

Month In Macro

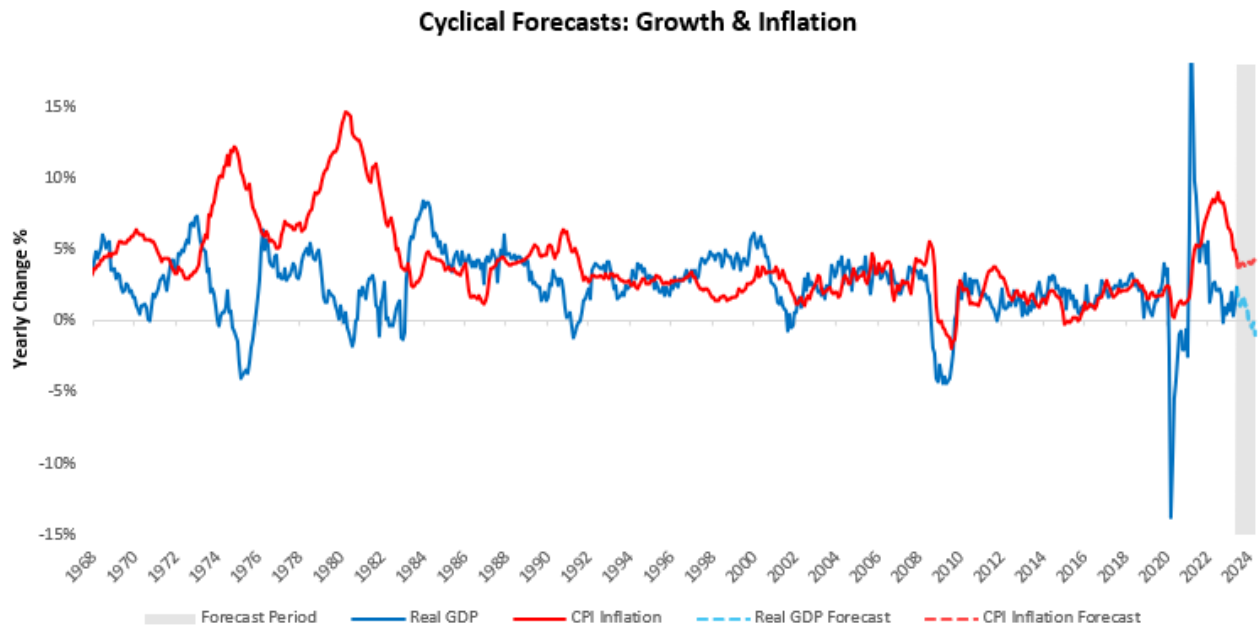
This note aims to share our research team's internal checkpoint process in evaluating the current state of the economy as it pertains to markets. The pages that follow will have familiar content for those who follow our work, but with the added benefit of our connecting the dots across all the economic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

- **Nominal GDP expanded by 1.05% in June, with real GDP increasing by 0.86% with inflation rising by 0.14%. This composition was a significant expansion in real activity.**
- **Liquidity conditions have remained buoyant, with nominal GDP continuing to flow to the money market complex.**
- **Equity markets have enjoyed this real growth acceleration, and liquidity has facilitated a significant bid for stocks versus bonds. Bonds continue to struggle as markets continue to price interest rate cuts, only to be thwarted by resilient nominal spending data.**
- **Looking ahead, real growth is unlikely to continue at this pace, though inflation is likely to remain resilient. Liquidity will likely soften as the treasury moves to lengthen its duration.**

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

"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 they price in expectations of cuts."

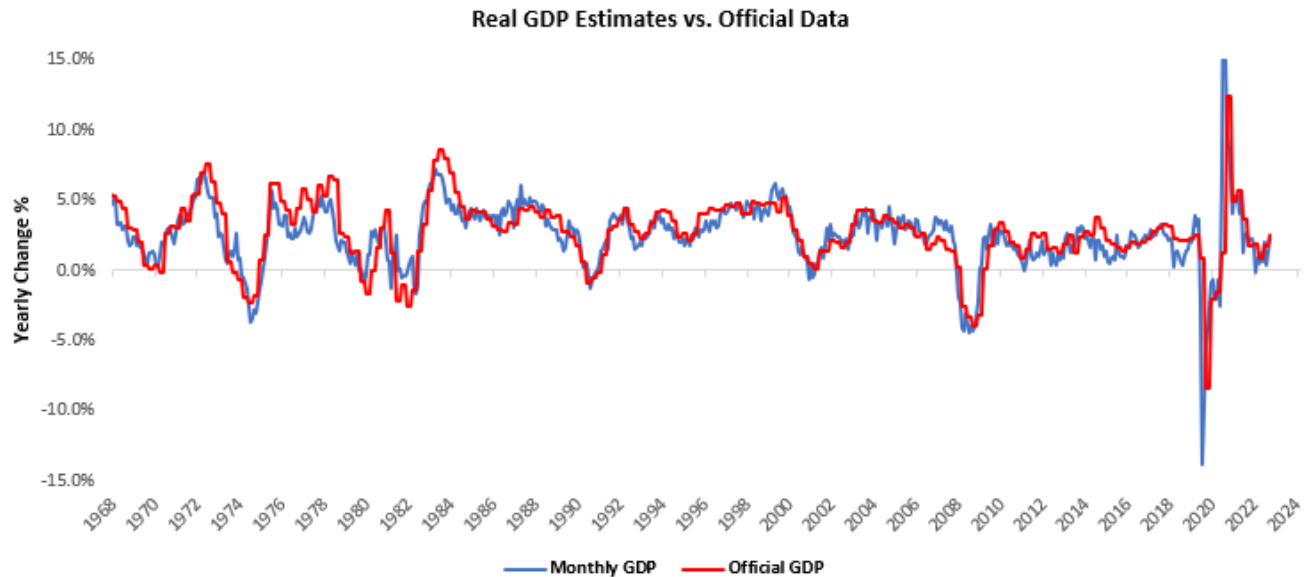
The picture remains the same for bonds, though signs of change are emerging for equities. Our expectations for growth and inflation future expectations remain a headwind for assets. Shown below:



Let's dive in.

Real GDP: Investment Acceleration

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 June, our systems place Real GDP growth at 2.29% versus one year prior. Below, we show our monthly estimates of Real GDP relative to the official data:

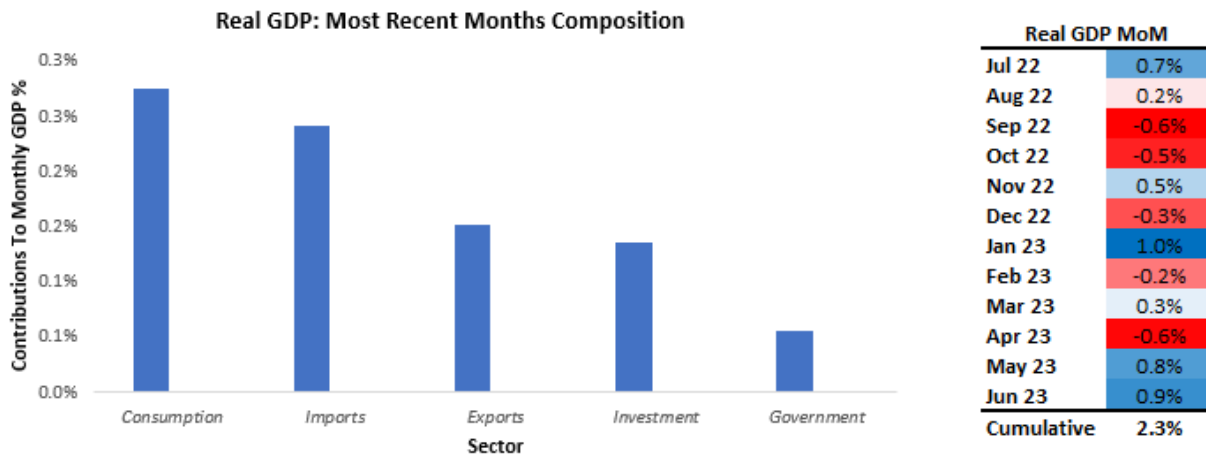


In June, GDP came in at 0.86% versus the prior month. We decompose the most recent months' data into its major divers to better understand this increase. Below, we offer the contribution by sector to monthly GDP in the table:

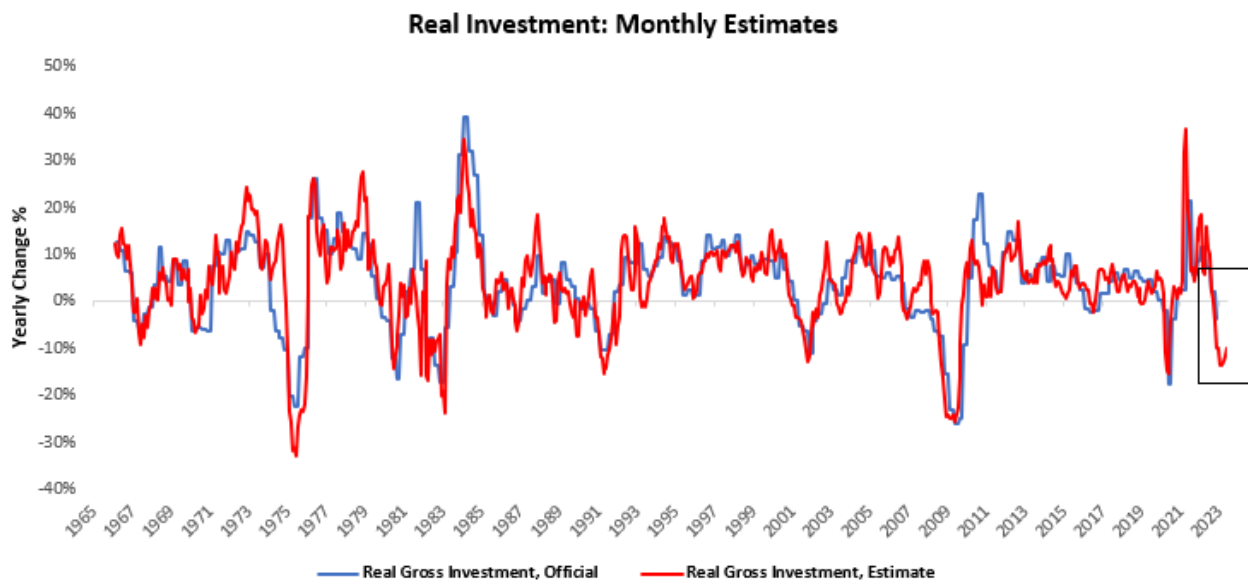
Contributions To Monthly GDP Changes						
	GDP	C	I	G	X	M
Jul 22	0.7%	0.0%	-0.1%	0.1%	0.6%	0.2%
Aug 22	0.2%	0.3%	-0.3%	0.0%	0.1%	0.0%
Sep 22	-0.6%	0.2%	-0.5%	0.0%	0.0%	-0.3%
Oct 22	-0.5%	0.2%	-0.2%	0.0%	-0.2%	-0.2%
Nov 22	0.5%	-0.3%	-0.2%	0.1%	-0.1%	1.0%
Dec 22	-0.3%	-0.1%	0.0%	0.0%	0.2%	-0.4%
Jan 23	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	-0.6%	0.2%	0.2%	0.0%	-0.7%	-0.4%
May 23	0.8%	0.0%	0.1%	0.1%	0.1%	0.5%
Jun 23	0.9%	0.3%	0.1%	0.1%	0.2%	0.2%
Cumulative	2.3%	1.7%	-0.9%	0.4%	0.4%	0.7%

As we can see above, yearly GDP (cumulative, at the bottom of the table) has improved mainly as investment data has reversed from consistent contractions on quarter ago.

In June, GDP came in at 0.86% versus the prior month. Below, we show the weighted contributions to the most recent one-month change in real GDP and the recent history of month-on-month GDP. Additionally, we offer the contribution by sector to monthly GDP in the table below:

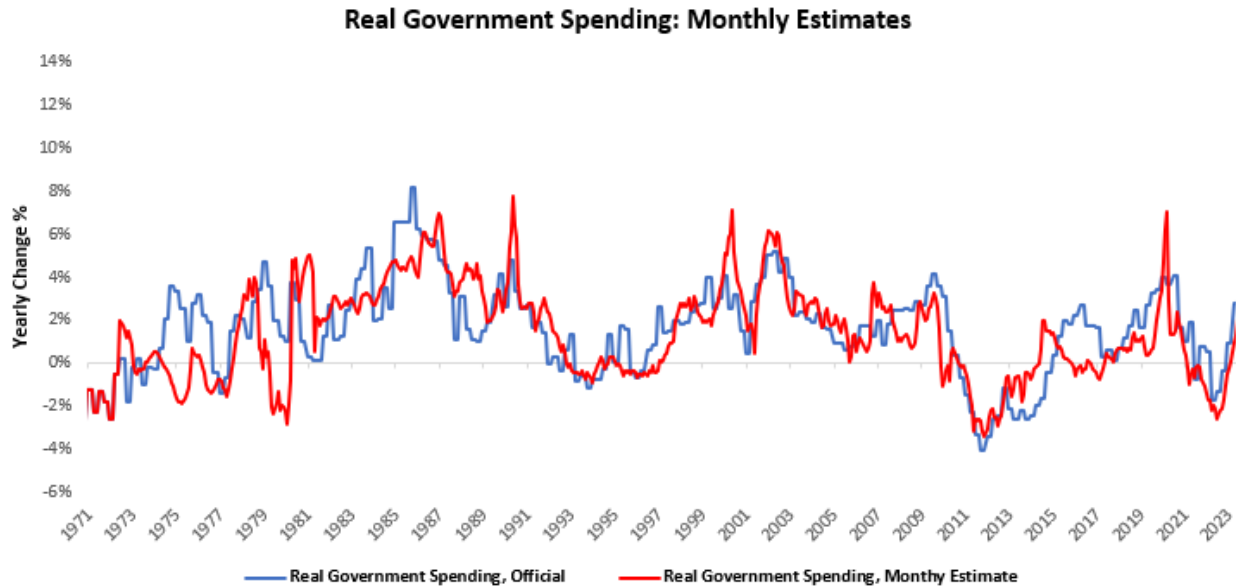


The biggest driver of the reacceleration in US GDP in July was the expansion investment data, which went from negative to positive. This improvement is a very modest when we look at the bigger picture, but it is nonetheless a significant sequential improvement. We show our tracking of real gross investment below:

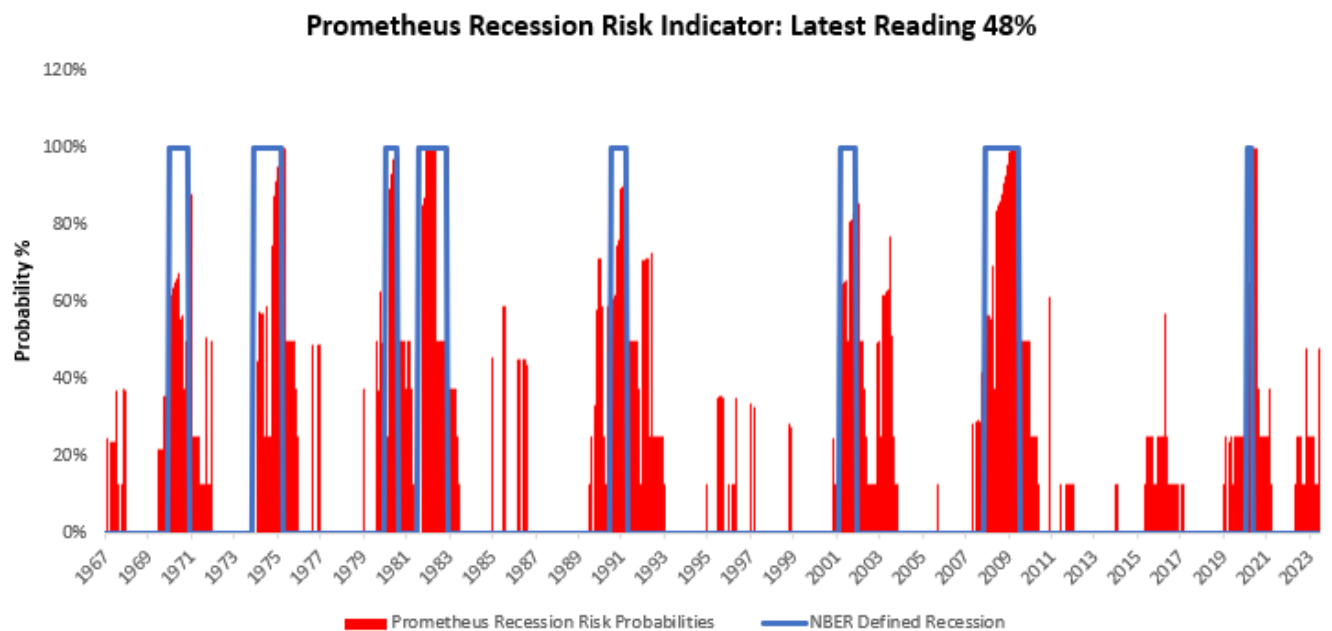


This strength in investment spending was driven by resilient construction and equipment spending, and an expansion in inventories. We will examine these components in more detail in the sections to come as they are in integral part of our assessment of business conditions. For the time being, we will say there remain significant business cycle pressures on investment activity, despite the recent strength of investment spending. This leads us to expect some of this strength will fade in the months ahead.

While investment activity was the biggest change in spending, we think its important to also note the most consistent component of GDP over the last six months, i.e., government spending. In June, real government expenditures increased by 0.06%. Over the last year, government spending has added 0.44% to GDP growth of 2.29%. We show this below:



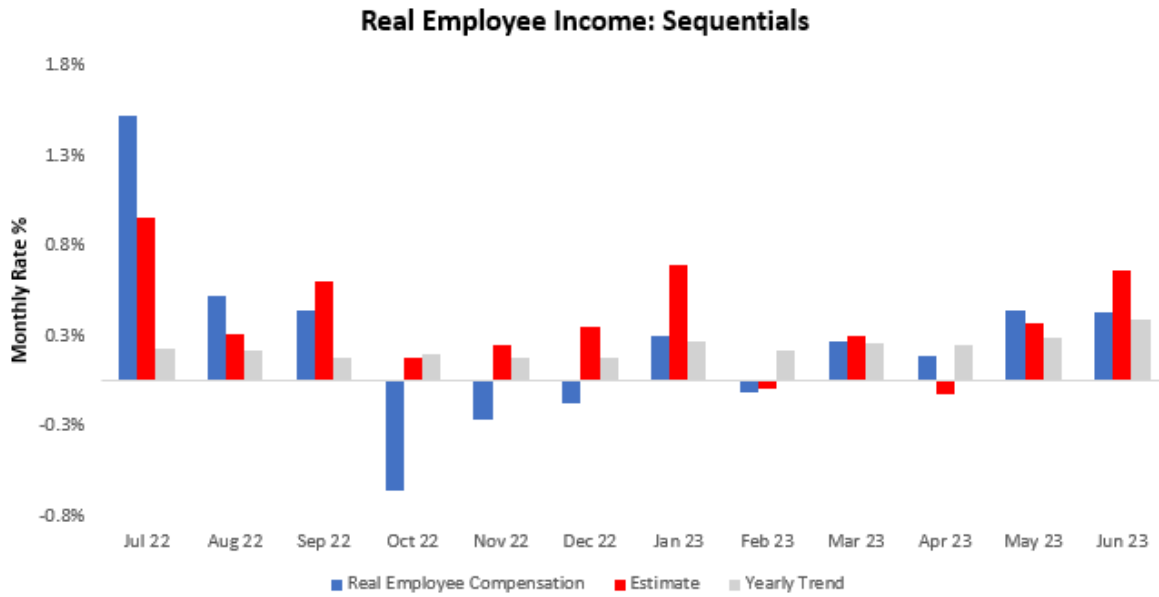
This government spending has come with a significant portion coming from a federal fiscal impulse. This size of deficit expansion is usually only seen during recessionary periods when the government needs to stabilize incomes. This spending, while not driven by recessionary forces, does coincide with the rise in recession probabilities:



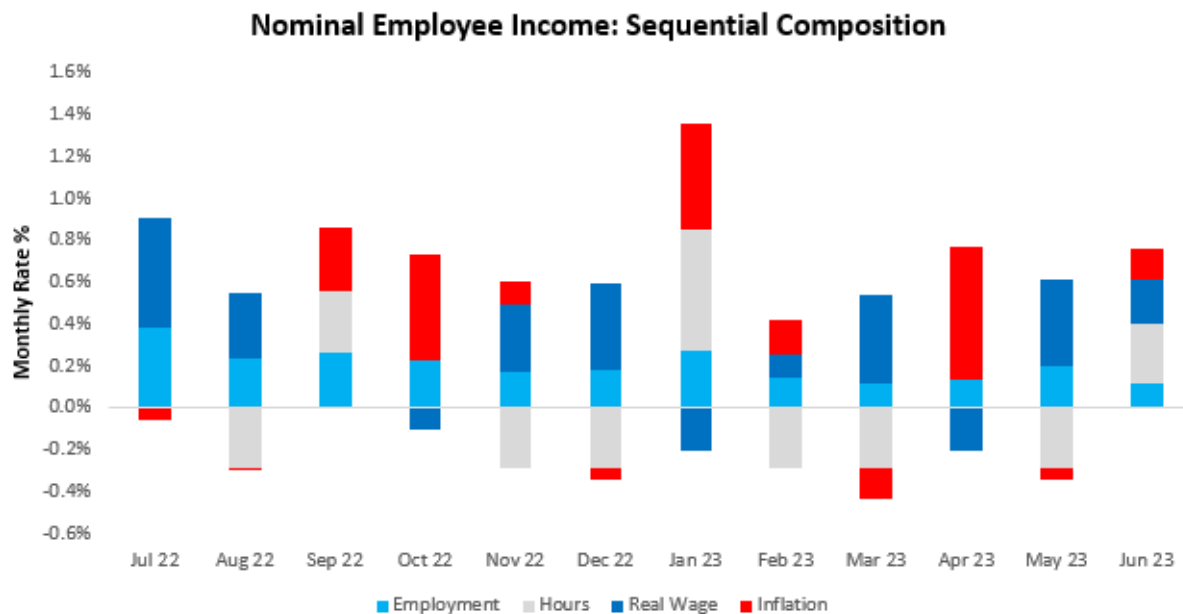
We discuss all this and more in the pages that follow.

Consumer Spending: Sources Of Spending Abundant

Consumer spending can come from income, leverage, or the sale of assets. When we look through these potential spending sources, the dominant driver of spending remains employee income, which we dissect in detail in this section. Our latest estimates for June showed real employee income increased by 0.61%. This data showed a deceleration in the quarterly trend relative to the one-year trend. We show the evolution of the sequential data below:

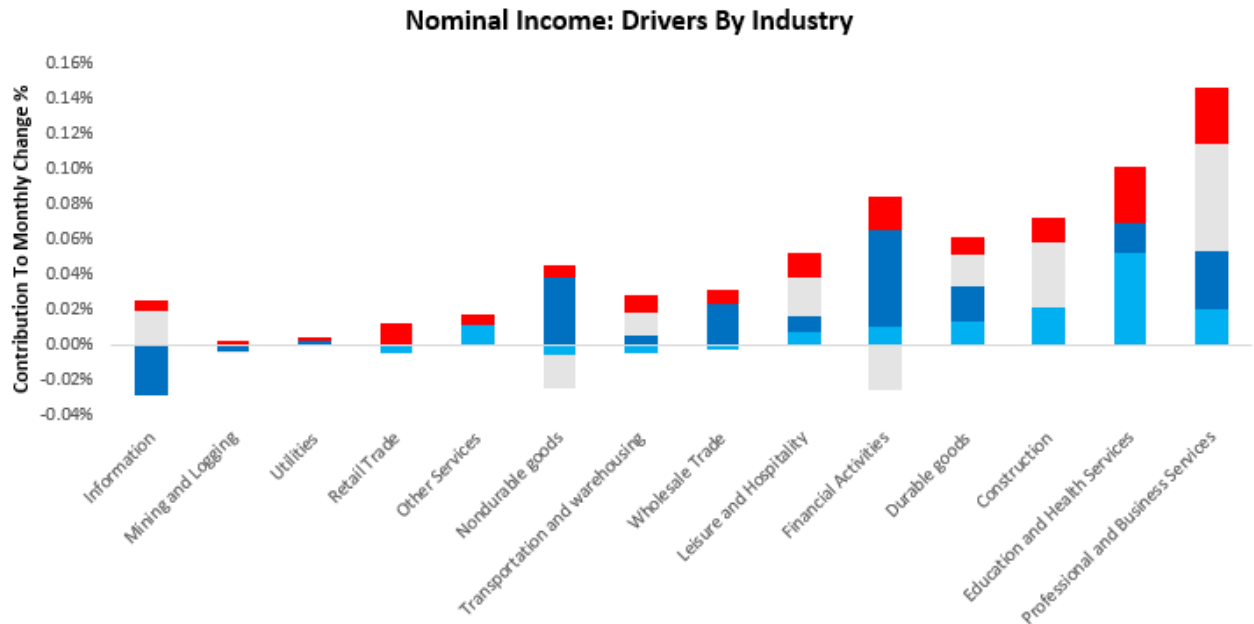


This estimated real income data came alongside a nominal income change of 0.76%. Below, we show the macroeconomic decomposition of nominal wages, which adds back inflation to real income:



We can decompose nominal wage growth into growth from employment, hours worked, real wages, and wage inflation, which contributed 0.11%, 0.29%, 0.21%, and 0.15%, respectively, to nominal income.

We further decompose these macroeconomic drivers by industry. Below, we visualize each industry's contributions to total nominal income, broken into its drivers, ranked from left (weakest) to right (strongest). As we can see below, nominal income was generally positive, with Professional and Business Services contributing the most to strength and information dragging on nominal income growth:



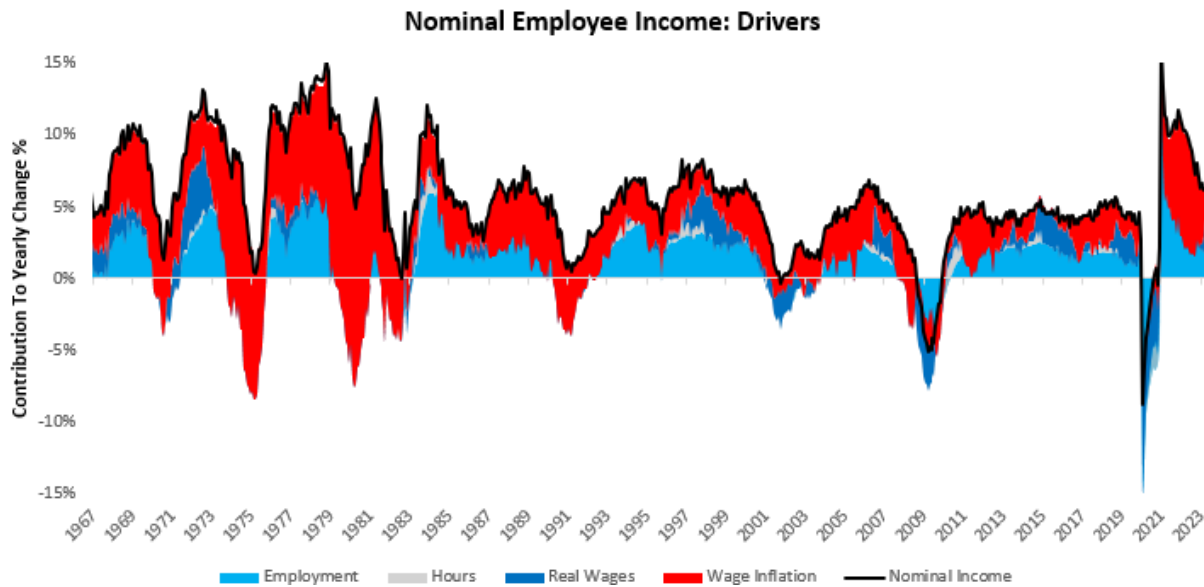
We illustrate the above in tabular form for further context, allowing us to weigh the impacts from various segments more carefully. Consistent with the previous visual, hours worked and real wages grew significantly this month and were the driving force for higher real incomes.

