Blackstone

It's All in the Fed's Hands Now

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Joseph Zidle
Chief Investment Strategist
Senior Managing Director

Byron R. Wien
Vice Chairman

To receive future market commentary publications, please email BlackstoneStrategy@Blackstone.com

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I. Introduction

The US Economy Is Still Strong

Despite the market's rising fear of near-term recession in the US, there remain important ongoing strengths. Corporate profits are still rising, and manufacturing and industrial production continue to expand. The robust June jobs report showed that businesses are still adding jobs, with demand for labor outpacing the number of workers that are available. There are around two job openings for every unemployed person, and there are four open positions for each prime-age worker (aged 25-54). In addition, despite souring consumer sentiment amid biting inflation levels, consumption has remained steady. Finally, and perhaps most significantly, there is still a significant cushion of excess savings and elevated levels of liquid financial assets on household balance sheets.

Inflation Is Still with Us

June's inflation report showed that prices continue to rise at an uncomfortable pace, and that the increases are broadening out. Around three-fourths of categories in the consumer price index (CPI) basket are now increasing by more than 4% on a year-over-year basis. To be sure, there have been positive signs in the inflation data, ranging from falling commodity prices to moderation in the core CPI (ex-food and energy). This means that year-ago increases may start to fall soon, especially should the price of oil remain range-bound and retail gasoline prices fall. Even so, we are less confident than the consensus that inflation is going to drift down to the Fed's 2% target level anytime soon. We maintain our view that inflation is going to remain persistently elevated, with "sticky" forms of inflation, including shelter prices and labor costs, potentially hindering a quick return to lower inflation. It may be easy to go from 9% inflation to 5%, but going from 5% to 2% may take longer than many expect.

Markets are pricing in a terminal rate of 3.5% for this Fed hiking cycle, but the Fed may very well need to raise rates much higher than that. A Fed Funds rate of 5% is a real possibility. For the Fed to feel that it has really licked inflation, the central bank will want to see lower levels with its own eyes. It won't be enough to just see some deceleration in price increases, as we saw earlier this year. If prices do moderate soon, the Fed may feel comfortable stopping its rate hiking cycle earlier.

Not Your Father's Fed

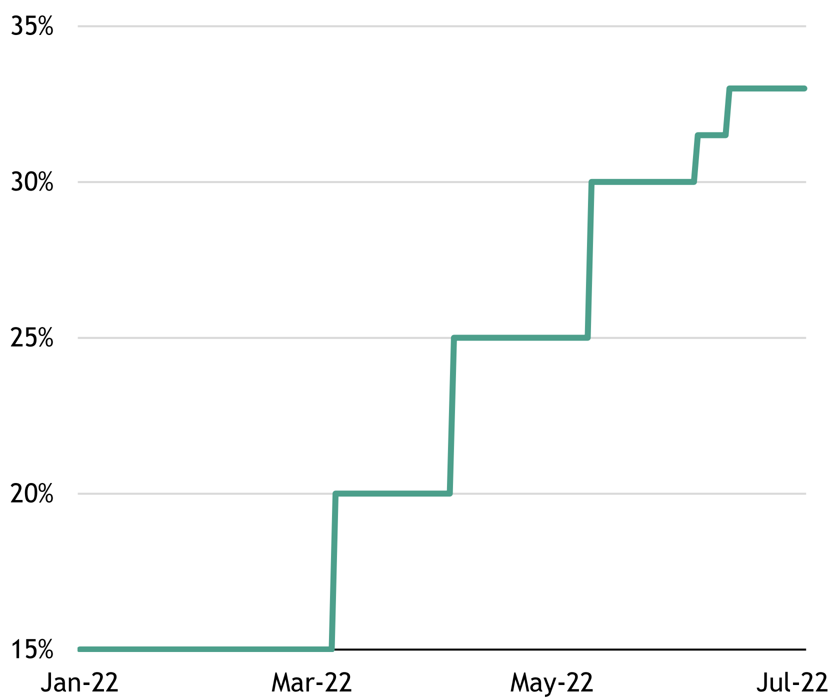
If we do enter recession as a result of demand being artificially suppressed by higher interest rates, the central bank may not be as likely as in prior cycles to immediately cut rates to support the economy, especially if supply constraints remain. The demand would snap back and we would end up right back where we are. As a result, the Fed may opt to keep rates elevated, even in the event of recession, for longer than consensus or markets expect. This would be a dramatic shift from prior cycles when the Fed cut rates to zero and expanded its balance sheet to support the economy and markets. What we are describing is a world of structurally higher interest rates, and inflation that doesn't come down as quickly as most think. The 10-year Treasury yield might not make new record lows, public equity markets could face structural valuation headwinds, volatility may be higher, and the traditional 60/40 portfolio could continue to be dead in the water. This environment will require creative approaches to investment and asset allocation, with an eye to duration management across a portfolio. It's an environment where alternative asset classes, with strong performance and lower volatility relative to public markets, are poised to shine.

Note: As detailed in the "Disclaimers" section, the above and all subsequent commentary in this presentation reflect the personal views of Joseph Zidle, Senior Managing Director, and Byron Wien, Vice Chairman, and do not necessarily reflect the view of Blackstone.

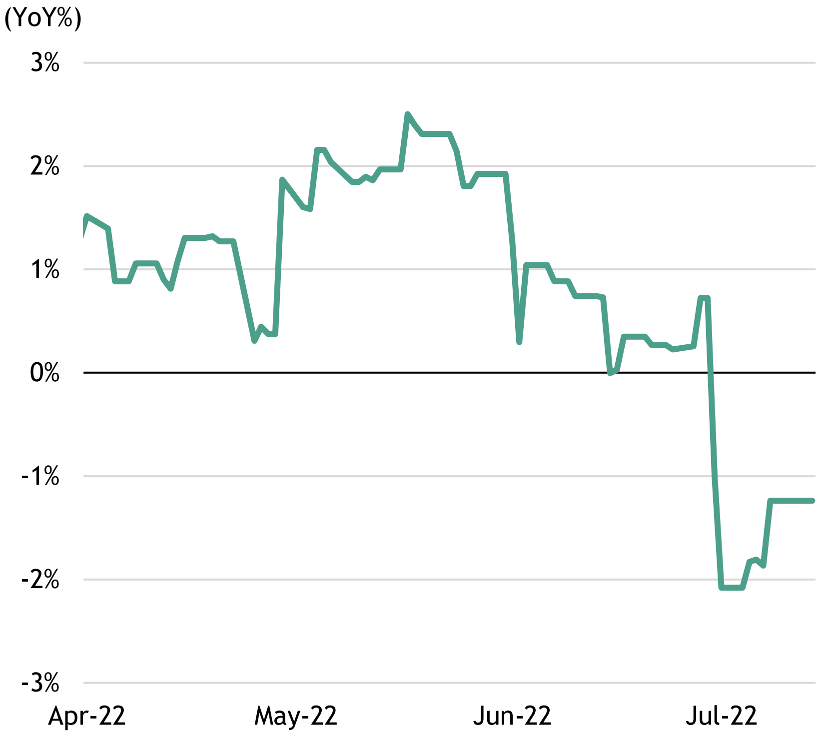
II. Calls for Recession Grow Louder

Consensus more pessimistic on odds of a US recession as high-frequency data indicate potential 2Q'22 contraction

Consensus Forecast for Probability of US Recession in the Next 12 Months(1)



Atlanta Fed GDPNow Real GDP Estimate for 2Q'2022(2)

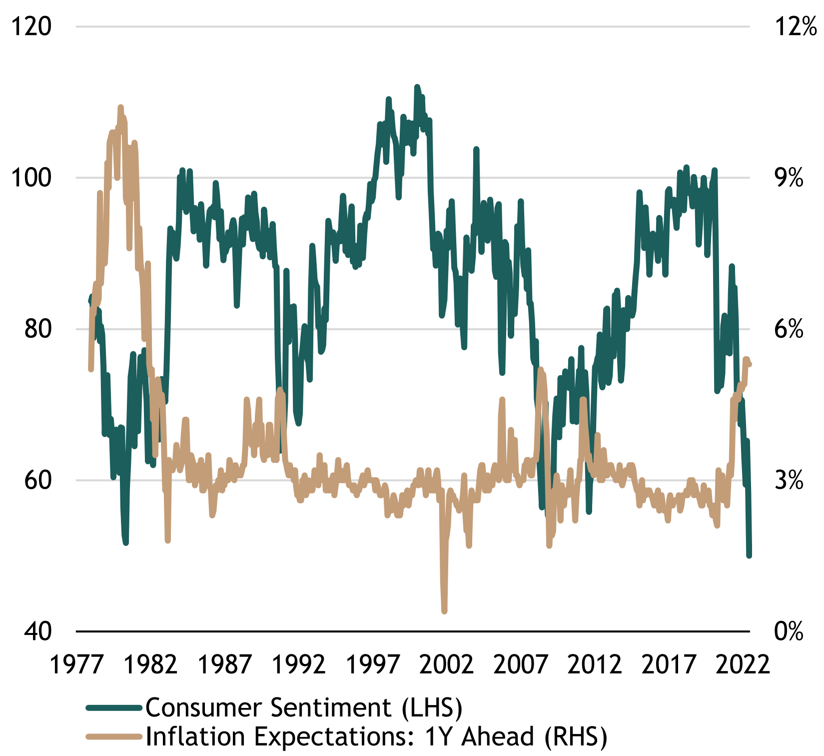


Source: Blackstone Investment Strategy, Bloomberg and Federal Reserve Bank of Atlanta, as of July 14, 2022.
(1) Based on median of economic forecasts, as compiled by Bloomberg, latest available as of date herein.
(2) GDPNow is a nowcasting model created by the Federal reserve bank of Atlanta that forecasts real GDP growth by aggregating 13 components that make up GDP with the chain-weighting methodology used by the US Bureau of Economic Analysis.

Consumers grow increasingly pessimistic as signs emerge that inflation is beginning to hit spending

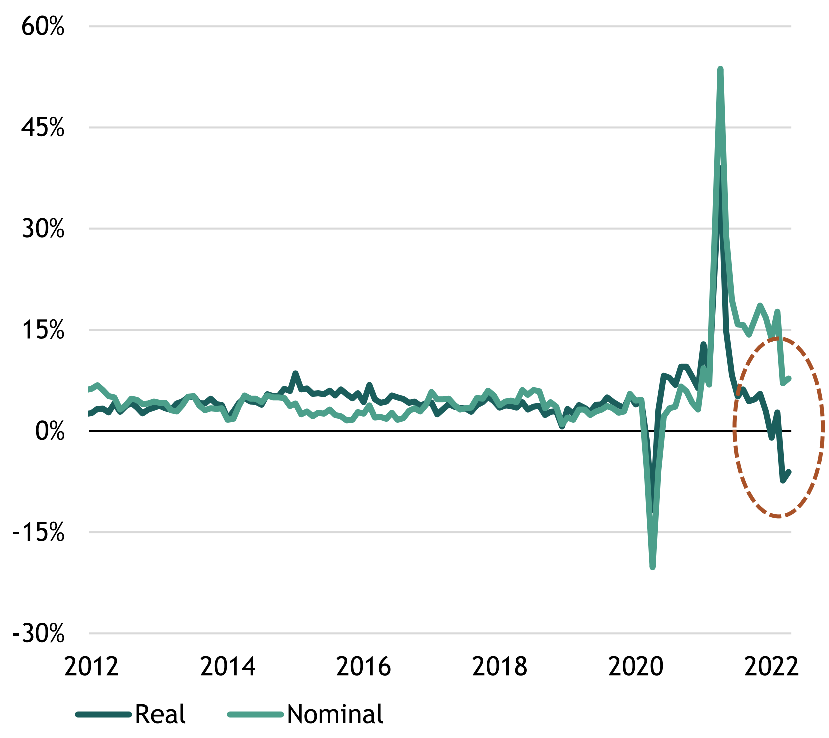
UMich Consumer Sentiment Surveys

(LHS = index level; RHS = YoY%)



US Real and Nominal Retail Sales

(YoY%)



Source: Blackstone Investment Strategy, University of Michigan, Census Bureau and Bloomberg. Consumer sentiment data are as of June 30, 2022. Nominal and real retail sales are as of May 31, 2022 and April 30, 2022, respectively.

RECESSION CHECKLIST

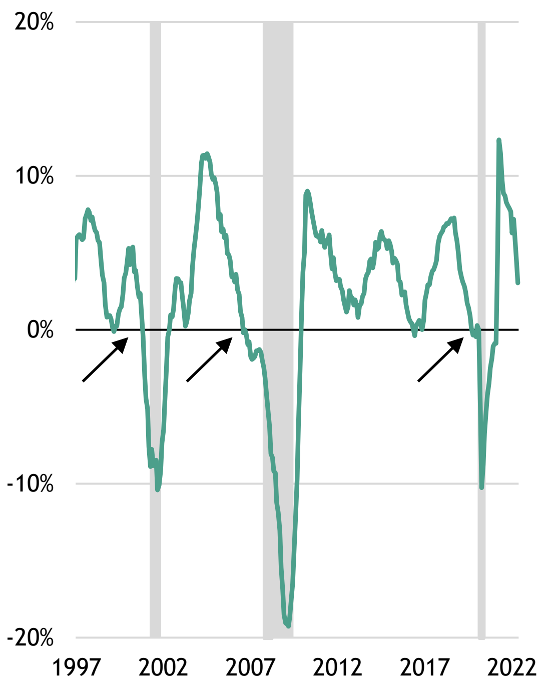
Indicator	Description	Tech Bubble (1999)	Housing Bubble (2007)	COVID-19 (2020)	Current	Note: Current
Primary Indicators ("Sufficient Conditions")						
Average Hourly Earnings Growth	▪ Growth of 4%+ creates concern of a wage-price spiral ▪ The Fed hikes to front-run inflation, and overtightens	✓	✓	✓	✓	Wage growth remains around 5%; Fed Chair Powell called the job market "unsustainably hot" in June 2022
Leading Economic Indicators Growth	▪ Growth in LEIs peaks and turns negative before recession	✓	✓	✓	✗	LEI growth has fallen from prior highs but yet to turn negative
Yield Curve: 10Y/2Y Spread	▪ Inversion preceded each of the last six recessions, with no false positives	✓	✓	✓	✓	The yield curve recently inverted for the third time this year
Secondary Indicators ("Necessary Conditions")						
Unemployment	▪ Recession signal when 3-month moving average of unemployment rises 0.5% or more vs. prior 12-month low	✓	✓	✓	✗	Unemployment is at 3.6% and Sahm indicator remains historically low
Corporate Profits Growth	▪ Year-over-year growth always turns negative before recession	✓	✓	✓	✗	Nonfinancial corporate profits growth remains positive; estimates for S&P 500 earnings in CY2022 and CY2023 continue to rise
Consumer Confidence	▪ The spread between consumer confidence on "future expectations" less "present situation" turns negative and troughs before recession	✓	✓	✓	✓	Consumers are highly pessimistic about future expectations relative to their current situation

Source: Blackstone Investment Strategy, as of June 30, 2022.

