

Month In Macro

This note aims to share our research team's internal checkpoint process in evaluating the current state of the economy as it pertains to markets. The pages that follow will have familiar content for those who follow our work, but with the added benefit of our connecting the dots across all the economic and financial data our systems use to make portfolio decisions. Our primary takeaways are as follows:

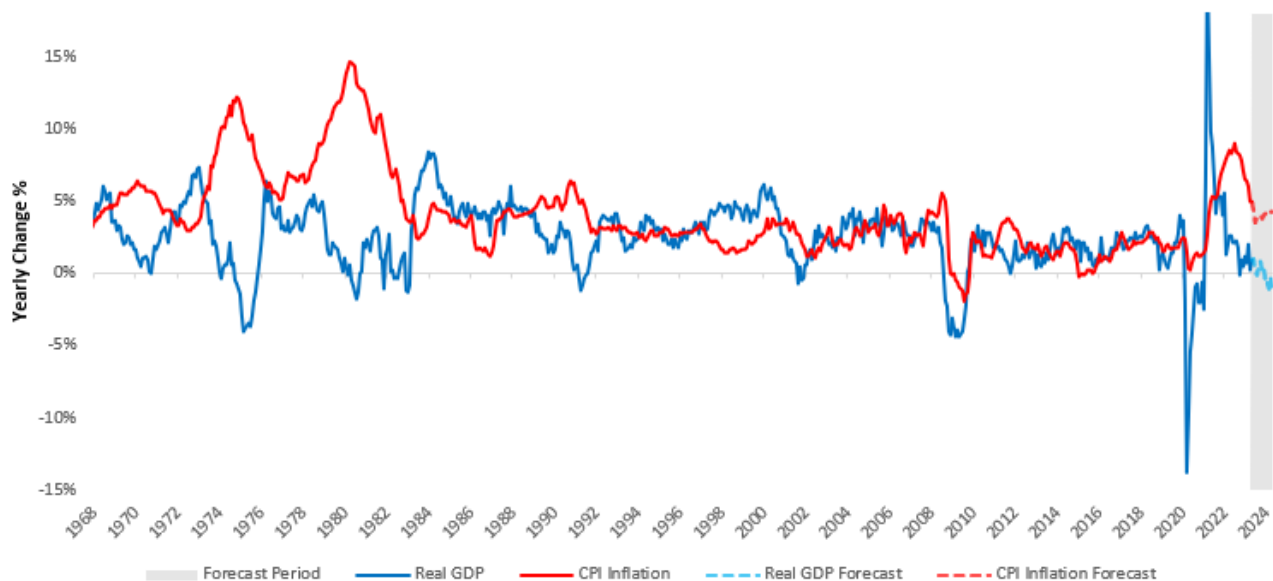
- **Nominal GDP expanded by 1.05% in May, with real GDP increasing by 0.9% with inflation rising by 0.15%.**
- **Coincident with this expansion in nominal GDP, liquidity conditions have improved significantly, primarily driven by private sector procyclical liquidity expansion.**
- **Treasury markets have fallen as they moved to price tighter monetary policy, while equity markets have risen due to higher liquidity and better-than-expected growth conditions.**
- **Looking ahead, real growth is likely to dwindle while inflation remains resilient. Monetary policy will likely have to remain tighter than priced. These dynamics will continue weighing on stocks and bonds. Bonds remain a potential short position, but less so than last month.**

The views outlined in our last Month In Macro played out well over May; for reference:

"Neither stocks nor bonds offer attractive return-on-risk here. Stocks remain highly exposed to weakness in the economic growth cycle, while bonds are likely to face headwinds from higher rates to combat resilient inflation. Cash remains an attractive hiding place for most investors. Active investors can short bonds."

While our views on bonds were confirmed in markets, our thoughts on being in cash versus equities were offside. We attribute this to the liquidity factor, which we discuss in detail in this note. From a growth and inflation perspective, our future expectations remain a headwind for assets. Shown below:

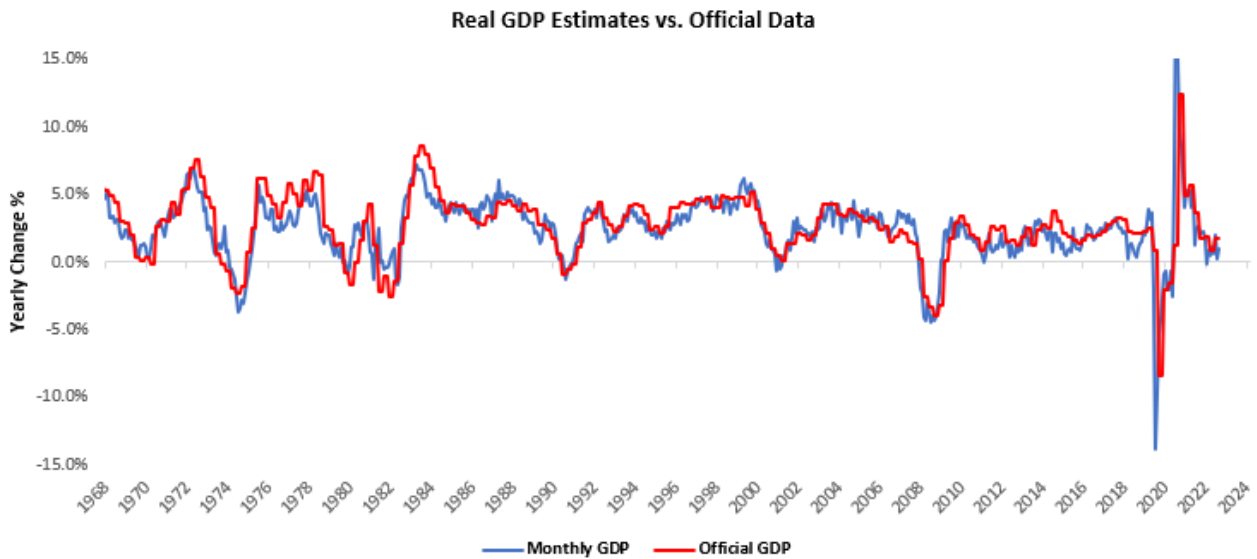
Cyclical Forecasts: Growth & Inflation



Let's dive in.

Real GDP: Weakening Domestic Spending

Before we dive deep, we think setting the stage for where we are is essential. This section briefly outlines the current status and drivers of real GDP. For the latest data through May, our systems place Real GDP growth at 0.98% versus one year prior. Below, we show our monthly estimates of Real GDP relative to the official data:

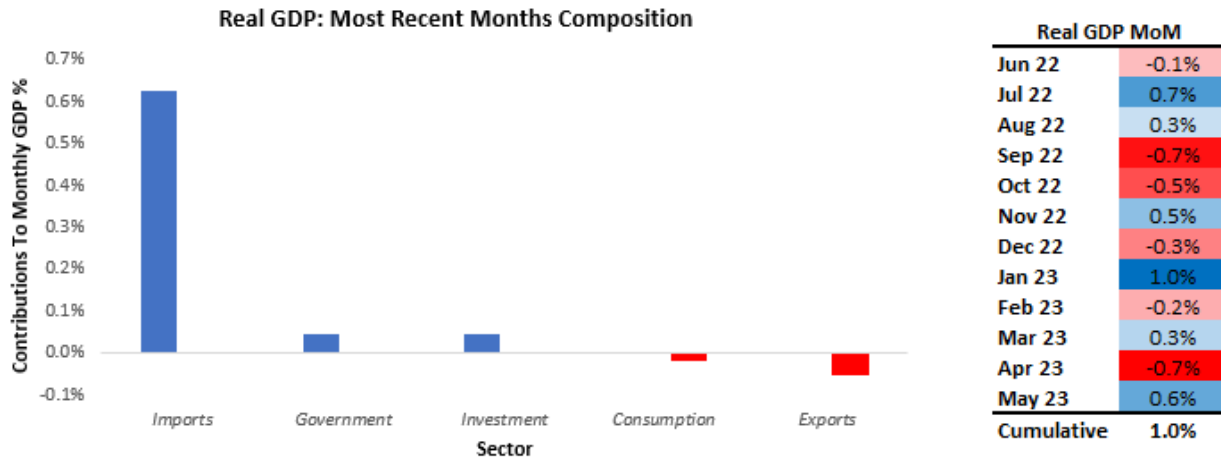


In May, GDP came in at 0.64% versus the prior month. We decompose the most recent months' data into its major divers to better understand this increase. Below, we offer the contribution by sector to monthly GDP in the table:

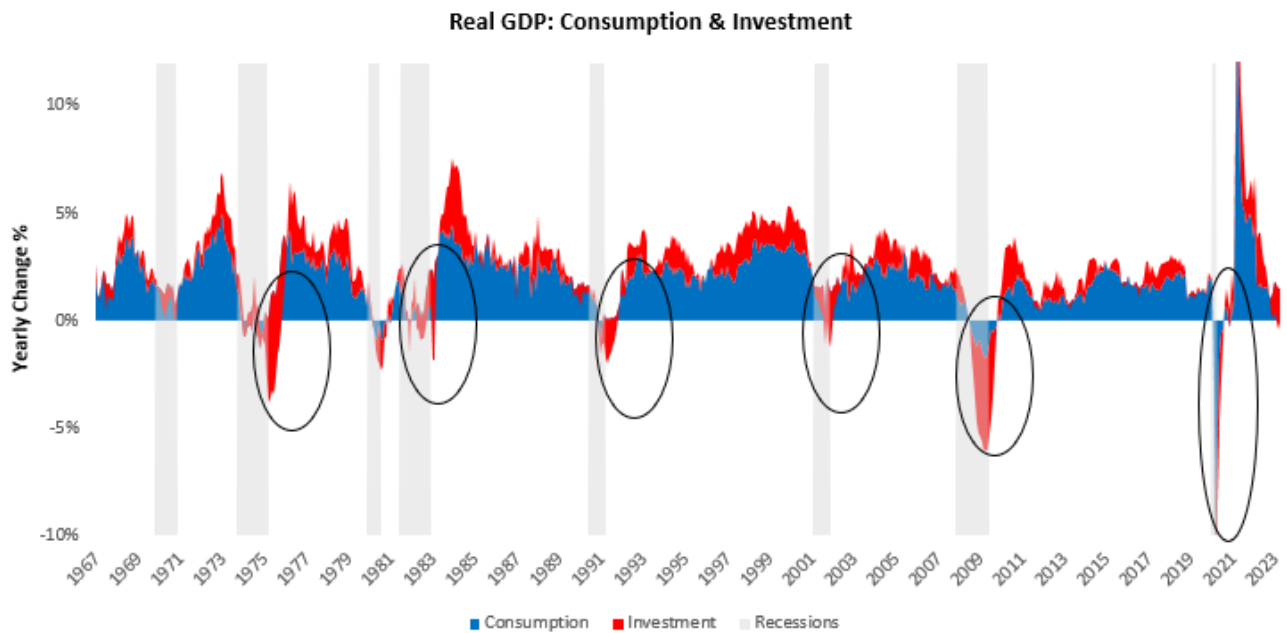
	GDP	C	I	G	X	M
Jun 22	-0.1%	0.1%	-0.3%	-0.1%	0.1%	0.1%
Jul 22	0.7%	0.0%	-0.1%	0.1%	0.6%	0.2%
Aug 22	0.3%	0.3%	-0.2%	0.0%	0.1%	0.0%
Sep 22	-0.7%	0.2%	-0.6%	0.0%	0.0%	-0.3%
Oct 22	-0.5%	0.2%	-0.2%	0.0%	-0.2%	-0.2%
Nov 22	0.5%	-0.3%	-0.2%	0.1%	-0.1%	1.0%
Dec 22	-0.3%	-0.1%	0.0%	0.0%	0.2%	-0.4%
Jan 23	1.0%	0.9%	0.1%	0.0%	0.5%	-0.6%
Feb 23	-0.2%	0.0%	0.0%	0.0%	-0.5%	0.4%
Mar 23	0.3%	0.0%	-0.2%	0.0%	0.3%	0.2%
Apr 23	-0.7%	0.2%	0.3%	0.0%	-0.7%	-0.5%
May 23	0.6%	0.0%	0.0%	0.0%	-0.1%	0.6%
Cumulative	1.0%	1.5%	-1.5%	0.3%	0.2%	0.6%

We think it is extremely important to note that the two most important domestic activity indicators, i.e., consumption and investment spending, have declined in real terms over the last twelve months. The strength in GDP in May came from a strong trade balance and continued government spending.

Zooming into the most recent month (April), we see that import spending was the primary driver of GDP. Ex-trade, our estimates of real GDP in May were for 0.07% growth.

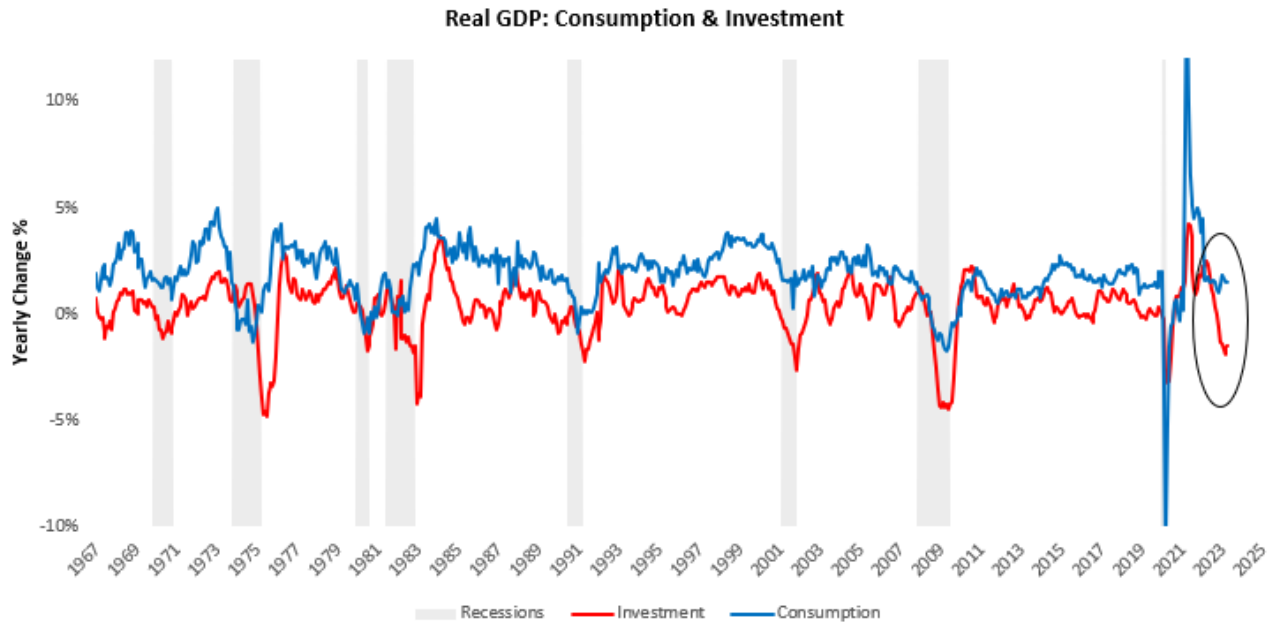


The contraction in consumption data is an important item to watch, especially if the weakness continues. This monitoring is essential as a contraction in the composite of consumption and investment has always been the hallmark of a recession. Below, we show how a contraction in consumption and investment has been classified as a recession in all instances it occurred:

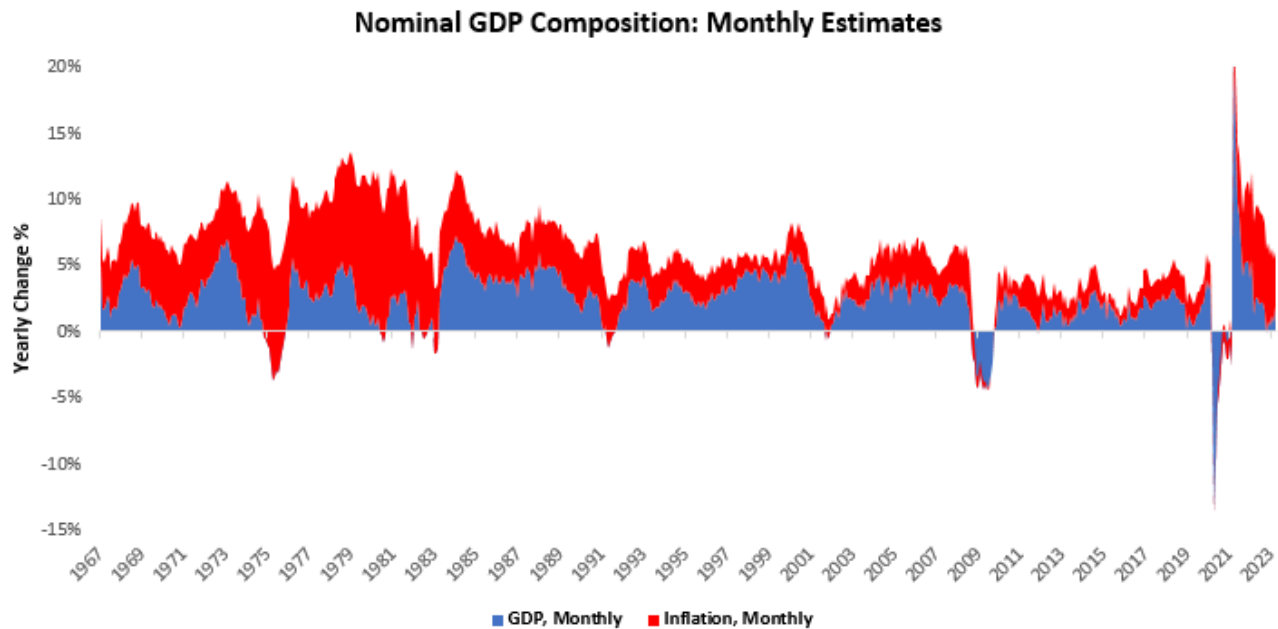


For balance, it is important to note that there was one recession in 1970 where consumption and investment did not contract. However, we don't consider this a contra-indication, as demand weakness is more recessionary than the lack of it. It is important to recognize that this demand is the bedrock of business sales, which creates topline revenue for businesses. As this number dwindles, so does domestic revenue for companies.

Even though the combined total of consumption and investment is close to contracting, we think it's important that these two areas paint two dramatically different pictures. We show this below:



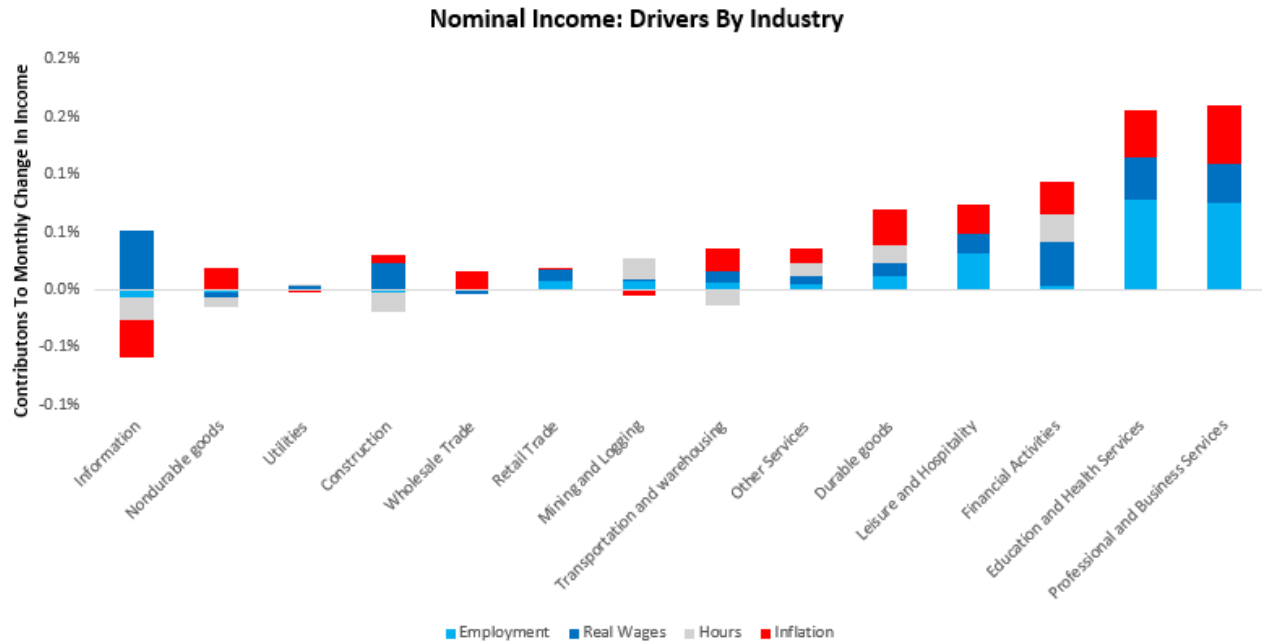
As circled in the above visual, investment continues to deteriorate as inventories, equipment, and construction investments decline. On the other hand, consumer spending remains positive in real terms, and its strength is broad-based. Finally, while real spending (output) from consumption and investment is declining, total nominal spending remains significantly elevated:



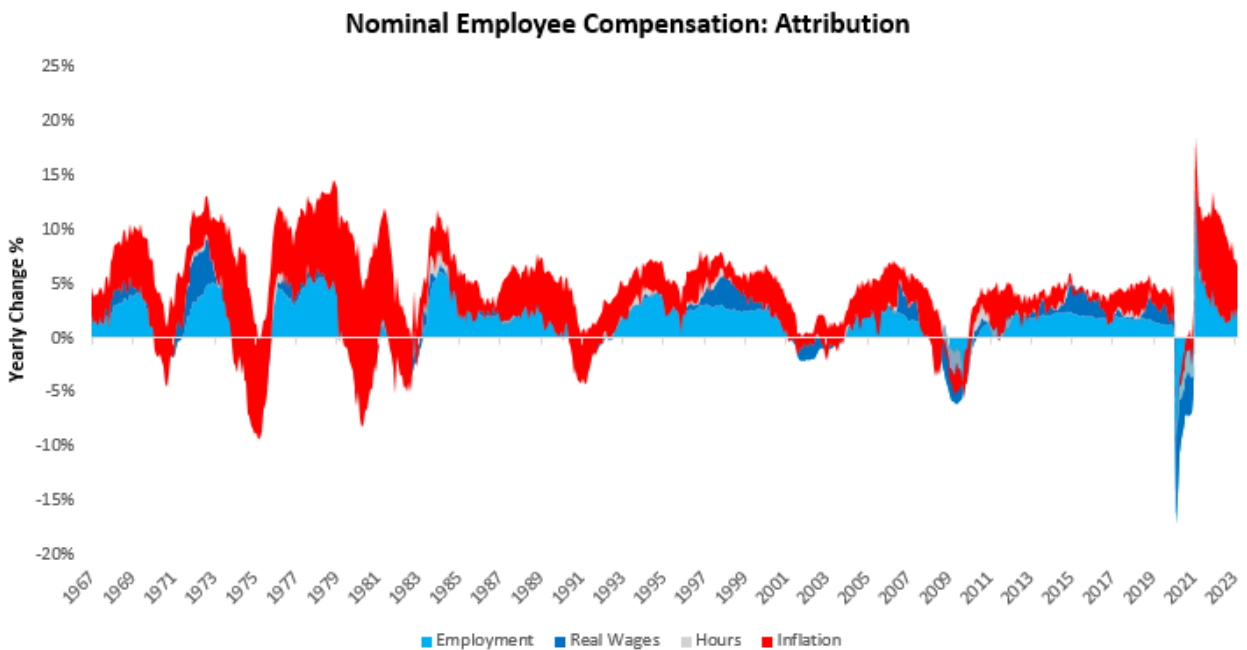
The combination of weakness in investment activity, resilience in consumption, and stable nominal spending creates an environment where inflation is unlikely to dissipate without a contraction in employment. We discuss each piece in the pages that follow.