Nominal Employee Income: Composition, Most Recent Month

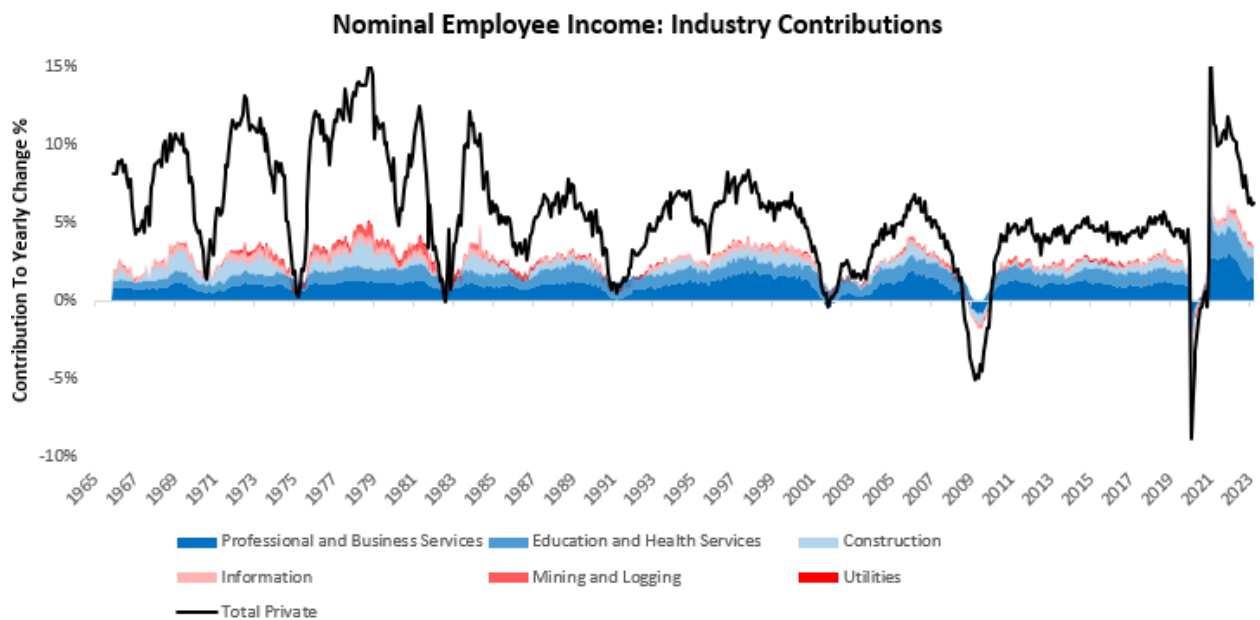
	Nominal Income	Employment	Real Wages	Hours	Wage Inflation
Information	0.00%	0.00%	-0.03%	0.02%	0.01%
Mining and Logging	0.00%	0.00%	0.00%	0.00%	0.00%
Utilities	0.00%	0.00%	0.00%	0.00%	0.00%
Retail Trade	0.01%	-0.01%	0.00%	0.00%	0.01%
Other Services	0.02%	0.01%	0.00%	0.00%	0.01%
Nondurable goods	0.02%	-0.01%	0.04%	-0.02%	0.01%
Transportation and warehousing	0.02%	0.00%	0.01%	0.01%	0.01%
Wholesale Trade	0.03%	0.00%	0.02%	0.00%	0.01%
Leisure and Hospitality	0.05%	0.01%	0.01%	0.02%	0.01%
Financial Activities	0.06%	0.01%	0.05%	-0.03%	0.02%
Durable goods	0.06%	0.01%	0.02%	0.02%	0.01%
Construction	0.07%	0.02%	0.00%	0.04%	0.01%
Education and Health Services	0.10%	0.05%	0.02%	0.00%	0.03%
Professional and Business Services	0.15%	0.02%	0.03%	0.06%	0.03%
Total	0.76%	0.11%	0.21%	0.29%	0.15%

However, what is also noteworthy is that there was considerable dispersion within the most recent employment data. Approximately 50% of the sector showed contractionary employment readings.

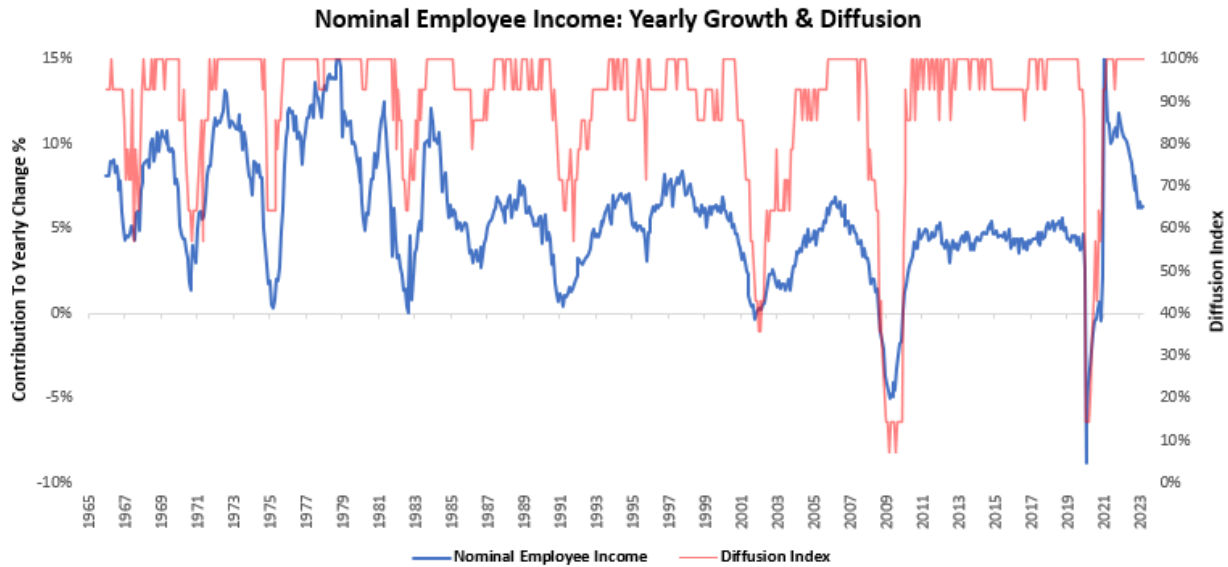
We think these contractions are signs of the times; employment continues to press against capacity constraints within a decelerating macroeconomic environment. Furthermore, layoffs were in segments where nominal sales have been hurt significantly, i.e., retail, wholesale, and manufacturing. We take this as an initial sign that some weakness from business conditions may flow through to labor. For further perspective on macroeconomic dynamics, we show how nominal employee income has evolved over the last year, with nominal income growth of 6.29%, 4.09% of which came from real growth. Over the last year, employment has primarily driven nominal income, expanding by 2.45%.



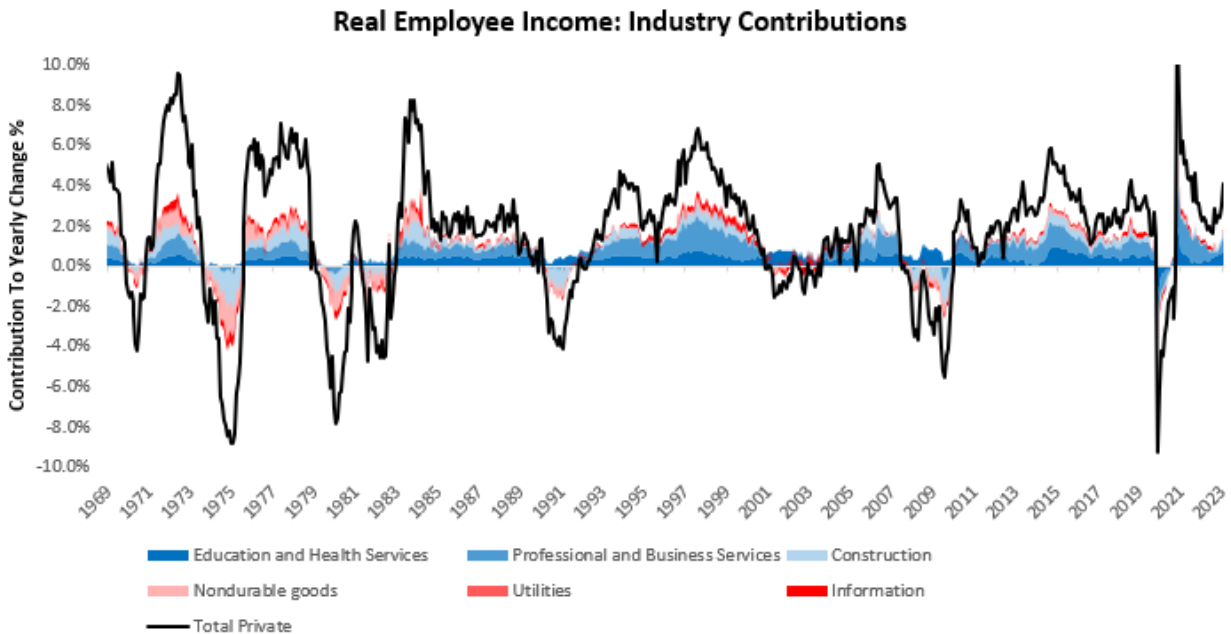
Digging into the industry-level data, we find that nominal employee income over the last year has been positive across the board, with Professional and Business Services, Education and Health Services, and Construction contributing strength (shown in shades of blue). On the other hand, Utilities, Mining and Logging, and Information are the weakest areas of income (shown in shades of red).



Additionally, we show the yearly change in the data and the underlying diffusion of industry growth:

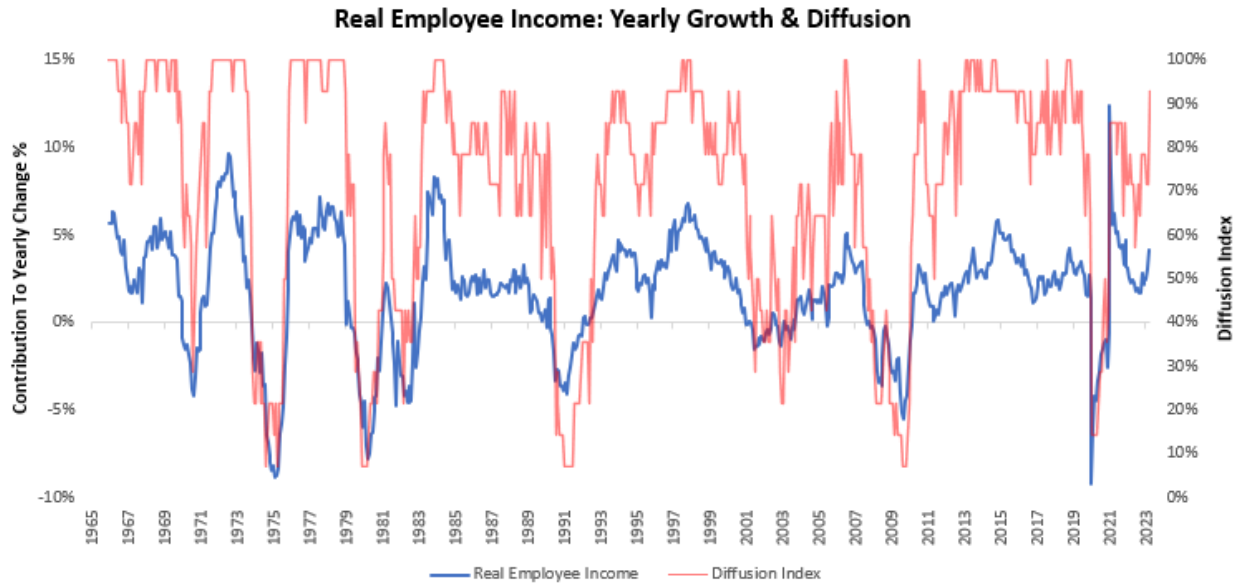


Nominal incomes are rare to contract, given the persistence of wage inflation. As such, they can often be a poor indicator of cyclical conditions. To better understand these dynamics, we turn to real employee income, which over the last year has largely been positive, with Education and Health Services, Professional and Business Services, and Construction contributing strength (shown in shades of blue). On the other hand, Information, Utilities, and Nondurable goods are the weakest areas of income (shown in shades of red):

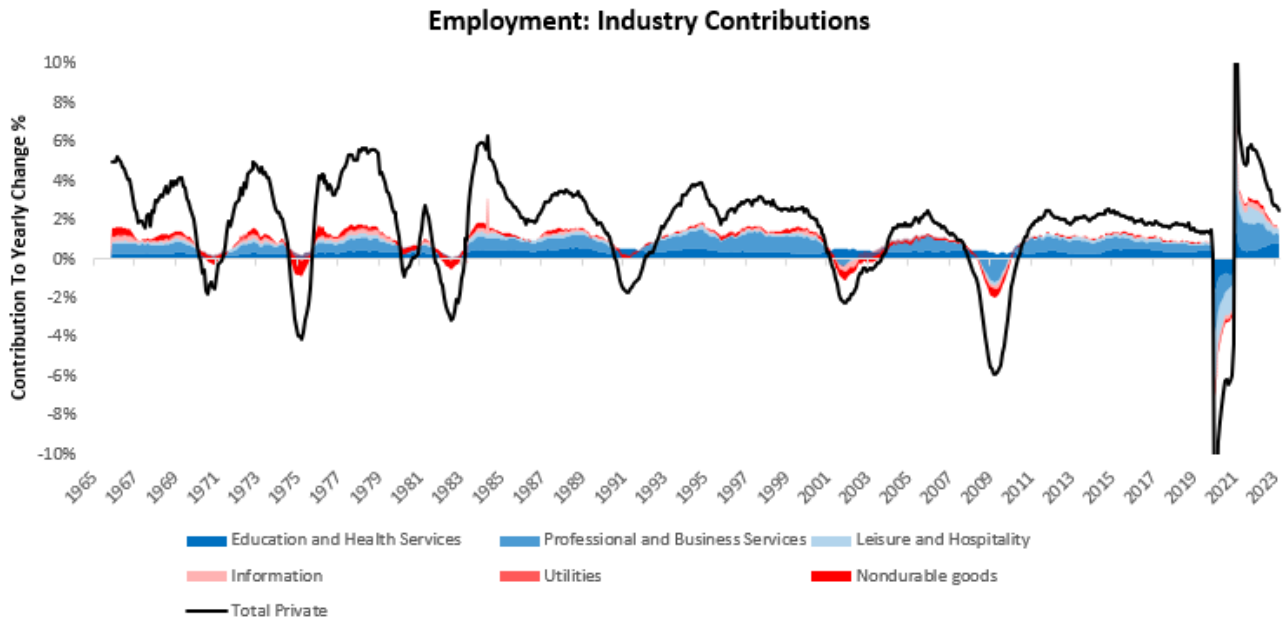


As we can see above, there has been a significant spike in real incomes over recent months as nominal spending has held steady and wage inflation has fallen. This expansion of real income is one of the primary drivers of strength in recent economic data.

We show how these real income gains are broad-based, with ninety percent of sectors seeing expanding real incomes versus one year prior:

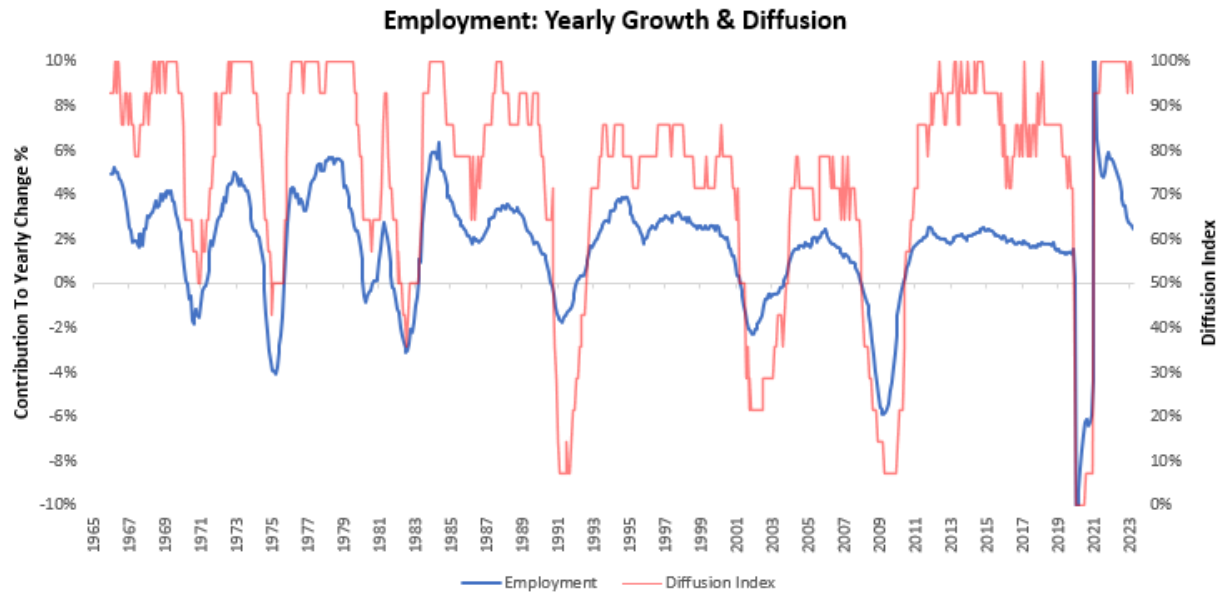


Further dissecting this real income, we examine employment, typically the primary driver of real growth. Over the last year, employment growth has largely been positive, with Education and Health Services, Professional and Business Services, and Leisure and Hospitality contributing strength (shown in shades of blue). On the other hand, Nondurable goods, Utilities, and Information are the weakest areas of employment (shown in shades of red):

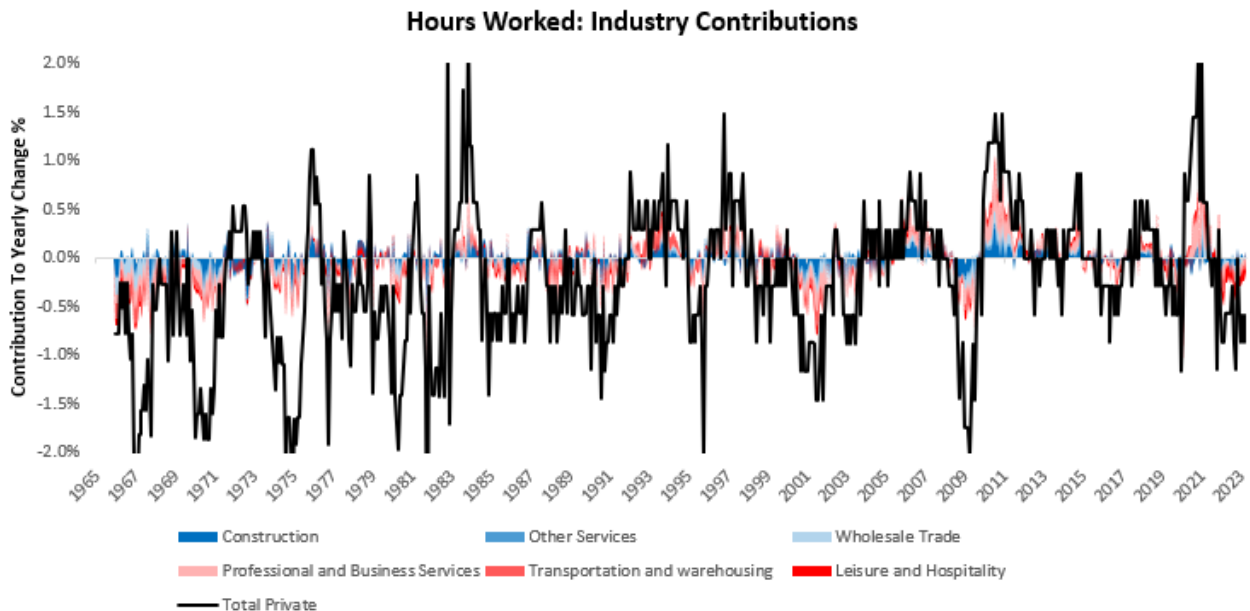


As we see above, service employment continues to drive the employment picture, keeping income and spending steady.

Additionally, we show the yearly change in the data and the underlying diffusion of industry growth. Employment remains strong across segments.

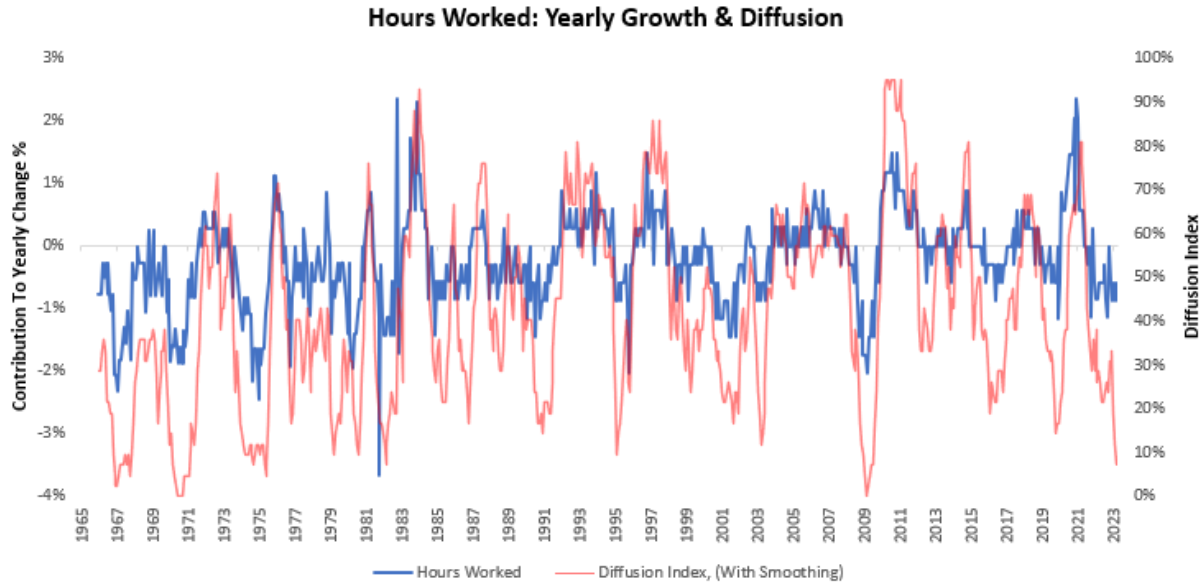


Next, in our analysis of real income, we turn to the number of hours worked by employees. Over the last year, growth in hours worked has largely been weak, with Construction, Professional and Business Services, and Wholesale Trade contributing strength (shown in shades of blue). On the other hand, Leisure and Hospitality, Transportation and warehousing, and Professional and Business Services are the weakest areas in terms of the number of hours worked (shown in shades of red):



As shown above, hours worked remain in contractionary territory despite the recent bounce. We think it is essential not to over-extrapolate the weakness in hours worked, as the number of hours worked by employees has been in a secular downtrend, i.e., they have been lower more often than they have been

higher. Our diffusion index paints a similar picture, showing how this has generally been true across industries:



The final component of our analysis of real incomes is real wage growth. Over the last year, real wages have been positive across the board, with Professional and Business Services, Leisure and Hospitality, and Financial Activities contributing strength (shown in shades of blue). On the other hand, Information, Utilities, and Mining & Logging are the weakest areas of real wage growth (shown in shades of red).

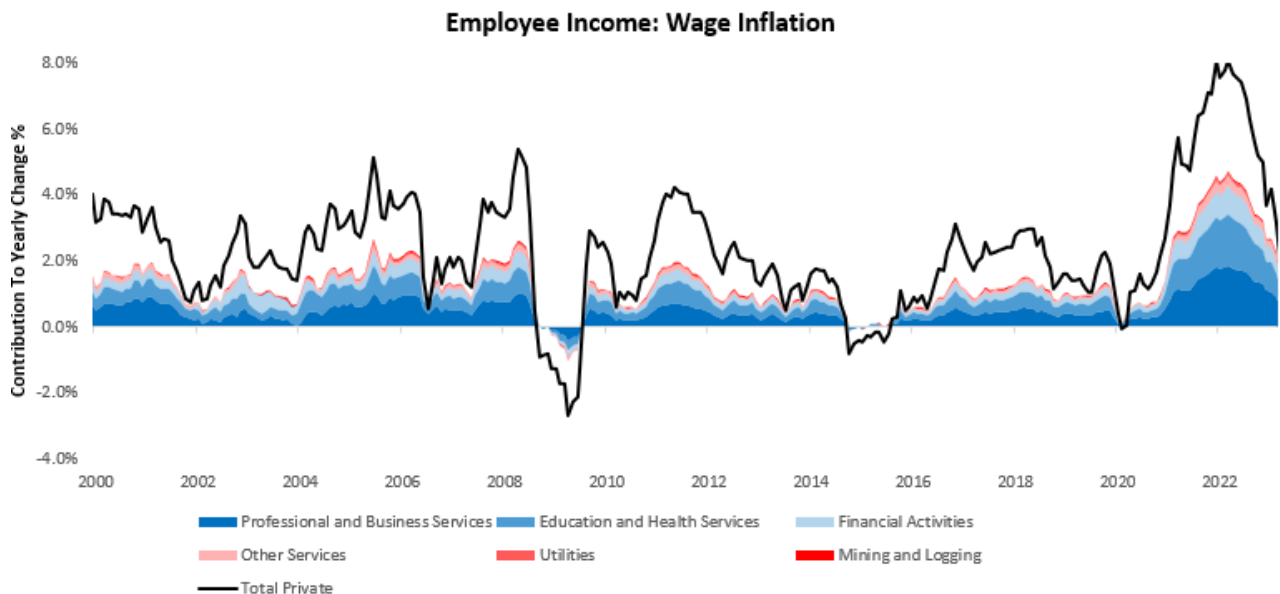


Once again, we see the services sector contributing strongly to income growth through strengthening real wages. A significant part of this likely comes from a wage inflation softening.

We show total real wage growth and our diffusion index but note that diffusion data is not available for the full sample due to data limitations:



Now that we addressed the drivers of real income, we turn to wage inflation. Over the last year, wage inflation has been positive across the board, with Professional and Business Services, Education and Health Services, and Financial Activities contributing strength (shown in shades of blue). On the other hand, Mining and Logging, Utilities, and Other Services are the smallest contributors to wage inflation (shown in shades of red):

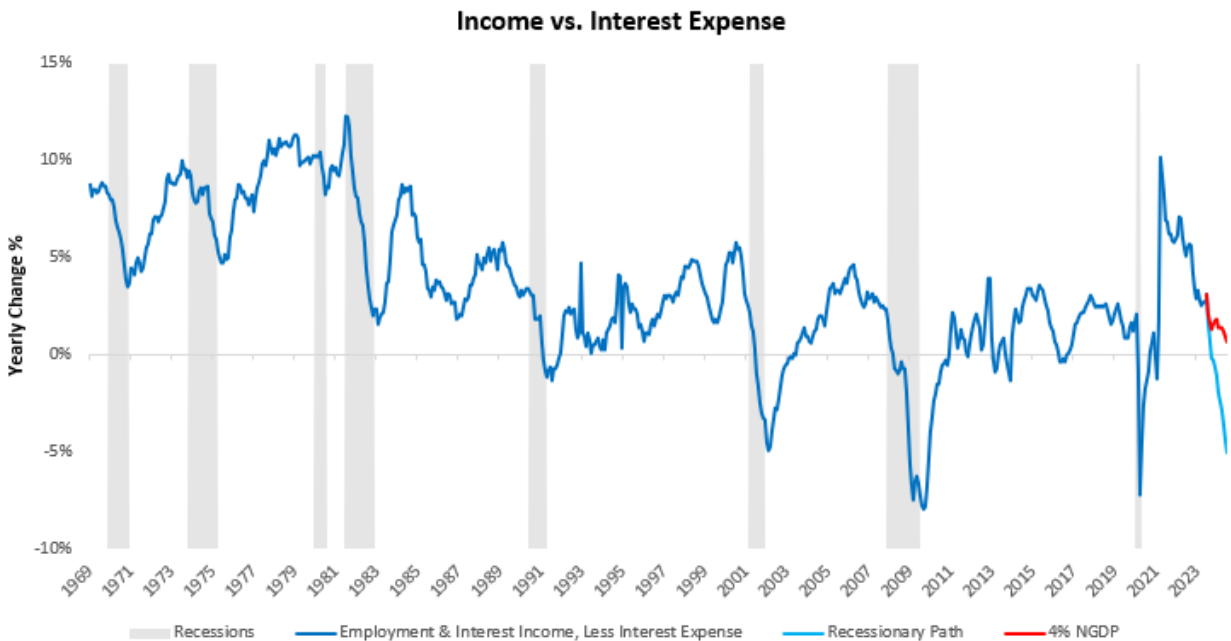


As we can see above, services wage inflation remains resilient relative to goods wage inflation, reflecting their respective sensitivities to commodities and the manufacturing cycle.