Three important indicators have yet to signal that the US is imminently headed for recession

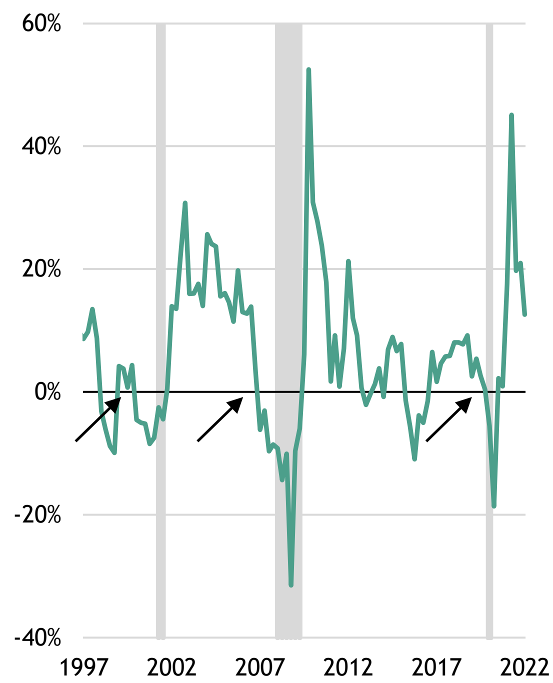
Leading Economic Index(1)

(YoY%)



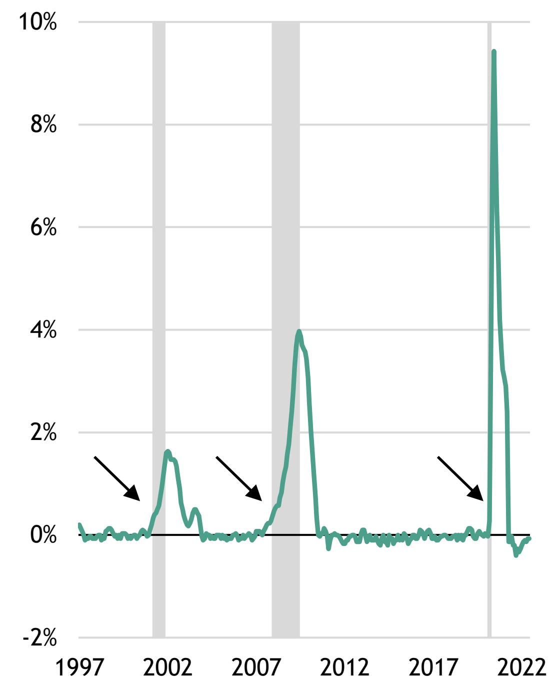
Corporate Profits(2)

(YoY%)



Unemployment(3)

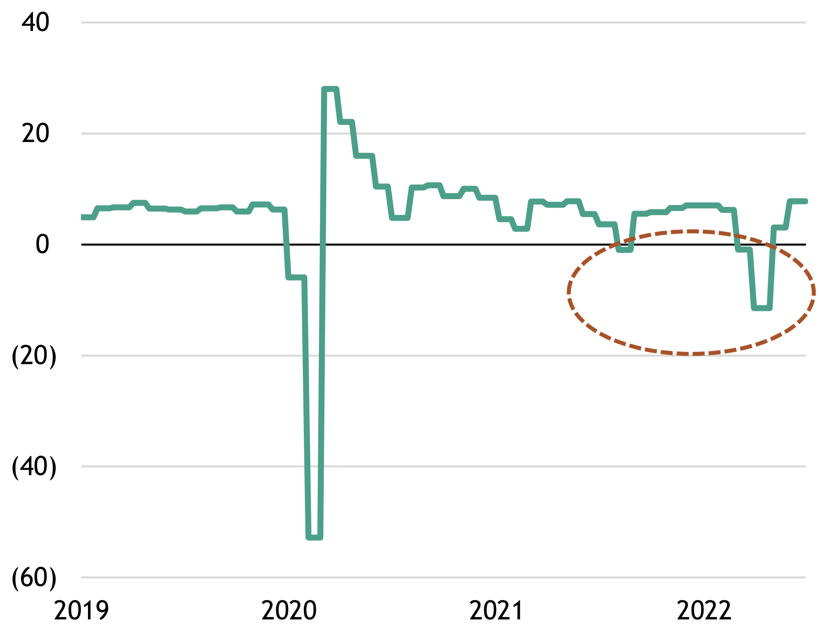
(Sahm Recession Indicator)



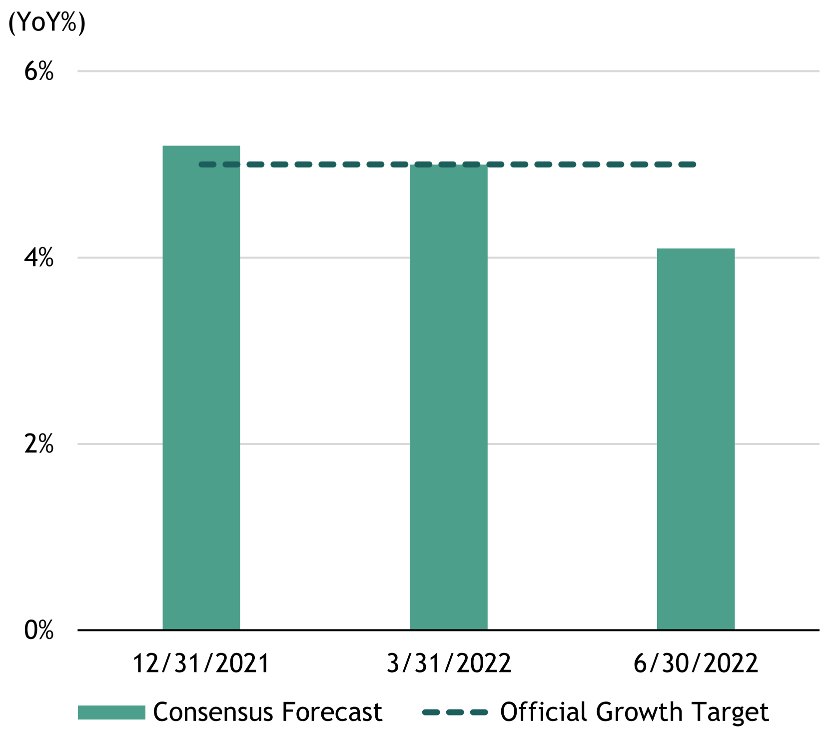
Source: Blackstone Investment Strategy, Bureau of Economic Analysis, Conference Board, Bureau of Labor Statistics and Bloomberg.
(1) Represents the Conference Board US Leading Economic Index, as of May 31, 2022.
(2) Represents corporate profits before tax with inventory valuation and capital consumption adjustments, as of March 31, 2022.
(3) Represents the Sahm Recession Indicator, which signals the start of a recession when the three-month moving average of the national unemployment rate (U3) rises by 0.50 percentage points or more relative to its low during the previous 12 months. As of June 30, 2022.

Economic activity rebounded from recent COVID-19 lockdowns, but 2022 GDP forecast to be below 5% target

Goldman Sachs' Current Activity Indicator (CAI) for China(1)



Consensus Forecasts for China's 2022 Real GDP Growth at Various Points in Time(2)



Source: Blackstone Investment Strategy, Goldman Sachs and Bloomberg, as of June 30, 2022.

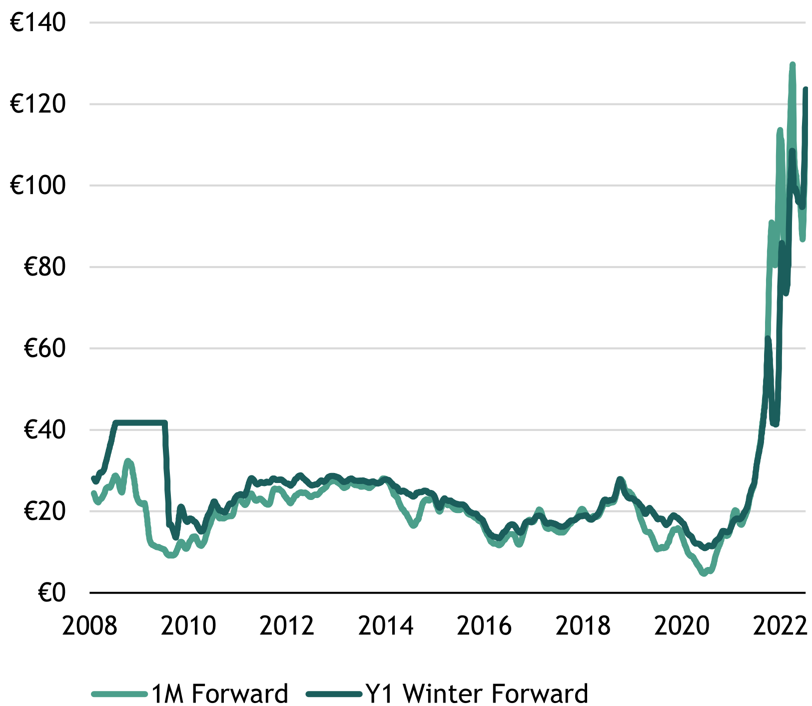
(1) The CAIs are the "first principal component" of several real activity indicators, expressed in GDP-equivalent units. The CAIs can be interpreted as the growth signal in the main high-frequency indicators for each economy. At any given point, data for certain indicators may not be available. The CAIs therefore incorporate forecasted values for missing indicators, which are then replaced with actual values when they are released.

(2) Represents the median economist forecast, as compiled by Bloomberg.

Russia's ongoing war in Ukraine continues to squeeze European energy prices and hurt economic activity

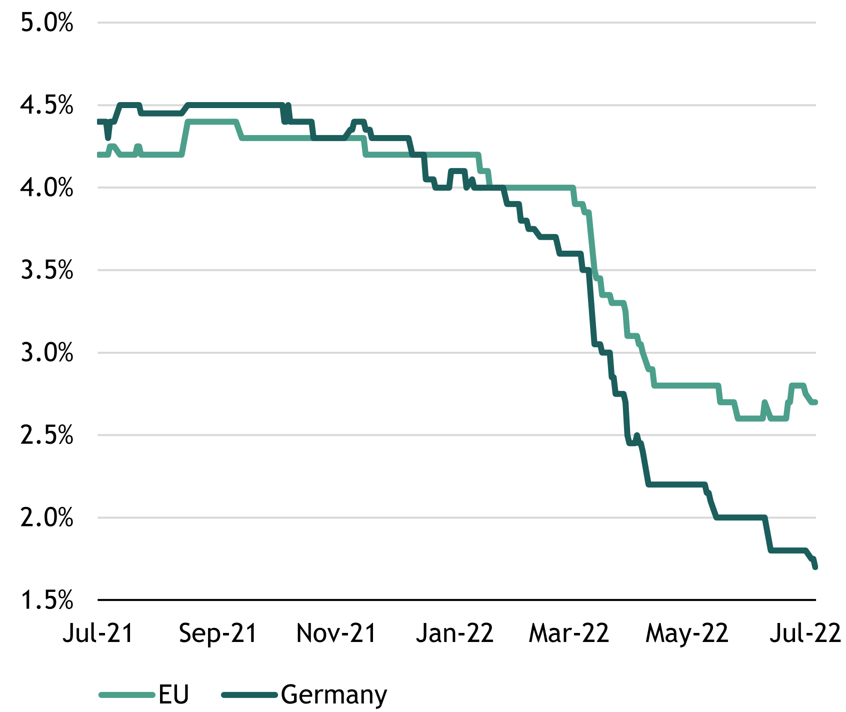
Dutch Natural Gas Futures Prices[1]

(€/MWh, 30-day moving average)



Consensus Forecasts for 2022 Real GDP[2]

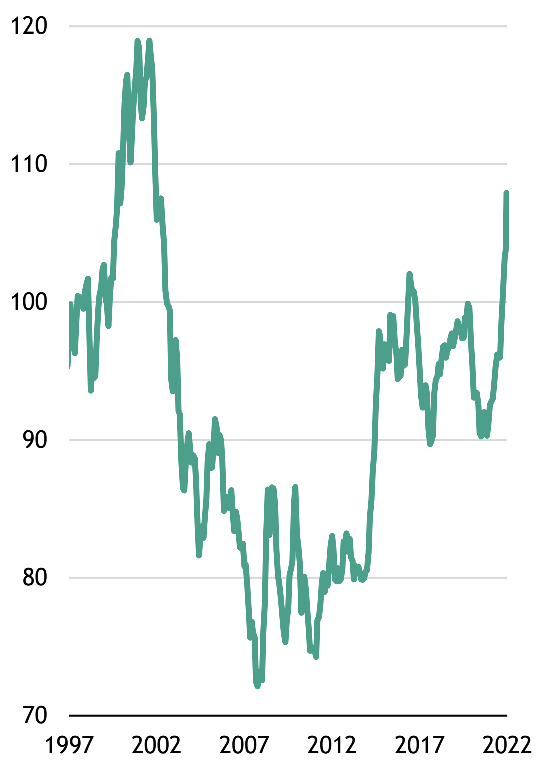
(YoY%)



Source: Blackstone Investment Strategy and Bloomberg, as of July 6, 2022.
(1) Represents forward month 1 and forward winter 1 prices for natural gas delivered to Virtual Trading Point Netherlands Title Transfer Facility (TTF). Forward winter prices are for the following October to March at each point in time.
(2) Based on median of economic forecasts, as compiled by Bloomberg, latest available as of date herein.

