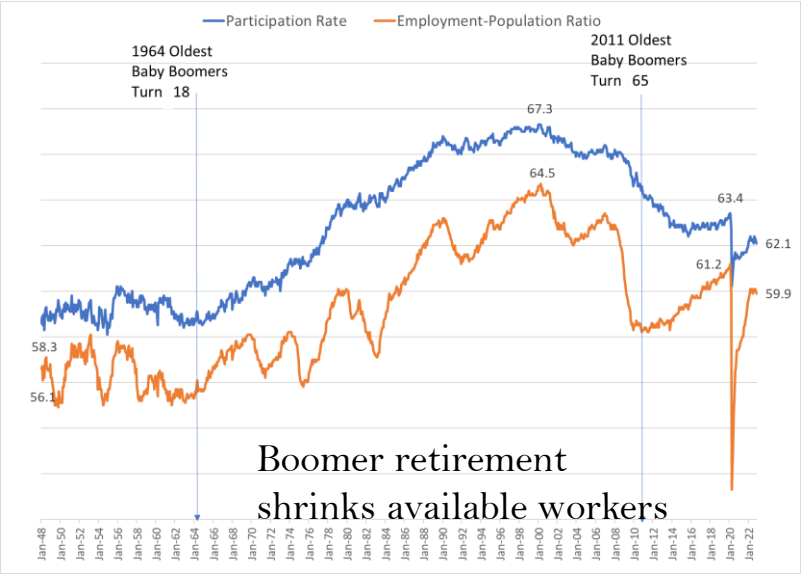
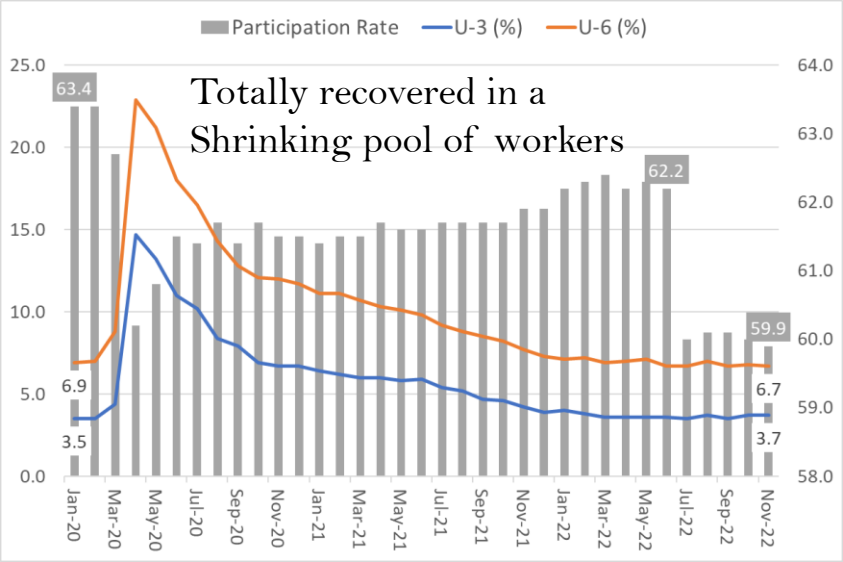
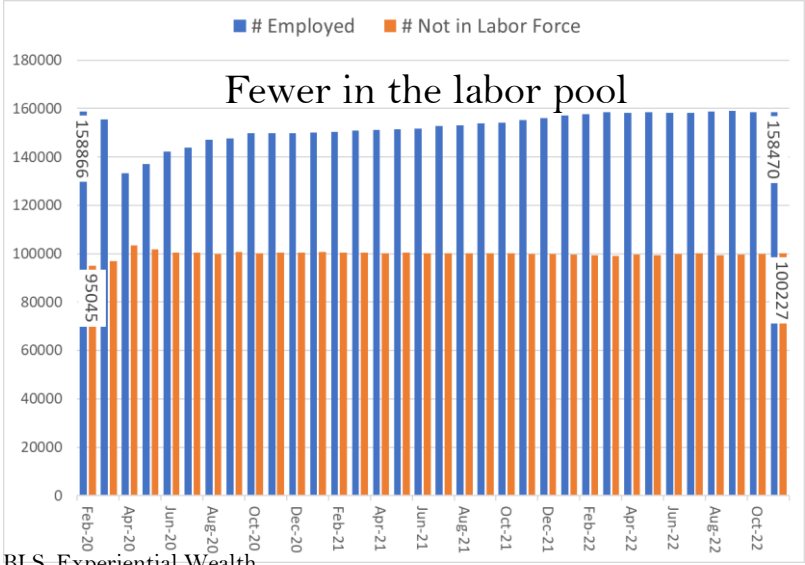
The Labor Economy – Less



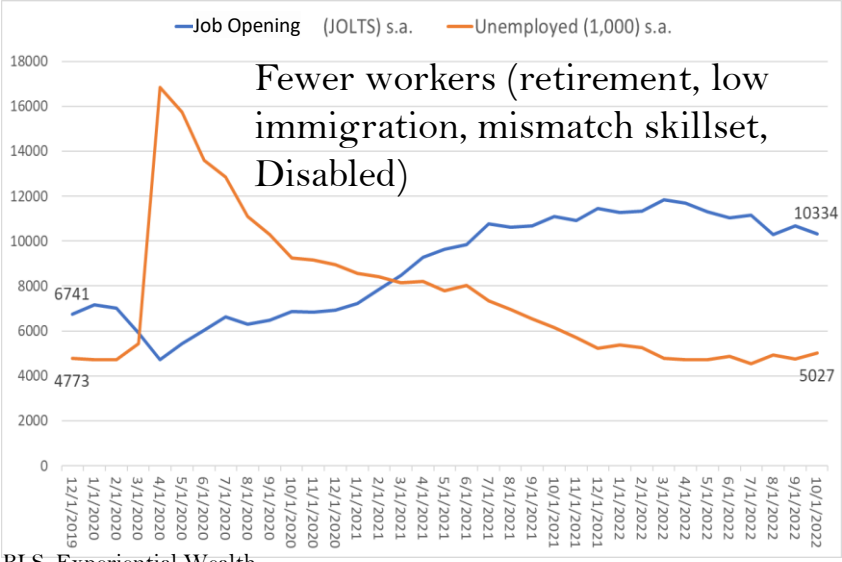
BLS, Experiential Wealth



BLS, Experiential Wealth



BLS, Experiential Wealth



BLS, Experiential Wealth

Chair Powell –11-30-2022 Remarks at Brookings[1]

