

# Quarterly Outlook <sup>Q3</sup> 2023

AI: The good, the bad,  
and the bubble





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# Q3 2023 Outlook: AI: The Good, the Bad and the Bubble

## **Executive Summary: AI: The Good, the Bad and the Bubble**

In this Outlook, our chief focus is on the current market impact of the AI theme across markets and around the world. But Steen's introductory piece also argues that market participants are making a mistake in believing that the current market cycle will play out like previous ones, as inflation is set to stay higher for longer than the market anticipates, which will eventually register as an enormous surprise, given that yield curves in most markets are pricing significant eventual policy easing starting early next year and a glide path to a soft landing. The complacency surrounding that disinflationary and soft-landing scenario have kept long yield anchored and allowed equity markets, and particularly AI-linked names, to inflate perilously.

Also on the AI theme that has dominated focus over the last quarter:

Equity strategist Peter Garnry argues that the emergence of advanced AI systems such as GPT-4 from OpenAI is by far the most surprising event this year, a phenomenon that has turned everything on its

head. Further, he writes that the AI-hyped rally has pushed the US equity market to new extremes, even as the benefits and risks of this new technology are hotly debated. He predicts that we risk seeing US and China engaging in an AI arms race.

Our Greater China strategist, Redmond Wong, points to the challenges China faces in the field of generative AI as it navigates a global order of fragmentation. The success of generative AI breakthroughs in the US, coupled with limited computing power and geopolitical tensions, has threatened to break down China's virtuous cycle of technology application, productivity enhancement and growth.

Macro strategist Charu Chanana highlights Japan's expertise in semiconductor manufacturing and robotic integration, suggesting these could be the foundation of a very strong presence in AI. She notes that Japanese equities and artificial intelligence combine the two most powerful market themes of this year.

Cryptocurrency analyst Mads Eberhardt notes that AI fever has stolen the spot-

light from blockchain technology and the cryptocurrency market generally, pushing the space further into speculative no man's land. Despite the contrasting performance between crypto and AI-linked assets, there are striking similarities, especially the risk of bubble-like dynamics.

Investment Coach Hans Oudshoorn outlines in his piece how investors can gain exposure to AI via ETFs that provide considerable diversification, but still noting the risks from valuations that have become very elevated in places.

In addition to the AI focus, this report also delves into the outlook across major asset classes:

In currencies, FX strategist John Hardy notes that USD shorts could be set for a vicious reality check if the US economy remains resilient and core inflation remains sticky, possibly engaging both sides of the "USD smile" that drive USD strength: the Fed remaining on the warpath and market turmoil. John notes that the stakes are even higher for the Japanese yen if the longer yields of the major sovereign yield curves

have to price in a new economic acceleration, as the BoJ will have to eventually capitulate on its yield-curve-control policy.

In commodities, commodity strategist Ole Hansen suggests that the commodity sector looks set to start the third quarter on a firmer footing after months of weakness saw a partial reversal during June. Ole notes that strong gains were at times driven by a weaker US dollar, but specific developments in each sector also weighed. Most concerning for is the risk of higher food prices into the autumn, as several key growing regions battle with hot and dry weather conditions sparked by the first El Niño weather pattern in years.

Fixed income strategist Althea Spinozzi argues that central banks face a troubling dilemma: if they really want to get ahead of inflation, they will need to burst asset bubbles created by a decade of quantitative easing (QE) and trigger a recession. But she asks whether they are willing to take policy tightening that far and ever win the inflation fight.

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**Steen Jakobsen, Chief Investment Officer** first joined Saxo in 2000 and has served as both Chief Economist and Chief Investment Officer since 2009.

*He focuses on delivering asset allocation strategies and analysis of the overall macroeconomic and political landscape as defined by fundamentals, market sentiment and technical developments in the charts.*

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# AI: The Good, the Bad and the Bubble

Summary: The good news is that a deep recession is unlikely to happen. The bad news is that interest rates will need to stay high for longer. We simply don't think the "audio matches the video" when looking at complacent market expectations versus the likely path from here.

# “Recessions are periods when the economy goes on a diet,”

Economist Paul Samuelson.

*In normal economic cycles, central banks raise interest rates in response to high inflation, a tight labour market and easy financial conditions, essentially the reality we see all around us. The central banks' tightening of policy is meant to cool the economy and prevent an overheating that worsens the eventual recession. However, since the 2008 financial crisis, central banks have been reluctant to trigger a recession and have become very nervous about tightening policy and taking interest rates into truly activity-dampening territory.*

*The market believes that the Fed has done enough with its 500 basis points of hikes, but the reality is that in most economic cycles, the Fed funds rate needs to at least match the nominal GDP growth rate in order to slow down economic activity enough to take the pressure off both inflation and a tight labor market.. As of Q1 of this year, US GDP was growing at a nominal rate of 720 basis points year-on-year,*

*suggesting that Fed policy is not tight, but neutral at best.*

*It seems that the dual mandate of price stability and full employment has been replaced with a number one priority of no recession ever, or in Samuelson's metaphor quoted at the head of this article, “No diet!”*

*After the COVID-19 pandemic, many people believe that the economy is returning to a normal path. They believe that low interest rates will continue to support growth and that a “soft landing” is possible. However, this view is naive. The economy is currently loaded with excess debt and asset valuations are at all-time highs. A “soft landing” is very unlikely in this environment and, as an economic concept, is extremely rare!*

*The global economy is currently more like a river that has been dammed up. The dam*

*represents the various factors that have been holding back economic growth, such as the COVID-19 pandemic, supply chain disruptions and the war in Ukraine.*

*As these factors start to dissipate, the dam will begin to break and the river will flow more freely. This will lead to an extension and resurgence of economic growth and inflation, contrary to the prevailing consensus of an imminent recession together with a credit crunch and housing crisis. The freeing of obstacles will allow the overall economy to steer clear of a deep recession and possibly a minor recession, even in real GDP terms.*

*This means that the Fed and the economy will have a run rate in nominal GDP terms that is higher than expected. There is ample pent-up demand at state levels, company levels, and from the IRA (the Inflation Reduction Act) and the CHIPS and Science Act to keep employment firm.*

*An insufficiently restrictive policy backdrop has set up a potential bubble in the stock market. The valuation this year has been driven by three impulses: the Silicon Valley Bank and regional bank mini-crisis, the trouble lifting the debt ceiling, and the super-valuation of the sub-set of mega caps and large cap stocks most associated with the introduction of generative AI applications (OpenAI's ChatGPT and Google's Bard).*

*The first two created a liquidity injection of more than \$1 billion. The third became the driver of super-exponential prices for the most directly AI-linked names. The*

*hype surrounding AI is the chief driver of the latest stock market surge, with talks of this being a new iPhone moment or even akin to the introduction of the internet. This is not a knock on AI, as we are keenly aware of the potential for generative AI to increase productivity over time. But the market is getting ahead of itself in selecting winners, and current valuations are already discounting too much of the longer-term future gains to be had.*

*The surface of this economic sea may be calm, with volatility at extremely low levels. However, beneath the waterline, there are strong currents and countercurrents, which, to our minds, set up a difficult second half of 2023.*

*We don't have the ability to time and project where the markets are going, but we do have the ability to recognise when a bubble is forming and where data doesn't support the narrative. This bubble, and all bubbles, are accelerating when the fundamentals don't support the narrative.*

*The good news is that a deep recession is unlikely to happen. The bad news is that interest rates will need to stay high for longer. We simply don't think the “audio matches the video” when looking at complacent market expectations versus the likely path from here.*

Steen Jakobsen, CIO

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**Peter Garnry, Head of Equity Strategy** joined Saxo in 2010 and is the Head of Equity Strategy.

*In 2016 he became responsible for the Quantitative Strategies team, which focuses on how to apply computer models to financial markets. He produces trading strategies and analyses of the equity markets as well as individual company stocks, applying advanced statistics and models to beat the market.*

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# Equities: The AI fever pushes market to new extremes

Summary: The emergence of advanced AI systems such as GPT-4 from OpenAI is by far the most surprising event this year, turning everything upside down. The AI-hyped rally has pushed the US equity market to new extremes, and the benefits and risk of this new technology is hotly debated. AI will also become an arms race between the US and China.

*“The main question for global investors is still whether to reduce exposure to equities.”*

**The rollercoaster year continues**

Going into 2023, pessimism had the upper hand, but China's reopening optimism and early talk about AI released animal spirits, causing semiconductors, luxury and mega caps to rally double digits by mid-March. The banking crisis, led by the Silicon Valley Bank failure and takeover of Credit Suisse, reignited the calls for a recession, and the market began pricing an aggressive 150 basis points in rate cuts by the end of the year. The thinking was that the economy would finally crumble.

What happened instead was a new twist on this year's rollercoaster. Around the same time of peak pessimism around the economy and bets of aggressive rate cuts, OpenAI released its GPT-4 AI system, and the year was never the same again. Every company related to AI saw its shares take off in an AI speculative fever in an echo of past bubbles. Our semiconductor theme basket was up 17.5% by mid-March and by mid-June the basket was up 39.8%. Even more impressive, the bubble theme basket went from being up 8% to 37.8% during that same time period.

Saxo equity themes performance overview

Sorted on year-to-date return (updated as of 19 Jun 2023)

Theme	1D	1W	MTD	YTD	1Y	5Y
Semiconductors	-0,3	1,0	5,5	39,4	39,8	167,7
Bubble stocks	0,1	3,0	11,1	37,9	26,6	133,3
Mega Caps	-0,4	1,7	6,4	26,8	29,5	128,7
Travel	-0,2	1,6	9,5	24,6	33,7	-7,8
Cyber security	-0,3	3,5	3,1	24,5	15,2	98,4
Gaming	-0,2	4,4	11,5	23,5	20,7	58,3
Luxury	-0,9	2,0	6,0	20,8	44,0	30,4
Defence	-0,1	1,9	6,9	18,9	32,7	68,5
Construction	-1,2	1,8	9,1	16,9	30,6	65,7
MSCI World (USD)	-0,2	1,7	5,6	14,6	20,9	45,8
Green transformation	-0,7	3,6	12,2	14,0	-22,2	152,9
Payments	-0,1	0,2	5,4	12,3	9,1	36,7
E-commerce	-0,5	2,7	11,0	12,1	5,8	7,9
Logistics	-0,6	3,1	4,4	11,0	17,9	113,0
Women in leadership	-0,3	0,6	5,8	9,8	19,1	72,9
NextGen medicine	-0,2	-1,1	4,5	8,8	12,6	121,0
MSCI EM (USD)	-0,6	2,2	7,0	8,2	4,9	-0,9
Financial trading	-0,6	2,4	3,7	7,7	16,6	68,3
Commodities	-1,1	2,5	9,3	5,0	14,3	81,8
Transportation infrastructure	0,1	2,2	3,2	5,0	7,6	27,5
Nuclear power	-0,5		10,6	4,7	19,9	113,4
China consumer & technology	-0,6	5,4	13,6	4,0	2,6	47,5
Energy storage	-1,4	2,1	11,3	0,7	-11,4	320,8
India (GDRs)	-0,2	0,2	1,7	-2,4	5,1	52,1
Renewable energy	-0,6	0,5	2,2	-6,3	1,1	234,9
China's little giants	-0,8	1,8	-1,1	-15,8	-28,6	115,6

Source: Bloomberg and Saxo

Source: Bloomberg and Saxo

Data on the US economy is still showing economic activity below trend growth but is also not showing recession dynamics, and earnings estimates have increased substantially, especially in Europe, since the Q1 earnings season started in mid-April. US financial conditions peaked in late March at levels that can still be characterised as loose given the economic backdrop and have fallen ever since to levels that are close to the loosest since March 2022, before the interest rate shock began to tighten financial conditions significantly. The previous rate cuts before year-end have been almost priced out. In other words, as markets enter Q3, the direction of forces are pointing more towards upside risks to inflation vs current market expectations and higher policy rates rather than the 'back to low inflation and rates' scenario.

