Capital Markets Strategy

Essential inCights for the C-Suite

MUFG

Resilience & Deceleration

Key Themes for Global Markets in 2H 2023

JUL 2023

Waiting for Godot

"Why are we here, that is the question?
And we are blessed in this, that we happen to know the answer.
Yes, in this immense confusion one thing alone is clear.
We are waiting for Godot to come…
We are not saints, but we have kept our appointment."

Samuel Beckett, Irish novelist and winner of the Nobel Prize
for Literature (1969) in his play "Waiting for Godot"

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Appendix: MUFG Global Markets Forecast


2H 2023 Economic Outlook
1
Resilient Post
COVID Economy

Global Economy Resilient to Multiple Shocks

Resilient US Economy Extending Cycle

COVID related structural imbalances extending the cycle

$10 trillion of fiscal and monetary stimulus
(Still working way through the economy)

$2 trillion of "excess" US consumer COVID savings
(Approximately $500 - 900 billion remaining)

Balance sheets strengthened during COVID
(Over $4 trillion USD IG & HY issuance in 2020 and 2021 combined)

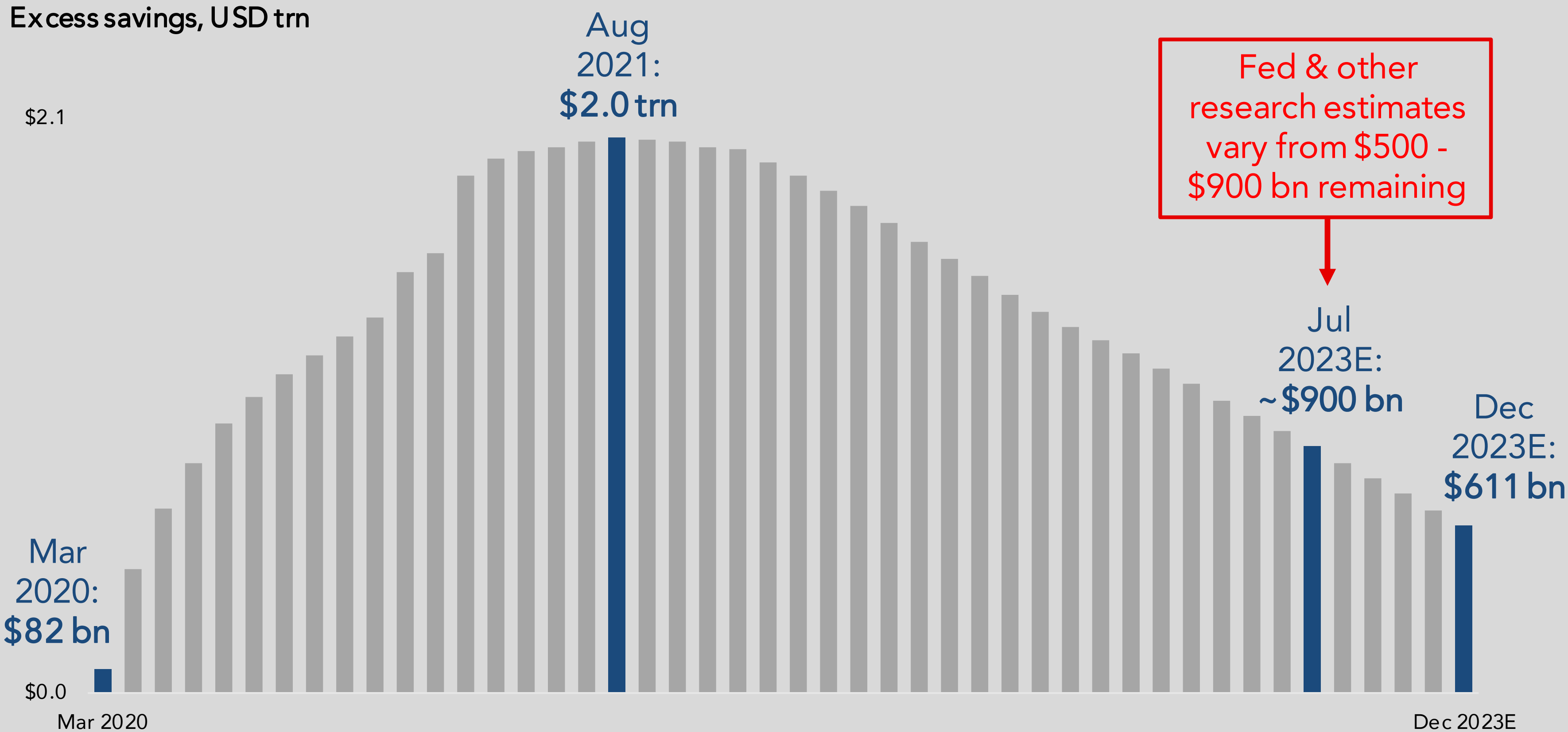
Structurally tight labor markets
(Numerous pre and post COVID multi-year drivers)

Post COVID pent up consumer demand
(Demand for services remains high as consumer normalizes behavior)

Less rate sensitive US economy
(Fixed rate home mortgages, robust capital markets, low deposit rates)

Resilient US Consumer

Following more than a year of spending less on services during COVID (travel, leisure, restaurants, hospitality, etc.), the US consumer accumulated an incremental $2 trillion of "excess savings". With more than half of the excess spent during the elevated inflation of the past 18 months, estimates vary on the timing of complete rundown, the most has been depleted for the lower 50% of the income distribution.



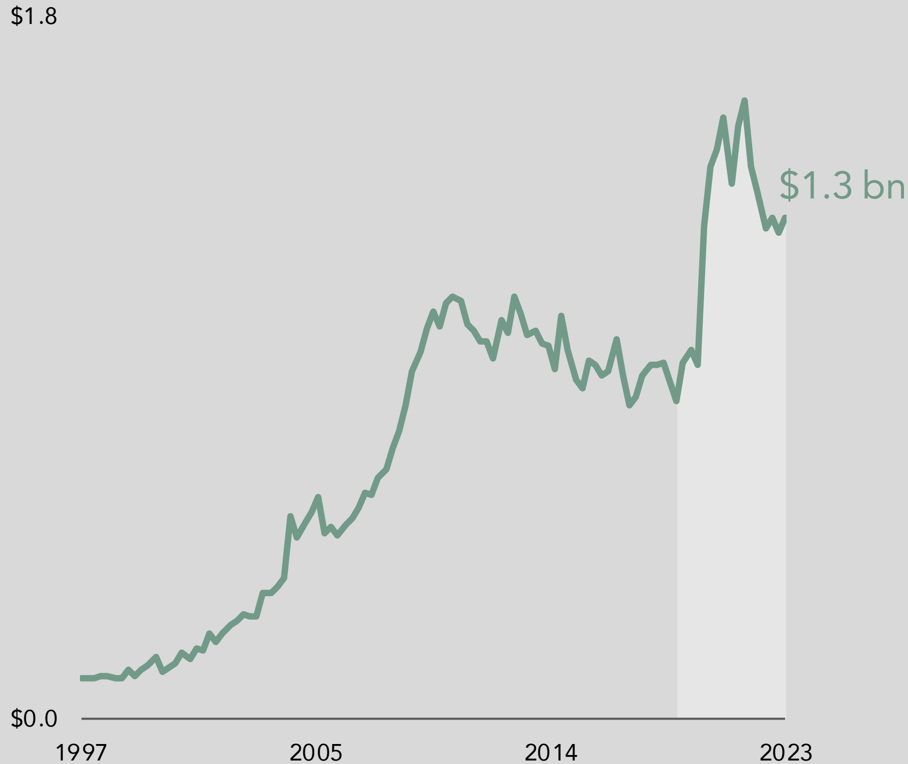
Source: (1) Fidelity. Excess savings are relative to 2019. Estimates assume savings rate continues at the average rate over last 6 months. Bureau of Economic Analysis. Bloomberg.

Strong Corporate Balance Sheets

With record profits and robust capital markets issuance since the COVID crisis began 3 years ago, IG corporates have increased cash balances, reduced leverage and extended maturities.

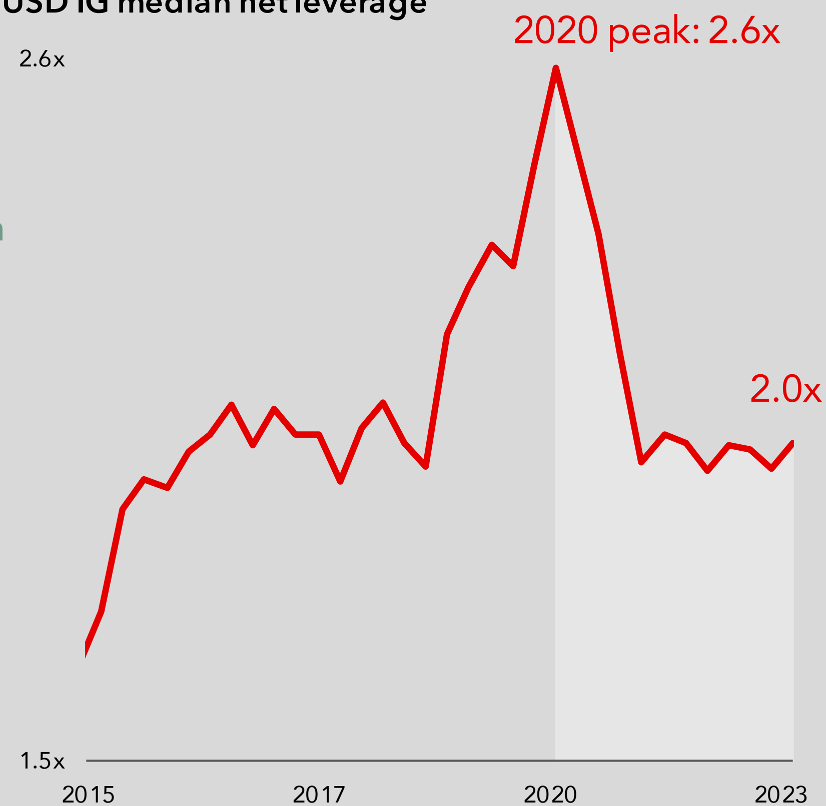
IG Corporate Cash Balances

Median IG corporate cash balances, USD bn



IG Corporate Leverage

USD IG median net leverage

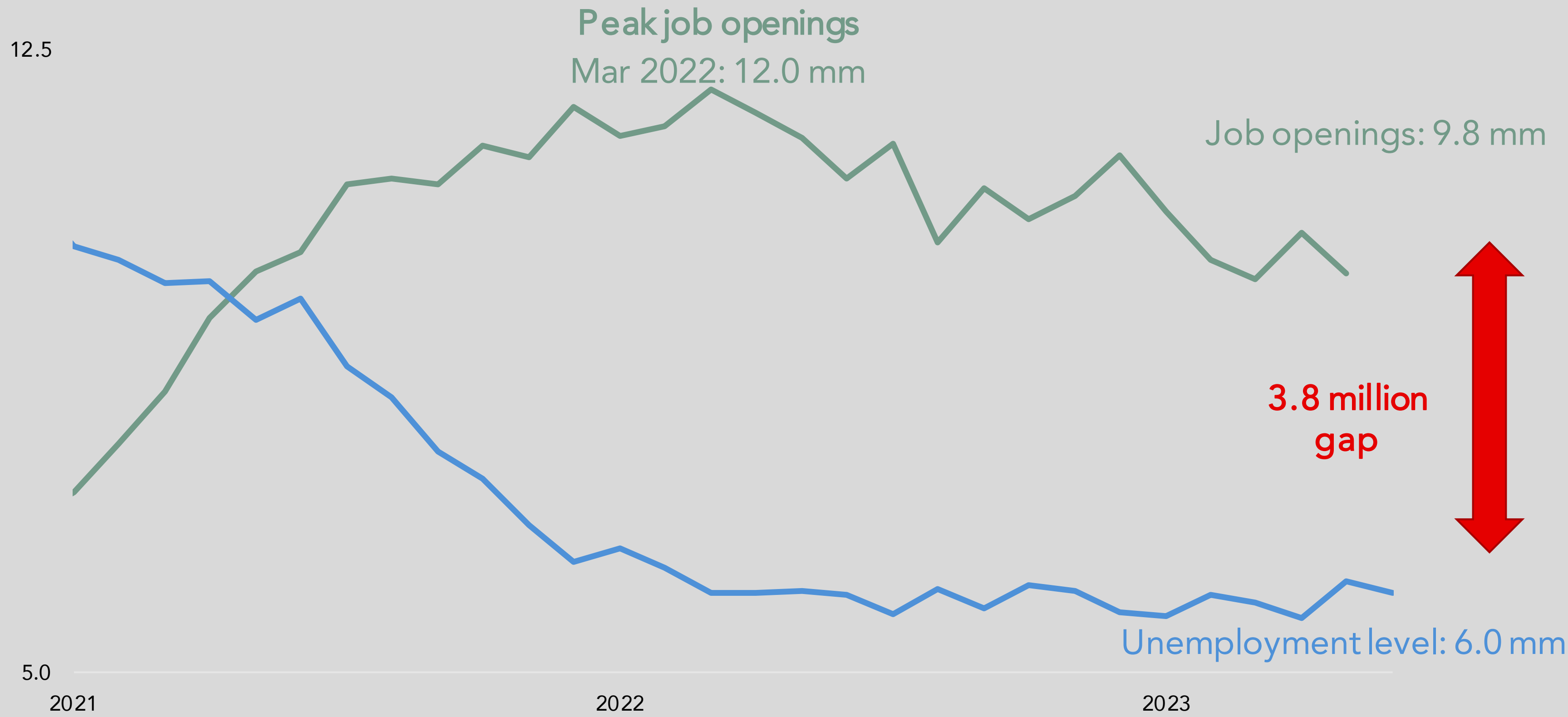


Source: (1-2) CreditSights. BAML Index. Data through Q1 2023.

Structurally Tight Labor Markets

At the peak of COVID in April 2020, there were 23 million Americans unemployed and 4.7 million job openings. In May, US job openings were nearly 10 mm, down from a peak of 12 mm in March 2022, but well above the pre-COVID peak of 7.2 mm. The gap between job openings and number of people unemployed remains close to record levels at nearly 4 million, while wage inflation remains persistently high > 4%.

US job openings vs. unemployment level, millions



Source: (1) Bloomberg. Data as of July 25, 2023.

2H 2023 Economic Outlook

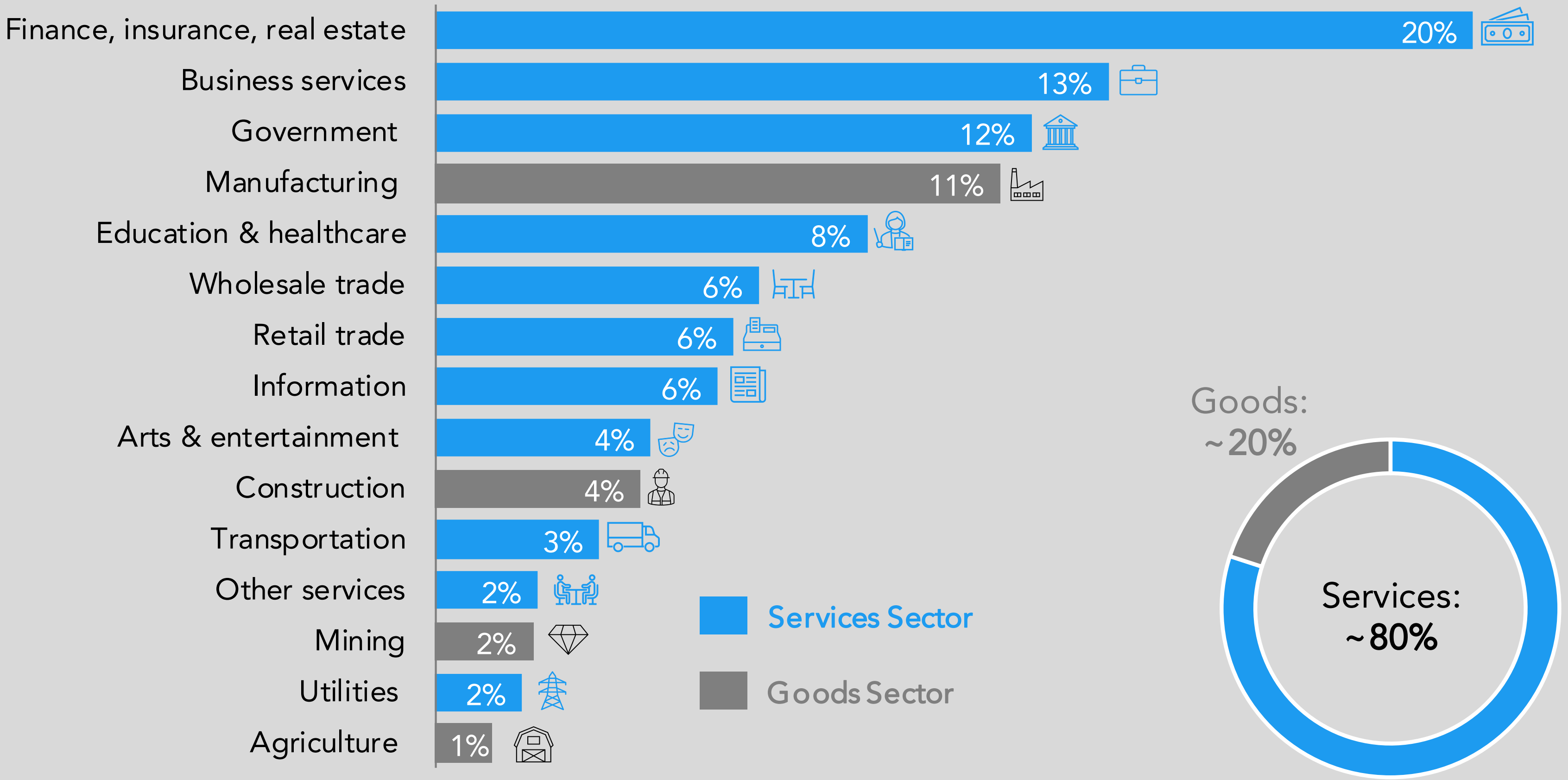
2

Less Rate Sensitive US Economy

US Services-Driven Economy Less Rate Sensitive

According to a recent Fed study, the US economy has become far less rate sensitive over the past 30 – 40 years as service-providing industries (which are less sensitive to rate movement) have contributed a larger and larger proportion of GDP. The rising insensitivity to rate policy impacts both the speed of reducing inflation as well as the strength of recovery following recessions.

Share of value added to US GDP in 2022, by industry

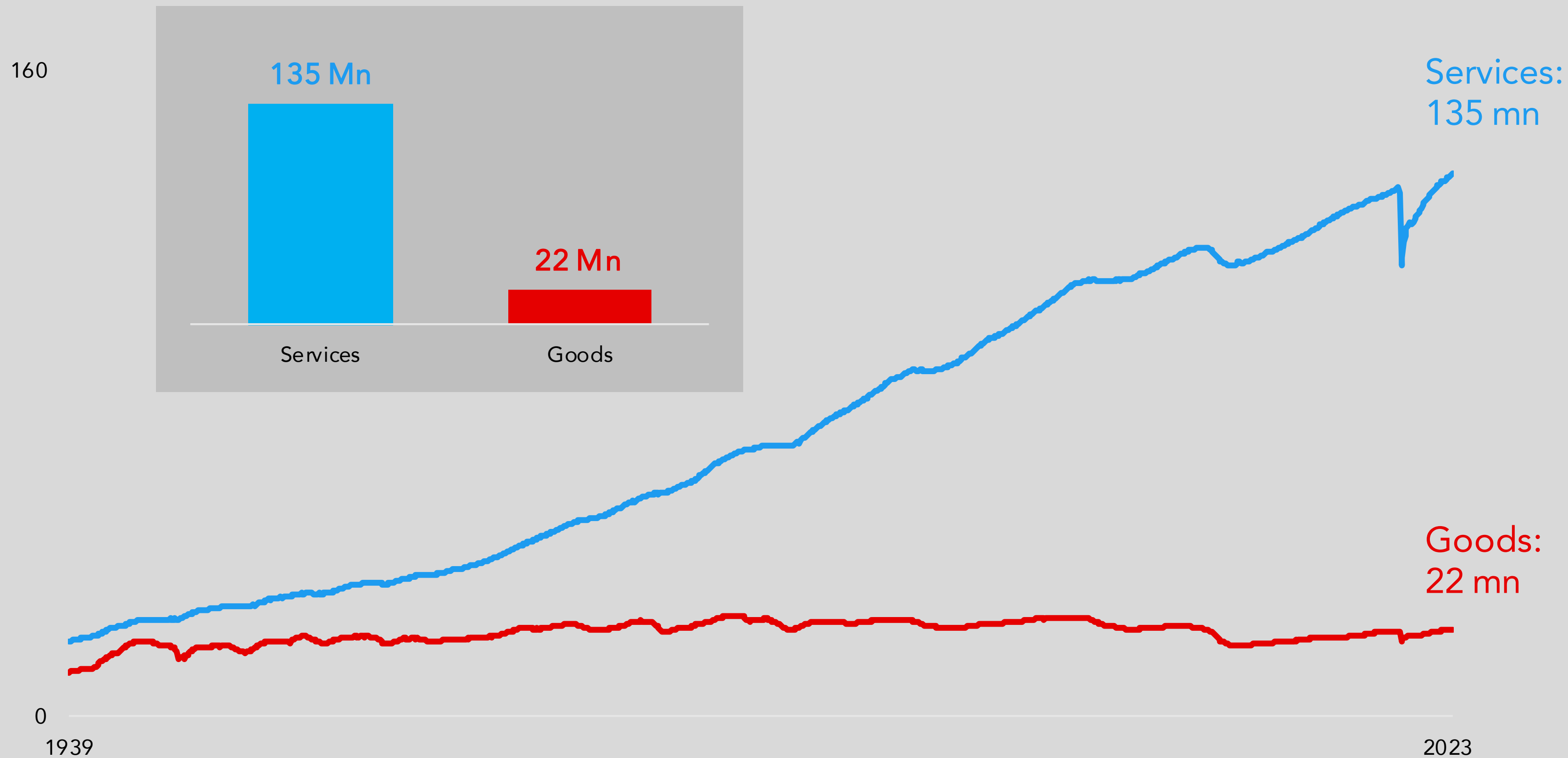


Source: (1) Statista "Share of value added to the gross domestic product of the Unites States in 2022". Federal Reserve.

US Labor Markets Less Rate Sensitive

Four-out-of-five private sector employees in the US workforce are employed in the less rate sensitive service economy. The goods-producing labor forced peaked in 1979 and declined through the 2010s, despite a larger overall population and workforce.

Employment in US Services-Providing and Goods-Producing Industries

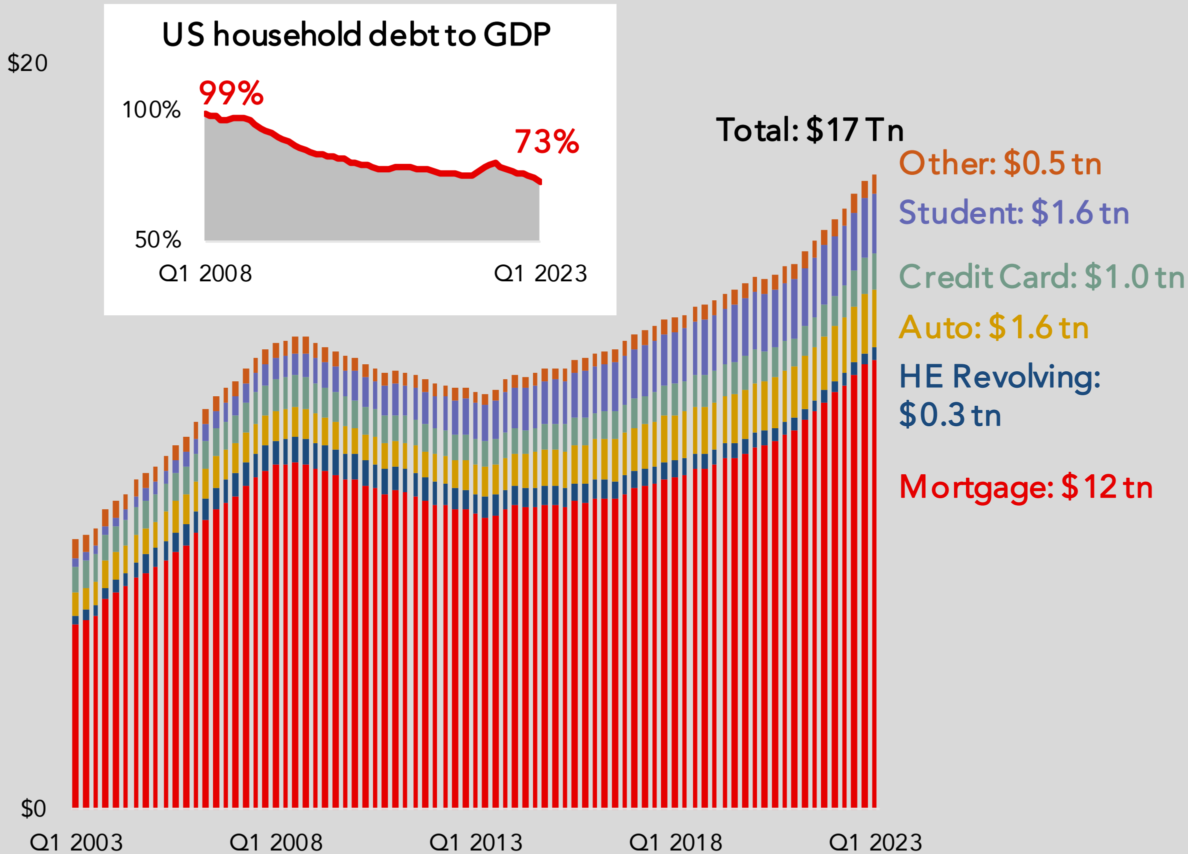


Source: (1-2) Bureau of Labor Statistics. The Hamilton Project, Brookings Institute. "Nine Facts About the Service Sector in the United States". Employment is all employees in goods-producing and service-providing industries, seasonally adjusted. Data through June 2023. May and June are preliminary values.

