Investor Advisory Committee on Financial Markets
Member Presentation Materials

October 19, 2023

Discussion Materials

October 2023

Pershing Square

Overview of Current Economic Conditions

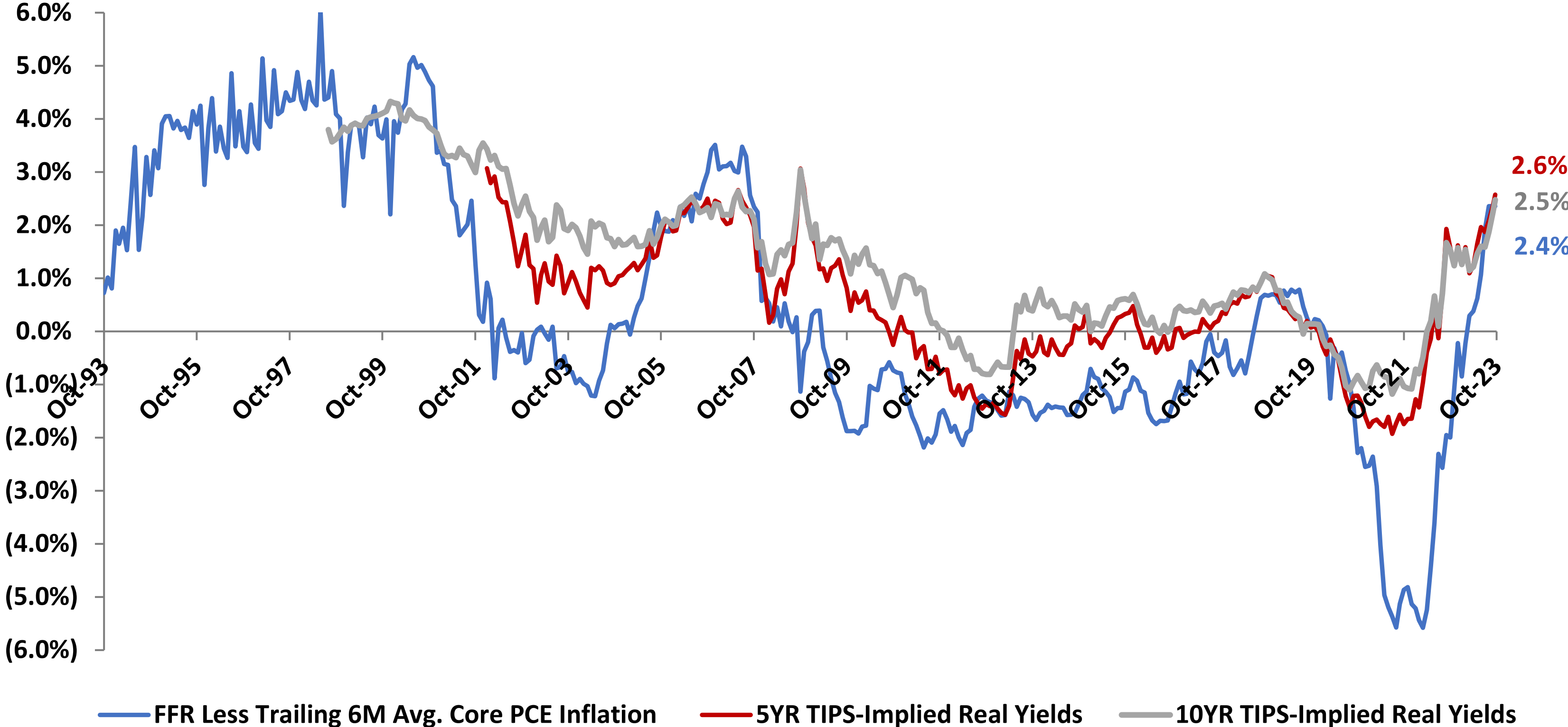
- **Real interest rates are at clearly restrictive levels (~250bps across the yield curve)**
- **Inflation is showing encouraging signs of moderating from peak levels**
  - On a trailing three-month average basis, Core CPI is run-rating ~3% & Core PCE ~2%
- **Supply-demand imbalance in the labor market is improving**
  - Slowing wage growth should point to further easing in core services inflation
- **Economic growth has been resilient; however, growth is likely to slow going forward**
  - Income growth is decelerating; excess household savings are being depleted; consumer loan supply & demand are weakening with deteriorating credit quality
  - Low-income consumer is under stress and facing fiscal headwinds from the end of pandemic-era relief programs and student loan repayments
  - Recent rapid rise in long-end rates will further tighten financial conditions
  - Beginning to see early signs of slowing consumer spend
- **Emerging risks: heightened geopolitical uncertainty, financial system instability**

We believe the current macroeconomic backdrop calls for more balanced monetary policy that is attentive to two-sided risks to growth and inflation

Real Rates are At Clearly Restrictive Levels

Across the yield curve, real interest rates are ~2.5%, a level that has rarely been sustained for any significant period of time since the 1990s

Real interest rates (nominal interest rates less inflation compensation):

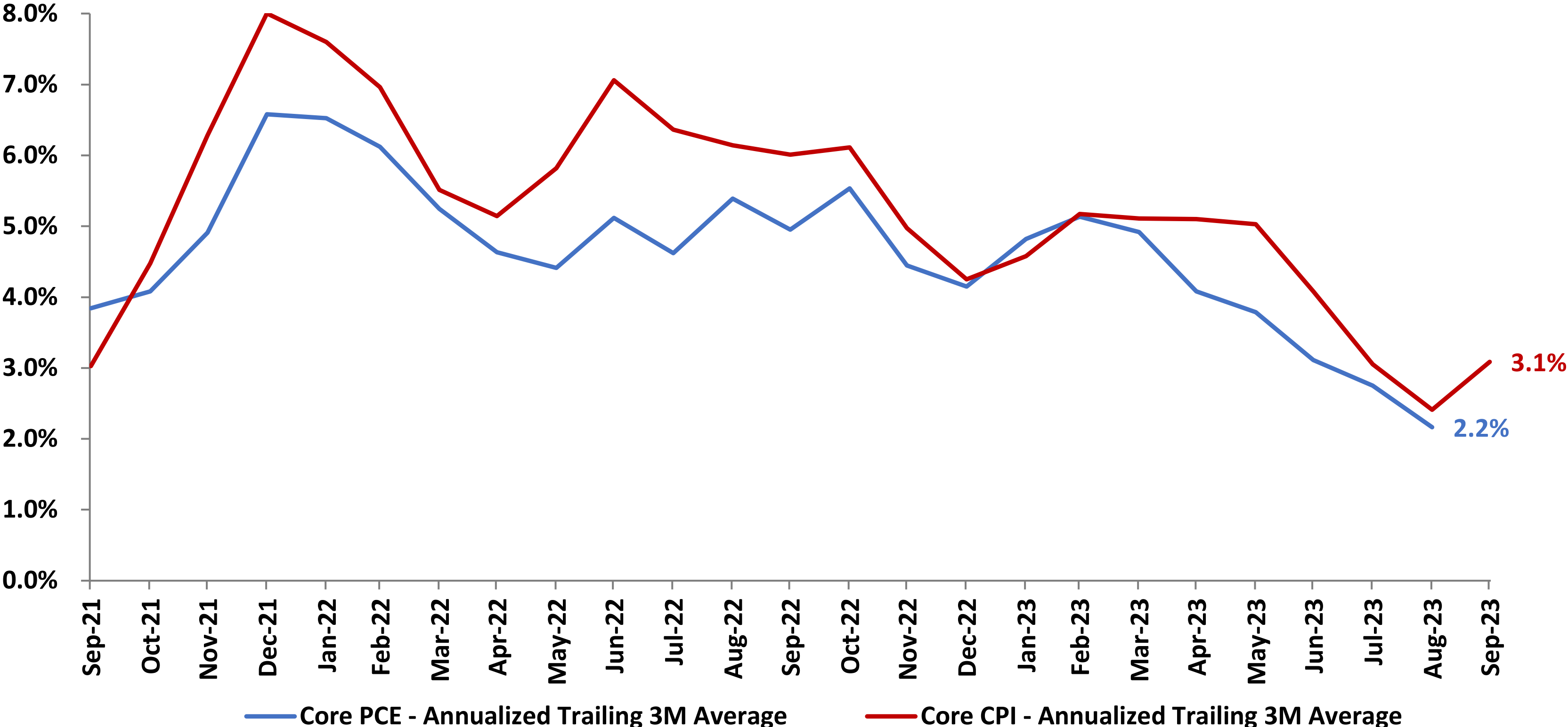


Source: Bloomberg, as of October 19, 2023 (at approximately 9AM)

Inflation is Moderating from Peak Levels

On a trailing three-month average basis, Core PCE inflation is run-rating at approximately 2% and Core CPI inflation is run-rating at approximately 3%, down from 4% to 5% inflation seen earlier in the year

Core PCE & Core CPI Inflation, Annualized Trailing 3M Average:

