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WisdomTree Market Outlook

Plus Model Portfolios

WisdomTree.eu
+44 (0) 207 448 4330

Authors

Christopher Gannatti
Global Head of Research

Aneeka Gupta
Director,
Macroeconomic Research

Ayush Babel
Global Associate Director,
Quantitative Research

Blake Heimann
Senior Associate,
Quantitative Research

Luca Berlanda
Associate Director,
Quantitative Research

Nitesh Shah
Head of Commodities &
Macroeconomic Research

Piergiacomo Braganti
Director,
Macroeconomic Research

Mobeen Tahir
Director, Macroeconomic
Research & Tactical Solutions

Pierre Debru
Head of Quantitative Research
& Multi Asset Solutions

Baoqi Zhu
Senior Associate, Quantitative
Research & Multi Asset Solutions

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Commodity Outlook: Commodities enter the Year of the Dragon

In this section

Our commodity outlook covers the Chinese Year of the Dragon. The dragon represents an auspicious yet mythical creature. As we look ahead to the coming year, we will see if commodities share the same auspicious features of the dragon or if the anticipated commodity supercycle proves to be a myth.

Lookback

Before turning to our outlook, let's first take stock of where we have come from. 2021 and 2022 were fantastic years for the commodity complex (see Figure 1). In the post-COVID-19 period, demand for goods and services rebounded strongly in most parts of the world while supply chain issues lingered. A positive demand and negative supply shock thus lifted most commodities. In fact, we would argue, especially due to the supply impact, that commodities were the best hedging instrument for the rampant inflation that occurred during that period. However, during that period, not every country across the globe had opened up. The notable exception of China meant that the world's second-largest economy was not contributing to the demand shock.

By the end of 2022, China—the largest consumer of commodities—opened up, and at the beginning of 2023, there were grand expectations of a demand shock continuing. China's economy, however, disappointed. It opened with a lot of restraint and minimal stimulus. China seemed overly focused on not letting the inflation genie out of the bottle. Moreover, the economy was hamstrung by a real estate bubble that had burst. Meanwhile, central banks across the developed world became serious about quashing inflation. The high global interest rate environment and an underwhelming China were not supportive for commodities. Even when China began to stimulate in the second half of the year, it was very piecemeal and micro-focused and largely failed to address the real estate problem head-on. Hopes of a China stimulus of the sort we saw after the global financial crisis of 2008 were quickly dashed. China has once again shifted gears with policies to address the real estate woes, but many feel it's too little too late. 2023 ended up being a negative year for commodities (Figure 1).

Figure 1: A decade of asset price performance, ranked

	2014	2015	2016	2017	2018	2019
Rank 1	Real Estate 15.9%	Cash 0.2%	Commodities 11.4%	Equities 21.6%	Cash 1.7%	Equities 24.0%
Rank 2	Bonds 5.6%	Real Estate 0.1%	Equities 5.6%	Real Estate 11.4%	Bonds -2.4%	Real Estate 23.1%
Rank 3	Equities 2.1%	Bonds -2.8%	Real Estate 5.0%	Bonds 10.3%	Real Estate -4.7%	Bonds 13.6%
Rank 4	Cash 0.2%	Equities -4.3%	Bonds 3.6%	Cash 0.9%	Equities -11.2%	Commodities 5.4%
Rank 5	Commodities -17.0%	Commodities -24.7%	Cash 0.5%	Commodities 0.7%	Commodities -13.0%	Cash 1.7%

	2020	2021	2022	2023	10 Yrs
Rank 1	Equities 14.3%	Real Estate 27.2%	Commodities 13.8%	Equities 20.1%	Equities 5.9%
Rank 2	Bonds 10.3%	Commodities 27.1%	Cash 1.7%	Real Estate 10.9%	Real Estate 4.5%
Rank 3	Cash 0.5%	Equities 16.8%	Equities -19.8%	Bonds 7.9%	Bonds 1.7%
Rank 4	Commodities -3.5%	Cash 0.1%	Bonds -21.0%	Cash 3.9%	Cash 1.1%
Rank 5	Real Estate -8.2%	Bonds -3.5%	Real Estate -24.4%	Commodities -12.6%	Commodities -2.4%

Source: WisdomTree, Bloomberg. Data until 31 December 2023. All returns are in USD; 10-year returns are annualised from 31/12/2013–31/12/2023. Data: Equity – MSCI World, Bond – Bloomberg Barclays Agg Sovereign TR Unhedged, Real Estate – EPRA/NAREIT Global, Bloomberg Commodity Total Return Index, Cash – US T-bill 3-Month. **Historical performance is not an indication of future performance and any investments may go down in value.**

Rates, rates, rates

As with every other asset class in our Spring Outlook, commodities stand to benefit from the decline in interest rates that is widely expected this year. Obviously, at the time of drafting this outlook, with the absence of forward guidance from central banks, there are a lot of unknowns about the rate path. However, our working assumptions are that the Federal Reserve (Fed) and European Central bank (ECB) will begin to cut interest rates in the second quarter of 2024 and could deliver close to 100 basis points (bps) of cuts in the calendar year. We note that there is a sizeable chasm between market expectations and central bank rhetoric, but we also note in a year of multiple elections, central banks will face growing pressure to move away from restrictive rates.

The December 2023 rally gives us a glimpse of what commodities could do once central banks signal the green light.

For commodities, the key question is whether the asset class will continue to be hamstrung by the lagged effects of past rate tightening, or will it start pricing in the prospects of a more supportive environment? In December 2023, we saw notable rallies across the commodity space, particularly in metals (both precious and industrial), in the hopes of a rapid pivot by central banks. Many of these hopes were dimmed in January 2024, but the December 2023 rally gives us a glimpse of what commodities could do once central banks signal the green light.

Commodities in soft landings

Some regions like North America and Asia ex-China seem to have been surprisingly resilient through the barrage of shocks over the past four years. A scenario of taming inflation without a recession—as we see in the US—is rare but not unprecedented. These events are often called 'soft landings' or a phrase increasingly entering the lexicon of economists, 'immaculate disinflation'.

Europe, which faced an energy shock in 2022, has been left with deeper scars. The euro area narrowly escaped a technical recession at the end of 2023 with a flat GDP reading in Q4 2023 after negative growth in Q3 2023. If the ECB moves decisively in 2024 to loosen monetary conditions, the economy may avoid skidding further.

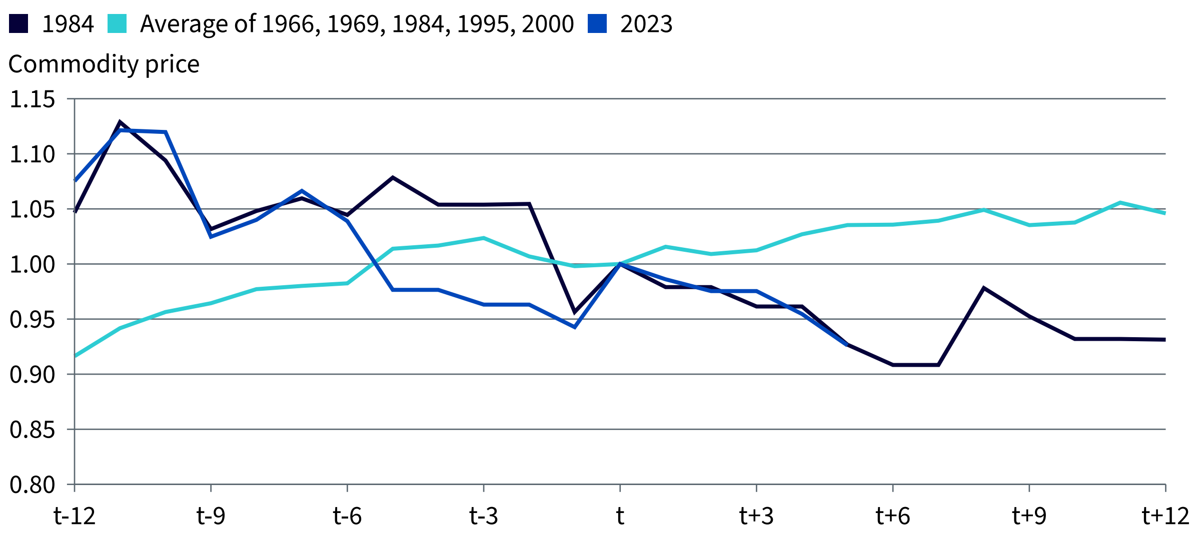
So, how do commodities perform in these soft landings?

To analyse soft landings, we use the work of Princeton economist Alan Blinder,[2] a former Fed vice chair. He considers soft landings a period when GDP declines by less than 1% and the National Bureau of Economic Research (NBER) doesn't declare a recession after at least one year of a Fed hiking cycle. In an earlier publication,[3] we analysed the performance of commodity prices one year prior to and post the final Fed Funds rate hike in each of these episodes.

With a limited sample of just five soft landings since 1960 (1966, 1969, 1984, 1995, 2000), we found that, on average, commodity prices were soft for the five months prior to the last rate hike and then rose thereafter (Figure 2). However, each rate/commodity scenario was different.

If we assume the last Fed rate hike in the current cycle was in July 2023, then we are six months into the soft landing at the time of writing (January 2024). Looking at where we are so far in this cycle, the 2023/2024 commodity path looks remarkably similar to the 1984 path. If 1984 serves as a guide for 2023/2024, then we are very close to the trough. We should note that the 1984 period was unusual in many ways, as the commodity market lagged the economy largely due to an increase in the supply of commodities.[4]

Figure 2: Real commodity prices around soft landings

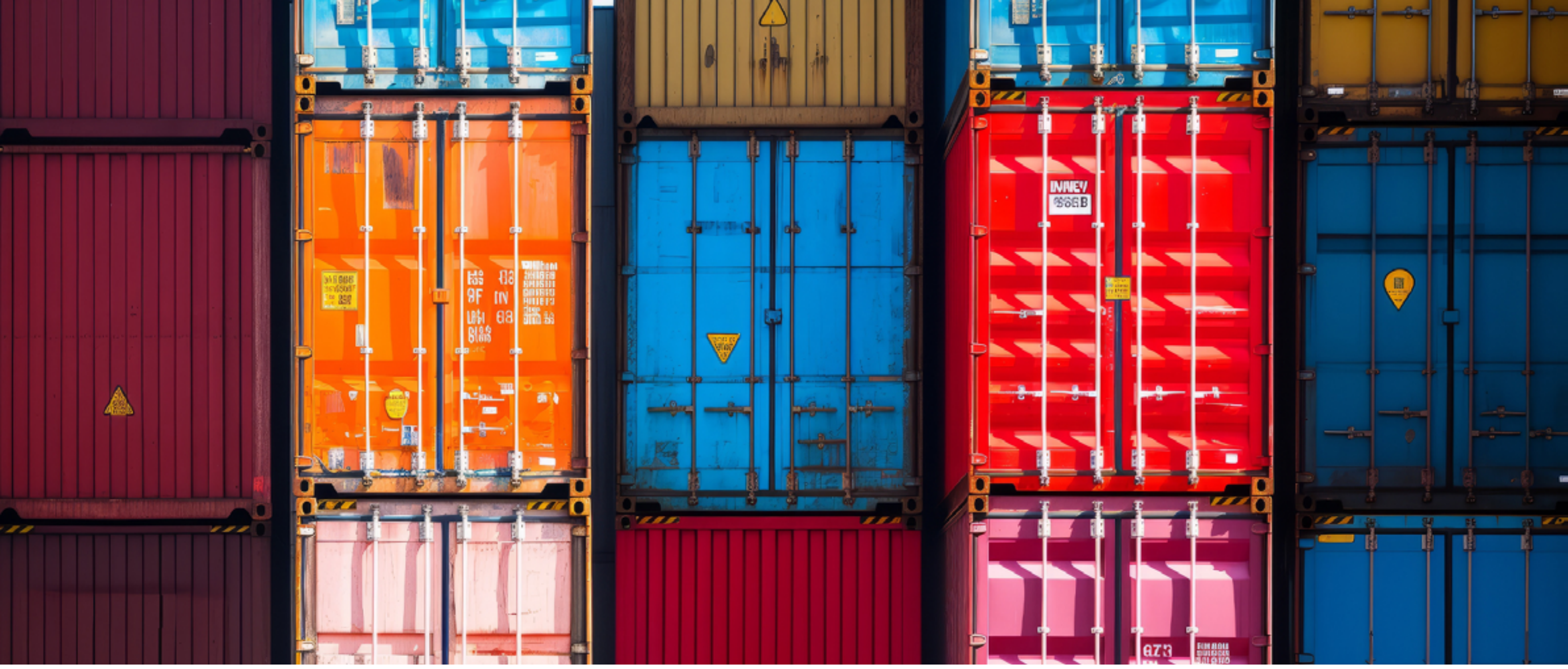


Sources: Bloomberg, WisdomTree. November 1965 to January 2024. Monthly data. Commodity price (Bloomberg Commodity Total Return Index) deflated by the US Consumer Price Index, indexed to 1 on the month of the final rate hike in the cycle. Legend label indicates the year of the last rate hike in the cycle. **Historical performance is not an indication of future performance and any investments may go down in value.**

2 Alan Blinder, "Landings, Soft and Hard: The Federal Reserve, 1965–2022," Journal of Economic Perspectives, Volume 37, Number 1, Winter 2023, Pages 101–120.

3 Commodities: an immaculate asset for an immaculate disinflation?

4 T.K. Morrison and M. Wattleworth, The 1984–86 Commodity Recession Analysis of Underlying Causes, IMF Staff Papers, 1988 (002), A007.



Year of the Dragon

Noting China's disappointment in 2023, will the country step up a gear in 2024? The country will announce its economic growth targets in March 2024. At its December 2023 Central Economic Work Conference, a mixed message of "pursue progress while ensuring stability, consolidate stability through progress, and establish the new before abolishing the old"[5] was given. It's hard to decipher a call to bold action from this.

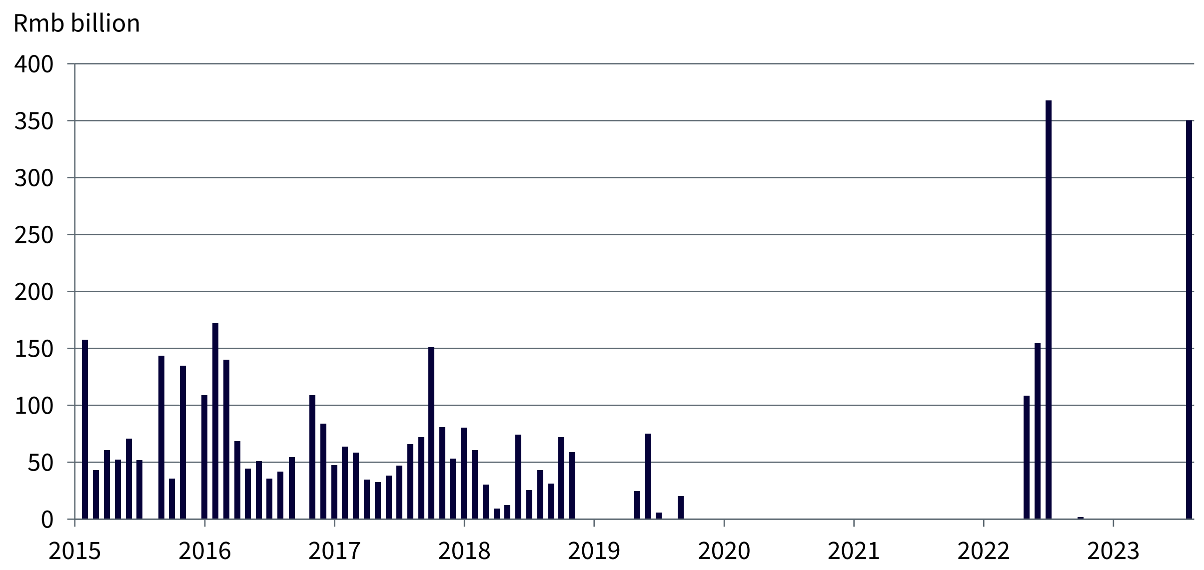
In January 2024, the People's Bank of China (PBoC) left the medium-term lending facility (MLF) rate and loan prime rate (LPR) unchanged despite widely forecasted cuts. Then, in a surprise press conference, it announced a generous 50-bp cut in reserve ratio requirements (RRR). The latter move may make up for some loss of confidence with respect to the former. Moreover, a cut in RRR is more of a liquidity measure, unleashing Rmb1 trillion in long-term liquidity to the banking system. For the first time since December 2021, the rates of relending and rediscounting loans for agriculture and SMEs were both trimmed by 25 bps in January 2024. Reluctance to cut interest rates more broadly may stem from the avoidance of currency depreciation pressure. When the Fed, ECB and other central banks start to cut, the PBoC may find it easier to do so as well.

China's beleaguered property sector remains a major headwind for the economy, and efforts to turn the property sector around still appear to be of the piecemeal model. Policymakers continue to emphasise the 'three major projects': affordable housing, urban village renovation and emergency public facilities. A boost to funding for the PBoC's Pledged Supplemental Lending (PSL) programme[6] seems to indicate spending on these projects will rise. Support via this channel does not involve a broad-based rate cut.

5 https://english.www.gov.cn/news/202312/12/content_WS657860aec6d0868f4e8e21c2.html

6 The PSL programme, initiated in 2014, was originally designed to help support any property downturn by funding urban redevelopment, pushing up property prices in the process. China relied heavily on PSL loans to support its shanty-town renovation during 2015–2018.

Figure 3: The PBoC's Pledged Supplemental Lending programme



Sources: Bloomberg, WisdomTree. June 2015 to January 2024. Monthly data. **Historical performance is not an indication of future performance and any investments may go down in value.**

A fundamental question is: how much more property demand will there be in an ageing country with slowing urbanisation? According to the census of 2020, China now enjoys a living area of 42 square metres per person. That is comparable to European countries. A new equilibrium of supply to meet 'replacement demand' rather than 'population growth demand' may form. The days of speculative buying with the assumption that demand and price will always go up seem to be over after this correction.

Elsewhere, China's 'National Team'—a collection of state or quasi-state-backed entities tasked by the Chinese government to smooth out financial market volatility—appears to be active in the stock market.

At the moment, it's hard to see any of the stimulus as a decisive paradigm shift but more an extension of the piecemeal easing we have seen since June 2023.

However, China's slowing economy has not dented commodity demand as much as expected. Copper demand in 2023, for example, remained in growth territory

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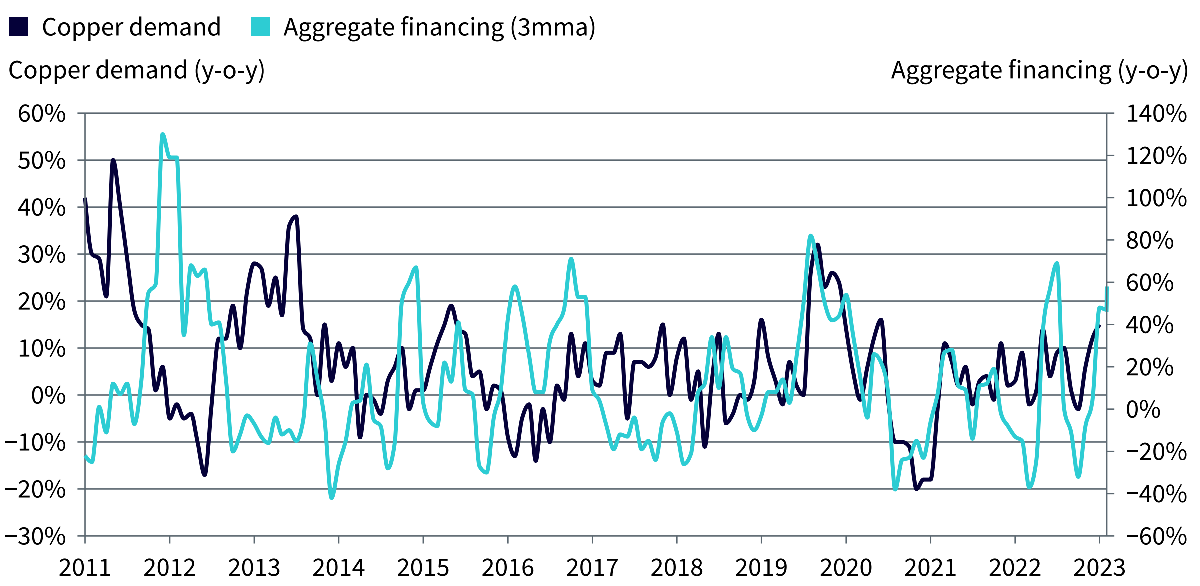
despite some sharp contractions in financing conditions in 2023 (Figure 4). With aggregate financing now rebounding, demand for copper could rise further.