US Household Debt Heavily Fixed Rate

US households have de-levered significantly since the financial crisis, with household debt to GDP falling to 73% from nearly 100% in 2008. Further, nearly three quarters of household debt is mortgage debt and 96% of mortgage debt is long-term fixed rate debt.

US household debt, by category (USD tn)



US Household Debt Observations

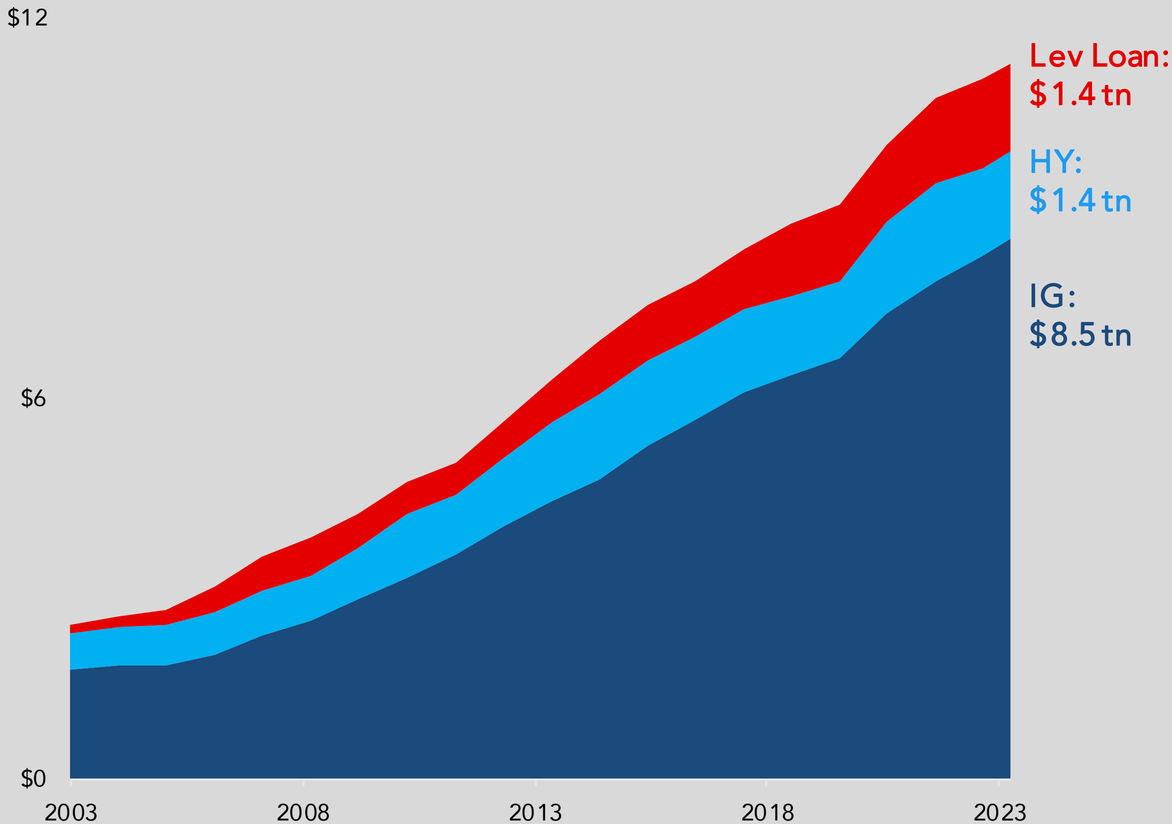
- 71% of US household debt is home mortgages (largely fixed)
- >95% of US mortgage loans are long term fixed rate
- 40% of US mortgages originated in low rate 2020-21
- Federal student loans are largely fixed rate
- Most auto loans fixed rate
- Credit card mix of fix and floating

Source: (1) Federal Reserve Bank of New York, Household debt and credit report. (2) IIF. Global Debt Monitor. Data through Q1 2023.

USD Credit Markets Heavily Fixed Rate

The USD bond markets, which are > 90% fixed rate, have experienced explosive growth over the last 30 years and have become a more prominent part of the capital markets based US economy. Further, corporates took advantage of Fed liquidity and historically low rates during COVID (2020-2021) to fortify their balance sheets and extend maturities with longer-term, fixed-rate debt.

Outstanding market value of USD credit markets



USD Bond Market Observations
• Fixed rate IG market 7x larger than HY and lev loans
• > 95% of $8.5 trn IG market is fixed rate
• > 99% of $1.4 trn HY market is fixed rate
• By contrast, > 95% of $1.4 trn lev loan market is floating-rate

Source: (1) Bloomberg. Data as of July 25, 2023. Loanstat.

3

Hiking into a Slowdown

The Case for a “Soft Landing”

As evidenced by the risk-on sentiment in markets, many economists and investors point to structurally tight labor markets, a resilient US consumer, and the rapid stabilization of US bank sector stress as reasons that the US may not only avoid recession, but that a new expansionary period will soon begin. In our view, looking at a plethora of economic and market signals, we think that recession has more likely been delayed by post-COVID structural imbalances, and not avoided.

The case for a “soft landing” (i.e., no recession)

- Structurally & historically tight labor markets
- Strength of corporate & consumer balance sheets
- Housing markets structurally undersupplied and recovering
- Easing of financial conditions with Fed pausing soon and equity rally
- Rapid progress in reducing headline inflation (9% to 3% in 12 months)
- Resurgent corporate capex cycle (tech, productivity enhancing, supply chains, clean energy)
- Stabilization of US bank sector

The Case for a “Hard Landing”

In our view, a “hard landing” (recession) over the next 6-9 months appears more likely than not, though timing is less certain. Historically, it has been very difficult to forecast the start date of US recessions as the US consumer and labor markets are often quite strong right up to the late stages of the cycle.

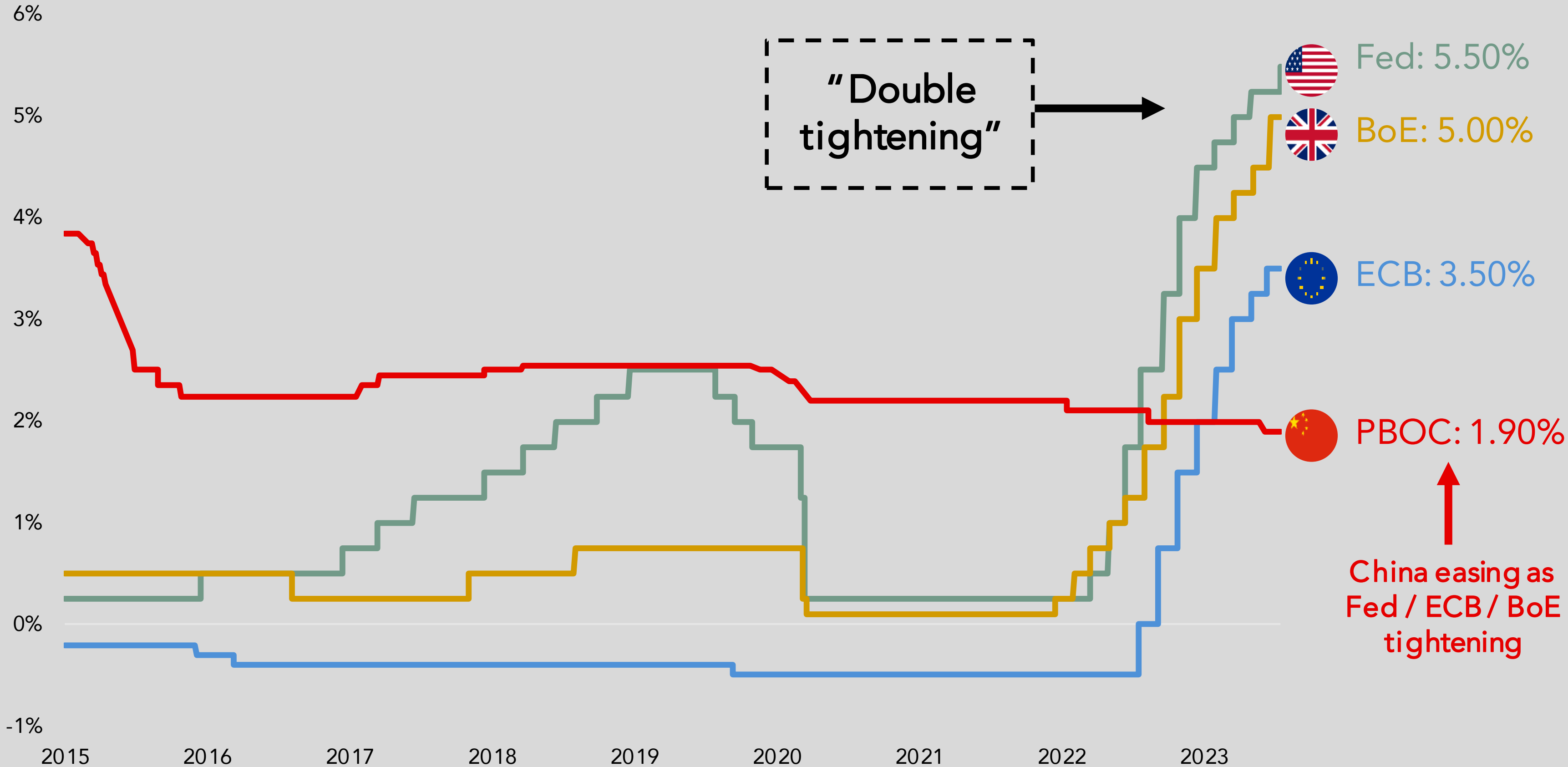
The case for a “hard landing” (i.e., recession)

- **Most aggressive Fed tightening cycle in 40 years**
- **Most rapid contraction in US M2 money supply since the 1930s**
- **Inverted yield curve**
- **Significant tightening in bank lending**
- **“Excess” consumer COVID savings depleting rapidly**
- **Manufacturing & corporate earnings recession well underway**
- **Credit default cycle in late innings, defaults rising**

Hiking Into a Slowdown

The current Fed tightening cycle has been an unusual one by virtue of the speed and magnitude of its "double tightening" (525 bps of rate increases, $95 bn of QT per month). With core inflation still well above target at 4.8%, the Fed once again raised rates by 25bps on July 26 (perhaps the last of the cycle), even as dozens of economic and market metrics signal that an economic slowdown is well underway.

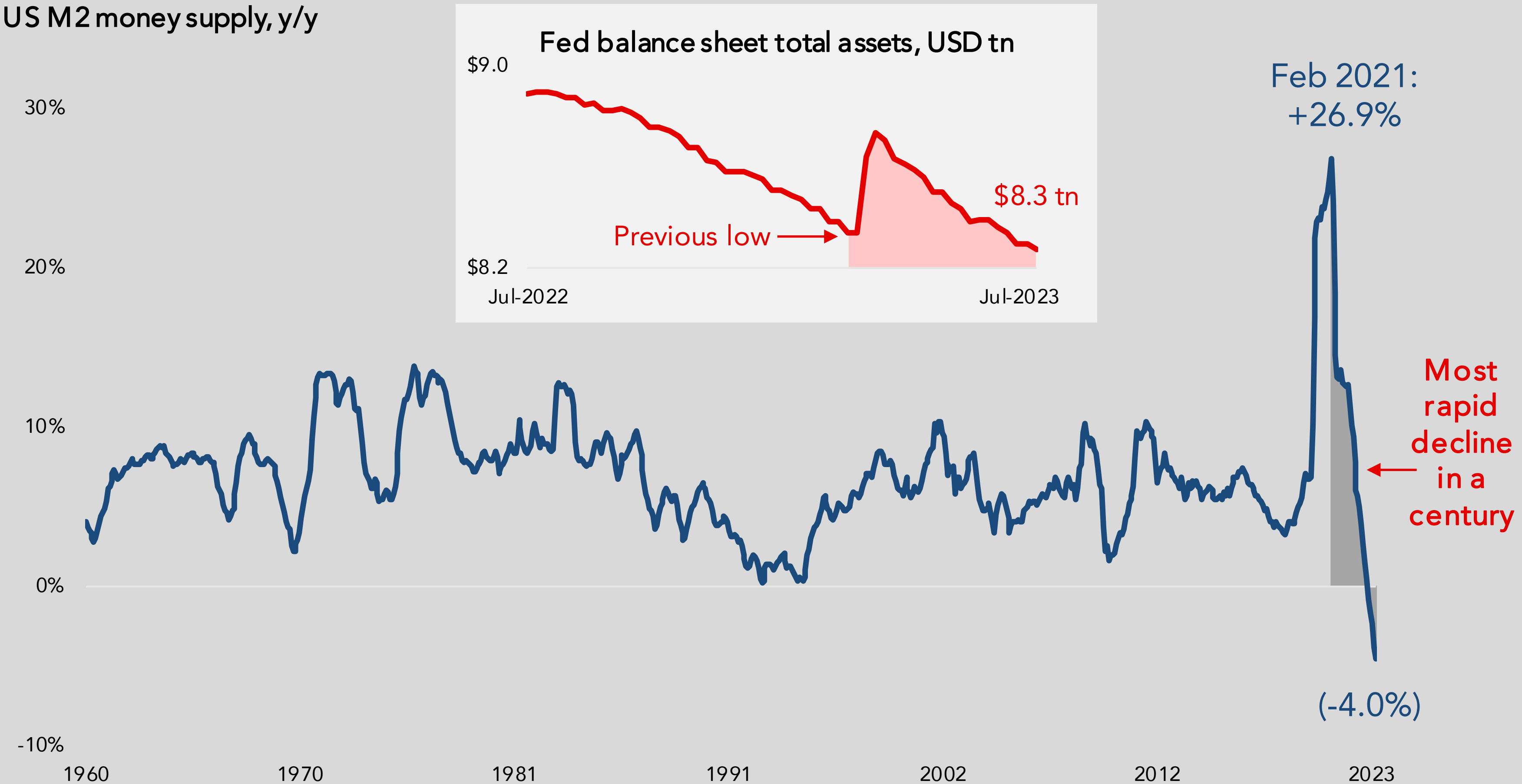
Central Bank policy rates



Source: (1) Bloomberg. Data as of July 25, 2023. BoE is the bank rate. ECB is deposit rate. China is the 7-day reverse repo rate.

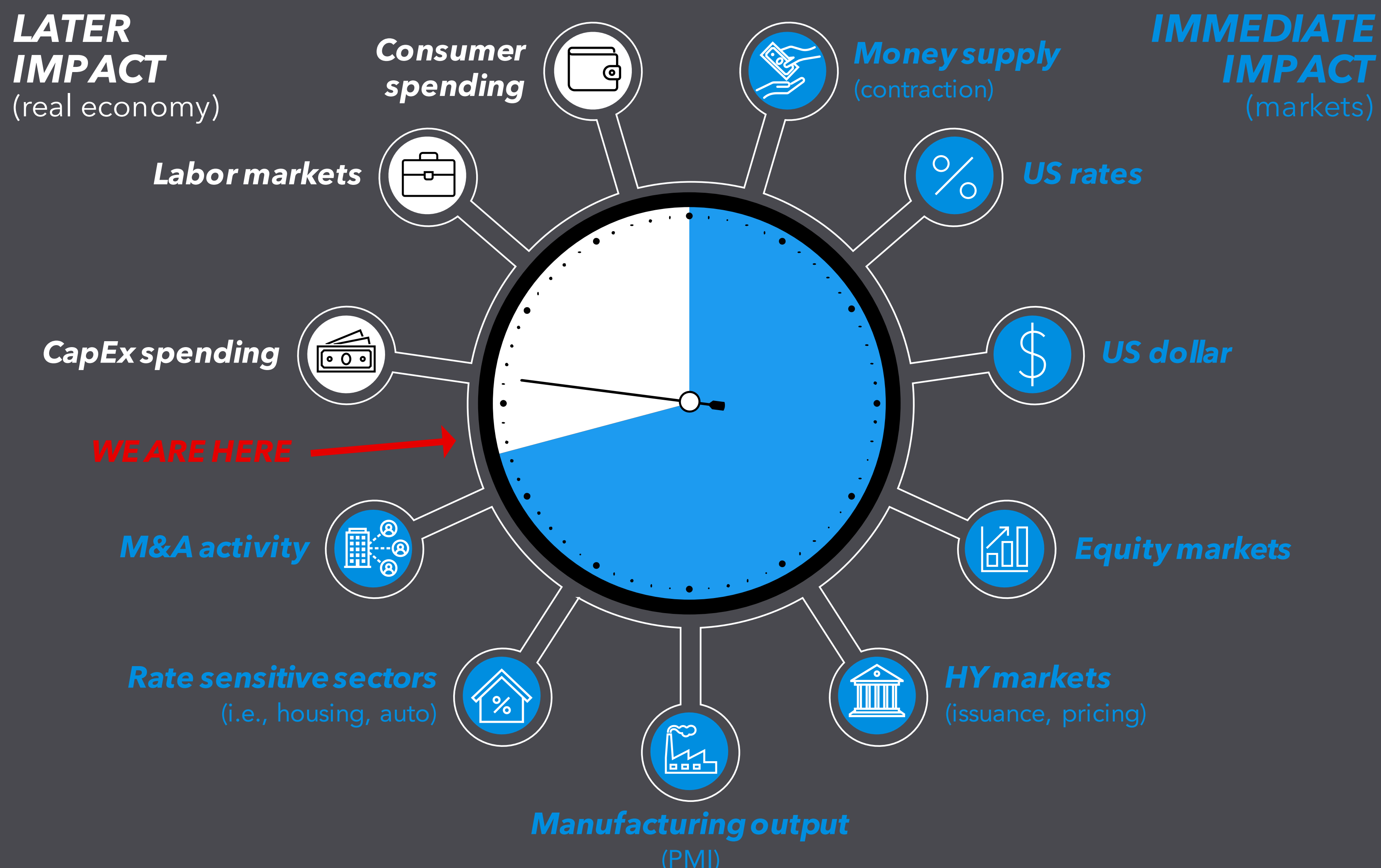
Historic Contraction in M2 Money Supply

The contraction in US M2 money supply has been the most rapid in nearly a century (1930s).



Source: (1-2) Bloomberg. Data as of July 25, 2023.

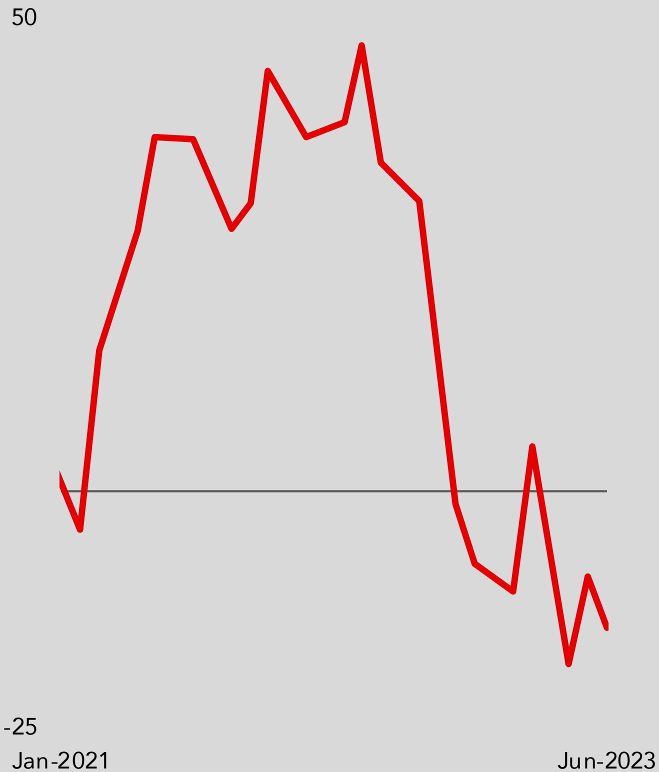
Monetary Policy Operates with a 12-18 Month Lag



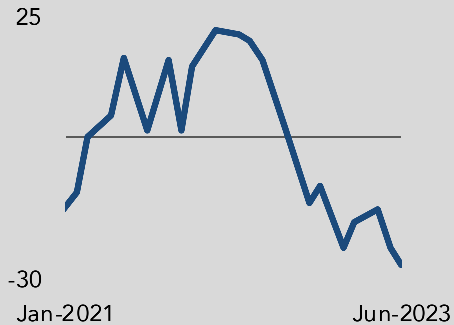
Banks Tightening Lending Standards

Bank loan volumes peaked in Q2 2022 as the Federal Reserve began its most rapid tightening cycle since the 1980s and depositors began shifting deposits away from banks. While the US banking system has stabilized in aggregate, thousands of smaller banks across the US have tightened lending standards as the cost of funding has risen (credit spreads wider, deposit outflows) and as recession timing comes closer into view.

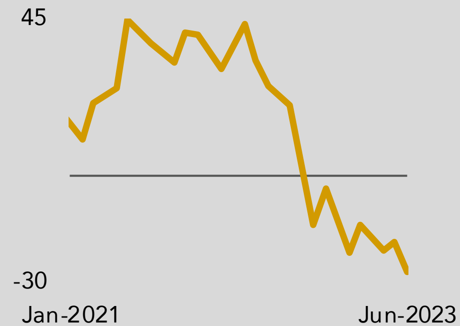
Total bank loan volume index



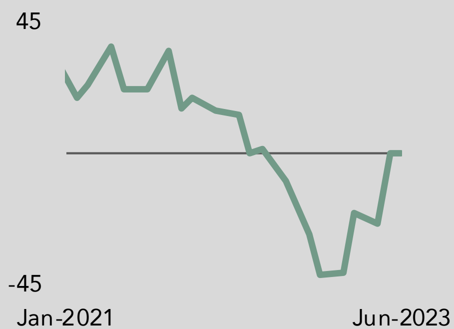
Commercial & industrial loan volume index



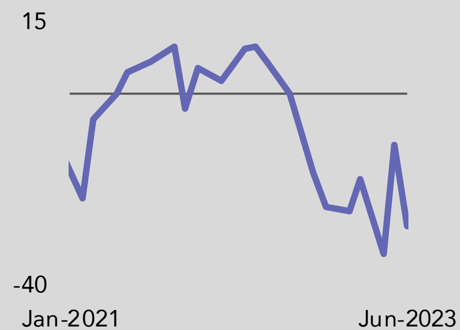
Commercial real estate loan volume index



Residential real estate loan volume



Consumer loan volume



Source: (1-5) Federal Reserve Bank of Dallas. Banking Conditions Survey June 2023. Data collected June 13-21, and 61 financial institutions responded to the survey.