Consumer Spending: All About Employment

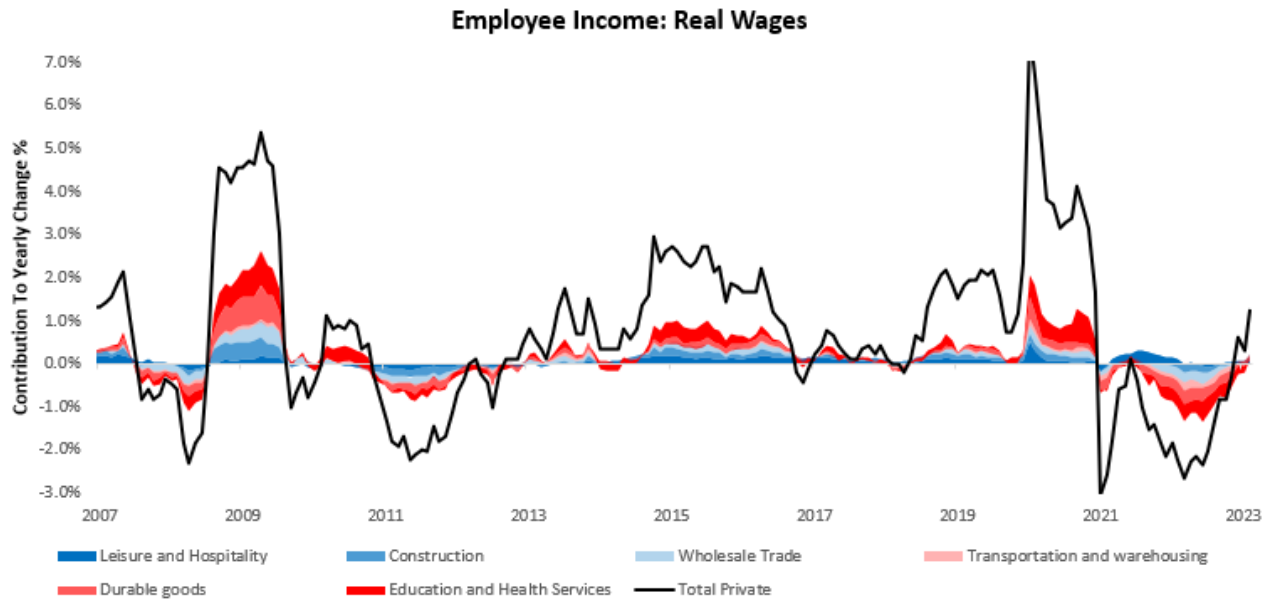
Consumption in the US is almost entirely financed by income, though a modest amount is currently also being financed by income on assets. When we look through the drivers of income, we see income driven primarily by employment and wage inflation. Below, we show the composition of our most recent estimates of employee compensation:



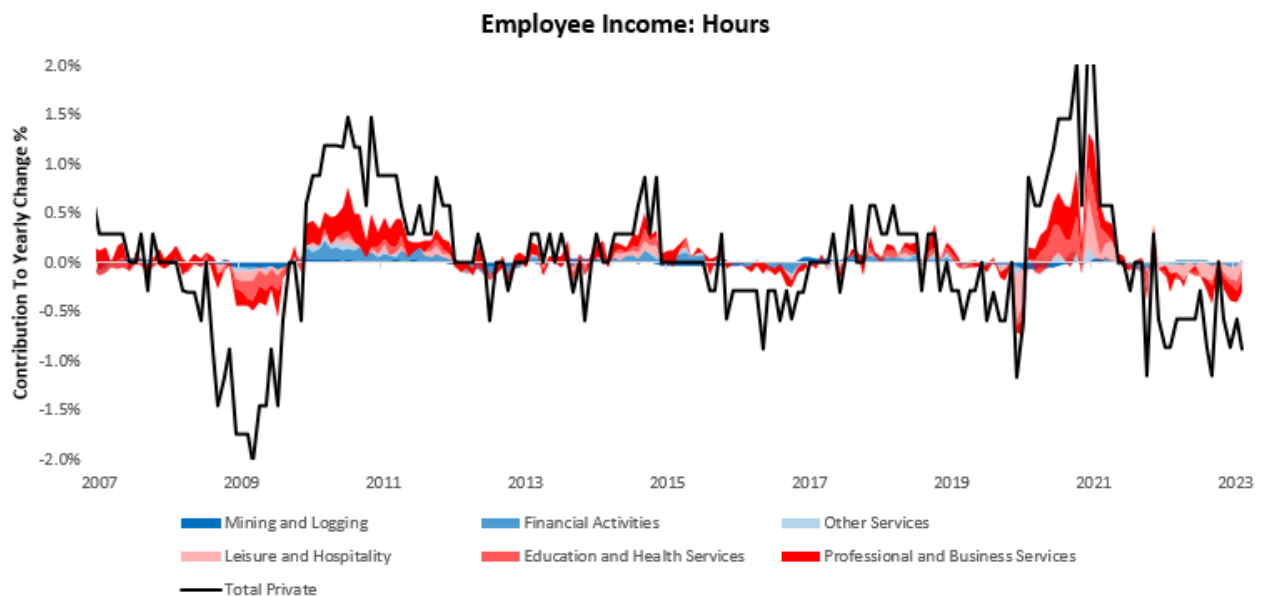
As we can see above, professional and business services remain the stronghold of employee income, while information and nondurable goods income has been moderate. For a bigger picture perspective, we show the evolution of aggregate nominal employee compensation by its driver below:



We dig into each component. We show real wages, which were negative for most of 2022, as nominal employee compensation remained weak relative to inflation. This shock has largely reversed, with employees now receiving modestly positive real wages versus one year prior:

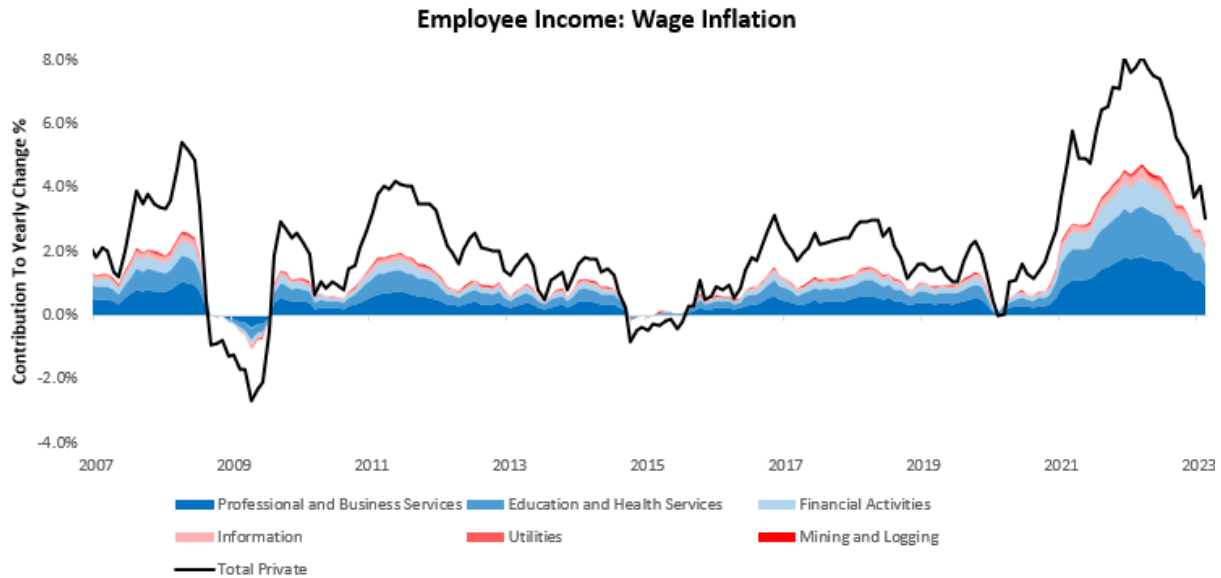


These improvements in real wages have come from higher wages in leisure, construction, and wholesale trade, while transportation and durable goods continue to see weakness alongside education and health services.

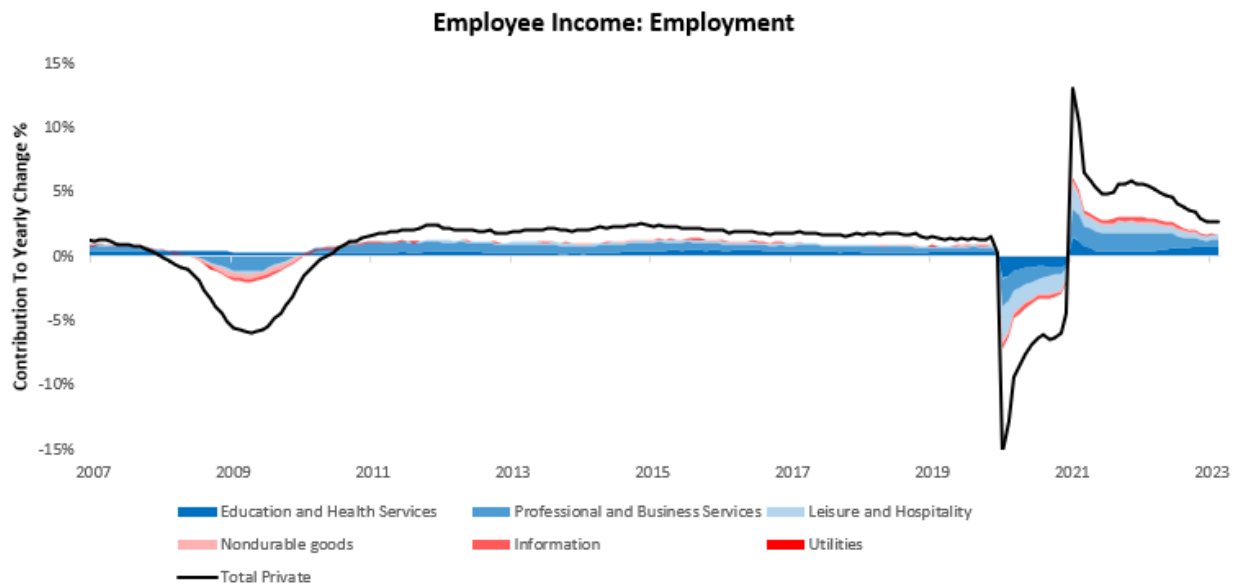


Coincident with this uptick in real wages, we have seen sustained deterioration in the hours worked. Interestingly, hours worked have declined in the industries with the most significant employment and nominal wage gains, i.e., professional and business services and education & health services. In our next visual, we show these industries have benefited from significant wage inflation relative to other sectors.

Wage inflation was a significant force last year and has largely decreased as we entered this year. As we can see in the below visual, some sectors have contributed to wage inflation more than others, with professional and business services, education & health services, and financial activities seeing the largest driving wage inflation:



While wage inflation is the largest contributor to nominal employee incomes today, it hasn't been the most durable. Sustained employment gains have been the bedrock of sustained nominal income growth. Once again, these gains have been driven by professional and business services, education & health services:



As we can see, employment has decelerated somewhat, but for incomes to contract, we would need to see a durable contraction in employment data. Given the bias of consumer spending to originate from nominal income, monitoring employment is crucial to evaluating the durability of activity.

This evaluation requires careful monitoring of labor market data in the form of jobless claims data. The latest initial and continuing jobless claims disappointed expectations. Below, we show the history of these measures, along with the Continuing Claims Rate, after adjusting these measures to provide an apples-to-apples comparison. Additionally, we combine these measures into a Jobless Claims Aggregate to capture the broad trend in the data:



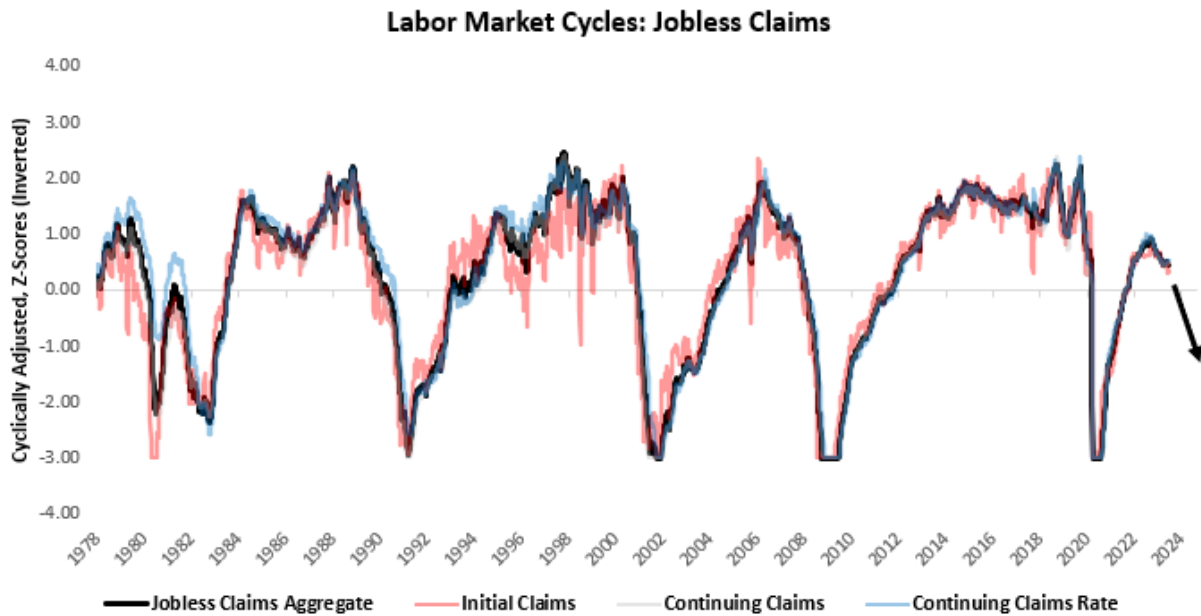
Additionally, we show the recent evolution of jobless claims data over the last twelve weeks. Our tracking of Jobless Claims currently tells us that we are a ways off from recessionary territory:

Jobless Claims: Recent History Relative To Recessionary Averages

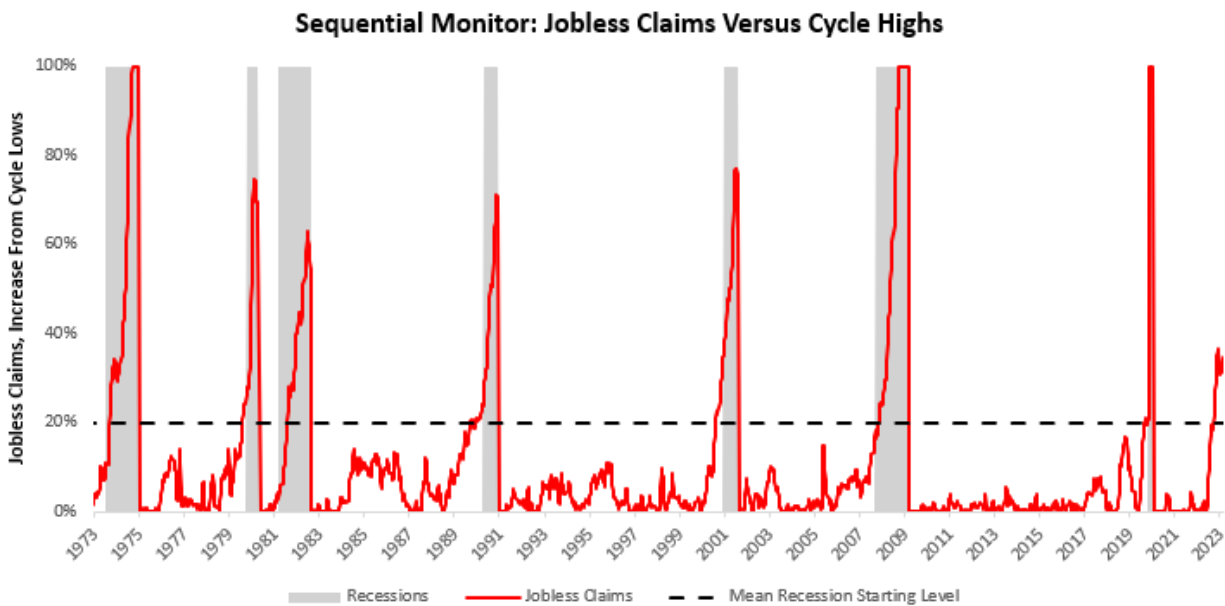
	Initial Claims	Continuing Claims	Continuing Claims %
4/7/2023	240	1861	1.30%
4/14/2023	246	1843	1.30%
4/21/2023	229	1801	1.20%
4/28/2023	242	1807	1.20%
5/5/2023	231	1799	1.20%
5/12/2023	225	1789	1.20%
5/19/2023	230	1794	1.20%
5/26/2023	233	1755	1.20%
6/2/2023	262	1772	1.20%
6/9/2023	264	1761	1.20%
6/16/2023	265	1742	1.20%
6/23/2023	239	-	-
Recessionary Avg. (Ex-COVID)	473	3395	3.51%
Recessionary Avg	574	3659	3.65%

Further, we show these Jobless Claims measures adjusted to show our position in the labor market cycle. We remain in expansionary territory. As we can see above, initial claims remain consistent with an economic expansion, far from the levels seen during prior recessionary periods. Now that we have examined the secular context, we turn to the cyclical context.

To showcase where we are in the labor market cycle, we show our cyclically adjusted jobless claims aggregate and its constituents. As we can see below, we are now in the early stages of a cyclical slowdown in the labor market, but still outside a contraction:

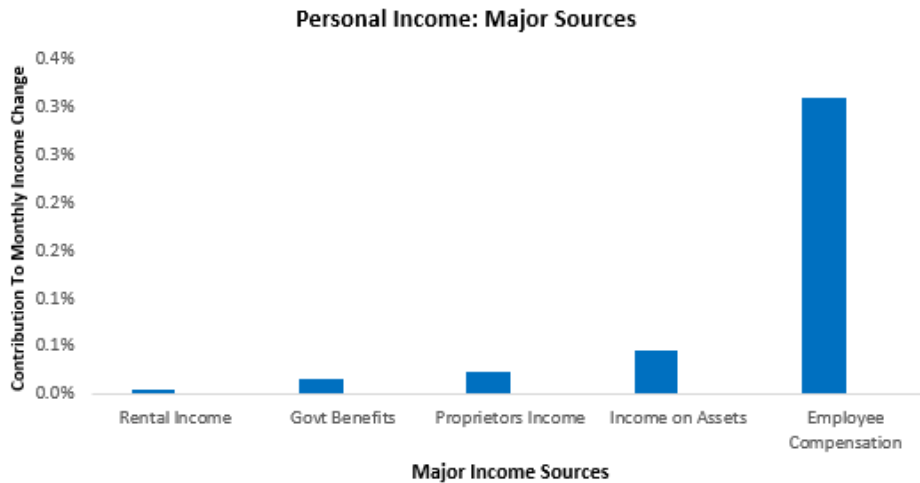


Finally, we show jobless claims data from a sequential perspective to understand where we are in the labor market cycle relative to the most recent cycle peak. As of our latest reading, our labor market measure shows Jobless Claims are 35%. Recessions typically begin around a reading of 20%, suggesting we are within the ballpark of recessionary territory.



Overall, the labor market remains secularly tight, cyclically softening, and sequentially contracting. A contraction in incomes will occur when all of these perspectives align to the downside.

The strength in the labor market and elevated wage inflation have been coupled with increased household income from assets. The combination of these dynamics led to significant gains in nominal personal income in May. We show the composition of this personal income below:

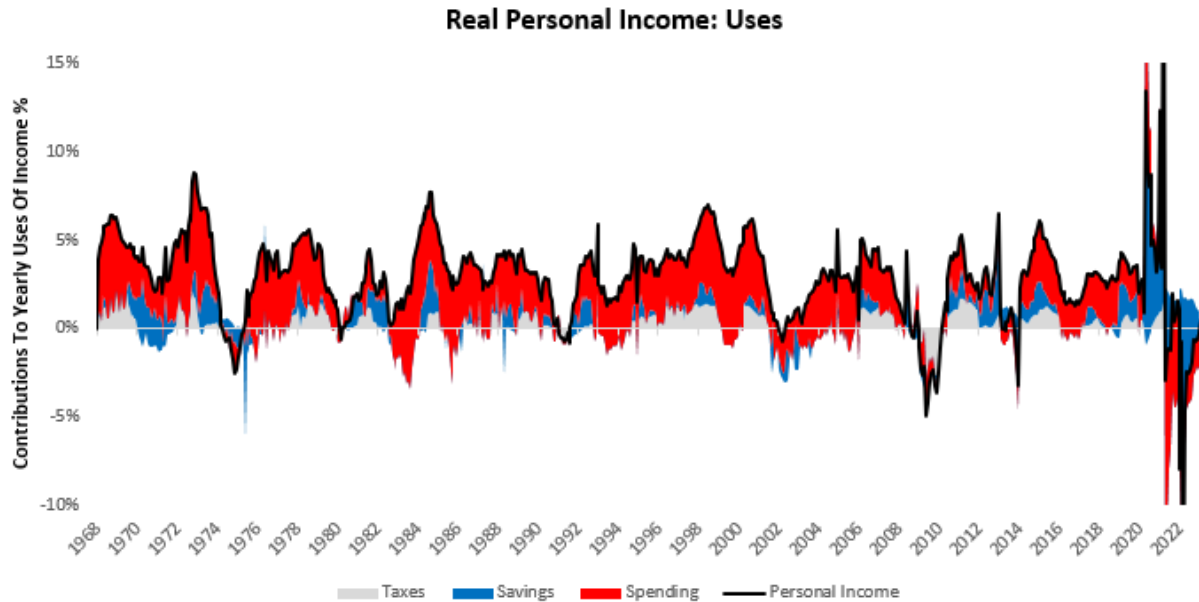


As we can see, employee compensation dominates, followed by income on assets. We see a large source of this income on assets coming from short-term securities like income from retail money funds. We show this below:

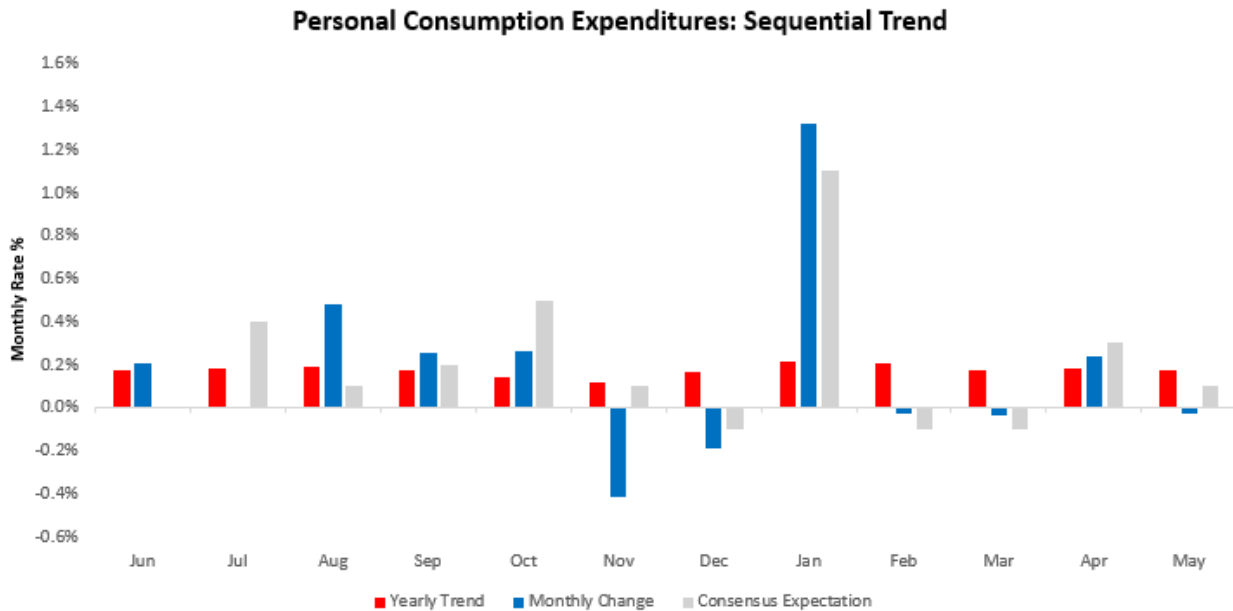


Above, we show our estimates for the income generated from household holdings of money market funds as a percentage of nominal GDP. Our estimates show that the income generated from retail funds alone adds about 0.40% to GDP growth. If we expand our definition to include income from institutional money market funds, this number is closer to 2%. Therefore, we think this remains an important avenue of income for households and the broader private sector. Without outflows from these assets, lower interest rates, lower employment, or lower nominal wages, incomes are unlikely to come down significantly.

Now that we have understood the sources of income, it is time to examine the uses of this income. As Personal Income increased in May, this income was saved. Income increased as taxes increased by 0.02%, savings increased by 0.28% & spending increased by 0.1%. However, inflation ate away at this income, and real income increased by 0.27%. Below, we show how these uses of income have evolved in real terms:

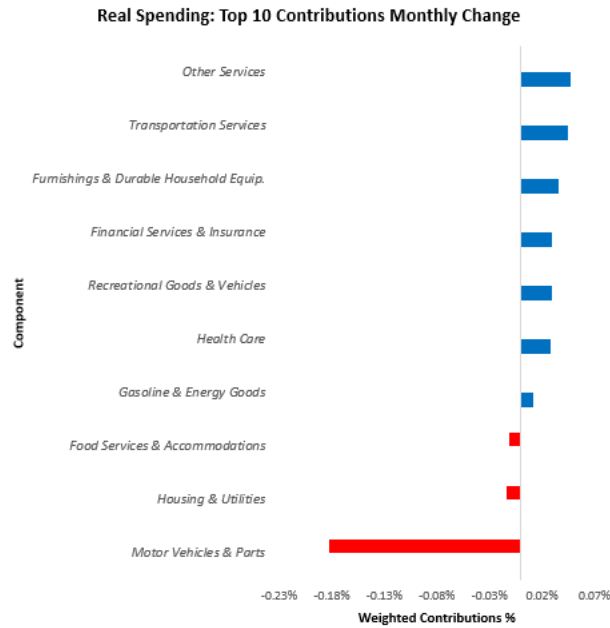


With an increase in savings this month, we saw a contraction in real personal spending. Real Spending decreased -0.03% in May, disappointing consensus expectations of 0.1%. This print contributed to a sequential deceleration in the quarterly trend relative to the yearly trend.

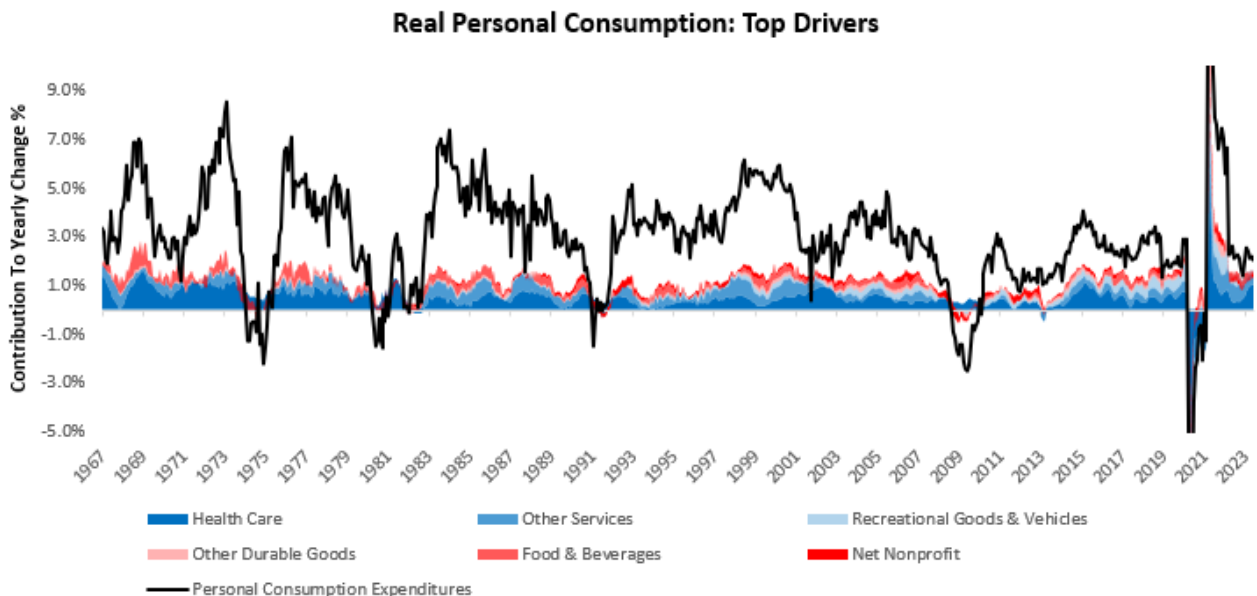


Below, we show the monthly evolution of the data relative to its 12-monthly trend and consensus expectations.