We believe that China has been increasing its grid spending during a period of relatively low copper prices as it aims to opportunistically accelerate its transition to a lower carbon economy. Copper is essential for renewable technologies and the grid infrastructure improvements needed to accommodate an increasing number of electric vehicles on the road.

Figure 4: China's aggregate financing and copper demand



Sources: Bloomberg, WisdomTree. January 2010 to December 2023. Combines old and new total social financing measures to get a longer aggregate financing time series, but reader should be aware of definitional changes in 2018. **Historical performance is not an indication of future performance and any investments may go down in value.**

In 2023, China also accounted for close to 70% of global oil demand growth.[7] That may sound surprising, given the perception of a relatively weak economy. China's crude oil imports hit a record high in 2023.[8] The reopening boost was clearly a factor, but China is also expanding its presence in the petrochemical sector for high-end chemical products used in the manufacture of key goods such as solar panels and electric vehicles (EVs).

7 International Energy Agency, January 2024.

8 General Administration of Customs.

Xin san yang

Apparently, a new buzzword is circulating among Chinese officials and state media—xin san yang, the 'new three'—referring to solar cells, lithium-ion batteries and EVs. China is a leader in the production and export of these goods. While the 'old three'—household appliances, furniture and clothing—had a negative contribution to export growth in 2023, the 'new three' were positive.

Solar cells, lithium-ion batteries and electric vehicles are metal-intensive industries, and a widening international market for them could go some way in replacing the slowing metal demand from the domestic real estate sector. Moreover, while property is more steel/iron ore-intensive, the 'new three' are more base metal-intensive.

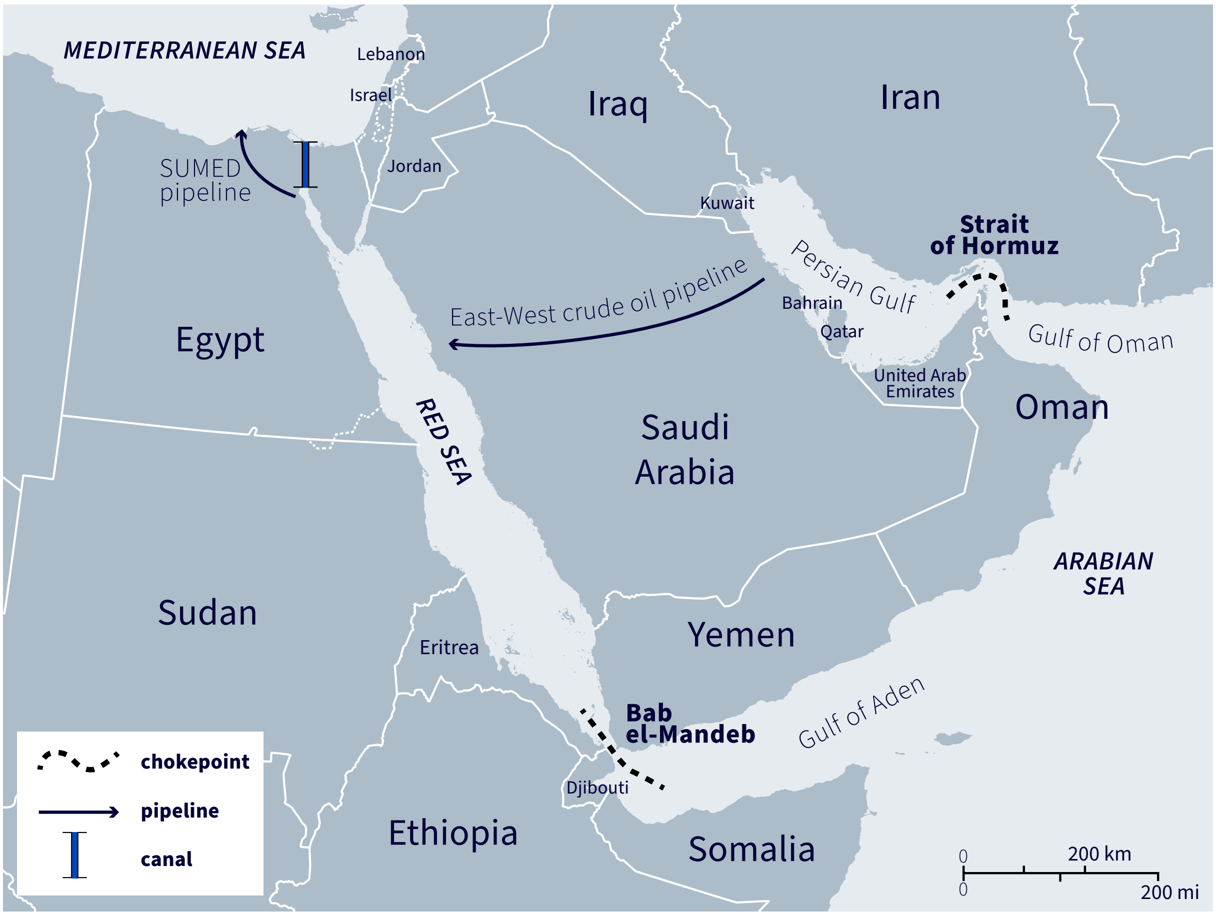
Geopolitics

> "…there are known knowns; there are things we know we know. We also know there are known unknowns; that is to say, we know there are some things we do not know. But there are also unknown unknowns—the ones we don't know we don't know."

These are the words of former US Secretary of Defence Donald Rumsfeld at a press conference in 2002 in response to a question about weapons of mass destruction in Iraq. We feel that sums up geopolitical risk very well. There are likely to be plenty of unknown unknowns in addition to the known unknowns and known knowns, which makes predicting geopolitical outcomes near impossible. However, as we have observed in the past three years, geopolitical risks are a very important driver of commodity prices as they can provide supply (and potentially demand) shocks.

A geopolitical risk that has flared up in recent months is the widening of the conflict in the Middle East, beyond Israel and Gaza. With Houthi rebels attacking ships in the Red Sea and counterattacks by the US and UK, Iran firing missiles at Pakistan (and counterattacks) and skirmishes on the Israel-Lebanese border with Iranian-funded Hezbollah, to name a few, the region appears to have become a lot riskier. The region is very important for the transit of many goods, especially the oil and hydrocarbons produced in the area (Figure 5).

Figure 5: Arabian Peninsula maritime choke points



Data source: U.S. Energy Information Administration

More than half of the world's seaborne oil moves via key choke points in the Middle East—through a combination of the Strait of Hormuz in the Persian Gulf, the Suez Canal and SUMED pipeline and the Bab el-Mandeb Strait in the Red Sea (Figure 6). If these routes were closed to oil tanker movement, that could present a sizeable shock to oil supply and, hence, price. While some tankers have halted transit through the region,[9]

More than half of the world's seaborne oil moves via key choke points in the Middle East.

9 For example, BP and Shell have announced a suspension of shipments there.

vessel tracking by Reuters indicates that by December 2023, volumes had not fallen by a lot, but the risk is that the longer the conflict, the more diversions we will see.

Figure 6: Oil and LNG flows through choke points

	2018	2019	2020	2021	2022	H1 2023
Oil flow through Strait of Hormuz	21.3	19.9	18.3	18.8	20.8	20.5
Oil flows through Suez Canal and SUMED pipeline	6.4	6.2	5.3	5.1	7.2	9.2
Oil flows through Bab el-Mandeb Strait	6.1	5.9	5	4.9	7.1	8.8
World maritime oil trade	77.4	77.1	71.9	73.2	75.2	76.3
LNG flow through Strait of Hormuz	10.3	10.6	10.4	10.6	10.9	10.8
LNG flow through Suez Canal	3.3	4.1	3.7	4.5	4.5	4.1
LNG flow through Bab el-Mandeb Strait	3.1	3.9	3.7	4.5	4.5	4.1

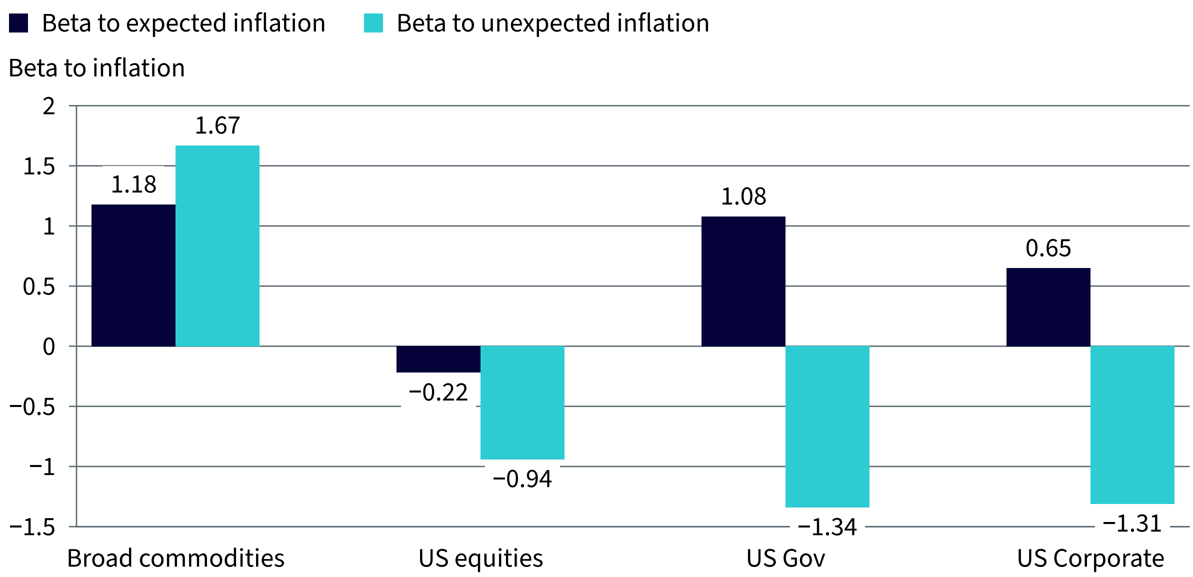
Source: EIA analysis based on Vortexa tanker tracking, December 2023. LNG = liquefied natural gas. Oil flows measured in millions of barrels per day, and LNG measured in billion cubic feet per day. World maritime oil trade excludes intra-country volumes except those volumes that transit the Strait of Hormuz. **Historical performance is not an indication of future performance and any investments may go down in value.**

Shipments of other goods are also affected. An estimated 12% of global trade passes through the Red Sea every year, but many shipping firms have begun to avoid the area altogether. Hundreds of giant container ships, some of them more than 300 metres (984 feet) long, are now choosing a lengthy detour around the continent of Africa instead of heading up the Red Sea and through the Suez Canal on voyages from Asia to Europe. That adds around 3,500 nautical miles (4,000 miles/6,500 kilometres) and 10–12 days sailing time to each trip. This requires extra fuel (an additional US$1 million/£790,000's worth, according to some estimates), possibly finding alternative ports of call, adjustments to delivery timetables and rising costs.

An estimated 12% of global trade passes through the Red Sea every year.

The price of raw materials that pass through the region may see an increase. We may find that commodities will prove to be the best hedge against surprise inflation, as we have observed historically. While several asset classes are good hedges for 'expected inflation', commodities are in a class of their own as a hedge against 'unexpected inflation' (Figure 7).

Figure 7: Beta to inflation



Sources: WisdomTree, Bloomberg, S&P. From January 1960 to June 2023 (Broad commodities and US equities), and January 1973 to June 2023 (US Gov and US Corporate). Calculations are based on monthly returns in USD. We define 'expected inflation' as the T-bill rate (which should be equal to inflation over the long term) and 'unexpected inflation' as the actual inflation rate less the T-bill rate.
Historical performance is not an indication of future performance and any investments may go down in value.

We acknowledge that the problems in the Red Sea complicate the job of central banks. As a source of inflation that they have no influence over, central banks could just choose to move ahead with easing and 'look through' what could be a transitory driver. However, after having left rates too low for too long in 2021 and 2022, they could be averse to looking too cavalier on this issue and could be worried about inflation expectations remaining too high as a result of the shock. Delaying the rate easing would naturally delay the recovery in commodity demand. However, the prices of commodities facing a supply disruption would rise.

In other sections of our outlooks, we have commented on the extraordinarily large number of elections taking place this year. Shock results could drive the price of geopolitically sensitive commodities. Gold often moves higher when the unexpected occurs, but that is not always the case. Take the 2016 US presidential election, for example. President Trump was not leading in the opinion polls yet won the election. The gold price fell despite the shock result. In hindsight, that could be because of the perception that Trump had more budgetary restraint than Clinton (his opponent).

Energy transition

Our long-term outlook for commodities is conditioned on an energy transition taking place: the migration away from fossil fuels to a greater reliance on renewables in an effort to reduce greenhouse gases.

After strong momentum behind the energy transition in 2021 and 2022, investor interest began to fray in 2023. 2022 marked a high-water mark, given the sheer scale of the US Inflation Reduction Act (IRA) that was signed into law. (Despite its name, the act was a piece of legislation designed to spur investment in green technology.) However, in 2023, the European Union adopted its Fit for 55 legislation (aimed to reduce greenhouse gas emissions by 55% by 2030 relative to 1990 levels). It is also on the cusp of signing the Critical Raw Materials Act (CRMA) into law. The CRMA is similar to the US IRA—providing tax credits to those onshoring the supply chain of electric vehicles, wind turbines and other green goods (but on a smaller scale).

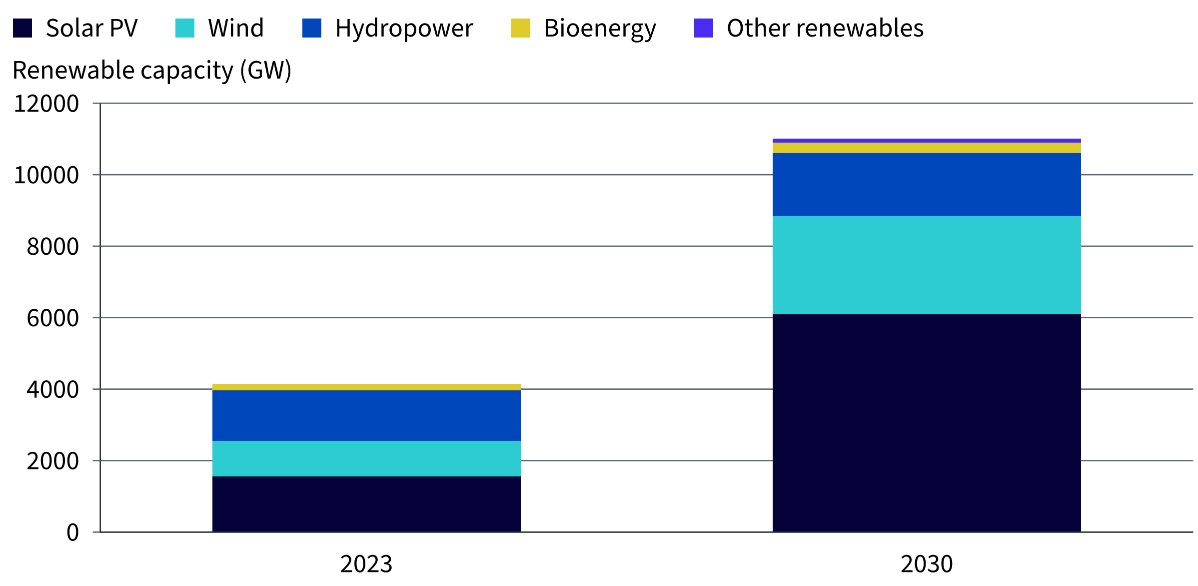
The COP28 UN Climate Change Conference in December 2023 concluded with a roadmap for ‘transitioning away from fossil fuels’—a first for a UN climate conference. That could potentially galvanise the energy transition once again. Although the extended discussions failed to agree on a ‘phase out’, the avoidance of a stalemate allows planning and resources to be devoted to the ‘phase down’ strategy. At COP28, more than 130 national governments, including the European Union, agreed to work together to triple the world’s installed renewable energy capacity to at least 11,000 gigawatts by 2030. That would be in line with the International Energy Agency’s (IEA) Net Zero Emissions by 2050 scenario (if coupled with a doubling of the annual rate of energy efficiency improvements every year to 2030), as shown in Figure 8.

On this track, wind and solar together will generate more electricity than hydropower in 2024. By 2025, renewables will surpass coal to become the largest source of electricity generation.

Renewable energy production is significantly more metal-intense than non-renewable energy. Combined with the expectation that electric vehicles will constitute a larger share of transportation and the metal intensity of electric vehicles being higher than their internal combustion counterparts, we expect base metal demand to keep growing.

At COP28, more than 130 national governments including the EU agreed to triple the world’s installed renewable energy capacity.

Figure 8: A tripling of capacity will put the world on track for a net zero scenario



Sources: WisdomTree, International Energy Agency Renewables 2023, January 2024. 2030 forecasts refer to a net zero scenario higher than its base case forecasts. **Forecasts are not an indicator of future performance and any investments are subject to risks and uncertainties.**

Conclusion

After a challenging 2023, commodities look poised for a breakout as rate cuts come to the fore. The late December 2023 rally provides a glimpse of what could happen when the cuts are delivered.

While the largest consumer of commodities (China) remains in a tough spot in terms of its economy, we recognise that its demand for commodities remains resilient as it modifies its 'business model'. That may mean some commodities will do better than others. We believe China will continue to stimulate, and its ability to do so may improve as other countries around the world loosen their monetary policy (as the country is worried about currency depreciation).

Geopolitical risks are driving raw material prices higher, and commodities could prove to be the best hedge against the inflationary pressures this poses. While central banks could use this as an excuse to hold off rate cuts (thus hurting cyclical demand), we believe the supply shock will still be net price positive.

While investor attention on the energy transition could be fading, policymakers are intensifying their resolve. Breakthrough agreements at COP28 are a case in point. Our long-term outlook for commodities is conditioned on the energy transition, and we believe that the potential for medium-to-long-term supply deficits in metals will generate a commodity supercycle.

2.

Equity Outlook: Navigating equities in the last mile of inflation

In this section

As the world enters 2024 navigating the complexities of geopolitical tensions and economic uncertainties, monetary policy continues to dominate sentiment and drive equity market performance. Inflation rates are decelerating across the globe, falling faster than policymakers expected. Equity markets remain impatient. In lockstep, investor expectations for rate cuts in 2024 appear to have diverged from central bank communication, making for a challenging rate environment. Equity markets are shrugging their shoulders at earnings and appear ready to rally on declining yields.

Investor expectations for rate cuts in 2024 appear to have diverged from central bank communication, this makes for a challenging rate environment.

