Capital Markets Strategy
Essential inCights for the C-Suite

VOLUME 3

Global Capital Markets in 2024

Key Themes for the Year Ahead

FEB 2024

2024: Geopolitical Recession

"It's what I consider a geopolitical recession. The institutions that we have globally, which are meant to create a level of governance, no longer align with the underlying balance of power of the world. The same institutions also no longer align with the world's policy or leadership needs.

As a result, businesses need to be much more thoughtful about how they operate on both sides of geopolitical tension."

Ian Bremmer, Founder & President of Eurasia Group,
a political risk research firm

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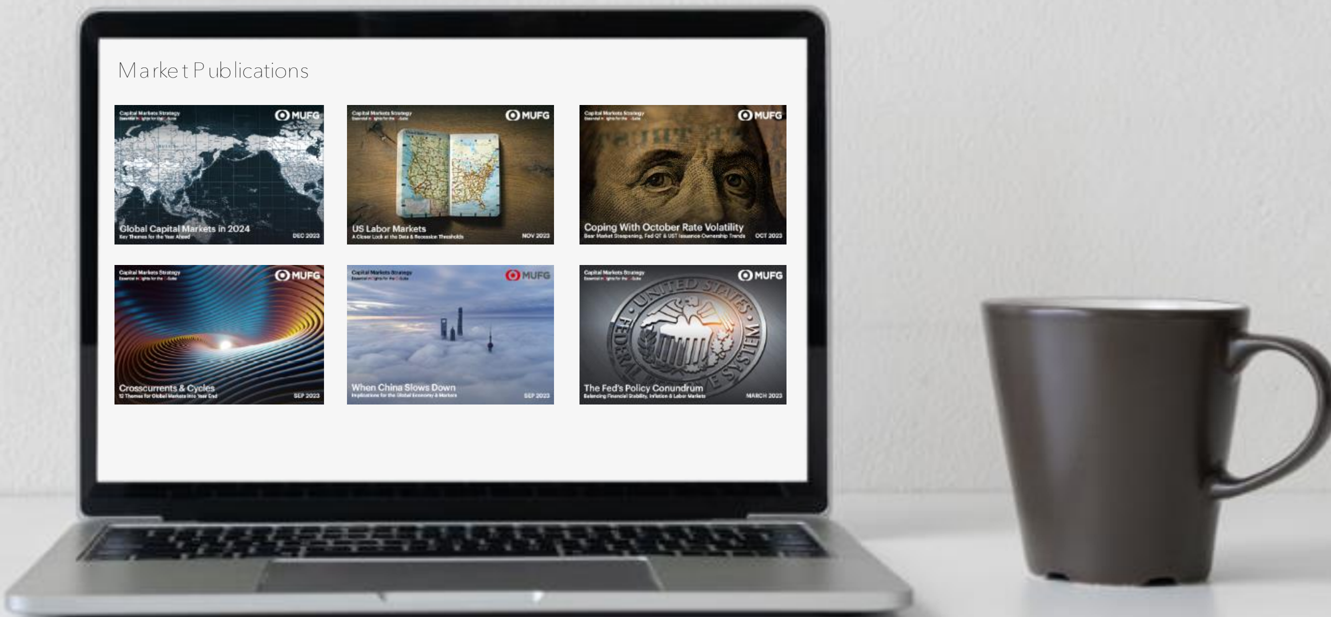

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Introduction

> "I constantly see people rise in life who are not the smartest, sometimes not even the most diligent, but they are learning machines. They go to bed every night a little wiser than when they got up."
>
> Charles Munger, American investor, philanthropist and Vice Chairman of Berkshire Hathaway (1924-2023)

Low Visibility Macro Backdrop

Low probability, high impact events have been occurring more frequently, and are nearly impossible to forecast.

2018
Global Trade War

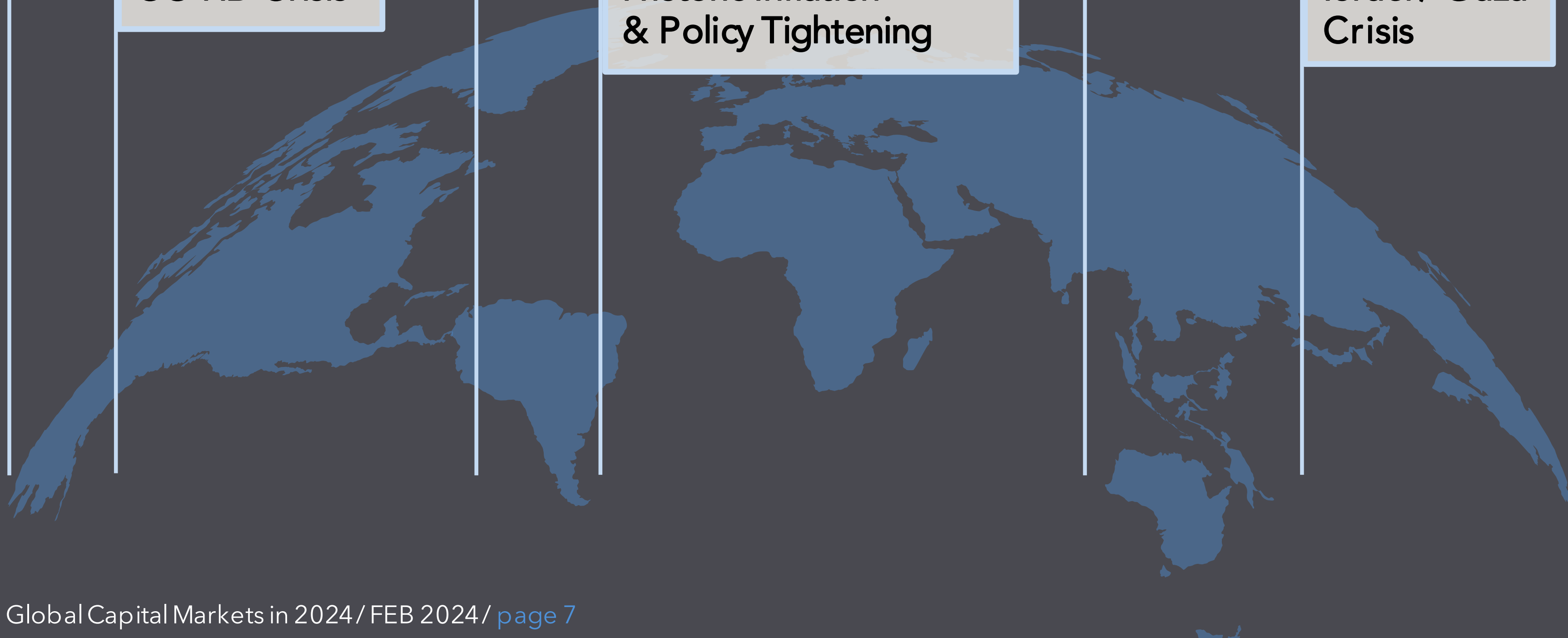
2020
COVID Crisis

Feb 2022
Russia-Ukraine

2022-23
Historic Inflation & Policy Tightening

Mar 2023
Global & US Bank Sector Stress

Oct 2023
Israel / Gaza Crisis



Key Themes for Markets in 2024

2024 Global Market Themes
1. “Higher friction” geopolitics
2. Fed policy, markets & election cycles
3. Policy pivot to monetary easing
4. Global growth below trend
5. Inflation normalizing above trend
6. Resilient USD credit markets
7. Neutral to bullish energy prices
8. Dollar depreciation
9. Higher deal activity (M&A, financing)
10. Accelerating innovation & productivity

2024 USD Credit Market Themes
1. Cyclically bullish bond yields
2. US debt & deficit-induced rate volatility
3. Moderately bearish credit spreads
4. Fed easing driving higher fund flows to IG corporate credit
5. Higher maturity walls in 2025-26 will drive 2024 issuance
6. Global M&A to rebound from 2023 lows
7. Increased differentiation by industry sector (recession resilience)
8. Increased differentiation by credit quality (balance sheet, ratings)
9. Expanding pockets of weakness (CRE, retail, consumer)
10. “Longer but lower” default cycle

Summary Conclusions for 2024

Global Economy in 2024	
Global GDP growth	↓
US GDP growth	↓
China GDP growth	↓
Japan GDP growth	↓
EU GDP growth	↓
India GDP growth	↓
Global inflation	↓
US inflation	↓
US unemployment	↑
Global trade volumes	↑

Earnings & Deal Activity in 2024	
S&P 500 earnings	↑
Global M&A volumes	↑
USD IG issuance	↑
USD HY issuance	↑
Equity & IPO volumes	↑

Global Markets in 2024	
UST rates	↓
IG credit spreads	↑
HY credit spreads	↑
US Dollar	↓
Oil prices	↓ ↑

Key Dates in 2024

JAN	1	Belgium assumes rotating 6-month Presidency of the European Council
	1	BRICS+ expanded with 6 new member countries
	1	15% global minimum corp-tax rate enacted
	15-19	World Economic Forum in Davos
	30-31	FOMC Meeting
Feb	10	Chinese New Year (Year of the Dragon)
MAR	1	Funding for ~20% of the US government expires
	8	Funding for ~80% of the US government expires
	19-20	FOMC Meeting
APR	15-21	IMF / World Bank meetings in Washington, D.C.
	29-5/5	Japan's Golden Week
	30-5/1	FOMC Meeting
May	20	Inauguration of new Taiwan President, Lai
JUN	6	80th Anniversary of D-Day
	11-12	FOMC Meeting
	13-15	G7 Summit in Puglia, Italy
JUL	1	Hungary assumes rotating 6-month Presidency of the European Council

JUL	9-11	NATO Summit in Washington, D.C.
	15-18	Republican National Convention in Milwaukee, WI
	26-8/11	Paris 2024 Summer Olympics
	30-31	FOMC Meeting
AUG	17	New city of Nusantara is formally inaugurated as the capital of Indonesia, replacing Jakarta
	19-22	Democratic National Convention in Chicago, IL
	28-9/8	Paralympic Games in Paris, France
	TBD	Jackson Hole Economic Policy Symposium
SEP	10-24	79th UN General Assembly meeting
	17-18	FOMC Meeting
	22-23	UN Summit of the Future in New York
	21-27	IMF / World Bank meetings in Washington, D.C.
OCT	TBD	BRICS Summit in Kazan, Russia
NOV	6-7	FOMC Meeting
	10-16	APEC Forum in Lima, Peru
	11-24	UN COP 29 Conference in Azerbaijan
	18-19	19th G20 Summit in Rio de Janeiro, Brazil
DEC	1	South Africa assumes G20 Presidency
	17-18	FOMC Meeting

Notable Elections in 2024

In 2024, more than 75 countries, and over 4.2 billion of the world's 8.1 billion people, will hold national or major regional elections in varying form

Bangladesh General	JAN 7	Turkey Local	MAR 31	Burkina Faso	BY JULY	Somaliland Presidential	BY NOV
Taiwan Presidential	JAN 13	Ukraine Presidential	MAR 31	Sri Lanka Presidential	BY SEP	Ghana General	DEC. 7
Comoros Presidential	JAN 14	South Korea Legislative	APR 10	Brazil Municipal	OCT 6	San Marino General	BY DEC
Finland Presidential	JAN 28	N. Macedonia Parliamentary	APR 24	Mozambique General	OCT 9	Algeria Presidential	BY DEC
El Salvador General	FEB 4	Slovakia Presidential	BY APR	Uruguay General	OCT 27	Croatia Presidential	BY DEC
Mali Presidential	FEB 4	Solomon Islands General	BY APR	Botswana General	BY OCT	South Sudan General	BY DEC
Azerbaijan Presidential	FEB 7	Panama General	MAY 5	Georgia Presidential	BY OCT	UK General	BY JAN 2025
Pakistan General	FEB 8	Dominican Rep. General	MAY 19	US Presidential	NOV 5	Moldova Presidential	TBD
Indonesia General	FEB 14	India General	BY MAY	Palau General	NOV 12	South Africa General	TBD
Belarus Parliamentary	FEB 25	Lithuania Presidential	BY MAY	Tunisia Presidential	NOV 24	Venezuela Presidential	TBD
Cambodia Senate	FEB 25	Iceland Presidential	JUN 1	Namibia General	BY NOV	Togo Parliamentary	TBD
Senegal Presidential	FEB 25	Mexico General	JUN 2	Chad Parl. & Presid.	BY NOV	Egypt Presidential	TBD
Iran Parliamentary	MAR 1	European Parliamentary	JUN 6-9	Guinea-Bissau	BY NOV	Peru General	TBD
Portugal Legislative	MAR 10	Mauritania Presidential	BY JUNE	Jordan General	BY NOV		
N. Korea Parliamentary	MAR 11	Mongolia Parliamentary	BY JUNE	Mauritius General	BY NOV		
Russia Presidential	MAR 17	Rwanda General	JUL 15	Romania Presidential	BY NOV		

1.

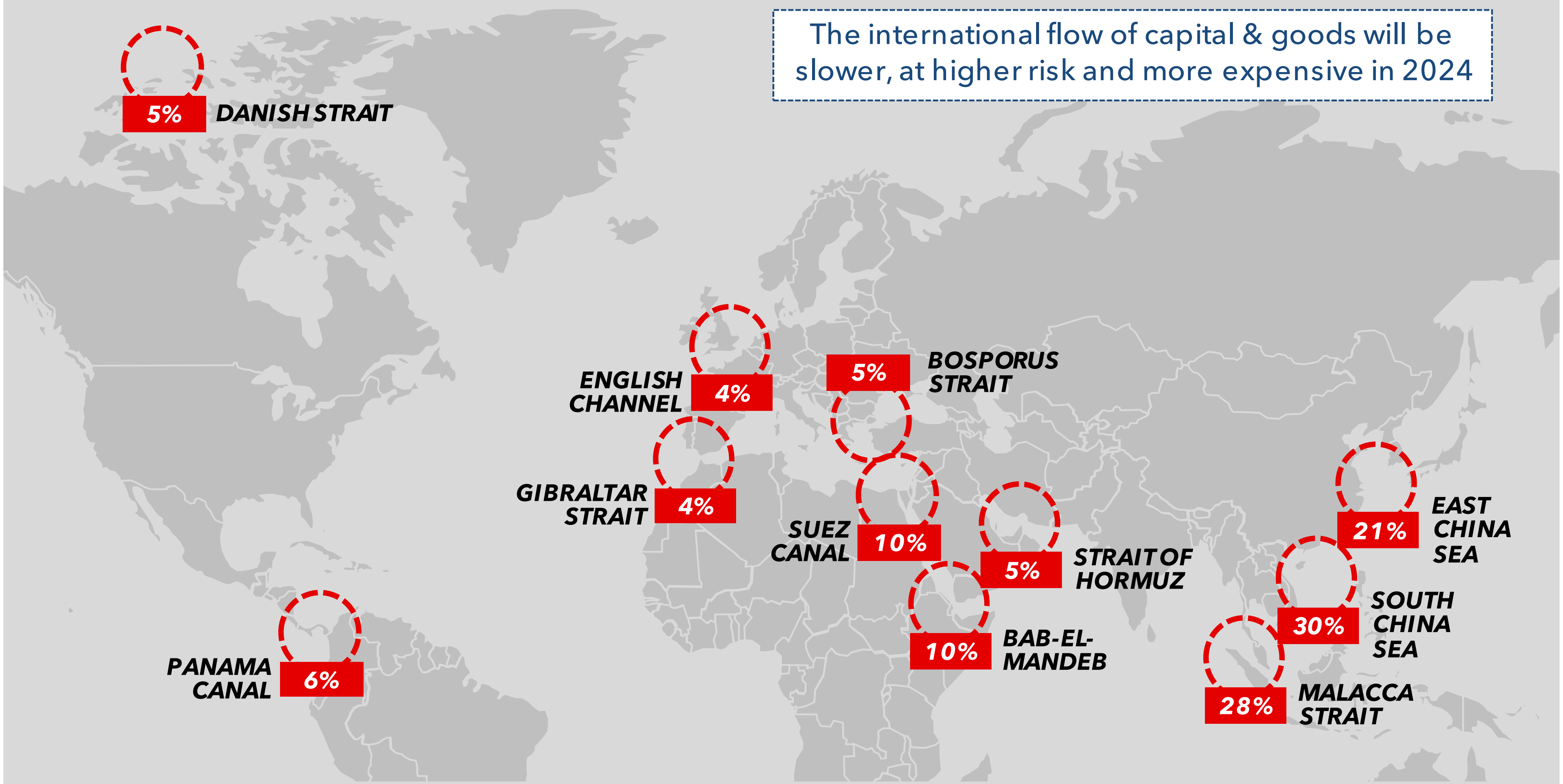
Higher Friction Geopolitics

> "Artists are the gatekeepers of truth. We are civilization's anchor. We are the compass for humanity's conscience."
>
> Harry Belafonte, 3-time Grammy award winning American singer, actor, and civil rights activist (1927-2023)

Global Maritime Chokepoints at Risk in Decade Ahead

Military conflict in the 21st Century is quickly shifting to maritime theaters. Over 90% of global trade is conducted at sea (95% for US), while 75% of the global population lives within 200 miles of the sea. Further, over 60% of global oil is transported by sea. Climate, geopolitical risk and de-globalization will thereby pose significant challenges to the world's most important geopolitical chokepoints in the decade ahead.

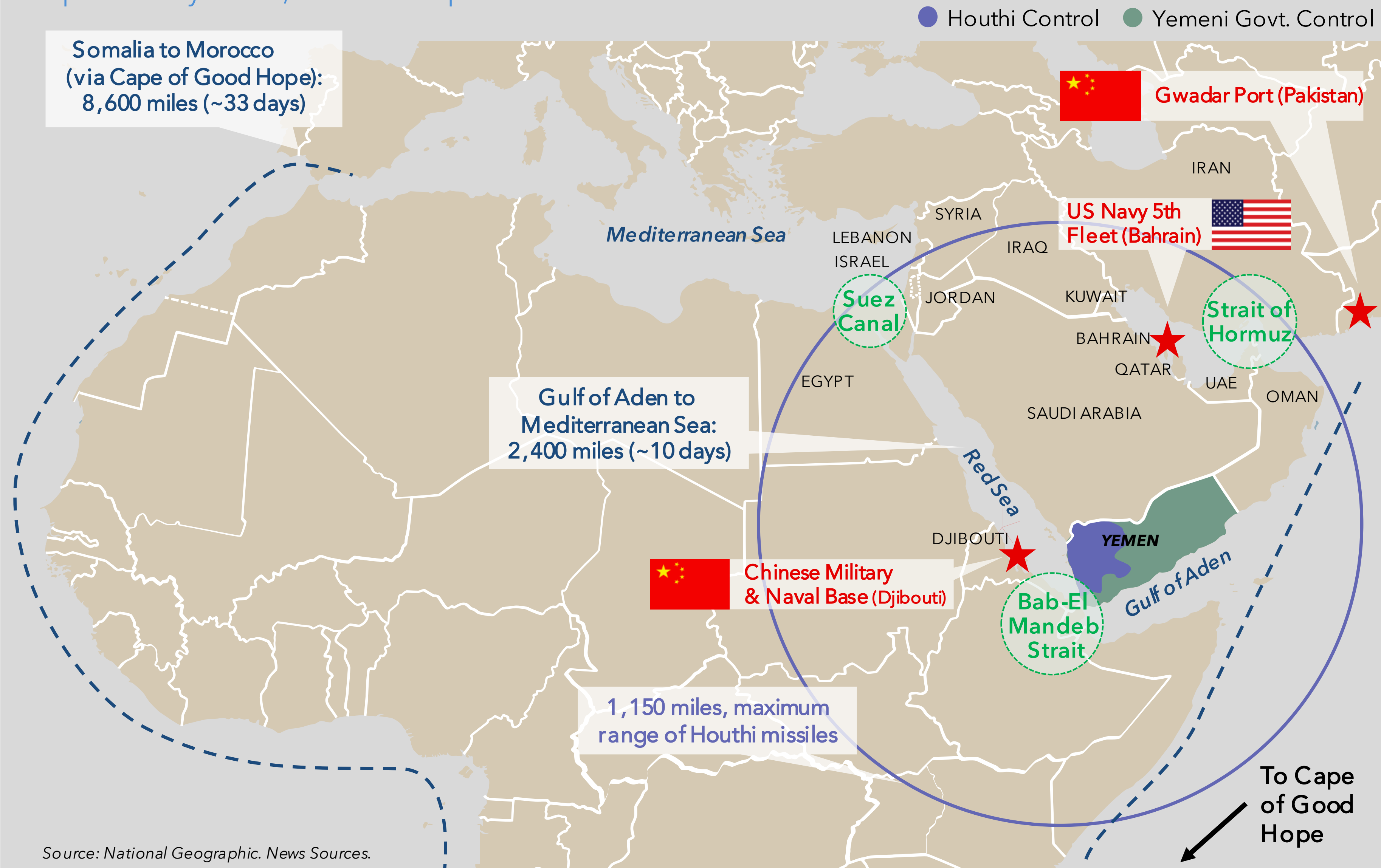
Share of global trade by 2019 value



Source: Lincoln Pratson of Duke University. GPS locations from OpenStreetMap. Statista. Percentages don't sum to 100 as a ship may pass through multiple chokepoints.

Address Vulnerabilities in China's Energy Security

As the world's largest oil importer, energy security is a key strategic priority. Owned by Pakistan and operated by China, the Gwadar port allows China to circumvent Strait of Malacca & South China Sea risk.



Source: National Geographic. News Sources.

Middle East Contagion to Maritime Chokepoints

The Strait of Hormuz, 21 miles wide and in close proximity to Iran, is the world's most active passageway for global oil and LNG shipments. Only 14 miles wide, and vulnerable to Yemen's Houthi rebels, the Bab-el-Mandeb is a critical geo-strategic choke point in the Red Sea that connects global shipping routes between the Indian Ocean and Mediterranean Sea via the 121 mile long Suez Canal. As of early January 2024, the number of container ships at the entry point to the Red Sea had declined 90% from the year prior.

Strait of Hormuz (21 miles wide)

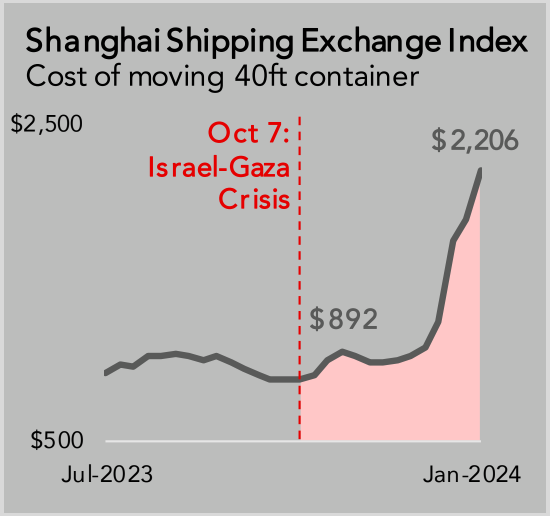
- Among the most important global geo-strategic choke points
- 1/3 of daily seaborne LNG
- 35% of daily seaborne oil; 20% of total global oil (~21 m/b/d)

Bab-el-Mandeb Strait (14 miles wide)

- 10-15% of global trade (several billion tons of cargo, annually)
- Approx. $1 trillion of global trade volume annually
- 10% of daily seaborne oil (~6 m/b/d)
- Approx. 50 million tons of agricultural products annually

Suez Canal (121 miles long)

- Over 25,000 ships per annum, connecting Europe & Asia
- Approx 10% of global trade (vs. ~6% for Panama Canal)



Source: (1) Bloomberg. Data as of January 18, 2024.

2.

Gravity Shifting East

> “It takes a person of great care and insight to watch for any abnormality in the green grass even while it grows abundantly and healthily.”
>
> Kenzaburō Ōe, Nobel Prize-winning writer and major figure in contemporary Japanese literature (1935-2023)

The Indo-Pacific:
21st Century Geostrategic Epicenter

From both an economic and geo-political perspective, the broader Indo-Pacific region has emerged as the geo-strategic epicenter of the great powers in the 21st Century

The Indo-Pacific Region

> 50% of global population

65% of the world's oceans

25% of world's land mass

7 of the world's largest militaries

~ **2/3** of global GDP

Nearly $2 trillion of US & Indo-Pacific trade

~ **3 million** US jobs

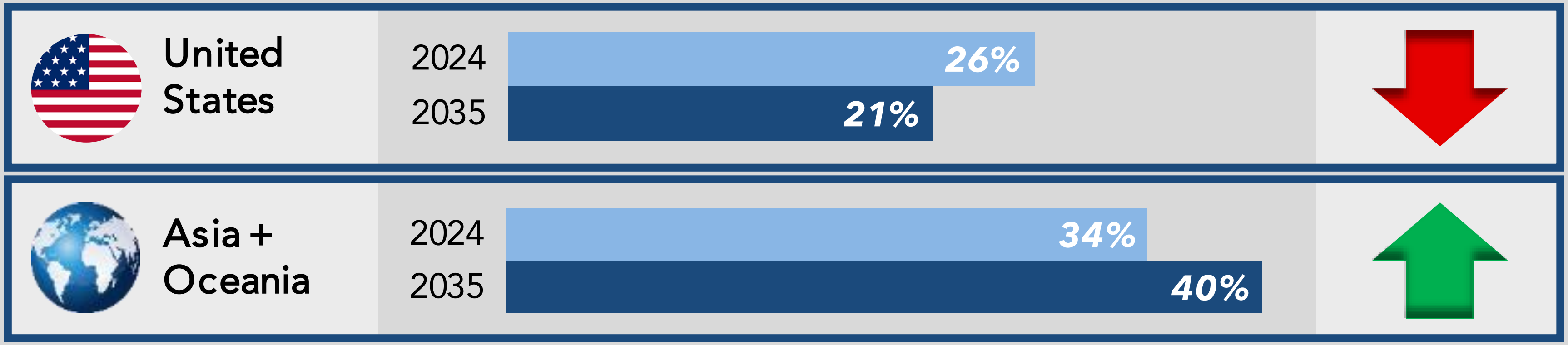
Nearly $1 trillion of inbound US FDI

Over $1 trillion of outbound US FDI

Global Growth Shifting East

Over the next 10 years, the Asia-Pacific region will grow to account for approximately 40% of global GDP, while US share will decline closer to 20%. China and India will be among the three largest economies in the world, while Japan will hold its position in the top 5.

Nominal GDP as share of global GDP



GDP, nominal, USD tn

Top 5 economies in the world, ***2024***		
1	US	$28.0 tn
2	China	$18.9 tn
3	Germany	$4.4 tn
4	Japan	$4.0 tn
5	India	$3.9 tn

Top 5 economies in the world, ***2035***		
1	US	$42.4 tn
2	China	$42.4 tn
3	India	$11.7 tn
4	Germany	$7.2 tn
5	Japan	$6.5 tn

Source: (1) Oxford Economics. Data as of December 2023.

21st Century Conflicts Shifting to Maritime Theaters

While 20th Century military conflicts were fought largely on land, military escalation and conflicts in the 21st Century are quickly shifting to maritime theaters. To this end, the South China Sea has become the most contested body of water in the world, a critical geo-strategic chokepoint, and likely the epicenter of geopolitical risk in the decade ahead.

Geo-strategic importance of the South China Sea

Strategic Chokepoint

- Strait of Malacca a critical global chokepoint (> 60k ships per year)
- Battlefield for China's regional hegemony

Critical Passageway for Global Trade

- 60% of Japan's, Taiwan's and S. Korea's energy imports
- 80% of China's oil imports
- > 50% of annual merchant fleet tonnage
- > 1/3 of global maritime traffic

Epicenter of Global Supply Chains

- Epicenter of semiconductor supply chains
- Focal point of extended global supply chains

Abundant Oil & Gas Reserves

- "2nd Persian Gulf"
- 900 trillion cubic feet of natural gas
- 10-20 billion barrels of oil

Domain of Word's Largest Arm's Race

- World's two largest navies: US & China
- Arms race (China, Japan, Taiwan, SE Asia)
- Taiwan risk

The World's Most Contested Sea

World's Most Contested Sea

- 80% of China's oil imports
- Massive oil & gas reserves
- 1/3 of global trade
- Center of global supply chains
- World's largest arms race
- World's 2 largest navies (US & China)
- Taiwan risk

US-China Military Assets

China today boasts the world's largest Army and the largest Navy (as measured by # of ships). While the US remains the world's most dominant military power, President Xi Jinping has accelerated the modernization and expansion of China's military with the explicit aim of becoming the dominant regional power in the South China Sea and winning a war in the Taiwan Strait, if needed.