- The labor market, which is especially important for inflation in core services ex housing, shows only tentative signs of rebalancing, and wage growth remains well above levels that would be consistent with 2 percent inflation over time. Despite some promising developments, we have a long way to go in restoring price stability.
- Demand for workers far exceeds the supply of available workers, and nominal wages have been growing at a pace well above what would be consistent with 2 percent inflation over time.
- Looking for restoration of balance between supply and demand in the labor market
- Current labor force shortfall of roughly 3-1/2 million people - This shortfall reflects both lower-than-expected population growth and a lower labor force participation rate.
- Participation dropped sharply at the onset of the pandemic because of many factors, including sickness, caregiving, and fear of infection. Overall participation, however, remains well below pre-pandemic trends.
- Some of the participation gap reflects workers who are still out of the labor force because they are sick with COVID-19 or continue to suffer lingering symptoms from previous COVID infection.
- Recent research finds that the participation gap is now mostly due to excess retirements and might now account for more than 2 million of the 3-1/2 million shortfall in the labor force.
- Older workers are still retiring at higher rates, and retirees do not appear to be returning to the labor force in sufficient numbers to meaningfully reduce the total number of excess retirees.
- Slower growth in the working-age population - The combination of a plunge in net immigration and a surge in deaths during the pandemic probably accounts for about 1-1/2 million missing workers.

[1] https://www.federalreserve.gov/newsevents/speech/powell20221130a.htm

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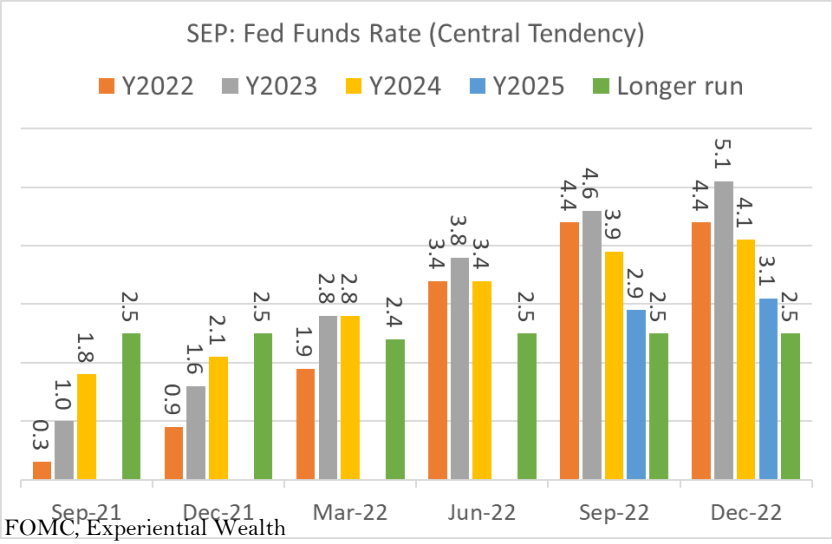
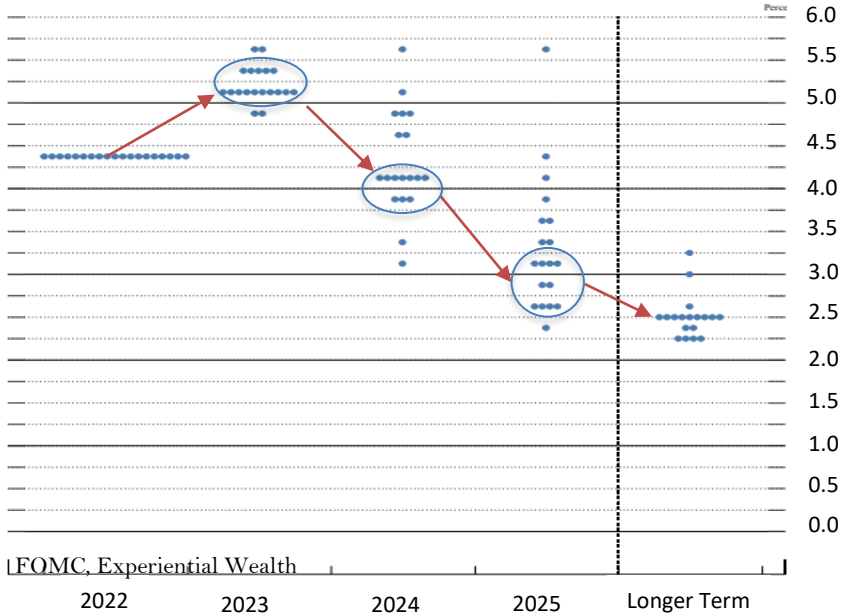
Summary of Economic Projections (SEP) – Fed Fund Rate





December projections show all forward-looking Fed Fund Rates continue an escalation trend since last December. For 2023, the current central tendency projection is at 5.1% from 4.6% just a quarter ago. For 2024, the projected rate is also higher at 5.1% vs. 4.6% in September's SEP. With this under-estimating track record, it is not must of a reach to suggest that the projection for 2023 may be revised upward in the next meeting.

The dot plot (each dot represents a FOMC member – voting and non-voting) in its December Summary of Economic Projections shows the range of opinion or projections among members of where the terminal rate would be for this cycle even though the majority projects a rate pivot in 2024 (not 2023). It is no surprise to see an expanding range of the dot plot (i.e., policy uncertainty) as time moves further out to 2025. Chair Powell stated that, for now, the terminal rate is likely be at 5.1% in 2023 but with the high end of the plots for 2023 moving closer to the 5.5% range.

Market Expectation of FOMC's Rate Hiking Cycle

September 22, 2022, Meeting CME Fed Watch Tool

9-22-2022 Meeting Rate Probabilities									
Meeting	325-350bp	350-375bp	375-400bp	400-425bp	425-450bp	450-475bp	475-500bp	500-525bp	525-550bp
Dec-23	0.3%	2.3%	10.0%	23.7%	**31.8%**	23.1%	7.9%	0.9%	
Nov-23	0.0%	0.5%	4.0%	15.5%	31.3%	**32.2%**	14.5%	1.8%	0.1%
Sep-23	0.0%	0.1%	1.4%	9.5%	28.1%	**38.0%**	20.2%	2.6%	0.1%
Jul-23	0.0%	0.0%	0.2%	4.0%	21.3%	**42.7%**	27.9%	3.8%	0.1%
Jun-23	0.0%	0.0%	0.0%	1.4%	16.3%	**44.8%**	32.8%	4.5%	0.2%
May-23	0.0%	0.0%	0.0%	0.0%	12.8%	**45.8%**	36.2%	5.0%	0.2%
Mar-23	0.0%	0.0%	0.0%	0.0%	13.9%	**48.6%**	35.1%	2.4%	
Feb-23	0.0%	0.0%	0.0%	0.0%	26.3%	**68.6%**	5.0%		