Figure 9: Earnings per share calendar year growth rate

Region	Price to Earnings	Growth Rate Earnings Per Share		
		2023	2024	2025
World	16.5	-0.3%	10.5%	11.6%
US	19.8	0.7%	11.4%	12.7%
Europe ex-UK	13.5	9.2%	6.2%	9.5%
UK	11	-7.4%	3.3%	7.9%
Japan	14	3.7%	9.1%	7.8%
Asia Pacific ex-Japan	12.6	-7.5%	20.8%	16.4%
Latin America	9	-16.9%	8.8%	6.5%
Emerging Markets	12.2	8.1%	4.3%	8.8%
World ex-US	12.9	-1.1%	9.5%	10.4%

Source: MSCI, FactSet, WisdomTree, as of 31/12/2023. **Forecasts are not an indicator of future performance and any investments are subject to risks and uncertainties.**

Earnings expectations for the US remain high

Investor expectations for earnings in the US are approximately 11.4% over 2024.[10] This could be achieved if economic data and the consumer stay strong. But we know growth in the US economy is set to slow, with real GDP forecasted to slow to 2.1% from about 2.5% in 2023.[11] At the same time, lower inflation, improving real wage growth and declining rates could support a late-cycle recovery.

Monetary easing to reduce strain on the economy

Excess savings accumulated during the pandemic remain large, but the remaining amount appears to belong to the top 20% of the income distribution, who are less likely to spend. This is why the strong consumption trends of 2023 will see a gradual loss of momentum in 2024. Falling mortgage rates are likely to boost housing sales but are unlikely to salvage the economy anytime soon. US corporates face a potential squeeze on gross margins as inflation falls and the reopening boom in services consumption fades. Corporates in the tech sector remain cash rich, while small businesses are paying more than 9% for working capital.

The Federal Reserve (Fed) has pencilled in three quarter-point interest rate cuts in 2024, yet investors are pricing in around six quarter-point cuts. Investors expect both rate cuts and strong earnings growth. However, only one of the two will likely prevail. If rate cuts fall short, it will result in higher real rates, which could put unnecessary strain on the economy.

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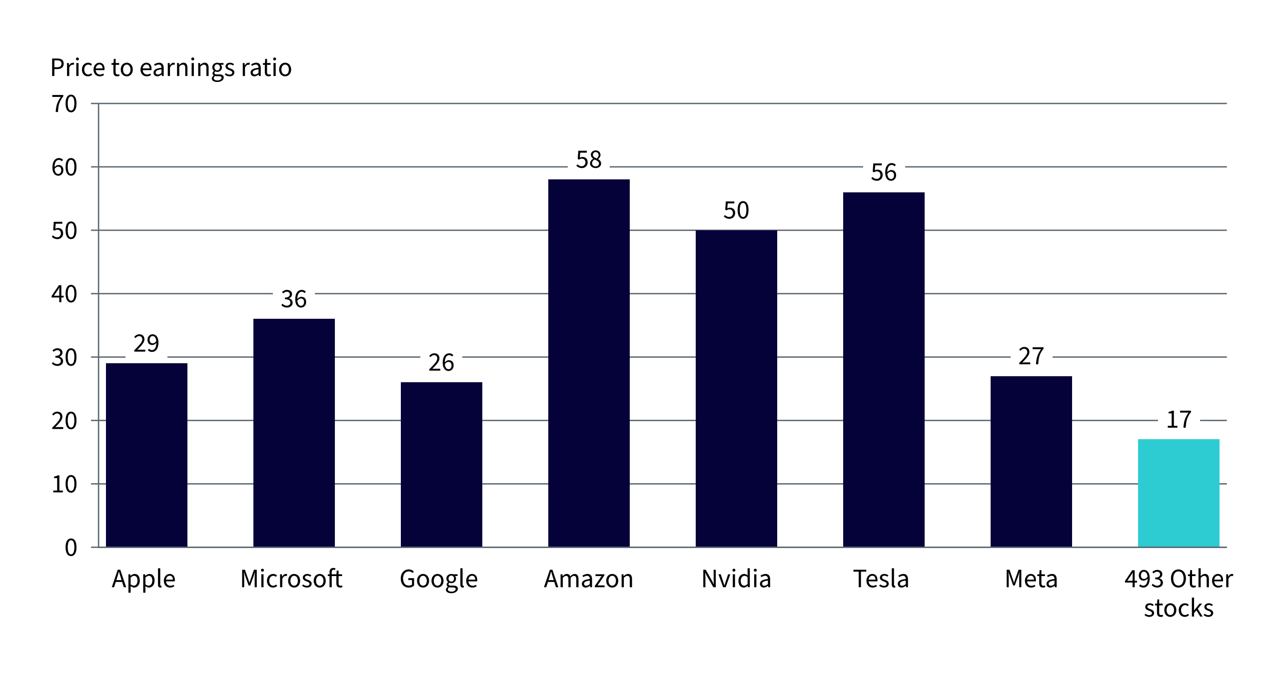
The narrow bull market

There are valuation excesses in certain leading US companies within the technology sector; however, the valuations of the remaining broader US market are not stretched. Each of the stocks within the Magnificent 7 has higher multiples than the median of 493 remaining stocks in the market (see Figure 10). 2023 was the narrowest year in equity markets since the late 1980s, with returns concentrated in the hands of a few tech titans. Amidst a weaker economic backdrop, we expect the leadership to continue to be narrow, with the large tech stocks' track record of higher profitability and strong balance sheets performing well.

10 MSCI, Factset, WisdomTree as of 31 December 2023.

11 Bloomberg as of 31 January 2024.

Figure 10: Comparison of valuations of Magnificent 7 vs. the remaining market



Sources: Bloomberg, WisdomTree, as of 24/01/2024. **Historical performance is not an indication of future performance and any investments may go down in value.**

However, investors should not simply load up on the Magnificent 7. Value stocks deserve attention. Investors have been underweight in value for several years, yet value stocks are known to outperform in softer and harder landing environments, rendering them important to consider for a balanced US equity allocation.

Value stocks are known to outperform in softer and harder landing environments, rendering them important to consider for a balanced US equity allocation.

Eurozone – looking for the rebound

European equities returned 22% last year.[12] Unlike the US, in Europe there has been more breadth in equity market performance. Most of the rally played out at the start of the year over the exuberance from China's reopening, while, over the course of the year, Europe's equity market performance slowed on account of the weakness in the German economy. European inflation trended within a 3% range above the US, owing to the lingering effects on food and energy prices in the aftermath of the Russia-Ukraine war. Europeans have been hit harder by the recent rate hikes owing to the higher proportion of mortgages and long-term loans with floating rates.

Despite facing the consequence of higher rates, excess household savings currently amount to 14% of annual incomes, up from 11% two years ago.[13] Real wages were falling; now they are growing at a pace of 3%, marking the fastest pace in three decades and giving consumers' ample spending power. While consumer confidence remains weak, it is starting to improve from a low base. There are initial signs that the worst might be over and momentum in the economy is beginning to stabilise. Growth should pick up modestly in 2024 as falling inflation boosts real incomes, global demand gathers steam, industrial de-stocking ends and monetary easing comes to fruition.

> Real wages in Europe were falling; now they are growing at a pace of 3%, marking the fastest pace in 3 decades, proving consumers' ample spending power.

The quality and growth factors are poised to benefit Eurozone equities

Amidst the current backdrop, equities that stand to outperform are long duration—quality stocks with a growth tilt. The European market has been transitioning to a more growth-oriented bias. While financials is the largest sector within the market, its dominance is waning. The cyclical energy and materials sectors have been in retreat, while health care, technology and consumer discretionary have been growing substantially. European equities currently trade at the lowest valuation (that is, a price-to-earnings (P/E) ratio of 13.5x) compared to developed market equities[14] alongside a higher dividend yield of 2.65%. Rising wages have hurt the profitability

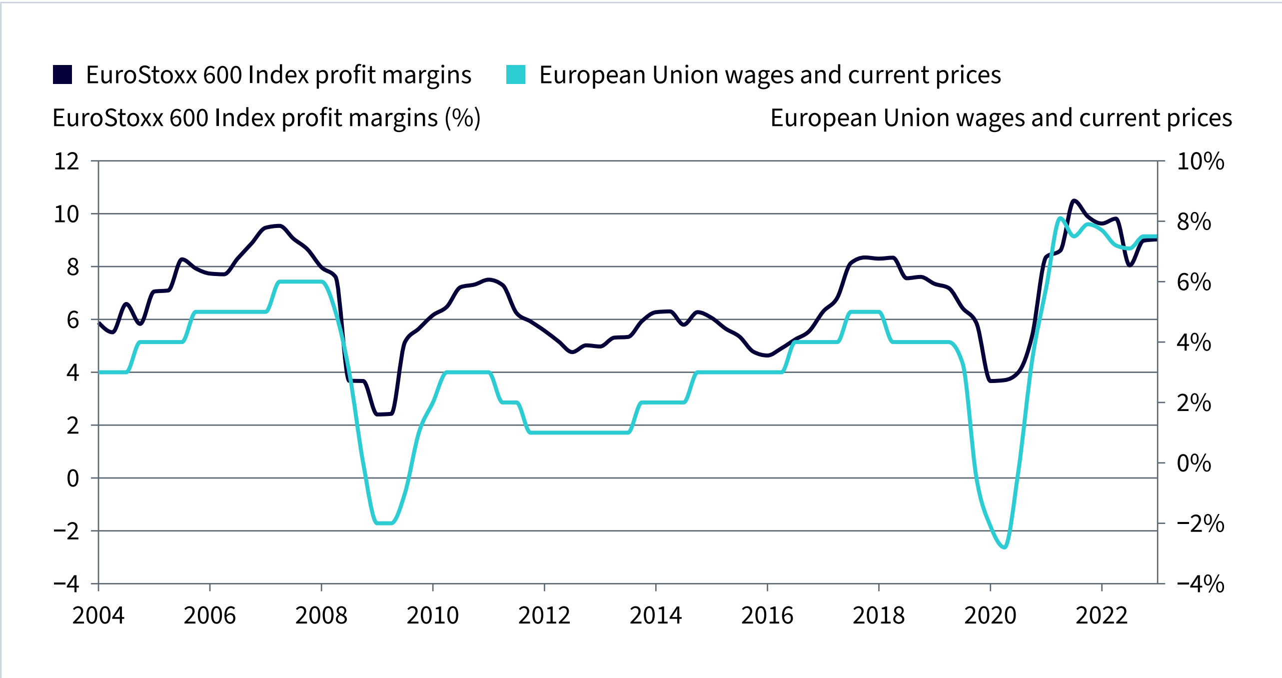
12 Performance of EuroStoxx 600 from 31 December 2022 to 29 December 2023.

13 FactSet, WisdomTree, as of 29 December 2023.

14 Bloomberg, WisdomTree, as of 24 January 2024.

of European corporates. As wage growth begins to peak and rate cuts materialise, corporate profitability should regain momentum.

Figure 11: Rising wages impact corporate margins



Sources: Bloomberg, WisdomTree, as of 30/09/2023. **Historical performance is not an indication of future performance and any investments may go down in value.**

Firepower abounds for Japanese equities

Japanese equities ended 2023 on a high note. Japan's post-pandemic reopening, accommodative monetary stance, high equity risk premiums and corporate governance reforms were important tailwinds for Japanese equities in 2023. Over the past 12 months, Japan has benefitted from global investor inflows that are diversifying their investments in Asia amidst geopolitical tensions and sluggish growth, causing a rotation from China to Japan.

Demographics driving wage inflation

The end of deflation is a catalyst unique to Japan. Manufacturers plan to increase capex in fiscal 2024 by 14.6%.[15] Higher cash holdings for Japanese corporates alongside a labour shortage are important incentives to invest in automation over the long run. Japan is at a demographic crossroads. The employment conditions diffusion index (DI) highlights Japan's labour shortage to be the worst in 30 years.[16] The spring wage growth negotiations in 2023 drove wages up by 3.6%[17] (the highest level in 30 years), and 2024 could see a further rise. To compensate, companies will need to invest in improving productivity.

> Japan is at a demographic crossroad, driving wages higher.

Japan's savings-to-investment drive

Japan is transforming into an asset management-led nation under the leadership of Prime Minister Kishida. In an effort to unlock nearly US$14 trillion of household financial assets tied up in cash deposits, Japanese leaders are embarking upon reforms like the introduction of 401(k)s in the US back in the 1970s. This is being done with the introduction of a revised Nippon Individual Savings Account ('NISA')

> Japan is transforming into an asset management-led nation under the leadership of Prime Minister Kishida.

15 Bank of Japan, December Tankan Survey, 13 December 2023.
16 Bloomberg, as of 31 December 2023.
17 Japanese Trade Union Confederation (Rengo).

programme offering tax benefits and portability. Starting in 2024, the maximum investment amounts allowed under NISA have been increased, and investors can enjoy the system's tax benefits permanently.

Figure 12: NISA – New tax breaks to encourage retail equity purchases

New NISA system (from 2024)	Tsumitate	Long-term investment
Tax exemption period	Unlimited (new)	
Annual Limit	¥1.2mn (tripled)	¥2.4mn (doubled)
Total Investment Limit	¥18mn (new)	
Eligible Investments	Mutual funds suitable for long-term investments	Stocks and mutual funds
Eligibility	Individuals 18 or older (junior NISA abolished)	
Launch	Jan '24	

Current NISA system	Tsumitate	Long-term investment
Tax exemption period	20yrs	5yrs
Annual Limit	¥0.4mn	¥1.2mn
Total Investment Limit	¥8mn	¥6mn
Eligible Investments	Mutual funds suitable for long-term investments	Stocks and mutual funds
Eligibility	Adults + Junior NISA for under 20yrs	

Sources: Japan Financial Services Agency (FSA), WisdomTree, as of 31/12/2023. The Tsumitate NISA is a tax-efficient investment account designed for monthly investments into Japanese-domiciled mutual funds.

Corporate Japan's ongoing reform initiatives benefit investors

Corporate Japan's ongoing reform initiatives, which include the Tokyo Stock Exchange's (TSE) March 2023 announcement dubbed the 'Price to Book (PBR) Guideline', had a strong impact on Japanese corporates. This was evident from the immediate rise in payout ratios (dividends and buybacks) following the announcements. So far, only 39% of companies have disclosed corporate governance reports on measures for realising management focussed on the cost of capital and share price, and 9% are under consideration, while 51% of companies have not provided disclosures.[18] This provides plenty of room for companies yet to provide disclosure to surprise on the upside with revised capital return announcements in 2024.

We continue to favour high dividend value-oriented stocks to access Japan as they stand to benefit from higher earnings growth, corporate reforms and the weaker yen. The auto sector, which is a major portion of the stock market continues to recover, with international profits aided by a weaker yen and the UAW strikes pushing up costs and lowering production for its Detroit competitors. The recovery in global technology sector demand should also support Japan's exports.

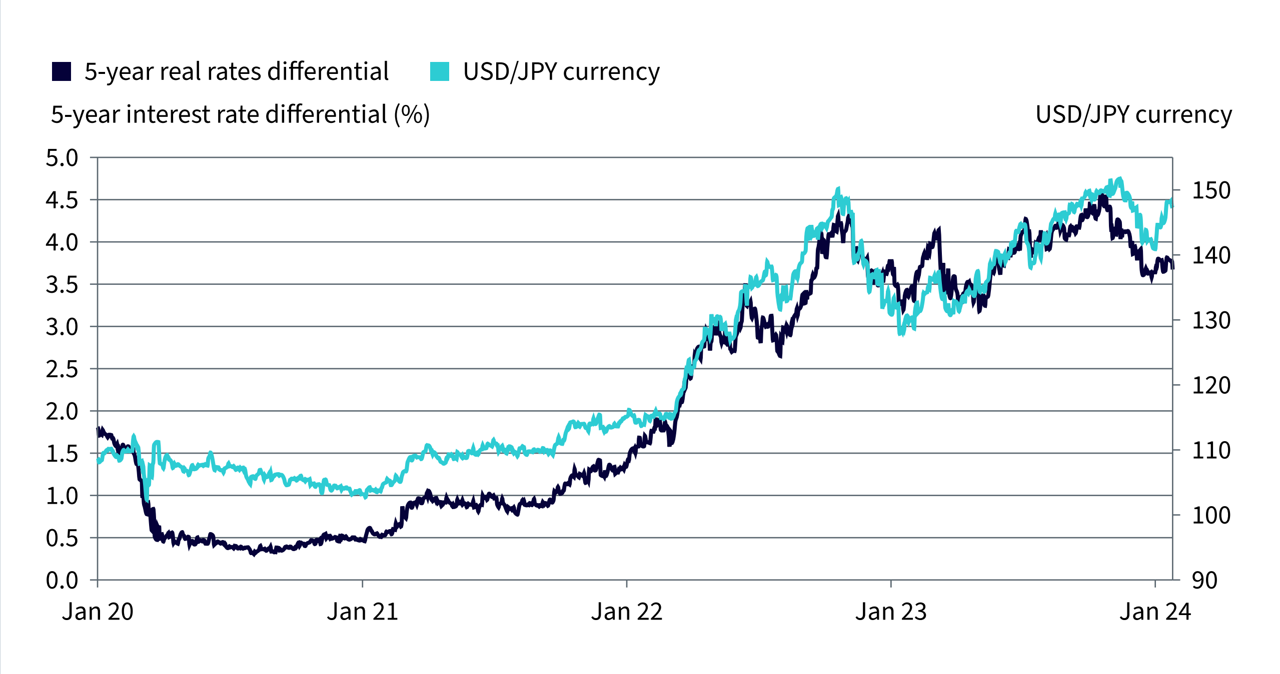
Monetary policy likely to stay on hold until H2 2024

An important concern in 2024 remains the path of monetary policy by the Bank of Japan (BOJ), its impact on the yen and the repercussions for Japanese equities. Governor Ueda told Prime Minister Kishida that the bank would monitor the strength of domestic demand, taking into consideration whether higher wages push service prices higher and the 2024 wage outlook. Recent inflation data continues to slow as the prior high import costs work through the system amidst soft domestic demand. We expect the BOJ to exit negative interest rates in H2 2024, taking into consideration the spring wage negotiations. However, softer economic data could delay policy normalisation.

> The Bank of Japan is likely to exit negative interest rates in H2 2024, taking into consideration the spring wage negotiations, however softer economic data could delay policy normalisation.

18 Company reports, WisdomTree, as of 31 December 2023.

Figure 13: Real interest rate differentials vs. USD/JPY



Sources: Bloomberg, WisdomTree, as of 29/12/2023. **Historical performance is not an indication of future performance and any investments may go down in value.**

The yen may appreciate in 2024 on narrowing US-Japan interest rate spreads. A stronger yen could renew concerns over a possible negative effect on Japanese corporate earnings. However, a strong yen may not be too much of a hindrance to Japanese equities, with the market set on the theme of further vitality in the economy on rising wages and improving capex.