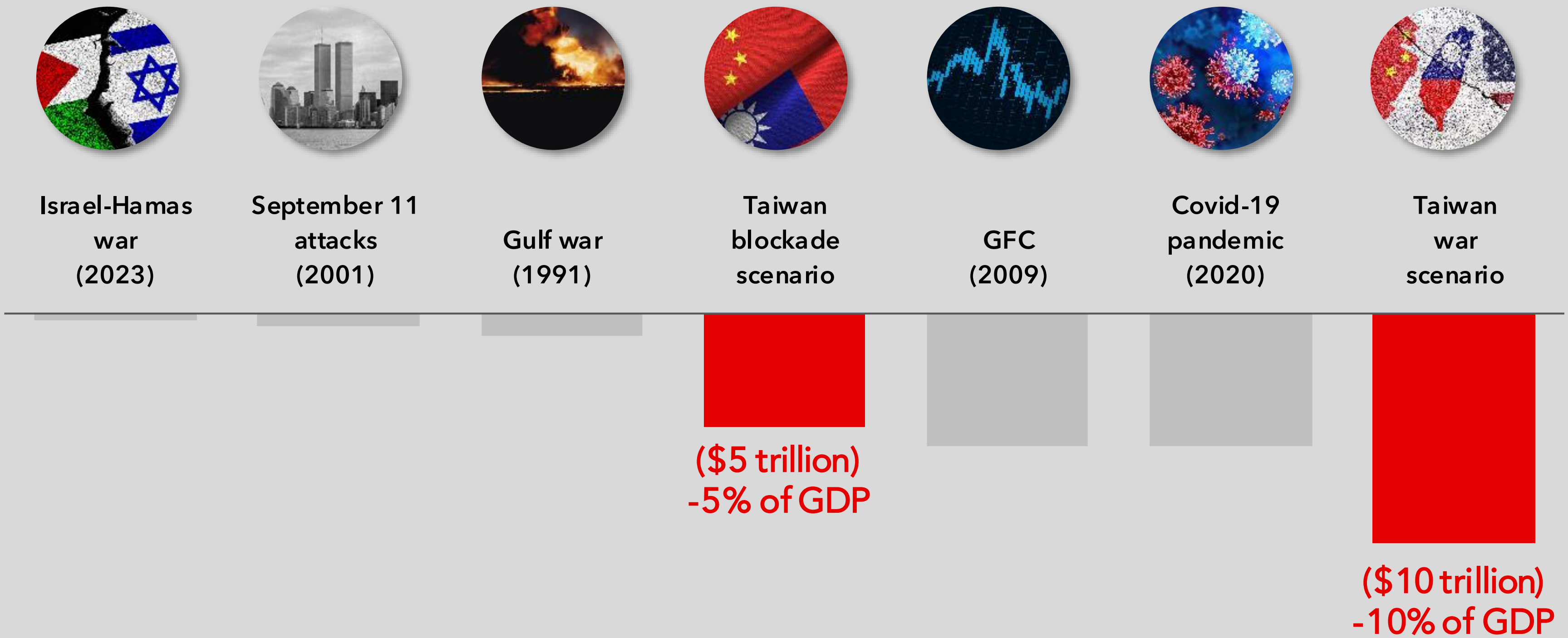
	US	China
Annual military spend (gross dollars, bn)	**$877 bn**	**$292 bn**
Annual military spend (% of GDP)	**3.5%**	**1.6%**
Nuclear arsenal (# of warheads)	5,244	410
Active military personnel	1,395,350	2,035,000
Active aircraft carriers	11	3
Destroyers	92	50
Frigates	0	43
Submarines	68	78
Fighters/attack planes	2,757	1,570
Main battle tanks	5,500	4,950

Source: (1) SIPRI 2022. Global Firepower. Federation of American Scientists (FAS). WiseVoter.

The Economic Cost of a Taiwan War

Bloomberg's economics team has modeled the potential cost of a military conflict in Taiwan across two scenarios. In both cases - a Taiwan blockade and a Taiwan war - they have projected a cost to the global economy of $5 and $10 trillion, respectively. The corresponding 5% and 10% contractions in global GDP would precipitate a global recession, and dwarf the cost of other recent conflicts including Ukraine, Gaza, the Gulf War and 9/11. The economic impact assessment takes into account the disruption to semiconductor supply chains, shipping, trade sanctions and tariffs, cyber-security and financial markets.

Global GDP deviation from pre-crisis trend

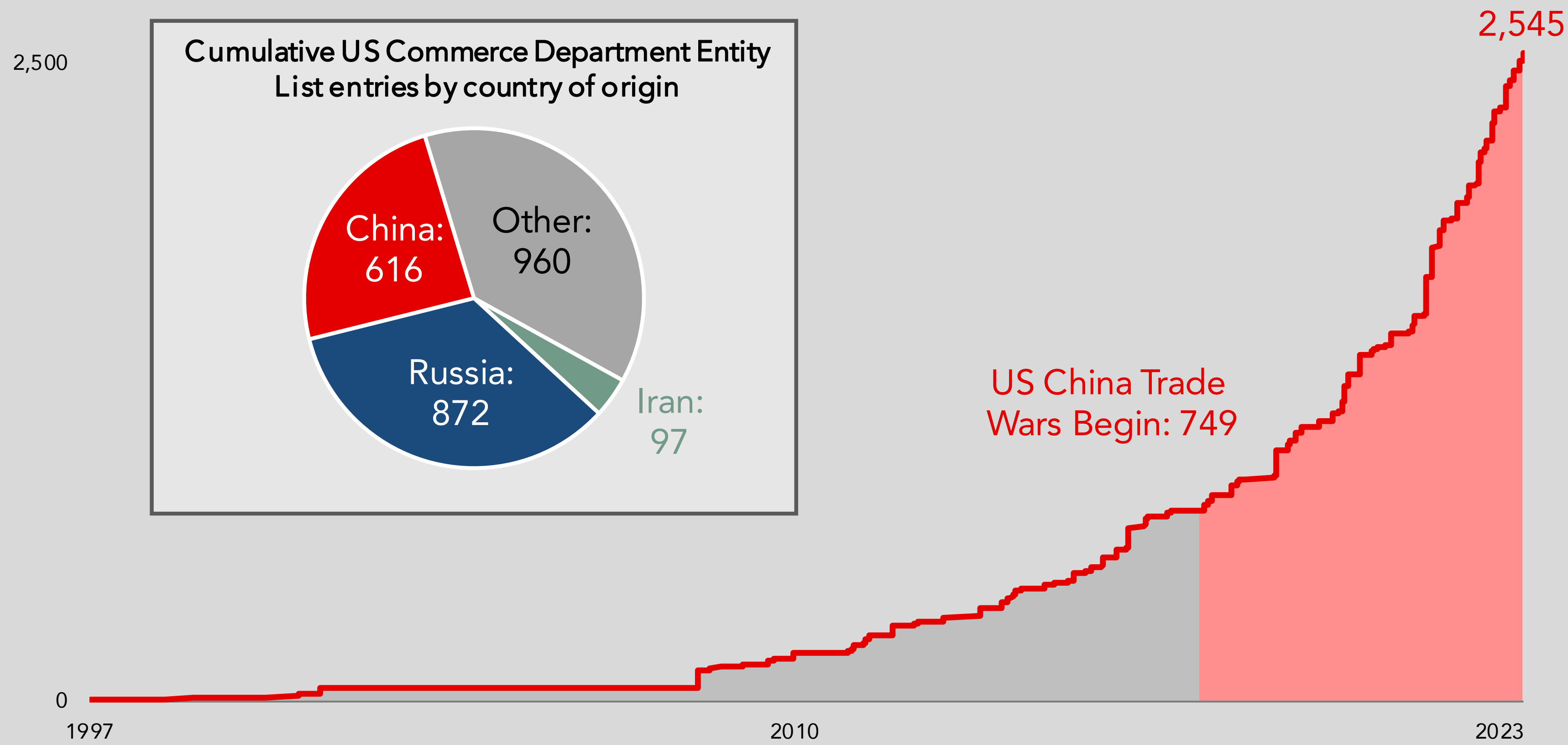


Source: Bloomberg. IMF. Israel-Hamas war, Taiwan blockade, and Taiwan war are Bloomberg Economics estimates.

US-China Policy Confrontation

Since inception in 1997, the US Commerce Department's Entity List has grown to over 2,500 entities and sub-entities. Members of the Entity List are subject to specific licensing requirements which may limit their ability to transact with US entities. Since the trade wars began in 2018, and Russia invaded Ukraine in 2022, China and Russia based companies have dominated new additions to the list.

Cumulative additions to the US Commerce Department Entity List (1997 – 2023)

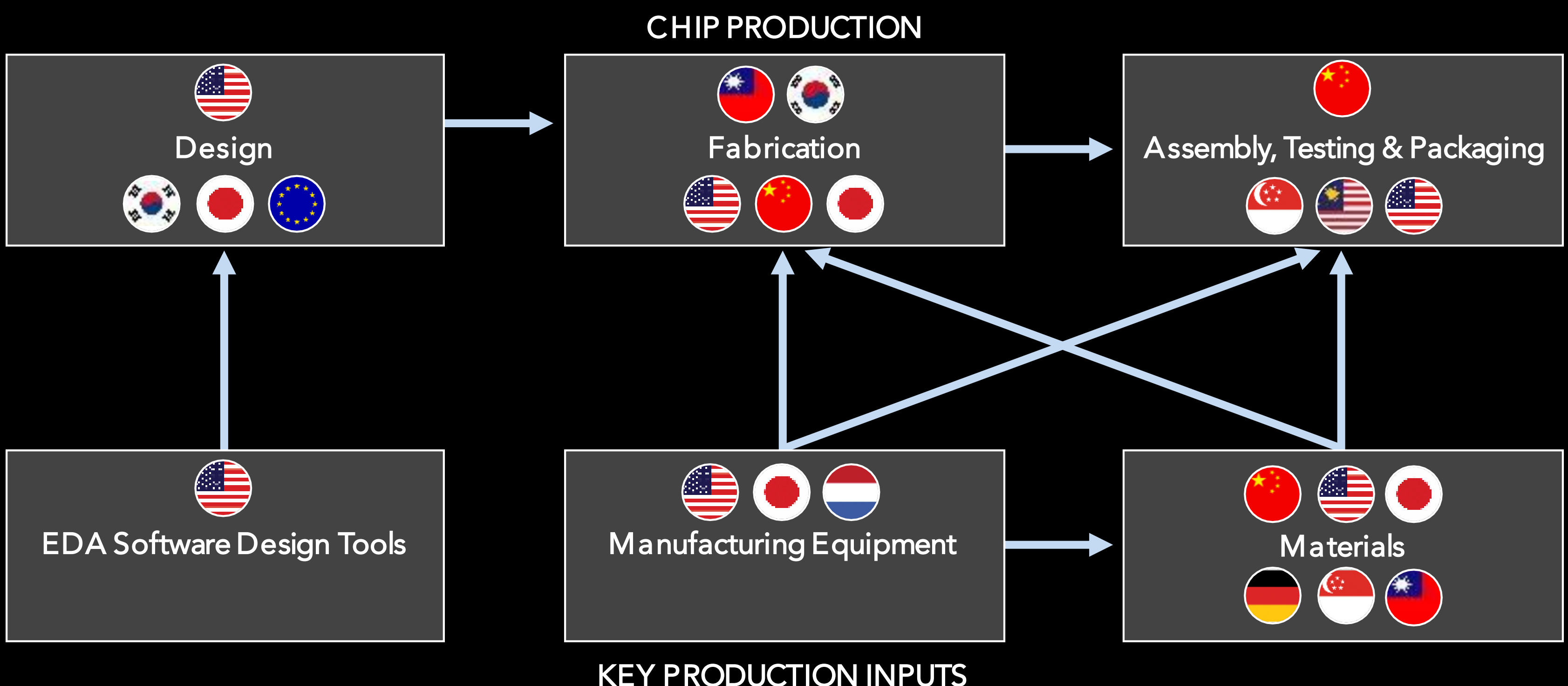


Source: (1-2) Commerce Department. Includes entities and sub-entities but removes duplicate entities. Entities added to the list multiple times are included from their first effective date. Excludes entities with no specified effective date. Data through December 2023. China figures include Hong Kong. Undated entries excluded.

East Asia Chip Manufacturing: Oil for the 21st Century

Semiconductor production requires the specialized capabilities of several different geographic regions. According to a study by the Center for Security and Emerging Technology, production of a single semiconductor could require more than 1,000 steps and pass through international borders 70 or more times before reaching the end consumer. While the US and its allies (Japan, Europe, Taiwan, South Korea) collectively dominate the supply chain, China is quickly developing its own manufacturing capabilities.

Leadership in the global semiconductor supply chain



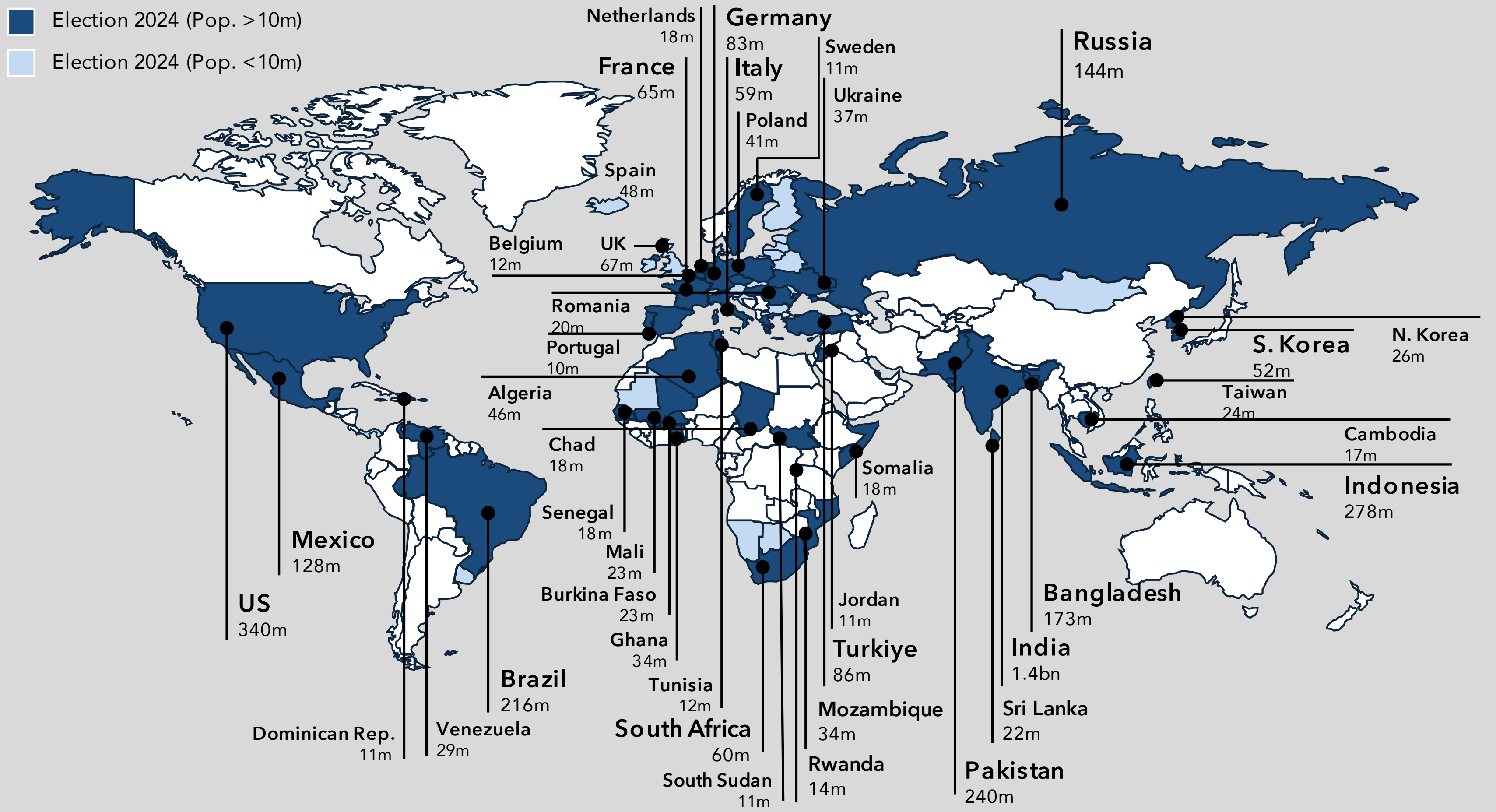
Source: Center for Security and Emerging Technology "The Semiconductor Supply Chain: Assessing National Competitiveness". January 2021.

3.

Biggest Election Year in History

> "I have become increasingly concerned in recent years about the lack of civics education in our nation's schools. The schools have stopped teaching it, and it's unfortunate."
>
> Sandra Day O'Connor, First woman to serve on the US Supreme Court (1930-2023)

2024 will be the largest election year in human history. More than 75 countries, and over 4.2 billion of the world's 8.1 billion people, will hold national or major regional elections in varying form, including several of the world's most populous countries (India, the United States, the EU, Indonesia, Russia, Mexico, Pakistan, Bangladesh, and South Korea). The five months between Taiwan's Jan 13 election and May 20th inauguration may be accompanied by increased tension across the Taiwan Strait.



Source: (1) Economist Intelligence Unit. United Nations. V-Dem 4. European countries included because of EU Parliamentary elections. UK general election could take place as late as January 2025, though 5-year Parliamentary term will end in 2024.

US Presidential Elections Getting Closer

In November, close to 160 million Americans will go to the polls for an election that may impact 8 billion people. Over the last 30 years, US elections have been getting much closer, and the possibility that either side will not accept a "close" 2024 election result is rising. Interestingly, in the last 8 Presidential elections, Democrats have won the popular vote 7 times, but have lost the electoral college 3 times in that same period.

Electoral college and popular vote results in US Presidential elections

Election year	***Republican candidate***	***Democrat candidate***	***Popular vote***		***Electoral college***
			Republican	***Democrat***	
2020	Donald Trump	Joe Biden	***47.1%***	***51.1%***	***Democrat +74*** ****306 - 232***
2016	Donald Trump	Hillary Clinton	***46.1%***	***48.2%***	***Republican +74*** ***306 - 232***
2012	Mitt Romney	Barack Obama	***47.2%***	***51.1%***	***Democrat +126*** ***332 - 206***
2008	John McCain	Barack Obama	***45.7%***	***52.9%***	***Democrat +192*** ***365 - 173***
2004	George W. Bush	John Kerry	***50.7%***	***48.3%***	***Republican +35*** ***286 - 251***
2000	George W. Bush	Al Gore	***47.9%***	***48.4%***	***Republican +5*** ***271 - 266***
1996	Bob Dole	Bill Clinton	***40.7%***	***49.2%***	***Democrat +220*** ***379 - 159***
1992	George H. W. Bush	Bill Clinton	***37.4%***	***43.0%***	***Democrat +202*** ***370 - 168***

*Source: (1) Federal Election Commission. *2020 election results subject to final certification. Election results as of November 30, 2020 at 5PM EST, Associated Press.*

2024 US Republican Party Primary Schedule

In order to win the party nomination, a US Republican candidate needs to win a simple majority (1,215 of 2,429) of delegates at-stake. With the primary season starting in January, the first four contests could be decisive as wins in Iowa, New Hampshire, Nevada and South Carolina would provide strong momentum into Super Tuesday on March 5th (when 36% of delegates are at-stake).

2024 Republican Party nomination timeline

Date	States	% of total delegates	Cumulative % of total delegates
JAN 15	Iowa	2%	2%
JAN 23	New Hampshire	1%	3%
FEB 8	Nevada, Virgin Islands	1%	4%
FEB 24	South Carolina	2%	6%
MAR 2	Idaho, Michigan	4%	9%
MAR 3	District of Columbia	1%	10%
MAR 4	North Dakota	1%	11%
MAR 5 SUPER TUESDAY	Alabama, Alaska, American Samoa, Arkansas, California, Colorado, Maine, Massachusetts, Minnesota, North Carolina, Oklahoma, Tennessee, Texas, Utah, Vermont, Virginia	36%	47%
MAR 12	Georgia, Hawaii, Mississippi, Washington	7%	54%
MAR 15	Northern Mariana	0.4%	54%
MAR 16	Guam	0.4%	55%
MAR 19	Arizona, Florida, Illinois, Kansas, Ohio	14%	69%
MAR 23	Louisiana	2%	71%
APR 2	Connecticut, Delaware, New York, Rhode Island, Wisconsin	8%	79%
APR 20	Wyoming	1%	80%
APR 21	Puerto Rico	1%	81%
APR 23	Pennsylvania	3%	84%
MAY TBD	South Dakota	1%	85%
MAY 1	New Mexico	1%	86%
MAY 4	Missouri	2%	88%
MAY 7	Indiana	2%	91%
MAY 14	Maryland, Nebraska, West VA	4%	95%
MAY 18	Montana	1%	96%
MAY 21	Kentucky	2%	98%
MAY 25	Oregon	1%	99%
JUN 4	New Jersey	0.5%	100%

Earliest candidates can achieve 50% threshold

Jul 15-18	GOP Conference, Milwaukee, WI
Aug 19-22	Dem. Conference, Chicago, IL

Source: 270 to Win. Some dates are subject to change. Libby Cantrill, Head of Government Affairs at PIMCO. The Green Papers.

4.

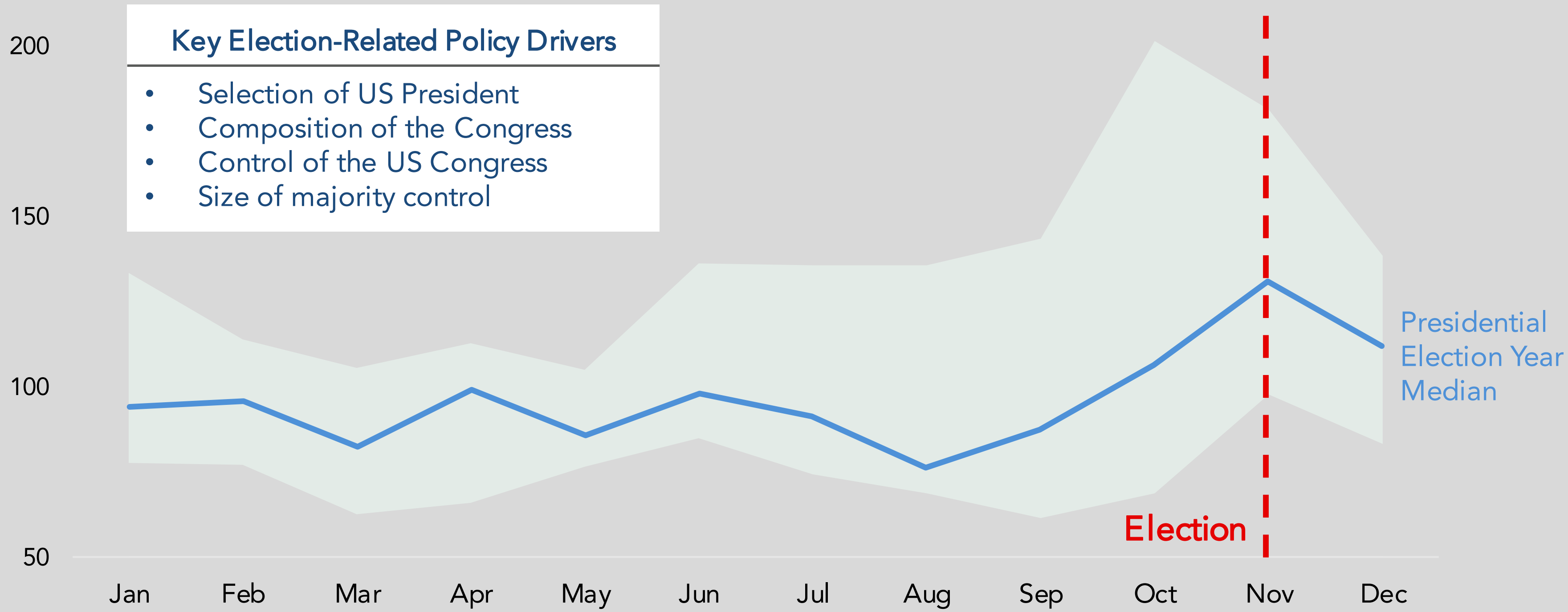
Markets & the US Election

> "Ninety percent of leadership is the ability to communicate something people want."
>
> Dianne Feinstein, Longest-serving female Senator (D-CA) in US history (1933-2023)

Economic Policy Uncertainty Rises Before Elections

Historically, uncertainty around US economic policy rises following the Party conventions in July-August, peaking on the date of the election. Following the election, numerous key variables become clear including the next US President, as well as composition and control of the next US Congress. In a potential repeat Biden-Trump election, a broad range of policy outcomes are likely across government spending, tax policy, trade, US-China relations and foreign policy generally (NATO, Ukraine funding, Middle East, Taiwan).

Economic Policy Uncertainty Index



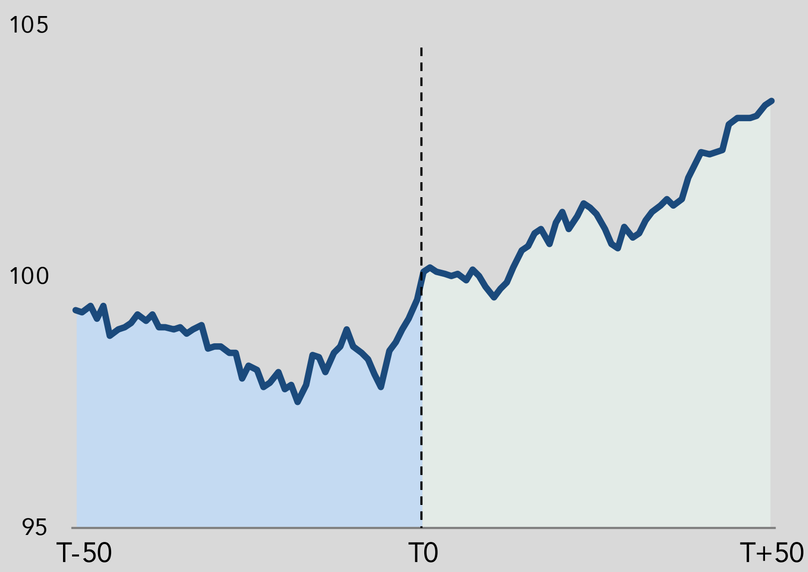
Source: (1) Oxford Economics, "US: This year's elections will be pivotal to the economic outlook." Index normalized such that January 1985 – December 2010 averages to 100. Median during all presidential election years since 1988.

