Capital Markets Strategy

Essential in Cights for the C-Suite





As the World Turns

The "New Narrative" Driving Markets in the 2H 2024

"What, then, consoles us in this human society full of calamities, but the unfeigned faith and mutual love of true and good friends?"

St. Augustine of Hippo, Theologian and Philosopher in his acclaimed book "The City of God" (426 AD)

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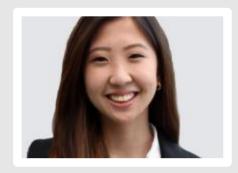
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"A semblance of objectivity might be achieved, no doubt, by way of a complete self-awareness at the time of observation."

Joseph Brodsky, Russian-American poet and recipient of the Nobel Prize for Literature in 1987

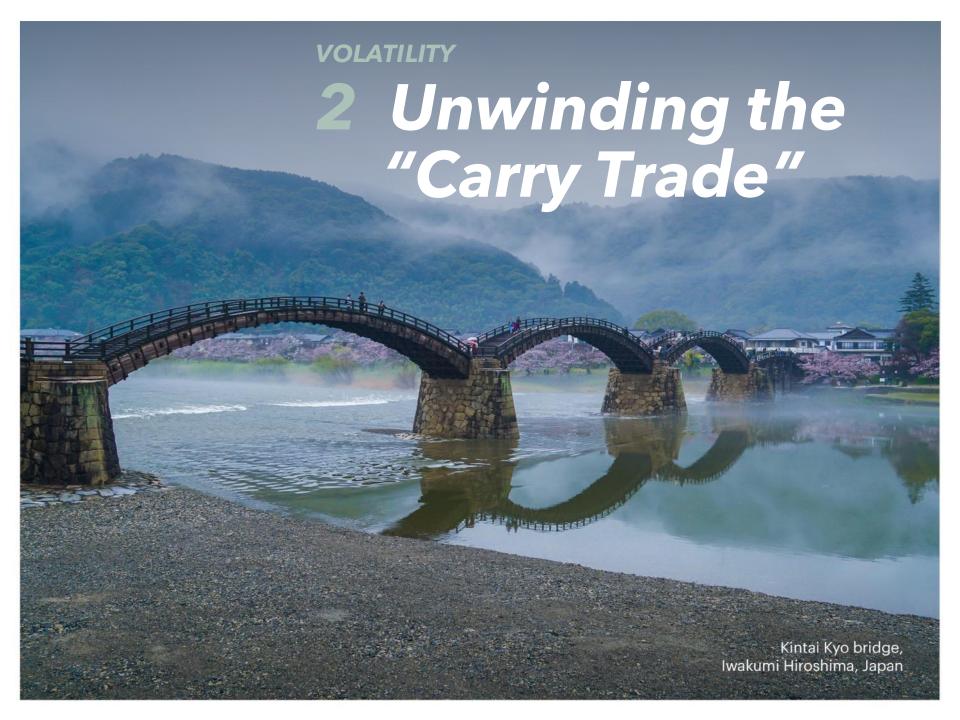
Prevailing Market Narrative Became Untenable

As compared to the prior eight months (since late October 2023), a "new narrative" is driving markets in the 2H 2024. Though there are elements of continuity (i.e., resilient debt financing markets), we expect volatility to be episodically higher going into year-end.

	PRIOR Narrative (1H 2024)	<i>NEW</i> Narrative (2H 2024)
US Election	Early election cycle	Late election cycle
	Biden vs. Trump	Harris vs. Trump
Geopolitical risk (Middle East, Russia)	Complex but contained	More complicated
		Higher risk
US Economy	Above trend growth (> 2%)	Below trend growth (< 2%)
	US "exceptionalism"	Higher "hard landing" risk
Fed Policy	Hawkish re-pricing	Dovish re-pricing
UST Rates	Peak 2024 yields in April (higher for longer)	Rates rally lower (curve dis-inversion)

Prevailing Market Narrative Became Untenable

	PRIOR Narrative (1H 2024)	<i>NEW</i> Narrative (2H 2024)
US Dollar	Strengthening	Weakening
BoJ Policy	Dovish tightening	More hawkish pivot than anticipated
Multi-decade JPY "Carry Trade"	Intact	Unwinding
	Massive global positioning	Forced de-leveraging of many risk positions
Al Optimism	"Magnificent 7" euphoria	Softness in big tech Al earnings
Commodity Prices	Range-bound	Softening on global demand concerns



"I can resist anything but temptation."

Oscar Wilde, Irish poet and playwright (1854 - 1900)

BoJ Policy Normalization (G20 Outlier)

The Fed is likely to participate in the synchronized 2024 G-20 policy easing in September. For markets, however, the concurrent dovish Fed repricing and hawkish BoJ repricing in July-August has precipitated an unwinding of the massive and multi-decade yen "carry trade."

Monetary policy expectations for G20 economies in 2024



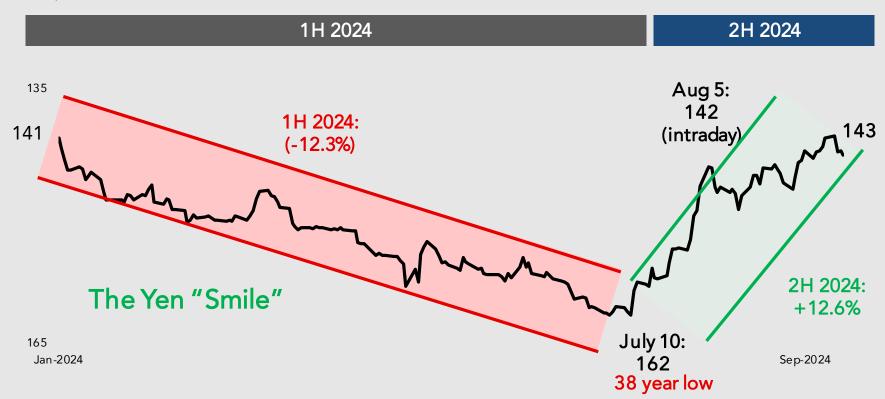
- 2024 policy easing expected
- 2024 policy tightening expected

Most Important Currency Pair into Year-End



USD / Yen may be the most important global currency pair to track into year-end. Following three years as the weakest performing G10 currency, reaching a 38 year low in July, the Yen has led G10 currencies with over 12% appreciation vs. USD since its July 10th low. Abrupt Yen appreciation has typically accompanied global financial instability in the past, as happened during the acute volatility of August 5th. MUFG's Derek Halpenny notes that the 20 point drop in USD/Yen over the 18 trading days into Aug 5 was the largest since October 2008.

USD/JPY in 2024



Source: (1) Bloomberg. Data as of September 19, 2024. Axis inverted to show Yen performance vs. USD. Percent change is yen de preciation / appreciation vs. the USD.

\$1 Trillion Yen Carry Trade

The Bank for International Settlements (BIS) cross-border lending data indicates demand for Yen carry reached levels not seen since before the GFC. Some analysts have suggested that the size of the carry trade built since 2011 reached as high as \$1 tn in late July, with roughly half of that increase extended over the last three post-COVID years given Fed-BOJ policy rate differentials and low FX volatility.

Amount outstanding of liabilities denominated in JPY, USD tn

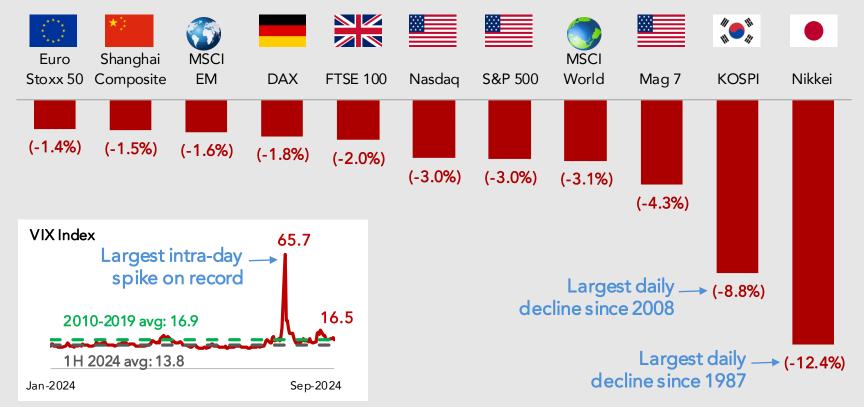


Source: (1) Bloomberg. Data through Q3 2023. MUFG (Derek Halpenny).

Volatility on Monday August 5th

Following the concurrent repricing of BOJ (more hawkish) and Fed (more dovish) policy expectations in early August, an unwind of the multi-decade Yen carry trade precipitated a surge in Japanese financial market volatility, and a once-in-a-generation selloff in Japanese equities. The sheer speed of the unwind, with the most speculative positions now closed, exposed the magnitude of global financial market leverage that had become highly correlated in a one-way trade over prior years.

Global equity market performance on August 5th

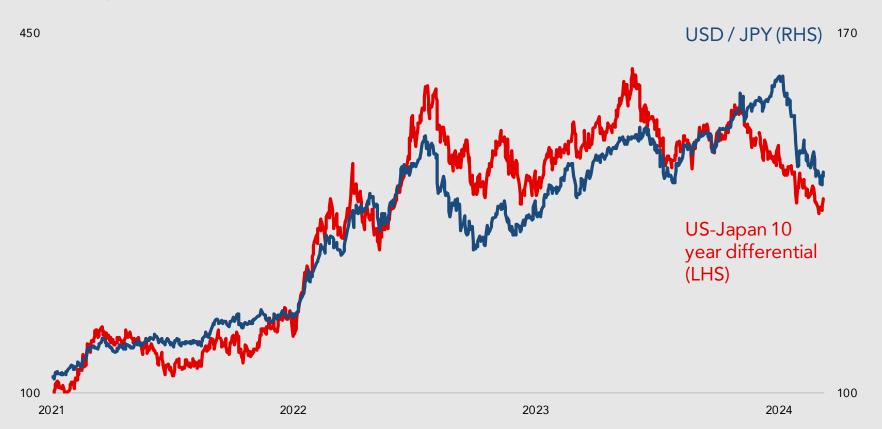


Source: (1-2) Bloomberg. Data as of September 19, 2024.

Carry Trade Unwind Has Further To Go

USD/Yen has been notably correlated to rate differentials since the Fed tightening cycle began in 2021. While the most speculative Yen carry trade positions have been closed following the August 5th volatility, the low visibility economy and policy environment, and continued Yen undervaluation, suggest the carry trade unwind has further to go.

US-Japan 10 year differential and USD / JPY



Source: (1) Bloomberg. Data as of September 19, 2024. As the World Turns / SEP 2024 / page 15



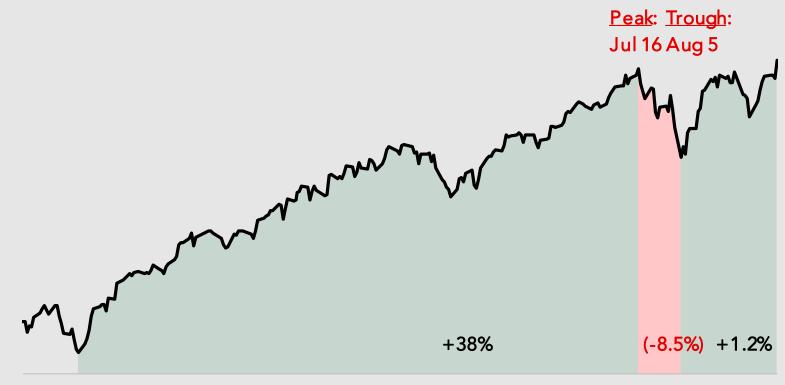
"Rage and frenzy will pull down more in half an hour, than prudence, deliberation and foresight can build up in a hundred years."

Edmund Burke, 18th Century British Parliamentarian in his work "Reflections on the Revolution in France (1790)"

Modest Equity Market Correction Following Historic Rally

Since October, when it became more clear that the Fed tightening cycle was complete, the S&P 500 rallied nearly 40% through the peak of mid-July, setting 36 new record highs over the period. Since its July peak, the S&P 500 declined close to correction territory (-8.5%). The 3% sell-off on August 5th was the largest in two years. While stocks may face a bumpy path into the election and year-end, robust balance sheets and corporate earnings should put a floor on the selling pressure and volatility.

S&P 500

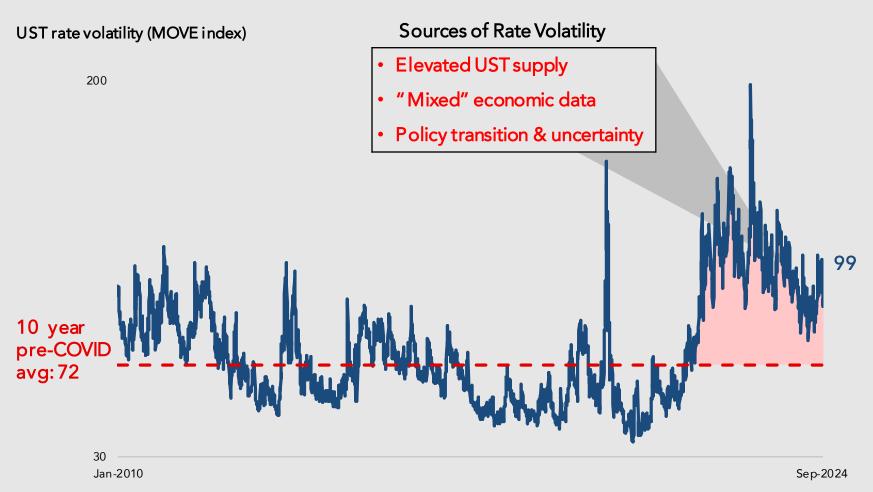


Oct-2023 Sep-2024

Source: (1) Bloomberg. Data as of September 19, 2024.