The changing landscape of emerging markets

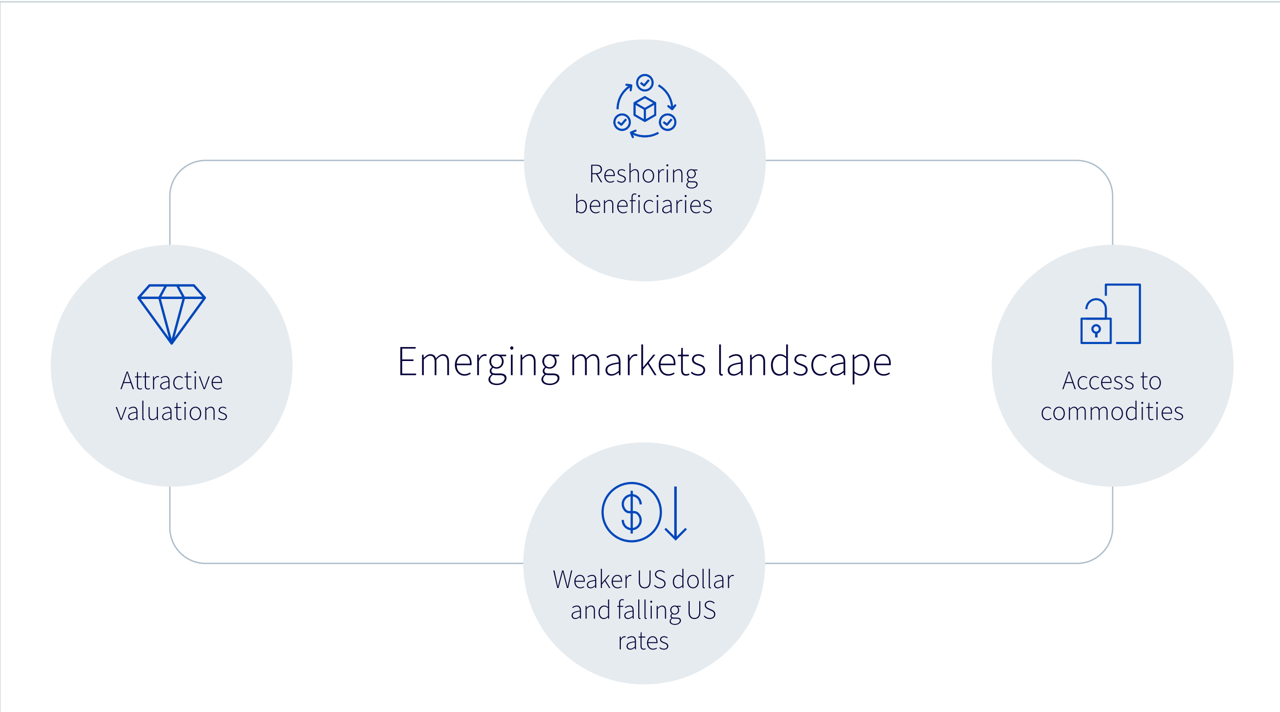
There is a traditional view among investors that markets reflect the real world. For emerging markets (EM), it is certainly shaping up to be the case. The old view of EM as a tactical investment, shunned during times of economic uncertainty, fails to adapt to how significantly the EM landscape has changed over the decade.

> There is a traditional view among investors that markets reflect the real world. For Emerging Markets it is certainly shaping up to be the case.

Beneficiaries from nearshoring

Since the COVID-19 pandemic, the re-wiring of globalisation—often termed 're-shoring'—has changed the landscape of manufacturing production, thereby benefitting the EM landscape. Rising geopolitical tensions and disrupted supply chains have led companies to move their supply chains closer to home. Mexico, owing to its proximity to the US, has also benefitted. India, owing to its large pool of working-age population alongside lower labour costs, has been an important beneficiary of this long-term trend. Vietnam, alongside its regional peers Thailand and Indonesia, also features, owing to lower wage costs and demographic support.

Figure 14: The emerging markets landscape



Source: WisdomTree, as of 21/01/2024.

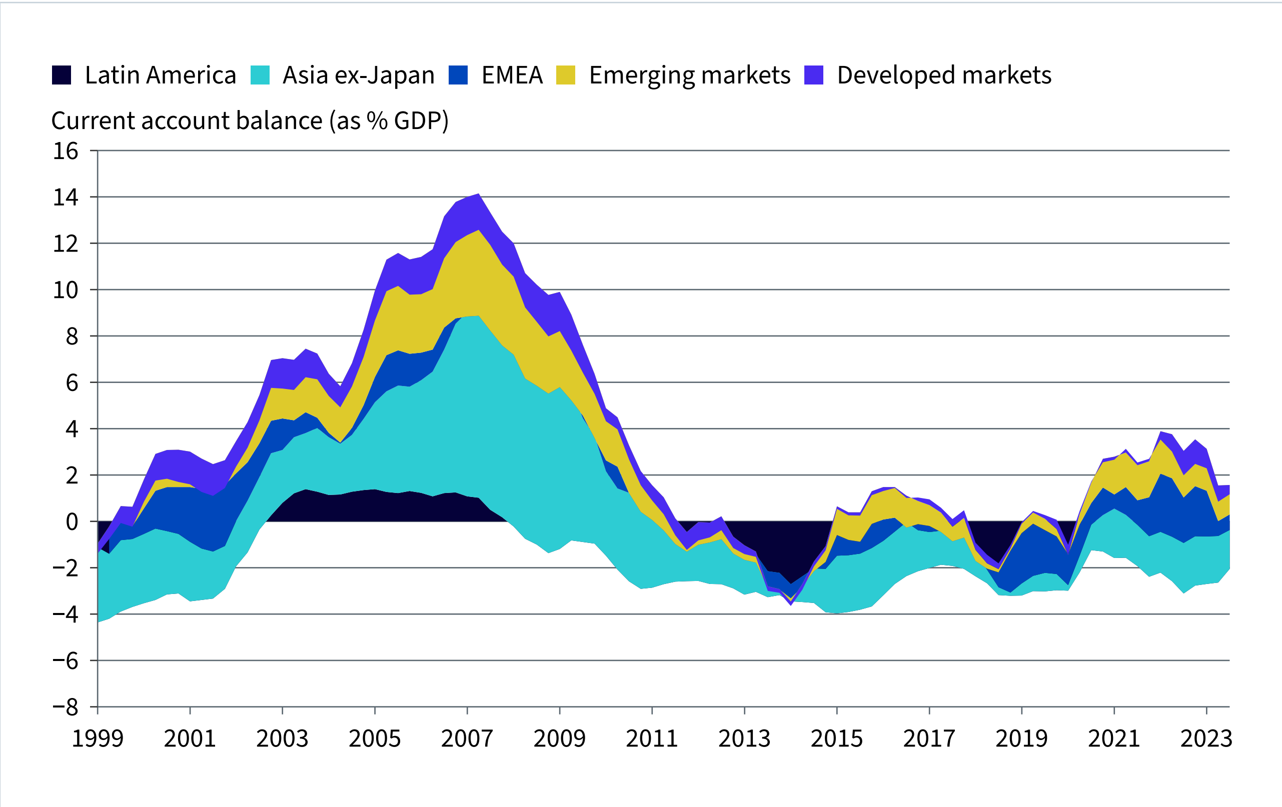
Decarbonisation is expected to be an important driver of demand for commodities. EMs such as South Africa, Mexico, Chile and Brazil stand to gain from the abundance of commodity supply. Following years of underinvestment in the commodity complex, the commitment to decarbonise the global economy is likely to be a boon for demand, as green technologies are commodity-intensive.

Strong fiscal position and inflation control

The fiscal position of EM economies has strengthened since 2013, with a current account balance above developed markets (DMs), less dollar-denominated debt and higher foreign exchange reserves. EM central banks have remained disciplined this cycle, staying ahead of the curve in raising rates. As inflation abates, rates are expected to decline, serving as a tailwind for EM consumers.

As inflation abates, rates are expected to decline, serving as a tailwind for EM consumers.

Figure 15: The balance of payments for emerging markets remains above developed markets



Sources: Bloomberg, WisdomTree, as of 29/12/2023. **Historical performance is not an indication of future performance and any investments may go down in value.**

Impact of biggest election year in history

While the US election will take centre stage, EM investors need to brace themselves for the biggest election year in history. More than 50 countries will hold elections in 2024, representing 40% of the MSCI Emerging Markets Index. Following this month's election in Taiwan, there are upcoming elections in India, Indonesia, South Africa and Mexico. March brings the presidential election in Russia; a Putin victory is the most likely outcome. The Indian election in April is expected to see the incumbent Bharatiya Janata Party (BJP) return to power under the leadership of incumbent Prime Minister Narendra Modi. H1 2024 should see a presidential election in Venezuela; we expect to see a victory for the governing coalition (probably the incumbent Nicolás Maduro), as the leading opposition candidate, María Corina Machado, was barred from politics last year. The US elections at the end of the year will have important implications for the relationship between China and Taiwan, the Russia-Ukraine war, the war in Gaza and the Middle East conflict.

While the US election will take centre stage, EM investors need to brace themselves for the biggest election year in history.

Mind the gap

Emerging market profit margins are near cyclical lows and have plenty of room to rebound. P/E valuations for EM equities remain below their long-term averages, and the P/E gap to global equities is close to its highest level in 20 years.[19] On their own, valuations are a terrible market timing tool, as they fail to tell you when the likelihood of reversal to the mean might be, although there is a strong link between valuations and long-term returns. We expect a recovery in earnings, a weaker US dollar and monetary easing to support performance of EM equities in 2024. Dividend, quality and value were the best performing factors across EM in 2024, our preference within EM remains tilted towards the dividend and value factor.

19 Bloomberg, WisdomTree, as of 31 December 2023.

Conclusion

The long-term outlook for equity returns remains attractive. Yet, after more than a decade, the implied earnings yield of global equities is facing stiff competition from cash and fixed income yields. However, now that inflation is settling down and expectations for monetary easing are taking shape, equities will enable investors to generate real returns above inflation to meet their long-term goals. Cash, unfortunately, hasn't beaten inflation for any of the past 12 years. Amidst rising geopolitical uncertainty, ambiguity around the timing of rate cuts and economic uncertainty, investors should look to take a balanced approach between valuation and earnings risk.

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3.
Thematic Outlook: Riding the crests and weathering the troughs

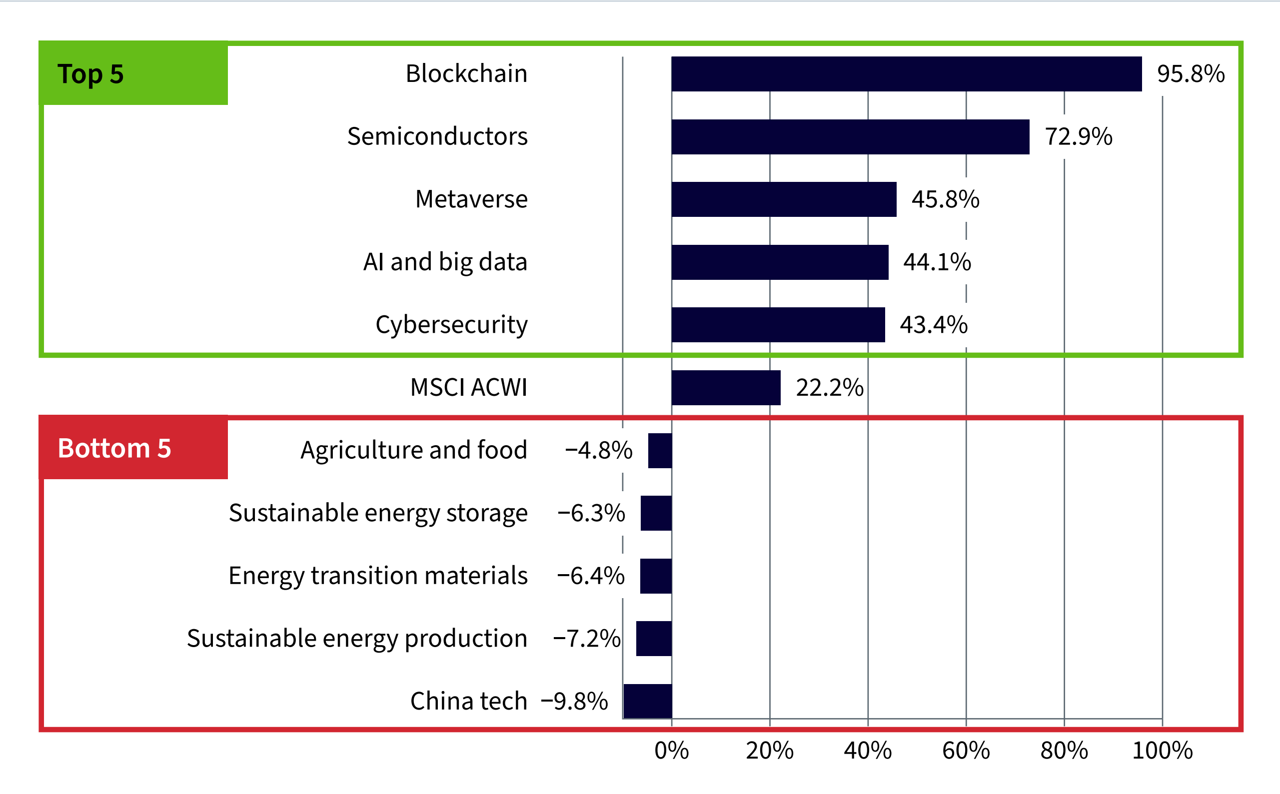
In this section

Tesla introduced its first electric vehicle, the sports car Roadster, in 2008. Its more popular Model S sedan was introduced in 2012. But even though there were early adopters, for many years, the share price didn't necessarily suggest the company had unveiled the next big thing. Until, perhaps, 2020, when technological adoption, regulatory support, changing consumer preferences and macroeconomic forces all came together to put Tesla's stock in high gear. Still, the company could not avoid a major pullback in 2022 before things picked up again in 2023.

Tesla's story highlights how thematic investing can be challenging yet exciting in equal measure. Innovation that can change the world is hard for markets to price in. Thus, themes go through cycles depending on how their impact is perceived at different points in time. Ultimately, the hope is that the investment endures if the underlying technology delivers on its promise, like Tesla's.

This is precisely why, at WisdomTree, we were not surprised by how divergent the performance was across themes in 2023. And we will not be surprised if this continues to be the case in 2024.

Figure 16: Top five and bottom five themes by performance in 2023



Sources: WisdomTree, Morningstar, Bloomberg. All data as of 31/12/2023 and based on WisdomTree's internal classification of thematic funds. Performance is based on monthly returns from Bloomberg and Morningstar. More information on the WisdomTree Thematic classification can be found in the Appendix. **Historical performance is not an indication of future performance and any investments may go down in value.**

Looking at 2023, it appears that themes can be bucketed into two categories: those that made strong gains and entered 2024 with momentum and those that were unloved by markets. For investors who believe in the underlying technologies from either category, 2024 will be about navigating two paradigms: riding the crests—sticking with the themes that have momentum—and weathering the troughs—holding the underperformers or identifying entry points.

In this outlook, we will briefly outline the themes that belong in each category, along with the main narratives driving them. In the latter section, where we highlight unloved themes, we will spotlight a megatrend that has received comparatively less coverage but holds immense potential going forward: biotechnology.

Riding the crests

Some themes defied the gravitational pull of interest rates in 2023. Excitement surrounding technological innovation tends to have that magical effect. In this section, we highlight three themes that entered 2024 with positive momentum.

Artificial intelligence

At CES 2024, the world's leading electronics trade fair held from 9 January to 12 January, the integration of artificial intelligence (AI) into all sorts of gadgets was a central theme. The automotive industry stands out as a notable example. Leading manufacturers, including Volkswagen, Mercedez Benz and BMW, all unveiled how digital assistants powered by generative AI will become mainstream in car infotainment systems.[20] Voice commands to a generative AI-powered assistant will not only enhance the user experience but also improve safety, with the assistant being able to 'answer' complex questions about the vehicle.

The automotive sector was one of the unexpected bright spots in 2023, with markets beginning to recognise how it stands to benefit from the AI revolution.

20 C2A security, January 2024.

The automotive sector was one of the unexpected bright spots in 2023, with markets beginning to recognise how it stands to benefit from the AI revolution.

2024 could be a year when we see more use cases of AI across industries, pushing the revolution that started in 2023 into its next phase.

> "By 2030, we expect $74.5 billion (€68.5 billion) will have been invested in AI by automotive companies, the question now is, what do we do with that money, and how do we commercialise it?" – **Constantin Gall, managing partner at EY**

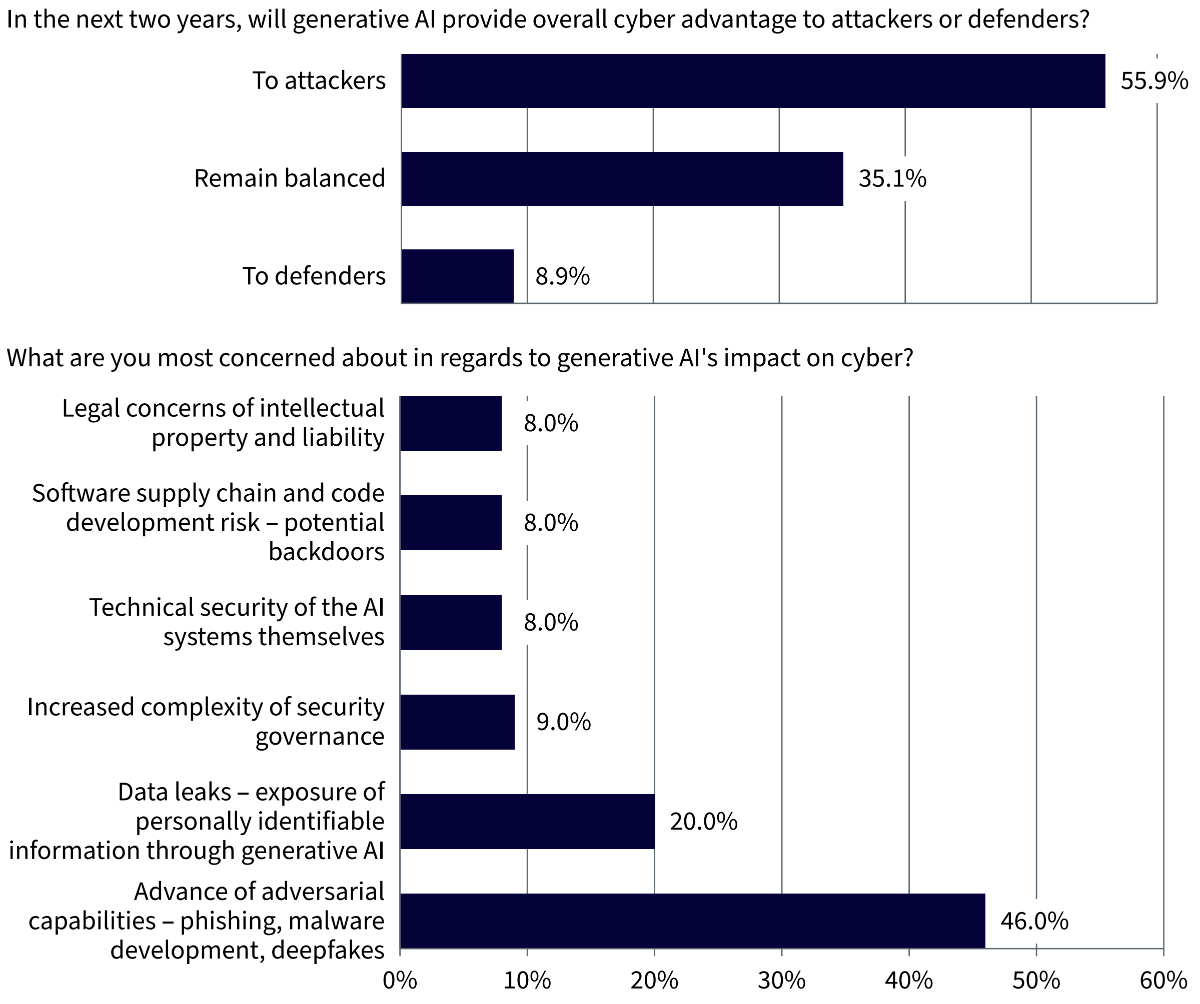
Source: Autovista, January 2024, quoting EY from CES 2024.

Cybersecurity

In its January 2024 Global Cybersecurity Outlook Report, the World Economic Forum (WEF) shared the results of a survey of 120 executives at its annual cybersecurity meeting.[21] Ninety per cent of the executives said that urgent action is required to address the inequity in cybersecurity resilience between small and large organisations, with the small ones likely to be more vulnerable. Moreover, emerging technologies are seen to exacerbate challenges related to cyber resilience.

21 World Economic Forum Global Cybersecurity Outlook 2024, https://www3.weforum.org/docs/WEF_Global_Cybersecurity_Outlook_2024.pdf

Figure 17: Emerging technologies will exacerbate longstanding challenges related to cyber resilience



Source: World Economic Forum Global Cybersecurity Outlook 2024. Based on a survey of 120 executives at the World Economic Forum's annual meeting on cybersecurity.