CME, Experiential Wealth
https://www.cmegroup.com/education/demos-and-tutorials/fed-funds-futures-probability-tree-calculator.html

November 3, 2022, Meeting CME Fed Watch Tool

11-3-2022 Meeting Rate Probabilities								
Meeting	400-425bp	425-450bp	450-475bp	475-500bp	500-525%	525-550bp%	550-575bp	575-600bp
Dec-23	1.5%	7.0%	18.6%	**29.1%**	26.7%	13.4%	3.2%	0.2%
Nov-23	0.4%	3.1%	12.6%	27.2%	**31.9%**	19.3%	5.1%	0.4%
Sep-23	0.0%	0.9%	6.6%	22.0%	**35.4%**	26.4%	8.0%	0.6%
Jul-23	0.0%	0.3%	4.0%	18.8%	**36.5%**	30.1%	9.6%	0.7%
Jun-23	0.0%	0.0%	2.2%	16.2%	**37.0%**	32.8%	10.8%	0.9%
May-23	0.0%	0.0%	2.5%	17.8%	**39.2%**	32.1%	8.4%	
Mar-23	0.0%	0.0%	3.8%	25.1%	**46.6%**	24.6%		
Feb-23	0.0%	0.0%	18.6%	**50.6%**	30.9%			
Dec-22	0.0%	**52.0%**	48.0%					

CME, Experiential Wealth

December 15, 2022, Meeting CME Fed Watch Tool

12-15-2022 Meeting Rate Probabilities									
Meeting	350-375bp	375-400bp	400-425bp	425-450bp	450-475bp	475-500bp	500-525bp	525-550bp	550-575bp
Dec-23	0.5%	5.2%	18.7%	**32.0%**	27.9%	12.5%	2.8%	0.3%	
Nov-23	0.0%	0.6%	6.1%	21.3%	**34.2%**	26.6%	9.6%	1.4%	
Sep-23	0.0%	0.0%	1.2%	10.5%	30.8%	**37.3%**	17.2%	2.9%	0.1%
Jul-23	0.0%	0.0%	0.0%	3.4%	23.1%	**44.5%**	24.4%	4.5%	0.2%
Jun-23	0.0%	0.0%	0.0%	0.0%	16.9%	**48.3%**	29.1%	5.5%	0.2%
May-23	0.0%	0.0%	0.0%	0.0%	17.6%	**49.6%**	28.2%	4.5%	
Mar-23	0.0%	0.0%	0.0%	0.0%	23.7%	**58.6%**	17.7%		
Feb-23	0.0%	0.0%	0.0%	0.0%	**73.9%**	26.1%			

CME, Experiential Wealth

The three Fed meetings show where the market is anticipating the highest probability of where the Fed Fund rate would be in the Feb 2023 meeting, The probabilities swing from 68.6% confidence for a 450-475bp (a 50bp increase) at the Sept meeting to 50.6% confidence for a 475-500bp (a 75bp increase) at the November meeting and then to 73.9% confidence for a 450-475bp (a 50bp increase) at the Dec meeting. This back and forth is mainly based on what Chair Powell is signaling and other members of the FOMC are broadcasting post-meeting. With Chair Powell suggesting a possible 5.1% terminal rate, the Dec 15th CME Tool is showing the highest probability of staying at 475-500bp through Sep 2023.

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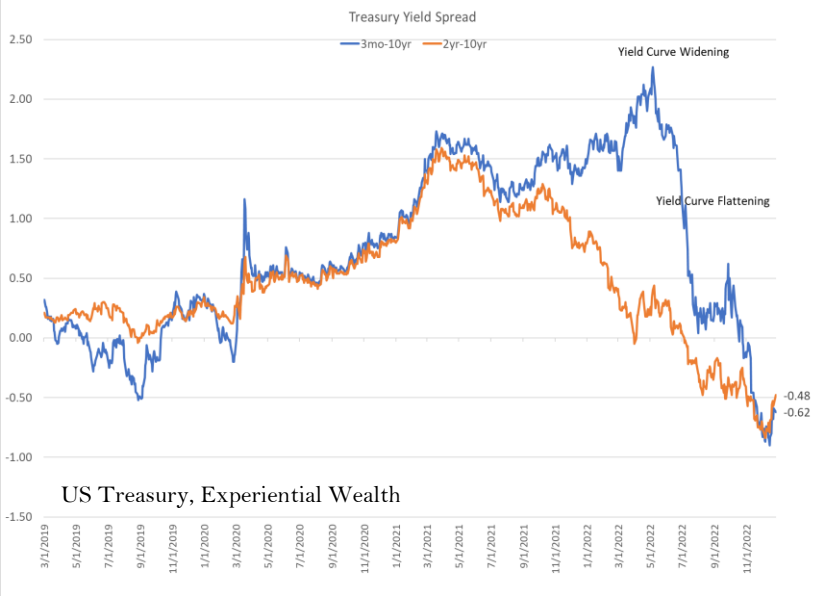
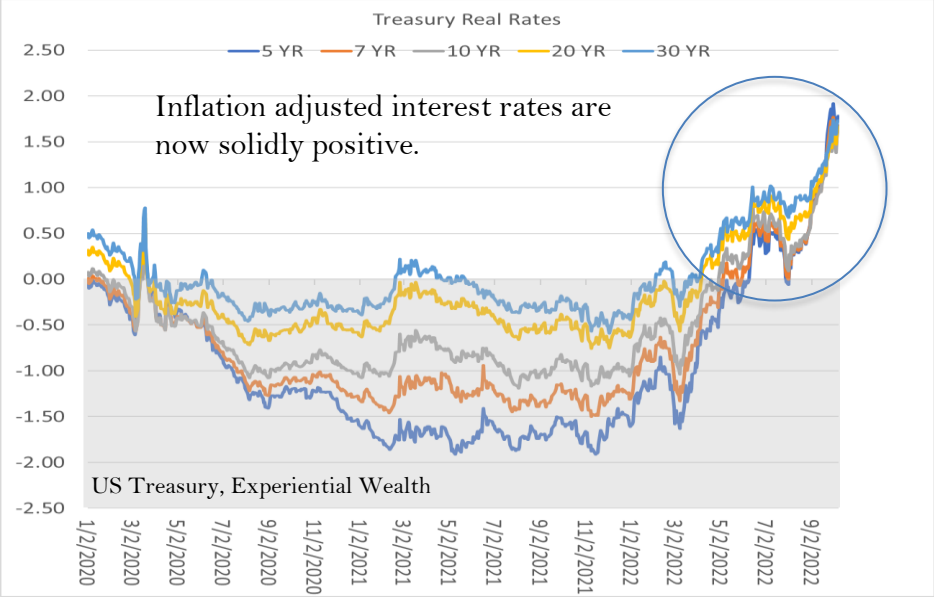
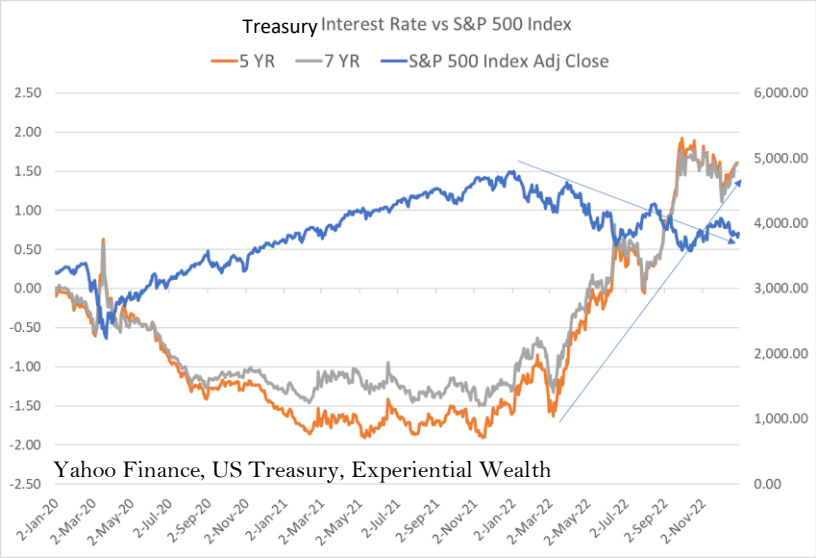
A Hawkish Fed – Good for savers, not so much stocks







