Capital Markets Strategy

Essential inCights for the C-Suite

The New Macro Supercycle

2023 Outlook for the Global Economy, Policy & Markets

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"Macro stability isn't everything, but without it, you have nothing."

Contents

2023 Economic & Markets Outlook

I. The New Macro Supercycle

1. From QE to QT
2. Regime change for rates
3. Shorter economic cycles
4. Persistent inflation
5. Structural labor shortages
6. Resurgent commodity supercycle
7. Higher friction geopolitics
8. Fragmented globalization
9. Energy security & transition
10. Gov't & regulatory activism

II. The Global Economy in 2023

11. Telegraphed, rolling recessions
12. Short & shallow most likely
13. China's complicated COVID reopening
14. Supply chains improving
15. Sustainable Recovery More Likely in 2024

III. Global Policy in 2023

16. The FOMC in 2023
17. Monetary policy operates with a lag
18. Volcker, not Burns
19. Inflation & Fed expectations
20. Low Expectations from Washington

IV. Credit Markets in 2023

21. Clean slate for investors
22. Strong technical demand
23. Attractive entry points
24. Spreads peak during recessions
25. Bearish credit spreads
26. More differentiation within BBB
27. Fundamentals poised to turn
28. Manageable maturity walls
29. New issuance rebounds
30. Default rates rising

V. Global Markets in 2023

31. Bullish USTs
32. Moderating US Dollar
33. Equities bottom during recessions
34. Downward earnings revisions
35. Divergent paths for commodities

> **If you want to go fast, go alone. If you want to go far, go together.**
> – African Proverb

Introduction

"He thought that in the beauty of the world was hidden a secret. He thought that the world's heart beat at some terrible cost and that the world's pain and its beauty moved in a relationship of diverging equity, and that in this headlong deficit the blood of multitudes might ultimately be exacted for the vision of a single flower."

Cormac McCarthy, Pulitzer Prize Winning US Author in *All the Pretty Horses*

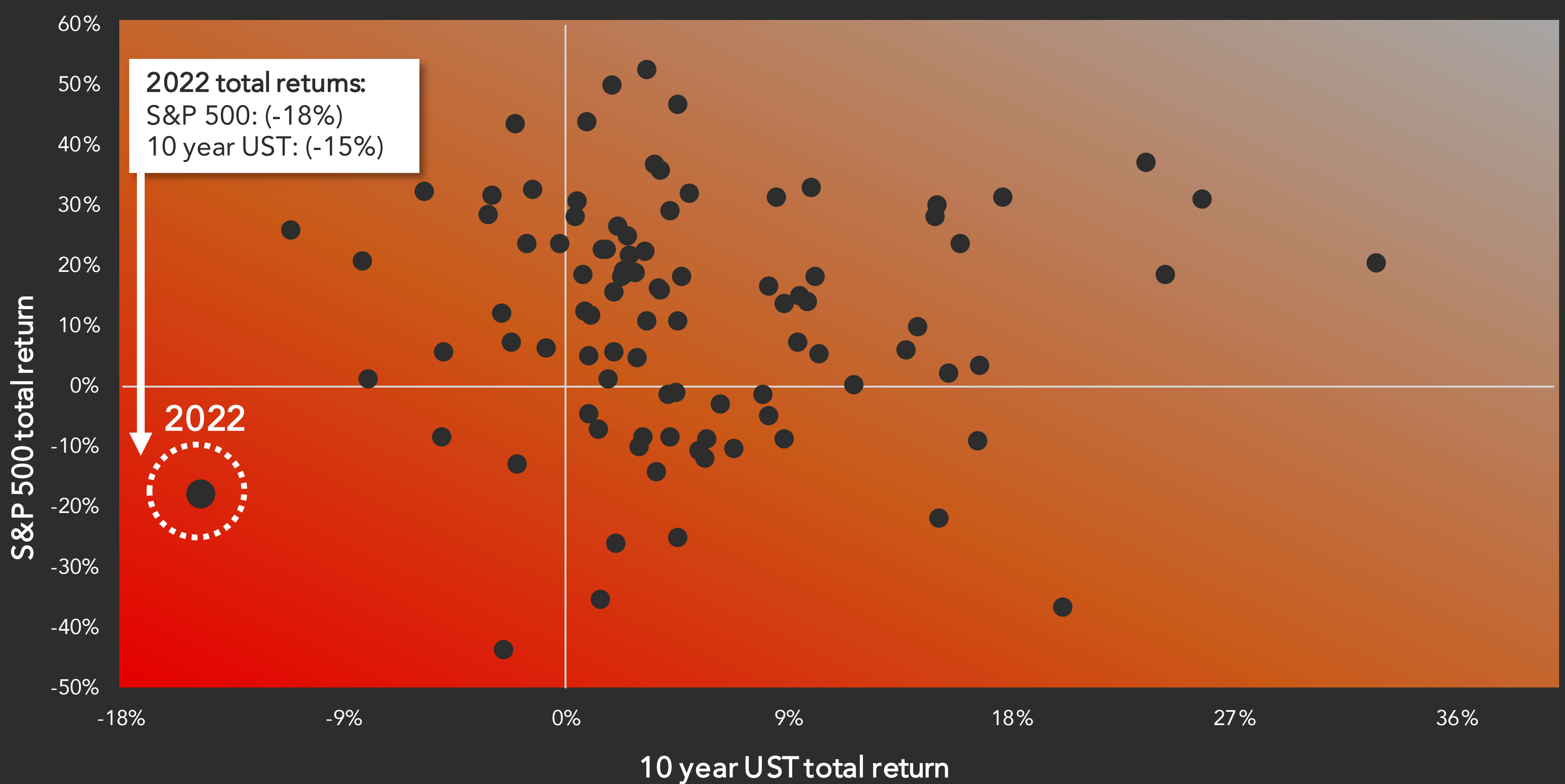
The Global "Polycrisis" of 2022

"Polycrisis" is defined as the occurrence of several catastrophic events at the same time. Following the overlapping COVID and Ukraine crises, numerous geopolitical, economic and policy shocks converged to drive heightened macroeconomic instability in 2022, with ripple effects still relevant to the outlook for 2023.

2022: Difficult Year for Stocks & Bonds

With largely unexpected geopolitical risk, inflation and Fed tightening, global markets had one of their worst total return years on record

US stocks vs. bond annual total returns, 1928 – 2022



Source: (1) John Authers, "Team Transitory vs. Team Structural – The Rematch" (December 16, 2022). Ned Davis Research. S&P Dow Jones. NYU Stern Historical Returns on Stocks, Bonds and Bills. 2010 – 2022 data is Bloomberg. 10 year UST is Bloomberg US Government 10 year Term Index Total Return.

Better Macro Backdrop in 2023

The recession fears of 2023 are likely less concerning, and more priced-in, than the unexpected acceleration of inflation and Fed tightening in 2022. While the global economy is likely to decelerate in 2023, we begin the year with positive surprises across the world's three largest economies: lower US inflation than anticipated, reopening in China and lower energy prices in Europe on warmer weather.

	2022	2023
Energy prices:	Global shock	Moderating
China	Lockdown	Re-opening
Valuations:	High	Low
Inflation:	Rapidly rising	Rapidly declining
Fed Policy:	Beginning of historic tightening	Nearing end of historic tightening
US Dollar:	Historic strengthening	Moderating
Bonds:	Worst returns in a century	New "clean slate" / More attractive entry point
Market Focus:	Inflation & rate risk	Growth & earnings risk

5 Critical Questions for 2023

More so than most other variables, we expect the 2023 market outlook to pivot around 5 questions in particular:

The magnitude and pace of disinflation? **1**

Does the Fed "hold" for longer, or "pivot"? **2**

Timing and depth of US recession? **3**

The uncertain path of China's COVID reopening? **4**

Will commodity prices be more demand-driven (i.e., growth concerns) or supply-driven (i.e., geopolitics, tight supply)? **5**

Summary Conclusions for 2023

Global Economy in 2023		
Global economy:	Recession likely	↓
EU economy:	1H recession	↓
US economy:	2H recession	↓
China's economy:	Q1 weakness, 2H recovery	↓ ↑
Japan's economy:	Relative resilience	↑
India's economy:	Highest G20 growth	↑
US goods inflation:	Rapid disinflation	↓
US services inflation:	Disinflation, but stickier	↓
Corporate earnings:	Downward revisions	↓
Global M&A:	Higher volumes, but tepid	↑

Global Markets in 2023		
UST yields:	Bearish, before bullish	↑ ↓
IG credit spreads:	Higher & wider range than 2022	↑
HY credit spreads:	Gap risk, wider divergence than 2022	↑
IG issuance:	Modestly higher, on maturities & M&A	↑
HY issuance:	Higher, from low 2022 base	↑
US Dollar:	Sustained depreciation	↓
US equities:	New lows after recession starts	↑ ↓
Oil:	Lower in Q1, higher by YE	↓ ↑
EU Nat gas:	Higher	↑
US Nat gas:	Lower	↓

Expectations for the Fed in 2023

1. Nearly 85% of CBs tightened in 2022. Given that monetary policy operates with a 12-18 month lag, much of the impact will be felt in mid-2023.
2. As inflation and rate risk concerns give way to growth and earnings risk, the Fed may matter less for markets than in 2022. Larger, more important trends are transforming the global economy.
3. The Fed is much closer to policy normalization than its big 4 counterparts (ECB, BOE & BOJ).
4. We expect the Fed to downshift to a 25 bps pace in February, though a "hawkish" 25. Dampening financial conditions remains critical to the mission.
5. Fed Chair Powell's "favorite" inflation metric, core services ex shelter, remains uncomfortably high and just below peak.
6. For markets, how high the Fed goes (i.e., 4.75% or 5.25%) may be less meaningful than what they do next. The consistent Fed chorus has been "hold" for longer, but markets are pricing a "pivot."
7. With 10 year UST yields trading well below Fed Funds, the markets have effectively been questioning the Fed's ability to stay "higher for longer".
8. Thus far, the Fed has emphasized 3% inflation is not the new 2%, but rather, 2% is 2%.
9. Historically, Fed tightening cycles end when Fed Funds is greater than inflation. Since 1990, the Fed has averaged 300-400 bps of rate cuts in the 1-2 years after recession begins.
10. 7-8 G10 CBs are likely to undertake QT in 2023, increasing disruption and liquidity risk for markets. MUFG estimates that G4 CB balance sheets will decline nearly $4 tn, or 16%, in 2023.

Expectations for Inflation in 2023

1. **This is not the 1970s.** Global and US inflation peaked in the 2H 2022 and should rapidly decline in 2023.
2. Prepare for a long ride. The **path to 2% will take years** (i.e., 2024-25), not months. It will be much easier to go from peak 9% inflation to 4%, than from 4% to 2%.
3. Prepare for a bumpy ride. The disinflation path is **unlikely to be smooth and linear**.
4. Markets in 2023 will shift **from "peak" inflation concerns to "sticky" persistent inflation**.
5. The focus in 2023 will shift **from goods and energy inflation to services (i.e., wages) and food**. Services inflation, in particular, remains uncomfortably high.
6. Goods inflation tends to be more **volatile**, services more **persistent**. In 2023, we expect more rapid **goods disinflation in the 1H, services disinflation in the 2H**.
7. As the year progresses, concerns should then **pivot from inflation and rate risk to growth and earnings risk**.
8. The COVID-induced **supply-side dislocations are closer to normalizing**, as evidenced by sharply lower transportation and input costs throughout the entire supply chain.
9. Several "structural" dynamics (not cyclical) driving higher LT inflation: **aging demographics, labor shortages and under-supplied housing markets.**
10. Numerous pervasive "megatrends" driving higher LT inflation: **energy transition, commodities supercycle, de-globalization, supply chain restructuring and US-China decoupling.**

Key Risks to Watch in 2023

While we expect "sticky inflation" to remain a concern this year, the markets will increasingly shift their focus from the "rising inflation" concerns of 2022 to "recession risk" in 2023. While risk remains high and visibility low, the preponderance of "tail" risk should be lower in 2023 than it was in 2022.

Economic Risk

1. Stagflation across global economy
2. Deeper global & US recession than anticipated
3. "Sticky" inflation (i.e., wages, services, food)
4. China's COVID re-opening
5. Sharp downturn in US consumer spending

Market Risk

1. Fed "higher for longer" than expected; implications of CB QT policy
2. "Gap risk" for HY credit spreads to recession thresholds
3. Structural vulnerabilities in leverage loan market
4. Credit cycle turn (downgrades & defaults)
5. Commodity and energy price resurgence

Key Risks to Watch in 2023

The Russia-Ukraine crisis remains a key concern in 2023. However, we also expect the US-China relationship to reassert itself as the most important, and politically challenging, bilateral relationship of the 21st Century. The implications for global growth, trade, supply chains and corporate strategy are likely to be formidable on a multi-year basis.

(Geo) Political Risk

1. Asymmetric Russia-Ukraine escalation
2. US-China decoupling (Taiwan, semiconductors)
3. Transatlantic Alliance friction (trade, China, Ukraine)
4. Iran instability
5. US debt ceiling showdown

Corporate & Strategy Risk

1. 2023 earnings & margin pressure
2. Cyber-security breaches
3. Labor market shortages; wage pressure
4. Exposure to “regulatory activism”
5. Funding market volatility, repricing

2023 Upside Risks

While a more balanced global recovery is more likely to occur in 2024, the year ahead could exceed consensus expectations if geopolitical tensions moderate, disinflation accelerates and the Fed succeeds in engineering a "soft landing" for the US economy

Upside Risks for 2023

Global Economy in 2023		Global Markets in 2023	
1	COVID recedes into rear-view mirror; China rebounds quickly	6	More complete supply side normalization (labor, supply chains)
2	Rapid & broad-based disinflation (goods, services, energy, food)	7	Corporate earnings resilience, capex acceleration
3	US consumer resilience (spending, savings, employment)	8	Global M&A resurgence
4	US avoids recession ("soft landing")	9	Goldilocks for credit markets (rates, spreads)
5	India, China & SE Asia drive EM growth resurgence	10	Declining dollar reduces pressure on global economy and markets

1 The New Macro Supercycle

“There are decades where nothing happens, and there are weeks where decades happen.”

Vladimir Ilyich Lenin, Russian Revolutionary, Leader & Political Theorist (1870-1924)

New Regime for Policy

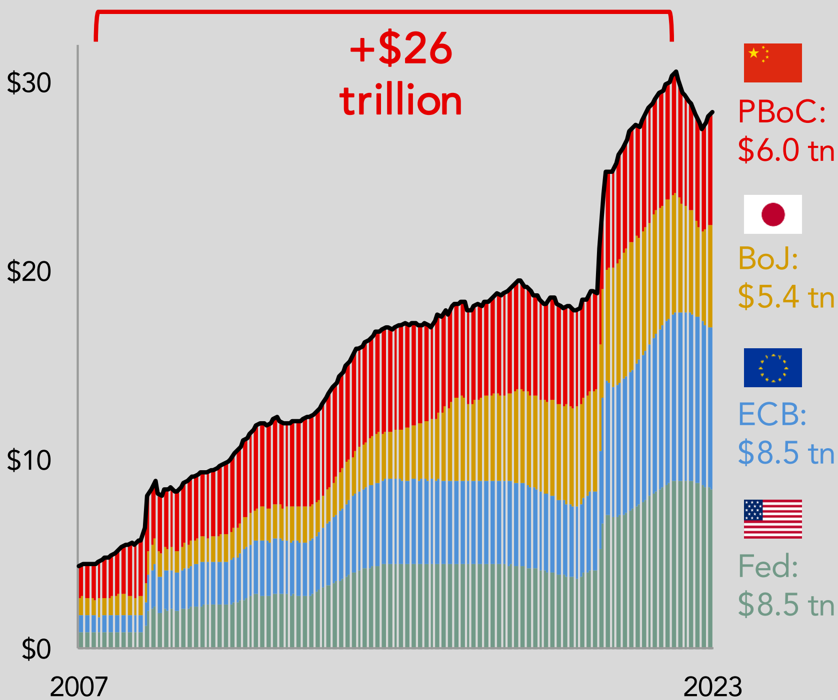
Macro-economic Policy	OLD	NEW
	Extraordinary policy easing	Historic policy tightening
	ZIRP & negative rate policy	Higher policy rate regime
	Quantitative easing (QE)	Quantitative tightening (QT)
	Currency wars ("race to bottom")	"Reverse" currency wars
	Expansive COVID fiscal stimulus	Fading post-COVID fiscal stimulus
	Fossil-fuel energy dependence	Energy security, diversification & transition

From QE to QT

Over the last 15 years, the big 4 central banks increased the size of their balance sheets by $26 trillion. In an extraordinary policy pivot, nearly 85% of global central banks tightened policy in 2022. MUFG's Head of Research, Derek Halpenny, notes that we expect as many as 7-8 G10 central banks to undertake QT in 2023, with big 4 CB balance sheets declining nearly $4 trillion, or 16%. As he notes, QT brings elevated risk of policy error, market disruption and USD squeezes.

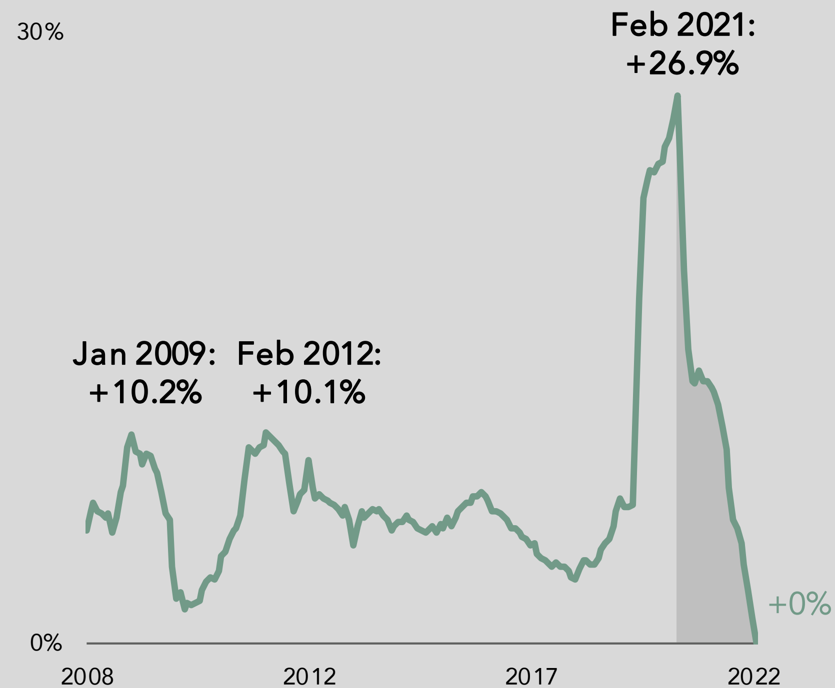
Quantitative Easing (2008 - 2021)

Total balance sheet assets, USD tn



Quantitative Tightening (2022 - onward)

US M2 money supply, y/y

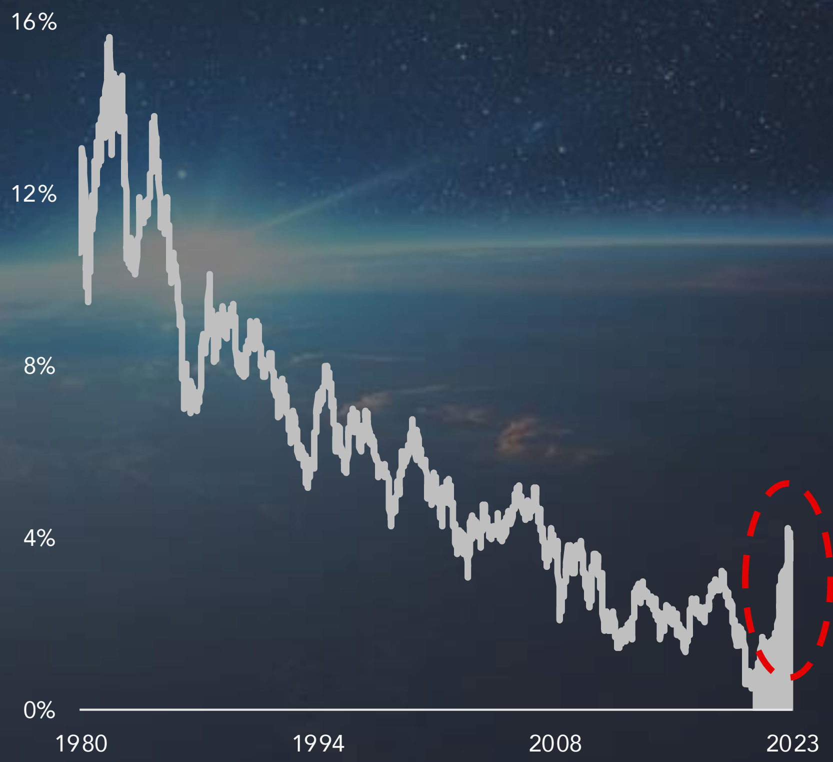


Source: (1-2) Bloomberg. Data as of January 12, 2023.

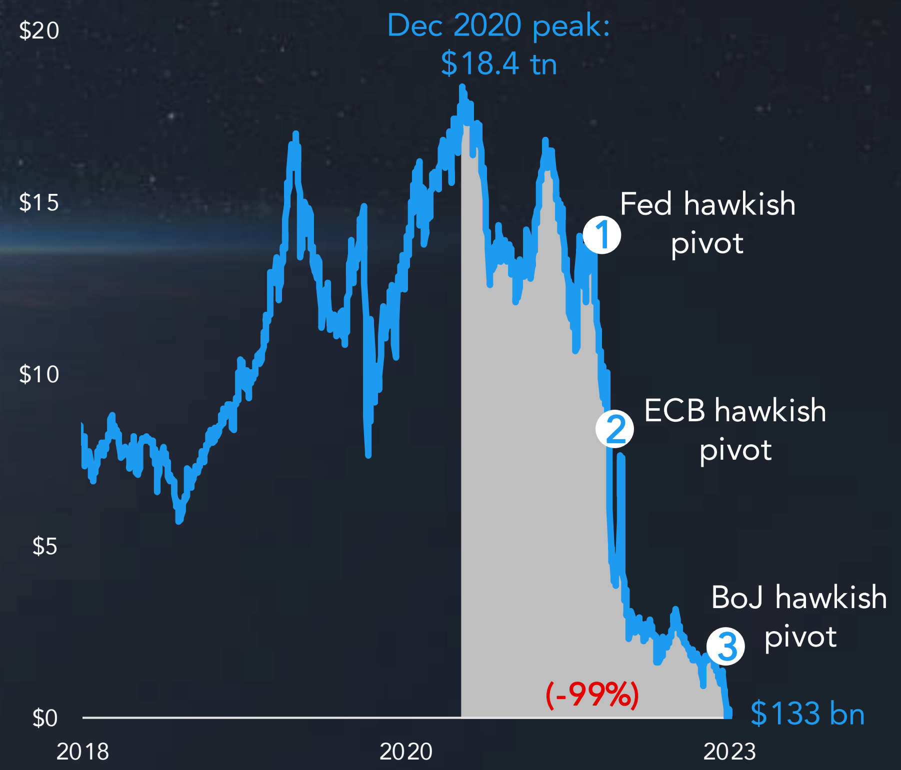
Regime Change for Rates

The 40 year bull market for bonds has ended. So too has the post GFC extraordinary period of Fed zero interest rate policy, or ZIRP (2008-2015, 2020-2022), and Europe's negative rates policy regime (2012-2022). Looking ahead, we expect US rates to trade in a new regime of elevated term premium that is modestly higher than the post GFC period, though likely below the levels of the decade prior to the GFC.

10 year UST



Global negative yielding debt, USD tn



Source: (1-2) Bloomberg. Data as of January 12, 2023.

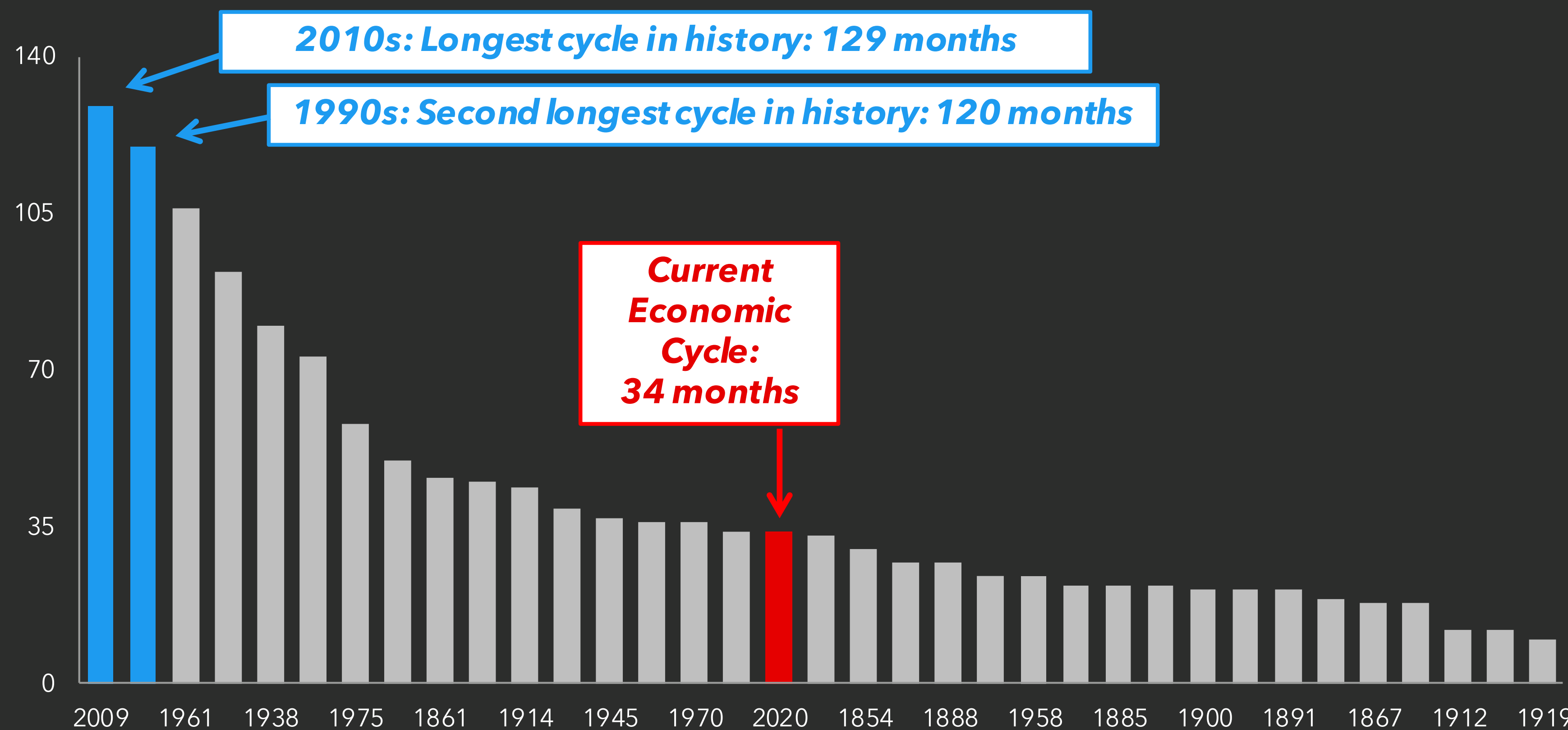
New Regime for the Economy

	OLD	NEW
Growth & Inflation	The great moderation	The great instability
	Longer economic cycles	Shorter economic cycles
	Secular stagnation (low growth & inflation)	Secular reflation (lower real & higher nominal growth)
	Disinflationary forces (i.e., e-commerce)	Inflationary pressures (i.e., energy transition)
	Persistent structural disinflation (below target)	Persistent structural inflation (above target)
	Peak China & EM growth	Lower China & EM growth
	More synchronized EM	More differentiated EM
	US consumer as world's largest	Asia's consumer as world's largest
	Deficient aggregate demand	Disruptions to global supply
	Lower DM gov't debt burdens	Higher DM gov't debt burdens

Shorter Economic Cycles

The two longest US economic cycles occurred during the "Great Moderation" of the last 40 years. More effective central bank inflation policy and improved business management of supply chains were important contributors to the length of recent cycles. In the new macro supercycle, however, business cycles are likely to be shorter and more vulnerable.

