

# MARKET UPDATE

*Global financial market developments*

ISSUE 6. March 2024

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## WHO WE ARE

We are a group of part time Master's students specialised in Banking, Finance and Analytics at King's College London, with students joining from all corners of the world.

## WHY WE DO THIS

Inspired by our diverse community, we created this project in order to join our experience and knowledge and apply it to the formation of a unique perspective on markets. We do so by capturing intriguing stories and combining them with detailed market research and data analysis. In such way we support each other to develop stronger analytical skills and become better investors. We are excited to share our analysis with the Finance community, or with anyone who shares the same passion!

## WHAT IT DOES FOR YOU

Our comprehensive analysis spans across multiple crucial domains including the Macro Economy, stocks, bonds, commodities, cryptocurrencies and real estate. Through the in-depth study of these sectors, we aim to offer a holistic view of the financial world which enables our readers to make informed decisions and gain a strong understanding of the complex dynamics at play.

## HIGHLIGHTS

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# Market performance (As of 08.03.24)



## Major Asset Performance YTD

<b>SPX</b>	5123	8,03%
<b>QQQ</b>	439	9,05%
<b>NIKKEI 225</b>	39688	19,23%
<b>HANG SENG</b>	16353	-2,59%
<b>EURO STOXX 50</b>	4961	11,53%
<b>FTSE 100</b>	7659	-0,80%
<b>MSCI World</b>	142,1	7,71%
<b>USD/Euro</b>	1,10	-0,96%
<b>USD/Yen</b>	147,87	4,91%
<b>USD/UK Pound</b>	1,28	0,67%
<b>GOLD (USD/oz)</b>	\$ 2178	5,53%
<b>BTC</b>	\$ 68300	54,64%
<b>Silver</b>	\$ 24,34	2,55%
<b>Copper</b>	\$ 3,88	0,41%
<b>Brent</b>	\$ 82,08	8,16%
<b>US 10Y Treasury</b>	% 4,09	3,62%
<b>UK 10Y Treasury</b>	% 4,09	3,62%

Source: Yahoo Finance & CME Group, QuikStrike

## Treasury Issuance

QUARTERLY ISSUANCE (\$B)				
	2023 Q3	2023 Q4	2024 Q1	2024 Q2
<b>Net Marketable Borrowing</b>	1.010	774	760	202
<b>Bills</b>	678	416	371	-271
<b>FRNs/TIPS</b>	-17	57	11	5
<b>Notes/Bonds</b>	349	301	378	468
Gross	714	807	897	954
Maturities	365	506	519	486
<b>Total Marketable Debt</b>	25.754	26.372		

## ECONOMIC RELEASES

EVENT (Click for Recap & History)	DATE
Inflation Rate MoM	Mrz 12
Core Inflation Rate MoM	Mrz 12
Core Inflation Rate YoY	Mrz 12
Inflation Rate YoY	Mrz 12
PPI MoM	Mrz 14

## CME FEDWATCH TOOL - MEETING PROBABILITIES

MEETING DATE	325-350	350-375	375-400	400-425	425-450	450-475	475-500	500-525	525-550
20.03.2024				0,0%	0,0%	0,0%	0,0%	3,0%	97,0%
01.05.2024	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,6%	21,9%	77,5%
12.06.2024	0,0%	0,0%	0,0%	0,0%	0,0%	0,4%	13,3%	55,2%	31,1%
31.07.2024	0,0%	0,0%	0,0%	0,0%	0,2%	8,7%	40,1%	39,8%	11,2%
18.09.2024	0,0%	0,0%	0,0%	0,2%	7,2%	34,5%	39,8%	16,3%	2,0%
07.11.2024	0,0%	0,0%	0,1%	4,2%	22,7%	37,5%	26,4%	8,2%	0,9%
18.12.2024	0,0%	0,1%	3,1%	17,7%	33,5%	29,4%	13,1%	2,8%	0,2%
29.01.2025	0,0%	1,9%	12,2%	27,5%	31,0%	19,3%	6,7%	1,2%	0,1%
19.03.2025	1,2%	8,0%	21,3%	29,6%	24,0%	11,8%	3,5%	0,5%	0,0%

# The Sun has Risen Again

By Adrian Ip & Thomas Petters

We hope everyone's Chinese New Year wishes came true (mostly the getting rich part), if it did not, we encourage you to try again next year.

To round up February, we have 29 days this month thanks to a leap year, which means we also worked one extra day for free. The NFL recognised Taylor Swift's contribution to viewership by posting a highlight reel of Swift either looking nervous or celebrating when Travis Kelce (her boyfriend) caught the football at the Super Bowl 58 (don't ask why we know). The upcoming US Presidential Election will likely echo the 2020 edition based on the Super Tuesday polls, with Biden and Trump leading their respective parties.

## Things look Bright and Shiny in the Land of the Rising Sun

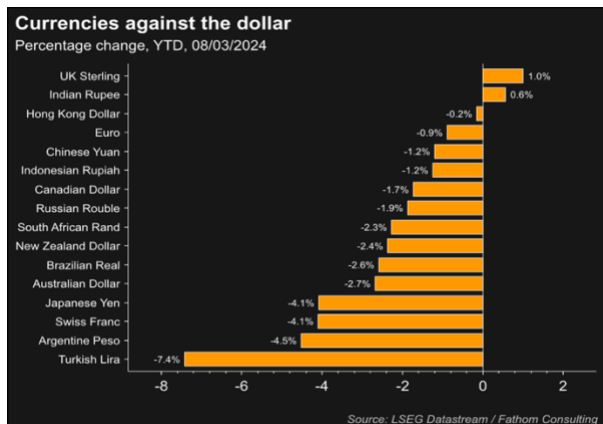
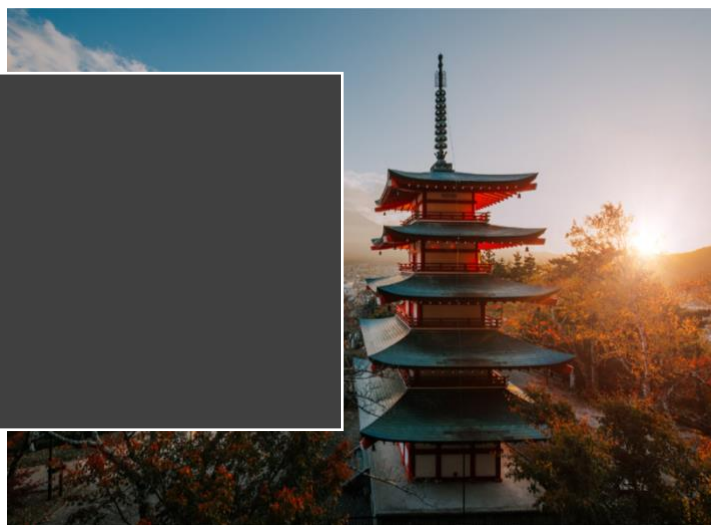
After the Nikkei-225 reached its peak of 38915.87 in 1989, Japan's stock market index for the Tokyo Stock Exchange (TSE), one may argue it was the last time anyone has seen the index or arguably Japan's glory days. The Bank of Japan (BOJ) would raise the interest rates to cool down the overheated stocks, which wiped out half the index' peak by August 1990, and property prices, which left many investors owing a much bigger amount to what they are now worth. This resulted in a sharp decline in consumer and investor confidence, which subsequently led to decades of economic stagnation and deflation.

Some 35 years on, Nikkei 225 reached an all-time high in February (broke the 40,000 level as of March) after Japan's "lost decades". For context, 1989 was the same year when The Cold War ended, The Simpsons and Dragon Ball Z made their TV debuts, Bagel Bites was the cool kid's snack at school and Batman was the highest grossing movie globally. Today's performance is attributed to a few main drivers, namely an AI boom driving semiconductor-related stocks, a weakened yen, TSE initiatives on corporate governance reform, NISA and investors pivoted away from China's stock market.

## How did the new highs come about?

Japan has benefitted from the resilience of the US economy that contributed to a positive knock-on effects for Japan's export sector. Nvidia's strong performance has spurred semi-conductor and AI-related shares such as Tokyo Electron and SoftBank Group (who owns 90% of Arm Holdings plc), which have been a big contributor to the Nikkei 225's performance since January.

The Japanese yen is at its weakest levels since the 1990s (USDJPY = 147, as of 8th March), as it depreciated by 8% and 25% versus US dollar in the past 1- and 5-year periods. This



Yen performance against US Dollar

played a part in fuelling net inflows from overseas investor funds to Japanese equity funds, which rose from 70 billion yen in November to 320 billion yen in December, according to Morningstar Fund Research.