While the AI hype has undoubtedly unleashed animal spirits and growing optimism around the boost to productivity, it has also created a growing risk to the US equity market. Valuations on the US equity market are back to the highest levels since April 2022 and with the free cash flow yield on the S&P

500 down to 3.9%, the market is beginning to look a bit more stretched. While it is too early to call for an overall bubble, the semiconductor industry is clearly showing bubble-like behaviour, and equity valuations on semiconductor stocks are the highest since 2010, measured on the 12-month forward EV/ EBITDA metric.

Another risk that has come back, and something we thought would never happen again, is US equity market concentration. The rally this year has been carried by a narrow group of mega caps, as the emerging AI technology is expected to deliver the highest economic gains for the large technology stocks. The deeper issue is that the US equity market has moved to an index weight concentration we have never seen before, with the 10 largest stocks weighing 30.4% of the S&P 500 and the Herfindahl-Hirschman Index to a level 40% above the market concentration during the dot-com bubble peak. This makes the US equity market more fragile and sensitive to fewer risk factors. As a result, we have moved to a negative view on mega caps and overweight the long tail of equities vs mega caps.

S&P 500 concentration ratio in %



The main question for global investors is still whether to reduce exposure to equities. Global equities measured by the MSCI All-Country World Index have a dividend yield of 2.3% and an estimated buyback yield of 1.2%. If we add expected real rate earnings growth of 2.2%, then the long-term expected annualised real-rate return on global equities is 5.7%. By comparison, global investment grade debt has a yield-to-worst of 3.8% but subtracting the 10-year inflation expectation of 2.5% takes the long-term expected return on investment grade bonds down to 1.2% annualised. In other words, if the investor wants to maximise long-term wealth, an overweight exposure to equities is still the most prudent.

### The two faces of AI technology

New technologies create both positive and negative impacts on society, and AI is no different. A recent McKinsey report on generative AI suggests that the technology will add \$2.6trn to \$4.4trn annually, adding roughly the economy of the United Kingdom. McKinsey is predicting that 60-70% of work activities today can be automated with AI, enabling 0.1-0.6% points to labour productivity

growth. Long-term predictions on technology are difficult, but the McKinsey report encapsulates the zeitgeist perfectly, as the AI technology is becoming our new hope for a better and richer future, a bit like the space age during the Cold War and the Internet two decades ago.

Our view is that AI-related stocks have entered a bubble phase marked by 'peak of inflated expectations', following the logic of Gardner's hype cycle model. Soon, we will likely begin to see companies disappoint against those elevated expectations and take investors downhill to the trough of disillusionment before entering the slope of enlightenment. In order for our clients to get the best overview of the companies that have reacted the most to the AI-hyped rally, we have created a theme around AI consisting of 20 stocks. This list is already our most accessed equity research by far, underscoring the interest in AI. It is worth noting in the table of AI stocks that many of these stocks trade close to their price targets, indicating that equity analysts have difficulties justifying current equity valuations against the outlook.

Name	Category	Mkt Cap (USD mn.)	Sales growth (%)	EBIT margin (%)	YTD return (%)	5Y return (%)	Diff to PT (%)
Advanced Micro Devices Inc	Semiconductor	193.372	22,2	0,7	85,4	667,3	8,7
Marvell Technology Inc	Semiconductor	52.563	14,1	-0,2	65,5	198,8	8,5
ASML Holding NV	Semiconductor	290.971	37,1	32,5	31,9	292,1	8,5
TSMC	Semiconductor	542.343	32,9	49,5	41,7	224,3	8,2
Pure Storage Inc	Data storage	11.606	14,0	0,6	41,0	57,1	7,2
Arista Networks Inc	Data storage	48.644	53,8	35,7	30,0	126,0	7,1
Adobe Inc	Software	227.139	10,4	33,6	47,1	99,0	6,8
NVIDIA Corp	Semiconductor	1.054.492	-12,4	17,4	192,2	570,3	6,8
Alphabet Inc	Software	1.571.807	5,3	25,4	40,0	111,3	6,3
UiPath Inc	Software	10.157	16,0	-25,3	42,4	NA	5,0
Micron Technology Inc	Data storage	74.047	-26,0	8,7	35,6	15,2	4,8
Equinix Inc	Data storage	72.818	11,1	17,5	20,0	103,2	2,7
Microsoft Corp	Software	2.545.390	7,8	40,9	43,4	258,0	1,5
Applied Materials Inc	Semiconductor	116.666	7,3	29,3	43,4	202,0	0,8
Meta Platforms Inc	Software	720.128	-1,9	23,6	133,5	39,5	-0,3
Snowflake Inc	Software	60.024	60,5	-40,9	28,3	NA	-0,8
Teradyne Inc	Semiconductor testing	17.219	-17,9	24,5	27,4	191,8	-1,8
KLA Corp	Semiconductor testing	63.782	22,9	39,0	24,1	360,1	-2,0
Advantest Corp	Semiconductor testing	25.911	34,4	29,9	127,7	832,8	-11,8
Palantir Technologies Inc	Software	34.531	20,5	-5,9	153,9	NA	-40,2
<b>Aggregate / median</b>		<b>7.733.613</b>	<b>14,1</b>	<b>24,0</b>	<b>42,0</b>	<b>198,8</b>	<b>4,9</b>

The pessimists would argue that while AI will create economic gains in the longer run, the world is greatly extrapolating the current trend, creating a bubble in AI-related stocks. Google search volume in the US on 'ChatGPT' and 'AI' peaked in April and is already declining, suggesting that the initial hype is beginning to fade, although the hype has not yet ended in equity markets. The pessimists will also argue that generative AI will cause a flood of fake news, images and video, essentially polluting its own training data in the future, causing a natural stagnation in future systems, but even worse, that it will potentially break down trust in our information systems. This scenario could be a big comeback for traditional media as a trusted source of information.

#### The AI race between the US and China

Vladimir Putin said in 2017 that whoever becomes the leader in AI will become the ruler of the world. Russian leaders are experienced in hyperbolic language, so this prediction should naturally be discounted, but AI will likely play a crucial role in the great power competition of the future.

Reading articles about technology and AI from those years around 2017, it is clear that the world thought China was either leading the AI race or at least had the speed to overtake the US in a few years. Surprisingly, it turned out, that the US was leading everyone else, as AI systems such as OpenAI's GPT-4 and Google's Bard are crushing AI systems from China across many benchmark tests.

As we described in our previous Quarterly Outlook, the future will be dictated by what we call the fragmentation game, which is essentially a strategic geopolitical dynamic fragmenting the world into regions with a higher degree of independence and with national security interests driving policies around four pillars: defence, energy, technology, and commodities. The fragmentation game is mostly a game evolving around how the physical world operates and it is a game in which Europe and the US are aiming to reduce China's role in their respective supply chains. While it causes headwinds for China, it creates tailwinds for other countries, which is well crystallised in our chart showing Chinese equity market performance vs those countries that are benefitting.

Fragmentation game  
Relative equity performance (%): China vs winner countries (\*)



Inside the fragmentation game framework, semiconductors also play a crucial role because they are the very foundation for AI chips. The capital expenditures on semiconductors will create an investment boom in the US and Europe over the next decade, as the regions will increase domestic production to limit dependencies on Asia. This dynamic will benefit semiconductor equipment makers

as their revenue figures are linked to capital expenditures on semiconductors. Regardless of the rollercoaster experience investors will have with AI stocks, one thing is certain: this technology will be an important technological battleground between the US and China, and many opportunities and threats will arise in the years to come.

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# China faces challenges from generative AI amidst the fragmentation game

Summary: China is confronted with challenges in the field of generative AI as it navigates a global order of fragmentation. The success of generative AI breakthroughs in the U.S., coupled with limited computing power and geopolitical tensions, has threatened to break down China's virtuous cycle of technology application, productivity enhancement and growth.

### **China's strategic initiatives for AI development**

In May 2017, Google's AlphaGo astounded China when it defeated Ke Jie, the renowned Chinese Go champion and the world's number one in ranking, with its artificial intelligence (AI) capability in a 3-0 victory. This triumph not only demonstrated the power of AI, but also somehow marked the point China embarked on a more aggressive pursuit of AI technology.

In July 2017, China unveiled its "Next Generation Artificial Intelligence Development Plan," followed by the "Three-year Plan for Next Generation AI Development (2018-2020)" in December. These strategic initiatives aimed to propel China to the forefront of AI innovation and were further complemented by the New Infrastructure Initiative introduced in May 2020.

China leveraged its mobile-plus-internet economy, fuelled by vast amounts of data, to empower AI algorithms in understanding consumer preferences. Internet giants like Baidu, Alibaba, Tencent and JD.COM successfully utilised AI to identify market trends, deliver personalised products and services, and even anticipate customer needs before they arise.

### **The challenge of generative AI**

China has made significant strides in AI applications, but generative AI demands a new level of sophistication and computing power. Over the past two decades, Chinese companies thrilled on applying relatively mature technology to disrupt and transform how merchandise trading, retailing, payment, entertainment and social media are conducted, first starting by copying the business models from overseas and eventually coming up with business innovations that turned out to lead the global trend instead. Nonetheless, the achievement has been mainly about business model innovation and expanding AI applications to more and more aspects of people's lives. In this process, the vast pool of data available in China has added to the speed and extent of development and made Chinese internet companies corporate giants with dominant domestic positions and global reach.

While China excelled in certain AI domains, particularly visual recognition and AI-enhanced big data analysis, it now faces a new challenge in the form of generative AI, similar to AlphaGo's breakthrough. Generative AI models, such as OpenAI's ChatGPT, have proven capable of generating coherent and contextually relevant content, expanding the boundaries of AI capabilities. This development has sent shockwaves across China, prompting a scramble to catch up.