Equities & Volatility Pre & Post US Elections

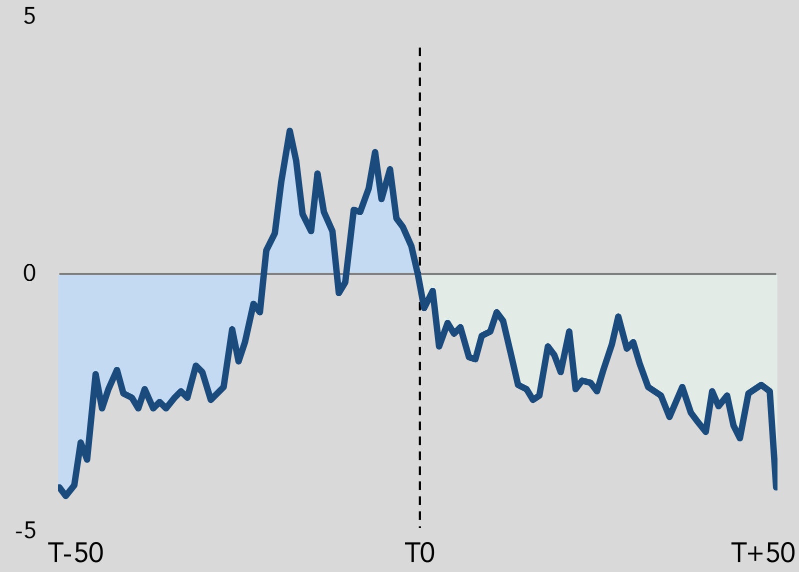
Historically, markets have tended to underperform during the period of pre-election uncertainty, with the post election rallies on higher certainty often beginning in the days immediately preceding the actual election (regardless of political party gaining or losing control).

Market performance before and after US elections

S&P 500



VIX index

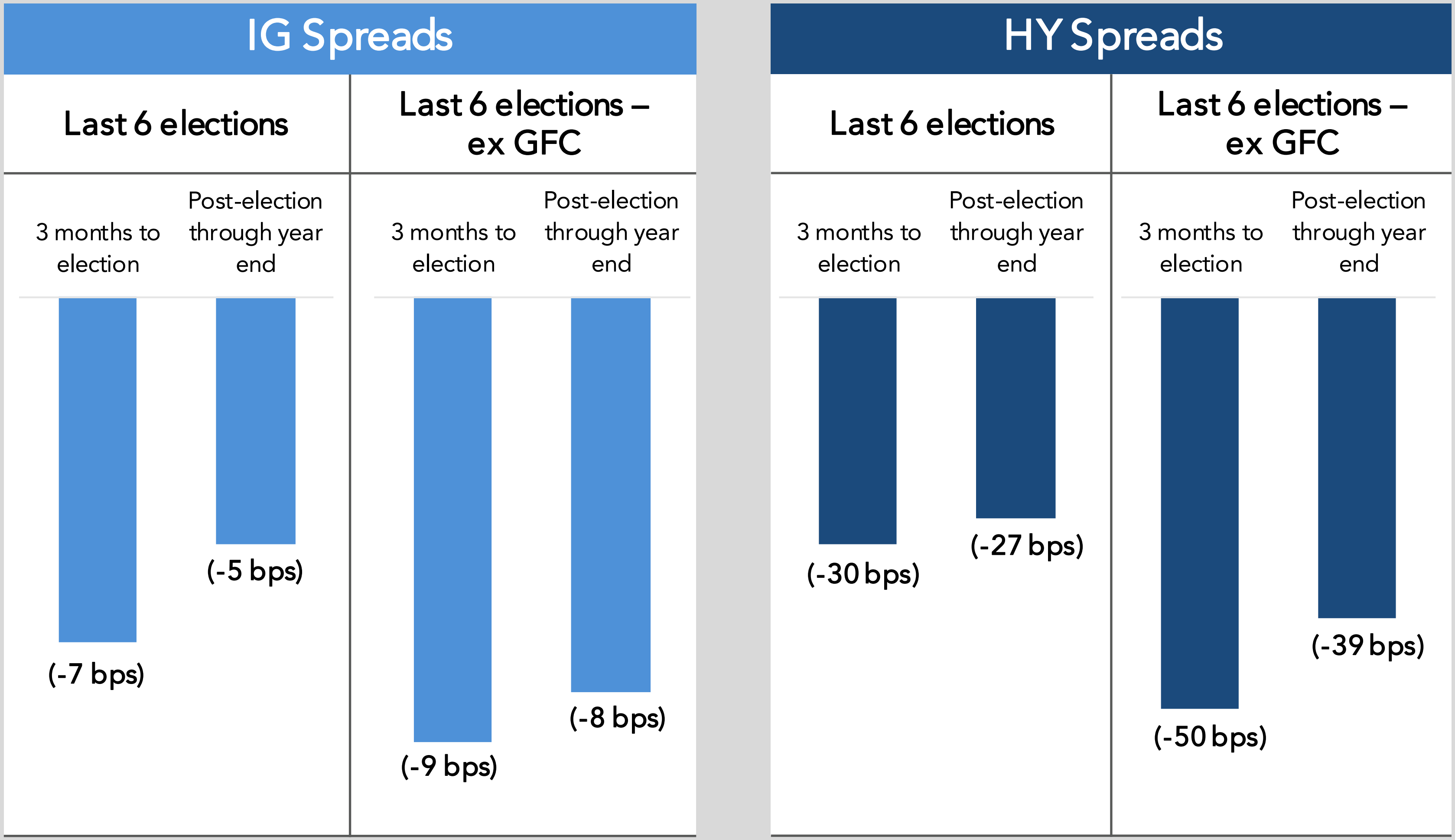


While elections are critically important, their ability to have sustained influence over the trajectory of economies and markets tends to be overstated, as the private sector becomes the more important variable over time

Source: (1) Bloomberg. US elections includes presidential elections only. Election data since 1960. Election day = 100 for S&P 500.

Credit Spreads & US Elections

Looking back at the last six elections, there is not a clearly discernible pattern pre and post US presidential elections. Rather, credit spreads are driven more by economic conditions and the credit cycle than by Washington.



Source: (1-2) CreditSights, "US IG & Leveraged Finance 2024 Outlook."

5.

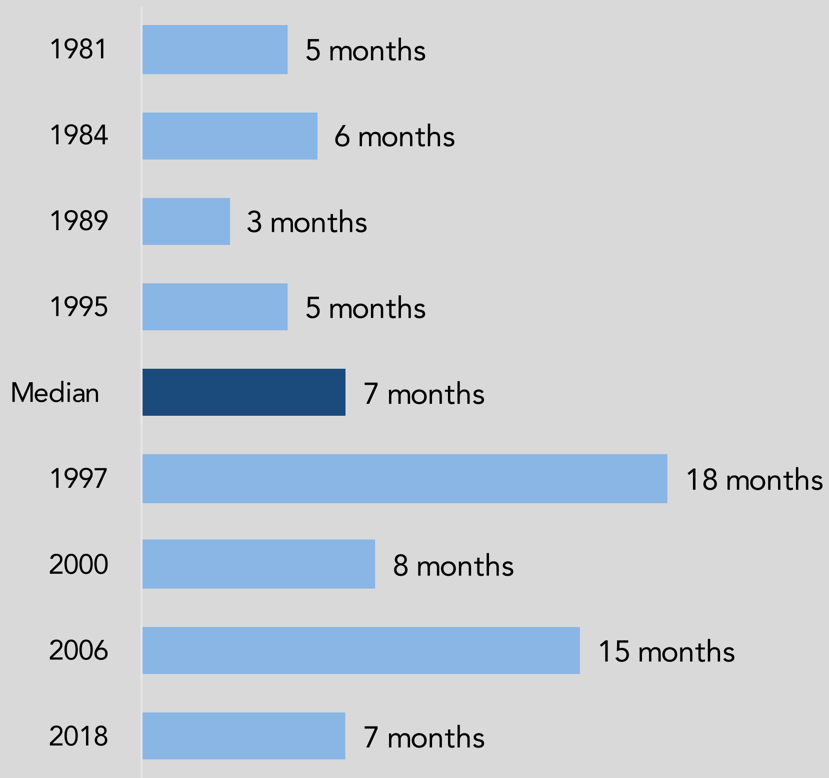
Fed Policy & the US Election

> "I am attracted to ellipsis, to the unsaid, to suggestion, to eloquent, deliberate silence. The unsaid, for me, exerts great power."
>
> Louise Glück, Pulitzer and Nobel Prize-winning American poet and essayist (1943-2023)

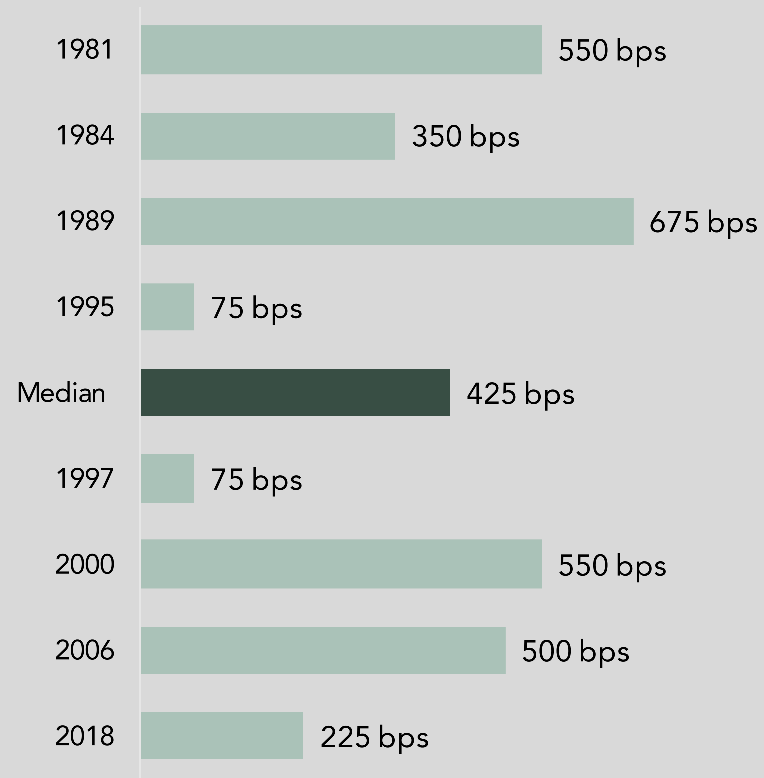
Timing & Magnitude of Fed Easing Cycles

Looking at Fed easing cycles since 1980, the Fed has historically begun its next easing cycle approximately 7 months after the its last rate increase. While the "total size" of rate cuts over an easing cycles varies widely, on average, the Fed cuts rates by 425 bps with just under 100 bps of cuts in the 12 months after the last rate hike.

Time between last rate hike and first rate cut



Total rate cuts over entire easing cycle

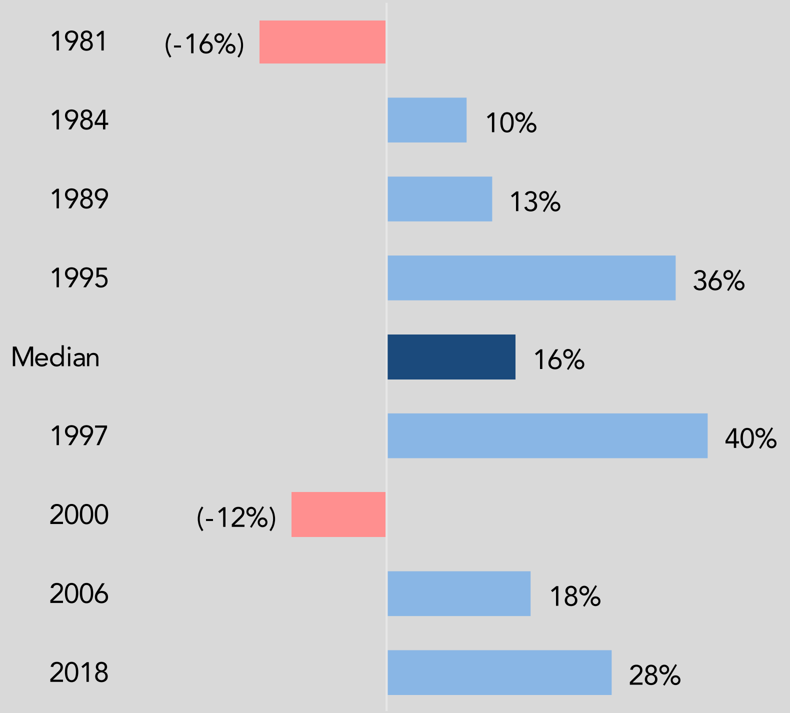


Source: (1-2) Bloomberg. Fred Economic Data St. Louis Fed. Note: Discount rate used before 1988.

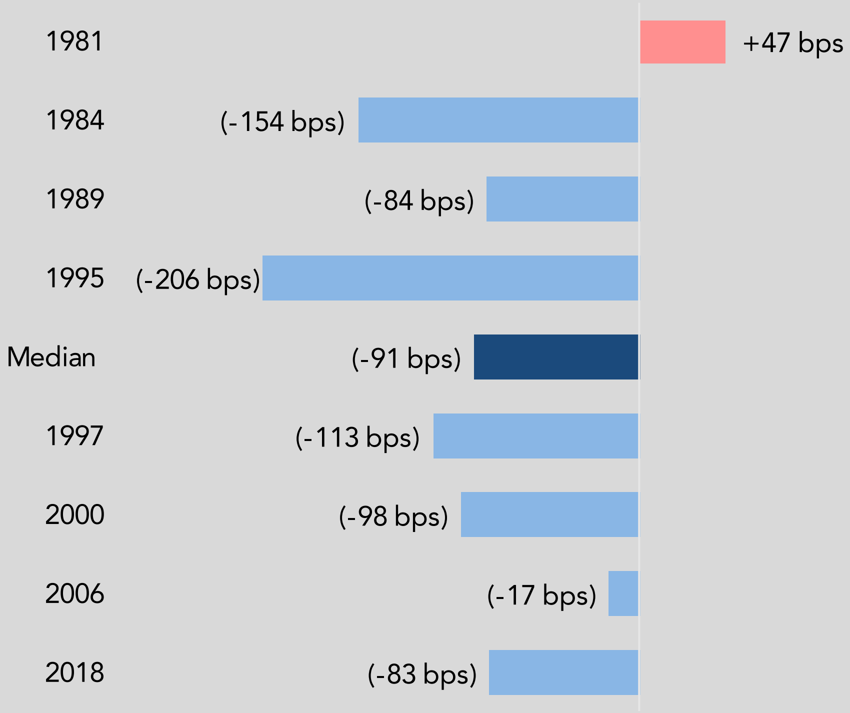
Equities & Rates Rally During Fed Easing Cycles

While economic recessions often cause equity market "corrections", risk assets typically perform well in Fed easing cycles. In the eight Fed easing cycles dating back to 1980, the S&P 500 has risen 16% on average in the 12 months immediately following the last Fed rate hike. 10 year UST rates have historically rallied ~90 bps in the 12 months following the last rate hike.

S&P 500 performance in the 12 months following the end of Fed tightening cycle



10 year UST performance in the 12 months following the end of Fed tightening cycle



Source: (1-2) Bloomberg. Fred Economic Data St. Louis Fed. Note: Discount rate used before 1988.

Fed Policy During Presidential Election Years

Generally speaking, Fed rate changes in election years have not been significantly different than non-election years. Looking at US election year data back to 1955, the Fed Funds rate has increased in election years by an average of 135 bps, and decreased in election years by an average of about 140 bps. Upon closer examination, however, it appears that the Fed becomes more reluctant to change policy within two months of an election. In addition, if warranted, the Fed appears more likely to <u>cut</u> rates if needed as an election approaches than they are to <u>increase</u> rates if needed.

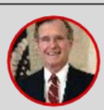
		Fed Policy Action in Election Years			
Election Year	Incumbent	Hike in election year	Cut in election year	Hike 2 months ahead of election	Cut 2 months ahead of election
1972		-	-	-	-
1976		-	Yes	-	Yes
1980		Yes	Yes	Yes	-
1984		Yes	Yes	-	Yes
1988		Yes	-	-	-
1992		-	Yes	-	Yes
1996		-	Yes	-	-
2000		Yes	-	-	-
2004		Yes	-	Yes	-
2008		-	Yes	-	Yes
2012		-	QE3	-	QE3
2016		Yes	-	-	-
2020		-	Yes	-	-

Rate Hikes less common

Source: (1) The Gail Fosler Group, "The Federal Reserve and the Presidential Election Cycle" (Bernadette Kilroy Martin). "Is the Fed Politically Biased? Look at its Interest-Rate Decisions as Elections Near" (Puzzanghera and Lee). "Election Year Unlikely to Sway Fed on Interest Rates" (Richard Berger). Bloomberg. Fred Economic Data St. Louis Fed. Note: Discount rate used before 1988. Fed Fund based on upper bound.

Historical Perspective: The Fed & US Elections

Generally speaking, incumbent Presidents prefer a stronger economy. While there has been only one clearly documented case where a Fed Chair actually changed rates in response to Presidential pressure in an election year – President Nixon and Fed Chair Arthur Burns in 1972 – there have been numerous instances historically where an incumbent President or Presidential nominee has encouraged a Fed Chair to change policy.

Election Year	Incumbent Party Candidate	Opposition Party Candidate	Fed Chair	Monetary Policy Observation
1964	 Lyndon Johnson	 Barry Goldwater	William Martin	Fed Chair Bill Martin revealed that President Johnson repeatedly "bullied" him on monetary policy
1972	 Richard Nixon	 George McGovern	Arthur Burns	White House tape recordings revealed President Nixon pressuring Fed Chair Burns to cut rates (which he did). Nixon also blamed his 1960 defeat on Fed Chair Bill Martin.
1980	 Jimmy Carter	 Ronald Reagan	Paul Volker	Some Democrats blamed the Fed for raising rates before the election, though inflation was above 14%
1984	 Ronald Reagan	 Walter Mondale	Paul Volker	Fed Chair Volcker subsequently revealed that Chief of Staff Jim Baker, with President Reagan present, strongly encouraged him to not raise rates in the election year
1992	 George H.W. Bush	 Bill Clinton	Alan Greenspan	Years later (1998), former President Bush attributed his 1992 re-election loss to Greenspan not cutting rates aggressively after the 1990-91 recession (cut in Sept '92, unchanged in Oct '92)
2016	 Hilary Clinton	 Donald Trump	Janet Yellen	Republican nominee Trump campaigned that Fed Chair Yellen "should be ashamed of herself" for easy monetary policy
2020	 Donald Trump	 Joe Biden	Jerome Powell	As the trade war progressed, President Trump reprimanded Fed Chair Powell repeatedly for not lowering rates sufficiently

Source: (1) "Is the Fed Politically Biased? Look at its Interest-Rate Decisions as Elections Near" (Puzzanghera and Lee). "Election Year Unlikely to Sway Fed on Interest Rates" (Richard Berger). Bloomberg. Fred Economic Data St. Louis Fed. Note: Discount rate used before 1988. Fed Fund based on upper bound.

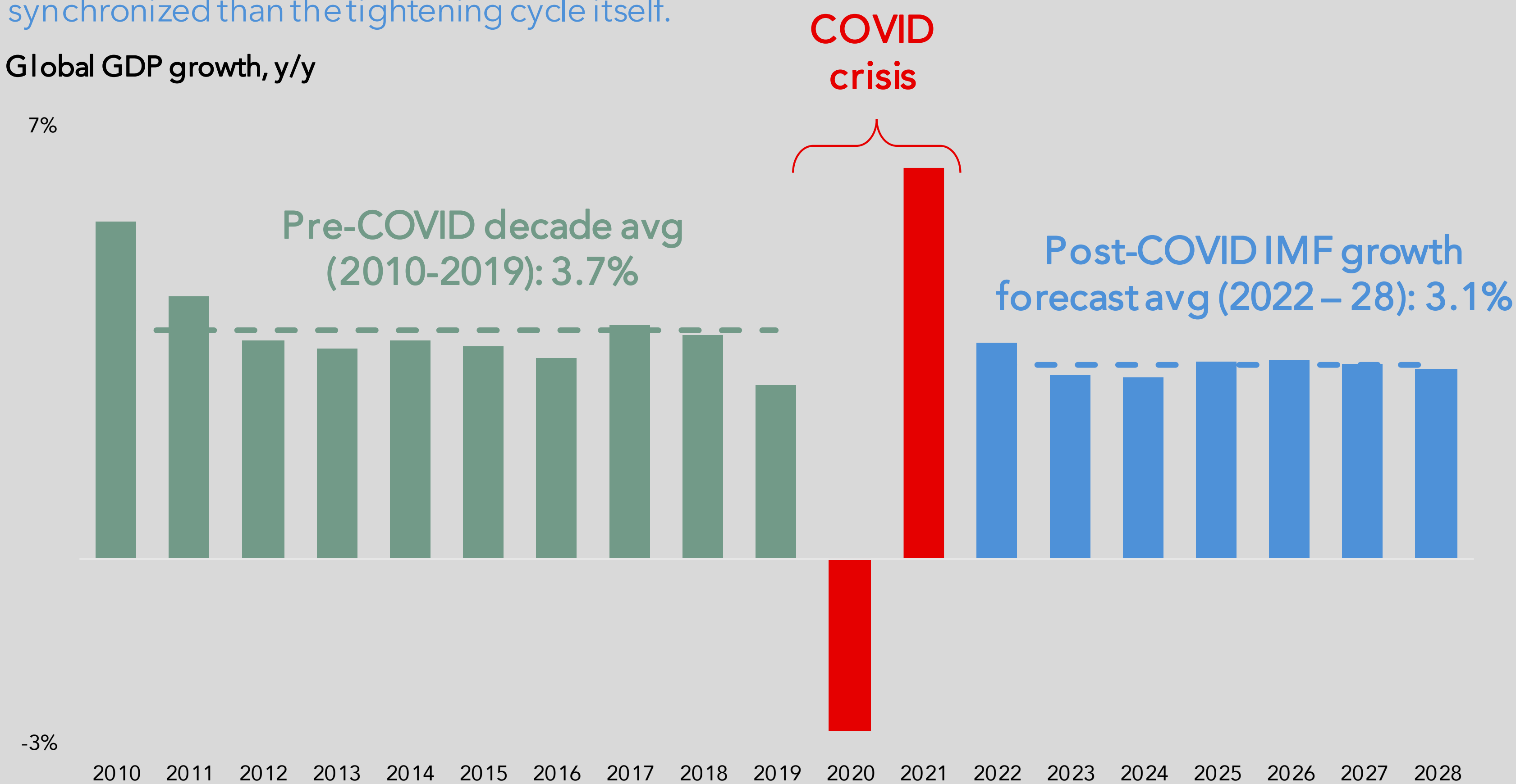
6.

Global Growth Below Trend

> “I'll call it a day when I die. It's a wonderful occupation for me. I've never worked a day in my life.”
>
> Tony Bennett, 20-time Grammy award winning American jazz and pop singer (1926-2023)

Global Growth Below Trend

The global economy has been more resilient to higher rates and inflation than expected. However, with more limited fiscal and monetary policy, alongside elevated debt and aging demographics, global growth is expected to be structurally lower in the post-pandemic world. As 2024 unfolds, "rolling recessions" (i.e., Europe, manufacturing) will evolve into "rolling recoveries", albeit less synchronized than the tightening cycle itself.



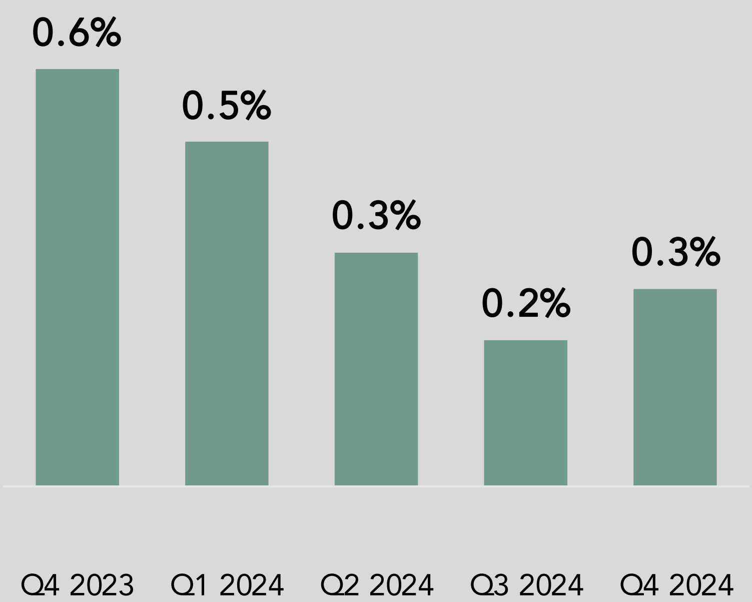
Source: (1) IMF World Economic Outlook. October 2023.

“Bumpy Landing” for US Economy

While the US economy and consumer have been more resilient than anticipated, numerous economic and market metrics point to a 2024 slowdown. Bloomberg’s most recent survey of 57 economists suggests a broad range of views on US recession risk in 2024, at roughly a 50% probability. Given the pace of Fed tightening, impact of depleting savings and inflation on the consumer, and tighter bank lending standards, the US and global economy are poised to decelerate in 2024.

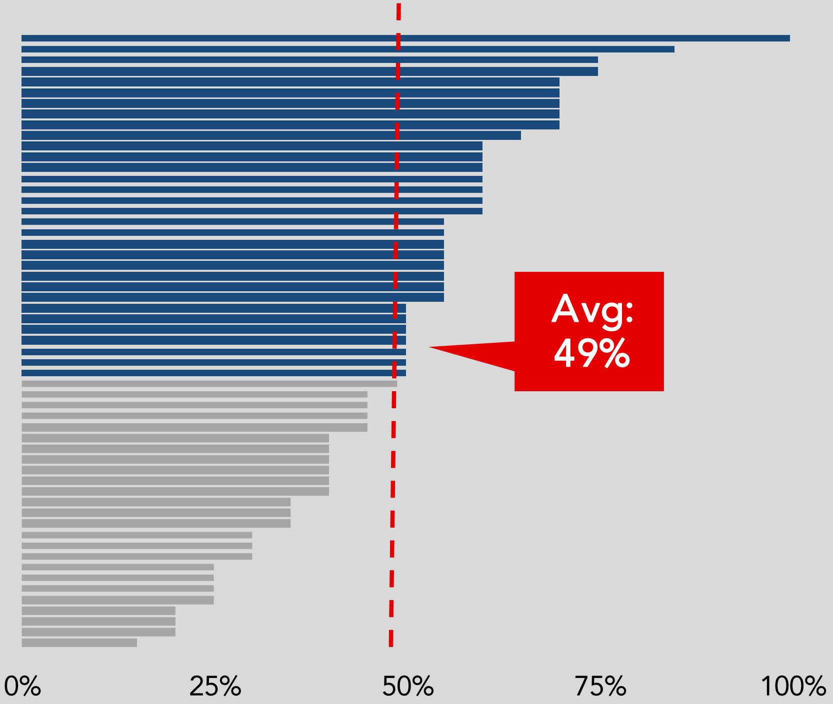
US GDP, Q/Q

US quarterly GDP growth forecast, q/q



Probability of US recession in 2024

Bloomberg survey of 57 economists

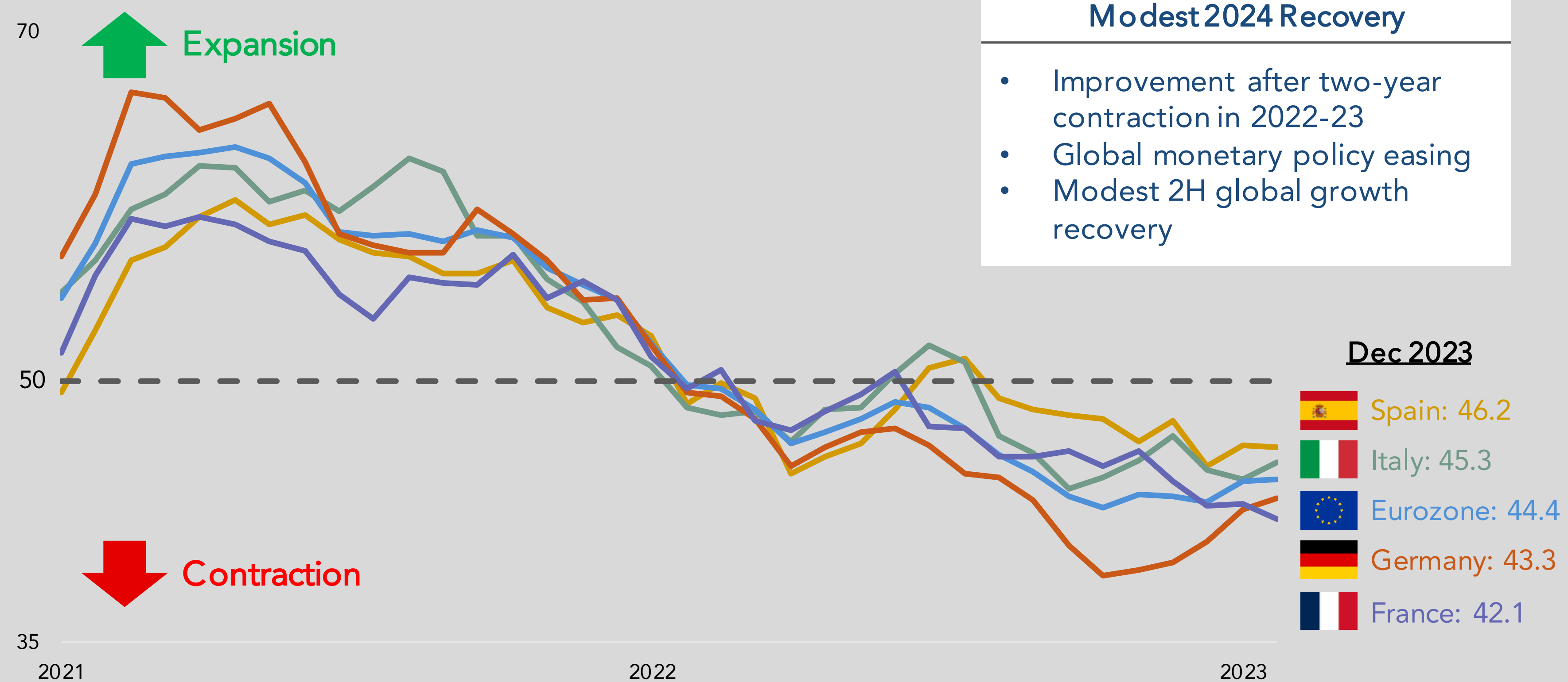


Source: (1) US GDP Q/Q is Oxford Economics. Data as of January 18, 2023. (2) Bloomberg. Data as of January 18, 2023. Recession probability forecasts from Bloomberg contributors.