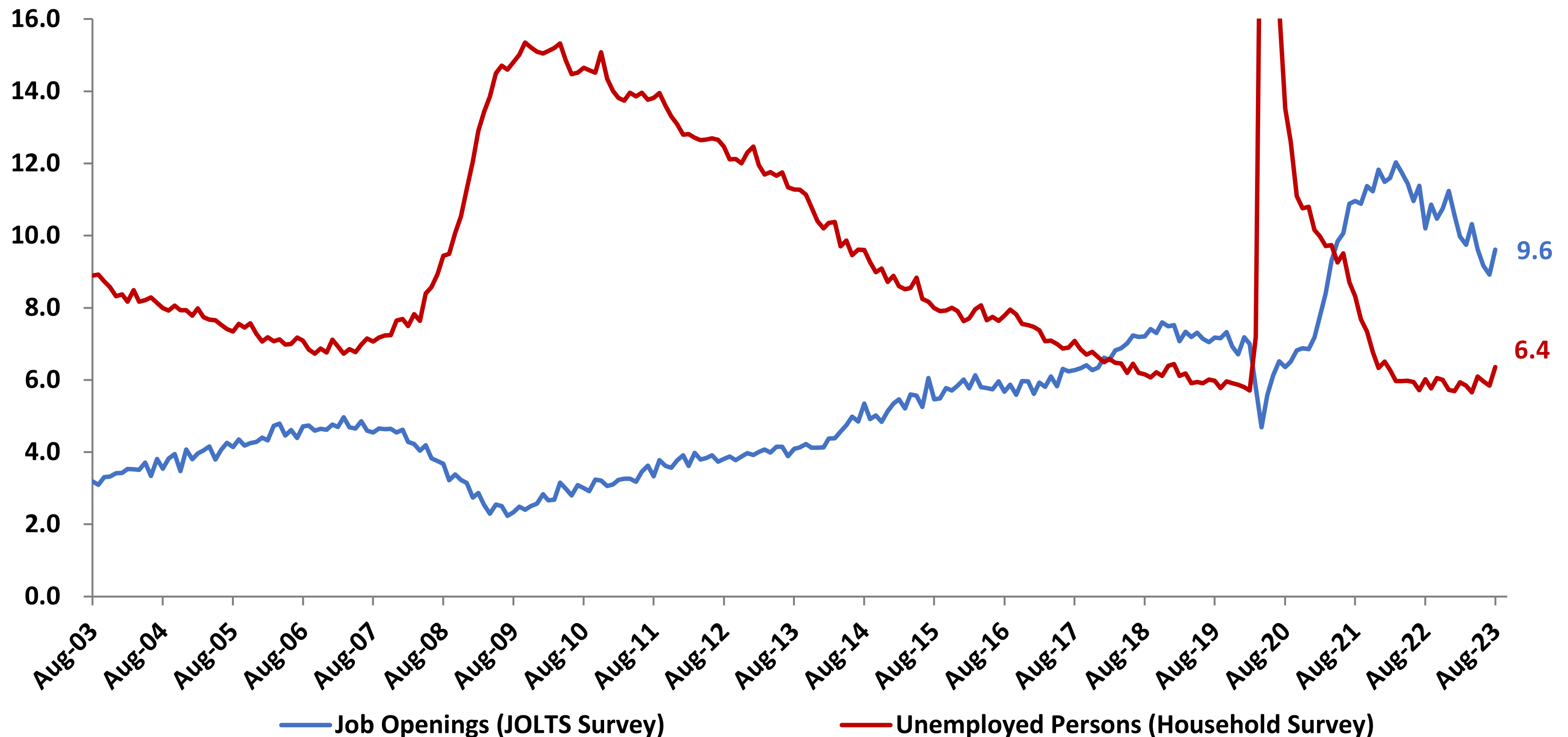


Source: Bureau of Labor Statistics (CPI) and Bureau of Economic Analysis (PCE)

Labor Supply-Demand Imbalance is Improving: Decline in Job Openings

The number of job openings has declined 20% from its peak of 12.0 million in March 2022 to 9.6 million as of August 2023

Number of Job Openings and Total Unemployed Persons in Labor Force | Figures in millions:

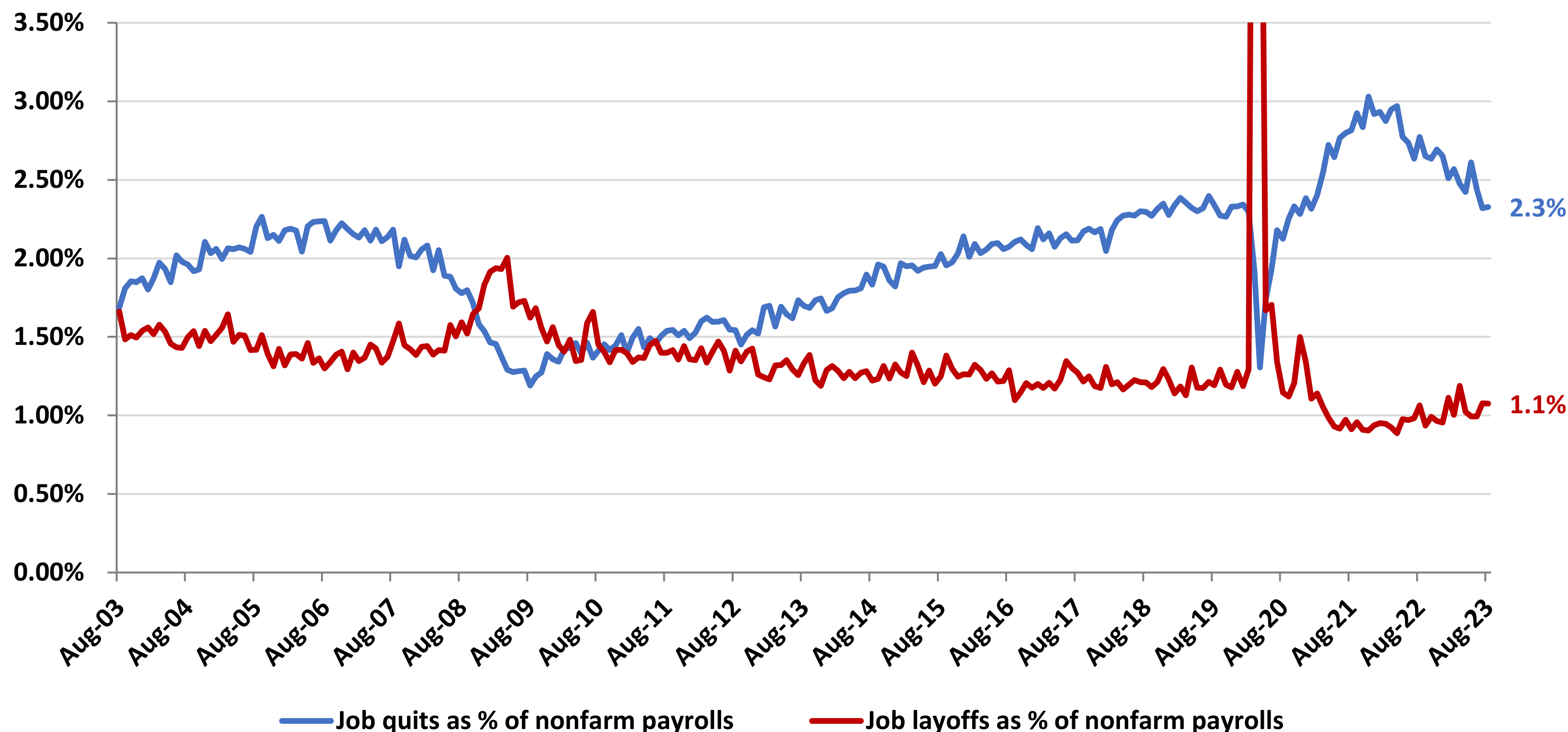


Source: Bureau of Labor Statistics (Job Openings and Labor Turnover Survey, Employment Report Household Survey)

Labor Supply-Demand Imbalance is Improving: Normalization in Voluntary Quits & Job Layoffs

Voluntary quits and job layoffs, as a percentage of nonfarm payrolls, are normalizing to their pre-pandemic levels

Monthly job quits and job layoffs as % of nonfarm payrolls:

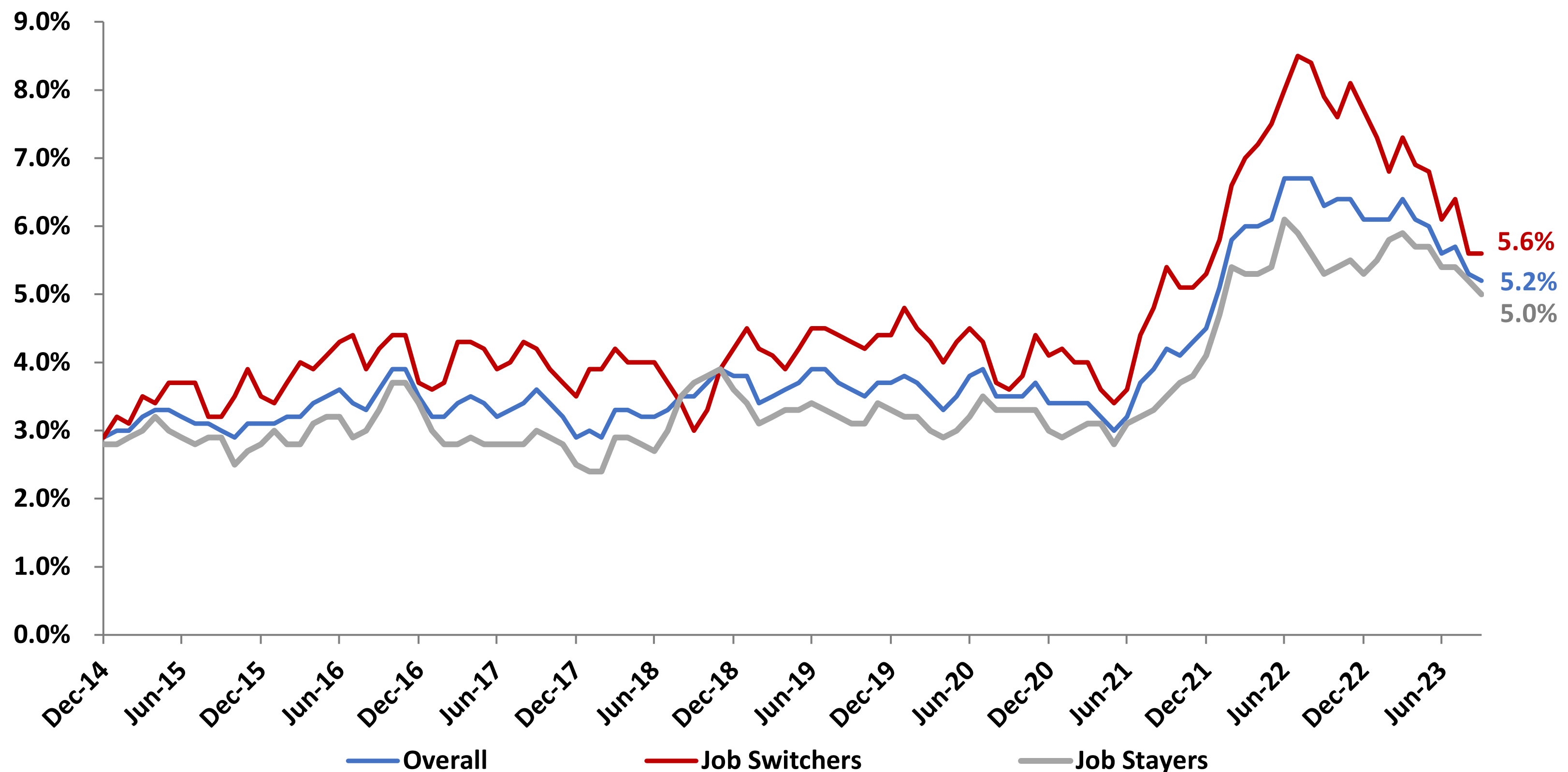


Source: Bureau of Labor Statistics (Job Openings and Labor Turnover Survey)

Labor Supply-Demand Imbalance is Improving: Moderating Wage Growth | Atlanta Fed Tracker

The Atlanta Fed's Wage Tracker, which measures year-over-year wage growth, is showing a marked deceleration in wage increases, particularly for job switchers

Atlanta Fed Wage Tracker | Year-over-Year Wage Growth:

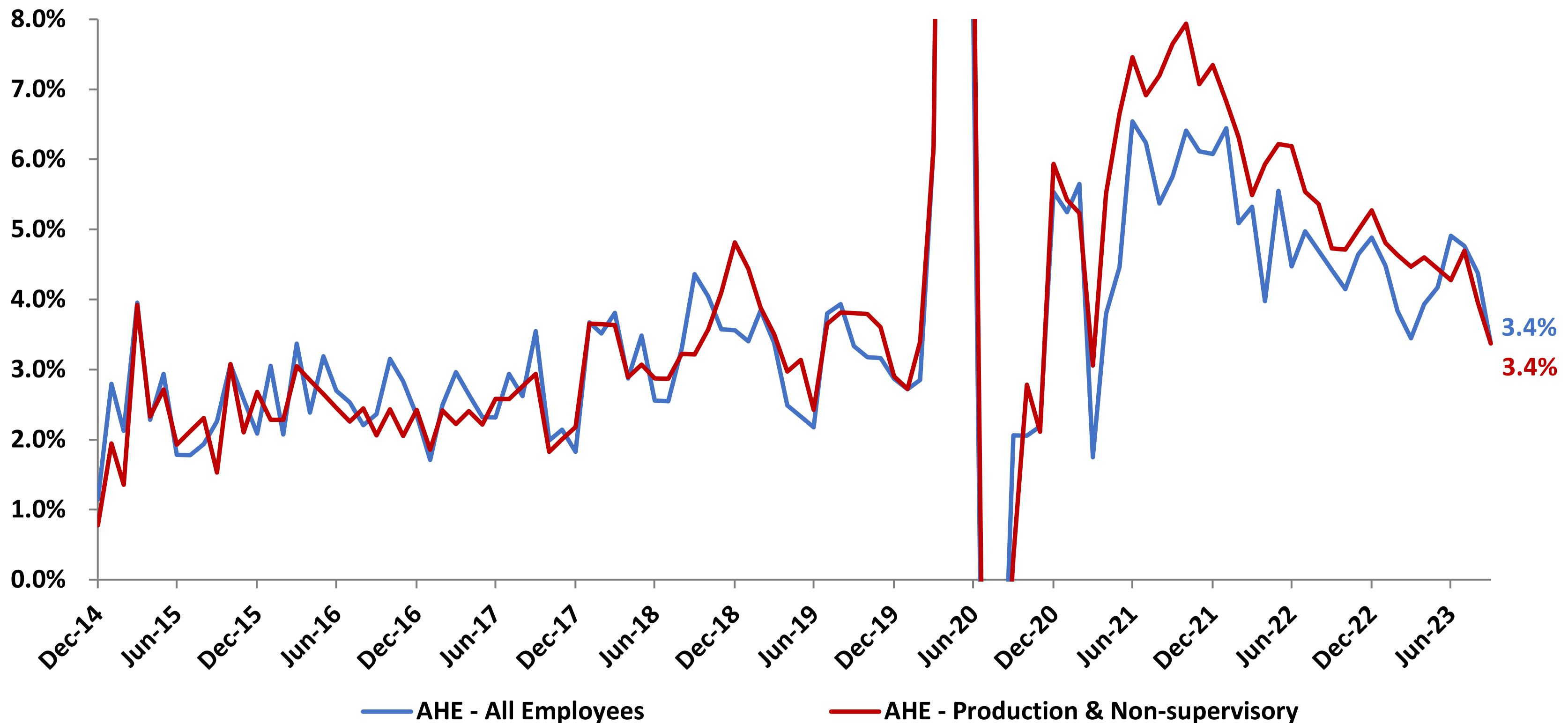


Source: Federal Reserve Bank of Atlanta

Labor Supply-Demand Imbalance is Improving: Moderating Wage Growth | Average Hourly Earnings

More timely measures of run-rate wage growth, such as Average Hourly Earnings ("AHE") from the Bureau of Labor Statistics' Employment Report, also highlight a normalization in wage increases back to pre-pandemic levels

Average Hourly Earnings ("AHE") Growth | Annualized Trailing 3M Average:



Source: Bureau of Labor Statistics (Employment Report Establishment Survey)

Economic Growth Has Been Resilient To-Date

Despite a decline in residential investment and volatile contributions from change in inventories, real GDP growth over the last few quarters has remained stable at >2%, driven by resilient personal consumption and government spending

Nonfarm Payroll Job Additions (new jobs in millions):

	% of GDP	Q3 2022	Q4 2022	Q1 2023	Q2 2023	Atlanta Fed GDPNow Forecast Q3E 2023
Real GDP Growth		**2.7%**	**2.6%**	**2.2%**	**2.1%**	**5.1%**
Contribution from:						
Personal Consumption Expenditures	**69%**	**1.1%**	**0.8%**	**2.5%**	**0.6%**	**2.5%**
Goods	24%	(0.2%)	(0.0%)	1.1%	0.1%	
Services	45%	1.2%	0.8%	1.4%	0.4%	
Gross private domestic investment	**18%**	**(1.5%)**	**0.6%**	**(1.7%)**	**0.9%**	**1.2%**
Nonresidential	15%	0.6%	0.2%	0.8%	1.0%	0.2%
Residential	3%	(1.4%)	(1.2%)	(0.2%)	(0.1%)	0.2%
Change in Private Inventories	0%	(0.7%)	1.6%	(2.2%)	0.0%	0.7%
Net Exports	**(4%)**	**2.6%**	**0.3%**	**0.6%**	**0.0%**	**0.9%**
Government Spending	**17%**	**0.5%**	**0.9%**	**0.8%**	**0.6%**	**0.5%**

Robust estimates for Q3 2023 Real GDP growth of approximately 4% to 5% include a nearly 2% contribution from net exports and change in private inventories, categories which are unlikely to persist at the same level of contribution going forward