35 US recoveries since 1854

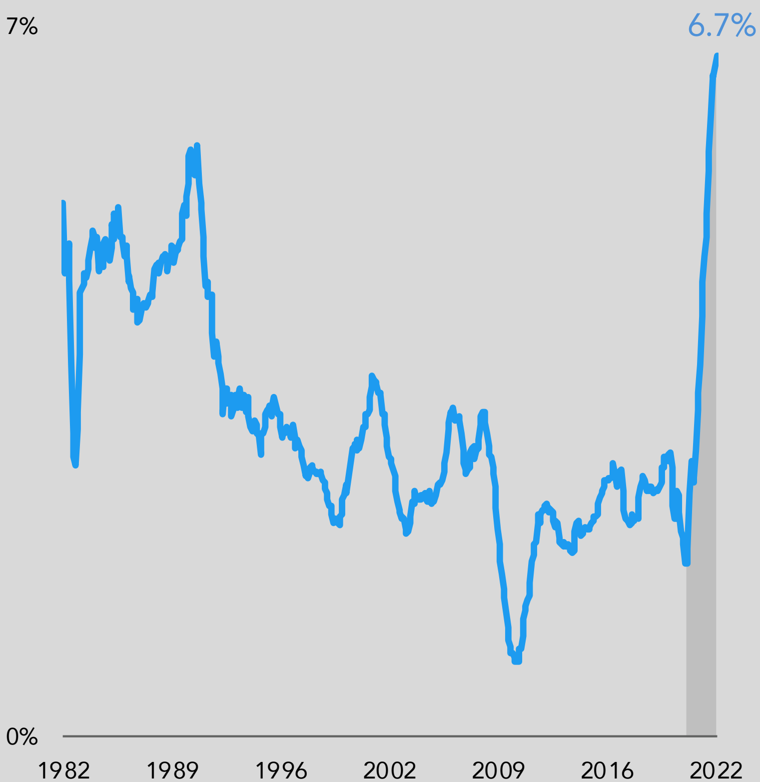


Source: (1) The National Bureau of Economic Research. Length of US recoveries as of January 2023.

Persistent & Structurally Higher Inflation

Thus far, the Fed has achieved just one of its three policy tightening objectives in 2022: goods inflation is rapidly declining, but services inflation (ex shelter) remains very high and labor markets extraordinarily tight. Looking ahead, several pervasive megatrends are likely to drive persistent and structurally higher inflation in the new macro supercycle compared to the "Great Moderation" of the last 40 years.

"Fed" sticky price inflation index, y/y



Mega-Trends Driving Structurally Higher Inflation

- Structural labor shortages, higher wages
- Under-supplied housing markets
- Energy transition
- ESG's acceleration
- De-globalization
- Restructuring global supply chains (security, resilience)
- Decade-long commodities supercycle
- US-China structural rivalry

Source: (1) Bloomberg. Data as of January 12, 2023. Sticky price inflation is Atlanta Fed index.

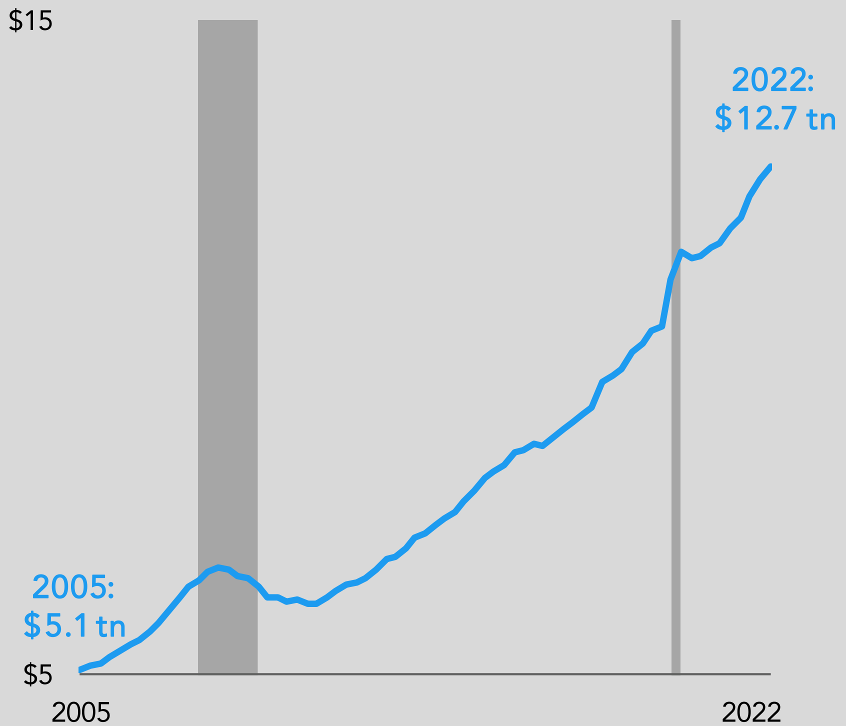
New Regime for Markets

	OLD	NEW
Markets	Volatility suppression	Higher volatility
	More correlated markets	Less predictable & uncorrelated risk
	"Easy" money	More rigorous investor scrutiny & differentiation
	40 year bond bull market	Modestly higher rates regime
	Lower rate term premium	Higher rate term premium
	Rapid Dollar strengthening	Sustained Dollar depreciation
	Dollar based global financial system	More de-dollarization & multi-currency settlement
	Petrodollar oil trading	More market fragmentation
	Commodities super-cycle "bust"	New structural commodities super-cycle
	Passive investor strategies	More "active" management
	Higher real investment returns	Lower real investment returns

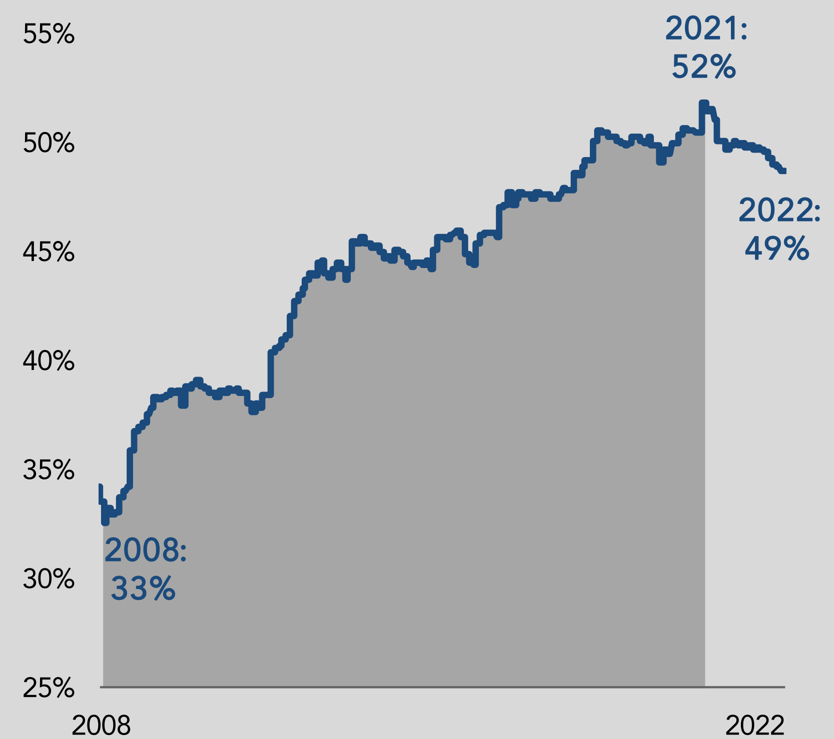
More Rigorous Investor Scrutiny & Differentiation

After the GFC, the ratings and credit quality profile of the US investment grade market declined during a period of "easy money" that peaked with historically low bond yields in June 2021. Over a nearly decade-long period of record bond issuance above $1 trillion per annum, corporates increased leverage to drive growth and investor returns. In the new macro supercycle, we expect more rigorous investor scrutiny of balance sheets, and greater differentiation across credit quality. In turn, we expect issuers to shift financing strategies in favor of deleveraging and ratings up-tiering over GCP and share repurchases.

Nonfinancial corporate debt & loans (USD, tn)



BBB-rated % of IG index face value

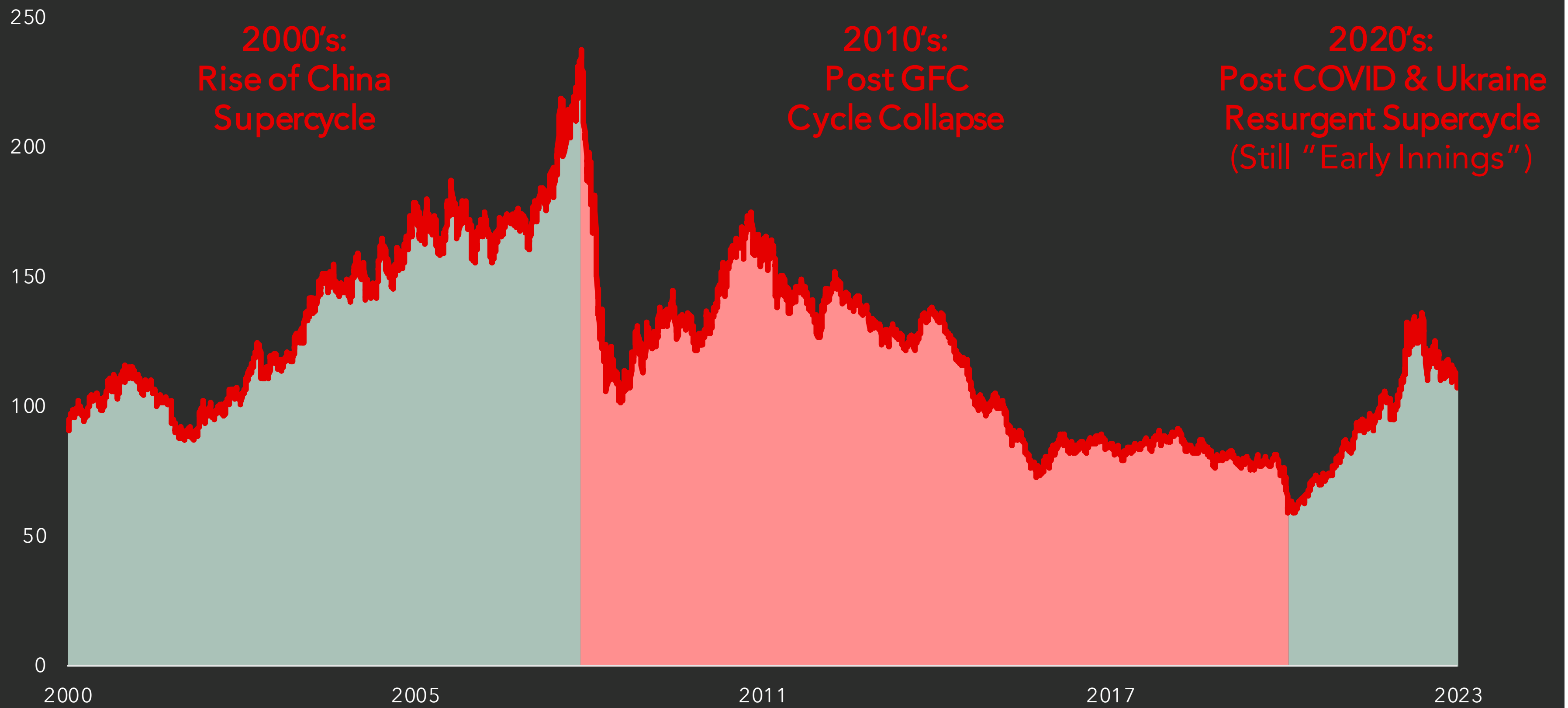


Source: (1) Board of Governors of the Federal Reserve System (FRED), data through Q3 2022. (2) Bloomberg. Data as of January 12, 2023.

Resurgent Commodity Supercycle

Commodity supercycles are relatively rare events. According to MUFG's Head of Commodities Research, Ehsan Khoman, we are in the early stages of a new, supply constrained commodities supercycle that, despite near term demand side headwinds, is likely to last a decade. Key drivers of the supply constrained thesis include: de-globalization, energy transition, regulatory dynamics, labor shortages, investor demands and years of structural under-investment.

Bloomberg commodities index

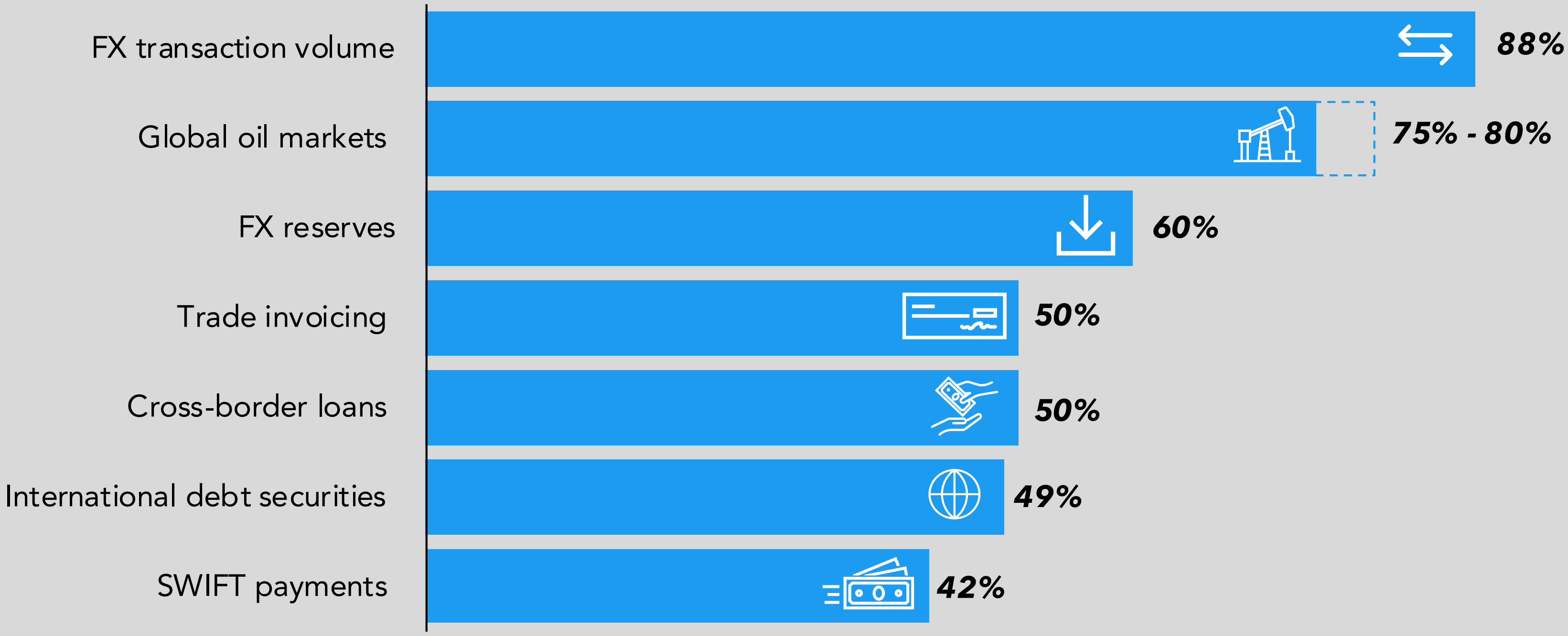


Source: Bloomberg. Data as of January 12, 2023.

More De-Dollarization & 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 multi-currency 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.

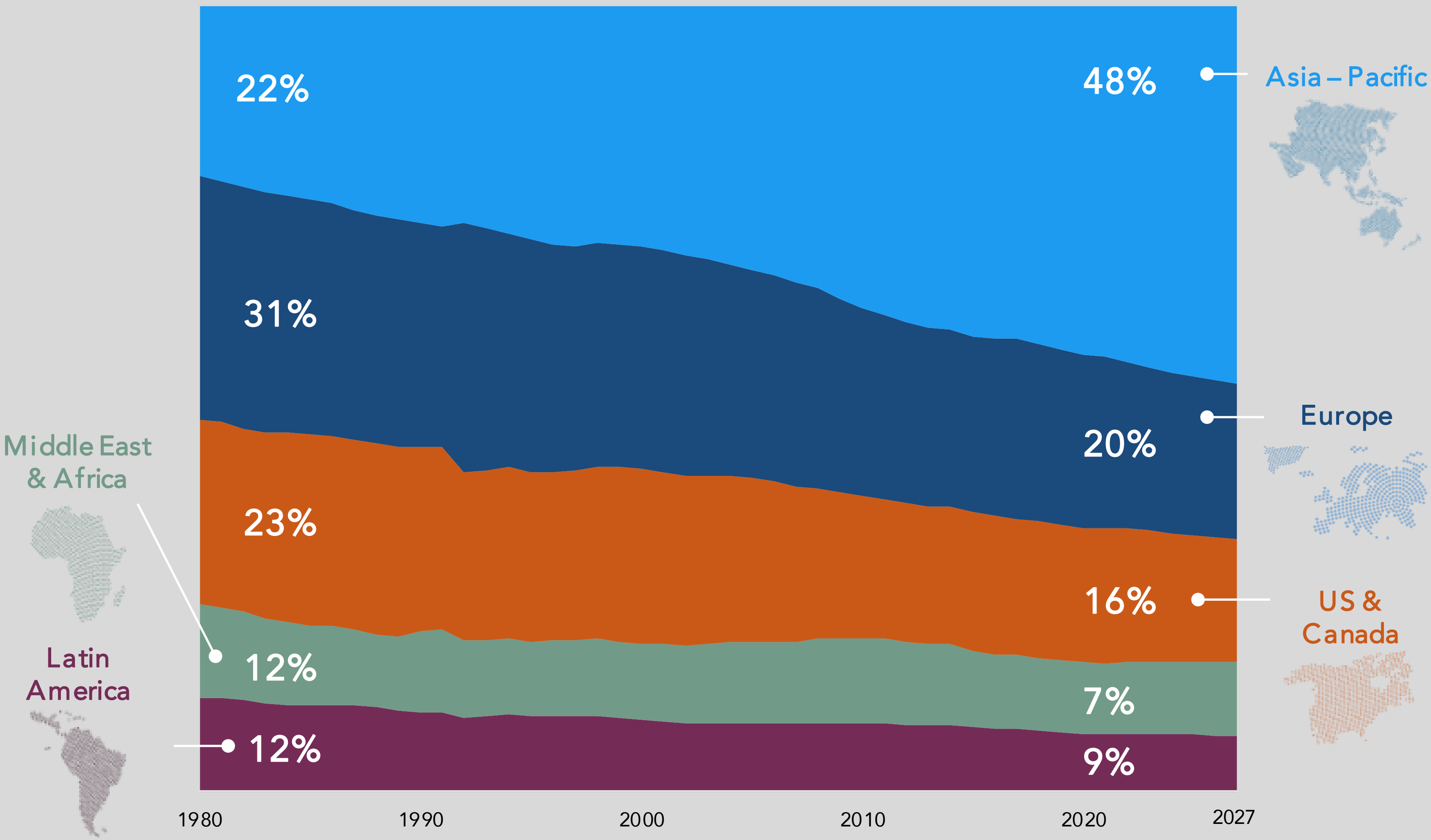
New Era for Geopolitics

Geopolitical & Power Politics

OLD	NEW
Unipolar geopolitical system	Multi-polar geopolitical system
American hegemony	Axes of power, East & West
Lower friction geopolitics	Higher friction geopolitics
Cold wars	More hot wars
US-China trade wars	US-China technology wars
“Peace dividend” in Europe	Rapidly rising defense spending
Rising globalism	Rising nationalism
Rise of China (China’s decades)	Emergence of India (India’s decade)
More synergistic US-China relationship	More confrontational US-China rivalry
Less assertive Chinese foreign policy	Greater US-China geopolitical competition

Gravity of Global Economy Shifting East

Share of global GDP (at purchasing-power parity)



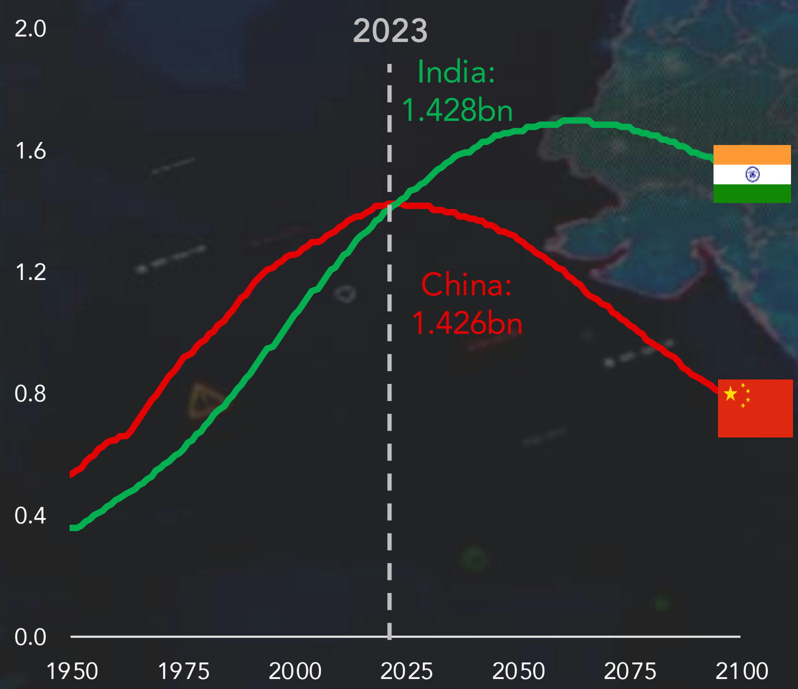
Source: (1) IMF. Data as of December 12, 2022.

The Emergence of India

In 2023, India will surpass China to become the world's most populous country. As one of the fastest growing economies in the world, India is also poised to surpass Germany and Japan to become the world's 3rd largest economy within 5 years. Key tailwinds driving "the rise of India" include: strong domestic economy (rising middle class), restructuring of global supply chains (friend-shoring), leadership in digitization and energy transition, and pro-growth government policy.

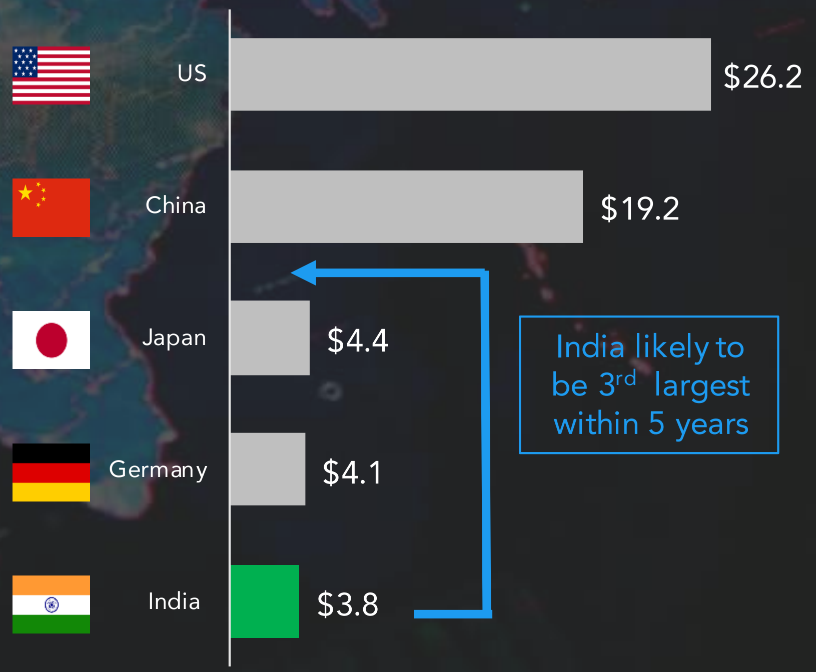
Most populated country in 2023

Total population, billions



3rd largest economy by 2027

GDP in 2023, USD tn



Source: (1) UN World Population Prospects 2022. (2) World Bank. GDP in current prices.