US dollar at strongest level in 20 years as recessionary fears and market volatility lead investors to safe assets

DXY Dollar Index



EUR/USD Spot Rate

JPY/USD Spot Rate

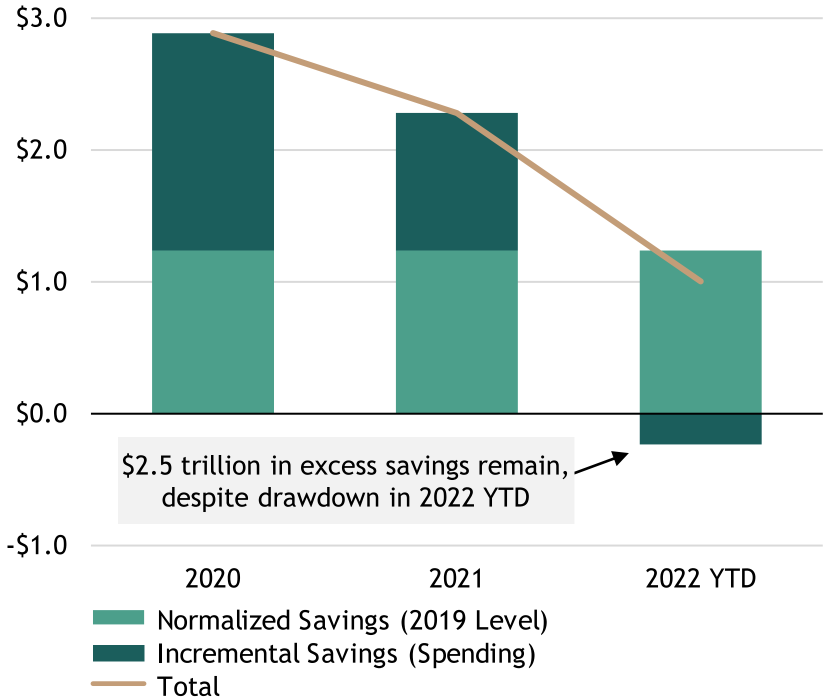
Source: Blackstone Investment Strategy and Bloomberg, as of July 12, 2022. Represents monthly averages, except for latest data point.

III. Important Strengths in the US Economy

Households continue to have significant cash buffer on balance sheets

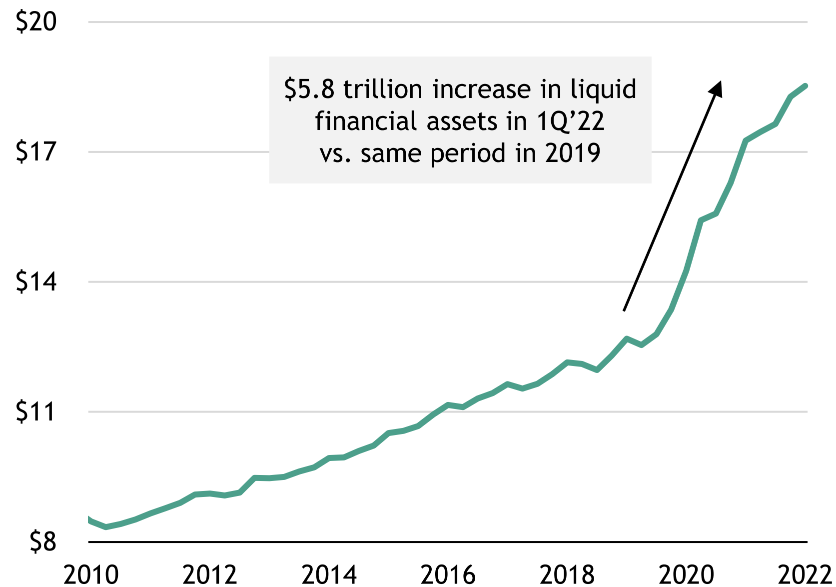
Incremental Savings (Spending) Relative to Normalized (2019 Level) Savings[1]

(US$ in trillions)



Household Liquid Financial Assets[2]

(US$ in trillions)



Source: Blackstone Investment Strategy, Bureau of Economic Analysis, Federal Reserve, Bloomberg and Haver Analytics.

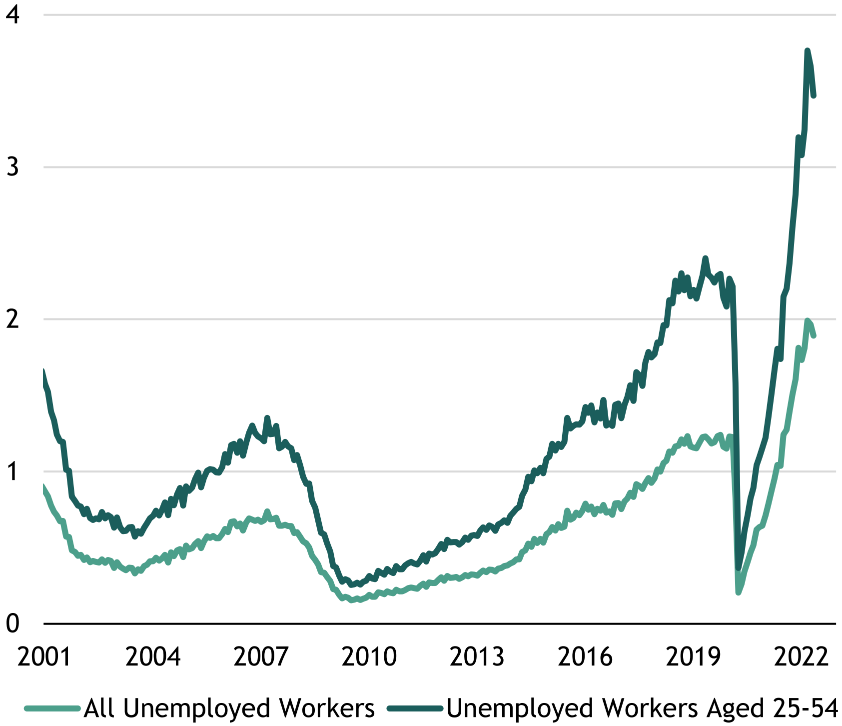
(1) "Incremental Savings (Spending)" represents the respective personal savings level relative to 2019 annual average, as of May 31, 2022. "2022 YTD" represents the average of monthly data at seasonally adjusted annual rate, from January 2022 through May 2022.

(2) Represents the sum of household assets consisting of deposits in foreign countries, checkable deposits and currency, savings deposits and money market shares, as of March 31, 2022.

There remain historically high number of job openings per available worker, driving continued wage pressures

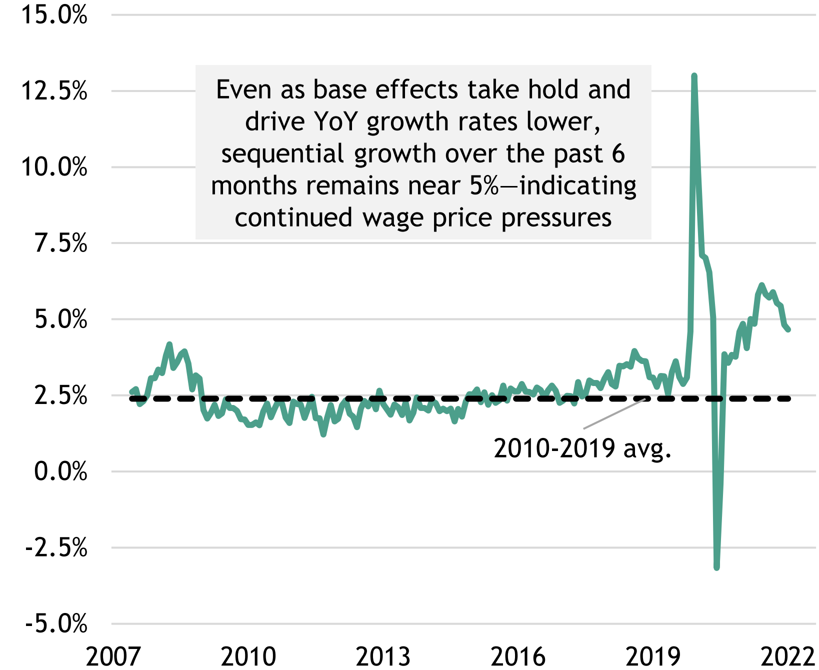
Number of Job Openings per Unemployed Worker

(all workers and workers aged 25-54)



Average Hourly Earnings for Total Private Employees

(6-month annualized growth rate)

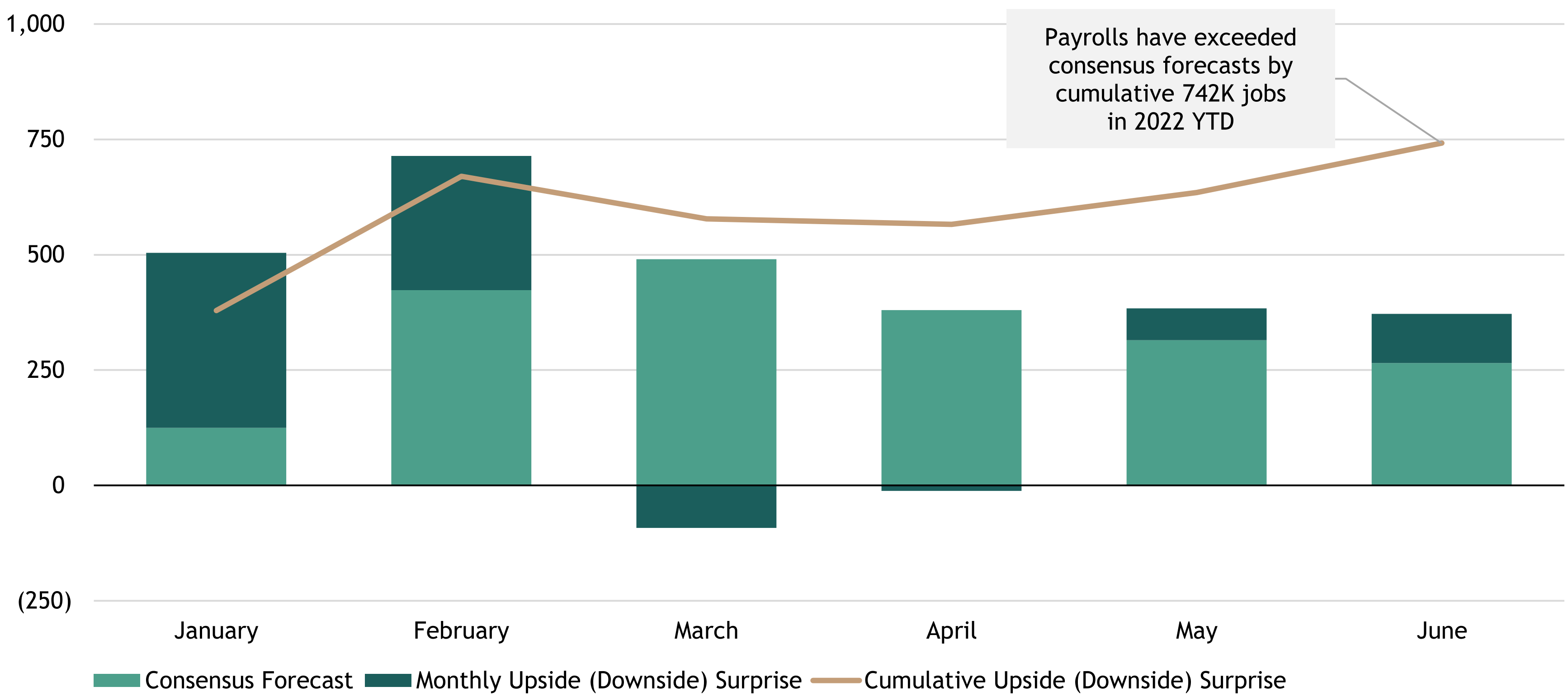


Source: Blackstone Investment Strategy, Bureau of Labor Statistics and Bloomberg, as of May 31, 2022.

June employment report surprised significantly to the upside, helping to mitigate concerns we are in recession

Nonfarm Payrolls Monthly Change in 2022 YTD

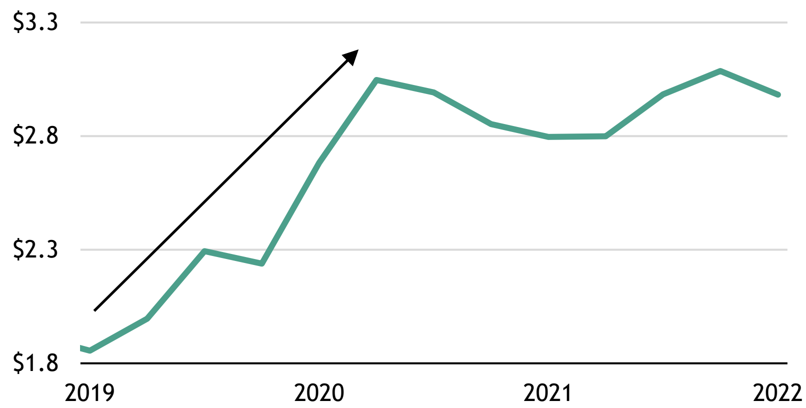
(in thousands)



Source: Blackstone Investment Strategy, Bureau of Labor Statistics and Bloomberg, as of June 30, 2022.