Volatility Typically Elevated During Policy Transition

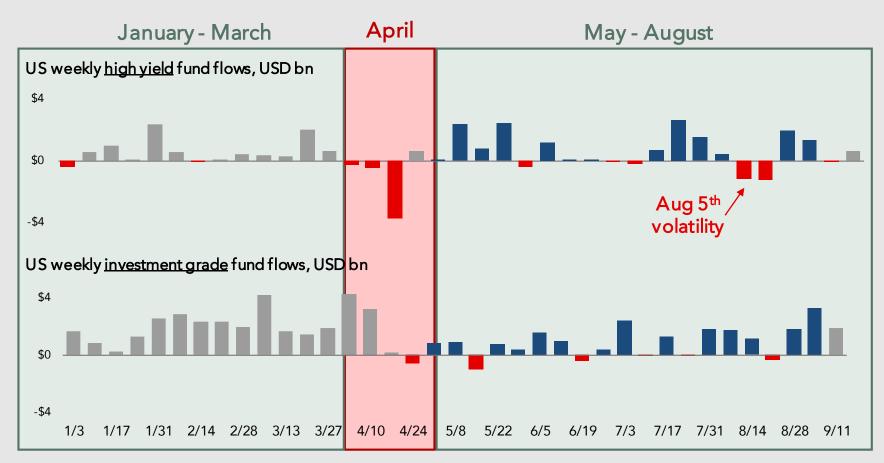
US rate volatility has been elevated for most of the Fed's tightening cycle. Today, a resilient US economy and "sticky" inflation are driving a repricing of market expectations for the Fed and creating higher volatility across the curve.



Source: (1) Bloomberg. Data as of September 19, 2024.

Resurgent USD Bond Flows in 2024

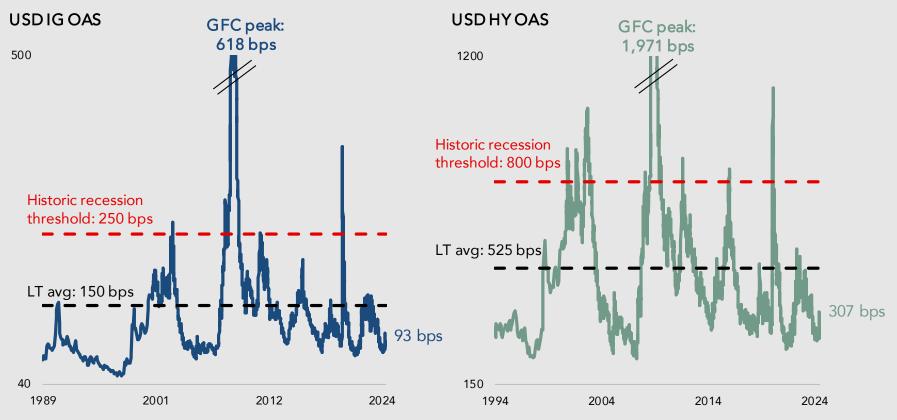
With the exception of the more pronounced period of rate volatility in April, USD IG and HY bond flows have been quite strong in 2024. Fueled by resilient economic fundamentals and a Fed policy transition underway, investors increased allocations to strong, yield-producing corporate balance sheets globally.



Source: (1) IFR. Data through September 12, 2024.

Credit Spreads at Multi-Decade Tights

Despite the uncertainty of policy transition and elevated geopolitical risk, IG and HY spreads have tightened to levels well below both long-term averages and historic recession thresholds. As the economy downshifts, look for HY spreads to experience more idiosyncratic and industry-specific dispersion.

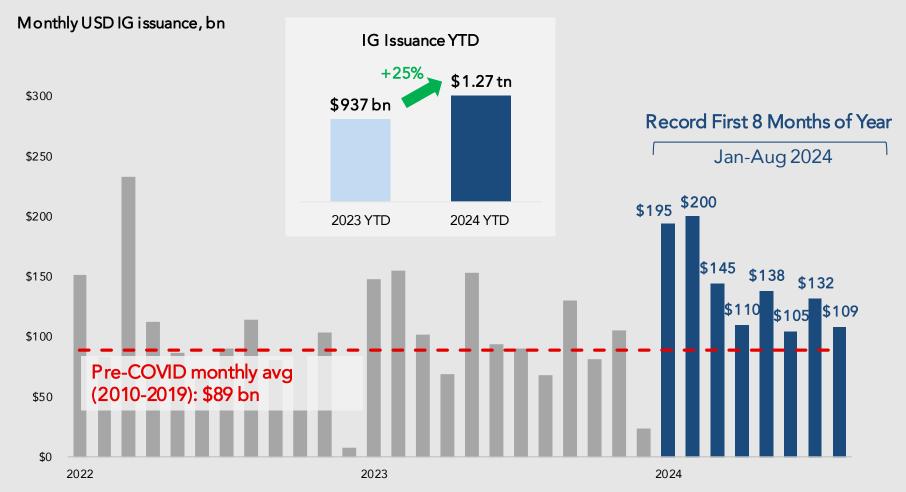


IG credit spreads remain firmly supported by both market technicals and fundamentals.

Source: (1-2) Bloomberg. Data as of September 19, 2024.

8 Sequential Months of IG Issuance > \$100 Bn

For the first time in history, USD IG issuance has exceeded \$100 bn in every month of 2024 to date (January - August). Year-to-date issuance, now at \$1.27 trillion, surpassed the \$1 trillion threshold on July 24th (in just 206 days), and is on track to exceed full year 2024 forecasts of ~\$1.4 trillion.

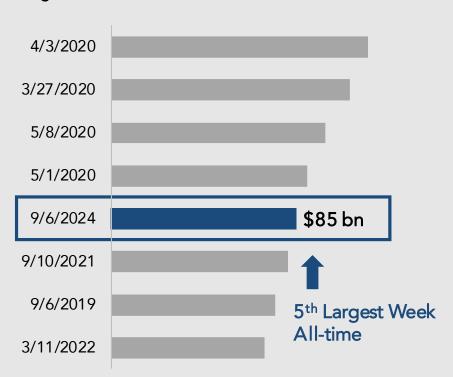


Source: (1-2) CFR. Data as of September 19, 2024. Monthly issuance is through August 31, 2024. Annual issuance is YTD through September 18, 2024.

Historic Post-Labor Day IG Issuance

Against a more complex geopolitical, economic and policy environment, USD IG bond issuance continued its torrid pace in early September amidst a favorable fundamental and technical backdrop (positive credit market returns, lower rates, tighter YTD spreads, leverage below historic averages and declining default rates). With record issuance in the first 48 hours following Labor Day, a record 61 issuers tapped the USD IG markets in the holiday shortened week, with total deal volume activity recording the 5th largest week on record.

Largest deal volume USD IG weeks all time, bn



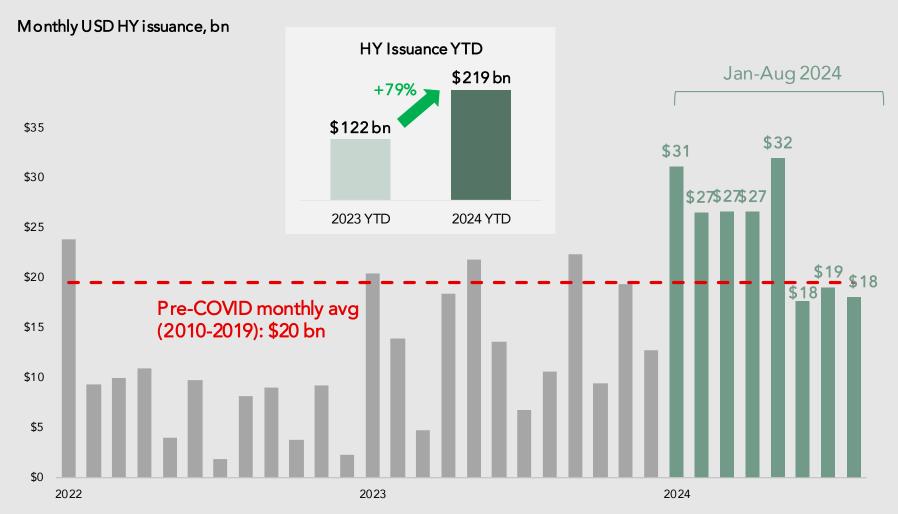
Largest deal count USD IG weeks all time, # of issuers



Source: (1-2) CFR. Data as of September 6, 2024.

2024 USD HY Issuance Well Above Historical Pace

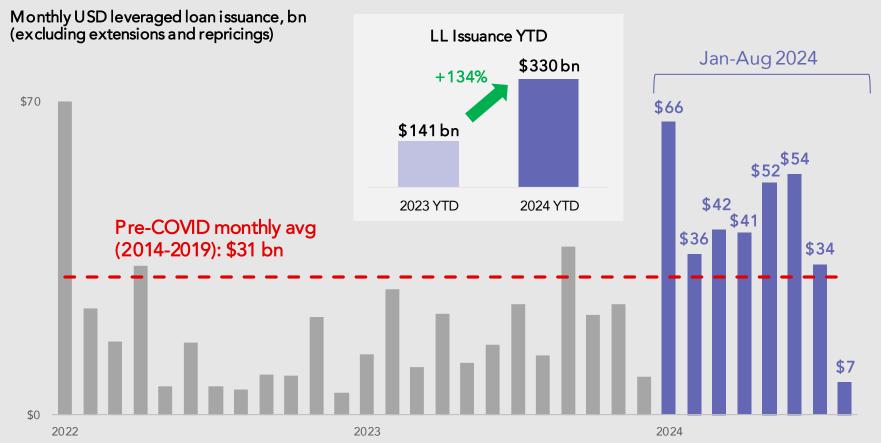
Just eight months into the year, 2024 USD HY issuance has surpassed 2023's full year issuance volume. Year-to-date issuance of \$219 bn is just \$6 bn short of MUFG's estimate for full year issuance.



Source: (1-2) CFR. Data as of September 18, 2024. Monthly issuance is through August 31, 2024. Annual issuance is YTD as of September 18, 2024.

2024 Robust USD Leveraged Loan Issuance

Leveraged loan issuance (excluding extensions and repricings) has outpaced its pre-COVID average in every month of 2024 driving year-to-date new issuance to \$330 bn, just \$20 bn short of CreditSights' full-year forecast of \$350 bn. In addition to robust net new issuance, opportunistic refinancing activity has also driven total issuance volume higher this year, accounting for roughly 56% of year-to-date activity.



Source: (1) Pitchbook. Data through August 29, 2024. Leveraged loan issuance repricings, refinancings, extensions, and non-refinancing issuance. Extensions and repricings reflect deals done via an amendment process.

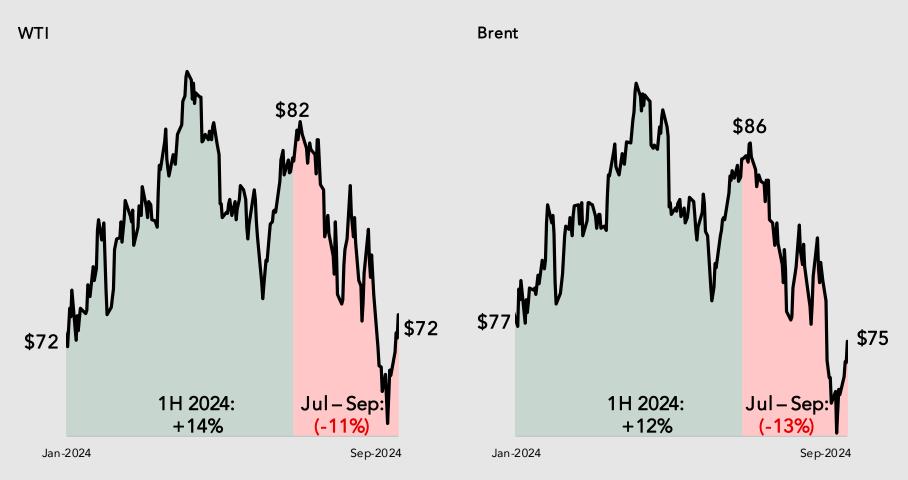


"While an autocrat is in power, his demise seems inconceivable; once he has been deposed, it seems inevitable."

Leon Trotsky, Russian revolutionary, politician and political theorist (1879 - 1940)

Energy Repricing for Lower Demand Outlook

Commodities are now the worst performing asset class in 2024 after outperforming in the 1H. Even as Middle East geopolitical risk increases, fundamentals have been the more prevailing driver of prices lower in July-August (surging US supply, OPEC spare capacity, lower demand outlook).



Source: (1-2) Bloomberg. Data as of September 19, 2024.

Minimal Risk Premium in Oil Prices (For Now)



Oil markets remain the primary transmission mechanism for rising geopolitical risk to the global economy. Since late 2022, the geopolitical risk premium in global energy markets has been fairly contained, though episodically volatile. Elevated global supply (OPEC spare capacity, surging US production) and global demand concerns have kept prices range-bound even as geopolitical risk remains very high.

Brent oil prices since Dec 2021



 $Source: (1) \ Bloomberg. \ Data as of September 19, 2024.$

End of European Energy Crisis in Sight



Following a post invasion surge in EU gas prices in the summer of 2022, the rapid decline in EU nat gas prices proved critical to the performance of Europe's economy over the last two years, as well as its energy security architecture. With resurgent global investment projects underway equal to 50% of total global natural gas production, lower nat gas prices have become an important part of Europe's industrial and economic recovery. Prices have risen moderately in July-August, especially since Ukraine's recent incursion into Russian territory.