Semiconductor Showdown in China

Selected US – China technology sector policy actions

 President Trump	May 2019	US national security order to ban Huawei
	Feb 2020	US bans government purchases of Huawei gear
	Jun 2020	US FCC designates Huawei & ZTE as national security threats
	Nov 2020	Executive order prohibiting Americans from investing in 31 tech firms
	Dec 2020	4 additional Chinese technology companies added to blacklist
 President Biden	Mar 2021	US FCC blacklists 5 Chinese telecom companies
	Apr 2021	US Commerce Department blacklists 7 Chinese supercomputing entities
	Apr 2021	US Senate Foreign Relations Committee approves the Strategic Competition Act of 2021
	Jun 2021	US Senate passes the Innovation and Competition Act of 2021
	Jul 2021	US adds 23 Chinese companies to economic blacklist
	Oct 2021	US FCC revokes China Telecom America's services authority
	Nov 2021	US blacklists over a dozen Chinese quantum computing companies
	Dec 2021	US OFAC adds China's top AI firm to the US's investment blacklist
	Dec 2021	US Treasury Department blacklists 8 Chinese technology firms
	Dec 2021	US Commerce Department adds 24 more Chinese entities to its "entity list"

Source: (1) Veda Partners (Treyz). China Briefing "US – China Relations in the Biden Era: A Timeline" (Dezan Shira & Associates).

Semiconductor Showdown in China

Selected US – China technology sector policy actions

President Biden

Feb 2022	US House of Representatives passes America Competes Act
Feb 2022	US adds 33 Chinese entities to its "unverified list"
Mar 2022	The United States Trade Representative (USTR) doubles down on competition with China in annual report
Mar 2022	SEC releases list of five Chinese companies for possible delisting from US stock markets
Mar 2022	SEC adds Weibo to list of Chinese companies for possible delisting from US stock exchanges
Aug 2022	US passes CHIPS & Science Act
Aug 2022	The US adds another seven China entities to its export control list
Aug 2022	US and China securities regulators reach agreement on auditing of US-listed Chinese companies
Oct 2022	Commerce Dept. issues two new rules on restricting US & foreign firms shipping high-end microchip manufacturing equipment to China
Oct 2022	Commerce Dept. adds 31 Chinese entities to the “unverified list”
Oct 2022	US announces restrictions on US citizens and green card holders working for certain Chinese semiconductor & AI companies
Dec 2022	US announces ongoing talks with Japan and Netherlands to restrict advanced chip exports to China
Dec 2022	US Congress proposes bill to add Huawei and other Chinese telecom companies to Treasury “specially designated nationals” list
Dec 2022	US Congress proposes ban on Chinese-linked social-media platform TikTok
Dec 2022	Commerce Department adds 36 Chinese companies to “entity list”

Source: (1) Veda Partners (Treyz). China Briefing “US - China Relations in the Biden Era: A Timeline” (Dezan Shira & Associates).

New Era of Fragmented Globalization

Globalization, Trade & Supply Chains

OLD	NEW
Multi-lateral "free" trade agreements	Unilateral trade policy intervention
Expansive globalization	Fragmented globalization
Off-shoring	Friend / Near / On-shoring
"Just-in-time" supply chains	"Just-in-case" supply chains
Speed & cost	Security & resilience
More export-driven China	More consumption-driven China
China reliance on foreign tech & FDI	More inward looking "fortress" China
Surplus global production capacity	Structural global labor shortages
Participation-driven shortages of older workers	Demographic-driven shortages of younger workers

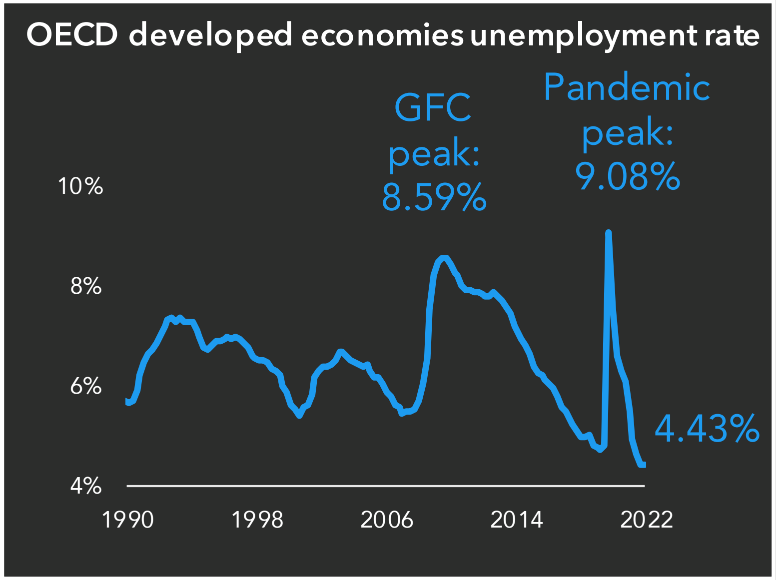
"Structural" Shortfalls in Labor Markets

Structural challenges in labor markets are likely to be a persistent theme of the new macro supercycle, with implications for inflation, corporate capex spending & profit margins

More COVID-related

- COVID fears
- COVID visa / travel restrictions
- COVID behavior changes
- Elevated consumer savings
- Child & elderly care challenges
- Accelerating baby boomer retirements
- Aging demographics
- "Mismatches" between job needs and skillsets
- Low immigration
- Decade-long disruption from technology disintermediation

More STRUCTURAL

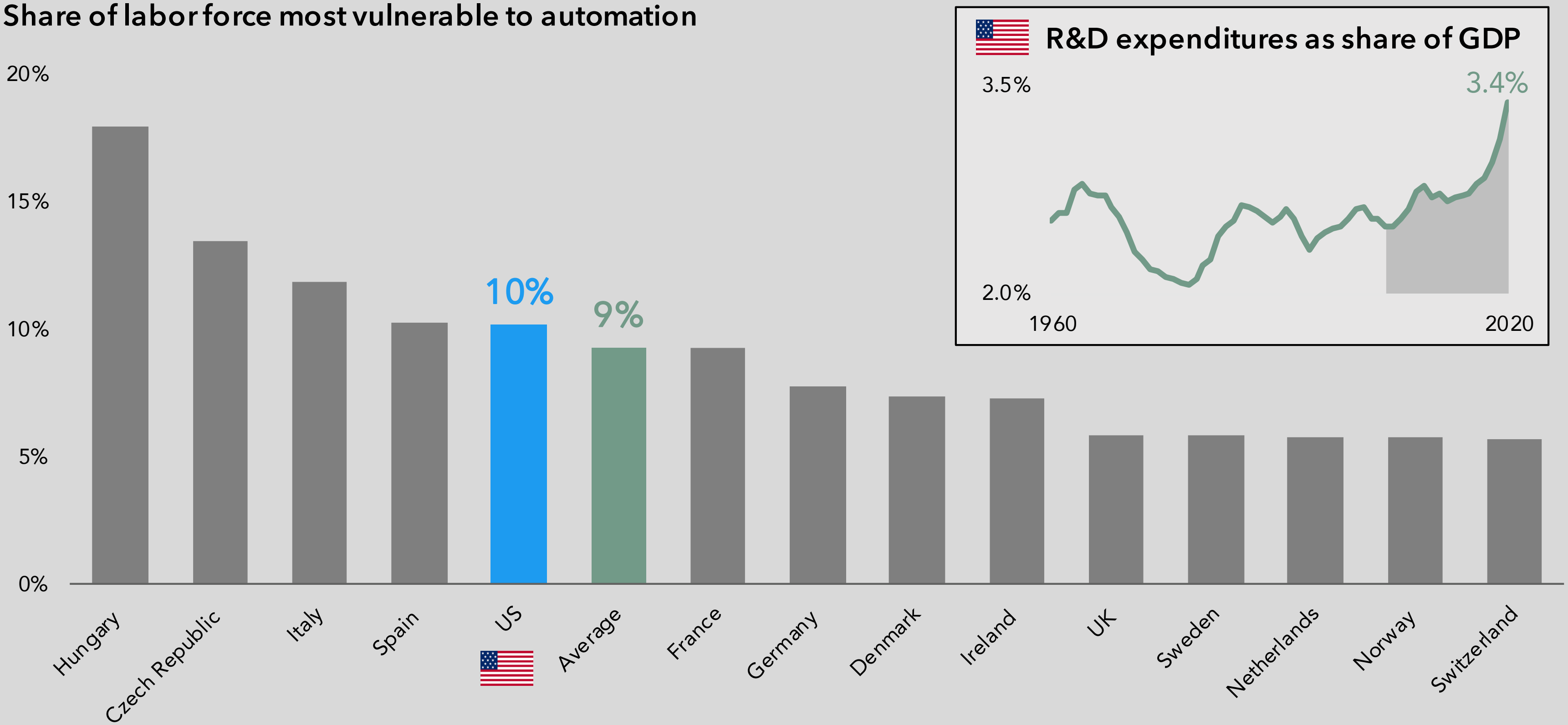


Source: (1) Bloomberg Government, "A Recession May Not Drive up Unemployment: New Economy Daily" (November 28, 2022). Data as of January 12, 2023.

Productivity-Enhancing Technology Investment

Historically, corporates have accelerated productivity-enhancing investments when faced with supply-side shortages (i.e., supply chain, labor), and that is exactly what they are doing now. Even as corporate capex spending slows with declining growth and margins, investment in tech and R&D continues to rise. Corporate investment in digitization, robotics and automation have been notably robust given the "structural" challenges in labor markets, including: aging populations, low participation rates, post COVID behavior changes, tighter immigration policies and skill / training shortfalls.

Share of labor force most vulnerable to automation



Source: (1) OECD, "What skills and abilities can automation technologies replicate and what does it mean for workers?" (December 13, 2022). (2) WSJ, "Stagnant Scientific Productivity Holding Back Growth" (November 17, 2022). National Center for Science and Engineering Statistics (R&D). Penn World Table (productivity 1965-97). US Labor Department (productivity 1998-2021).

New Era for Gov't Activism & Regulation

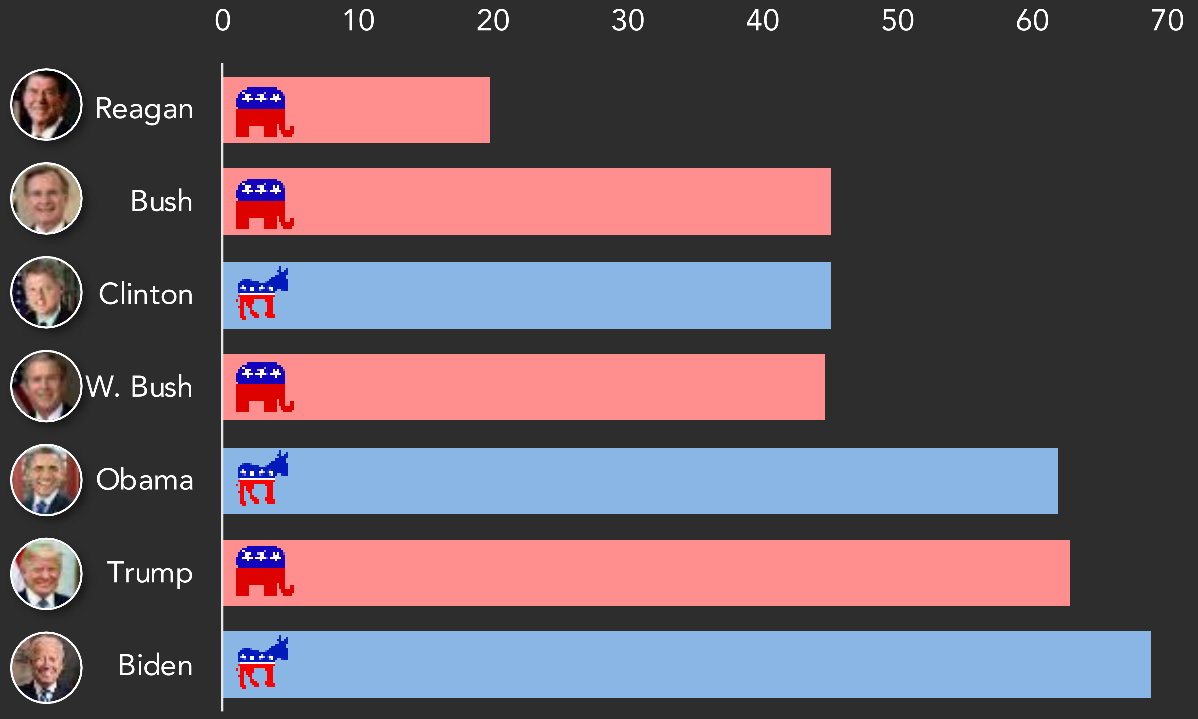
Gov't Activism & Regulation

OLD	NEW
Laissez-faire economic policy ("invisible hand")	State directed industrial policy ("visible hand")
Less government regulation	More regulatory activism
Cost-driven energy policy	Balancing energy security & sustainability
ESG's rapid acceleration	ESG "road bumps"
Shareholder supremacy	Stakeholder capitalism (investors, employees, regulators, public)
Lower global taxation	Higher global taxation

Government Activism

In the last 25 years, the US economy has endured three economic crises (tech bubble in 2000, GFC in 2008, and COVID in 2020), each of which led to more interventionalist policy in Washington. In addition to industry specific government bailout packages, policy makers in both parties have embraced tariffs to combat China's rapid rise and the use of tax incentives to advance economic agendas. Incentives in the US tax code, adjusted for inflation, have doubled from $729.5 billion in 1996 to over $1.4 trillion today.

Average number of economically significant new regulations per year



"Adam Smith's invisible hand—popularized by Ronald Reagan in the 1980s and adopted by Bill Clinton in the 1990s—has been replaced by a muscular arm, ***in which Washington uses tax credits, tax rebates, loans, loan guarantees, regulations, tariffs, spending programs and other tools to nudge a market-driven economy*** that has proven far more turbulent and uneven than many people expected it to become a quarter-century ago."

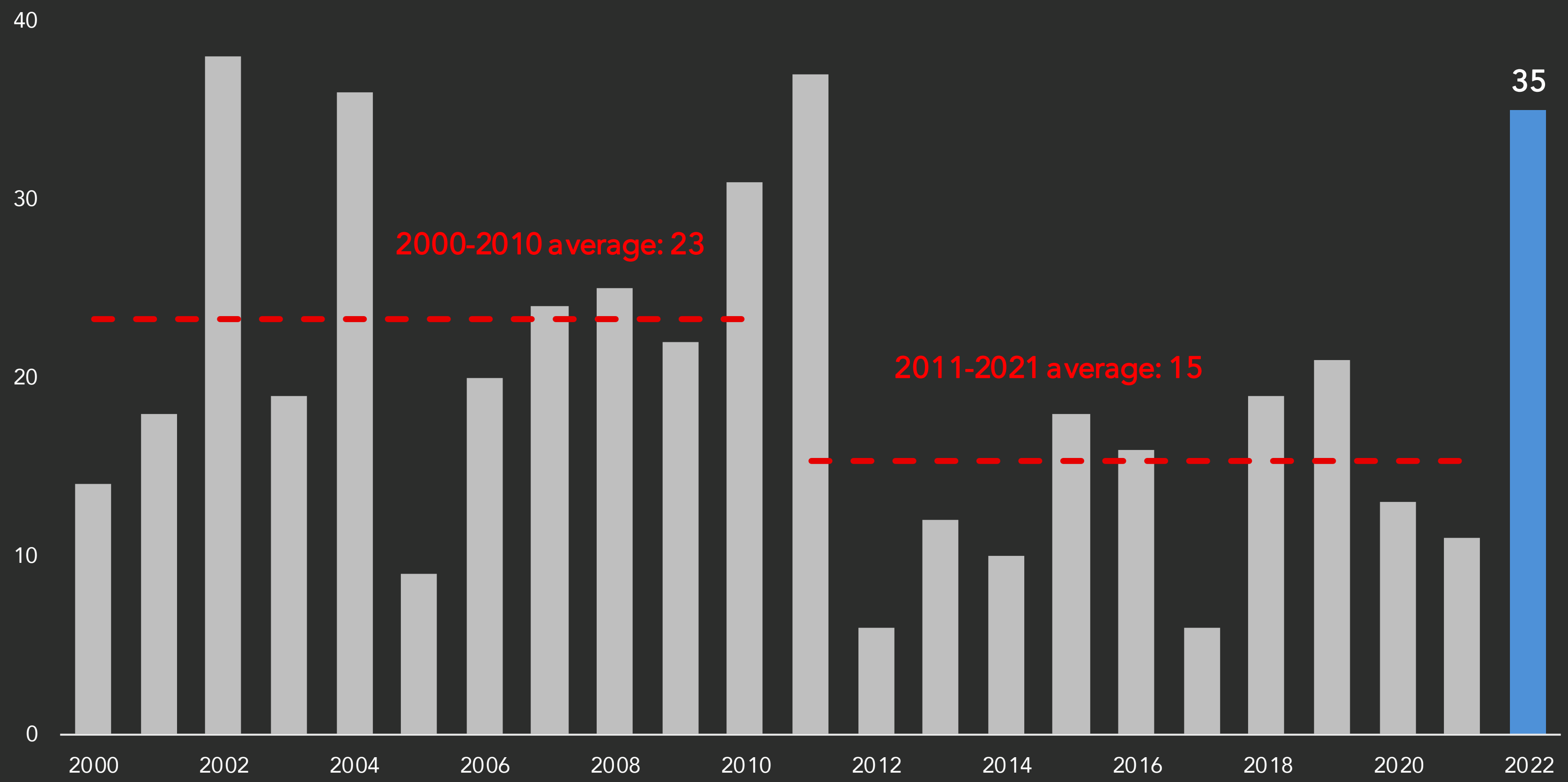
Jon Hilsenrath, senior writer for the WSJ

Source: (1) WSJ, "New Climate, Tech Bills Expand Role of Government in Private Markets" (August 12, 2022). Economically significant is defined as those rules that impact at least $100 million in activity. George Washington University Regulatory Studies Center.

Regulatory Activism

In 2022, the SEC proposed 35 new rules on a range of topics, including: short selling & settlement rules, ESG & disclosure rules, cross-regulatory consistency, and market structure and trading rules. While 2022 was the most active year for proposed rules since 2011, we expect 2023 will be another active year for regulators. Many of the proposed rules are yet to be finalized or implemented.

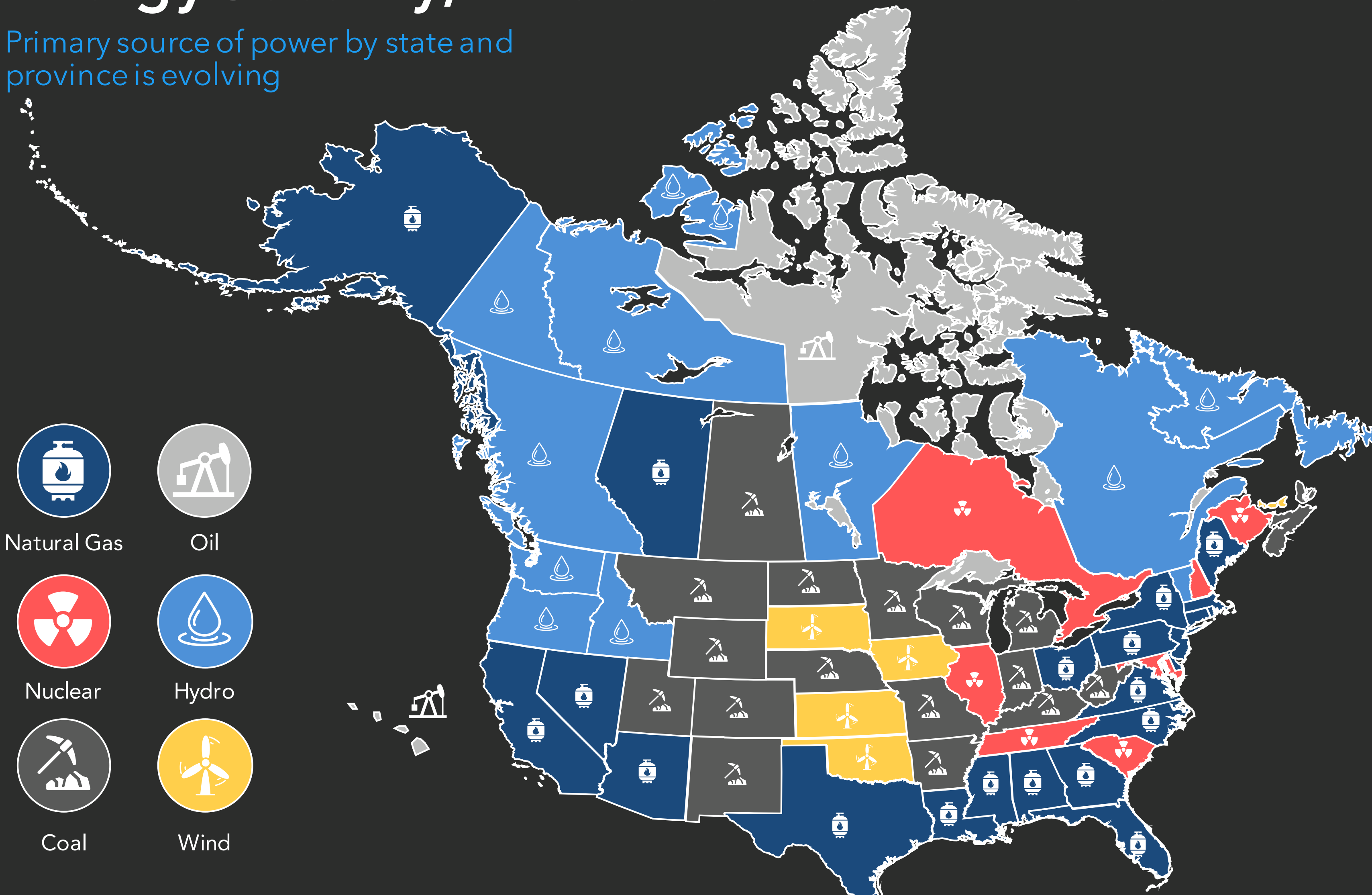
# of SEC proposed rules, by year



Source: (1) SEC. Phil Mackintosh (NASDAQ Chief Economist). Data as of January 12, 2023.

Energy Security, Diversification & Transition

Primary source of power by state and province is evolving

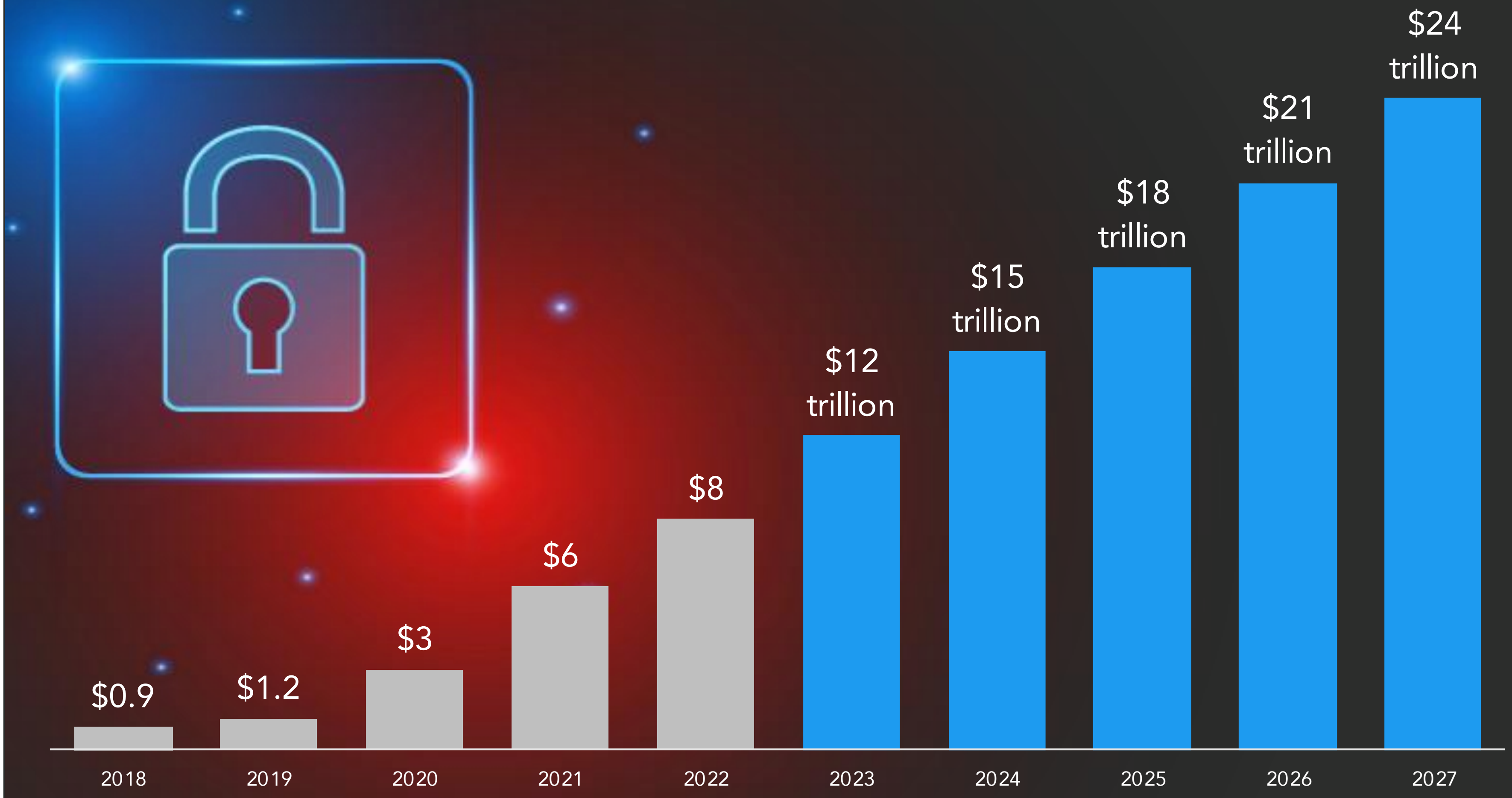


Source: NEI, Natural Resources Canada, https://www.energyminute.ca/, https://www.nei.org/resources/statistics/state-electricity-generation-fuel-shares, https://www.cer-rec-gc.ca/en/data-analysis/energy-markets/provincial-territorial-energy-profiles/

Cybercrime Becoming Larger Security Risk

Cybercrime is expected to skyrocket in the coming years and is likely to be a key contributor to greater instability in the new macro supercycle

Estimated cost of cybercrime globally, USD tn



Source: (1) National Cyber Security Organizations. FBI. IMF. Data as of November 2022. Statista Technology Market Outlook.