We note that this increase in savings and decline in consumption will be a drag on corporate profits. For further context, we decompose the monthly print. The primary drivers of this print were Motor Vehicles & Parts (-0.2%), Transportation Services (0.06%), & Other Services (0.07%). Below, we show the top 10 drivers of the monthly change:

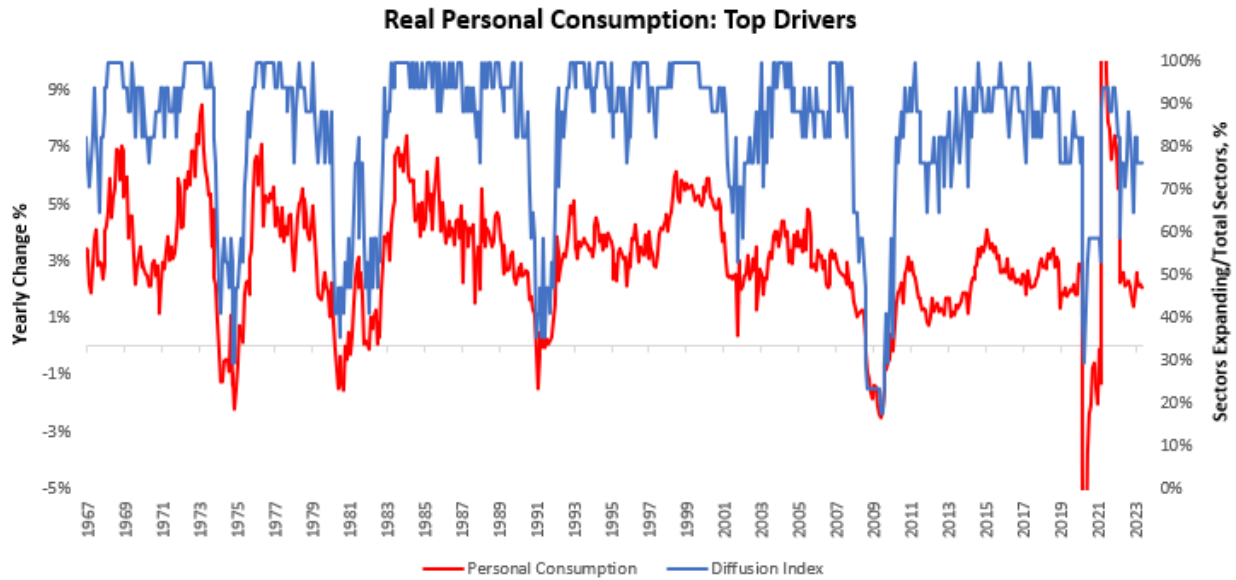


As we can see above, the primary drag to consumer spending came from motor vehicles and parts spending. For further perspective, we zoom out to show the primary driver of real consumption spending over the last year:

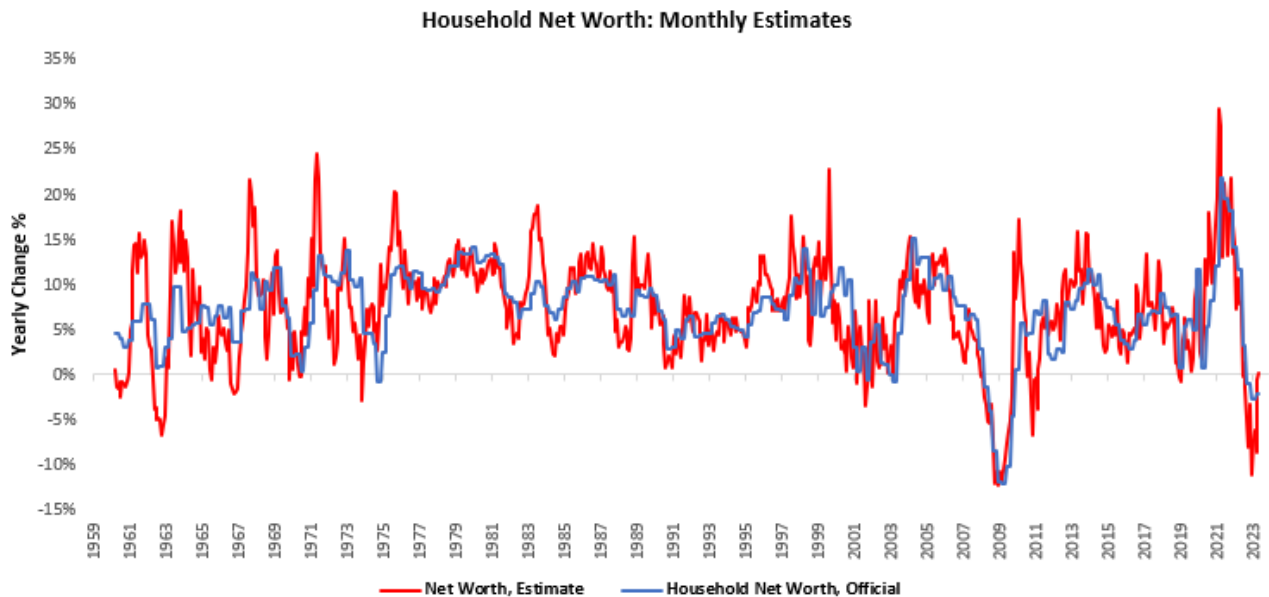


We see weakness in real spending on durable goods, food & beverages, and nonprofit spending.

While we see some degree of softening in consumption, the breadth of consumption strength remains strong. Typically, contractions in consumption require at least 50% of sectors to see a pullback in spending. We show how we would require further breath in weakness today to confirm a slowdown in personal consumption.

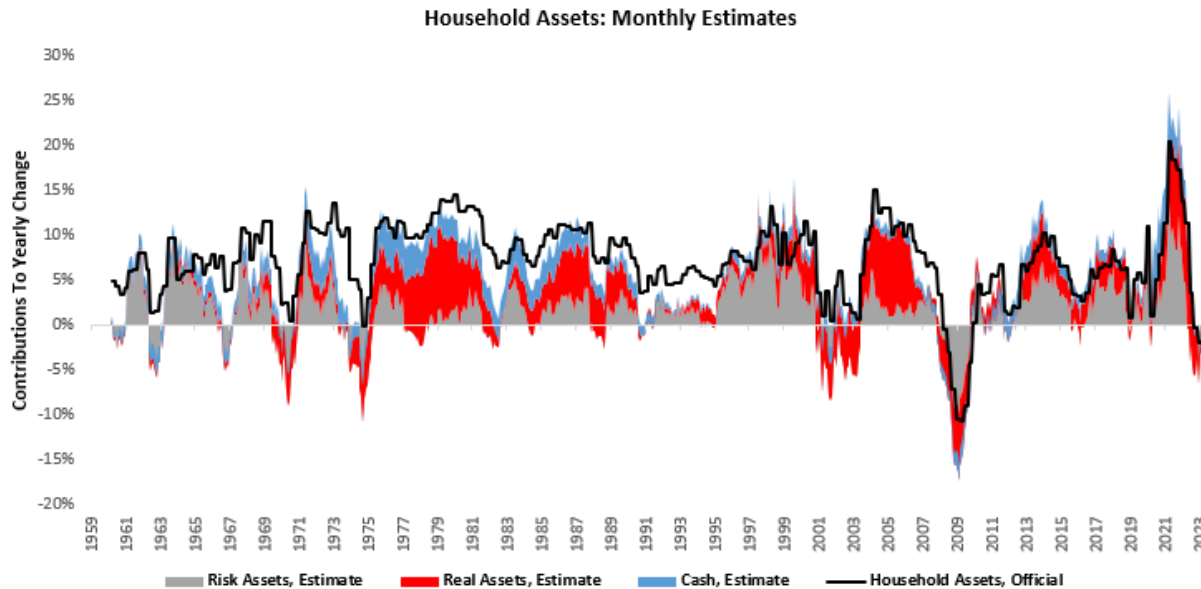


As we can see, 75% of sectors of real personal consumption are expanding compared to last year. For the most recent month, only 47% were expanding. Over the last quarter, only 53% were expanding. This sequential worsening of our diffusion index indicates a potential worsening of breadth ahead. As previously noted, this weakness in the most recent month has come from increased savings rates. These increased savings is consistent with the pressures we see from the household balance sheet:

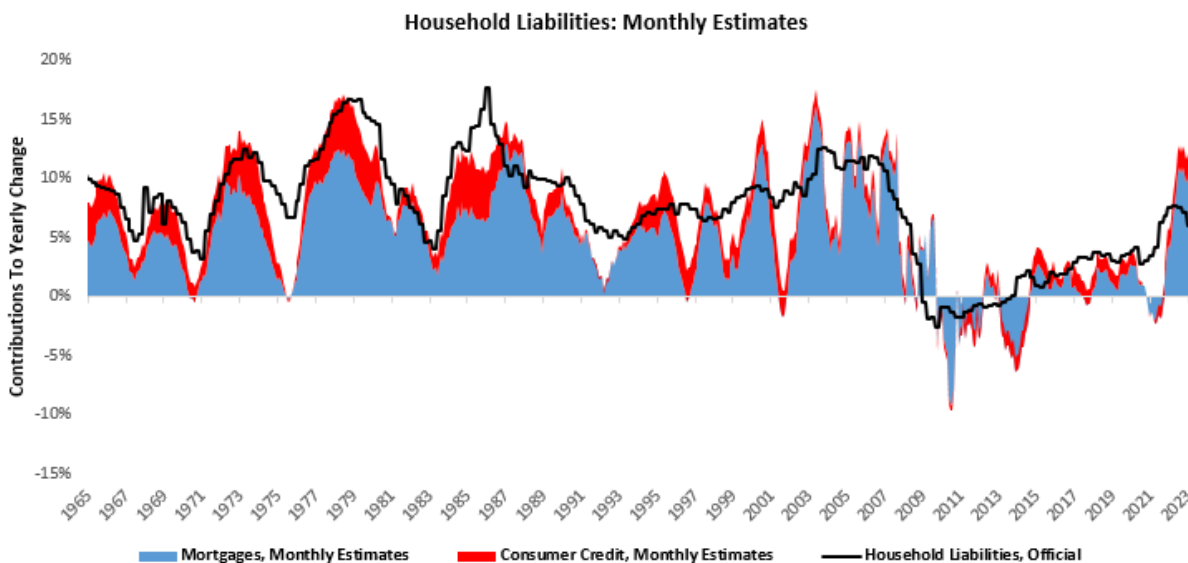


According to our latest estimates for June, household net worth declined by -0.11%, driven by a -0.23% and -0.12% change in assets & liabilities, respectively. We show the evolution of our household net

worth estimates below, which show that net worth has contracted -0.93% over the last year. We decompose these moves into asset and liability moves. Over the last year, household assets have fallen by -0.93%. Below, we decompose these changes in assets into risk assets (equities, corporate credit, etc.), real assets (real estate, consumer durables, etc.), and cash assets (checking, savings, money markets funds, etc.). Risk, real, and cash assets have contributed 0.38%, -0.55%, and -0.76%, respectively, to the total change in household assets over the last year.

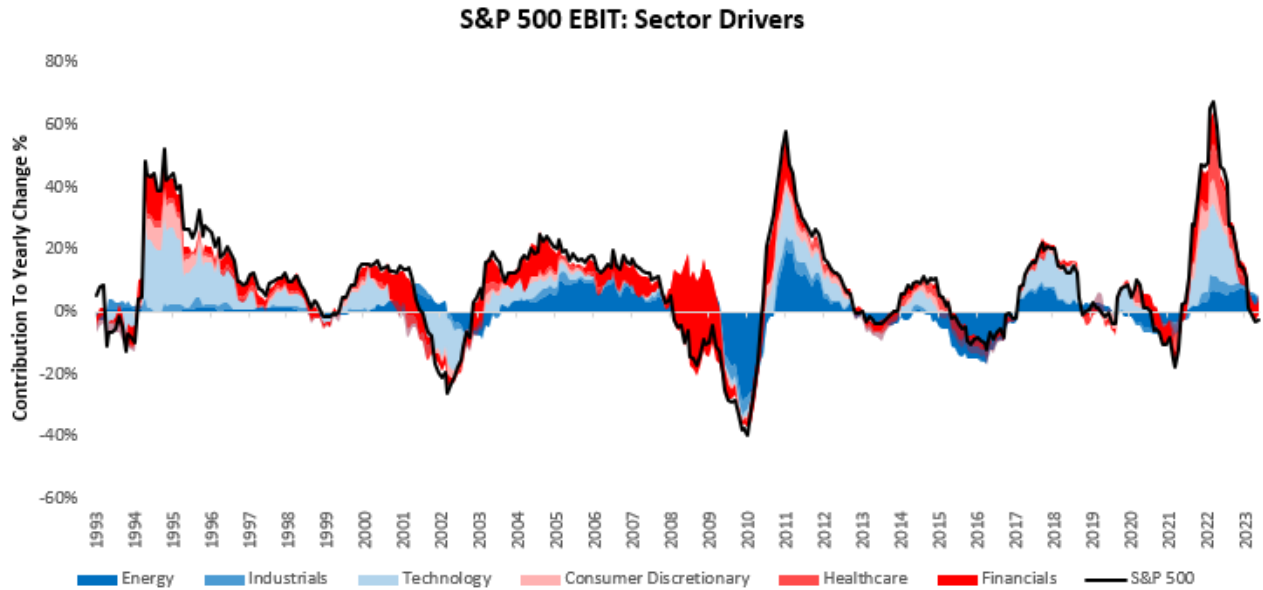


Contemporaneously, household liabilities have grown by 8.02%, driven by a 6.41% rise in mortgages and a 1.6% increase in consumer credit. We show our estimates for both below, along with the official data:



Overall, the household net worth position remains under modest pressure. If we continue to see sustained weakness in housing, equities, and durable goods, savings will likely rise further.

This sustained weakness in net worth may elicit a widening in the breadth of the weakness in real personal consumption. However, to have a meaningful contraction in consumption, we would need to see a meaningful weakness in employment. The fate of this employment will be determined by business activity. For now, pressures have emerged on business activities, but they have not moved as quickly as anticipated. Below, we show how corporate profits are in contraction:



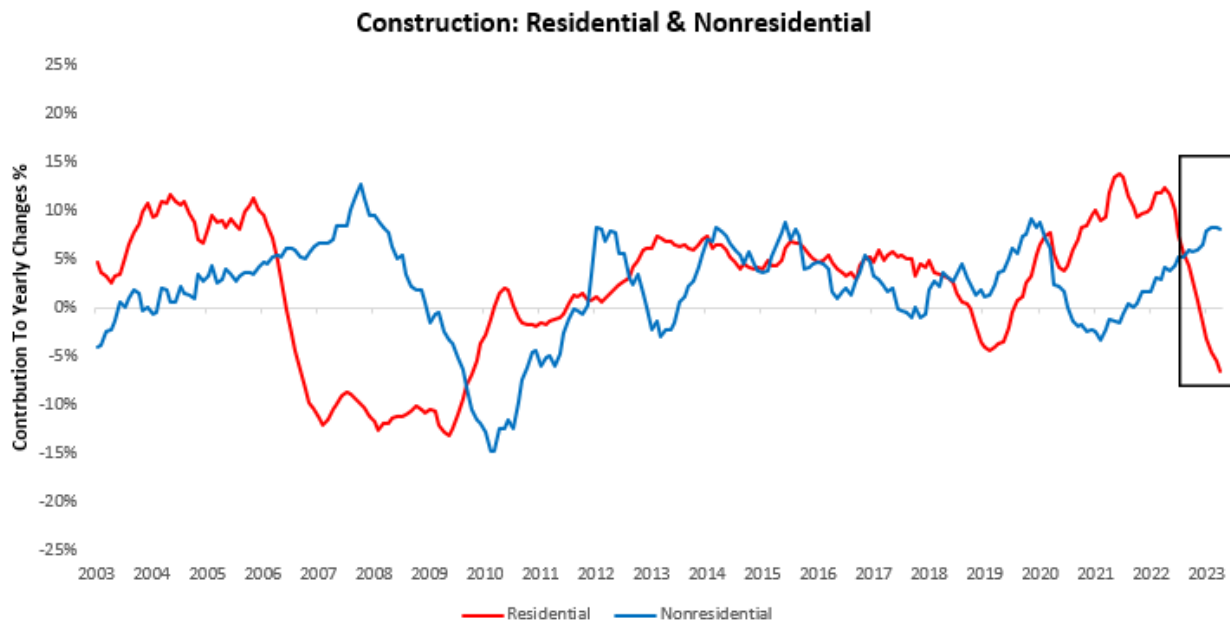
This contractionary condition for profits is likely to persist based on our tracking of topline revenue conditions. As these profit pressures become more acute, the likelihood of labor contraction increases. The balance between the business topline falling and costs rising will determine whether we go into contraction now. A big source of business topline is investment in the economy by businesses and households. In the next section, we look through a key area of investment: real estate.

Real Estate Investment: Weak Residential, Resilient Nonresidential

A sizable portion of GDP growth is determined by how much economic entities invest in the real economy. A large chunk of this investment is the investment of businesses and households into purchasing and constructing real estate. Real estate is considered an important barometer of both economic health & the business cycle. It is an important variable, as while it does not account for a huge part of total GDP, it has significant variability, which can meaningfully impact GDP growth. Additionally, the real estate sector, both in its production and consumption- is highly leveraged. This leverage makes real estate highly sensitive to interest rate conditions. Higher interest rates impact demand (higher mortgage rates) and supply (higher capital costs). As such, this sector is one of the first to weaken as interest rates rise. It's important to recognize that this is now because of any information edge in the sector; it is simply a higher sensitivity to interest rates for a given level of nominal income.

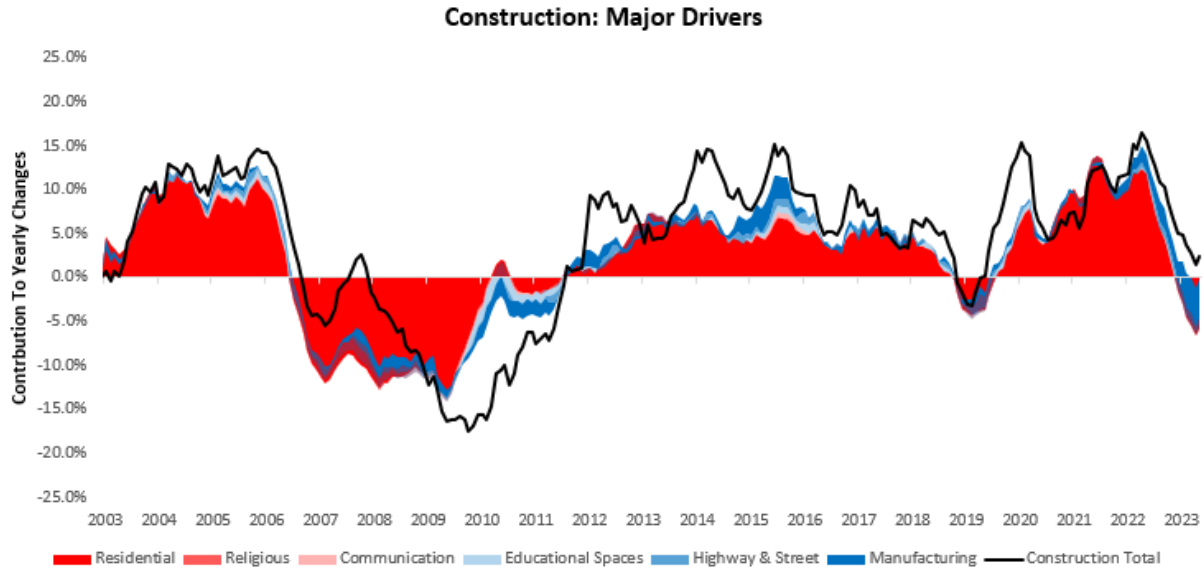
Given that this sector is sensitive to interest rates., and is decently volatile, any initial weakness dampens GDP growth. If the real estate activity suffers, it eventually has a high enough variance to cause GDP to contract. This dynamic creates the illusory lead time it has on economic cycles. The initial stages of real estate contraction are insufficient to contract GDP; however, as they get substantial, they are the marginal contributor to a contraction. The important thing to recognize is not that they lead but rather contribute to a contraction.

This brings us to the current context. Construction spending in GDP has two components, residential and nonresidential, which paint opposing pictures. The residential market (which is larger) has contracted significantly, while the nonresidential market has expanded over the last year. We show this divergence in nominal spending below:



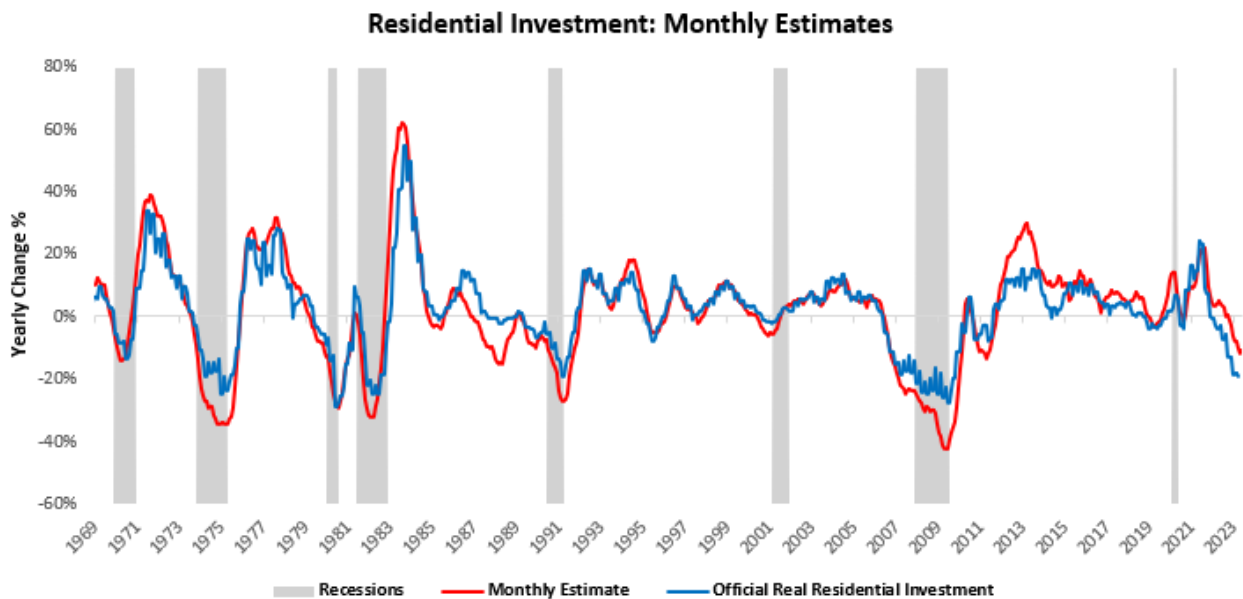
Above, we show the evolution of construction spending over the last year, which rose by 2.37%. This nominal increase was driven by an -5.92% decrease in residential spending and an 8.29% rise in nonresidential spending. For further context, we drill down further to show the top 3 drivers of strength

in blue (Manufacturing, Highway & Street, and Educational Spaces) and the top 3 drivers of weakness in red (Residential, Religious, and Communication) over the last year:



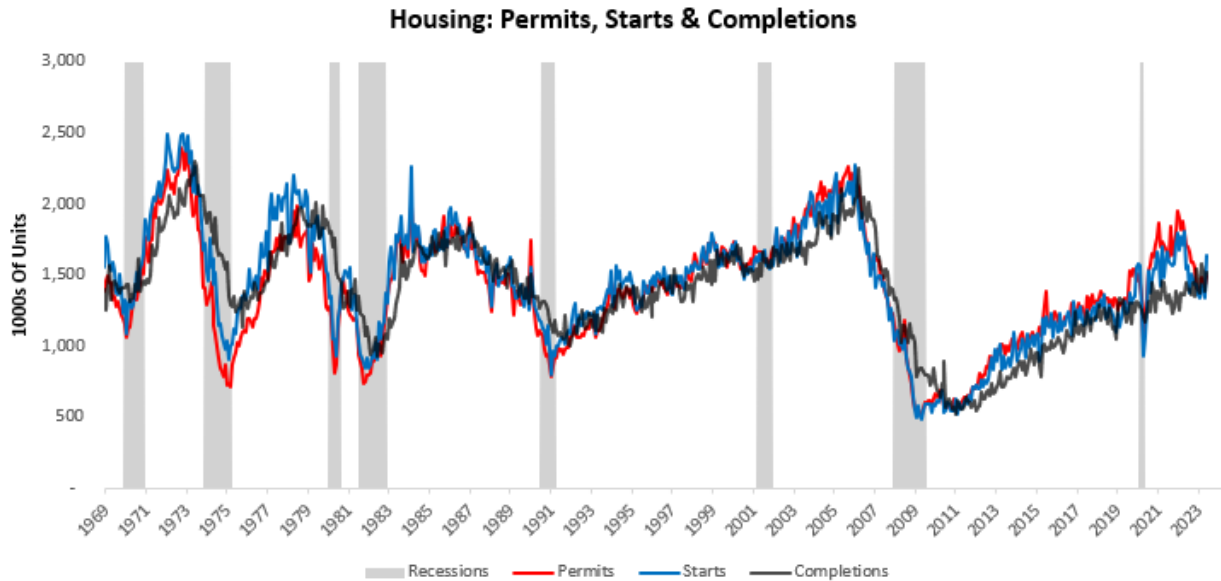
As we can see above, it is clear that residential construction is driving a seat as always and has been declining. On the other hand, manufacturing construction (which is nonresidential) has been an offset to this weakness. To better understand the dynamics at play, we dive into each individually.

Residential spending remains significantly weak, and macroeconomic headwinds remain in place, but we have seen modest sequential improvements. Our latest monthly estimate place real residential investment at -10.57% versus one year ago.

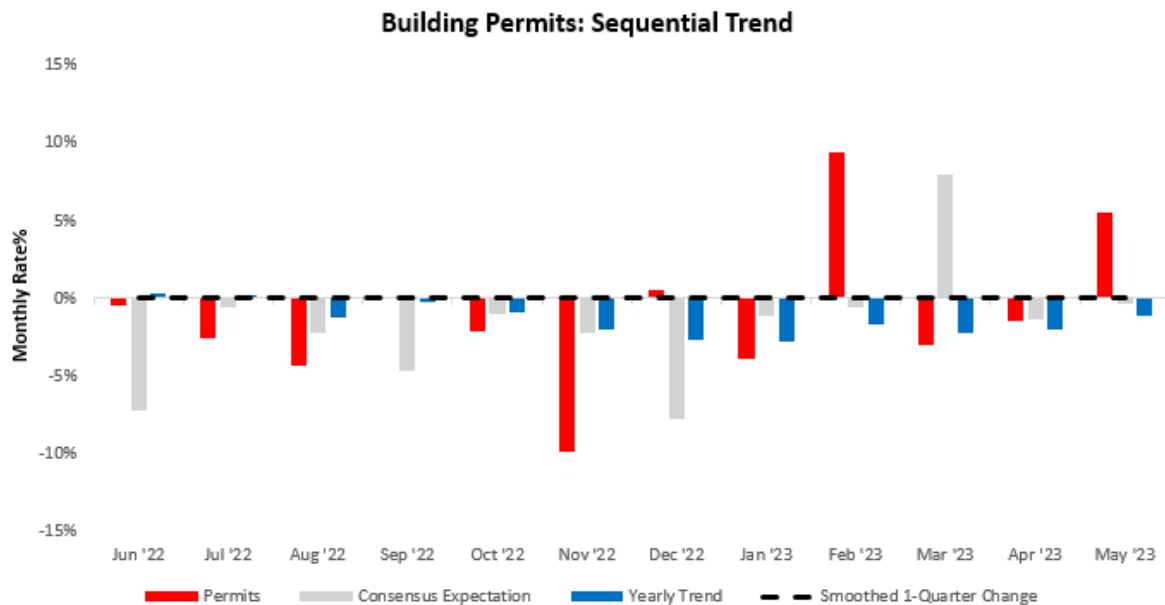


At the same time, our most recent estimates of one-quarter of real residential investment improved by 0.27%, an annualized growth rate of 1.2%.