https://home.treasury.gov/policy-issues/financing-the-government/interest-rate-statistics

https://home.treasury.gov/resource-center/data-chart-center/interest-rates/TextView?type=daily_treasury_real_yield_curve&field_tdr_date_value_month=202212

U.S. Treasury yield curve has flattened somewhat since summer. The 2-10 spread is now less than 50bp. This may be suggesting that market participants are pricing in somewhat a lower probability for a hard landing or recession. Traditionally, as the market anticipates a recession, the longer end of the yield curve drops, while the front end remains high or escalates. This means that the market anticipates that, as the economy slows and contracts, the Fed would drop rates to support and stimulate the economy to begin a new economic cycle. However, the market is discounting the well broadcast message from the Fed that the economy and households will likely experience more pain and rates shall remain higher for longer. This means the Fed will not jump in quickly to drop rates this time around.

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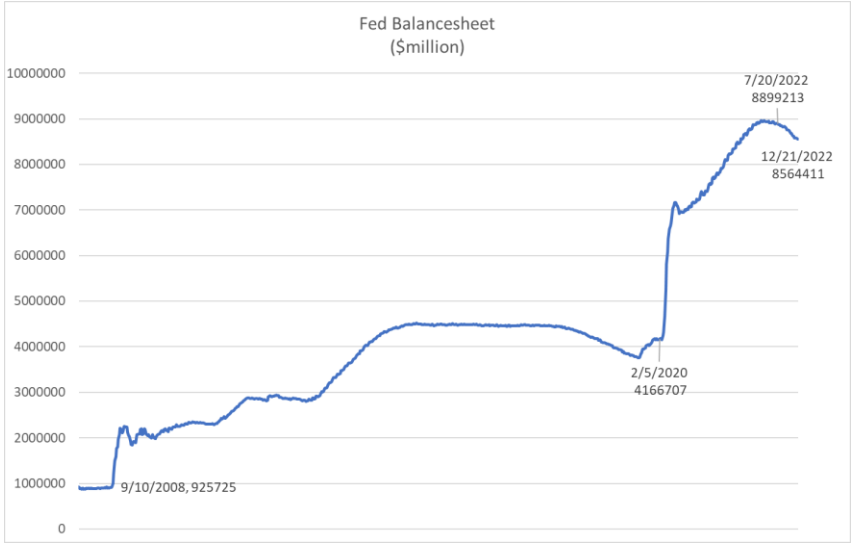
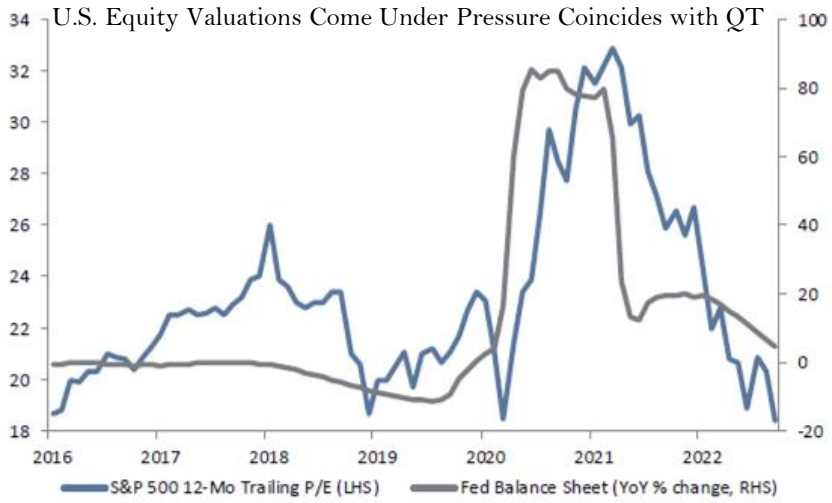
Quantitative Tightening – Uncertain Impact[1]



January 31, 2016 – September 30, 2022



Sources: Federal Reserve, Standard & Poor's, and Thomson Reuters Datastream.
Note: Data are monthly.