Europe's Manufacturing Recovery

Europe's manufacturing sector, critical to its export-driven economy, finished 2023 in deep contraction territory with a grim outlook for near-term recovery. The contraction remains broad-based, with every major European manufacturing sector in negative territory on tighter credit conditions and global growth decelerating. As 2024 progresses, the two year downturn across Europe's industrial sector should rebound modestly, as the global economy recovers and global central banks pivot policy toward easing.

Eurozone manufacturing PMIs



Modest 2024 Recovery

- Improvement after two-year contraction in 2022-23
- Global monetary policy easing
- Modest 2H global growth recovery

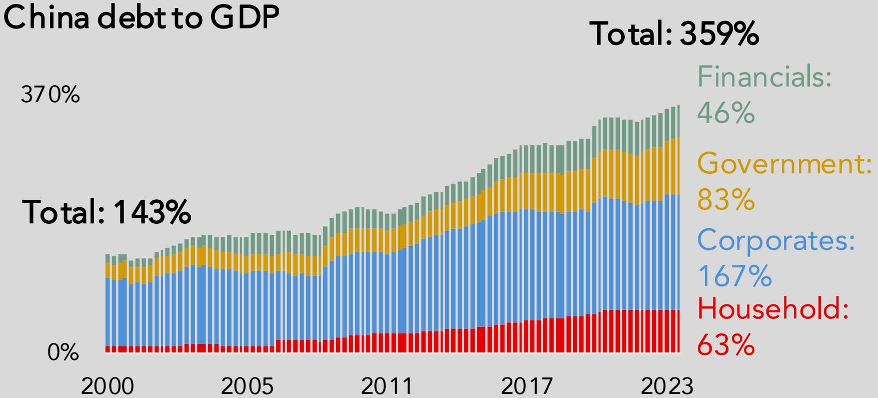
Source: (1) Oxford Economics. Bloomberg. Data as of January 18, 2024. Neutral is equal to 50.

The 4 Ds Driving China's Slowdown

The COVID-crisis did <u>not</u> so much create, as it did exacerbate and accelerate, the pervasive structural forces driving the multi-year slowdown in China's economy. Look for a cyclical recovery but continued structural weakness from China in 2024.

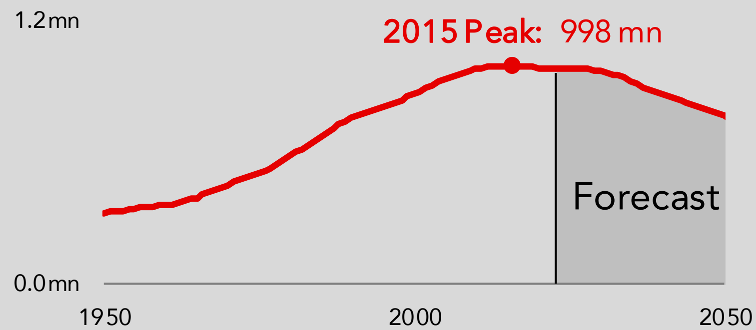
#1: Debt

China debt to GDP



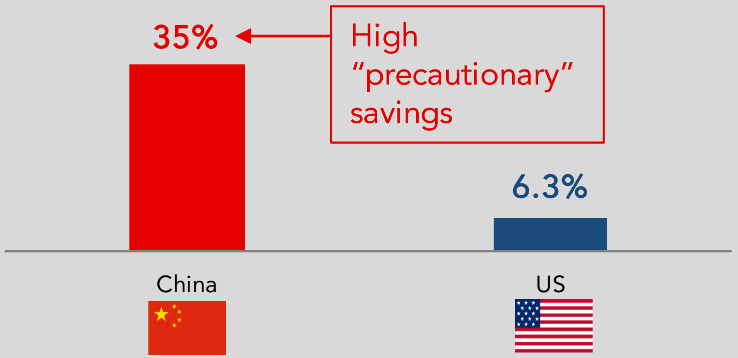
#2: Demographics

China's working age population (Age 15-64)



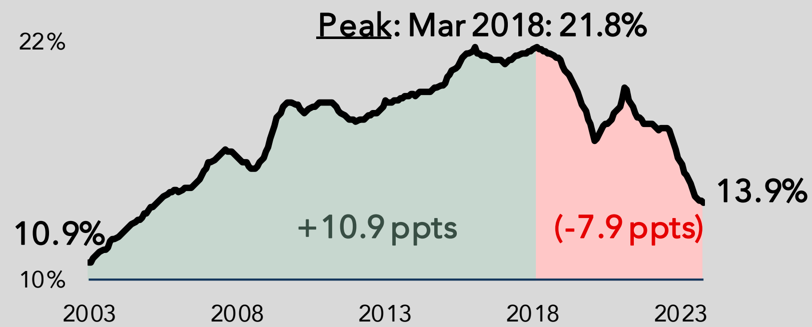
#3: Demand

Average consumer savings rate since 1991



#4: Decoupling

Share of US goods imports from China



Source: (1) IIF Global Debt Monitor. 2023 is Q3 data. (2) UN World Population Prospects 2022. Based on Medium variant estimates. (3) Bloomberg. Data as of September 8, 2023. PBOC. (4) US Census Bureau. Data is rolling 12-month average through November 2023.

7.

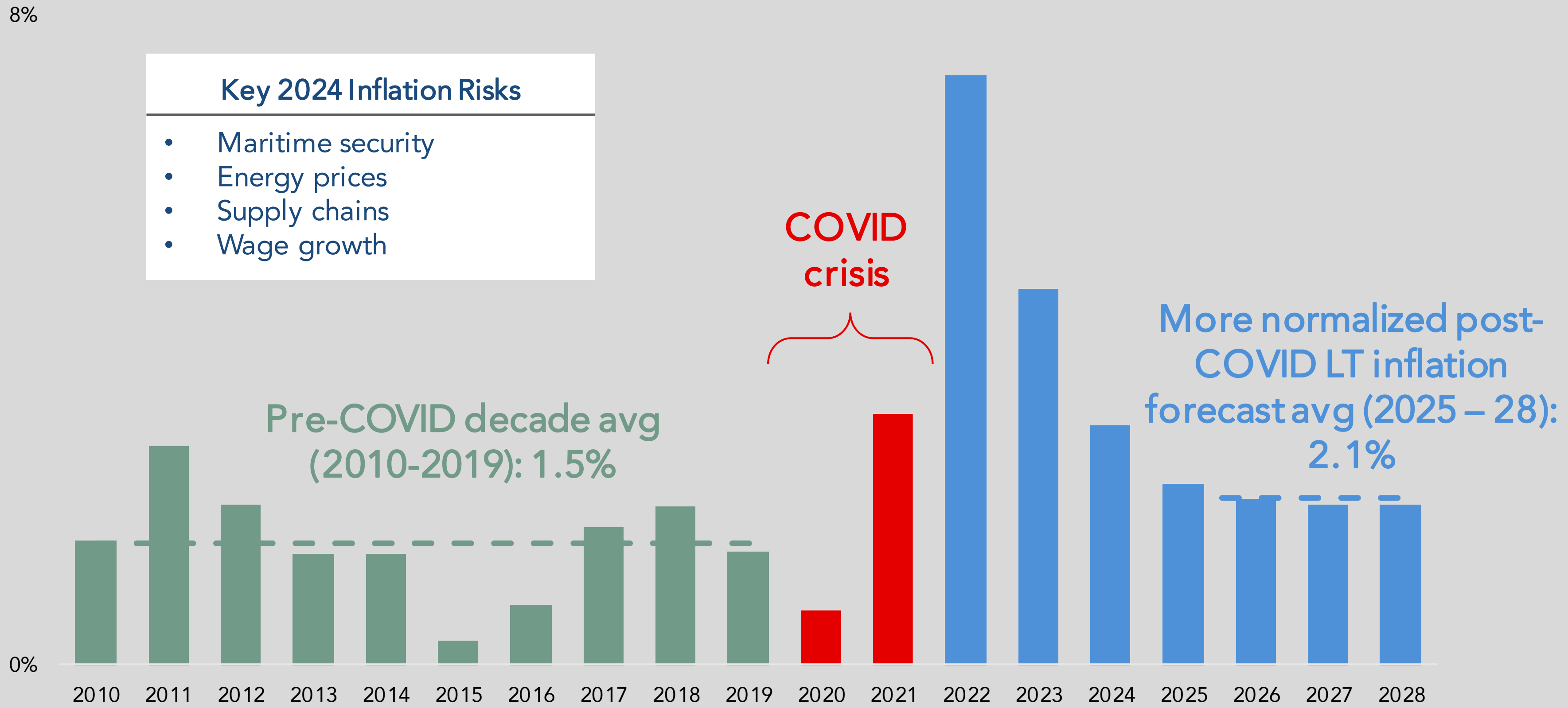
Inflation Normalizing Above Trend

> "I think ideas are still the most powerful things on the planet, and music is a great way to transmit them."
>
> David Crosby, American singer, songwriter, guitarist and 2-time Rock and Roll Hall of Fame inductee (1941-2023)

Inflation Normalizing Above Trend

Advanced economy inflation is trending lower after the COVID induced supply-chain shocks. However, numerous global mega-trends are likely to keep advanced economy inflation structurally higher in the decade ahead, including: labor shortages, restructured supply chains, energy transition, and US-China structural rivalry. In 2024, look for the pace of disinflation to diverge more across economies.

Advanced Economies CPI, y/y

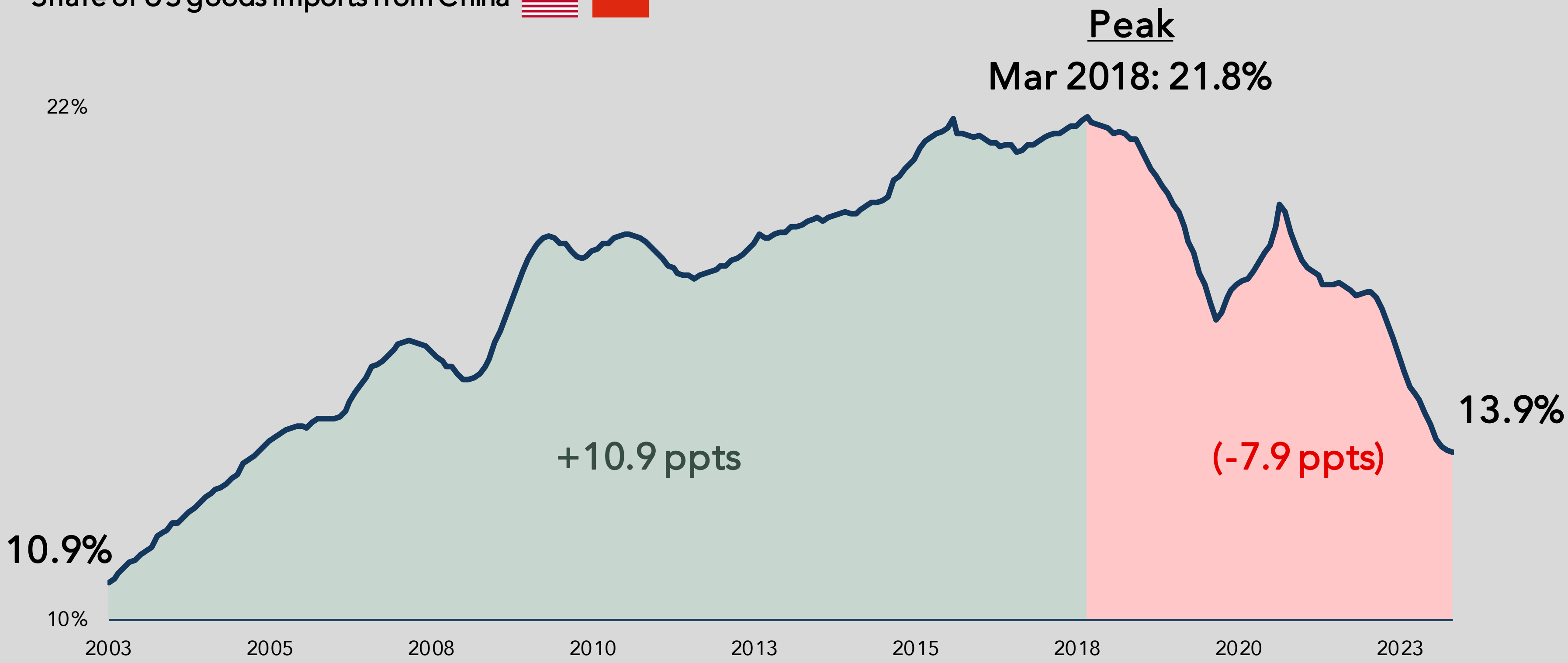


Source: (1) IMF World Economic Outlook. October 2023. CPI is yearly average. Post-COVID average is 2025 – 2028.

De-globalization is Inflationary

Following their accession into the WTO in Dec 2001, China's market share of US imports more than doubled from about 10% to nearly 22% in just 15 years. Since the peak of the trade wars in 2018, China's market share of US imports has declined from approximately 22% to 14% in just 5 years as US MNCs restructure supply chains and diversify production into Mexico, Europe and Asia. While Vietnam and India have been the largest beneficiaries of China's five year net decline, supply chain shifts are occurring across dozens of industries and countries concurrently.

Share of US goods imports from China

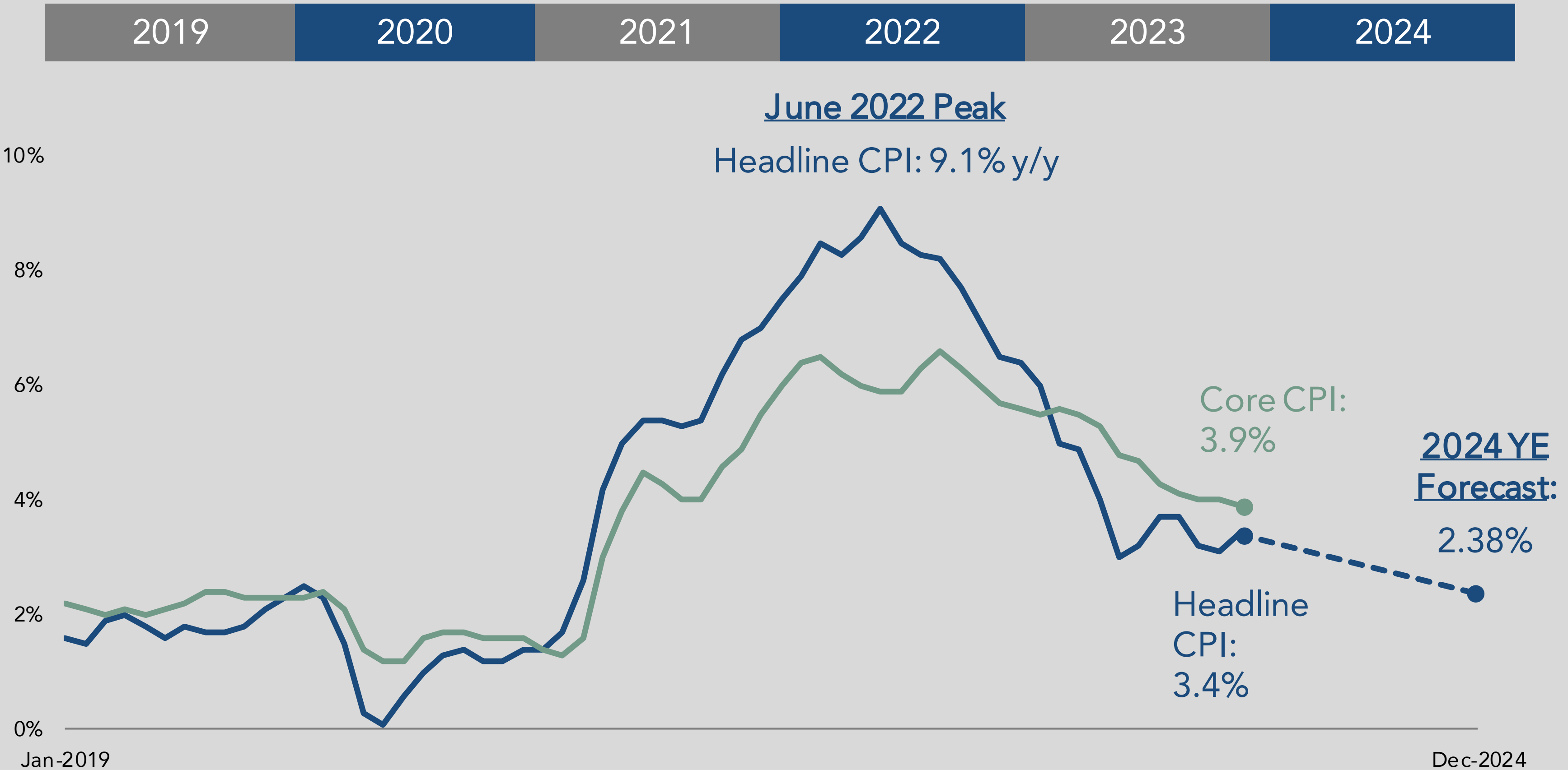


Source: (1) US Census Bureau. Data is rolling 12-month average through November 2023.

Disinflation More Advanced in the US

Due largely to COVID related imbalances (excess stimulus & savings, consumer behavior changes, supply chain bottlenecks), inflation rose to 40 year highs in 2022-23. Looking ahead to 2024, one year-breakevens suggest that markets believe inflation will drop close to the Fed's 2% target by year-end. Fed forecasts for PCE inflation, their preferred inflation metric, are also at 2.4% for year-end 2024.

US headline and core CPI, y/y

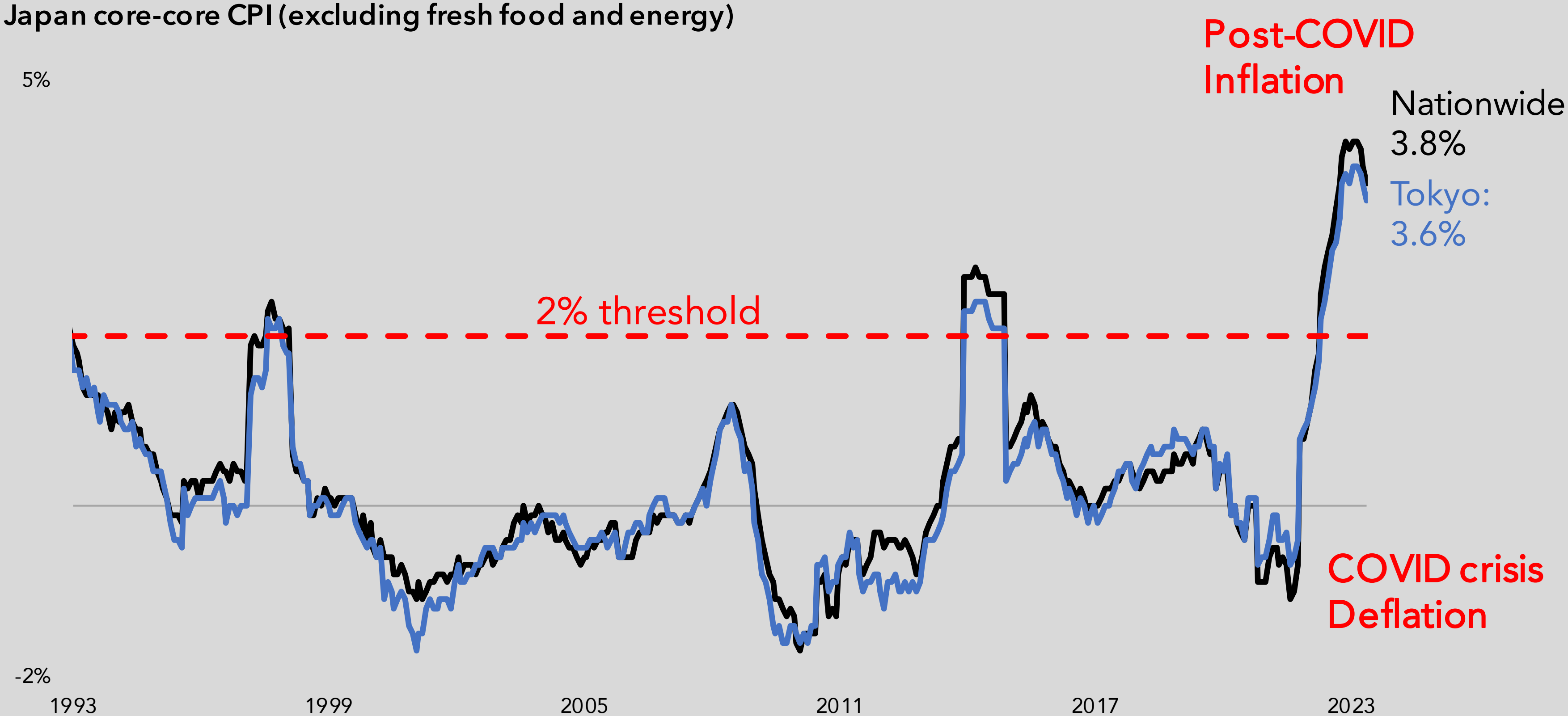


Source: (1) Bloomberg. Data as of January 18, 2024. 2024 forecast is US 1 year breakeven rate.

Japan Exits Three Decades of Deflation

The BOJ remains concerned that the origins of post-COVID Japanese inflation have been less from robust demand driven growth, and more exogenously derived food and fuel price increases. Core-core inflation in Japan (ex fresh food and energy) is expected to drop closer to 2% in early 2024. Wage growth will be critical to Japan's medium term inflation outlook. In this regard, forthcoming spring wage negotiations and settlement, which should become more evident by April, will be an important development.

Japan core-core CPI (excluding fresh food and energy)



Source: (1) Bloomberg. Data as of January 18, 2024. Oxford Economics, "Japan: No Change in Policy as BoJ Waits for Wage Data." Capital Economics. Bloomberg Government. MUFG Economics Research.

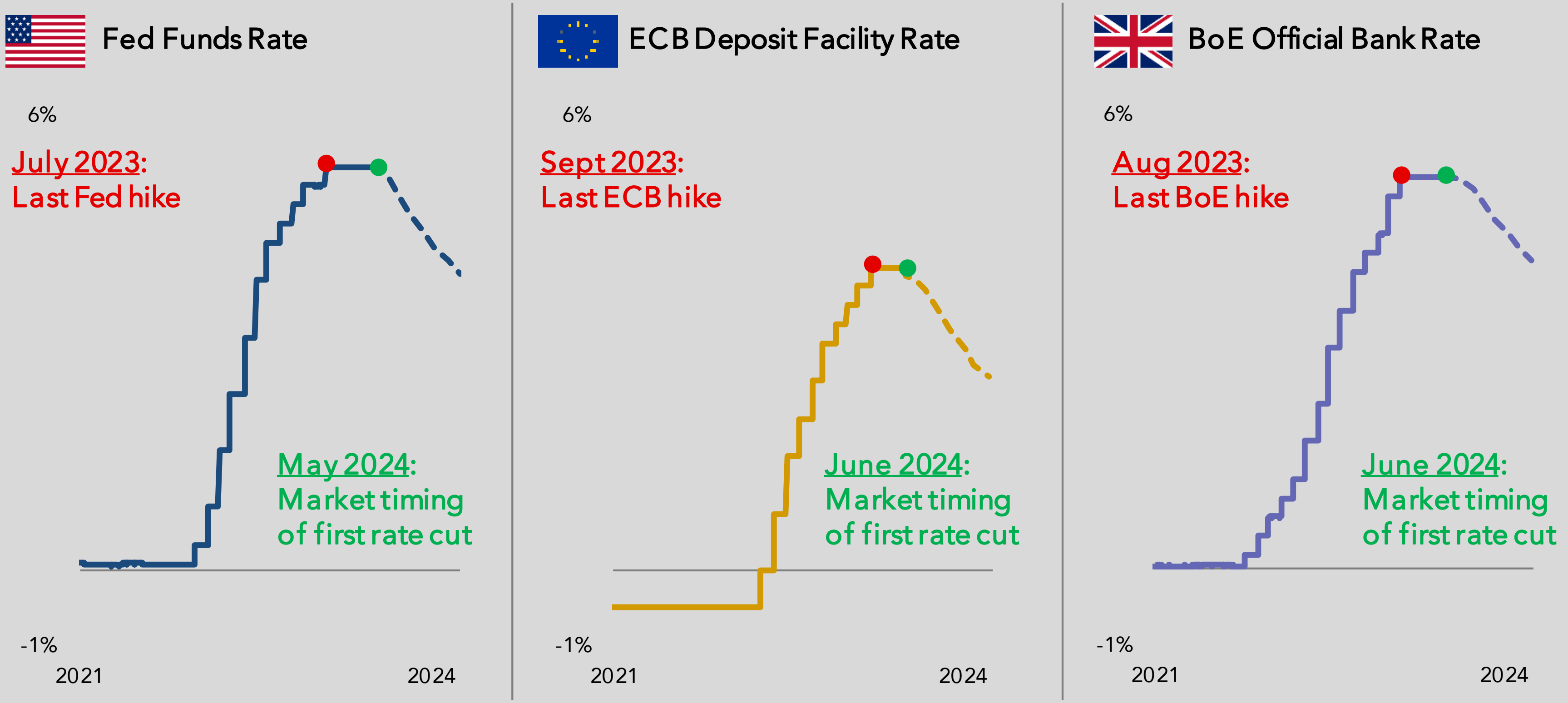
8.

Cyclically Bullish Bond Yields

> "If you want to be successful and live a long, stimulating life, keep yourself at risk intellectually all the time."
>
> Byron Wien, American investor, Vice Chairman of Blackstone Advisory Partners and creator of the annual "Ten Surprises" list (1933-2023)

Monetary Policy Easing

As we enter 2024, the G10 tightening cycle of 2022-23 is nearly complete, with most central banks expected to pivot toward a synchronized easing of policy by 2H 2024. While the Fed is forecasting three rate cuts (75 bps) in 2024, the market is currently expecting policy easing in 2024 at nearly double that pace. Nonetheless, the full impact of 2022-23 tightening will still operate with a lag as 2024 unfolds.