Cybersecurity was among the top-performing themes in 2023, with markets recognising its growing importance given the explosion in generative AI. With the ongoing proliferation of generative AI across all sorts of applications, it is hard to see cybersecurity becoming less important going forward.

Cloud computing

In their 'State of the Cloud 2023' report,[22] Bessemer Venture Partners predicts that large language models (LLMs) will transform the software as a service (SaaS) landscape. What is particularly noteworthy is their prediction that AI native cloud companies will accelerate the path to US$1 billion in revenue by 50%. This, in our view, is believable. Thanks to LLMs, people have had a taste of the ease with which they can communicate with the computer using simple language to do incredible things. Going forward, more people will demand such features in the software they use. AI native companies will naturally have an advantage, given their head start.

AI native cloud companies will accelerate the path to US$1 billion in revenue by 50%.

AI, cybersecurity and cloud computing, therefore, are a trio of themes with their fates inextricably intertwined.

Weathering the troughs

The contrasting paradigm in the world of thematics points to themes that did exactly as you would expect in a year of rising interest rates, testing the resolve of those who committed to these themes before central banks turned hawkish. For others, if monetary policy has not killed the theme completely, it has created a potential entry point.

Energy transition

According to the International Energy Agency, the world added 50% more renewable energy capacity in 2023 than in 2022, and the next five years are expected to see the fastest growth yet.[23] More policy impetus has come from COP28,[24] where leaders have agreed to triple renewable energy capacity by 2030.

22 Bessemer Venture Partners, 'State of the Cloud 2023', https://www.bvp.com/atlas/state-of-the-cloud-2023#Prediction-5-AI-Native-companies-will-accelerate-path-to-1-billion-by-50

23 International Energy Agency, January 2024.

24 United Nations Climate Change Conference in Dubai, UAE, from 30 November 2023 to 12 December 2023.

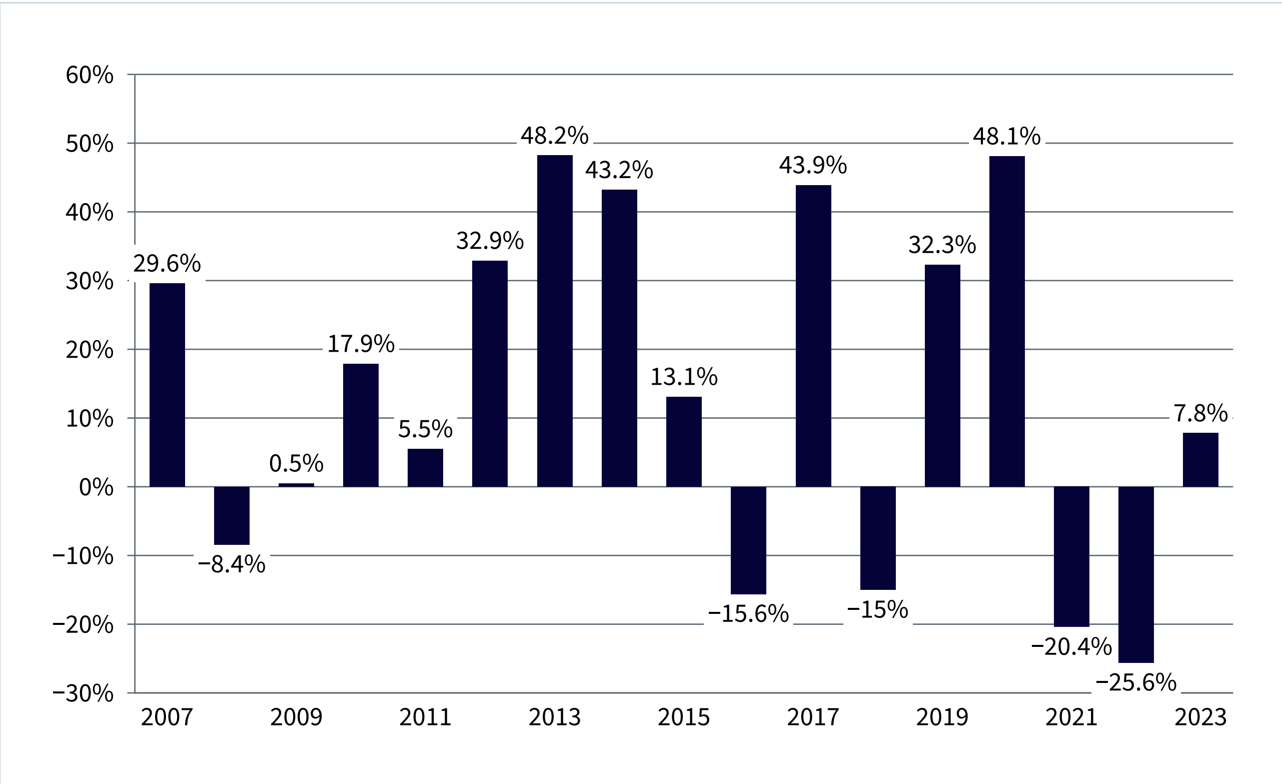
But performance for green themes in 2023 painted a colourless story. For themes like renewable energy and battery storage, this has created a stark contrast between poor market performance and strong underlying fundamentals. We expect this dynamic to attract the attention of more investors in 2024.

But among the themes that remained downtrodden in 2023 was biotechnology. We now turn to it for a deeper insight.

Biotechnology

The biotech sector nearly extended its negative streak for the third consecutive year in 2023 but rallied in December to stay above water, returning approximately 7%. After the sector posted losses of -20% and -26% in 2021 and 2022, respectively, investors might have wondered when things would turn around.

Figure 18: Calendar year returns for the S&P Biotechnology Select Industry Index (31/12/2013–24/11/2023)



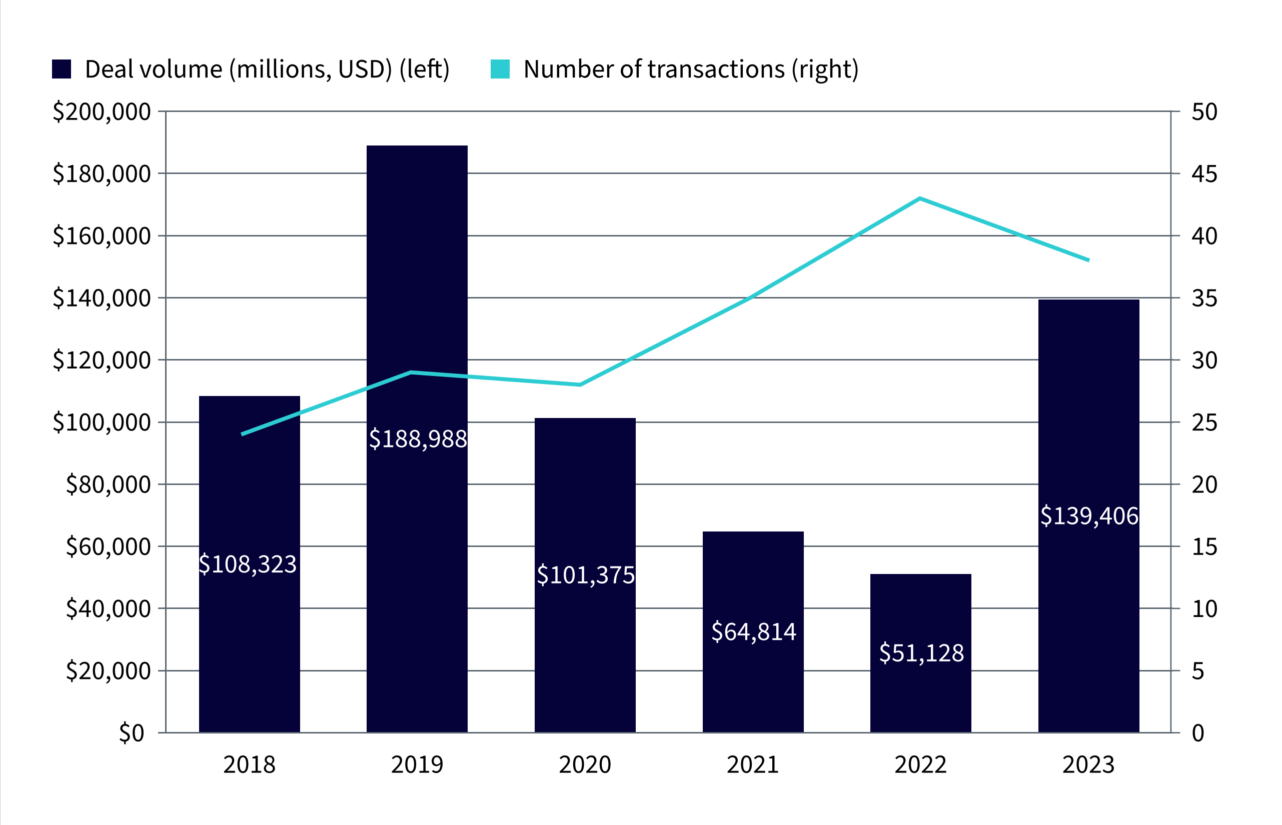
Source: S&P Global as of 31 December 2023. **Historical performance is not an indication of future performance, and any investments may go down in value.**

The recent poor performance reflects the challenges and uncertainties that biotech companies face in developing and commercialising innovative therapies, as well as the competitive pressures and regulatory hurdles that affect their growth and profitability prospects. However, despite this, there are some positive signs and opportunities for the biotech sector that may reverse the trend in 2024.

Merger and acquisition (M&A) activity is one of the first opportunities for value creation, allowing acquiring companies to access new technologies, expand their pipelines and diversify their product portfolios. For those being acquired, they may gain access to fresh capital resources and the experience, knowledge and relationships of the large conglomerates. After three years of down-trending M&A activity, 2023 broke the trend with more than US$140 billion in M&A transactions, nearly triple the 2022 total of US$51 billion. The number of transactions greater than US$1 billion in size nearly doubled from the prior year, leaving indications that firms were making up for missed opportunities.

> 2023 broke the trend with more than US$140 billion in M&A transactions

Figure 19: Biotech M&A activity: deal volume and transactions by year



Sources: WisdomTree, Biopharmadive, as of January 2024. https://www.biopharmadive.com/news/biotech-pharma-deals-merger-acquisitions-tracker/.

Several major deals took place in 2023, highlighting the continued interest and competition for biotech innovation among large pharma companies. Bristol Myers Squibb went on a US$20 billion shopping spree, buying up Karuna Therapeutics, Mirati Therapeutics and RayzeBio. For the RayzeBio acquisition, Bristol Myers Squibb paid a premium of 104% to add Rayze's targeted cancer therapies to their portfolio.[25]

Bristol Myers Squibb paid a premium of 104% to add Rayze's targeted cancer therapies to their portfolio.

25 'Bristol Myers to buy RayzeBio for $4.1 billion in targeted cancer therapy push', Reuters.com, December 2023.

This took place only a week after announcing the US$14 billion buyout of schizophrenia drug developer Karuna Therapeutics. Pfizer acquired Seagen for its antibody-drug conjugates (ADCs) technology (for cancer treatment), and AbbVie followed in similar footsteps later in the year to acquire similar technology from Immunogen.

Figure 20: Biotech and pharma top 10 M&A transactions by size, 2023

Acquirer	Acquired	Date	Deal value (billions, USD)
Pfizer	Seagen	Mar-23	43.0
Bristol Myers Squibb	Karuna Therapeutics	Dec-23	14.0
Merck & Co.	Prometheus Biosciences	Apr-23	10.8
AbbVie	ImmunoGen	Nov-23	10.1
AbbVie	Cerevel Therapeutics	Dec-23	8.7
Biogen	Reata Pharmaceuticals	Jul-23	7.3
Roche	Telavant	Oct-23	7.1
Astellas Pharma	Iveric Bio	Apr-23	5.9
Bristol Myers Squibb	Mirati Therapeutics	Oct-23	4.8
Bristol Myers Squibb	RayzeBio	Dec-23	4.1

Sources: WisdomTree, Biopharmadive, as of January 2024. https://www.biopharmadive.com/news/biotech-pharma-deals-merger-acquisitions-tracker.

These deals suggest that large biopharma companies are still interested in biotech innovation and are willing to pay a premium for promising therapies. If industry leaders are investing firm capital in such a way, are investors to follow?

Another key trend that is transforming the biotech sector is AI. AI can analyse large datasets and perform complex computations, quickly finding the most suitable solutions for various aspects of the drug discovery process. Drug development is a costly and time-consuming process with high failure rates. It is estimated that it takes more than 10 years and US$1–$2 billion to develop a drug,[26] and a drug's chance of approval is less than 10%.[27] Generative AI is one of the technologies that can streamline this process by narrowing down the possible candidates to only those with the highest probability of success.

26 'Accelerating therapeutics for opportunities in medicine: a paradigm shift in drug discovery', National Library of Medicine, 2020.

27 'Why 90% of clinical drug development fails and how to improve it?', National Library of Medicine, 2022.

If generative AI can improve the accuracy of selecting drug candidates during the preclinical phase, it could reduce the number of failed attempts in the early stages of clinical trials, saving time and money. This could lead to higher approval rates, shorter timelines, lower costs and better ROI for biotech firms choosing to leverage this technology in their workflow.

If generative AI can improve the accuracy of selecting drug candidates during the preclinical phase, it could reduce the number of failed attempts in the early stages of clinical trials, saving time and money.

Several companies have demonstrated some level of success in this arena, including Exscientia and Recursion Pharmaceuticals. Exscientia has used AI to develop a drug candidate for obsessive-compulsive disorder that is currently in clinical trials, the first AI-generated drug to reach such a stage.[28] Recursion Pharmaceuticals has developed an AI platform called RecursionOS, which leverages large language models to streamline drug development workflow.

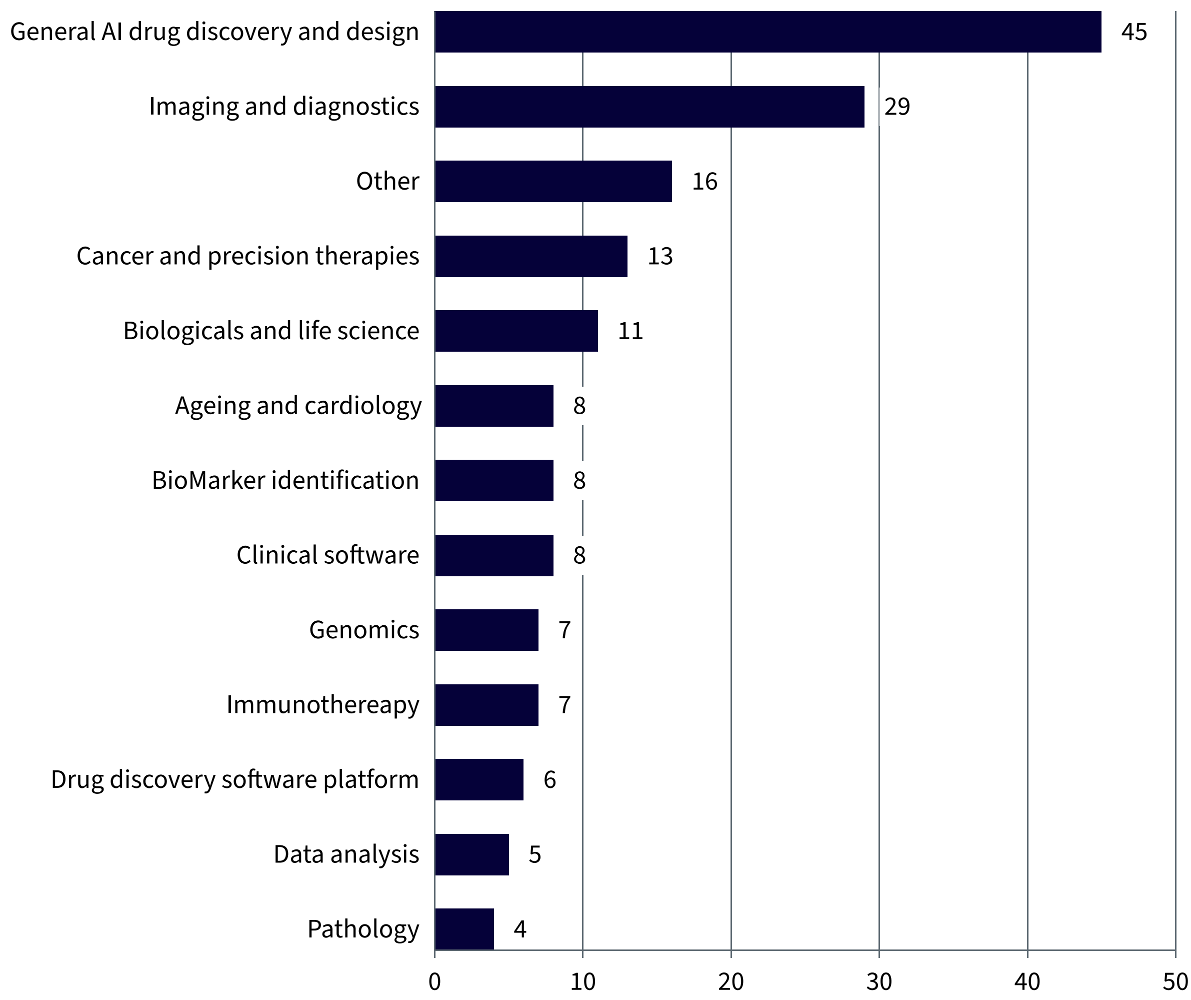
Although drug discovery is the most common area of focus for AI-driven biotech companies, many firms are exploring beyond this arena. Take, for example:

+ Renalytix: performing risk assessment for rapidly progressing kidney disease
+ IXACO: AI-based neuroimaging and biomarker identification for neurogenerative disease
+ CellChorus: AI-based dynamic single-cell analysis for antibodies, cell therapies and vaccines

28 Jane Wakefield, 'Artificial intelligence-created medicine to be used on humans for first time', BBC, 30 January 2020.

A quick clustering analysis of more than 190 AI-focused biotech firms would indicate that the intersection of AI and biotech is much vaster than one would expect.

Figure 21: AI-focused biotech companies by segment



WisdomTree, BioPharmGuy Company Database, as of January 2024, https://biopharmguy.com.

This illustrates the impact and potential of AI in drug discovery, as well as the diversity and complexity of AI applications and solutions that are culminating in the space. The AI and biotechnology ecosystem is growing and evolving quickly, with many firms fully devoted to finding ways to maximise the benefits of this new technology in the biotechnology domain.

The biotech sector is facing a dynamic and evolving landscape, with both challenges and opportunities for value creation and innovation. The pickup in M&A activity and operational efficiencies achieved with AI are two key trends shaping the biotech sector and offering new possibilities for patients, companies and investors alike. These may be two signals pointing to a shift in momentum for the theme in 2024.

Conclusion

Thematic investing is easy and hard at the same time. It’s easy because, in theory, investors should simply commit to a theme and then sit back and let the megatrend unfold. Returns will eventually accrue. And it’s hard because it can be a bumpy ride. But with the bumps come opportunities to change the world and achieve worthwhile returns. Striking a balance between playing momentum and identifying underappreciated themes may be the way to go in 2024.

4. Crypto Outlook: Signs are pointing higher for bitcoin and cryptocurrencies

In this section

Anyone looking back at bitcoin in the first half of 2024 would see the launch of the spot bitcoin ETFs in the US market. If measured from the first time anyone filed to launch an ETF there, this move took more than 10 years to materialise. While an important step in the institutionalisation of crypto as an asset class, it's important to recognise that this isn't the first step, given bitcoin exchange-traded products (ETPs) have been available in Europe since 2019 with more advanced features. We shall see where the space goes from here, but if the US follows the European path, the next step could be more coins, with maybe a US spot Ether ETF being approved later in the year.

2023, the ninth year out of the past 12 when bitcoin beat all other asset classes

With cryptocurrencies firmly entering the universe of asset classes that investors allocate to, it's important to look back and assess where bitcoin stands within a broad multi-asset toolkit.