Quantitative tightening (QT)[2], also known as balance sheet normalization, is a part of the central bank monetary policy tool kit. It simply means that a central bank reduces the pace of reinvestment of proceeds from maturing government bonds or takes additional action to trim its assets. This is the exact opposite of the monetary stance of quantitative easing (QE). The chart above shows the expansion of the Fed's balance sheet (doubling since post-COVID alone) since the financial crisis and its not-so-successful outcome from 2017 to 2019. The Fed does not directly control long-term interest rates (unlike setting the Fed Funds rate). But through QE, the Fed is able to use its balance sheet to primarily purchase Treasuries and mortgage securities to lower interest rates along the entire yield curve. This was deemed an unconventional monetary policy tool as it results in financial repression by rewarding borrowers at the cost to savers. This expansion in market and banking liquidity helped to stabilize financial stress and pushed investors and savers to take risk since the GFC. Today, with the economy recovering from the pandemic and escalating inflation, QE is no longer a needed tool to support the economy. In fact, to return to a 2% inflation world, QT (or reversal of QE) is needed to constrain financial conditions at the rate of $95 billion per month since September. The overall impact from the reversal of policy remains uncertain in terms of currency, interest rate, financial assets and global markets. We are entering uncharted waters, but it is not likely to be an inconsequential event.

[1] https://www.cambridgeassociates.com/insight/quantitative-tightening-raises-the-risks-for-markets/
[2] https://www.federalreserve.gov/newsevents/pressreleases/monetary20220504b.htm

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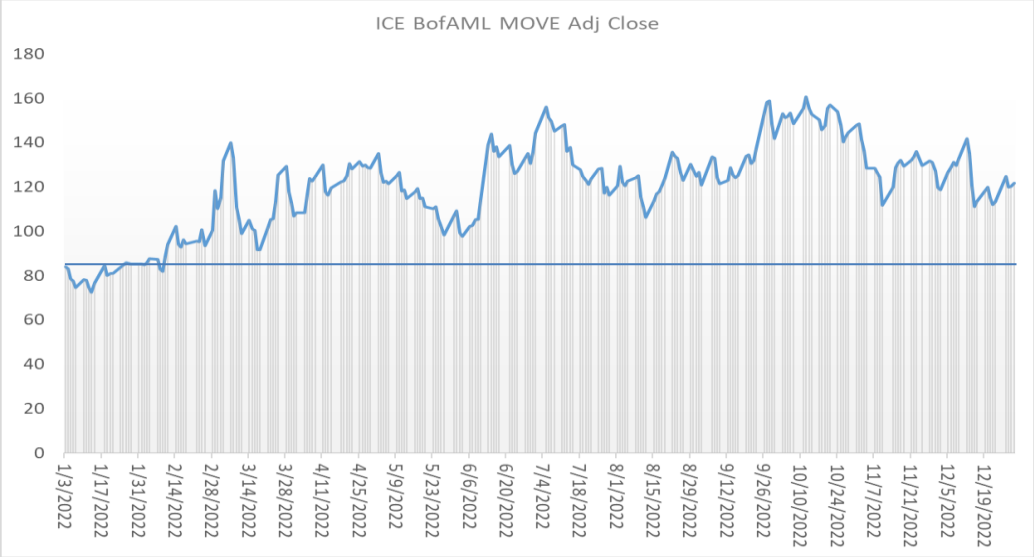
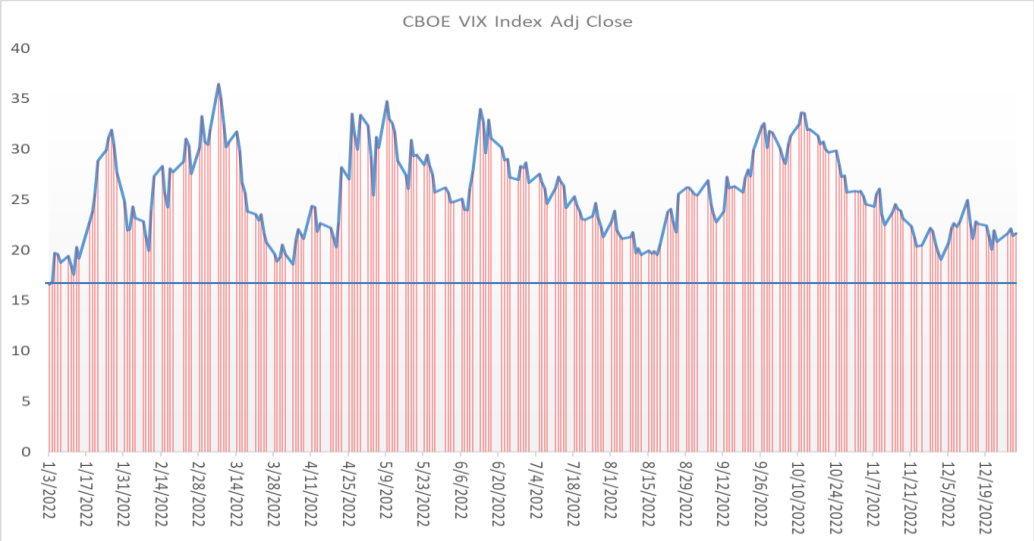
The Market: volatility remains elevated



https://finance.yahoo.com/quote/%5EMOVE/history?p=%5EMOVE



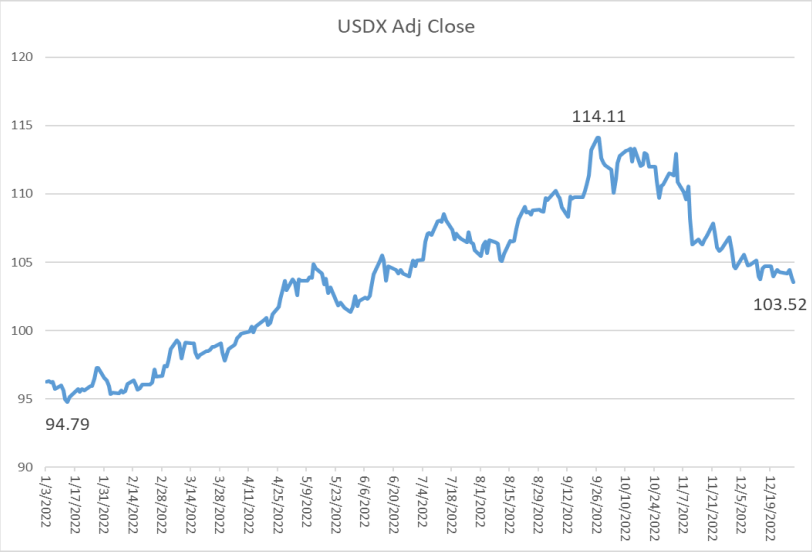
https://finance.yahoo.com/quote/%5EVIX/history?p=%5EVIX

MOVE - Merrill Lynch Option Volatility Estimate- is one measure of U.S. interest rate volatility and can provide a signal for changing risk sentiment in fixed income markets. This year's speed and the expected continuation of FOMC's interest rate hikes have vastly increased fixed income volatility.