### **In search of technology innovation and computing power**

The Chinese authorities have reportedly been urging Chinese internet companies to come up with more generative AI solutions and applications and the latter are fully aware of the urgency to prepare for the disruption that generative AI presents. However, the new challenges posed by generative AI are the advancement of the underlying technology innovation and the massive demand for computing power, and less about business model innovation and new applications of mature technology. According to the Artificial Intelligence Index Report 2023 by Stanford University, China has come close to the US in AI conference citations (China: 22.02%; US: 23.86%) and depository citations (China: 20.98%; US: 29.22%), but China (at 8.04%) is still a long way away from the US (at 54.02%) in terms of citations in the field of large language and multimodal models, which are fundamental to generative AI such as ChatGPT.

The challenge of computing power faced by China is even more daunting as computing power requires a large number of advanced microchips, which China is incapable of designing and manufacturing. Moreover, the US ban on exporting high-end semiconductors as well as the relevant equipment and technology to China since October last year has further exacerbated the situation, limiting the country's access to the necessary hardware for rapid AI development, in particular generative AI.

### **Implications for China's economy and investors' perspectives**

China aims to foster a virtuous circle of economic growth through technology innovation, technology application, business model innovation, productivity enhancement, economic growth, and further investment in technology. In a globalised world, this circle could be sustained even if certain critical technologies were lacking. However, in the fragmentation game that increasingly dominates the world's order, falling behind in technology innovation could disrupt the virtuous circle and result in declining productivity, ultimately hindering economic development.

Investors take this risk into account when considering investments in China, along with factors like the slower-than-expected economic recovery and various constraints. These constraints include a highly leveraged economy, particularly among local governments and the property sector, which somewhat restricts the Chinese authorities' ability to implement stimulus measures without potentially causing future financial turmoil.

The extent of the impact on productivity in the Chinese internet sector, manufacturing sector and the broader economy, as well as how it will unfold, remains uncertain. Some investors positioning themselves for these changes are looking at companies capable of developing generative AI applications, manufacturing AI-related hardware, or producing AI-relevant microchips, semiconductor materials or equipment. Some Chinese companies actively sought after by investors include Baidu, 360 Security, Lenovo, Shanghai Boasight Software, Iflytek, Unisplendour, ZTE and Foxconn Industrial Internet, which are listed on the mainland and Hong Kong stock exchanges.

While major Chinese internet and technology companies are aware of the need to adapt their business models to potential disruptions, their generative AI products and new applications have yet to demonstrate promising prospects and significant impacts on their revenues.

Baidu has shown some progress with its early focus on AI and the launch of ERNIE, an AI model capable of search, dialogue and content generation. Xiaomi continues to pursue an AI and Internet of Things development path, utilising deep learning to connect mobile and IoT devices. Tencent has developed its own AI models, including HunYuan and WeLM, facilitating text generation, dialogue, translation and gaming. Alibaba has created the Multi-Modality to Multi-Modality Multitask Mega-transformer (M6) model, while JD.COM has come up with pre-trained language models for natural language understanding and generation. Bytedance contributes a multilingual machine translation model, and NetEase offers the YuYan language model.

These efforts are commendable but yet to have meaningful impact on their business models and much more needs to be done. Some of these stocks which trade at reasonable valuations based on their existing businesses may present interesting investment opportunities, but investors should take into consideration that high growth could be something of the past for these companies.

As technology innovation and productivity growth hold the key to success, companies that advance in intelligent manufacturing which employs generative AI may be the next "new-new thing" to watch in China in the coming years. Investors can potentially benefit from following developments in this area.

### **Concluding remarks**

China's drive towards a virtuous circle of economic growth, fuelled by technology innovation and productivity enhancement, is of utmost importance. Investors evaluating China should acknowledge the challenges posed by generative AI, while also recognising potential investment prospects in companies poised to leverage these transformative changes.

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At Saxo, she focuses on delivering investment strategies based on global macroeconomic analysis and monetary policy developments.

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# Japan's riposte to aging and productivity headwinds: robots with generative AI

Summary: Japan's expertise in semiconductor manufacturing and robotic integration could be the foundation of its dominance in AI. Combining the two most powerful market themes of this year, Japanese equities and artificial intelligence, brings a wave of opportunities.

The two themes that have been discussed most extensively in the market in the last few months have been AI and Japan, and bringing the two together creates a new wave of opportunities for investors.

We have previously discussed how a slew of positives are lining up for Japanese markets – from stronger growth to higher inflation, negative interest rates, improving corporate governance, geopolitical tremors, attractive valuations and Warren Buffet’s increasing interest in the market. Nikkei 225 and the TOPIX have both reached fresh 33-year highs recently, and while there may be reasons for a tactical pullback or a short-term deterioration of sentiment for reasons such as a Fed pivot or China devaluation, the advent of artificial intelligence coming on top of the current dominance in robotics has strengthened the long-term case for an exposure to Japanese equities.

**Japan set to reaffirm its global chipmaking leadership**

Japan was the epicentre of the chip man-

ufacturing industry back in the 1980s, and despite some setbacks, it still retains a key position in select semiconductor sectors such as NAND chips (a type of flash memory that does not need power) and sensors. Authorities are seemingly keen to regain Japan’s position in the global chip industry and plan to overhaul its chip strategy to triple sales of domestically produced semiconductors to over 15 trillion yen (\$108 billion) by 2030.

The new strategy is a conscious step to boost production of advanced semiconductors that are a key strategic commodity globally for economic security and advancements in technology, including the latest buzz of generative artificial intelligence. This has come at a time when global leaders are becoming increasingly concerned about the threat to Taiwan’s chip manufacturing industry, which produces over half the world’s chips and 90% of the most sophisticated ones. Access to Taiwan’s chips remains key for the global digital economy to thrive, and to continue to make progress on AI developments.

Aiming to achieve domestic production of next-generation semiconductors, Japanese authorities set up a consortium called Rapidus in 2022 with investments from eight Japanese companies including Sony, Toyota and Softbank. They plan to make investments totalling \$36 billion over the next decade, with the government offering around \$500 million in subsidies, with an aim to deliver next-generation 2-nanometre chip technology. In addition, the government has committed financial support of up to JPY 476 billion for TSMC’s new factory in Kumamoto in southern Japan and subsidies of JPY 92.9 billion to Kioxia Holdings, which specialises in flash memory, for its plant in central Japan. US companies such as Micron are also expanding in Japan and it has recently announced a new program for the US and Japan to work together on R&D in semiconductors, which has been of interest for local companies like Tokyo Electron.

With its history of being a leader in technological research and innovation, Japan has the potential to fill the gaps and help global semiconductor companies de-risk as they try to move their

operations away from China and Taiwan. The increased Japanese investment aligns well with the global need for diversification of supply chains and could bode well for the return of Japan as a technological giant.

**Strong potential for success with generative AI**

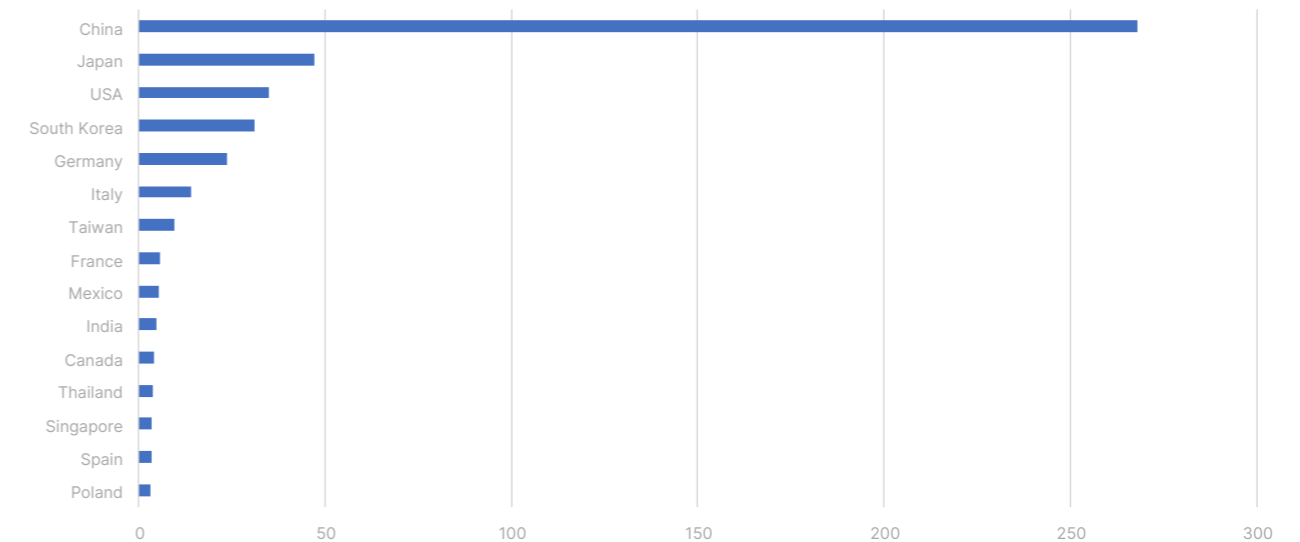
Japanese companies have traditionally been the leaders in robot production, exports and industrial use. Domestically, robot integration in industrial use has been especially popular and easy to execute due to the shrinking workforce given the ageing dynamic of Japanese society and lack of immigration. This has made Japanese businesses and workers more willing to invest in robots in order to drive up productivity, total output and GDP growth. Firms such as FANUC, Kawasaki Heavy Industries, Sony and the Yaskawa Electric Corporation led the way in robotic development during Japan’s economic rise.