Source: Bureau of Economic Analysis, Federal Reserve Bank of Atlanta

Growth is Likely to Decelerate Going Forward

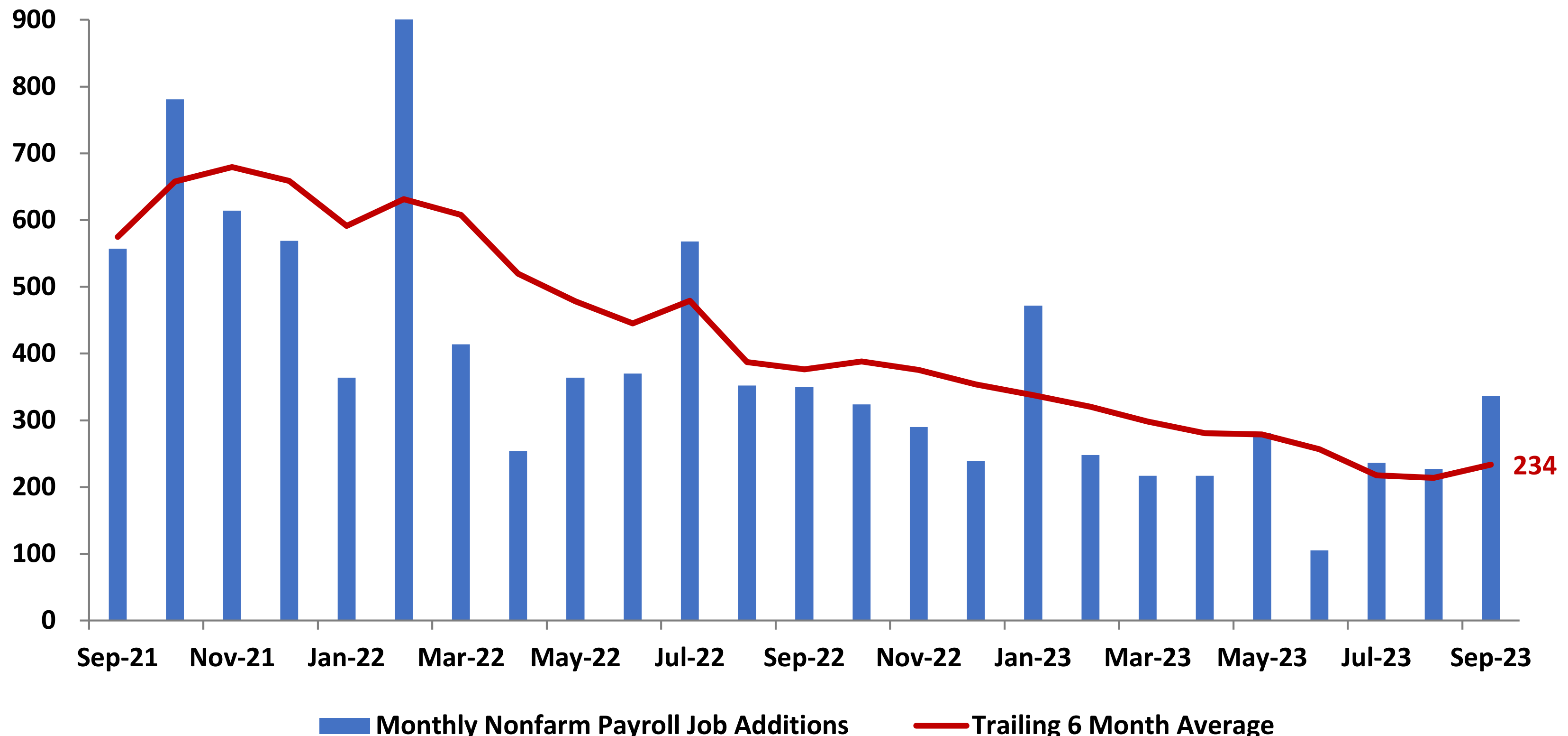
Looking ahead, we believe economic growth will likely decelerate as the tailwinds fueling personal consumption, which accounts for ~70% of GDP, gradually recede and downside risks emerge

1. **Slowing income growth as job & wage growth moderate**
2. **Excess savings are being depleted**
3. **Weakening consumer loan supply/demand and detoriating credit quality**
4. **Low-income consumer, who has the highest propensity to drive incremental spend, is under stress**
5. **Resumption of student loan payments**
6. **Early signs of broader consumer spending slowdown**
7. **Rising long-end interest rates further tighten financial conditions**
8. **Emerging geopolitical and financial stability risks**

1 Pace of Job Growth is Slowing

While job growth remains robust, at nearly double the baseline rate implied by population growth alone, it has materially decelerated from a pace of ~350K monthly job additions in the beginning of the year to ~200K monthly job additions today

Nonfarm Payroll Job Additions (new jobs in millions):

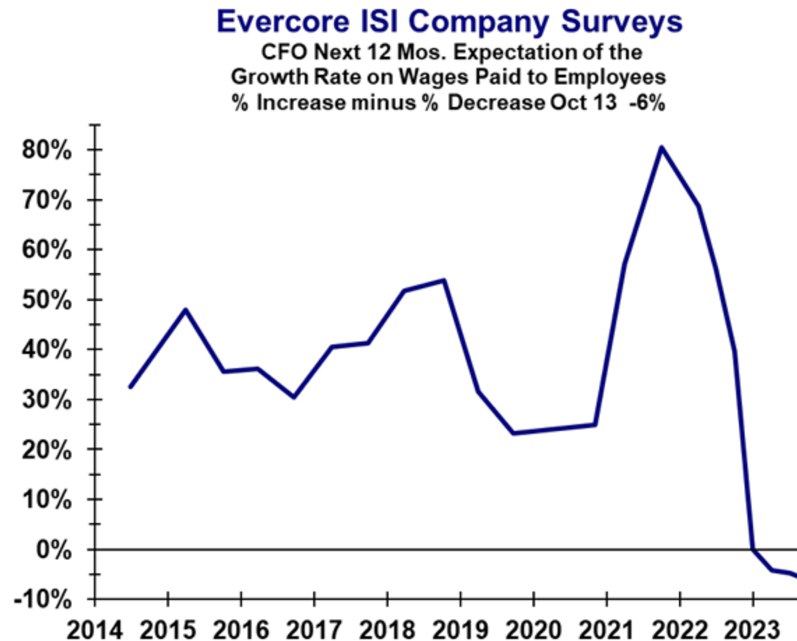


Source: Bureau of Labor Statistics (Employment Report Establishment Survey)

1 Wage Increases Likely to Slow Over Time

A recent survey of CFOs conducted by Evercore ISI, and corroborated by other broad surveys (regional Federal Reserve, S&P & ISM PMIs), suggests wage growth is likely to decelerate meaningfully over the next few months

Corporate Expectations of Wage Growth:



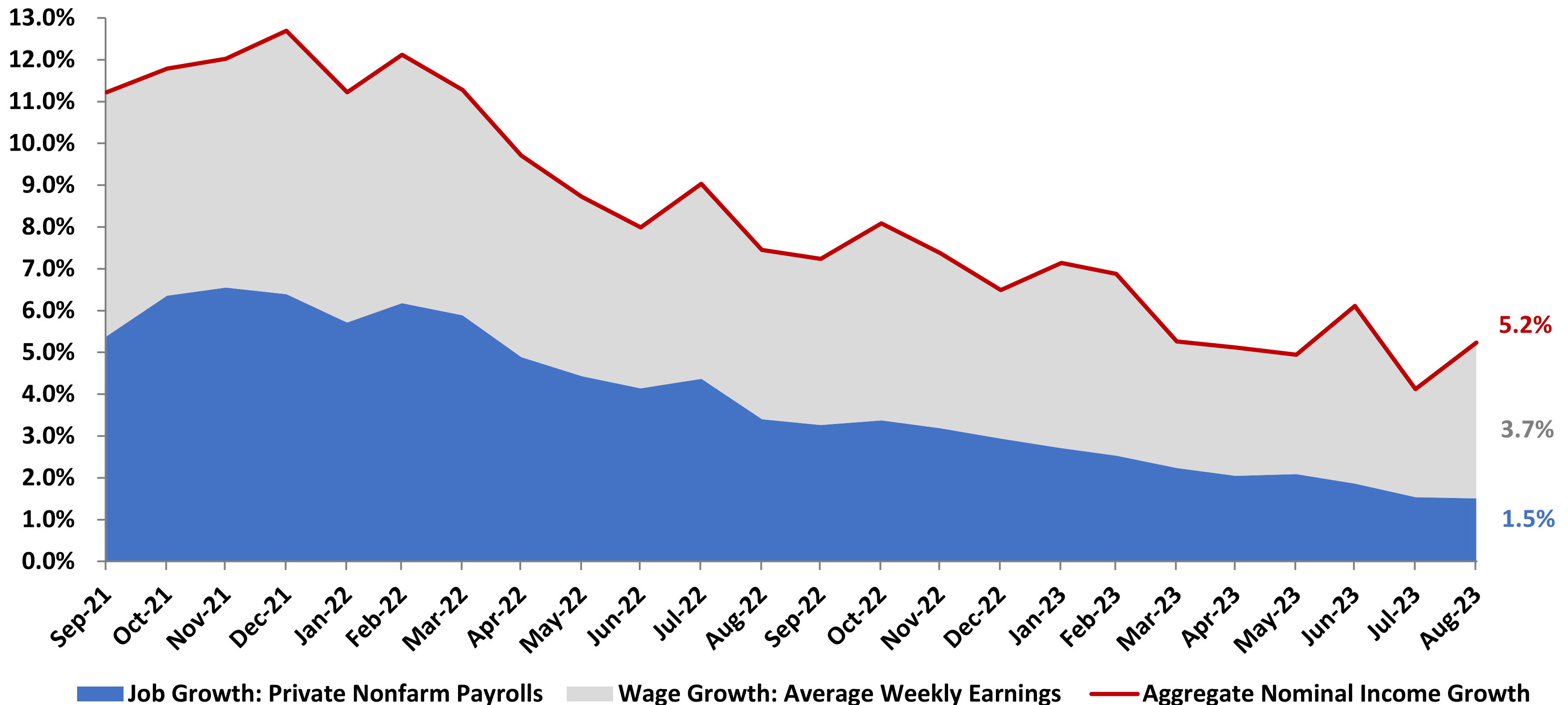
"Many contacts suggested "the second half of the year will be different" when describing wage growth. Growth in labor cost pressures was elevated in most Districts, often exceeding expectations during the first half of the year. But nearly all Districts indicated businesses renewed their previously unfulfilled expectations that wage growth will slow broadly in the near term."