We think it is critical to recognize that the combination of these forces has created a very resilient picture for real income. On the current path, incomes are highly unlikely to contract. Importantly, even on a recessionary path, incomes are unlikely to contract durably until next year. We show this below:



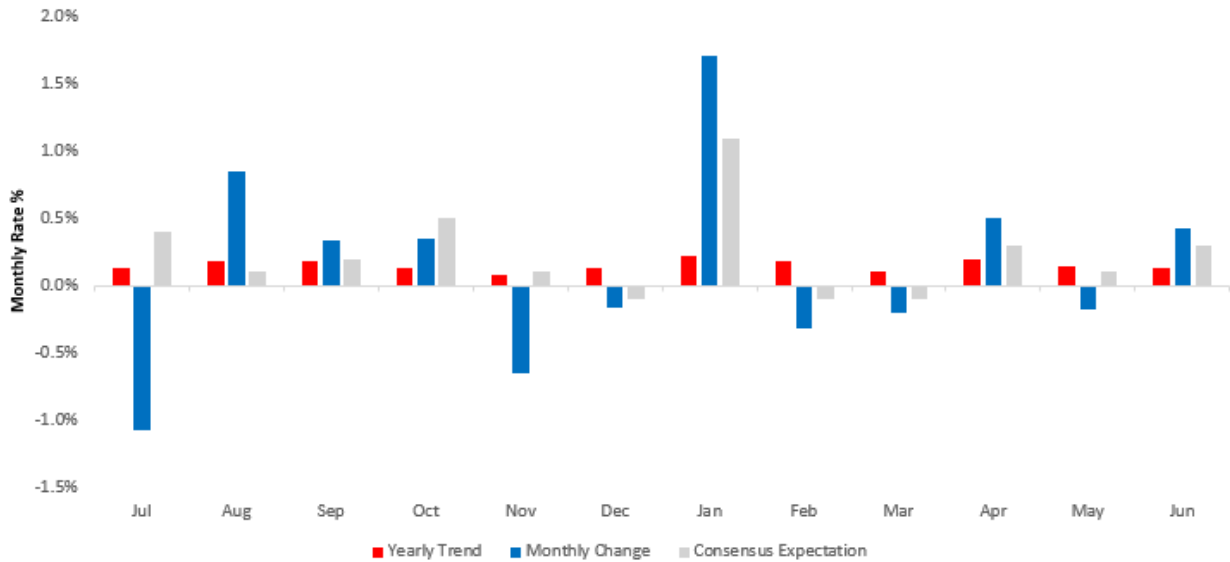
Now, we don't think it is likely that the economy can continue for very long at the current pace. Therefore the projection based on the current path of the data is unlikely to materialize. At the same time, our assessment of the future needs to be grounded in the realities of the present. Slowing is likely; contractions in income are uncertain. What we think is important to understand about incomes today is that despite slowing, they will continue to exceed interest expense:



Above, we show the sum of wages and interest income on assets, less interest expense paid.

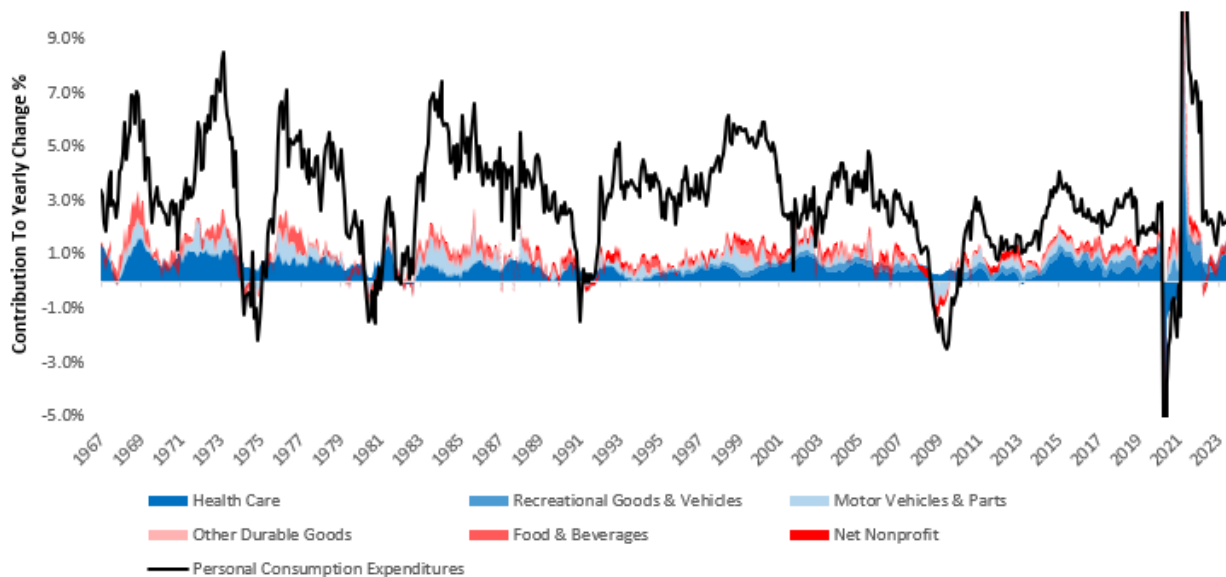
Rising interest expense tends to weigh on incomes as we move into recessionary periods, usually facilitated by a rise in interest rates. Interest expense has begun to rise; however, even if we project this pace forward, it is inadequate to cause a contraction in spending. What is required to cause a pullback in spending is a pullback in incomes, which cannot come only from interest expense despite the current hiking cycle. These dynamics have driven resilience in real and nominal spending. Real consumer spending pending increased 0.39% in June, surprising consensus expectations of 0.3%. This print contributed to a sequential deceleration in the quarterly trend relative to the yearly trend:

Personal Consumption Expenditures: Sequential Trend

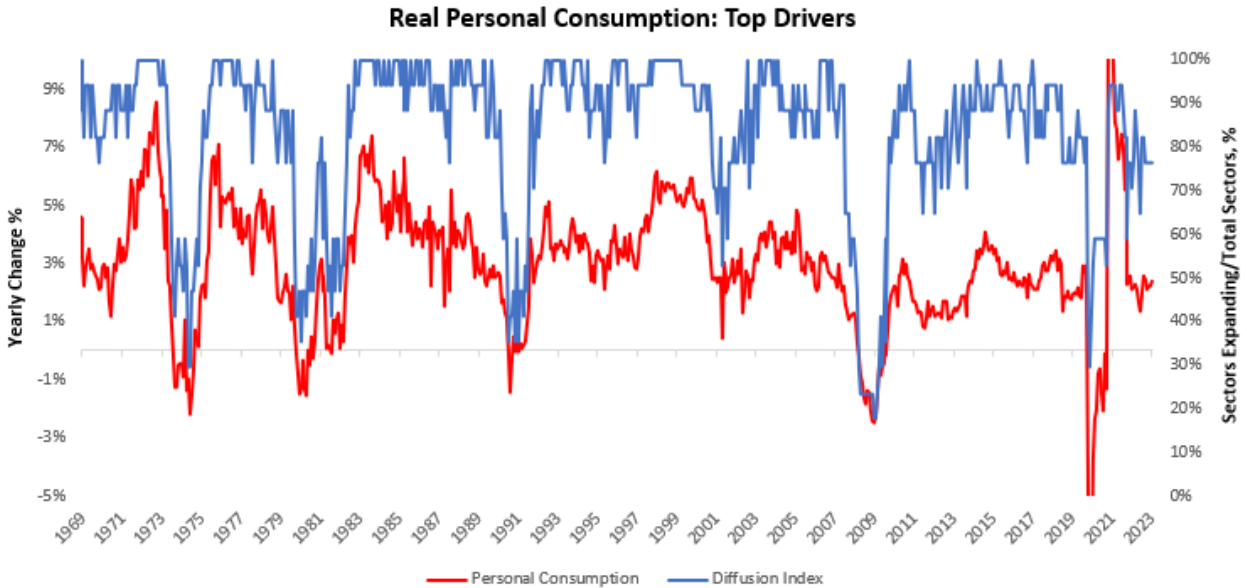


Over the last year, healthcare, motor vehicles & parts, and recreational goods & vehicles have been the primary drivers of the 2.38% growth in spending. We show the contributions of these items to yearly changes in total spending below:

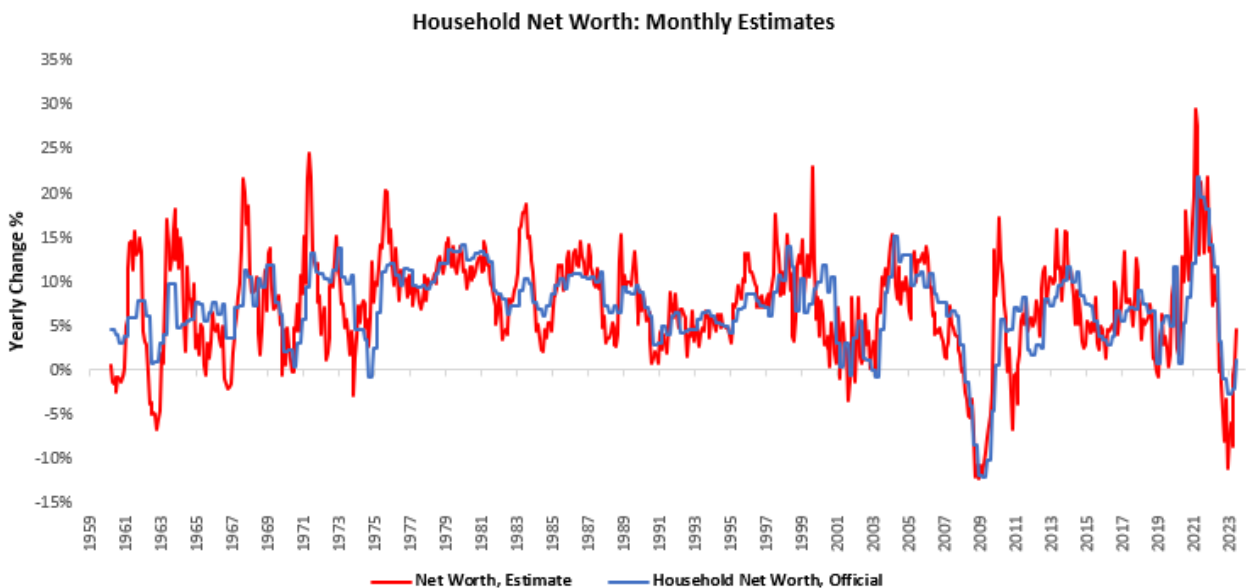
Real Personal Consumption: Top Drivers



Furthermore, this strength in real consumer spending has been broad-based. Below, we show the diffusion across sectors, which shows that consumption remains largely positive across the economy:

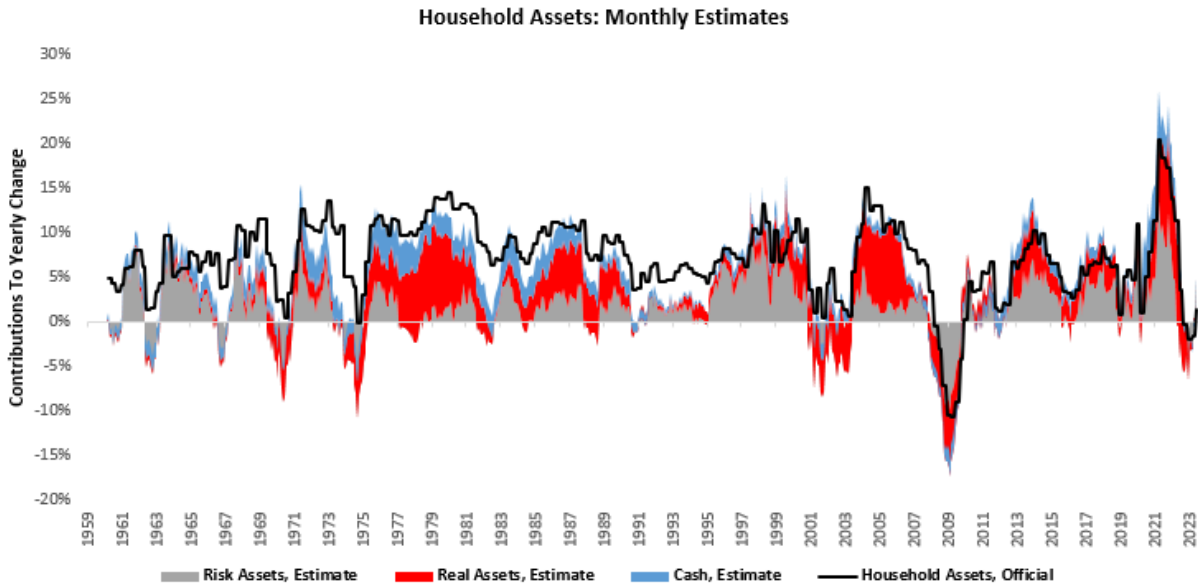


As we can see above, real consumption across spending segments remains positive. This picture is largely inconsistent with the economy being in a recession or entering one imminently. This strength remains well-supported by household balance sheets. We show estimates of household net worth below:

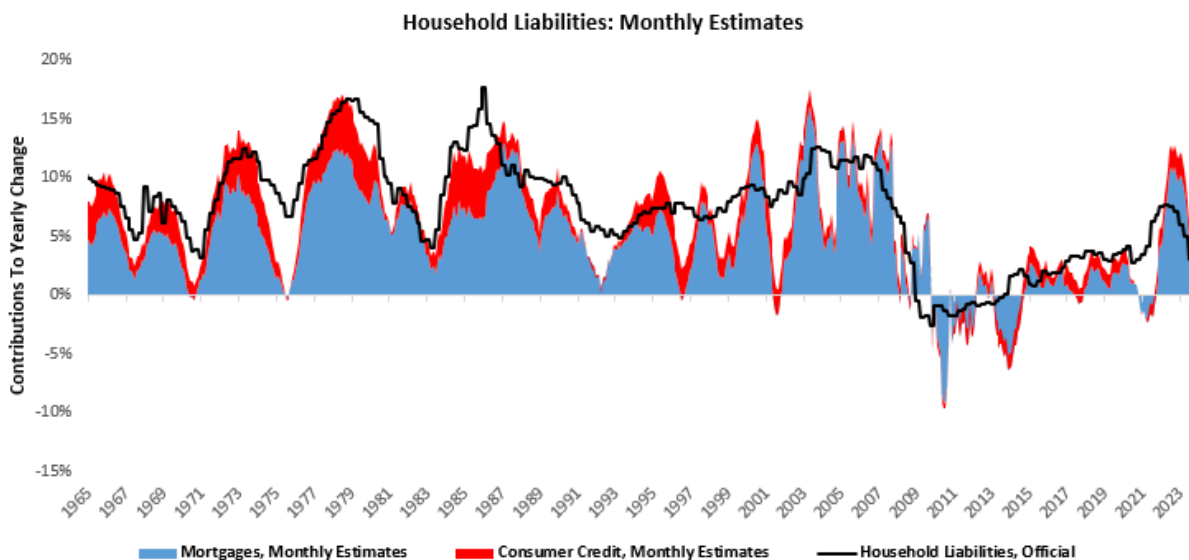


According to our latest estimates for July, household net worth increased by 3.71%, driven by a 1.76% and -1.95% change in assets & liabilities, respectively. We show the evolution of our household net worth estimates above, which show that net worth has increased 4.09% over the last year.

Over the last year, household assets have grown by 4.09%. 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 assets, real assets, and cash assets have contributed 4.96%, -0.17%, and -0.7%, respectively, to the total change in household assets over the last year.



Contemporaneously, household liabilities have fallen by -19.73%, driven by a 4.5% rise in mortgages and a -24.23% decrease in consumer credit. We show our estimates for both below, along with the official data:



As we can see above, the household financial position largely remains inconsistent with a recession. To understand the next stage in the cycle, we turn to business conditions.

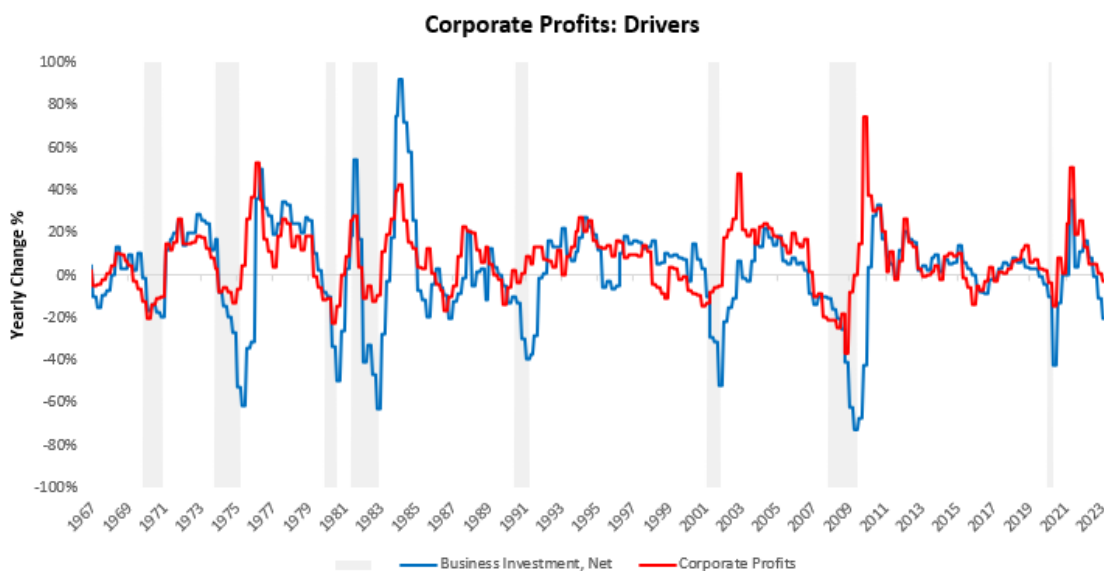
Understanding The Path To A Recession

Before we delve into conditions in the business sector, we think it is important to contextualize how we think about how a recession can evolve today in a manner mechanically and empirically consistent with history.

Recessions are a non-linear phenomenon, which makes them empirically hard to estimate using traditional statistical techniques. Recessions are categorized by significant and somewhat abrupt reversals in the natural upwards trajectory of economic growth. These multi-standard deviation events are caused predominantly by contractions in the employed population. In our view, layoffs are the defining feature of a recessionary regime, as they perpetuate a downward spiral in economic activity. Layoffs create this downward spiral by creating self-reinforcing dynamics of lower income and spending, which are typically only halted by the easing of financial conditions by policymakers. These layoffs come from businesses pulling back on their output in response to weak income and profitability, a poor outlook on future economic conditions, and an elevation in the cost of capital relative to current and expected income conditions. Therefore, if we are to understand the potential for layoffs, we need to understand the pressures that would cause them.

Today, we think that business conditions have deteriorated, but deteriorated much less than they would have if there had not been an extremely large monetary and fiscal impulse in response to COVID-19. Additionally, lockdowns, onshoring, and business innovations have created significant shortages of certain products, affording companies pricing power relative to their input costs. Said differently, many companies have been the beneficiaries of the even distribution of inflationary pressures. Furthermore, as we have shown in the previous section, consumers' financial position remains well-supported. Thus, both business investment and consumer spending have remained tailwinds for corporate profitability relative to other economic cycles.

Now, while there is a significant amount of focus in financial media on the position of households in this equation, we think that the future of business investment will drive profitability and the labor market. We show how this logic has borne out over history:



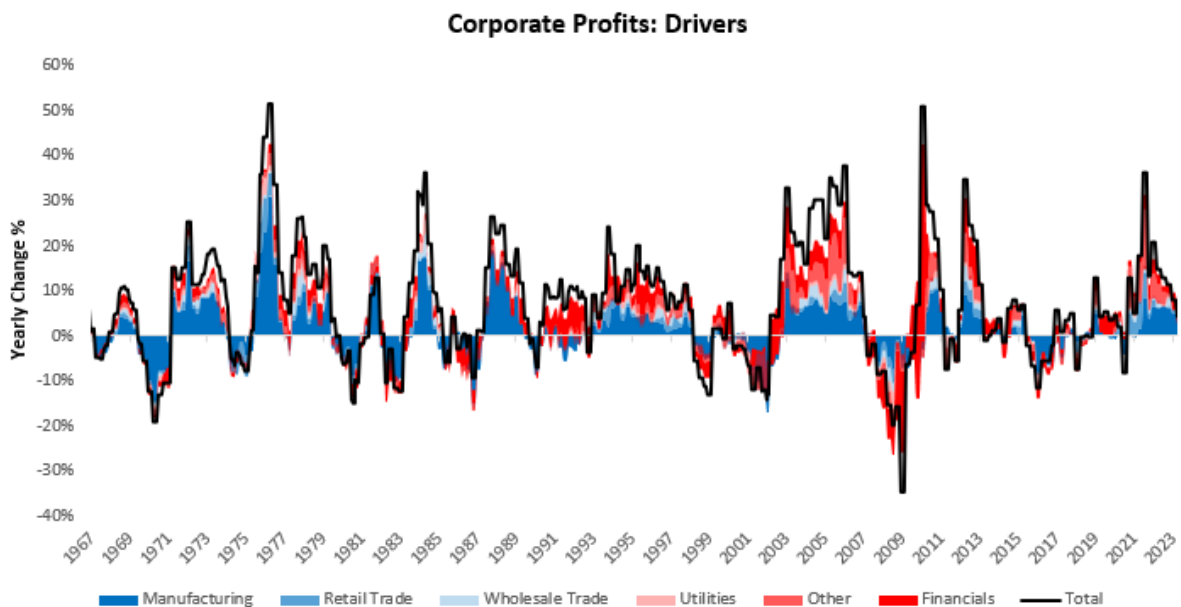
With these mechanics in mind, we turn to our next section evaluating business conditions.

Business Conditions: Manufacturing Weakness Extends

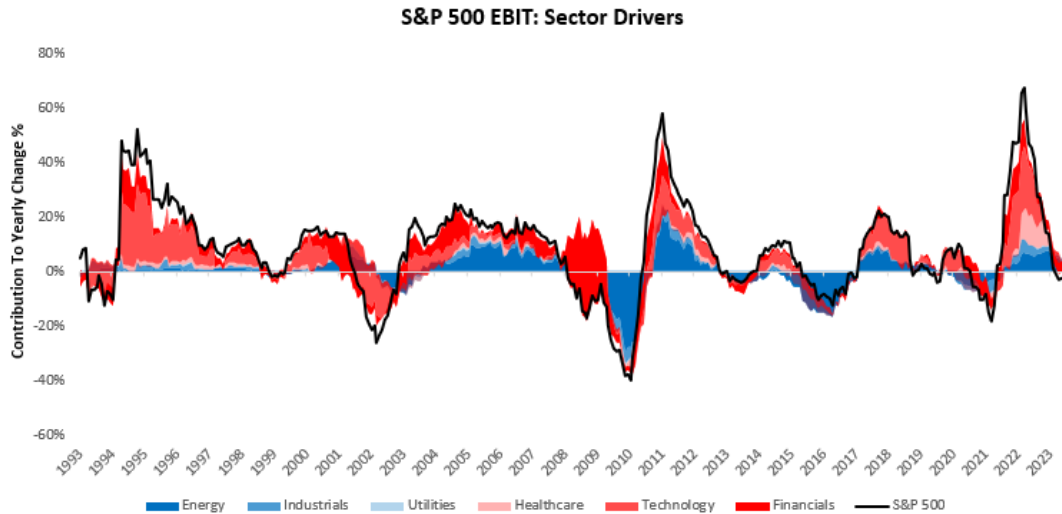
Our granular tracking of conditions shows signs of weakness emerging within the economy's manufacturing & trade sector. In the following section, we zoom in on the manufacturing picture to show the pressures on profits we see in our tracking. **Manufacturing and trade sales are turning negative, but profit growth for the same industries remains positive; we see this dynamic as unsustainable.** We begin by showing nominal manufacturing and trade sales:



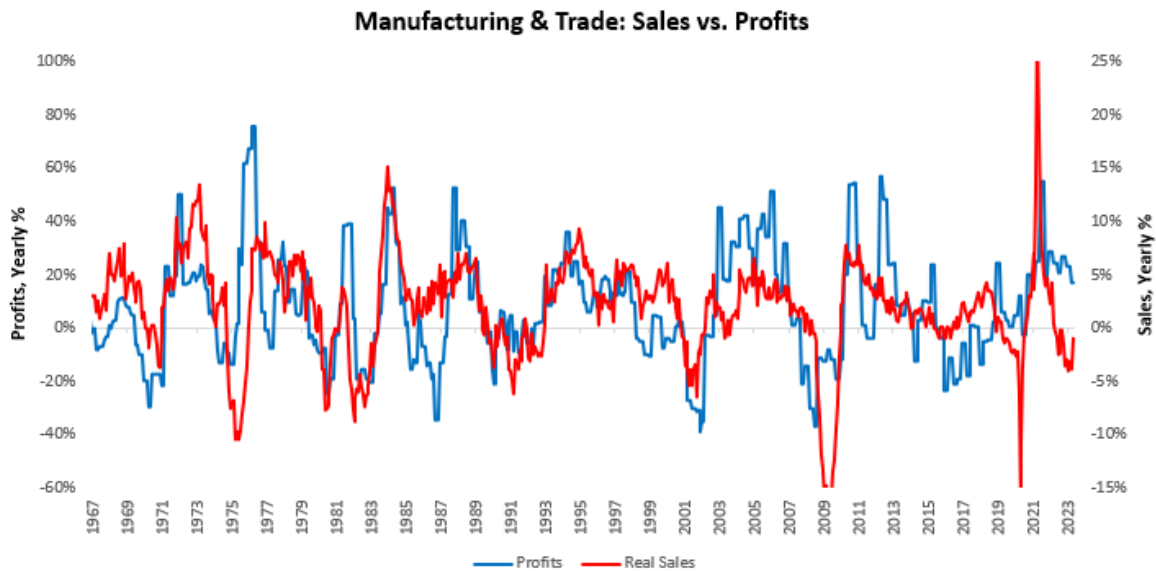
As we can see above, nominal sales across these goods-sensitive sectors have fallen across the board. However, when we look at the profitability in these sectors, we see that they are the primary drivers of US corporate profitability. Below, we show US corporate profits decomposed into their strong and weakest drivers, in shades of blue and red, respectively.