VIX - Chicago Board Options Exchange Volatility Index is a popular measure of the implied volatility of S&P 500 index options. A high value corresponds to a more volatile market and, therefore, more costly options, which can be used to defray risk from volatility. With real and nominal interest rates moving steadfastly upward, we witnessed a jump in stock market volatility as well, and the market is expected to remain uncertain until there is more clarity regarding the FOMC's terminal interest rate for this cycle.

World Central Banks & USD

Central Bank	Direction	current rate	previous rate	Rate Change	change
United States	↑	4.50%	4.00%	0.50%	12/14/2022
Australia	↑	3.10%	2.85%	0.25%	12/6/2022
Chile	↑	11.25%	10.75%	0.50%	10/13/2022
South Korea	↑	3.25%	3.00%	0.25%	11/24/2022
Brazil	↑	13.75%	13.25%	0.50%	8/4/2022
Great Britain	↑	3.50%	3.00%	0.50%	12/15/2022
Canada	↑	4.25%	3.75%	0.50%	12/7/2022
China	↓	3.65%	3.70%	-0.05%	**8/22/2022**
Czech Republic	↑	7.00%	5.75%	1.25%	6/22/2022
Denmark	↑	1.90%	1.40%	0.50%	12/15/2022
Europe	↑	2.50%	2.00%	0.50%	12/15/2022
Hungary	↑	13.00%	11.75%	1.25%	9/27/2022
India	↑	6.25%	5.90%	0.35%	12/7/2022
Indonesia	↓	6.50%	6.75%	-0.25%	**6/16/2016**
Israel	↑	3.25%	2.75%	0.50%	11/21/2022
Japan	↓	-0.10%	0.00%	-0.10%	**2/1/2016**
Mexico	↑	10.50%	10.00%	0.50%	12/15/2022
New Zealand	↑	3.50%	3.00%	0.50%	10/5/2022
Norway	↑	2.75%	2.50%	0.25%	12/15/2022
Poland	↑	6.75%	6.50%	0.25%	9/7/2022
Russia	↓	7.50%	8.00%	-0.50%	**9/16/2022**
Saudi Arabia	↑	5.00%	4.50%	0.50%	12/15/2022
South Africa	↑	7.00%	6.25%	0.75%	11/24/2022
Sweden	↑	2.50%	1.75%	0.75%	11/24/2022
Switzerland	↑	1.00%	0.50%	0.50%	12/15/2022
Turkey	↓	9.00%	10.50%	-1.50%	**11/24/2022**



The Fed is on the fastest rate hike path in history in an effort to tamp down inflation. A number of emerging markets have been raising rates in anticipation of Fed actions while others are reacting to the speed and scale of the increase, with a few exceptions. One of the consequences of the U.S. hiking rates to tamp down the U.S. economic growth and ultimately U.S. inflation is making USD assets more attractive. The U.S. Dollar Index (DXY) has risen significantly since the start of 2022 and, as such, is exporting inflation to the rest of the world since the USD is a reserve currency and used to transact commodities.

