ISSUE 5. February 2024

Market Update

Monthly review of market developments

1 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.

2 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!

3 What it does for you

Our comprehensive analysis spans across multiple crucial domains including the macro economy, stocks, bonds, commodities, FX market, M&A, private equity, 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.

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No Fear (just yet)

By: Adrian Ip & Thomas Petters

Feels good to be back after a two-month hiatus, thanks to exam and holiday seasons.

January kicked off with a series of interest rate decisions from the five central banks representing the G7 countries, all of whom have decided to keep the rates unchanged. Apple released the $3499 Vision Pro headset last week, its first spatial computer that resembles a pair of ski goggles. We are also one week away from the NFL Super Bowl, which is the biggest game of the season. An ad during the match will cost up to $7 million, largely thanks to the Taylor Swift Effect and her high-profile relationship with Kansas City Chiefs' star player Travis Kelce, who will play in the match. While the cameras keep cutting to shots of her in the suite may upset some football fans, it has only had a positive effect on its viewership, as her attendances to games have coincided with breaking multiple viewership records. Here we are hoping the mention of Swift would also have the same effects on our readership.

Before we jump to the exciting bits, we would like to wish all our readers a happy Chinese New Year, or as the saying goes that would land you cash in the form of a red pocket, "Hope You Get Rich" in the year of the dragon.

Not so Grande

While Taylor Swift simply appearing on TV brought joy to Swifties, the story about China Evergrande and the order for the company to liquidate by the Hong Kong court certainly brought fear to the markets. After all, it is the most indebted property developer in the world, having amassed more than $300 billion in liabilities.

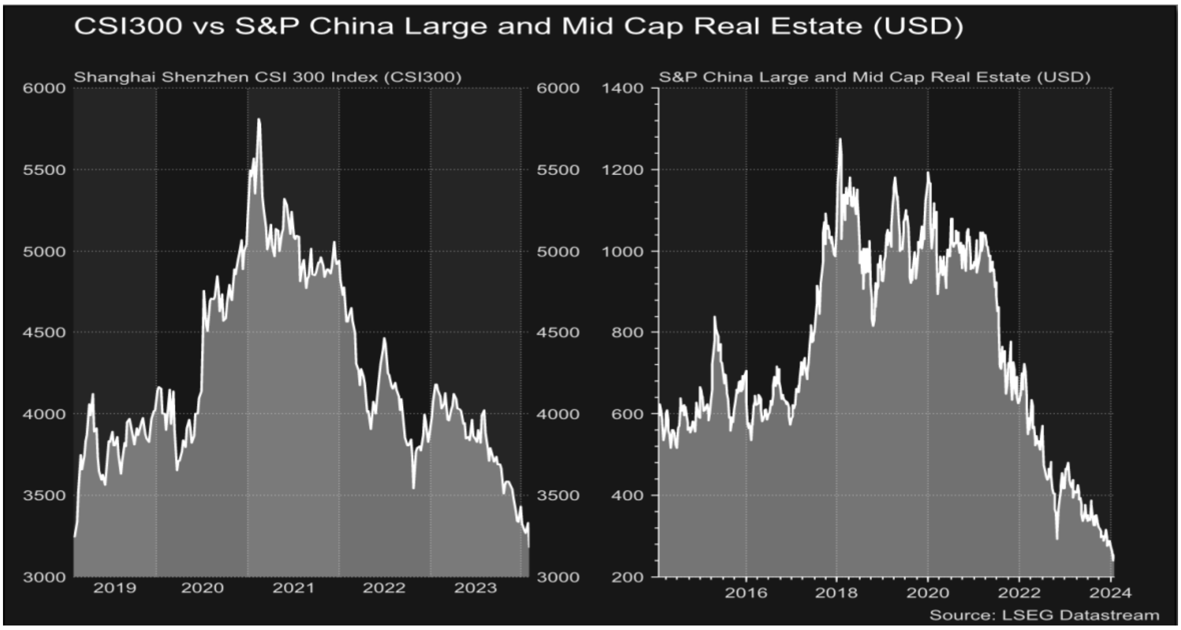
On the surface, China Evergrande Group is a real estate company built by Hui Ka Yan, once the richest person in Asia, it diversified its business operations into areas such as football, theme parks, electronic vehicles and healthcare. In its glory days, the China Evergrande Group was the second largest Chinese property developer. Its rose to prominence started in 2009 and peaked in late 2017, when the company's stock price grew more than eightfold and outpaced the Hang Seng index in the process.