The corporate reforms driven by TSE are directing companies to either explain why the price-to-book value is trading at less than one or improve profitability and support their share prices. The companies could face the prospect of delisting as soon as 2026 if they do not meet the criteria within the transitional and by the end of the improvement period. These initiatives have given global investors confidence that there would likely be sustained improvement in corporate profitability and better capital efficiency, with Buffett's disclosures last May helped achieved 10 straight weeks of net foreign purchases of Japanese equities.

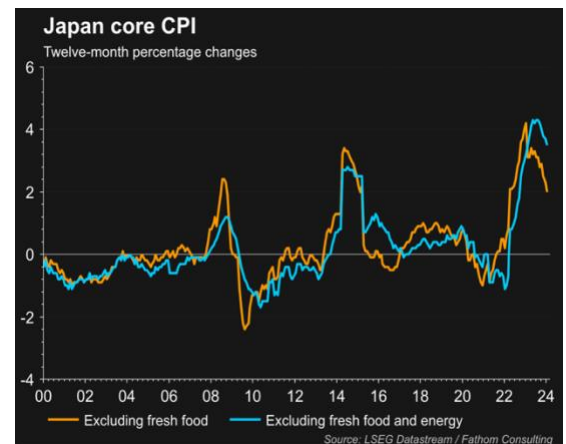
NISA, known as the Nippon Individual Savings Account, which is modelled after the ISA in UK, is a stock investment initiative by the Japanese government to encourage more people save money for retirement with investments. Under PM Kishida's "new capitalism" drive, the program has further increased the investment limits and extended tax-exemption periods since January this year.

As for the reason that led to the pivot away from the Chinese stock market, please see our article from February 2024 titled "No Fear (Just Yet)", where we discussed the biggest cause of concern led by the faltering Chinese real estate sector.

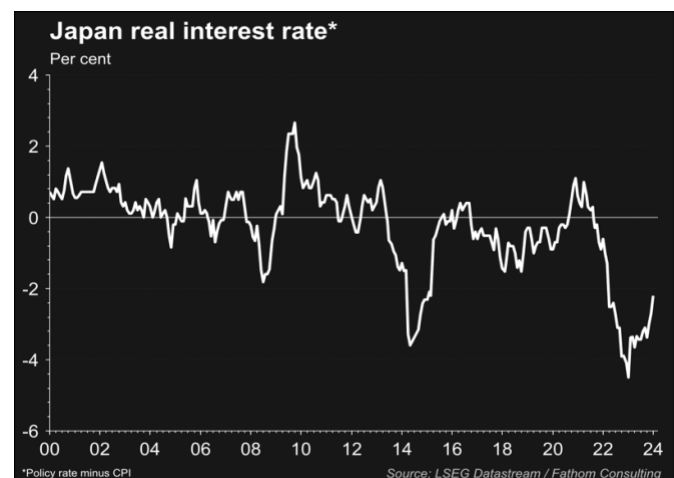
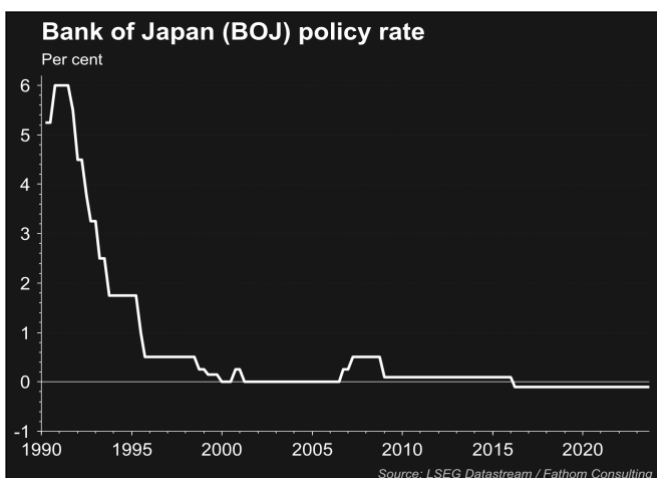
## “Weather” Forecast

Japan has recorded its most significant rise in core-core consumer price index (excludes fresh food and energy) since 1982, at 3.5%, primarily contributed by a weaker yen leading to more expensive imports and a surge in food costs.

The US Federal Reserve is widely expected to cut the interest rates this year after two years of rate hikes, meanwhile the BOJ is likely to wind down its negative interest rate policy since their objective appears to have been met, which is to fire up inflation by pegging the 10-year Japanese government bond yield to 0% and hit the 2% target sustainably. We can see the real interest rate is deep into the negative territory, suggesting there is room for rate hikes that could lead to yen appreciation. A stronger yen could negatively impact the stock prices, especially those that rely on exports such as electronics and auto companies.



Japan core & core-core CPI



BOJ policy rate and real interest rate

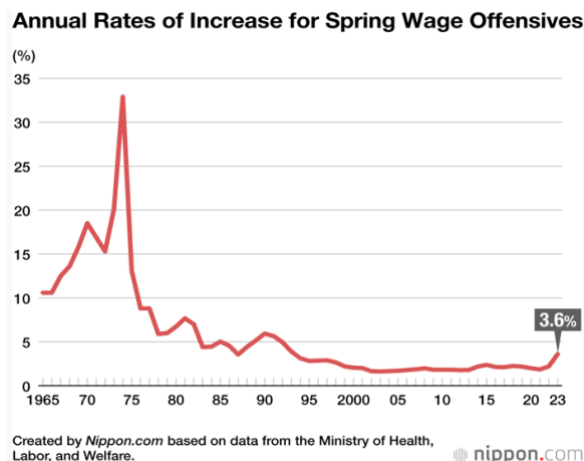
The index “does not look overheated”, argued Ryuta Otsuka at Toyo Securities, as companies are expected to announce record profits for the fiscal year ending in March 2024. It is not hard to see why Ryuta’s comment is reasonable by comparing the current price-to-earnings (P/E) ratio (17 times) to the ratio in December 1989 (more than 60x), where a higher P/E ratio would generally mean the stocks are overvalued. The current P/E ratio for developed markets is approximately 20 times and on an uptrend. Chisa Kobayashi at UBS SuMi Trust Wealth Management pointed out that the economic circumstances today are different to the bubble era. “Japan is starting to see higher inflation and wage hikes at the same time” said Kobayashi, which did not happen in the 80s.



*Developed Market P/E ratio*

Not everyone is convinced, however, that this is sustainable, Bart Wakabayashi at State Street voiced his concern that “We’re approaching bubble statue here.... Living in Tokyo, it feels like a bubble, particularly if you look at real estate.”. Over the past five years, prices of new apartments in Tokyo have skyrocketed by nearly two-thirds.

It is important to learn from the bubble era that realising pay rises are crucial to mitigate economic disparity, as the gap between the have and have-nots widened, “only those with financial resources can invest” said Asuka Sakamoto, chief economist of Mizuho Research & Technology. Hence the outcome of “spring wage offensive” (known as shunto in Japan) will be crucial this spring, as labour unions of companies present specific demands to management and engage in collective bargaining for wage increases.



Mark Twain allegedly once said: “History never repeats itself, but it does often rhyme.” Whether it becomes another bubble, or the stock market will ascend in a controlled manner remains to be seen. It could easily be a sunset disguised as a sunrise.

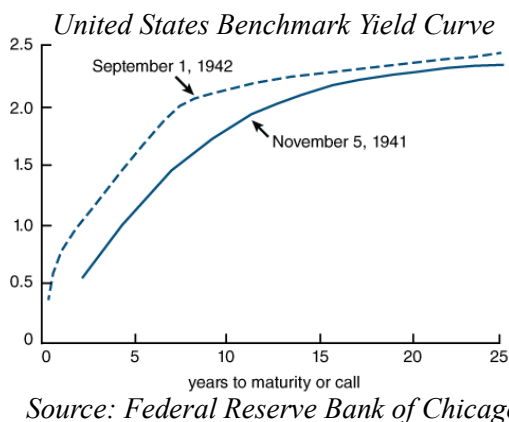
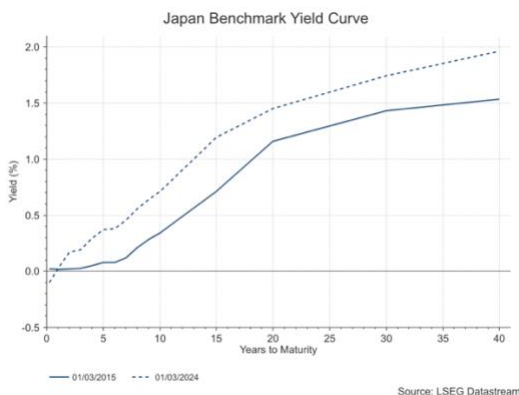
## **Is Yield Curve Control (YCC) coming to an end in Japan, thus closing a historic chapter of the BOJ's unprecedented monetary policy regime?**

Yield Curve Control (YCC) has been notably implemented by the Bank of Japan in 2016 alongside its quantitative and qualitative monetary easing (QQE). These very loose policy approaches are usually adopted by countries facing substantial expenditures or struggling with economic challenges. While Japan's active management of its yield curve sets it apart in contemporary times, it parallels the documented policies of the Federal Reserve during and after World War II.