This data is insufficient to bring residential investment out of contraction in the near term. To better understand the nuances of the drivers of residential investment, we dig into the latest data for housing permits, start, and completions. The latest data for May showed housing permits increased by 5.58%, housing starts increased by 21.72%, and housing completions increased by 9.52%. Below, we show the current levels for the same:

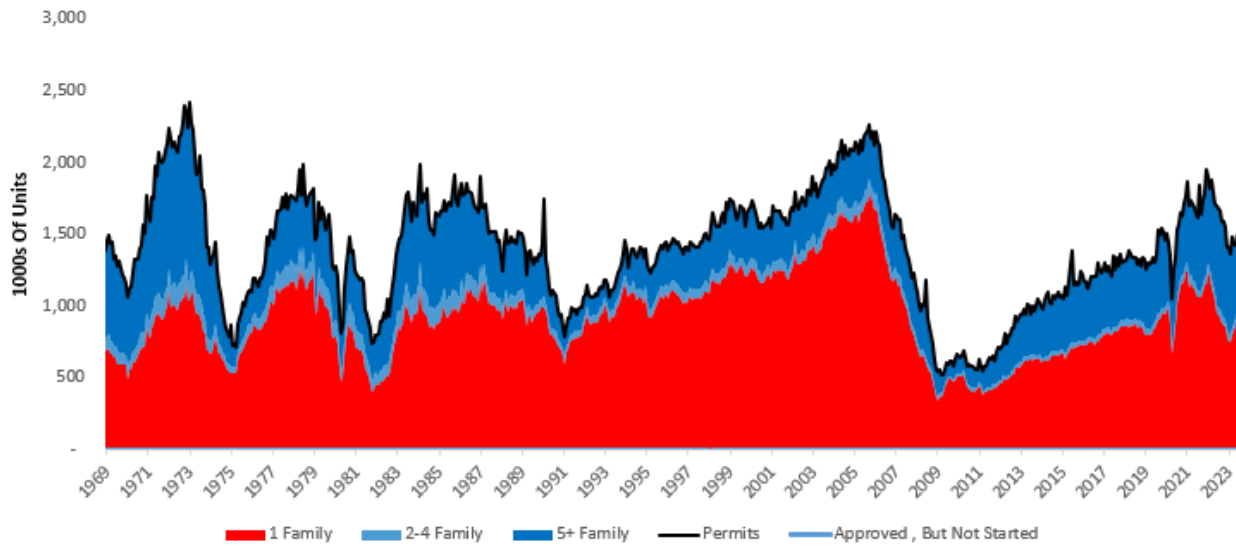


Housing permits increased by 5.58%, surprising consensus expectations of -0.35%. Below, we show the sequential evolution of the data, along with the smoothed one-quarter change in the most recent data. We provide the smoothed version as monthly housing data contain significant noise.



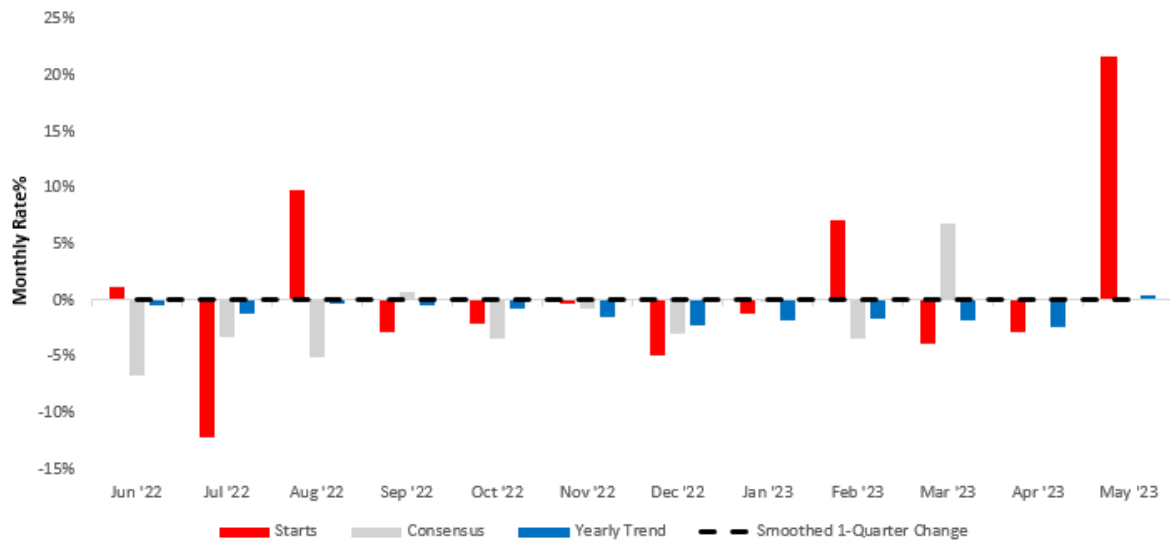
For further context, we zoom out to show the contributions from single-family homes (-131), two-family homes (-6), and multi-family homes (-75) to the fall (-212) in total permits over the last year:

Building Permits: Composition



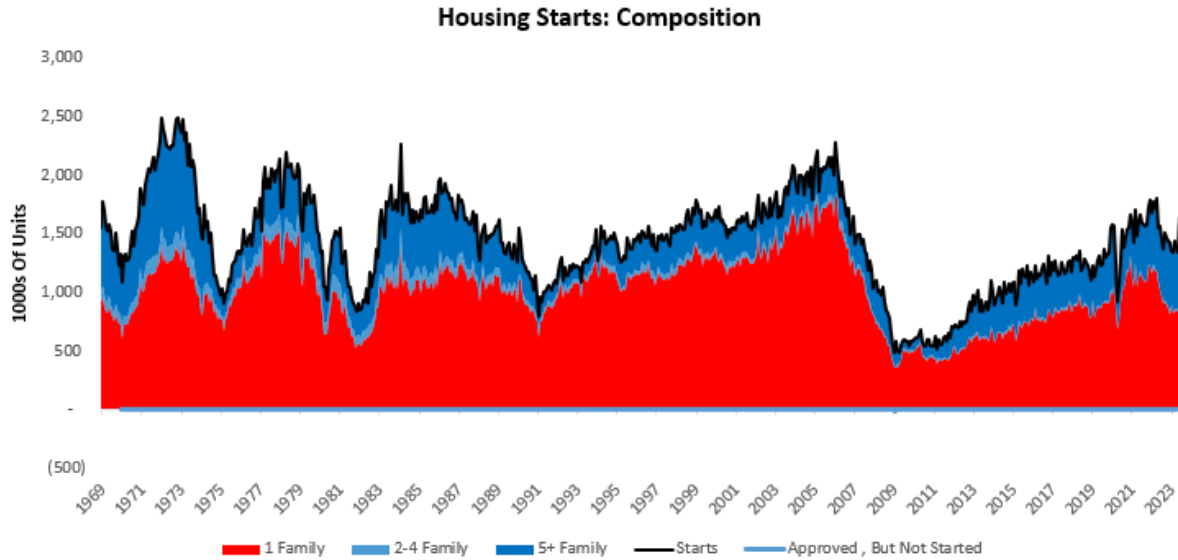
Consistent with the permits data, housing starts data showed starts increased by 21.72%, surprising consensus expectations of 0%. Below, we offer the sequential evolution of the data, along with the smoothed one-quarter change in the most recent data. We provide the smoothed version again here to filter some of the noise:

Housing Starts: Sequential Trend

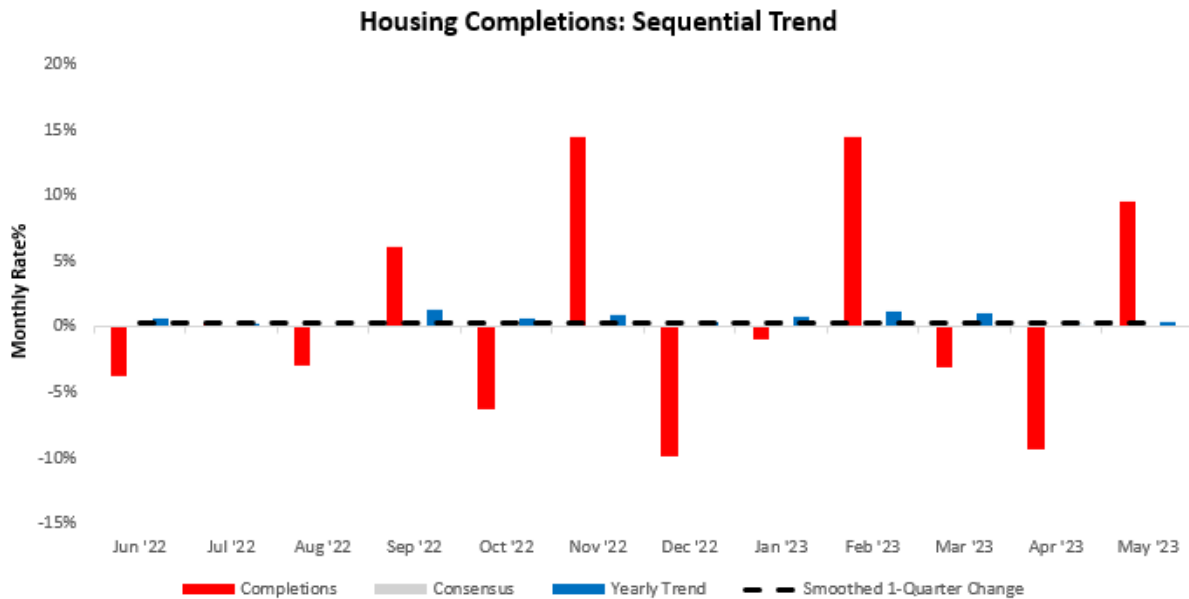


As we can see above, the smoothed rate for housing starts is almost entirely flat. This feature is important, as headlines regarding the data can often be taken out of context. Looking at a single monthly print will likely create a lot of noise in data assessment.

To illustrate the bigger picture, we show the contributions from single-family homes (156), two-family homes (-19), and multi-family homes (177) to the rise (88) in total starts over the last year:

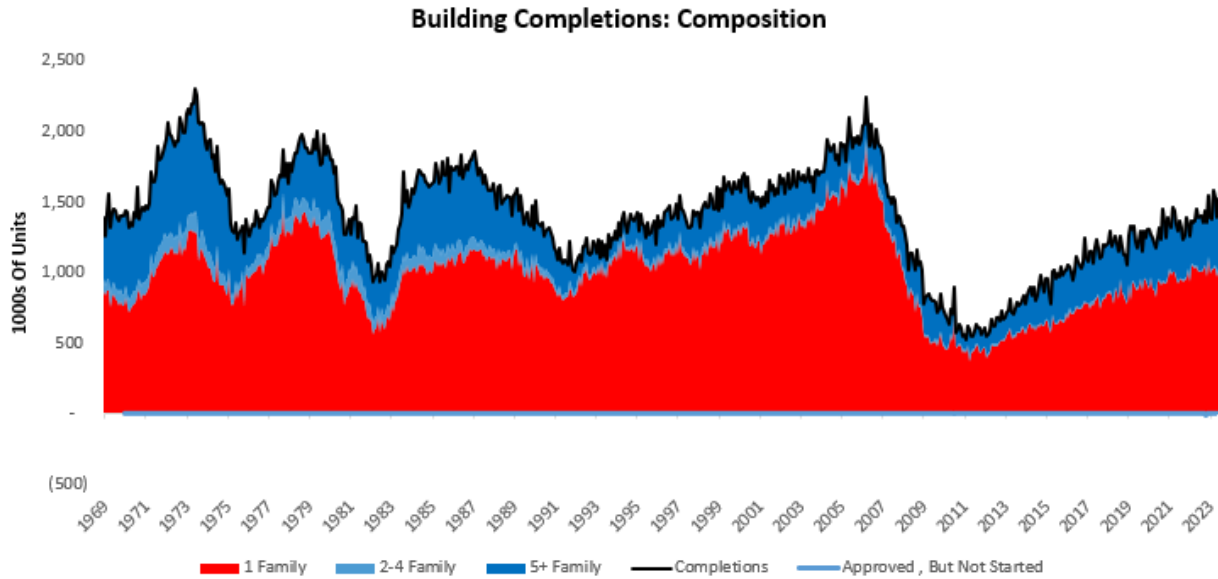


We now turn to housing completions data, which showed completions increase by 9.52%. Below, we show the sequential evolution of the data, along with the smoothed one-quarter change in the most recent data. We provide the smoothed version as monthly housing data contain significant noise:

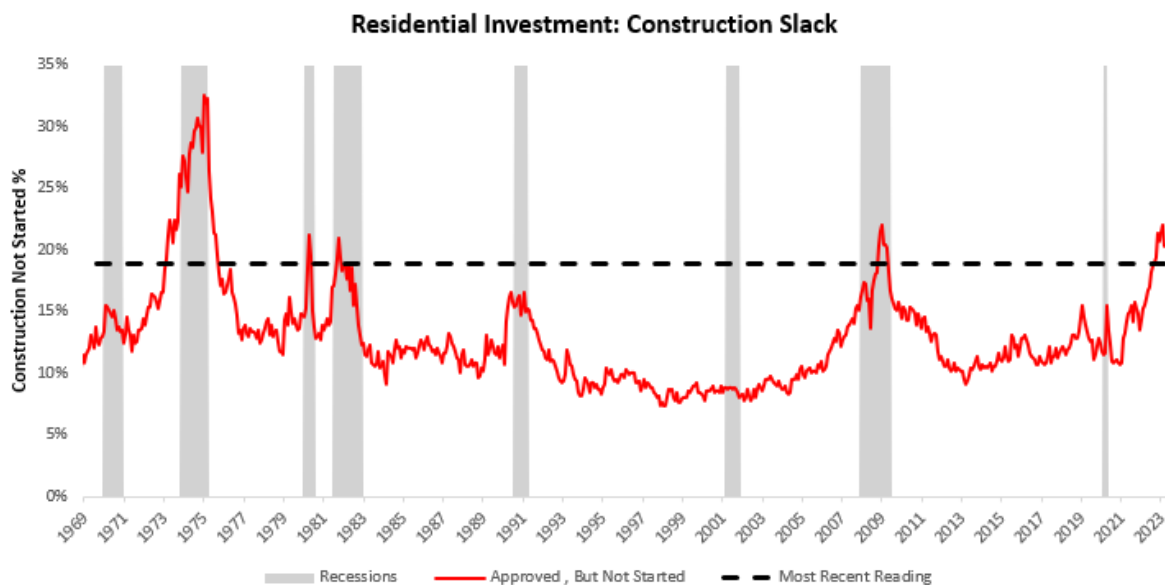


Once again, we note how little the one-quarter trend has changed, despite the substantial increase in completions for the most recent monthly data.

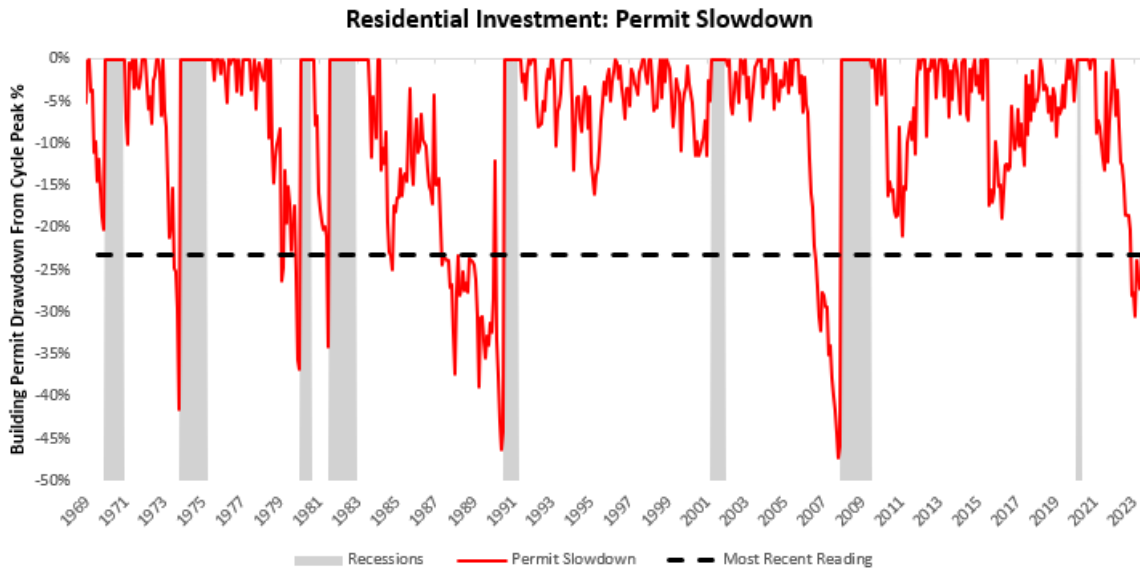
In the final part of our sequential analysis, we show the contributions from single-family homes (38), two-family homes (11), and multi-family homes (95) to the rise (72) in total completions over the last year:



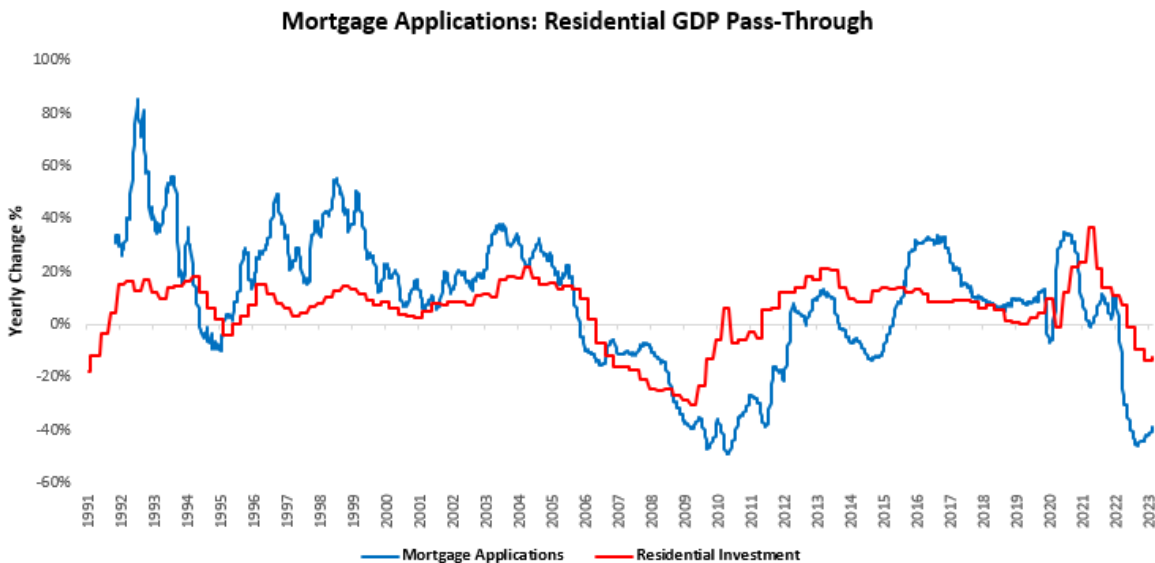
Now that we have examined the sequential evolution of the data, we now zoom out to offer a bigger picture view. To better understand where we are in the housing cycle, we examine how many construction projects have been approved but not yet started. According to the latest data, 19% of projects are yet to begin construction. Looking through history, housing-led recessions usually begin when this measure of construction slack is around 15% suggesting that we are within the ballpark of a recession.



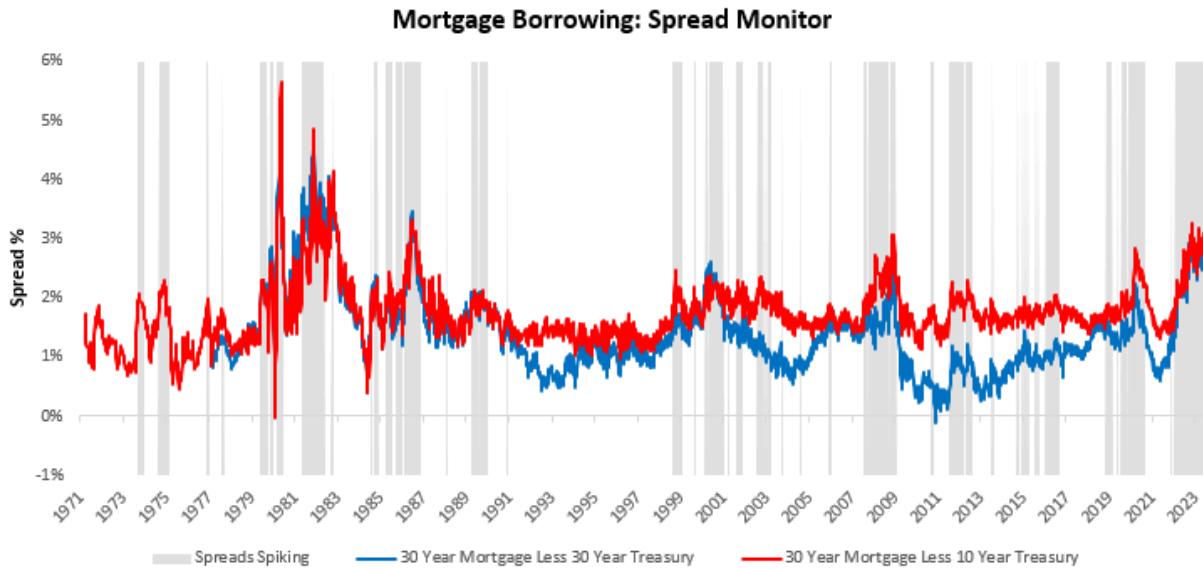
It is important to remember that this measure typically indicates weakening construction activity relative to the expected home demand. However, the increased number of projects approved but not started can also be due to building backlogs. To sidestep this limitation, we conclude by examining another measure of housing weakness, i.e., permit slowdowns- which measures how much building permits have fallen from their cycle highs.



We conclude by examining another measure of housing weakness, i.e., permit slowdowns- which measures how much building permits have fallen from their cycle highs. Large drops in permits bode ill for the broader residential investment complex & GDP. The latest data shows that building permits are off their cycle highs by -35%. Housing-led recessions usually begin when this measure of cyclical weakness is around -35%, suggesting that we are within the ballpark of a recession. Overall, housing remains in a cyclical contraction, with some sequential improvements. We see this in timely mortgage application data:

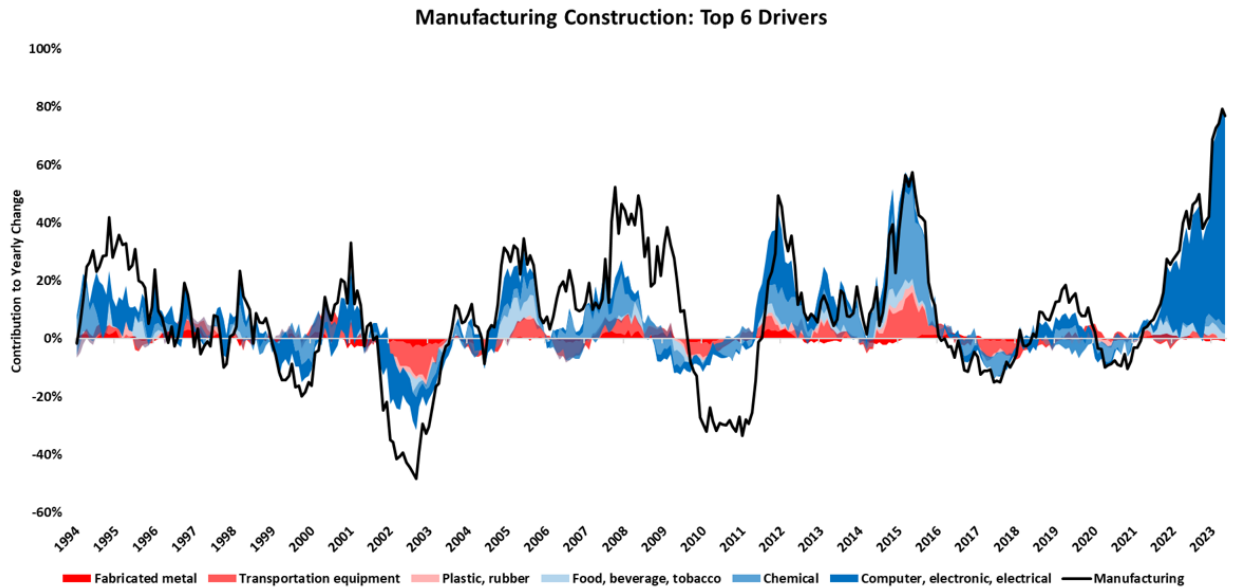


The latest data shows a sequential improvement in our weekly tracking of mortgage applications. Our latest estimate suggests downward pressure on mortgage borrowing and residential investment. Our latest estimates show mortgage applications down by -38.97% compared to one year prior. To assess the borrowing conditions driving these changes in mortgage applications, we turn to mortgage spreads. According to our measures, mortgage spreads are rising:

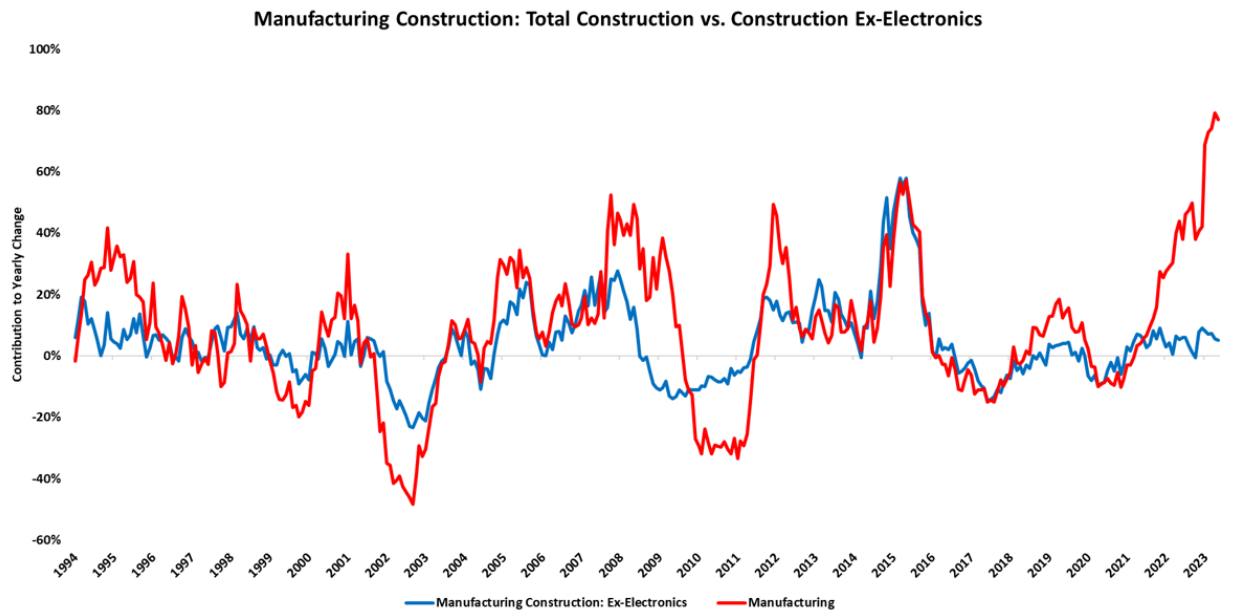


Spreads have begun to rise since February 2022. Since then, the 30-year mortgage yield relative to 10-year Treasury yields has increased by 1.13%. This rise in mortgage rates, alongside a decelerating income environment, continues to be a headwind for mortgage activity. Mortgage borrowing is the primary driver of household home purchases, which will continue to weigh on residential investment. We now turn to nonresidential investment.