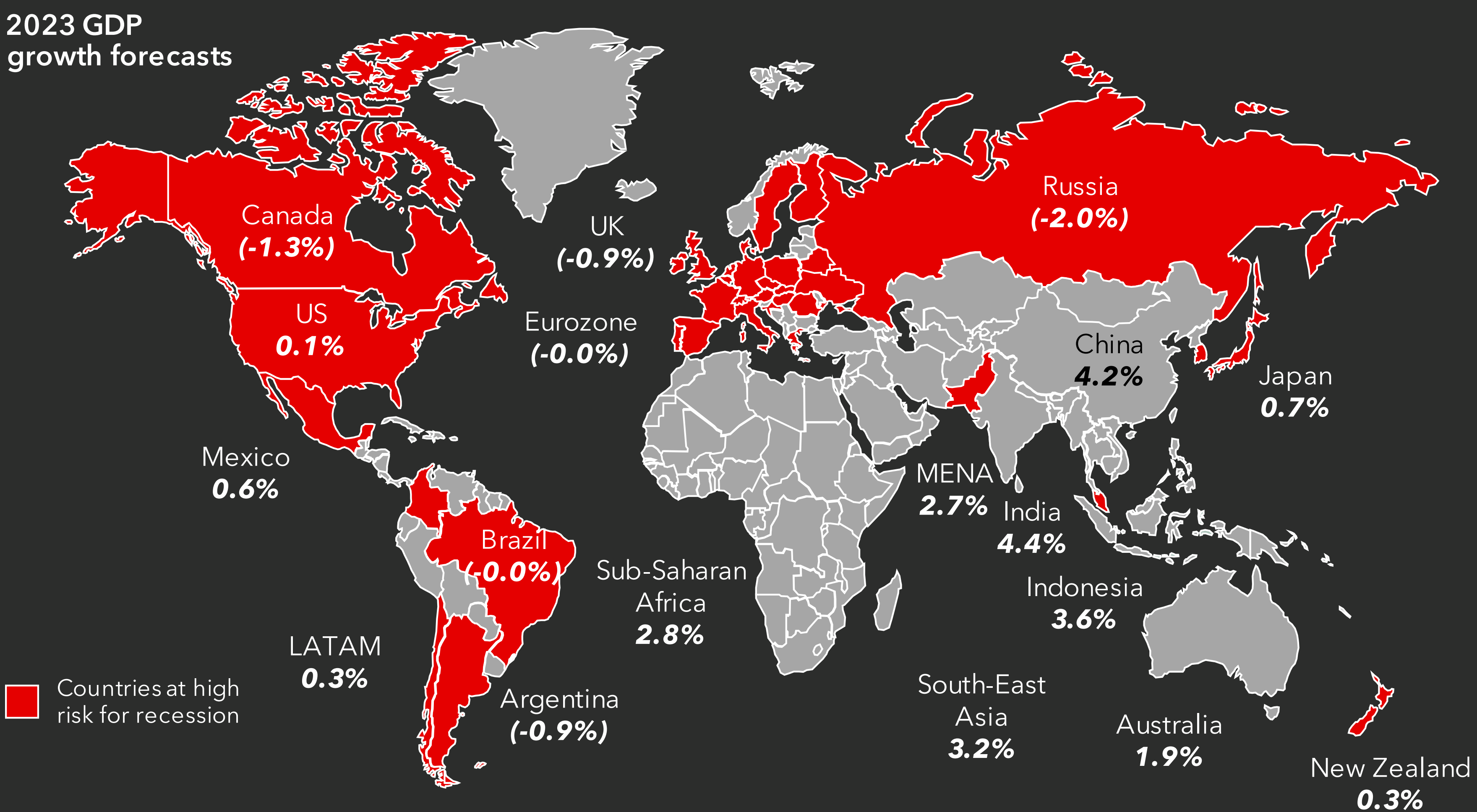
2 The Global Economy in 2023

“We do have competition - but it is competition between consumers for goods. Absurd! Producers should compete with each other and run after consumers, not the other way around.”

Nikolai Petrakov, Mikhail Gorbachev’s economic advisor (late 1980s)

Highly Telegraphed, Rolling Recessions

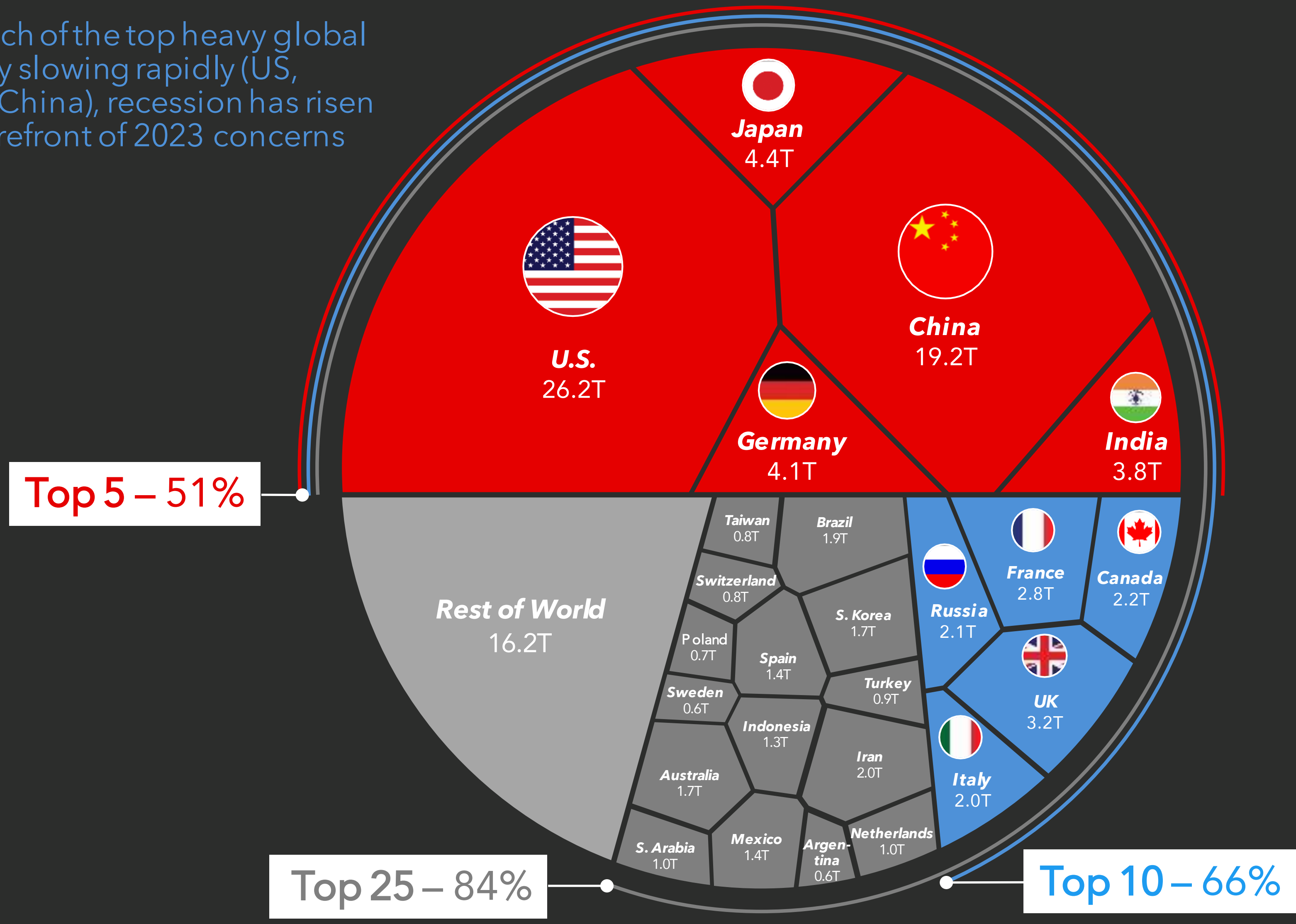
In aggregate, countries representing nearly 50% of global GDP are at "high risk" for recession in 2023, in what may be one of the most highly telegraphed global recessions in the post WW2 period



Source: Oxford Economics. Bloomberg. Data as of January 12, 2023. Based off of economies that are high risk, but not necessarily forecast for recession 2023.

Top Heavy Global Economy Slowing Down

With much of the top heavy global economy slowing rapidly (US, Europe, China), recession has risen to the forefront of 2023 concerns

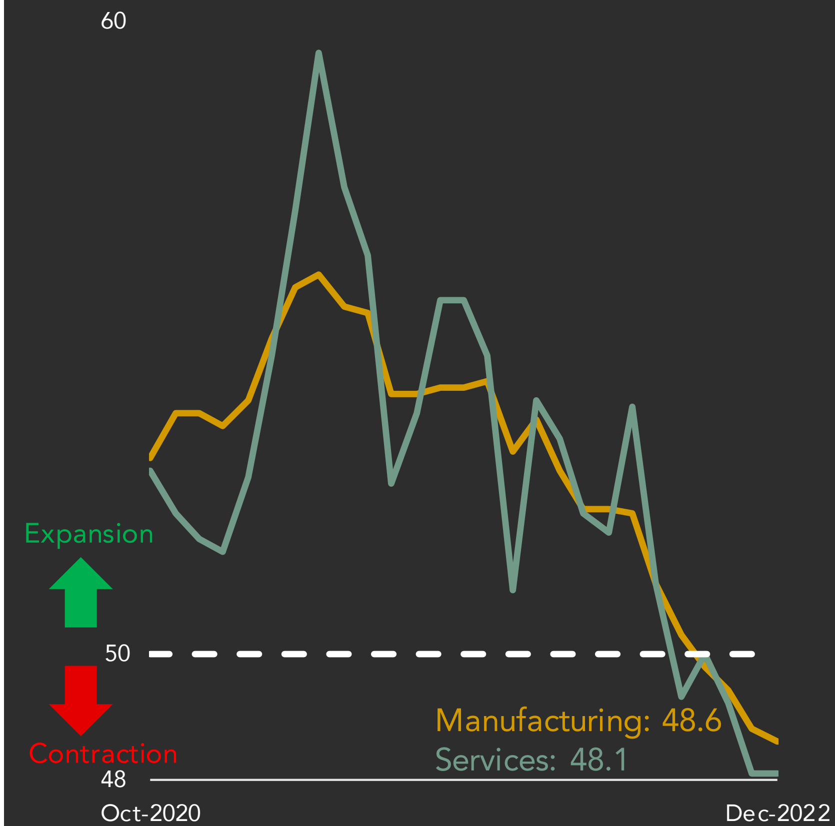


Source: International Monetary Fund. Visual Capitalist

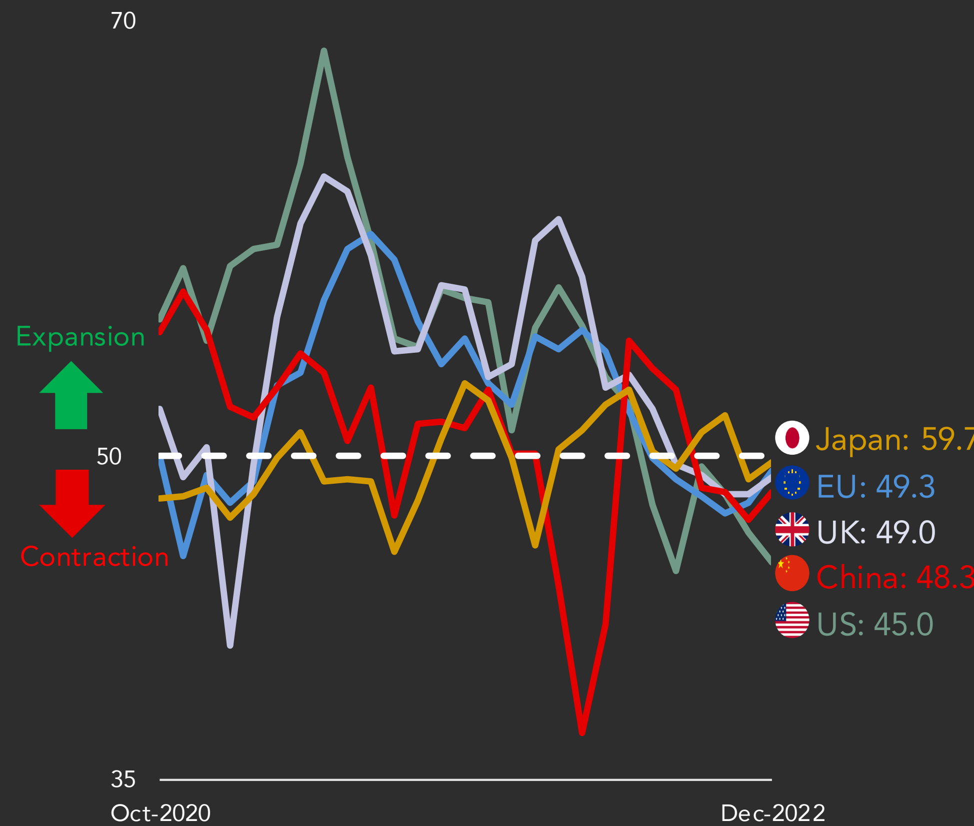
PMI Data Signaling Global Slowdown

Global manufacturing and services data, historically a reliable signal of growth 6 months ahead, has dipped into contraction territory at both a global level, and also across several of the world's largest economies

Global PMI



Composite PMI

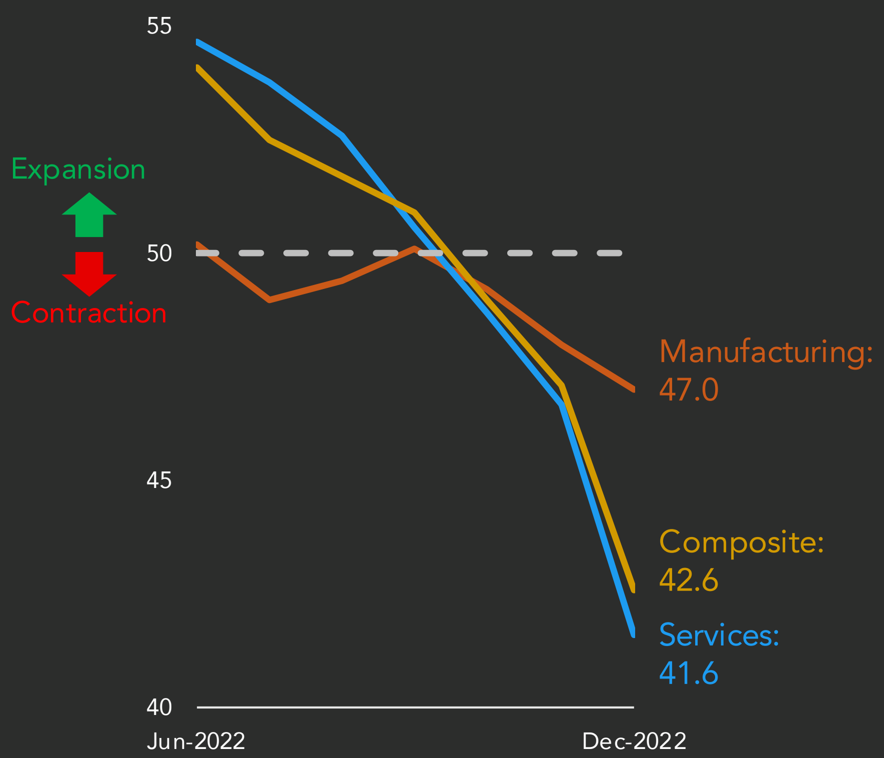


Source: (1-2) Bloomberg. Data as of January 12, 2023. PMI is S&P Global. China is Caixin.

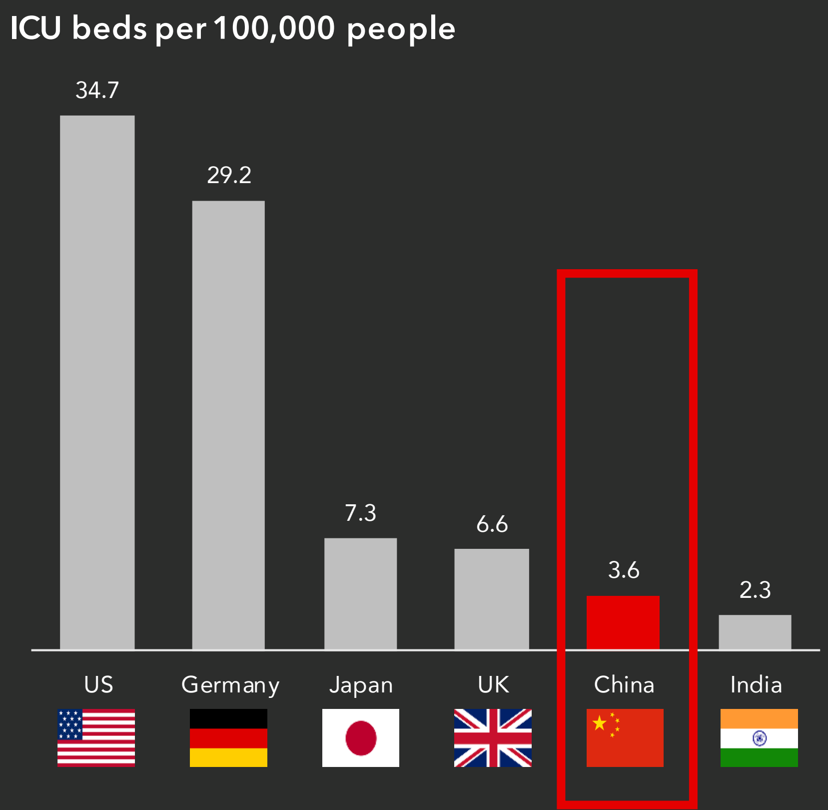
China's Complicated COVID Reopening

By transitioning rapidly from a protracted multi-year lock down to a hasty, unplanned reopening, China's COVID policy errors pose substantive risks to both China's economy and global supply chains in the 1H 2023. The economic impact, however, while potentially significant, is likely to be short-lived. By mid 2023, stronger consumer activity, policy easing and a property market closer to bottom should support an acceleration of economic activity in the 2H 2023 and 2024.

China's Manufacturing, Services & Construction PMI



China's Healthcare System

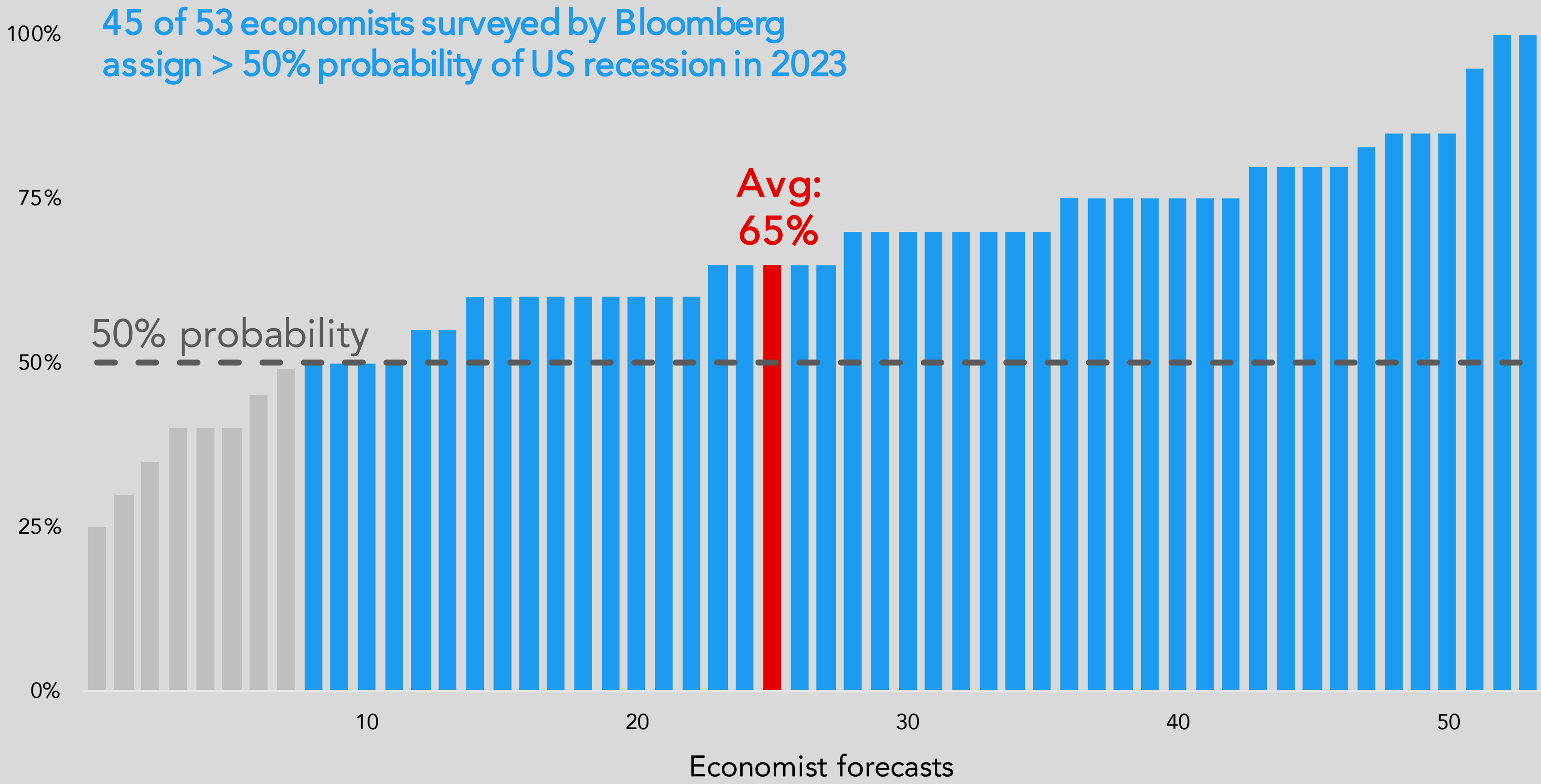


Source: (1) Bloomberg. Data as of January 12, 2023. (2) World Population Review.

Probability of US Recession in 2023

If the US economy manages to avoid recession in 2023, it will be one of those rare occasions where the historically reliable recession signals (yield curve, PMI, inflation, etc.) were wrong

Consensus US recession probability in next 12 months

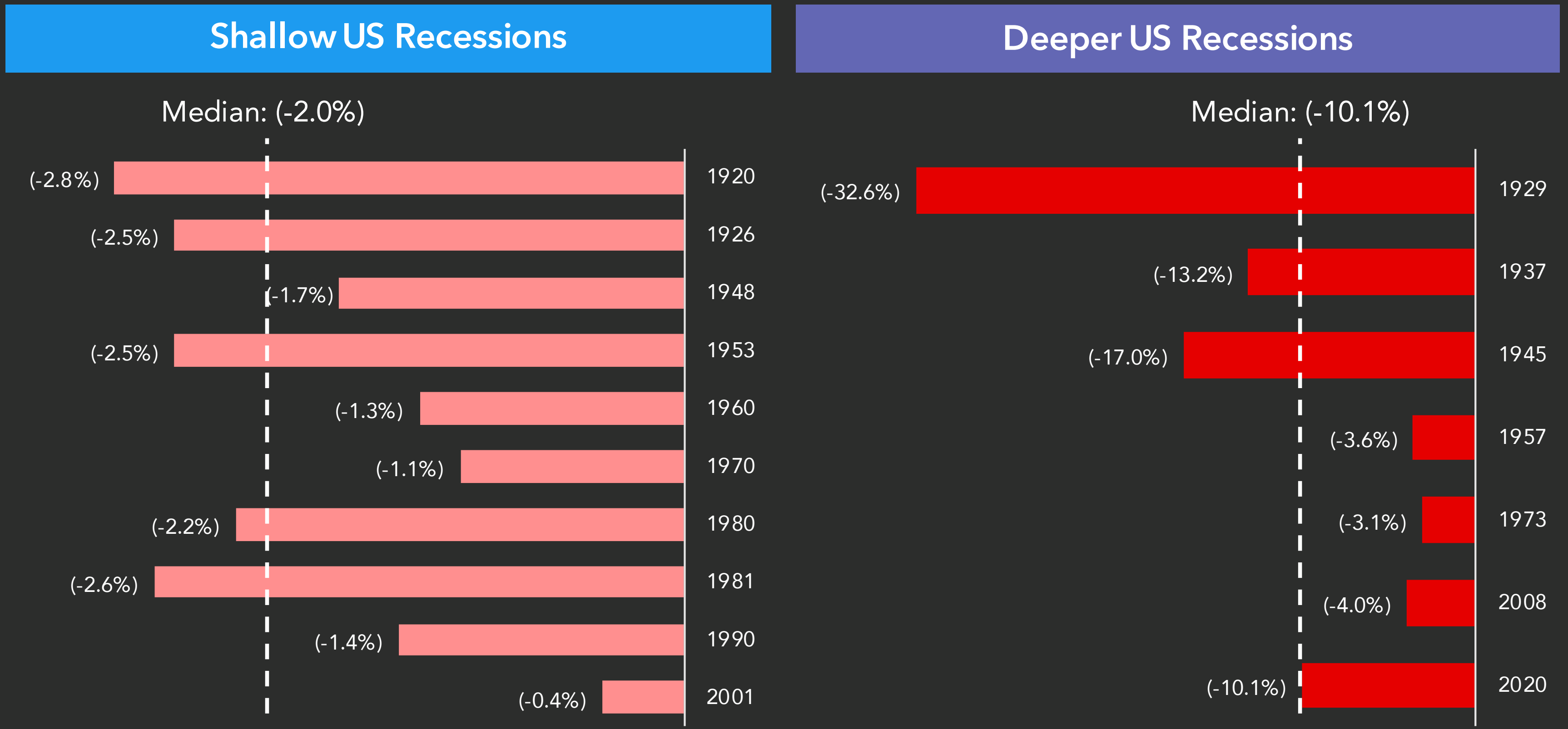


Source: (1) Bloomberg. Data as of January 12, 2023. Recession probability forecasts from Bloomberg contributors.

Shallow Recession, Shallow Recovery

While US growth is decelerating in 2023, we expect a "short and shallow" (i.e., 2001) recession to begin by mid year given the strength of the consumer, corporate and financial sector balance sheets, as well as tightness in labor markets. Structural factors (i.e., aging demographics, high debt levels) and limited fiscal-monetary stimulus will create headwinds for the strength of the recovery.