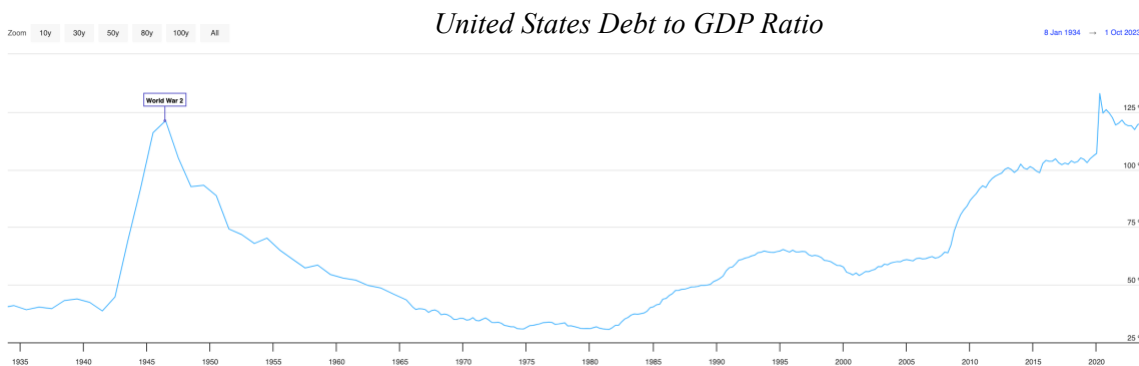
Yield Curve Control (YCC) policies are typically adopted by countries confronting significant expenditures or grappling with economic challenges. Japan, therefore, implemented YCC due to difficulties in achieving sustainable growth and consumer price inflation, while the United States implemented YCC during World War II to manage borrowing costs amid massive wartime spending.

Similar to traditional policy rate management, YCC targets specific segments of the yield curve to regulate interest rates. While central banks typically influence short-term rates through policy rates, YCC directly addresses longer-term rates by imposing interest rate caps on specific maturities. If yields stay below the cap, no action is taken. However, if they surpass the cap, the central bank intervenes by purchasing securities of the targeted maturity, thereby increasing demand, boosting prices, and lowering yields.

Currently, rumors are increasing that the Bank of Japan will end its YCC policy, thus marking the end of a contemporary chapter in history. However, while Japan, regarded as a trailblazer in experimental monetary policy, aims to move past this policy, many fear that similar measures could be introduced in other developed economies due to escalating government debts. We therefore would like to take a brief excursion into the FED's YCC policy during the 1940s.



While the situation in the early 1940s was in many ways different from today, U.S. debt also soared in an unsustainable manner. Therefore, the Federal Reserve was tasked with continuously purchasing securities to maintain the targeted rates, leading to a relinquishment of some control over its balance sheet and the money supply. With the public showing a preference for higher-yielding, longer-term bonds, the Fed started purchasing a significant quantity of short-term bills to sustain the low interest rate peg, thereby also increasing the money supply. Similar to the present day, the Federal Reserve was tasked with managing inflationary pressures stemming from the growth in money supply due to high levels of issuance and a mounting debt burden, all while striving to sustain GDP growth.



Source: [www.longtermtrends.net](http://www.longtermtrends.net)

At the same time, the U.S. experienced significant gold inflows following the devaluation of the dollar in 1934, as well as capital flight from countries at war and from payments for war materials. As a result, the commercial banks' excess reserves reached a record level by 1940. To manage reserves during the war and to get some relief, the Fed introduced a special facility for Treasury bills, effectively incentivizing banks to invest in them rather than hold excess reserves. This facility mirrored the modern-day Interest on Excess Reserves (IOER) mechanism.

Between December 1941 and June 1943, banks transitioned a substantial portion of excess reserves into Treasury bills, amounting to approximately 40 percent of the increase in supply of T-bills during that period. To curb inflation and expectations, the Roosevelt Administration initiated price controls in May 1940, which intensified by mid-1941 and were rigorously enforced by June 1942. Despite occasional complaints, the public, including the business sector, generally supported these controls. They persisted until November 1946, effectively managing inflation expectations.

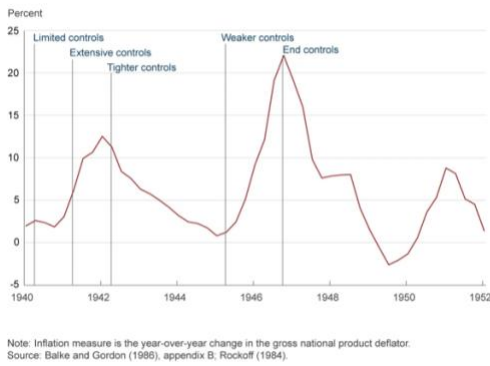
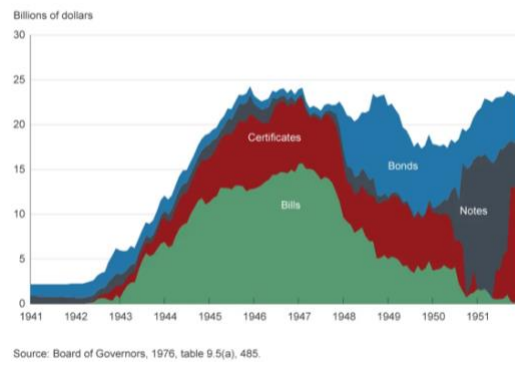


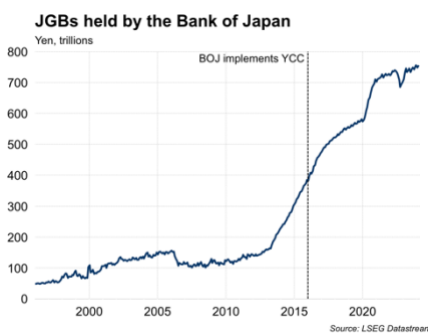
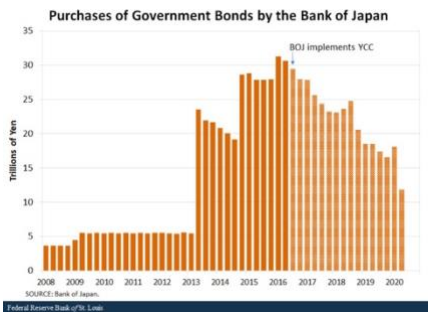
Figure 2. The Federal Reserve's Government Securities Portfolio



Under the Fed's yield-curve-control program, the central bank purchased \$20 billion worth of Treasury securities, primarily Treasury bills, between March 1942 and August 1945. Although the Fed supported the longer-term Treasury market initially, private demand for these securities remained strong throughout the war, leading to a reduction in the Fed's holdings of long-term Treasury bonds over time.

With a record issuance of short-term Treasury Bills and persistent pressure on long-term government bond yields, a monetary policy resembling yield curve control could also come back into fashion in the USA, as well as in the UK and Europe over the coming years.

## What were the evident impacts of YCC in Japan?



YCC was implemented alongside Japan's quantitative and qualitative monetary easing (QQE) and negative interest rate policies to enhance management of debt issuance and servicing costs. QQE involved annual bond purchases of approximately 100 trillion yen until 2016, significantly expanding the Bank of Japan's balance sheet. With the introduction of YCC within the QQE framework, bond purchases decreased to around 70 trillion yen by 2019. Despite these changes, the monthly inflation rate, measured by the year-over-year percent change in the Consumer Price Index (CPI), has consistently remained above zero since the implementation of YCC. After eight years of actively managing its yield curve, Japanese policymakers anticipate inflation levels to stabilize at the target level in the years ahead.