https://www.global-rates.com/en/interest-rates/central-banks/central-banks.aspx

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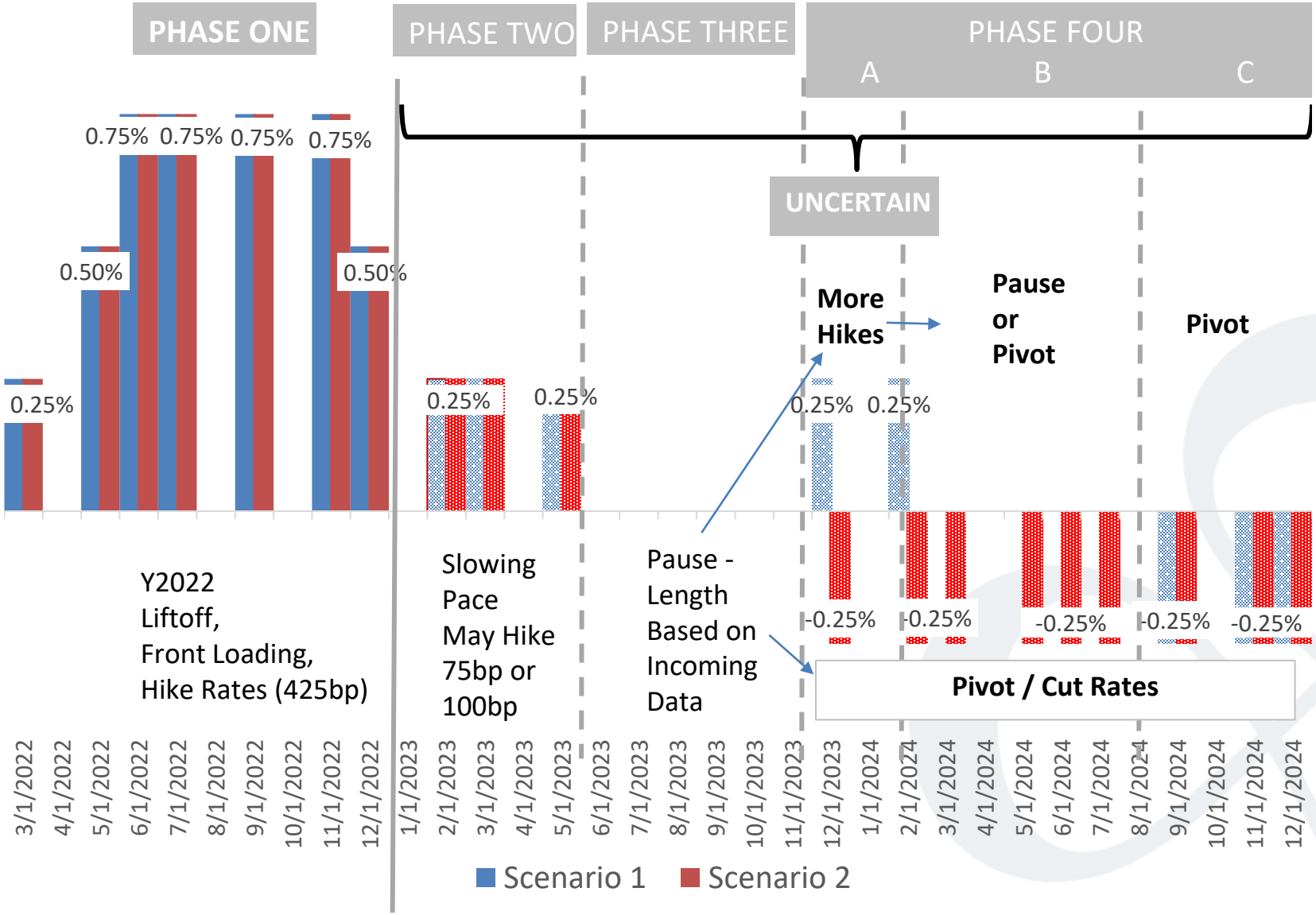
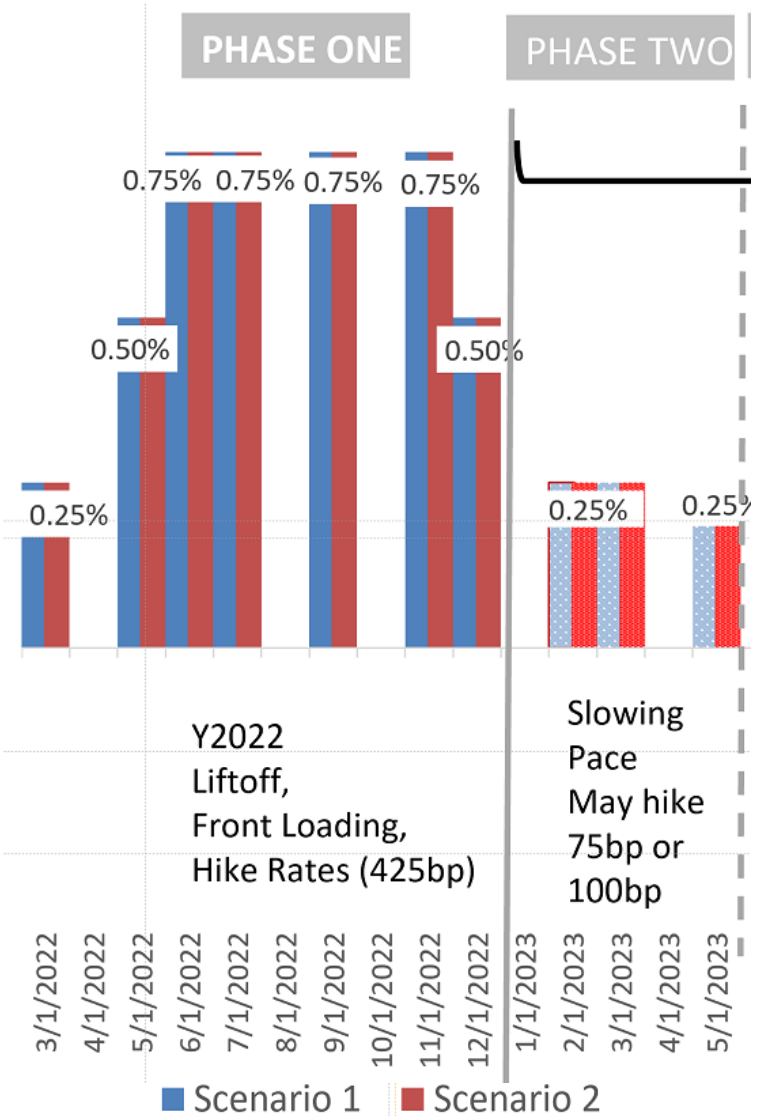
The Four Phases of Fed Rate Actions – A Framework



Phase 1 and 2 of Fed Rate Decisions



- Phase 1 has already happened in 2022. The Fed aggressively hiked interest rates in an attempt to chase and then run in front of rapidly escalating inflation (using tools forcefully to bring demand and supply into better balance). With a strong economy, the Fed was able to massively "front load" rate hikes, and, within 9 months, the Fed Fund Rate went from 0bp-25bp to 425bp-450bp, an unprecedented move.
- The bond and stock markets both reacted poorly and ended the year with double digit losses in response.
- Chair Powell has repeatedly stated that, in meeting the Fed's price stability mandate, rates have to keep going higher to constrain financial conditions, even if that brings pain to the people (higher unemployment) and the economy (contraction).
- At the same time, investors have been doubting the Fed's resolve to keep hiking rates as the yield curve turned increasingly inverted. (Short-end rates are higher than longer end rates.) This is the market signaling a likely economic slowdown ending in a recession.
- After the aggressive policy actions, not to mention Quantitative Easing transpiring in the background, the Fed has signaled that the pace of rate hikes will slow in their December 2022 meeting and further suggested that the "terminal rate" may be at 5.1%. This means another 75bp hikes are needed in 2023. However, there is always the caveat that rate decisions are made on a meeting-by-meeting basis and predicated on new and incoming economic data.
- For now, Phase 2 means three more 25bp rate hikes as the base case and reaching the terminal rate of 500bp-525bp range.

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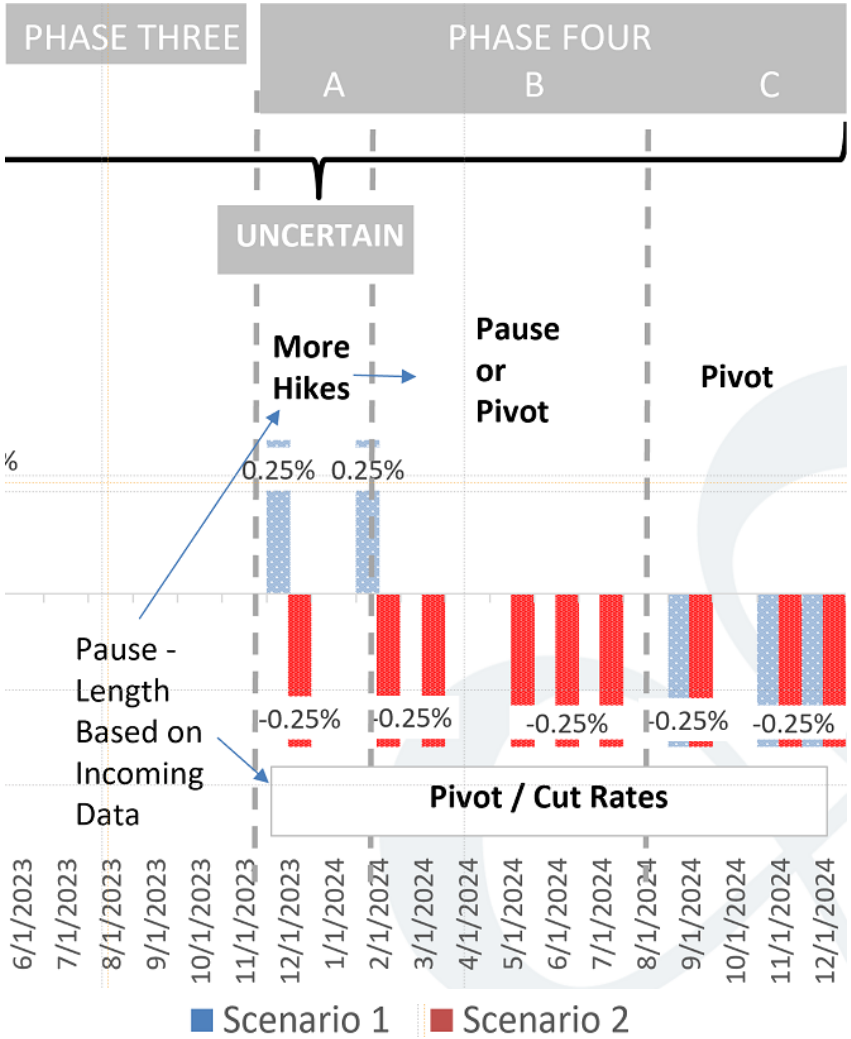
Phase 3 and 4 of Fed Rate Decisions