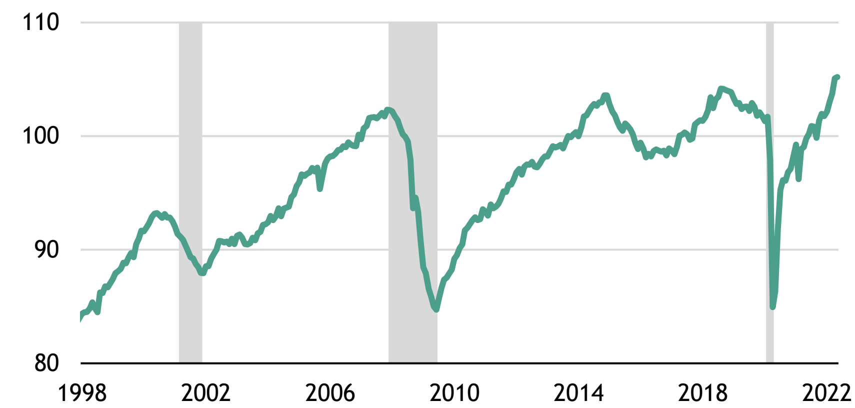
Corporations' Liquid Financial Assets

(US$ in trillions)



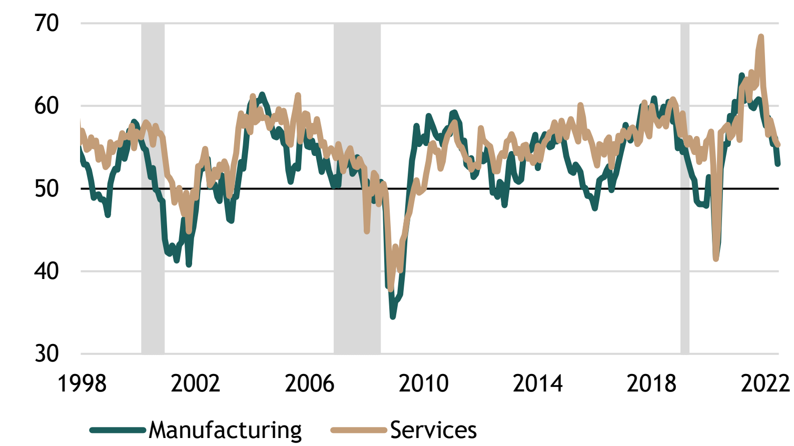
Industrial Production

(2017 = 100)



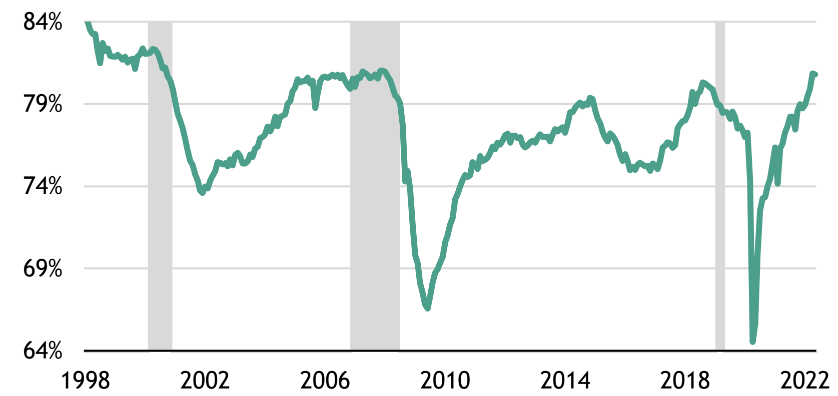
Manufacturing & Services PMIs

(>50 = expansion; <50 = contraction)



Capacity Utilization

(% of total capacity)

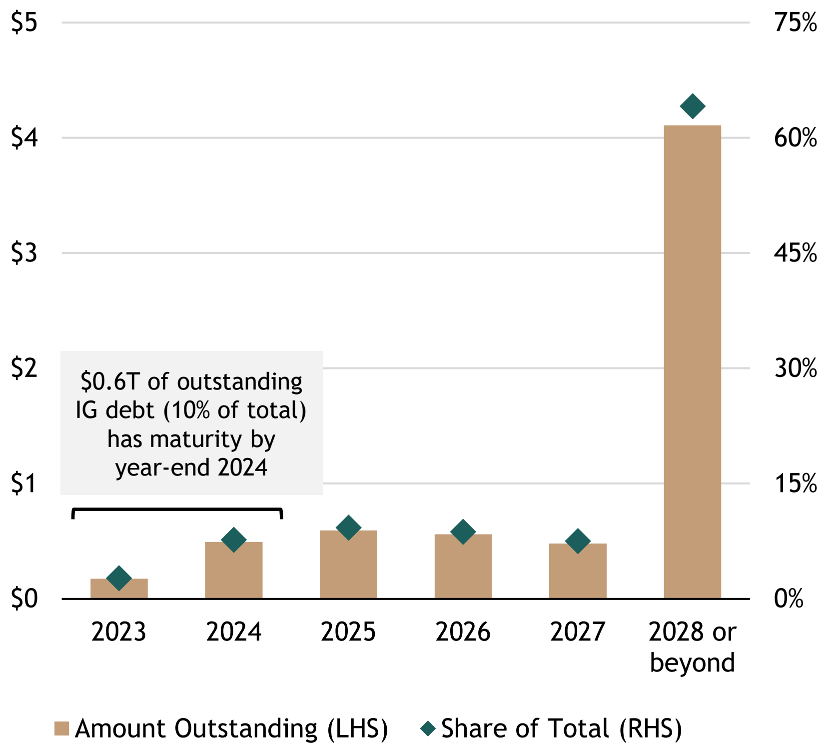


Source: Blackstone Investment Strategy, Federal Reserve, Bloomberg and Haver Analytics, as of March 31, 2022 (liquid financial assets), May 31, 2022 (industrial production and capacity utilization) and June 30, 2022 (PMIs). Gray shading in charts represents recessions. Note: "Liquid Financial Assets" represent the sum of assets on the balance sheets of nonfinancial corporations, consisting of checkable deposits and currency, money market fund shares, asset security RPs, commercial paper, Treasury issues, Agency & GSE-backed securities and municipal securities.

Majority of IG and HY bonds mature in 2028 or later, reducing the risk of higher rates for existing debt

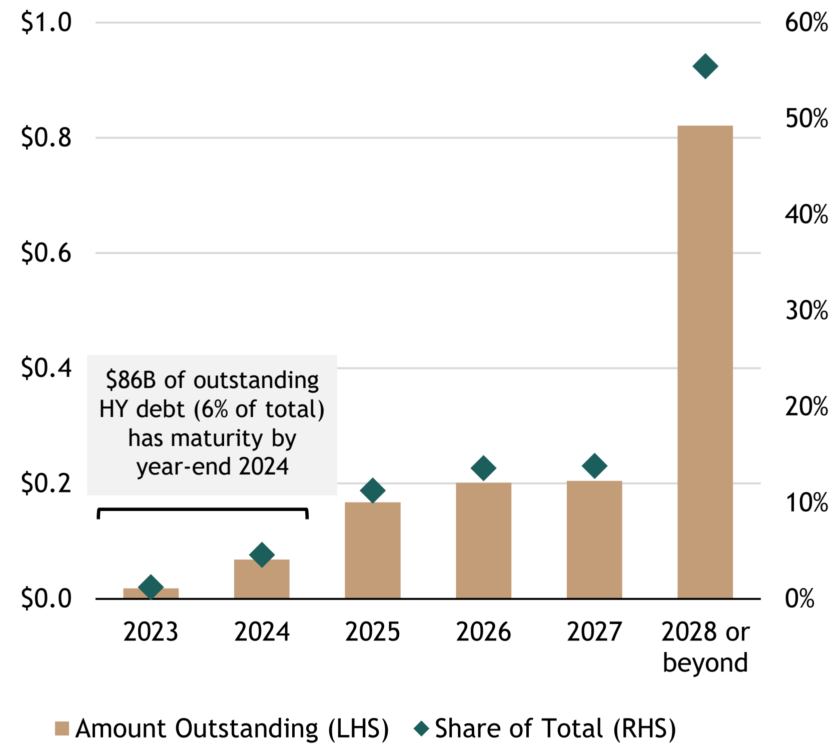
Maturity of US Investment Grade Debt

(US$ in trillions)



Maturity of US High Yield Debt

(US$ in trillions)



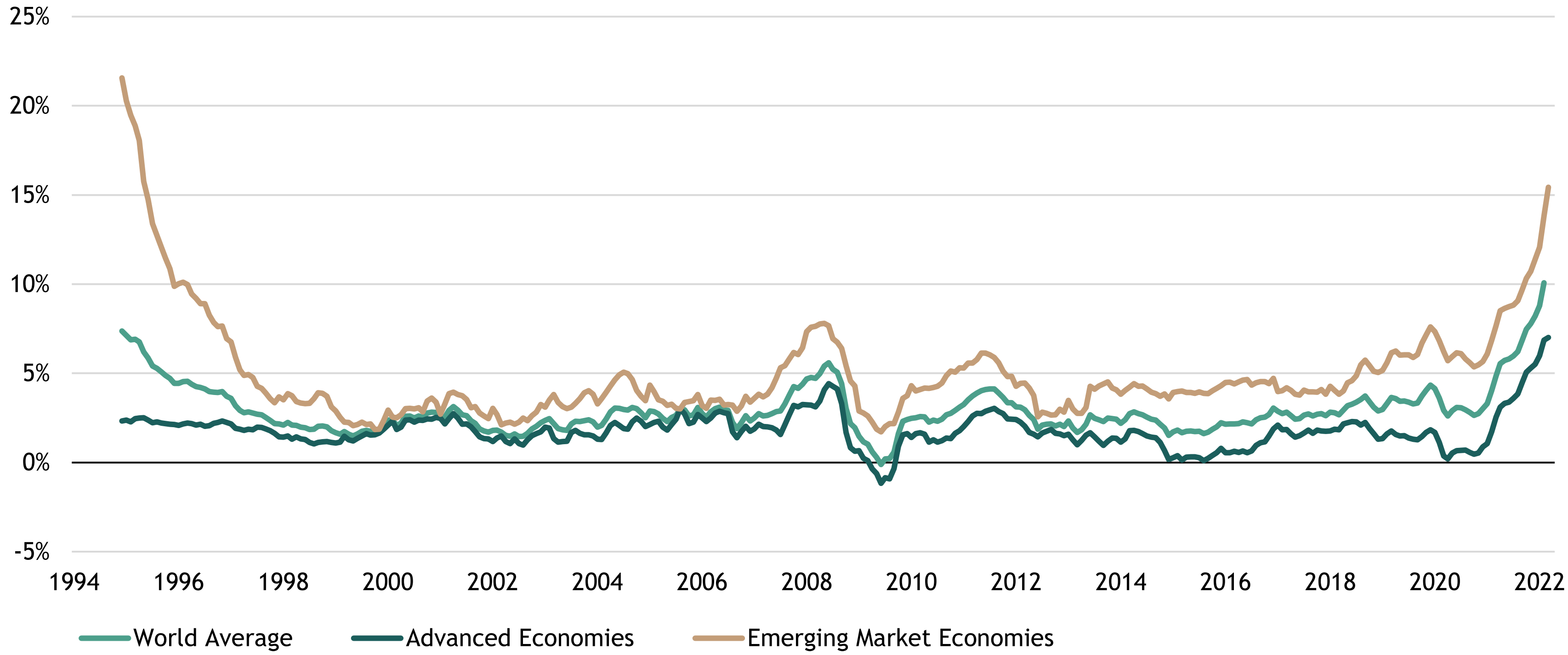
Source: Blackstone Investment Strategy and Bloomberg, as of July 7, 2022. Investment Grade debt represented by the Bloomberg US Corporate Total Return Index and High Yield debt represented by the Bloomberg US High Yield Total Return Index.

IV. Inflation: More Persistent than the Recent Consensus

Inflation at multi-decade highs globally, and evident in both advanced and emerging economies

Consumer Price Index Increase

(YoY%)

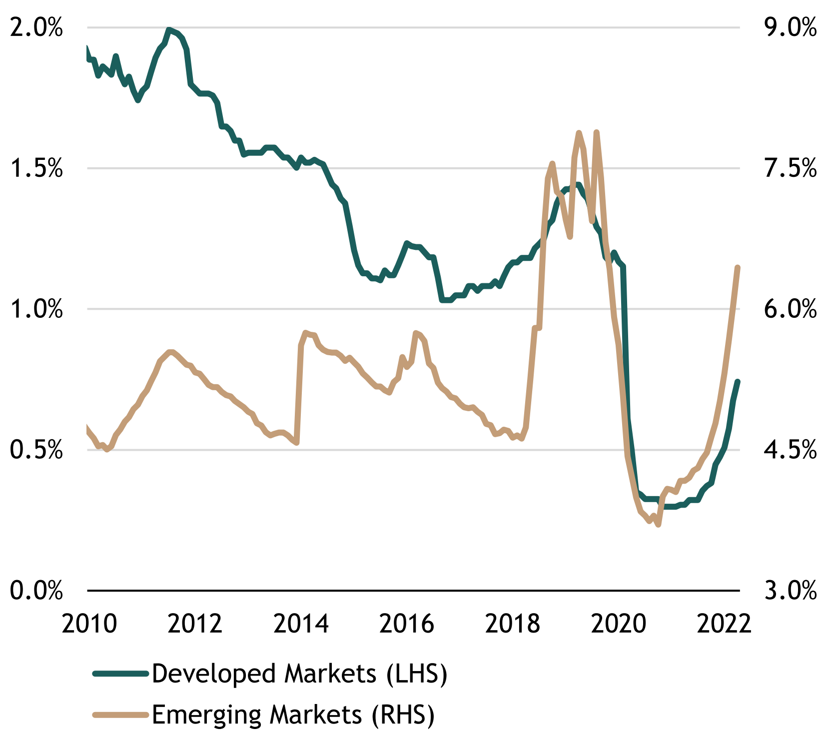


Source: Blackstone Investment Strategy and Haver Analytics, as of May 31, 2022. "World average" represents the average composite CPI of Advanced Economies and the composite CPI of Emerging Market Economies, weighted by their shares of GDP in US dollars in 2015. "Advanced Economies" and "Emerging Market Economies" represent the average CPIs of 22 advanced economies and 51 emerging market economies, respectively, weighted by each individual economy's share of total nominal GDP in 2015.