FactSet Japan Semiconductor Index



Source: Bloomberg, Saxo

Annual Installation of Industrial Robots, 2021 (in '000 units)



Source: World Robotics 2022, Saxo

Japan's success in robotics and involvement in the earlier AI booms sets up a strong potential for its success with the latest buzz of generative AI. Firms will remain open to enabling new technologies due to population constraint and easy access to chips. About 60% of Japanese companies have net cash with very low levels of gearing, which will also allow for investments in AI-related research and development, in contrast to international

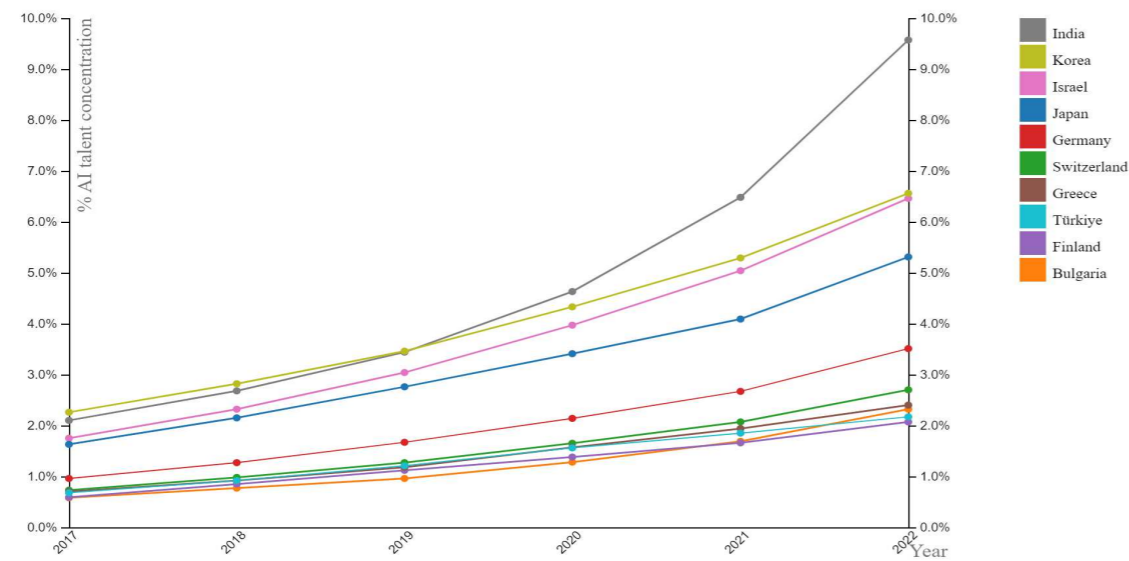
competitors who may face a high interest rate environment. In addition, there is ample tech and AI-skilled labour supply in Japan, given its prior success in robotics and other tech fields and constant collaboration with global tech companies.

**Robots + AI could spell productivity leaps and a new era of Japanese manufacturing**

Japan's greatest potential could be in bringing together its success in robotics with new AI offerings to create a completely new technology that can change the face of the global economy. Artificial intelligence applied to robotics offers a new way for robots (software) to execute commands or tasks given to them. This means robots could become more independent and

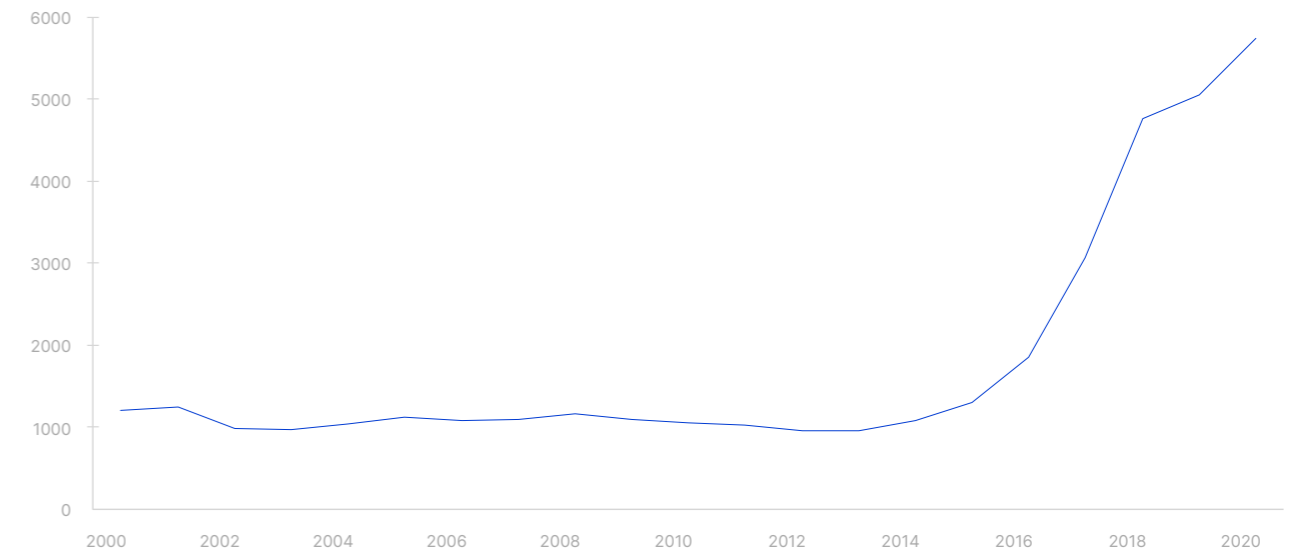
be able to learn, understand, solve, reason and react, while being less dependent on human commands. For industrials, this could mean a robot navigating its way around a busy warehouse, adapting itself to change routes in case of unforeseen events, or a robot understanding supply chains and streamlining inventory, while also analysing data for any likely hiccups.

Percentage of AI Talent Concentration by Country, 2017-2022



Source: OECD

Number of Patent Applications related to AI in Japan, 2000-2020



Source: Japan Patent Office, Saxo

*“Japanese companies have traditionally been the leaders in robot production.”*

This marriage of robots and AI could bring leaps in productivity gains as well as enhancements in labour and global trade, which could lead to a new era of economic prowess for Japan. Japanese companies in a variety of sectors are embracing AI. SoftBank’s mobile unit is developing a Japanese equivalent of ChatGPT. CyberAgent announced that it has released its own large language model (LLM) with which companies can create AI chatbot tools. NTT also plans to develop its own LLM this fiscal year and provide it to other businesses. Industrial conglomerate Hitachi has set up an internal body called the Generative AI Center to facilitate the use of generative AI to improve the productivity of its employees and also plans to provide consulting services on AI for other companies.

#### **A host of opportunities in Japan's AI potential**

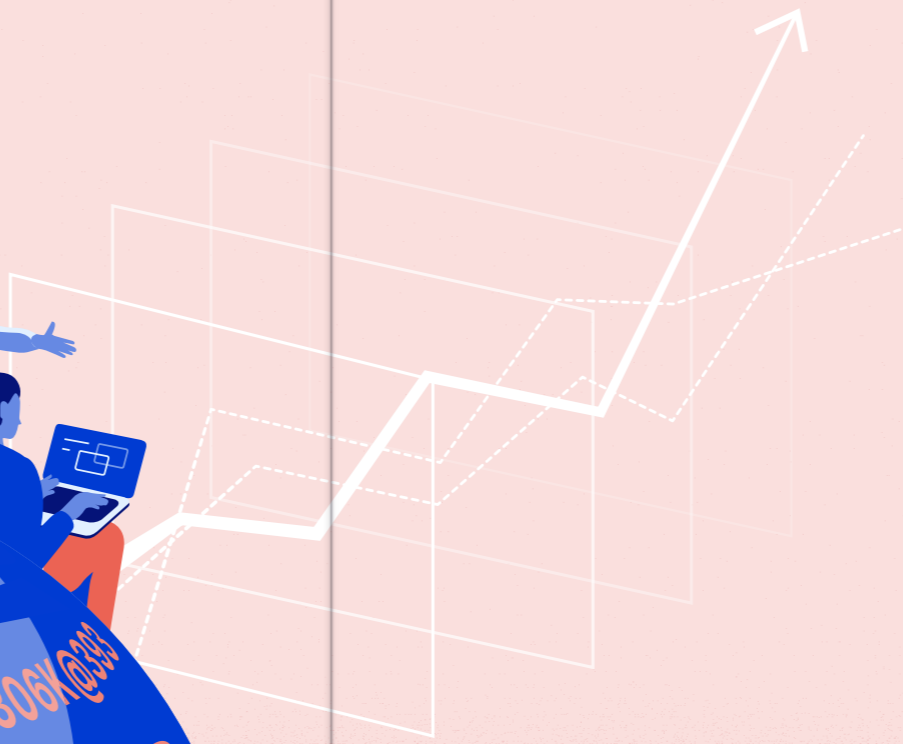
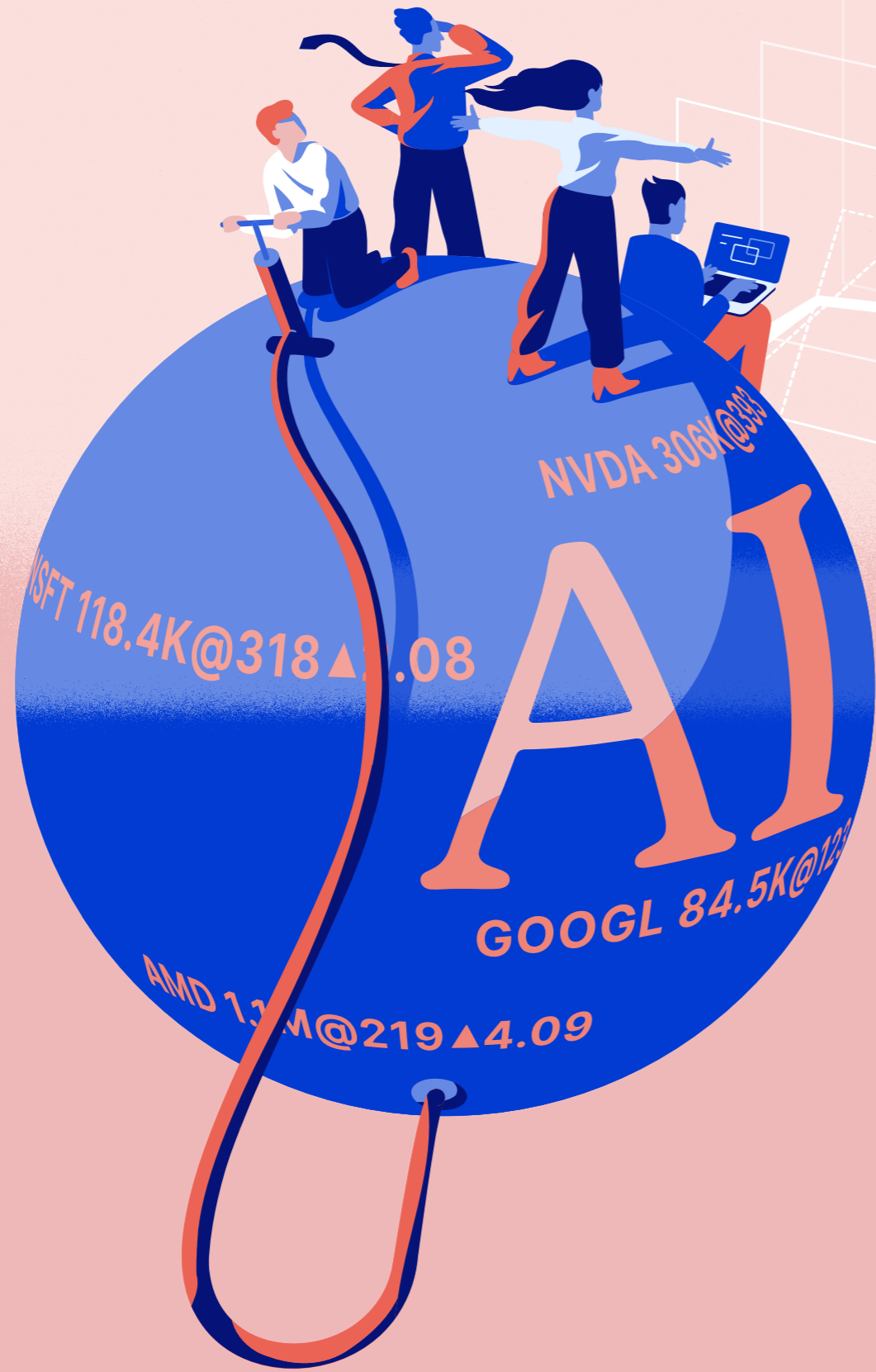
The potential for innovation adds to the other tailwinds that are lining up for Japanese equities and brings a host of additional investment opportunities in Japan. Below is an inspiration list for your reference.