EU natural gas prices since Dec 2021

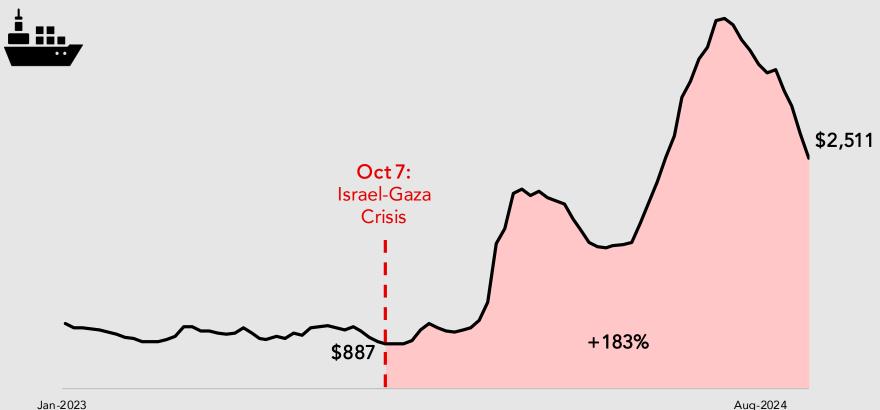


Source: (1) Bloomberg. Data as of September 19, 2024.

Container Shipping Prices Have Nearly Tripled

In recent years, numerous variables have highlighted the vulnerability of global supply chains including the pandemic, US-China tension and escalating Middle East conflict. While the Houthi rebels have not disrupted outbound Strait of Hormuz oil flows, their missiles have been highly disruptive to inbound Bab-el-Mandeb shipping routes, as evidenced by the sharp rise in Asia-to-Europe container shipping prices in recent months.

Shanghai Shipping Exchange Index, cost of moving 40ft container

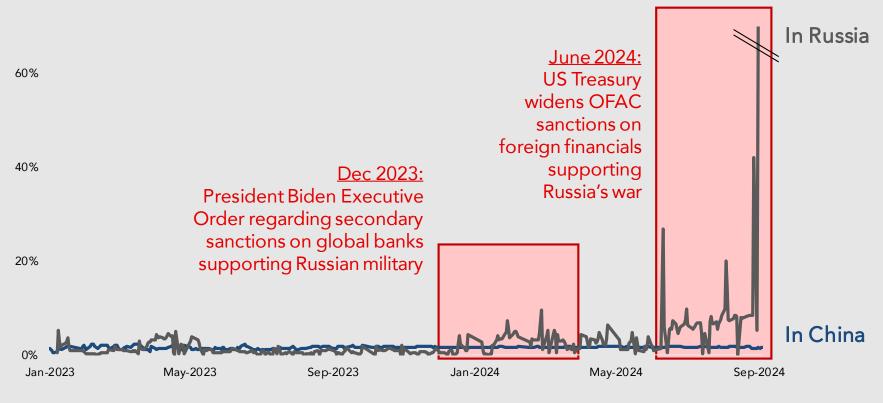


Source: (1) Bloomberg. Data as of September 19, 2024. IMF Portwatch. Apollo.

Sharply Higher Yuan Funding Costs for Russian Banks

Tighter US sanctions have constrained the flow of Yuan to Russia in 2024. Following a White House Executive Order in December 2023, and new US Treasury OFAC restrictions announced in June 2024, the US has threatened secondary sanctions on foreign financial institutions (FFIs) supporting Russia's war effort. The cost of Yuan financing for Russian entities has since surged, even as domestic Yuan lending rates remain stable. In July, as many as 98% of Chinese banks, fearing secondary sanctions from Washington, directly refused Yuan payments from Russian entities.

Overnight yuan rate



Source: (1) Bloomberg. MOEX. Data as of September 6, 2024. Russian overnight rate is Russian secured funding average rate (CNY). Chinese overnight rate is SHIBOR.



"May not political passion be a net which holds the heart distant from all that has nourished it?"

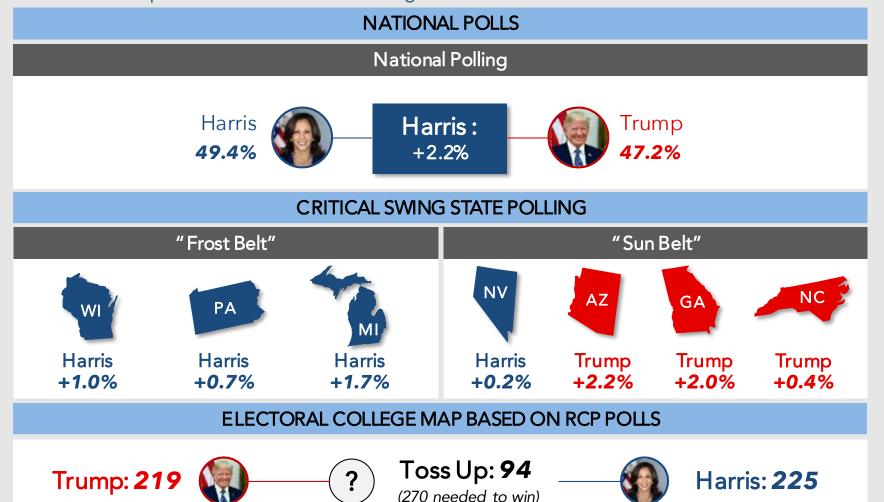
Thomas Flanagan, American author & professor in The Year of the French (1979)

Notable Dates in US Election Cycle

June 27	Trump-Biden debate
Jul 15-18	Republican National Convention
Aug 19-22	Democratic National Convention
Sep 6	Early Voting begins in North Carolina (and other key swing states in following weeks)
Sep 10	First Trump-Harris debate
Sept 17-18	Last Fed meeting before election
Oct 1	VP debate (Vance / Walz)
Nov 5	US election
Nov 6-7	First Fed meeting post-US election

2024 US Presidential Election Dashboard

With the electoral map favoring Republicans, history suggests that VP Kamala Harris may need a 3-4% lead in national polls to win the electoral college.

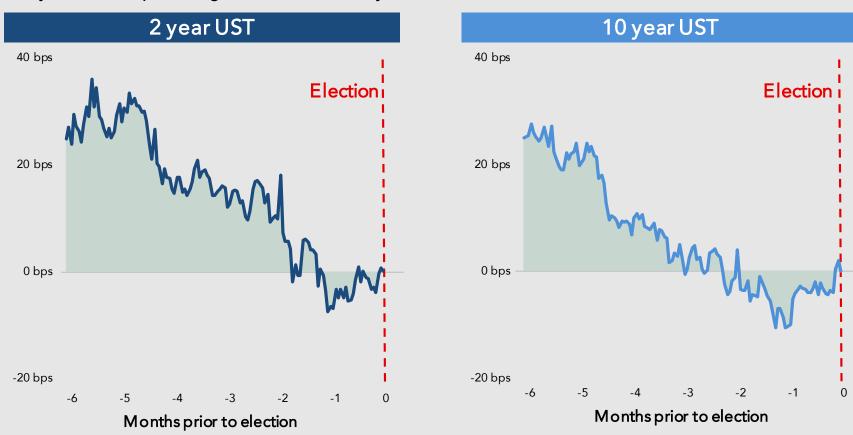


Source: (1) RealClearPolitics. Data as of September 23, 2024.

UST Yields Rally in Months Preceding Presidential Elections

The US economy, Fed policy and market structure dynamics are the primary drivers of US Treasury yields through the various stages of the economic cycle. However, looking back at US elections over the last 35 years (since 1988), 10 year UST yields have generally tightened in the six months preceding US elections as investors reduce risk until election uncertainty is resolved.

UST yield moves (bps), average a cross 9 US election years (1988 – 2020)

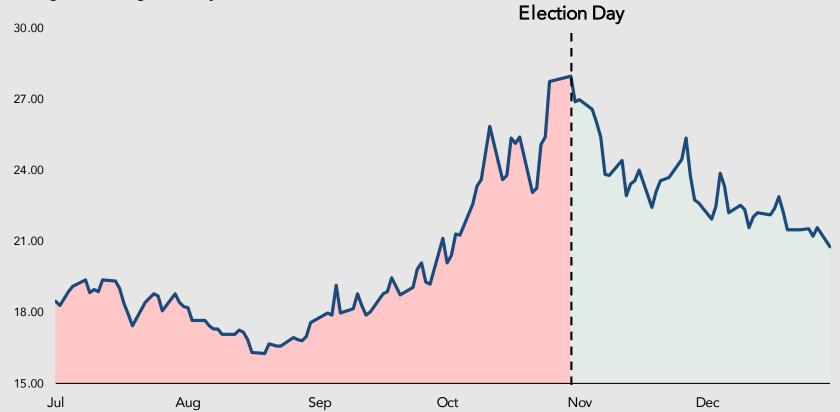


 $Source: (1-2) \, Bloomberg. \, Election \, years \, included \, in \, average \, are \, from \, 1988-2020. \, Election \, is \, time \, 0.$

VIX Elevated in Presidential Election Years

In Presidential elections dating back to the early 1990s, volatility in US equity markets increase in the two - three months ahead of the election and decline as the market gains "certainty" on who the winner will be. Notably, while volatility tends to decline into year-end, futures pricing this year suggests volatility may rebound ahead of the inauguration in January.

Average VIX during election years since 1992

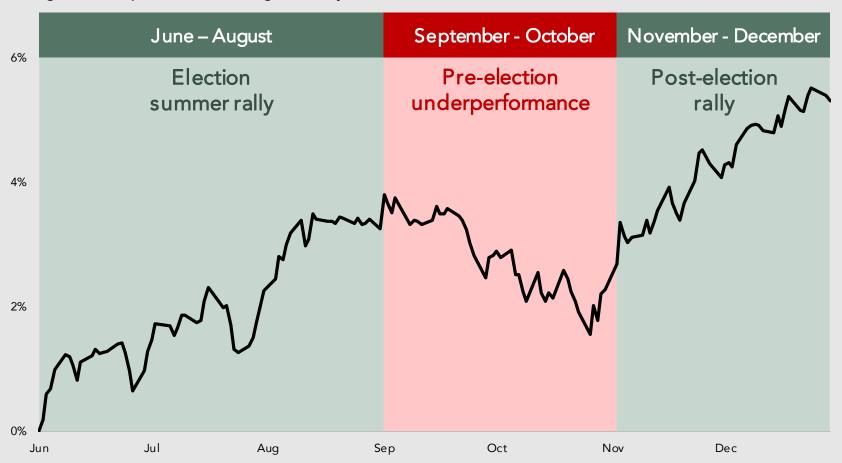


Source: (1) Bloomberg. VIX for presidential election years starting in July from 1992 - 2020.

Equity Markets in US Election Years

Historically, markets have tended to underperform during the period of pre-election uncertainty, with the post election rallies on higher certainty typically beginning immediately after the election (regardless of political party gaining or losing control).

Average S&P 500 performance during election years since 1952



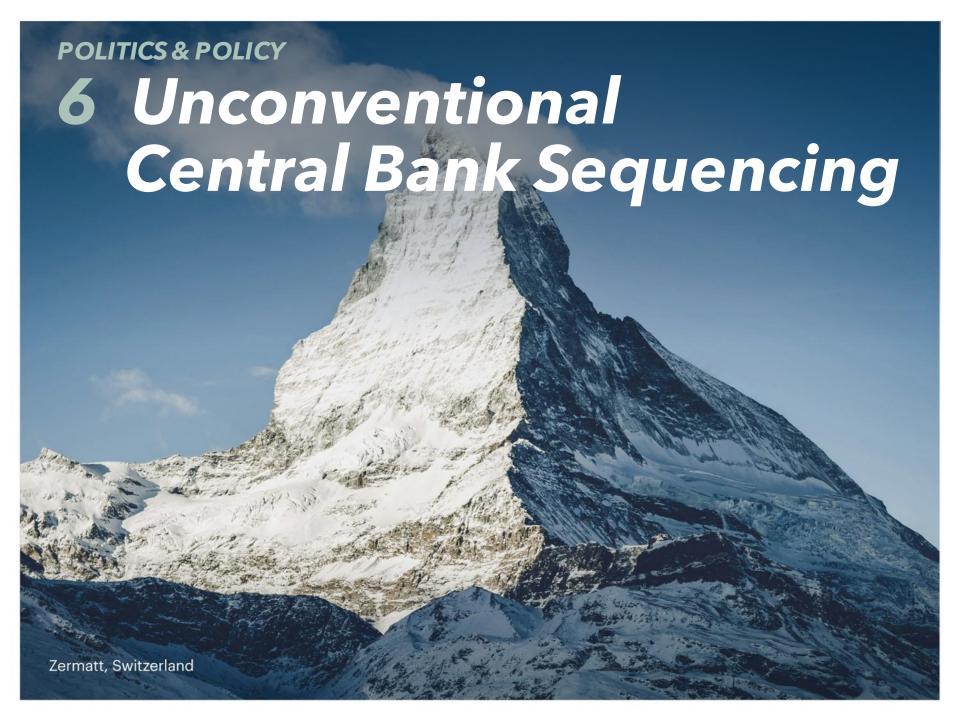
Source: (1) Bloomberg. S&P 500 performance for presidential election years starting in June from 1952 - 2020.

Trade War Begins on Day 1 of Trump 2.0



In his first term, former President Trump focused his first full year on generational tax reform in 2017 and the stock market rose 19%. In 2018, nearly 18 months into his first term, President Trump pivoted to the trade war. In a Trump 2.0 scenario, we expect the trade war to begin on Day 1.