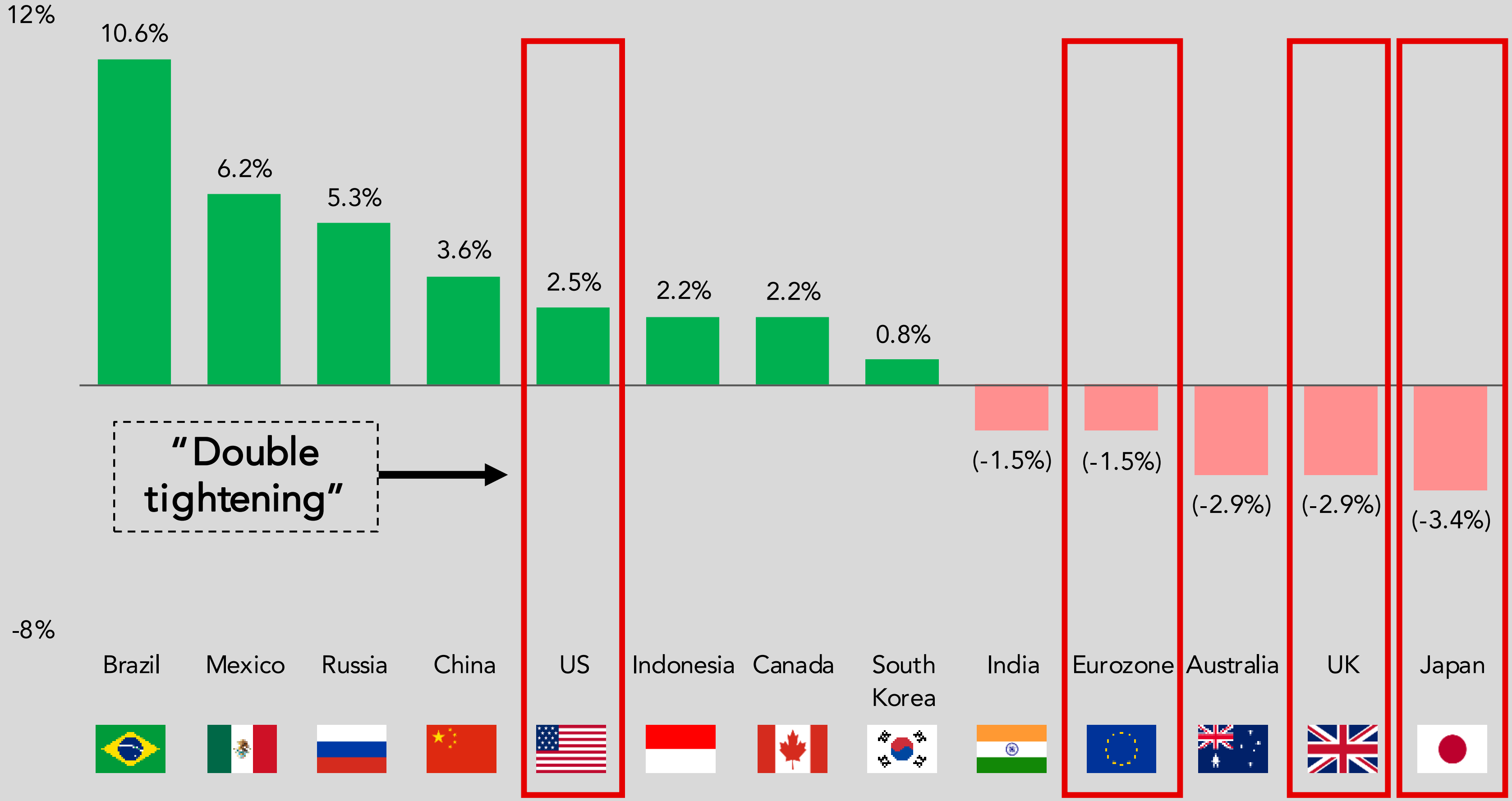
4

Disinflation Firmly in Place

Divergent Progress in Reducing Inflation

Last year, more than 90% of global central banks raised policy rates to combat post-COVID inflation. However, not all central banks are in the same place in their tightening cycle, with the Fed notably ahead of the ECB, BOE and BOJ. This, in turn, has implications for currencies, capital flows and markets.

Difference between policy rate and inflation

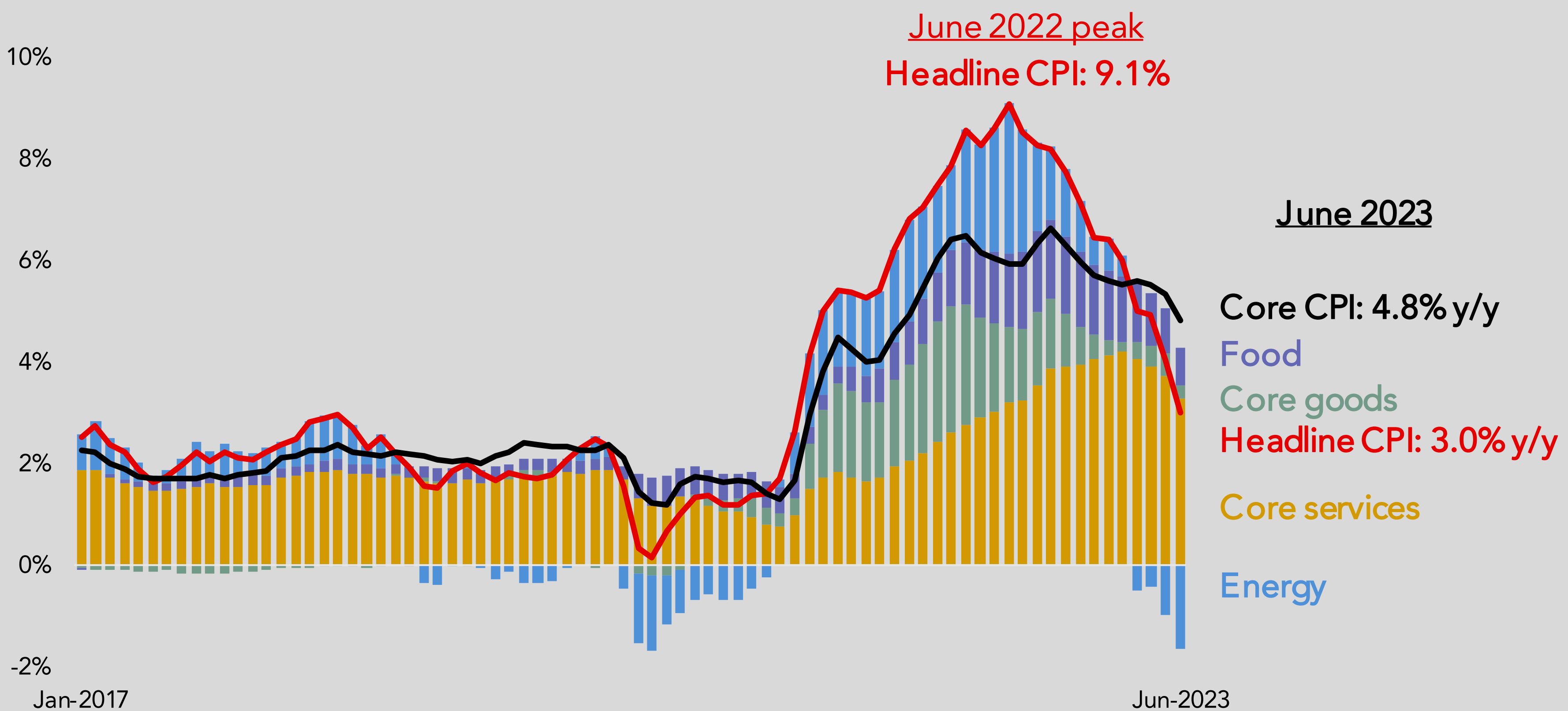


Source: (1) Bloomberg. Data as of July 26, 2023. China is 1 year LPR Rate. India is reverse repo rate.

US Inflation Drops to 27 Month Low of 3%

The headline US Consumer Price Index (CPI) fell to 3.0% in June, down sharply from the 9.1% peak one year ago, and its lowest level in 27 months. With core CPI of 4.8% still well above the Fed's 2% target, the Fed once again raised rates by 25bps at the July 26th meeting.

Breakdown of CPI by components

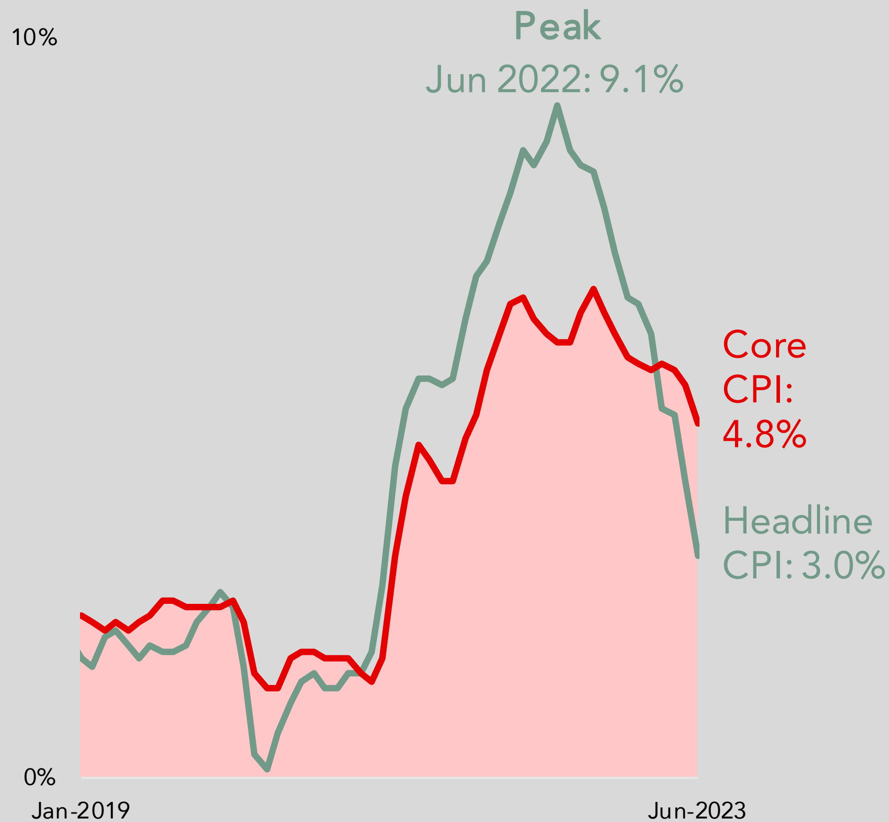


Source: (1) Bloomberg. Data as of July 25, 2023.

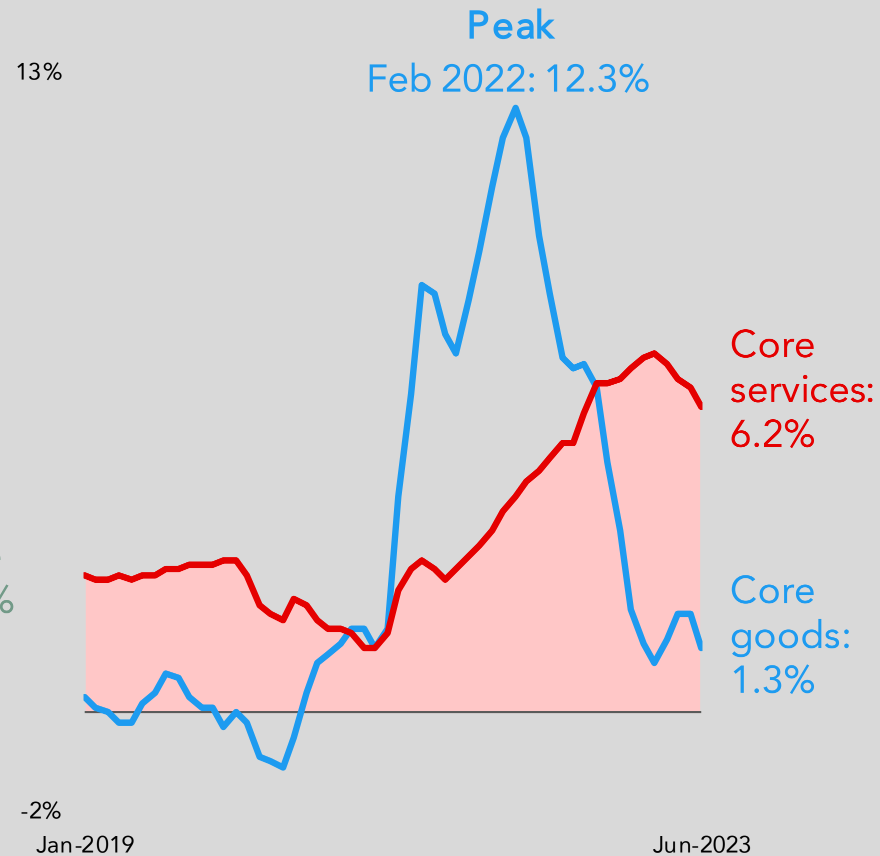
“Core” & “Services” Inflation Declining More Slowly

While headline US inflation has declined from 9.1% to 3% over the last year, much of the recent progress has been due to lower energy prices and “base effects” (i.e., y/y comparisons). While Fed policy is close to sufficiently restrictive, core CPI and services inflation are still well above target.

US core and headline inflation, y/y



US core goods and services inflation, y/y

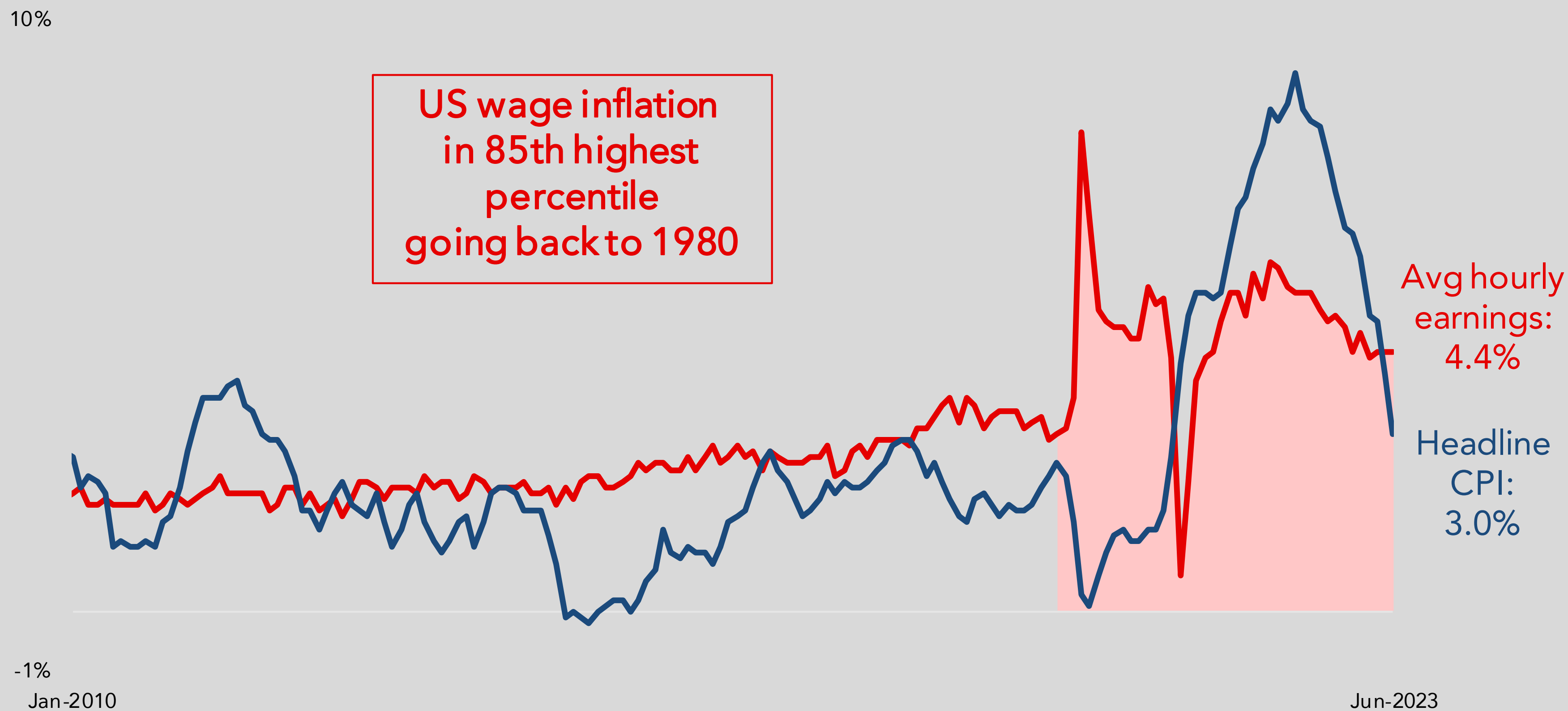


Source: (1-2) Bloomberg. Data as of July 25, 2023. Goods is commodities less food and energy commodities. Services is less energy.

Wages Outpacing Inflation, Once Again

Alongside overall inflation, US wage pressures have eased over the past 15 months, with private-sector hourly wage growth dropping y/y from over 8% in early 2020 to just over 4% today. Nonetheless, US wage inflation remains in the 85th highest percentile compared to wage data going back to 1980. Given structural shortages in US labor markets, elevated wage pressures are likely to complicate the Fed's policy path.

Average hourly earnings and headline CPI, y/y



Source: (1) Bloomberg. Data as of July 25, 2023.

2H 2023 Economic Outlook

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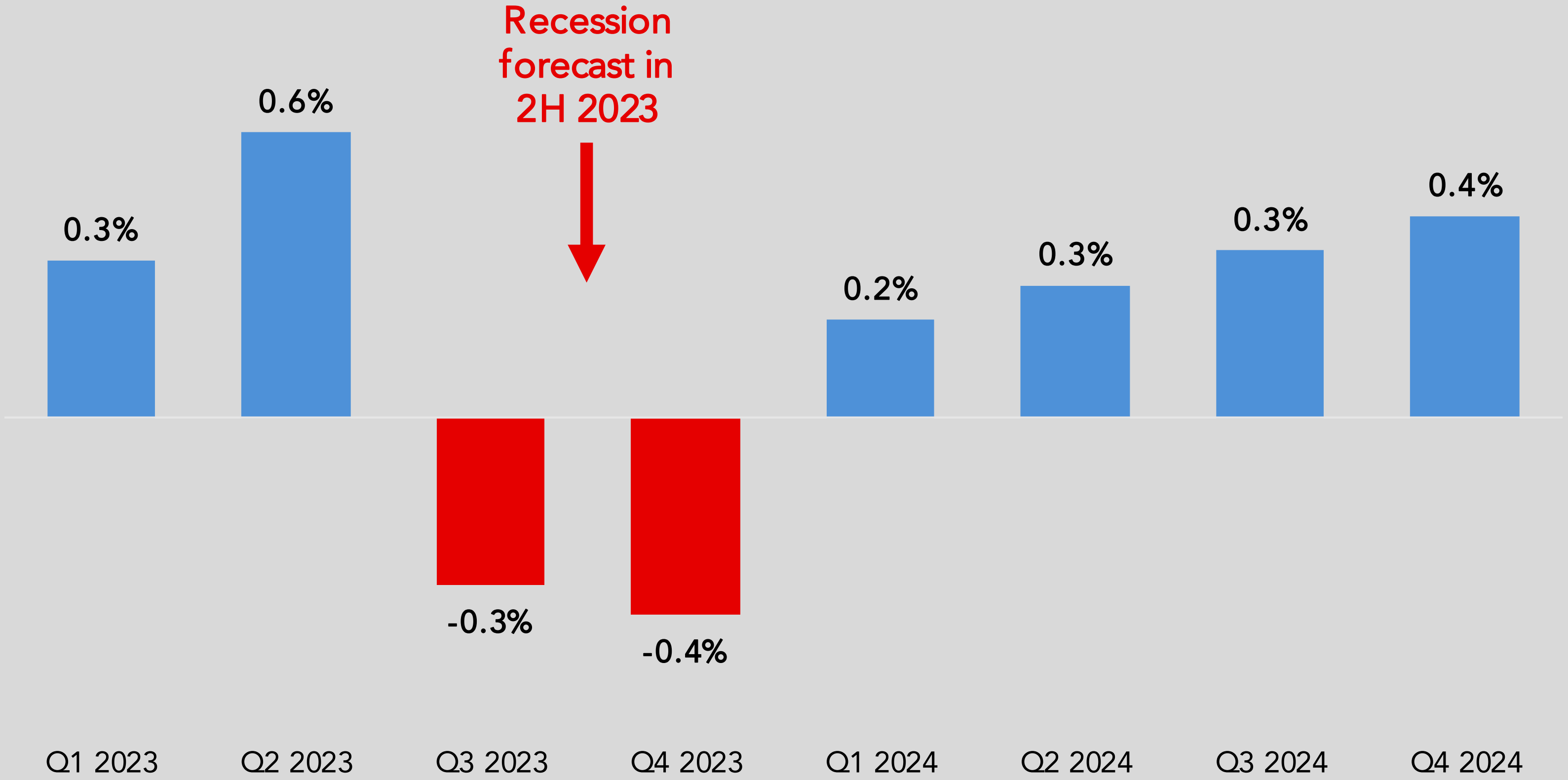
Waiting for Godot

Consensus Forecasting Mild Q4 Recession

While the US economy and consumer have been far more resilient than anticipated, dozens of economic and market metrics are pointing to a slowdown. Given the pace of Fed tightening, collapse in M2 money supply, yield curve inversion, impact of depleting savings and inflation on the consumer, and tighter bank lending standards, we believe near-term recession risk remains high. Less clear is whether the recession begins in the 2H 2023 or early 2024.

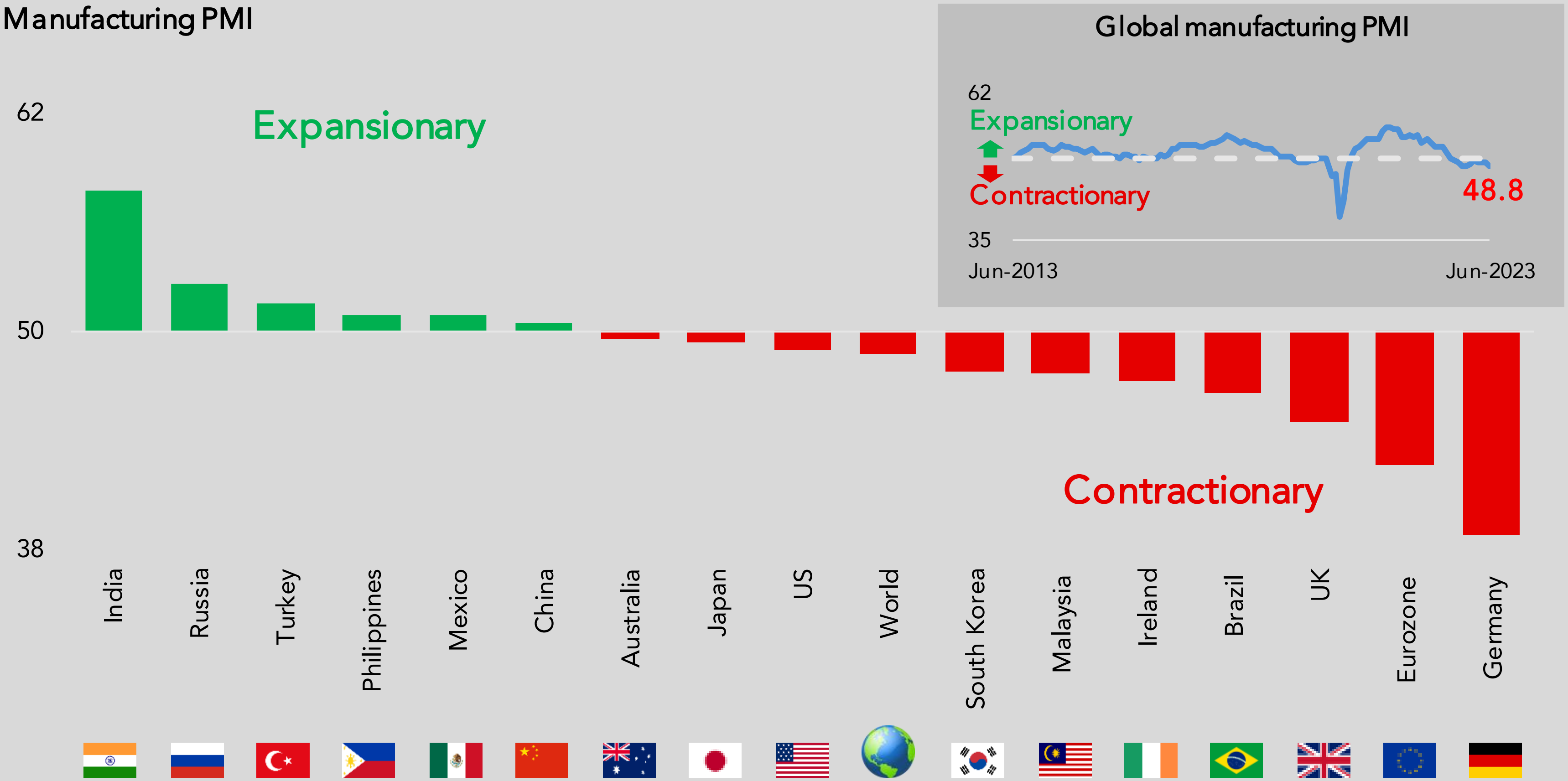
US GDP, Q/Q



Source: (1) US GDP Q/Q is Oxford Economics. Data as of July 25, 2023.

Global Manufacturing Contracts 10 Straight Months

Global manufacturing PMI dipped to a six-month low of 48.8 at the end of Q2, its 10th consecutive month in contraction territory. New orders fell at the fastest rate in five months, with business optimism now at a seven month low. In response to demand weakness, manufacturers have cut back purchases, reduced inventory and kept employment broadly flat. Only 10 of the 29 economies in S&P's global PMI survey had expansion in the manufacturing sector in June (7 of the 10 were in Asia).