Real GDP contraction (peak to trough)

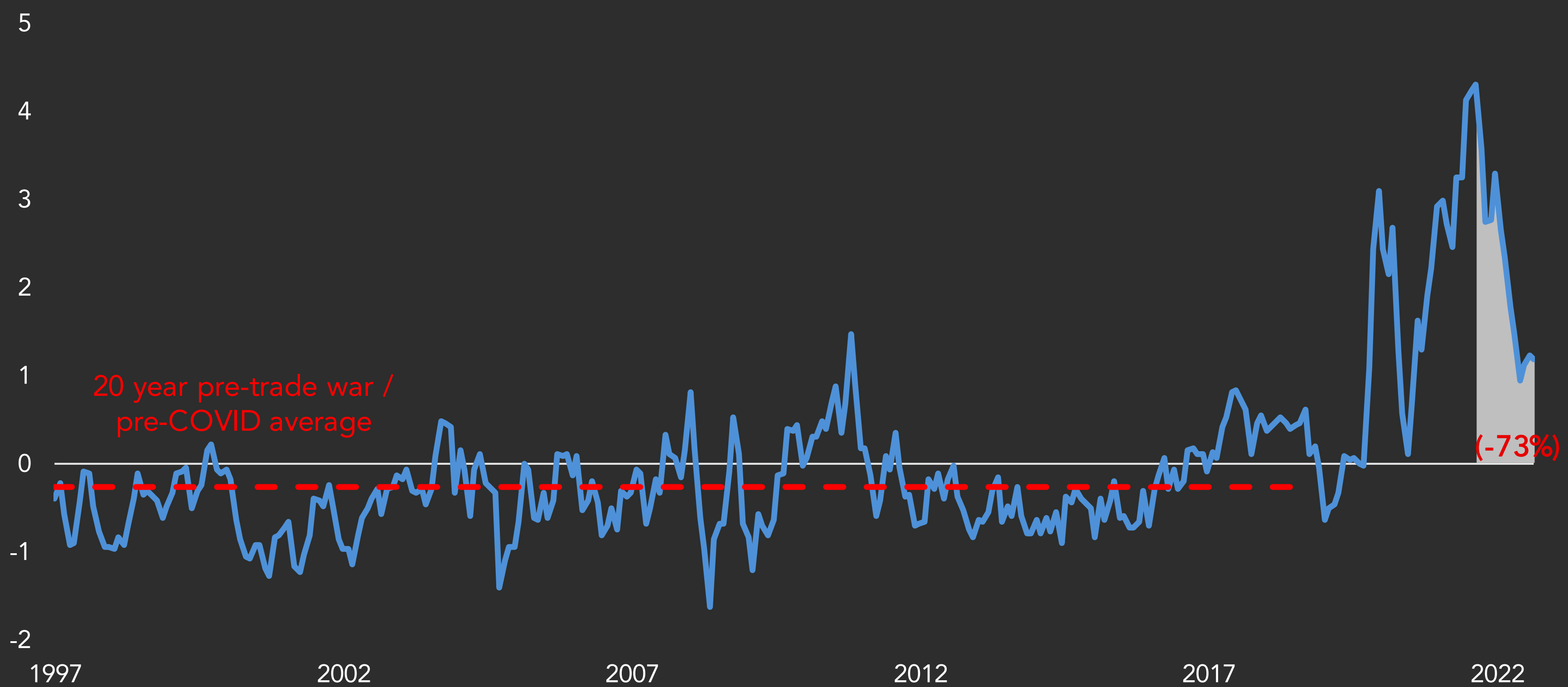


Source: (1-2) Bloomberg. NBER. Haver.

Significant Supply Chain Improvements Going into 2023

The Federal Reserve's Global Supply Chain Pressure Index, which examines 27 variables from cross-border transportation costs to country-level manufacturing data (delivery times, backlogs, purchased stocks) in seven regions (US, China, Eurozone, Japan, South Korea, Taiwan and the UK), has declined over 70% since its peak in December 2021.

New York Fed global supply chain pressure index



Source: (1) Bloomberg. New York Fed index based on data from the Bureau of Labor Statistics; Harper Petersen; Baltic Exchange; IHSMarkit; ISM; Haver Analytics; Bloomberg; NY Fed researchers' calculations. Index is normalized such that zero indicates that the index is at its average value with positive values representing how many standard deviations the index is above this average and negative values the opposite. Data updated as January 12, 2023.

Sustainable Recovery More Likely in 2024

GDP growth forecasts, y/y

Region / country	2023	2024
North America		
Canada	(-1.3%)	2.2%
Mexico	0.6%	1.8%
US	0.1%	0.8%
Eurozone	**(-0.0%)**	**1.8%**
Germany	(-0.7%)	2.2%
Ireland	1.2%	2.2%
Spain	1.1%	2.0%
France	0.1%	1.6%
Netherlands	0.4%	1.5%
Finland	(-0.2%)	1.4%
Italy	(-0.0%)	1.0%
Other Europe		
Russia	(-2.0%)	3.2%
Poland	(-0.6%)	2.9%
Czech Republic	(-0.7%)	2.8%
Denmark	0.6%	2.4%
Switzerland	0.2%	2.1%
Sweden	(-0.4%)	2.0%
Turkey	0.9%	2.0%
Norway	2.0%	1.5%
UK	(-0.9%)	1.5%

Region / country	2023	2024
APAC	**3.2%**	**4.2%**
India	4.4%	7.2%
Philippines	3.2%	6.0%
Indonesia	3.6%	5.7%
Vietnam	4.0%	5.3%
China	4.2%	4.7%
Singapore	0.7%	3.0%
New Zealand	0.3%	2.4%
South Korea	1.0%	2.3%
Australia	1.9%	2.0%
Japan	0.7%	1.5%
LatAm	**0.3%**	**2.5%**
Brazil	(-0.0%)	2.9%
Colombia	(-1.5%)	1.9%
Argentina	(-0.9%)	1.8%
Chile	(-1.2%)	1.7%
MENA	**2.7%**	**3.1%**
UAE	3.5%	4.6%
Sub-Saharan Africa	2.8%	3.2%
Saudi Arabia	2.5%	3.1%
South Africa	1.0%	1.4%

Source: (1) Oxford Economics. Data as of January 6, 2023.

3 Global Policy in 2023

“Self sufficiency is a fantasy for any large country, even the US and China, when it comes to semiconductor chips.”

Dan Wang, Technology analyst for Gavekal Research

The FOMC in 2023

The Federal Open Market Committee (FOMC) in 2023

2023 FOMC

Board of Governors

- **Jerome Powell** Chair of FOMC
- **Lael Brainard** Vice Chair Board of Governors
- **Michael Barr** Vice Chair for Supervision
- **Christopher Waller**
- **Michelle Bowman**
- **Lisa Cook**
- **Philip Jefferson**

Voting Districts

- **John Williams** Vice Chair of FOMC (New York)
- **Austan Goolsbee** (Chicago)
- **Patrick Harker** (Philadelphia)
- **Lorie Logan** (Dallas)
- **Neel Kashkari** (Minneapolis)

Hawk

Neutral

Dove

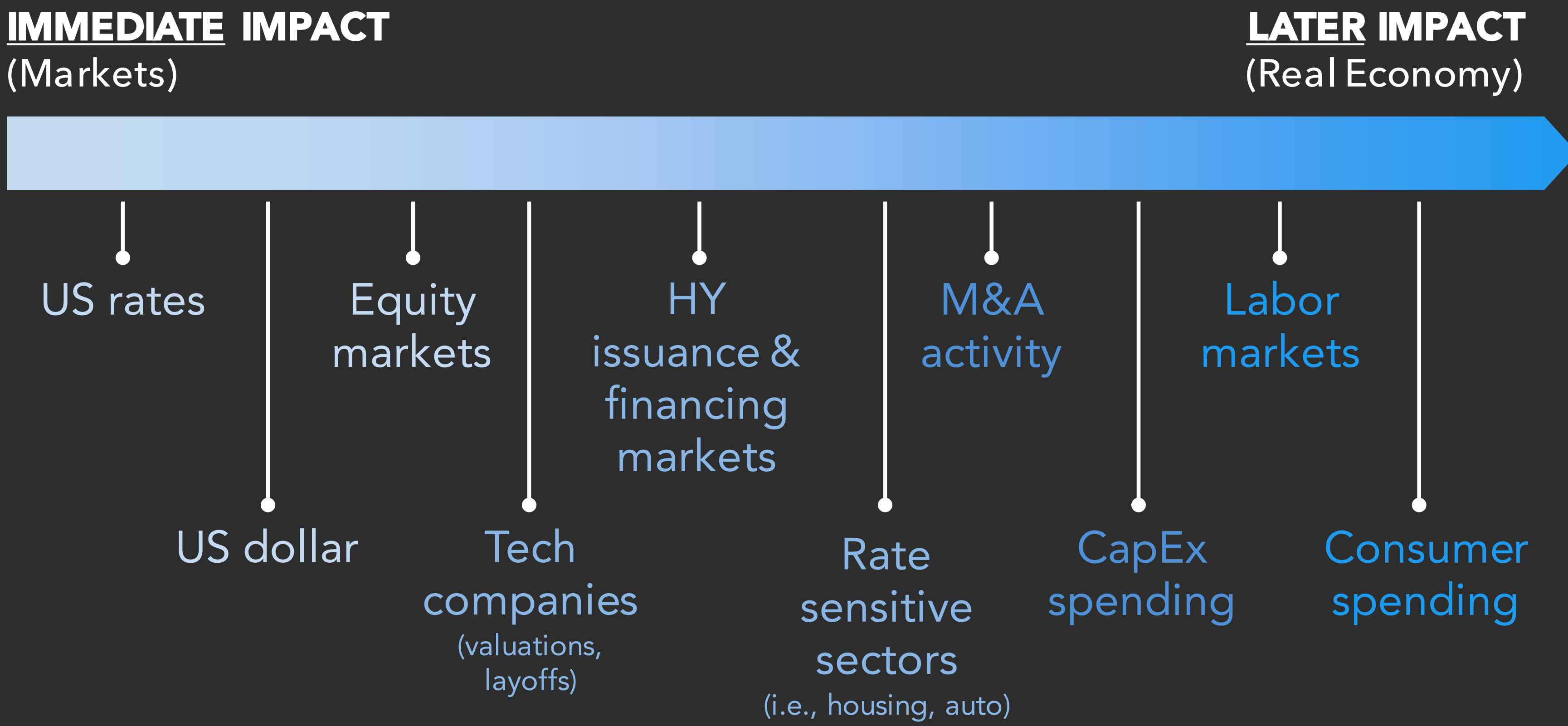
Non-Voting Districts

- **Loretta Mester** (Cleveland)
- **Thomas Barkin** (Richmond)
- **Raphael Bostic** (Atlanta)
- **Mary Daly** (San Francisco)
- **Susan Collins** (Boston)
- **James Bullard** (St. Louis)
- **Esther George** (Kansas City)

Source: (1) Federal Reserve.

Monetary Policy Operates with a Lag

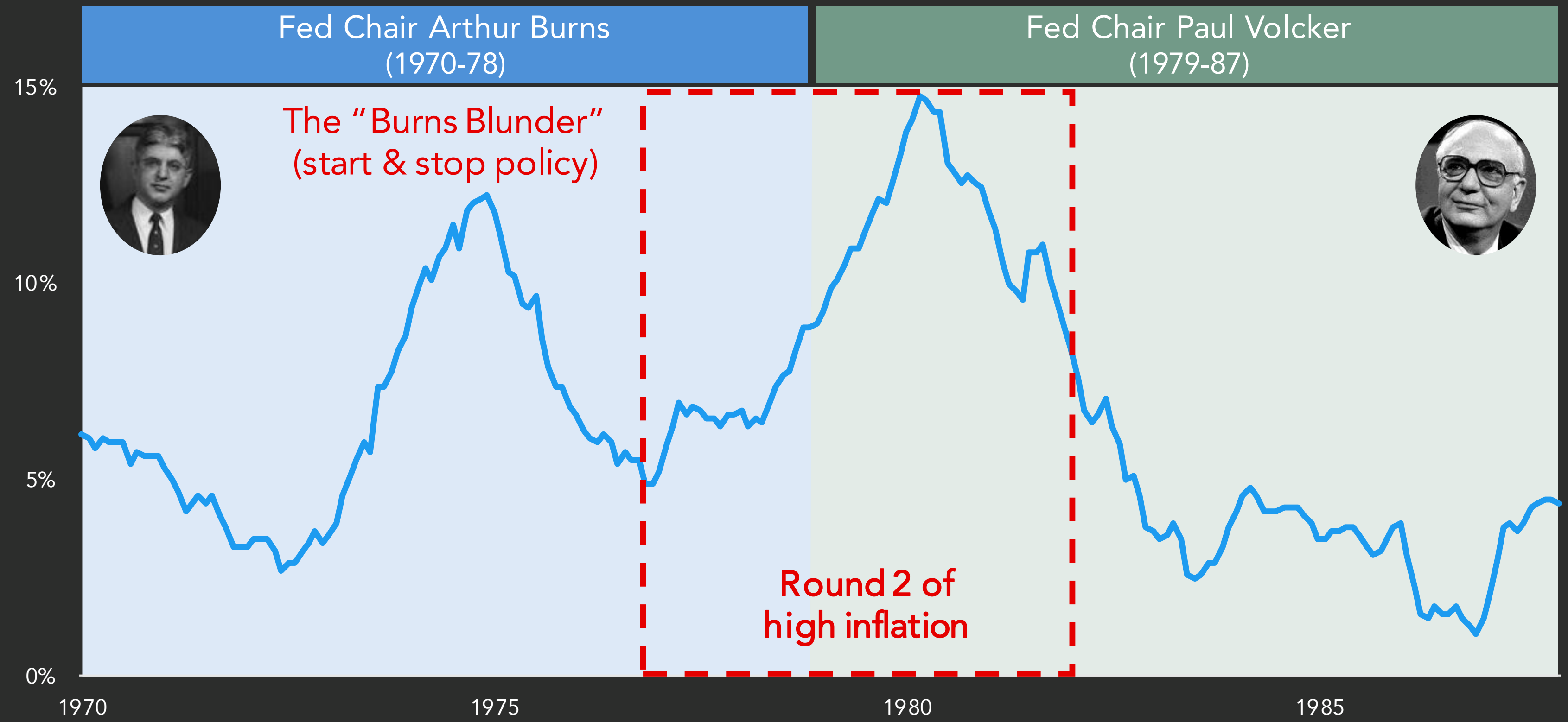
Historically, monetary policy tightening operates with a lag, typically 12-18 months. With nearly 85% of global central banks tightening in 2022, and the Fed raising rates last year at the fastest pace in 40 years, we expect much of the impact of this tightening to be felt in 2023. While the impact on markets tends to be rapid, the ripple effects to the real economy take longer.



Volcker, Not Burns

The Fed appears determined to not repeat "the mistakes of history;" that is, to embrace the legacy of Fed Chair Paul Volcker, rather than Chair Arthur Burns. Unfair as the analogy may be, the latter made numerous policy errors in the early 1970s in a less than vigorous approach to inflation which included: over-emphasizing exogenous factors as the source of inflation, premature rate cuts and a "stop and re-start approach."

US CPI, y/y

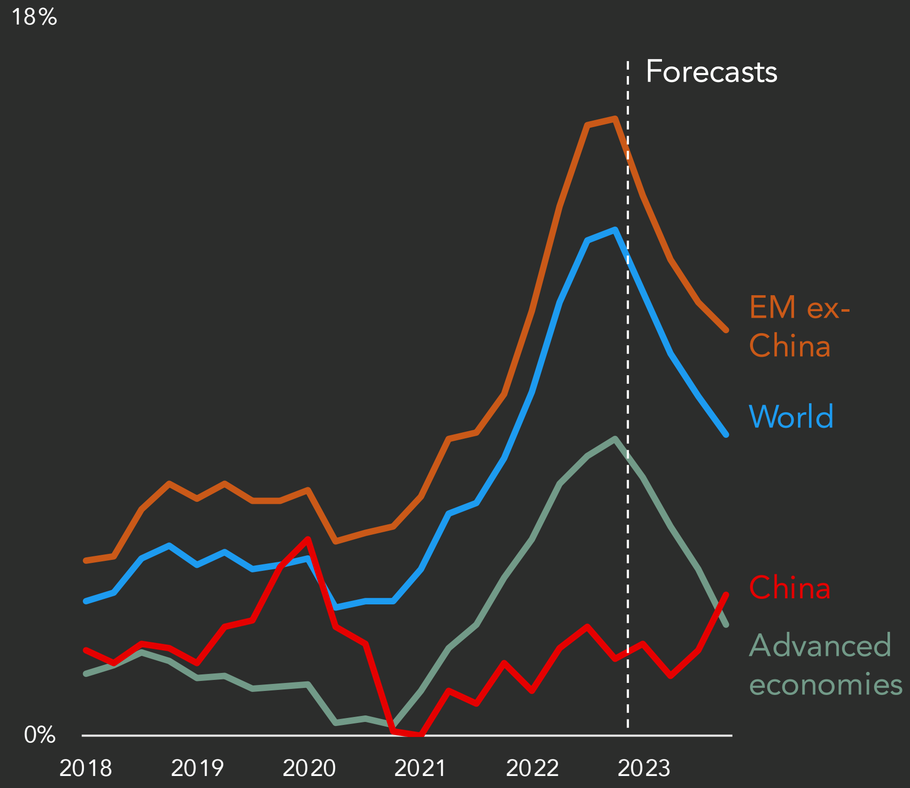


Source: (1) Bloomberg. Data as of January 12, 2023.

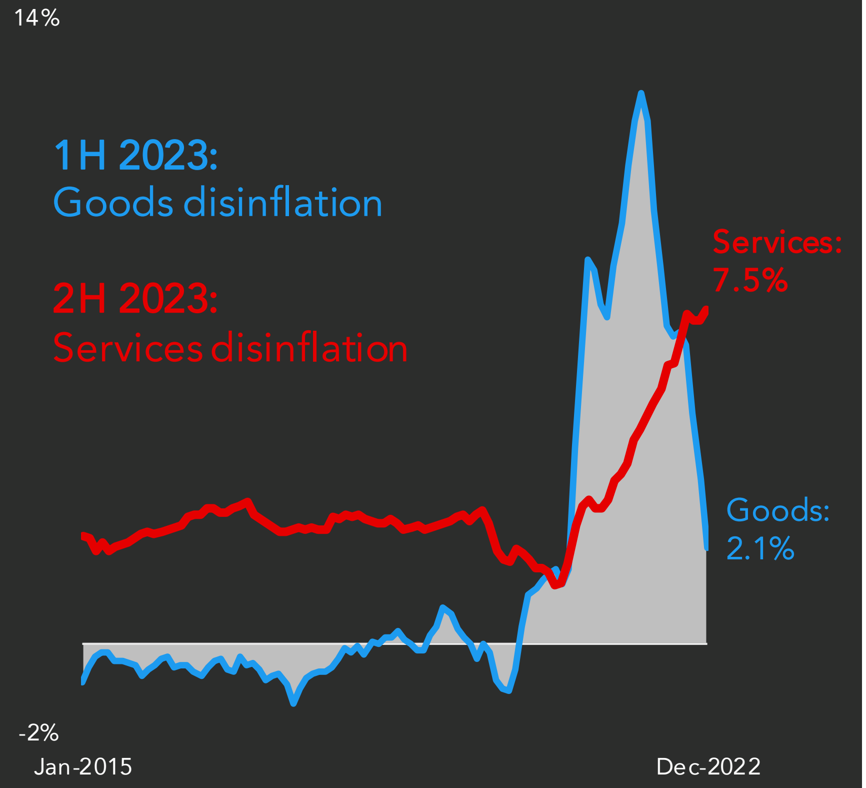
This is Not the 1970s

Global inflation likely peaked at around 12% in late 2022, with moderation expected globally in 2023 as supply chain bottlenecks unwind and the goods-to-services imbalances of the COVID period normalize. However, even as inflation moderates, we expect "sticky inflation" (wages, services) to remain a challenge for economies in the year ahead.

Global CPI inflation rates, y/y



US goods and services inflation, y/y

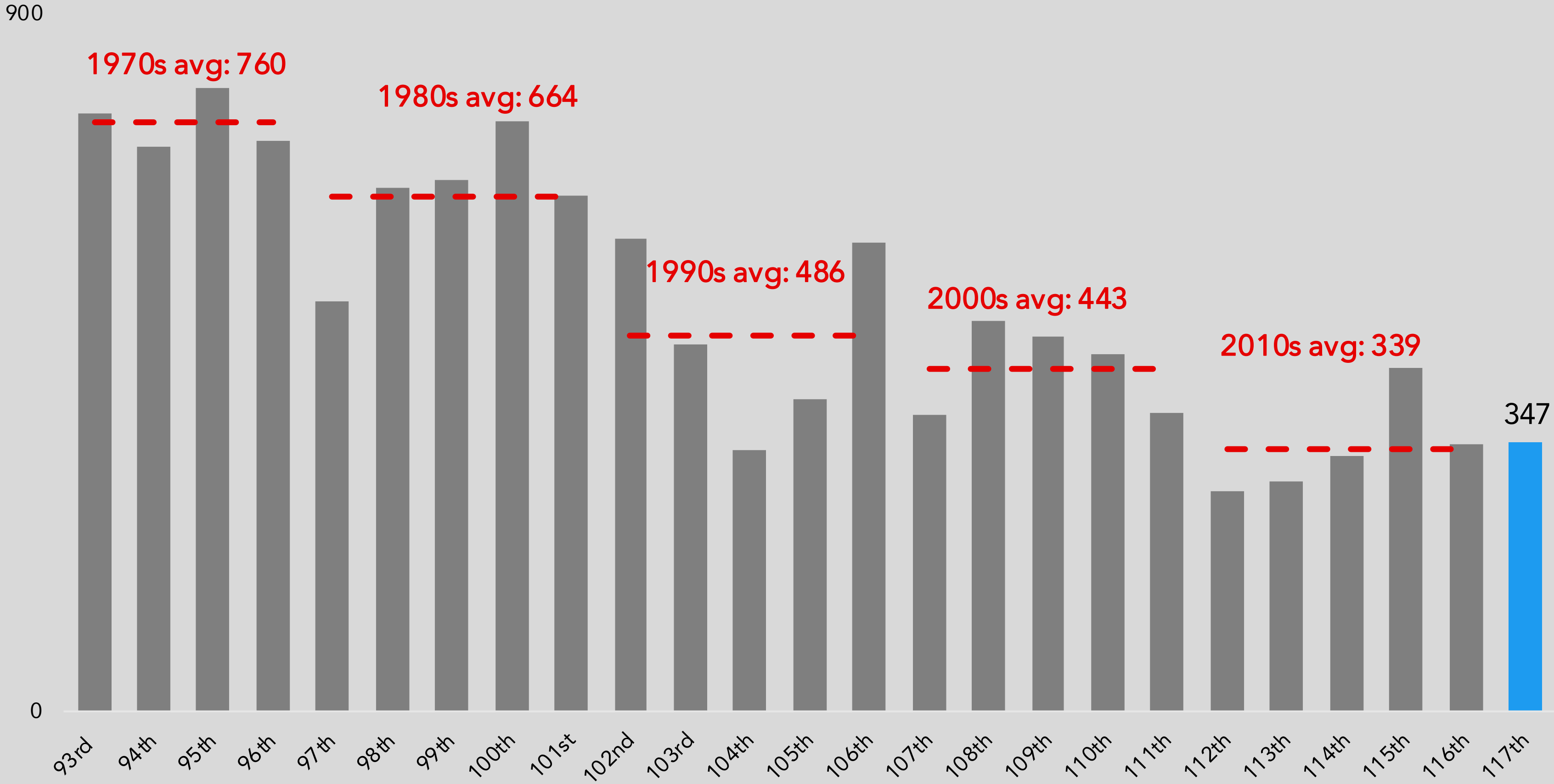


Source: (1-2) Bloomberg. Data as of January 12, 2023. y/y quarterly average. Goods is commodities less food and energy commodities.

Low Expectations from Washington in 2023

Large, complex legislation is very difficult in today's Washington. With a split Congress and narrow majorities in both houses, expect very limited fiscal support and more complexity around regular way legislation in 2023.

Enacted legislation by US Congress



Source: (1) GovTrack Statistical and Historical Comparison. Data as of January 12, 2023.

Low Expectations from Washington in 2023

We expect a "bare minimum" of legislation from Washington in 2023 as a result of divided Government, razor thin majorities, challenges to intra-party consensus on both sides of the aisle, and the upcoming 2024 election

Expectations for the 118th Congress in 2023

Foreign Policy Priorities	
Continued "support" for Ukraine (financial, arms)	Very Likely
"Tough on China" legislation & committee hearings	Very Likely
Economic & Tax Policy Priorities	
Farm bill	Very Likely
FY2024 US defense spending authorizations	Very Likely
Gridlock on tax extenders bill	Very Likely
Gridlock on debt ceiling	Likely
Financial & Market Policy Priorities	
Digital asset legislation (crypto, stablecoin, CBDC)	Likely
Big Tech antitrust legislation	Possible
Closer "scrutiny" of ESG & climate regulations	Possible
Heightened consumer protection regulation	Possible

Source: (1) MUFG Government Affairs (Hollingsworth). Veda Partners (Treyz).