– Federal Reserve Beige Book, September 6, 2023

Source: Evercore ISI, Company Survey Report (October 13, 2023); Federal Reserve

1 Nominal Income Growth Likely to Decelerate

The combination of moderating job growth and wage growth should lead to aggregate nominal income growth continuing to decelerate

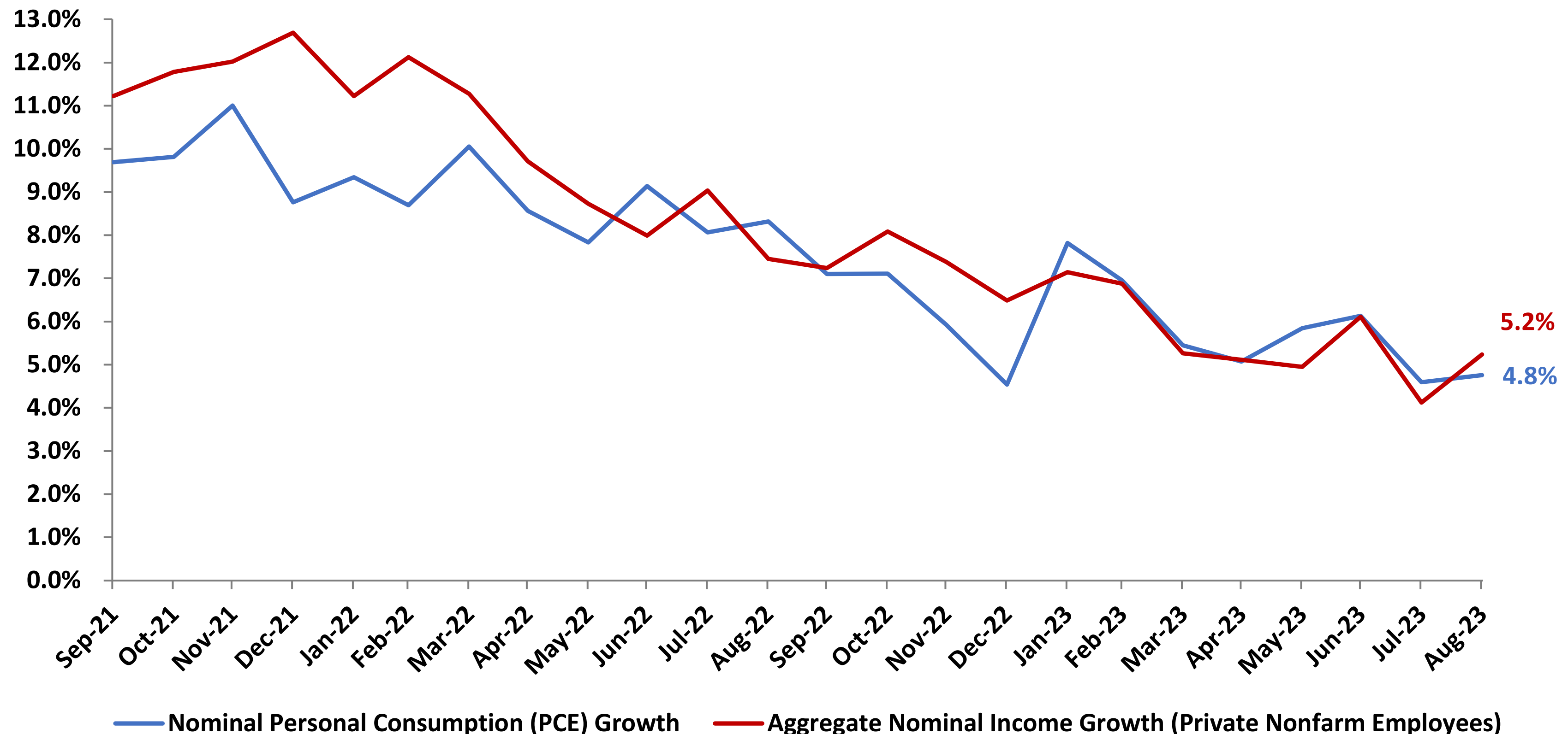


Source: Bureau of Labor Statistics (Employment Report Establishment Survey)

1 Slowing Income Growth Will Constrain Spending

Consumer spending is, in large part, driven by nominal income growth and as income growth slows, we would expect personal consumption to decelerate

Personal Consumption & Nominal Income Growth | Annualized Trailing 6M Average:

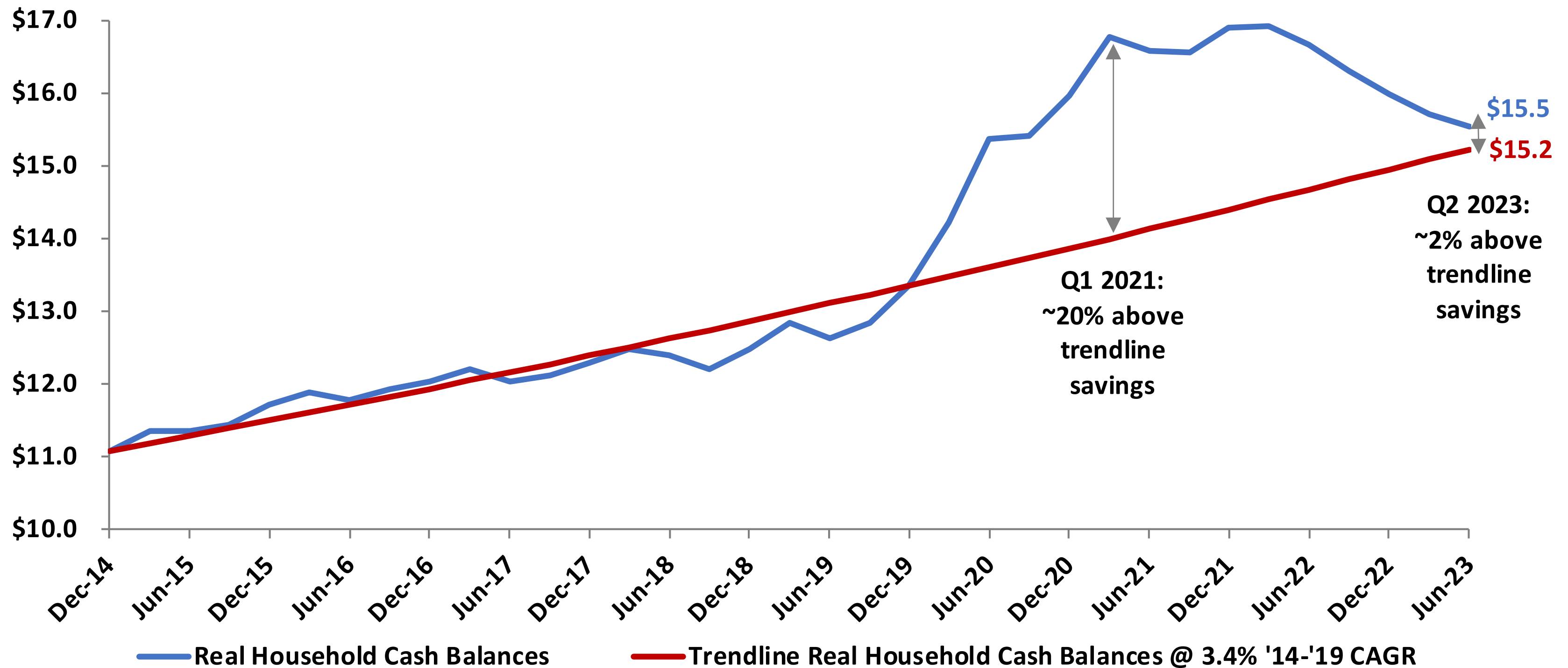


Source: Bureau of Economic Analysis (Personal Income & Outlays), Bureau of Labor Statistics (Employment Report Establishment Survey)

2 Household Excess Savings Are Normalizing

Household cash balances, in real terms[1], are nearly back to their pre-pandemic trend after reaching levels that were nearly 20% in "excess" of trendline savings in 2021

Real Household Cash and Cash-like Deposits (Chained Q4 2019 $, Deflated by Core PCE):