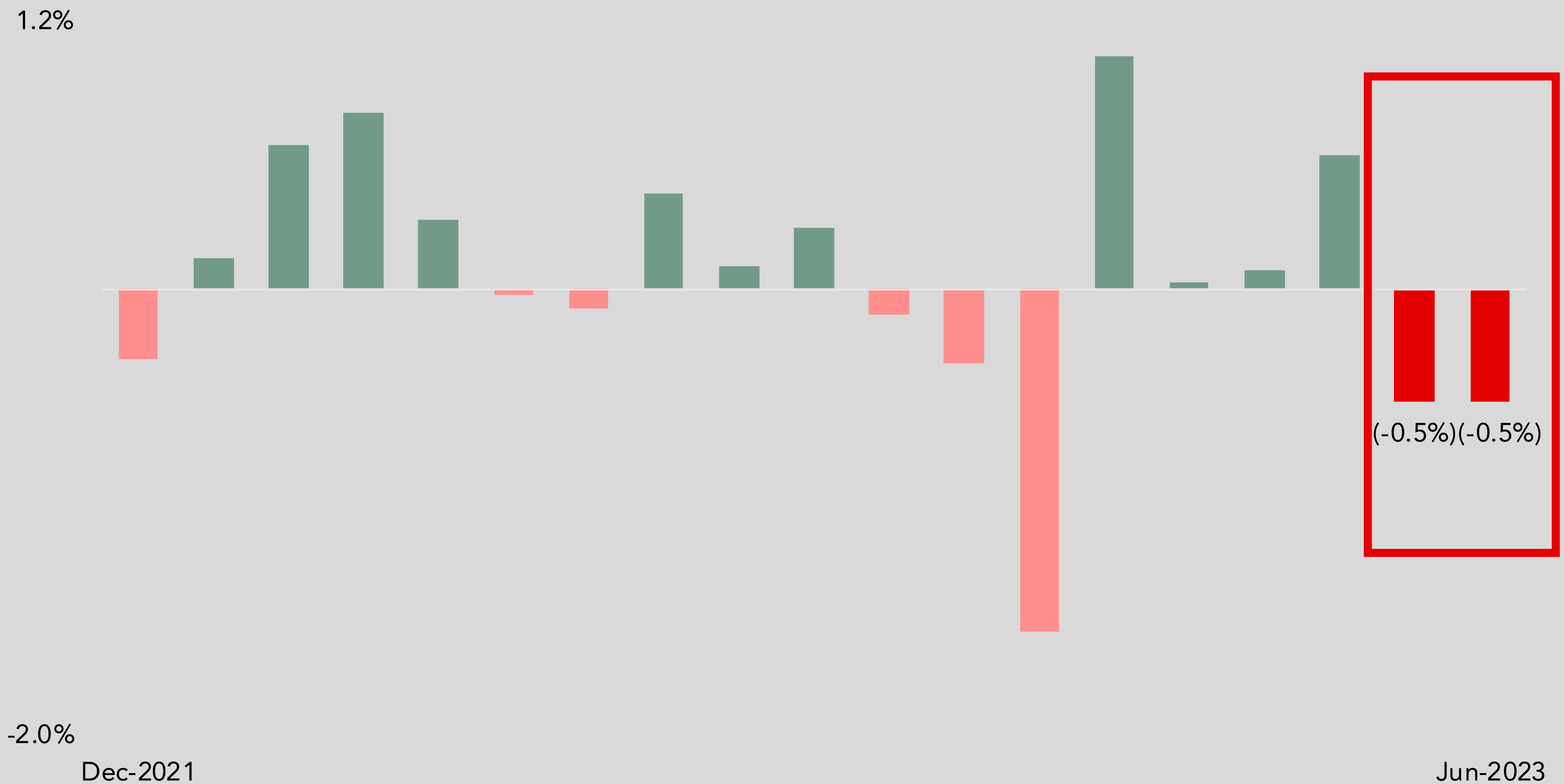


Source: (1-2) Bloomberg. Data as of July 25, 2023. July flash PMI data where available.

Industrial Production Declines 2 Straight Months

US industrial production declined 0.5% m/m in June, more than analysts expected and the second consecutive such contraction. The decline was led by a sharp contraction in output for consumer durables like automotive, home furnishing and appliance products.

US industrial production, m/m

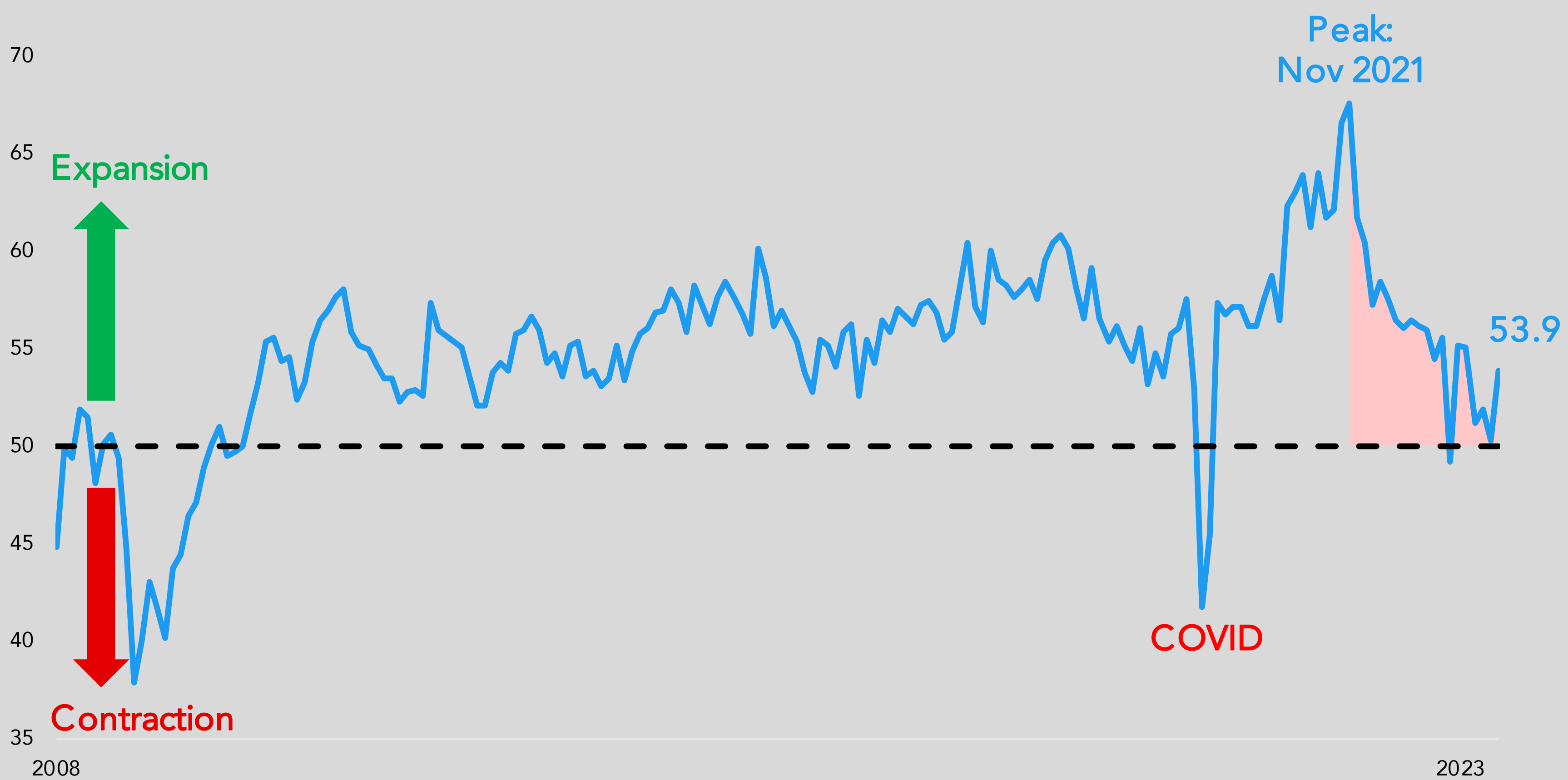


Source: (1) Bloomberg. Data as of July 25, 2023.

Services Sector Showing Signs of Slowing

The US Services PMI has shown a persistent (if non-linear) decline since it's peak in November 2021, briefly breaching the key "50" level in December 2022. July flash PMIs suggest that activity in the services sector continues to expand, but at a noticeably slower pace than prior periods.

ISM Services PMI

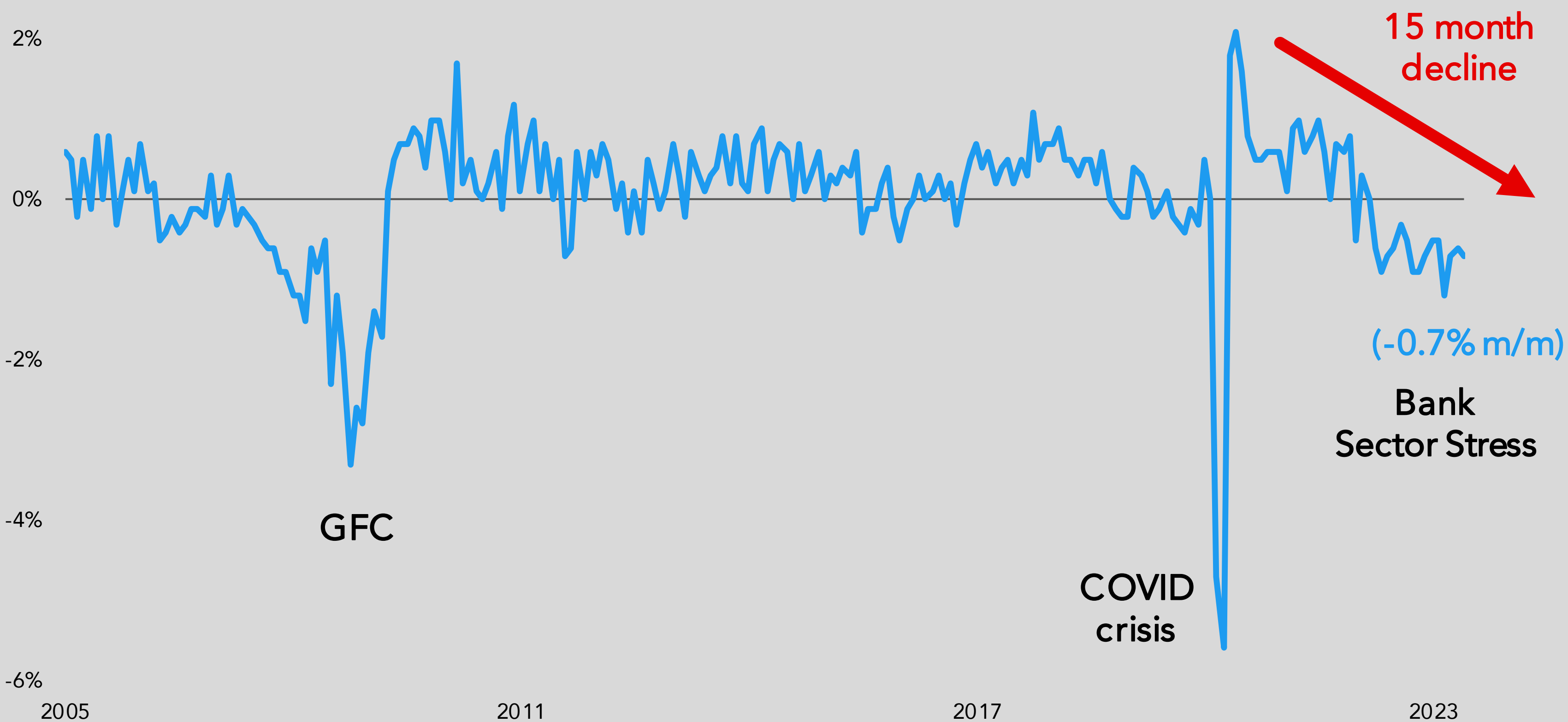


Source: (1) Bloomberg. Data as of July 25, 2023.

LEI Down 15 Straight Months

The Conference Board's Leading Economic Index (LEI) recently declined for its 15th consecutive month to reach 106.1, 10% below its December 2021 peak and its lowest level since July 2020. The LEI tracks 10 economic indicators including consumer expectations for business conditions, interest rates, manufacturer's orders, and employment statistics. In the latest report, 6 of the 10 subcomponents contracted, indicating broad based weakness and elevated recession risk.

Conference Board Leading Economic Index (LEI), m/m

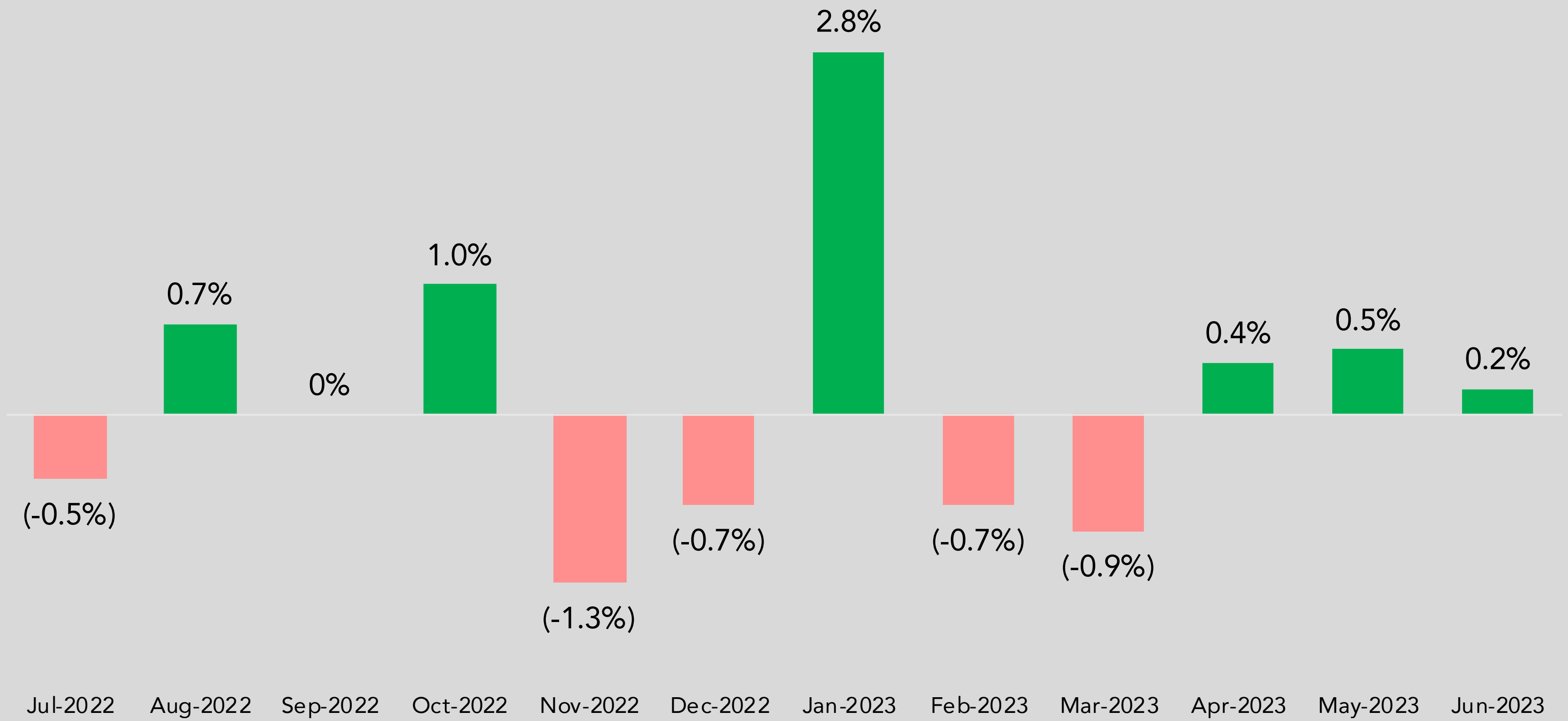


Source: (1) Bloomberg. Data as of July 25, 2023.

US Consumer Up & Down, but Resilient

High post COVID consumer savings, tight labor markets and softer energy prices have allowed the US consumer to absorb the highest inflation period in 40 years. Since the Fed tightening cycle began one year ago, US consumer spending has been up and down, but impressively resilient.

US retail sales, m/m

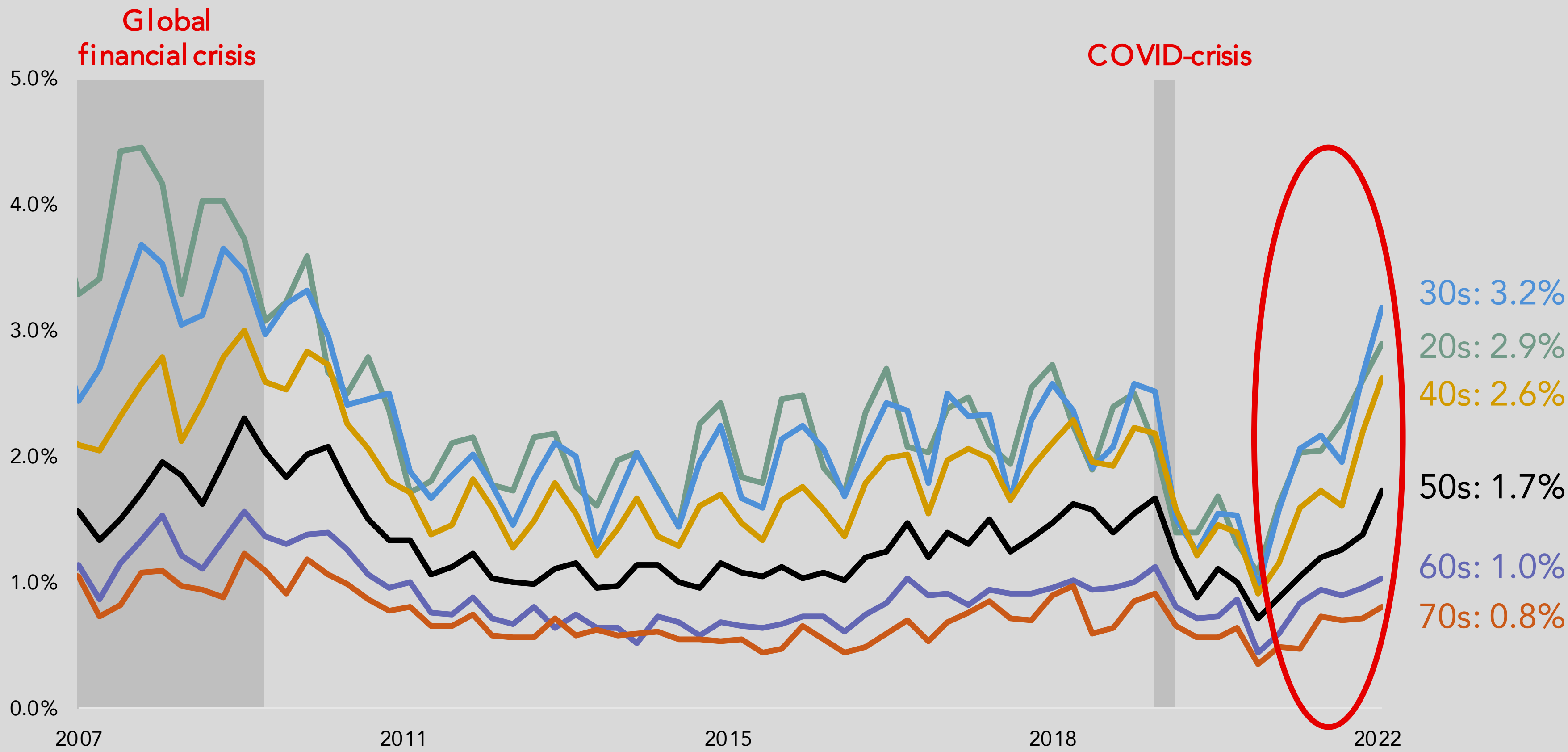


Source: (1) Bloomberg. Data as of July 25, 2023.

Rising US Credit Card Defaults

Total debt balances grew by $394 billion in Q4 2022, the largest nominal quarterly increase in twenty years. Credit card balances increased $61 billion, the largest observed in the history of the data, going back to 1999, with younger borrowers surpassing their pre-pandemic delinquency rates.

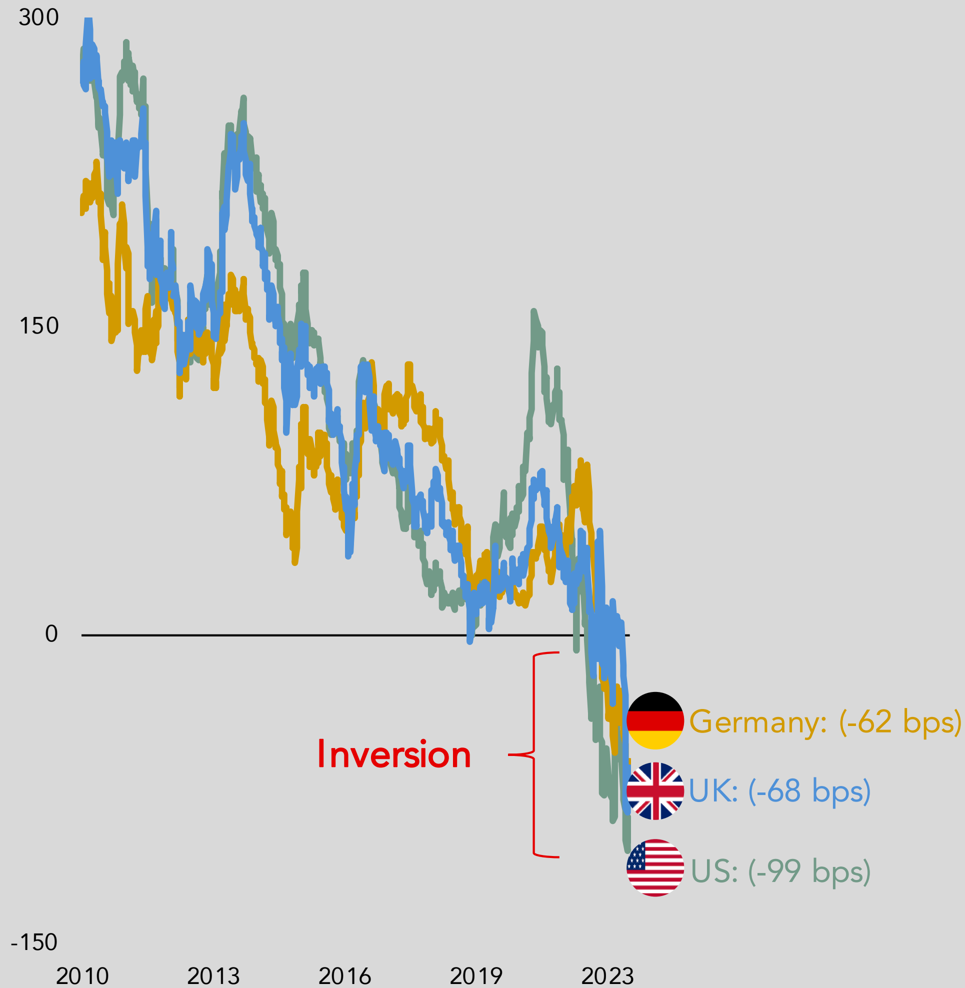
Delinquency rate for credit card borrowers, by age



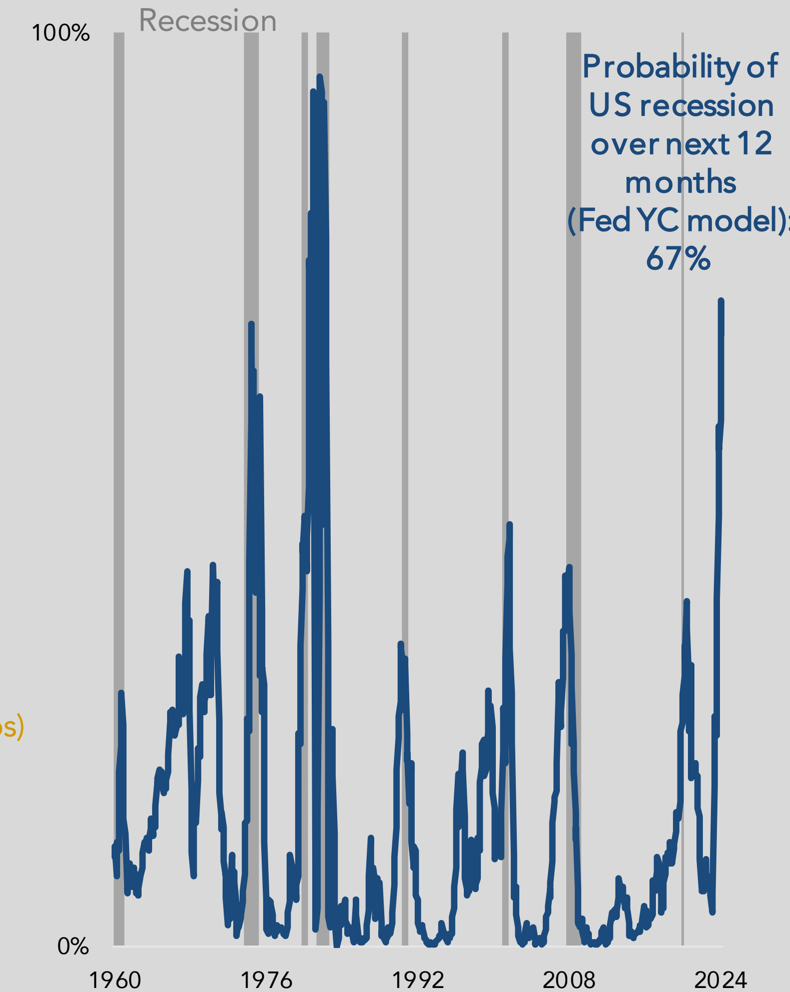
Source: (1) New York Fed Consumer Credit Panel / Equifax. Data through end of 2022.