Nonresidential construction has been driven by investment by manufacturers of electronics and computer manufacturers to expand their production capacity of semiconductors. This investment in capacity can continue due to supply constraints from COVID-19 and due to policy incentives. However, the current pace construction growth is unlikely to be sustained, suggest less support for nonresidential construction ahead. Below, we show that almost all of the growth in manufacturing construction is coming from construction in electronics manufacturing facilities:

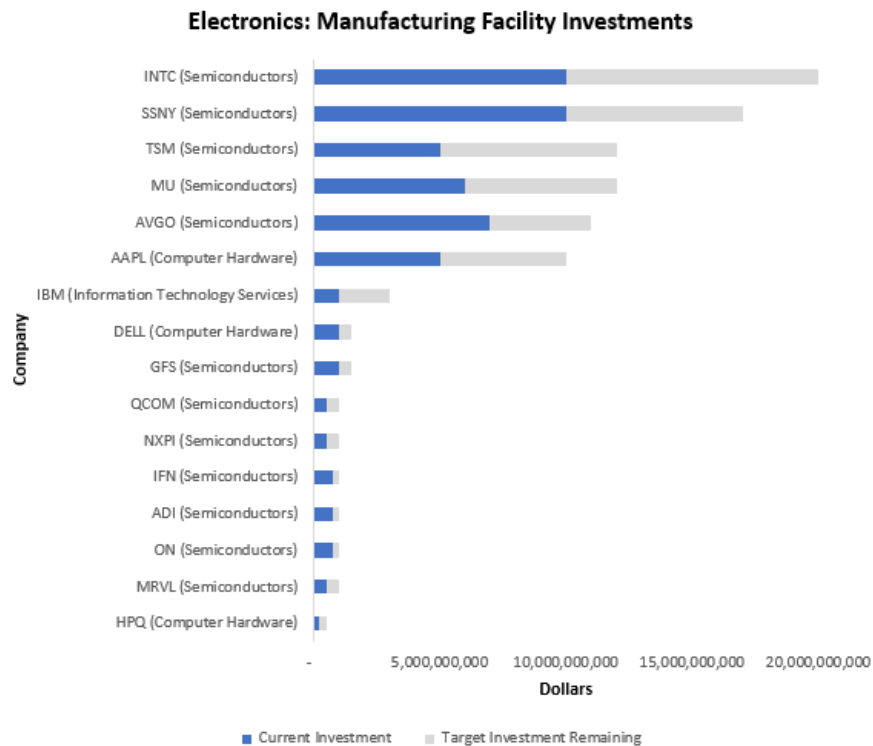


For further clarity, we show how manufacturing construction looks, excluding electronics manufacturing construction:



As we can see, without electronics, manufacturing construction is significantly weaker. In fact, this number would be well into contraction on a real basis. Nonetheless, aggregate manufacturing

construction remains resilient due to this outsized contribution. By triangulation, we have been able to estimate the sources of this electronics spending: investment by large firms in electronic and semiconductor production facilities. We show the largest contributors to this trend below:



The overwhelming majority of this is semiconductor facility related. This strength is partly policy-related and related to global semiconductor shortages in a post-pandemic world. Regardless of the cause, manufacturing construction is up 77% versus one year prior, with 72% coming from electronics facilities. Looking through the companies fueling these investments, we see that a large portion of this investment comes from large, cash-rich companies. The largest 16 players have cash balances over \$650 billion (10% of assets, 1.3% of GDP). These companies are high cash holding companies relative to the broader economy, both in percentage cash and nominal dollar cash holdings. This high cash position makes these investments far more insensitive to interest rate hikes. This insensitivity to interest rates has created a high resilience in the investment in constructing electronic manufacturing facilities. This means that from a current GDP perspective, total construction activity has been stronger than it would have been without these cash-rich firms. Unless the broader manufacturing environment improves dramatically, semiconductor investment seems unlikely to continue to drive construction growth. This tailwind for manufacturing construction will likely turn into a headwind by early next year, weighing on nonresidential spending.

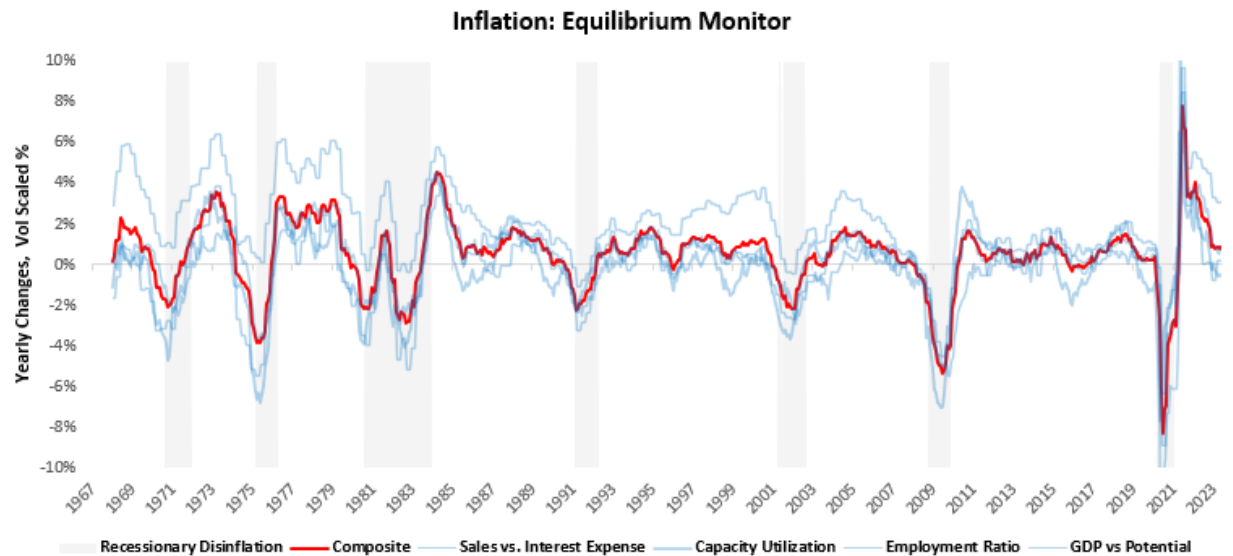
Putting together the picture from our assessment of residential and nonresidential spending, it is likely that total construction spending remains weak. Residential spending faces the headwinds of higher mortgage rates and lower nominal incomes, and nonresidential spending can remain resilient but at a lower growth rate. The likely path is for real estate activity to remain weak, especially if monetary policy remains tight, and given the inflation environment, we expect it to remain so. We will address this in the next section.

Inflation: Disequilibrium Persists

In previous editions of Month In Macro, we have shared our bottom-up tracking and forecasting of inflation subcomponents. Today, we offer our to-down views. The question before markets today is whether inflation will return to 2%. The kind of disinflation required to bring this about is consistent with a recessionary disinflation. We show what periods of recessionary disinflation have looked like:

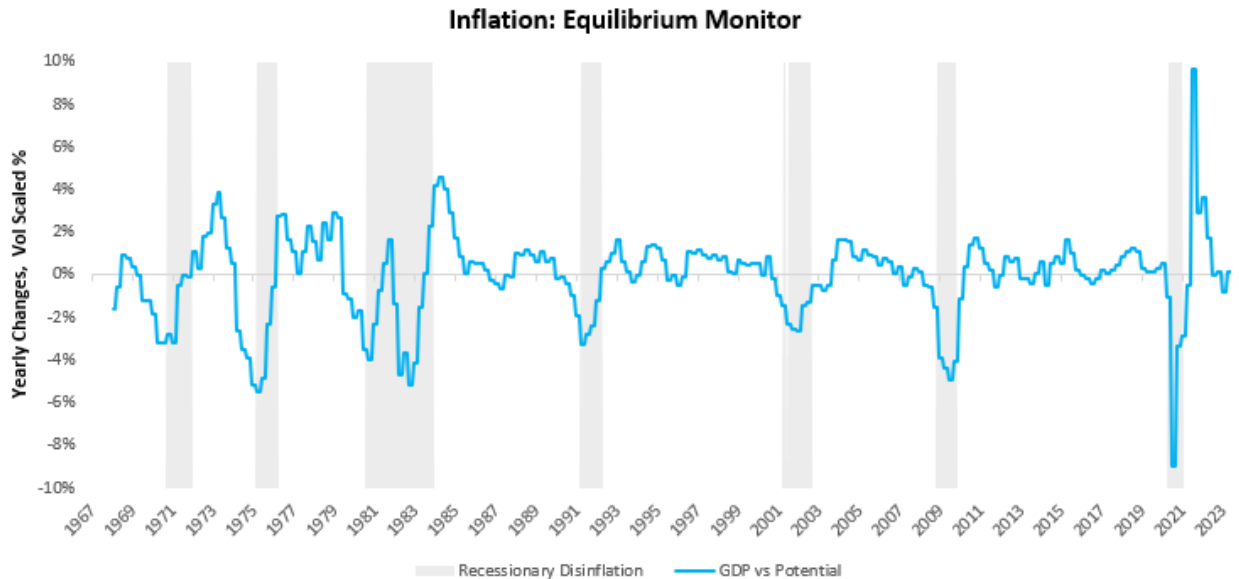


To understand whether this is possible, we evaluate how far inflation dynamics are from equilibrium conditions. At its core, inflation is the balance between spending relative to output capacity. As spending ramps up relative to the economy's output capacity, we experience higher inflation. The wider the gap between the economy's potential and its current pace, the further inflation conditions are from equilibrium. We can use a variety of measures to determine how far these conditions are from equilibrium.:

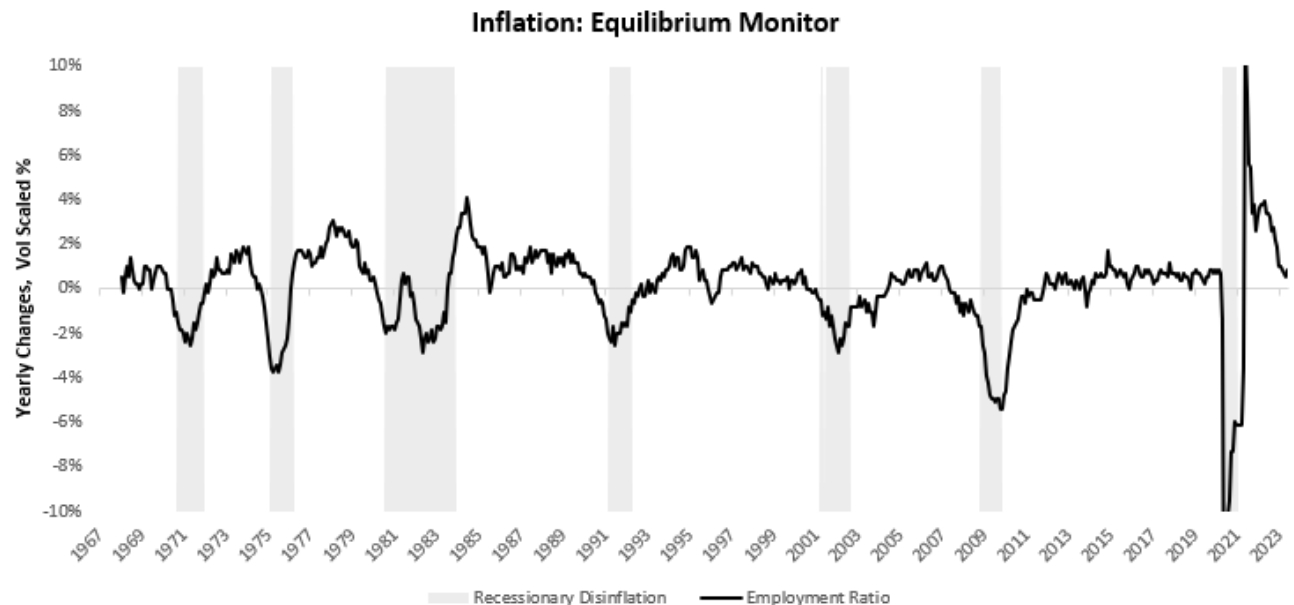


Above, we show our inflation equilibrium monitor, which aggregates measures indicative of the degree of inflationary pressures. The higher the readings in red, the more inflationary pressures; the lower the readings, the more deflationary. As we can see, every instance of recessionary disinflation has come when the composite of these measures has contracted. Today, these measures suggest we remain a ways off from durable disinflation. We go through the components.

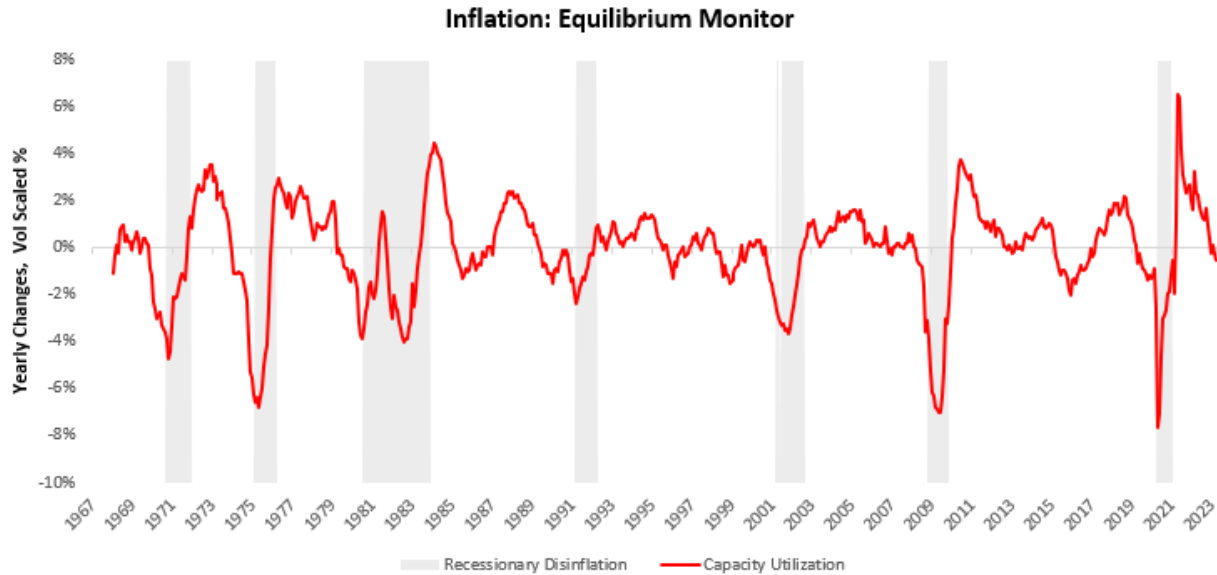
Nominal GDP has deteriorated to look somewhat consistent with potential GDP; this is neutral for inflation. We show this below:



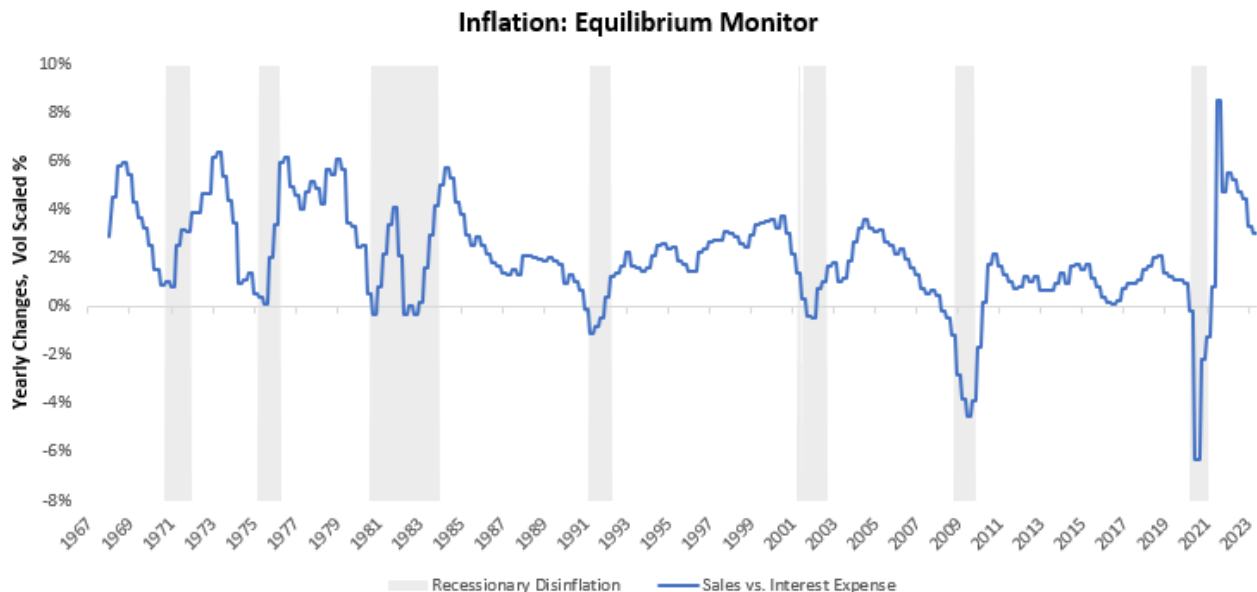
Next, we show how employment growth continues to outpace the growth of the labor force, which will continue to support wage inflation. This pressure has declined significantly but persists:



We now turn to industrial capacity utilization, which suggests the onset of disinflationary pressures:

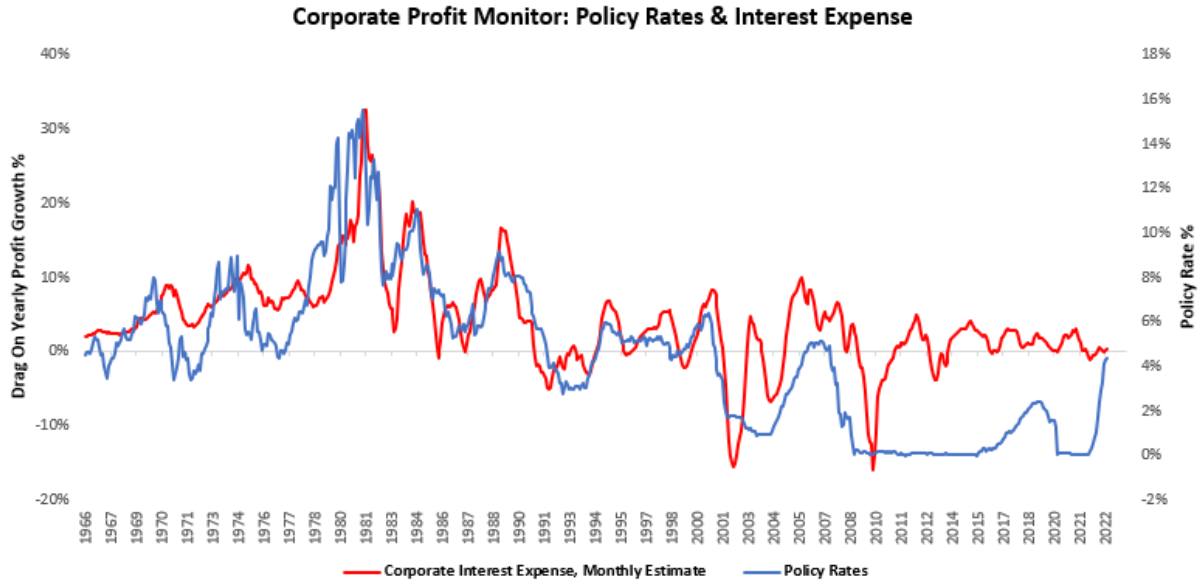


However, these disinflationary pressures will likely be limited to goods and not services. **Finally, we show the measure furthest from equilibrium, i.e., business sales relative to interest expense:**

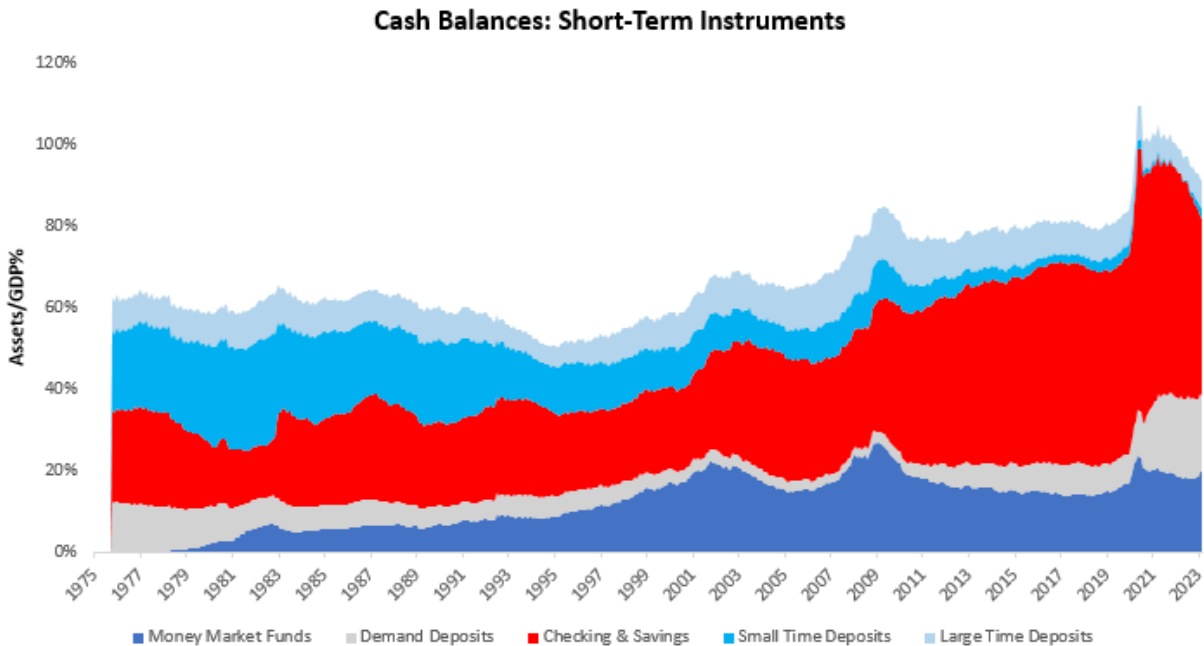


As we can see, sales continue to outpace interest expense by a historically wide margin. This gap between interest expense and topline sales is the most significant driver of current disequilibrium conditions. As revenues remain more than interest expense, debt service burdens continue to be met, with room for employee compensation and potentially a little profitability. This gap allows businesses to expand their leverage, investment, and spending relative to the existing output capacity of the economy. The reason this gap exists is not only because revenues are at extremely high levels but because net interest burdens have remained subdued. We explained further.

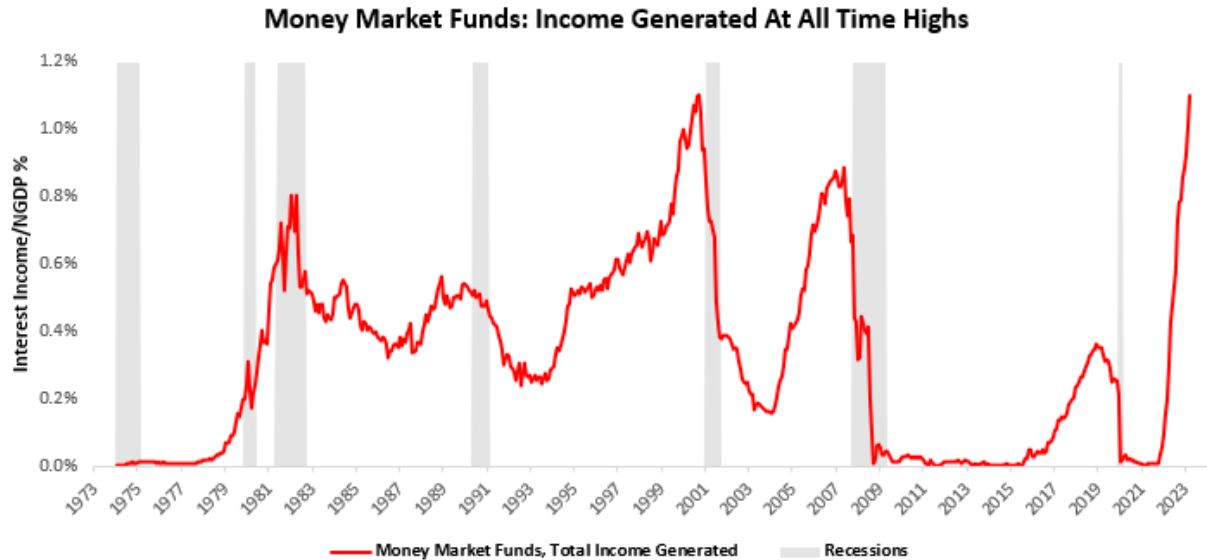
Net interest burdens are the effective interest rates that businesses/the private sector pay after accounting for the interest income they earn on assets, i.e., net interest burdens total interest expense paid less interest income earned on assets. We show how net interest burdens have typically been moved higher and dragged on profitability as the Fed hiked interest rates.



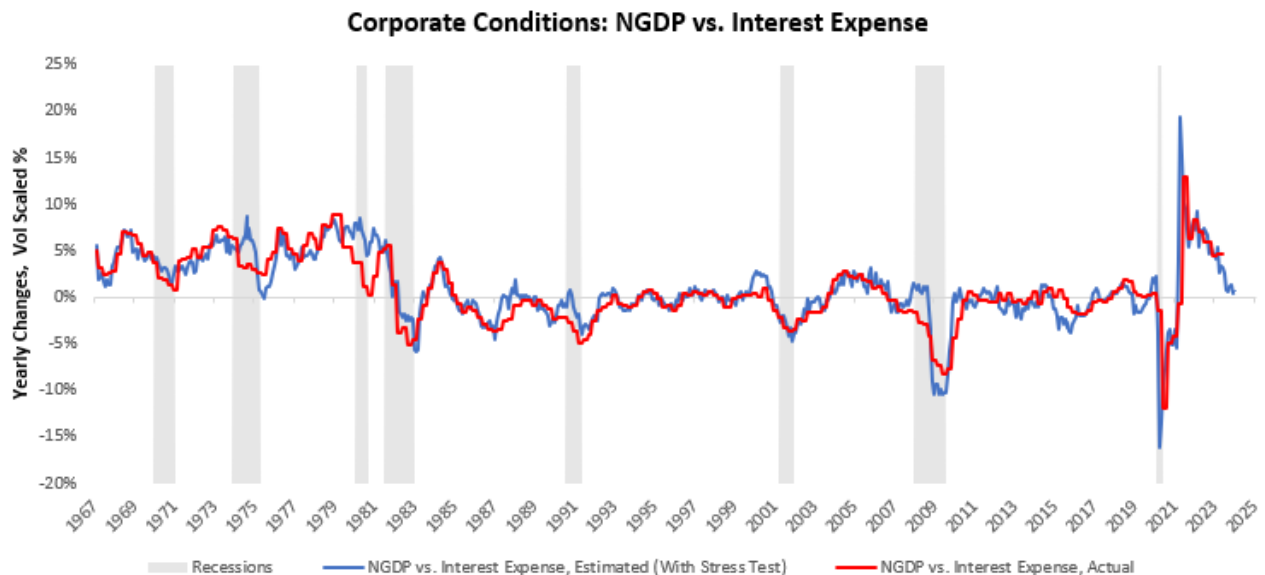
During a tightening cycle, the Fed raises interest rates to curtail borrowing. This increase in interest rates takes some time to filter to longer-dated borrowing as most debt is fixed-rate, and interest expense only rises for new borrowing. However, this increase in interest rates also raises interest income on short-term cash-like holdings nearly instantaneously. Therefore, the impact of tightening is a combination of the balance of short-term assets and long-term liabilities and the time it takes for the tightening to flow through to the liabilities. COVID-19 stimulus injected a tremendous amount of cash into the system:



This recomposition has created a significant income benefit for asset holders, while debt service costs have yet to increase meaningfully. Below, we show one avenue of this increased income: money market funds. Money market funds are essentially more than 1% of nominal GDP as interest income for the private sector:



This increase in income on assets is a significant offset to any monetary tightening thus far. Peering around the corner to see what the future may hold, we stress-test how much nominal GDP can fall relative to net interest expense, even if interest expense has one of the largest increases in recorded history over the next six months. We show this below:



As we see above, nominal spending remains in excess of net interest expense. We note that this stress test assumes recessionary real GDP data and a meteoric rise in net interest expense. This dynamic is the largest support to inflationary conditions. Barring a substantial decline in other equilibrium measures, we will likely remain in an elevated inflation environment.