Policy rates rising globally, with global bond yields rising to the highest levels since the Global Financial Crisis

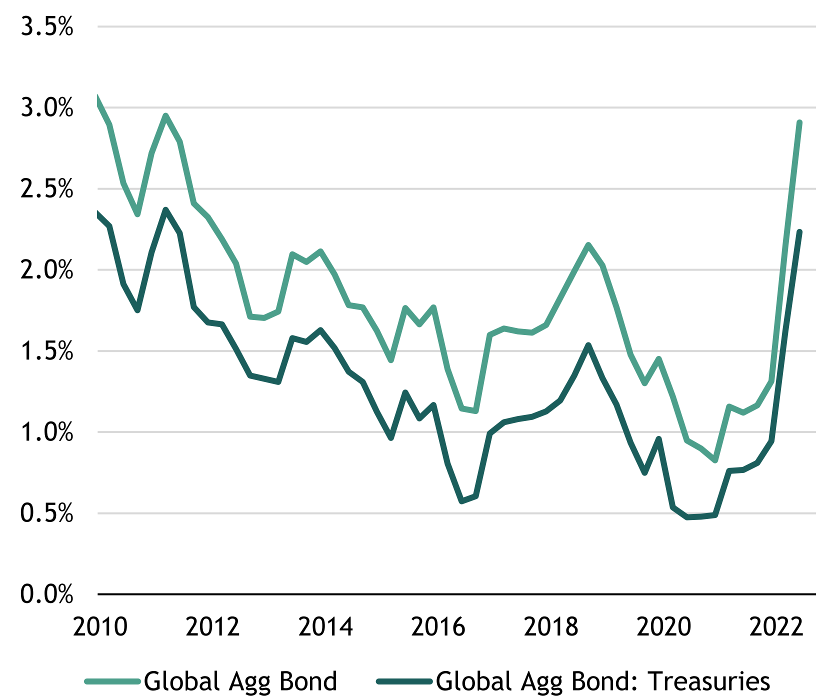
Central Bank Policy Rates[(1)]

(average)



Global Aggregate Bond Index Yields[(2)]

(yield to worst)



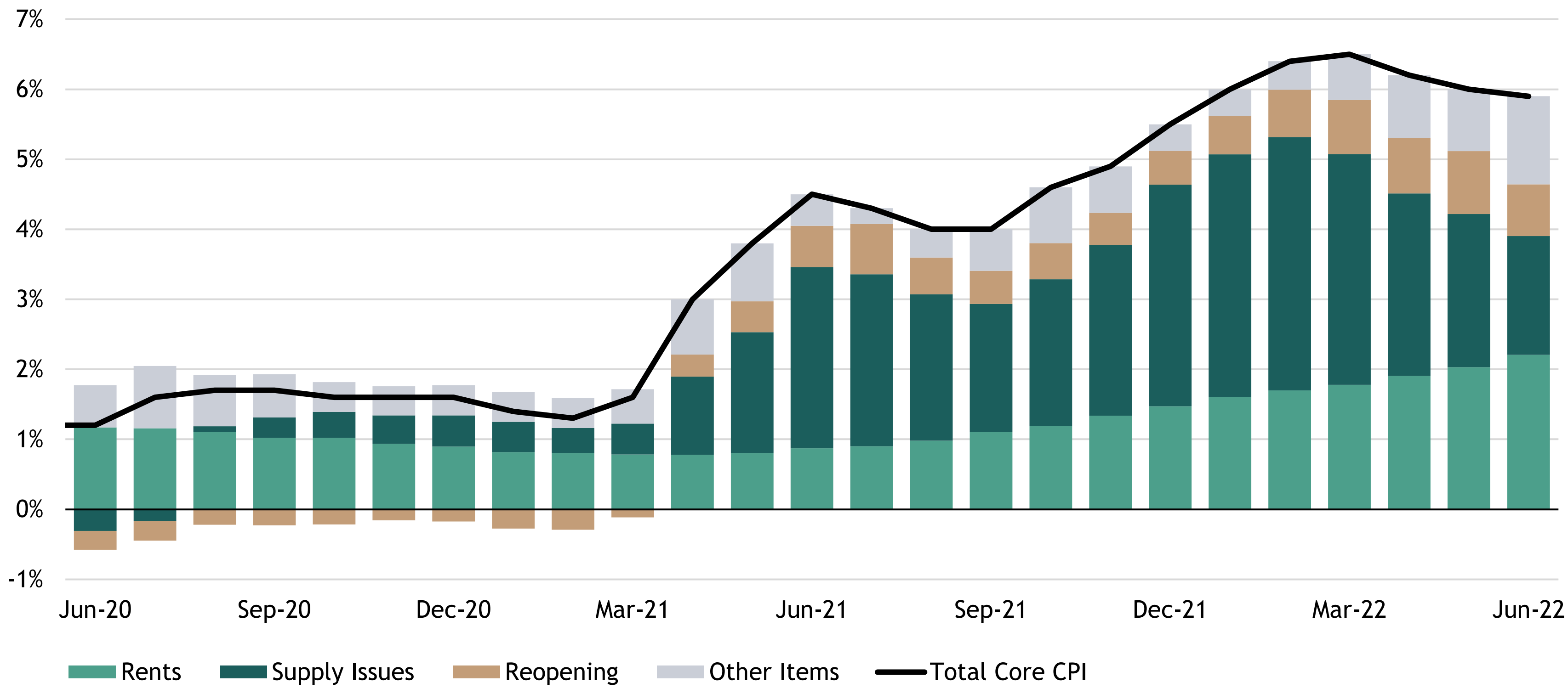
(1) Source: Blackstone Investment Strategy, Haver Analytics and Bloomberg as of April 30, 2022."Developed Markets" and "Emerging Markets" are calculated by Haver Analytics by averaging the policy rates of 15 developed markets and 21 emerging markets, respectively.

(2) Source: Blackstone Investment Strategy and Bloomberg as of June 30, 2022. Represents the Bloomberg Global Aggregate Bond Index (Unhedged USD).

Core CPI has moderated somewhat in recent months, while the CPI for rents has continued to accelerate

Contribution to US Core CPI[1]

(YoY%)



Source: Blackstone Investment Strategy calculations, Bureau of Labor Statistics, and Haver Analytics, as of June 30, 2022.

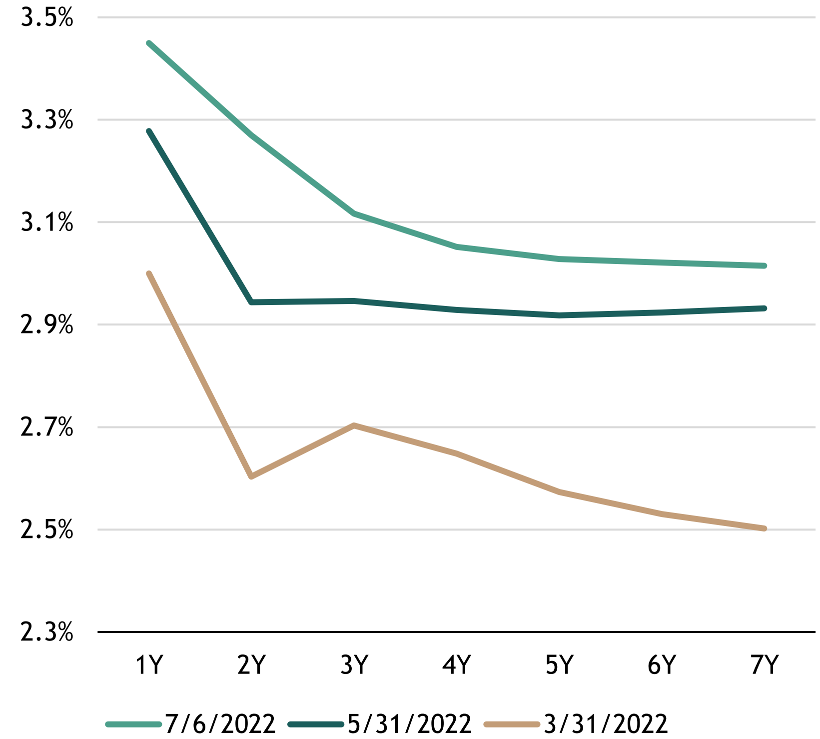
(1) "Supply Issues" category items are those affected by supply disruptions and bottlenecks, and comprise new and used vehicles; motor vehicle parts and equipment; and household furnishings and supplies (including electronics). "Reopening" category items are those affected by the reopening of the economy, and comprise apparel; recreation goods (excluding electronics); recreation services; hotels/motels; and airline fares. "Rents" category comprises rent of primary residence and owners' equivalent rent.

Markets now expect the Fed Funds rate to peak higher and sooner, and the terminal rate to remain higher

Market-Implied Fed Funds Rate on February 2023

Interest Rate Forward Curve

(based on US dollar swaps, 30/360, S/A)

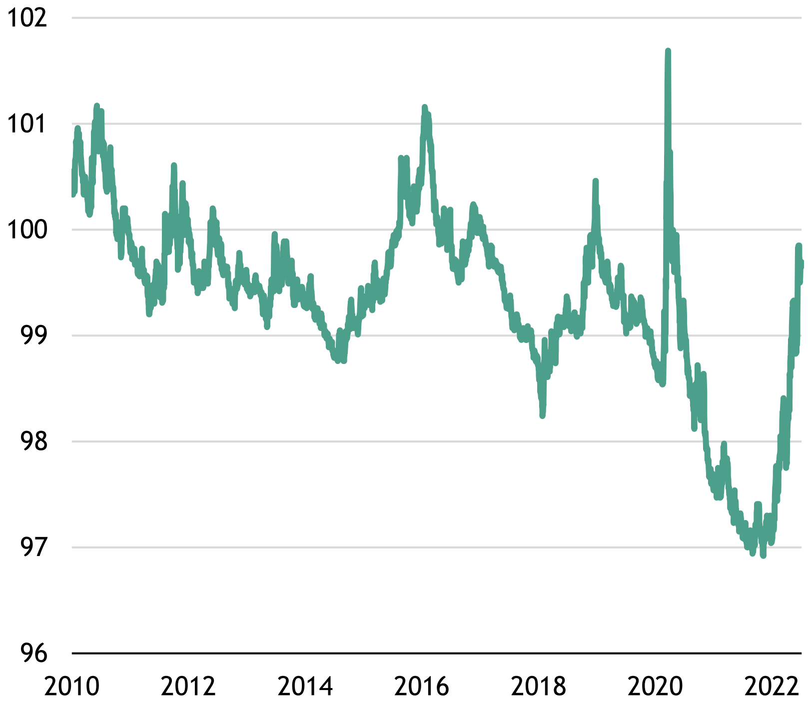


Source: Blackstone Investment Strategy and Bloomberg, as of July 6, 2022.

Tightening financial conditions indicate that markets have already done much of the Fed's work for it

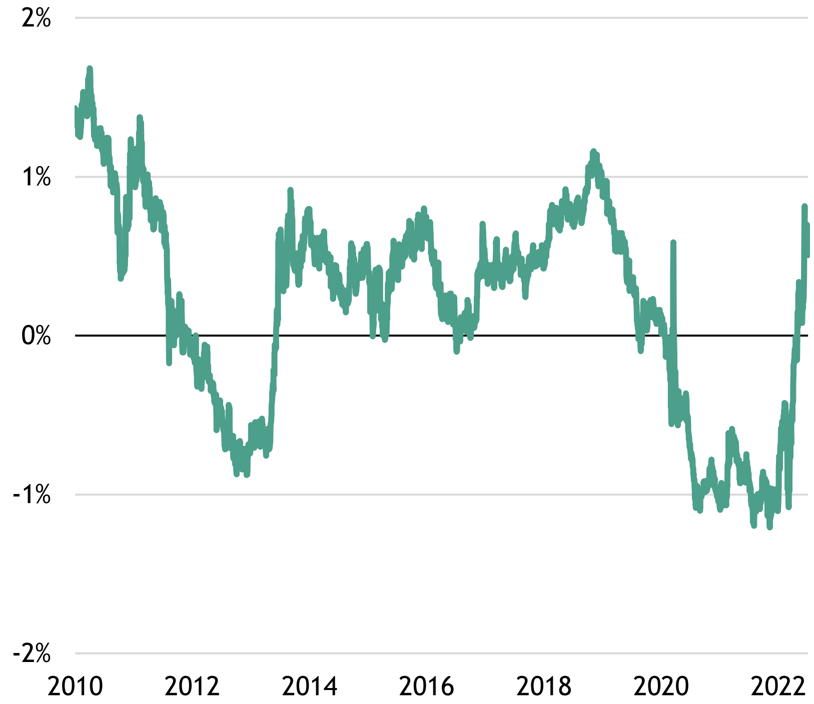
Goldman Sachs US Financial Conditions Index

(higher = tighter)



Real 10-Year Treasury Yield

(10Y Treasury yield less 10Y breakeven rate)

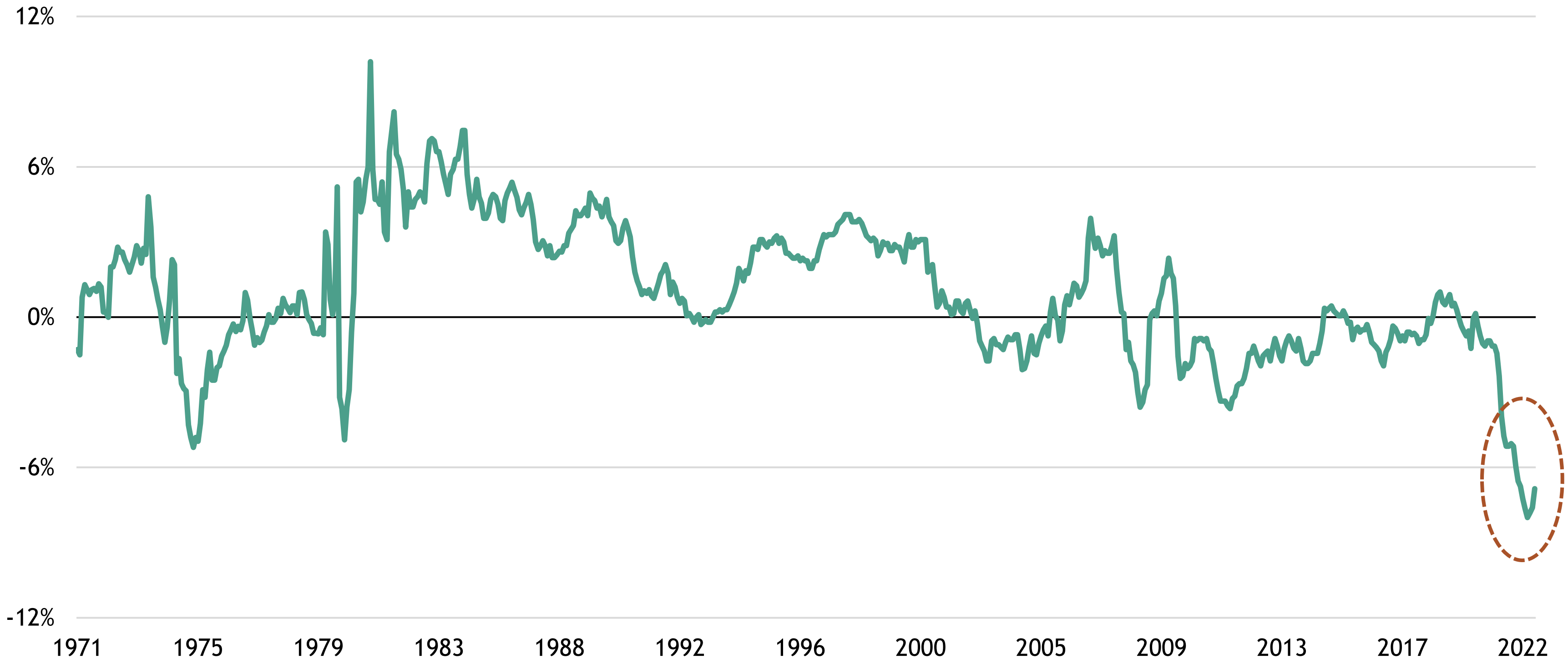


Source: Blackstone Investment Strategy, Goldman Sachs, Federal Reserve and Bloomberg, as of July 6, 2022.