- Chip manufacturers and testing: Advantest, Kyocera, Renesas, Lasertec, Shibaura Mechatronics, Screen Holdings, Tokyo Electron, Tokyo Seimitsu
- Automation manufacturers: SMC Corp, Omron, Yaskawa, Keyence, FANUC
- AI-integrated products: Sony, Nintendo, Nikon, Hitachi, Kawasaki, Mitsubishi, Toshiba
- AI-driven services: Appier, Change Holdings, NTT Data Corp, AI Inside, Advanced Media
- ETFs: Global X Japan Semiconductor ETF, Global X Japan Robotics & AI ETF

#### **Risks to the view**

While the potential for Japan to gain a competitive edge in manufacturing is immense, there will likely be a hesitancy from companies looking to diversify their supply chains outside China, given the weak labour supply and rising wage pressures in Japan. The reshoring among Japanese companies could also remain limited to production of higher-end products on a smaller scale. A weak yen also means a high cost of imports of raw materials for companies looking to move production to Japan. On the contrary, a sharp appreciation in the yen could reduce the demand for Japan-made consumer electronics and other products. Meanwhile, recent sharp gains in semiconductor stocks could also mean that the expectations of technology advancement have already been priced in.

Smoothing of US-China tensions could slow down or reverse the realignment of global supply chains. Japan has also announced some curbs on exports of semiconductor chips, which could impact earnings of key Japanese chip companies. In addition, any AI-related advancements could be interrupted by regulation risks or energy supply constraints.



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*Prior to joining Saxo Bank, Mads founded one of the biggest Danish crypto-brokers, which was later acquired. Following that, he worked as a trader for one of the world's biggest cryptocurrency brokers in "Crypto Valley" - Zug, Switzerland. His hands-on experience with the crypto industry gives Mads a broad understanding of the world of cryptocurrencies.*

# Is AI the new crypto?

Summary: The AI fever has turned the technology into a darling as capital flows to AI firms, pushing crypto further into no man's land, as fewer people now care about the former favorite in the speculative landscape. Despite the contrasting degree of present recognition, there are striking similarities between AI and crypto. If these similarities are to come full circle, AI is not to be spared for bubbles.

The crypto market is volatile, mostly non-regulated, suffers from a limited track record, and there are wide disputes about whether the market possesses any intrinsic value. No matter one's stance on the latter, there is arguably a broad consensus that these attributes cause the crypto market to stand apart from most other markets. Given this, crypto presents a poor model to be compared to other markets, except if it regards bubbles caused by immature but highly anticipated technologies. In this case, no market is arguably better suited than crypto to set side by side. In doing so, we see remarkable similarities between crypto and the recent rise of AI, including the seemingly one-way street of capital flowing to everything AI.

In recent years, the crypto market has experienced two such one-way streets before the capital pools were emptied causing the bubbles to burst. These bubbles occurred in 2017 and 2021, during which the value of Bitcoin, Ethereum, and various other cryptocurrencies skyrocketed, only to subsequently plummet by as much as 90% in the following year. Not only did the prices rise, crypto projects and firms could during the bubbles raise money as easily as pie, as everyone wanted in on the action, but all of a sudden, nobody seemed to care anymore, leaving merely a few interested in crypto.

**At what point does the market's collective imagination end?**

Crypto and AI have earned great prospects for the future as cornerstone technologies among an ever-increasing crowd. Admitting we fairly share this outlook, we must acknowledge that both crypto and AI are yet to experience wide implementation across the world, having shown limited value creation at present-day. Worse yet, there are no guarantees for at what point the technologies enjoy adequate maturity to be applied widely if ever, but it is roughly guaranteed that folks are to overestimate the short-term significance of AI as with most other new technologies, including previously crypto.

Up to technical maturity, the market judges the technologies fairly blindly based on collective imagination, as Benjamin Graham once upon a time said, "In a speculative market, what counts is imagination and not analysts". Graham, often regarded as the father of value investing, possibly intended his words as a cautionary reminder for any markets, wherein guesswork about the future is a main pillar to assess it. As crypto and AI are not yet well-established technologies, the imagination of the future surpasses the tangible aspects of the present, so rather than relying on concrete data and figures, market participants allow their imagination to shape their perception of the industry's future impact on the world and subsequently its value. This is likely to truly deviate from how AI is to unfold later on, in the same way it has for crypto multiple times.

Besides, this judgment is widely guided by retail investors. The latter was largely absent in the AI rally earlier this year, as many retail investors had reduced their equity holdings upon surging interest rates, but it appears that they have returned in the past few months, particularly to AI-related stocks. We expect the retail flow to continue into AI for it to gradually turn into a new darling of retail, as they enjoy markets with greater risk/reward, similar to crypto and meme stocks, in which retail investors are highly dominant. The noteworthy presence of this fear-of-missing-out crowd in a market led by imagination fuels a cocktail for promising bubbles.

We would be surprised if this cocktail does not involve at least one significant drawback of AI-related tradeable instruments, similar to the history of crypto but not least the dot-com bubble. We expect the market to eventually reassess its projection of the near-term impact of AI, as the technology matures slower than expected and other challenges become evident, including regulatory uncertainty, which AI like crypto is likely to suffer from. Too, except for a select few firms, the unfamiliarity

with to which extent individual firms are to capture the value generated by AI adds to the uncertainty, potentially intensifying excess volatility.

**"During a gold rush, sell shovels"**

One of the select few firms by which the present captured value of AI is clear as day is GPU manufacturer Nvidia. The latter is the leading supplier of the computing required to train AI models, for instance, those by OpenAI. The company has achieved conspicuous revenue growth in the past year, mainly driven by the eagerness of companies to acquire GPUs to not fall between the cracks of the AI rage. In late May, Nvidia said it expects revenue of \$11bn in the second quarter of 2023, far surpassing the average analyst forecast of \$7.18bn. This AI hoarding has sent Nvidia past the \$1tn valuation mark alongside only five other firms, quadrupling its stock price since its 1-year low in October 2022. The \$750bn expansion to

Nvidia's \$250bn market capitalization less than 12 months ago stresses that AI is a speculative market, by which the imagination of investors has persuaded them to expect that something truly great waits ahead.

The story of Nvidia points to the adage that "during a gold rush, sell shovels". The latter suggests that it is more profitable to provide the required infrastructure to those pursuing a booming trend rather than pursuing the craze itself. In the crypto rush of 2021, Coinbase profited heavily by selling picks and shovels by facilitating crypto trading, similar to Nvidia now. In due time, the crypto bubble burst, shortening Coinbase's revenue markedly and bringing an up to 90% drop in its stock price in a single year. Time will tell whether Nvidia is in an everlasting gold rush or the firm is to follow Coinbase's "the higher you climb, the harder you fall"-tale.

Coinbase Sells Shovels: The recent crypto bubble until now



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**Hans Oudshoorn, Investment Coach** *Those who follow Hans know that he invests like a soccer coach. So in his articles and webinars, you will regularly come across robust defenders (fixed income) or phlegmatic flank players (options). Hans also likes to write and talk about investment themes, fund investing and portfolio construction. Hans has worked at Alex, Binck and now Saxo since 2000. He studied International Financial Economics and in 2014 he successfully completed the Senior Investment Advisor course. With the Academy team, he won the Golden Bull – the Oscars of the Dutch financial world – twice. Furthermore, Hans is co-author of the book 'Beleggen voor Dummies' and regular columnist of FiscAlert and regularly contributes to various media.*

[@HansOudshoorn](#)

# Artificial Intelligence, a promising gamechanger for the portfolio?

## **A diversified approach to investing in the AI sector**

**SUMMARY:** The introduction of ChatGPT and Nvidia's recent share price jump have put stocks related to artificial intelligence (AI) on investors' radars. Earnings growth expectations are high and this article aims to highlight ways to get exposure to AI in a diversified way.

# “AI is everywhere in our daily lives.”

On 25 May, Nvidia shares closed 24% higher. In percentage terms, it was not the biggest rise by a listed company ever, but in terms of market capitalisation it was. The company became \$185bn more valuable in a single trading day. An extraordinarily strong outlook for revenue and earnings, well above analysts' consensus estimates, fuelled the rally. The company's leading position as a supplier of GPU chips has put the company in a position to reap maximum gains from increased investments into AI research and deployment. Nvidia's outlook confirmed that the AI hype was real and it put AI on the map like never before.

## What is artificial intelligence?

Artificial intelligence (AI) is the simulation or approximation of human intelligence by machines. It is the ability of a system to correctly interpret external data, learn from this data, and use these lessons to achieve specific goals or tasks.

AI basically has two forms: weak and strong. Weak AI is concerned with research and the development of applications in limited subfields in which behaviours are possible that appear intelligent but are not truly intelligent. Examples include chess computers, chatbots and search engines.

Strong AI deals with research related to creating a computer or software that can reason and solve problems as well as possibly having self-awareness. ChatGPT and generative AI tools are potentially closer to the strong form of AI.

In a nutshell, business processes can be automated and optimised using AI. For example, complex petrochemical companies like Dow Chemical or DuPont de Nemours can use AI to determine when and where maintenance is needed. We also see AI in the form of high-performance surgical robots and it can support doctors in making the right diagnoses, thereby improving treatment plans.

However, there are many more applications. For instance, AI can help detect fraud, but it can also recommend music (Spotify) and movies (Netflix) based on your previous interests and ratings.

In short, AI is everywhere in our daily lives and it is likely that AI will be an integral part of almost every sector in the future. This offers opportunities for investors looking to capitalise on the growing demand for AI technologies and applications.

## Investing in a new technology

The sector is expected to see high growth. In the report '[Global artificial intelligence market size 2021-2030](#)', research firm Statista has calculated that the market will grow from \$100bn in 2021 to \$1.8trn in 2030, equivalent to a 38% annualised growth rate. One should note that this is just one forecast, projecting growth rates for a new technology that we have never observed before.

One way to get exposure to AI is through the 'Magnificent Seven' - Amazon, Alphabet (Google), Apple, Meta, Microsoft, Nvidia, and Tesla. These companies all play a key role in the development and application of AI, but it is worth remembering that the key driver of their earnings is still not AI. Investors should also recognise that investing in individual stocks is generally riskier than diversified investing through a mutual fund or ETF.