The picture above deviates modestly from S&P 500 earnings, which have market capitalization and public company bias, but nonetheless, the big-picture themes align. It is worth noting that the previous visual includes both public and private reported companies and is more comprehensive. Overall, goods-sensitive sectors have been the primary support of profits within a declining trend:

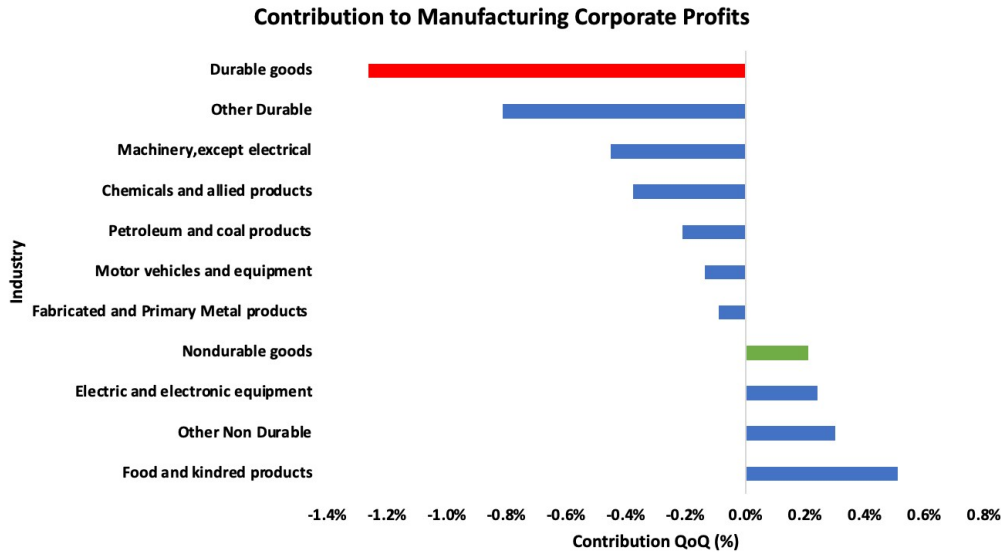


As highlighted previously, this strong profit contribution from manufacturing and trade companies comes alongside weak nominal sales. Typically, these goods-producing companies need to expand output, i.e., real sales, to maintain strong profits. We show this relationship over time below:

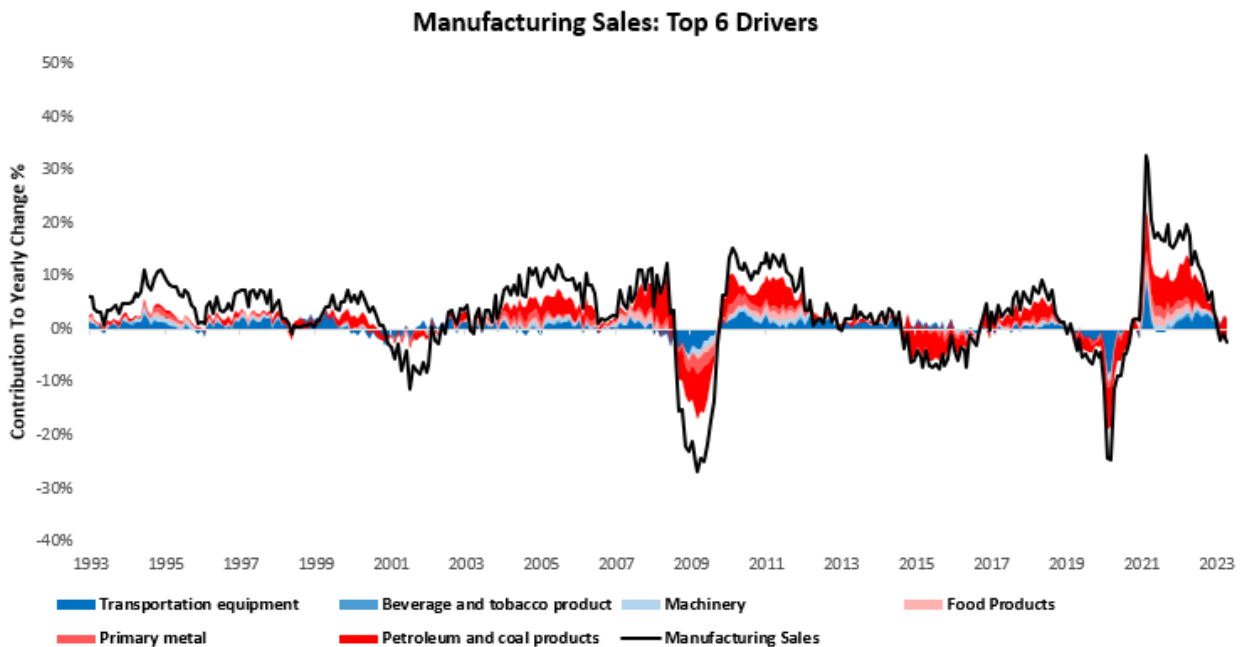


Real sales across the manufacturing and trade space have contracted, and while they have risen in recent months, this is largely due to a deflationary drop in input costs rather than an improvement in topline. We expect that the trend in nominal sales weakness will persist, keeping the pressure on profits going.

We attribute this divergence between sales and profits to pricing power created by COVID dynamics. However, we do not think marginal expansion can indefinitely power these profits. These dynamics are crucial to understanding today, particularly in the manufacturing sector. Manufacturing profits are the largest contributor to economy-wide profits today, accounting for more than 100% of profit growth. We show the composition of the most recent manufacturing profits data below:

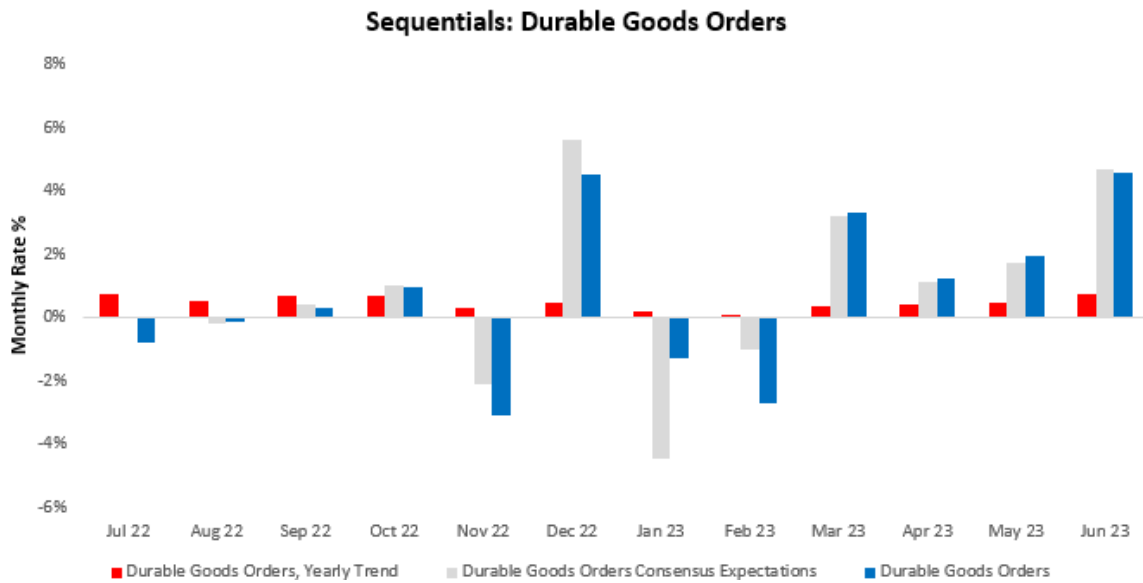


As we can see above, the most recent quarter we have official data for (Q1 2023) shows mixed manufacturing profits, with durable goods dragging and nondurable goods adding. Over the last year, manufacturers' sales have contracted by -2.55%:

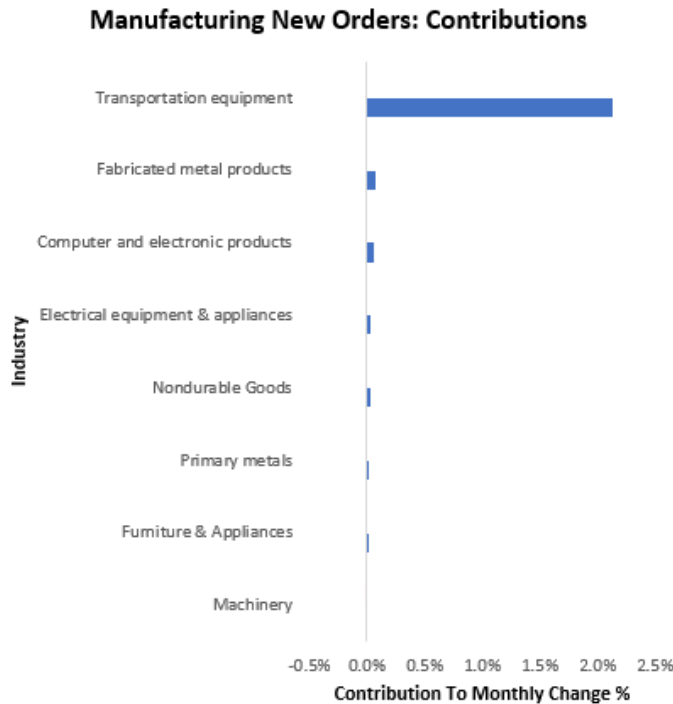


Above, we zoom out to show the six significant drivers of strength in shades of blue (Transportation equipment, Beverage and tobacco product, and Machinery) and weakness in shades of red (Food

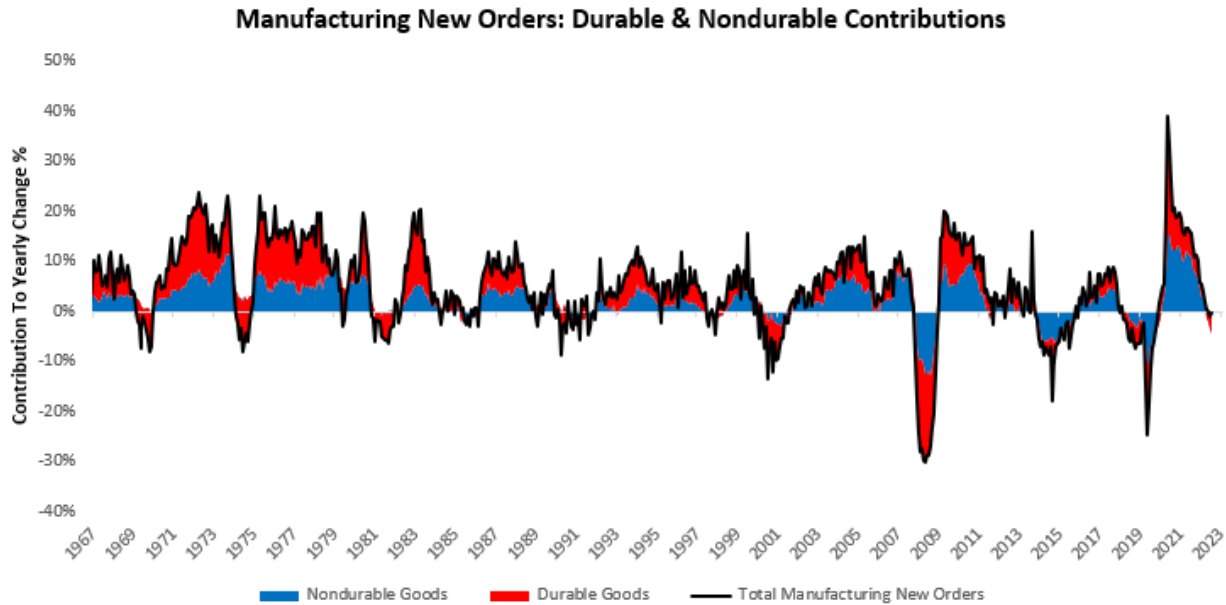
Products, Primary metal, and Petroleum and coal products). The strength in transportation has been salient across the industrial complex and largely due to acute shortages created by the shutdown in production caused by COVID-19 lockdowns. We also saw this in the latest industrial new orders data: The latest data for June showed manufacturing new orders for durable goods increased by 4.58%, disappointing consensus expectations of 4.7%. This print contributed to an acceleration in the quarterly trend relative to the yearly trend. Below, we show the sequential evolution of the data relative to consensus expectations:



As mentioned, the largest contributor to the most recent change in manufacturing new orders is Transportation equipment. We display the composition below:



This data places total manufacturing new orders growth at 4.65% in June. Over the last year, manufacturing new orders have grown by -0.18% compared to one year prior. Below, we show the contributions coming from durables (4.11%) and nondurables (-4.29%) to these changes in total industrial new orders:

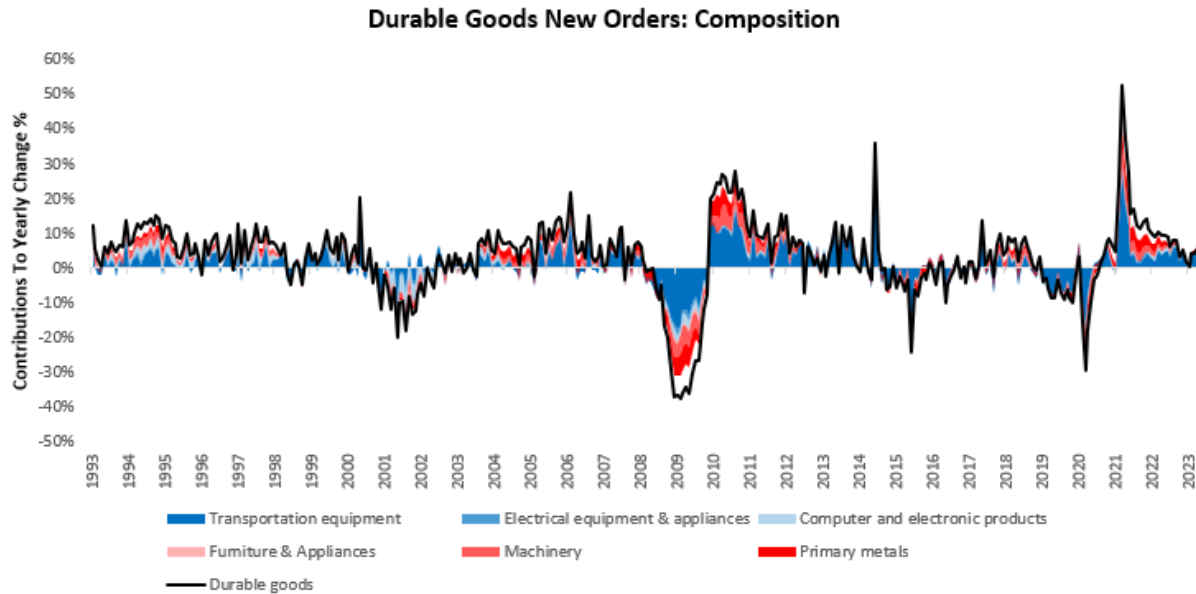


Further, we show how the sequential data have evolved for industrial goods orders. As we can see below, there has been a three-month acceleration in durable goods relative to nondurables. We show this below:

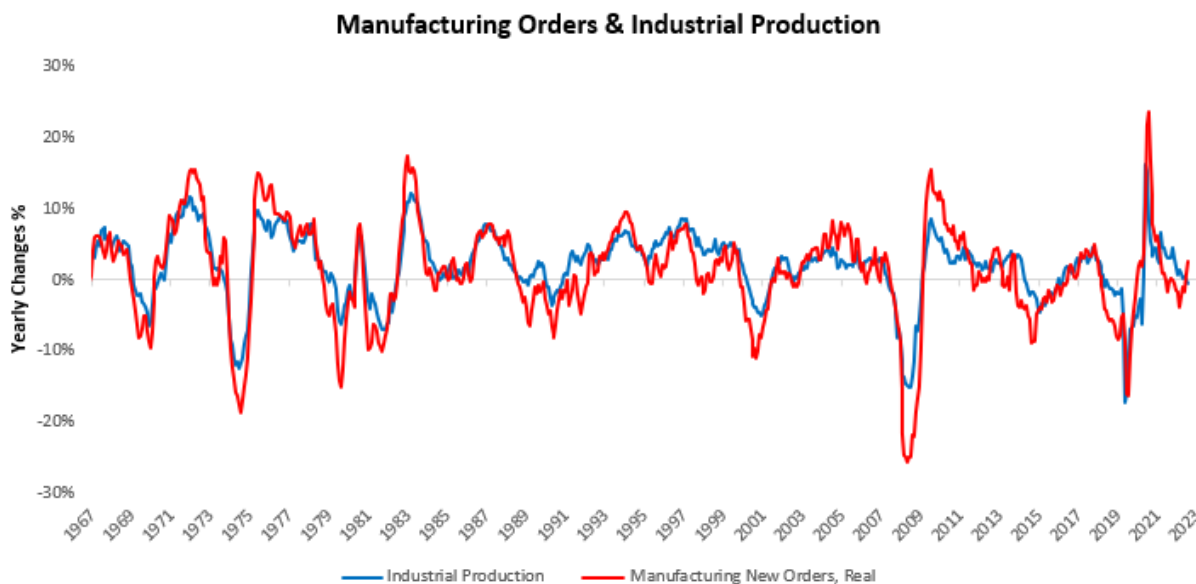
Manufacturing New Orders: Quarterly Changes, Rolling												
	Jul '22	Aug '22	Sep '22	Oct '22	Nov '22	Dec '22	Jan '23	Feb '23	Mar '23	Apr '23	May '23	Jun '23
Nondurable Goods	0.5%	-0.4%	-1.3%	0.5%	-0.5%	-1.5%	-1.3%	-0.8%	-0.7%	-1.6%	-1.9%	-0.9%
Durable Goods, of which:	0.7%	0.3%	-0.3%	0.5%	-0.9%	1.0%	0.0%	0.2%	-0.4%	0.9%	3.2%	3.9%
<i>Furniture & Appliances</i>	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<i>Computer and electronic products</i>	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%
<i>Electrical equipment & appliances</i>	0.0%	0.1%	0.0%	0.0%	-0.1%	0.0%	0.1%	0.2%	0.1%	0.0%	0.0%	0.0%
<i>Primary metals</i>	-0.2%	-0.4%	-0.1%	0.0%	0.0%	-0.1%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%
<i>Machinery</i>	0.1%	0.0%	0.0%	0.1%	0.0%	0.0%	-0.1%	-0.1%	0.0%	0.0%	0.1%	0.1%
<i>Fabricated metal products</i>	0.0%	0.0%	0.0%	-0.1%	-0.1%	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.1%
<i>Transportation equipment</i>	0.8%	0.5%	-0.1%	0.6%	-0.7%	1.1%	0.0%	0.0%	-0.6%	0.9%	3.0%	3.7%
Total New Orders	1.2%	-0.1%	-1.6%	1.0%	-1.4%	-0.5%	-1.4%	-0.6%	-1.0%	-0.8%	1.3%	3.0%

To better understand the bigger picture, we decompose the primary drivers of durable goods orders over the last year on the next page.

Over the last year, Transportation equipment, Electrical equipment & appliances, and Computer and electronic products have been the primary drivers of strength in durable goods orders, as shown in shades of blue below. On the other hand, Primary metals, Machinery, and Furniture & Appliances have dragged on growth, as shown below:

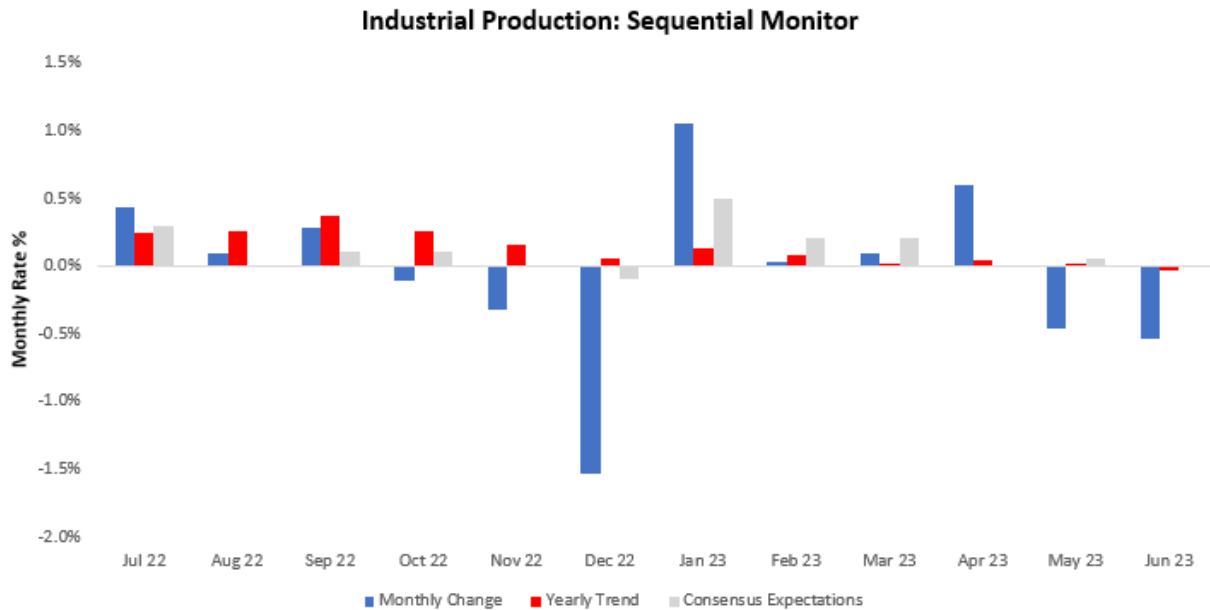


Once again, transportation spending significantly contributes to economic resilience, while commodity production remains weak. Ex-transport, the picture for durable goods is negative. We see this contraction activity supported by industrial production data. Real manufacturing orders and industrial production move hand-in-hand, with new orders fueling output. Currently, orders are consistent with the latest industrial production data. We display this below:

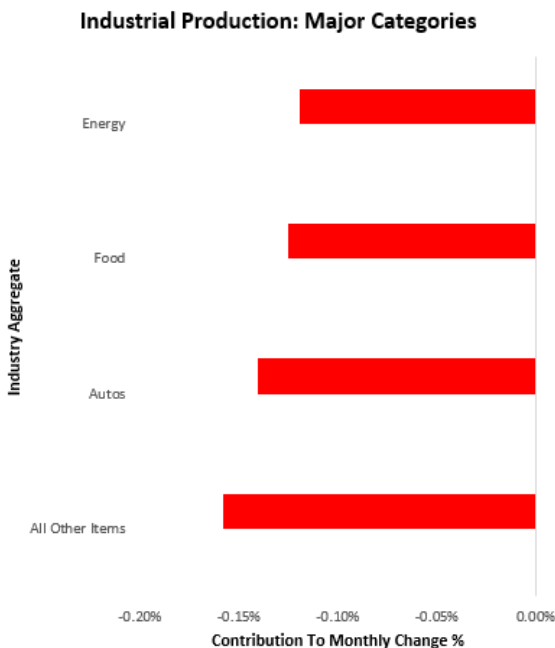
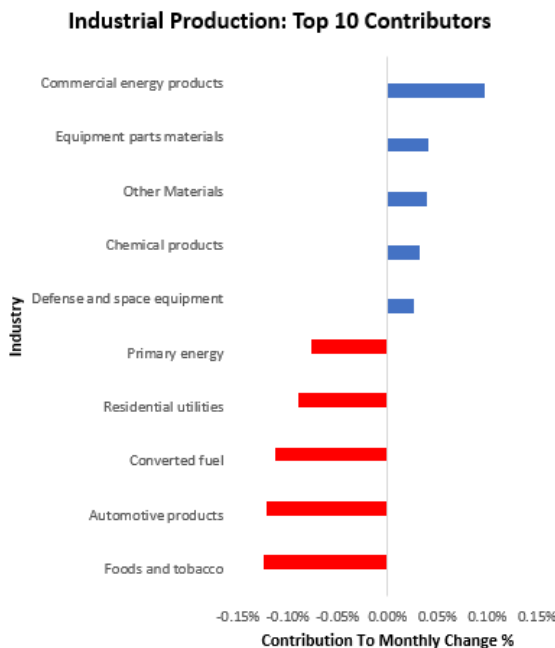


Recently, we have seen improvement in real orders, largely coming from a bout of deflation.

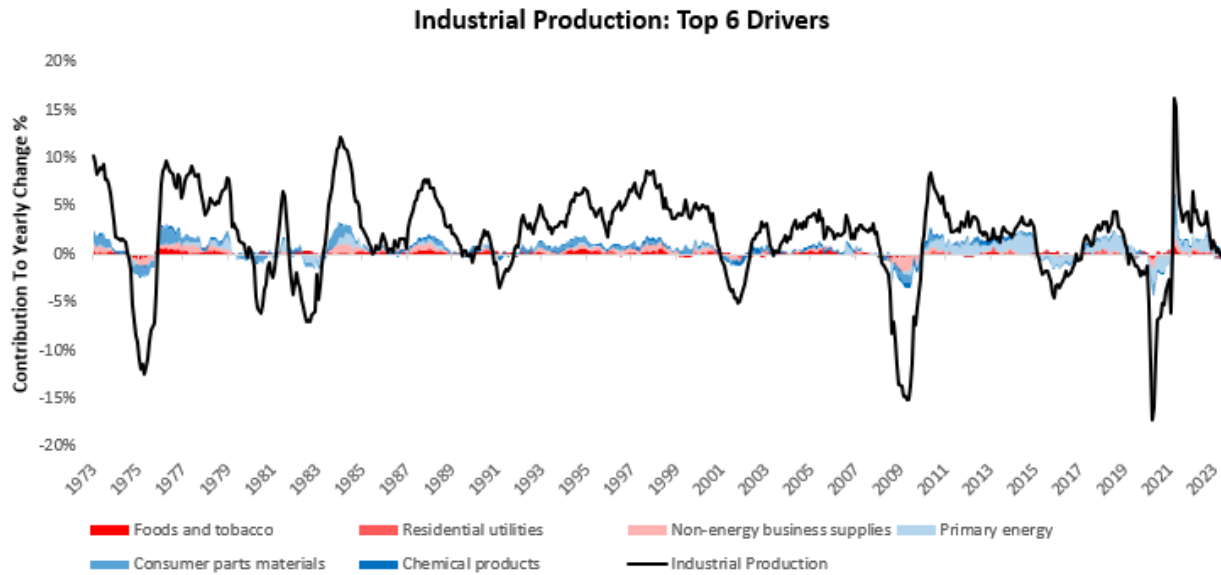
We expect this deflationary lift to dissipate, leaving nominal declines in the driver's seat. To further understand the state of the manufacturing sector, we turn to industrial production data, where we have seen some significant negative developments. The latest data for June shows industrial production declined, coming in at -0.54%. This print disappointed consensus expectations of 0% and contributed to a deceleration in the three-month trend relative to the twelve-month trend. We show the sequential evolution of the data below:



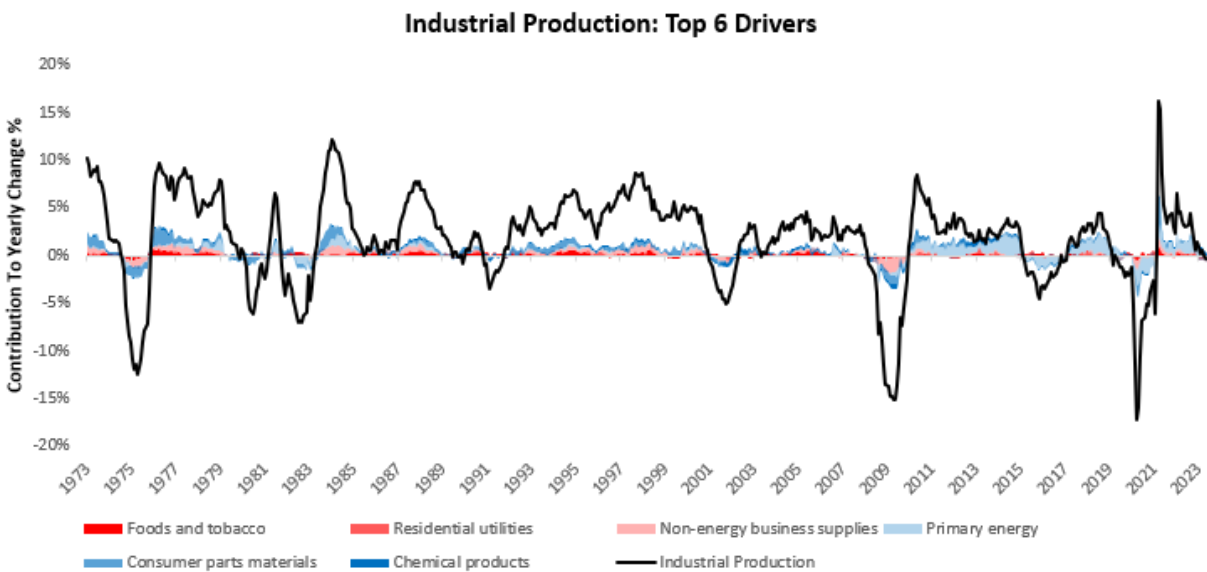
We break this print into its contributions from production coming from Food (-0.12%), Energy (-0.12%), Autos (-0.14%), and All Other Items (-0.16%). Additionally, we also showcase the top 10 contributions by industry and our industry aggregates:



We zoom out to offer further context on the dynamics of industrial production. Over the last year, industrial production has contracted by -0.43%. Below, we present the top six drivers of industrial production, with the three strongest industries highlighted in blue (Commercial energy products, Equipment parts materials, and Other Materials) and the three weakest industries highlighted in red (Foods and tobacco, Automotive Products, and Converted fuel):