4 Credit Markets in 2023

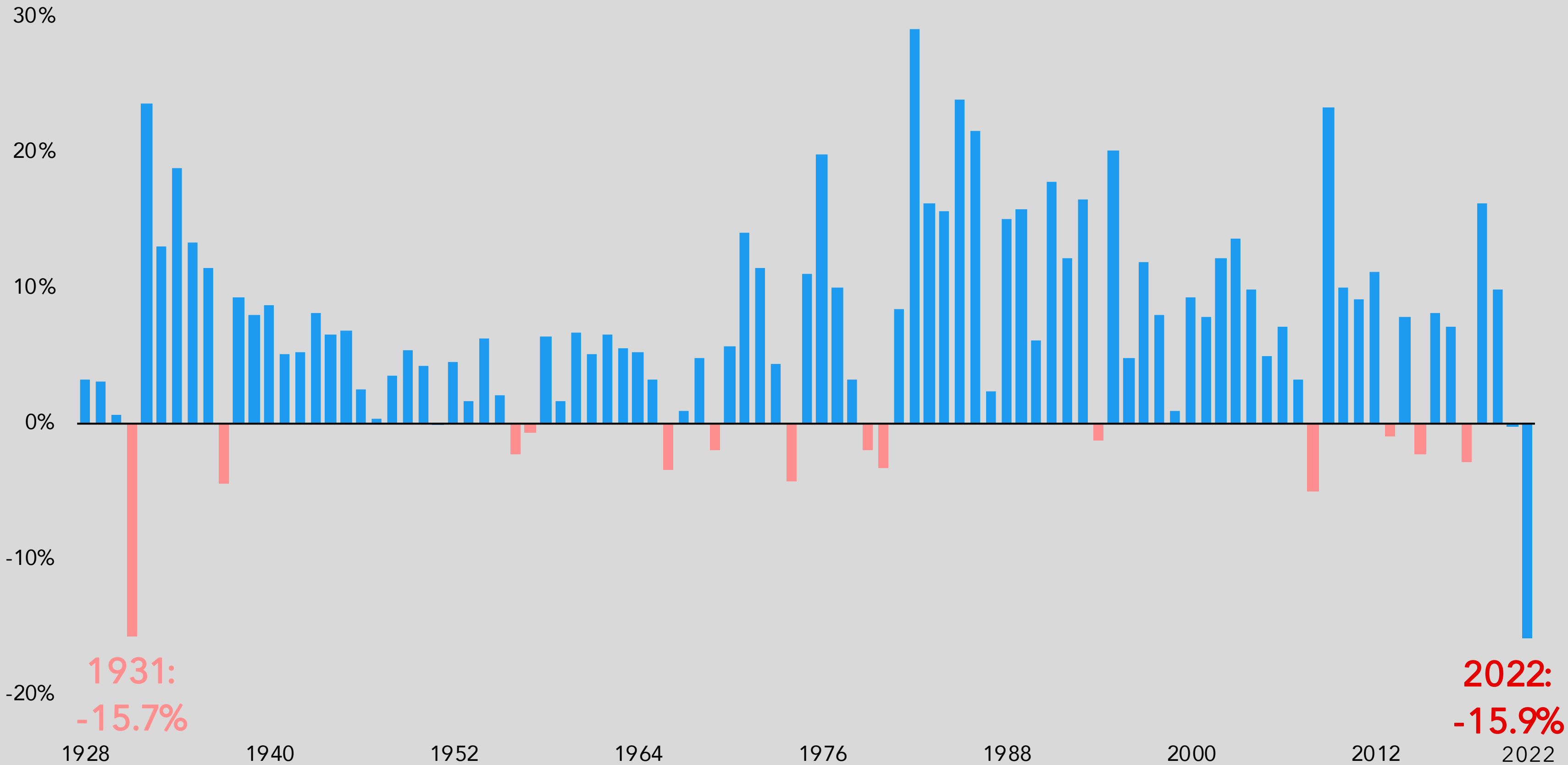
“I’m more excited going into 2023 than I’ve been in a really long time because we’re going to have so many different opportunities.”

Rick Rieder, BlackRock’s Global Chief Investment Officer of Fixed Income, Head of Global Allocation Team

New “Clean Slate” for Investors in 2023

Following the worst bond returns in nearly a century, investors enter 2023 with a new “clean slate” to put money to work in companies with strong balance sheets that offer more attractive yields than had previously been available during the pre-COVID period of structurally lower rates and historically tight spreads.

Investment grade corporate bond returns since 1928

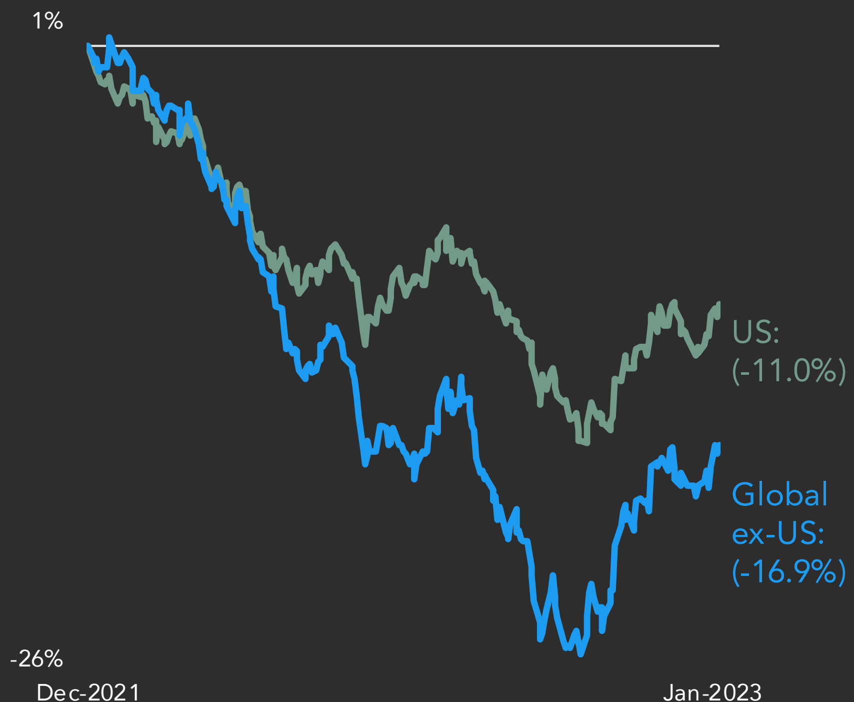


Source: (1) Bloomberg. NYU Stern Historical Returns on Stocks, Bonds and Bills: 1928-2021. 2010 – 2022 data is Bloomberg Baa corporate bond index. Data as of January 12, 2023.

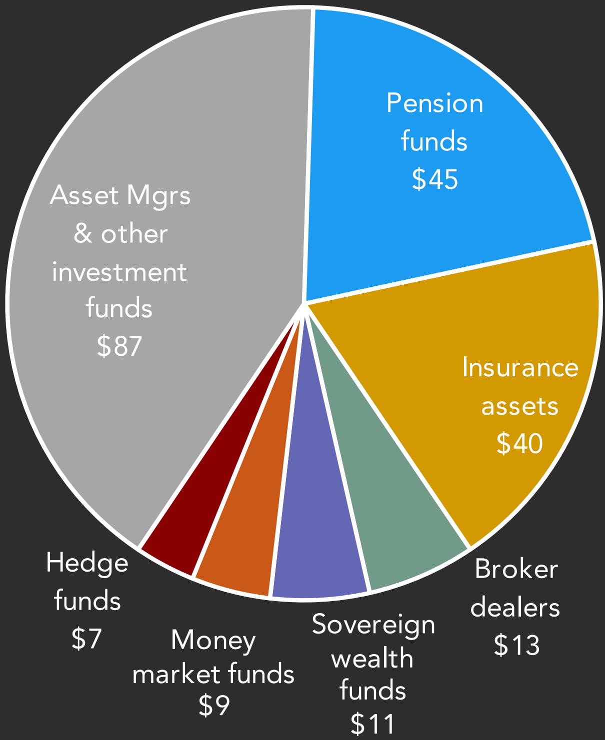
Technical Demand for Corporate Credit Remains Strong

While balance sheet fundamentals will weaken under margin pressure and tighter financial conditions, the technical demand for high quality USD corporate credit remains strong. As evidenced by the outperformance of US credit vs ex-US in 2022, investors view the US as closer to policy normalization than Europe and Japan. Globally, there are more than $200 trillion of investment funds (asset managers, pension, insurance, etc.) that need to invest in high quality, income-producing assets.

Bloomberg aggregate US total return index vs. global ex-US index



Over $200 trillion of investment funds

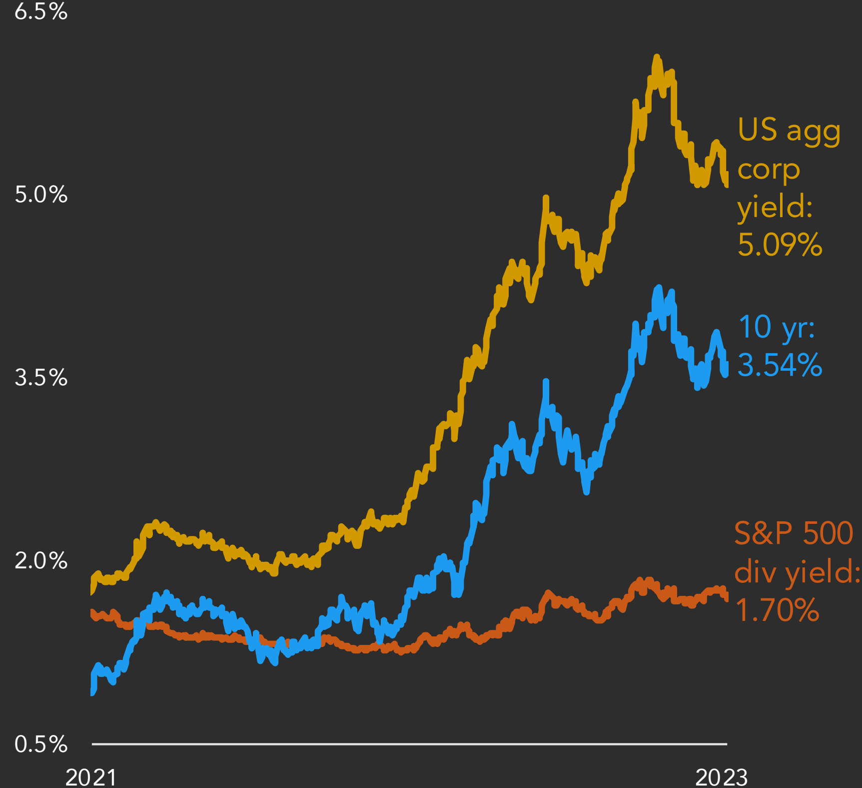


Source: (1) Bloomberg. Data as of January 12, 2023. (2) Financial Stability Board. Global Monitoring Report on Non-Bank Financial Intermediation. (December 2022). Covers 29 jurisdictions that account for around 80% of global GDP. National Sector Balance Sheets, FSB calculations. Statista. IE Center for Governance and Change. Global Sovereign Wealth Fund – 2022 Annual Report.

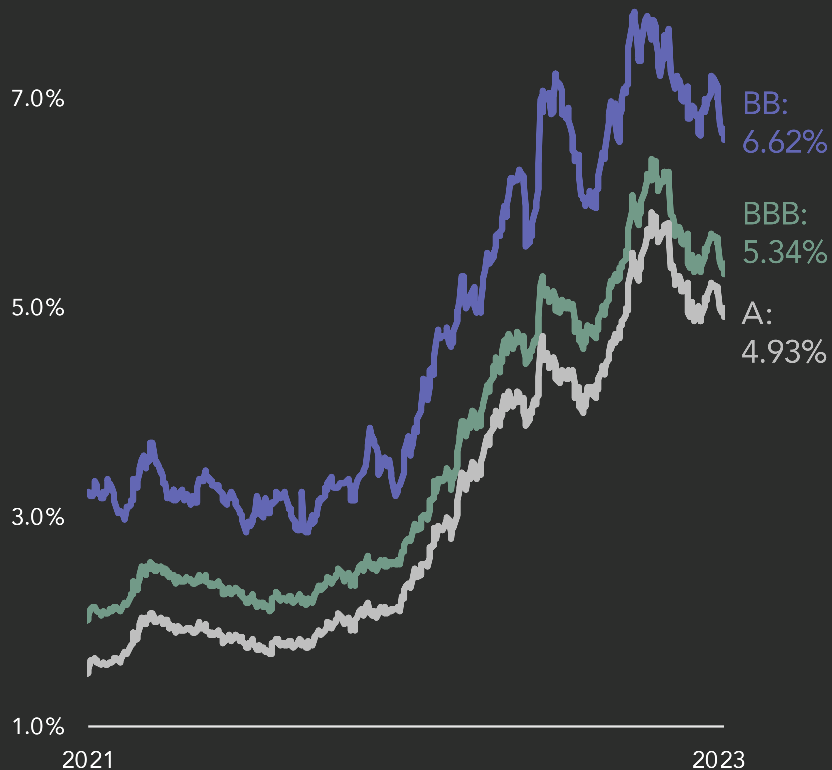
Attractive Entry Point for High Quality Credit

Compared to one year ago, the higher corporate bond yields in today's market offer attractive income for investors, as well as cushion to weather volatility. In fact, the additional yield between bond markets and S&P 500 dividend yields are at their widest level since 2007. Look for higher quality and shorter duration credit to outperform in the early part of the year.

10 year UST vs. S&P dividend yield vs. US aggregate corporate yield



Yield by rating

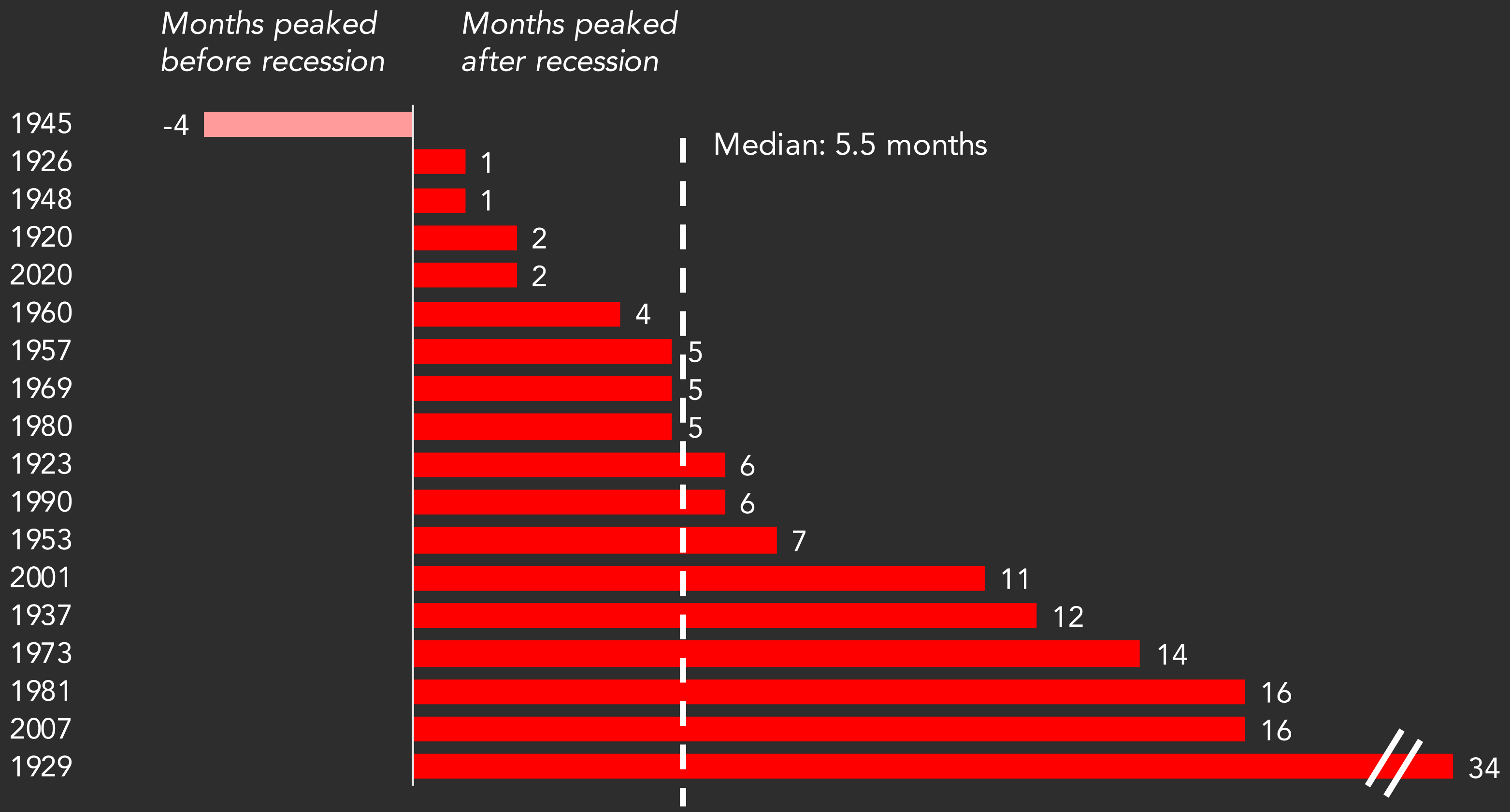


Source: (1-2) Bloomberg. Data as of January 12, 2023. Average yield is Bloomberg US Agg Corporate Yield to Worst.

Spreads Rarely Peak in Advance of Recessions

In nearly 20 US recessions over the last 100 years, USD corporate credit spreads peaked BEFORE the recession on only one occasion. On average, spreads typically hit the wides about 5-7 months after the start of the recession. As such, we believe the strong tightening in spreads over recent months is likely not sustainable, with gap-out risk on spreads increasing in the 2H of 2023.

# of months after recession starts to spread peak

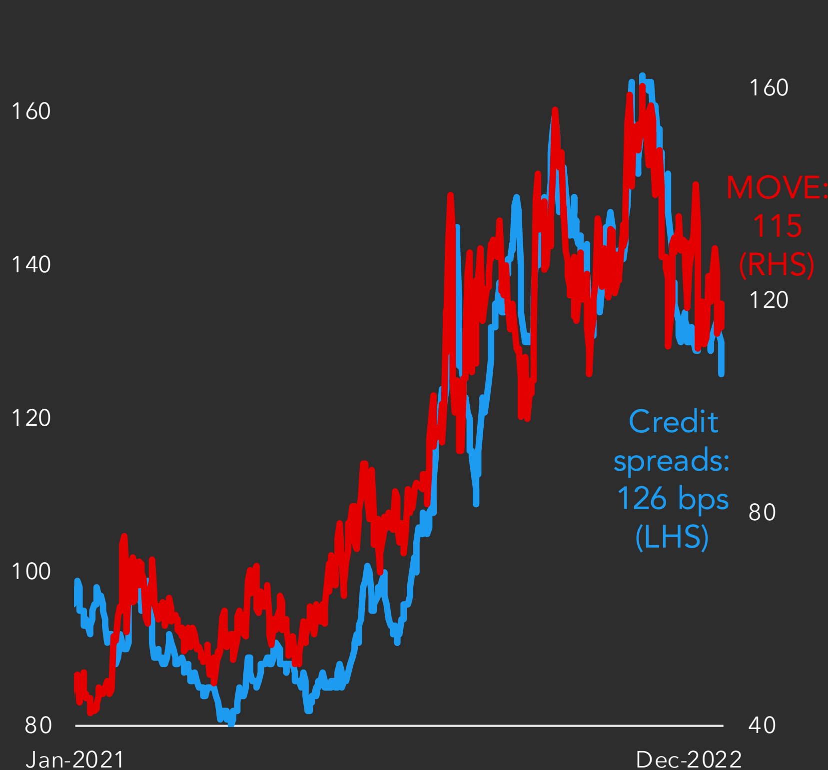


Source: (1) Capital Economics, "We Think US Corporate Bond Spreads Will Widen Again" (December 12, 2022). Shiller, NBER, Bloomberg, Refinitiv. Spreads are derived using the OAS of ICE BofA (2000-today) or Moody's seasoned Baa-rated US corporate bond yield (1962-1999) or the NBER US yields on lowest rating corporate bonds (1920-1961).

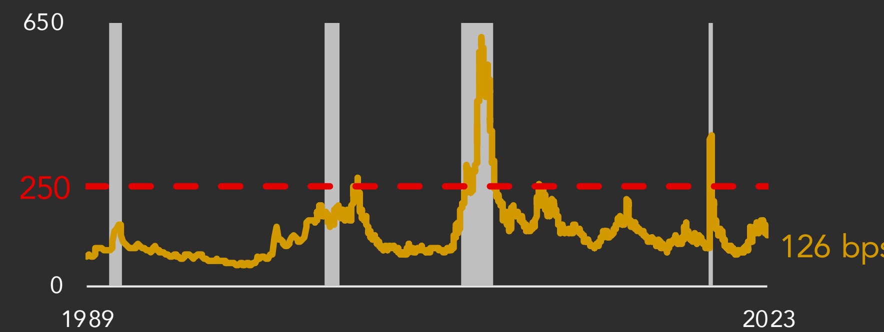
Bearish Credit Spreads

Spreads don't like volatility. Historically, IG and HY corporate credit spreads trade above 250 bps and 800 bps, respectively, in the months following US recession. With strong corporate balance sheets, manageable maturity walls and a potentially mild recession ahead, look for IG credit spreads to trade higher and in a wider range than 2022 (115 – 175 bps, and above 200 bps in more stressed scenarios). HY spreads, by comparison, are more vulnerable to margin and recession pressures, with much more divergence across the balance sheet quality and ratings spectrum.

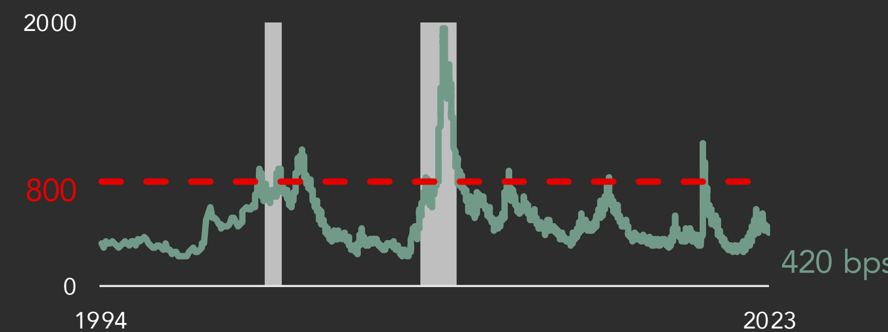
Credit spreads and rate volatility (MOVE index)



US IG OAS



US HY OAS

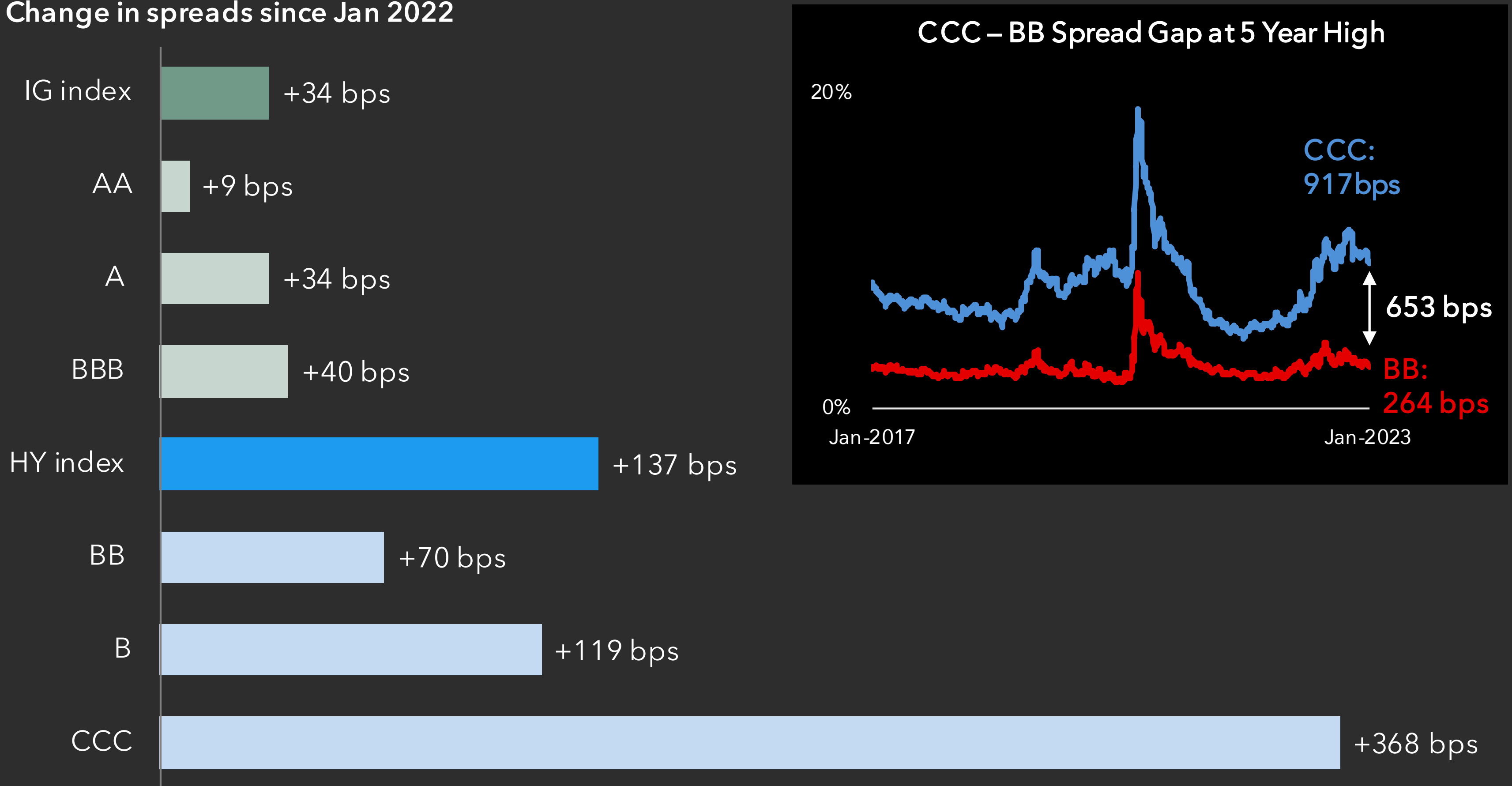


Source: (1-3) Bloomberg. Data as of January 12, 2023. Credit spreads is Bloomberg US Agg Corporate Avg OAS.

Market Differentiating More by Credit Quality

In 2021, IG & HY spreads reached post GFC tights, with spread compression across the spectrum and lower credits outperforming. In 2022, investors differentiated sharply between higher quality IG and lower rated HY balance sheets. Looking ahead to 2023, we are expecting market differentiation to spread more meaningfully, by strength of balance sheet, across the very large BBB rating category.