- Chair Powell and other governors are well aware of "the lags with which monetary policy affects economic activity and inflation, and economic and financial developments." This means they understand that the impact of the 2022 rate hikes have not been fully translated into the economy.
- Phase 3 starts when incoming data over time shows the desired effect on inflation. Then, the Fed will likely pause from any rate hikes. However, it is also clearly stated that "restoring price stability will likely require maintaining a restrictive policy stance for some time. The historical record cautions strongly against prematurely loosening policy." This means we are not certain as to how long the "pause" period will be.
- Most market participants believe that, after the "pause" period, the next phase would be to "pivot" or cut interest rates, with the likely scenario of an economic contraction or significant slowdown, which would require monetary stimulus. However, it is also possible that, after the pause, the income data suggests a revival of inflation, causing the Fed to hike rates (Phase 4 A).
- Phase 4 is when (Phase 4 B) the Fed is confident that we are at or headed back close to the 2% inflation target; then rate cut to r* will begin (Phase 4 C). The timing of this is also highly uncertain.

Our Base Case Forward

- Yogi Berra: "It's tough to make predictions, especially about the future." At the end of a year, almost every investment firm offers its predictions about the next year. We will not make predictions; rather, we will try to see trends that are developing and point towards where they are likely leading.
- The disinflation wind is blowing, evidenced by the cooling housing and rental markets, the goods component of the CPI/PCE falling consistently, the waning of excess savings, and the slowing of wage growth. This is not only occurring in the U.S. but also in Europe and globally.
- The continued healing of the global supply chain, along with the rolling back of energy prices, are all helping to dial back inflation. However, this disinflation wind is primarily a result of the post-COVID normalization of supply chains, from commodities to finished goods. There may be rapid deceleration of inflation for a short period of time, but let's not allow this reversal to be seen as a declaration of victory or somehow interpret it as the central banks having beaten back inflation for good. The service component of inflation remains strong and will require more evidence of economic slowdown or even contraction to dis-inflate. Finally, there are structural and contributing systemic factors that are more difficult to predict (fracturing of the global supply chain, reshoring to higher cost locations for national security reasons, lingering geopolitical risks, emphasizing resilience over low cost, inefficient allocation of sovereign assets to military and defense, incongruent energy transition, etc.) which could lead baseline inflation to remain higher for some time.
- The uncertainty to the terminal rate (i.e., when will the Fed pause) and the length of time the Fed will hold the terminal rate (assuming incoming data do not require continuing hikes) before reversal (i.e., when will the Fed pivot) will continue to keep market participants hanging onto every word of Chair Powell and scrutinizing incoming data.
- Rate hikes will continue for 2 to 3 more meetings at a minimum to reach the 5.1% range. Unless the economy cools and aggregate demand wanes, it will be hard to imagine the service sector of the economy weakening enough to meet the Fed's inflation target. Assuming Chair Powell's conviction to bringing inflation (core PCE) back down to 2% is unyielding, even against an economic contraction and higher unemployment or political pressure, pivoting will be a ways off.

Our Investment Thinking (not advice)

- The current environment should pose more downside risks to the stock market than the bond market. It is reasonable to assume that most of the rate hikes (425bp in 2022) are behind us (assuming terminal rate between 500 to 550bp). As such, most of the losses in fixed income are also behind us. Now, under a higher interest regime, there is a bigger cushion for bonds to absorb losses. For stocks, the forward PE is not likely to remain at the current level as companies' revenues and profits are likely to revise downward in a slowing to contracting economy.
- The 60/40 portfolio will be working again, with bonds and stocks correlation to normalize. This will be more obvious as the economy continues to slow where bonds will appreciate as market interest rate drops.
- Growth-oriented stocks will likely remain under pressure, especially in a higher real rate environment. Companies that have demonstrated sustainable high free cash flow, revenue and profitability best serve as the bedrock of a stock portfolio during times of uncertainty. And investment grade bonds with good yields are less volatile securities to hold while earning respectable current income and counterbalancing stock volatility.
- Timing is everything. Since timing the market is a fool's errand, the only logical approach is dollar-cost-averaging. This is a process of buying bonds (a bit faster) and stocks (a bit slower) over a series of months in anticipation of the market recovering without the need for getting the turning points exactly right.
- U.S. dollar strength may be waning as the U.S. rate hiking cycle is likely coming to an end and the U.S. economy is more synchronized with the rest of the slowing world. Moreover, with real rates in other advanced economies becoming increasingly more positive, investors now have alternatives to U.S. assets.
- Selective emerging market (EM) bonds (especially local currency sovereign bonds) may do well as their central banks lower rates in a weakening U.S. dollar environment. Both factors should boost EM bond returns.
- Energy transition related companies (both old and new energy producers) will remain front and center for years to come. As population continues to grow globally, energy consumption will only expand. The cheaper but polluting old energy complex is starving for new capital while most of the world still relies upon it as their primary energy source. The new energy complex is getting the attention and capital, but it is not ready to replace the current energy infrastructure. Investment in the energy transition theme (both old and new) will remain an important foundational long-term endeavor.
- Finally, cash is not trash any more. TINA (There Is No Alternative…to stock) is yesterday's reality. Allocating to cash as an uncorrelated asset class, while collecting a respectable return with little to no risk could make sense.

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