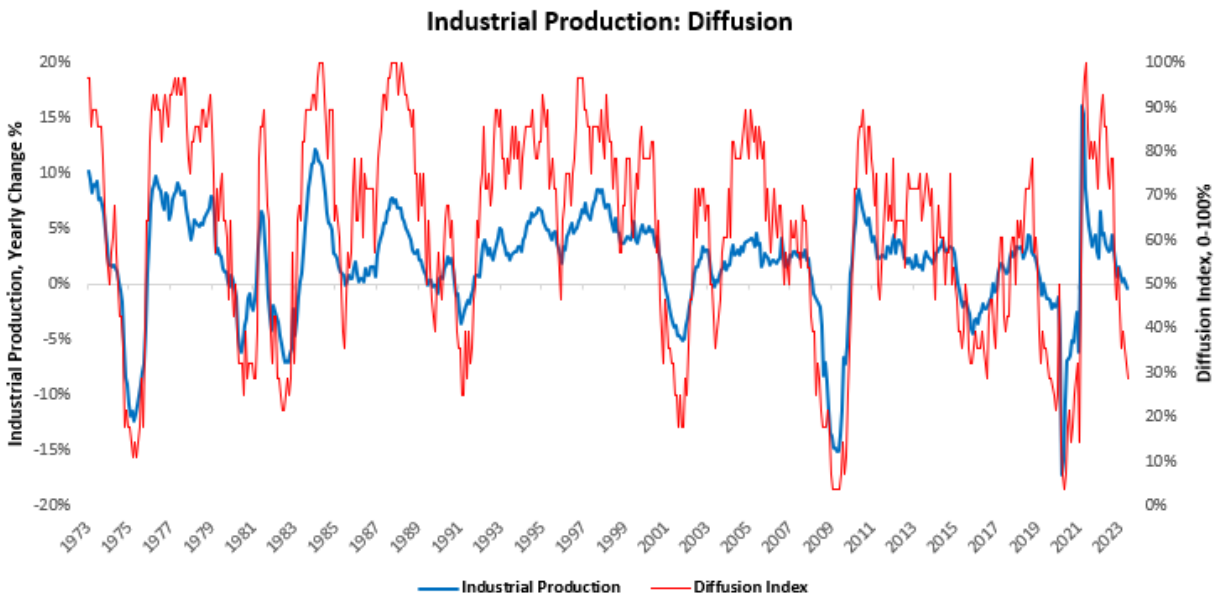


Over the last few decades, the importance of food, energy, and automobiles has risen, accounting for a significant amount of the variation in industrial production. Over the last year, food, energy, and automobiles have contributed -0.04% to the -0.43% change in industrial production. We show this impact below:

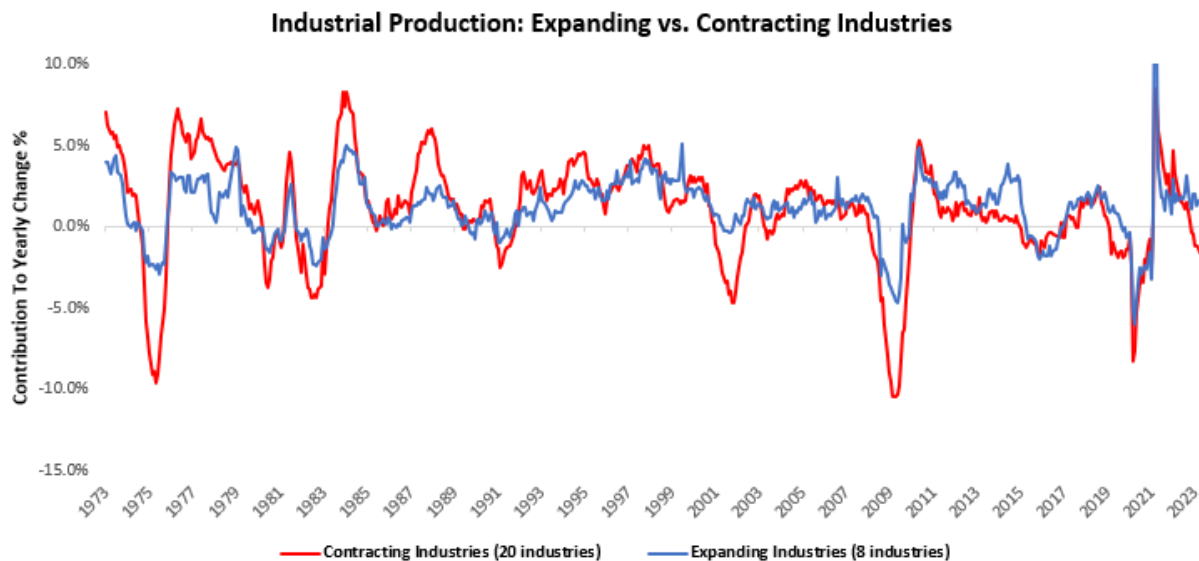


To further assess the health of the current contraction of industrial production, we examine the diffusion of the 28 subsectors we track. This process involves examining the number of industries that

are expanding versus the number of industries that are contracting. We find that 71% of industries are contracting. Below, we visualize how a diffusion index has generally been a good barometer of the durability of upturns and downturns in industrial production:

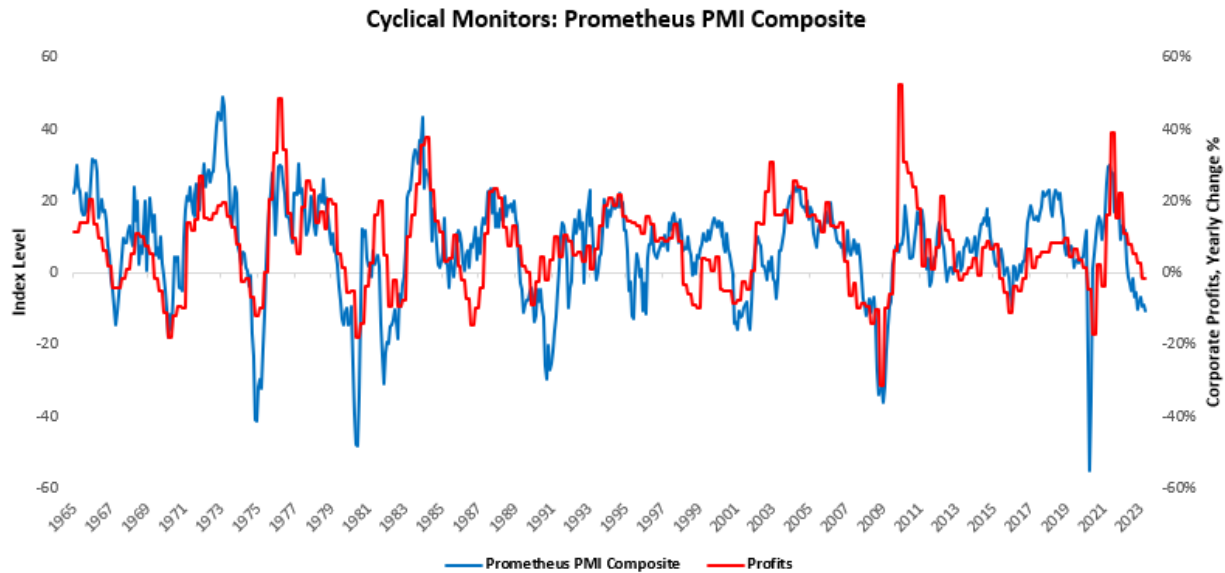


To elaborate further, eight industries are currently expanding and contributing 1.24% to industrial production, compared to 20 industries showing contraction and detracting -1.66% from industrial production growth compared to one year prior. We visualize their respective weighted contributions below:

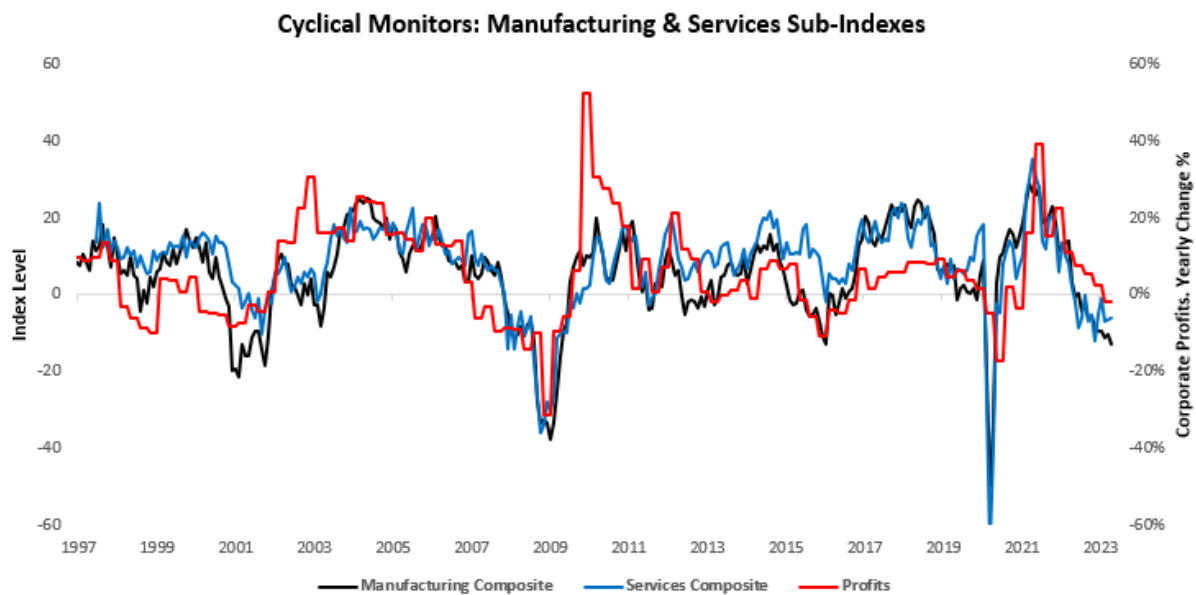


Overall, current industrial production and activity point to broad weakness, which is likely to be sustainable unless orders rise dramatically. We see this as unlikely given where we are in the business cycle and the pressures in place. Furthermore, business business outlook remains weak. To gauge manufacturers' assessment of business conditions, we turn to PMI's.

As of the latest available data, our PMI composite now shows a reading of -5.87. This was a sequential acceleration from one month prior and an improvement in the three-month trend. PMIs are generally strong directional indicators of where we are in the profit cycle, as PMI respondents manage inventories and orders in response to their outlook on revenue and profitability. Below, we offer the latest readings of our PMI Composite, which offers us a sense of the pressures on profitability:

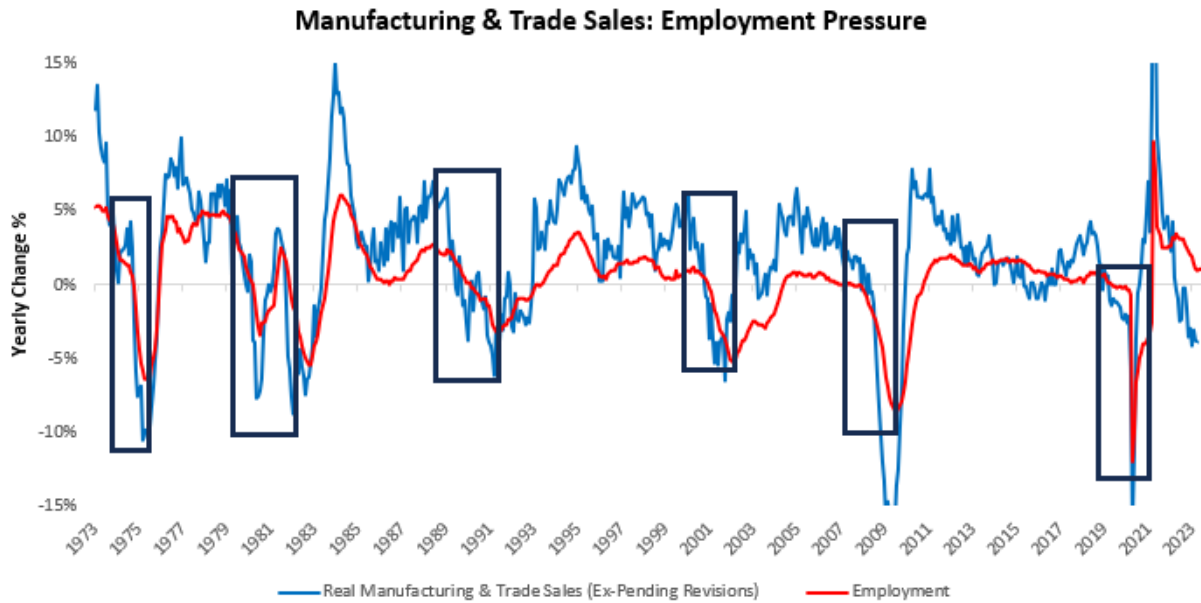


PMI indicators are typically biased toward the manufacturing sector. While this does indeed make sense since production is largely driven by the manufacturing sector, we think it is important to also separate these sub-indexes to understand the pervasiveness of the current trend in PMIs. Currently, our Manufacturing and Services composites are showing readings of -8.91 & -0.55, respectively, signaling consistency within the current trend:

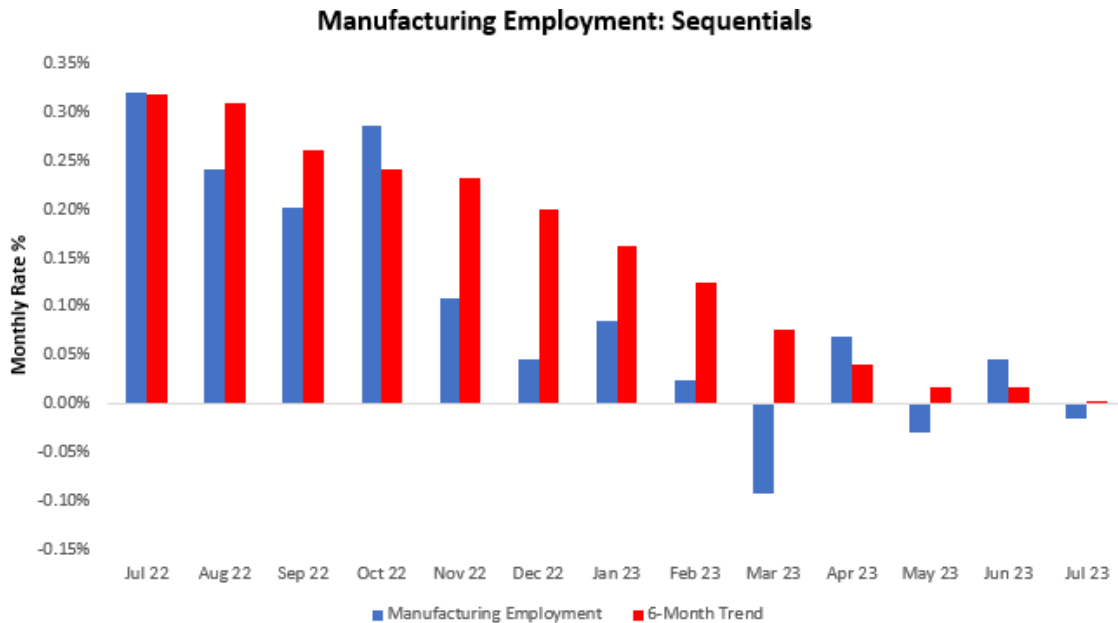


Overall, we see the wheels turning in the manufacturing sector toward a meaningful slowdown.

How much of an impact this can have on economy-wide growth dynamics remains an open question and will depend on the severity of the prospective downturn in manufacturing. We show the broader dynamic and highlight how declining sales have usually resulted in declines in employment:

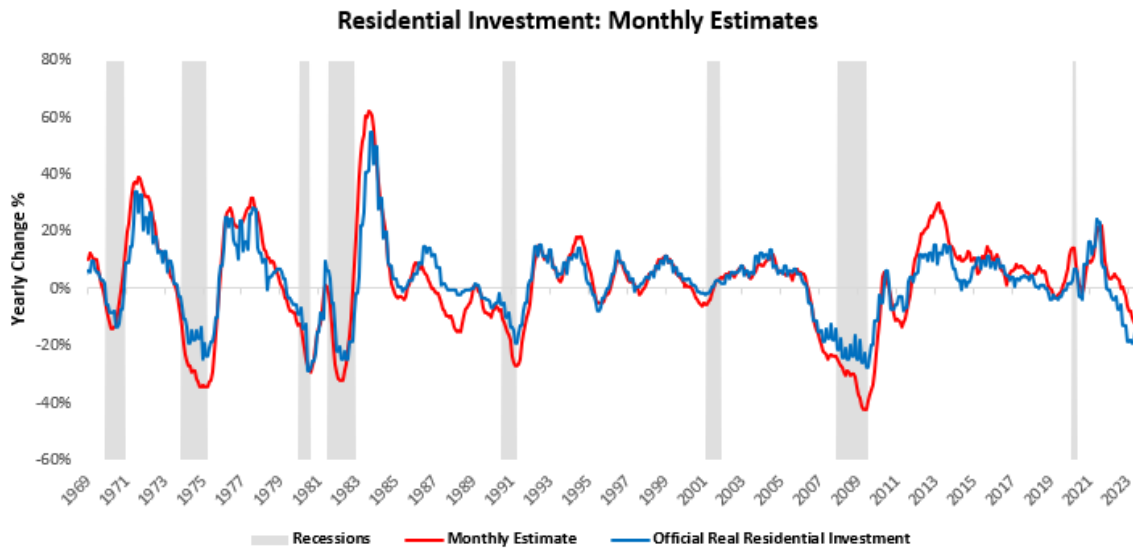


Additionally, we zoom into the recent sequential data for manufacturing employment, which shows the six-month trend in manufacturing employment approaching contraction. We think this will be a key variable to watch in the coming months to understand the progression of the manufacturing sector.

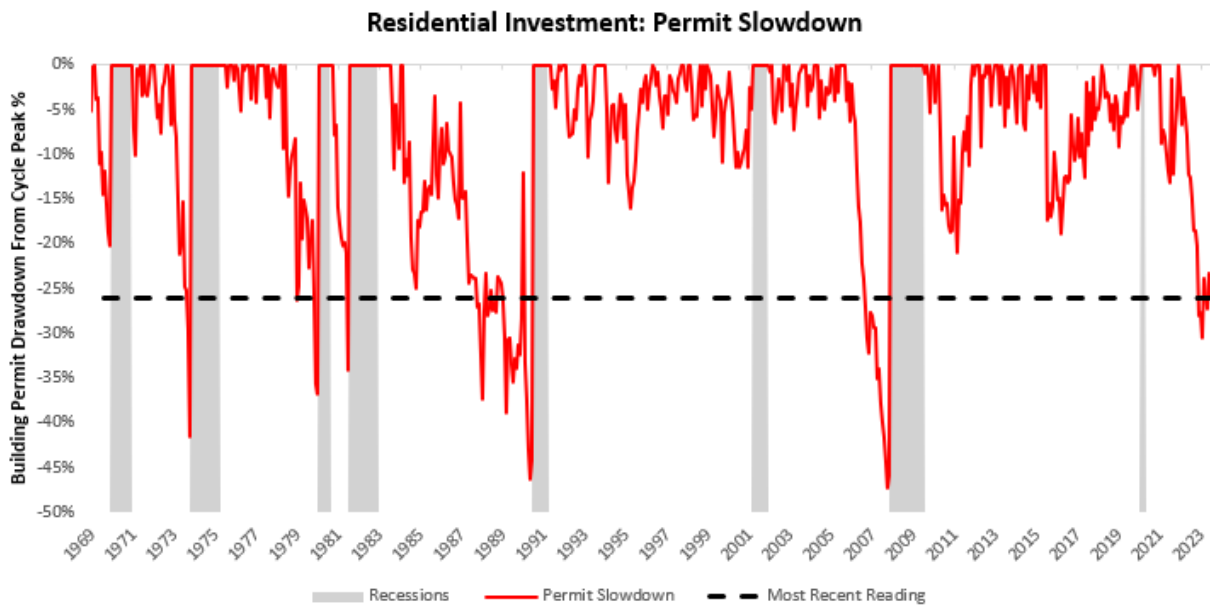


While conditions have moved in sync with traditional cycles in manufacturing, many areas have not. In particular, two large areas that have created resilience in the economy are non-residential and fiscal spending.

We have detailed the dynamics in construction in prior notes; therefore, we shall not spend too much time on the underlying detail. Our latest monthly estimate place real residential investment at -9.02% versus one year ago.



These numbers have expanded by approximately 1% over the last quarter, but we think these are likely to be a counter-trend move. The latest data shows that building permits are off their cycle highs by -26.03%. Housing-led recessions usually begin when this measure of cyclical weakness is around -35%, suggesting that we are within the ballpark of a recession:



Traditional risk factors to the economic cycle continue to build, though several non-traditional factors continue to support resilience in the economy. These cross-currents bring us to the fiscal picture, which we discuss next.

Fiscal Impulse: Issuance Improves NGDP, Hurts Liquidity

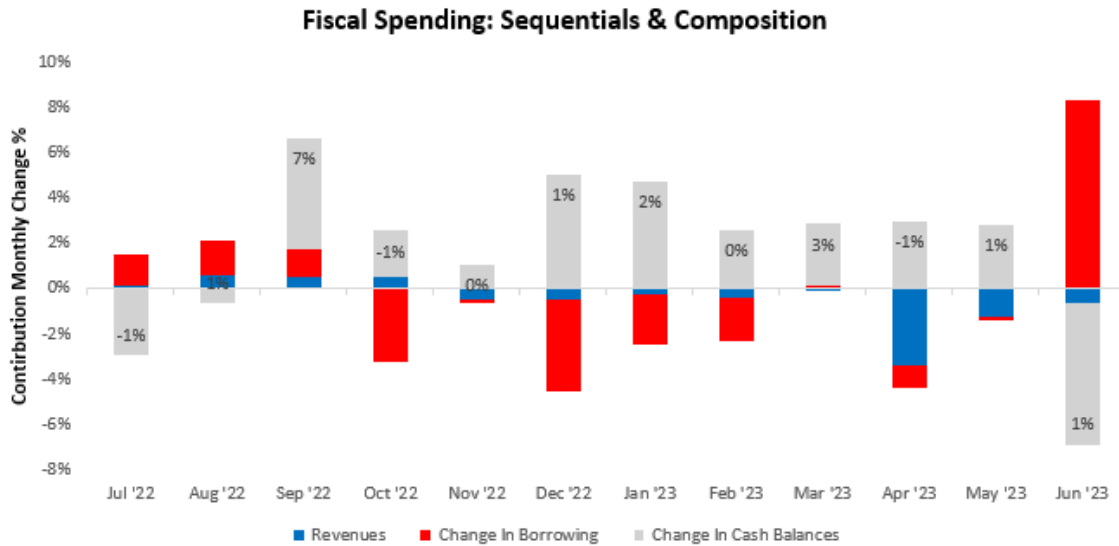
Before diving into the fiscal picture is important to explain the mechanical impact of the fiscal impulse, funded by treasury issuance. The first is the effect on nominal GDP, and the second is the impact on the liquidity ecosystem.

When the treasury borrows, it is largely reflective of ongoing spending or slated spending. Mechanistically, spending can indeed occur even before the borrowing has occurred as the government is the issuer of the currency, but from an accounting perspective, these values are always reconciled, i.e., borrowing is consistent with spending. When the treasury borrows, it is because government revenue falls short of spending requirements. This deficit has two impacts: first, it is a boost to nominal spending. This appears in incomes via government employees & income transfers and in spending through government investment & consumption activity. All else being equal, this spending is a boost to NGDP. Now, if this spending is financed by borrowing, i.e., a deficit, this spending becomes supportive of private sector savings and profits. Whether this benefit flows to households or corporations depends on economic circumstances. Nonetheless, what's important to recognize is that the government sector deficit flows to the private sector as a benefit. This benefit does not come for free. Deficits need to be financed by the domestic private sector, foreign investors, or monetized. Each source has its costs, and these are beyond the scope of this note. We think what is important to take away is that government deficits will turn into private surpluses. Thus, deficit spending is largely stimulative to the economy in the immediate term, both in terms of GDP and profitability.

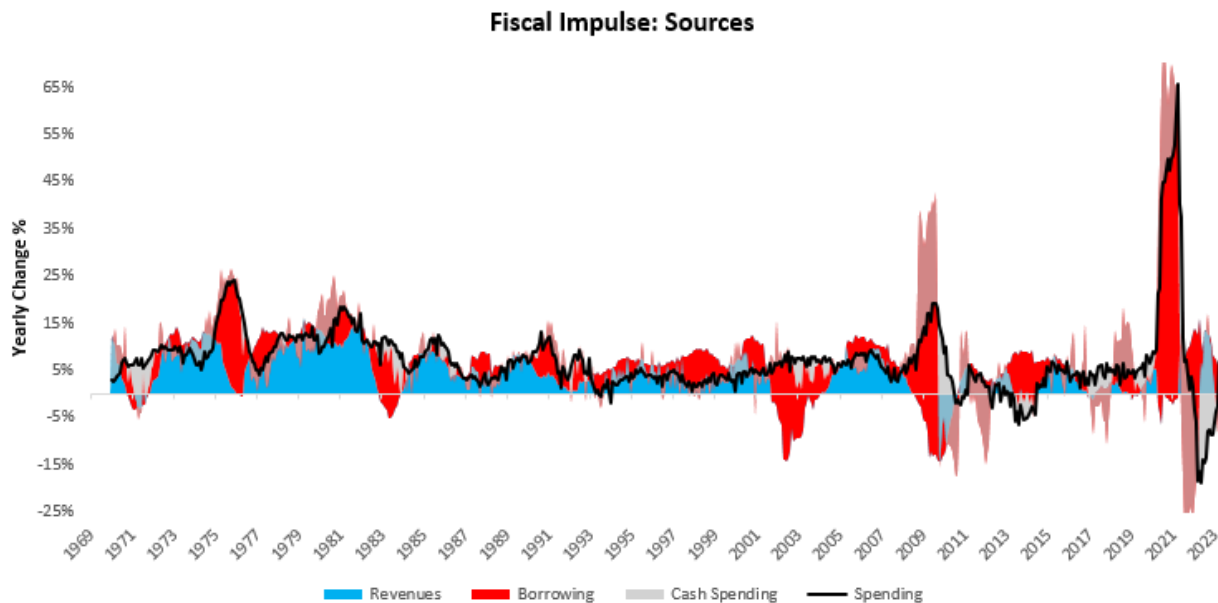
While this deficit is stimulative to activity, it also has an extremely important impact on financial conditions and liquidity. When the government (Fed or Treasury) borrows money, it creates a liability for itself and an asset for the private sector. These assets are the highest-quality assets for any given duration. They have negligible credit risk because the government is the issuer of the currency, and its ability to repay any outstanding debts isn't mechanically in question – though, at times, politically, it may be. Therefore, for any given duration, US government securities sit at the very top of the liquidity hierarchy, i.e., these securities are close to holding cash. Therefore, the more government assets as a stock of outstanding assets, the more liquid the asset base. Now while the more government-guaranteed securities for a given duration there are system-wide, not all securities exist at the same duration. The longer the duration of an asset, the more risk it exposes the holder to. Thus, while long-duration government bonds may have no credit risk, they have substantially more risk than a fixed deposit at the bank.

Putting these dimensions together, the amount of liquidity provided by the government depends on both the gross value of the issuance, but also the duration of this issuance. All else equal, large-scale issuance at a very short duration is very stimulative. Conversely, low issuance with a long duration is less liquidity-enhancing. There is nuance to these calculations, but this high-level template is helpful. Now that we have established our thinking on the mechanics, we turn to current conditions.