Bitcoin beat all other main asset classes in 9 out of the last 12 years.

+ In nine out of the past 12 years, bitcoin was the top performer among the main asset classes. What happened in the three years it was not? Well, it was the bottom performer. So, bitcoin's price performance so far has been very much all-or-nothing—mostly all, so far, nothing in between. Still, the performance in the nine winning years largely overpowers the three losing years.
+ Gold, something that bitcoin is often compared to, had a completely different feel to its calendar year returns. It was the bottom performer two times and was mostly in the fifth and sixth positions—at least in 50% of the calendar years shown. It did have three years in the second position but no years in the top position.
+ US Treasuries were interesting, noting that yields were generally quite low in most of these years. One can see that, for the most part, they were in seventh or bottom position, specifically in eight out of the 12 years.

We certainly don't know what 2024 will bring, but we are curious as to when that first calendar year comes when bitcoin leaves its 'all or nothing' type of price performance behaviour and ends up in the middle of the group. This could mark the final step in the institutionalisation of bitcoin. But before this happens, and if history is any guide, there may still be a few top-performing years for investors to benefit from.

Figure 22: Multi-asset yearly performance quilt

	Top Performer	Second Rank	Third Rank	Fourth Rank	Fifth Rank	Sixth Rank	Seventh Rank	Bottom Performer
2012	Bitcoin (217.9%)	MSCI EM (18.6%)	Russell 2000 (16.4%)	S&P 500 (16.0%)	US Corporate (9.8%)	Gold (8.3%)	US Treasuries (2.0%)	Commodities (0.1%)
2013	Bitcoin (5428.4%)	Russell 2000 (38.8%)	S&P 500 (32.4%)	Commodities (-1.2%)	US Corporate (-1.5%)	MSCI EM (-2.3%)	US Treasuries (-2.7%)	Gold (-27.3%)
2014	S&P 500 (13.7%)	US Corporate (7.5%)	US Treasuries (5.1%)	Russell 2000 (4.9%)	Gold (0.1%)	MSCI EM (-1.8%)	Commodities (-33.1%)	Bitcoin (-57.5%)
2015	Bitcoin (36.2%)	S&P 500 (1.4%)	US Treasuries (0.8%)	US Corporate (-0.7%)	Russell 2000 (-4.4%)	Gold (-12.1%)	MSCI EM (-14.6%)	Commodities (-32.9%)
2016	Bitcoin (120.3%)	Russell 2000 (21.3%)	S&P 500 (12.0%)	MSCI EM (11.6%)	Commodities (11.4%)	Gold (8.1%)	US Corporate (6.1%)	US Treasuries (1.0%)
2017	Bitcoin (1375.1%)	MSCI EM (37.8%)	S&P 500 (21.8%)	Russell 2000 (14.6%)	Gold (12.7%)	US Corporate (6.4%)	Commodities (5.8%)	US Treasuries (2.3%)
2018	US Treasuries (0.9%)	Gold (-0.9%)	US Corporate (-2.5%)	S&P 500 (-4.4%)	Russell 2000 (-11.0%)	Commodities (-13.8%)	MSCI EM (-14.2%)	Bitcoin (-73.8%)
2019	Bitcoin (94.8%)	S&P 500 (31.5%)	Russell 2000 (25.5%)	MSCI EM (18.9%)	Gold (18.4%)	Commodities (17.6%)	US Corporate (14.5%)	US Treasuries (6.9%)
2020	Bitcoin (305.1%)	Gold (24.6%)	Russell 2000 (20.0%)	MSCI EM (18.7%)	S&P 500 (18.4%)	US Corporate (9.9%)	US Treasuries (8.0%)	Commodities (-23.7%)
2021	Bitcoin (59.8%)	Commodities (40.4%)	S&P 500 (28.7%)	Russell 2000 (14.8%)	US Corporate (-1.0%)	MSCI EM (-2.2%)	US Treasuries (-2.3%)	Gold (-4.3%)
2022	Commodities (26.0%)	Gold (0.4%)	US Treasuries (-12.5%)	US Corporate (-15.8%)	S&P 500 (-18.1%)	MSCI EM (-19.7%)	Russell 2000 (-20.4%)	Bitcoin (-64.3%)
2023	Bitcoin (157.0%)	S&P 500 (26.3%)	Russell 2000 (16.9%)	Gold (14.6%)	MSCI EM (10.3%)	US Corporate (8.5%)	US Treasuries (4.1%)	Commodities (-4.3%)

Source: Bitcoin: Referenced as the change in the XBTUSD exchange rate within Bloomberg. MSCI EM refers to the MSCI Emerging Markets Index. Russell 2000 refers to the Russell 2000 Index. S&P 500 refers to the S&P 500 Index. US Corporate refers to the Bloomberg US Corporate Total Return Index. Gold refers to the LBMA Gold Price. US Treasuries refers to the Bloomberg US Treasury Total Return Unhedged Index. Commodities refers to the S&P GSCI Index.

When it comes to building multi-asset portfolios, asset managers tend to start from a 'neutral' portfolio and then build overweight and underweight based on their short-to medium-term views of the market. This neutral view is often very similar to the 'market portfolio'; that is, the portfolio that simulates the totality of all liquid assets accessible to investors. This market portfolio comprises around 51% of equities (that represent almost US$100 trillion of listed equities around the world), 38% of fixed income and 11% of alternatives. Among this 11%, almost 1% represents more than US$1 trillion of the market cap of the cryptocurrency space.

In other words, nowadays, the neutral position for a multi-asset manager is to invest 1% of its assets in bitcoin and cryptos. Anything less represents underweight and, therefore, a clear investment thesis to support that underweight. What is really interesting is that in 2023, such a

1% allocation to bitcoin would have added 1.57% to the performance of a multi-asset portfolio.[29] On many occasions, this is enough to make the difference between a top quartile or a bottom quartile finish for this portfolio compared to peers.

Increased adoption could be one of many catalysts for bitcoin in 2024

The real area of untapped potential is US retirement accounts

At WisdomTree, we believe that anything that creates a catalyst for a broader array of people to become involved in the bitcoin space could create demand and, therefore, a source of upward price pressure on the asset class. Many investors believe that the 11 recently launched spot bitcoin ETFs in the US could be one such source of extra demand. While the market was widely prepared for the approval of the US spot bitcoin ETFs, many US investors sit at larger investment houses that curate the allowable list of investments, and most of these actors do not simply approve any new ETFs within days or weeks. So, this extra demand will take some time to materialise fully. This is why many investors were left underwhelmed by the result of the launch of spot bitcoin ETFs in the United States in terms of overall flows and price actions. However, the real area of untapped potential is US retirement accounts, such as IRAs and 401ks. Prior to the introduction of spot bitcoin ETFs, there was no easy way for these account holders to access such an investment. The only options were for firms managing these accounts to jump through regulatory hoops and compliance hurdles, dancing to the step of the offbeat tempo of the US regulators. As a result, many of these investment accounts have not touched digital assets. With an estimated US$35 trillion under management, per the Investment Company Institute, just moving in the direction of a small 1% allocation to bitcoin would amount to US$350 billion flowing into the asset, which is more than one-third of bitcoin's current market capitalisation. But this doesn't happen overnight. Advisors may, at best, speak to their end clients quarterly and, more likely, annually to begin to understand their clients' perspectives and risk tolerance for the new asset class. Furthermore, the due diligence questions that come along with any product being approved on any of the big investment platforms take time—internal legal and compliance approvals—the usual process. If investors are patient, and we continue to see bitcoin being adopted as a key allocation to a multi-asset portfolio, we believe this is an overlooked opportunity that will play out over the next few years.

29 Bloomberg as of 31 December 2023. Performance contribution of 1% allocation of XBT/USD for the calendar year 2023.

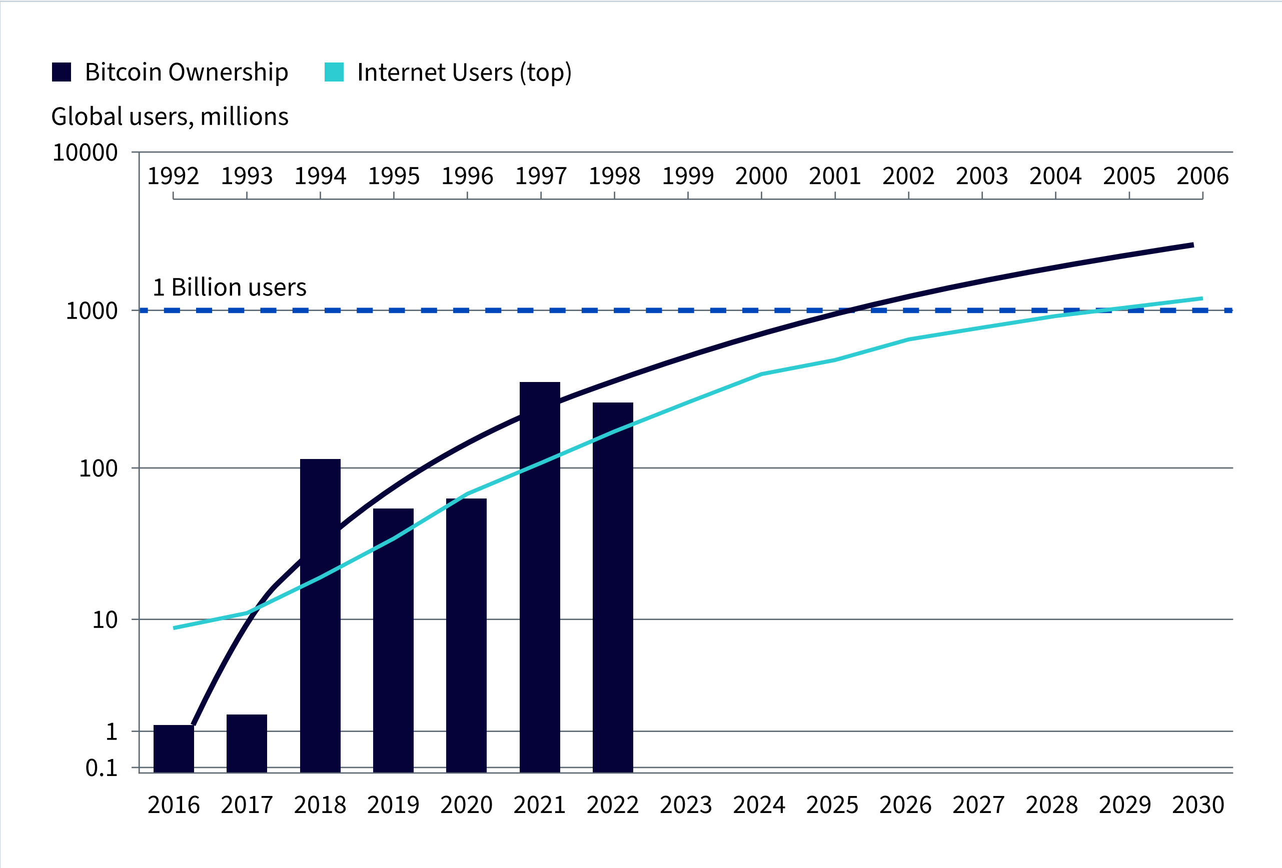
Figure 23 illustrates a second source of extra demand: the adoption of bitcoin. By looking at the adoption of earlier technologies, it may be possible to anticipate the future adoption of bitcoin. In this case, we look at the adoption of the internet.

+ The upper horizontal axis, starting with 1992, is meant to represent the timeline of internet adoption. In 1992, it was not usual or standard to use the internet, and one might have needed certain expertise as the browsers that make it easy for many of us today did not yet exist. We can see the teal line noting slightly fewer than 10 million global users.
+ If we then look at years like 1997, 1998 and 1999—the three years prior to what we now know was the 'bursting' of the tech bubble—we see the acceleration beyond 100 million users. The vertical axis is done on a logarithmic scale, so the change that you see from 1992, 1993 and 1994 is, mathematically speaking, a drop in the bucket compared to the increase observed in 1997, 1998 and 1999. Many reference terms like 'exponential growth' are used, and this is what can be seen in many technologies as they spread.
+ The blue bars represent a measure of global users of bitcoin, and the years, in this case, are measured on the lower horizontal axis, starting in 2016.
+ Similar to the internet, 2016 and 2017 did not see much change, with a total of around 1 million global users. 2018 saw a 100x increase in global users, with a further massive increase in 2021. Something we would note is that there are certain differences in the world relative to 1992. Those of us around in 1992—did we even have a cell phone? Was there news outside of the actual paper newspaper or the relevant television programme? In recent years, including as we write these words, we can choose to hear news piped into our smartphones about bitcoin (or almost anything) 24 hours a day, seven days a week.

The bottom line is that as we think about a path of user growth and adoption of technology in the 2020s, we see things that could indicate it could occur faster than it would have in the 1990s. While the internet took 14 years to grow to one billion users from those early millions, it is expected that bitcoin may reach that threshold in only nine—as early as 2025.

The internet took 14 years to grow to one billion users from those early millions, it is expected that bitcoin may reach that threshold in only nine.

Figure 23: Bitcoin adoption vs. internet user adoption



Sources: Our World in Data, based on International Telecommunication Union (via World Bank) and UN (2022), Raoul Pal, Global Macro Investor, CoinShares, WisdomTree.

A US presidential election and supportive macros

Furthermore, 2024 is an election year. It is logical to think that stimulating the economy—usually done at the US Federal Reserve through a lower policy interest rate—makes the general person in the US 'feel better', and even though the presidential administration is not directly telling the Fed what to do, any policy is associated with the administration's leadership.

You could easily imagine, therefore, that if it were up to incumbent President Biden, he might prefer, all other things being equal, stimulative policy from the Fed. While we know that it is not directly up to President Biden, we also know that after two years of restrictive fiscal policies, cuts are coming in 2024. While we don't know exactly when and how many, the market is widely anticipating this easing of monetary policy.

Of course, this does not impact the bitcoin protocol or any cryptocurrency protocol directly, but we would be remiss not to note that the restrictive macroeconomic environment did weigh on Tech stocks and cryptocurrencies in 2022 and that at the first sign of cuts, both 'long duration' assets started to rise. Bitcoin is viewed as a higher-risk asset, and when market participants predict a fall in rates, it tends to lead to riskier assets increasing in value. So, from that angle, 2024 could be quite supportive.

The fourth halving in spring 2024 could be the main performance catalyst this year

Bitcoin is never 'stimulative'

One of the best aspects of bitcoin's protocol is that it is one of the few things that is truly independent of human feelings and politics. For all instances and purposes, the 'monetary policy' of bitcoin is set in stone or, more specifically, set in code. This is one of the unique features of bitcoin as a currency, and this is why it is considered a 'store of value'. Every fiat currency has a centralised authority that can try to stimulate the economy. (Historically, this has led to those currencies losing pricing power over time.)

Bitcoin is never 'stimulative' if we define stimulative as taking on policies that increase the supply of bitcoin upwards for any reason. In fact, it is the contrary; there is a hard cap—21 million bitcoins (this cap is expected to be hit roughly in 2140, even if well over 90% of these 21 million bitcoins have already been mined today)—and every four years, roughly speaking, the supply reduces. This 'halving', which refers directly to the reward miners get for solving the proof-of-work algorithm, is expected to occur in April 2024.

Figure 24 is a table that indicates the history of bitcoin's halvings as well as the expected further path these will take. The critical point to have in mind is that there is always an amount of bitcoin outstanding currently in existence, and as time goes by, there is less and less 'new supply' coming into the market. Gold is the only thing currently in existence with a very big current supply and a tiny amount, relatively speaking, that is mined each year. All the world's fiat currencies can increase their supply by printing more at the government's discretion anytime they choose.

Figure 24: The path of bitcoin halvings

Event	Date	Block	Block reward	Mined in period	% Mined
Launch	January 2009		50	10,500,000	
Halving 1	November 2012	210,000	25	5,250,000	75%
Halving 2	July 2016	420,000	12.5	2,625,000	87.5%
Halving 3	May 2020	630,000	6.25	1,312,500	93.75%
Halving 4	Estimated April/May 2024	840,000	3.13	656,250	96.88%
Halving 5	Estimated 2028	1,050,000	1.56	328,125	98.44%
Halving 6	Estimated 2032	1,260,000	0.78	164,063	99.22%

Sources: Capital.com, Zenledger.io, WisdomTree, 2024.

Now, as we think specifically about the halving, we note that, like a commodity, we have:

+ An upcoming, highly telegraphed **decrease** in terms of new supply.
+ A whole host of variables on the demand side, some of which could relate to more demand or less demand, depending on what you're looking at.

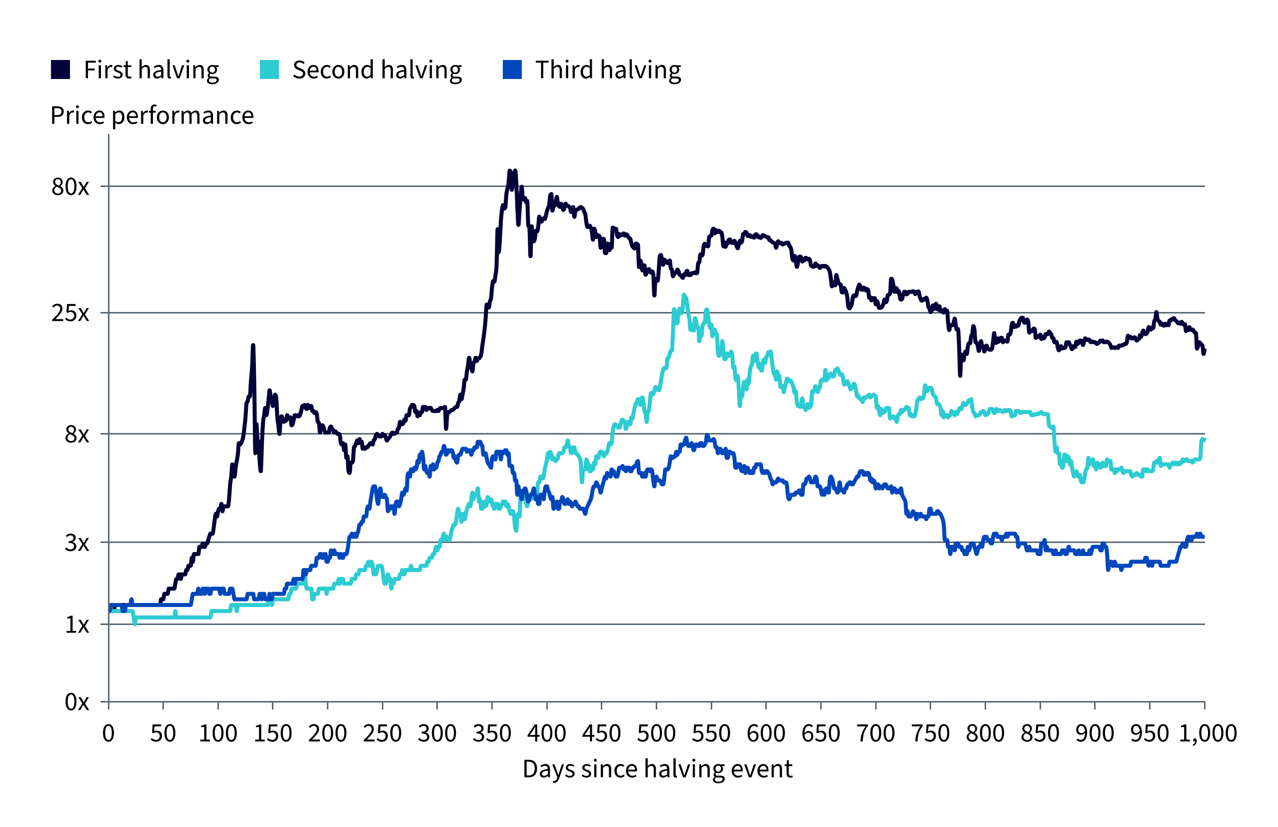
One might think that, since things are so telegraphed and mathematically driven, the impact of the halving must be 'priced-in'. In our opinion, there could be some of that, but history tells us this is usually not the case for halvings.