Change in spreads since Jan 2022

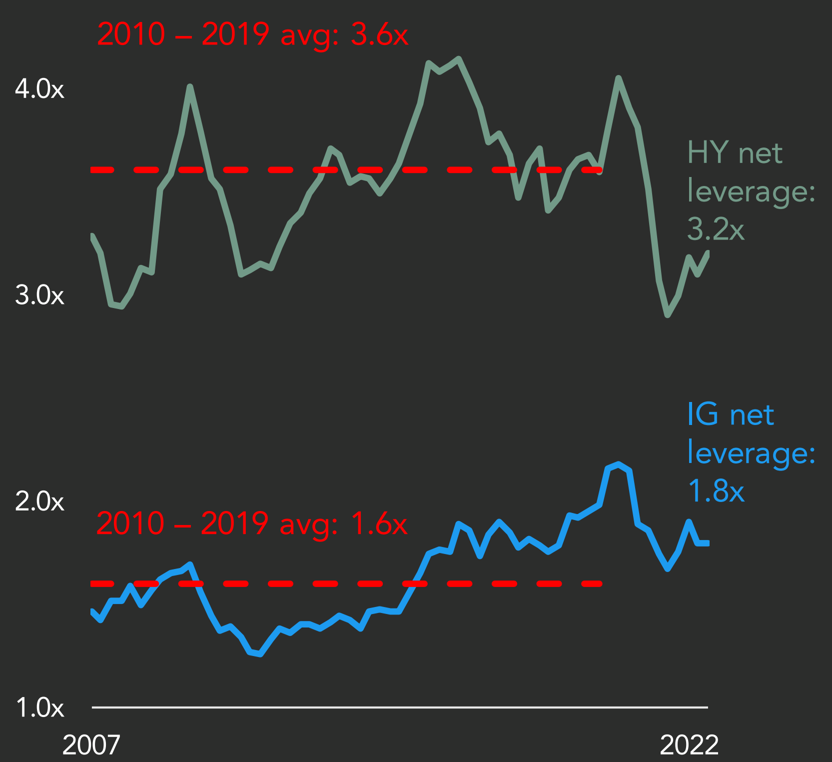


Source: (1) Bloomberg. Data as of January 12, 2023. Bloomberg OAS indices.

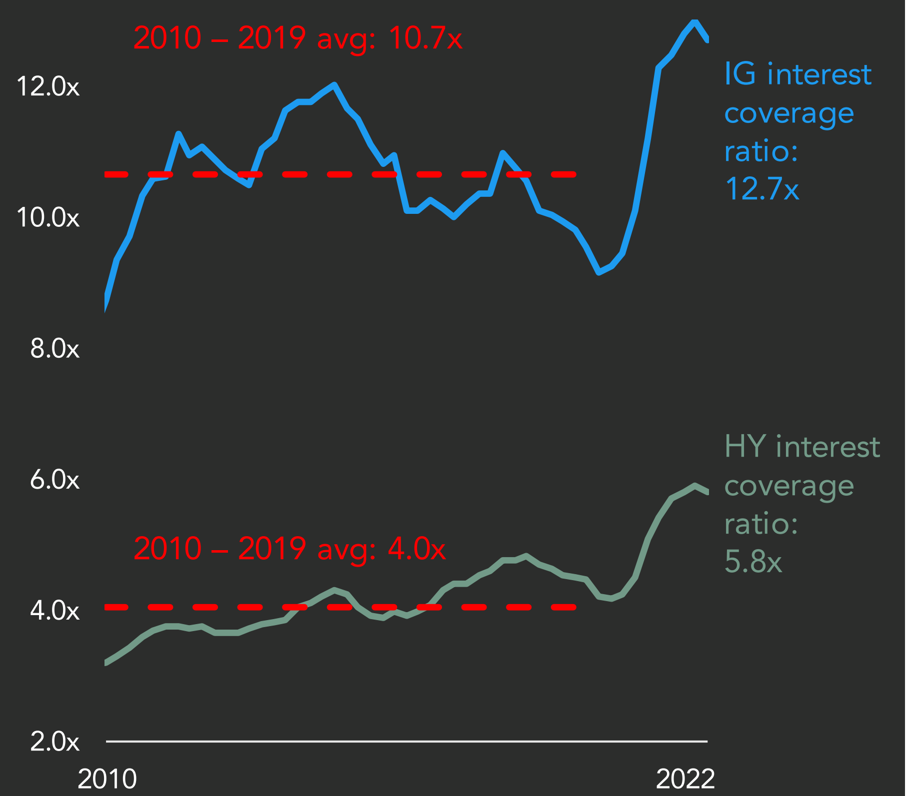
Credit Fundamentals Poised to Turn

Corporates enter 2023 with strong balance sheets and interest coverage ratios at record highs. However, against a backdrop of decelerating earnings, margin pressure and a higher cost of capital, credit market fundaments have begun to turn.

USD IG & HY index net leverage



USD IG & HY index interest coverage ratios

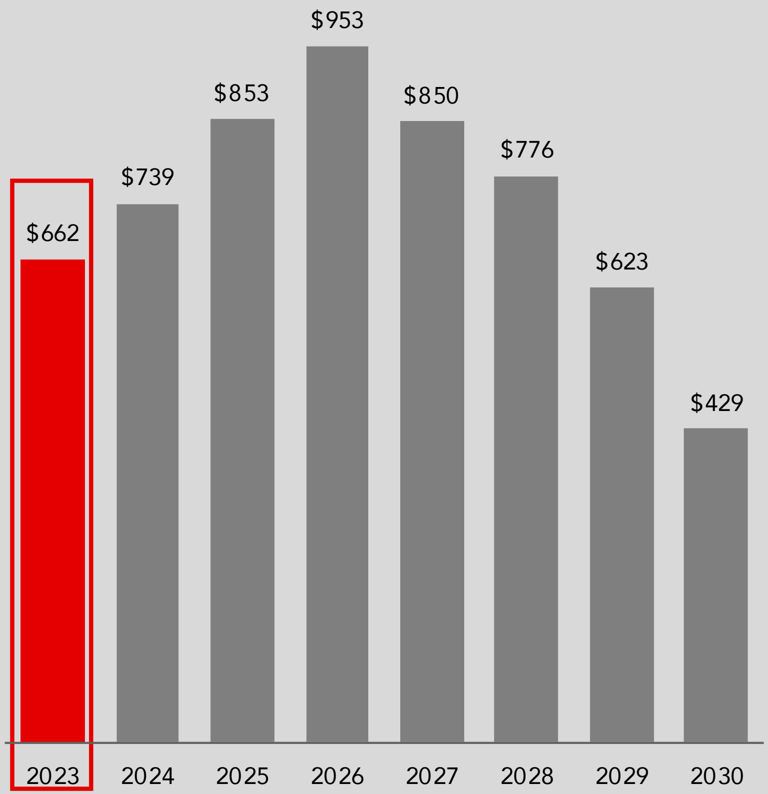


Source: (1-2) CreditSights (Winnie Cisar). Data through Q3 2022. Universe of companies is constituents of the BAML / ICE IG and HY indies. Does not include all private issuers. S&P Global, "Global Credit Outlook 2023: No Easy Way Out."

Manageable 2023 Maturity Walls

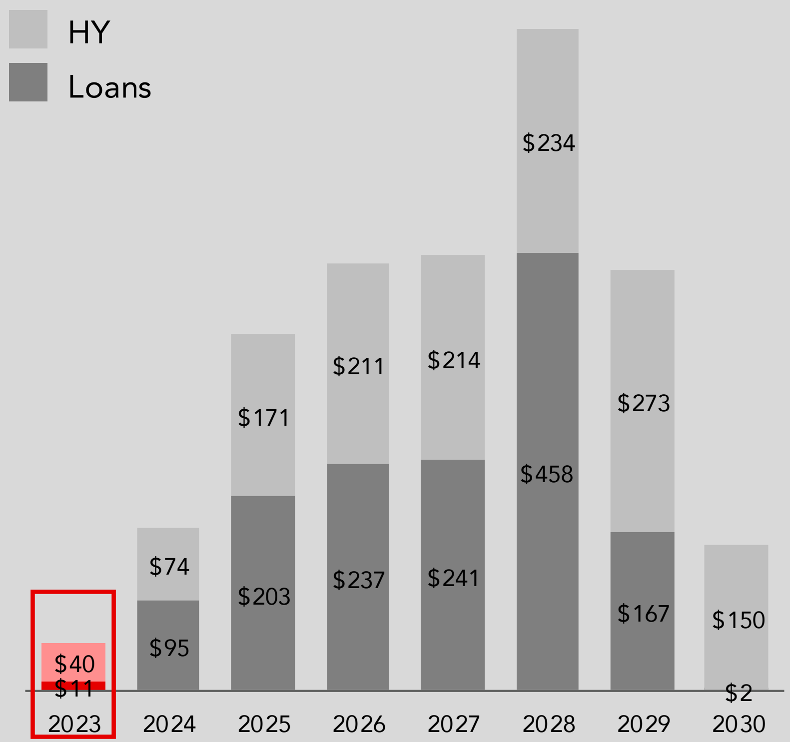
Though up 12% from 2022, IG maturity walls are manageable. However, with strong cash balances and higher cost of capital, not all upcoming maturities will be refinanced.

USD IG maturity profile, par outstanding, USD bn



HY and leverage loans have nearly $600 bn of debt maturities over the next three years, though less than 10% of that amount in 2023. Single B & CCC issuers represent more than 2/3 of that amount at a time when investors are differentiating more on ratings and credit quality.

USD HY & loans maturity profile, par outstanding, USD bn

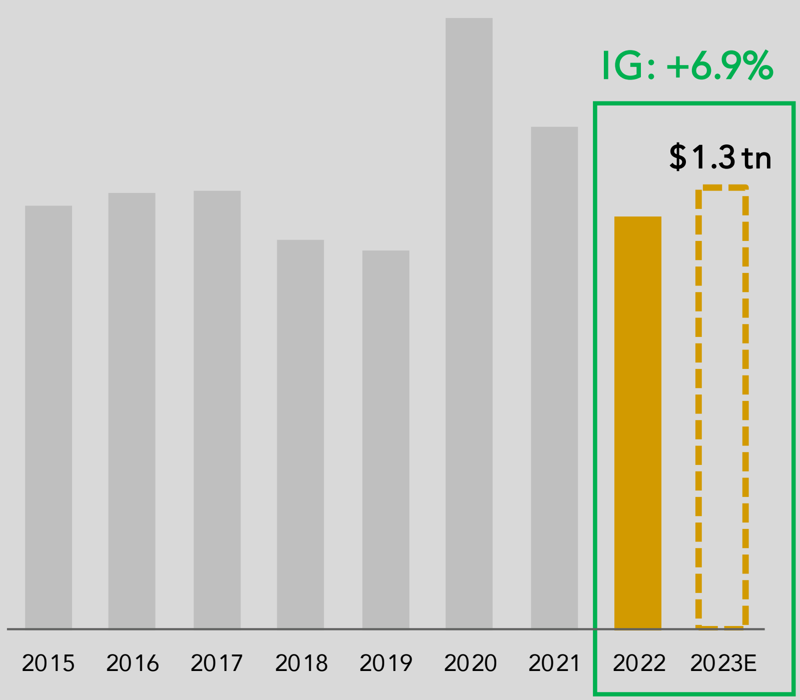


Source: (1-2) MUFG Capital Markets. Bloomberg. Morningstar LCD.

Modest Rebound in New Issue Activity

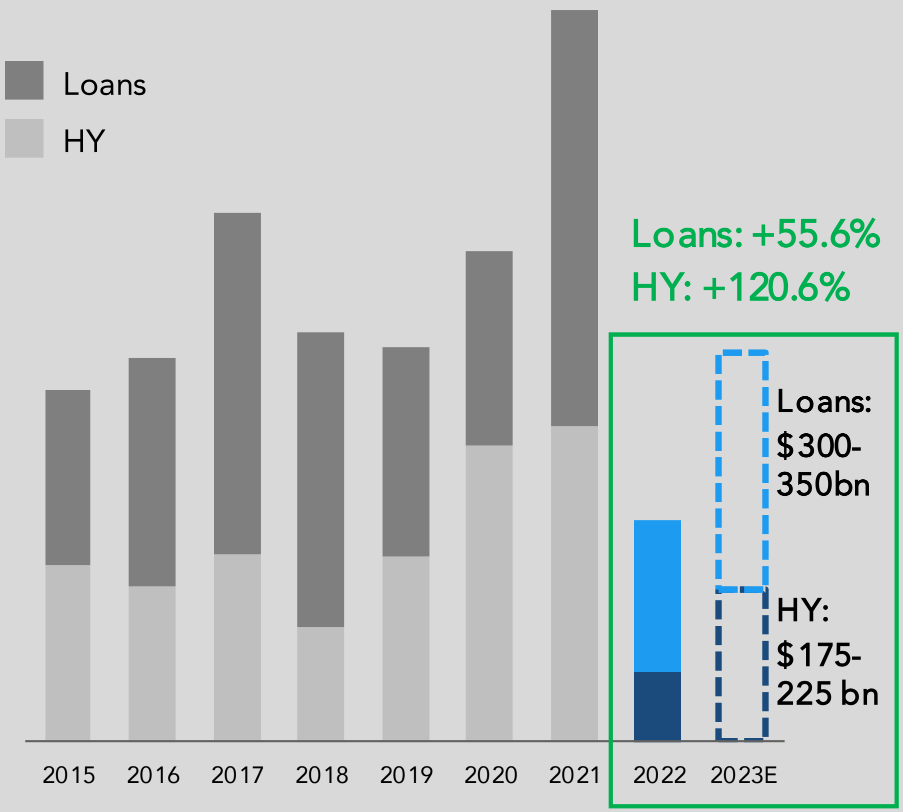
MUFG expects new issuance to increase 7% from 2022 levels to $1.3 trillion. Higher M&A volumes and a 12% y/y increase in maturities should drive volumes, while the higher cost of capital will reduce issuance activity driven by maturity refinancing, leverage, and share repurchases.

IG USD new issue, bn



HY issuance expected to double from 2022 lows, though still 50% below 2021 volumes. Expected leverage loan issuance of $300-350 bn, up from 2022 but below historical averages

HY USD new issue, bn

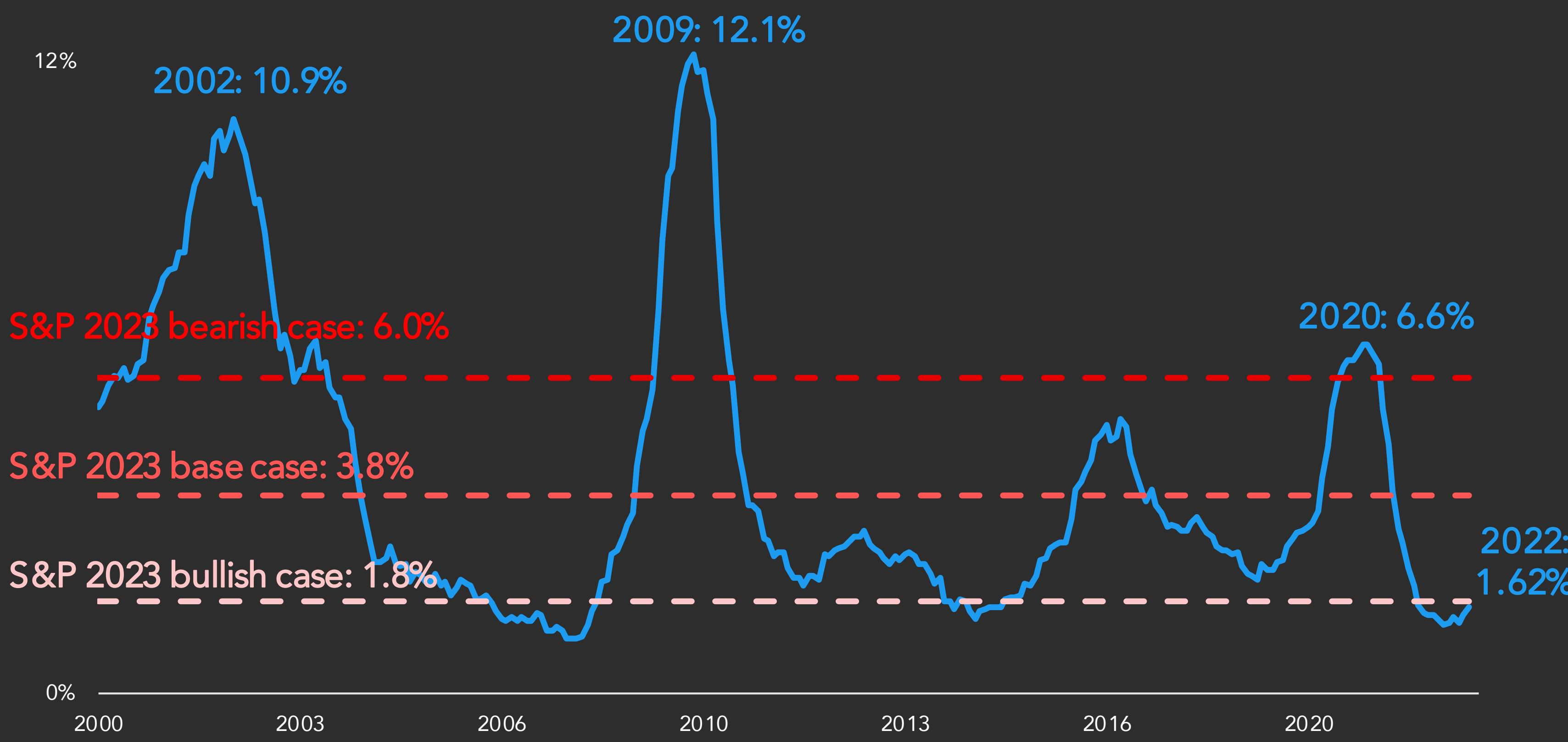


Source: (1-2) IFR. MUFG Syndicate. Data as of January 12, 2023.

Default Rates Rising in 2023

Default rates are a "lagging" indicator but typically rise above the 6% threshold as the recession progresses. While the recession is expected to be relatively mild and short, an anemic recovery and tighter financial conditions could continue to push default rates higher into 2024. From a sector perspective, media, telecom, leisure & entertainment, retail and healthcare are most at risk.

S&P scenarios for 2023 speculative grade default rate



Source: (1) S&P Rating Direct. 12 month speculative grade default rate. 2022 data is as of September. 2023 forecasts are for September 2023.

5 Global Markets in 2023

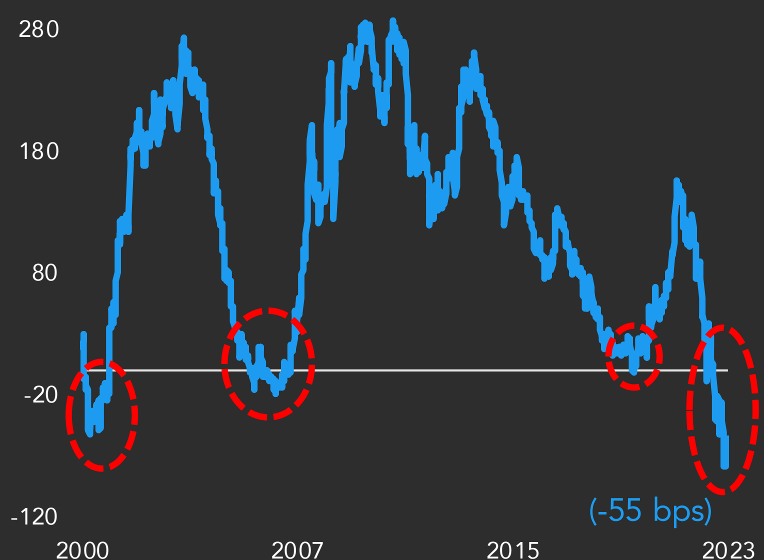
“Why were the things that were closest so often the hardest to see?”

Claire Keegan, Award-winning Irish author of *Small Things Like These* (shortlisted for the Booker Prize in 2022)

Bearish, Before Bullish, USTs

MUFG's Head of US Rates Strategy, George Goncalves, believes that US rates will have at least one more sell-off in early 2023 before trading lower on growth concerns in the latter part of the year. George believes that the UST curve will see multiple rounds of bear steepening in 2023, and will not be able to dis-invert until the Fed pivots to easing later in the year.

2s10s UST curve



MUFG 10 year UST forecast				
Spot (Jan 12)	Q1 2023	Q2 2023	Q3 2023	Q4 2023
3.58%	4.13%	3.88%	3.50%	3.38%

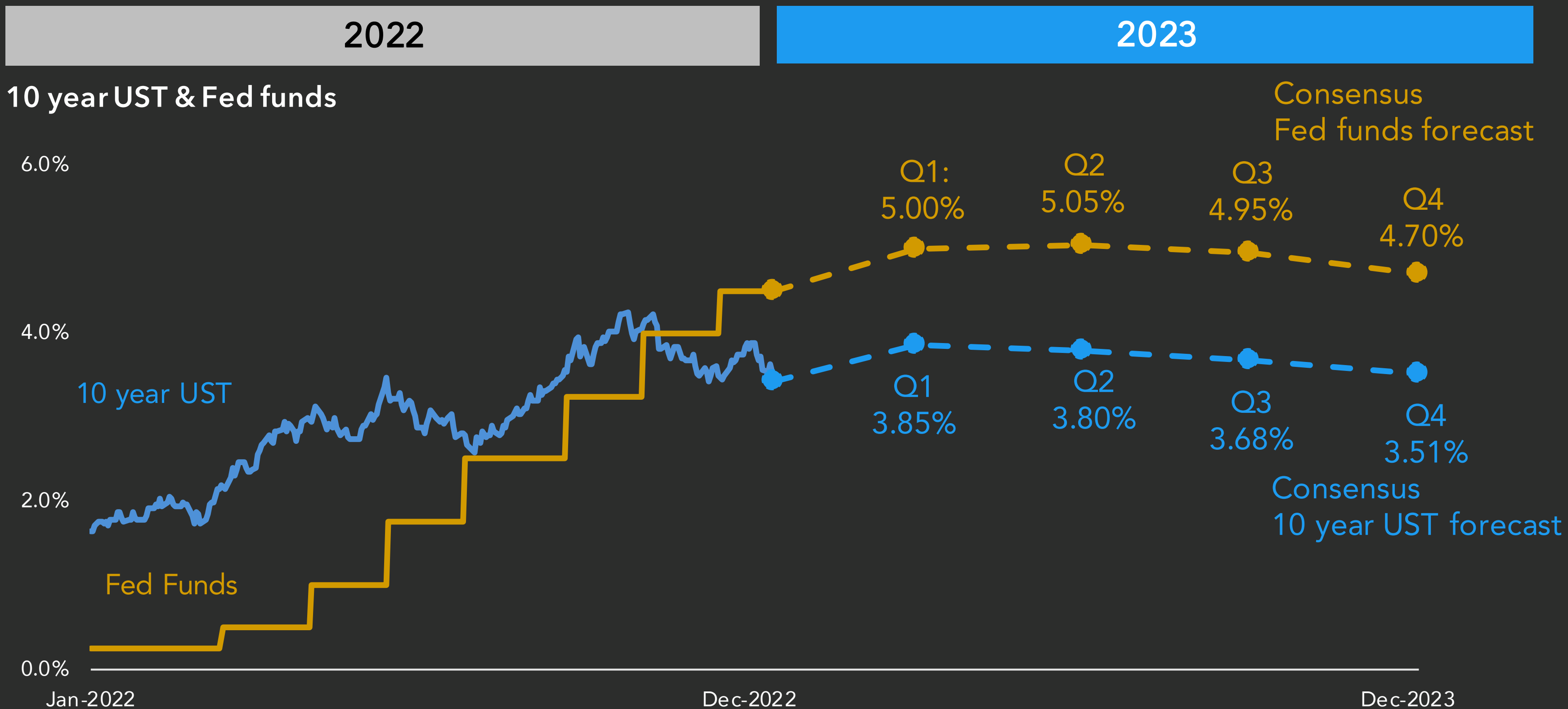
Key Drivers of Rates in 2023

- Fed tightening in 1H 2023
- Market pivot from inflation to growth in 2H 2023
- Persistent, volatile & elevated inflation (though declining)
- Structural labor shortages (i.e., sticky wage inflation)
- Less technical demand as ECB/BOJ more hawkish
- Fed "holding" FFs as long as possible in 5% area
- Markets questioning Fed ability to "hold" (10 yr trading < FFs)

Source: (1) Bloomberg. Data as of January 12, 2023.

Markets Defying Fed Ability to "Hold"

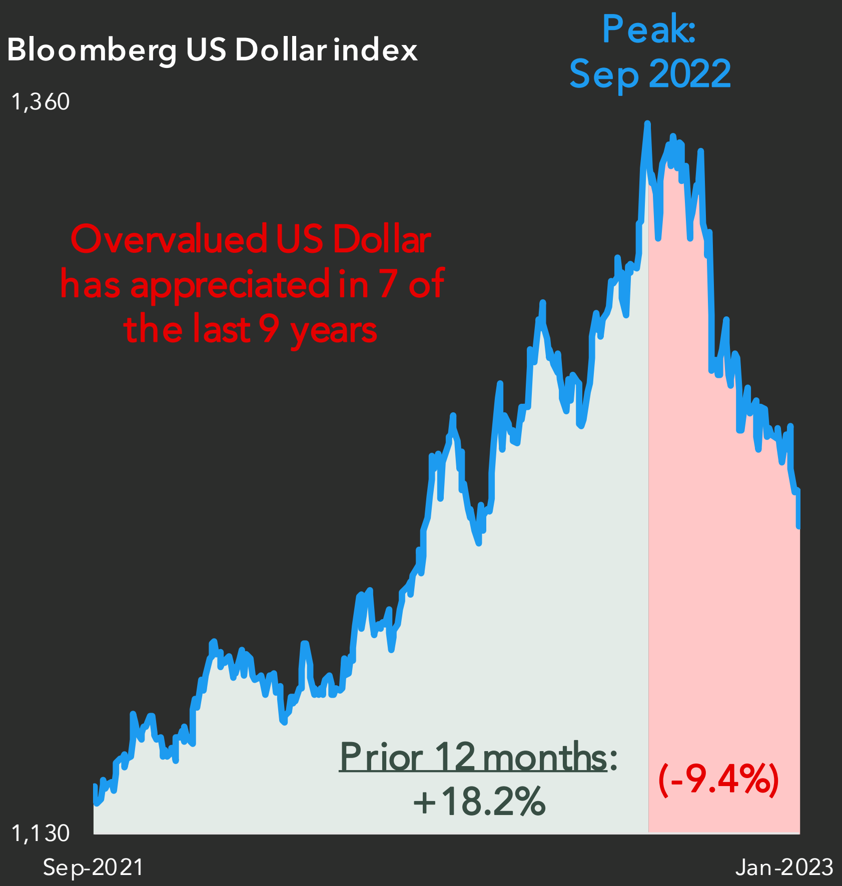
MUFG's Rate Strategist George Goncalves observes that the market has been defying the Fed since November, with 10yr UST yields trading below Fed Funds as if the Fed tightening cycle were complete. Recently weak ISM services, new orders and inflation data has only strengthened the move. In our view, the Fed may very well hold "higher for longer" due to stickier than anticipated inflation (wages, services) and tighter than expected labor markets. Whether and how long the Fed holds above 5% FFs will be critical to the 2023 outlook for the economy and markets.