Developers often sell houses before construction and the proceeds will be used for land acquisitions, which is a major source of income for local governments. The banks would then offer mortgages on these unbuilt properties and the cycle repeats. Their heavy reliance on a growth model fuelled by debt has shown to be unsustainable.

Evergrande's story is only the tip of the iceberg in the property sector crisis. Country Garden Holdings, who was once the largest non-state-owned developer by sales in China, defaulted on its dollar bond in October 2023 while it battled liquidity distress, though the total liabilities are significantly smaller than Evergrande at $190 billion.

The Chinese government's introduction of the "three red lines" policy in 2020 was intended to help rein in the heavily indebted real estate sector, which regulates the leverage taken on by developers, has led to a liquidity crisis in the sector. Since 2020, two-thirds of the top 30 Chinese developers have violated the policy at least once according to Bloomberg and companies responsible for 40% of Chinese home sales have defaulted. The liquidation of Evergrande gives the signal that the Chinese government will do everything it takes to crush the bubble.

Some analysts argued the Chinese economy could withstand the blow, while others suggest the impact of Evergrande's misery has already been felt in 2021. As can be seen in the charts below, both CSI300 and the S&P China Large and Mid-Cap Real Estate Index have experienced a significant decline since 2021, with the stock market reaching a five-year low while the real estate index has reached its lowest on record since its inception in 2010, with no end in sight. The court verdict in Hong Kong was not unexpected and has been priced in prior to the ruling.



Few foreign investors expect the liquidation process to be easy in China. Anne Stevenson-Yang, founder of J Capital Research, was quoted saying "good luck enforcing" when asked if the verdict could be enforced in China. The priority for Beijing is to maintain control of the crisis and ensuring domestic homebuyers are protected, even at the expense of foreign bondholders. For these bondholders, their best hope would be relying on the cooperation mechanism re-established in 2021 and receiving assistance from mainland courts to get hold of assets in the mainland.

The property sector contributes to almost a quarter of China's GDP. A deteriorating property market coupled with an oversupply of housing will likely lead to negative wealth effect, as much of China's consumer net worth is tied up in housing. It only adds to the trouble with a record high youth unemployment and weak retail sales. Some worry that the sluggish economic growth performance will lead China down a similar path as Japan in the 1980s, when the growth stagnated in the subsequent decades.

In view of the impact brought by the property sector's struggle, the PBOC has cut the reserve ratio requirements (RRR) for banks by 50 bps, which is expected to boost 1 trillion yuan in long-term capital to the economy. Supporting loans to high-quality real estate is also on the PBOC's agenda, details of which are expected to be released this week. Bruce Pang, chief economist and head of research for Greater China at JLL, was quoted saying the cut was "early and powerful".

Conclusion

The story of Evergrande tells us companies do not live forever. A transparent insolvency process is indispensable to preserve investor confidence. The fate of the foreign bondholders would certainly provide a precedent to other potential foreign investors before they decide to invest in China. Additionally, whether the RRR cut is effective remains to be seen, though PBOC has the luxury of learning from the experience of the BOJ, who took six years to lower its policy rates after the burst of the asset bubble in 1992. Crushing the bubble may be difficult for the economy in the short term, but it is good in the long term.

To quote Herbert Stein's famous words: "If something cannot go on forever, it will stop."