It will be intriguing to observe the consequences should the BOJ decide to transition away from its current YCC regime. While past Japanese policymakers may view the regime as successful, it's crucial to recognize that every policy carries drawbacks. One major concern of market participants and analysts is that YCC could distort market signals, potentially reducing the value of information that monetary policymakers derive from the Treasury market.

## Conclusion

The proposed end of YCC closes a chapter of BOJ's attempt to control the shape of yield curve. Japan is not the first and will not be the last country to utilise YCC, the effectiveness however, varies by country and the economic situation it faces. It will be interesting to watch, if and how clear the YCC exit strategy is communicated by BOJ Governor Kuroda to the public. Given the widespread expectation that the Bank of Japan will maintain its ultra-loose monetary policy, it will be intriguing to monitor the future evolution of government bond durations and whether the yen can regain strength against other major currencies in the coming months.

# With rate cuts on the market watch, we learn how to tell the time.

By Ali Cem Tezel and Evgenia Raevskaya



## What do current rates whistle?

As of 8<sup>th</sup> of March 2024, the yield of U.S. 10-Year Treasury bond is at 4.07% which reflects 20 basis-points increase since the beginning of February. The highest yield on 10-Year bonds was on 4.33% which was seen on 22<sup>nd</sup> of February during the period. In the meantime, U.S. 10-2 Year spread has been diminished by 7 basis-points and currently stands at -0.40% whereas U.S. 2-Year Treasury yields 4.47%.

Last month, we have pointed out the divergence between the market expectations and FED's path and asserted the market pricing led to yields that are way lower than the justified levels.

Following the release of January CPI (Consumer Price Index) results in the beginning of February the yields started to climb as core CPI came in as 3.8% way above the current inflation target. Alternatively, FED's preferred gauge core PCE (Personal Consumption Expenditures) which is less volatile than core CPI was 2.8% for January and continued its downward trend. As a result, the treasuries rallied as yields came down.

10-Year TIPS yields could not catch the movement in the 10-Year treasury yields. This is evident for all maturities. As TIPS yields fall short compared to treasury yields this indicates that the real interest rates are falling, and inflation expectations (breakeven) are rising. Given the uncertain outlook ahead, we still think that there is a significant potential for the U.S. treasury yields on the upside before they indicate a balance.

Chart 1: U.S. 10-Year Treasury Yield



Source: Investing.com

Table 1: Treasury yield performance as of 10.03.24

NAME	COUPON	PRICE	YIELD	1 MONTH	1 YEAR	TIME (EST)
GB3:GOV 3 Month	0.00	5.23	5.38%	+0	+41	3/8/2024
GB6:GOV 6 Month	0.00	5.08	5.30%	+3	+8	3/8/2024
GB12:GOV 12 Month	0.00	4.68	4.92%	+6	-21	3/8/2024
GT2:GOV 2 Year	4.63	100.28	4.47%	-1	-40	3/8/2024
GT5:GOV 5 Year	4.25	100.91	4.05%	-9	-15	3/8/2024
GT10:GOV 10 Year	4.00	99.39	4.07%	-10	+17	3/8/2024
GT30:GOV 30 Year	4.25	99.95	4.25%	-12	+40	3/8/2024

Source: Bloomberg



## Correction of expectations

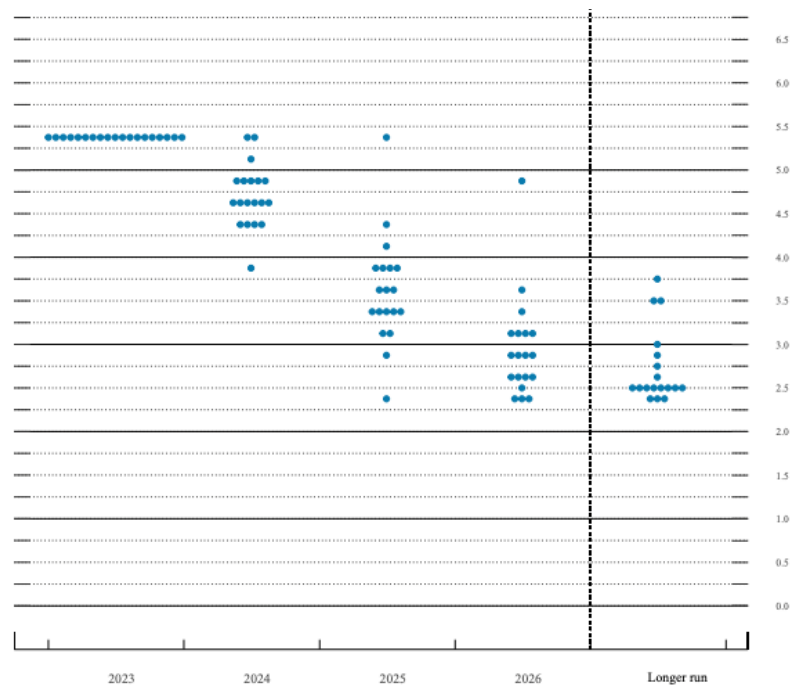
This month, the market sentiment had aligned with the prevailing guidance, reinforced by FED Chair Jerome Powell who further highlighted a cautionary stance regarding rate cuts at Congress. Returning to the CME FED Watch tool, (as of the 5th of March) we may observe corrections in market perception to a 3% probability of a 25 bps rate cut, and 75% probability of rates being held stable for the March FED meeting. Furthermore 76% expect rates to be held steady at the May meeting, and the first rate cut to be delivered in June. There is also a clear reduction in the number of total expected rate cuts. In January market prediction was 5-6 cuts, which now fell to 3-4 cuts, with 62% probability of rates to be in a 425-475 bps range by the end of 2024. Loose financial conditions and reports of good economic performance further support the notion that rate cuts would occur towards the end of the year, rather than in the immediate future. In order to obtain better estimates, the circumstances under which such cuts may begin are worthy of notice, and economic conditions should be closely monitored.

## Connecting the dots

Chart 1 displays the latest FED dot plot, as of 13th December 2023. The dot plot provides a better idea regarding opinions of FOMC members about future rate movements. It is updated quarterly, with each dot representing the projection of an individual FOMC member. The latest projections show that most officials expect a total of 3 rate cuts for 2024, and rates within the 4.50-5.00% range by the end of the year. Furthermore, rates were expected to reach a 2.75-3.00% range by the end of 2026. This implies a rate reduction of 2.5% from the beginning of 2024, to the end of 2026, and translates to a total of 10 cuts within 3 years.

From this an important observation can be derived. The FED uniformly expects rates to reduce from a peak of tightening, and for that reduction to begin late 2024, and continue onwards. Currently we may see that the FED are waiting, with inflation concerns cited as the primary cause. However, if we connect the rates trajectory to economic cycles based on historical data, it becomes evident that performance of multiple other economic indicators could lead up to a rate reduction. Although an argument can be made that such projections aren't stable, and can change in line with the changing economic environment, the recent forward guidance delivered by FED officials, suggests no drastic change in expectations as of today.

*Chart 1: FOMC participant assessments of appropriate monetary policy. Midpoint of target range or level for the Federal Funds rate 13.12.2023.*