Real Fed Funds rate is at record negative levels, implying the Fed may have to do more than the market expects

Real Fed Funds Rate

(Fed Funds upper limit less Core CPI YoY%)

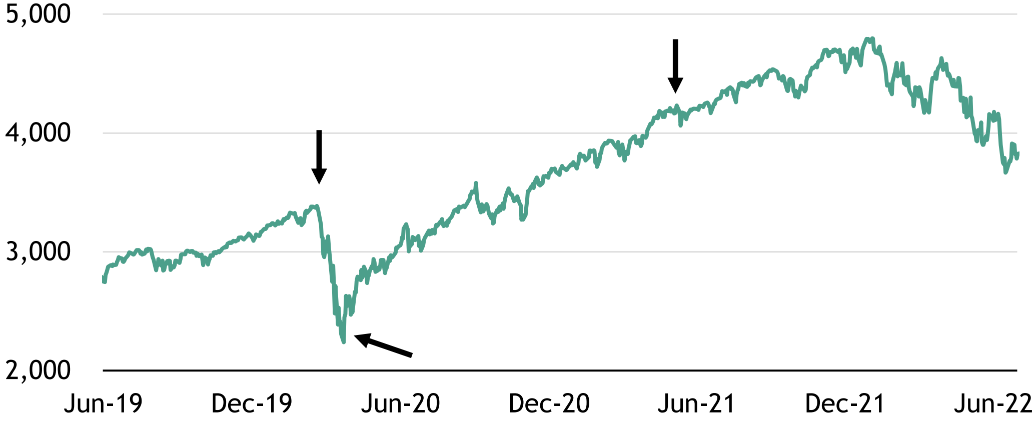


Source: Blackstone Investment Strategy, Federal Reserve and Bloomberg, as of June 30, 2022.

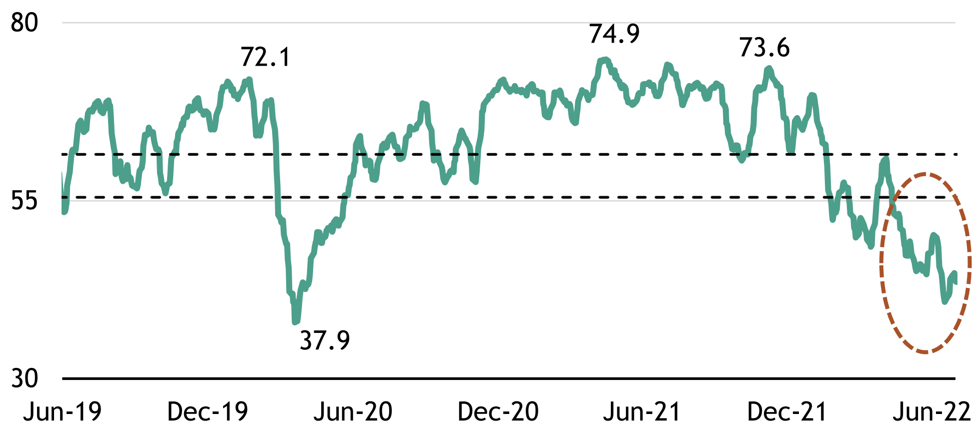
V. Markets: Where We Are and Where We're Going

Market sentiment currently at pessimistic extreme

S&P 500 Composite Index



NDR Crowd Sentiment Poll



S&P 500 Index Performance(1)
Full History: 12/01/1995 – 06/30/2022

NDR Crowd Sentiment Poll is:	% Gain / p.a.	% of Time
Above 66.0	-0.4	28
57.0 – 66.0 from Above	1.9	18
57.0 – 66.0 from Below	20.1	19
Below 57.0	9.8	35
Buy / Hold = 7.1% Gain / p.a.		

Historical average value of Crowd Sentiment Poll at:(2)

- Optimistic extremes (down arrows) = 68.8
- Pessimistic extremes (up arrows) = 46.8
- Average spread between extremes = 22.1

Extremes generated when sentiment reading:(3)

- Rises above 61.5 = Extreme Optimism
- Declines below 55.5 = Extreme Pessimism

Source: Ned Davis Research, as of June 30, 2022.
(1) Totals may sum to >100 due to rounding.
(2) Arrows represent extremes in optimism and pessimism. They do not represent buy and sell signals and can only be known for certain (and added to the chart) in hindsight.
(3) Sentiment must reverse by 10 percentage points to signal an extreme, in addition to reaching the above extreme levels.

Dividend discount model shows implied S&P 500 price levels at various levels of earnings and risk-free rates

S&P 500 Dividend Discount Model(1)

Trailing Twelve-Month EPS	10-Year Treasury Yield										
	1.75%	2.00%	2.25%	2.50%	2.75%	3.00%	3.25%	3.50%	3.75%	4.00%	4.25%
$208	8,072	6,054	4,843	4,036	3,459	3,027	2,691	2,422	2,201	2,018	1,863
$210	8,150	6,112	4,890	4,075	3,493	3,056	2,717	2,445	2,223	2,037	1,881
$213	8,266	6,200	4,960	4,133	3,543	3,100	2,755	2,480	2,254	2,067	1,908
$216	8,382	6,287	5,029	4,191	3,592	3,143	2,794	2,515	2,286	2,096	1,934
$219	8,499	6,374	5,099	4,249	3,642	3,187	2,833	2,550	2,318	2,125	1,961
$222	8,615	6,461	5,169	4,308	3,692	3,231	2,872	2,585	2,350	2,154	1,988
$225	8,732	6,549	5,239	4,366	3,742	3,274	2,911	2,620	2,381	2,183	2,015
$228	8,848	6,636	5,309	4,424	3,792	3,318	2,949	2,654	2,413	2,212	2,042
$231	8,965	6,723	5,379	4,482	3,842	3,362	2,988	2,689	2,445	2,241	2,069
$234	9,081	6,811	5,449	4,541	3,892	3,405	3,027	2,724	2,477	2,270	2,096
$237	9,197	6,898	5,518	4,599	3,942	3,449	3,066	2,759	2,508	2,299	2,122
$240	9,314	6,985	5,588	4,657	3,992	3,493	3,105	2,794	2,540	2,328	2,149
$243	9,430	7,073	5,658	4,715	4,042	3,536	3,143	2,829	2,572	2,358	2,176
$246	9,547	7,160	5,728	4,773	4,091	3,580	3,182	2,864	2,604	2,387	2,203
$249	9,663	7,247	5,798	4,832	4,141	3,624	3,221	2,899	2,635	2,416	2,230
$252	9,780	7,335	5,868	4,890	4,191	3,667	3,260	2,934	2,667	2,445	2,257

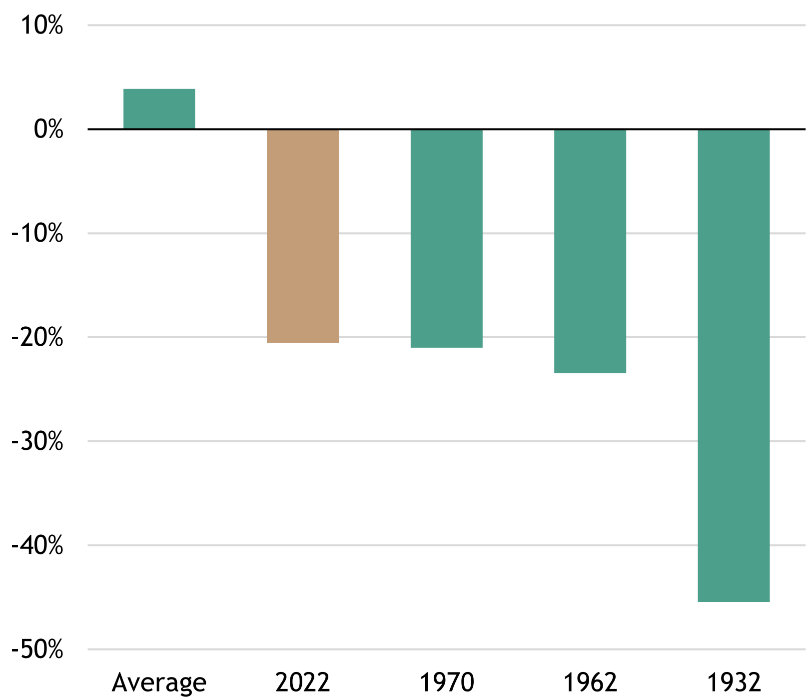
Source: Blackstone Investment Strategy, as of June 30, 2022.

(1) Assumes starting S&P 500 Earnings Per Share (EPS) of $208, and that EPS start the period increasing / decreasing to level indicated in first column, before increasing / decreasing linearly over 2 years to a 4% nominal growth rate and remaining there in perpetuity. Further assumes dividend payout ratio remains at prior year's level of 41.94% and equity risk premium is a constant 4.15%.

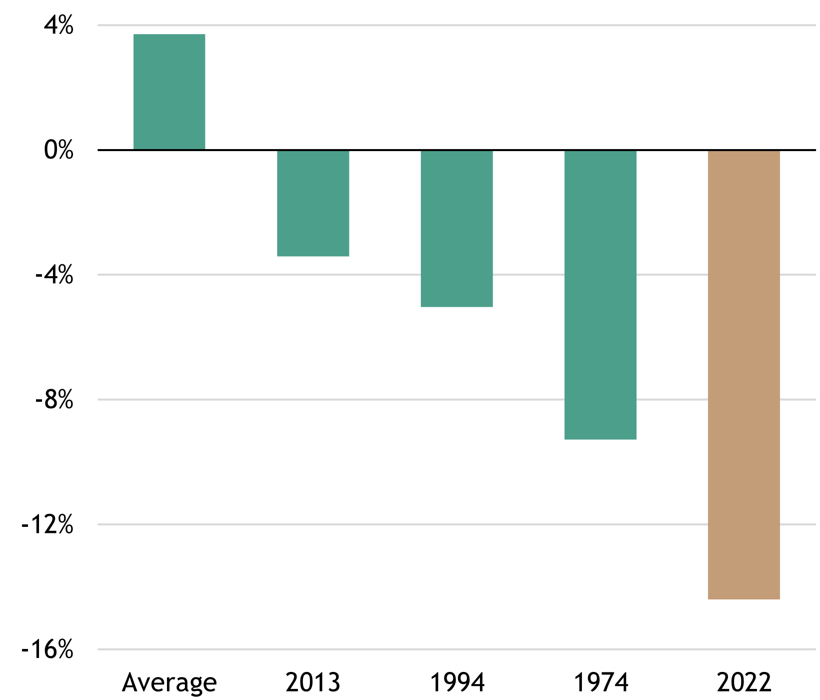
Worst H1 performance for the S&P 500 since 1970 and the worst-ever on record for the US Agg Bond Index

Highlights difficulty of the traditional 60/40 portfolio in a period of coordinated stock/bond volatility

Historical H1 Performance (Average and Worst-Ever) for S&P 500 Index



Historical H1 Performance (Average and Worst-Ever) for US Agg Bond Index

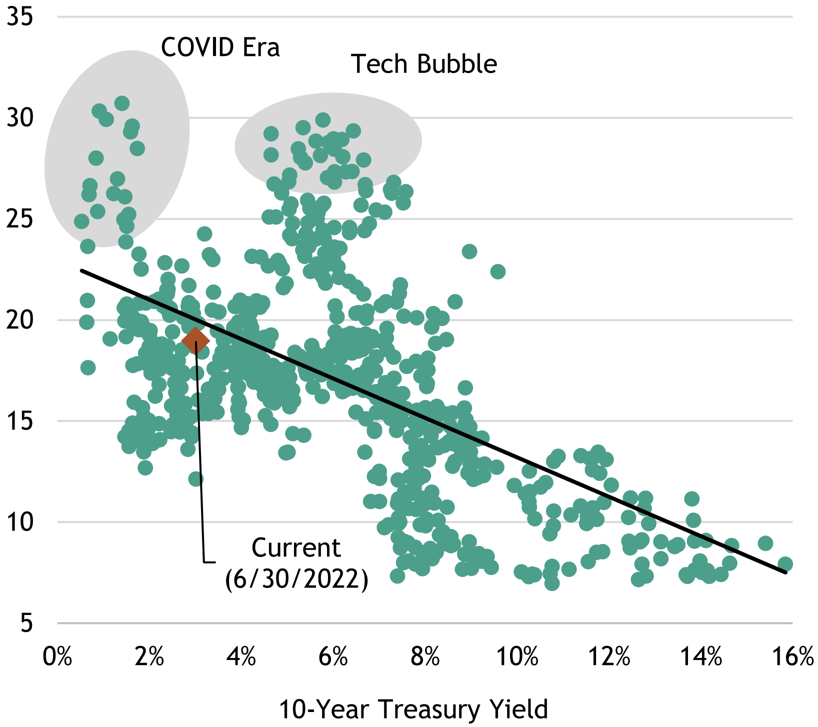


Source: Blackstone Investment Strategy and Bloomberg, as of June 30, 2022. Note: Data for the S&P 500 and Bloomberg US Aggregate Bond Index are available beginning in 1928 and 1974, respectively.