Notable attributes of a trade war in a Trump 2.0 scenario				
	Timing: Day 1 of Trump 2.0			
List of the second	Key Architect: Robert Lighthizer (former US Trade Rep)			
	Legal Toolkit: First term blueprint (Sec 201, 232, 301, etc.)			
	Targets: Allies and adversaries			
ф	China: Existential threat (higher tariffs, revoke MFN status?)			
* <u>=</u>	Approach: Emboldened ("Big plans already underway")			
	Philosophy: "Zero-Sum" game (no "soft" benefit focus)			
× ox	Strategy: More tactical; create uncertainty; encourage domestic MNC investment			
<u> </u>	Partnerships: Bilateral over multi-lateral			
M	Barometers: Trade deficits; US domestic spending			
	Governor: Stock market (less so this time)			



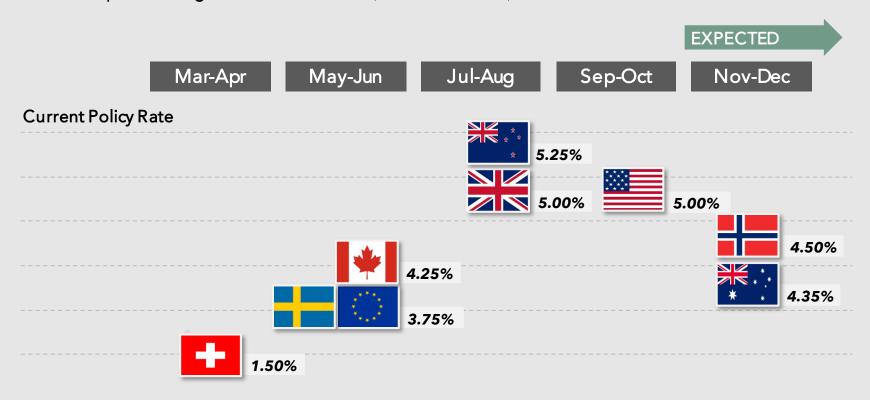
"I don't order bacon anymore. It's too expensive."

Former US President Donald Trump, in a speech on the economy in Asheville, NC (Aug 14, 2024)

Unconventional Central Bank Sequencing

Historically, the Fed leads the global financial cycle, typically leading the pivot to new policy regimes. For example, the ECB typically moves 3-4 months behind the Fed, but this time jumped ahead (as did Switzerland and Sweden earlier this year). With the US economy outperforming its G10 peer group even after 525 bps of tightening, the policy sequencing is different this time. For global markets, the implications have been formidable across rates, currencies, capital flows and portfolio allocations.

Actual or expected timing in 2024 of first rate cut (G10 Central Banks)

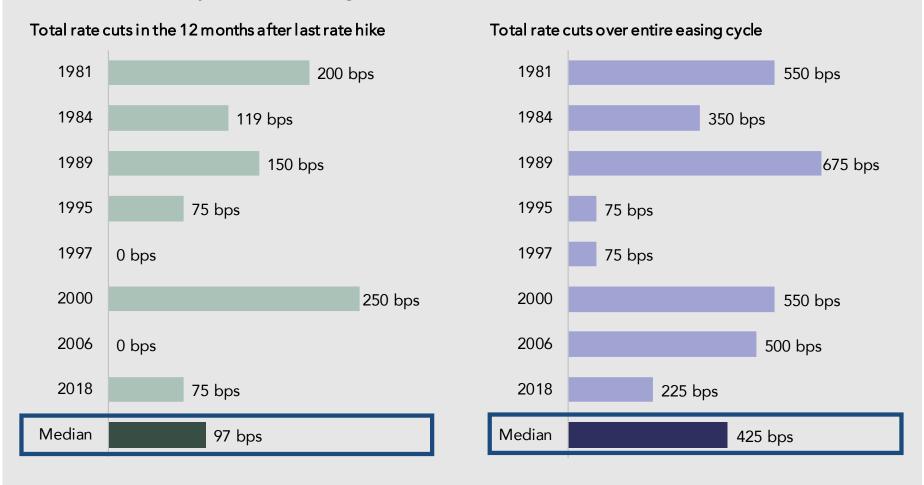


Source: (1) Bloomberg. Data as of September 19, 2024. ECB is the deposit rate. US Fed Funds rate is upper bound. Markets pricing 80% chance of a Decrate cut for Reserve Bank of Australia.

Sizing Fed Easing Cycles Historically



Looking at eight easing cycles since 1980, the Fed has typically cut rates by about 100 bps in the first 12 months of an easing cycle and by more than 4% over the entirety of the easing cycle, with a fair amount of variability around that range.

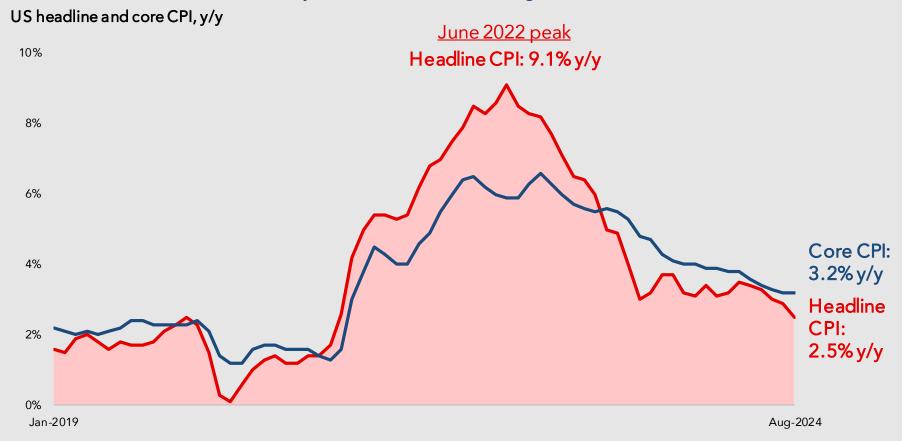


Source: (1-2) Bloomberg. Data as of July 12, 2024. Fred Economic Data St. Louis Fed. Note: Discount rate used before 1988. Fed Fund based on upper bound.

US CPI Below 3%, Down from 9.1% Two Yrs Ago



US headline inflation slowed to 2.5% y/y in August, a three-year low and its fifth straight month of easing. While annual core CPI remained unchanged at 3.2% y/y, as expected, the index rose 0.3% m/m (vs. 0.2% expected), the most in four months. The 5.2% y/y increase in shelter costs accounted for 70% of the gain in the annual core inflation rate in August and the monthly increase of 0.5% m/m was the most since the start of the year, and the second straight month of acceleration.



Source: (1) Bureau of Labor Statistics. CPI Report August 2024. Bloomberg. Data as of September 19. 2024.

Market Repricing "More Dovish" Policy Path



Over the course of 2024, markets have dramatically repriced expectations for Fed policy in the year ahead. After a 50 bps rate cut at the September FOMC meeting, the market is pricing an additional ~75 bps of easing, or 3 cuts, by year end 2024 and nearly 200 bps of easing over the next 12 months. Notably, the market has very quickly become "more dovish" than Fed forecasts for policy easing.

Market implied cumulative bps of Fed rate cuts by Fed meeting

~200 bps over next 12 months



Source: (1) Bloomberg. Data as of September 19, 2024.

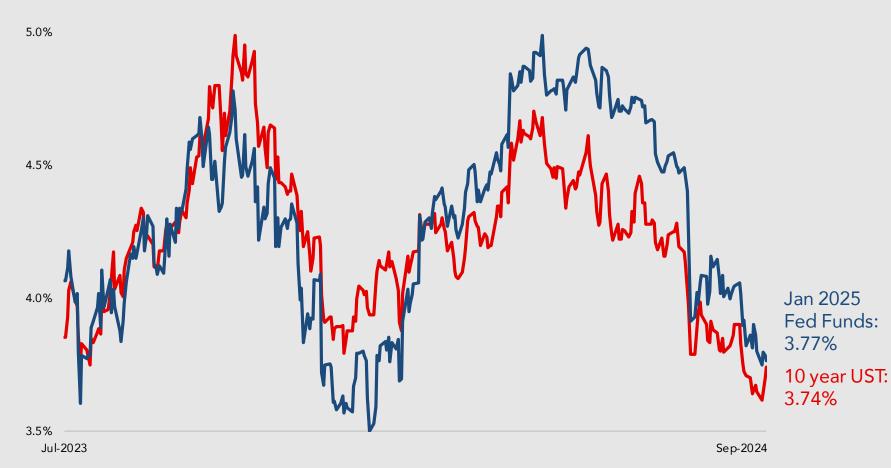
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UST Yields Largely Tracking Fed Policy



Even as global geopolitical and US election risk remains elevated, UST yields have been trading almost entirely on Fed policy over the last year.

10 year UST and market implied January 2025 Fed Funds rate



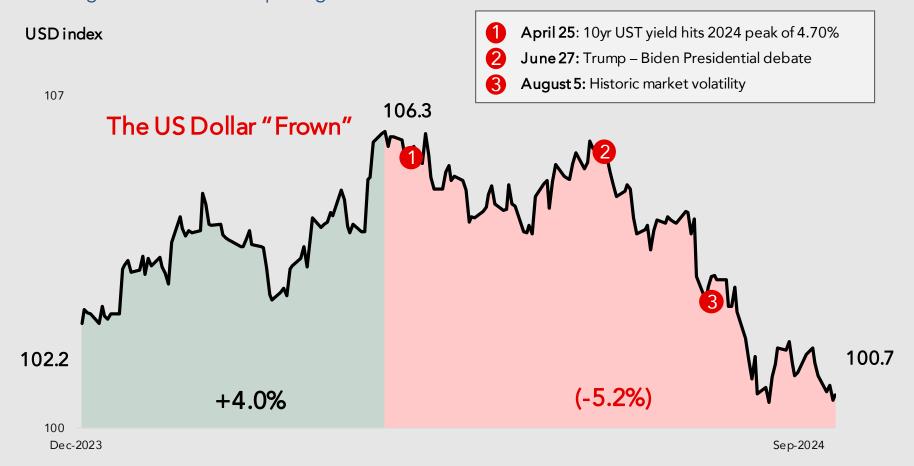
Source: (1) Bloomberg. Data as of September 19, 2024.

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The US Dollar "Frown"



Since UST yields hit their 2024 highs in April, the USD index has declined nearly 5%. Key drivers of the US dollar's deceleration include: (1) Fed policy easing coming closer into view; (2) expected convergence in global rate expectation differentials; (3) softer US economic data; and (4) convergence in US election polling.



Source: (1) Bloomberg. Data as of September 19, 2024. USD index is DXY index.



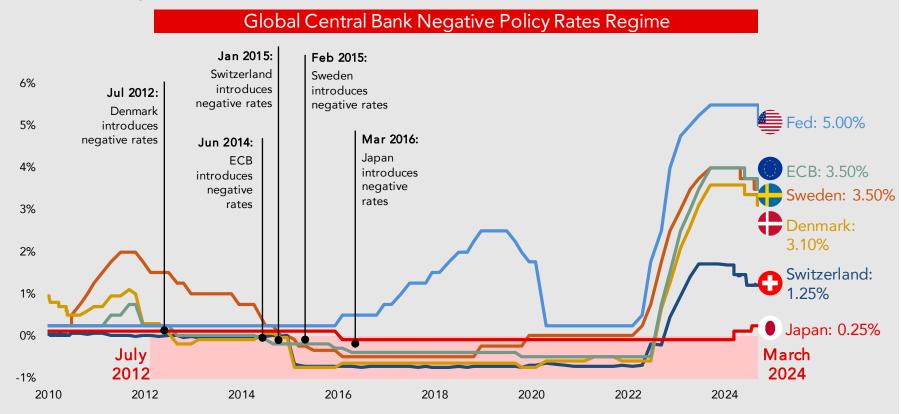
"How did you go bankrupt? Two ways. Gradually, then suddenly."

Ernest Hemingway, Nobel Prize winning American author in "The Sun Also Rises" (1926)

Monetary Policy "Normalization" Away from NIRP & ZIRP

The grand experiment of negative interest rate policy (NIRP) began in 2012 when Denmark became the first central bank to go negative in July of that year. Sweden was the first to exit NIRP in December 2019, though kept policy rates at 0% (ZIRP) until April 2022. It took a full decade for other G10 central banks to abandon the NIRP policy regime, led by the ECB in July 2023, Denmark and Switzerland in September 2023, and finally Japan in March 2024.

Central bank policy rates

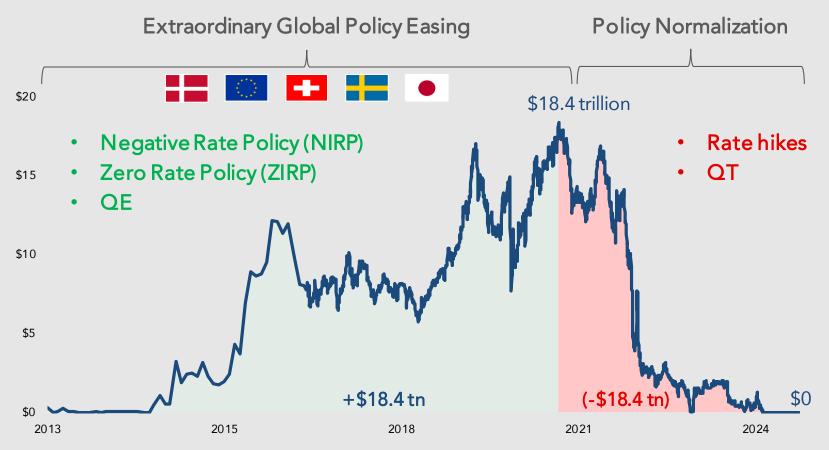


Source: (1) Bloomberg. Data as of September 19, 2024. US is Fed Funds upper bound. ECB is deposit facility. Denmark is interest rate on certificates of deposit. Japan is unsecured overnight call rate upper bound. Switzerland is the overnight reporate.