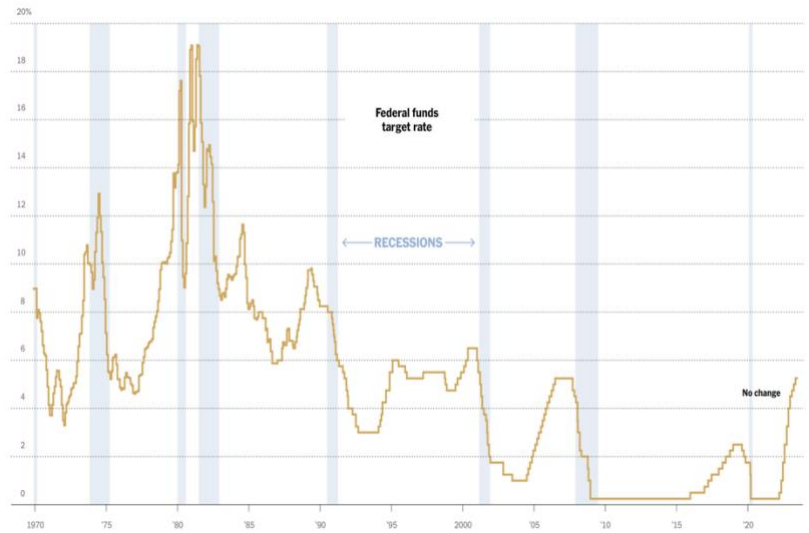


Source: FOMC

## A standard course of events

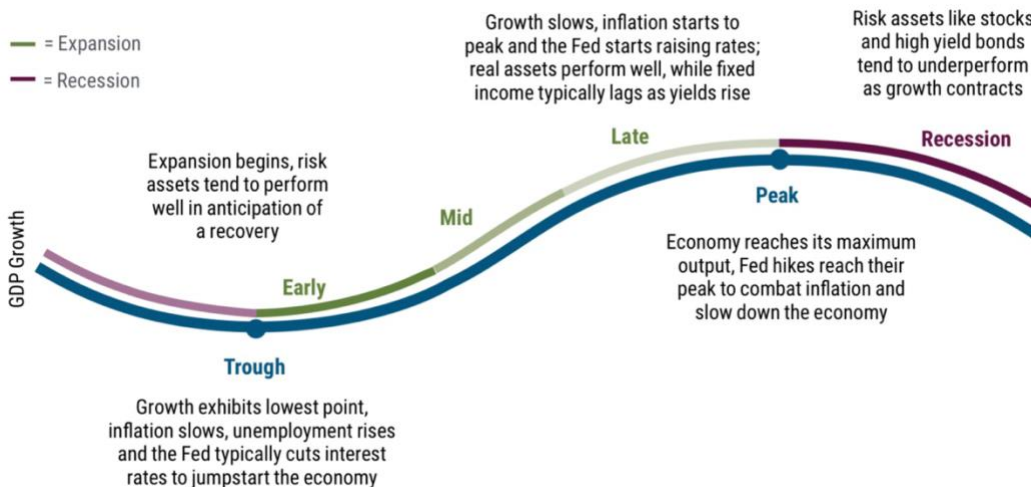
In the current subject matter, one aspect appears to be considerably overlooked. Many a time since the last rate hike in July 23, Jerome Powell had mentioned that the peak of the tightening cycle had been reached. As discussed earlier, the dot plot also confirms FOMC participants increasing expectations of rate cuts going forward. It is well known that past performance is not indicative of the future, unless a movement is cyclical. In this case we look at the relationship between the interest rates and the economic business cycle. Chart 2 reflects the cyclical nature of economic performance, over the past 50 years. We may observe a recessionary period 8/10 times, following a cycle of interest rate hikes. In some cases rates were held steady for some time, which was followed by a recessionary period and rate cuts simultaneously. Exhibit 1 provides further explanation of rate movements at each stage of the business cycle.

Chart 2: FED rates and recessionary periods, 1970-2023



Source: New York Times.

Exhibit 1: Phases of the business cycle.



Source: PIMCO

The current evidence from FED predictions, as well as the current market performance, reflect that we may be at the peak of a cycle. This could mean that the FED may begin cutting rates once economic indicators signal a recession. Such economic indicators include GDP growth, JOLTS data (Wage growth, jobless claims, unemployment rate, labor force participation) Conference Board's Leading Economic Index (LEI) which follows the turning points in a business cycle and reflects where the economy is heading, U.S. 10 Year – 3 Month (10-2 Year alternatively) Treasury spread and the state of the yield curve, money supply etc. Currently the indicators present mixed information. For example, treasury spreads indicate an onset of recession, while employment statistics signal improvements in economic performance. This may provide further reason to hold rates steady for longer, until the time of greater certainty about the direction of economic performance. Furthermore, evidence suggests a correlation between the rate and the business cycle. Therefore it is possible to build predictive models in order to estimate the timing of the rate changes. Such model may be based on the relationship between multiple economic indicators and the FED funds rate, where indicators are independent variables and rate is the dependent variable over time.

# Gold rallies to historic highs

By Nikol Elia



## Key points:

- Driven by increased expectations of Fed rate cuts and falling U.S. real yields, alongside with striking demand by Chinese investors and central banks, gold prices hit new records.
- On 8 March 2024, spot gold closing price rallied to USD 2,179.16/oz.

## Why are gold prices rising?

In the past couple of months, economic challenges and geopolitical instability have expanded the global demand for gold, driving prices to record highs. On the one hand, demand for gold increased over investor concerns around the geopolitical situation with the Israel-Hamas and Russia-Ukraine conflicts. On the other hand, growing expectations of Fed rate cuts and falling U.S. real yields boosted gold prices. Firstly, lower yields imply that the opportunity cost of holding gold is decreasing, hence driving up the demand for gold. Secondly, lower borrowing costs can stimulate economic activity and increase the money supply, which may lead to concerns about inflation and currency devaluation. In such scenarios, investors often turn to gold as a hedge against inflation and currency fluctuations, further bolstering its appeal during periods of low borrowing costs.

Another key driver of the record high gold prices are the striking levels of gold purchasing by Chinese consumers and increased demand by central banks. Chinese investors turned to the safe-haven asset following local property and stock markets crash. Central banks globally have bought 1,037 tons of gold in 2023 in efforts to hedge against inflation and reduce reliance on the USD.

## Gold and its timeless allure

From ancient times to the modern era, gold has held a revered status. It not only symbolizes wealth and serves as a vital industrial metal, but also throughout history, gold has functioned as a pillar of stability, enduring economic fluctuations, and geopolitical uncertainties. Gold is widely perceived as a safe-haven asset and a reliable store of value. It has low correlation with other asset classes and can play a key role in a diversified portfolio. In the long run gold tends to maintain its value in terms of real purchasing parity (Harmston, 1998)<sup>1</sup>.

To date, approximately 245,000 metric tonnes of gold have been discovered, of which only  $\frac{3}{4}$  have been mined. From discovery to mining, the process can take on average 16.9 years. Therefore, the total supply of gold can be considered static and fundamentally, the demand for gold has a greater impact on its price.

Furthermore, considering its financial characteristics - lack of credit risk and absence of income generation - gold prices typically decline as yields on alternative low-risk assets increase, and vice versa. Monetary policy decisions such as interest rate changes, driven by economic data, affect the opportunity cost of gold and thus influence its price. As demonstrated in Figure 1, typically there is an inverse relationship between gold prices and the 10-year real yields.

Currency changes may also affect the price of gold. Internationally traded gold is denominated in USD; Hence when the USD loses value, investors may look at gold as a store of value and foreign investors may take advantage of the weaker USD to invest in gold.

<sup>1</sup> Harmston, S. (1998). *Gold as a Store of Value*. Centre for Public Policy Studies, The World Gold Council.

Figure 1: Gold prices are heavily influenced by 10-year real yields



Source: Bloomberg, PIMCO data

Figure 1 shows the logarithm of the inflation-adjusted price of gold and the 10-year real yield from the U.S. Treasury Inflation-Protected Securities (TIPS) market. Using the logarithm makes the size of a given percent change constant over time (gold prices increased from \$830, in today's dollars, to more than \$1,800 over this period, so a \$100 move in 2006 is not the same percentage change as a \$100 move in 2022). We also divided the gold price by the U.S. Consumer Price Index (CPI) to control for the general increase in real asset values over time. Since we expect gold prices to rise when real yields fall, we have inverted the axis of the 10-year real yield.

As of 31 May 2022

Source: PIMCO (2022)<sup>2</sup>

## Outlook for 2024

- J.P. Morgan<sup>3</sup> expects gold prices to hit USD 2,175/oz by the fourth quarter of 2024, before peaking at USD 2,300/oz in the third quarter of 2025.
- UBP<sup>4</sup> estimates that in 2024 gold prices will move to USD 2,200/oz, with risks placed firmly on the upside of this level.
- Goldman Sachs<sup>5</sup> anticipates gold prices to increase by 6% to USD 2,175/oz in 2024.
- Pictet<sup>6</sup> predicts that in 2024 gold prices will go up to USD 2,100/oz.

Various financial institutions predict a general upside trend for gold in 2024. The closing price of gold on 8 March 2024 hit USD 2,179.16/oz, surpassing the levels predicted above. However, a moderate upside trend is expected to persist. The mounting geopolitical instability, economic uncertainty, and anticipation of Fed rate cuts later this year present compelling arguments to support this belief.