Liquidity: Highly Procyclical Exposure

So far, we have discussed how we remain on a slow path to GDP contraction with resilient inflation. Yet, equity markets have performed extremely well. While the direction of price improvement has come from better-than-expected growth conditions, we attribute the degree of strength to changes in the liquidity environment. Before diving into our liquidity condition tracking, we think providing some conceptual background is important.

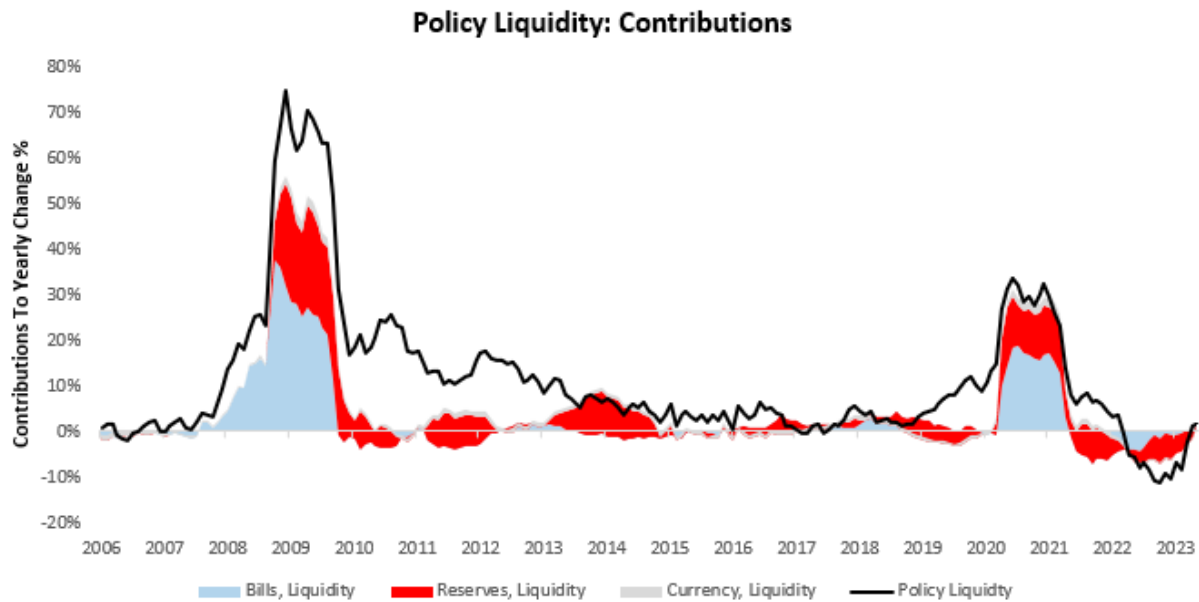
In our definition, liquidity is the flow of cash and cash like assets that potentiate spending in both the financial & real economy. Importantly, liquidity is a measure of balance sheet potential. As macro investors, we care about whether market participants will buy or sell assets. Ideally, we could position ahead of these moves to profit from them. Take the example of buying an asset before its bid. For an asset to rise in value, it needs to have buyers. These buyers need to have cash to buy this asset. To obtain this cash, the buyer can go to one of three sources: savings (income excess of spending), borrowing, or they can sell some assets. These are the sources of funds for asset demand for a given asset. What is important to recognize is that savings and liabilities spend just like cash, i.e., \$100 of income in excess consumption spends just like \$100 of cash. The same goes for liabilities; a \$100 loan from a bank is worth \$100. The sale of assets, however, is not the same as savings and liabilities due to the risk of loss on the assets. If you wish to sell your house to buy equities, there's a risk that you may not get the par value of your house, i.e., there is a risk.

Furthermore, you cannot sell your house instantaneously, i.e., it is not liquid. However, a savings deposit could easily be tapped for cash to buy equities. Thus, the more assets we can instantaneously sell at close par, the more "liquid" the asset side of the balance sheet. Importantly, changes in the asset side of the balance sheet must equal changes in the liability side. What's important to recognize here is that the more risky the asset side, the more potential for the liability side to fall dramatically. Therefore, when we measure liquidity, we need also to measure the quality of the total sources & uses of funds. We can do this from the asset or liability side. Therefore, every asset exists somewhere on the liquidity spectrum. This hierarchy is defined by who the issuer of the asset is. The government has the most liquid assets since they control the currency, then financial institutions with a license to create money-like assets, etc. Thus, every asset has some degree of liquidity; just some are much more liquid than others.

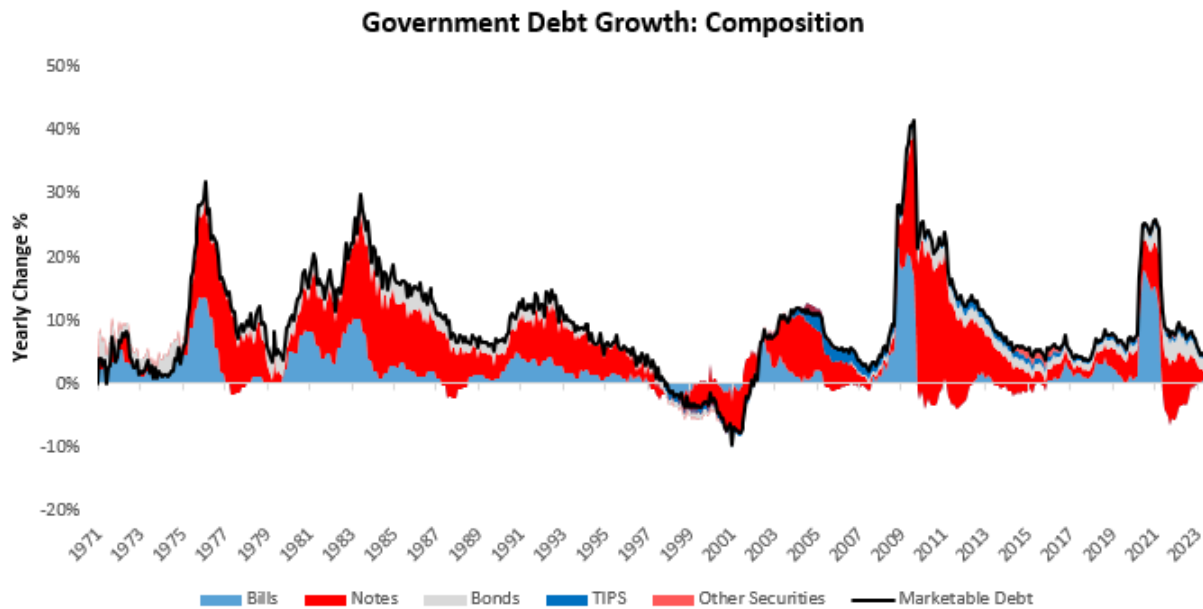
Calculating how much liquidity is in the system is complex but is an important complement to growth and inflation. While growth and inflation determine the relative distribution of asset returns, liquidity potentiates the size of the moves. Practically, there are two major types of liquidity: policy liquidity and private liquidity. The joint actions of the Fed & Treasury create policy liquidity. This is done by adjusting the amount of government assets outstanding by changing the maturity distribution of these assets & by changing the interest rate on these assets. More liabilities, more short-dated assets, and lower interest rates reduce risk and enhance liquidity, and vice versa.

Private sector liquidity follows the same rules regarding issuance, interest, and duration but also introduces a dimension of credit risk. Any private sector entity can create private sector liquidity. The important distinction between private sector and public sector liquidity is that it is highly procyclical and includes credit risk, i.e., it largely reflects nominal income, spending, and private borrowing dynamics. This type of liquidity differs from public liquidity, which has decidedly taken a counter-cyclical role.

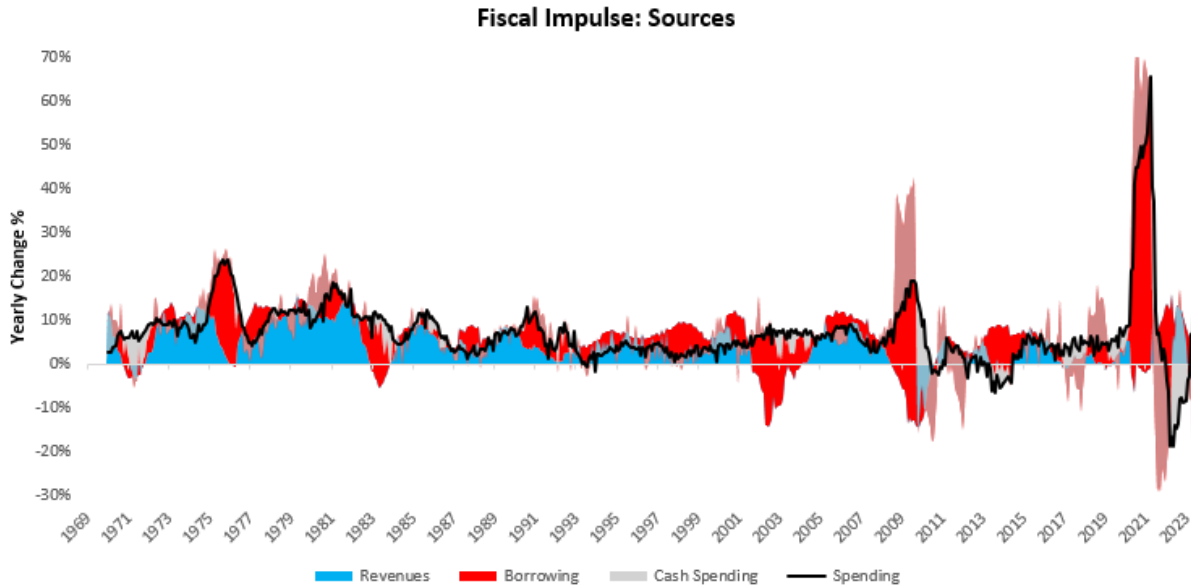
Our assessment of liquidity conditions suggests that liquidity conditions have improved, driven primarily by private-sector improvements and neutral public-sector liquidity. This private sector-led liquidity growth creates significant procyclical exposure to nominal GDP conditions. This dynamic creates significant reflexive potential to the downside for equities if and when nominal activity contracts. We begin by showing how our policy liquidity estimates have come out of contractionary territory. And highlight the contributions from the shortest durations of government assets, i.e., bills, reserves, and currency.



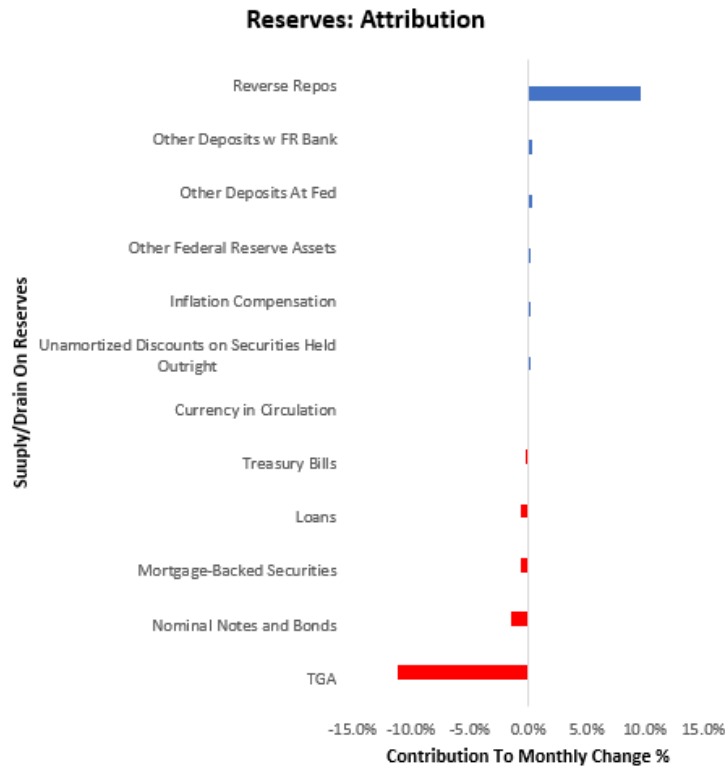
Keep in mind the above aggregates include calculations to net the impacts of the Fed and Treasury balance sheet, along with other adjustment factors. We isolate impacts coming from the Fed and Treasury, respectively. We begin with the treasury to show that issuance has slowed:



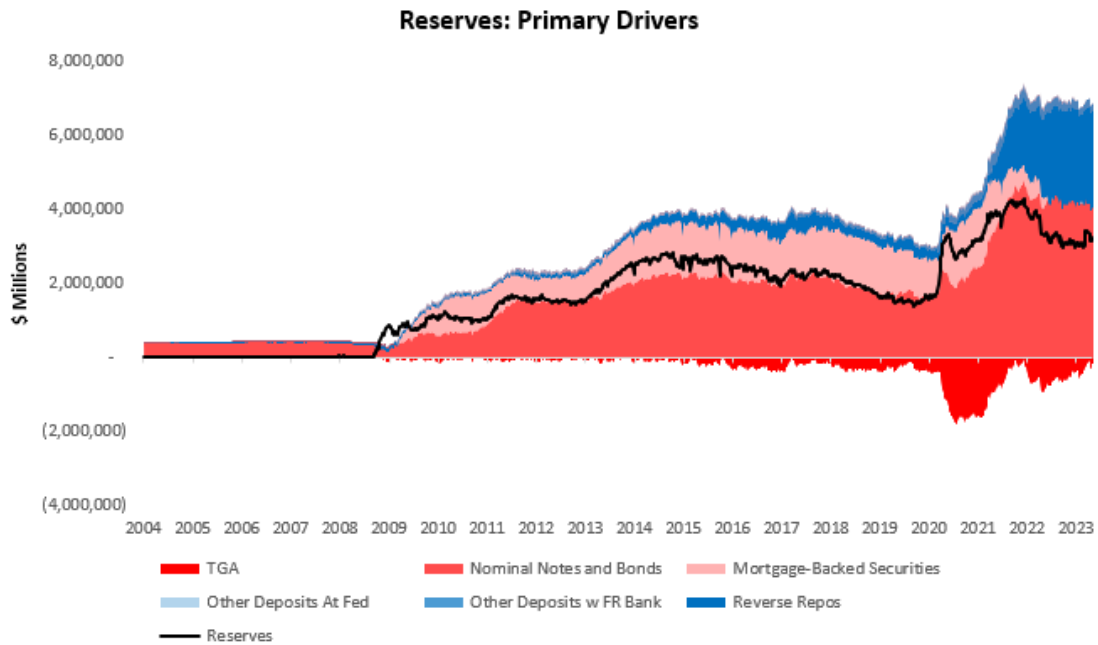
This has largely been a function of debt ceiling limitations, with the treasury spending down its cash reserves to facilitate fiscal spending into the economy. We show this fiscal impulse below:



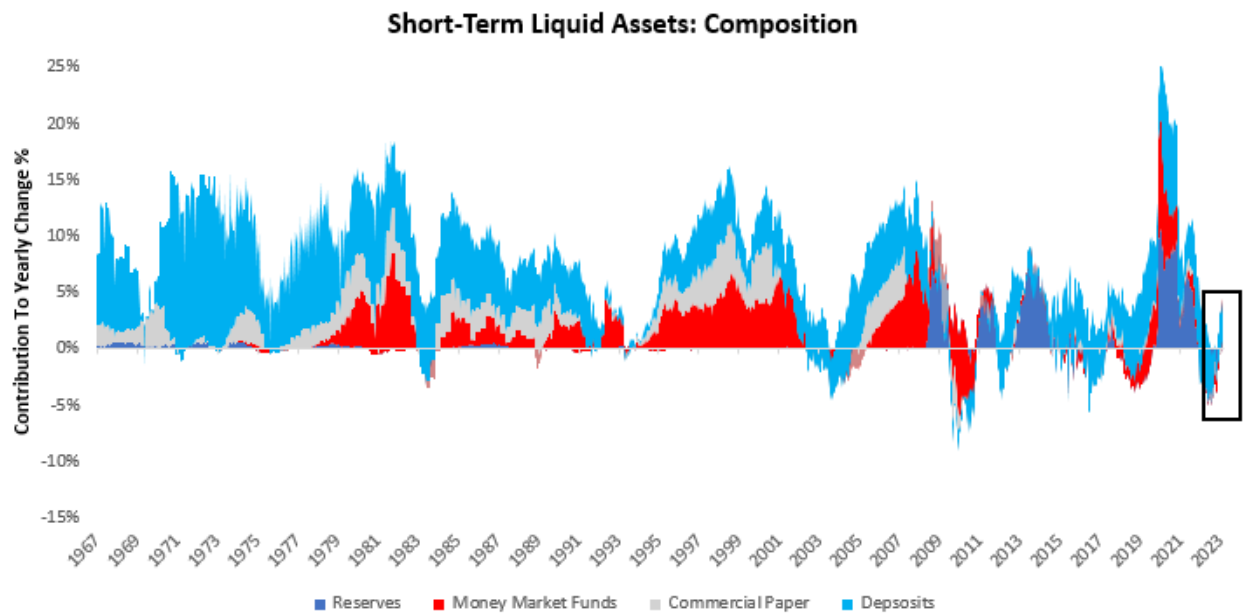
This decline in treasury cash balances held at the Fed is now being reversed, with the government raising cash via bills issuance, which is a drain on reserve balances. However, this drain was somewhat offset by the decline in reverse repurchase uptake at the Fed. We show this below:



The combination of these factors created a dynamic where reserve balances at the Fed have declined over the last month but have remained somewhat flat over the last quarter. We show this below, along with the primary drivers of these changes:

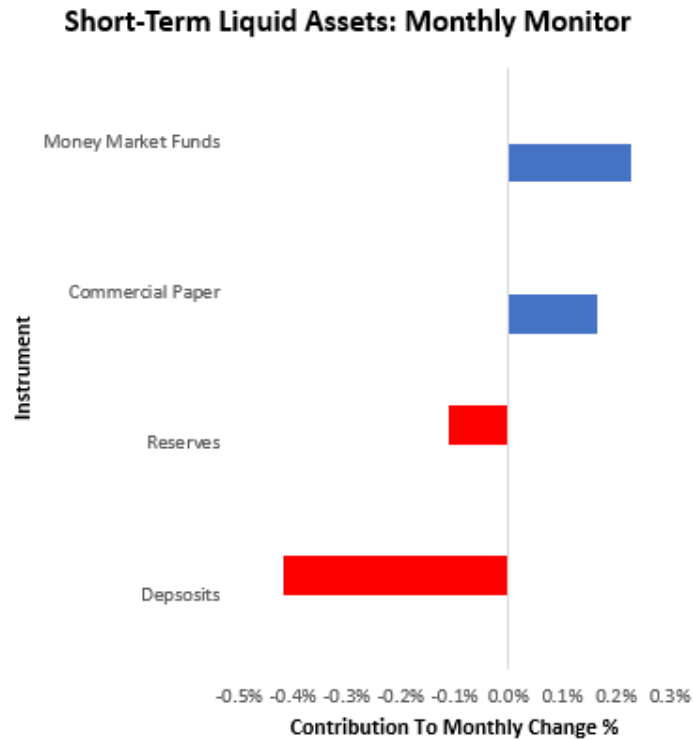


These government dynamics, along with private sector dynamics, have created an environment where short-term liquid assets have increased over the last year. We show this below:

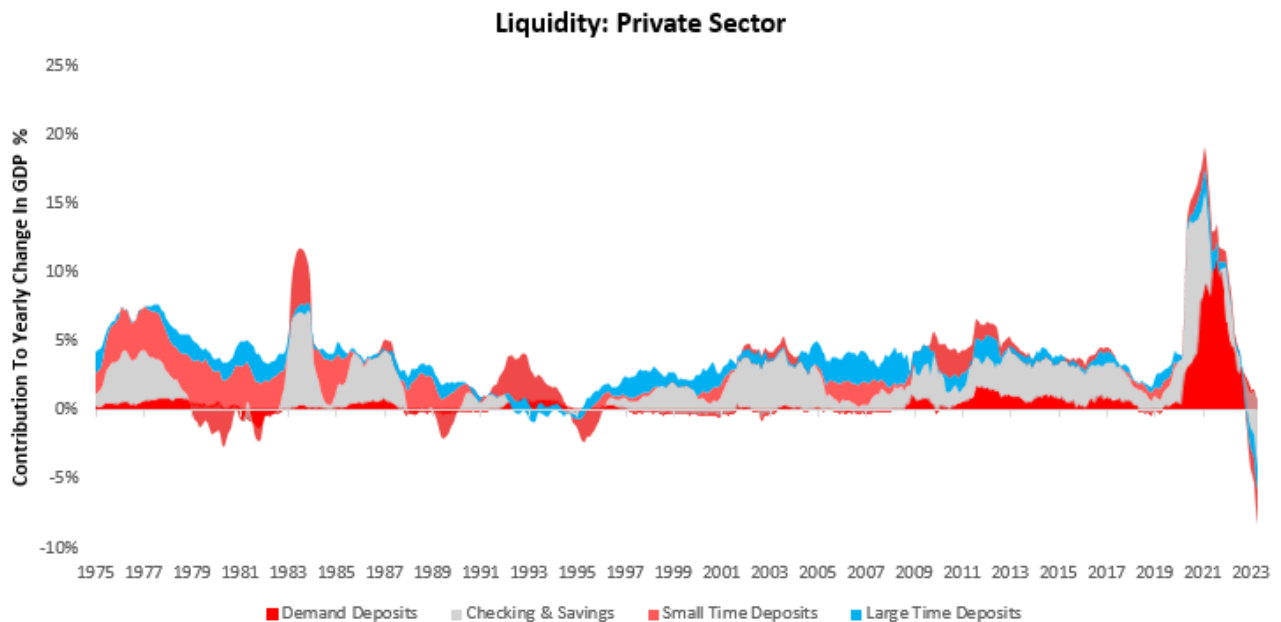


The above shows our tracking of short-term receptacles of private sector cash balances and includes calculations to account for balance sheet overlaps. As we can see, conditions have improved in recent months.

We now zoom into the most recent data to show the contributions to this complex:

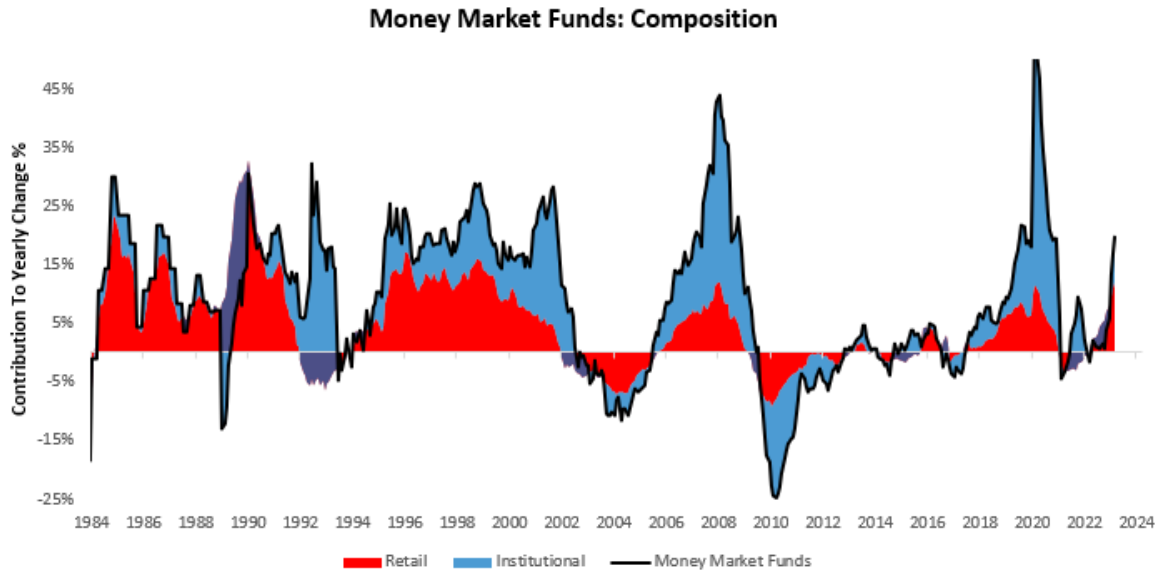


As previously shown, reserves have declined on the back of a government cash rebuild, and bank deposits have fallen significantly as well. Below, we show how bank deposits have largely been in contraction:

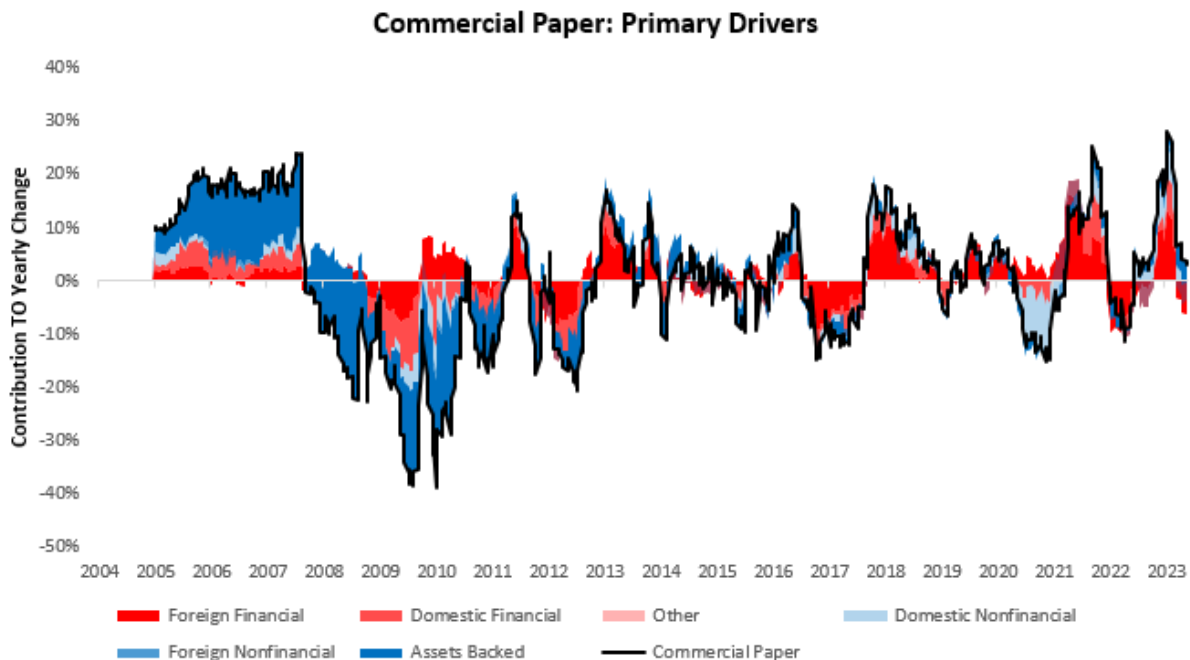


It is important to note that all of the deposits contraction we have seen above come from checking and savings accounts seeing declines.