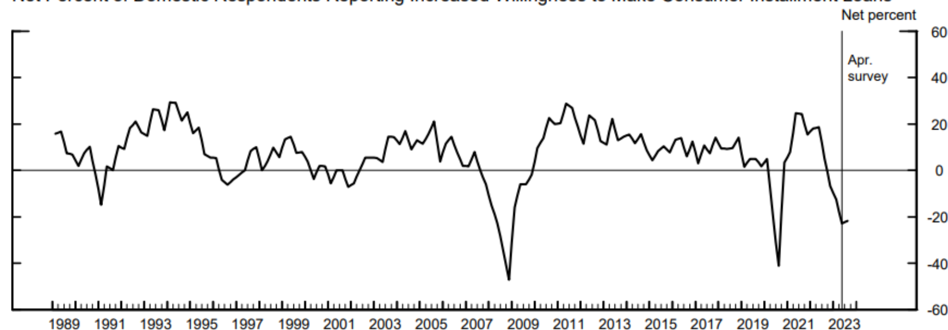


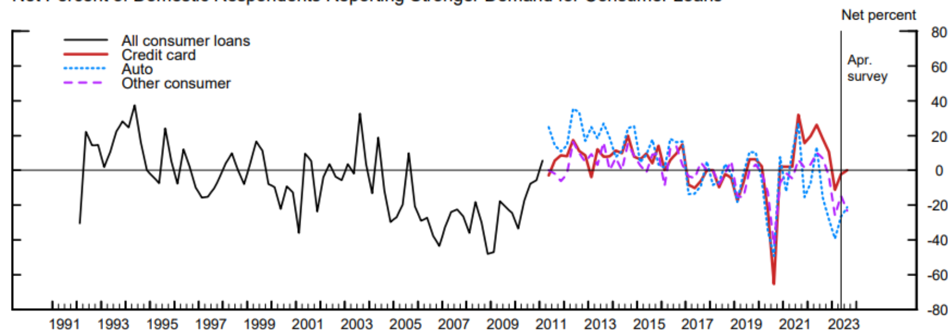
Source: Federal Reserve Z.1 Financial Accounts. Household cash and cash-like deposits includes investments in money market funds.
(1) Adjusted for inflation using the Core PCE price index

3 Consumer Loan Supply & Demand Has Weakened

Consumer loan supply and demand has weakened significantly over the last few months, reducing consumers' ability to finance spending from borrowing

Federal Reserve Senior Loan Officer Opinion Survey (SLOOS) | July 31, 2023:





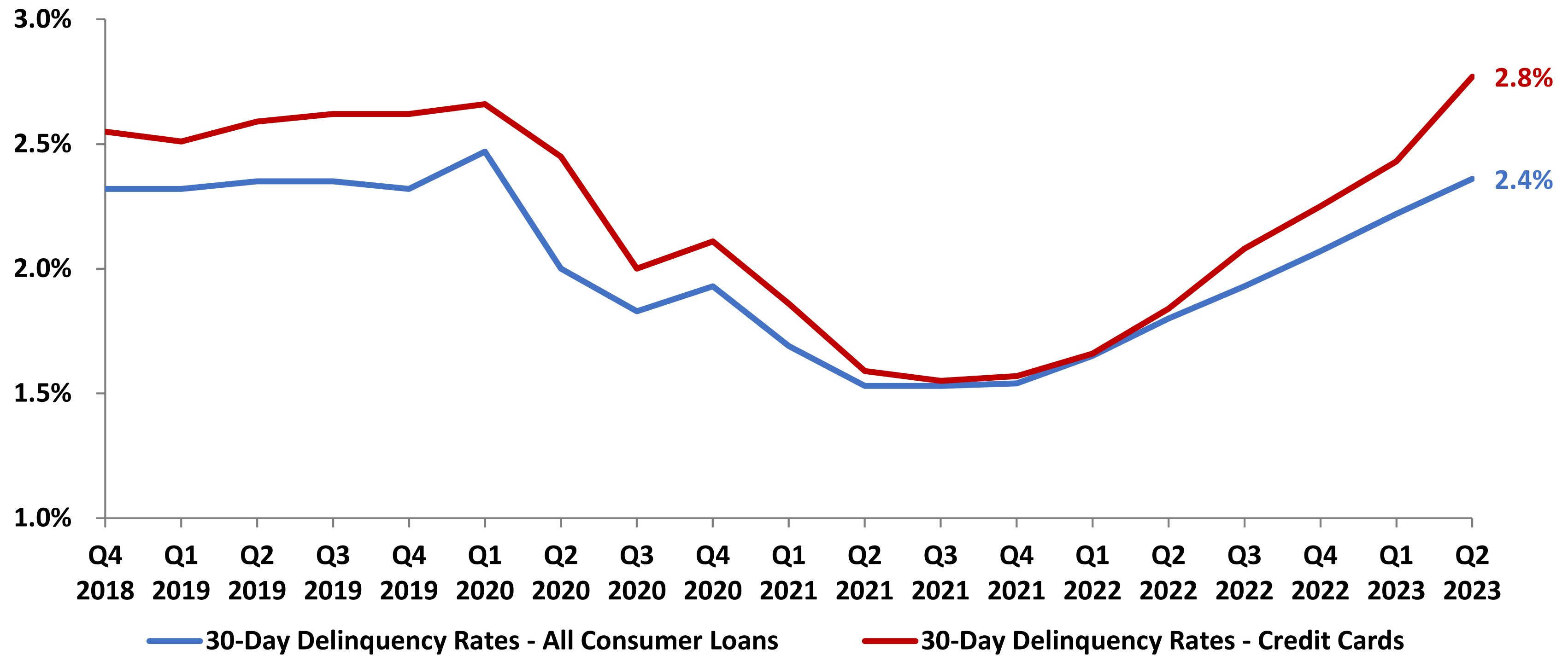
"Just more broadly on credit, we've said now for probably the last 4 or 5 quarters, we've been kind of incrementally tightening the credit box on the consumer side for a while. Whether it's really across the board in home lending, auto, card, personal loans, really every single one of them had some credit tightening." – Michael Santomassimo, CFO, Wells Fargo October 13, 2023

Source: Federal Reserve, Company Transcripts

3 Consumer Credit Quality is Normalizing

Delinquency rates for all consumer loans, and in particular, credit cards, have normalized to their pre-pandemic levels

30-Day Delinquency Rates | All Consumer Loans and Credit Cards:



Source: Federal Reserve

4 Stress at the Low-Income Consumer Segment

Companies are calling attention to increasing stress amongst low-income consumers, who generally have the highest marginal propensity to drive incremental consumption across the economy

*"Consumer spend growth has now reverted to pre-pandemic trends with nominal spend for customer stable and relatively flat year-on-year. **Cash buffers continue to normalize to pre-pandemic levels with lower income groups normalizing faster.**"*

– Jeremy Barnum, J.P. Morgan CFO, Q3 2023 Earnings Call (October 13, 2023)

*"Our customer has household income around $35,000 **… but she -- certainly in 2023, she's under some challenge. We talked about this in our first quarter call. It really showed up in mid-March where the SNAP reductions and the tax refund lowering -- or in some cases, didn't get one at all, really had a pressure -- put pressure on our consumer.** As she's still battling the inflationary pressures, even though it's moderating, it's certainly on a 2-year stack, is still significant for our consumer."*

- Jeffrey Owen, CEO, Dollar General, Goldman Sachs Retailing Conference (September 12, 2023)

*"Budget-conscious households are facing external spending pressures. **These customers are buying smaller pack sizes and, at times, prioritizing the lowest shelf price. These customers are building smaller baskets and switching to lower-priced items to stretch their budgets.** They are also exhibiting spending patterns that ebb and flow with payroll periods and SNAP benefit distributions. We expect these broader economic headwinds to continue pressuring customer spending in the second half of the year"*

- Rodney McMullen, CEO, Kroger, Q2 2024 Earnings Call (September 8, 2023)

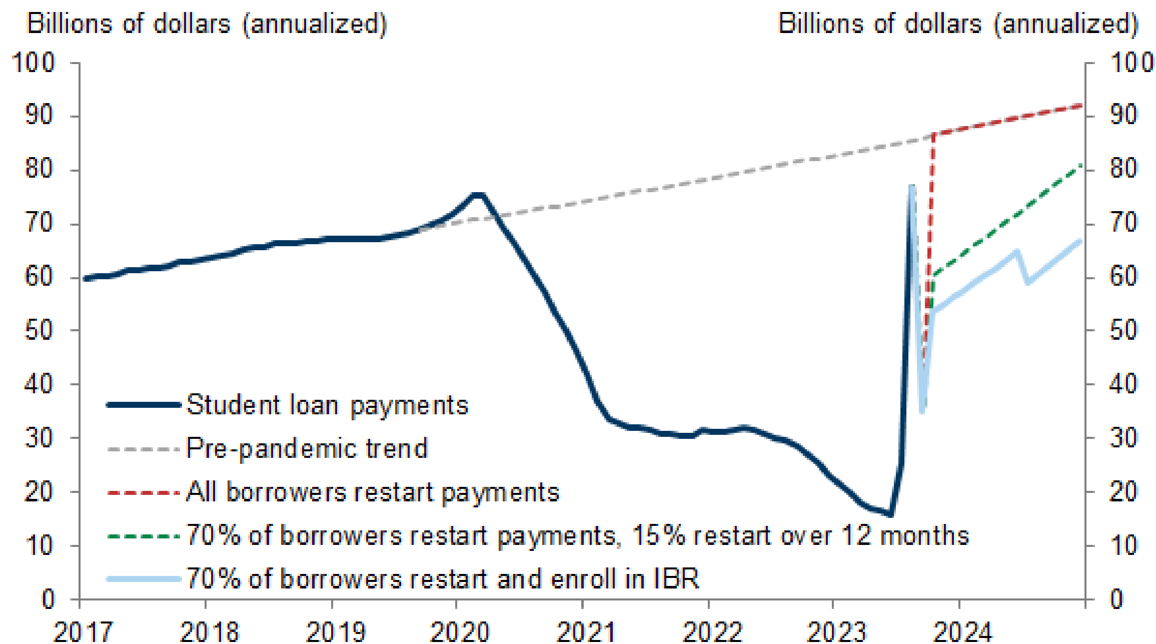
Moreover, we expect the resumption of student loan payments to pose further headwinds to an already strained consumer segment

Source: Company transcripts

5 Resumption of Student Loan Payments

Resumption of student loan payments in October is estimated to deduct ~50bps from Q4 GDP growth and will pose further headwinds to consumer spending

Student Loan Repayments Estimated Impact | Goldman Sachs Research:



"We expect the resumption of student loan payments—which officially starts in October—to subtract 0.5pp from quarterly annualized GDP growth in Q4. The resumption of payments in full would be equal to roughly $70bn, or around 0.3% of disposable personal income. Assuming that two-thirds of this hit comes out of spending and the impact builds over a few months, the impact on quarterly annualized consumption growth is -0.8pp."