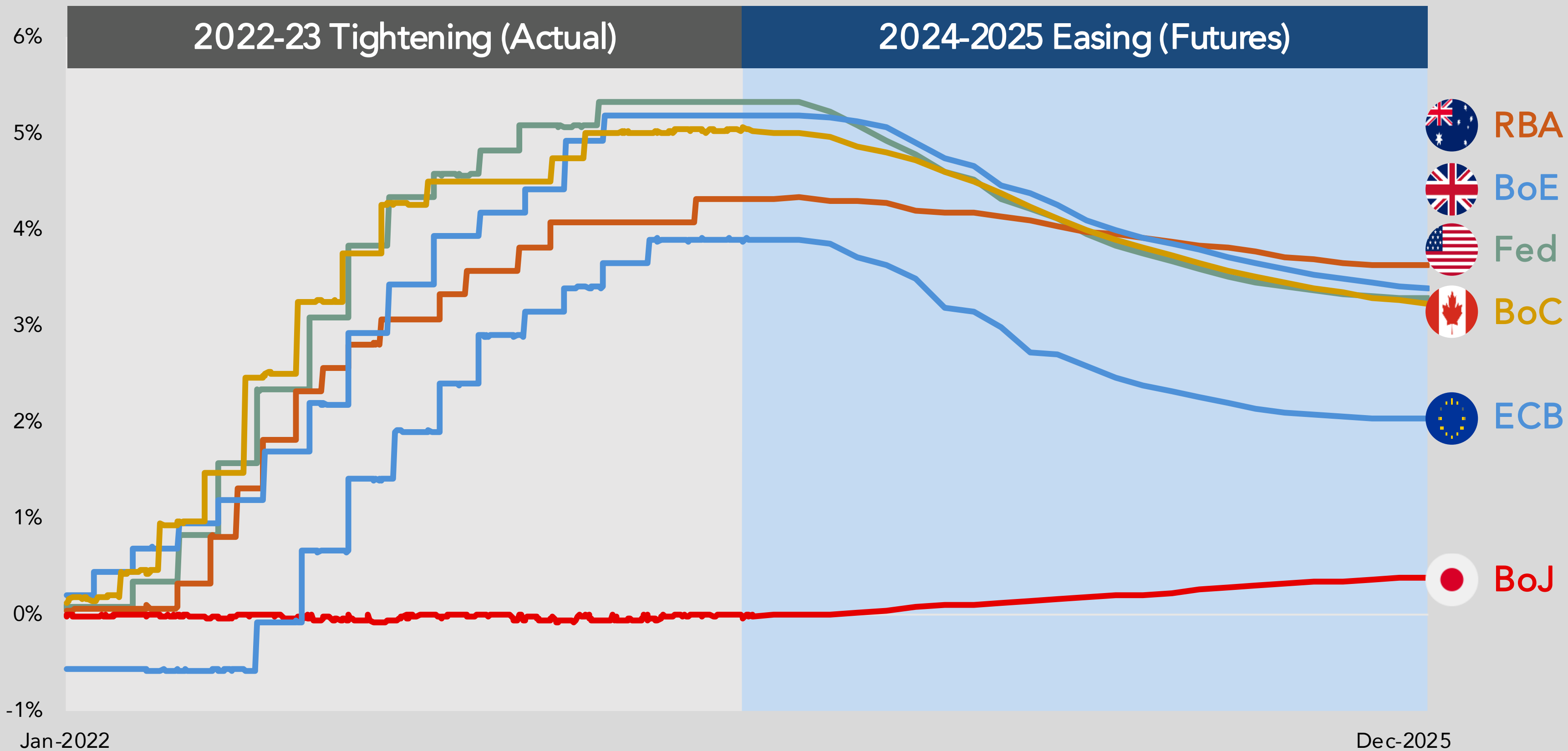
As the Fed pivots toward easing by mid-year, look for lower UST yields to drive a higher pace of fund flows into corporate credit

Source: (1-3) Bloomberg. Data as of January 18, 2024.

Easing More Gradual than the Tightening

The pace of easing in 2024, however, is expected to be gradual – both compared to the tightening of 2022-23 and to the pace of prior easing cycles historically. In addition, the Fed may still continue its balance sheet reduction program (QT), which combined with the lagging impact of tightening, may begin to weigh more heavily on the consumer.

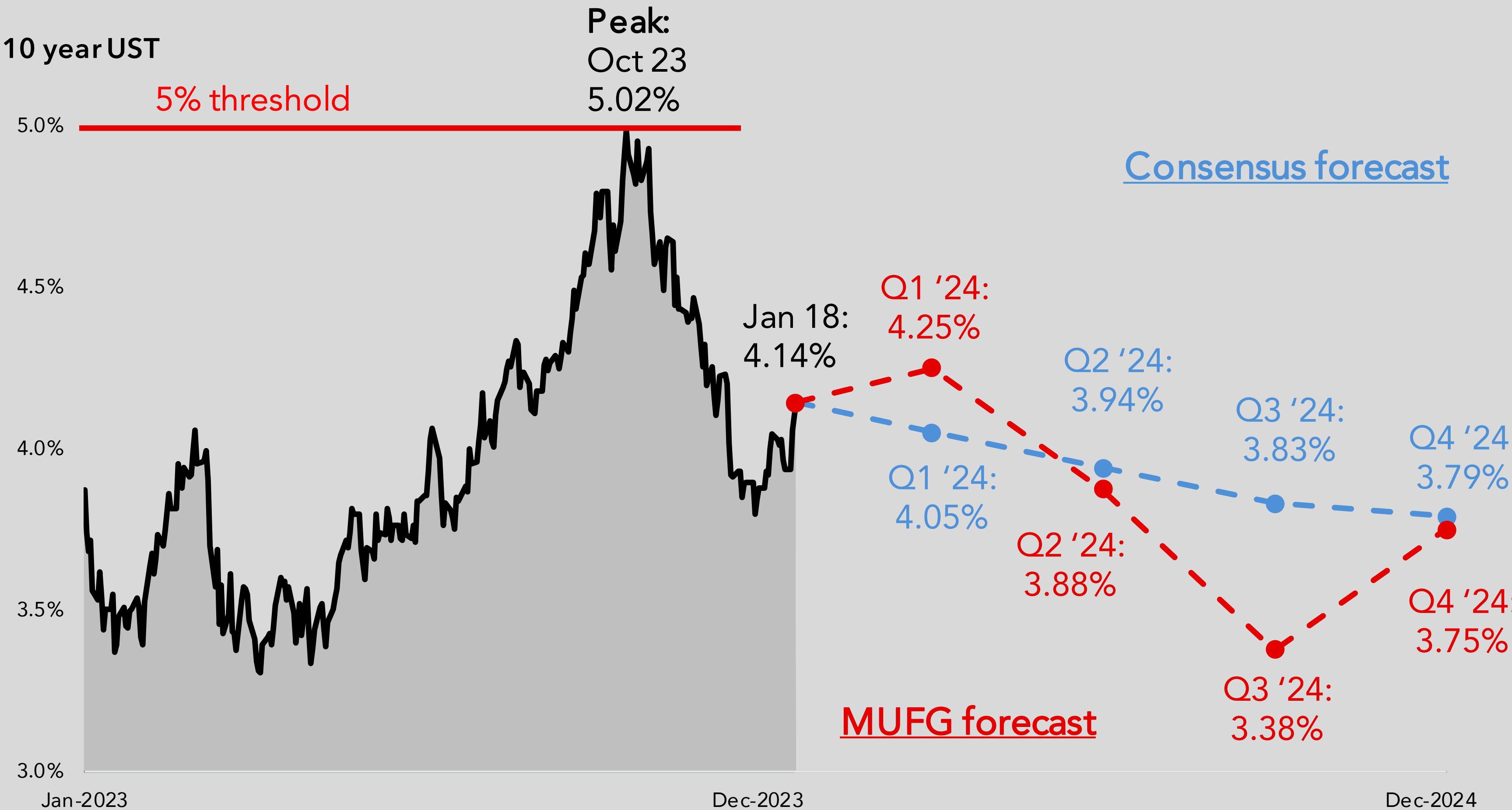
Global policy rates



Source: (1) Charles Schwab, "2024 Growth Outlook: The Big Picture" (December 2023). Bloomberg. Data as of January 18, 2024. Fed Fund futures for Fed, ESTR futures for ECB, SONIA futures for BoE, CORRA futures for BoC, JPY OIS futures for BoJ, ASX futures for RBA.

Cyclically Bullish UST Yields

MUFG's US Rates Strategist, George Goncalves is forecasting 10 year UST yields below consensus forecasts in 2024. Following a sell-off in Q1, MUFG expects rates to resume their rally to new cycle lows by Q3 2024.



Source: (1) Bloomberg. Data as of January 18, 2023. MUFG (George Goncalves).

9.

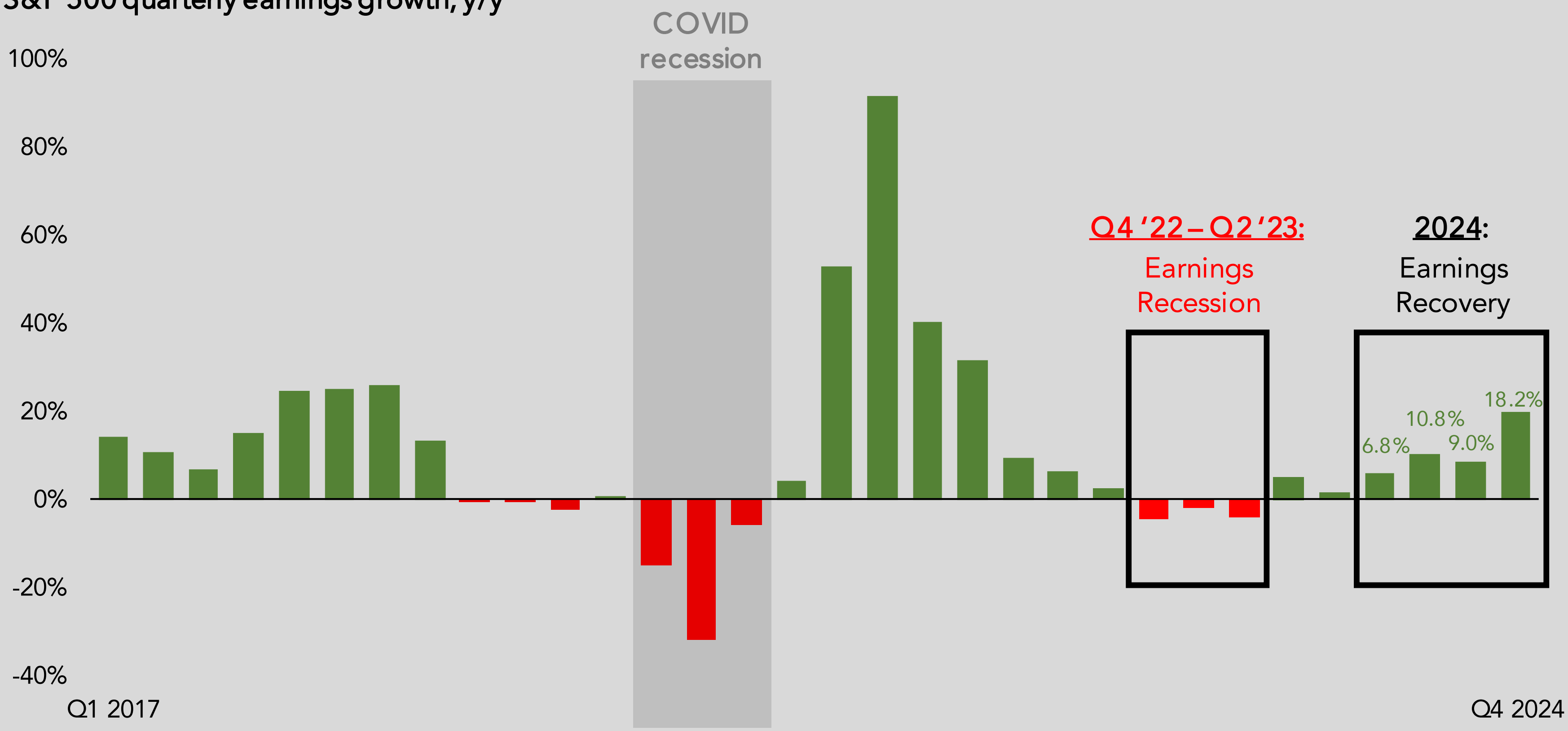
Higher Pace of Deal Activity

> "Keep a little fire burning; however small, however hidden."
>
> Cormac McCarthy, Pulitzer Prize-winning American novelist (1933-2023)

Corporate Earnings Recovery in 2024

Historically, corporate earnings and valuations move higher in advance of the trough in GDP. In our view, the S&P 500 earnings cycle bottomed in 2023, and is poised to recover in 2024 in line with market forecasts of 12% y/y. The operating environment will nonetheless be a challenge for corporates to navigate, given: (i) geopolitical contagion to energy prices, maritime transport and supply chains; (ii) elevated funding costs; (iii) expiry of R&D and investment tax code provisions; (iv) sticky wage growth; and (v) US election related policy pivots on fiscal, tax and trade.

S&P 500 quarterly earnings growth, y/y

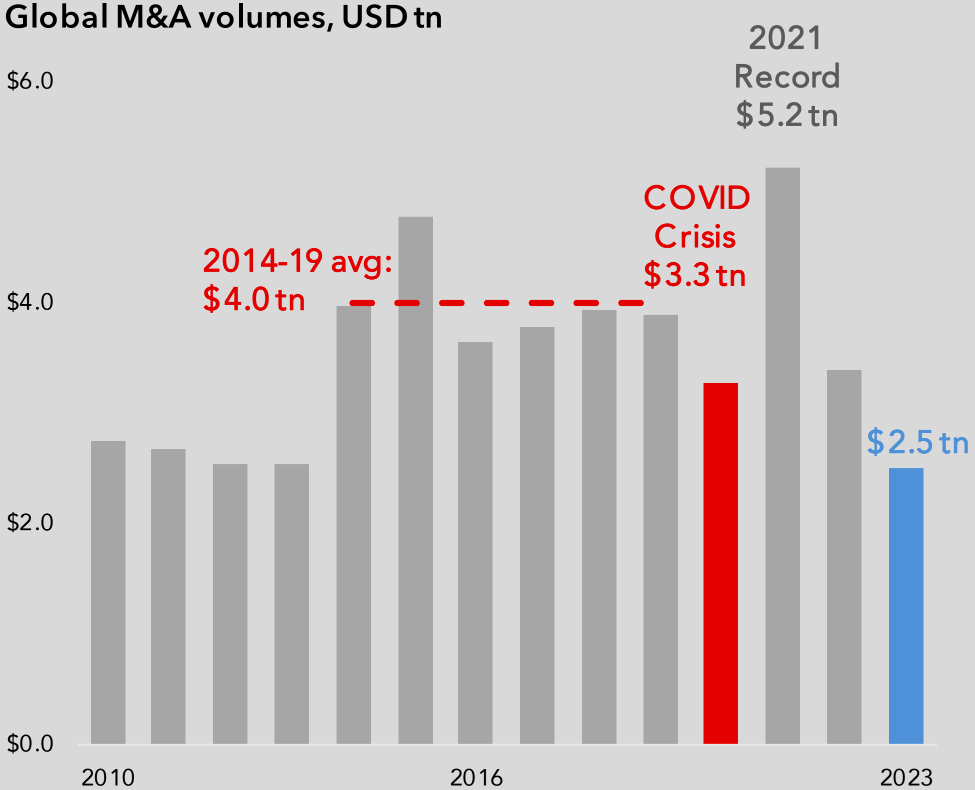


Source: (1) FactSet, Earnings Insight Report (January 12, 2023). Q4 2023 is December 31, 2023 FactSet forecast. KKR ("Glass Half Full: Outlook for 2024". Henry McVey).

Modest Global M&A Recovery in 2024

Global M&A volumes in 2023 slowed to the lowest levels in more than a decade ($2.5 trillion), less than half the record volumes of just two years ago. Key contributors to the decline included access and cost of capital, as well as a challenging regulatory environment. Even with rising recession risk in 2024, we expect global M&A volumes to improve in anticipation of the recovery, though not likely to the level of deal activity in the five years preceding COVID.

Global M&A volumes, USD tn

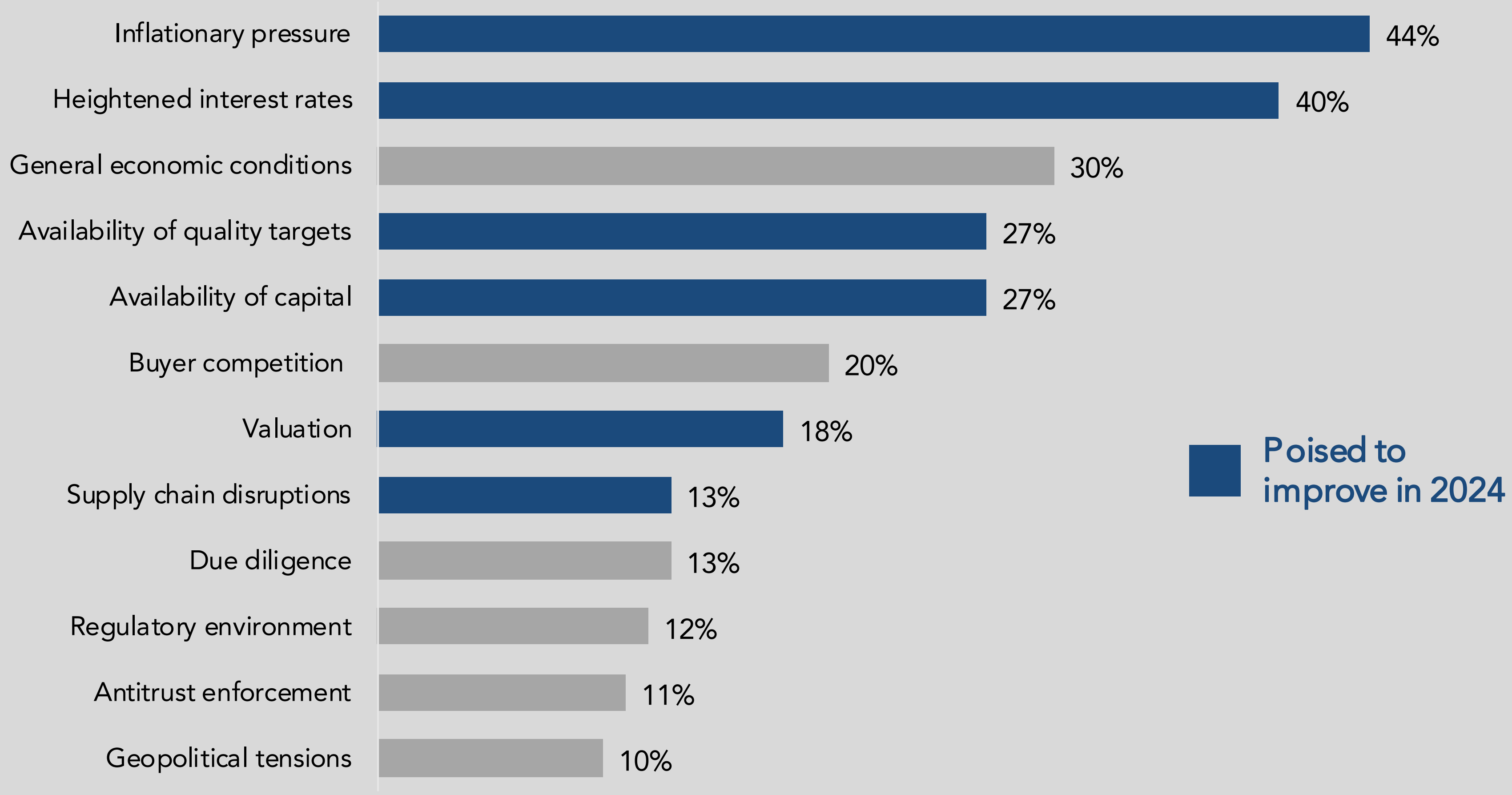


Catalysts for 2024 Deal Activity
• Moderating inflation; lower rates
• Earnings recovery; equity market strength
• Resilience & depth of IG financing markets
• Generate growth > organic alternatives
• Strong, cash-rich balance sheets
• Record PE dry powder ($2.5 trillion)
• Converging buyer / seller price expectations
• Access to technology, innovation (digital, AI, fintech)
• Higher energy prices; energy transition; infrastructure
• Pent up demand following low 2023 M&A

Source: (1) Bloomberg. Data as December 31, 2023. Institute for Mergers, Acquisitions & Alliances. SP Global "End of rate hikes can trigger M&A turnaround". PWC "US Deals 2024 Outlook".

Dampened 2023 M&A Should Rebound in 2024

Question: Which of the following were the top obstacles to M&A over the past 12 months?



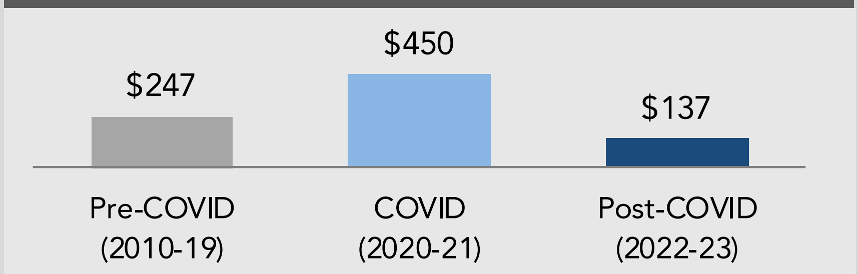
Source: (1) Dykema, "M&A 19th Annual Mergers & Acquisitions Outlook Survey." 2023 Gossett PLLC. Survey of group of 263 CEOs, CFOs, and other senior company officers and executives, as well as professional advisors engaged in the M&A industry. Represents a cross section of executives and M&A advisors engaged in more than a doze sectors representing companies with annual revenues from less than $1 million to more than $1 billion.

Equity Issuance Should Bounce Back in 2024

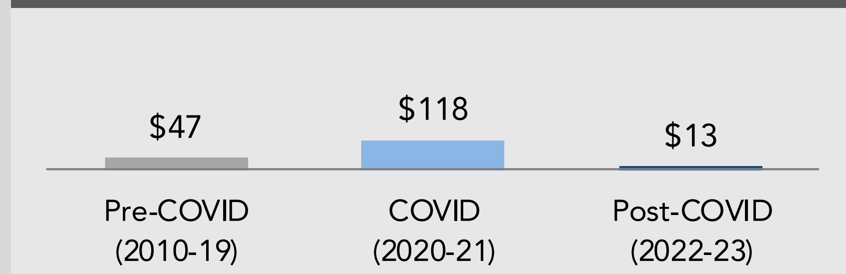
MUFG expects 2024 equity issuance to bounce back from the historically low levels of 2022-23 on the back of Fed policy easing, a resilient economy, and a more robust M&A calendar. While an expected IPO market recovery failed to materialize in 2023, we expect the pace of activity and deal sizes to improve in 2024 both as S&P 500 earnings recover and because equity markets typically perform well during policy easing cycles. Follow-on activity should also increase accordingly. Convert volumes, which accelerated in 2023, should remain strong as large cap issuers continue to find appeal in low cost debt alternatives.

Annual average volume, USD bn

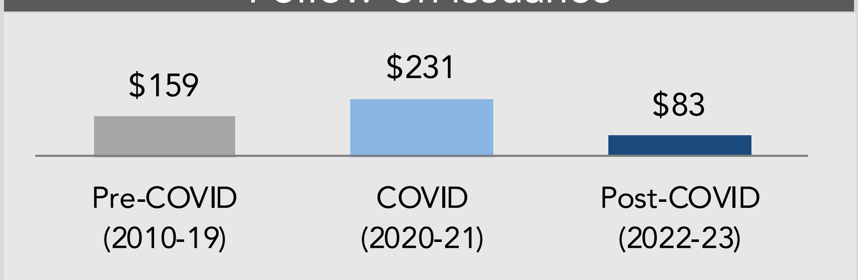
Total ECM issuance



IPO issuance



Follow-on issuance



Convert issuance

Source: (1) MUFG Equity Capital Markets Team (Geoffrey Paul). Dealogic, Bloomberg and MUFG Equity Capital Markets as of 12/13 /23. Includes US-listed offerings priced with deal value greater than or equal to $50 million. Excludes SPACs and CEFs. Includes marketed follow-on offerings and registered block trades.

10.

Resilient Bond Financing Markets

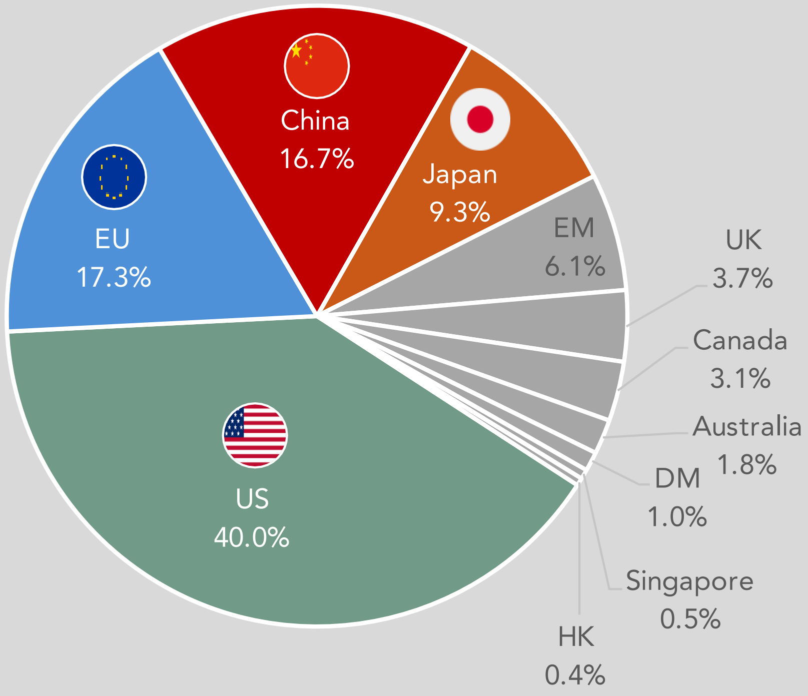
> “People think my life has been tough, but I think it has been a wonderful journey. The older you get, the more you realize it's not what happens, but how you deal with it.”
>
> Tina Turner, “The Queen of Rock ‘n’ Roll”, 12-time Grammy award winning American singer (1939-2023)

Largest, Most Liquid Capital Markets in the World

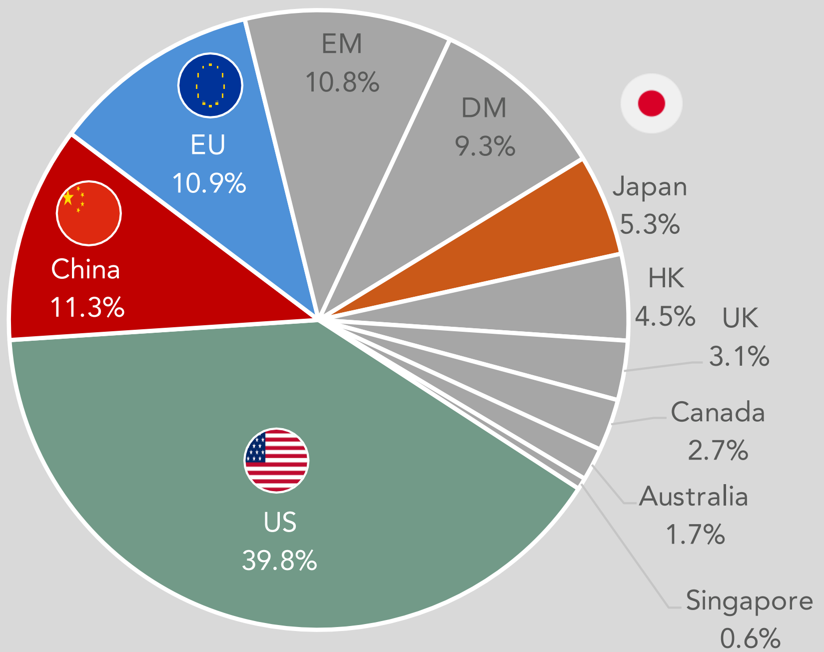
The US fixed income markets account for approximately 40% of the more than $130 trillion debt securities outstanding globally, which is over 2x the next largest market, the EU. Bond markets in the US, EU, China and Japan represent over 80% of total global fixed income securities outstanding.