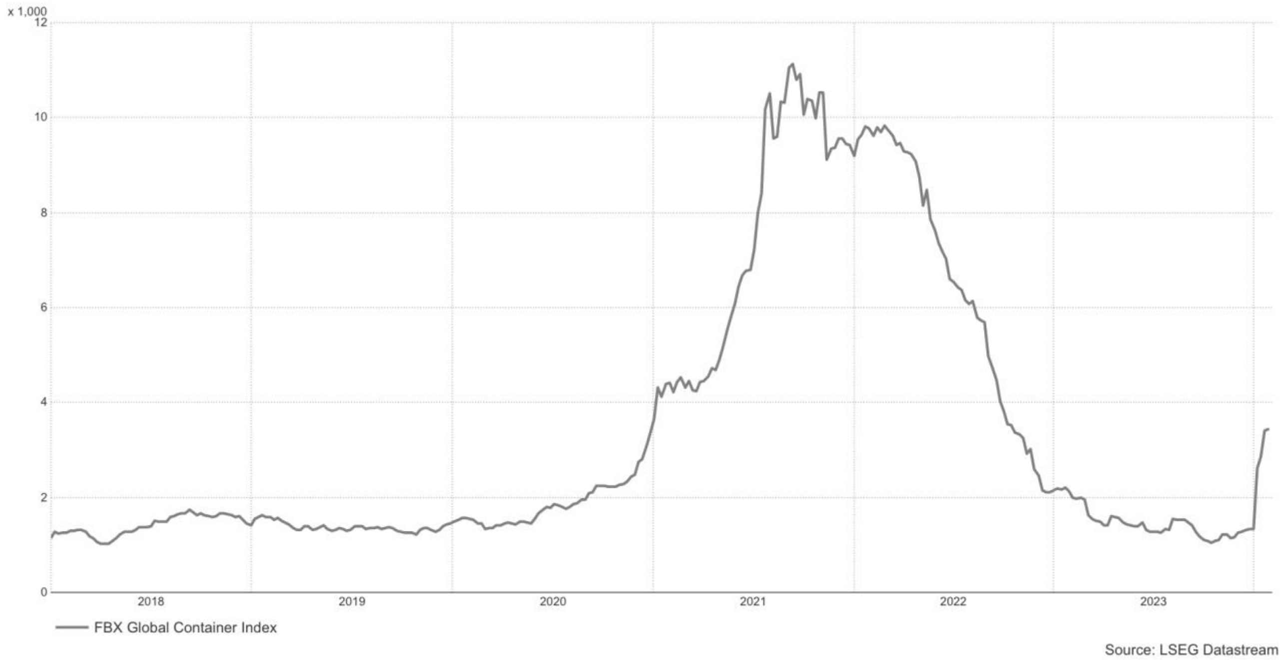
Rising Tensions in the Red Sea and its Impacts on Global Trade

In the dynamic landscape of global trade, the dry bulk freight industry faces profound challenges, particularly in the Red Sea region. Tensions in the area have triggered a cascade of effects, from reshaping shipping routes to influencing freight rates and impacting various sectors of the economy. Analysts suggest that the market might not fully comprehend the implications of these challenges, emphasizing the importance of considering geopolitical factors and potential shifts in global dynamics.

While short-lived maritime disruptions often have idiosyncratic effects on certain goods, the global maritime trade's influence on raw materials in supply chains, particularly primary and secondary energy sources, is significant if a disturbance lasts longer than a few weeks. Therefore, the disruption caused by tensions in the Red Sea may not have a major impact on worldwide economies if it remains short-term. However, if the disruptions persist for several months, it could reverberate throughout the global economy.

In recent interview with Argus Media, Wilson Wirawan, Dry Bulk Team Lead - Maritime Analyst at BRS Shipbrokers, emphasizes the importance of major navie to effectively enforce the international rules-based order to maintain freedom of navigation in the Red Sea. In his case, he mentions the importance of collaboration between the U.S. with China in order to set an example and maintain stability on major trade routes. However, the chances of cooperation are rather low due to the safe passage granted to Chinese and Russian vessels by Houthi forces, potentially hindering any efforts for collaboration.

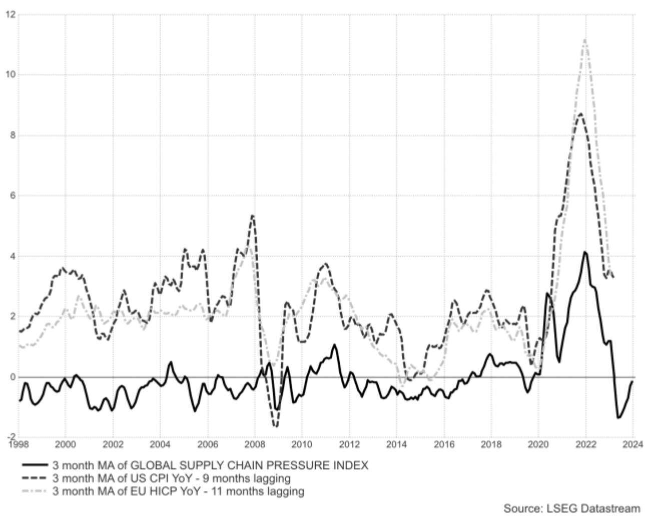
Despite escalating risks, shipowners decided at the beginning of the year that navigating the Red Sea was still viable, albeit with increased insurance premiums that have increased tenfold since the beginning of the year. Wirawan predicts a trend where major ship owners and operators may opt to avoid the Red Sea, driven by rising insurance costs and a nearly doubled increase in crew wages. The implications of this decision are evident, with high-value products like LNG and car carrier vessels choosing alternative routes, such as around the Cape of Good Hope, instead of the Suez Canal. Thus far, while the total number of ships transiting the Suez Canal has decreased by approximately 30% over the last weeks, the reduction in terms of tonnage accounts for up to 60% of previous volumes, according to shipping expert Sal Mercogliano.