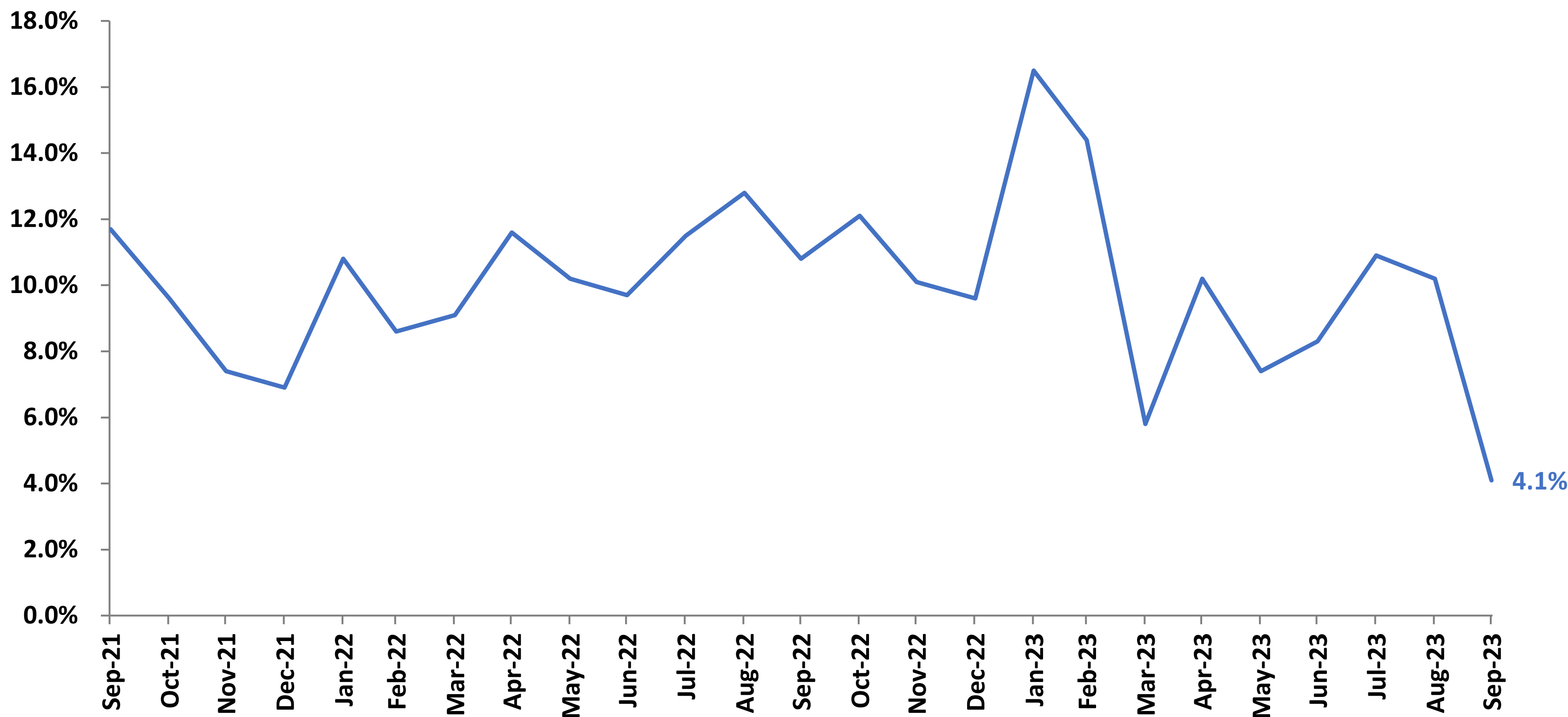
- Goldman Sachs Research, September 12, 2023

Source: Goldman Sachs Research, "The Q4 Pothole: Student Loans, Shutdown, and Strikes (Walker/Phillips)", September 12, 2023

6 Slowing Spend: High-Frequency Credit Card Data

The Bureau of Economic Analysis's high-frequency credit card data, which tracks spend levels relative to their pre-pandemic baseline, has shown a meaningful deceleration over the last two months

Total Retail & Food Service Spend vs Pre-Pandemic Trend | BEA High Frequency Credit Card Data:

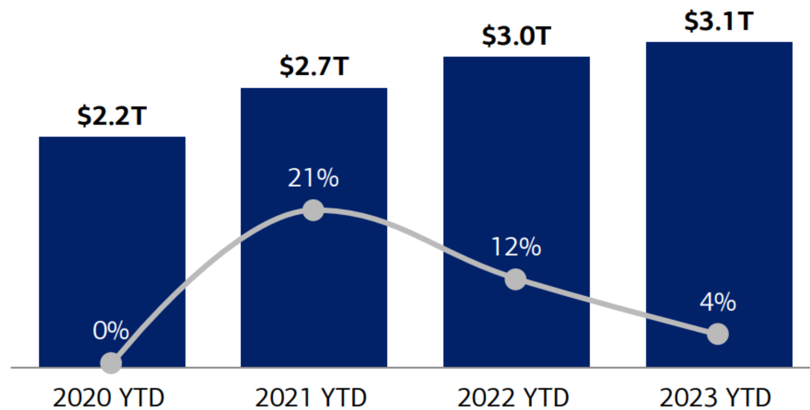


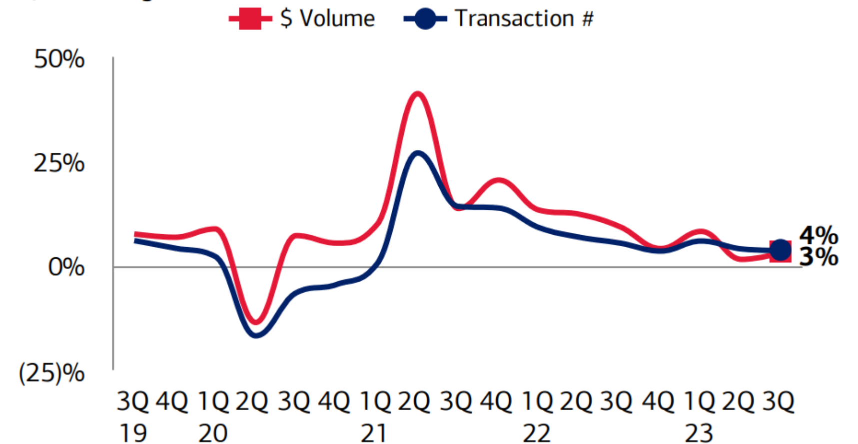
Source: Bureau of Economic Analysis (Near Real Time Spending Study)

6 Slowing Spend: Bank of America Transaction Data

Bank of America's most recent transaction data, which covers ~$4 trillion of annual spend, shows payment dollar-volume growth decelerating from 12% in 2022 year-to-date to 4% in 2023 year-to-date

Bank of America Consumer Payment Spend Data | October 17, 2023:[1]





Source: Bank of America Q3 2023 Earnings Presentation (October 17, 2023)

(1) Total payments represent payments made from Bank of America accounts using credit card, debit card, ACH, wires, billpay, person-to-person, cash, and checks

6 Slowing Spend: Recent Company Commentary

Large banks and retailers, who observe a broad swath of economic activity, have begun highlighting a slowdown in consumer spend

*"But when I look out at the market, I talked to our corporate clients, that's where we tend to see them be more nervous about the softness in the consumer. **And just -- I call it, they're much more mindful about where they're spending, right? So you're seeing them moving down within a category. They're certainly looking more on the bargain front.** We've been hearing that from our retail partners. We've been hearing that across the board."*

– Jane Fraser, CE, Citigroup, Q3 2023 Earnings Call (October 13, 2023)

*"And I do think over the next 2 to 4 quarters, the impact of that tightening will be more evident and will create slowdowns in some areas. **I am hearing, as I interact with CEOs, particularly around consumer businesses, some softness, particularly in the last 8 weeks in certain consumer behaviors.** I don't want to overamplify that because I think the economy and the consumer has been more resilient. But I think that gears some watching closely."*

– David Solomon, CEO, Goldman Sachs, Q3 2023 Earnings Call (October 17, 2023)

*"The Federal Reserve's campaign to hike interest rates with the goal of fighting inflation has successfully slowed US consumer spending, said Bank of America Corp. Chief Executive Officer Brian Moynihan. **"Frankly, the Fed has won the battle of the American consumer — they are slowing down,"** Moynihan said in a Bloomberg Television interview Tuesday. "And the question is what happens next."*