Global Negative Rate Experiment Over (For Now)

Global negative yielding debt peaked around \$18 trillion during the peak US-China trade wars and COVID crisis period, but has since declined to zero as global central banks pivot to a new era of global policy normalization.

Global aggregate negative yielding debt, market value, USD tn



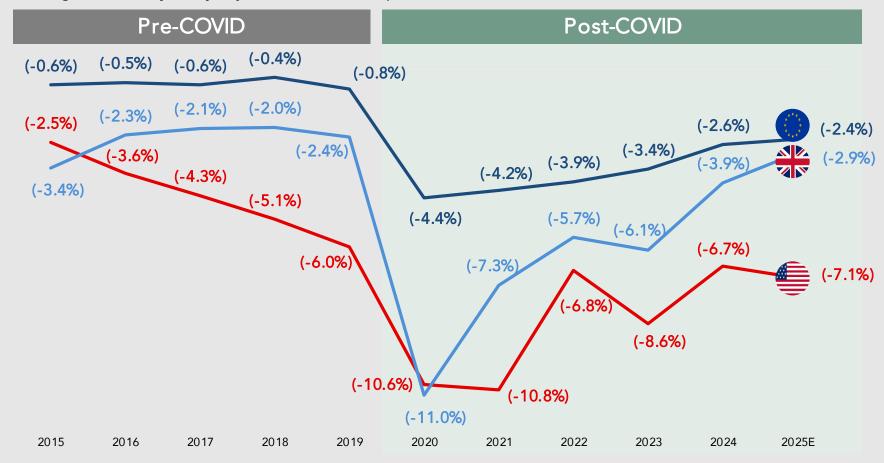
Source: (1) Bloomberg. Data as of September 19, 2024.

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New Era of Fiscal Dominance

Following nearly 15 years of extraordinary monetary policy easing, we have entered a new post-COVID period of higher structural deficits and fiscal policy dominance across advanced economies globally.

General government cyclically-adjusted fiscal balance, percent of GDP

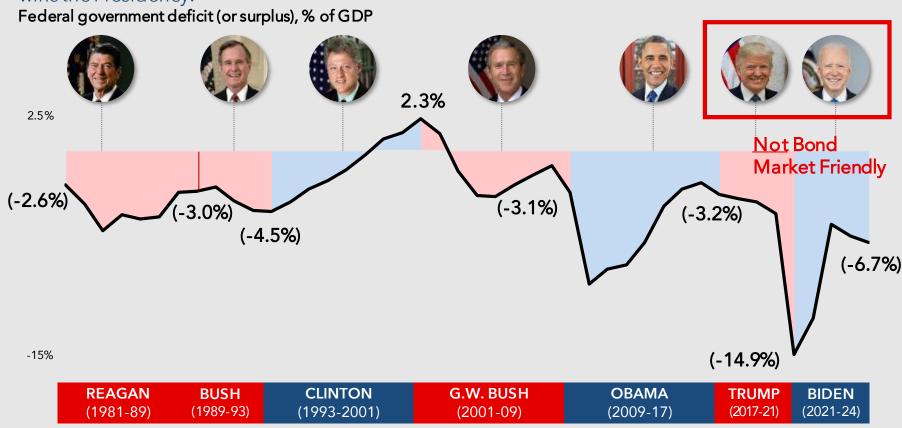


Source: (1) Apollo (Torsten Slok). IMF. Data based on fiscal year-based potential GDP. Data as of April 2024.

Expansionary Fiscal Policy is Not Bond Market Friendly



For decades now, Washington has not been adequately focused on fiscal discipline, on either side of the aisle. By virtue of their expansionary fiscal policies, neither the Trump nor Biden / Harris Administrations have been bond market friendly. Looking ahead, the magnitude of expansionary fiscal policy would likely be much larger in the "Republican sweep" scenario (White House, Senate and House) than it would be under "divided Government," which is the more likely scenario if Harris wins the Presidency.



Source: (1) Congressional Budget Office. Long-Term Budget Outlook 2024 to 2054. Historical Data on federal Debt Held by the Public. 2023 FY deficit is actual. 2024 is CBO forecast as of June 2024.

Higher Structural Deficits Will be Hard to Reduce



Approximately 70% of US gov't spending is effectively "mandatory" insofar as Congress is "politically" either unwilling or unable to reduce. The three major entitlement programs - Social Security, Medicare and Medicaid - have become a "political 3rd rail" and account for 45% of total outlays. Defense spending, which Congress is unlikely to reduce amidst heightened geopolitical risk, accounts for an additional 15%. In the years ahead, net interest expense on gov't debt is expected to rise from 12% of total spending to become the US government's largest individual outlay.

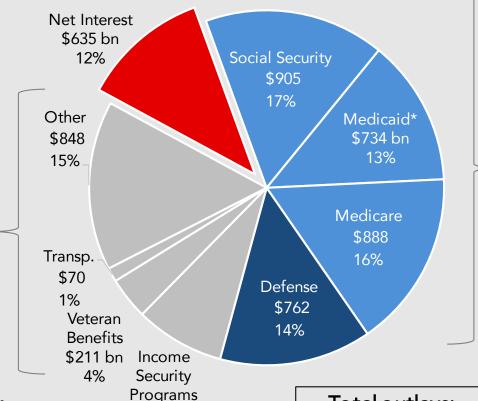
US federal budget in fiscal year 2024, USD bn

\sim 30% of spending:

Smaller discretionary buckets not easy to sufficiently cut path to debt sustainability

Source: (1) Fiscal Data. US Treasury.
*Medicaid includes Medicaid as well as
health care related research grants and
other healthcare related expenses. Data as
of April 2024.

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\$448 bn

8%

\sim 70% of spending:

Largely mandatory
spending
that Congress is
either
unwilling or unable to
reduce
(entitlements, defense
& net interest)

Total outlays: \$5.5 trillion

Federal Debt to Reach 122% of GDP in 2034

Over the three years since COVID began, US Government debt/GDP increased from approximately 70% to nearly 100% today, a milestone previously not expected to be reached for a decade. Current CBO projections have US government debt rising to 122% in 2034.

Federal debt held by the public, % of GDP



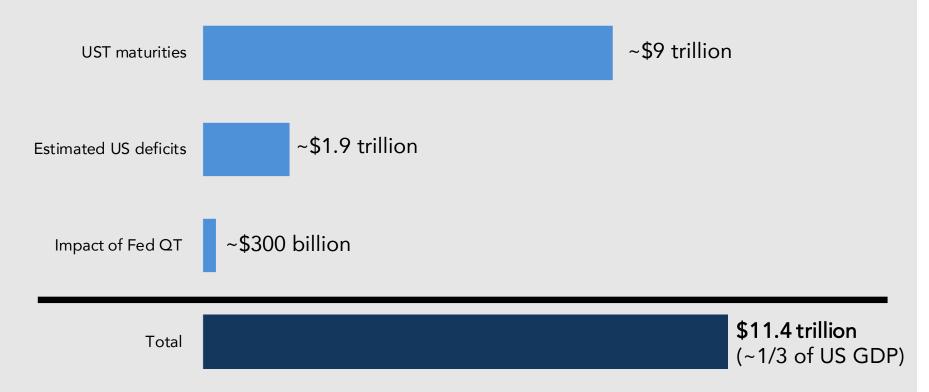
Source: (1) Congressional Budget Office. Historical Data on federal debt held by the public. June 2024 10 Year Budget Projections.

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\$11 Tn of UST Issuance Over the Next 12 Months

With over \$9 trillion of maturities and nearly \$2 trillion of deficits to finance in the year ahead, the US Treasury will have to issue approximately \$11 trillion of securities (1/3 of GDP) during a period of economic and policy transition. At the same time, the investor profile for USTs has shifted markedly in recent years. Domestic buyers now account for approximately 70% of UST purchases. Among foreign buyers, private sector purchases currently outpace public sector demand by a wide margin.

UST issuance over the next 12 months

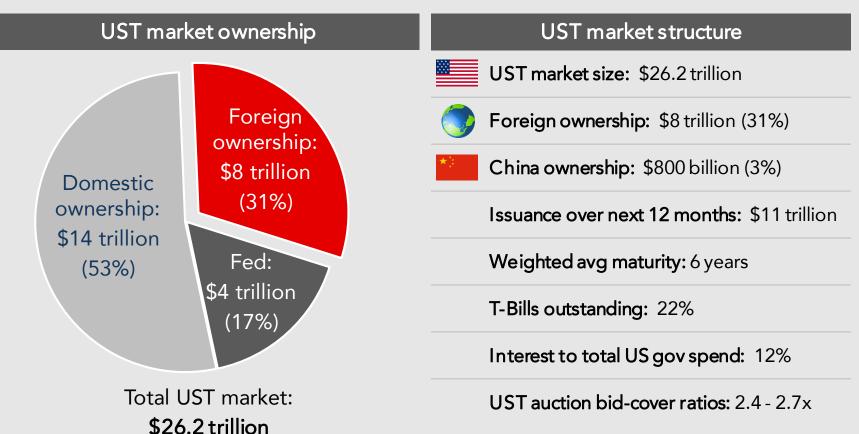


Source: (1) Bloomberg. Data as of August 14, 2024.

US Treasury Market Structure



While foreign central bank purchases of US Treasuries have increased on an absolute basis over the last decade, their relative share of today's over \$26 trillion UST market has declined sharply since peak China and EM growth in 2014. Investment fund purchases of USTs (pension funds, insurance funds, money market funds) have increased notably since the Fed tightening cycle began in March 2022.



Source: (1) Federal Reserve. Data for fiscal year 2023. Financial Accounts of the United States, L.210 Treasury Securities. US Government includes Federal, State & local. Domestic ownership is real money, banks, and households.

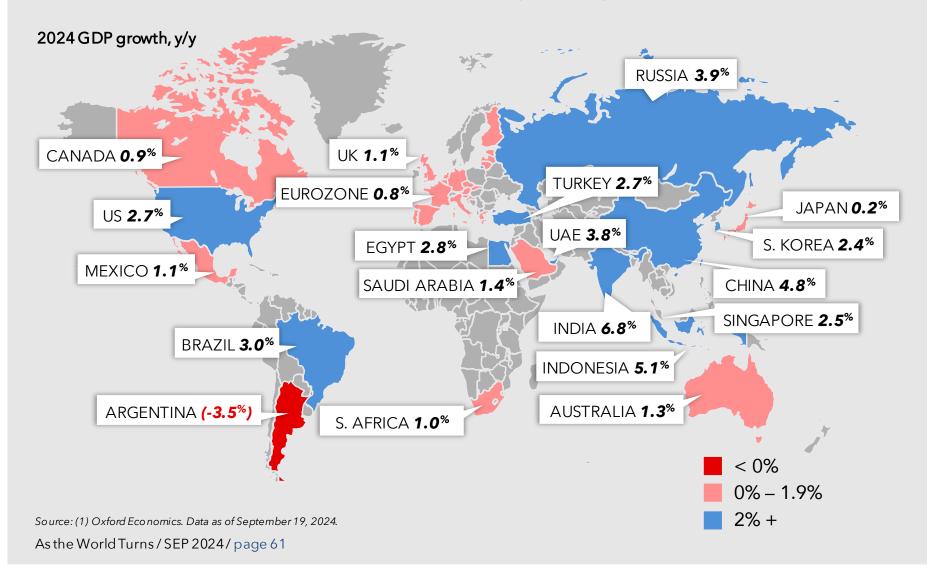


"Prosperity ripened the principle of decay; the causes of destruction multiplied with the extent of the conquest; and as soon as time or accident had removed the artificial supports, the stupendous imperial fabric yielded to the pressure of its own weight."

Edward Gibbons, English historian and scholar in his 6-volume acclaimed work, The Decline and Fall of the Roman Empire (published between 1776 - 1789)

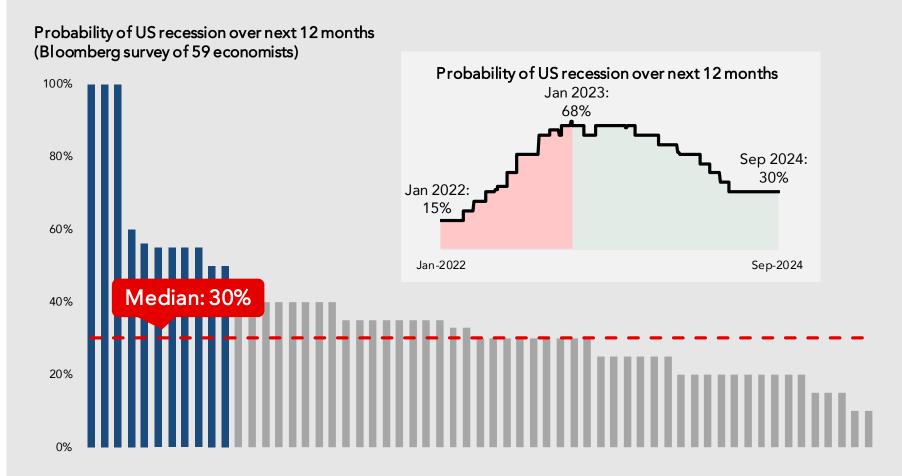
Subdued Global Economic Recovery

As evident in softer commodity prices, global economic growth has been subdued in 2024 led by a decelerating US economy, China growth < 5%, and Europe and Japan growing < 1%.