Figure 25 shows what we have learned with the first three halvings. The horizontal axis is delineated in days, so a figure of more than 900 towards 1,000 days is basically 2.5 years. The vertical axis is setting the 1.0x level as the price at the actual halving. Going about 1.0x tells us that the price of bitcoin rose, whereas going below 1.0x tells us that the price of bitcoin fell. Similarly, 2.0x would mean ‘the price doubled’, and further figures can be interpreted analogously.

+ Bitcoin was more volatile earlier in its history. We see this illustrated through the fact that the 2.5 years after the first halving had a very different path of appreciation than the 2.5 years after the third halving. This doesn’t mean that the trend absolutely must follow this path—we recognise that we are looking at three events that occurred over roughly 12 years, so this is not data based on a short-run type of analysis.
+ All three of these events were associated with a rising bitcoin price over the subsequent 2.5 years. That does not mean that the fourth halving will lead to a similar experience, but we note that if the new supply is decreasing and other factors, like the deployment of US spot ETFs, create new demand, it could represent a dynamic supportive of a higher bitcoin price over time.

All three of the precedent halvings have led to price increase and new record highs for bitcoin in the 2 years that followed.

Figure 25: A time series view of bitcoin's halving events



Sources: Glassnode, WisdomTree, as of December 2023. Rebased to 1 from the halving date. **Historical performance is not an indication of future performance, and any investments may go down in value.**

Digging further into those halvings, we tried to find some patterns by looking at the following:

+ **Bitcoin's minimum price in the two years prior to the halving event:** These types of minimum values coincide with what many term 'crypto winters' in the sense that it represents the difficulty of living through tough drawdowns in value.
+ **The number of days that the minimum price occurred prior to the halving event:** The reason we wanted to measure the number of days from the 'local minimum' to the following halving is that the halving date is not 'unknown'—the market should know about it, fully, ahead of time and whether there is any assumed impact of the supply/demand balance of bitcoin, and therefore, we should observe some pattern forming ahead of each halving.
+ **The gain in price from the minimum up to the day of the halving event:** Looking at the percentage gain in price between the minimum value within the two years leading up to the halving and the price on the day of the halving can give us a measure of the market's anticipation of reduced supply after the halving event. If investors are increasing allocations prior to the halving, that would be a source of incremental demand that could push prices higher. It may not be the only thing serving to push prices higher, but it could be a big part of the picture.

- **The price level on the day of halving:** Whenever we look at past measures of bitcoin's price level, the primary value is just to recognise the historical path upon which we have been travelling. While the price level of one bitcoin as we write these words is roughly US$40,000, that is not where the price was five or even ten years ago. At the first halving, the price was US$12.35.
- **The gain in price to the maximum level observed two years after the halving:** If the movement of bitcoin's price reflected all available information fully and completely, once the halving occurs, the further price movements after that point should depend on other factors. However, this has not been the case with previous halvings. While supply decreased instantaneously on the day, prices adjusted more slowly as the mining community adapted to the new environment.
- **The number of days taken to achieve this maximum level:** We were curious how many days it tended to take between having the halving occur and the maximum price level of bitcoin observed in the next two years.
- **The price level representing the maximum level within two years after the halving event:** The actual price level of bitcoin puts things in perspective and alignment with the price levels reported in public settings all the time.

Figure 26: Pre- and post-halving price patterns – what could they mean for 2024 and 2025?

	Minimum in the 2 years prior	Date of minimum	Days of minimum before halving	Gain pre-halving	Level on halving
1st halving	0.2	06/12/2010	723	6075.0%	12.35
2nd halving	183.1	14/01/2015	542	260.9%	660.7
3rd halving	3156.9	14/12/2018	514	173.6%	8636.21
4th halving	15632.0	21/11/2022	511	75%(?)	27300 (?)

	Gain post-halving	Days of maximum after halving	Date of new high	Post-halving maximum level
1st halving	9106.5%	366	29/11/2013	1137.0
2nd halving	2782.0%	526	17/12/2017	19041.6
3rd halving	684.3%	547	09/11/2021	67734.0
4th halving	200% (?)	530 (?)	September 2025 (?)	81900 (?)

Source: WisdomTree as of January 2024.

One of the notable coincidences—and we say coincidences purposely because it is difficult to attribute any price causation to this—is that between 511 and 542 days prior to the second, third and fourth halvings, we observed the minimum price level. Three halvings represent a period of roughly 12 years since halvings occur every four years, and these minimum price levels were consistent in terms of when they occurred within a range of about 30 days. This is the case for the fourth halvings and could be the sign that the pattern we observed in the first three halvings is happening again.

Between 511 and 542 days prior to the second, third and fourth halvings, we observed the minimum price level.

We will be interested to see if this pattern continues, but if it does, we could observe:

+ A price increase between the minimum of US$15,632 at the end of 2022 and the halving. However, this increase has been going down consistently at each halving, and therefore, the level on halving day could very well be a bit lower than today's level. With all the news of the US spot ETF launches, a lot of this pre-halving gained may have been anticipated earlier in the year, leading to the consolidation that we have observed post-launch.
+ A second price increase, which would be expected to be lower than the percentage gains post-halving. We observed this historically:
+ Approximately 91 times (9,106.5%) in the first
+ Approximately 28 times (2,782.0%) in the second
+ Approximately seven times (684.3%) in the third

This could still lead to multiple 100% gains in the 18 months following the halvings: that is, until the end of 2025.

Still assuming a small 75% gain pre-halving and 200% gain post-halving would propel bitcoin to new all-time highs of around US$82,000. We will continue to monitor the formation of patterns and connect the supply story of bitcoin to the various things that could drive the demand higher. Higher demand and greater network participation—these things can influence the price level to go higher, should they occur.

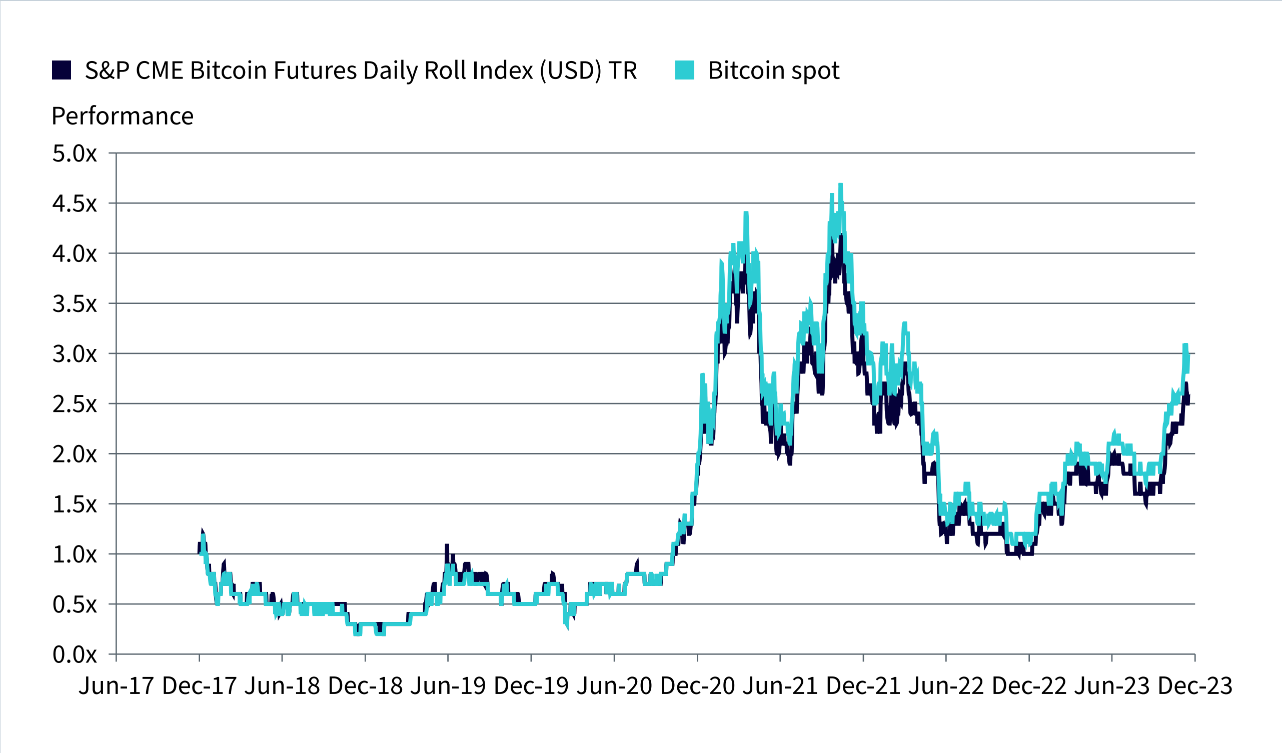
With spot bitcoin more easily accessible, could some of the future volume migrate back?

Another big discussion in the bitcoin space worth monitoring regards the futures market. Globally speaking, WisdomTree has a large commodity presence and frequently looks at the futures curves of different commodities. Bitcoin has a futures curve, and the shape of this curve is typically something we'd denote as 'contango.' Contango means that futures prices are higher than spot prices, which is typically true for gold and oil. When you sell the current expiring futures contract to buy the next maturity, (rolling your position), a negative roll cost is incurred which puts a negative drag on returns. Over time, this negative drag on returns can add up, contributing to how one might see the price of a given commodity at a certain level and the return they've experienced in the futures-based product being at a very different level.

The contango has historically been very steep for bitcoin, as highlighted in Figure 27. While future contracts are useful for investors who need leverage or want to short, they are not as useful for long-term investors who have access to spot assets. The big difference between classic commodities and bitcoin is that it is possible to buy bitcoins easily. Buying oil or wheat spots would mean having dedicated storage facilities and trucks.

Historically, bitcoin futures were one of the only ways to access bitcoin in a regulated fashion. But with new vehicles accessible that do not suffer from the contango effect, it is possible that we will see some of this money move to the spot. The ProShares futures bitcoin strategy BITO represents 1.9 billion assets alone, which could represent a further source of demand and push prices higher.

Figure 27: Historical underperformance of bitcoin futures strategy vs. spot bitcoin



Sources: WisdomTree, S&P Global, as of 31/12/2023. Historical performance is not an indication of future performance, and any investments may go down in value.

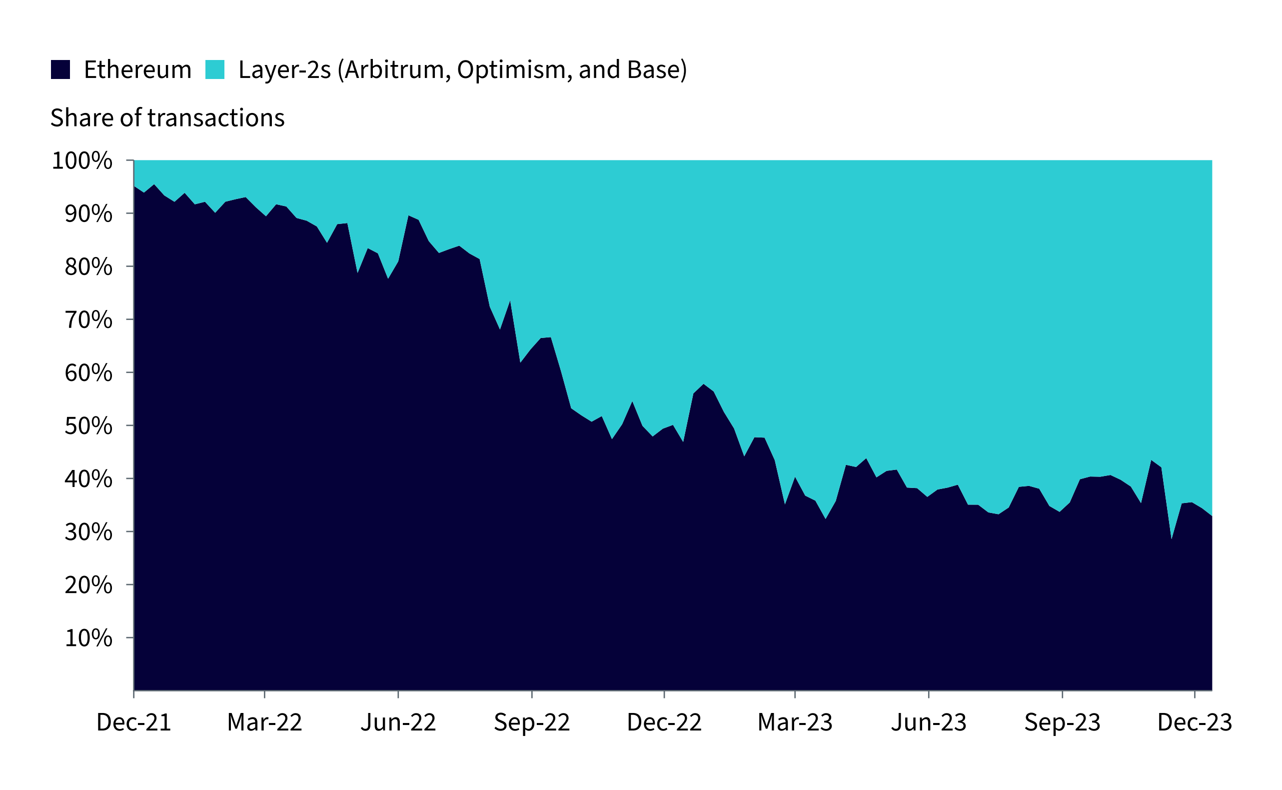
The next wave of killer applications may be enabled through planned Ethereum upgrades

Beyond bitcoin, another digital asset that deserves attention is Ethereum, the second-largest cryptocurrency by market capitalisation. Ethereum is more than just a digital currency; it is a technology platform that enables decentralised applications (dApps) to run on a global network of computers powered by blockchain.

Ethereum has undergone several notable upgrades in the past few years. In 2022, it switched from proof-of-work (PoW) consensus, which requires intensive computation, to proof-of-stake (PoS), which rewards participants for locking assets and validating transactions—thereby securing the network—and henceforth introduced the concept of a 'staking yield'. In 2023, the Shanghai upgrade took place, which enabled validators to withdraw their staked ether, providing long-awaited liquidity and flexibility for stakers and enhancing the appeal for staking.

In 2024, Ethereum is expected to make the 'proto-danksharding' upgrade, which will enable cheaper and faster transactions for layer 2 solutions. Layer 2 solutions are protocols that run on top of Ethereum and handle transactions off-chain, bundling and settling them on Ethereum, reducing the congestion and fees on the main network. Some examples of layer 2 solutions are Polygon, Optimism, Arbitrum and Coinbase's Base. These solutions are becoming more popular and accessible as Ethereum prioritises their development and integration.

Figure 28: Layer 2 solutions are beginning to dominate the transactions being settled on Ethereum



Source: @jhackworth, 'Ethereum and its L2s: Growth Comparison', Dune Analytics, as of 09/01/24. **Historical performance is not an indication of future performance, and any investments may go down in value.**

With these upgrades, Ethereum aims to solve the scalability problem that has plagued many blockchain platforms and gain an edge over its competitors, such as Solana, which claims to offer higher throughput and lower costs. Ethereum's vision is to become the base decentralised blockchain that supports a variety of layer 2 solutions and dApps, creating a web3 world where users have more control, privacy and freedom over their online activities. This is a compelling scenario for Ethereum investors, who stand to benefit from the possible increased adoption and innovation of the platform.

Ethereum aims to solve the scalability problem that has plagued many blockchain platforms

Conclusion

After a strong performance in 2023 and an eventful January 2024 with the launch of 11 spot bitcoin ETFs in the US, signs are looking positive for cryptocurrencies. Adoption is on the rise, and with the further institutionalisation of bitcoin, demand should steadily increase over the next few years. The macro environment is turning supportive with the money tap reopening in a year of US elections. Supply continues to be reduced with the upcoming fourth halvings. While predicting a price target for crypto is a fool's errand, if history is any guide, everything is now in place for bitcoin to reach new highs in the next 18 to 24 months.

5.

Model Portfolios: Combining outlook and ETF selection to achieve long-term consistency and tactical flexibility

In this section

In this section, we leverage the different views outlined in our outlook to update our illustrative suite of core, multi-asset portfolios tactically. Those core model portfolios aim to offer the potential for competitive risk-adjusted performance versus appropriate passive benchmarks without the higher costs associated with traditional active management. They capture our long-term asset allocation philosophy: academically driven and focused on diversification. Adding a tactical overlay that aligns with our outlook makes it possible to deliver portfolios that strike the right balance between fitting the current market environment and handling changes in circumstances and unexpected events.

We show a series of five portfolios with increasing levels of risk:

+ The **Illustrative Conservative Portfolio** and the **Illustrative Moderately Conservative Portfolio** invest most of their assets in lower-volatility assets and aim to deliver some growth with controlled risks to investors.
+ The **Illustrative Moderate Portfolio** invests about half its assets in fixed income and half in riskier assets. It aims to deliver a balanced risk-return profile to investors.
+ The **Illustrative Aggressive Portfolio** invests most of its assets in higher-growth/higher-risk assets. However, the portfolio aims to improve diversification to limit those risks.
+ The **Illustrative Equity Portfolio** invests solely in risk-on assets. However, the portfolio is still risk-managed through the use of diversifiers.

While the portfolios are built with EUR-based investors in mind, the equity and alternative sleeve would not change significantly for other base currencies.