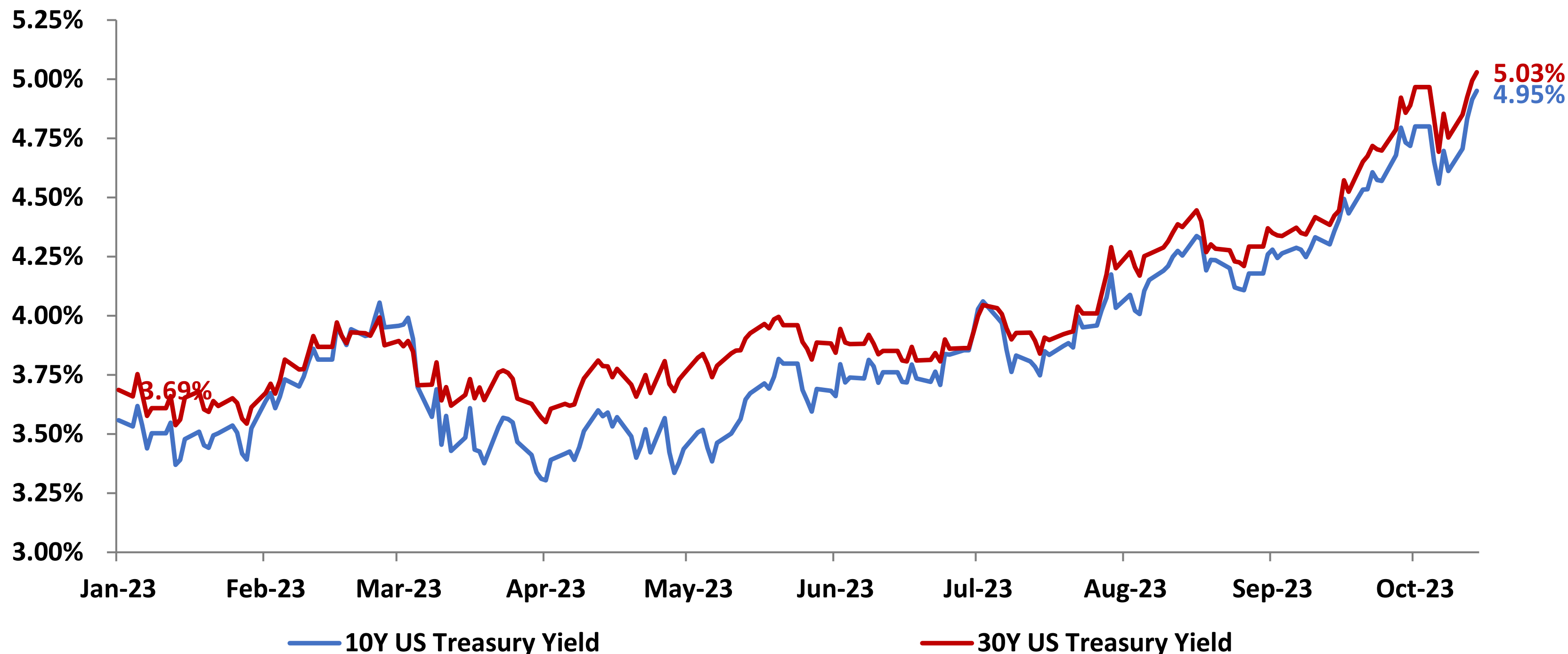
– Brian Moynihan, CEO, Bank of America, Bloomberg TV Interview, (October 17, 2023)

Source: Company transcripts

7 Rising Long-End Yields Further Tighten Conditions

The recent rapid rise in long-end U.S. treasury yields has a substantial impact on household and corporate financing costs

10Y and 30Y U.S. Treasury Yields:



10Y and 30Y U.S. Treasury yields have increased ~115bps since mid-July and are up more than 145bps from their 2023 lows

Source: Bloomberg, as of October 19, 2023 (at approximately 9AM)

7 Mortgage Rates Are at Peak Levels Since 1990s

Due to rising treasury yields and widening spreads to benchmark yields, current mortgage rates, at ~8%, are at their highest level since the late 1990s

BankRate.com 30Y Fixed Mortgage National Average Rate:

Source: Bloomberg, as of October 18, 2023.

8 Emerging Risk Factors

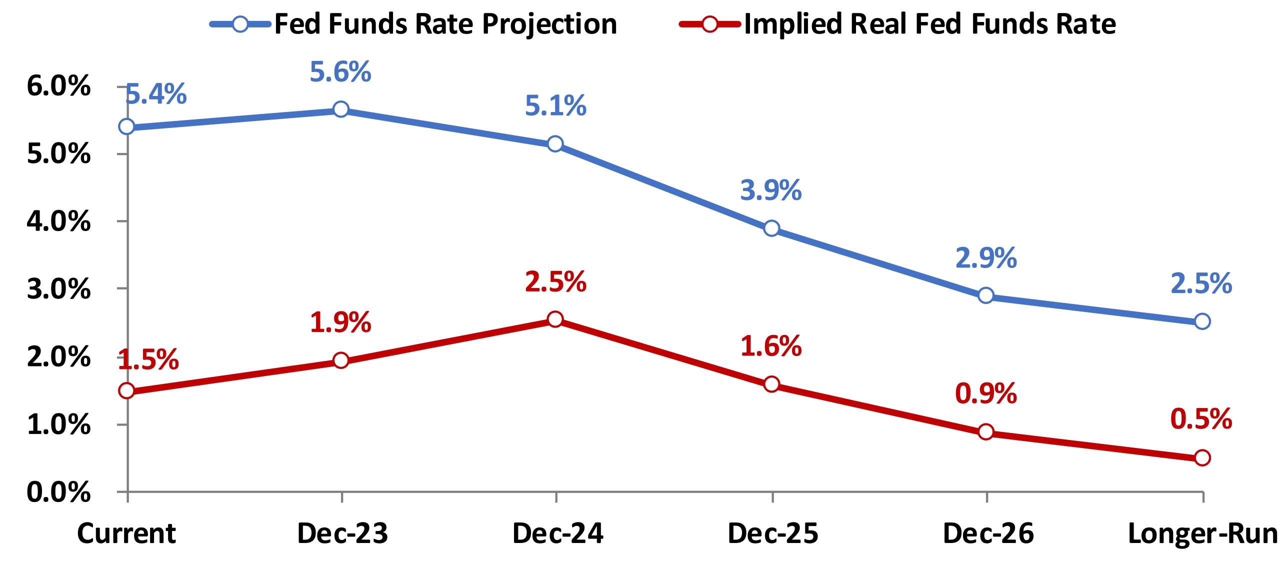
- **Heightened geopolitical uncertainty across multiple fronts**
  - Israel-Hamas conflict & potential spillover into broader Middle East region
  - Russia-Ukraine war
  - China-Taiwan potential escalation
- **Financial system stability risks**
  - BOJ policy normalization & resulting effect on global yields
  - Dislocated commercial real estate capital markets
- **Impact of higher long-end yields on bank balance sheets and corporate refinancings (higher cost of capital, increased default risk)**
- **Risk of a U.S. government shutdown**
- **Slowing global economic growth**
  - China's economic growth momentum has stalled, with potential contagion risk from an overleveraged real estate sector
  - Weakness in European manufacturing sector

Conclusion

FOMC Forecasts Risks Overtightening

The Federal Reserve's most recent dot plot anticipates the real FFR, implied by adjusting its forecast for nominal FFR by its own forecast for Core PCE inflation, will increase from 190bps in December 2023 to 250bps by December 2024

FOMC Summary of Economic Projections | September 2023:



	Current	Dec-23	Dec-24	Dec-25	Dec-26	Longer-Run
Fed Funds Rate	**5.4%**	**5.6%**	**5.1%**	**3.9%**	**2.9%**	**2.5%**
(-) Core PCE YoY Inflation	(3.9%)	(3.7%)	(2.6%)	(2.3%)	(2.0%)	(2.0%)
Implied Real Fed Funds Rate	**1.5%**	**1.9%**	**2.5%**	**1.6%**	**0.9%**	**0.5%**

The Fed dot plot implies a significant risk of unnecessarily overtightening given the meaningful progress on inflation amidst the increasing economic headwinds and emerging risk factors

Source: Federal Reserve

Balanced Monetary Policy

Current economic conditions, characterized by easing inflation, receding growth tailwinds and emerging "black swan" risk factors, require a more balanced monetary policy framework than at any point earlier in the cycle

- **As inflation continues to moderate, simply holding the FFR constant will tighten monetary policy as real rates become more restrictive**
- **The Federal Reserve's current policy outlook does not appear to sufficiently consider downside risks to economic growth**
  - FOMC's September meeting dot plot forecasts one more rate hike by year-end 2023 and further tightening of the real FFR into 2024 despite expectations of slowing growth and inflation
  - Over-tightening as economic growth slows could inadvertently catalyze a "hard landing"
- **Gradual normalization will still maintain ample policy space to cut rates substantially in response to any economic shocks**
  - Given the high starting level of the FFR, the Federal Reserve can begin normalizing the FFR to a less restrictive stance while still preserving sufficient flexibility to ease more rapidly if needed

We believe the Federal Reserve should maintain rates at their current level and gradually begin introducing a framework for less restrictive monetary policy (rate cuts) as inflation continues to ease and there is greater uncertainty on economic growth outcomes

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