Over the last month, fiscal spending rose by 1% versus one month prior, driven entirely by new borrowing. We show this below:

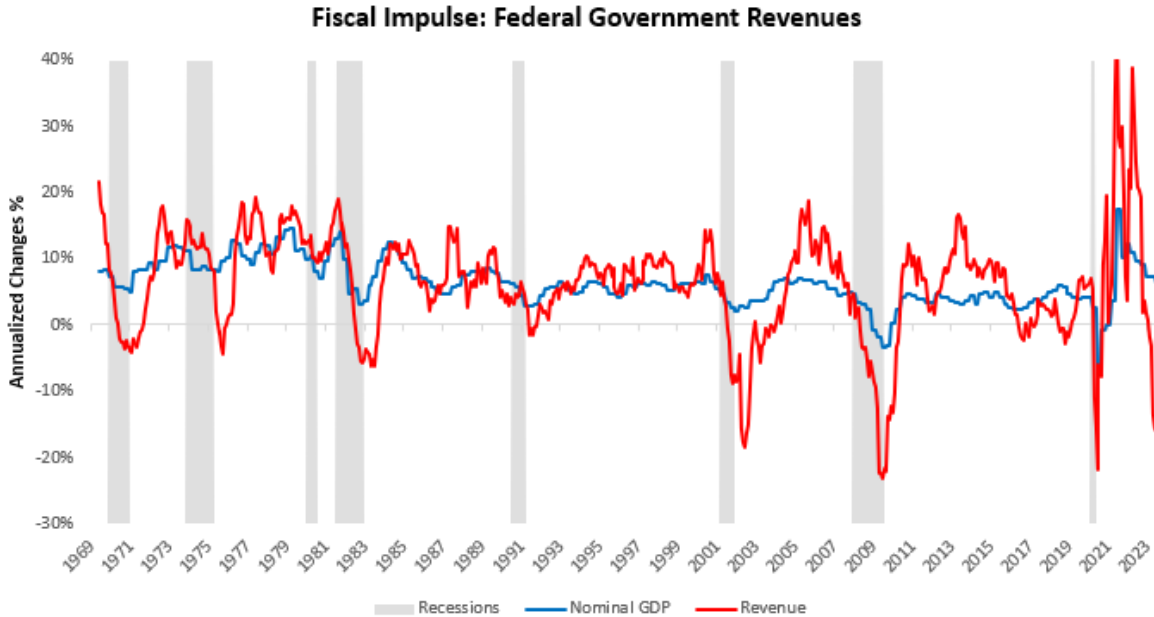


Over the last year, spending has moved from being financed by government cash holdings to now being financed by new borrowing. The acceleration in this spending has been significant and additive to both income and spending in the economy. Below, we show the big-picture attribution of yearly changes in fiscal expenditure:

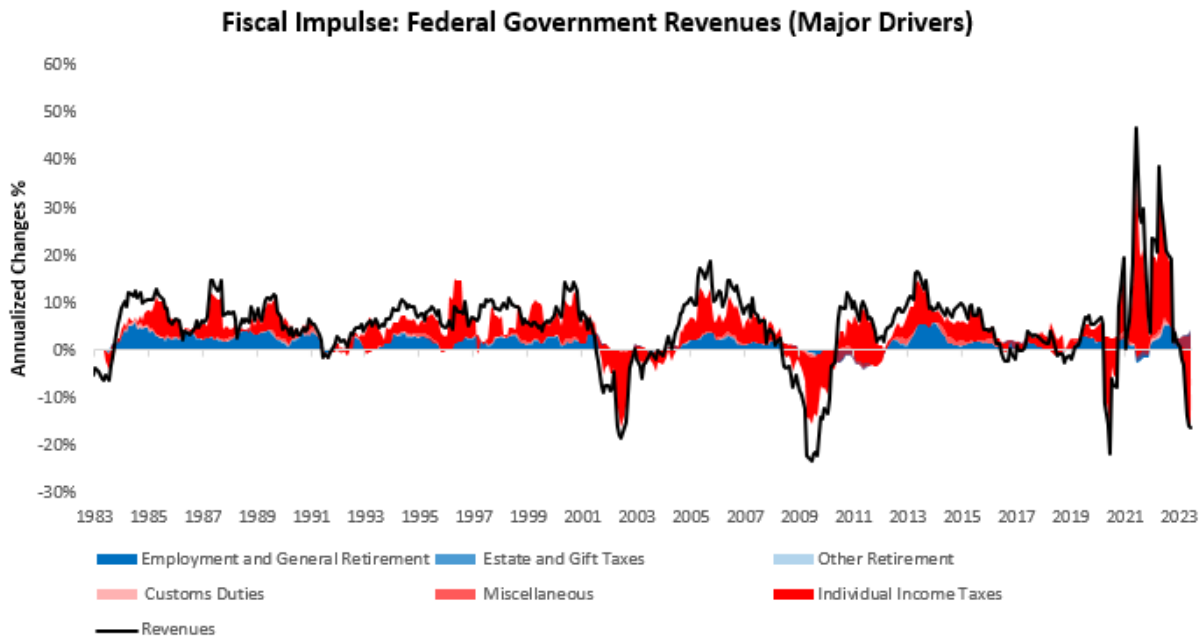


This fiscal spending has provided a modest but continuous boost to GDP. At the same time, federal revenues have continued to decline. This type of deficit spending is usually consistent with a slowdown in the economy and a sign that automatic stabilizers have kicked in. We offer perspective on this next.

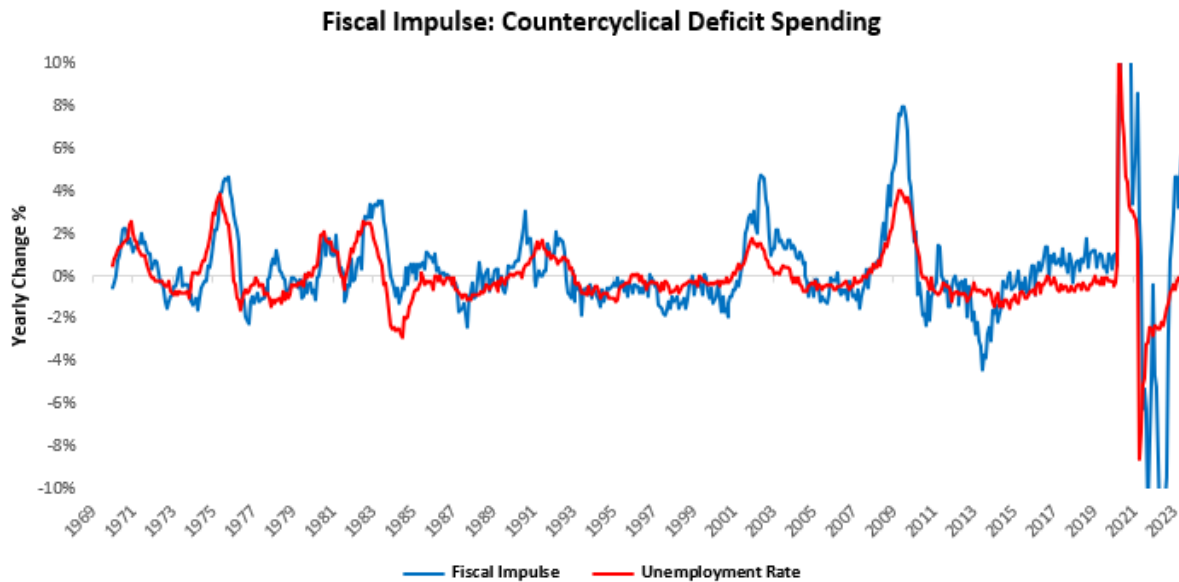
Below, we show how barring a major change to the tax code, federal revenue largely rises and falls with nominal GDP. We see more volatility in fiscal revenues, largely due to asymmetries created by tax revenues falling dramatically during profit contractions and inventory valuation effects on net income for businesses. As we can see below, government income has deteriorated meaningfully:



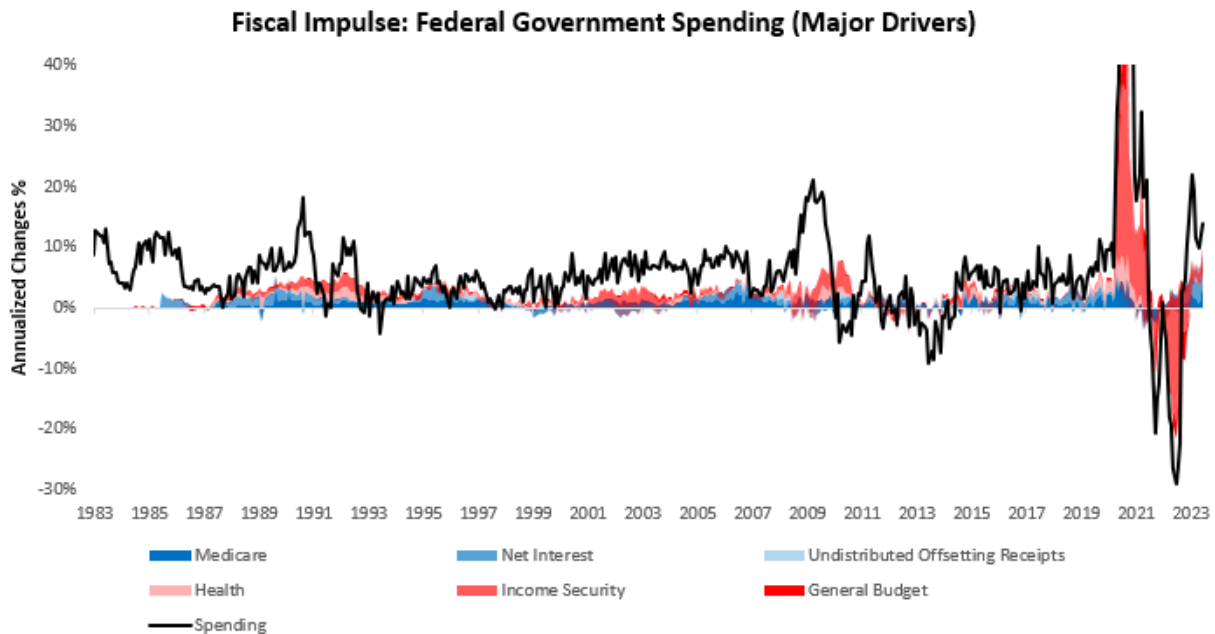
We drill down into the drivers of this decline in tax revenues. Below, we show the primary drivers of strength and weakness in tax revenues in shades of red and green, respectively. The primary driver of the decline in taxes has been the weakness in individual income taxes:



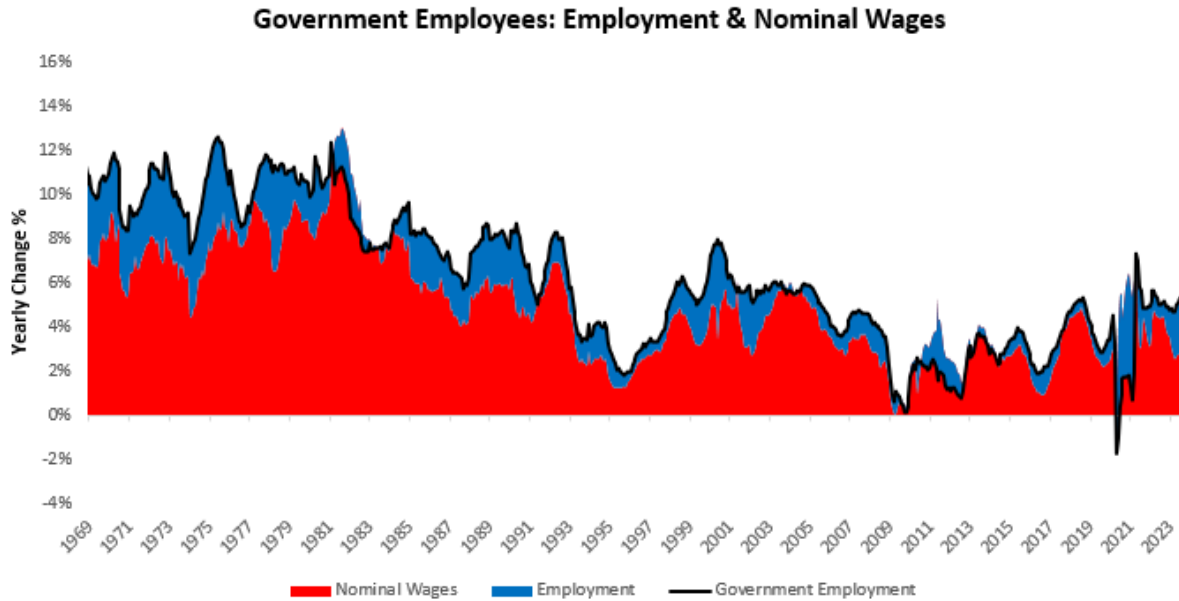
Individual income taxes have fallen, likely as capital gains tax dwindled and government benefits passed on to individuals fell. Importantly, employment taxes are not driving the declines in government tax collections, reflecting a strong labor market. On the other side of government revenue is government spending. We net these two items to measure the fiscal impulse as a share of GDP. This fiscal impulse is proportional to new borrowing changes plus cash holdings spent. Typically, this spending is countercyclical, i.e., it expands as the economic labor market softens. We show fiscal impulse relative to GDP below:



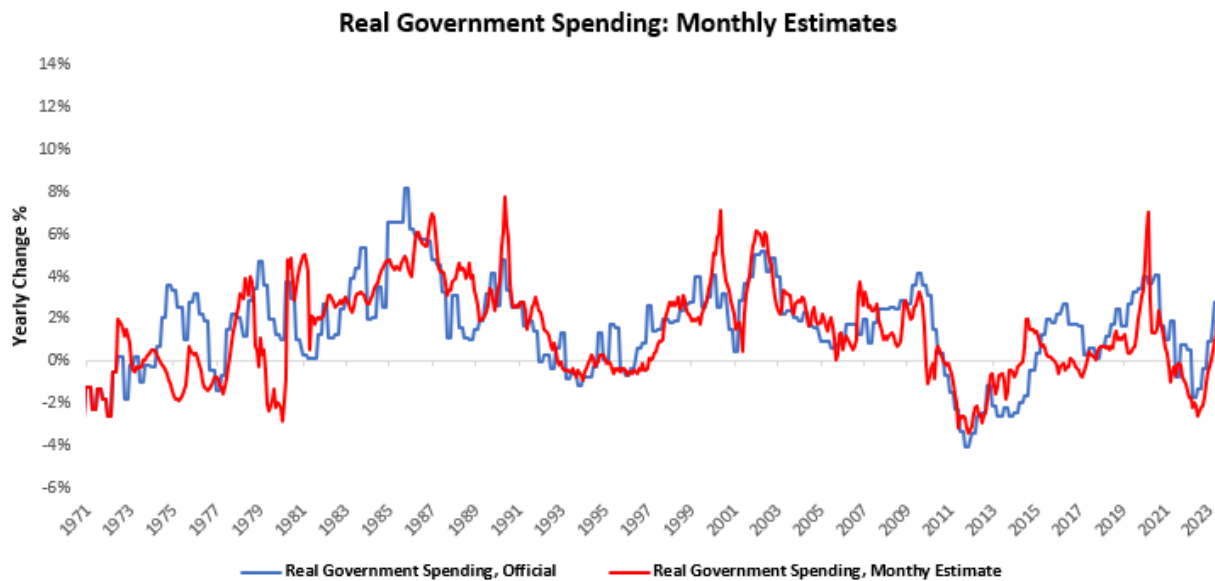
As we can see, the fiscal impulse has risen considerably, typically indicative of automatic stabilizers kicking in. However, when we look through the drivers of fiscal spending, we see that it is not automatic stabilizers but rather fixed obligations in the form of Medicare and interest payments driving spending:



We have seen this broader government stabilization in both incomes and spending. Below, we show how government employment has continued to remain resilient:

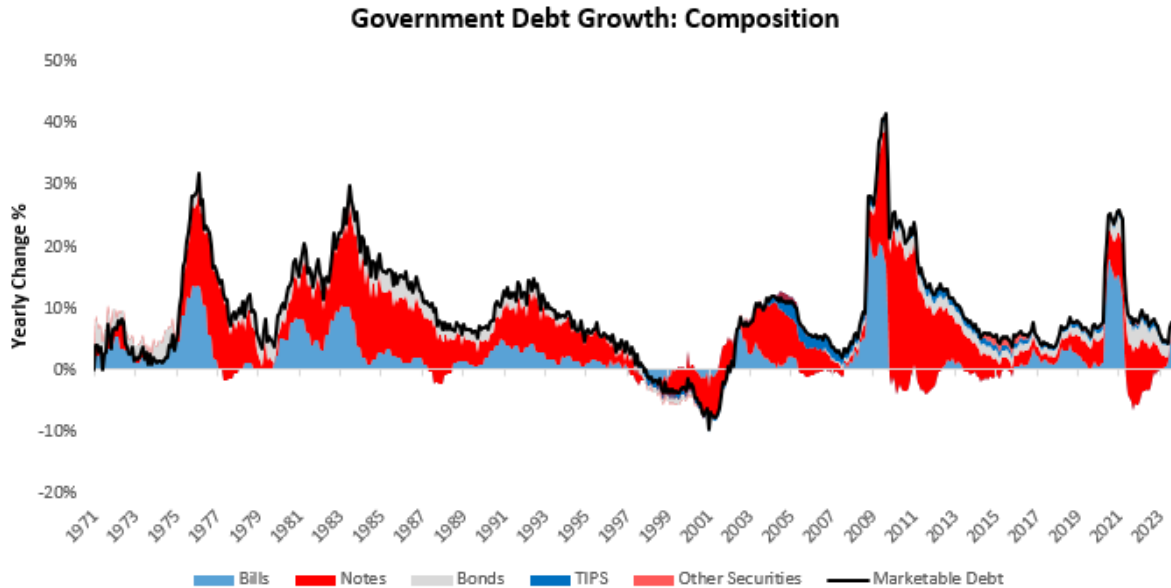


With nominal employee income growing at 6%, government wages account for 2% of this growth and are unlikely to contract. While government employment has supported incomes, government consumption, and investment have supported spending over the last six months. We show our estimate of the impact on GDP and official GDP data below:

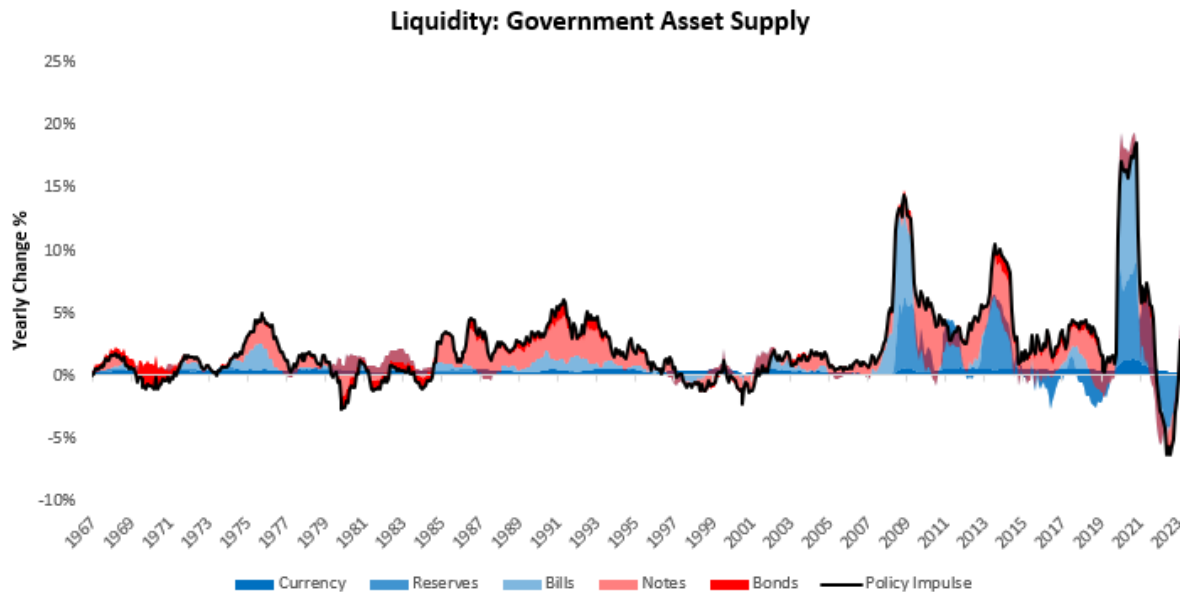


Government deficits are countercyclically boosting income and spending, but not due to automatic stabilizers. Sustained deficits to meet fixed expenses (employment, social benefits, and interest expense) will likely boost nominal GDP. This picture will likely add to the resilience of nominal activity.

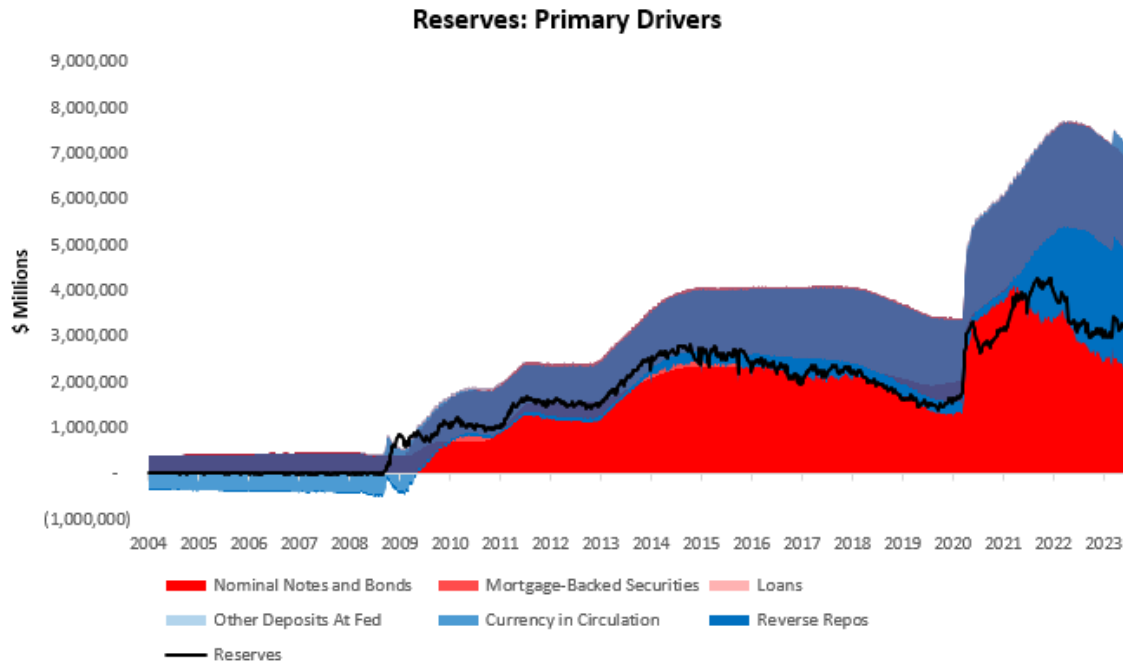
Now that we have discussed the first-order impact of government spending, we turn to its impacts on the liquidity ecosystem. The coming fiscal stimulus is likely to be financed by the issuance of long-term securities, a significant change from recent issuance patterns, wherein the government largely financed its borrowing via bills. Below, we show the yearly net issuance of treasury securities:



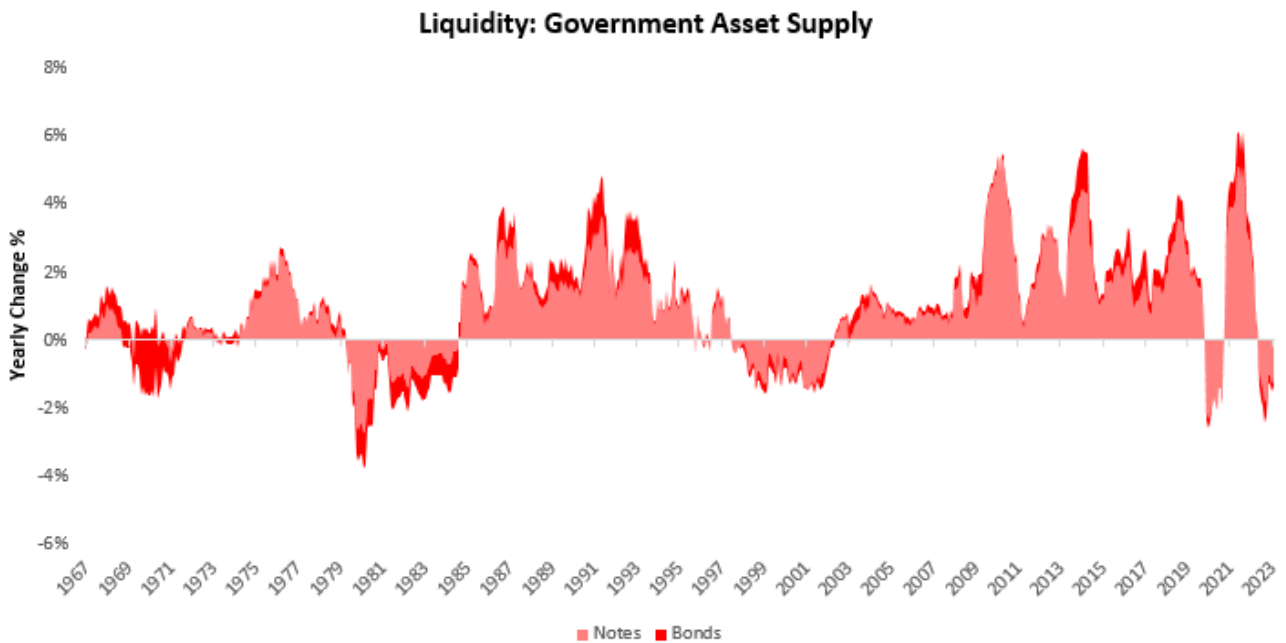
As we can see above, almost all the recent growth in government securities has come from bill issuance. Due to large amounts of short-duration assets in the system, and technicals around the RRP facility, this bill issuance was easily absorbed by the private sector. This expansion was a net enhancement of liquidity relative to the recent past. We show the impact of aggregate government asset supply on liquidity conditions below:



As we can see above, the recent issuance of bills and the slowdown in the drawdown in reserve balances at the Federal Reserve were significantly positive liquidity impulses. We show the primary drivers of this flatlining of reserve below:

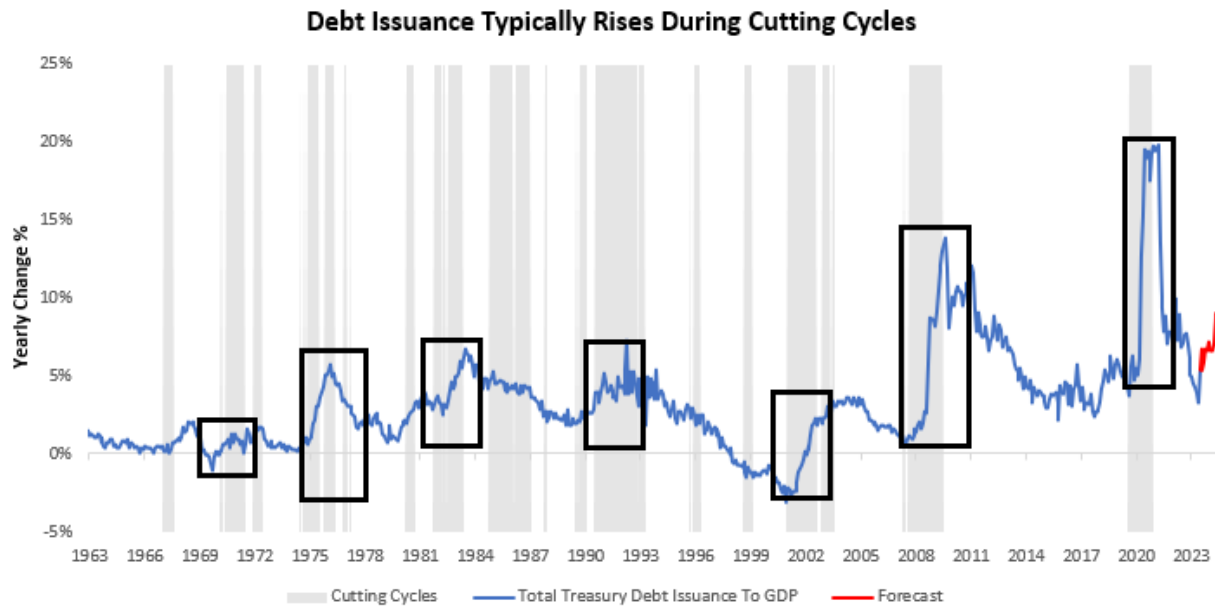


As we can see above, while the run-off of securities continued as expected, reverse repo outflow offset these declines, keeping reserves stable. This offset will likely dissipate as more duration issuance comes to the forefront. Importantly, with the current dynamics in place, coupon issuance will drain liquidity, as it has been over the last year. We show our measures below:



As shown above, notes and bond issuance have detracted from liquidity conditions.