<sup>2</sup> PIMCO (2022), *Understanding Gold Prices*. <https://www.pimco.ch/en-ch/resources/education/understanding-gold-prices>

<sup>3</sup> J.P. Morgan (2024), *Will gold prices hit another all-time high in 2024?*. <https://www.jpmorgan.com/insights/global-research/commodities/gold-prices>

<sup>4</sup> UBP (2024), *A Glittering Outlook: Gold Promises to Shine in 2024*. <https://www.ubp.com/en/newsroom/a-glittering-outlook-gold-promises-to-shine-in-2024>

<sup>5</sup> Goldman Sachs (2024), *Gold prices are forecast to rise 6% in the next 12 months*. <https://www.goldmansachs.com/intelligence/pages/gold-prices-are-forecast-to-rise-six-percent.html>

<sup>6</sup> Pictet (2023), *Precious metals: 2024 outlook*. <https://www.pictet.com/ch/en/insights/precious-metals-2024>

# Saudi Arabia & GCC Real Estate Market Update

By Awad Bajair



## January 2024: Real Estate Future Forum 2024 Riyadh, Saudi Arabia:

The property sector in Saudi Arabia is poised for significant growth, with more than 50 deals totalling approximately SAR100 billion (\$26.6 billion) finalized during the Real Estate Future Forum. The recently concluded event, themed "The Power of Resilience: Building a Sustainable and Prosperous Real Estate Future," focused on exploring innovation, key challenges, emerging trends, and sustainable financing solutions within the property market, as reported by the Saudi Press Agency. The forum aligns with the Kingdom's objective of achieving 1 million housing units through initiatives led by the National Housing Company (NHC) and companies like ROSHN (a PIF company). Additionally, the event addressed the influence of natural factors on the industry and its role in elevating business standards.

A dialogue session titled "The Integrative Role of the Non-Profit Sector in Real Estate Service" delved into matters concerning the non-profit sector (also called the 3rd sector), its governance, support for vulnerable families, and housing provision for those in need to ensure social justice, stability and equality. Abdul Rahman Al-Aqil, Deputy Governor of the General Authority for Endowments, elucidated significant sectoral transformations and efforts to develop customer-centric products. He underscored the importance of stakeholder collaborative agreements to foster sustainable homeownership goals.

In another session titled "Leading Transformation in Decision-Making," Minister of Justice Walid Al-Samaani announced implementing a real-estate identity system for inheritances to prevent documentation duplication and ensure a unified electronic platform for estate division. This initiative expedites the division process and streamlines procedures from the deceased owner's estate to the rightful heirs.

The event convened 300 speakers from 85 countries, including government officials, private-sector representatives, economists, investors, decision-makers, and real estate experts from local and global spheres. It encompassed over 30 dialogue sessions and 25 workshops addressing critical strategic themes.

## February 2024: General Authority for Statistics Report

According to official data from the General Authority for Statistics, Saudi Arabia observed a modest 0.7% increase in its real estate price index in 2023, primarily driven by a surge in residential sector prices. The average prices in the housing sector saw a 1.1% rise compared to the previous year, primarily due to a 1.2% increase in land plot purchasing expenses. Similarly, apartment prices experienced a slight uptick of 0.8% in 2023 compared to 2022. However, there was a marginal decline of 0.1% in house prices, while villa expenses dipped by 3.2%

during the same period. In contrast, real estate prices in the overall commercial sector slightly diminished by 0.1% in 2023 compared to 2022, with commercial buildings and centres remaining stable.

Additionally, prices in the agricultural sector witnessed a 0.3% decline in 2023. Another report from the General Authority for Statistics (GASTAT) revealed that Saudi Arabia's real estate index for the fourth quarter of 2023 remained steady, rising by 0.2% compared to the previous year, primarily due to increased residential property prices. However, declines in commercial real estate by 0.5% and the agricultural sector by 0.1% helped contain the overall rise in the index. The residential sector's significant weight notably impacted the general index.

Abdullah Saud Al-Hammad, CEO of the Kingdom's Real Estate Authority, highlighted at the Future Real Estate Forum in Riyadh that the real estate sector in Saudi Arabia is undergoing significant transformations and plays a crucial role in the economy, contributing significantly to the gross domestic product. Additionally, Ahmed Al-Rajhi, Saudi Arabia's minister of human resources and social development, emphasized the role of property development in job creation and sectoral advancement in the Kingdom.

### March 2024: CBRE Report:

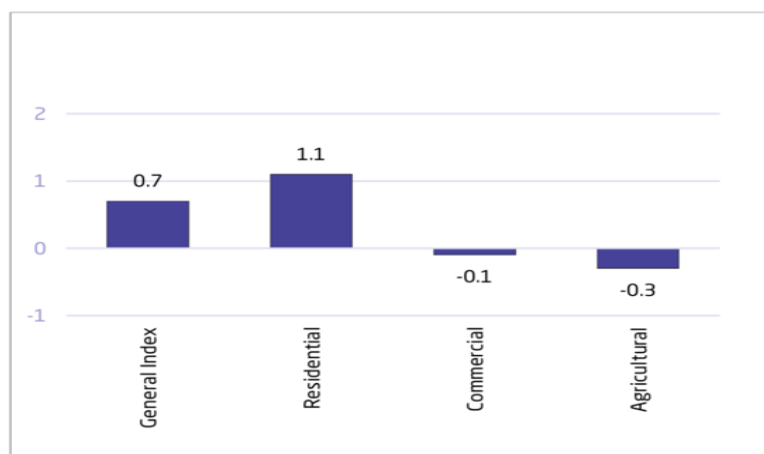
Saudi Arabia is leading growth in the Gulf Cooperation Council's real estate sector, comprising 63.1% of total projects in the region in 2024, as indicated by a recent report from consultancy firm CBRE. The report highlights a significant increase in the total value of projects across the GCC, estimated at \$1.68 trillion in 2024, up from \$1.38 trillion the previous year. Of this total, the Kingdom accounts for \$1.06 trillion. The UAE follows with \$409 billion. Oman contributes 5.2%, Kuwait 3.2% , Qatar 2.9%, and Bahrain 1.3%.

CBRE's report underscores the integral role of real estate projects in the GCC's diversification strategies. Taimur Khan, CBRE's Head of Research for the Middle East and North Africa region, notes that the region's positive economic outlook and robust inbound investment levels are expected to support continued demand in the real estate sector. CBRE observes predominantly positive price performance throughout 2023 in the residential market, albeit with varying growth rates. This trend is expected to persist, reflecting ongoing demand dynamics.

The report anticipates sustained upward momentum in the Middle East real estate market in 2024, driven by strong economic growth, high demand, and limited supply. Office sector occupier activity is expected to focus on Riyadh, which is supported by national and international demand. However, global economic challenges and limited stock in crucial GCC markets may temper market activity in the office sector.

CBRE forecasts that Riyadh will experience significant average price growth in the residential sector compared to other key cities in Saudi Arabia. The Kingdom is poised for a promising transition in the hospitality sector in 2024, with preparations underway to accommodate visitors to its tourist destinations. CBRE notes that Saudi Arabia's hospitality landscape is evolving, with new destinations emerging alongside established leisure hubs like Al Khobar, Jeddah, and Abha, leading to increased competition in the market.

Annual real estate price index for 2023 (%)



Source: Saudi Arabian General Authority for Statistics

# Macro outlook figures:

Figure 1: GCC Countries, GDP, YoY % Change

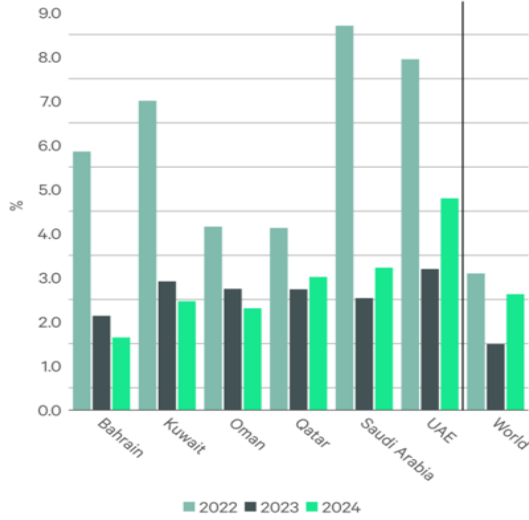
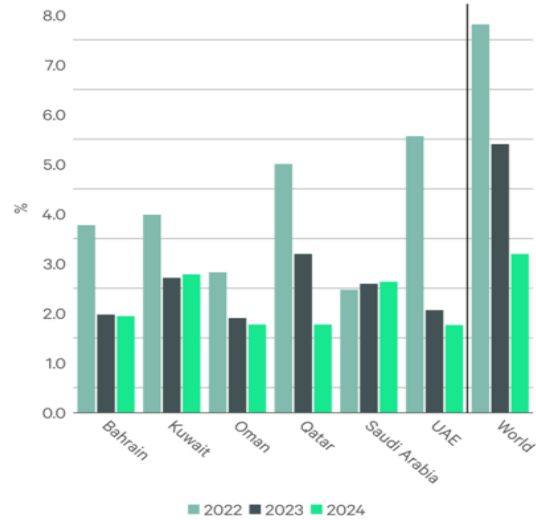