There are two UCITS ETFs tracking AI-related stocks that are well-diversified and have acceptable costs: the L&G Artificial Intelligence UCITS ETF and the WisdomTree Artificial Intelligence UCITS ETF. Both ETFs score, at minimum, three out of five globes on Morningstar's Sustainability Rating. However, neither of these ETFs have an overall score yet from Morningstar.

The AI ETF from L&G currently holds 68 well-known and lesser-known positions such as Alphabet (Google), Global Unichip, Nvidia and Shopify, while WisdomTree's ETF holds 62 stocks. These include BlackBerry, C3.AI, Nvidia and Upstart. Running costs are 0.49% (L&G) and 0.40% (WisdomTree) per year, respectively. Both ETFs are traded on several exchanges with euro and dollar denominations available.

The primary objective of L&G's ETF is to track the performance of the [ROBO Global® Artificial Intelligence Index TR](#), while the WisdomTree ETF tracks the [Nasdaq CTA Artificial Intelligence NTR Index](#). So far, both ETFs have done what they are supposed to do: closely tracking the benchmark, excluding costs.

The dividend yield is between 0.25% and 0.75% annually for both ETFs and is automatically reinvested in both cases, as both ETFs are accumulating. The underlying dividend yield across these stocks is naturally low because this sector has very high equity valuations and many of these companies are reinvesting their cash flows into growth.

The key risks to consider when investing in AI-related stocks are naturally the market risk itself, but also the elevated equity valuation for this sector, which could be triggered should interest rates rise further. Growth expectations are very high for these companies, which means that the upcoming Q2 earnings season poses a key test of those expectations. Most of the AI-related companies are US-based and thus there is a considerable USD risk in this theme. Additional information on the risks, historical returns, costs and currency spreads of L&G's ETF can be found [here](#); for WisdomTree's ETF, use [this link](#).

The AI theme has undoubtedly been the biggest surprise this year in global equity markets, and in this article we have highlighted different ways to get exposure to this new technology, which is likely seeing some of the most optimistic expectations for the future since the early days of the internet.

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**John Hardy, Head of FX Strategy** joined Saxo in 2002 and has been Head of FX Strategy since 2007.

*He focuses on delivering strategies and analyses in the currency market as defined by fundamentals, changes in macroeconomic themes, and technical developments.*

[@Johnjhardy](#)

# FX: The USD smile and the JPY dam break

Summary: Q2 brought a reacceleration of central bank tightening expectations, as the impact of the bank turmoil from March faded quickly. The USD is on its back foot as global markets continue to celebrate an eventual Fed rate peak and steady long US yields. On that note, USD shorts are set for a vicious reality check if the US economy remains resilient and core inflation remains sticky, possibly engaging

both sides of the “USD smile” that drive USD strength: the Fed on the warpath and market turmoil. And the stakes are even higher for the Japanese yen if the longer yields of the major sovereign yield curves have to price in a new economic acceleration, as the BoJ will have to eventually capitulate on its yield-curve-control policy.

# *“Markets are overconfident in benign outcomes for inflation and therefore for central bank policy.”*

We composed our Q2 quarterly update in the thick of the fallout just after the March banking turmoil. The cratering of investor confidence at the time and the belief that this would bring forward the end of the central bank tightening cycle due to an incoming credit crunch wrong-footed many, including this analyst. Instead, as core inflation levels nearly everywhere have proven sticky and economies largely resilient, global central banks have largely continued and even resumed tightening rates after a pause. As of late Q2, forward expectations for the Fed policy “terminal rate” have crept back close to the cycle highs from early March, before Silicon Valley Bank’s collapse. Elsewhere, two G10 central banks, the Bank of Canada and the Reserve Bank of Australia, abandoned the pause in their tightening cycles and resumed hiking rates in Q2. So yes, the banking turmoil was a milestone pointing in the direction of further tightening on credit that will eventually lead to an economic slowdown, but it looks like “eventually” will prove much further over the horizon than we anticipated.

The most extreme example of a reacceleration in forward tightening expectations in Q2 was for the Bank of England, which reported an alarming spike in core inflation to a new cycle high of 6.8% in April. This saw the market repricing BoE tightening both higher and longer, extending through early 2024. And yet global risk sentiment continues to soar, as markets apparently continue to believe in a Goldilocks soft landing of disinflation and no recession, or at least an extremely shallow one. That’s the only way to interpret strong risk sentiment in an environment of increasingly inverted yield curves.

### **The USD to smile and potential USD strength in Q3**

Indeed, the markets remain reluctant to believe that inflationary dynamics and the economic cycle will extend much longer and were quick to celebrate the June FOMC rate tightening pause from the Fed, even as Powell and company penciled in two more rate hikes for later in the year. Powell’s declaration of data dependency in the press conference at that meeting has

set up markets for a wild ride in Q3 and Q4 on incoming data releases. The market will be poorly prepared for resilient inflation and activity data and for any ensuing need to reprice the Fed.

This brings us to the “USD smile”, a rule-of-thumb model for what drives the US dollar. The one side of the smile is the USD rising when there is any major form of global market turmoil. When markets are stressed, investors run for safety and scramble for the US dollars needed to service USD-denominated assets, which dominate global liquid assets. Once the Fed intervenes with sufficiently forceful easing to calm markets, the USD retreats.

The other side of the smile that drives USD strength is any aggressive rise in US yields, especially at the front end due to Fed tightening (especially 2022, but arguably also 2015, when the contrast of the Fed’s tightening with the other central banks standing pat or even easing was great). A USD smile driven by a sharp rise in long US treasury yields is possible as well. (For example, most traumatically from one moment to the next in the 2013 “taper tantrum” and again when both the Fed and market forces took the entire yield curve higher in 2018 after the Trump supply-side tax reforms of the prior year).

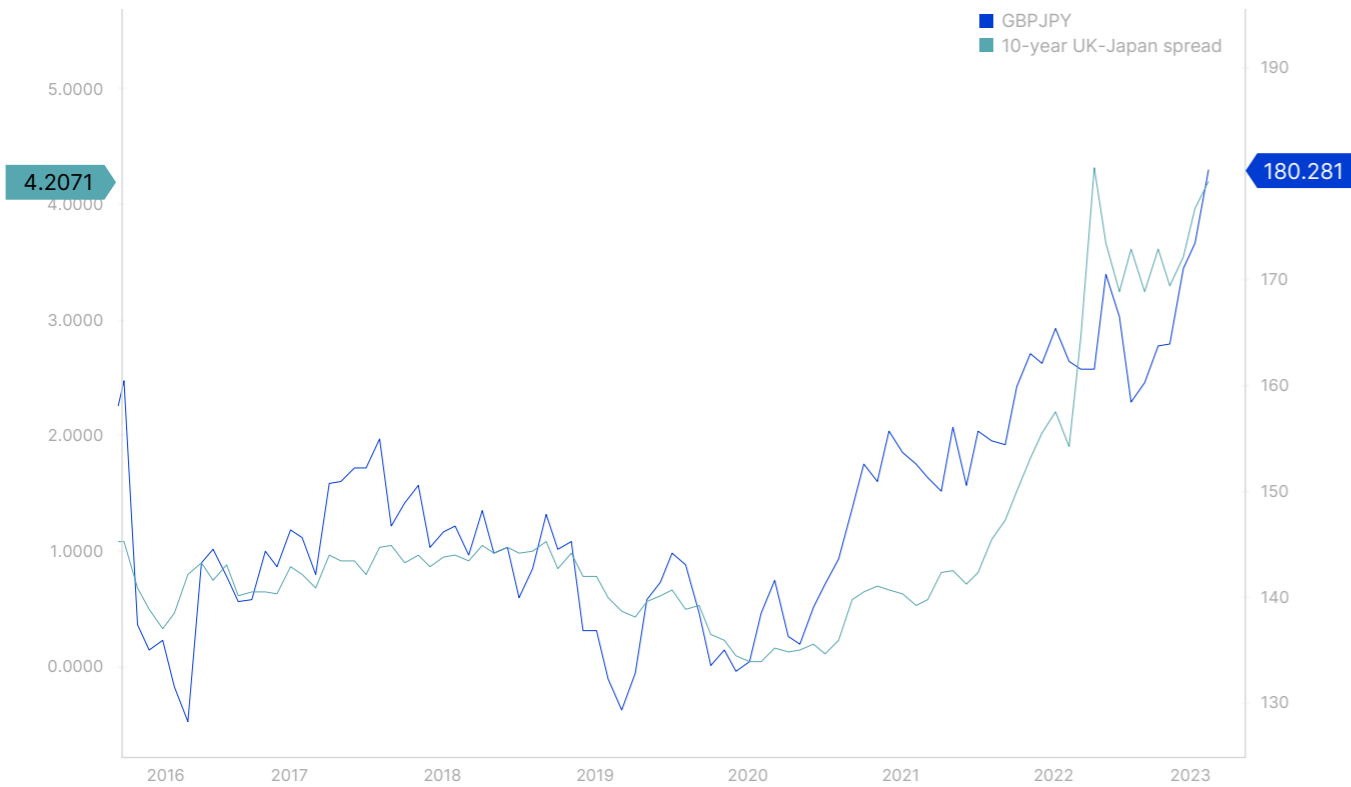
The middle part of the smile is when there is no significant turmoil or when the Fed is not providing any drama. This allows USD direction to yield to external factors and generally means a weaker USD. For example, once the bulk of Fed tightening was priced by late 2022, financial market conditions eased and long US treasury yields had peaked (well ahead of what was the peak (so

far!) at the front end of the curve this March), the USD eased off and more notable developments elsewhere could take center stage. In the case of late 2022, those developments were the ECB coming in more forcefully with tightening. Later, AUD, CAD and GBP grabbed the spotlight on the notable adjustment in policy expectations noted above.

In Q3, our belief is that markets are overconfident in benign outcomes for inflation and therefore for central bank policy. This could engage either or even both sides of the USD smile: sticky inflation and a drum-tight labor market could force the Fed to continue hiking far more than the market imagines as we leave Q2. The most dramatic scenario would be renewed strength in the economy, as this could trigger an unmooring of longer US treasury yields. With global risk sentiment in near euphoria as of late Q2, we’re watching the 10-year US Treasury benchmark, which would threaten a reality check and boost the USD as well on a move to new cycle highs. Sure, as long as incoming data cooperates with the disinflation and soft landing and anchored long US yields narrative, the USD can weaken, but beware the USD smile if the music changes.

**Waiting for the Bank of Japan dam break**

Broad measures of JPY in late Q2 show the currency edging toward the record modern lows posted last fall, even as the weaker USD has meant that USDJPY has yet to challenge the cycle highs. The most obvious driver of the weaker yen in Q2 was the fresh widening of policy spreads, as central banks elsewhere continued to tighten, while the Bank of Japan remains unmoved with its -0.10% policy rate and +/- 0.50% band on 10-year JGB's, or yield-curve-control. Our belief that the economic growth and hiking cycle could extend from here would prove a real challenge for the Bank of Japan and for the very stretched JPY valuation.