Figure 29: Five WisdomTree Illustrative Model Portfolios

ETF Name	Category	ISIN	MER	Illustrative Conservative	Illustrative Moderately Conservative	Illustrative Moderate	Illustrative Aggressive	Illustrative Equity
WisdomTree Global Quality Dividend Growth UCITS ETF USD	Global Equity	IE00BZ56SW52	38	6.38%	12.19%	5.28%	7.04%	8.80%
WisdomTree US Equity Income UCITS ETF USD	US Equity	IE00BD6RZT93	29	0.00%	0.00%	4.20%	5.60%	7.00%
WisdomTree US Quality Dividend Growth UCITS ETF USD	US Equity	IE00BZ56RG20	33	0.00%	0.00%	9.60%	12.80%	13.00%
WisdomTree Europe Equity UCITS ETF EUR	Europe Equity	IE00BYQCZX56	32	0.00%	0.00%	0.00%	0.00%	0.00%
WisdomTree Eurozone Quality Dividend Growth UCITS ETF	Europe Equity	IE00BZ56TQ67	29	0.00%	0.00%	4.32%	5.76%	7.20%
WisdomTree Japan Equity UCITS ETF - EUR Hedged Acc	Japan Equity	IE00BYQCZJ13	45	1.00%	2.00%	6.36%	8.48%	10.60%
WisdomTree EM ex-State-Owned Enterprises UCITS ETF USD	Emerging Equity	IE00BM9TSP27	32	1.02%	2.01%	2.40%	3.20%	4.00%
WisdomTree Emerging Markets Equity Income UCITS ETF USD	Emerging Equity	IE00BDF12W49	46	0.00%	0.00%	1.92%	2.56%	3.20%
SPDR S&P 400 US Mid Cap UCITS ETF USD	US Equity	IE00B4YBJ215	30	1.96%	3.78%	3.84%	5.12%	6.40%
iShares MSCI World Small Cap USD	Global Equity	IE00BF4RFH31	35	1.54%	2.97%	1.92%	2.56%	3.20%

Figure 29 (continued): Five WisdomTree Illustrative Model Portfolios

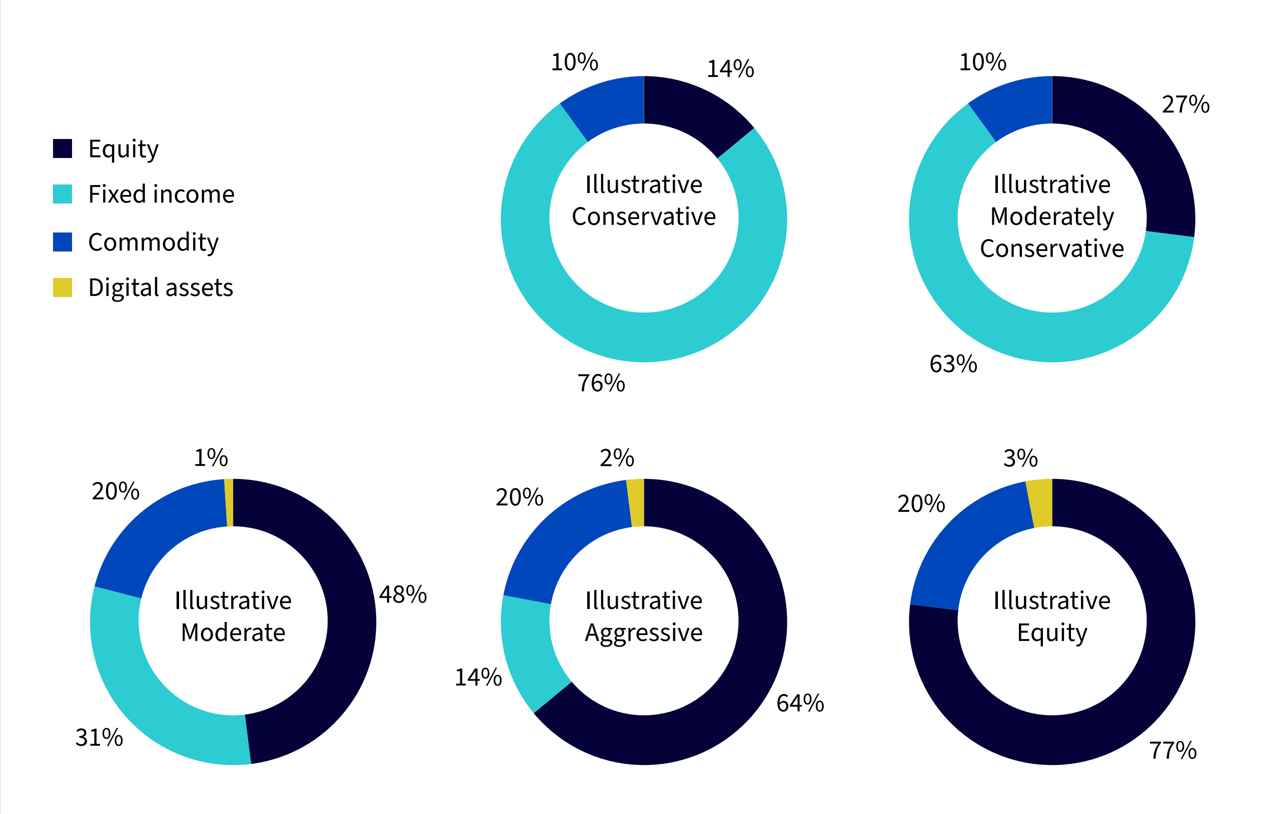
ETF Name	Category	ISIN	MER	Illustrative Conservative	Illustrative Moderately Conservative	Illustrative Moderate	Illustrative Aggressive	Illustrative Equity
iShares S&P Small Cap 600 UCITS ETF USD	US Equity	IE00B2QWCY14	40	0.70%	1.35%	1.44%	1.92%	2.40%
Xtrackers NASDAQ 100 UCITS ETF USD	US Equity	IE00BMFKG444	10	0.00%	0.00%	0.00%	0.00%	0.00%
WisdomTree Megatrends UCITS ETF	Thematic Equity	IE0000902GT6	50	1.40%	2.70%	6.72%	8.96%	11.20%
iShares Core Global Aggregate EUR Hedged	Global Fixed Income	IE00BDBRDM35	10	31.92%	26.46%	13.32%	5.68%	0.00%
iShares USD Treasury Bond 20+yr UCITS ETF EUR-hedged	USD Fixed Income	IE00BD8PGZ49	10	4.56%	3.78%	1.44%	0.96%	0.00%
iShares EUR Govt Bond 20yr Target Dur. UCITS ETF EUR	EUR Fixed Income	IE00BSKRJX20	15	4.56%	3.78%	1.44%	0.96%	0.00%
WisdomTree US Floating Rate Bond UCITS ETF USD	USD Fixed Income	IE00BJJYYX67	15	6.08%	5.04%	3.52%	1.28%	0.00%
iShares US Mortgage Backed Securities UCITS ETF EUR Hedged	USD Fixed Income	IE00BKP5L409	30	16.72%	13.86%	7.36%	3.20%	0.00%
iShares USD Corp Bond 0-3yr ESG UCITS ETF EUR-hedged	USD Fixed Income	IE00BG5QQ390	14	3.42%	2.84%	0.00%	0.24%	0.00%
iShares EUR Corp Bond 1-5yr UCITS ETF EUR	EUR Fixed Income	IE000F6G1DE0	20	3.42%	2.84%	0.00%	0.24%	0.00%

Figure 29 (continued): Five WisdomTree Illustrative Model Portfolios

ETF Name	Category	ISIN	MER	Illustrative Conservative	Illustrative Moderately Conservative	Illustrative Moderate	Illustrative Aggressive	Illustrative Equity
iShares Global High Yield Corp UCITS ETF EUR-hedged	Global Fixed Income	IE00BJSFR200	55	5.32%	4.41%	2.32%	1.44%	0.00%
iShares J.P. Morgan EM Local Govt Bond UCITS ETF USD	EM Fixed Income	IE00BFZPF546	50	0.00%	0.00%	1.60%	0.00%	0.00%
WisdomTree Enhanced Commodity UCITS ETF USD	Commodity	IE00BYMLZY74	35	2.00%	2.00%	4.00%	4.00%	4.00%
WisdomTree Industrial Metals Enhanced	Commodity	IE00BF4TWC33	40	1.50%	1.50%	3.00%	3.00%	3.00%
WisdomTree Core Physical Gold USD	Gold	JE00BN2CJ301	12	6.00%	6.00%	12.00%	12.00%	12.00%
WisdomTree Carbon USD	Commodity	JE00BP2PWW32	35	0.50%	0.50%	1.00%	1.00%	1.00%
WisdomTree Physical Crypto Mega Cap Equal Weight	Digital Assets	GB00BMTP1733	40	0.00%	0.00%	1.00%	2.00%	3.00%

Source: WisdomTree, as of 31 January 2024.

Figure 30: Five WisdomTree Illustrative Model Portfolios



Navigating equities in the last mile of inflation

The equity sleeve of our core models is built around a core equity exposure that invests in high-quality, dividend-growing companies with the **WisdomTree Global Quality Dividend Growth UCITS ETF** and **WisdomTree US Quality Dividend Growth UCITS ETF.** The objective is to offer a geographically diversified core exposure that could benefit from a rebound in equity markets while withstanding increased market volatility. These ETFs are exposed to quality and value stocks simultaneously through dividend-growing companies that balance short-term opportunities and long-term growth. The sub-portfolio is then complemented by different geographically focused ETFs (US equities, European equities, EM equities, etc.) and ETFs with a particular factor focus (Dividend, Value, Small Cap, etc.). All five of our illustrative risk-managed portfolios invest in emerging markets through a combination of dividend stocks with the **WisdomTree Emerging Markets Equity Income UCITS ETF** and a unique portfolio of non-state-owned companies with the **WisdomTree EM ex-State-Owned Enterprise UCITS ETF**.
All portfolios are also invested in small caps across developed markets.

As discussed in the different outlooks, we remain constructive on developed markets equities even if with high earnings expectations and strong challenges to companies' profitability, we favour a balanced approach between valuation and earnings risk. Our main tactical focuses are on Japan, which benefits from multiple bullish catalysts coming out of 2023, and emerging markets, which have reached 'peak pessimism'. A recovery in earnings, a weaker US dollar and monetary easing combined with the tailwinds of nearshoring could support performance in the year. Thematic equities, like most risk-on assets, are also poised to benefit from the upcoming series of rate cuts, and the illustrative portfolios could benefit from some overweighting.

These views translate into the portfolio by:

+ Overweighting in Japan through the use of **WisdomTree Japan Equity UCITS ETF EUR Hedged** to benefit from the continued strength of Japan. This strategy is focused specifically on exporters, which helped it outperform the classic market cap benchmark in 2023 and is poised to benefit from a continued weak yen.
+ Replacing WisdomTree Europe Equity Income UCITS ETF with the **WisdomTree Eurozone Quality Dividend Growth UCITS ETF**. The portfolio is, therefore, positioned to benefit from the rebound of high-quality equities in the eurozone. European equities currently trade at the lowest compared to developed market equities.[30] Rising wages have hurt the profitability of European corporates. As wage growth begins to peak and rate cuts materialise, corporate profitability should regain momentum.
+ Overweighting in thematic equity to benefit from rate cuts and position our portfolio for risk-on assets to benefit. The **WisdomTree Megatrends UCITS ETF** offers a unique approach that allows investors to access long-term growth through a curated portfolio of themes and expert-driven stock selection in each of those themes. Investors also benefit from tactical allocation to the different themes over time to adapt to current market environments.

30 Bloomberg, WisdomTree, as of 24 January 2024.

Figure 31: Fundamental characteristics of the equity sub-portfolio

	Illustrative Conservative	Illustrative Moderately Conservative	Illustrative Moderate	Illustrative Aggressive	Illustrative Equity	MSCI AC World
Weight	14%	27%	48%	64%	77%	
Return on equity	15.9	15.9	15.1	15.1	14.6	14.4
Return on asset	3.3	3.3	2.9	2.9	2.9	2.4
Price to earnings	20.8	20.7	18.7	18.7	18.5	19.3
Price to book	2.8	2.8	2.4	2.4	2.4	2.9
Forward dividend yield	2.02%	2.03%	2.45%	2.45%	2.47%	2.10%
Country allocation						
Developed markets	90.71%	90.55%	88.91%	88.91%	88.48%	88.88%
Emerging markets	9.29%	9.45%	11.09%	11.09%	11.52%	11.12%
US	58.38%	58.13%	57.42%	57.42%	55.76%	60.64%
Europe	17.36%	17.23%	14.85%	14.85%	15.42%	17.09%
Japan	11.26%	11.50%	14.94%	14.94%	15.53%	5.40%
Market cap split						
Large cap	61.77%	61.69%	68.74%	68.74%	67.66%	94.27%
Mid cap	31.46%	31.52%	24.45%	24.45%	25.28%	5.64%
Small cap	6.77%	6.79%	6.80%	6.80%	7.07%	0.09%

Sources: WisdomTree, FactSet, Bloomberg, as of 31/12/2023. **Historical performance is not an indication of future performance and any investments may go down in value.**

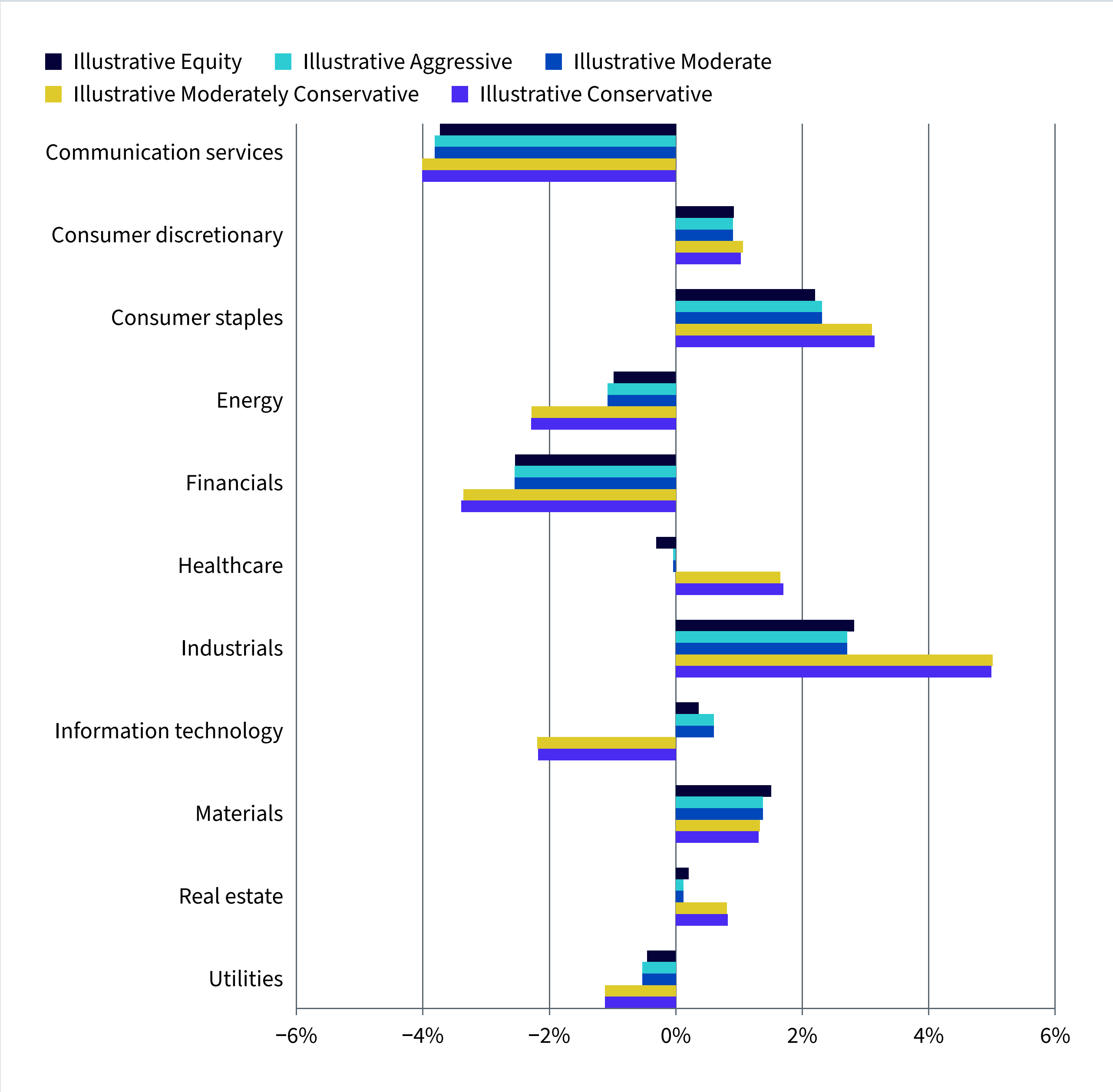
Overall, our equity sub-portfolio exhibits a clear overweight in Japan compared to the markets, while European equities are neutral to slightly underweighted. The most risk-on portfolios also exhibit some overweight in emerging markets. Through our investment in small cap directly but also indirectly in thematic equity, the proportion of mid and small cap is higher in our portfolio. This could help further benefit from rate cuts in the US and Europe in the year's second half.

The portfolio's fundamentals reflect our continued focus on high-quality, highly profitable companies with increased returns on equity and return on assets. Valuations remain very much in line with the markets, highlighting some of our choices around value and dividends.

Sector-wise, the portfolios are quite balanced. They exhibit only small overweights or underweights in the market. Communication Services is the biggest underweight across all the portfolios, with Financials just behind. Consumer Staples and Industrials are the biggest overweights, especially the conservative ones. Information Technology is the only sector where the conservative portfolios are underweighted, and the more aggressive ones are overweighted. This results from the significant focus on the **WisdomTree Megatrends UCITS ETF.**

It is worth noting that in the equity sleeve, many ETFs are ESG-screened and follow the WisdomTree principle-based and activity-based exclusions screens.

Figure 32: Sector allocation in the equity sub-portfolio (vs. MSCI All Country World)



Sources: WisdomTree, FactSet, Bloomberg, as of 31/12/2023.

Cuts are coming, but maybe not right away

Rates in developed markets should go down over the year. The Federal Reserve and the European Central Bank have consistently indicated that multiple cuts could be forthcoming in the year's second half. While the market is, in our opinion, pricing the number of cuts and the timing of the first one, we have been adding duration back into the portfolios. The portfolios now show duration in line with or slightly above the benchmark.

All three model portfolios are diversified across EUR and USD fixed income exposures, but when possible, we use a EUR hedged share class to remove the currency risk.

The core fixed income exposure is a diversified investment in the Global Aggregate Index EUR Hedged, which gives exposure to Treasuries and corporate investment-grade bonds across the developed markets. The allocation is then supplemented by long-duration Treasuries and short-duration corporate bonds in USD and EUR.

The final allocations are spread across US mortgage-backed securities, high-yield bonds globally and local currency emerging market government bonds.

This combination delivers a portfolio yield to worst ranging from 4.8% to 5.1% versus only 3.47% for the EUR Aggregate Index. The duration remains down around 5 compared to 6.6 for the EUR Aggregate Index.

Figure 33: Fundamental characteristics of the fixed income sub-portfolio

	Illustrative Conservative	Illustrative Moderately Conservative	Illustrative Moderate	Illustrative Aggressive	Illustrative Equity	Bloomberg EUR Aggregate Index
Weight	76%	63%	31%	14%	0%	
Yield to worst	4.4%	4.4%	4.4%	4.5%	-	2.9%
Duration	6.8	6.8	6.7	7.1	-	6.6

Sources: WisdomTree, FactSet, Bloomberg, as of 31/12/2023. **Historical performance is not an indication of future performance, and any investments may go down in value.**

Commodities enter the Year of the Dragon

Geopolitical risk is again rising, casting its shadows on risky assets. History has shown that commodities and gold can provide a very efficient hedge to those risks that equities or bonds cannot. We think this is already a good reason to add those assets systematically to all multi-asset portfolios, including conservative ones. Furthermore, commodities are excellent diversifiers, allowing them to improve portfolios' risk-return profiles over the long term.

Our strategic holding for broad commodities includes the **WisdomTree Enhanced Commodity UCITS ETF**, which, instead of using a commodity benchmark like the Bloomberg Commodity Index, uses a second-generation index that uses a systematic strategy to reduce the rolling drag in the strategy and improve the performance. Historically, the index tracked by the ETF would have outperformed the benchmark. For some investors, an investment in broad commodity ex-agriculture can be preferable. For those, this ETF can be replaced by the **WisdomTree Enhanced Commodity ex-Agriculture UCITS ETF**. It also tracks a second-generation commodity index with roll yield optimisation. We also include **WisdomTree Core Gold** in all portfolios as a diversifier and hedge.

While investors' attention to the energy transition appears to be fading somewhat, policymakers are forging ahead. The long-term outlook for commodities remains linked to the energy transition, and we believe that the potential for medium-to-long-term supply deficits in metals will generate a commodity supercycle. This is why we built a position in industrial metals (**WisdomTree Industrial Metals Enhanced**) and in **WisdomTree Carbon** as a way to participate further in the energy transition.

Signs are pointing higher for bitcoin and cryptocurrencies

Even a small allocation in cryptocurrency can make a big difference in portfolios. In the past 12 years, bitcoin was the best-performing asset for nine of them. Last year, bitcoin gained 157%, which means that a 1% allocation would have added around 1.6% to the calendar year performance of the portfolio. With many catalysts aligning in favour of crypto, including the upcoming halving, we think the asset class warrants some allocation in the riskiest part of the portfolio.

Overall, the space remains highly heterogeneous, and at this stage, we prefer to concentrate on the most established assets. We propose a small exposure to the WisdomTree Physical Crypto Mega Cap Equal Weight in the three risk-on illustrative portfolios. This ETP provides easy investor access, tradability, transparency and institutional custody solutions within a robust, physically backed structure to an equal-weight basket of ether and bitcoin.

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WisdomTree USD Floating Rate Treasury Bond UCITS ETF

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WisdomTree.eu
+44 (0) 207 448 4330