Probability of US Recession Over Next 12 Months

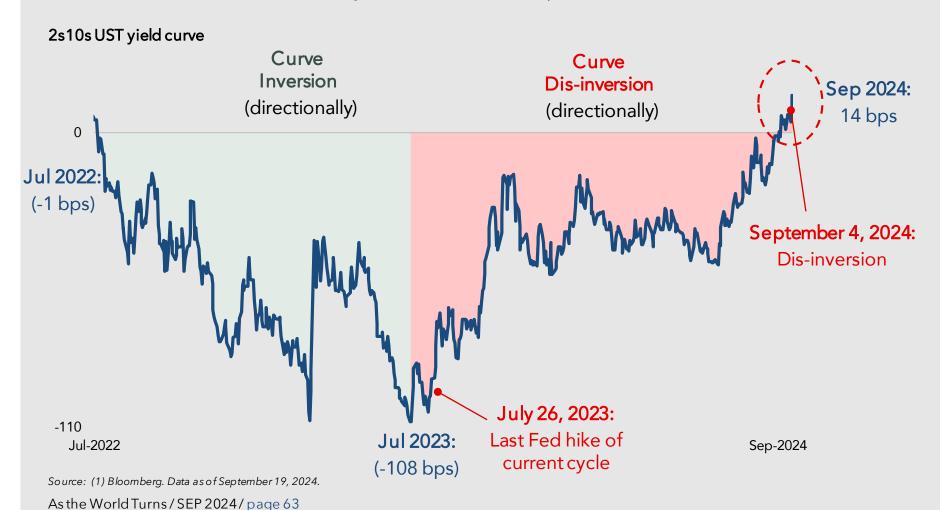
Bloomberg's most recent survey of 59 economists suggests a broad range of views on US recession risk over the next 12 months. Notably, the 59 surveyed economists have an aggregate 30% median probability of US recession over the next 12 months, while 50 of 59 place the odds at or below 50%.



Source: (1-2) Bloomberg. Data as of September 9, 2024. Recession probability forecasts from Bloomberg contributors.

Curve Dis-Inversion Highlights Recession Fears

Solid US economic and inflation data have extended the period of US yield curve inversion to the longest in 50 years, thereby rendering this historically reliable predictor of US recession timing less accurate in the current economic cycle. As the Fed pivots to policy easing, and "hard landing" risk increases, the curve has directionally dis-inverted over the past 12 months.



US "Hard Landing" Risk Still Premature

Due to a number of structural factors in the post-COVID economy, the impact of the Fed's accelerated tightening cycle has taken longer to hit the real economy than the 12-18 months of historic cycles. While numerous economic metrics have weakened in 2024, many of them remain quite resilient (inflation declining rapidly, retail sales still robust, ISM services index in expansionary territory, unemployment rate low by historic standards, elevated labor force participation, positive "real" wage growth).

Key economic metrics

Metric	Dec 2023	Current	Change
Headline inflation (y/y)	3.4%	2.5%	•
Core inflation (y/y)	3.9%	3.2%	•
UofM consumer sentiment	69.7	67.9	•
US savings rate	3.6%	2.9%	•
Retail sales (y/y)	5.5%	2.1%	•
Consumer loan delinquencies	2.61%	2.74%	1
ISM manufacturing index	47.1	47.2	•
ISM services index	50.5	51.5	1
Durable goods (y/y)	3.4%	2.9%	•
Estimated 2024 S&P 500 earnings growth	5.5%	10.2%	

Metric	Dec 2023	Current	Change
US unemployment rate	3.7%	4.2%	1
Labor force participation	62.5%	62.7%	
Wage growth	4.3%	3.8%	-
Monthly change in nonfarm payrolls	+290k	+142k	-
3-month avg. change in nonfarm payrolls	+212k	+116k	-
Initial jobless claims (3-month avg.)	206k	228k	1
JOLTS job openings	8.9 mn	7.7 mn	-
Quits rate	2.2%	2.1%	-
New home sales	654k	739k	
Existing home sales	3.88 mn	3.86 mn	

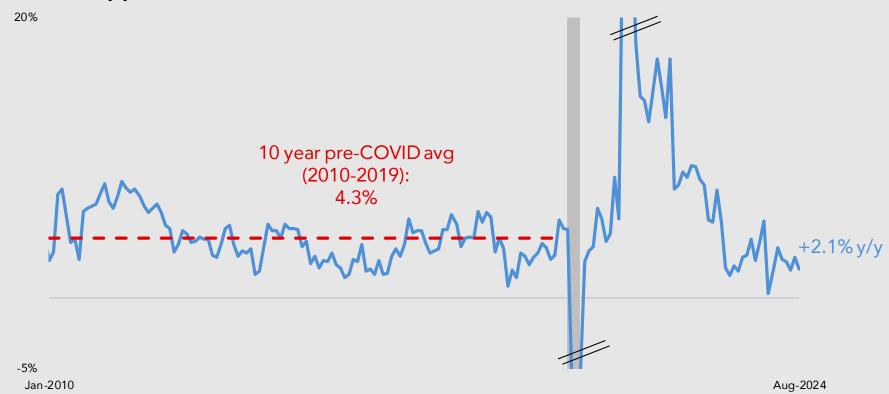
Source: (1) Bloomberg. Fed. Data as of September 19, 2024. FactSet Earnings Insight (Sep 13, 2024). S&P 500 earnings growth is for CY 2024.

"Soft Landing" in US Consumer Spending



The recent normalization in consumer spending growth from the COVID-era reflects a "cooling" in US economic growth rather than a contraction. While lower income households are bearing the brunt of a cooling labor market and "sticky" inflation, US consumer spending is more dependent on middle and upper income households. The July retail sales data came in stronger than expected at a headline level and the underlying data points to continued resilience in most sectors and roughly 2% annualized consumer spending in Q3.

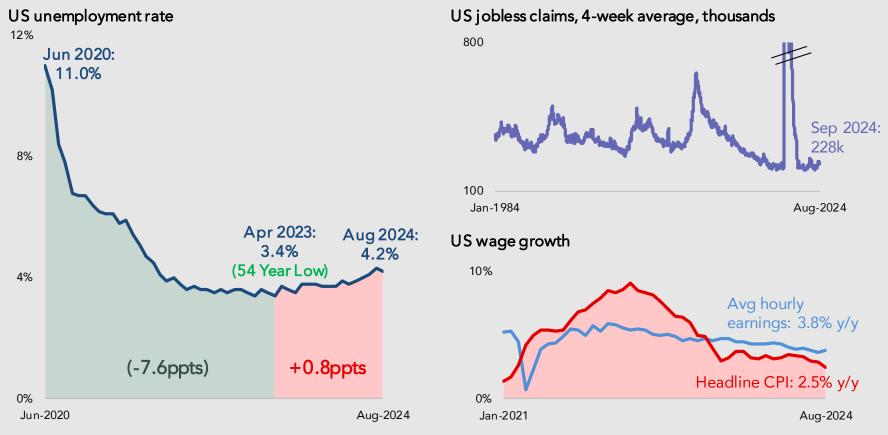
US retail sales y/y



Source: (1) Bloomberg. Data as of September 19, 2024. FRED. Real retail sales are adjusted for inflation. Capital Economics "US Retail Sales (Sep.), Real consumption growth muted as higher rates bite)."

Markets Shift Focus from Inflation to Jobs

As US inflation has dropped precipitously from above 9% to below 3% in just two years, markets have shifted their focus to softer US labor markets. Looking at US economic and market data in a more comprehensive and integrated manner (i.e., GDP growth, retail sales, wage growth), we believe that US labor markets are slowing, not stalling, from structurally tight post-COVID labor market conditions. In addition, a substantive portion of the slowdown has been driven by supply side forces (i.e., immigration, people returning to the workforce), rather than weakening demand side dynamics.



Source: (1-3) Bloomberg. Data as of September 19, 2024.

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USD HY Market Not Pricing a US Recession

Looking back at historic US recession thresholds for numerous credit market metrics, today's USD HY market is <u>not</u> pricing elevated US recession risk.

HY credit metrics

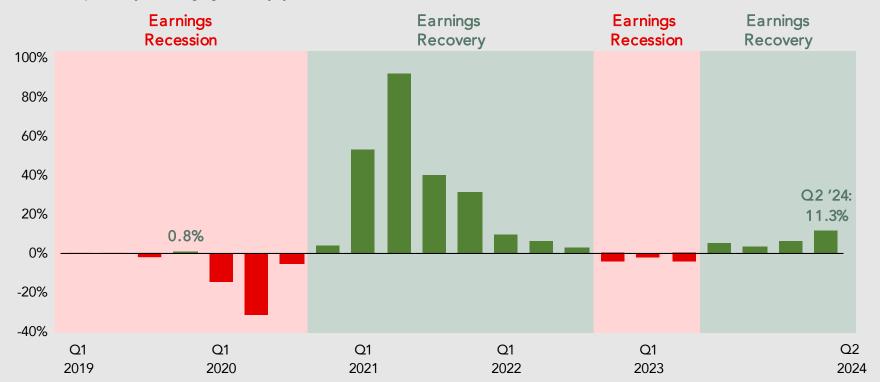
Metric	Historic recession threshold	Recent level	Recession signal
HY spreads	> 800 bps	307 bps	Notyet
CCC spreads	Sharp widening	Tightening (98 bps tighter YTD)	Notyet
HY funding costs (Yield)	Sharply higher	Costs declining (yields 53 bps tighter YTD)	Notyet
HY total returns	Negative on trailing 12 month basis	Trending positive in 2024 (+7.5% YTD)	Notyet
HY net leverage	Sharp spike	3.6x (below historical median)	Notyet
Default rates	> 6%	4.6% (steady decline since Apr 2024)	Notyet

Source: (1) Bloomberg. CreditSights. HY leverage metrics are as of Q1 2024. S&P Capital IQ Default, Transition and Recovery August 2024 report. Default rate is June 2024 US speculative grade corporate default rate. Data as of September 19, 2024.

Q2 Earnings Tilt Toward "Soft Landing" Narrative

As of September 6, with 99% of companies reporting, Q2 2024 earnings growth for the S&P 500 stands at 11.3%, the highest quarterly growth number since Q4 2021, and the 4th consecutive quarter of positive year-over-year earnings growth for the index. 79% of companies reported a positive EPS surprise (<u>above</u> 10 year average of 74%), while 60% reported a positive revenue surprise (<u>below</u> the 10 year average of 64%). To date, the market has been rewarding positive earnings surprises in line with historic averages, and punishing negative earnings surprises by more than average.

S&P 500 quarterly earnings growth, y/y



Source: (1) FactSet, Earnings Insight Report (September 6, 2024). FactSet forecast. Q2 2024 earnings growth rate of 11.3% is based on 99% of S&P 500 companies reporting actual earnings results.

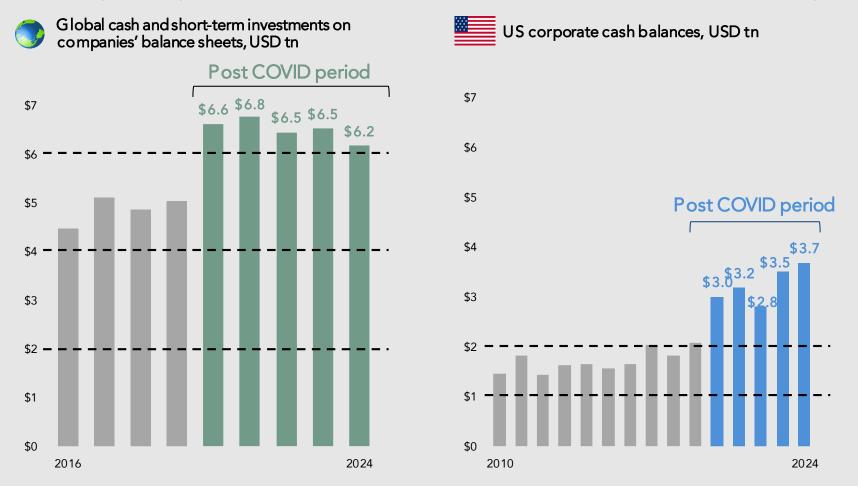


"Nothing...is ever so expensive as what is offered for free."

Viet Thanh Nguyen, Vietnamese-born American author in his Pulitzer Prize-winning novel, *The Sympathizer* (2016)

Over \$6 Trillion of Global Corporate Cash

Corporates moved quickly (and impressively) after COVID to adjust business strategy to drive stronger operating performance as well as to fortify balance sheets with historically low cost capital.

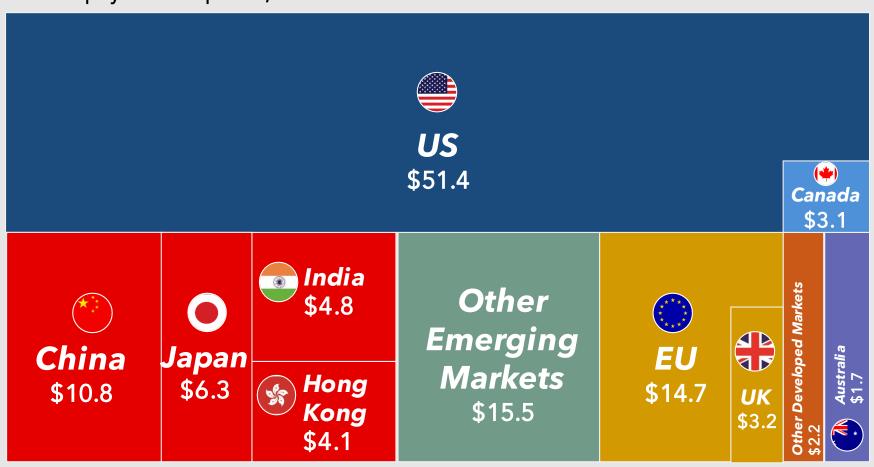


Source: (1) S&P Global Market Intelligence, S&P Global Ratings. Data as of July 29, 2024. Refers to nonfinancial corporates rated by S&P Global Ratings globally. (2) Federal Reserve. US corporate cash balance is nonfinancial corporate business foreign deposits, checkable deposits and currency, time and savings deposits, and money market funds. 2024 data through Q1.