The US equity markets also represent approximately 40% of more than $100 trillion in total global equity market capitalization, which is 3.5x the next largest market, China. Equity markets in the US, China, EU and Japan represent over 65% of global equity market cap.

Global fixed income securities outstanding



Global equity market cap

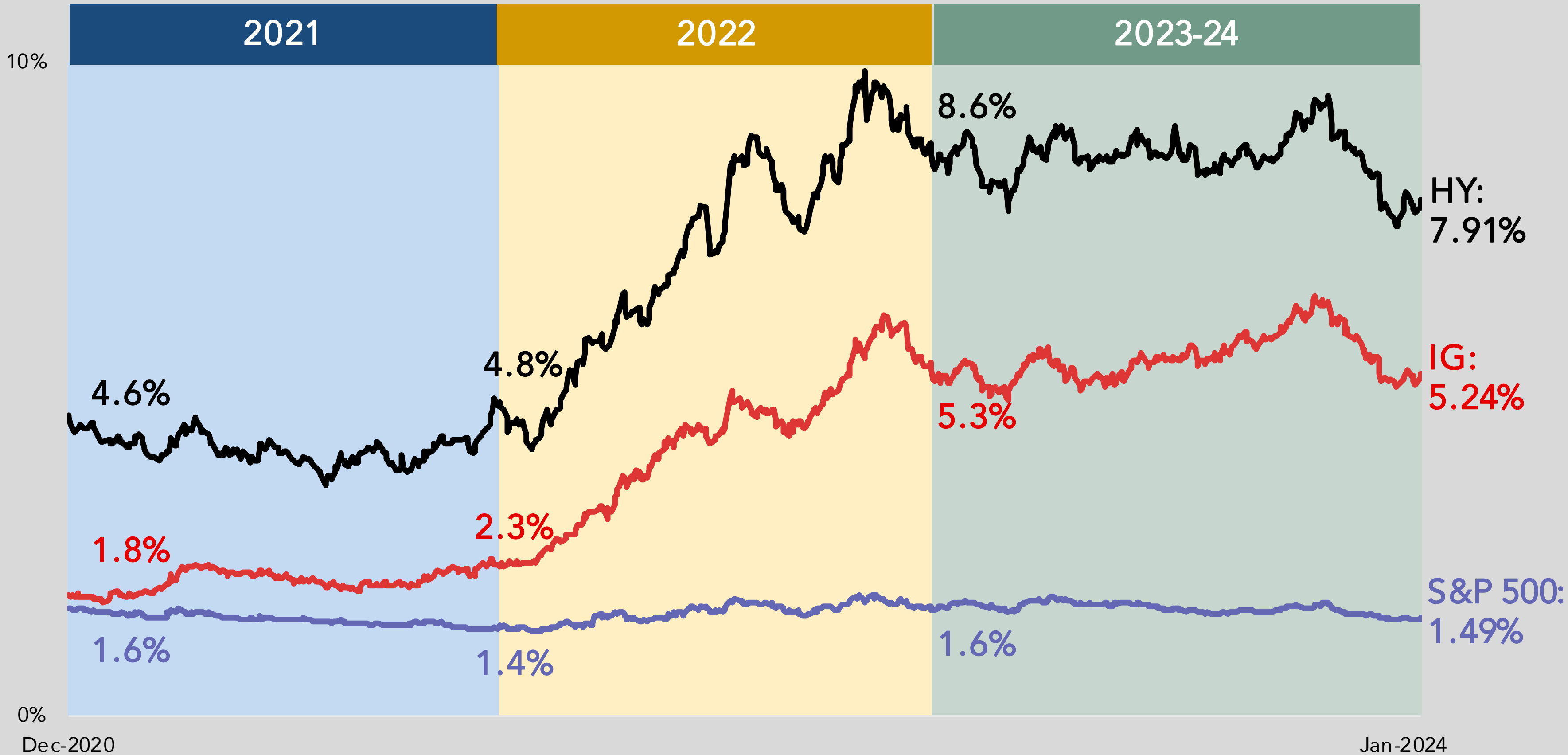


Source: (1-2) SIFMA Research (2023 Capital Markets Fact Book, July 2023). Data is full year 2022.

Attractive Entry Point for High Quality Credit

Corporate bond yields above 5% today remain meaningfully more attractive than the 5 year average below 3.5%, and stand well above the current earnings yield for stocks.

USD IG & HY index yield to worst and S&P 500 dividend yield

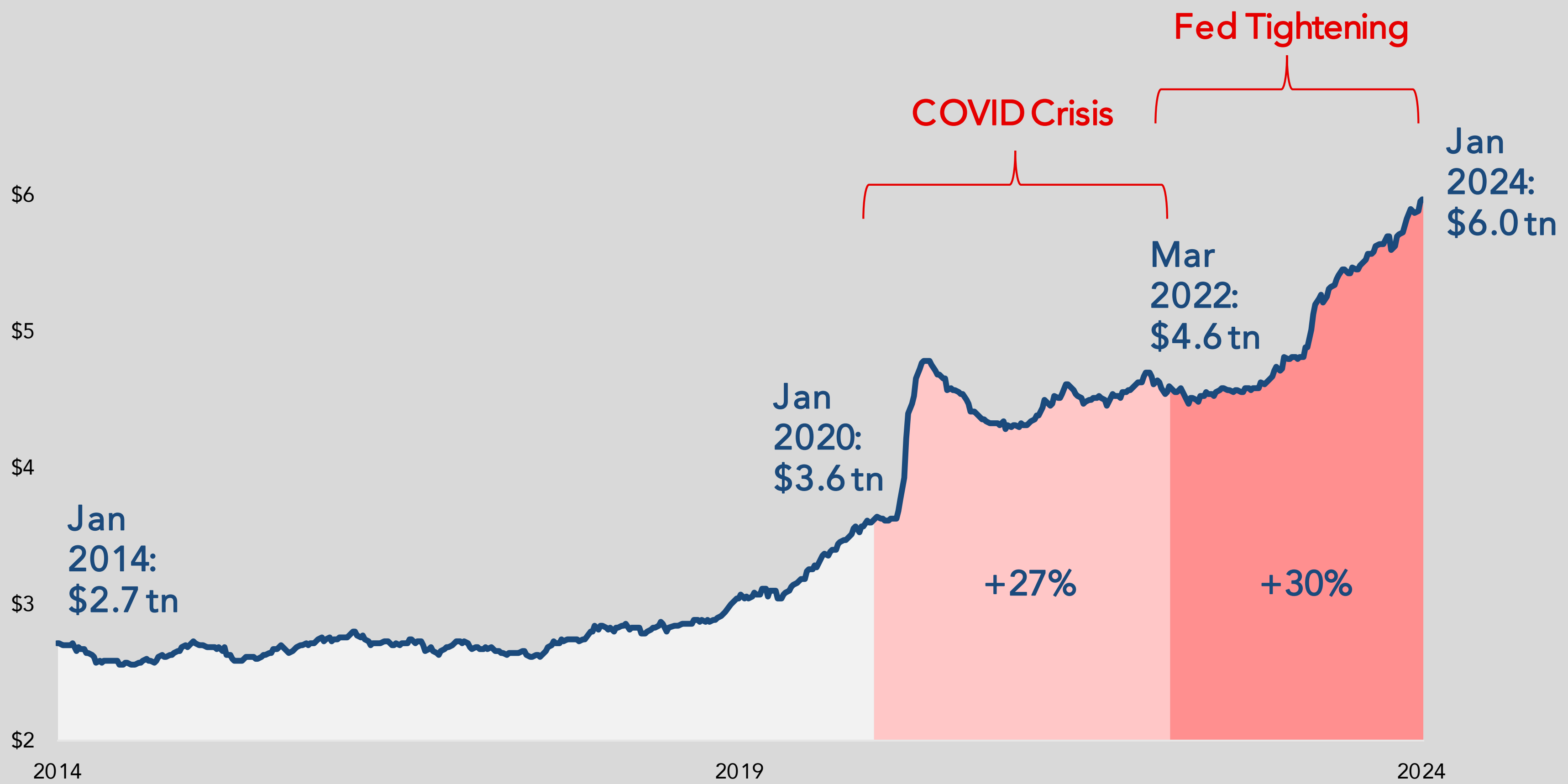


Source: (1) Bloomberg. Data through January 18, 2024.

Increased Fund Flows into Corporate Credit

Since January 2020, Money Market Fund balances nearly doubled to $6 trillion on a combination of safe haven and yield seeking flows during the COVID crisis of 2020-21 and Fed tightening of 2022-23. As the Fed pivots toward easing by mid-year, look for lower UST yields to drive a higher pace of fund flows into corporate credit.

Money Market Fund assets, USD tn



Source: Bloomberg. Data as of January 18, 2024.

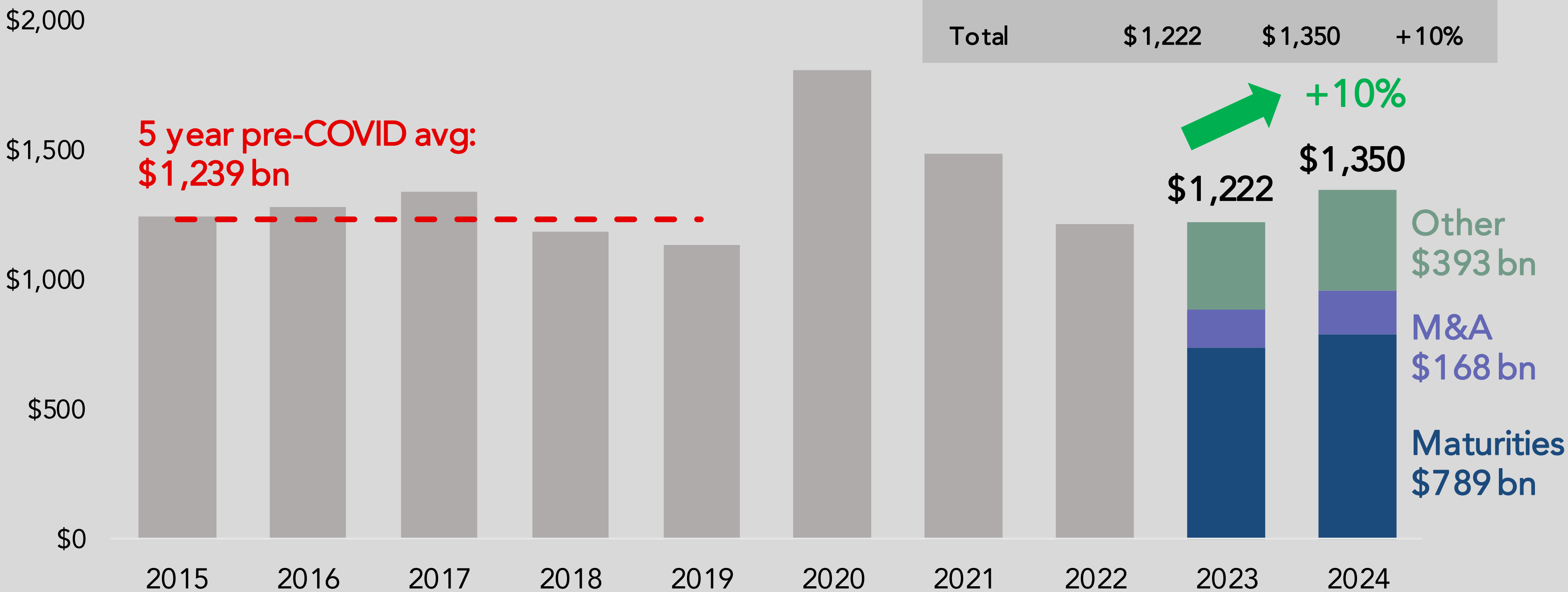
2024 IG Issuance Should Increase 10%

MUFG expects a 10% uptick in 2024 USD IG volumes, relative to 2023. A more stable rate environment, better business confidence and pent-up demand are likely to drive marginally higher M&A financing volumes. While the 2024 maturity wall is manageable, expect corporates to opportunistically pre-finance large maturities in 2025 and 2026.

2024 IG Forecasts

	2023	2024	
Maturities	$739	$789	+7%
M&A	$147	$168	+14%
Other	$336	$393	+17%
Total	**$1,222**	**$1,350**	**+10%**

Investment grade issuance, USD bn

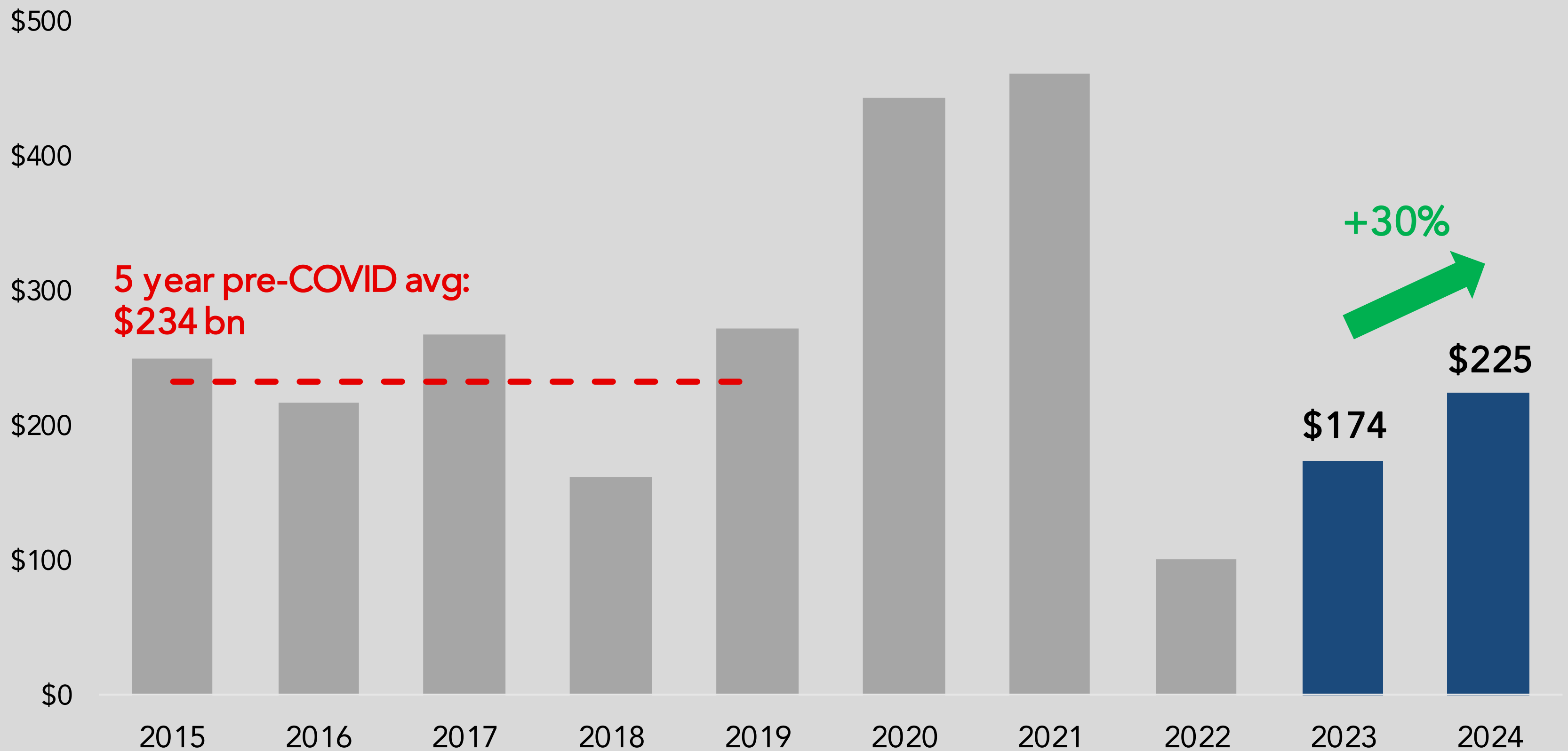


Source: (1) Bloomberg. Data as of January 18, 2024. MUFG.

2024 HY Issuance Should Increase 30%

MUFG expects a 30% uptick in 2024 USD HY volumes, relative to 2023. A more stable rate environment, a dearth of supply in 2022 and 2023, marginally higher M&A volumes, and opportunistic refinancing of larger 2025 – 26 maturity walls will drive issuance volumes.

High yield issuance, USD bn

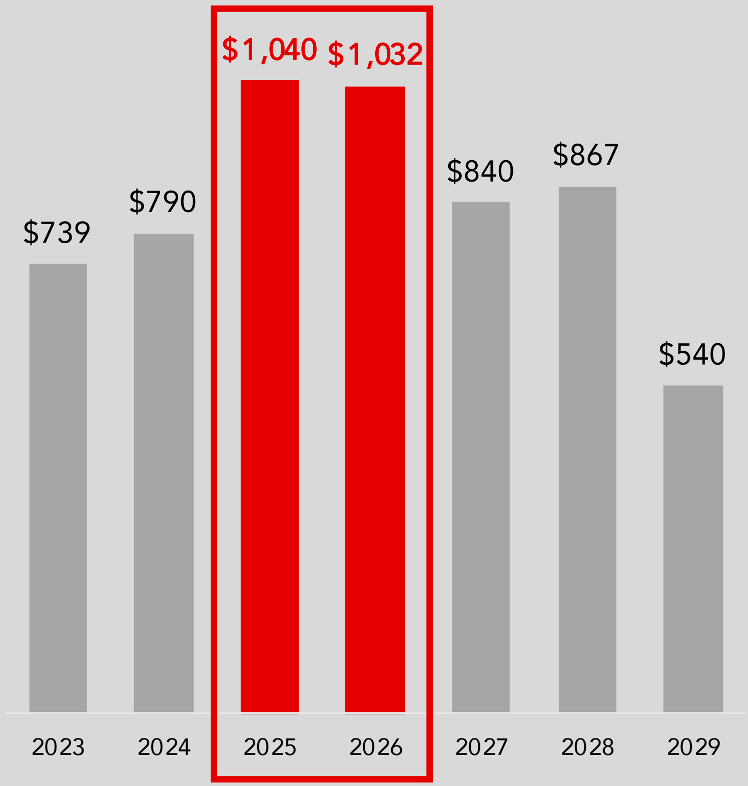


Source: (1) Bloomberg. Data as of January 18, 2024. MUFG.

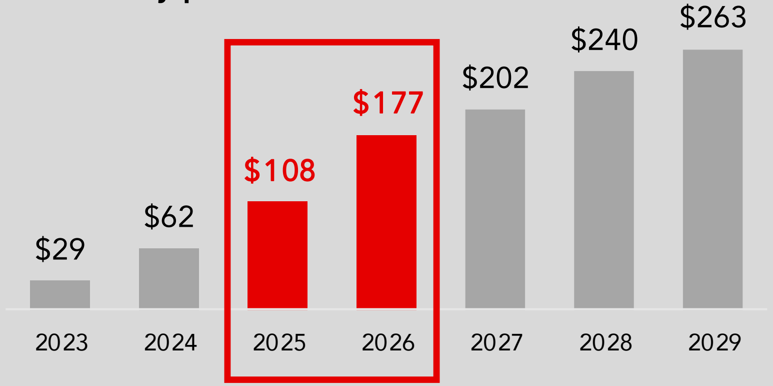
Maturity Looms Larger in 2025-26

Maturity walls in 2024 are relatively manageable in both the IG and HY markets. However, further out the maturity curve, IG corporates face a formidable $1 trillion of refinancing needs in both 2025 and 2026. In high yield, the average life to maturity is at record lows and the 2025-2026 maturity profile is skewed toward lower rated credits. In both markets, look for corporates to opportunistically pull-forward issuance into 2024. More challenged HY issuers may look to the private credit markets to fund maturities up to 18-months out.

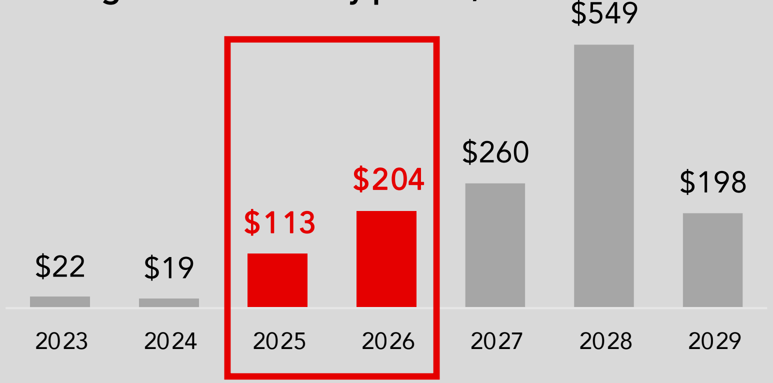
IG maturity profile, USD bn



HY maturity profile, USD bn



Leveraged loan maturity profile, USD bn



Source: (1-3) Bloomberg. CreditSights, "US HY New Issues for '23 and a First Look at '24." LPL Research "Rating Downgrades are Picking Up: What That Means for Corporate Bonds".

11.

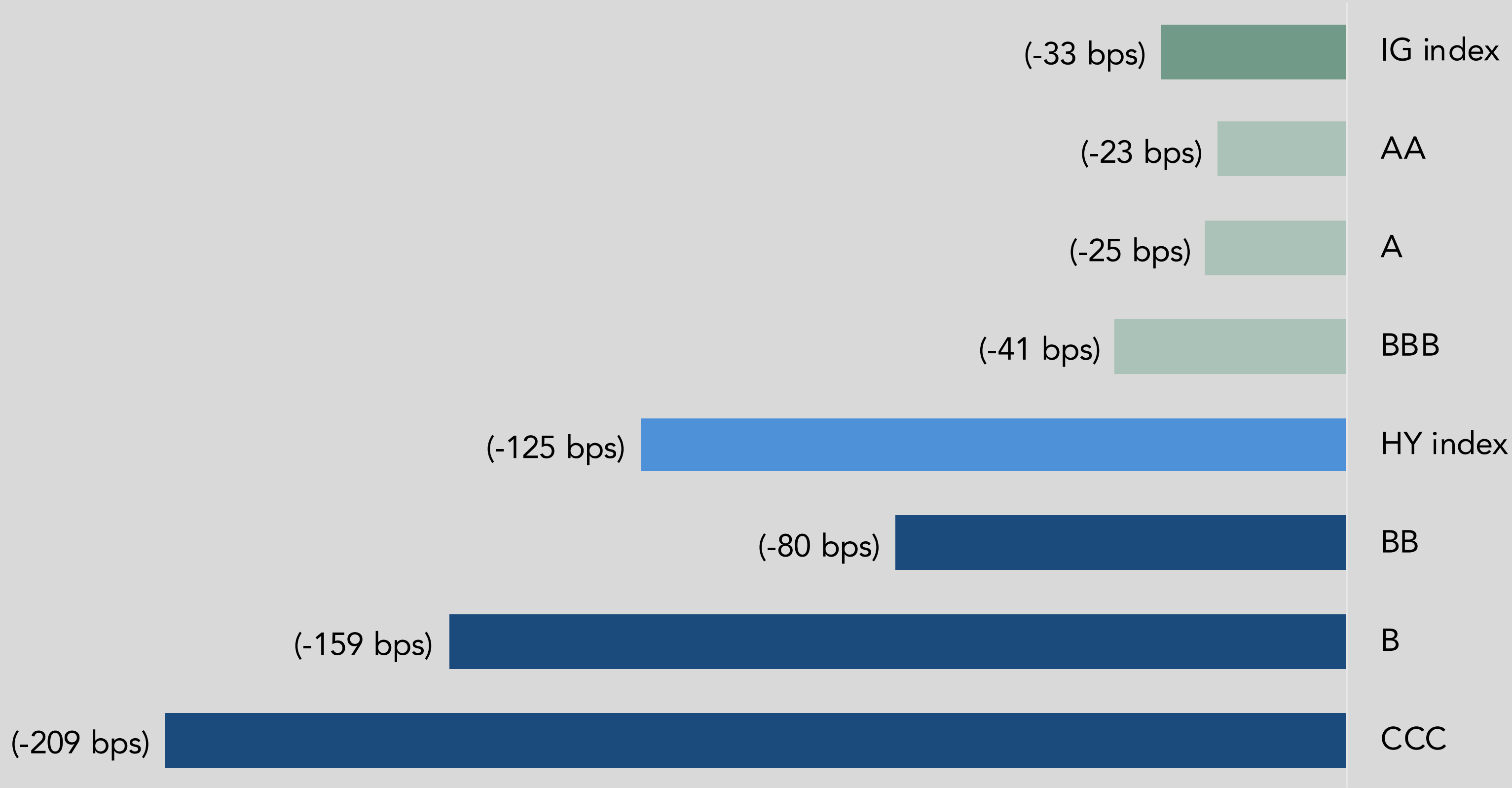
Bearish Credit Spreads

> “Whatever it may bring, I will live by my own policies, I will sleep with a clear conscience, I will sleep in peace.”
>
> Sinéad O'Connor, Irish singer, songwriter, and human rights activist (1966-2023)

USD Credit Spreads Currently Not Pricing Recession

USD credit spreads are currently not pricing a recession, tightening sharply over 2023 vs. consensus expectations at the beginning of the year for widening. In 2023, IG and HY spreads tightened ~30 bps and ~145 bps, respectively.

Change in spreads (since Jan 2023)

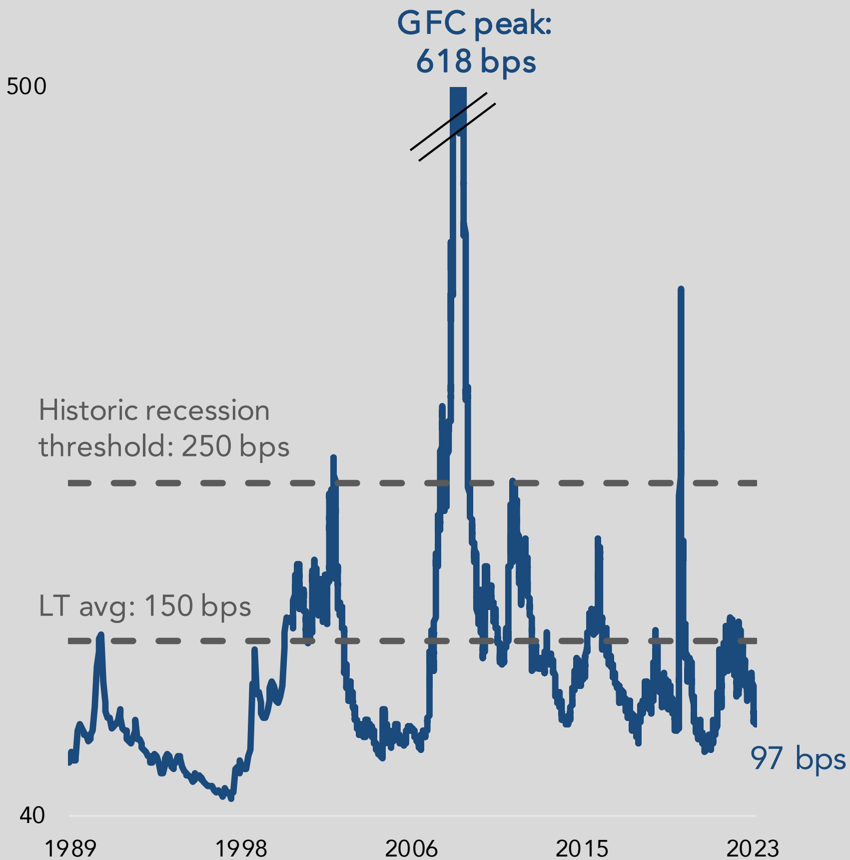


Source: (1) Bloomberg. Data as of January 18, 2024.