Figure 2: GCC Countries, Inflation, YoY % Change



## Macroeconomic Outlook

Figure 3: GCC Countries, Employment, YoY % Change

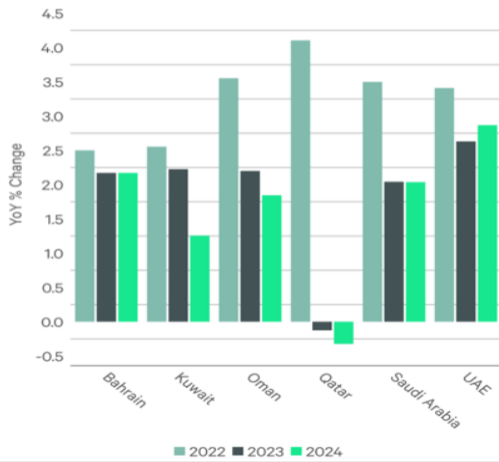
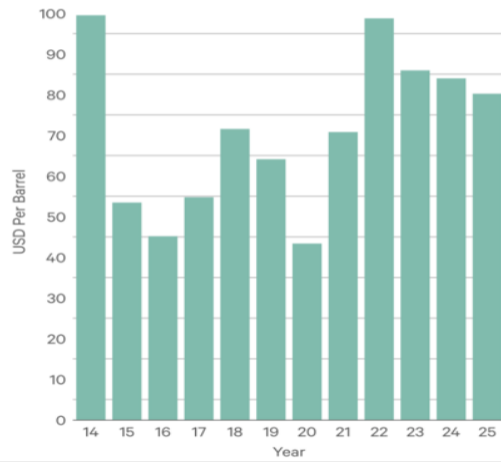
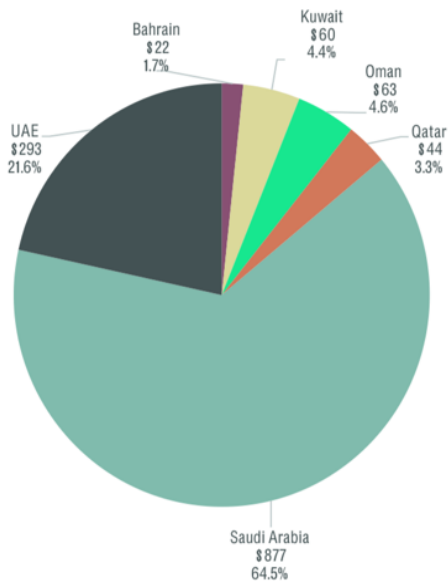


Figure 4: Oil Prices, US\$ per Barrel



Sources: CBRE Research / Oxford Economics

Figure 5: GCC Countries, Projects Pipeline, US\$, Billions



Source: CBRE Research / MEED Projects

## March 2024: LEAP Riyadh Saudi Arabia:

At LEAP 2024, the National Housing Company (NHC) of Saudi Arabia executed two agreements to bolster real estate activities within the Kingdom by developing bespoke business intelligence solutions. According to reports from the Saudi Press Agency (SPA), these agreements were signed with data science firm Quant and Pasetah Tech Solutions to leverage technology to enhance services offered to prospective investors in the real estate market.

Representing the National Housing Company (NHC), Rayan Al-Aql, Chief of the Solutions Sector, signed the agreements. In contrast, Ahmed Bukhamseen, CEO of Quant, and Omar Al-Omar, CEO of Pasetah Tech Solutions, represented their respective companies. The overarching goal of these agreements is to integrate modern technologies into the real estate sector by utilizing the data assets held by the NHC to develop innovative solutions tailored to meet market demands.



This collaborative effort aims to generate more precise real estate analytics, foster innovation in data analysis, and establish real estate indicators that promote reliance on data-driven property decisions. As per the Saudi Press Agency report, these initiatives are poised to enhance overall market efficiency by facilitating informed decision-making processes for investors and buyers.

At the ongoing LEAP conference in Riyadh, the National Housing Company (NHC) showcases its services and technological advancements, which have positively impacted over 10 million individuals through eight government digital platforms. Noteworthy achievements include the documentation of more than 9 million residential and commercial lease contracts and the operation and development of the "Sakani" application, which has garnered over 6.5 million downloads. Additionally, the NHC has contributed to managing and enhancing the "Balady" platform under the Ministry of Municipal and Rural Affairs and Housing, among other notable technological endeavours. Remarkably, in February, the National Housing Company announced plans to construct 3,800 homes after executing six partnership agreements valued at SR2 billion (\$533 million) with various real estate developers. According to the Saudi Press Agency (SPA), these agreements aim to develop residential units in the Al-Asalah community in southwestern Riyadh, with prices commencing at SAR475,000 (\$126,667). This initiative forms part of a comprehensive urban development program spearheaded by the NHC, designed to revolutionize the housing landscape by introducing innovative concepts and integrated services, ultimately enhancing the quality of life for all segments of society.



# DEFI INVESTMENTS AND DEVELOPMENTS IN DEX AND CENTRALIZED-DEX.

By David Peisakhov and Estella Zaengle
















In the ever-evolving realm of finance, decentralized finance, or DeFi, has emerged as a revolutionary force challenging traditional financial intermediaries. DeFi leverages blockchain technology to create an open, transparent, and permissionless ecosystem where users can access a wide range of financial services without the need for intermediaries like banks or brokers. With DeFi, financial services such as lending, borrowing, trading, and asset management are conducted directly between participants, unlocking unprecedented levels of accessibility, efficiency, and transparency.

## Decentralized exchanges

At the heart of the DeFi movement are decentralized trading venues, which facilitate the exchange of digital assets in a trustless manner, offering users unprecedented control over their funds and trading activities. These venues, often referred to as decentralized exchanges (DEXs), have witnessed explosive growth in recent years, attracting users and capital at an unprecedented pace. Unlike traditional centralized exchanges, which rely on centralized authorities to facilitate trades and custody assets, DEXs operate entirely on blockchain networks, allowing users to trade directly from their digital wallets while retaining full control of their funds.

Among the most popular decentralized trading venues in the DeFi ecosystem are Uniswap, PancakeSwap, and Jupiter, each offering unique features and functionalities that cater to the diverse needs of traders and investors. These platforms have played a pivotal role in driving the adoption of DeFi by providing users with access to a wide range of digital assets, seamless trading experiences, and lucrative liquidity mining opportunities.

Uniswap, the pioneering automated market maker (AMM) protocol, revolutionized decentralized trading with its innovative approach to liquidity

Exchange	24h Volume	Market Share
 Uniswap V3 (Ethereum)	\$1,173,245,012	17.1%
 PancakeSwap V3 (BSC)	\$811,539,524	11.8%
 Jupiter	\$688,555,953	10.0%
 Orca	\$476,650,482	6.9%
 Uniswap V2 (Ethereum)	\$431,646,586	6.3%
 Uniswap V3 (Arbitrum One)	\$387,077,757	5.6%
 THORChain	\$375,000,331	5.5%
 Nomiswap	\$310,454,198	4.5%
 Curve (Ethereum)	\$222,701,207	3.2%
 Uniswap V3 (Polygon)	\$166,832,728	2.4%
 Raydium	\$137,326,137	2.0%
 PancakeSwap (v2)	\$133,246,324	1.9%
 Ferro Protocol	\$130,000,915	1.9%
 Uniswap V3 (BSC)	\$128,651,178	1.9%
 Raydium (CLMM)	\$118,971,765	1.7%

Top 15 Decentralized Exchanges by Volume. Source: CoinGecko.com

provision and asset swapping. By utilizing liquidity pools and smart contracts, Uniswap enables users to trade tokens directly from their wallets with minimal slippage and no order book. Its simple yet powerful interface and permissionless nature have made it a go-to platform for DeFi enthusiasts worldwide.



*Price dynamics of Uniswap Token in US Dollars. Source: Coinbase.com*

PancakeSwap, built on the Binance Smart Chain (BSC), offers a decentralized trading experience with lower fees and faster transaction speeds compared to its Ethereum-based counterparts. Leveraging the growing ecosystem of BSC, PancakeSwap has attracted users with its user-friendly interface, diverse range of tokens, and innovative yield farming strategies.