Over \$120 Trillion of Global Equity Market Capitalization

At over \$120 trillion in size, global equity markets have risen considerably over the last decade, and provide formidable "acquisition currency" for deal-making activity.

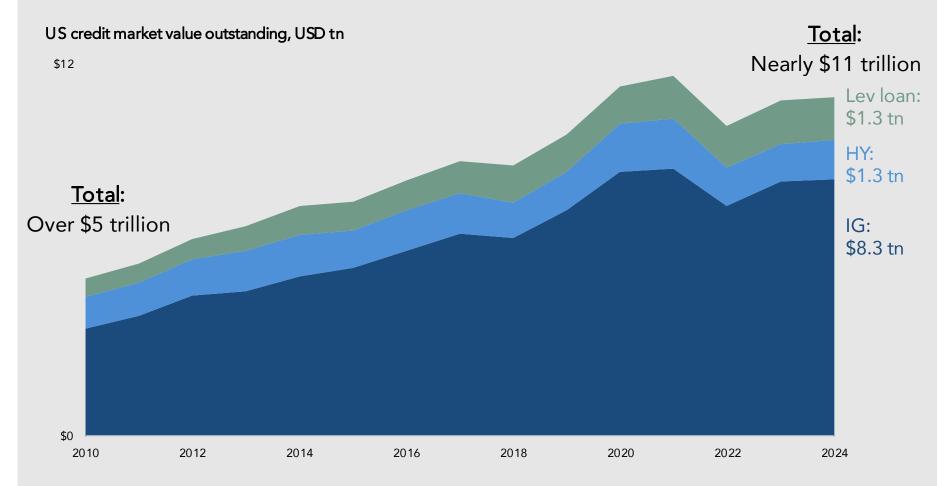
Global equity market cap share, USD tn



Source: World Federation of Exchanges. Data is April 2024. UK is Statista.

\$11 Trillion USD Corporate Debt Markets

US Dollar corporate credit markets, the largest in the world, have more than doubled in size since the Global Financial Crisis. In the first half of 2024, nearly 13% of IG issuance (\$107 bn) proceeds were directed toward M&A.



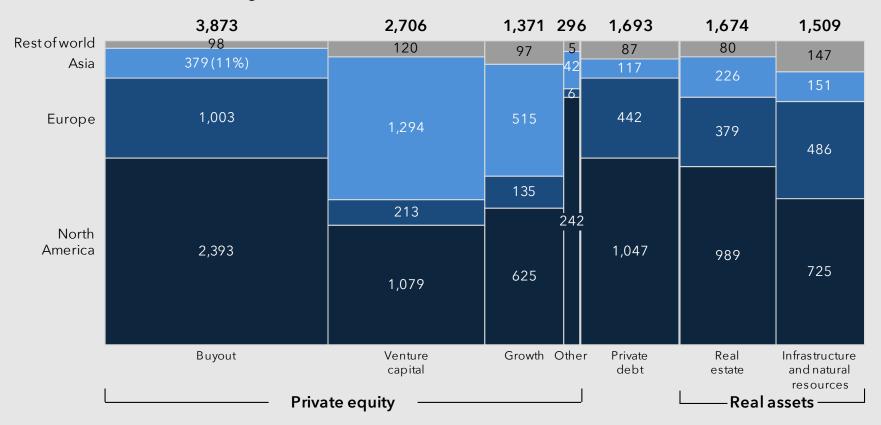
Source: (1) CreditSights. FactSet. ICE Data Indices. LLC. LFI. CFR. Data as of June 30, 2024.

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Over \$13 Trillion of Private Capital Globally

According to a recent study by McKinsey & Company, private market AUM has grown nearly 14% per year since 2013 and totaled \$13.1 tn in 1H 2023. Private debt AUM has nearly doubled since 1H 2020 while Private Equity funds, which have held assets longer than usual due to a more challenging exit market, have increased AUM by over 80% in the same time period.

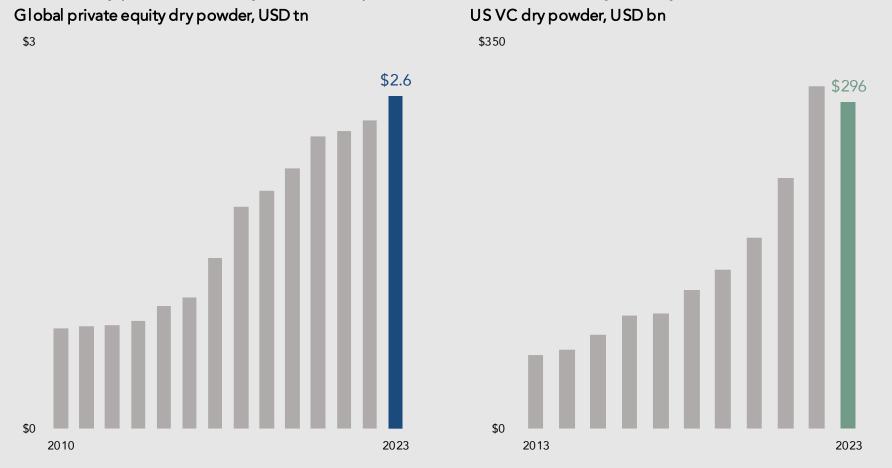
Private market assets under management, H1 2023, USD Billion



Source: (1) Prequin. McKinsey & Company, "Private markets: A slower era" (March 2024). Figures may no sum precisely because of rounding. Other includes turnaround, private investments in public equity, balanced, hybrid funds, and funds with unspecified strategy.

Nearly \$3 Trillion of Private Equity "Dry Powder"

Between 2021 and 2023, US Private Equity funds had their three strongest fundraising years on record. The trend continued in Q1 2024 as 63 PE funds raised \$77 bn in the first three months of the year. More cautious investment strategies over the same time period have driven PE dry powder to record levels. Record "dry powder" is likely to be an important source of deal activity in the years ahead.



Source: (1) S&P Global Market Intelligence. Data for 2023 is YTD. Analysis includes aggregate. (2) Pitchbook, "NVCA Venture Monitor - Ω 2 2024". Data as of December 31, 2023. As the World Turns / SEP 2024 / page 75

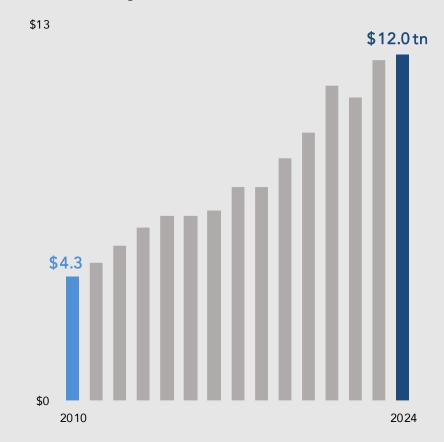
Over \$12 Trillion of Sovereign Wealth Funds

Seeking higher returns and increased influence across international markets, global sovereign wealth funds have become increasingly prominent in global M&A in recent years. The resource-rich GCC funds have been notably active in cross-border M&A, while other SWFs have partnered with PE and venture funds with increased frequency.

Top 10 global sovereign wealth funds by AUM

Norway Gov't Pension Fund Global \$1,634 bn 2. China Investment Corporation \$1,240 bn 3. SAFE Investment Company \$1,098 bn 4. Abu Dhabi Investment Authority \$993 bn 5. Public Investment Fund \$978 bn 6. Kuwait Investment Authority \$969 bn 7. GIC Private Limited \$769 bn 8. Qatar Investment Authority \$510 bn 9. Investment Corporation of Dubai \$360 bn 10. Mubadala Investment Company \$302 bn

Global sovereign wealth fund AUM, USD tn



Source: (1-2) Global SWF. AUM is assets under management. Data as of June 2024. As the World Turns / SEP 2024/ page 76



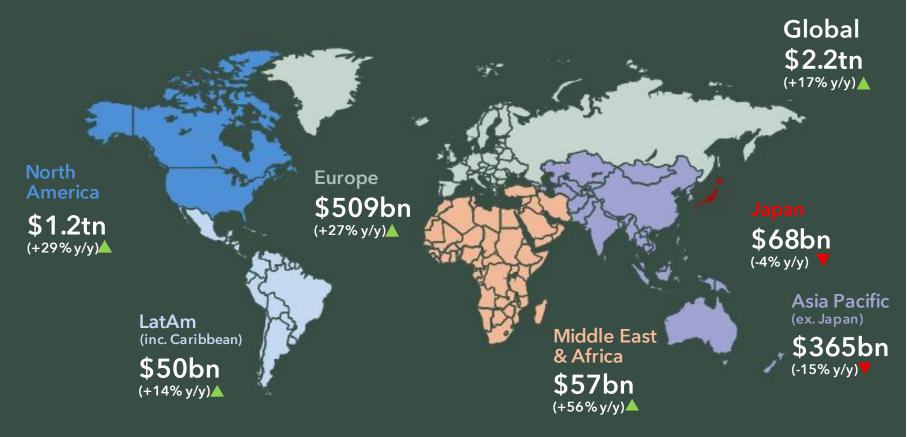
"It's in vain to recall the past, unless it works some influence upon the present."

Charles Dickens, acclaimed English novelist in his semi-autobiographical and classic work, David Copperfield (1850)

2024 Volumes Rising Across Most Regions

Global M&A activity increased 17% y/y in 2024 driven by outperformance in North America and Europe. North American activity more than doubled any other region while European activity increased nearly 30% y/y. Activity in Asia has lagged considerably, due in part to lower inbound and outbound activity from China.

Jan-Aug 2024 volume and y/y increase (based on target region)

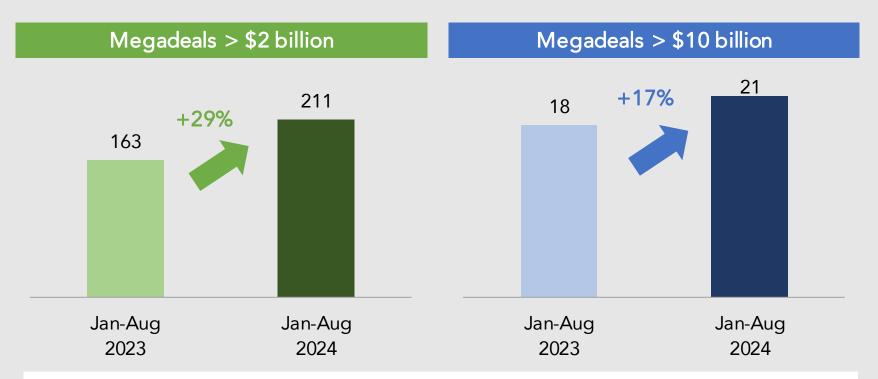


Source: Cortex. Dealogic. 2024 YTD data is through August 31, 2024. Data as of September 5, 2024. Include rank eligible M&A deals. Region is based on target. Asia Pacific includes Australasia, Central Asia and the Caucasus, India subcontinent, North Asia, SE Asia and India subcontinent.

Synergies & Growth Driving Megadeal Resurgence

Though the total number of transactions has declined in 2024, global deal volumes have risen on the significant increase in large M&A deals YTD. Globally, the number of megadeals > \$2 and \$10 billion have increased 29% and 17%, respectively.

Global M&A Megadeals (Jan-Aug 2023 & Jan-Aug 2024)



Resurgent 2024 megadeal activity had been driven by large deals designed to deliver <u>both</u> scale (synergies) and scope (growth) – not necessarily one or the other

Source: (1) Cortex. Dealogic. 2024 YTD data is through August 31, 2024. Data as of September 5, 2024. Includes rank eligible, M&A deals. Greater than or equal to \$2bn and \$10bn. As the World Turns / SEP 2024 / page 80

Resurgent "Scale & Scope" Megadeal Activity

In the 12 months through the end of the August 2024, there have been 15 deals over \$20 billion in value. Of those transactions, all but one involved a US acquiror or target, or both. "Scale consolidation" deals dominated, with the energy sector accounting for 5 of the 15 largest deals in the last 12 months. By contrast, large tech sector deals were more "growth oriented scope" transactions.

	Acquiror	Target	Deal size	Deal size Deal type	
1.	Exxon Mobil	Pioneer Natural Resources	\$68 bn	Strategic M&A	Energy
2.	Chevron	Hess Corp	\$60 bn	Strategic M&A	Energy
4.	Existing Shareholders	GE Vernova Inc.	\$38 bn	Spinoff	Energy
5.	Mars	Kellanova	\$36 bn	Strategic M&A	Consumer
6.	Capital One	Discover	\$35 bn	Strategic M&A	Finance
7.	Synopsys	Ansys	\$34 bn	Strategic M&A	Tech
8.	Cisco Systems	Splunk	\$30 bn	Strategic M&A	Tech
9.	Existing Shareholders	Sirius XM Holdings	\$26 bn	Spinoff	Telecom
10.	Diamondback Energy	Endeavor Energy Resources	\$23 bn	Strategic M&A	Energy
11.	Smurfit Kappa Group	WestRock Co	\$23 bn	Strategic M&A	Paper & Pack.
12.	KKR / ADIA / F2i SGR	FiberCop SpA	\$23 bn	Sponsor	Telecom
13.	Existing Shareholders	Veralto	\$23 bn	Spinoff	Tech
14.	ConocoPhillips	Marathon Oil	\$22 bn	Strategic M&A	Energy
15.	Merck & Co	Daiichi Sankyo Co	\$21 bn	Strategic M&A	Healthcare

Source: (1) Cortex. Dealogic. Data as of September 5, 2024. Listed deals include announced, active or completed deals but do es not include deals that have been declined. Deals from September 2023 through August 2024.