A significant portion of this decline in checking and savings accounts is retail players rebalancing their cash balances to higher-yielding money market funds. We show this below:

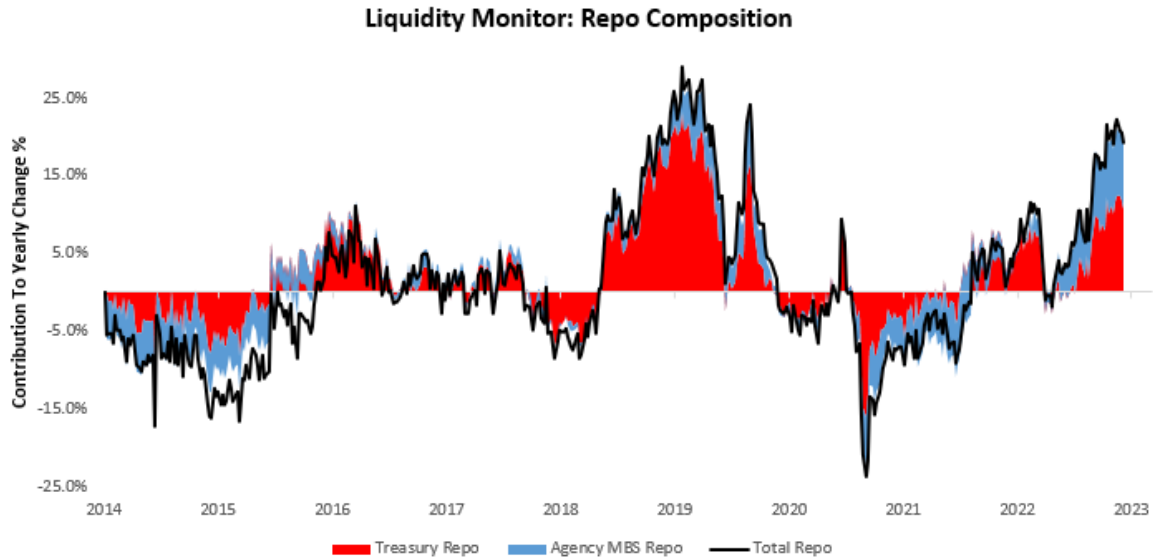


As we see above, the lion's share of money market fund inflows comes from retail deposits. This increase in money markets has come alongside a steady flow of commercial paper issuance, which surged last year:

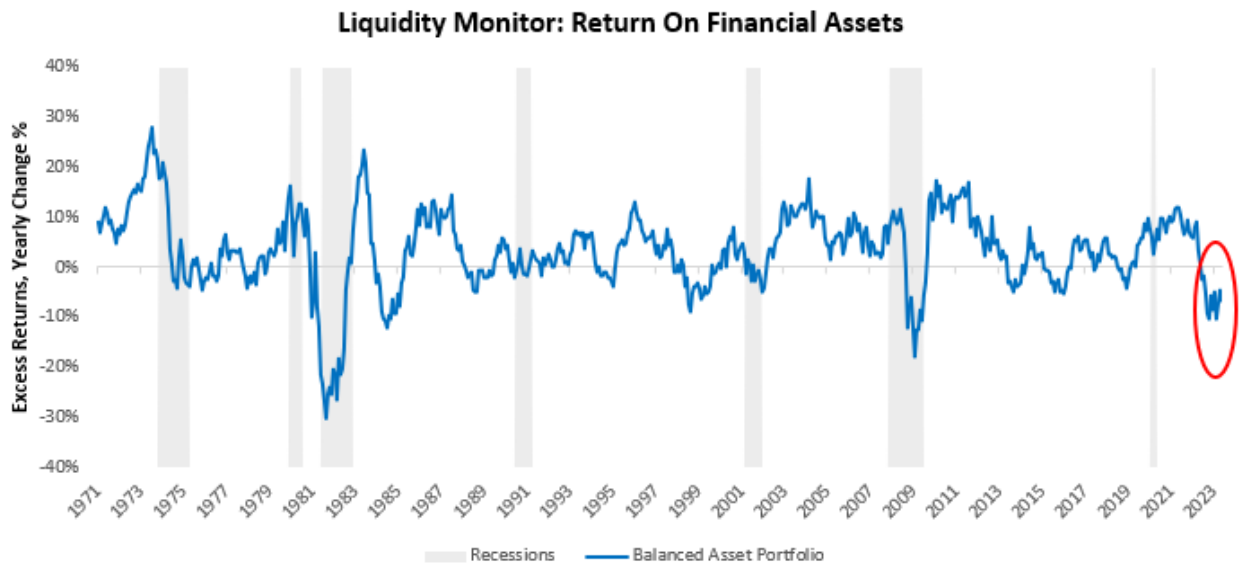


As we can see above, commercial paper issuance rose dramatically in the second half of 2022, and its growth rate has slowed since then but has not yet contracted. This area will be an important avenue for us to track corporate conditions, as companies may become reticent to have significant commercial paper issuance as nominal income falls and commercial paper rates stay elevated due to policy rates

staying high. With these major receptacles of short-term cash improving since last year, we have also seen overnight repo activity increase significantly. Repo activity is an important component of financial market liquidity, with repo lending facilitating a large share of leveraged finance. The primary financing for repo operations for primary dealers comes from treasury and agency mortgage-backed securities. Below, we show how repo activity has increased significantly this year, driven by increased Treasury repo:



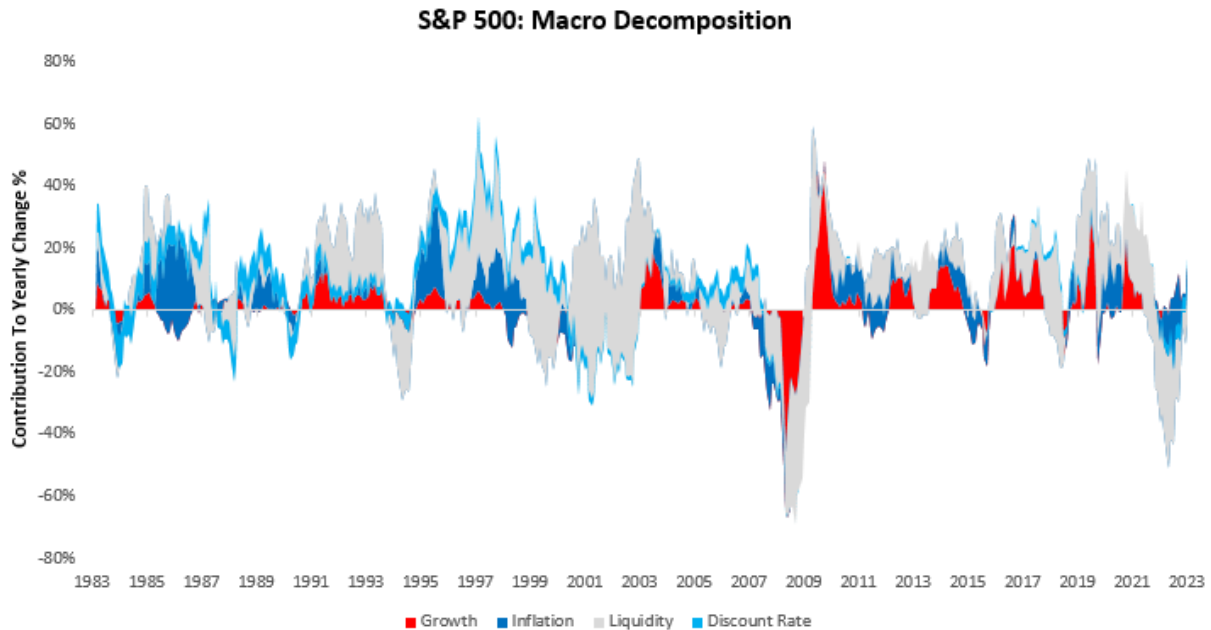
As we can see above, total repo activity has improved significantly. The combination of these factors has improved market liquidity conditions on the margin, reducing pressure on financial assets. Below, we show how a balanced mix of assets has bottomed temporarily. We show this below:



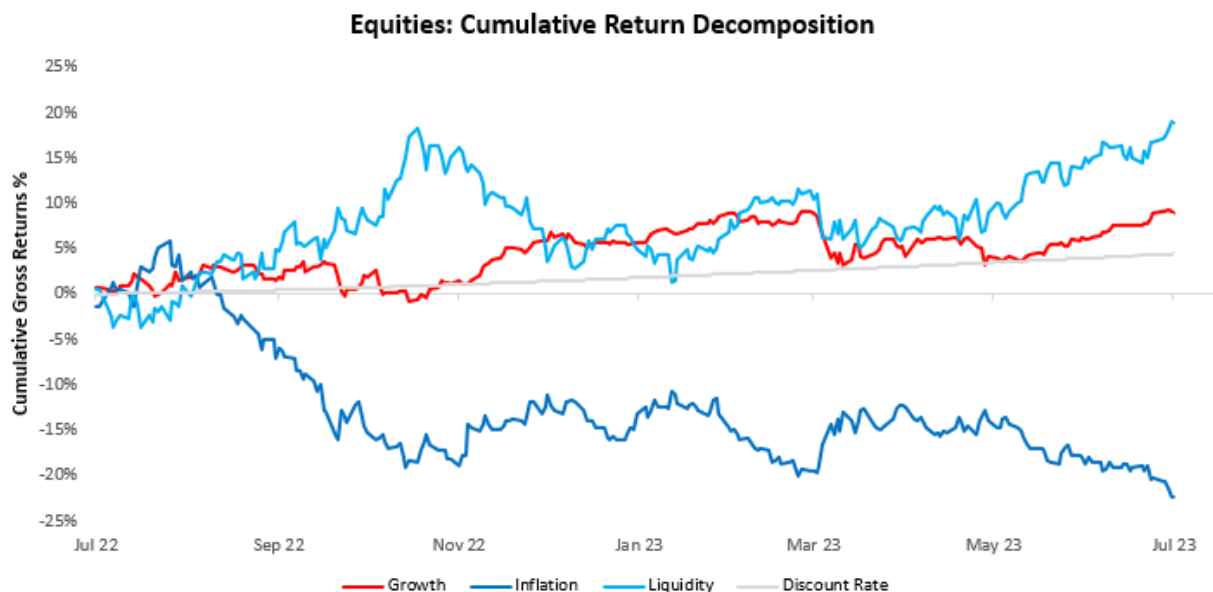
As we can see above, the returns on a balanced mix of assets (unbiased to growth or inflation) have stabilized at a low over the last few months. However, this liquidity improvement has been far from evenly distributed in markets. This brings us to our next section.

Stocks Look Better Than Bonds, And Bonds Look Weak

Our assessment of conditions suggests that bonds will remain under pressure as market expectations of interest rate cuts need to be reversed. As nominal activity remains resilient, this benefit can continue to flow to equities relative to bonds. However, when we look at equity gains, they primarily look like liquidity gains rather than growth-based gains. We discuss equities first. At a macroeconomic level, we can decompose equity returns into their constituent growth drivers, inflation, liquidity, and discount rates using our proprietary measures. Over the last year, equities have been primarily driven by liquidity, with inflation dragging on returns:

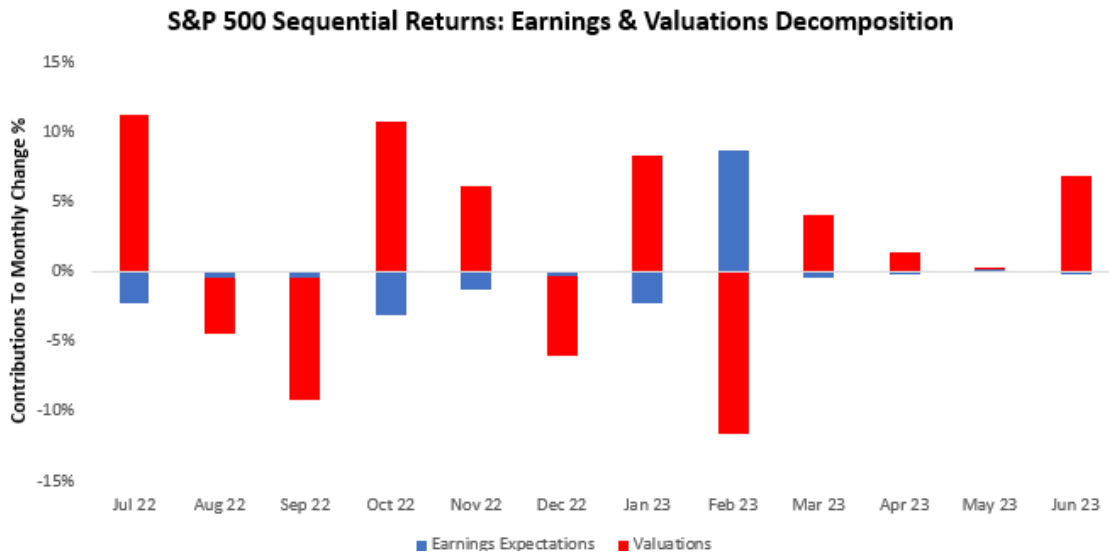


To further contextualize these returns, we show the cumulative returns attributable to our growth, inflation, liquidity, and discount rate factors.

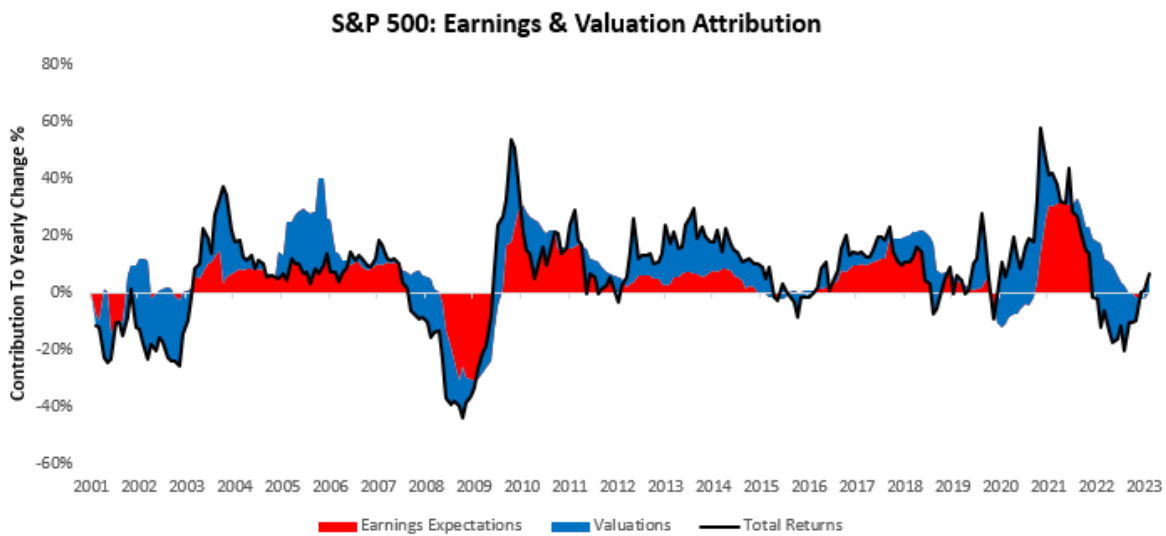


As shown above, growth, inflation, liquidity, and discount rates have contributed 2.8%, -5.57%, 4.37%, & 0.5%, respectively. We also offer some alternative perspectives next.

Alternative to the macroeconomic approach, we can decompose their total returns into those coming from earnings expectations and valuations changes. Over June, the S&P 500 rose 6.73%, primarily driven by valuations. Earnings expectations and valuations contributed -0.13% & 6.86% to the 6.73% rise in markets. Below, we show the sequential evolution of market prices, along with our decomposition of returns:

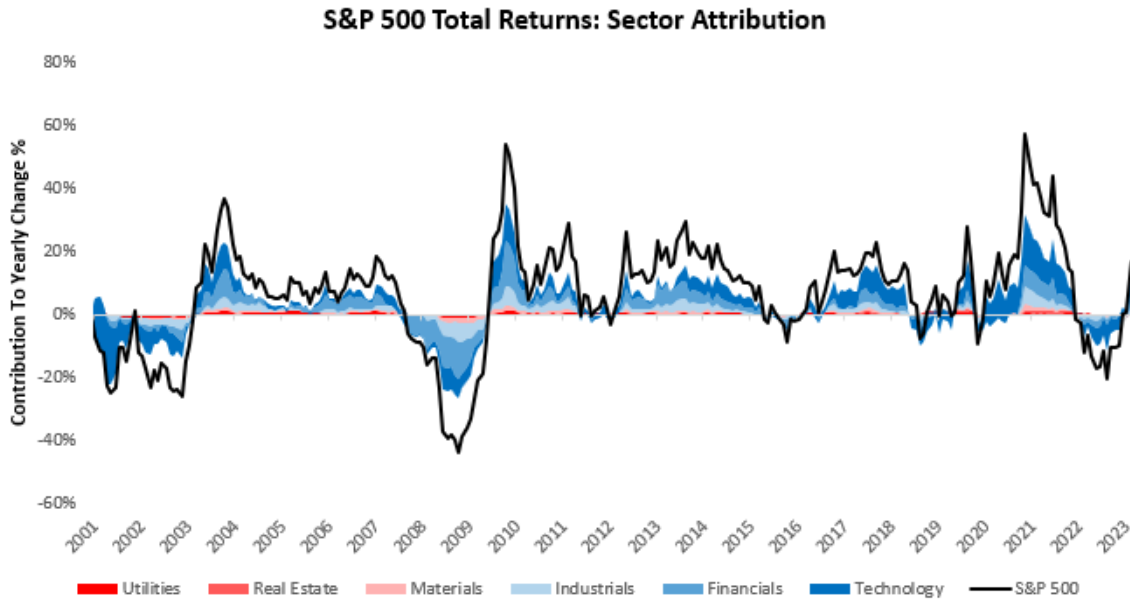


Over the last year, the S&P 500 has been dominantly driven by valuations, with total returns rising by 16.71%. We show cumulative returns on the S&P 500 over the last year, decomposed into earnings expectations (-2.07%) and valuations (-2.07%):

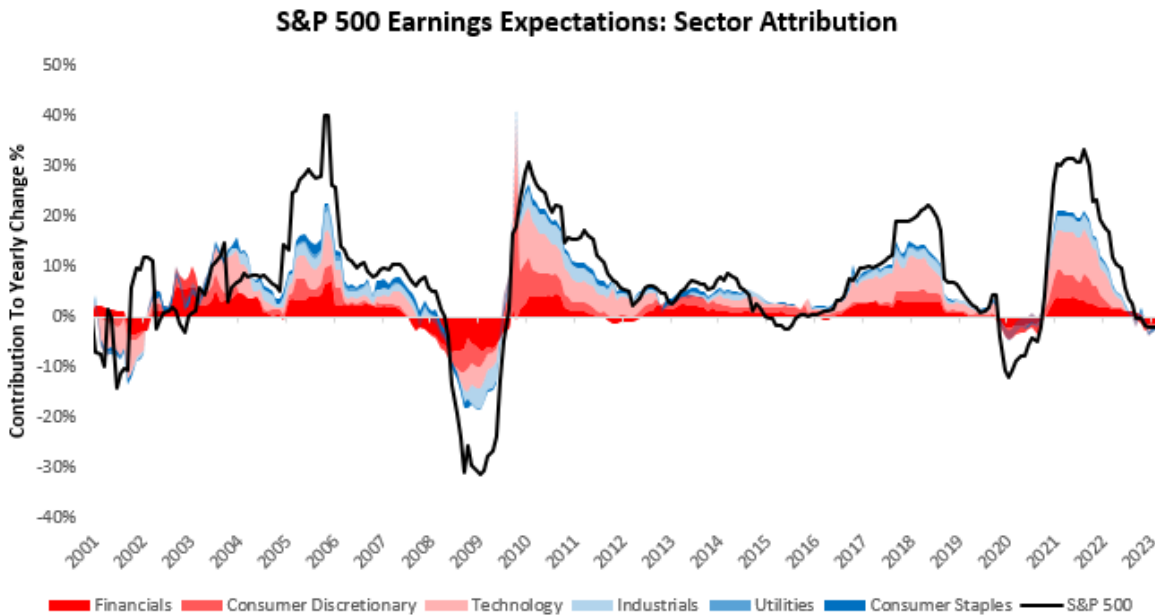


This increase in valuations is largely consistent with increased liquidity and measures of liquidity pricing in asset markets.

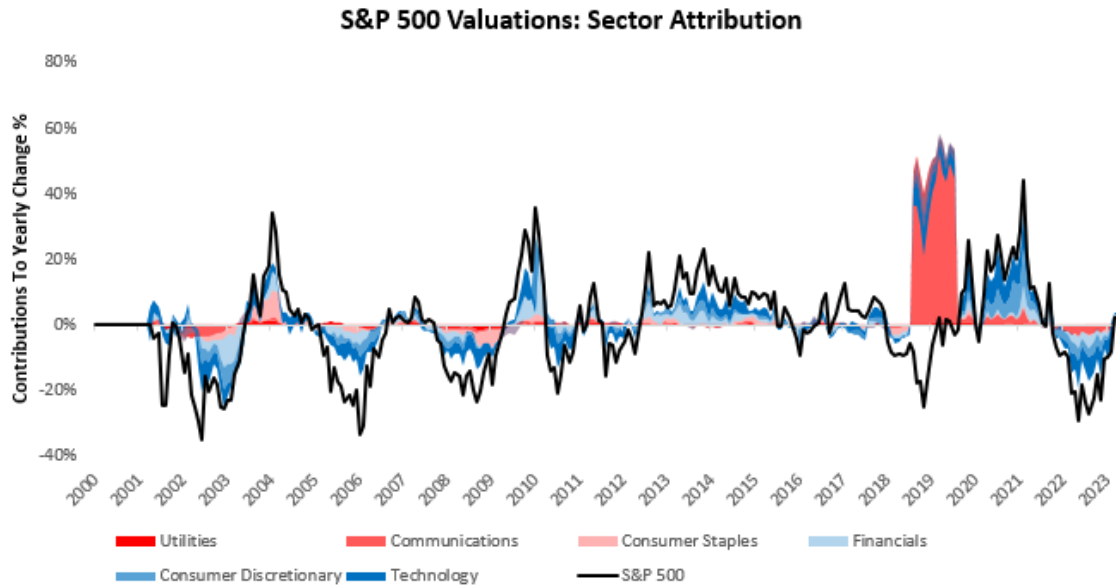
We further decompose these yearly returns into their sector contributions. We begin by showing the primary drivers of the S&P 500. We show the top three drivers in blue (Technology, Financials, Industrials) and the bottom three in red (Utilities, Real Estate, Materials):



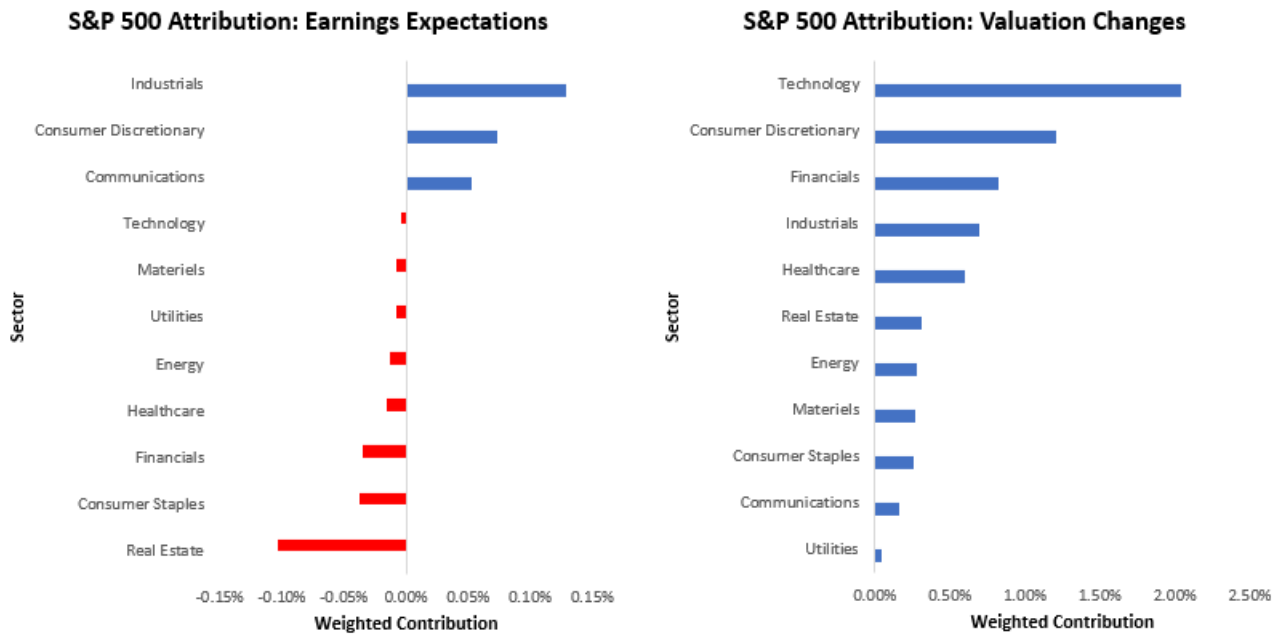
We drill down into these total returns by isolating the changes in earnings expectations. We show the top three drivers in blue (Consumer Staples, Utilities, Industrials) and the bottom three in red (Financials, Consumer Discretionary, Technology):



Finally, we examine the contributions of sectors to valuations changes. We show the top three drivers in blue (Technology, Consumer Discretionary, Financials) and the bottom three in red (Utilities, Communications, Consumer Staples):

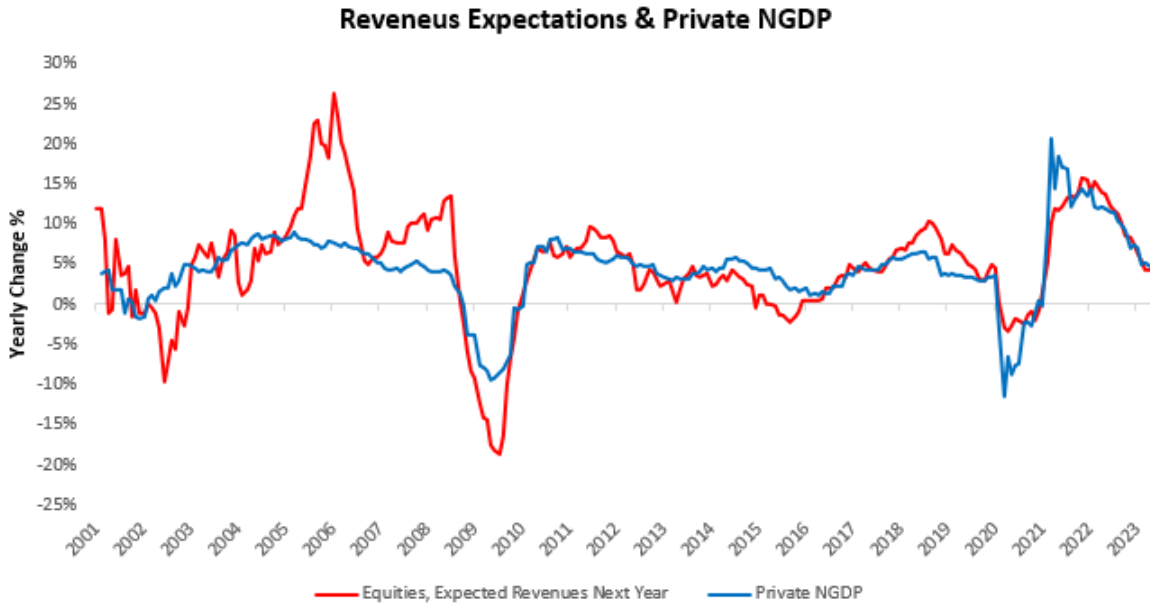


Zooming back into the most recent month, we show the composition of the most recent strength in equity markets. We show the sector-wise composition of the most recent months' returns in terms of changes in earnings expectations and changes in valuations below:

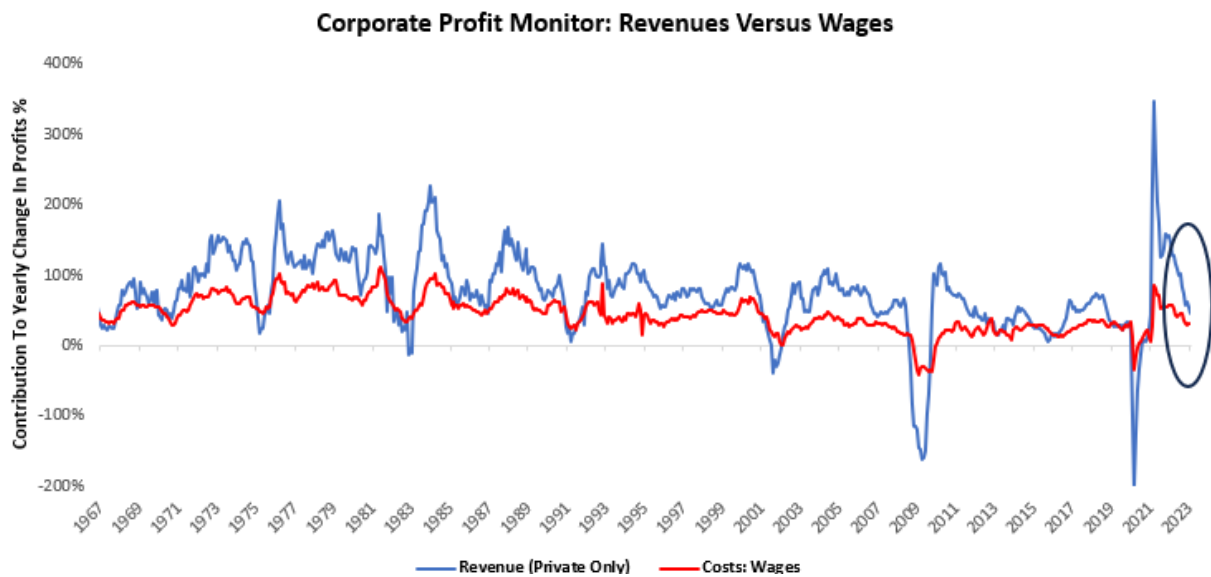


As we can see above, price returns have been driven by increased valuations across the board. This composition in itself is not a contra-indicator for equities.