Higher 10Y Treasury yields and inflation both correspond to lower equity multiples historically

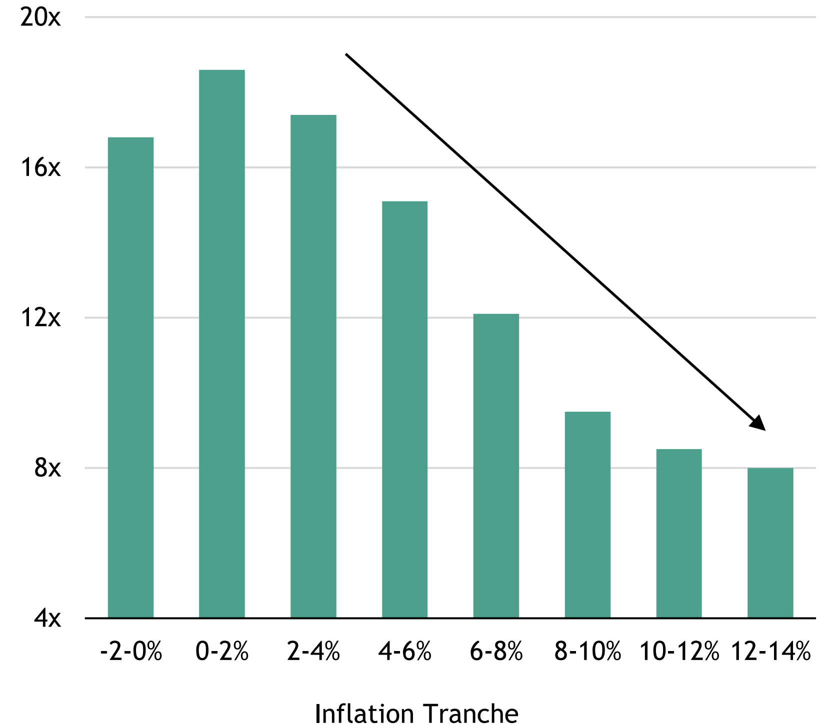
S&P 500 P/E Ratio and 10-Year Treasury Yield

(P/E ratio)



Average S&P 500 P/E Ratio by CPI YoY Tranche

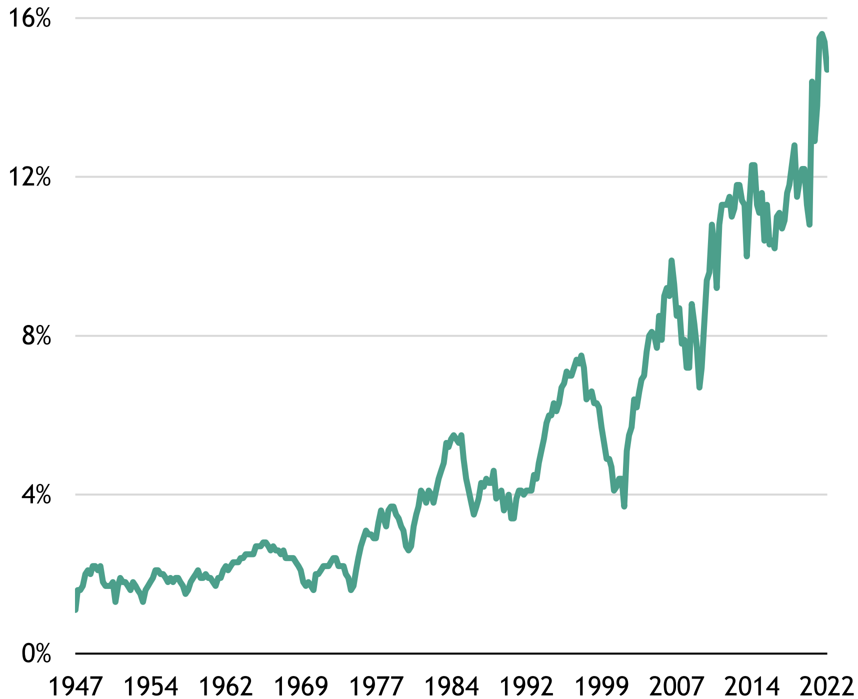
(LTM P/E Ratio)



Source: Blackstone Investment Strategy, Federal Reserve and Bloomberg, as of June 30, 2022. "P/E ratio" is the trailing 12-month price-to-earnings ratio. Historical sample size extends from January 1957 through February 2022.

Profit margins recently reached highs, but a challenging operating environment will be headwind for margins

US Nonfinancial Corporate Business Profit Margins



Headwinds for Profit Margins:

- Slowing growth
- Rising cost of capital
- Historically tight labor markets and rising wages
- Persistent cost pressures / inflation
- Ongoing supply chain bottlenecks and logistics issues
- Deglobalization / higher barriers to trade

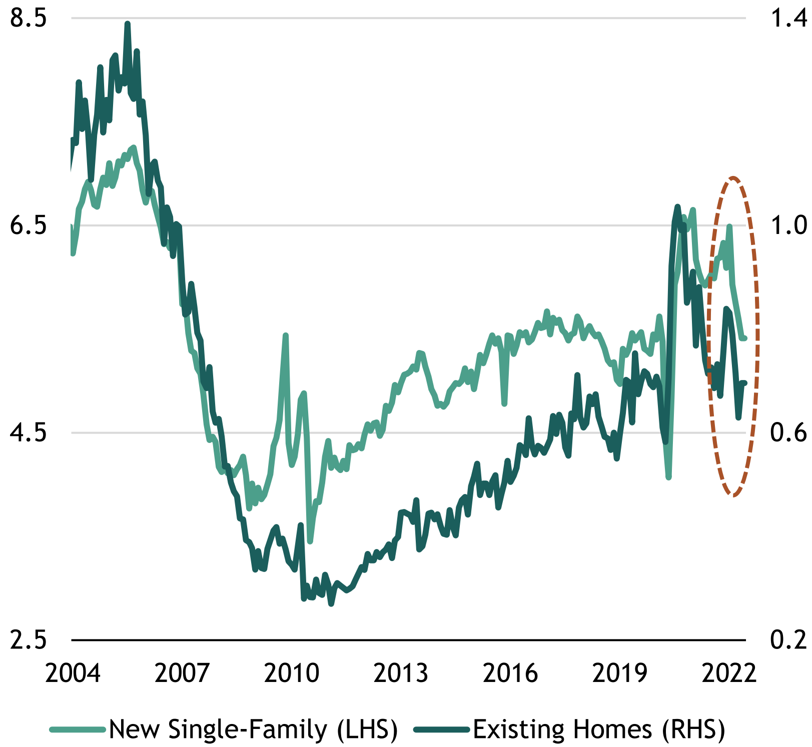
Source: Bureau of Economic Analysis, as of March 31, 2022. Represents profit per unit of real gross value added of nonfinancial corporate business. Corporate profits are after tax with inventory valuation adjustment and capital consumption adjustment.

VI. Secular Housing Story Remains Intact

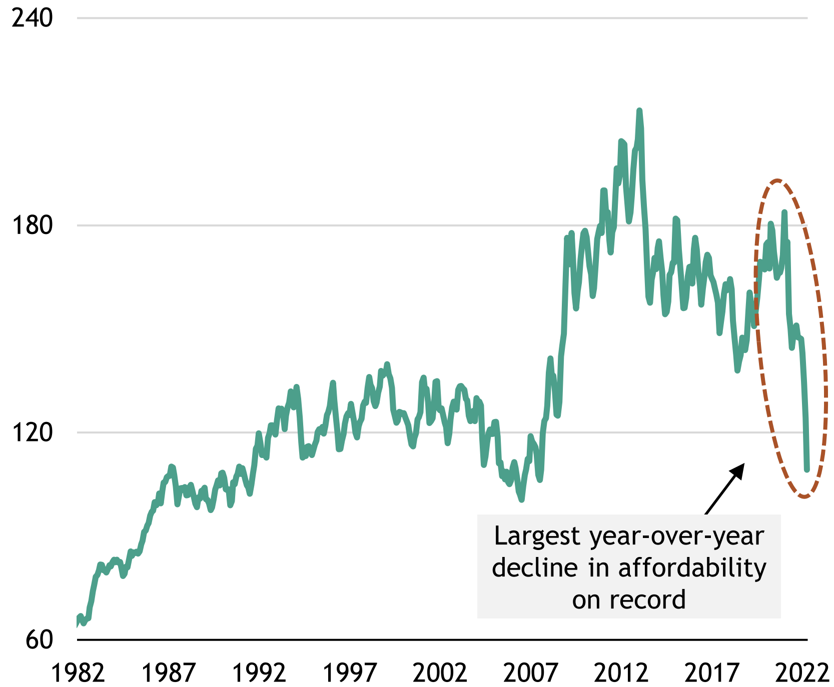
Activity has fallen as affordability has fallen to its lowest point since 2007 and deteriorated the fastest on record

New and Existing Home Sales

(seasonally adjusted annual rate, in millions)



Homebuyer Affordability Index for Fixed Rate Mortgages[1]

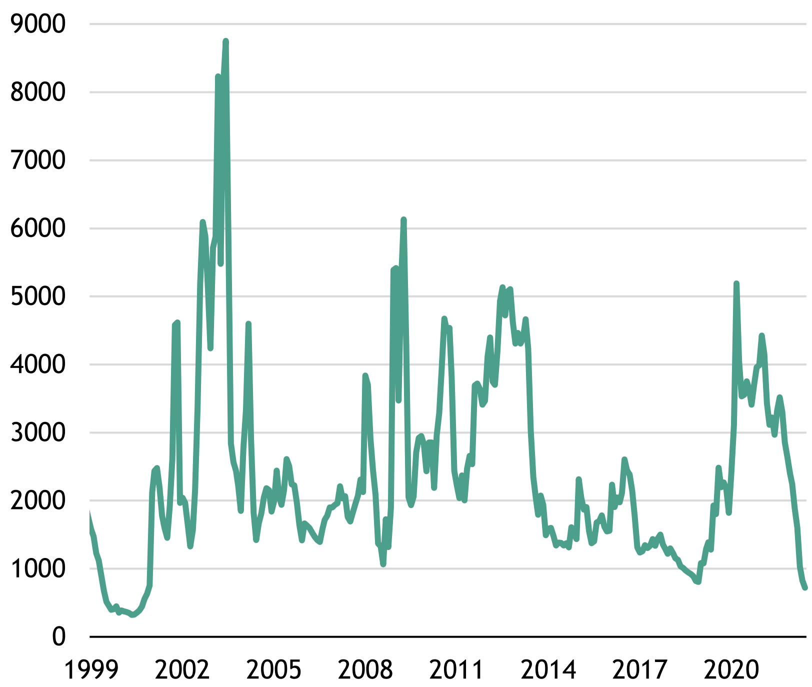


Source: Blackstone Investment Strategy, Census Bureau, National Association of Realtors (NAR) and Macrobond, as of April 30, 2022.

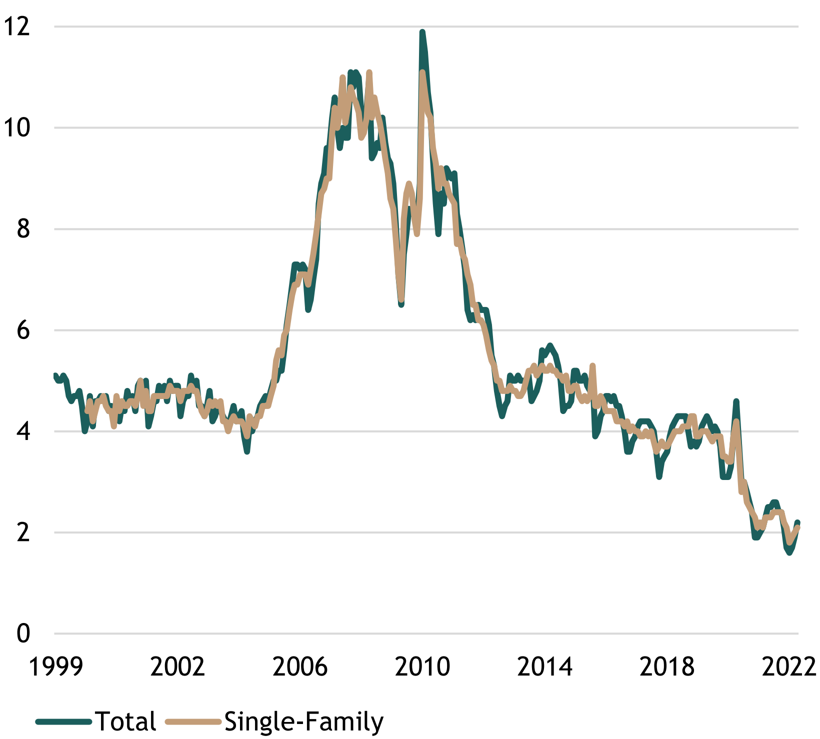
(1) This concept tracks the affordability of housing, typically based on a mix of median home prices, median income and mortgage rates.

Higher rates make existing mortgages less attractive to refinance and further constrain historically low supply

MBA US Refinancing Index[1]



Existing Home Inventory: Months Supply

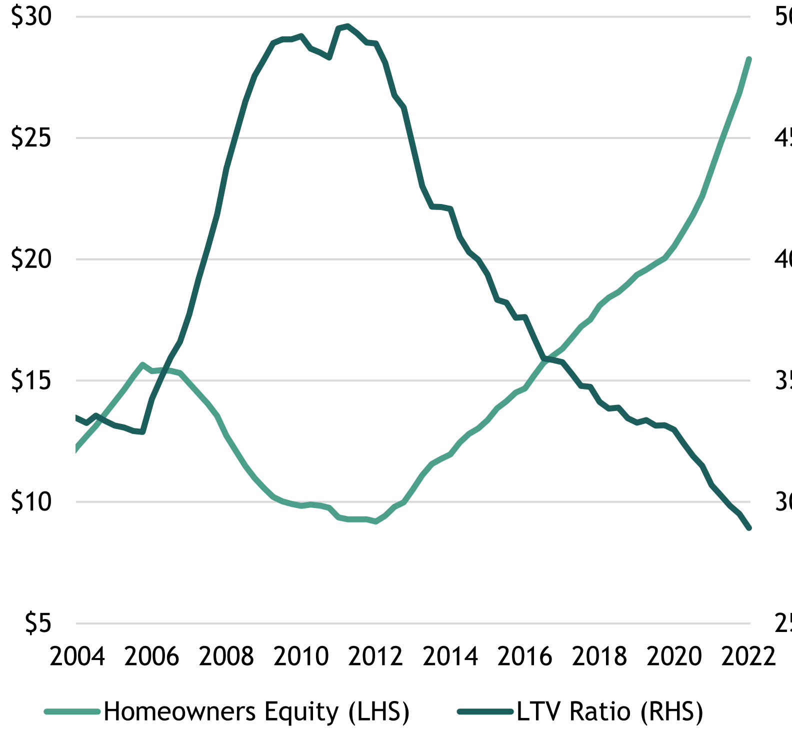


Source: Blackstone Investment Strategy, NAR, Mortgage Bankers' Association (MBA), Macrobond and Bloomberg, as of April 30, 2022 (existing home inventory) and June 30, 2022 (refinancing index).
(1) The Refinancing Index covers all mortgage applications to refinance an existing mortgage and includes conventional and government refinances.