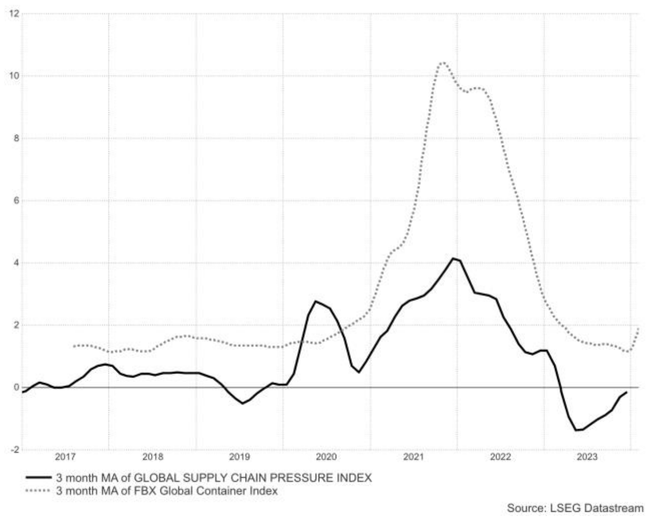


In recent weeks, the reverberations of the Red Sea situation have also cascaded into the fertilizer markets, which are starting materials of any food supply chain. A notable incident involved a U.S.-owned Genco Picardy vessel on 17.01.2024, tasked with transporting fertilizer from Egypt to India, experiencing disruptions. Lizzy Lancaster, a Senior Reporter at Argus Media Group, underscores the potential for shortages in specific markets when producers opt to forgo shipments due to heightened costs. The rerouting of ships carrying ammonia and other liquefied gases around the Cape of Good Hope introduces substantial transit delays, prompting brokers to incorporate a premium in forward rates. This signals the likelihood of further escalations in shipping costs in the coming months. The tangible impacts of geopolitical tensions are not confined to the maritime sector, as evident in Tesla's recent decision to suspend significant production at its Berlin gigafactory due to the Red Sea attacks.

The challenges faced by the global freight industry extend beyond the Red Sea to another vital trade route—the Panama Canal. Currently operating below full capacity due to regional drought conditions expected to persist until May, this exacerbates the already tight availability of shipping capacity. Producers are currently shouldering the bulk of these additional costs, raising concerns about the long-term sustainability of this situation. As tensions escalate and global trade routes continue to be reshaped, businesses must carefully navigate these challenges, assessing potential impacts on supply chains, costs, and overall operations. The dry bulk freight industry remains at the forefront of these changes, with implications extending far beyond the immediate shipping sector. Despite the increased costs resulting from disruptions in these key trade routes, shipping will remain the most economically viable transportation option for global trade for the foreseeable future.

If we now look at the overall impact of price increases in the shipping segment, the potential for rising prices in industrial and core goods raises concerns about a global resurgence of inflation. The Global Supply Chain Pressure Index, which has 0.7 correlation with U.S. and EU consumer price inflation, with the index leading inflation by 3 to 4 quarters over the last two decades, has been rising for weeks. A similarly high correlation exists between the Global Supply Chain Pressure Index and the FBX Global Container Index, which has significantly risen in recent weeks. The prospect of a substantial reduction in interest rates, combined with stronger-than-expected economic growth, could lead to a resurgence in inflation and shake up the markets.