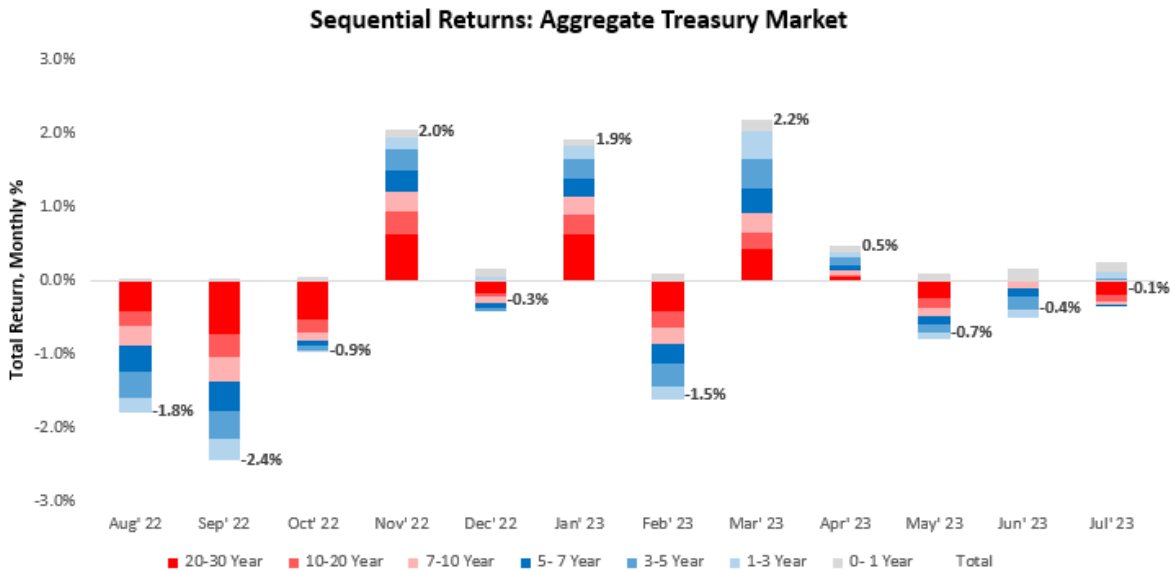
In our assessment, the coming issuance is likely to drag liquidity conditions as the private sector will likely have limited ability to pull back on issuance. What is critical to recognize is that the private sector must absorb this issuance; there is no way around it. The question remains what will be the clearing price for these securities that will allow this issuance to be absorbed? We think that historical analog may be potentially misleading here, as interest rates were being cut, not raised in prior cycles of increased debt issuance. Cutting cycles improve liquidity conditions and make it easier for the private sector to absorb treasury issuance. We show this below:



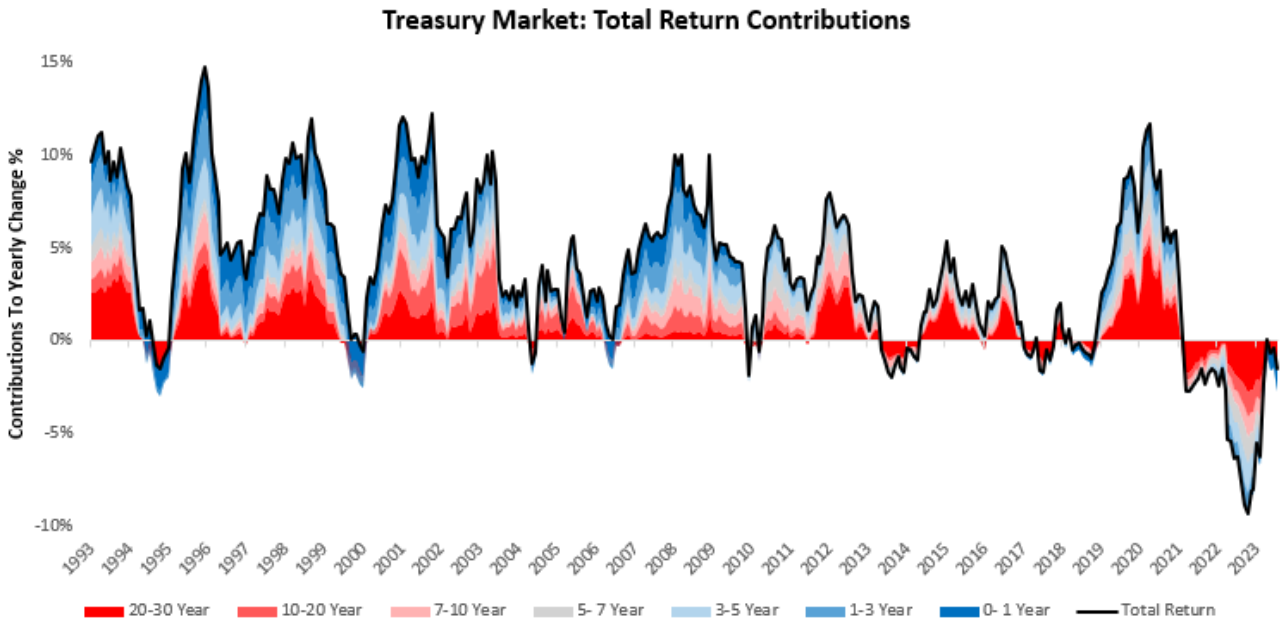
As we can see above, our estimates of future treasury issuance are likely to create a significant asset supply. However, given economic conditions and what is currently priced into markets, we see it as unlikely that the private sector will easily absorb this issue. These observations bring us to our next sections on markets.

Stocks Look Better Than Treasuries, Even If They Sell-Off

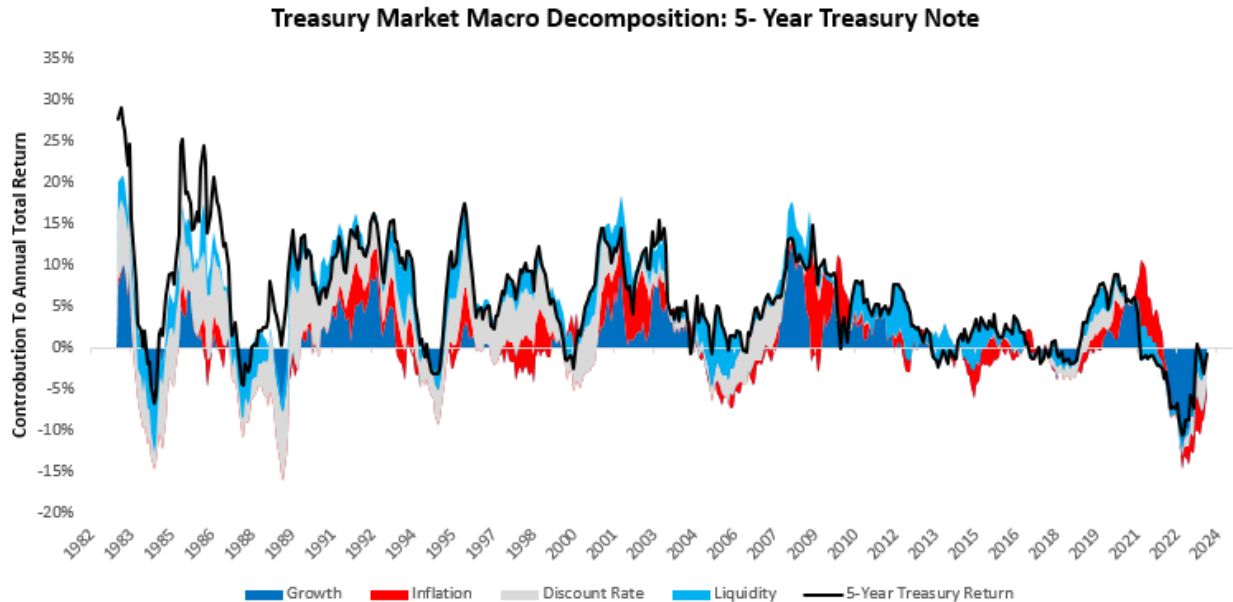
As we said last month, markets continue to price discount rate cuts, which remain incongruent with economic realities. The potential repricing of these factors will weigh on both stocks and bonds, however; these are likely to weigh on bonds more than stocks. We begin by examining the drivers of treasury performance. Over July, treasury markets fell by -0.1%. Over the last year, our aggregate treasury markets have returned -1.51%. Below, we show the sequential evolution of returns:



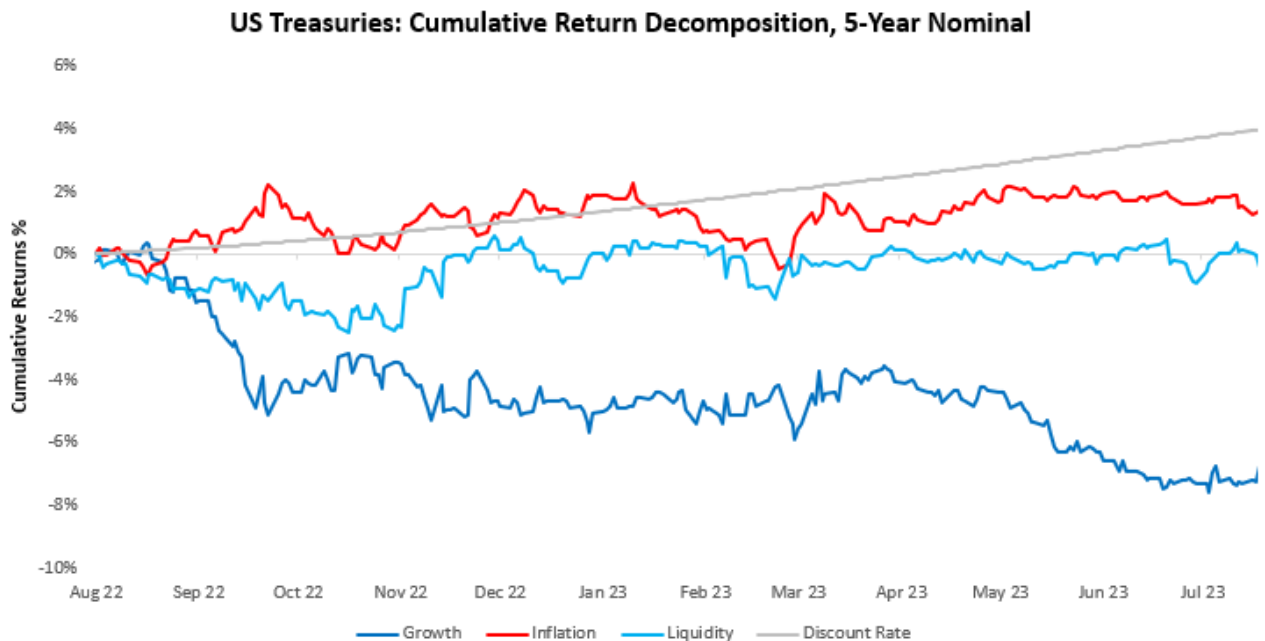
For a more granular understanding of the most recent months' returns, we perform an attribution of total returns coming from various maturities of nominal treasuries across the yield curve. Over July, treasury markets were somewhat mixed, with 0- 1 Year treasuries contributing the most to strength while 20-30 Year treasuries contributed the most to weakness. We show this below:



To help better understand these moves in treasury markets, we decompose these returns into their constituent macroeconomic drivers. Our estimate of the weighted average maturity of outstanding treasuries is six years, making the 5-year note the best proxy to assess the impact of macroeconomic forces on the treasury market. Over the last year, growth, inflation, and liquidity have contributed 3.89%, 2.16%, and 1.01% to total treasury returns.

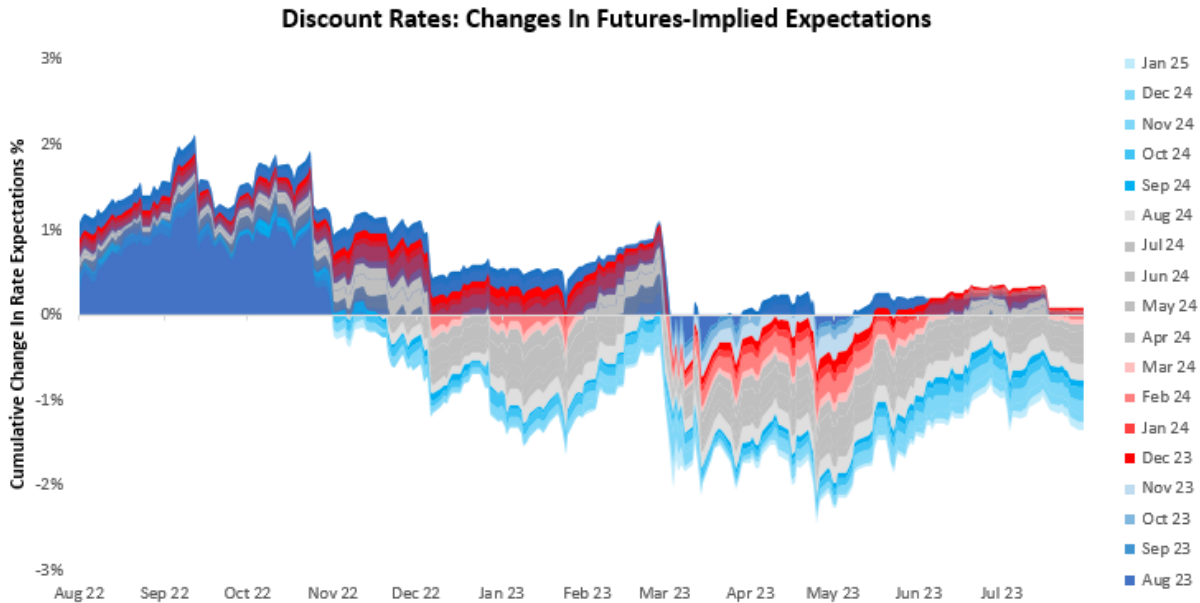


For a closer look at the current dynamic, we show the contributions to cumulative returns over the last coming from our macroeconomic factors. Please note the sum of the various factors equals the total return on the 5-year note:

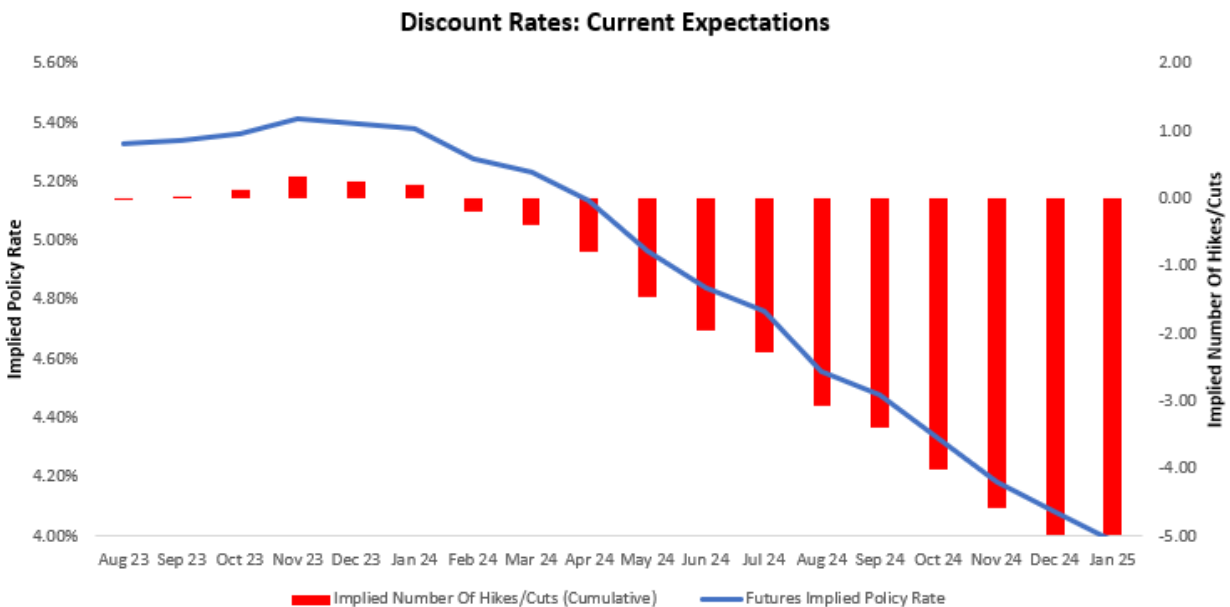


While our macroeconomic perspective is essential for us to understand what's going on under the surface, mathematically, the single biggest factor that impacts nominal bonds are changes in discount

rate expectations. Over the last month, short-term interest rate markets have remained unchanged. Over the last year, these markets have moved to price expectations of interest rate cuts. We show the evolution of these expectations below:

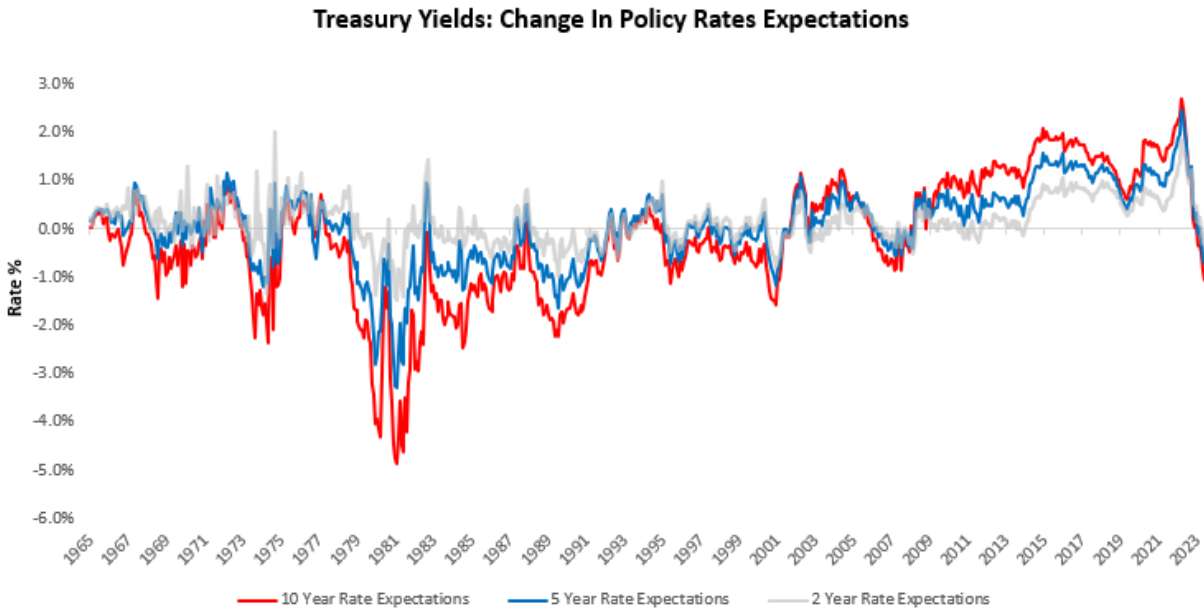


To better contextualize these recent changes in policy expectations, we show the latest discount rate path priced over the next eighteen months. Short-term interest rate markets are expecting a peak in policy rates on Nov 23 at 5.42%, followed by a trough on Jan 25 at 3.99%. This implies approximately 5 interest rate cuts cumulatively over the next eighteen months. We show this path below:

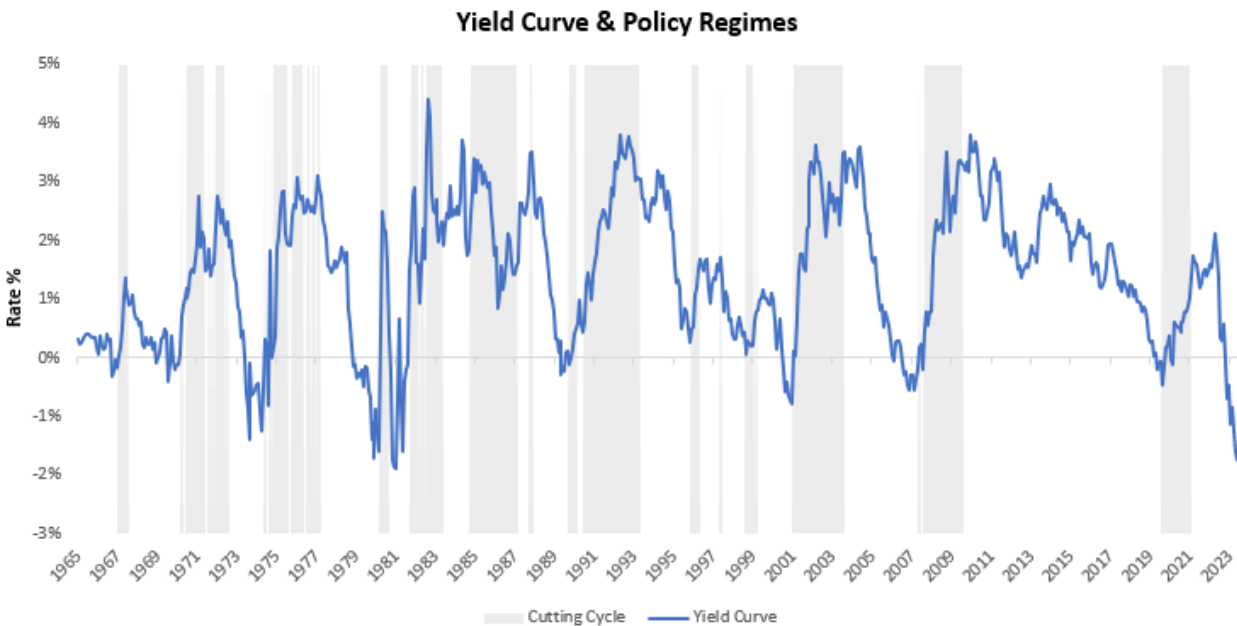


For further insight into what markets are pricing for the expected policy path, we show market expectations for discount rates priced across the yield curve.

Currently, 10-year notes are pricing three cuts, 5-year notes are pricing two cuts, and 2-year notes are pricing one cut:

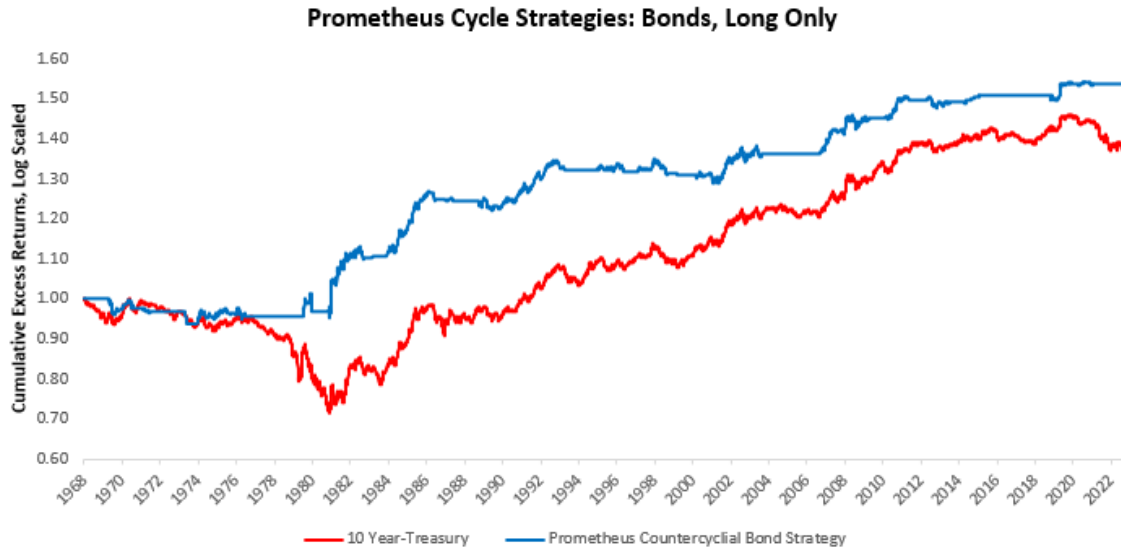


Finally, we turn to the yield curve to help contextualize where we are in the monetary policy cycle. Yield curves are useful in helping us understand equilibrium and how far we are from equilibrium conditions, as long-duration assets should, over time, command a yield premium over short-duration assets. Extreme deviations from these equilibrium conditions increase the potential for mean reversion over long periods. Currently, the yield curve is inverted and suggests eventual policy easing:

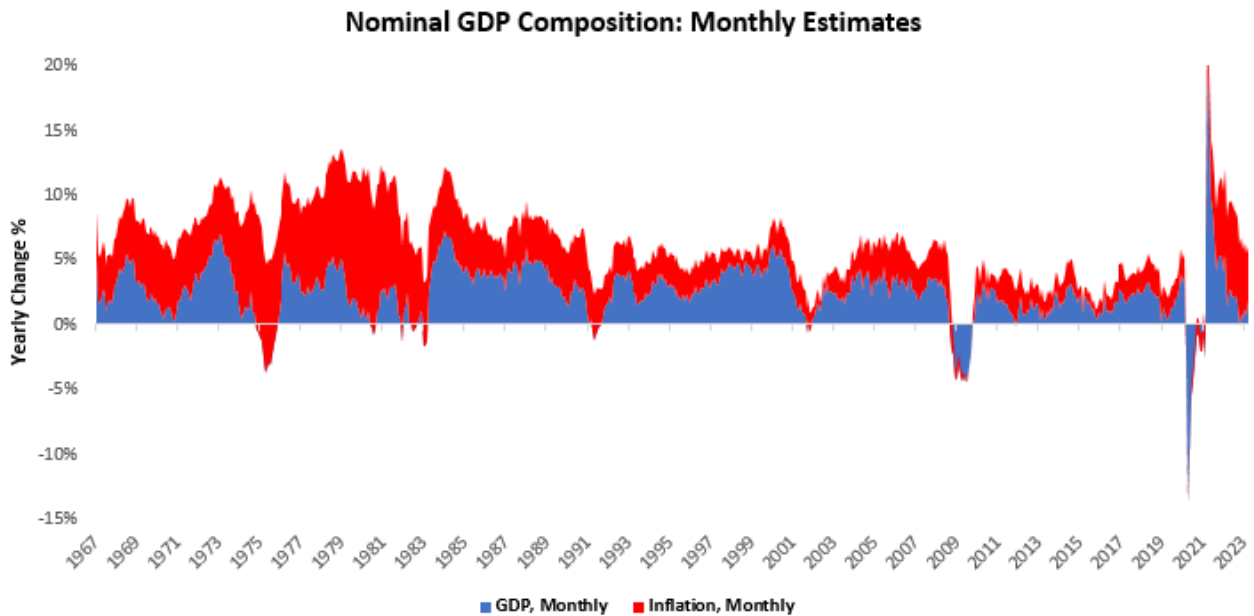


Now, while an inverted yield curve likely means that there is eventual policy easing ahead of us, this can take a significant amount of time for fundamental dynamics to evolve to facilitate policy easing.