Yield Curve Signaling Recession

2s-10s government yield curves



NY Fed probability of US recession in the next 12 months



Source: (1-2) Bloomberg. Data as of July 25, 2023.

2H 2023 Market Outlook

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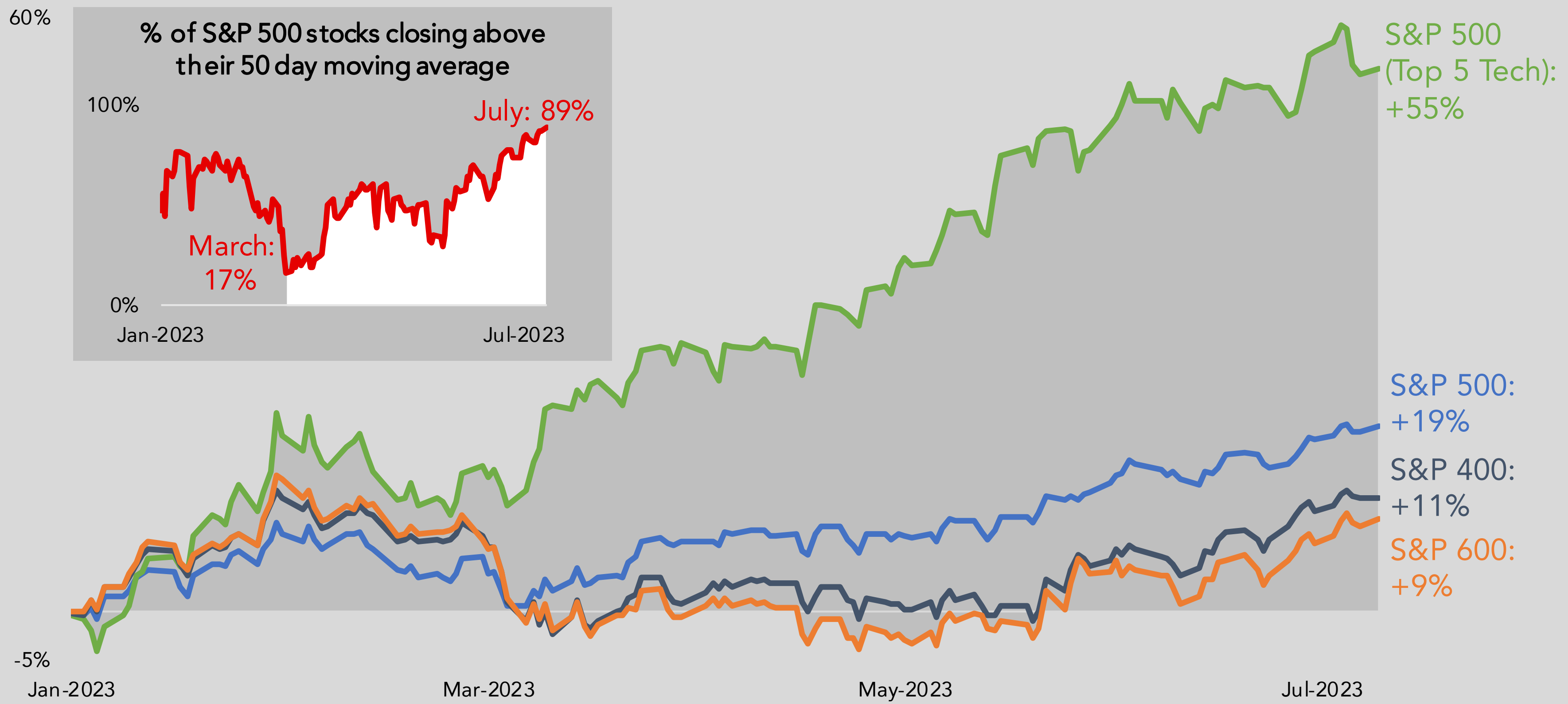
Markets After Fed Tightening Cycles

Are Equity Markets Too Optimistic on the Economy?

The US equity rebound in the 1H 2023 was led primarily by big tech. By June and July, however, a sharp divergence between equity valuations and earnings began to broaden, as 140 stocks in the S&P 500 have now hit 52 week highs, even as the earnings recession deepens. Nearly 90% of S&P 500 stocks are now trading above their 50 day moving average.

2023 YTD equity market performance

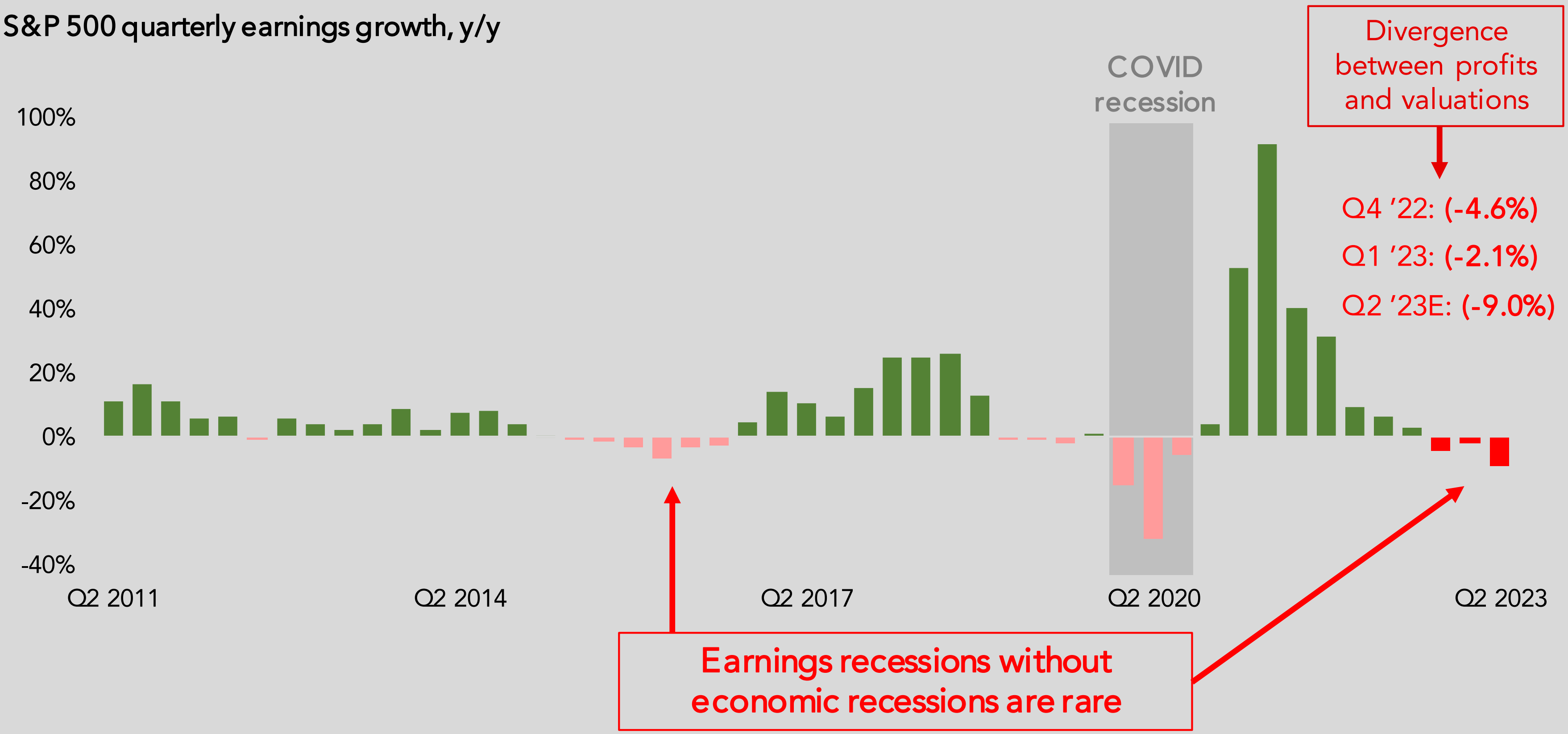


Source: (1-2) Bloomberg. Data as of July 25, 2023. S&P 500 top 5 names by market cap are Apple, Microsoft, Alphabet, Amazon & Nvidia.

Earnings Recession Well Underway

S&P 500 corporate earnings recessions in the absence of economic recessions are reasonably rare events, with a strong US dollar and/or low oil prices the culprit on each such occasion. The two quarter contraction in corporate earnings from Q4 '22 to Q1 '23, in the absence of a US economic recession, was only the 5th such occasion over the last 50 years, going back to 1974. Looking ahead to Q2 2023, higher funding costs, slowing consumer demand and margin pressure are expected to drive a third and deeper quarterly contraction in US corporate earnings.

S&P 500 quarterly earnings growth, y/y

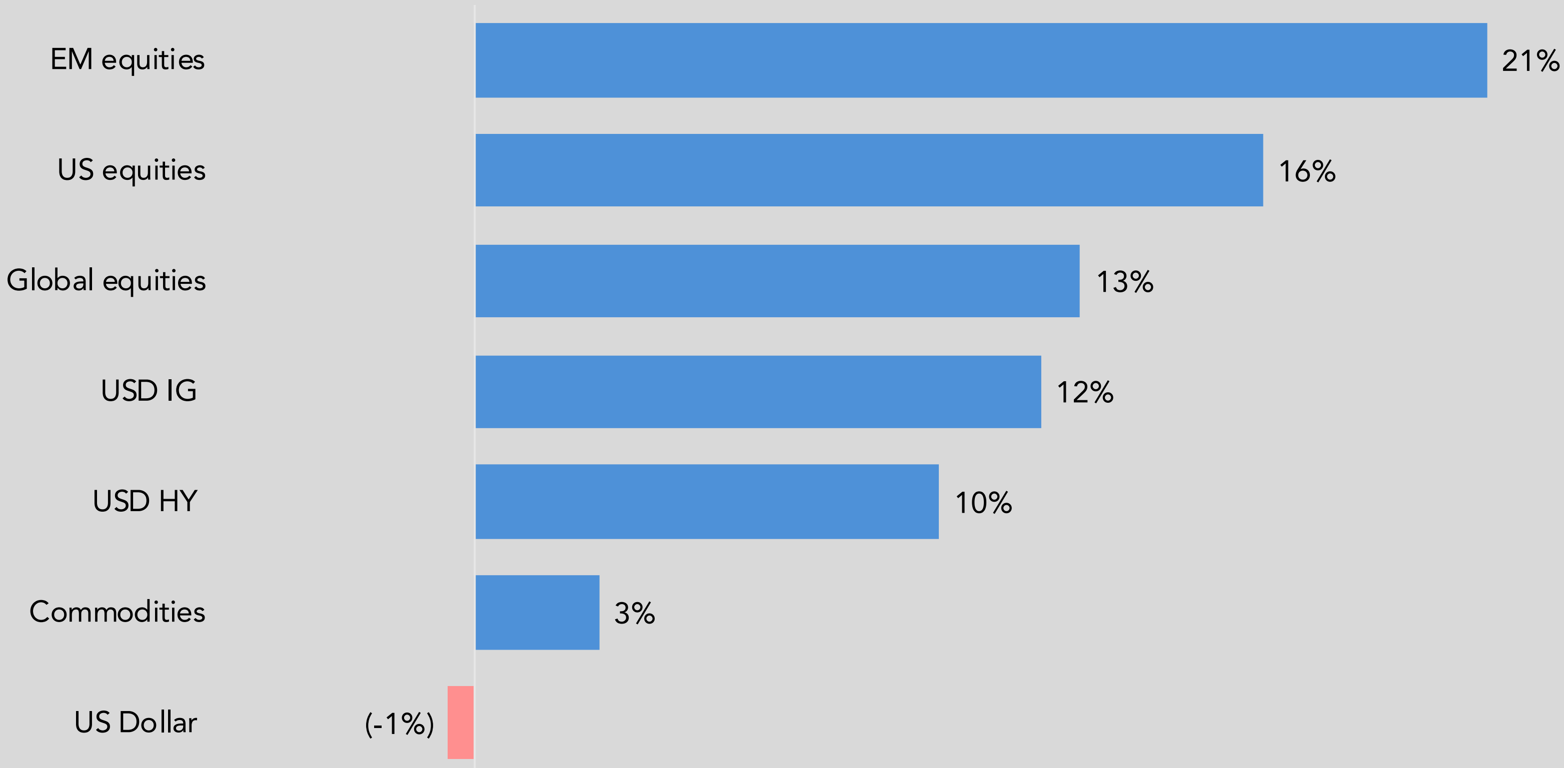


Source: (1) FactSet, Earnings Insight Report (July 21, 2023).

Global Markets Do Well After Tightening Cycles

While US equities typically have a 20% correction after recession begins, and credit spreads hit new wides, debt and equity markets nonetheless recover and do well in the 12 months following the end of a Fed tightening cycle.

Average returns in the 12 months following the end of the 6 fed tightening cycles since 1983



Source: (1) Bloomberg. Data as of July 25, 2023. USD IG and HY total return indices and EM equities start in 1987 recession due to data availability.

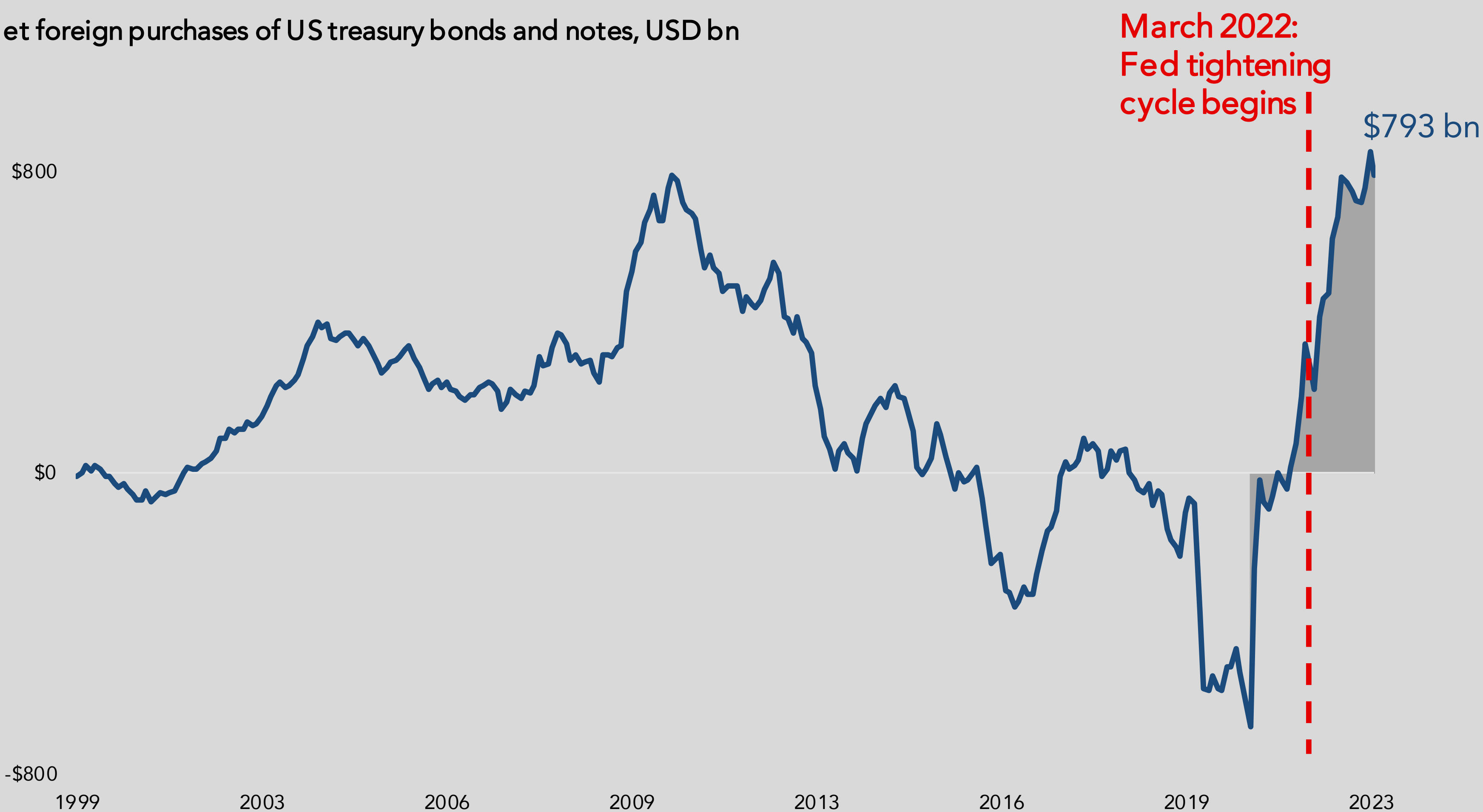
7

Range-Bound & Lower US Rates

Foreign Purchases of USTs Rose During Fed Tightening

Foreign purchases of US Treasuries have risen significantly as US rates increased during the Fed tightening cycle.

Net foreign purchases of US treasury bonds and notes, USD bn

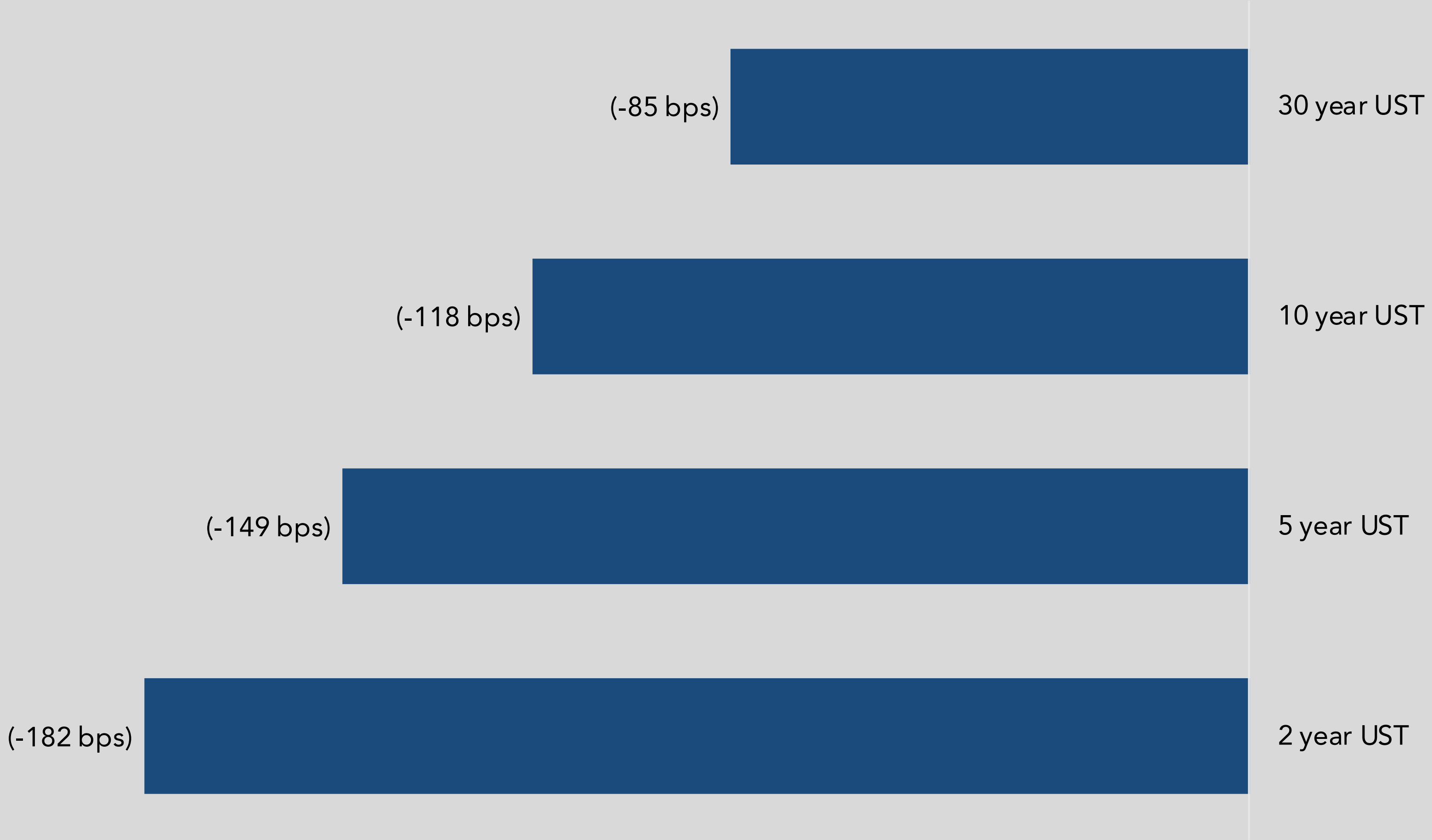


Source: (1) Bloomberg. Data as of July 25, 2023. Rolling 12 month sum.

US Treasuries Rally After Fed Tightening Cycles

Historically, UST yields have moved significantly lower in the 12 months following the end of a Fed tightening cycle.

Average change in yields in the 12 months following the end of the 6 fed tightening cycles since 1983

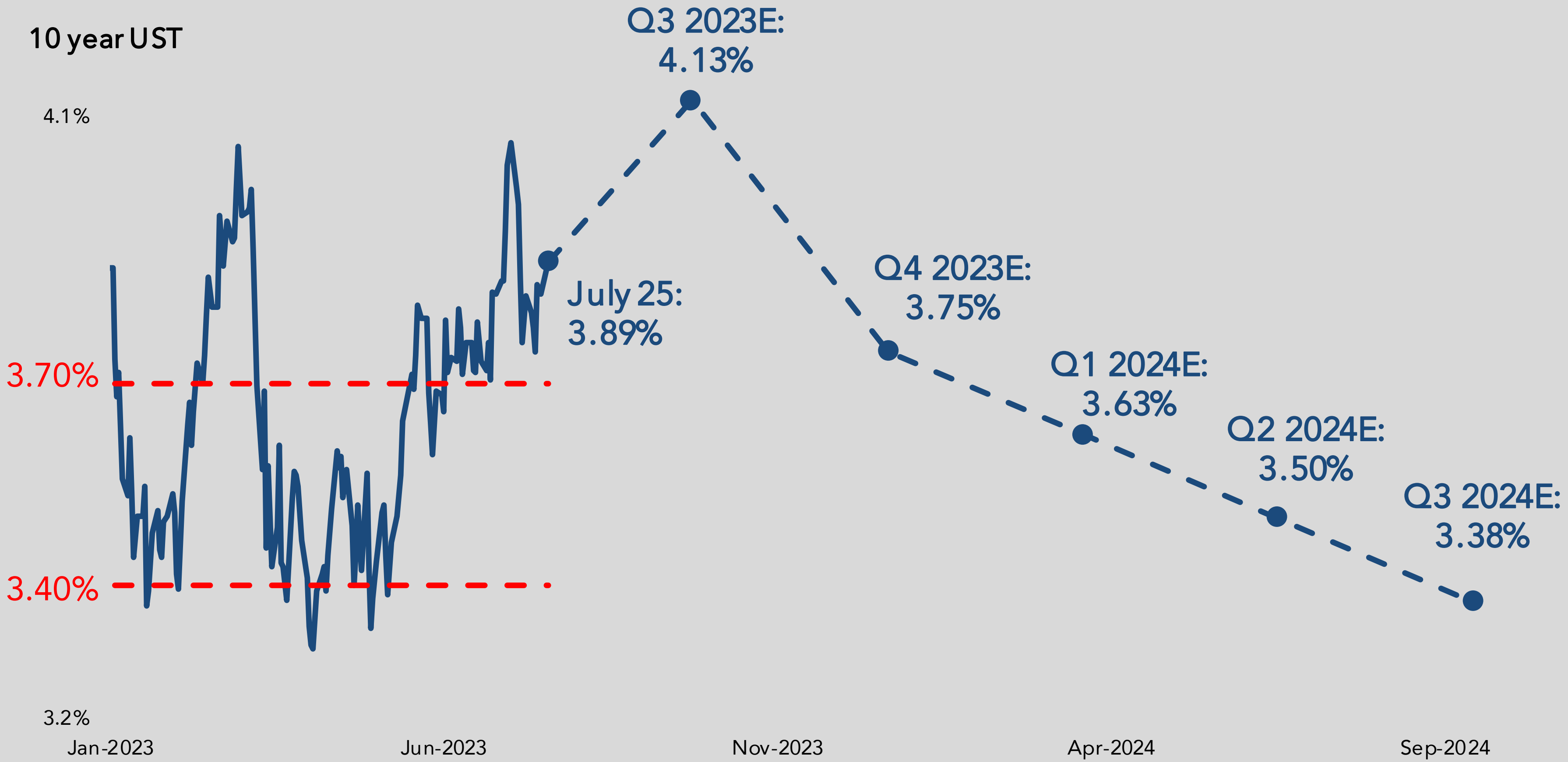


Source: (1) Bloomberg. Data as of July 25, 2023.