A weak base effect in the inflation comparison with last year and the disruptions on global trade routes add complexity to the current inflation outlook. In the backdrop of the 1970s, a period marked by central banks proclaiming victory over inflation, the reality unfolded differently, revealing a lag behind the inflation trend. Examining the historical tapestry of global trade, cooperation between major players appears to be less inflationary, while conflicts historically lean towards inflationary pressures. The current evolution highlights the delicate balance that the global economy faces amid evolving geopolitical dynamics.

Conclusion

We encourage our readers to closely monitor the situation and align the current market pricing for bonds and equities with the ongoing developments in global seaborne trade. It might be wise to stay vigilant and consider how fluctuations in the maritime sector may impact broader financial markets over the upcoming quarters.

Empowering the Future: The Pivotal Role of Semiconductors in the Age of Artificial Intelligence (Part 1)

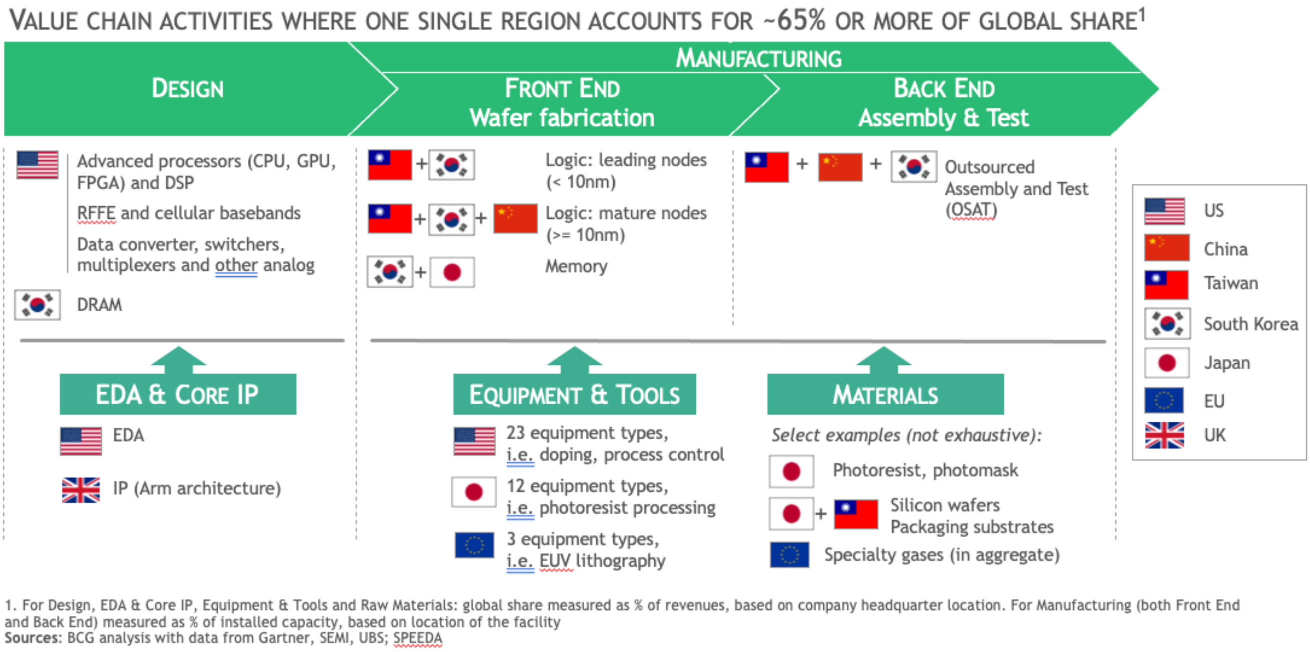
By: Partha Sharma

Introduction

In the Age of Artificial Intelligence (AI), semiconductors stand as the cornerstone of technological advancement, fueling innovations that redefine the boundaries of possibility. These tiny yet powerful components are essential for the processing speed and efficiency required by AI algorithms to analyze vast datasets and execute complex computations. As AI applications become increasingly integrated into daily life—from autonomous vehicles to personalized medicine—semiconductors' role becomes ever more critical. They not only support the rapid growth of AI capabilities but also drive the evolution of smarter, more efficient, and energy-saving devices. Consequently, advancements in semiconductor technology are directly linked to the acceleration and expansion of AI's potential, marking a pivotal chapter in the symbiosis between hardware and AI-driven innovation.