We think there will eventually come a time to buy treasuries in the wake of interest rate cuts. We show one of our levered long cycle strategies that do precisely this:

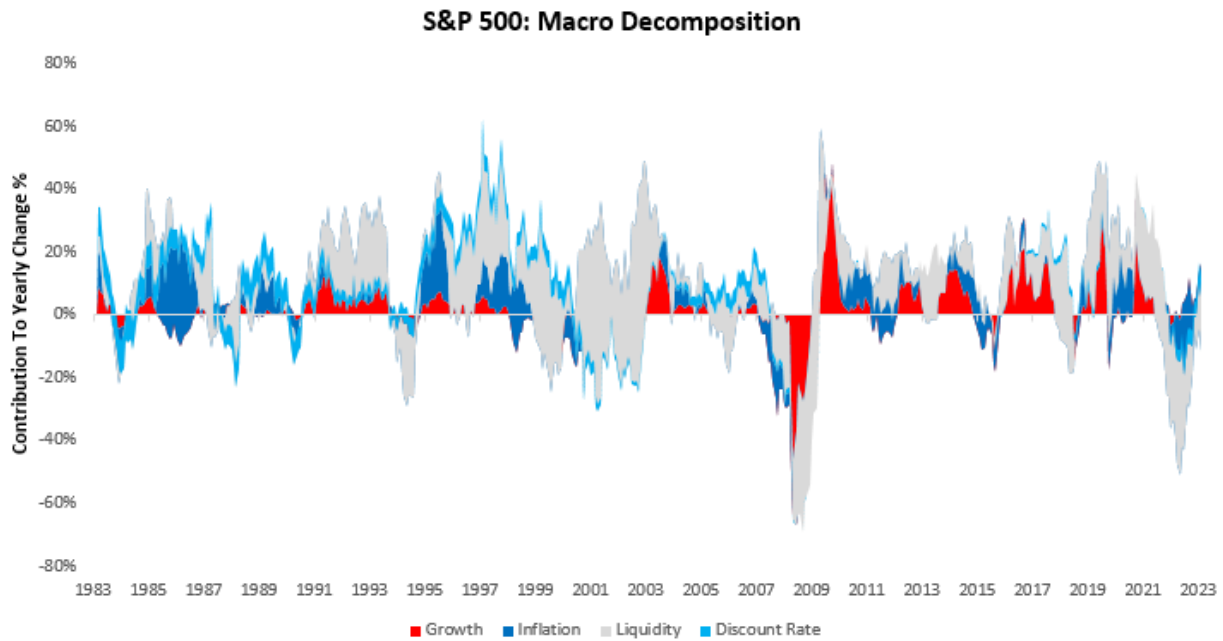


We expect a time to buy bonds in a recessionary environment to come. However, we do not see nominal growth as well-contained enough for a durable bond bid. We show the nominal GDP below, which remains significantly above a trend consistent with lower inflation:

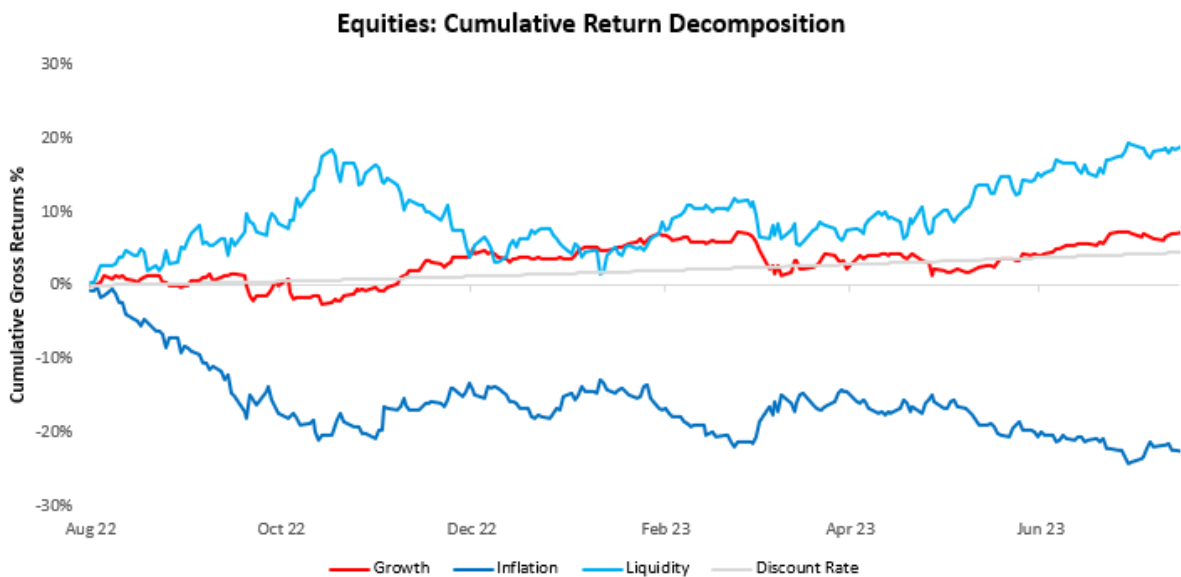


Above, we show the composition of monthly nominal GDP estimates, broken into real GDP growth and inflation. Our latest estimates place nominal GDP at 4.72% versus one year prior. These conditions remain incongruent with an imminent contraction in activity.

Given nominal GDP dynamics, we see it as unlikely that the policy easing that is currently priced into the market can be achieved. If nominal GDP remains resilient, markets will be forced to reprice a slower path to recession via a tightening of financial conditions. These forces will weigh on both treasuries and stocks, but stocks will benefit from nominal growth pricing and potentially private sector liquidity. Much like bonds, we can decompose equity returns into their constituent drivers of growth, 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:

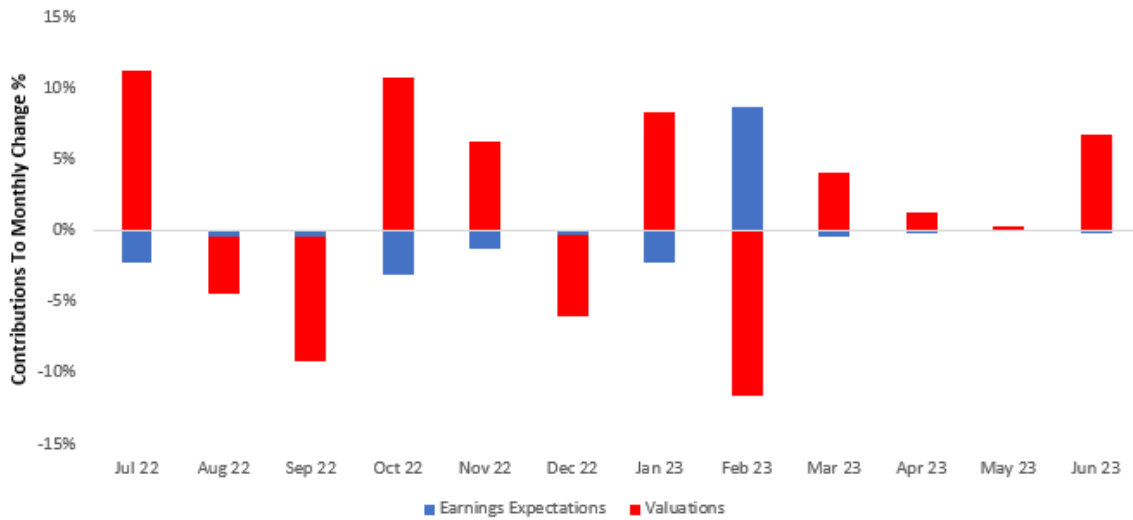


For further contextualization of these returns, we show the cumulative returns attributable to our growth, inflation, liquidity, and discount rate factors.



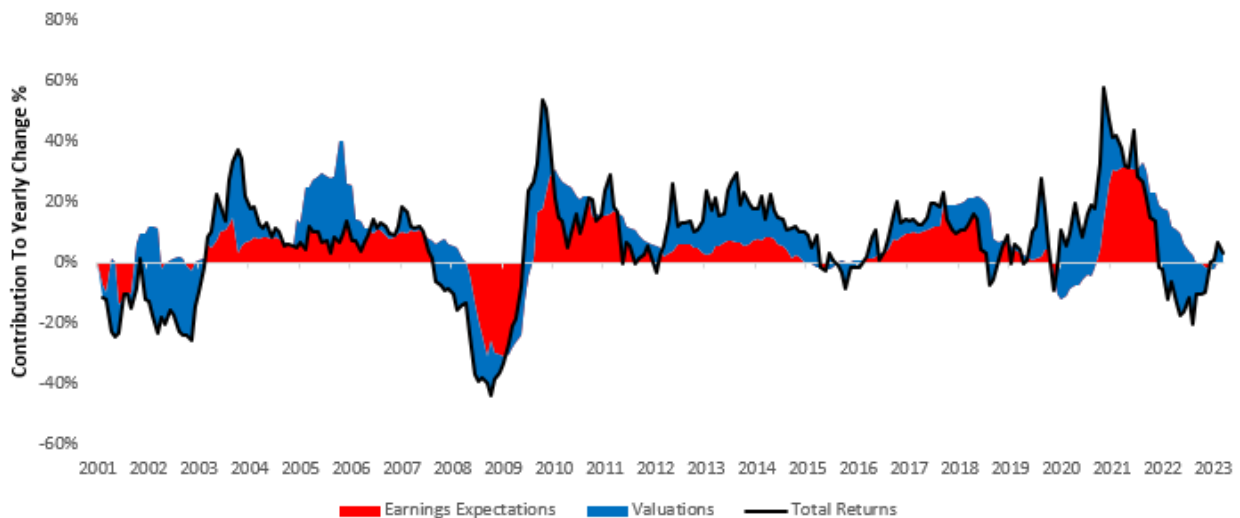
In the most recent month, growth, inflation, liquidity, and discount rates have contributed -0.45%, -1.88%, 2.65%, & 0.51%, respectively. As an alternative to our macroeconomic decompositions, we can decompose their total returns into those coming from earnings expectations and valuations changes. Over July, the S&P 500 rose 6.73%, primarily driven by valuations. Earnings expectations and valuations contributed -0.06% & 6.79% to the 6.73% rise in markets. Below, we show the sequential evolution of market prices, along with our decomposition of returns:

S&P 500 Sequential Returns: Earnings & Valuations Decomposition



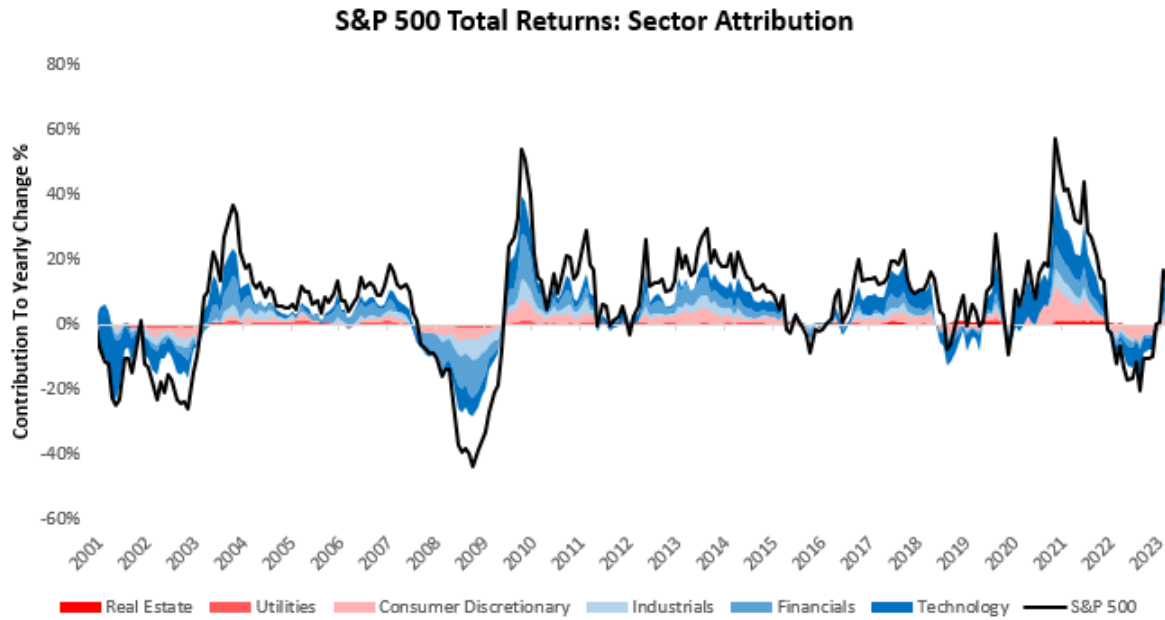
Over the last year, the S&P 500 has been dominantly driven by valuations, with total returns rising by 16.71%. We show cumulative returns on the S&P 500 over the last year, decomposed into earnings expectations (-2.01%) and valuations (18.72%):

S&P 500: Earnings & Valuation Attribution

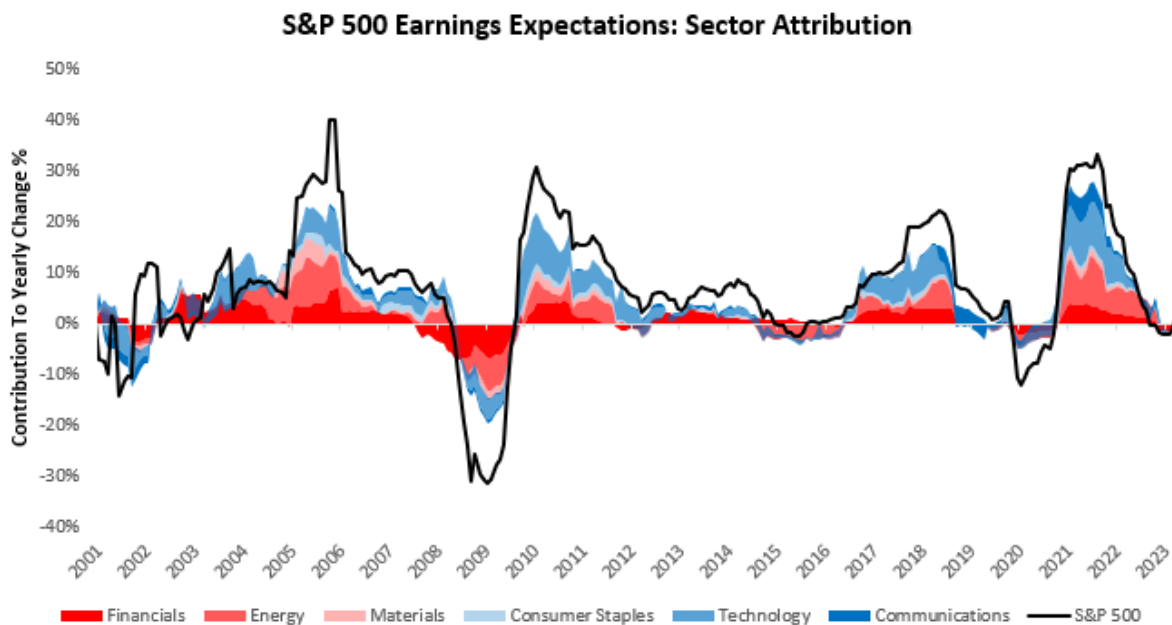


We further decompose these yearly returns into their sector contributions. We begin by showing the primary drivers of the S&P 500 over the last year.

We show the top three drivers in blue (Technology, Financials, Industrials) and the bottom three in red (Real Estate, Utilities, Consumer Discretionary):

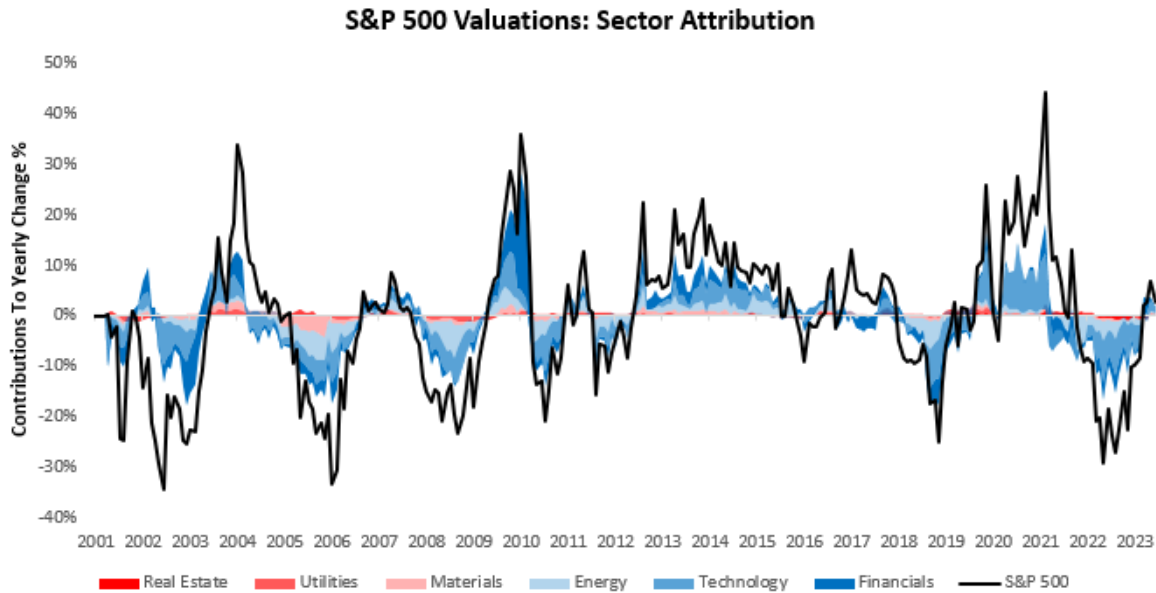


We drill down into these total returns by isolating the changes in earnings expectations. We show the top three drivers in blue (Communications, Technology, Consumer Staples) and the bottom three in red (Financials, Energy, Materials):

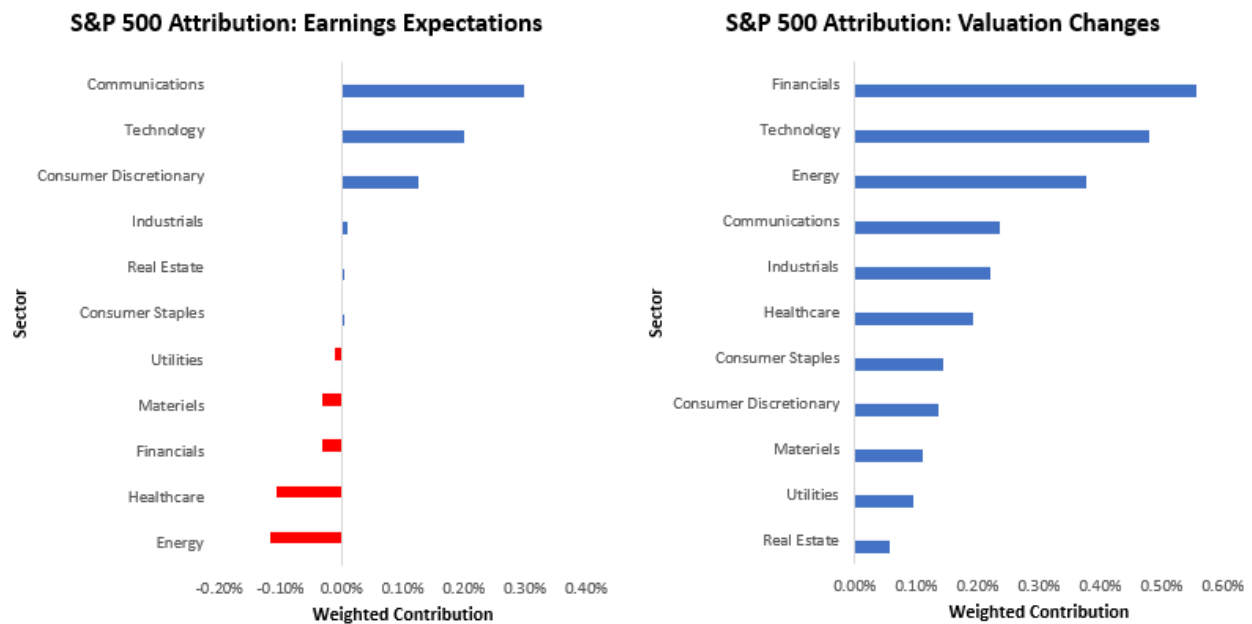


As we can see above, earnings expectations have largely fallen coincident with the path of realized earnings.

Finally, we examine the contributions of sectors to valuations changes. We show the top three drivers in blue (Financials, Technology, Energy) and the bottom three in red (Real Estate, Utilities, Materials):



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, changes in earnings expectations, and changes in valuations below:



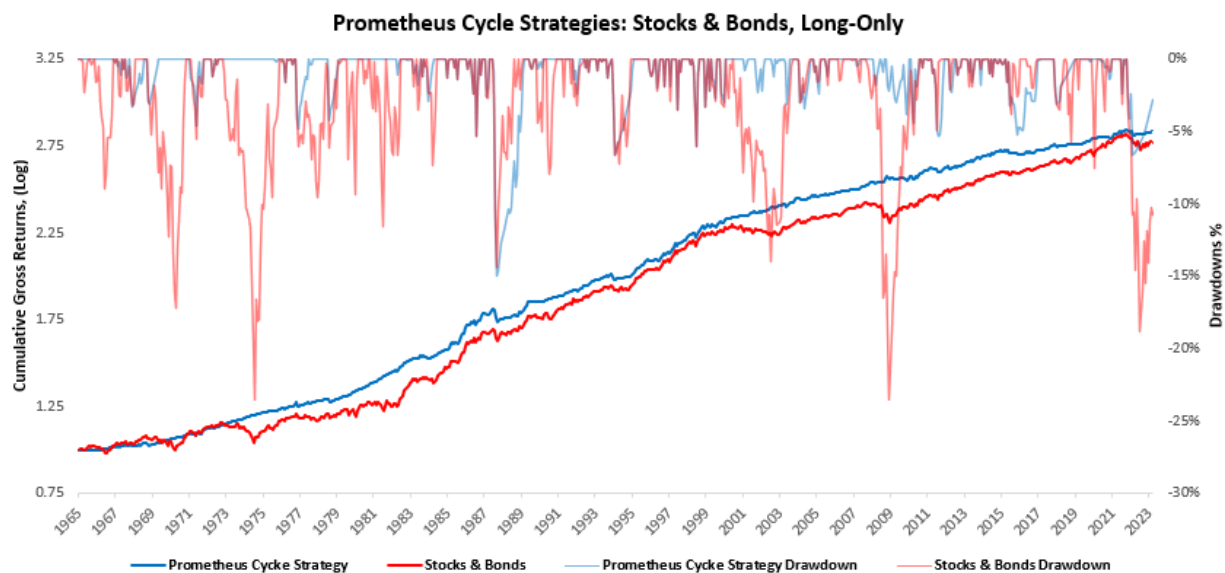
Putting the picture together from stocks and bonds, we expect the repricing of discount rates to be a headwind for both stocks and bonds. However, the reason for this repricing will be resilient nominal growth conditions, which likely benefit stocks versus treasuries. Neither beta look attractive here, but stocks likely outperform bonds until a downturn in activity.

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:

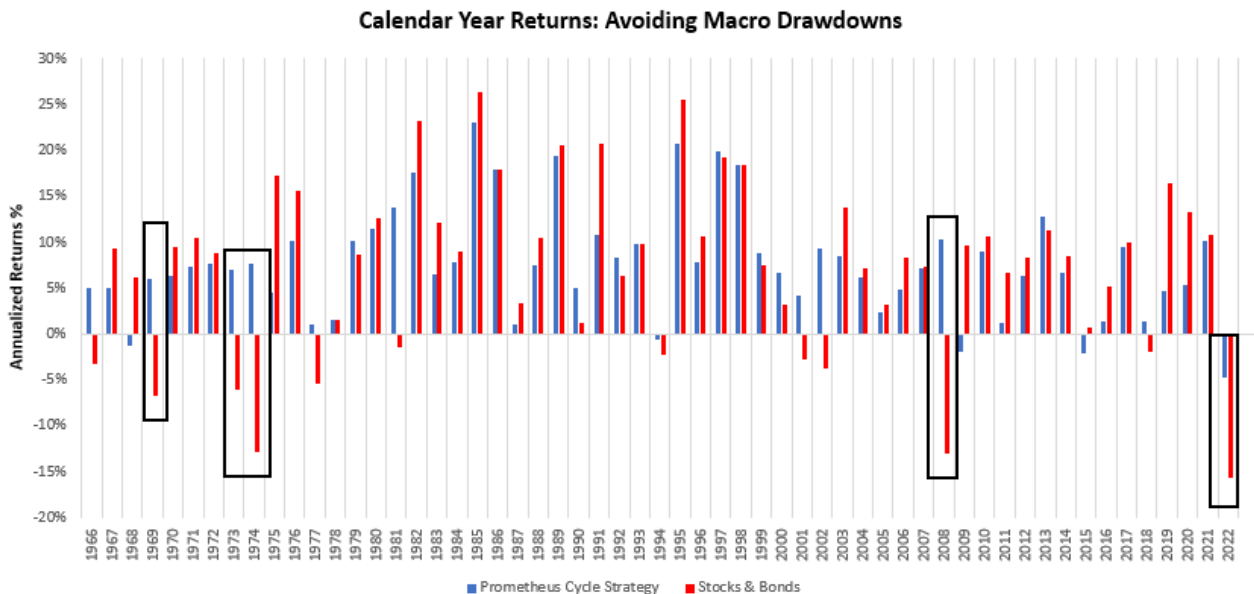


As shown above, our Prometheus Cycle Strategy outperforms static passive exposure to stocks and bonds while delivering significantly reduced drawdowns. Importantly, it does with relatively few trades (excluding the monthly rebalance for both strategies). The system has traded less than twice a year on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

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

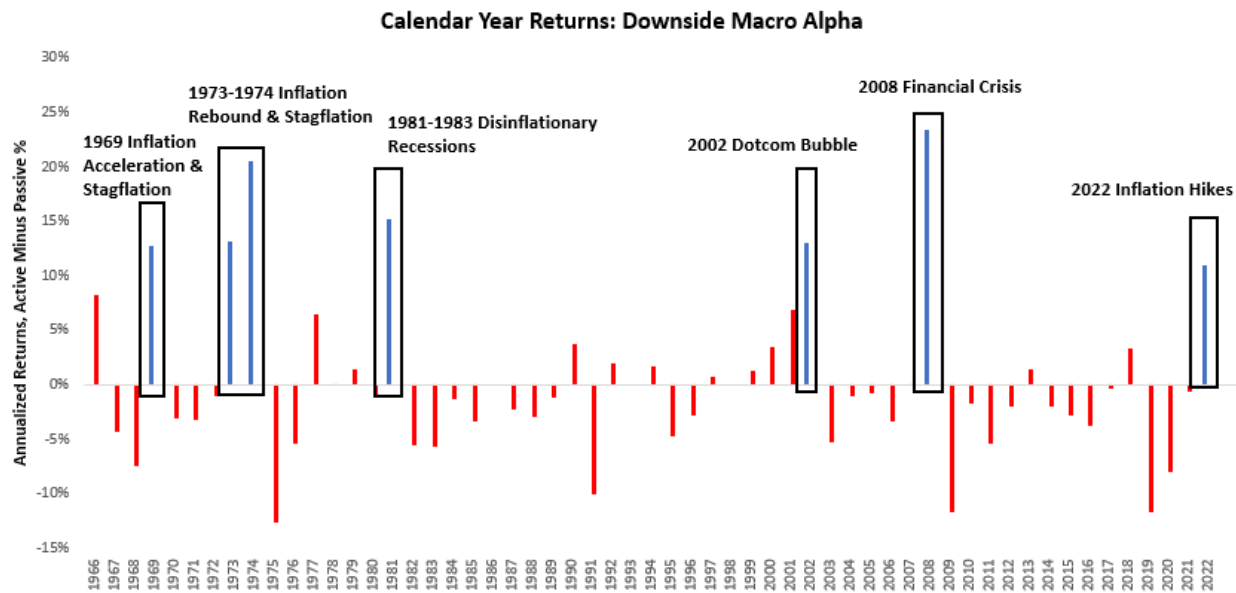
Prometheus Cycle Strategy: Summary Stats		
	Prometheus Strategy	Passive Stocks & Bonds
Gross Returns	7.5%	7.2%
Volatility	5.4%	8.8%
Semi-Variance	4.5%	5.6%
Max Drawdown	-15.0%	-23.6%
Sharpe Ratio	0.57	0.31
Sortino Ratio	0.67	0.49
Calmar Ratio	0.50	0.31

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 again flat stocks and short bonds this month.

Conclusions

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

- ***Nominal GDP expanded by 1.05% in June, with real GDP increasing by 0.86% with inflation rising by 0.14%. This composition was a significant expansion in real activity.***
- ***Liquidity conditions have remained buoyant, with nominal GDP continuing to flow to the money market complex.***
- ***Equity markets have enjoyed this real growth acceleration, and liquidity has facilitated a significant bid for stocks versus bonds. Bonds continue to struggle as markets continue to price interest rate cuts, only to be thwarted by resilient nominal spending data.***
- ***Looking ahead, real growth is unlikely to continue at this pace, though inflation is likely to remain resilient. Liquidity will likely soften as the treasury moves to lengthen its duration.***
- ***Both stocks and bonds continue to look unattractive to our systematic strategies. Long-only investors are likely best served to maintain cash. Active investors may short treasuries.***

Additionally, being long, stocks versus bonds may offer relative value, though we do not like standalone beta on either stocks or bonds. Equities have thus far this year been a liquidity trade, and staying long means remaining long liquidity. We think headwinds are emerging on this front. These headwinds include tightening policy liquidity and the repricing of interest rate cuts. Finally, we are seeing cyclical indications of further weakness in growth ahead of us. Until next month.

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