GBPJPY has rocketed higher this year as Bank of England expectations have been adjusted sharply higher due to ongoing inflation, while the Bank of Japan seems unmovable on policy. This can extend wildly and/or collapse depending on whether the Bank of England can deliver sufficient tightening to gain inflation credibility at the longer end of the yield curve and whether the Bank of Japan eventually capitulates and moves to unwind its more than ten years of ultra-easy policy and yield-curve control. The GBPJPY chart is shown vs. the 10-year UK-Japan yield spread.

At its first meeting in April under new Governor Kazuo Ueda, the Bank of Japan declared that it would conduct a policy review lasting as long as eighteen months, clearly wanting to at least get to the other side of wage negotiations next March before making a larger policy move and probably crossing its fingers that inflation would just go away. Circumstances may not allow the Bank of Japan to wait so long.

JPY volatility can only accelerate if the global economy shows signs of resurgence, and commodities prices and long sovereign bond yields rise. The JPY has always been more sensitive to longer yields than the policy yields globally, which is the chief reason that USDJPY peaked when it did last fall, coinciding with the peak in long US treasury yields.

As a side note, the Bank of Japan's easy monetary policy is likely one of the key pillars helping to support strong global liquidity and positive risk sentiment that has seen markets rebounding so aggressively off the March turmoil, especially on enthusiasm for Japanese equities (it has been so cheap to hedge the JPY!).

A JPY reset higher on a Bank of Japan capitulation could bring a kind of "dam break" so large that it could drive significant contagion across global markets. Curiously, as of late June, implied options volatility and options skew in JPY suggest a retreating belief in the potential for any JPY volatility. Watch this space: the JPY is the most stretched of all currencies in value terms, and if the bond market is wrong about the cycle, the market could prove wrong in driving the JPY lower on the risk of a BoJ dam break.

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*He focuses on delivering strategies and analyses of the global commodity markets defined by fundamentals, market sentiment and technical developments.*

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# Commodities: Bottoming out?

## **A year-long commodity sector correction showing signs of reversing**

The commodity sector looks set to start the third quarter on a firmer footing after months of weakness saw a partial reversal during June. Multiple developments, some based on expectations and some on actual developments, have all contributed to the strong gains, the most important being renewed dollar weakness

as interest rate gaps narrow, OPEC's active management of oil production and prices, the not-yet-realised prospect for the Chinese government stepping up its support for the economy and, not least, the risk of higher food prices into the autumn, as several key growing regions battle with hot and dry weather conditions.

# *“We could be seeing the first signs of markets bottoming out.”*

Despite continued demand worries led by recession concerns in the US and Europe, the energy sector is holding up – supported by Saudi Arabia's unilateral production cut, rising refinery margins into the peak summer demand season and speculative traders' and investors' belief in higher prices being near the weakest in more than ten years, thereby reducing the risk of additional aggressive macroeconomic-related selling. Elsewhere, we are seeing hot and dry weather raising concerns across the agriculture sector, while also raising demand for natural gas around the world from power generators towards cooling.

The precious metal rally ran out of steam during the second quarter, as surging stock markets reduced the need for alternative investments while central banks continued to hike rates in order to get inflation under control. Inflation may fall further but we increasingly see the risk of long-term inflation staying well above the 2% to 2.5% target area, and together with a growing bubble risk in stocks, continued strong demand

from central banks, and the eventual peak in short-term rates as the FOMC shifts its focus, we see further upside for precious metals into the second half of the year.

From the recent price performance across the different sectors, we could be seeing the first signs of markets bottoming out, with current levels already pricing in some of the worst-case growth scenarios. Data on the US economy is still showing economic activity below trend growth but is also not showing recession dynamics, and earnings estimates have increased substantially, especially in Europe, since the Q1 earnings season started in mid-April. The potential for additional gains from here, however, will primarily depend on whether China can deliver additional stimulus, thereby supporting demand for key commodities from crude oil to copper and iron ore. Weather developments across the coming weeks across the Northern Hemisphere and their impact on crop production will also be key.

## **Gold pausing but a fresh record high remains the target**

Following a strong run-up in prices since November, gold spent most of the second quarter consolidating after briefly reaching a fresh record high. Sentiment is currently challenged by the recent stock market rally and the prospect for additional US rate hikes, thereby delaying the timing of a gold supportive peak in rates. So while the short-term outlook points to further consolidation below 2,000 dollars per ounce as we await incoming economic data, we keep an overall bullish outlook for gold and silver, driven among others by: continued dollar weakness; an economic slowdown, making current stock market gains untenable, leading to fresh safe-haven demand for precious metals; continued central bank demand providing a floor under the market; sticky US inflation struggling to reach the 2.5% long-term target set out by the US Federal Reserve (and if realised, it will likely to trigger a gold-supportive repricing of real yields lower), and a multipolar world raising the geopolitical temperature. In addition, silver may benefit from additional industrial metal strength, which could see it outperform gold. Overall, and based on the expectations and assumptions mentioned, we see the potential for gold reaching a fresh record high above \$2100 before year-end.

## **Dr Copper: building a foundation**

Copper spent most of the second quarter on the defensive, after a less commodity-intensive recovery in China upset expectations for a strong rebound in demand of key industrial metals. However, during June, the prospect of

additional China economic stimulus and falling inventories at exchange-monitored warehouses to a five-month low helped trigger a change in sentiment from hedge funds who, up until then, had traded copper with a short bias.

Additional China stimulus or not, we view the current copper weakness as temporary, as the green transformation theme in the coming years will continue to provide strong tailwinds for so-called green metals, the king of which is copper – the best electrical-conducting metal needed in batteries, electrical traction motors, renewable power generation, energy storage and grid upgrades. Adding to a challenged production outlook as miners see lower ore grades, rising production costs, climate change and government intervention, as well as the ESG focus which reduces the available investment pool provided by banks and funds.

From its current level below \$4 we see the High Grade contract eventually move Higher and reach a fresh record high, potentially not until the new year when the global growth outlook and the central bank rate focus turns to cuts from hiking.

**Crude oil: demand concerns offsetting Saudi supply cut**

WTI and Brent crude oil's sideways trading action since May looks set to continue into the third quarter with global economic growth concerns continuing to be offset by the willingness of key OPEC+ members to sacrifice revenues and market share to support the price. Overall, we believe prices are near a cycle low, but a few more challenging months cannot be ruled out, primarily because of worries that a robust pickup in demand, as forecast by OPEC and the IEA, will fail to materialise. The latter is potentially the reason why Saudi Arabia took the unprecedented step of announcing a unilateral production cut shortly after the group announced production cutbacks.

It all adds up to what could become a challenging few months for OPEC, especially if demand should fail to recover with Saudi Arabia, then raising the pressure on other producers

to curb production. For now, the de facto leader of OPEC has managed to send a signal of support which may help prevent a deeper correction, while an eventual recovery, which we believe will occur, paves the way for higher prices.

Until then, Brent will likely remain stuck in the \$70's before, towards the end of the quarter, eventually breaking back above to the psychologically important \$80 level, thereby shifting the current 70-80 range higher by 5-10 dollars, where it will be trading ahead of year-end.

**Crop production risks downgrade amid rising weather concerns**

Following a year-long retreat, the grains sector joined a rally already well established across key soft commodity futures from sugar and cocoa to coffee and orange juice. The grains sector has sprung back to life amid concerns of the potentially damaging impact of drought

in key production regions across the Northern Hemisphere, where unseasonably dry conditions have been noted across some the key growing areas, from the Black Sea to Northern Europe and, most recently and not least, the US. Weekly data showing the conditions of the three major crops of wheat, corn and soybeans have all deteriorated, and unless dry conditions are reversed soon by rainfalls, concerns about the eventual production results may underpin prices ahead of the harvest season.

These developments are occurring at a time when markets are on high alert for the potential impact of a returning El Niño, and having formed a month or two earlier than most El Niños, the head of NOAA's El Niño/La Niña forecast office said it would give it room to grow, raising the risk of a strong event over the coming months. El Niño strongly tilts Australia towards drier and warmer conditions, with northern countries

in South America—Brazil, Colombia, and Venezuela — likely to be drier and Southeast Argentina and parts of Chile likely to be wetter. India and Indonesia also tend to be dry through August in El Niños.

In addition to these, the prospect of a long drawn-out war in Ukraine challenging supply from the Black Sea region, and China, following domestic weather woes, becoming the world's largest importer of wheat could increase global competition for this sought-after crop -- especially in a year where El Niño may reduce production in Australia, China's biggest supplier of wheat by far.

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*Althea produces Fixed Income research and works directly with clients in order to help them select and trade bonds. Because of her background in leveraged debt, she is particularly focused on high yield and corporate bonds with attractive risk and return.*

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# Fixed Income: To hike or not to hike, that is the question

Summary: Central banks are realising that over a year of aggressive monetary policies might not have been enough to fight inflation. Financial conditions remain loose, governments continue to implement expansionary fiscal policies, and the economy is not decelerating at the expected pace. There is more tightening to do, which will continue to drive yield curves to a deeper inversion in the third

quarter of the year. However, additional interest rate hikes might not work as intended. That's why policymakers must consider the active disinvestment of central banks' balance sheets to lift yields in the long part of the yield curve. As the hiking cycle approaches its end, the corporate and sovereign bond markets will provide enticing opportunities in the front part of the yield curve.

Central banks face a troubling dilemma: should they burst the bubble created by more than a decade of Quantitative Easing (QE), or are they able to fight inflation without doing that?