US Rates Trending Lower as Fed Tightening Ends

The unexpected resilience of the US economy in 1H 2023 has prolonged the Fed's hiking cycle beyond market expectations. In early Q3 2023, 10 year yields broke out of their 1H trading range, rising above 4% on July 6, before trending lower again following the soft June CPI report. MUFG's Head of Macro Strategy, George Goncalves, expects rates to peak inQ3 and move progressively lower over the next year.

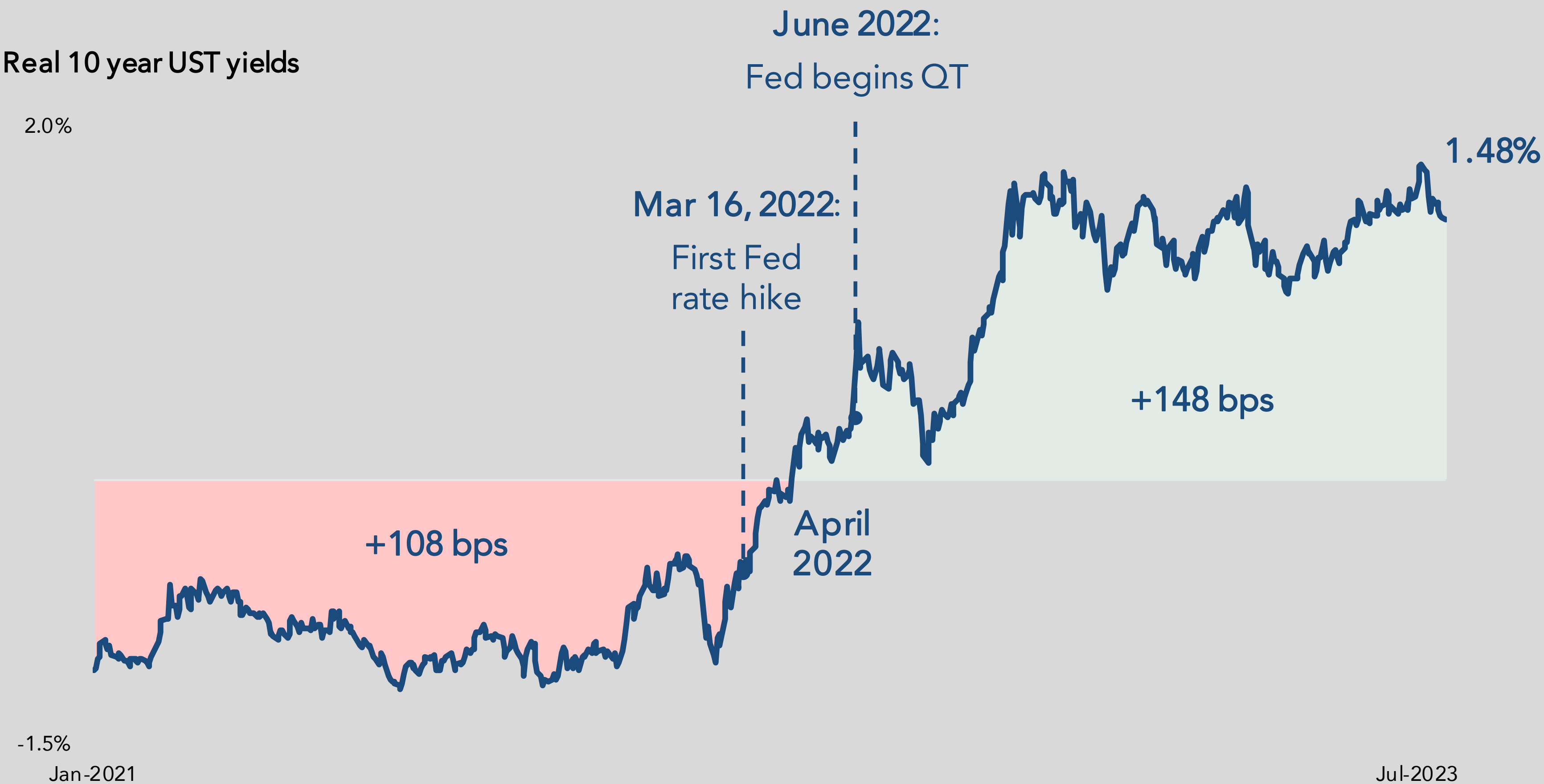
10 year UST



Source: (1) Bloomberg. Data as of July 25, 2023. MUFG Rate Strategy (George Goncalves).

Real Rates Elevated Even After The Pause

Even after the Fed pause, US real rates may remain elevated. Since the Fed began its accelerated "double tightening" (raising rates, reducing balance sheet) in March 2022, and as the economy has shown resilience with inflation declining, US "real" rates have moved more firmly positive. With "real" rates likely to remain elevated during a "higher for longer" Fed pause, assessing the impact of "sufficiently restrictive" becomes more challenging.

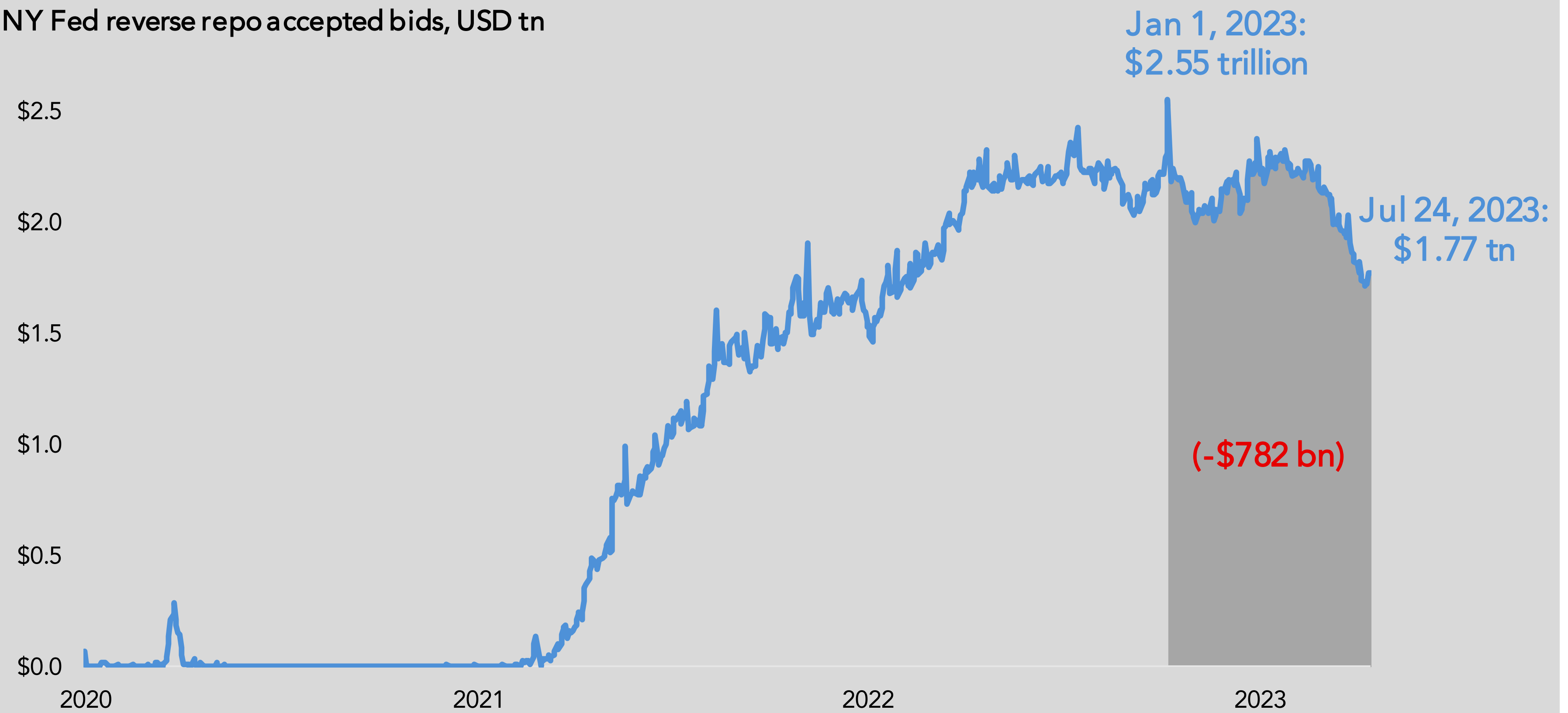


Source: (1) Bloomberg. Data as of July 25, 2023.

Who is Buying $1 Trillion of US Treasuries?

Between the June 1 US debt ceiling resolution and late September, the US Treasury will be replenishing its coffers by issuing nearly $1 trillion of US Treasuries at a time when the Fed is reducing its balance sheet by $95 bn per month. Money markets, with nearly $2 trillion of their $5 trillion in funds parked in the Fed's reverse repo facility, are likely to absorb the bulk of the issuance. To lure investors, Treasury will face higher interest costs while markets will be concerned about liquidity and unintended consequences.

NY Fed reverse repo accepted bids, USD tn



Source: (1) Bloomberg. Data as of July 25, 2023.

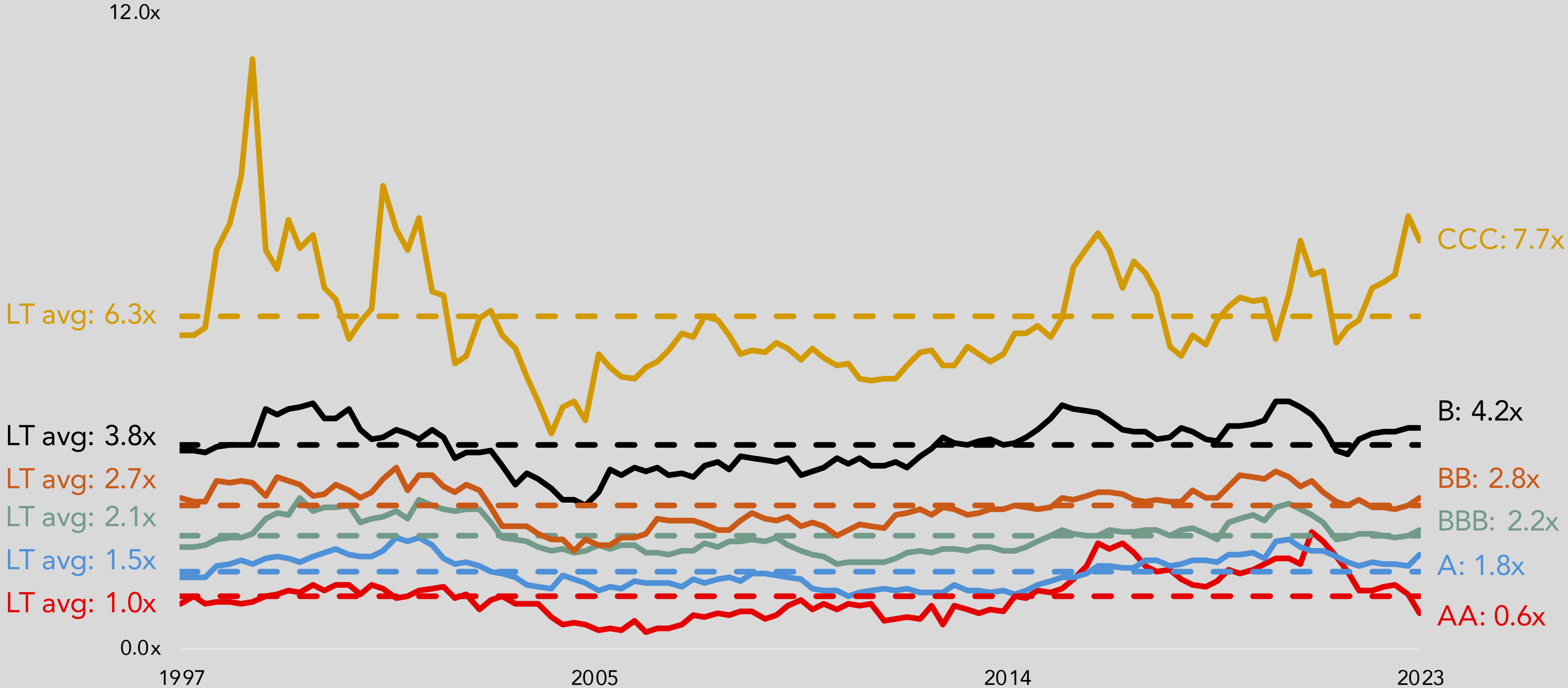
8

Tailwinds Still Favorable for Bond Issuance

Strong Balance Sheets with Divergence by Rating

Corporate balance sheets in the multi-trillion USD bond markets have remained strong by historic standards, with variance by ratings category. Since Q2 2021, leverage has risen above LT averages for most ratings categories, though only modestly. At the low end, CCC leverage has diverged most sharply above LT averages, while in the strong AA rating category, leverage has sharply declined as cash balances increased by 67%.

USD net leverage by rating

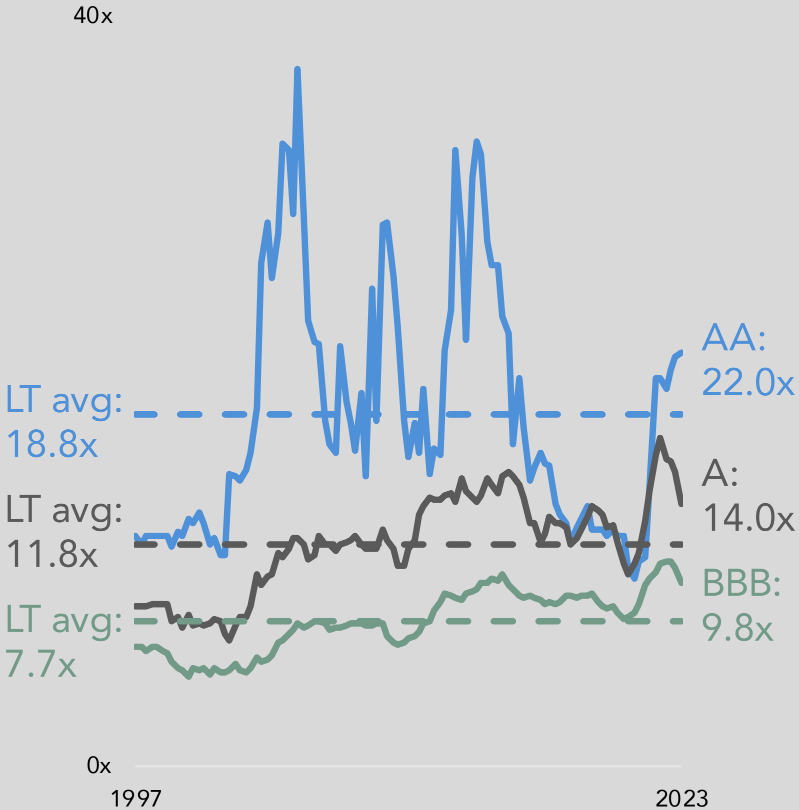


Source: (1) CreditSights, "US Strategy: IG leverage Report 1Q23."

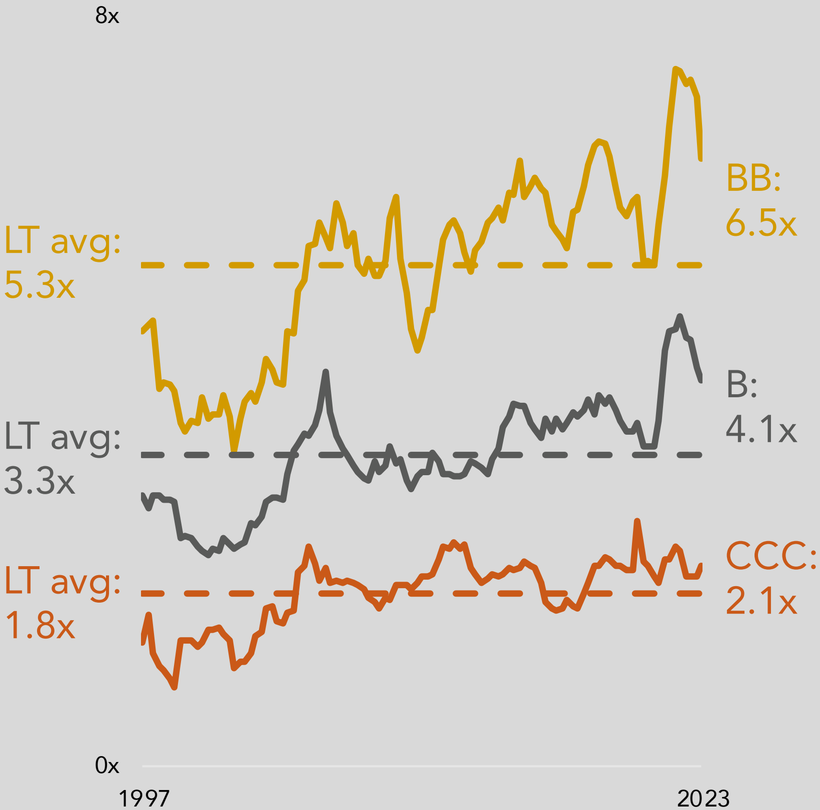
Interest Coverage Ratios Above Historic Levels

Following a multi-year period of elevated earnings and margins, high cash balances and less leverage with extended maturities, corporates in the USD bond markets, in aggregate, have stronger interest coverage ratios than historic levels, as often occurs late in an economic expansion.

USD IG interest coverage ratio, by rating



USD HY interest coverage ratio, by rating

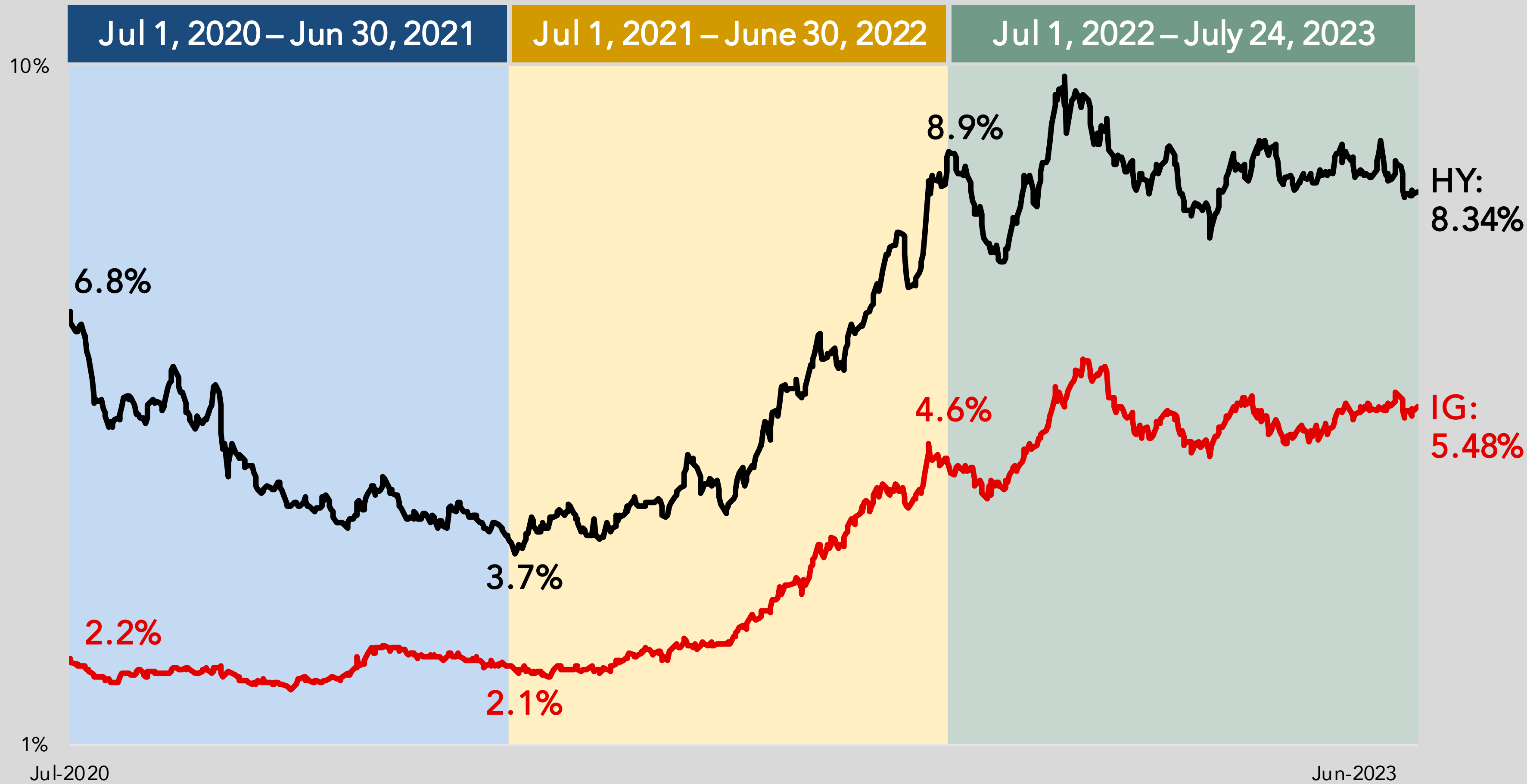


Source: (1-2) CreditSights. Data through Q1 2023.

Attractive Yields Creating Favorable Technical Tailwinds

With yields consistently above 5% for the first time since the GFC, high quality corporate bonds offer investors significant cushion to weather volatility and recession risk.

USD IG & HY index yield to worst

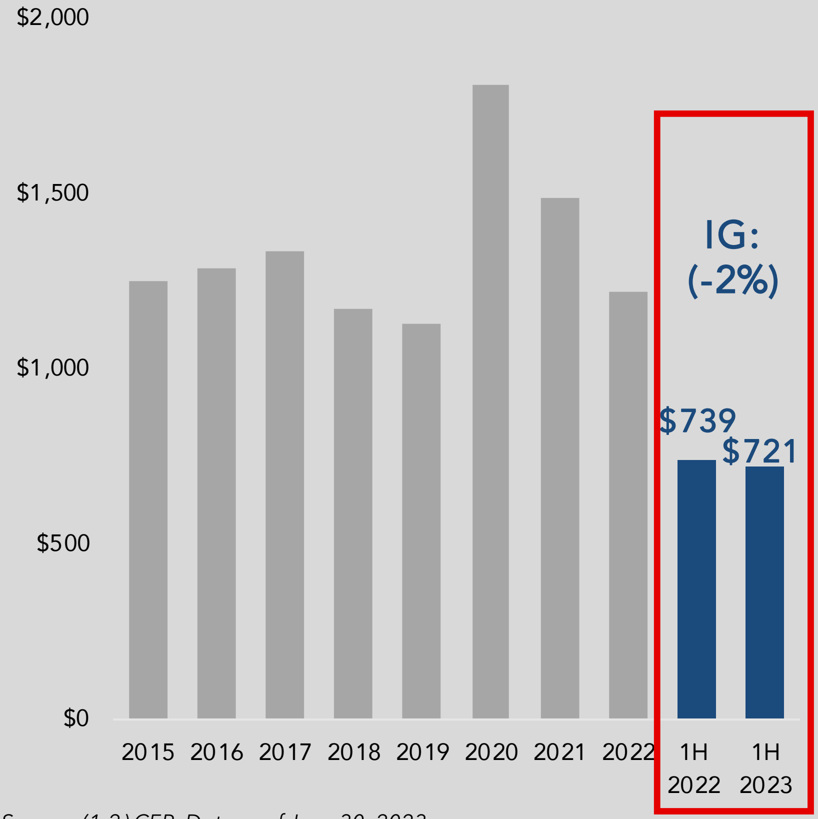


Source: (1) Bloomberg. Data as of July 25, 2023.