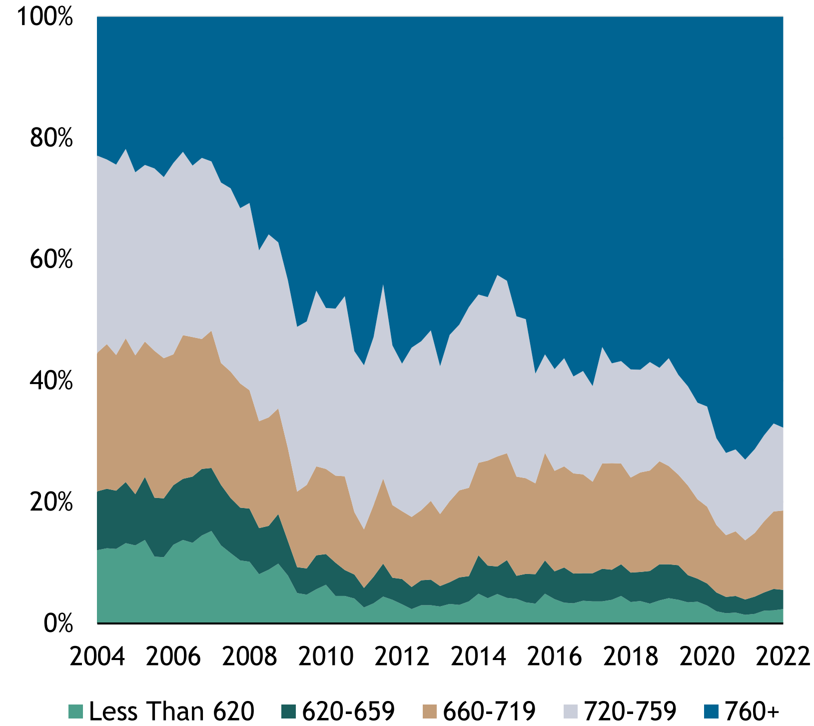
Housing markets are significantly less leveraged and have significantly tighter lending standards than '07/'08

Homeowners' Equity and LTV Ratio[(1)]

(US$ in trillions)



Share of Mortgage Originations, by Credit Score



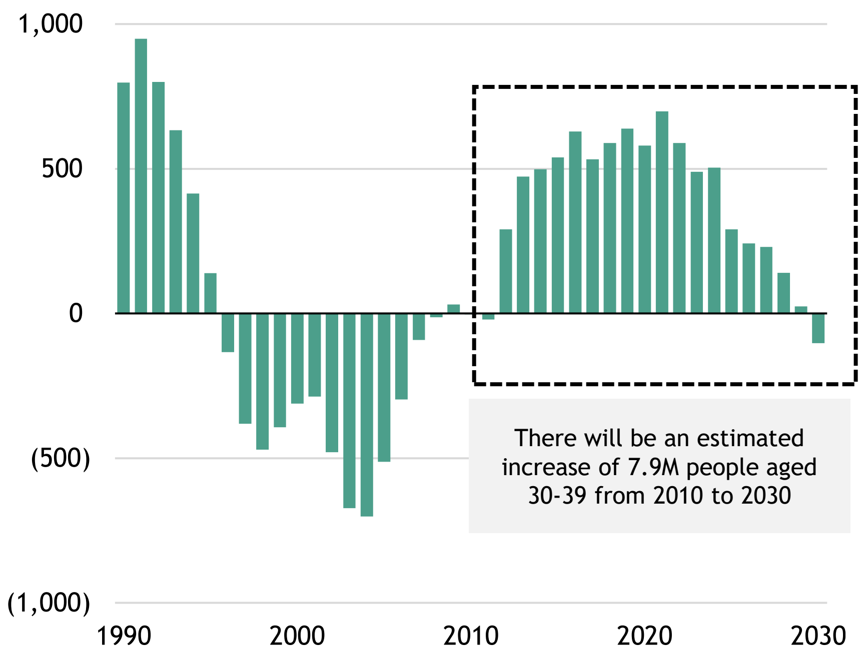
Source: Blackstone Investment Strategy, Board of Governors of the Federal Reserve System and Federal Reserve Bank of New York Consumer Credit Panel/Equifax, as of March 31, 2022.

(1) "Homeowners' Equity" represents the difference between "Market Value" (the aggregate market value levels of owner-occupied real estate, including vacant land and mobile homes), less "Total Mortgage Debt" (aggregate mortgage balances outstanding plus balances on home equity lines of credit, or "HELOC".) "Loan to Value Ratio" (or "LTV Ratio") represents the ratio of "Market Value" to "Total Mortgage Debt."

Secularly bullish on housing given demographic tailwinds and secular undersupply

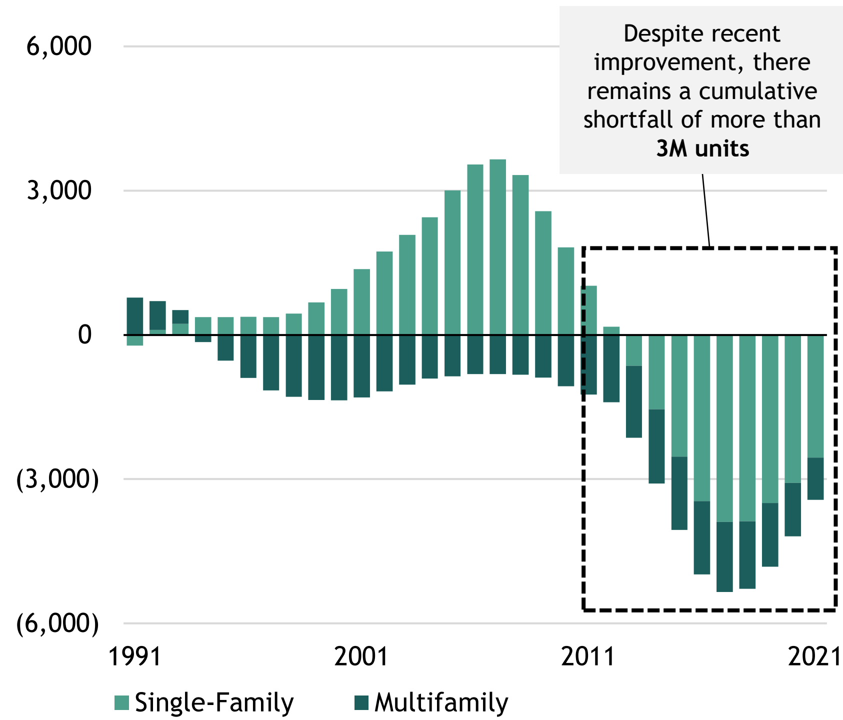
Annual Change in Number of US Residents Aged 30-39[(1)]

(in thousands)



Home Completions Relative to Historical Average[(2)]

(thousands of units, rolling 10-year sum)



Source: Blackstone Investment Strategy calculations, US Census Bureau, US Department of Urban Housing and Development.

(1) Actual data as of 2017; data for 2018 and beyond represent Census Bureau projections.

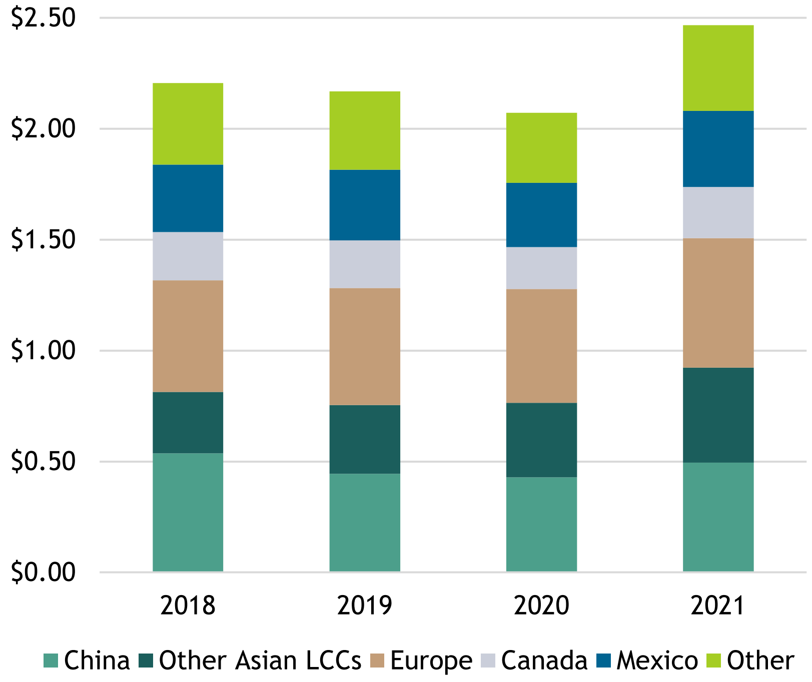
(2) As of December 31, 2021. "Home Completions" is the number of total new privately owned housing units completed in each calendar year, calculated as the average of monthly units completed at a seasonally adjusted annual rate. "Multi-Family" housing units are defined as total less single-family. The "historical average" is the average of annual housing completions in each respective category from 1968 (earliest data available) to 2020.

VII. A Couple of Long-Term Themes to Consider

Asian Low-Cost Countries (LCCs) and USMCA countries gaining share in US imports of manufactured goods

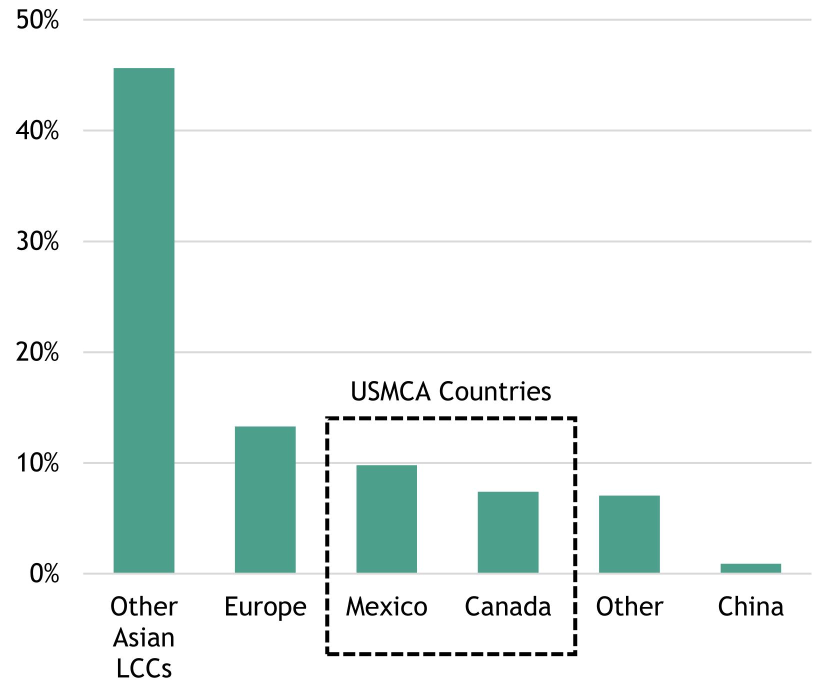
Country of Origin Mix of Manufactured Goods Imported into the US

(US$ in trillions)



Change in US Imports of Manufactured Goods, by Origin

(% change in 2021 vs. the average of 2018-2019)

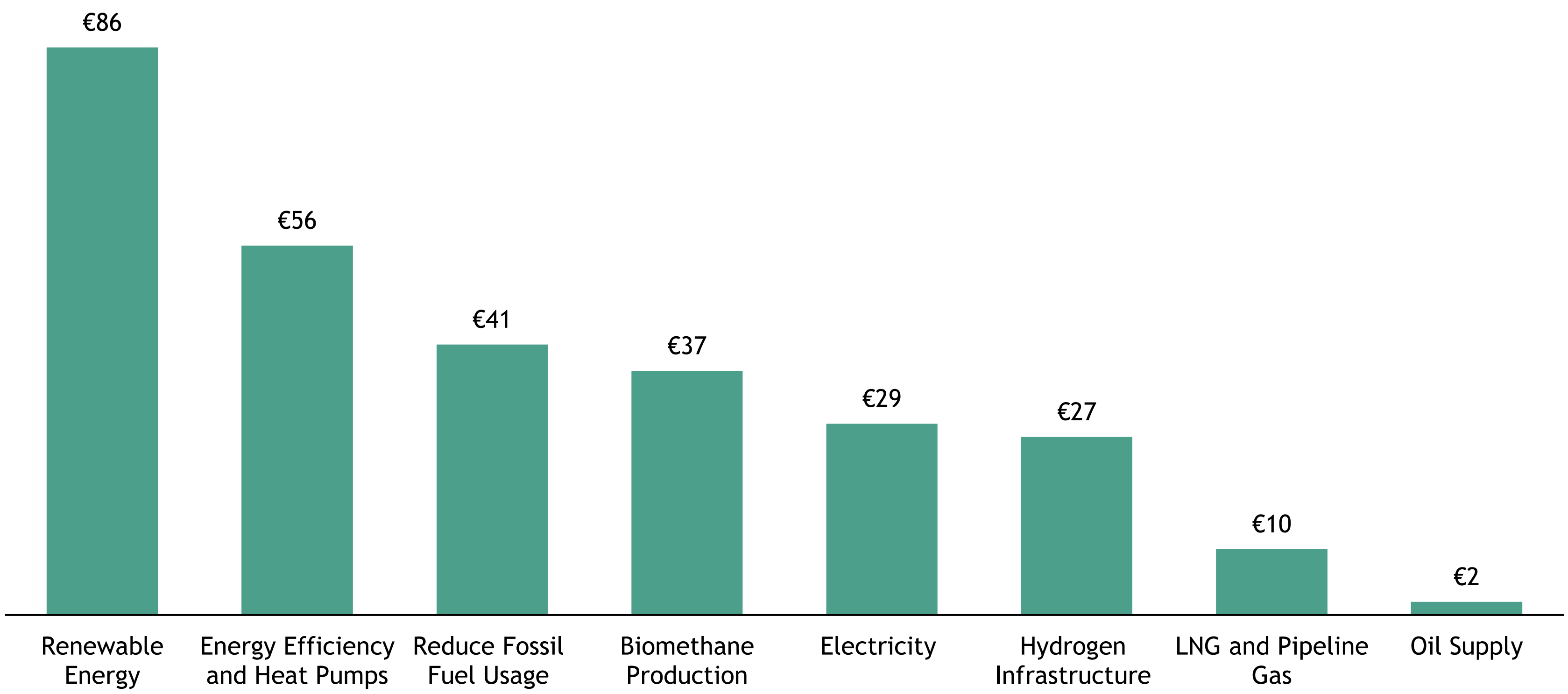


Source: US International Trade Commission and Kearney, as of December 31, 2021.

EU to spend €200B+ through 2027 to reduce dependence on Russian energy and transition to clean energy

Announced "REPowerEU Plan" – Energy Investment by Category

(€ in billions)



Source: European Commission, as of May 18, 2022.

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