Hiking interest rates by 500bps in the United States and 400bps in Europe has not done the job as central bankers hoped. The job market remains solid, and inflation is stubbornly sticky and well above central banks' 2% target. All developed central banks have done so far is to drive yield curves to inversion. While an inverted yield curve puts cash-strapped companies at risk,

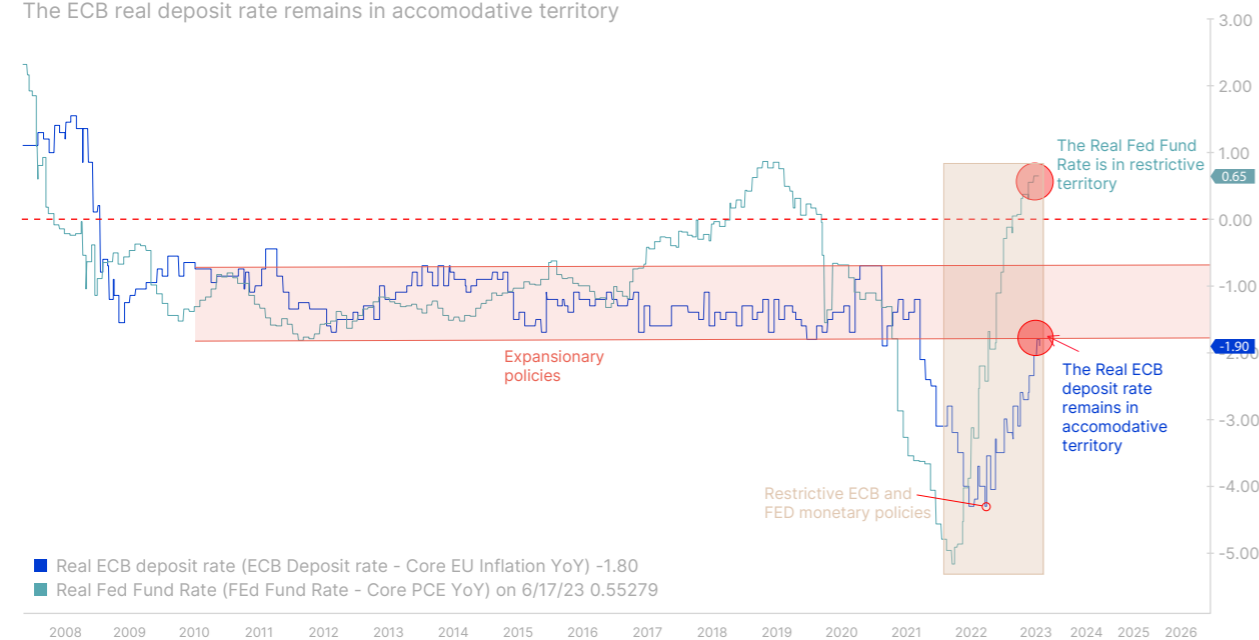
bigger corporates continue to take advantage of lower yields in the long part of the yield curve. Amazon can raise debt at 4.5% and invest at more than 5% in short-term bills. It doesn't take much to understand that such a rate environment would create the wrong incentives. The dream that fighting inflation won't mean putting financial stability at risk is adding to the existing bubble.

Overall, financial conditions remain loose. The Chicago Fed adjusted national financial conditions index is negative, indicating that financial conditions are looser on average than would be typically suggested

by current economic conditions. Similarly, the real Fed Fund rate has turned positive at the end of March for the first time since November 2019, reaching a restrictive posture only one year and 500bps rate hikes later. The ECB, on the other hand, is markedly behind the curve with the real ECB deposit rate in the bottom range it was trading in before Covid, when the ECB was trying to stimulate growth. Yet, governments continue to perpetrate lavish fiscal policies to win the electorate, adding pressure to the dangerous inflationary environment.

*“It doesn't take much to understand that such a rate environment would create the wrong incentives.”*

The ECB way behind the curve  
The ECB real deposit rate remains in accommodative territory



**The way forward: active quantitative tightening becomes preferable over rate hikes**

Despite being officially ended, quantitative easing and big central banks' balance sheets remain the core issue to sticky inflation.

The joint balance sheet of the Federal Reserve and the ECB is above \$15 trillion. Currently, both central banks are not actively selling their balance sheets as they have chosen not to reinvest part of their maturing securities. Calling such a strategy "Quantitative Tightening" is just a way for them to talk hawkish and act dovish. They know that to fight the inflation boogeyman, long term yields need to rise, and the way to do that is to actively disinvest their balance sheets, which are composed of long-term bonds. The outcome might be the opposite if central banks choose to hike rates beyond expectations. The higher the benchmark rate, the more likely

long-term sovereign yields will begin to drop, as markets forecast a deep recession. Such a move would work against the central banks' tightening agenda.

Thus, it's safe to expect that the tightening cycle will come to an end in the second half of the year as more interest rate hikes than those expected by markets would just further invert yield curves rather than have a significant impact on inflation.

As the tightening cycle approaches its end, we expect Federal Reserve and ECB officials to begin to talk about balance sheet disinvestments. At that point, yield curves will begin to steepen, driven by the rise of long-term yields. The front part of the yield curve might start to descend, as markets anticipate the beginning of a rate-cutting cycle. However, if interest rate cut expectations are pushed further in the future, there is a chance that they will remain

underpinned for a period. Yet, this path is less certain, as it depends on the ability of policy makers to keep rate cut expectations at bay and the capability of the economy to endure periods of higher volatility. It is at this point that we expect the market to rotate from risky assets to risk-free assets, bursting the bubble created by decades of QE.

We expect the first central bank to end the rate hiking cycle to be the Federal Reserve, while the ECB will need to hike a few additional times to bring the real ECB deposit rate further up. The Bank of England might need to hike into the new year, diverging further from its peers.

**An alluring entry point for income seekers**

Income-seeking investors should prepare to identify entry points as central banks' policy tightening peaks. As we are entering into a volatile environment, balancing duration and credit risk will be pivotal. Moreover, as uncertainty keeps volatility in bond markets elevated, our preference is to keep duration at a minimum.

Short duration markets, which are the most sensitive to central banks' policies, offer above-average income opportunities. Even if rates rise further in the near future, the yield offered by high-grade bonds is enticing for buy-and-hold-investors. The spread offered by investment-grade corporates with maturity between one to three years over the US Treasuries is 62bps, paying an average yield of 5.04%. According to the Bloomberg US Aggregate Bond Index, that's the highest yield paid by

high-grade bonds with such short maturity since 2007. More strikingly, IG corporate bonds with one to three years' maturity offered an average yield of 1.8% from 2007 to today.

Similarly, high-grade euro corporates with one to three years of maturity pay 4.43%, the highest yield since the 2011 European sovereign crisis, paying 280bps over the past fifteen years' average.

The yield offered by corporate bonds in the UK is much higher than in the United States and Europe. Although for buy-and-hold investors further BOE rate hikes might not represent a threat, it's important to note that credit risk in the UK is higher than anywhere in developed economies due to uncertainty surrounding inflation and future monetary policies agenda. Thus, cherry picking in this space is even more critical.

**Investment Grade corporate bonds**

Maturity in years	United States			Europe			United Kingdom		
	Avg. yield offered	Avg. yield over past 15 years	Spread in bps (yield now - yield 15y avg)	Avg. yield offered	Spread in bps (yield now - yield 15y avg)	Spread in bps (yield now - yield 15y avg)	Avg. yield offered	Avg. yield over past 15 years	Spread in bps (yield now - yield 15y avg)
1 - 3	5,04%	1,58%	346	4,43%	1,63%	280	6,25%	2,12%	413
3 - 5	4,64%	2,37%	227	4,35%	2,05%	230	6,49%	2,79%	370
5 - 7	4,55%	2,89%	166	4,30%	2,46%	184	6,23%	3,49%	274
7 - 10	4,61%	3,22%	139	4,21%	2,85%	136	6,23%	3,91%	232
10+	4,72%	4,01%	71	4,12%	3,01%	111	5,93%	3,97%	196

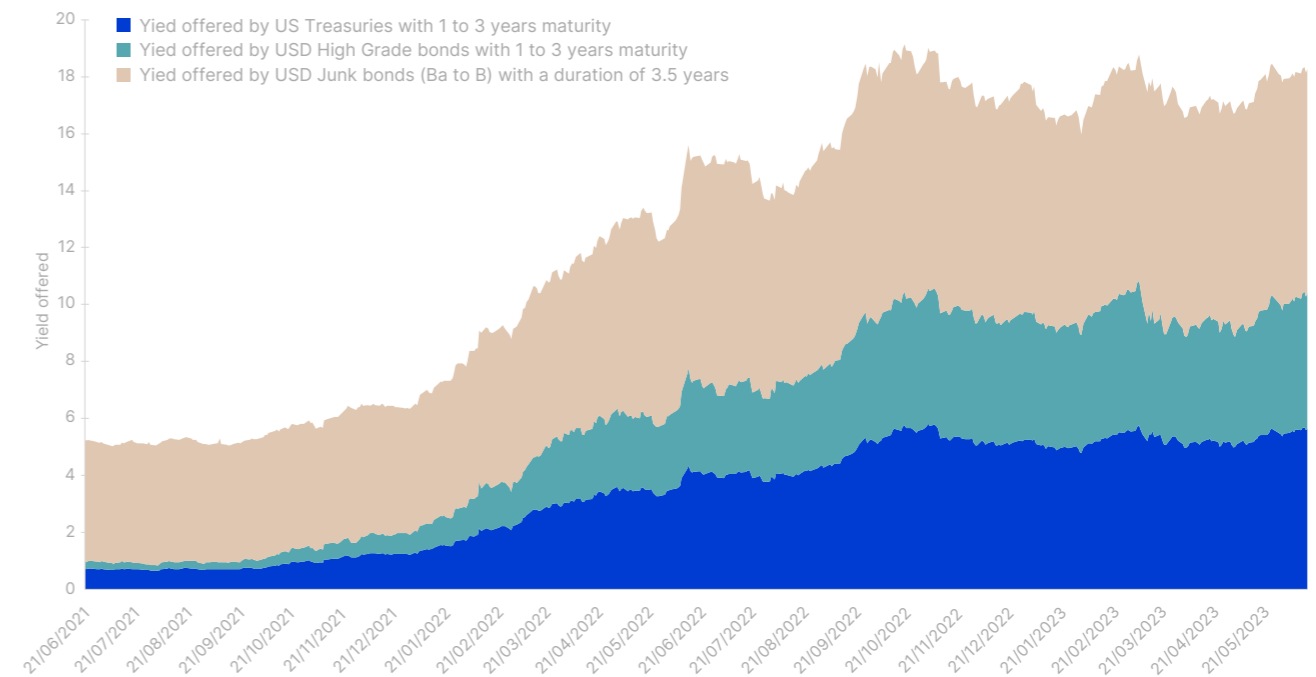
Source: Bloomberg Barclays Indexes, Saxo Group.

**Not only corporate bonds offer enticing returns**

Recent government bond issuance shows that risk-free alternatives to the corporate bond market or even stocks offer good opportunities. In June, the UK debt management office (DMO) sold five-year notes with a coupon of 4.5% and a yield of 4.932% (GB00BMF9LG83). That's the highest coupon offered on five-

year notes since 2012, and the highest yield since 2008. Similarly, the US Treasury issued two-year notes in June with a coupon of 4.25% (US91282CHD65). Also, the German Bund issued in April (DE000BU3Z005) pays a coupon of 2.3%. That's quite staggering if we think that a few years ago, it would have paid a coupon of 0%, providing a negative yield to investors.

**High quality corporate bonds offer enticing opportunities, while junk remains vulnerable to weak growth**



**Artificial Intelligence and the bond market: the great deflation**

In an AI economy, increased productivity and job displacement will exacerbate income inequality. It translates into bigger fiscal deficits as governments initiate education initiatives and social safety nets. As unemployment rises and inflation drops, monetary policies will become

more accommodative, with the possibility of negative rates becoming the norm. Yet, the new regime will come with increased inflation volatility. To avoid that, policy makers will be incentivised to regulate AI and use it selectively in order not to destroy the real economy, producing milder economic effects.

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