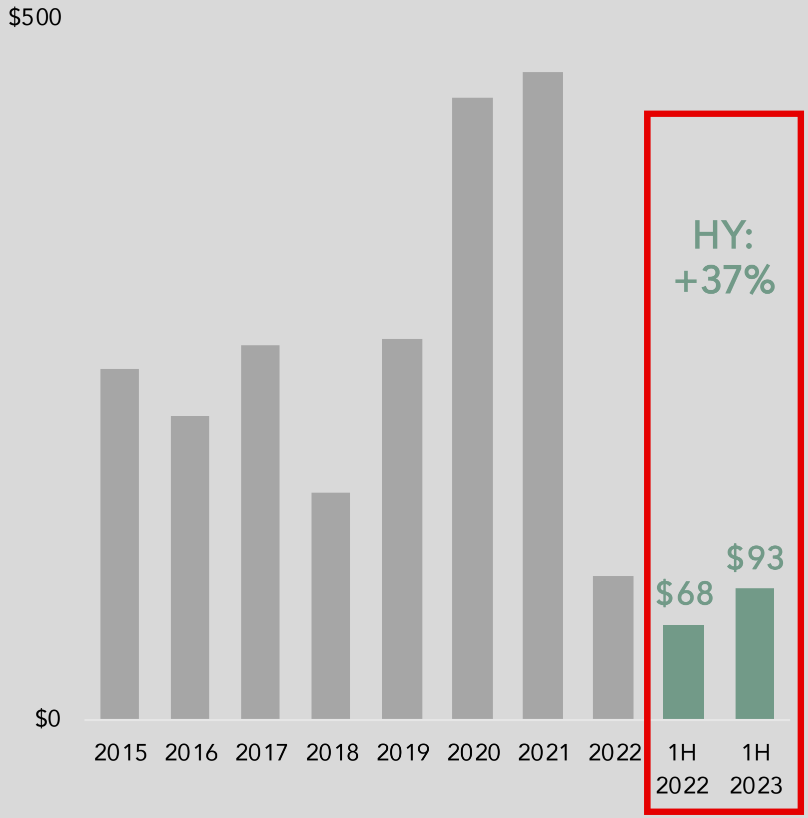
USD New Issue Market in 1H 2023

After a strong start in Jan-Feb, IG new issue volumes declined sharply with bank sector stress in March-April, down as much as 20% Y/Y after the first 4 months of the year. However, stronger performance in May and June has brought the gap to just 2% below last year's 1H levels. High Yield issuance, on the other hand, was much stronger in 1H 2023 vs. 1H 2022. USD HY issuance volumes are up 37% year-on-year and are just 9% short of 2022's full year volume.

USD IG new issue, bn



USD HY new issue, bn

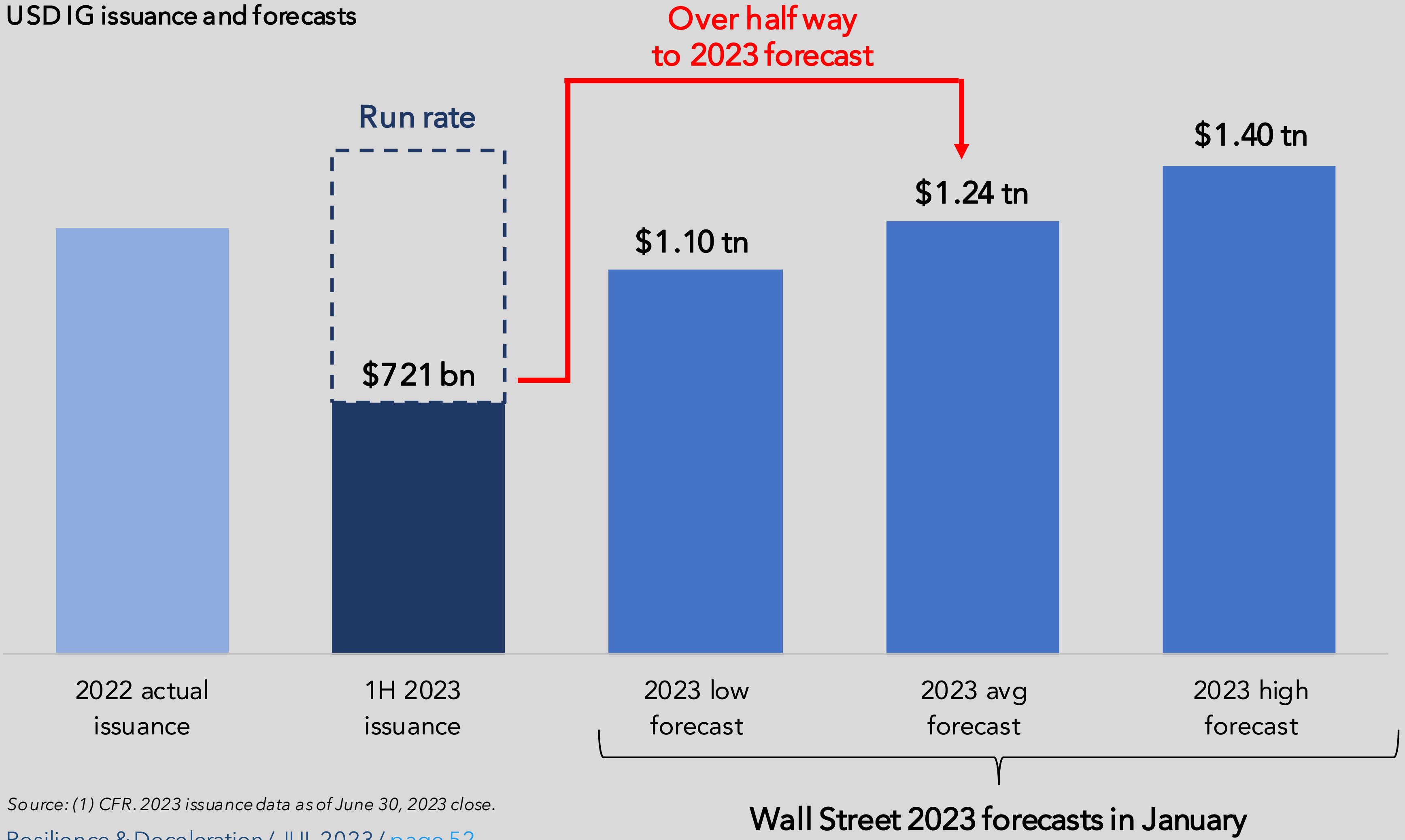


Source: (1-2) CFR. Data as of June 30, 2023.

Robust USD IG Issuance in 1H 2023

USD IG issuance volumes of $721 bn in the 1H 2023 are nearly 60% toward full year forecasts, and on track for one of the strongest issuance years on record. M&A accounted for ~15% of 1H issuance, above the 5 year average of 11%.

USD IG issuance and forecasts

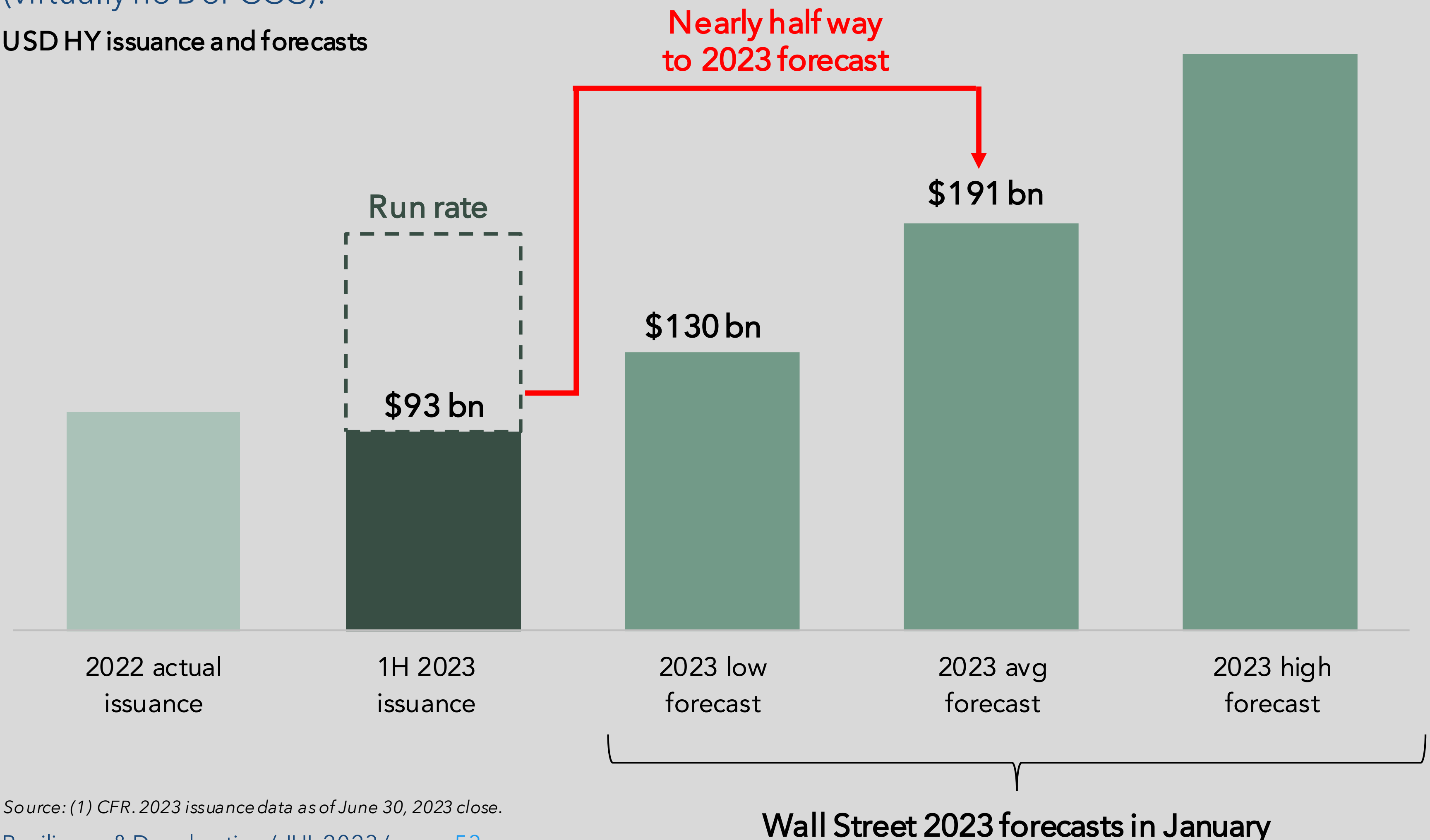


Source: (1) CFR. 2023 issuance data as of June 30, 2023 close.

USD HY Issuance Rebounds from 2022 Lows

Up 37% Y/Y, USD HY issuance volumes of $93bn in the 1H 2023 are on track to meet full year projections and nearly as high as the entire year of HY issuance in 2022. HY Investors have become more selective, with nearly all of 1H 2023 HY issuance from the BB rating category (virtually no B or CCC).

USD HY issuance and forecasts



Source: (1) CFR. 2023 issuance data as of June 30, 2023 close.

2H 2023 Market Outlook

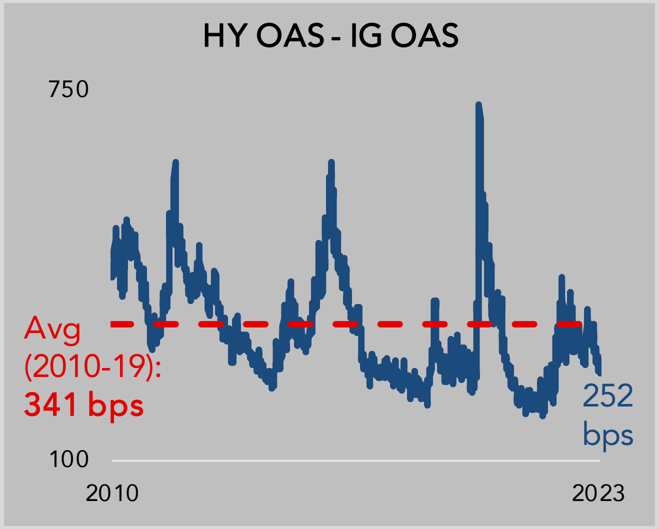
9

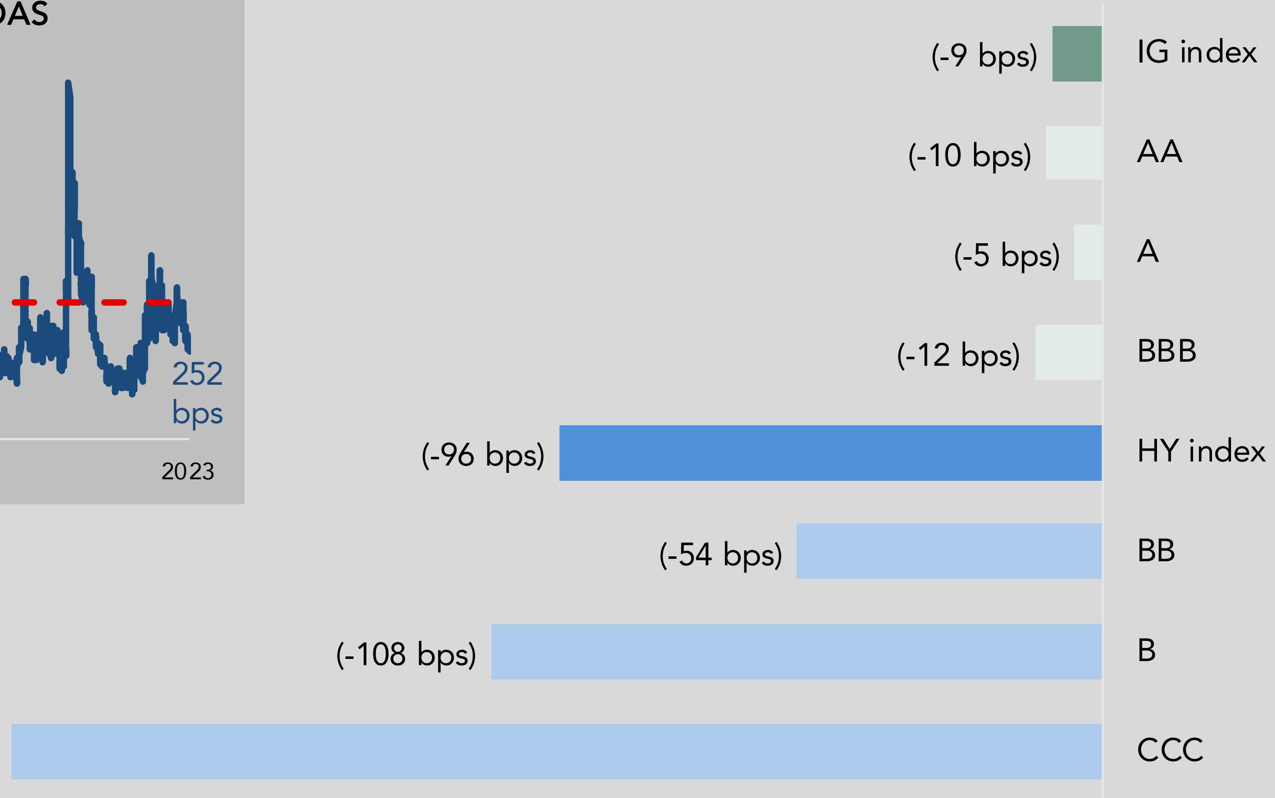
Late Cycle Dynamics for Credit Markets

USD Credit Spreads Not Pricing Recession

IG and HY spreads are not pricing in near term recession or an imminent spike in credit default risk. Despite higher volatility since mid-2022, credit spreads tightened across the rating spectrum in 2023. The tightening in the lower rated CCC market has been particularly pronounced.

Change in spreads (YTD 2023)

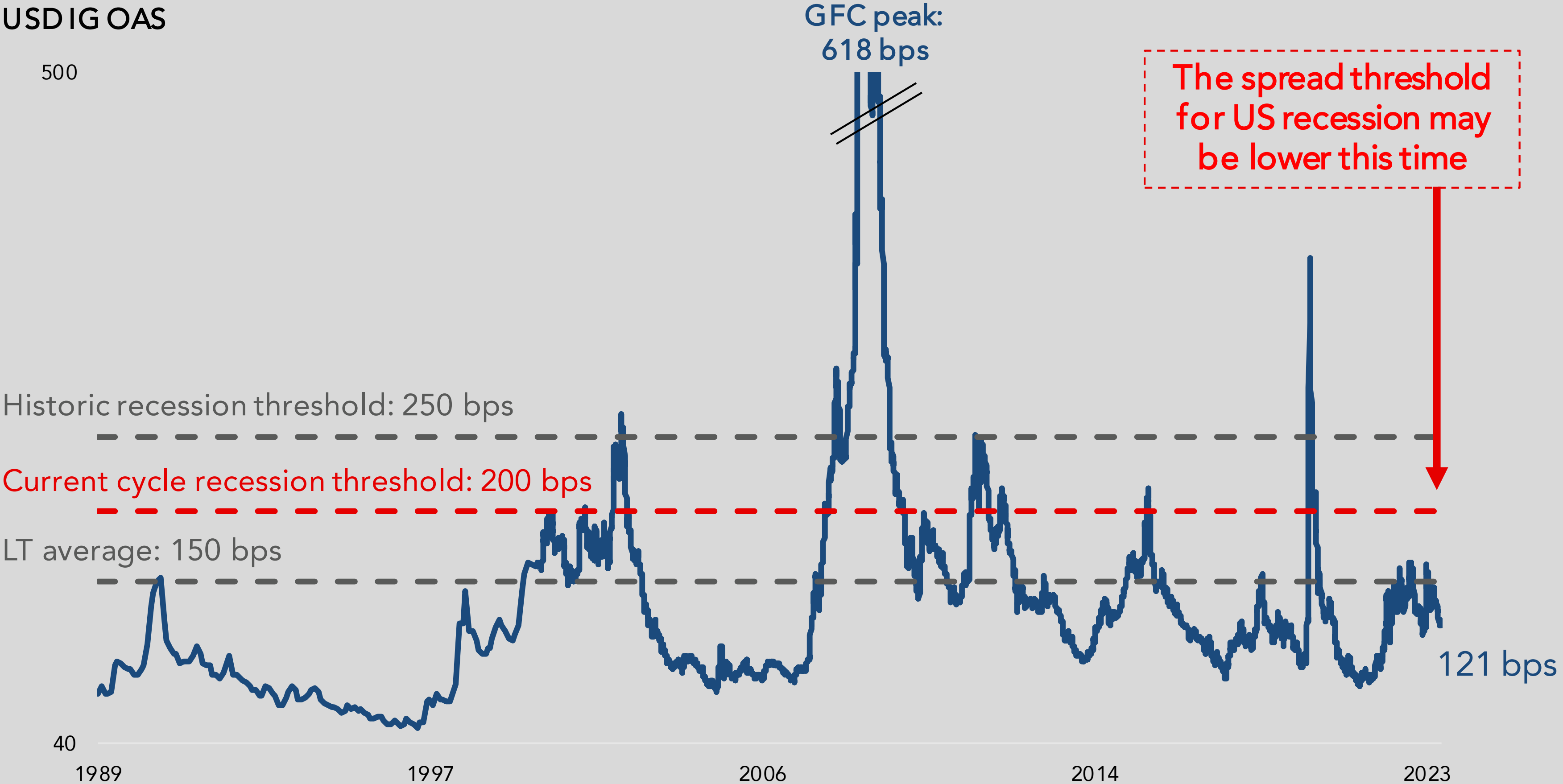




Source: (1-2) Bloomberg. Data as of July 25, 2023.

IG Credit Spreads Below LT Average

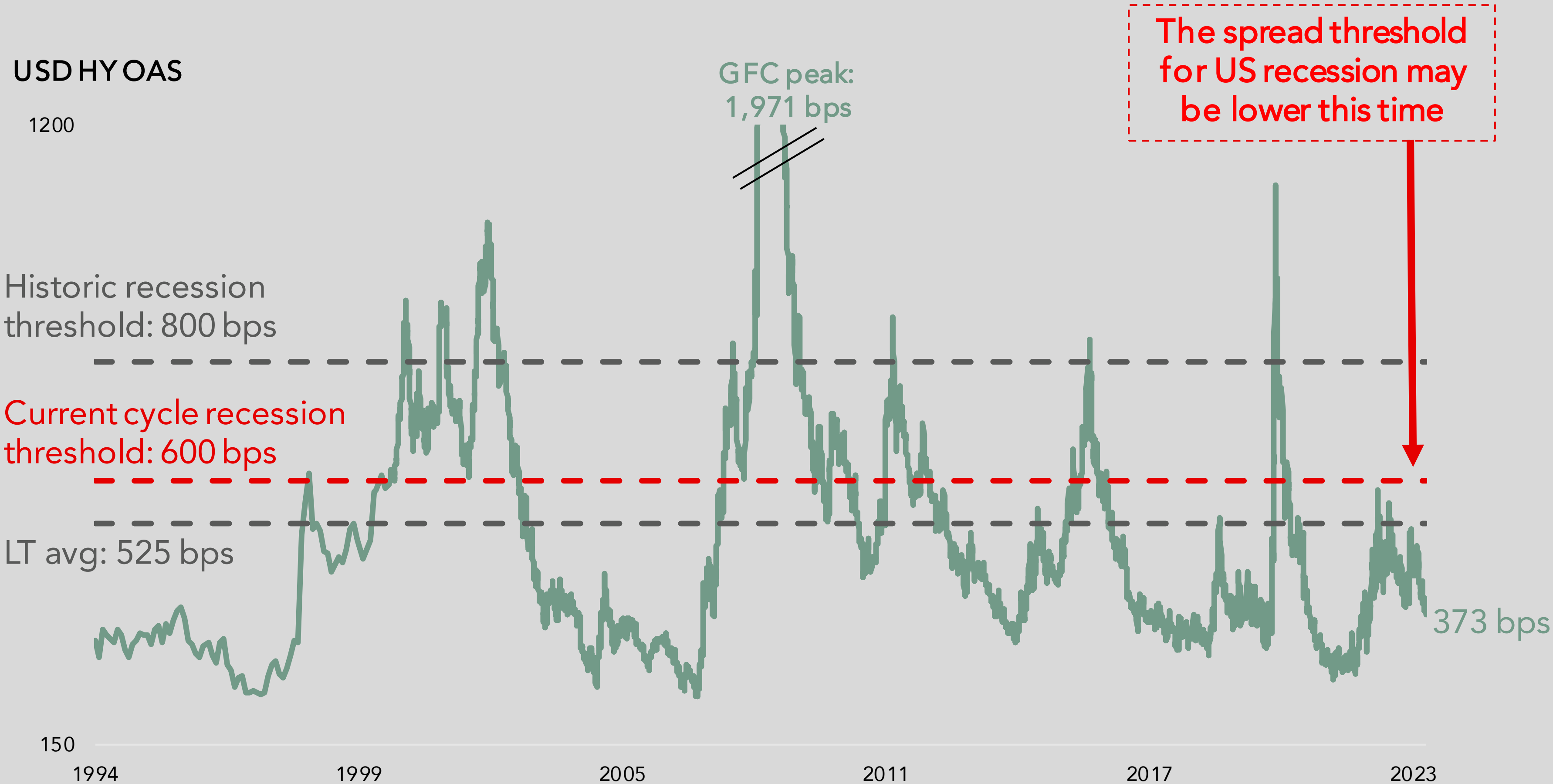
Based on data going back more than three decades, IG & HY credit spreads are trading below their long-term averages and well below recession threshold levels. While IG spreads historically widen above 250 bps during US recessions, the strength of corporate balance sheets and a potentially "mild" recession suggest that 200 bps may be the more likely threshold for the next US recession.



Source: (1) Bloomberg. Data as of July 25, 2023.

HY Credit Spreads Also Below LT Average

HY spreads traded remarkably tight in the 1H 2023 despite bank sector stress and Fed tightening. While HY spreads historically widen above 800 bps during US recessions, the strength of corporate balance sheets and a potentially "mild" recession suggest that 600 bps may be the more likely threshold for the next US recession.