*Price dynamics of PancakeSwap Token in US Dollars. Source: Crypto.com*

## **Challenges of traditional exchanges solved by DEXs**

While these decentralized trading venues share a common goal of democratizing access to financial services, they differ in their technological implementations and design philosophies. However, before diving into the intricacies of these platforms, it's crucial to understand the genesis of decentralized exchanges (DEXs) and the challenges they aim to address.

Decentralized exchanges have their roots in the shortcomings of traditional centralized exchanges, which have long been plagued by issues such as custodial risk, lack of transparency, and susceptibility to hacking and manipulation. Traditional centralized exchanges rely on centralized servers to match buyers and sellers, manage order books, and custody users' funds, posing significant security and privacy risks. Moreover, traditional centralized exchanges often impose strict KYC/AML requirements and trading restrictions, limiting access for users around the world.

In response to these challenges, decentralized exchanges emerged as a viable alternative, offering a trustless and censorship-resistant platform for trading digital assets. By leveraging blockchain technology and smart contracts, decentralized exchanges enable peer-to-peer trading without relying on intermediaries or centralized authorities. Users retain full control of their funds, trade directly from their digital wallets, and enjoy greater privacy and security.

However, decentralized exchanges are not without their own set of challenges. Early iterations of decentralized exchanges faced issues such as low liquidity, high latency, high slippage, and poor user experience, hindering their mainstream adoption. Moreover, decentralized exchanges operating on the Ethereum blockchain encountered scalability issues and high gas fees, making trading expensive and inaccessible for many users.

## Centralized-DEX platforms

To address challenges DEX platforms confronted, a new breed of decentralized exchanges known as centralized-DEX (C-DEX) emerged, combining the benefits of decentralization with the performance and scalability of centralized platforms. These platforms leverage off-chain order matching engines and on-chain settlement to achieve fast transaction speeds, low fees, and high throughput while maintaining the security and trustlessness of decentralized exchanges.

Centralized-DEX platforms like THORChain, Loopring and Serum have gained traction for their innovative approaches to decentralized trading. By adopting layer 2 scaling solutions, cross-chain interoperability, and decentralized governance, these platforms offer users a seamless and efficient trading experience without compromising on security or decentralization.



Price dynamics of THORChain Token in US Dollars. Source: Crypto.com



Price dynamics of Loopring Token in US Dollars. Source: Coinbase.com

## Technological differences between DEX and Centralized-DEX platforms

In the following sections, we will explore the key technological differences between popular decentralized trading venues like Uniswap, PancakeSwap, and Jupiter, as well as centralized-DEX platforms like THORChain, Loopring and Serum. By understanding the unique features and functionalities of these platforms, readers can gain insights into the evolving landscape of decentralized finance and the innovations driving its continued growth and adoption.

### Automated Market Making (AMM) vs. Order Book Model:

Decentralized exchanges, e.g. Uniswap, PancakeSwap and Jupiter, operate on the automated market-making (AMM) model, where liquidity providers contribute funds to liquidity pools, and trades are executed against these pools using predefined mathematical formulas. There are no order books, and trades are executed instantly, but at the expense of potentially higher slippage.

While centralized-DEX platforms, e.g. THORChain, Loopring and Serum, employ a hybrid model combining elements of centralized and decentralized exchanges. They use order books for trade matching but settle transactions on a blockchain, providing the performance benefits of centralized exchanges with the security and trustlessness of decentralized platforms.

### Blockchain Networks:

Decentralized exchanges primarily operate on the Ethereum blockchain, leveraging its smart contract functionality and ecosystem of ERC-20 tokens.

Centralized-DEX platforms may operate on multiple blockchain networks or have their own native blockchain. For example, Loopring operates on Ethereum but utilizes layer 2 scaling solutions, while Serum is built on the Solana blockchain, known for its high throughput and low transaction fees.

### Interoperability and Cross-Chain Functionality:

Initially, DEX platforms were primarily focused on Ethereum-based assets. However, with the rise of interoperability solutions like wrapped tokens and cross-chain bridges, they are gradually expanding to support assets from other blockchains.

Centralized-DEX platforms often prioritize interoperability and cross-chain functionality, enabling users to trade assets across multiple blockchain networks seamlessly. This allows for greater asset liquidity and accessibility.

### Security and Trustlessness:

Decentralized Exchanges are known for their trustless nature, as trades are executed directly between users' wallets without the need for intermediaries. However, vulnerabilities in smart contracts or external dependencies can pose security risks.

While Centralized-DEX platforms aim to achieve a balance between performance and security, they may still face security risks associated with centralized components such as order matching engines. However, settlement on the blockchain provides additional security and transparency.



Price dynamics of Serum Token in US Dollars. Source: Crypto.com

## Conclusion

Decentralized finance (DeFi) has heralded a seismic shift in the financial landscape, empowering individuals with unparalleled access, efficiency, and transparency. At its core are decentralized trading venues, offering users direct control over their assets and trading activities. While platforms like Uniswap, PancakeSwap, and Jupiter exemplify the decentralized ethos, a new breed of centralized-decentralized exchanges (C-DEX) like THORChain, Loopring and Serum, aim to marry performance with security.

By embracing innovative models like automated market making (AMM) and fostering interoperability across blockchain networks, these platforms are democratizing finance like never before. As the DeFi ecosystem continues to evolve, users stand poised to reap the benefits of a truly decentralized and inclusive financial future.

# Investing 101: An introduction to risks

By Cameron Bruce



Financial risks are factors that impact the certainty of an investment's outcome. They consist of a mix of opportunity and threats with the potential to reduce or increase the investor's return. Every investment has a risk and return trade off, the weight you assign to either preference becomes your risk appetite. In issue four we researched the S&P 500 index as a low risk investment, this month's contribution will help explain the types of risks investors factor into their decision making when purchasing stocks.

## Risks Types: Systematic and Diversifiable risk.

The riskiness of an investment is categorised as either systematic or unsystematic. Systematic risk can affect the whole economy and therefore are shared by uncorrelated industries. Systematic risks are known as market risks. They include: political risk, macroeconomic risk, inflation and interest risk, and tax risk. These risks are out of our control and thus can be managed but not removed from investment. In April we explore the main risk management strategy. Unsystematic risk relates specifically to the industry and company being invested in. In this category, it is useful to think of the supply chains that create the products and services on offer, and the industries legal structure that controls operations. Unsystematic risks include, regulation and law, business and operational risks and financial risks. Next month Investing 101's contribution to Market Update will walkthrough an industry and company analysis, identifying the types and levels of unsystematic risks when deciding to invest in a company.

## Systematic Risk: Political risk

Political risk includes the domestic and global political environment. Political changes and instability has the power to impact society on many fronts, particularly socially and economically. In the UK the increasing requirement for governments to ensure stable and productive international relationships and trade deals are magnified since Brexit. Political risks share commonalities with unsystematic risks, politics can very easily and quickly impact whole economic performance and at the same time unsystematically impact one industry. For example, Brexit had a very broad impact, whereas international trade policy regarding sea fishing has a very specific impact to one industry. Ultimately, investors conduct thorough investigations of the political environment, and competition in the countries they are interested in. They further their investigation to identify the level of influence politics has on the industry, and, the companies within that industry they wish to invest in. This creates a deep understanding of the political risk level of their investment.

## Systematic Risk: Inflation and interest rate risk

The important factor to consider with inflation and interest rates is the purchasing power of the consumer and businesses'. If consumers purchase increasingly less goods and services, what is the effect on the domestic economy, specific industries and the company you are investing in?. Inflation is the rate prices of goods and services rise. When prices increase, costs increase for businesses and consumers. Businesses tend to raise their prices and consequently compound their suffering by reducing their revenue and profit. It is simply a snow ball effect. In terms of investing, the company's earnings is often used to calculate its stock price. Inflation risk can

cause the company's earnings to rise and fall, this movement creates an opportunity and risk for investors to capitalise on or succumb to. Interest rates are costs attached to debt financing. Inflation and interest rates causes consumers and businesses to suffer in a similar ways, they impact costs, thus impacting purchasing power and ultimately businesses earnings.

## **Conclusion**

A professional investment analysis involves investigating the level of impact of systematic and unsystematic risk on the return on the investment opportunity. Risk comes in all shapes and sizes; investors are not expected to factor in every type of risk into their investment, that is unrealistic and many risks will be irrelevant. The main objective when integrating risks into your investment portfolio is diversification. Having a variety of investments with each investment varying in systematic and unsystematic riskiness. This article provides a great starting point for risk, next month investing 101 introduces diversification and building a portfolio.

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