Key Drivers of Global M&A Recovery

Against a resilient though volatile macro backdrop, the global M&A recovery in 2024 has been driven by both scale (synergies) and scope (growth-oriented) transactions.

Catalysts for 2024 deal activity

Macro & Market Drivers



Corporate Strategy Drivers



Moderating inflation; policy easing & declining rates



Generate growth > organic alternatives; shareholder activism



Equity market & acquisition currency strength



Strong, cash-rich balance sheets



Converging buyer / seller valuation expectations



Access to technology, innovation (digital, AI, automation)



Abundant global capital; Record PE dry powder (\$2.6 tn)



Restructuring; divesting non-core businesses



Resilience & depth of IG financing markets

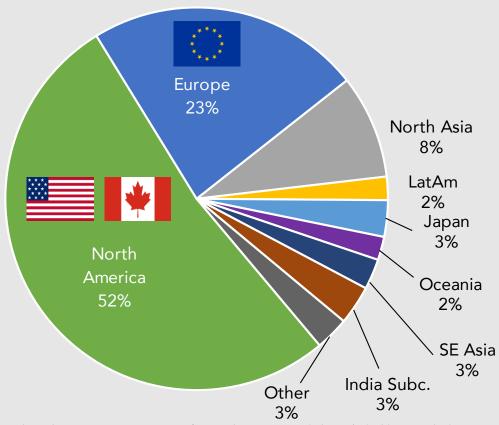


Capturing synergies; optimizing business; diversification

Outsized US & European Market Share

M&A activity in North America and Europe accounted for 75% of total deal volumes in 2024 YTD. European deal activity was the second largest regional category at 23%.

Breakdown of Global M&A Activity (Jan-Aug 2024)

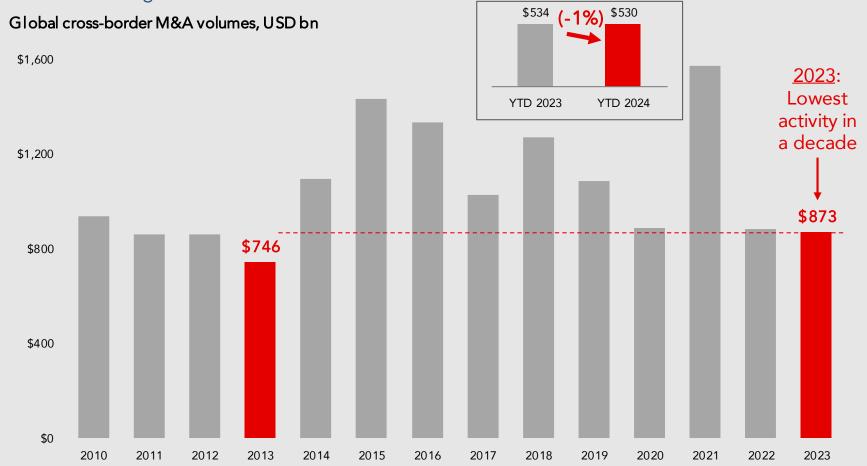


Source: (1) Cortex. Dealogic. 2024 YTD data is through August 31, 2024. Data as of September 5, 2024. Includes rank eligible, M&A deals.

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Cross-Border Activity Below Trend

In 2023, global cross-border M&A declined to \$873 bn, its lowest level in a decade. In 2024 YTD, cross-border activity is down (-1%) from 2023's below trend levels. A confluence of factors, including lower global growth, more activist global regulatory regimes, and trade barrier escalation may continue to weigh on cross-border transactions.

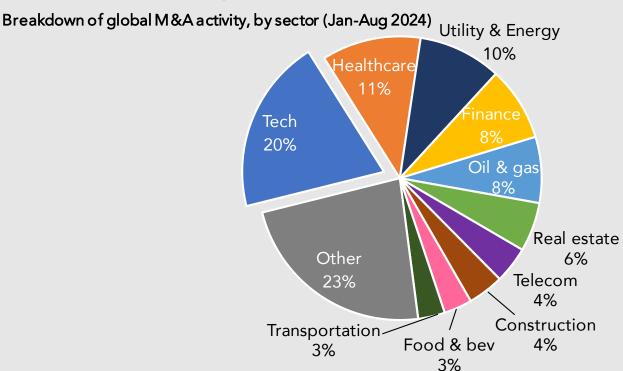


Source: (1) Cortex. Dealogic. 2024 YTD data is through August 31, 2024. Data as of September 5, 2024. Includes rank eligible, M&A deals.

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Tech Recaptures Historic Leadership Position in M&A

In 2023, US energy sector consolidation drove M&A activity. In 2024, the tech sector has recaptures its historic leadership role in global M&A activity. An analysis by PwC found that there were eight Alinfluenced deals worth over \$1 bn in just the first four months of 2024 vs. eight deals in the entirety of 2023. Looking ahead, technological innovation and integration will continue to be a key driver of business strategy and acquisition activity.



Though technology remains the most scrutinized sector for global regulators, tech-driven M&A has re-established itself at the forefront of the M&A recovery underway globally

Appendix

2024 Global Economic Forecasts

The global economy is expected to grow at about 2.5% in 2024, well below its long term 3.5% average, with the US the only G7 economy projected to grow above 2% in the year ahead.

GDP growth forecasts, y/y

Region / country	2023	2024E	
North America			
US	2.5%	2.7%	1
Mexico	3.2%	1.1%	-
* Canada	1.3%	0.9%	-
Eurozone	0.5%	0.8%	
Spain	2.5%	2.8%	1
France	1.1%	1.2%	1
Italy	1.0%	0.8%	•
Netherlands	0.1%	0.5%	1
Germany	(-0.1%)	0.0%	1
Finland	(-1.2%)	(-0.2%)	1
Ireland	(-5.7%)	(-1.3%)	1
Other Europe			
Russia	3.7%	3.9%	1
Türkiye	5.1%	2.7%	•
Poland	0.1%	3.3%	1
Norway	0.7%	1.8%	1
Switzerland	0.7%	1.5%	1
Denmark	2.5%	1.6%	-
UK	0.1%	1.1%	1
Czech Republic	0.0%	1.0%	1
Sweden	(-0.1%)	0.8%	1

Region / country	2023	2024E	
APAC	4.3%	3.9%	
			_
<u> </u>	7.8%	6.8%	•
Indonesia	5.1%	5.1%	1
China	5.3%	4.8%	-
Singapore	1.1%	2.5%	•
South Korea	1.4%	2.4%	•
Australia Australia	2.0%	1.1%	-
New Zealand	0.8%	0.6%	-
Japan	1.7%	0.2%	-
LatAm	1.9%	1.6%	
Chile	0.3%	2.5%	1
Colombia	0.6%	1.9%	1
Brazil	2.9%	3.0%	•
Argentina	(-1.6%)	(-3.5%)	-
MENA	2.0%	2.3%	
UAE	3.6%	3.8%	•
Sub-Saharan Africa	3.3%	3.3%	1
Egypt	2.9%	2.8%	-
Qatar	1.1%	2.0%	1
Oman	3.6%	1.5%	-
Saudi Arabia	(-0.8%)	1.4%	1
South Africa	0.7%	1.0%	•
Kuwait	(-3.6%)	0.5%	•

Source: (1) Oxford Economics. Data as of September 19, 2024.

Global Currency Forecasts

Currency pair	Spot (Sep 19)	Q3 2024	Q4 2024	Q1 2025	Q2 2025
EUR/USD	1.11	1.12	1.12	1.14	1.15
GBP / USD	1.32	1.34	1.33	1.34	1.35
USD / JPY	USD/JPY 142		141	139	137
USD / CNY	7.08	7.10	7.05	7.00	6.95
AUD/ USD	0.68	0.68	0.68	0.70	0.71
NZD / USD 0.62		0.63	0.63	0.64	0.64
USD / CAD	1.36	1.35	1.33	1.30	1.30
USD / NOK	10.59	10.45	10.36	10.09	9.91
USD / SEK	10.20	10.27	10.36	10.09	9.91
USD / CHF	0.85	0.83	0.84	0.83	0.84
USD / MXN	19.20	20.00	19.50	18.75	18.00
USD / BRL	5.47	5.65	5.70	5.60	5.45

Source: (1) MUFG FX September 2024 Monthly Outlook. (Derek Halpenny). Bloomberg.

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MUFG Global Rates Forecasts

		Q3 2024		Q4 2024		Q1 2025		Q2 2025	
	Spot (Sep 19)	MUFG	Consensus	MUFG	Consensus	MUFG	Consensus	MUFG	Consensus
Fed Funds	5.00%	5.00%	5.25%	4.25%	4.70%	3.75%	4.30%	3.25%	3.95%
2 yr UST	3.60%	3.75%	3.83%	3.50%	3.82%	3.38%	3.66%	3.25%	3.52%
5 yr UST	3.51%	3.88%	3.70%	3.75%	3.73%	3.63%	3.66%	3.50%	3.59%
10 yr UST	3.74%	4.00%	3.83%	3.88%	3.87%	3.88%	3.84%	3.75%	3.79%
30 yr UST	4.07%	4.25%	4.09%	4.13%	4.09%	4.13%	4.05%	4.00%	4.00%

 $Source: (1) \, MUFG \, Global \, Macro \, Research \, (George \, Goncalves). \, Bloomberg. \, Data as of \, September \, 19, \, 2024. \, Fed \, funds \, is \, upper \, bound.$

MUFG Commodities Forecasts

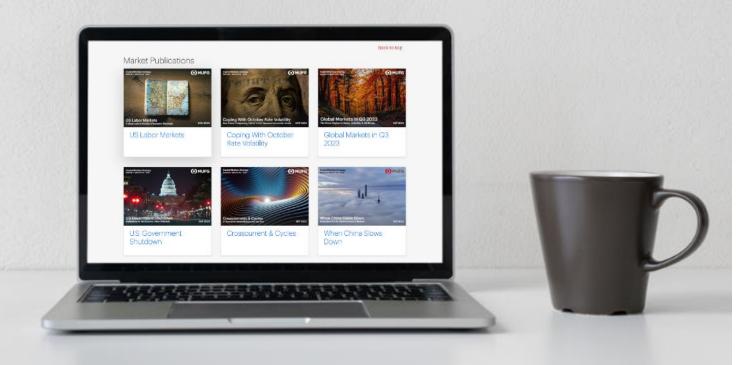
		Q3 2024		Q4 2024		Q1 2025		Q2 2025	
	Spot (Sep 19)	MUFG	Consensus	MUFG	Consensus	MUFG	Consensus	MUFG	Consensus
WTI	\$72	\$77	\$80	\$79	\$77	\$75	\$76	\$76	\$76
Brent	\$75	\$82	\$83	\$84	\$81	\$80	\$80	\$81	\$80
US Nat Gas	\$2.31	\$2.10	\$2.32	\$2.60	\$2.98	\$2.90	\$3.38	\$3.10	\$3.25
Euro Nat Gas	€33	€34	€35	€38	€38	€31	€35	€28	€31

Source: (1) MUFG Commodities Research (Ehsan Khoman). Bloomberg. Data as of September 19, 2024.



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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 nearly 30 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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Role

Hailey Orr is a Managing Director in MUFG's Capital Markets Strategy group within the global capital markets and investment banking business. The team provides market based content for corporate clients to assist in strategic decision making. Focus areas include the impact of economic, political, public policy and regulatory dynamics on the US credit, foreign exchange, rates and commodities markets.

Experience

Hailey has over a decade of Wall Street experience, including three years as a Consumer Sector Specialist in Equity Sales and ten years as a Capital Markets Strategist. Hailey is also the co-chair of MUFG's Women's Initiative Network (WIN) 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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Stephanie Kendal is a Vice President in MUFG's Capital Markets Strategy group within the global capital markets and investment banking business. The team provides market based content for corporate clients to assist in strategic decision making. Focus areas include the impact of economic, political, public policy and regulatory dynamics on the US credit, foreign exchange, rates and commodities markets.

Experience

Stephanie has spent nearly seven 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. She also volunteers at Experience Camps, a free summer camp program for grieving children.



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Role

Angela Sun is an Analyst in MUFG's Capital Markets Strategy group within the global capital markets and investment banking business. The team provides market based content for corporate clients to assist in strategic decision making. Focus areas include the impact of economic, political, public policy and regulatory dynamics on the US credit, foreign exchange, rates and commodities markets.

Experience

Angela previously interned at MUFG working in Capital Markets within the Equity Capital Markets and Leveraged Finance divisions. She is also an active member of the Carnegie Mellon University recruiting team.

Education

Angela graduated with honors from Carnegie Mellon University's Tepper School of Business with a BS in Business Administration with an additional major in Statistics and a minor in Media Design. She was a member of Alpha Kappa Psi business fraternity and the Undergraduate Entrepreneurship Association.





























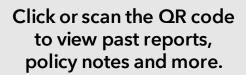








































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