Source: (1) Bloomberg. Data as of January 12, 2023. MUFG, "2023 Macro2Markets Outlook" (George Goncalves).

Moderating US Dollar

MUFG Head of Research, Derek Halpenny, believes that after appreciating in 7 of the last 9 years, the US Dollar is poised for sustained depreciation from Q2 onwards, after an initial period of resilience in Q1 as the Fed completes its tightening cycle. Derek notes that in 4 of the last 5 Fed tightening cycles since 1989, the USD was flat (once) or weaker in the 12 month period following the last rate hike.



Drivers of USD Moderation in 2023
• Fed closer to end of tightening cycle
• Interest rate differentials
• ECB/BOJ hawkish pivot
• Relative differences in QT policy
• Inflation past peak, closer to normalizing in US
• Market pivot from inflation to growth
• Better relative global growth as US enters 2H recession

Source: (1) Bloomberg. Data as of January 12, 2023.

2023 Global Currency Forecasts

FX Forecasts

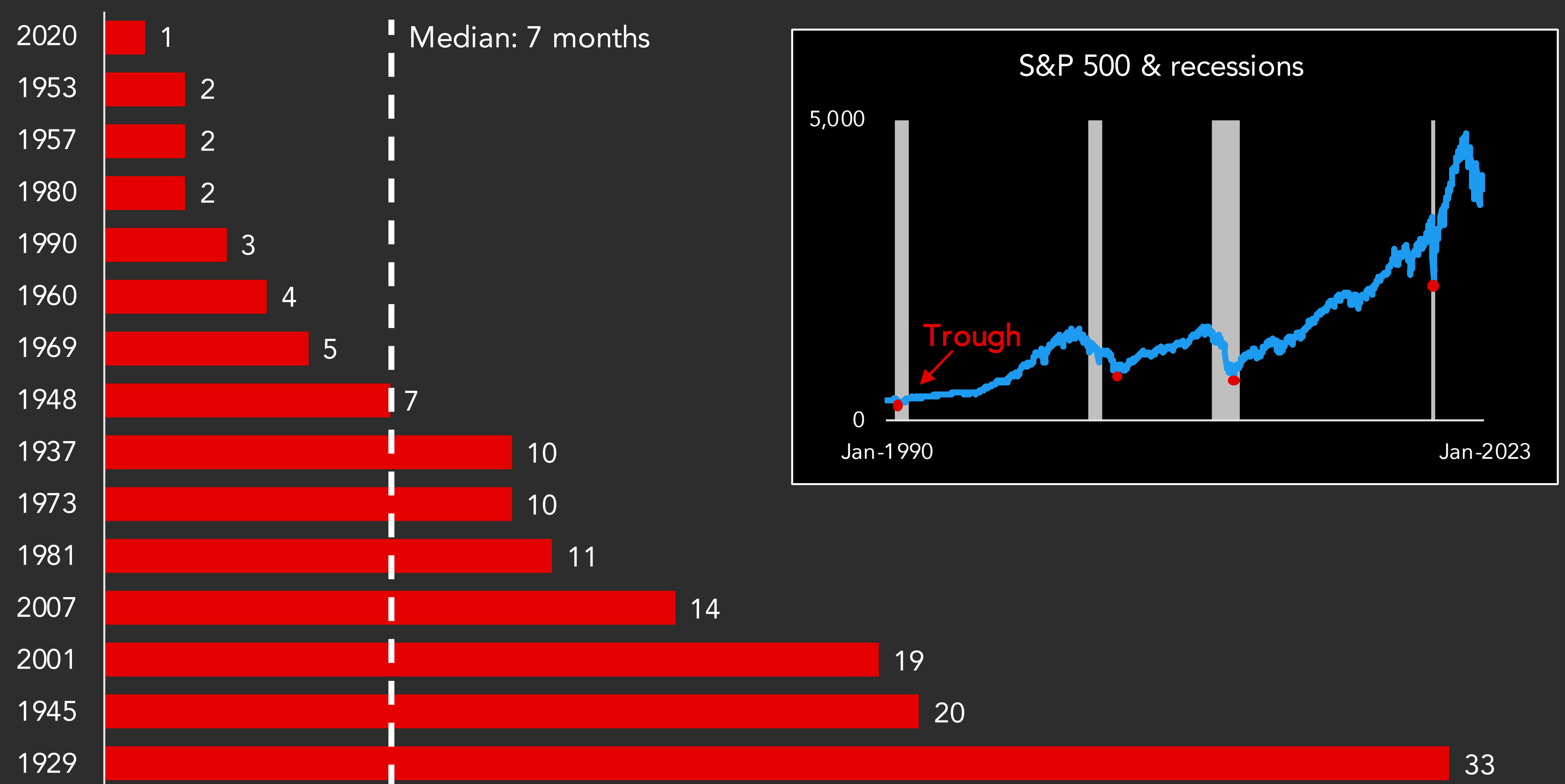
Currency pair	Spot (Jan 12)	Q1 2023	Q2 2023	Q3 2023	Q4 2023
EUR / USD	1.09	1.01	1.06	1.08	1.12
GBP / USD	1.22	1.14	1.22	1.24	1.30
USD / JPY	129	130	127	125	123
USD / CNY	6.73	7.00	6.85	6.75	6.65
AUD / USD	0.70	0.65	0.68	0.70	0.73
NZD / USD	0.64	0.60	0.62	0.63	0.65
USD / CAD	1.34	1.40	1.36	1.35	1.32
USD / NOK	9.90	10.59	9.91	9.63	9.11
USD / SEK	10.41	11.19	10.47	10.09	9.64
USD /CHF	0.93	0.96	0.91	0.90	0.89
USD / MXN	18.85	19.70	19.80	19.90	20.00
USD / BRL	5.09	5.20	5.24	5.29	5.40

Source: (1) MUFG Foreign Exchange Outlook. January 2023 (Derek Halpenny).

Equities Typically Bottom AFTER Recession Begins

Historically, equities tend to hit new lows approximately 6-7 months AFTER the recession begins, with the low in corporate earnings coming an additional 6-12 months later

# of months after recession starts to S&P 500 trough

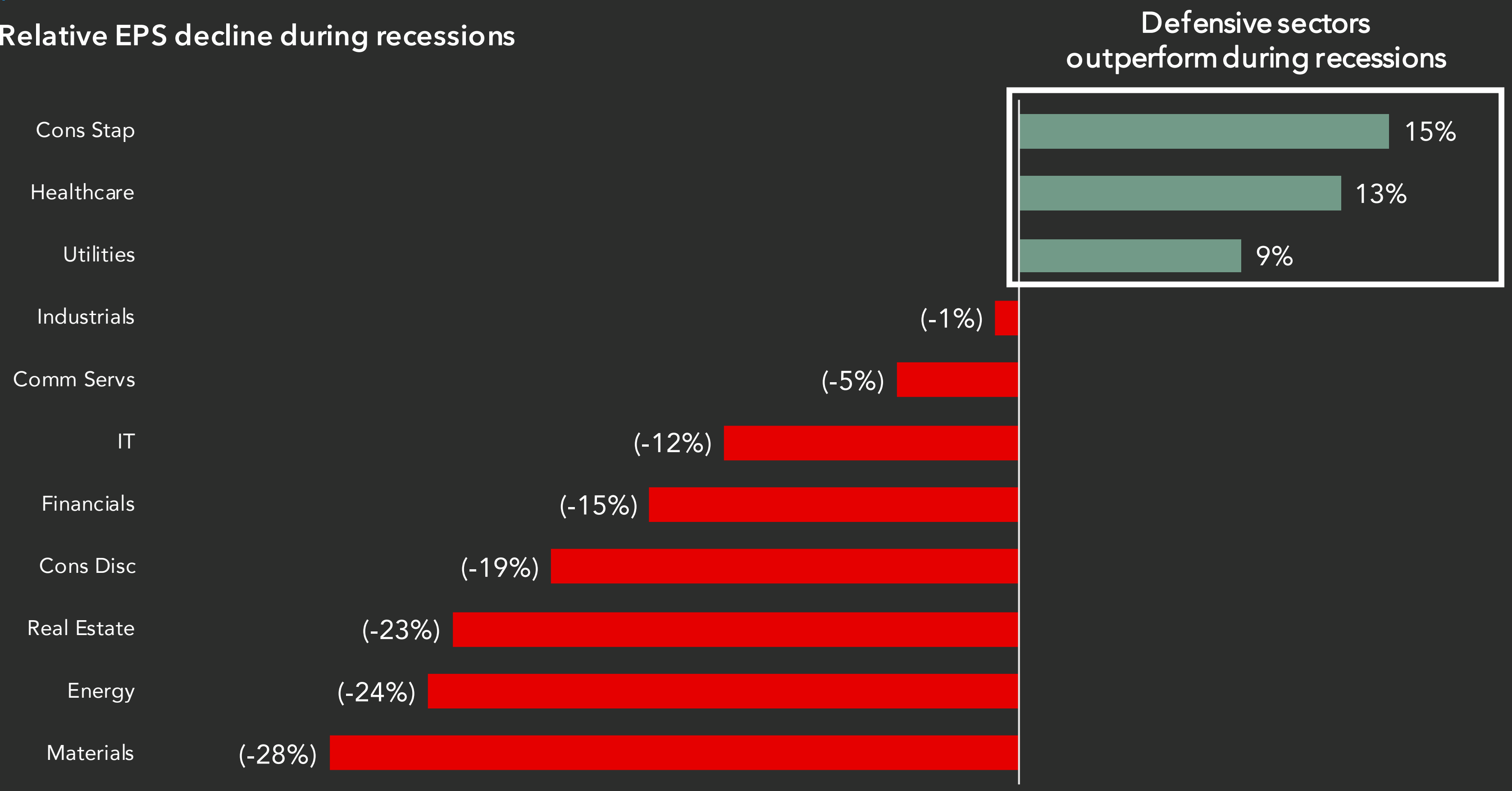


Source: (1-2) Bloomberg. Data as of January 12, 2023. Schroders/ Performance is based on daily S&P 500 price returns. 1945 and 2001 S&P 500 trough occurs after recession has ended.

Defensives Outperform During Recessions

Defensive sectors have historically outperformed growth during US recessions. In the current cycle, sectors more resilient to margin pressure – energy, industrials, and pharma – should also outperform. Given their more attractive valuation levels to begin the year, look for international equities to perform well in 2023 as well.

Relative EPS decline during recessions

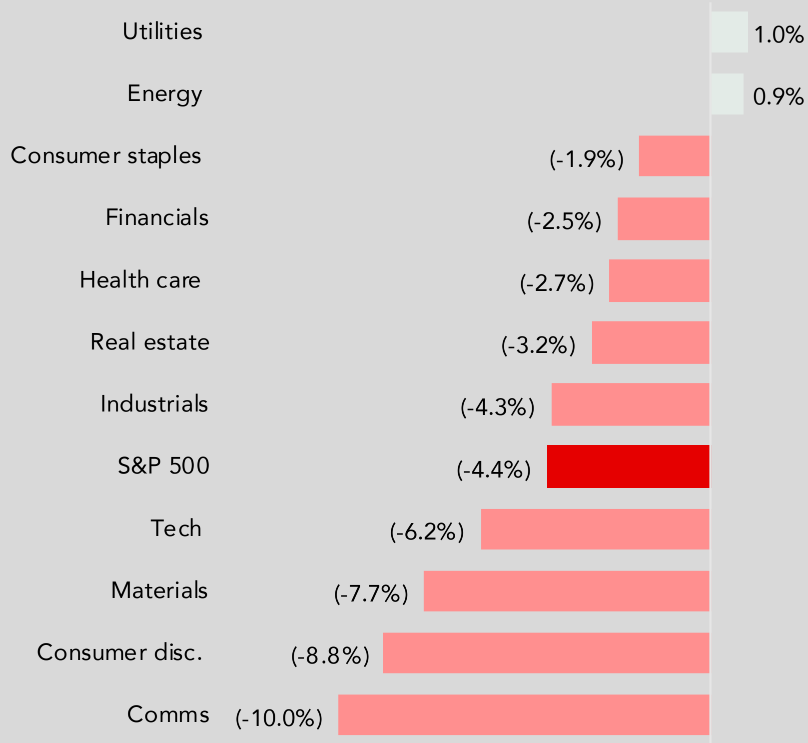


Source: (1) Oxford Economics, "Equities: Too early to rotate back to growth stocks" (December 9, 2022). Average EPS decline in 2001, 2009 recessions vs. overall market.

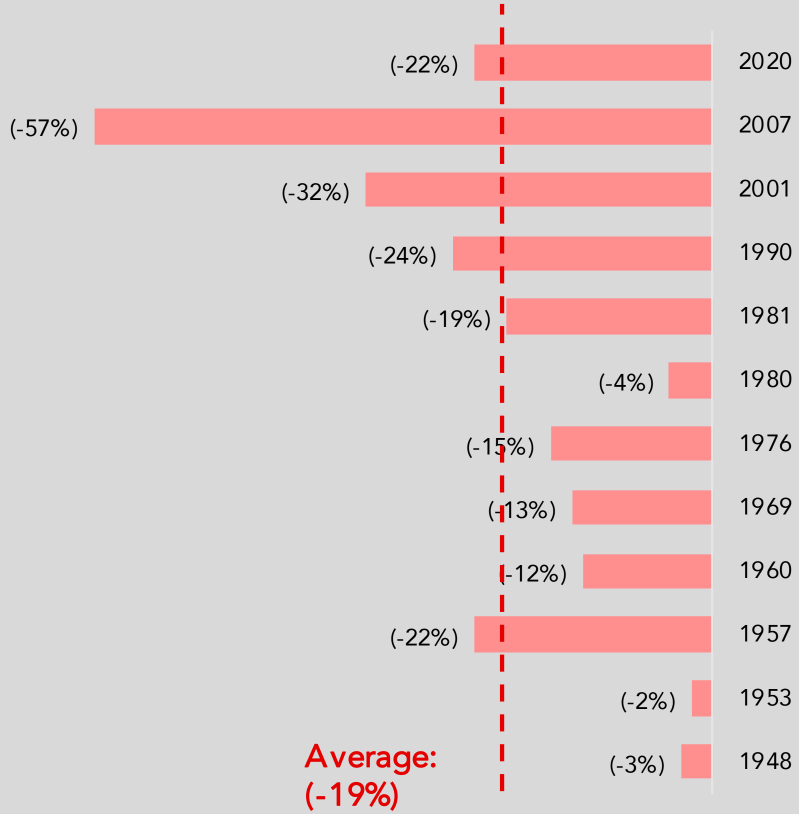
Downward Earnings Revisions Likely

"Economic" recessions are seldom fully priced until they arrive, and are frequently accompanied by "earnings" recessions. Historically, stock prices and earnings hit new lows around 6 and 12 months, respectively, after a recession begins. In our view, sharp downward revisions to earnings remain a key risk for 2023 as nominal GDP decelerates, and as margins come under pressure as the rate of change on costs exceeds the rate of change on sales.

Downward revisions to 2023 S&P 500 EPS since September 2022, by sector



S&P 500 earnings declines around recession



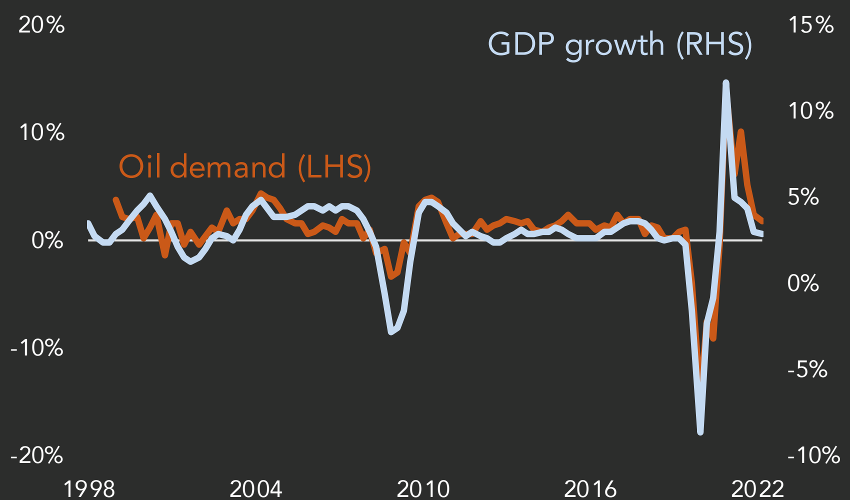
Source: (1) FactSet Earnings Insight (January 6, 2023). (2) Truist Advisory Services. Bloomberg.

Oil Cyclically Mixed, Structurally Tight

MUFG's Head of Commodity Research, Ehsan Khoman, expects oil prices to be range-bound in the 1H 2023 on sluggish demand and recession risk, but then higher in 2H 2023 due to meaningful supply side tightness

Demand-side: Cyclically Mixed

World GDP growth and global oil demand, y/y



	Spot (Jan 12)	Q1 2023	Q2 2023	Q3 2023	Q4 2023
Brent	$84	$87	$94	$112	$109
WTI	$78	$83	$89	$107	$104

Source: (1) Bloomberg. Data as of January 12, 2023.

Supply-side: Structurally Tight

China reopening

Russian sanctions

OPEC production cuts

US SPR refill (at ~$70/b)

Tight inventory

Structural under-investment

- Low capex
- Labor shortages
- Higher cost of capital
- Inflation, supply chain tightness
- Investor demands
- Reduced refining capacity
- Regulatory restrictions
- Energy transition policies

Divergent Paths for Nat Gas

MUFG's Global Head of Commodities Research, Ehsan Khoman, is forecasting divergent paths for European and US nat gas in 2023

Upward Pressure on EU Nat Gas

2023 EU nat gas forecasts (TTF)

- Slower 2023 inventory rebuild
- LNG terminal constraints
- Russian gas flow cut off
- Rising Chinese LNG competition (re-open)
- Demand defense measures strengthens consumption

Downward Pressure on US Nat Gas

2023 US nat gas forecasts (HH)

- Higher dry production in 2023
- Weaker US power demand
- Limited additional LNG export capacity
- Favorable inventory levels

Source: (1-2) MUFG Commodities Research. "Commodities Markets 2023 Outlook" (Ehsan Khoman). Bloomberg. Data as of January 12, 2023. Euro natural gas is TTF.

Appendix: Key Dates & Elections in 2023

Key Dates in 1H 2023

Month	Date	Event
JANUARY	1	Sweden assumes rotating 6-month Presidency of the European Council
	1	Croatia adopts Euro & becomes EZ's 20th member
	3	118th US Congress convenes
	9-10	North American Leaders' Summit in Mexico City
	14-17	US-Taiwan first round formal trade negotiations
	16-20	World Economic Forum in Davos
	22	Chinese New Year (Year of the Rabbit)
	31-2/1	**FOMC Meeting**
FEBRUARY	5	EU ban on Russian petroleum products
	6	Biden FY 2024 budget proposal
	7	President Biden's State of the Union
	25	Nigeria Presidential & Parliamentary elections
	28	USTR releases President Biden's trade agenda
MARCH	4	China National People's Congress
	15	UK Chancellor Jeremy Hunt annual Budget speech
	21-22	**FOMC Meeting**
	29-30	Summit for Democracy
APR	14-16	IMF / World Bank meetings in Washington, D.C.
MAY	2-3	**FOMC Meeting**
	3-5	Japan's Golden Week
	6	Coronation of King Charles III
	19-21	G7 Summit in Hiroshima, Japan
JUNE	13-14	**FOMC Meeting**
	18	Turkey Presidential & Parliamentary elections

Key Dates in 2H 2023

JULY	1	Spain assumes rotating 6-month Presidency of the European Council
	11 - 12	NATO summit in Vilnius, Lithuania
	25 - 26	**FOMC Meeting**
AUG	24	Jackson Hole economic policy symposium
SEPT	9-10	18th G20 summit in New Delhi, India
	12 - 30	78th UN General Assembly meeting
	19 - 20	**FOMC Meeting**
OCTOBER	1	US Government fiscal 2024 year begins
	1	EU Carbon Border Adjustment Mechanism phase-in begins
	13 - 15	IMF / World Bank meetings in Morocco
	29	Turkey's centennial anniversary
	31 - 11/1	**FOMC Meeting**
NOV	12 - 19	APEC forum in San Francisco, California
	30 - 12/12	UN COP28 in Dubai, UAE
DEC	1	Brazil assumes G20 Presidency
	12 - 13	**FOMC Meeting**

Notable Elections in 2023

2023 may be the first year of the 21st century without a major election in a G7 country.

Jan 13	Tunisia Legislative
Jan 13 - 14	Czech Republic Presidential Election
Jan 18	Antigua and Barbuda General Election
Feb 12	Cyprus Presidential Election
Feb 25	Nigeria General Election
Mar 5	Estonia Legislative Election
Mar 26	Cuba Parliamentary Election
By Apr 2	Finland Legislative Election
Apr 30	Paraguay General Election
Apr	Montenegro Presidential Election
May 7	Benin Legislative Election
May 7	Thailand General Election
Jun 4	Guinea-Bissau Legislative Election
Jun 18	Turkey General Election
Jun 25	Sierra Leone Presidential Election
Jun 25	Guatemala General Election
By Jul	Greece Legislative Election
Jul	Cambodia Parliamentary Election

Jul	Zimbabwe General Election
Aug	Sudan General Election
Sep	France Legislative Election
By Oct 8	Luxembourg General Election
Oct 10	Burma / Myanmar General Election
By Oct 12	Pakistan General Election
Oct 22	Switzerland General Election
By Oct 29	Ukraine Parliamentary Election
Oct 29	Argentina Presidential Election
Oct	Liberia Presidential Election
Oct	Mali Legislative Election
By Nov 11	Poland Legislative Election
Nov	Madagascar Presidential Election
By Dec 10	Spain Legislative Election
Dec	Belarus Legislative Election
Dec	Democratic Republic of Congo Presidential Election
Dec	Bangladesh General Election
Dec	Switzerland Presidential Election

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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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Role

Hailey Orr is a 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 a over 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".

Stephanie Kendal

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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 also focused on the diversity recruiting effort at MUFG. At her prior firm, Stephanie was a part of the Americas Women's Network Junior Council.

Education

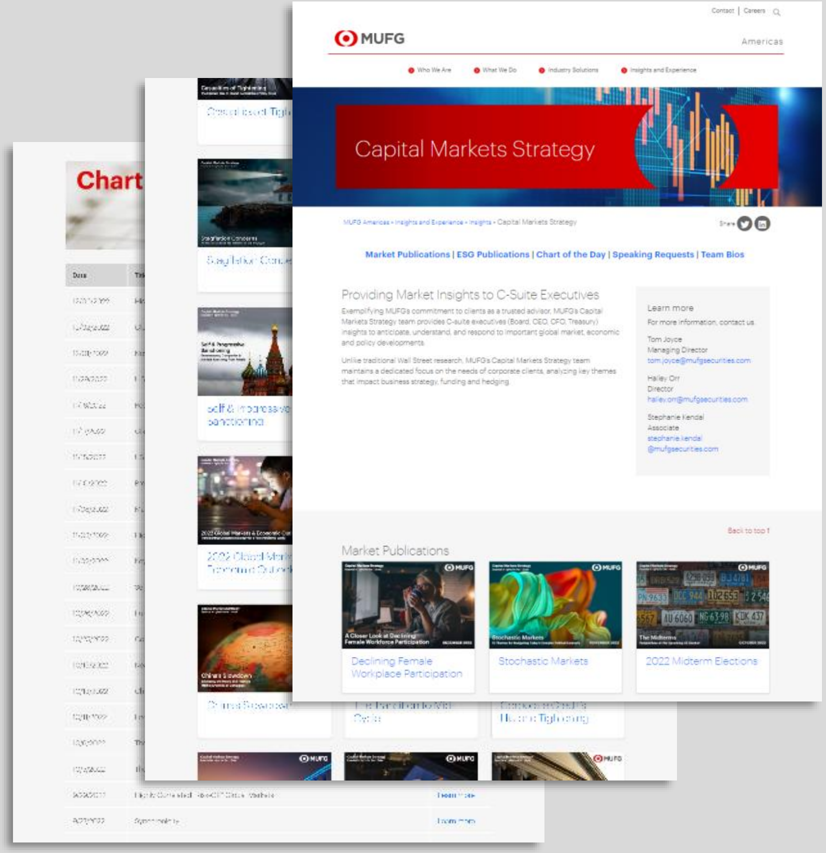
Stephanie graduated with honors from the University of Michigan's Ross School of Business with a BBA .

Personal

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

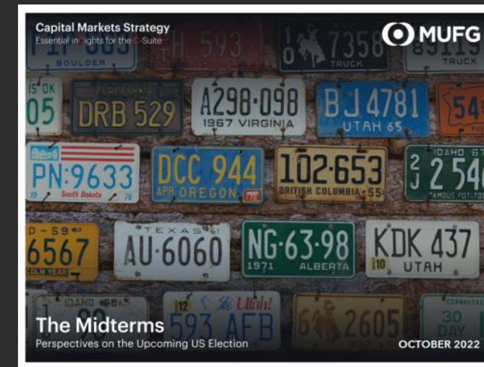
Capital Markets Strategy Digital Content

The MUFG Capital Markets Strategy team provides monthly publications and weekly policy notes, presenting to Boards and C-Suite executives, on a broad range of transformative themes driving the FX, rates and credit markets including: monetary policy, inflation, labor markets, supply chain dislocations, US-China decoupling, the COVID-19 recovery, tax code policy changes, geopolitical risk and corporate strategy.



For more information: www.mufgamericas.com/insights-and-experience/insights/capital-markets-strategy

MUFG's Capital Markets Strategy Team



MUFG's Capital Markets Strategy Team

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