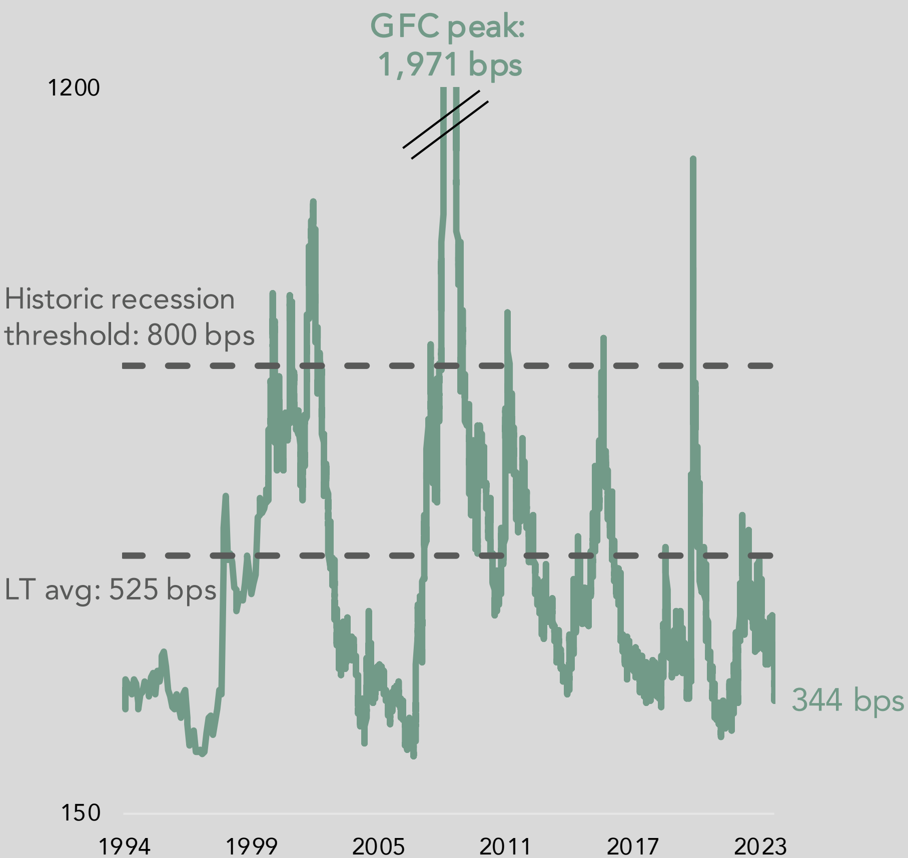
IG and HY Credit Spreads Below LT Average

Despite Fed tightening, bank sector stress, and concerns over economic slowdown, IG and HY spreads tightened sharply in 2023 (contrary to consensus expectations for widening one year ago), and are currently trading below long-term averages.

USD IG OAS



USD HY OAS



Source: (1-2) Bloomberg. Data as of January 18, 2023.

Moderately Bearish Corporate Credit Spreads

A rising chorus of Wall Street consensus, including CreditSights research, remains optimistic around a "soft landing" in 2024. Due to the lagging impact of an historic Fed tightening cycle, and a weakening consumer, MUFG's Macro Strategy team and credit desk analysts believe a "bumpy" landing and "mild" US recession is more likely. While our base case scenario for USD IG and HY spreads point to modest widening in 2024, MUFG's outlook for corporate credit spreads remains very constructive by the standards of US recessions historically.

Scenario analysis for 2024 credit spreads

		Spot (Jan 17)	Soft Landing	Mild Recession/ Stagflation	Hard Landing
IG Index	MUFG	97 bps *(Bloomberg OAS)*	85 - 120 bps	**95 - 140 bps** *Base case*	100 - 180 bps
	CreditSights	102 bps *(ICE BofA OAS)*	**100 bps** *Base case*	150 bps	200 bps
HY Index	MUFG	344 bps *(Bloomberg OAS)*	315 - 415 bps	**340 - 490 bps** *Base case*	340 - 640 bps
	CreditSights	362 bps *(ICE BofA OAS)*	**350 bps** *Base case*	500 bps	750 bps

Source: (1) George Goncalves (Head of MUFG US Macro Strategy), Andrew Myers & Bill Matthews (MUFG credit desk analysts), Glenn Schultz (MUFG quant analytics team). CreditSights, "US IG & Crossover 2024 Outlook: Hurry Up & Wait." Bloomberg. Data as of January 18, 2024.

12.

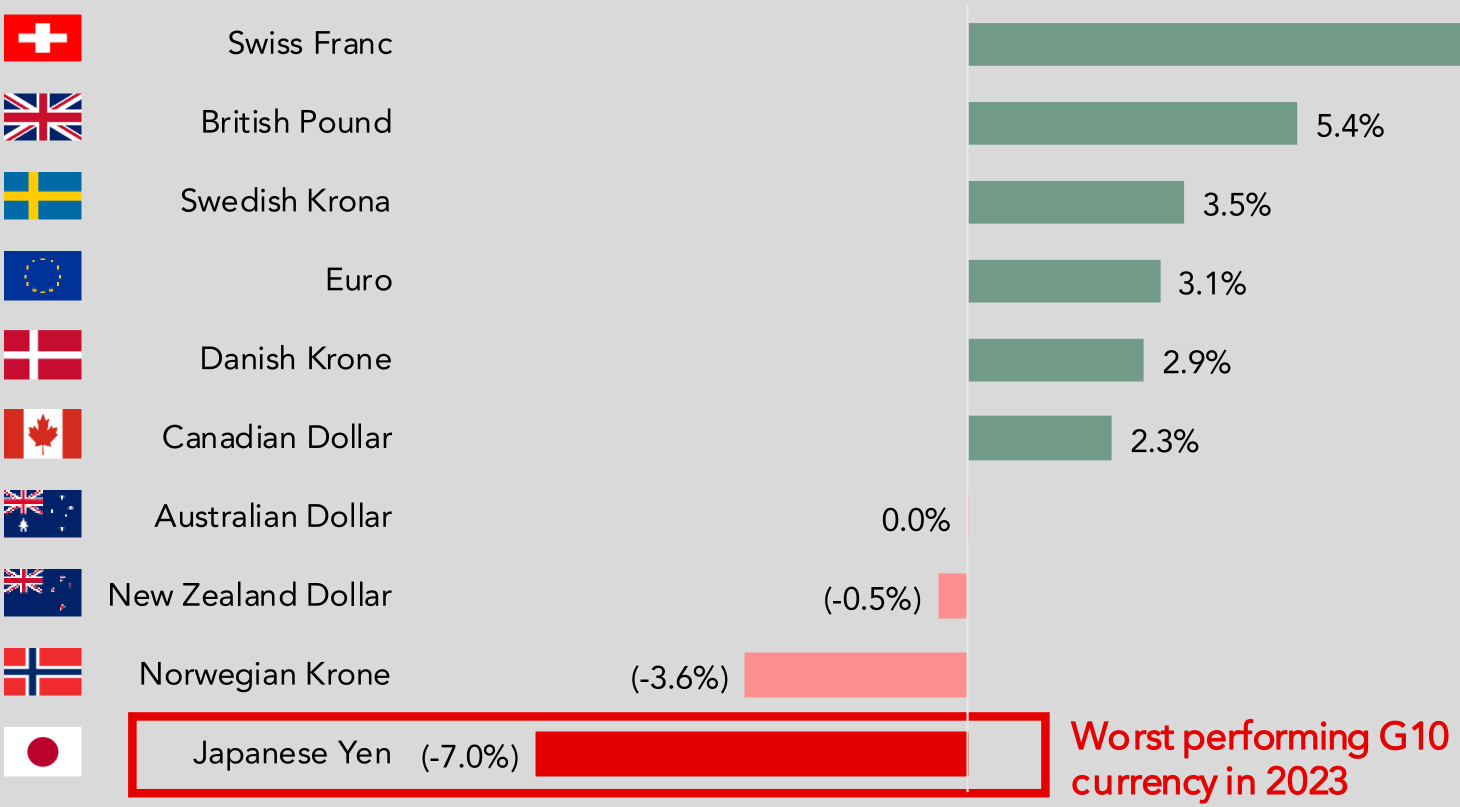
Year of the Yen

> “The world is full of sounds. We just don’t usually hear them as music.”
>
> Ryuichi Sakamoto, Japanese composer, pianist & producer, and Academy Award winner for Original Score for “The Last Emperor” (1952 – 2023)

Worst Performing G10 Currency in 2023

As noted by MUFG FX strategist, Derek Halpenny, the USD Index (DXY) declined 2.1% in 2023 (vs. 8.2% gain in 2022), and traded in a narrow 7.8% range (vs. wider 21.3% range in 2022). As the 2022-23 global tightening cycle unfolded in reasonably synchronized fashion, the BOJ became the last major Central Bank to maintain a negative benchmark policy rate. The Yen, in turn, declined 20% over the two year period, and became the worst performing G10 currency in 2023.

2023 annual returns vs. USD



Source: (1) Bloomberg. Data through December 31, 2023. Axis inverted to show JPY performance vs. USD. MUFG Annual Foreign Exchange Outlook (Halpenny).

Year of the Yen

MUFG expects a substantive policy pivot to tightening by the BOJ in 2024, which includes the end of both its yield curve control (YCC) and negative-interest-rate policy (NIRP) stance. Notably, the BOJ will be tightening policy in 2024 as most G10 Central Banks pivot toward monetary easing. MUFG expects the BOJ to increase its key policy rate by 20 bps to +0.10% in 2024, most likely commencing at the April meeting since January is not plausible given recent BOJ communication.

USD / JPY

Key drivers of 2024 Yen strength

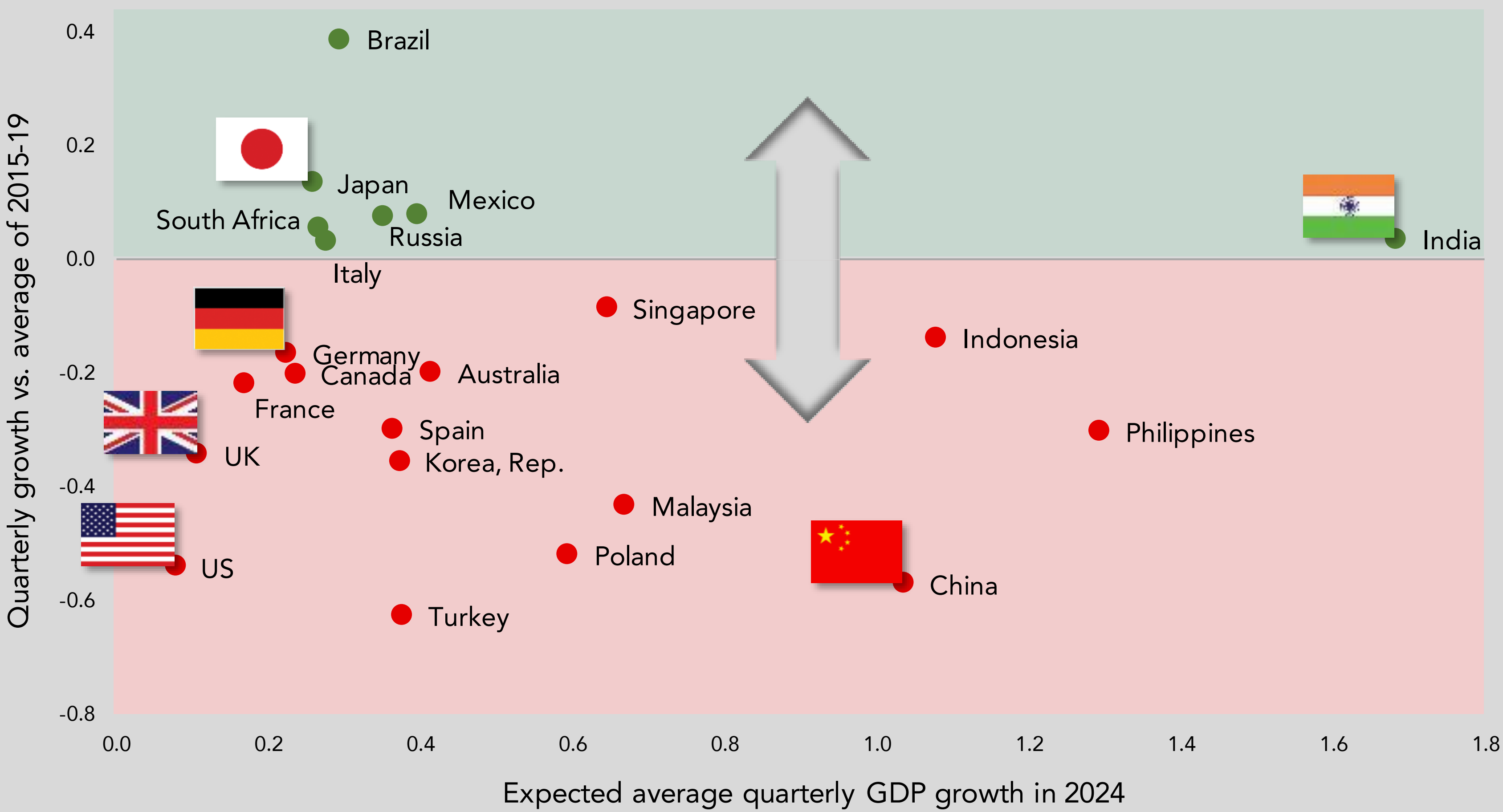
- Policy divergence (BOJ tightening, G10 easing)
- G10 bond yields declining
- Global growth deceleration
- Global inflation normalizing (albeit more slowly in Japan)
- Strong wage growth in Japan
- Volatility following unwind of Yen carry positions
- Rising political risk driving safe-haven flows

Source: (1) Bloomberg. Data through December 31, 2023. Axis inverted to show JPY performance vs. USD. MUFG Global Research (Japan). MUFG 2024 Foreign Exchange Outlook: 2024 Themes (Derek Halpenny).

Outperforming Pre-Pandemic Growth

Most major economies will fall short of pre-pandemic growth rates in 2024. Japan is among the few large global economies expected to outperform on growth in 2024 relative to the pre-COVID period.

2024 growth relative to 2015-19 avg

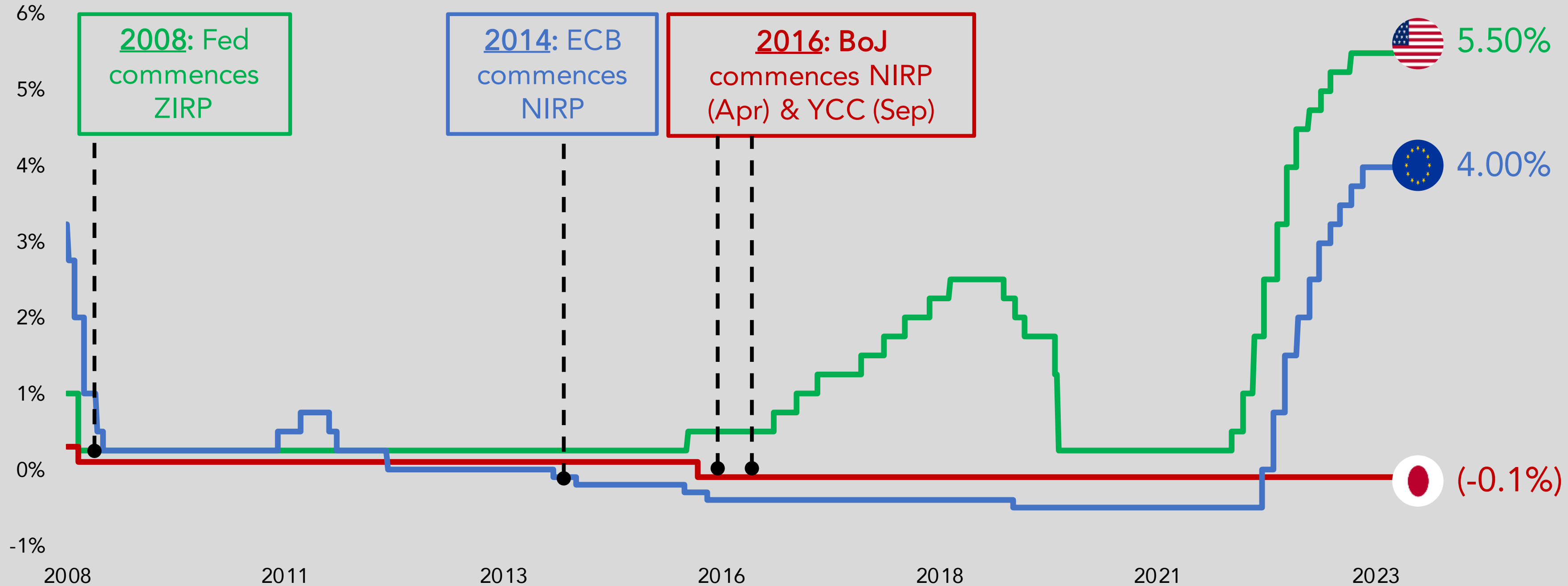


Source: (1) Oxford Economics, "Global: Key Themes 2024 – Few Opportunities in a Gloomy Landscape" (November 15, 2023).

BoJ 2024 Policy Pivot

At its December meeting, the BOJ left both its ST and LT policy rates unchanged, thereby maintaining its status as the only major global central bank with a negative benchmark policy rate. Despite Governor Ueda's dovish policy communication, MUFG expects the BOJ to pivot away from its negative interest rate (NIRP) and yield curve control (YCC) policies, initially established in 2016, in early 2024. For the BOJ, the end of NIRP may not necessarily represent policy tightening; but rather, policy easing by virtue of enhancing financial intermediation in markets.

Fed Funds, ECB deposit rate, and BoJ policy rate

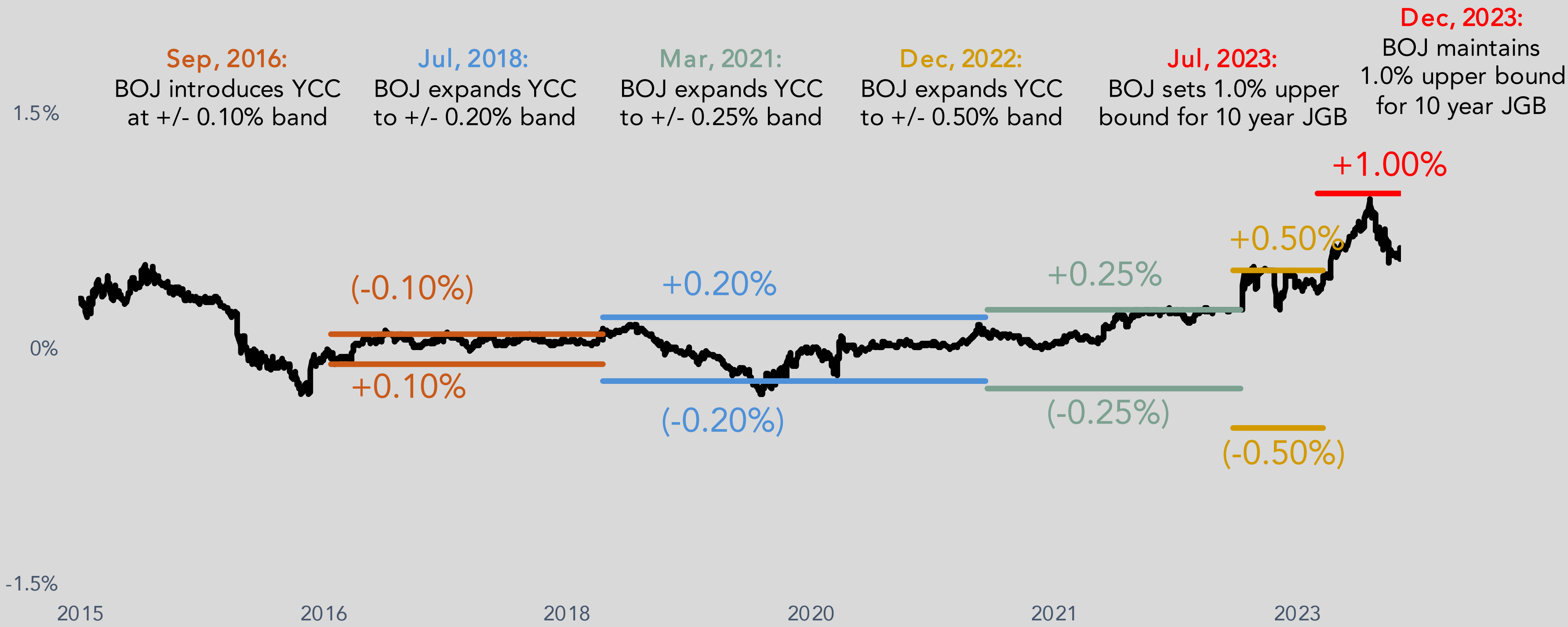


Source: (1) Bloomberg. Data as of January 18, 2024. Oxford Economics, "Japan: No Change in Policy as BoJ Waits for Wage Data ." Capital Economics. Bloomberg Government. MUFG Economics Research. Fed funds is upper bound.

2024 Pivot Away from Unsustainable YCC

The rally lower in UST yields, which has reduced pressure on JGBs and Yen, has given the BOJ more flexibility to assess the timing of their departure from both NIRP and YCC. With staff papers from the comprehensive monetary policy review already highlighting the negative side effects of unconventional BOJ policy easing (specifically NIRP and YCC), a cautious and gradual pivot toward policy normalization remains the base case for early 2024. By comparison, the BOJ's move away from QE will be a more complicated and multi-year pivot that is unlikely to commence until the BOJ's "monetary policy review of the last 25 years" concludes in mid-2024.

Japan 10 year government bond yield

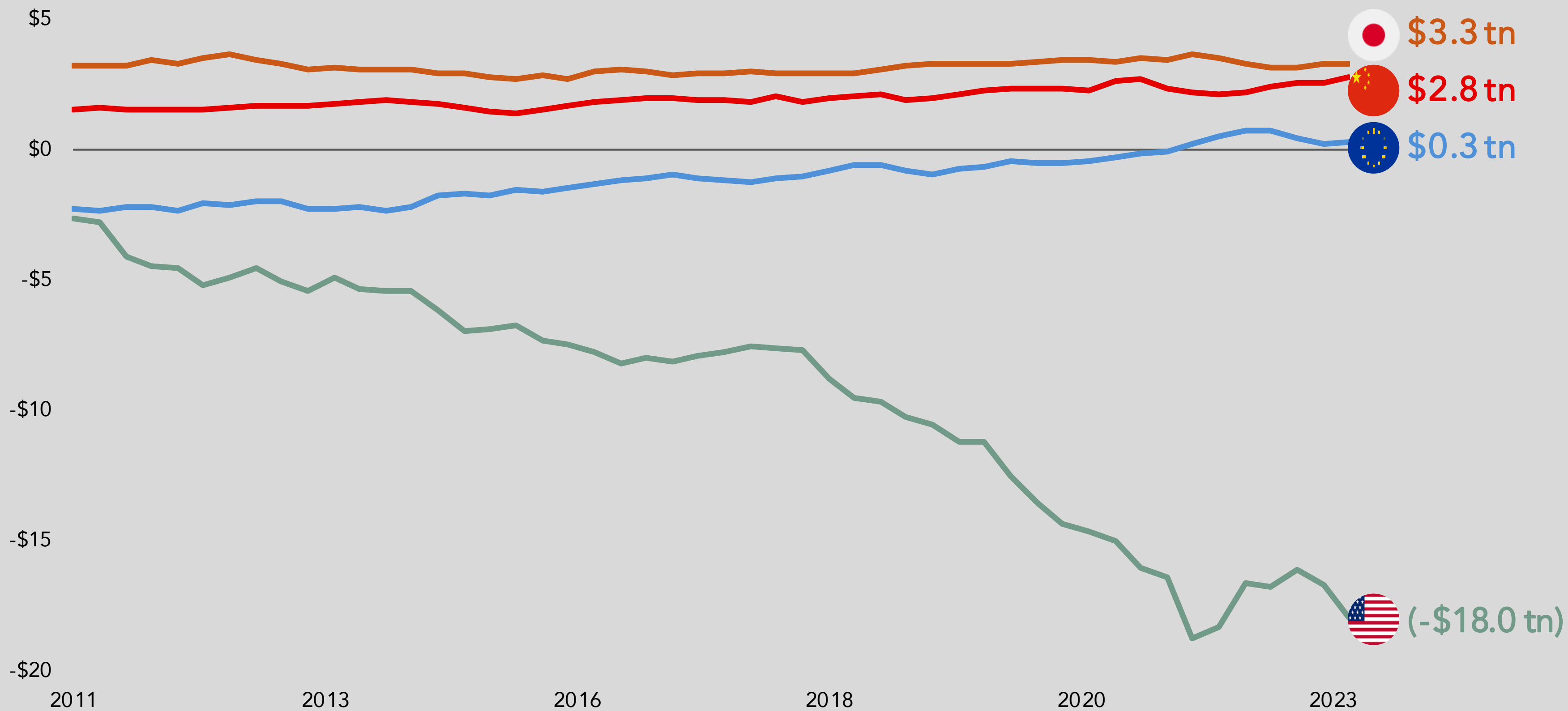


Source: (1) Bloomberg. Data as of January 18, 2024. Oxford Economics, "Japan: No Change in Policy as BoJ Waits for Wage Data." Capital Economics. Bloomberg Government. MUFG Economics Research.

World’s Largest Net International Investment Surplus

Decades of current account surpluses have allowed Japan to accumulate the largest net international investment position on the planet, at $3.3 trillion. Roughly half of Japanese investors’ overseas investments are in US stocks and bonds. Should the BoJ pivot to tighter policy in 2024, as expected, the implications for US rates and risk assets could be significant.

Net international investment position by country, USD tn



Source: (1) Charles Schwab, “2024 Growth Outlook: The Big Picture”(December 2023). Bloomberg. Data as of January 18, 2024. IMF.

13.