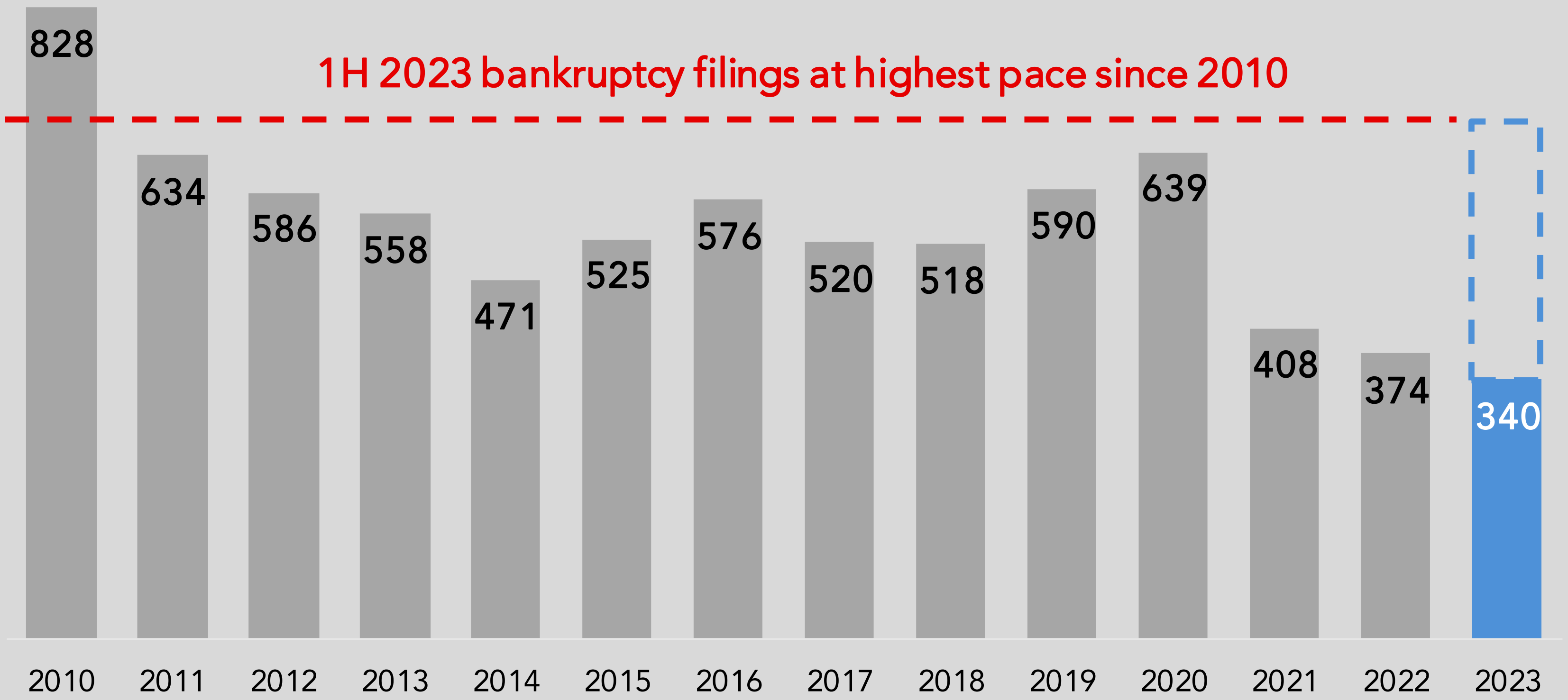


Source: (1) Bloomberg. Data as of July 25, 2023.

US Bankruptcies Rising

Currently tighter than historical averages, corporate credit spreads are not reflective of pressures in the real economy (weakening demand, higher inflation, higher borrowing costs), as evidenced by a surge in US bankruptcies in 1H 2023 to the highest levels since 2010. Consumer companies have accounted for 25% of filings, followed by healthcare (15%) and financials (11%).

US bankruptcy filings by year

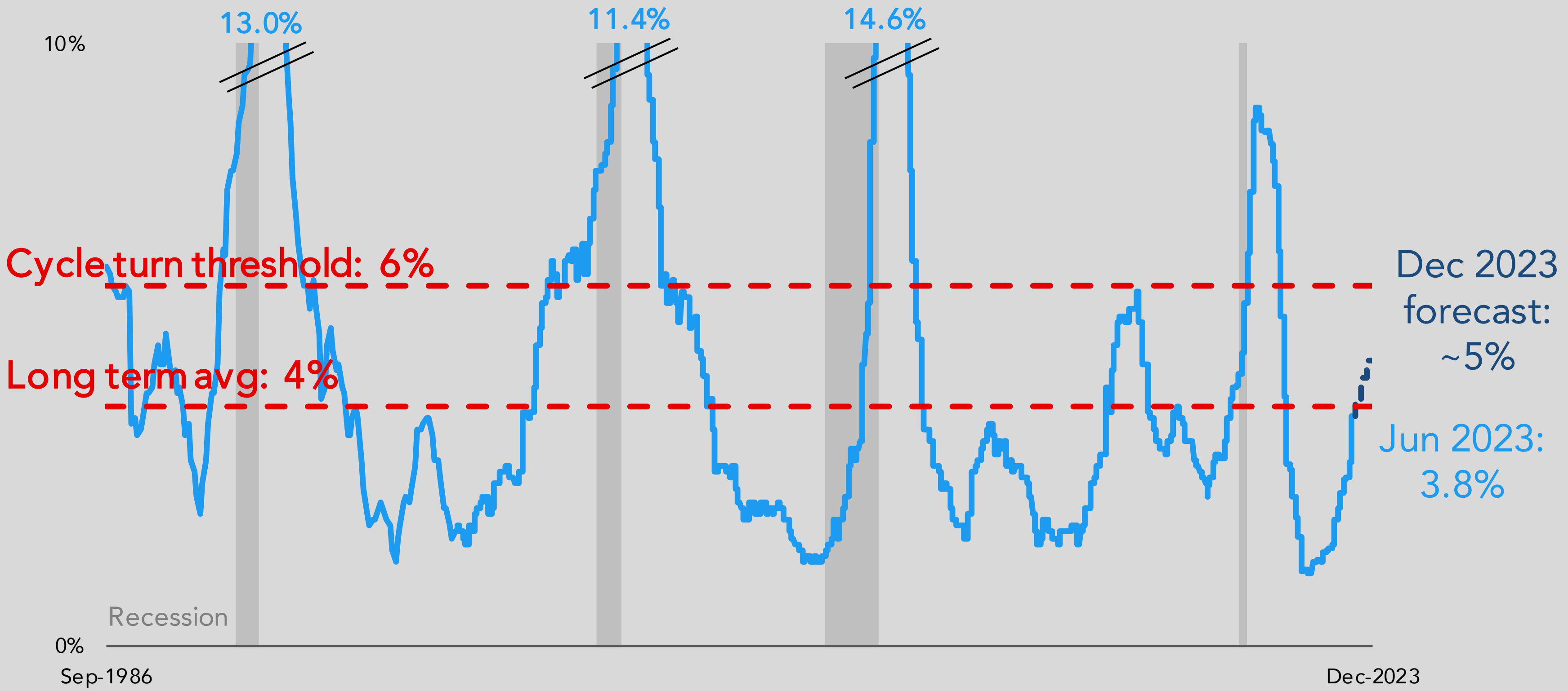


Source: (1) S&P Global Market Intelligence – covered US companies that announced bankruptcies between January 2010 and June 30, 2023.

The Credit Default Cycle Has Begun to Turn

After reaching historically low levels in early 2022, default rates have begun to move higher. Over the last 12 months, 20 USD HY Issuers defaulted on $34bn of bonds. As default rates typically "lag" the economic cycle, default rates may not peak until late 2024 or early 2025. Consumer facing businesses, many of which are rated CCC, are notably vulnerable with close to 30% of the sector on negative outlook or Credit Watch negative.

US speculative grade default rate
(includes HY & lev loans)

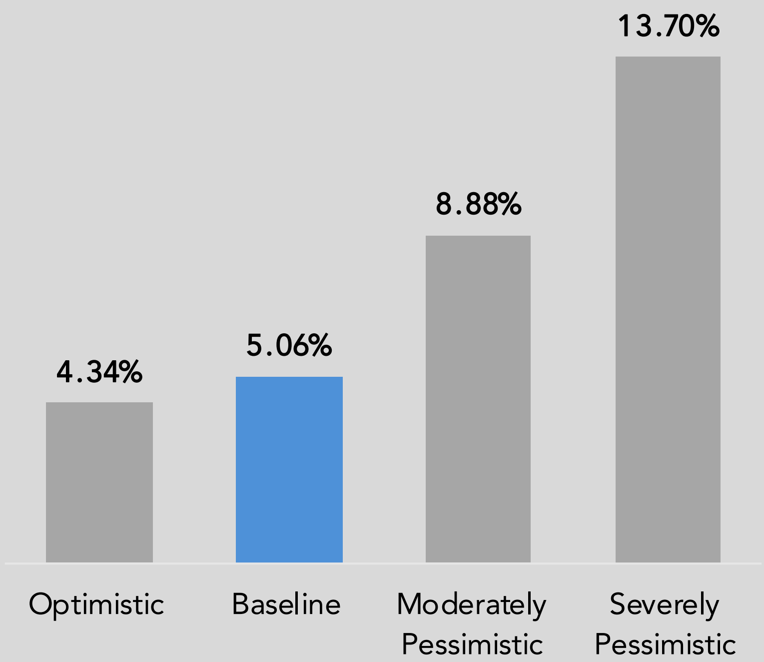


Source: (1) Moody's, "Default Trends – Global June 2023 Default Report." Default rate is trailing 12 months US speculative grade default rate.

Peak Defaults May Be Lower This Cycle

For the market in aggregate, we expect lower peak defaults in the current cycle given the strength of post COVID balance sheets following several years of high profits, significant pre-funding and prevalence of covenant-lite bonds. Vulnerable sectors will include those with unsustainable capital structures, high leverage, exposure to floating rate debt, less recession proof sectors and capital intensive businesses with greater competition and margin pressure. Private debt markets with stricter covenant regimes are likely to experience higher default rates.

Moody's speculative grade peak default rate forecast scenarios



Drivers of Lower Peak Defaults in Current Cycle

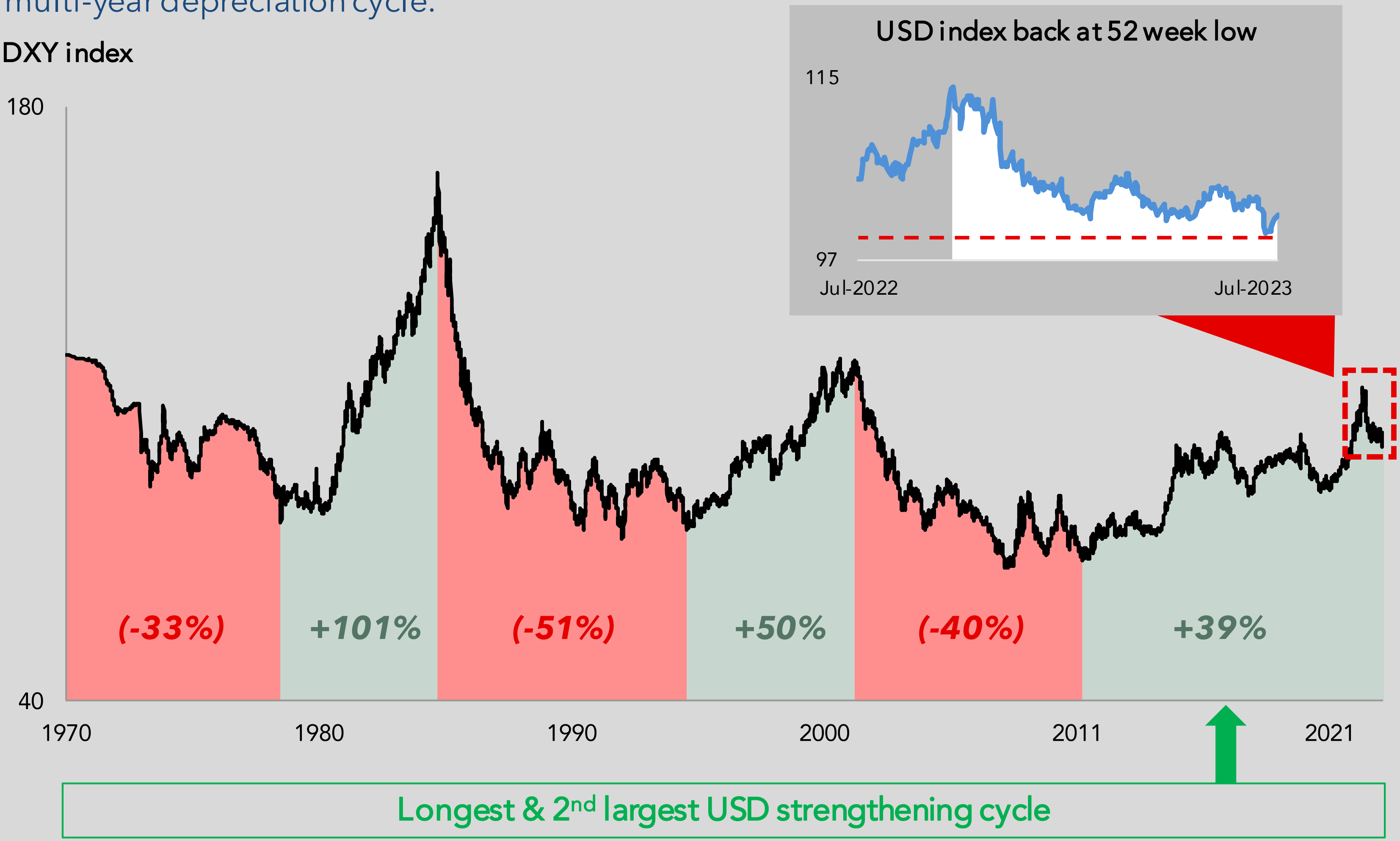
- Potentially mild recession
- Prevalence of covenant-light (fewer triggers)
- Low 2023-24 maturity walls
- Significant pre-funding
- High cash balances, strong interest coverage ratios
- Strong, well capitalized banking system

Source: (1) Moody, "Default Trends Global Report – June 2023." Peak default rate for Baseline is March 2024, optimistic scenario is January 2024, Pessimistic scenarios is June 2024.

Structurally Bearish, Tactically Neutral, the US Dollar

US Dollar Poised for Multi-Year Depreciation

Following the longest and 2nd largest USD strengthening cycle in the post Bretton Woods era, and with the Fed approaching the end of its tightening cycle, the US Dollar is poised to embark on a multi-year depreciation cycle.



Source: (1-2) MUFG Foreign Exchange Outlook. (Derek Halpenny). Bloomberg. Data as of July 25, 2023.

Structurally Bearish US Dollar, Tactically Neutral

Following the 2nd longest US dollar strengthening cycle over the last 50 years, the US dollar is poised for a structural shift lower. However, a Fed pause may not be enough for a sustained dollar downcycle. For one, at least some portion of dollar weakness in recent months has been a function of the unwind in its safe haven risk premium and tailwinds in Europe from lower energy prices. Secondly, peak inversion of the US yield curve has historically been accompanied by a range-bound dollar more so than sustained dollar weakness. Derek Halpenny, MUFG's Global Head of Research, highlights numerous compelling reasons for dollar depreciation at this stage of the cycle.

8 Reasons for USD Depreciation

Interest rate differentials
(Fed closer to end of hiking cycle)

De-dollarization forces
(Slow & gradual pivot toward multi-currency settlement)

Relative macro
(US closer to recession)

Relative equity market outperformance
(US equities more fully-valued; EM equities more undervalued)

Unwind of energy shock
(Energy deficit currencies poised to recover)

Cyclical nature of US dollar
(Consolidation after 2nd longest and largest US dollar appreciation)

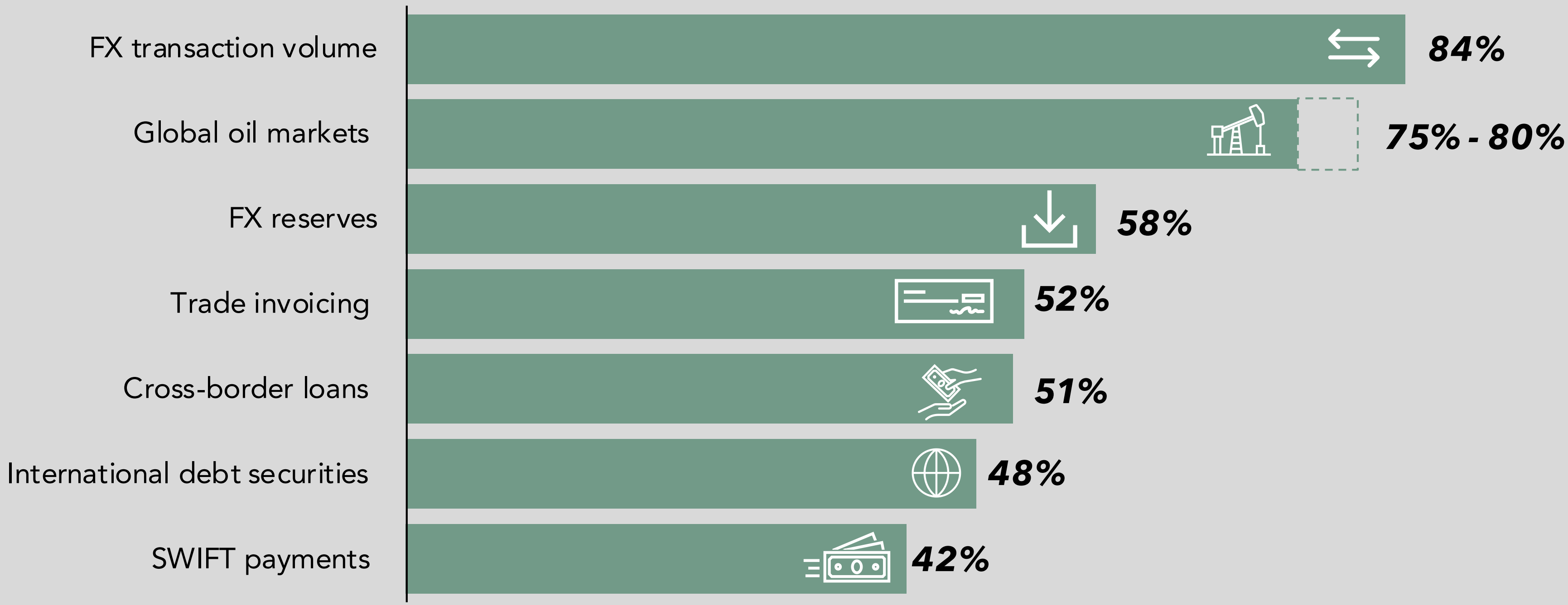
BOJ policy pivot
(YCC policy unwind, rise in Japanese inflation expectations)

Relative value of the US dollar
(USD most overvalued among G10 FX)

Dollar Dominance, More Multi-currency Settlement

More than 50 years after President Nixon closed the door on Bretton Woods, the US dollar continues to play a dominant role in the global financial system. In the absence of sufficient alternatives, we expect the primary tenets of this system to continue. However, due to unsustainable imbalances and accelerating geopolitical shifts (US-Russia-China-Saudi), we expect a continued increase in multicurrency settlement across numerous global trading and financial markets in the years ahead. Wholesale replacement of dollar dominance by another currency? Highly unlikely. Increased financial fragmentation in the years ahead? Yes.

USD share of global markets



Source: (1) BIS, "The Global Foreign Exchange Market in a Higher-Volatility Environment" (December 2022). G Gopinath, "The international price system", NBER Working Papers, no 2164, 2015; IMF; Bloomberg; CPB World Trade Monitor; SWIFT; BIS debt securities statistics; BIS locational banking statistics; BIS Triennial Central Bank Survey. Foreign Affairs ("Great Powers Don't Default: The Dangers of Debt Ceiling Brinkmanship" by Matt Pottinger and Daleep Singh)

Appendix: MUFG Global Markets Forecasts

MUFG Global Rates Forecasts

	Spot (Jul 26)	Q3 2023		Q4 2023		Q1 2024		Q2 2024		Q3 2024	
		MUFG	Consensus	MUFG	Consensus	MUFG	Consensus	MUFG	Consensus	MUFG	Consensus
Fed Funds	5.50%	5.50%	5.50%	5.25%	5.50%	4.75%	5.25%	4.00%	4.80%	3.50%	4.35%
2 yr UST	4.90	5.00%	4.65%	4.25%	4.41%	3.50%	4.07%	3.38%	3.80%	3.13%	3.58%
5 yr UST	4.16	4.38%	4.01%	3.88%	3.86%	3.63%	3.71%	3.50%	3.57%	3.38%	3.47%
10 yr UST	3.90	**4.13%**	**3.75%**	**3.75%**	**3.64%**	**3.63%**	**3.54%**	**3.50%**	**3.48%**	**3.38%**	**3.45%**
30 yr UST	3.94	4.00%	3.91%	3.63%	3.84%	3.50%	3.78%	3.50%	3.73%	3.38%	3.73%

Source: (1) MUFG Global Macro Research (George Goncalves). Bloomberg. Data as of July 26, 2023. Fed funds is upper bound.

MUFG Global FX Forecasts

Currency pair	Spot (Jul 25)	Q3 2023	Q4 2023	Q1 2024	Q2 2024
EUR / USD	**1.11**	**1.10**	**1.12**	**1.13**	**1.10**
GBP / USD	**1.29**	**1.27**	**1.27**	**1.27**	**1.23**
USD / JPY	**141**	**136**	**134**	**132**	**130**
USD / CNY	7.14	7.00	6.80	6.70	6.60
AUD / USD	0.68	0.66	0.68	0.67	0.65
NZD / USD	0.62	0.61	0.62	0.61	0.59
USD / CAD	1.32	1.31	1.32	1.34	1.35
USD / NOK	10.10	10.82	10.45	10.09	10.09
USD / SEK	10.37	10.82	10.45	10.18	10.27
USD / CHF	0.86	0.89	0.88	0.89	0.91
USD / MXN	16.93	17.20	17.30	17.40	17.50
USD / BRL	4.75	5.08	5.20	5.22	5.25

Source: (1) MUFG FX July Monthly (Derek Halpenny). Bloomberg. Data as of July 25, 2023.

MUFG Commodities Forecasts

	Spot (Jul 25)	Q3 2023		Q4 2023		Q1 2024		Q2 2024	
		MUFG	Consensus	MUFG	Consensus	MUFG	Consensus	MUFG	Consensus
WTI	**$80**	$76	$75	$79	$78	$78	$78	$77	$80
Brent	**$83**	$80	$80	$84	$83	$83	$85	$81	$84
US Nat Gas	**$2.73**	$2.90	$2.83	$3.10	$3.33	$3.40	$3.50	$3.60	$3.48
Euro Nat Gas	**€33**	€88	N/A	€74	N/A	€52	N/A	€78	N/A

Source: (1) MUFG Commodities Research (Ehsan Khoman). Bloomberg. Data as of July 25, 2023.

About the Authors

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Role

Tom Joyce is a Managing Director and Capital Markets Strategist within MUFG's global capital markets and investment banking business. Based in New York, Tom heads a team that creates customized analytical content for multi-national S&P 500 companies. His team provides in depth analysis on the impact of economic, political, public policy and regulatory dynamics on the US credit, foreign exchange, rates and commodities markets.

Experience

Tom has over 25 years of Investment Banking experience in New York, London, Hong Kong, and San Francisco. Over the last 15 years, Tom created and built the Capital Markets Strategy role, advising corporate C-Suite executives (Boards, CEOs, CFOs, and Treasurers) on the pervasive macro forces driving markets. Tom also presents at dozens of corporate events each year including Board meetings, CEO ExCo sessions, CFO and Treasury off-sites, corporate leadership events and conferences.

Education

Tom's educational background includes a year of study at Oxford University from 1991 - 1992, a Bachelor of Arts in Political Science from Holy Cross College in 1993, and a MBA from Kellogg Business School, Northwestern University in 2000.

Personal

Tom resides in New Canaan, CT with his wife and four sons, where he serves on the Board of Trustees of the New Canaan Library as well as the Holy Cross College President's Council.

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Experience

Hailey has a decade of Wall Street experience, including three years as a Consumer Sector Specialist in Equity Sales and seven years as a Capital Markets Strategist. Hailey is also a member of MUFG's Inclusion & Diversity Council and has devoted years to participating in and developing Wall Street recruiting programs.

Education

Hailey graduated with honors from the University of Michigan's Ross School of Business with a BBA and a minor in International Studies.

Personal

In March 2020, Crain's New York Business Magazine named Hailey one of the "Rising Stars in Banking and Finance".

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Role

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Experience

Stephanie has spent over five years as a Capital Markets Strategist. She is an active member of the University of Michigan recruiting team and is focused on the diversity recruiting effort at MUFG. Stephanie is also a part of MUFG's DEI, Culture & Philanthropy (DCP) Council.

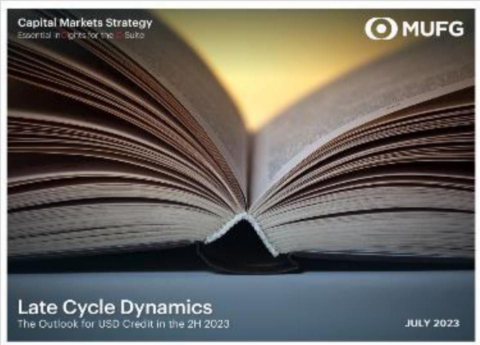
Education

Stephanie graduated with honors from the University of Michigan's Ross School of Business with a BBA .

Personal

Stephanie is actively involved in NYC's iMentor program, mentoring high school students with their journey to college graduation.

MUFG's Capital Markets Strategy Team



MUFG's Capital Markets Strategy Team

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