The picture in equities is one where stock prices are benefiting from better-than-expected earnings conditions powered by liquidity. These earnings expectations have largely moved consistent with coincident data, which has been resilient relative to expectations. Below, we show earnings expectations one year ahead versus private NGDP:



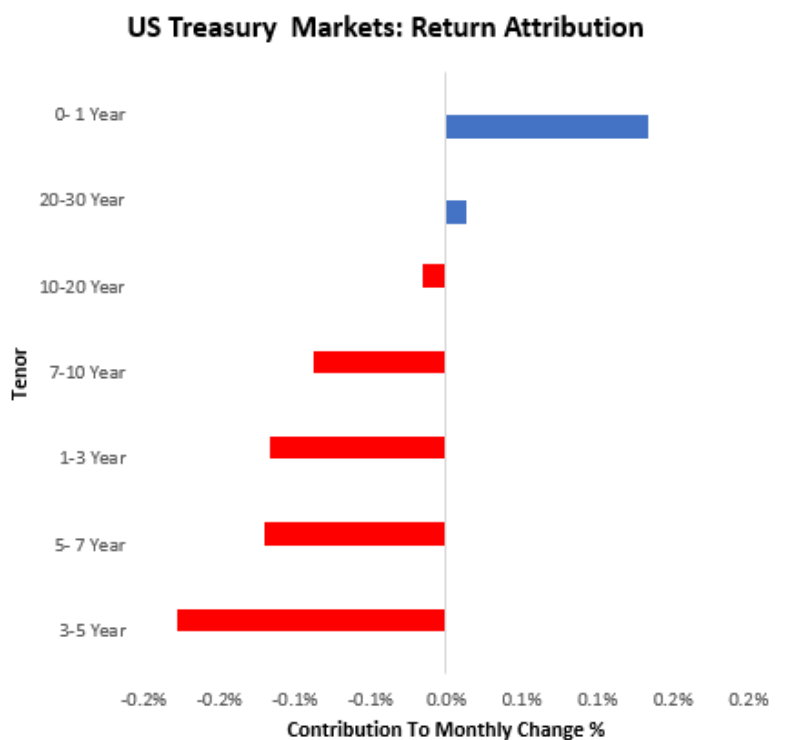
The question ahead for markets is whether the benefits of elevated NGDP can continue to flow to better-than-expected profitability. In our view, this sets up an interesting dynamic. Growth expectations have largely increased as wage and employment data have remained resilient relative to total spending. However, as progress through the resilience of nominal wages relative to topline will begin to drag on profitability further. We visualize this below:



Therefore, as markets move to price strong growth conditions for equities based on employment, we will likely have a setup for disappointment unless this employment flows to the company topline.

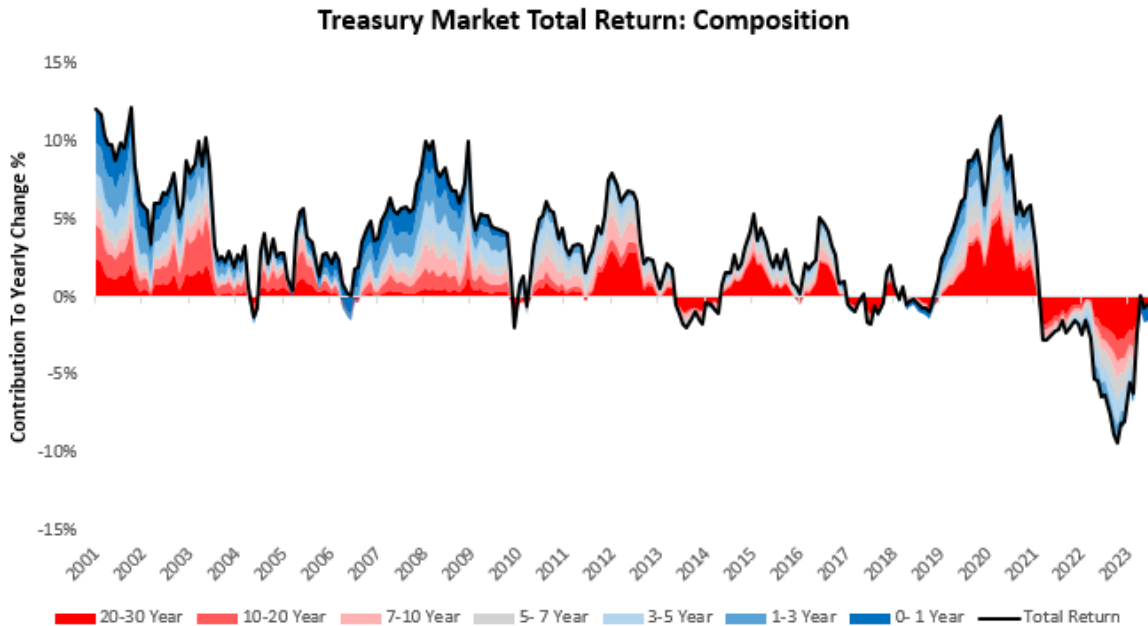
Overall, equities have many cross-currents today, with growth and liquidity driving the rally. A bet on equities here is that nominal GDP will continue to support liquidity and company bottom lines. We think the former is more likely than the latter as we progress through the cycle. However, what seems to be clearer is that these conditions support equities much more than treasuries. We discuss treasuries next.

While equities receive some degree of the benefits of inflation, bonds pay when inflation expectations rise. Therefore, as nominal activity surprises the upside, stocks can protect investors against this (somewhat), but bonds have no mechanism to benefit from higher inflation and suffer. Furthermore, in today's environment, treasuries are most significantly exposed to the repricing of policy rate expectations. We continue to think this is the primary risk and opportunity in treasuries. This risk drove treasury markets this month, with the aggregate treasury market contracting by -0.37%. We show the composition of this move below:

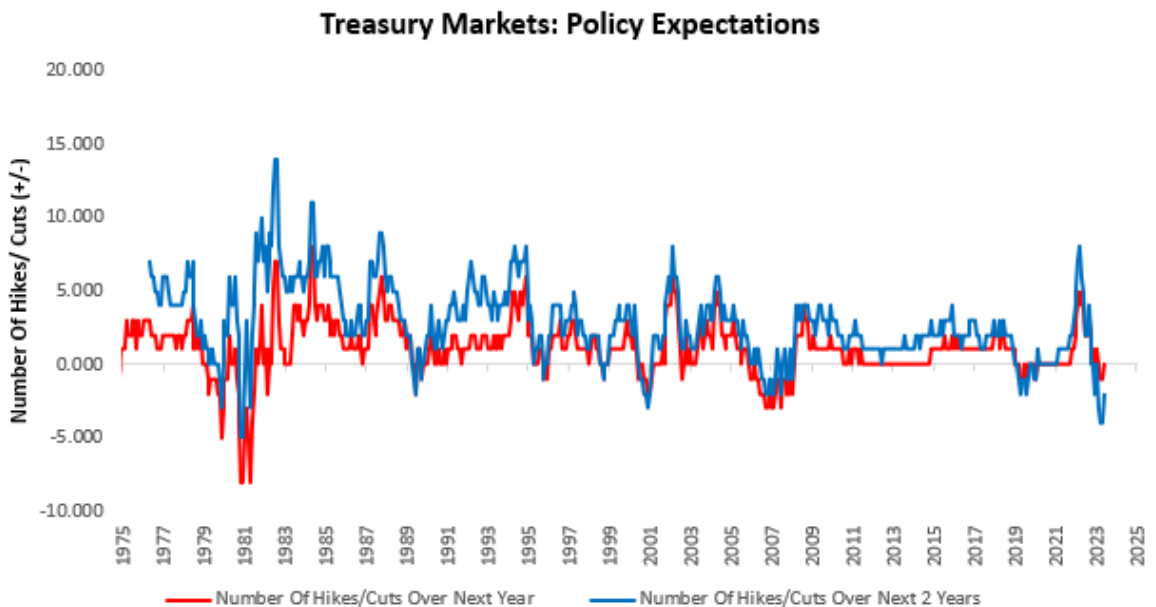


These moves came primarily from markets moving to reprice discount rate expectations to remove expectations for interest rate cuts over the next year. This theme has been consistent over this year, with the market moving to price cuts, only to be met by inflation far from the Fed's objectives.

Below, we show how treasury markets have fared over the last year:



As we can see above, Treasury markets remain in contraction, albeit much less weak than they were earlier last year. Additionally, we show how markets have continued to price interest rate cuts over the last six months:



Part of this pricing has been reversed, with markets pricing zero cuts over the next years but still pricing two cuts over the next two years. Given the dynamics we have shared from our inflation equilibrium monitors, we think the Fed is unlikely to be able to materialize these cuts. However, the opportunity set to be short is less than last month.

We now zoom in on the 10-year treasury. The yield curve remains inverted, largely a function of front-end policy rates being driven up significantly rather than long-end yields coming in:



The shortage of policy liquidity also drives a significant portion of this inversion, i.e., there is a shortage of government liabilities for the private sector to house cash balances. We see this in negative term premia for 10-year treasuries:



Given the constraints on policy by inflation, we think it unlikely that policy liquidity will be forthcoming from the Fed. The only other source can be the treasury by, issuing a significant amount of treasuries, especially on the long end of the curve. While this would improve policy liquidity conditions, it would also be a drag on longer-dated treasuries. Therefore, we continue to think inverted yield curves and compressed term premia persist.

As liquidity has remained compressed, breakevens have declined -0.30% this year, though they are flat over the last month. We show how breakevens have declined over the last year:



While breakevens could move marginally higher, barring an inflation shock to the upside, the potential remains somewhat muted. The biggest area for repricing remains discount rate expectations, which we show below:



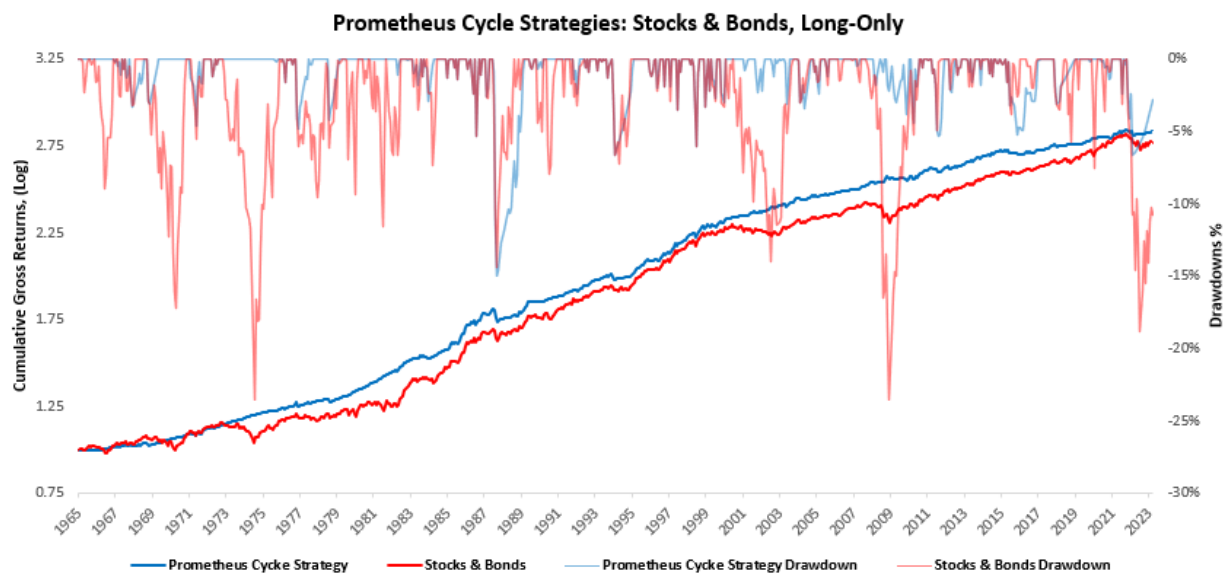
We think it is important to remember that market pricing for 10-year rate expectations is typically harder to bet on than more immediate term, i.e., over the next year or so. However, we think it's important to recognize that 75% of the rate cut expectations for the 10-year treasury come over the next two years. This pricing remains the biggest headwind for bonds.

Beating Stocks & Bonds: Cash Is King

Typically, in macro, we focus on alpha generation via going long and short a variety of assets, often relative to one another. While fruitful, some of these approaches are often complex and require significant monitoring and management, making them out of reach for the everyday investor. We're trying to help the broadest possible population at Prometheus using our systematic tools. Therefore, today we will share a simple strategy aimed at helping a somewhat passive investor navigate today's challenging macroeconomic landscape. We offer a simple approach that leverages the insights provided in this month in macro to risk-manage an equal-weighted portfolio of stocks and bonds.

The performance of stocks and bonds is tied to the future outcomes for growth and inflation, and as active investors, we try to use our expectations for these variables to time our exposure to these markets. For a long-only, largely passive investor, we think our process's biggest benefit is allowing you to sidestep the worst drawdowns in these asset classes.

Recessions are the primary risk to stocks as nominal spending collapses. At the same time, inflationary episodes are the primary risk to bonds as their fixed interest rate becomes less attractive relative to other nominal assets. Inflation also impacts stocks, through eventually higher costs and interest rates. Therefore, for a long-only investor, it makes sense to seek to exit stocks before an impending recession and exit both stocks and bonds during inflationary periods. With these objectives in mind, our systems use a wide range of economic and market data to protect long-only, largely passive investors from material drawdowns driven by macroeconomic factors. We use a simple strategy that rotates between stocks, bonds, and cash. Below, we show how this modestly active strategy has performed relative to a passive stock & bond portfolio:

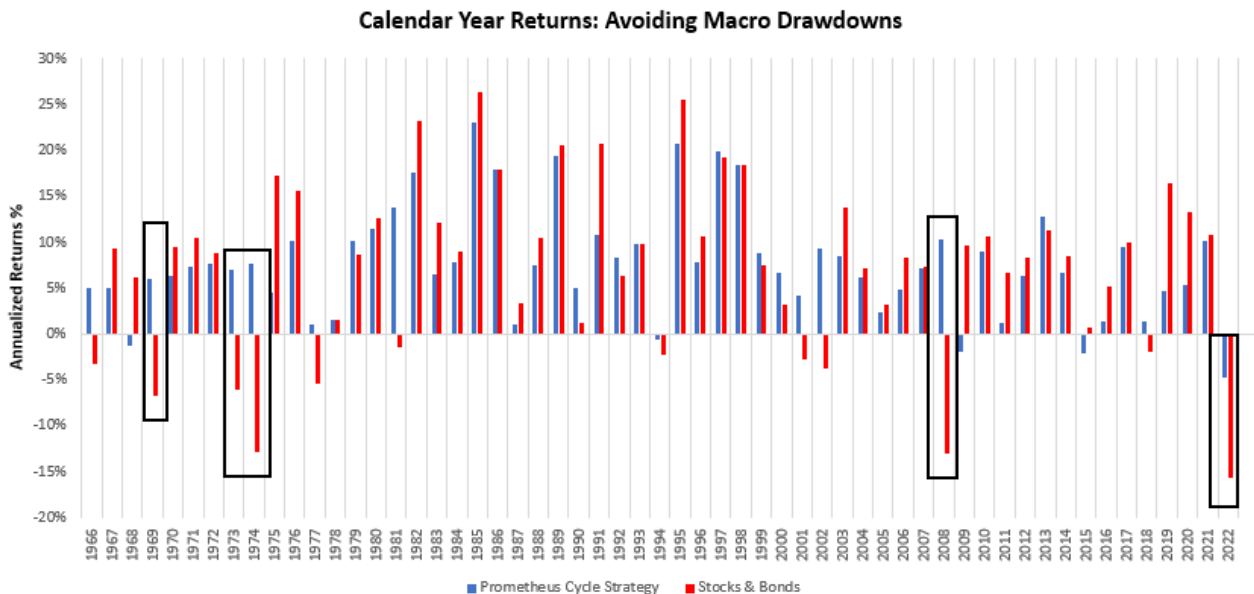


As shown above, our Prometheus Cycle Strategy outperforms static passive exposure to stocks and bonds while delivering significantly reduced drawdowns. Importantly, it does with relatively few trades (excluding the monthly rebalance for both strategies). The system has traded less than twice a year on average versus the benchmark.

For further context, we show some summary statistics for the strategy:

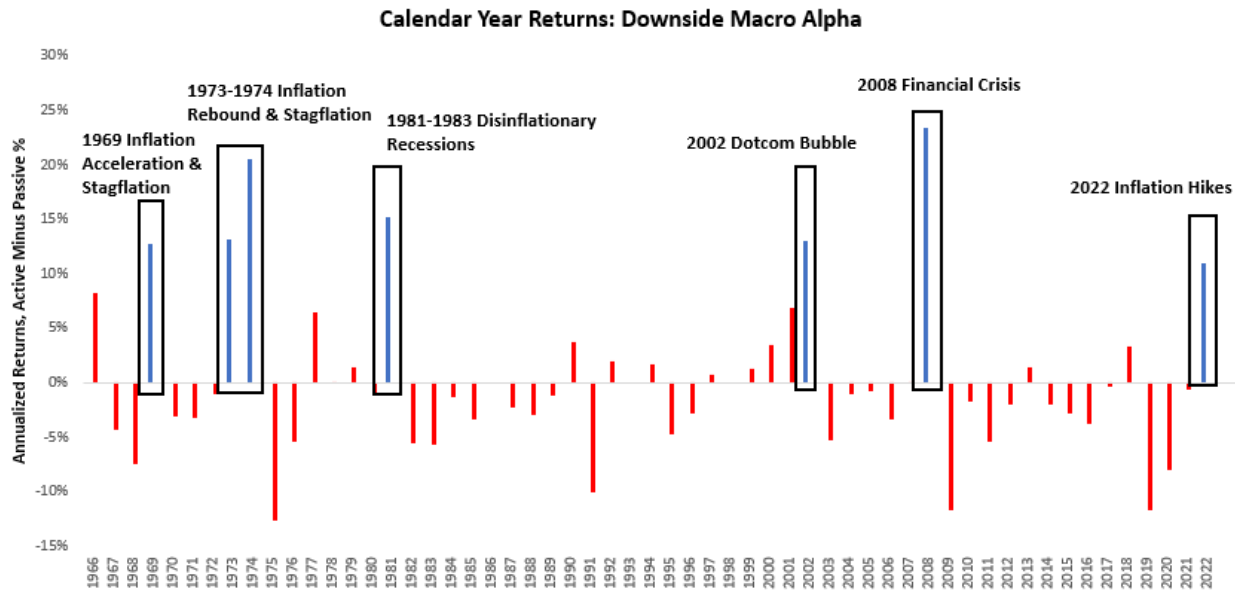
Prometheus Cycle Strategy: Summary Stats		
	Prometheus Strategy	Passive Stocks & Bonds
Gross Returns	7.5%	7.2%
Volatility	5.4%	8.8%
Semi-Variance	4.5%	5.6%
Max Drawdown	-15.0%	-23.6%
Sharpe Ratio	0.57	0.31
Sortino Ratio	0.67	0.49
Calmar Ratio	0.50	0.31

As shown above, our Prometheus Cycle strategy outperforms the passive portfolio on all measures. To display the consistency of this strategy, we also offer the calendar year returns of the strategy relative to the passive portfolio:

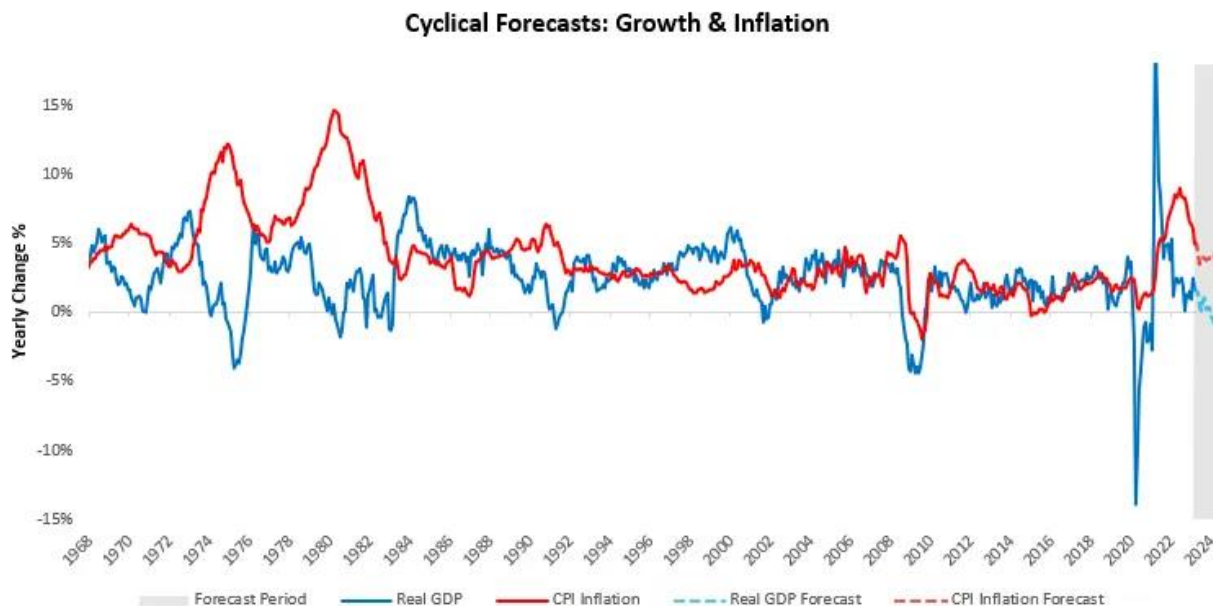


Additionally, we show the relative performance of our strategy versus the passive portfolio to showcase that the portfolio generates its outperformance for protecting against macroeconomic tail events. While calendar year returns are not the best way to gauge a return stream's variability, they help us contextualize changes over time.

To enhance this contextualization, we highlight how the strategy's alpha primarily comes from protecting against macroeconomic shocks from growth & inflation. We do so by annotating several important macroeconomic events and the corresponding returns during these periods:



Our systems have generally proven reliable in flagging significant potential drawdowns in a portfolio of stocks and bonds, allowing us to attempt to sidestep these drawdowns. To protect our edge in markets, we don't share how our strategies are constructed. However, the intuitions driving our systematic process have been provided over the last 50 pages. To reiterate our outlook: Our systems expect growth to worsen and inflation to stay resilient. This combination of events will likely hurt both stocks and bonds. We think 90% of investors are best served by being paid 5% to remain in cash, with no chance of drawdowns. For active investors, our strategies are flat stocks and short bonds this month. We reiterate our forecast below:



Conclusions

We reiterate our expectations and our views on macro and risk.

- ***Nominal GDP expanded by 1.05% in May, with real GDP increasing by 0.9% with inflation rising by 0.15%.***
- ***Coincident with this expansion in nominal GDP, liquidity conditions have improved significantly, primarily driven by private sector procyclical liquidity expansion.***
- ***Treasury markets have fallen as they moved to price tighter monetary policy, while equity markets have risen due to higher liquidity and better-than-expected growth conditions.***
- ***Looking ahead, real growth is likely to dwindle while inflation remains resilient. Monetary policy will likely have to remain tighter than priced. These dynamics will continue weighing on stocks and bonds. Bonds remain a potential short position, but less so than last month.***

We missed a strong month in equities but capitalized on a weak month for bonds. We think that if you're long equity risk, you're long liquidity with support from better-than-expected nominal growth. Stocks have continued to cross-current that could swing either way, but stocks look better than bonds until economic activity deteriorates enough to hurt inflation. Bonds remain exposed to losses so long as the price expectations of cuts. This mispricing has reduced over the last month, but any further pricing of interest rate cuts without a change in inflation dynamics is probably worth fading by active investors. Until next month.

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