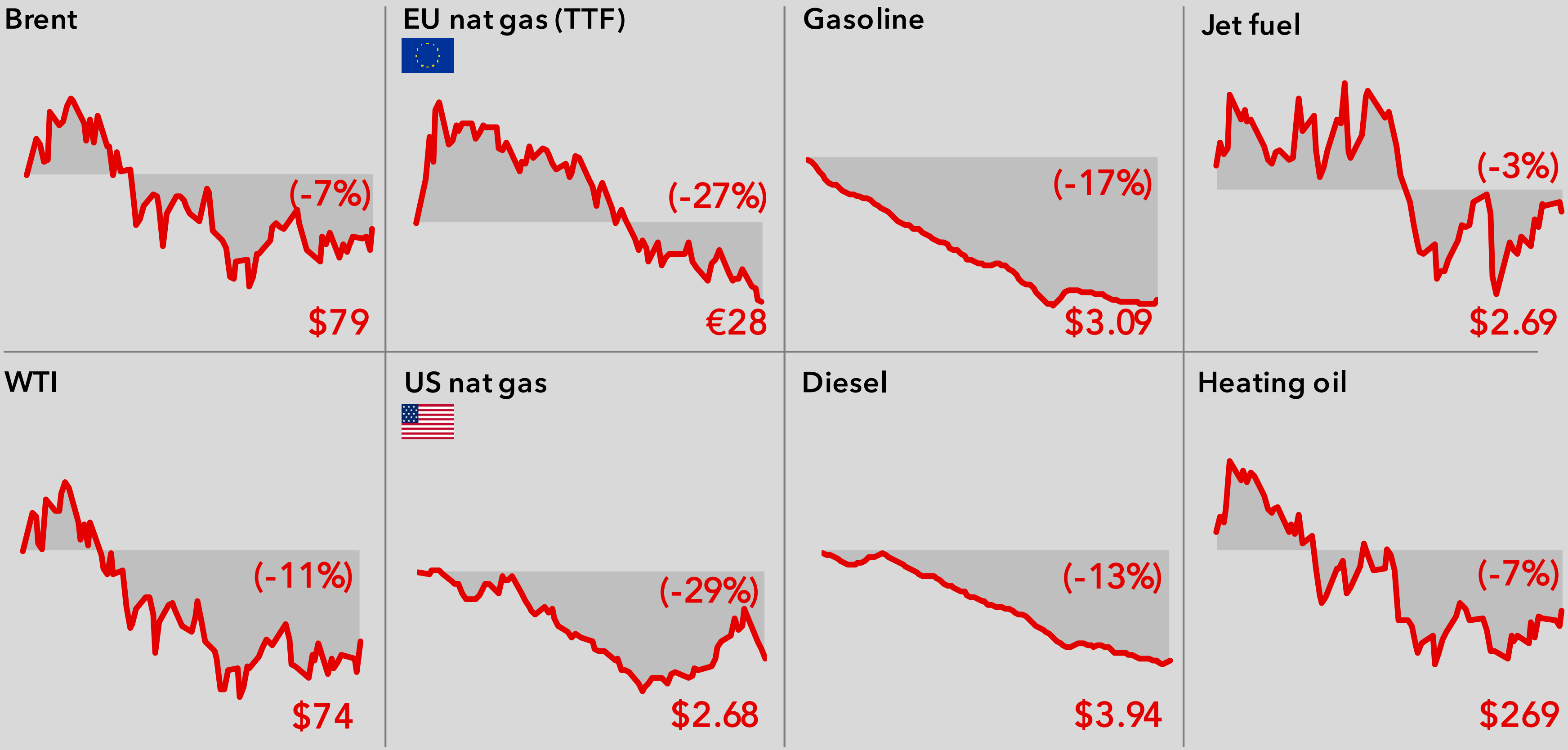
Neutral to Bullish Energy Prices

> "I would never try to motivate anyone to follow me.
> I would motivate him to follow certain principles."
>
> Jim Brown, "The Greatest Professional Football Player Ever,"
> Civil Rights activist and actor (1936-2023)

Modest Geopolitical Risk Premium in Energy Prices

Somewhat counterintuitively, energy prices have declined since the Israel-Gaza crisis began on October 7th due to increased US production and expectations of softer global demand. While the geopolitical risk premium in oil prices has risen since the conflict spread to Yemen and the Red Sea, it has done so only marginally. MUFG expects this push-and-pull between geopolitical risk and oil price fundamentals to remain a critical theme in 2024 energy markets.

Energy prices since Israel-Gaza on October 7

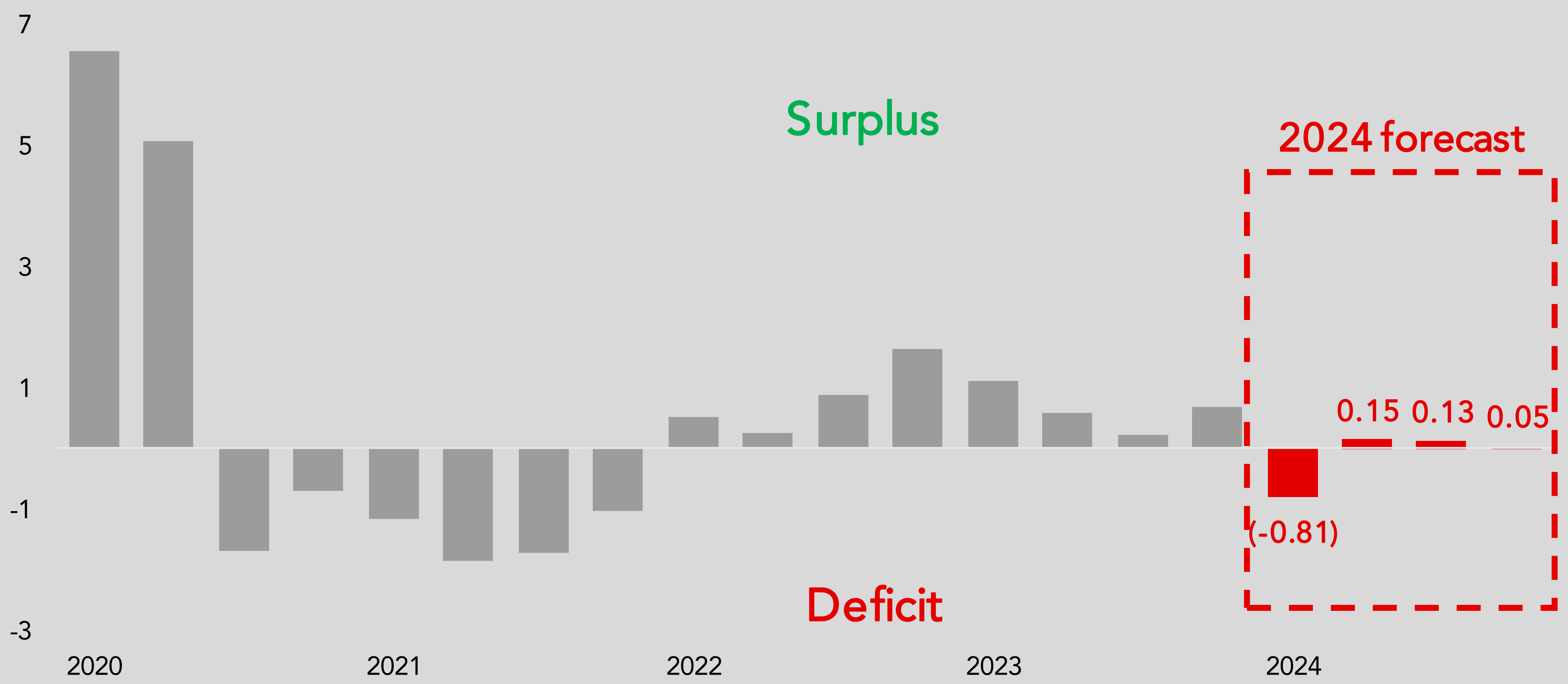


Source: (1-8) Bloomberg. Data through January 18, 2024. Euro and US natural gas axis is from (-50%) to 50%. All other graphs are from (-20%) – 15%.

Tight Micro Fundamentals for Oil in 2024

MUFG's Head of Commodities Research, Ehsan Khoman, expects energy commodity prices to skew neutral in 2024. Tighter supply paired with a fading monetary policy drag and receding recession fears will support prices while "higher for longer" rates will challenge the macro backdrop and weigh on near term demand. Look for oil markets in deficit in early 2024 and to remain tight for the balance of the year. Longer term, Ehsan still expects structural challenges, including underinvestment, decarbonization, and deglobalization to drive prices higher.

Global oil balance, million barrels per day

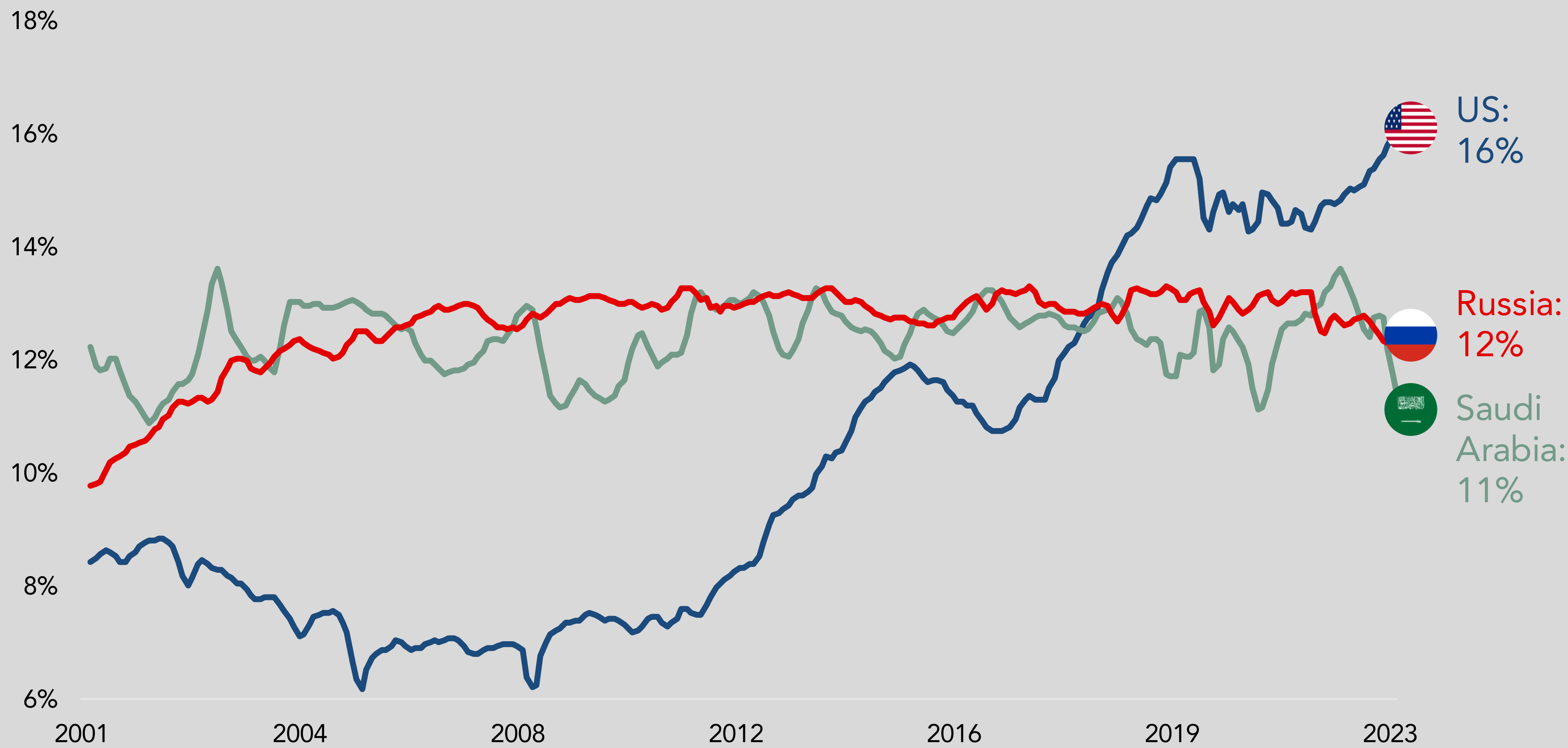


Source: (1) EIA, "Short-Term Energy Outlook" (January 2024).

Record US Production Offsetting OPEC+ Supply Discipline

According to MUFG's Ehsan Khoman, OPEC+ supply management is likely to keep 2024 oil prices in a $80 - $100 range. The US, however, has ramped up production and is now the world's largest producer at 13 million barrels per day (over 15% of total global supply). Higher US supply is an important factor supporting a more neutral outlook for oil prices in 2024.

Oil production as % of world total



Source: (1) Bloomberg. Data as of January 17, 2024. EIA. 3 -month moving average.

14.

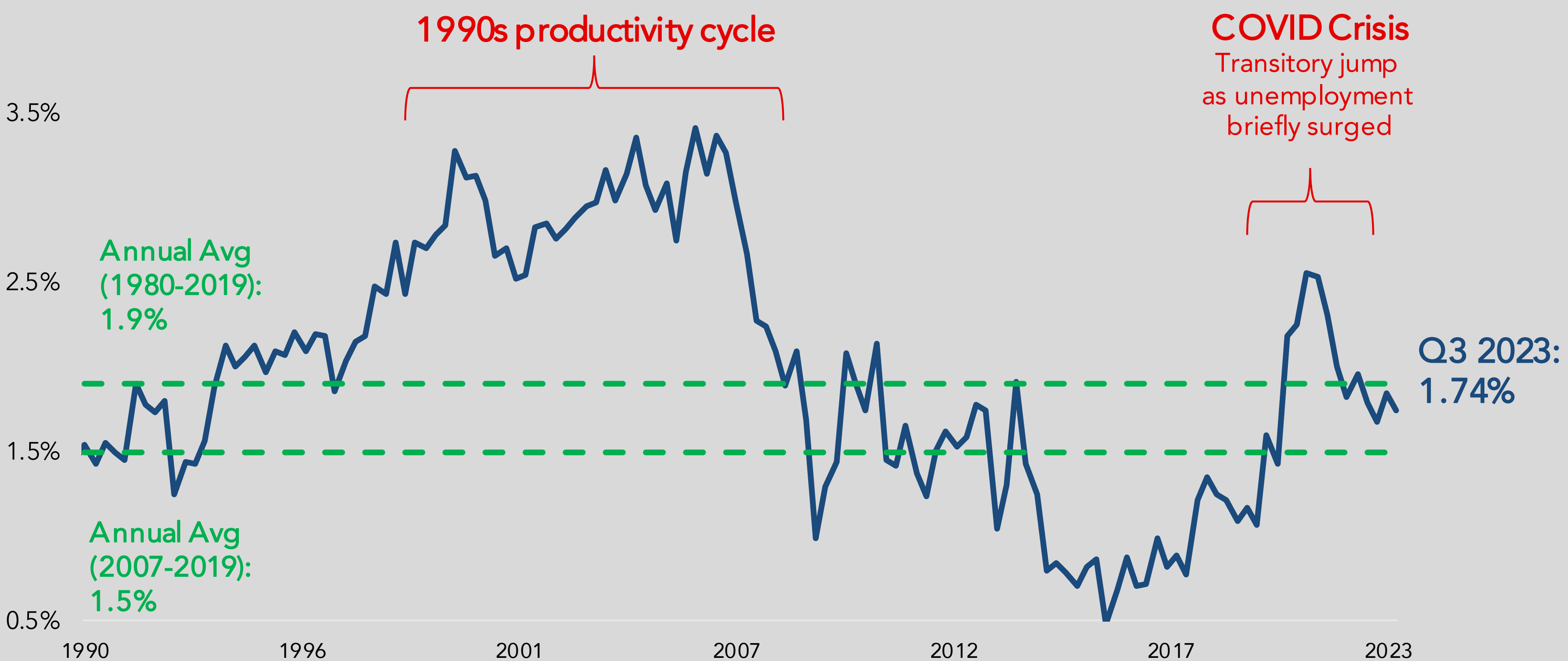
Accelerating Innovation & Productivity

> "Looking back, I realize that nurturing curiosity and the instinct to seek solutions are perhaps the most important contributions education can make."
>
> Paul Berg, Stanford professor and Nobel Prize-winning biochemist who ushered in the era of genetic engineering (1926-2023)

Productivity Cycle Optimism

The US economy has not had a sustained acceleration in productivity since the late 1990s. Following a transitory surge during COVID due to a temporary surge in unemployment, US productivity growth is poised to remain above its multi-decade 1.5% average on a multi-year basis. While an element of productivity growth is cyclical and therefore tied to growth, we believe that an acceleration in capital investment, innovation and productivity is emerging as a sustainable mega-theme in the post-COVID period.

Non-financial corporates productivity 5 year average, q/q

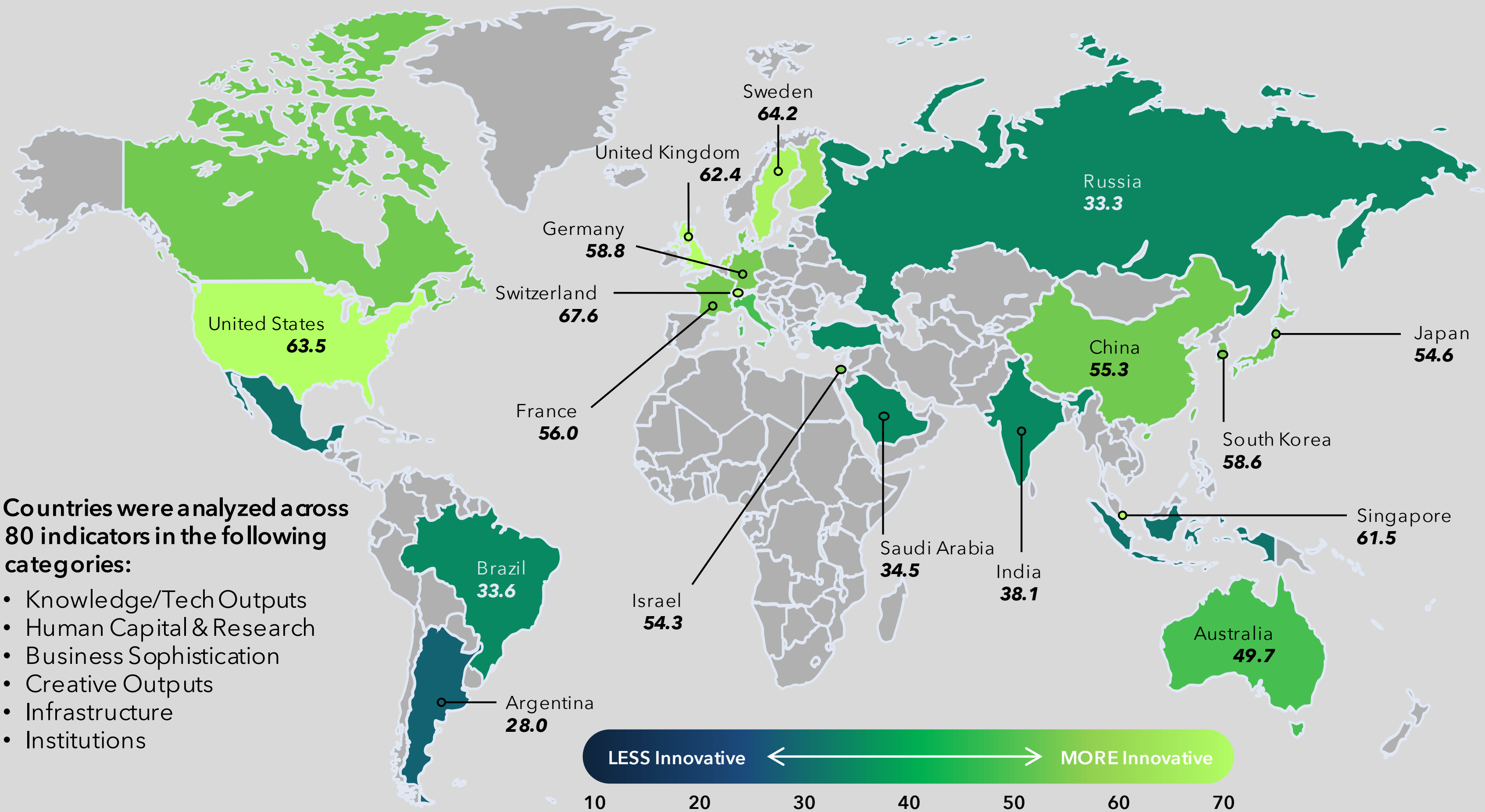


Source: (1) Bureau of Labor Statistics. Data as of December 6, 2023.

World's Most Innovative Economies

The United States ranked #3 globally, behind Switzerland and Sweden, in the 2023 Global Innovation Index (GII) as part of a comprehensive study by the World Intellectual Property Organization (WIPO).

2023 Global Innovation Index



Countries were analyzed across 80 indicators in the following categories:

- Knowledge/Tech Outputs
- Human Capital & Research
- Business Sophistication
- Creative Outputs
- Infrastructure
- Institutions

Source: WIPO, "Global Innovation Index 2023".

World's Most Competitive Economies

The 2023 IMD World Competitiveness Ranking

1.	Denmark	100.00
2.	Ireland	99.71
3.	Switzerland	99.13
4.	Singapore	97.44
5.	Netherlands	95.58
6.	Taiwan	93.11
7.	Hong Kong	92.05
8.	Sweden	91.86
9.	USA	91.14
10.	UAE	90.52
11.	Finland	89.73
12.	Qatar	89.72
13.	Belgium	89.69
14.	Norway	88.43
15.	Canada	88.21
16.	Iceland	86.74
17.	Saudi Arabia	86.06
18.	Czech Republic	83.48
19.	Australia	83.02
20.	Luxembourg	82.46
21.	China	82.10
22.	Germany	80.47
23.	Israel	78.84
24.	Austria	78.16
25.	Bahrain	77.82
26.	Estonia	76.84
27.	Malaysia	75.75
28.	South Korea	75.71
29.	UK	75.48
30.	Thailand	74.54
31.	New Zealand	73.30
32.	Lithuania	71.67
33.	France	71.05
34.	Indonesia	70.75
35.	Japan	67.84
36.	Spain	67.22
37.	Kazakhstan	66.11
38.	Kuwait	65.59
39.	Portugal	65.54
40.	India	64.63
41.	Italy	63.32
42.	Slovenia	62.82
43.	Poland	60.48
44.	Chile	60.25
45.	Cyprus	60.21
46.	Hungary	59.85
47.	Türkiye	55.64
48.	Romania	55.34
49.	Greece	55.12
50.	Croatia	54.93

Source: (1) IMD World Competitiveness Ranking. The IMD World Competitiveness ranking presents the 2023 overall ranking for the 64 economies covered by the WCY.

Appendix: Market & Economic Forecasts

> “As a professor, I tended to think of history as run by impersonal forces. But when you see it in practice, you see the difference personalities make.”
>
> Henry Kissinger, US National Security Advisor & Secretary of State (1923 - 2023)

2024 Global Economic Forecasts

The global economy is expected to grow at about 2.1% in 2024, well below its long term 3.5% average, with the US the only G7 economy projected to grow above 1% in the year ahead.

GDP growth forecasts, y/y

Region / country	2023E	2024E	
North America			
Mexico	3.3%	**1.9%**	↓
US	2.5%	**2.0%**	↓
Canada	1.0%	**(-0.6%)**	↓
Eurozone	0.5%	**0.6%**	
Ireland	(-2.1%)	**1.8%**	↑
Spain	2.4%	**1.4%**	↓
Netherlands	0.0%	**0.7%**	↑
France	0.8%	**0.6%**	↓
Finland	(-0.4%)	**0.6%**	↑
Italy	0.7%	**0.5%**	↓
Germany	(-0.2%)	**(-0.1%)**	↑
Other Europe			
Poland	0.6%	**3.2%**	↑
Russia	3.2%	**2.3%**	↓
Denmark	0.7%	**1.5%**	↑
Switzerland	0.7%	**1.2%**	↑
Türkiye	4.0%	**1.0%**	↓
Czech Republic	(-0.5%)	**0.9%**	↑
UK	0.3%	**0.6%**	↑
Norway	0.4%	**0.5%**	↑
Sweden	(-0.3%)	**(-0.0%)**	↑

Region / country	2023E	2024E	
APAC	4.3%	**3.5%**	
India	7.0%	**5.7%**	↓
China	5.2%	**4.4%**	↓
Indonesia	5.1%	**4.4%**	↓
Singapore	1.2%	**2.3%**	↑
New Zealand	0.3%	**1.5%**	↑
South Korea	1.2%	**1.4%**	↑
Australia	2.0%	**1.2%**	↓
Japan	2.0%	**0.7%**	↓
LatAm	2.0%	**0.8%**	
Chile	(-0.0%)	**1.8%**	↑
Brazil	2.9%	**0.4%**	↓
Colombia	1.1%	**0.2%**	↓
Argentina	(-1.2%)	**(-1.8%)**	↓
MENA	1.8%	**2.9%**	
Saudi Arabia	(-0.5%)	**5.0%**	↑
UAE	2.5%	**4.4%**	↑
Sub-Saharan Africa	3.0%	**3.3%**	↑
Qatar	1.1%	**2.5%**	↑
Kuwait	1.6%	**2.1%**	↑
Egypt	2.8%	**1.9%**	↓
Oman	1.5%	**1.7%**	↑
South Africa	0.5%	**0.7%**	↑

Source: (1) Oxford Economics. Data as of January 17, 2024.

MUFG Global Rates Forecasts

	Spot (Jan 18)	Q1 2024		Q2 2024		Q3 2024		Q4 2024	
		MUFG	Consensus	MUFG	Consensus	MUFG	Consensus	MUFG	Consensus
Fed Funds	5.50%	5.25%	5.45%	4.75%	5.15%	4.25%	4.70%	3.75%	4.30%
2 yr UST	4.36%	4.25%	4.39%	3.63%	4.12%	3.50%	3.86%	3.50%	3.68%
5 yr UST	4.05%	4.25%	4.06%	3.75%	3.89%	3.38%	3.73%	3.63%	3.62%
10 yr UST	4.14%	**4.25%**	**4.05%**	**3.88%**	**3.94%**	**3.38%**	**3.83%**	**3.75%**	**3.79%**
30 yr UST	4.37%	4.25%	4.25%	4.00%	4.15%	3.25%	4.05%	3.88%	4.05%

Source: (1) MUFG Global Macro Research (George Goncalves). Bloomberg. Data as of January 18, 2024. Fed funds is upper bound.

Global Currency Forecasts

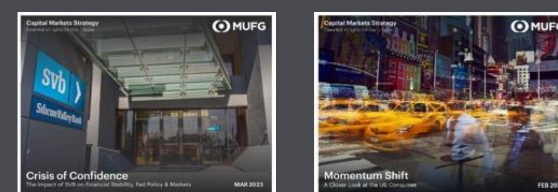
Currency pair	Spot (Jan 18)	Q1 2024	Q2 2024	Q3 2024	Q4 2024
EUR / USD	**1.09**	**1.08**	**1.10**	**1.12**	**1.14**
GBP / USD	**1.27**	**1.26**	**1.28**	**1.29**	**1.30**
USD / JPY	**148**	**140**	**138**	**136**	**134**
USD / CNY	7.20	7.05	7.00	6.90	6.80
AUD / USD	0.66	0.66	0.67	0.68	0.71
NZD / USD	0.61	0.61	0.62	0.62	0.64
USD / CAD	1.35	1.35	1.34	1.32	1.30
USD / NOK	10.54	10.56	10.27	9.91	9.56
USD / SEK	10.51	10.56	10.27	10.00	9.65
USD / CHF	0.87	0.85	0.84	0.84	0.83
USD / MXN	17.19	17.30	17.40	17.50	17.60
USD / BRL	4.93	4.89	4.91	4.93	4.95

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

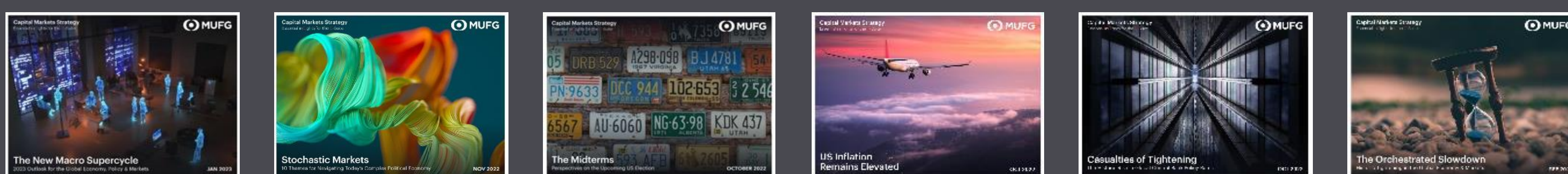
MUFG Commodities Forecasts

	Spot (Jan 18)	Q1 2024		Q2 2024		Q3 2024		Q4 2024	
		MUFG	Consensus	MUFG	Consensus	MUFG	Consensus	MUFG	Consensus
WTI	**$74**	$76	$79	$75	$78	$81	$80	$84	$80
Brent	**$79**	$81	$83	$80	$83	$86	$84	$89	$84
US Nat Gas	**$2.69**	$2.80	$2.82	$2.30	$2.65	$2.40	$3.00	$2.70	$3.50
Euro Nat Gas	€28	€45	€42	€41	€35	€40	€32	€48	€42

Source: (1) MUFG Commodities Research (Ehsan Khoman). Bloomberg. Data as of January 18, 2024.



Click or scan the QR code to view past reports, policy notes and more.



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

Education

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

Personal

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

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Role

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 over six 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.

Angela Sun

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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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