Supply Chain

The semiconductor supply chain is a complex, global network that involves the design, manufacturing, assembly, testing, and distribution of chips, integral to everything from consumer electronics to critical infrastructure. This network spans continents, with key components and raw materials sourced from various countries, making it susceptible to disruptions from geopolitical tensions, trade disputes, and natural disasters.



Source: Semiconductor Industry Association

Over fifty stages in the semiconductor value chain are dominated by a single region, owning more than 65% of the worldwide market share, representing critical vulnerabilities. Such concentration risks supply disruptions due to events like natural disasters, infrastructural halts, or geopolitical strife, potentially halting the delivery of crucial semiconductors. Notably, about three-quarters of the world's chip production is centralized in China and East Asia, areas prone to seismic risks and political unrest. Furthermore, the entirety of the globe's most sophisticated semiconductor manufacturing capabilities (sub-10 nanometers) is split between Taiwan (92%) and South Korea (8%). These cutting-edge semiconductors are vital for the United States in terms of economic stability, national defense, and the maintenance of crucial systems.

The global COVID-19 pandemic further highlighted the fragility of the semiconductor supply chain, with surges in demand for consumer electronics, coupled with factory shutdowns, leading to significant shortages.

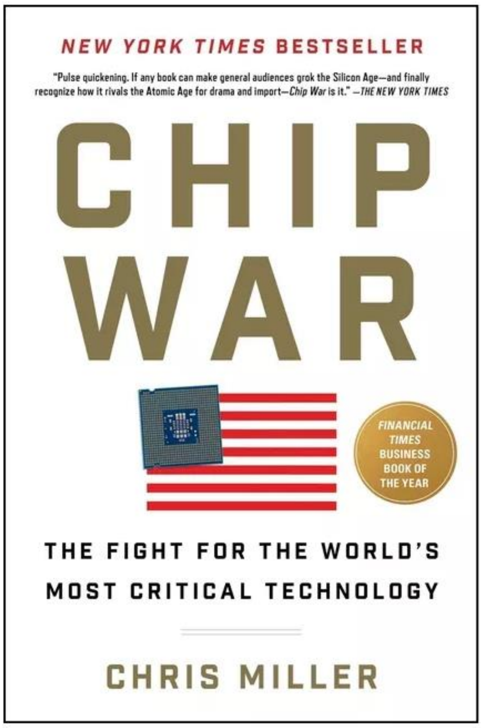
These shortages affected various industries, from automotive to consumer electronics, demonstrating the critical role of semiconductors in the modern economy.

In response to these challenges, countries and companies are reevaluating their supply chain strategies. Efforts include increasing investment in domestic semiconductor manufacturing, developing partnerships to secure supply chains, and seeking to reduce reliance on a single source or region.

Chip Wars

The "chip wars" refer to the intense competition and strategic maneuvering among nations and companies to secure dominance in semiconductor technology and production capabilities, which are seen as pivotal for economic and national security.

Chris Miller's latest publication, "Chip War," provides an insightful exploration into the evolution, widespread use, and strategic significance of semiconductor chips, which are integral to a vast range of products from vehicles to children's toys and even nuclear weapons. Miller, an international affairs educator at Tufts University with a deep knowledge of Russian and Chinese historical dynamics, delves into the tightly controlled global market responsible for producing these critical components along with the highly sophisticated tools and manufacturing facilities required for their creation. "Chip War" compellingly argues that the semiconductor industry is now a pivotal force shaping the global economic framework and altering the geopolitical landscape.



The "chip wars" have escalated due to several factors. First, semiconductors are foundational to advancing technology sectors such as AI, 5G telecommunications, and quantum computing, making them strategically important. Second, the concentration of advanced semiconductor manufacturing in a few geographical locations, particularly Taiwan and South Korea, poses supply chain vulnerabilities. This concentration has led countries to seek ways to repatriate or diversify semiconductor manufacturing to ensure national security and economic stability.

Geopolitical tensions, notably between the U.S. and China, have exacerbated the situation, with both nations imposing restrictions on semiconductor sales and technology transfers. The U.S. has sought to limit China's access to advanced semiconductor technology through export controls and sanctions, while China has been investing heavily in developing its domestic semiconductor industry to reduce dependence on foreign chips.

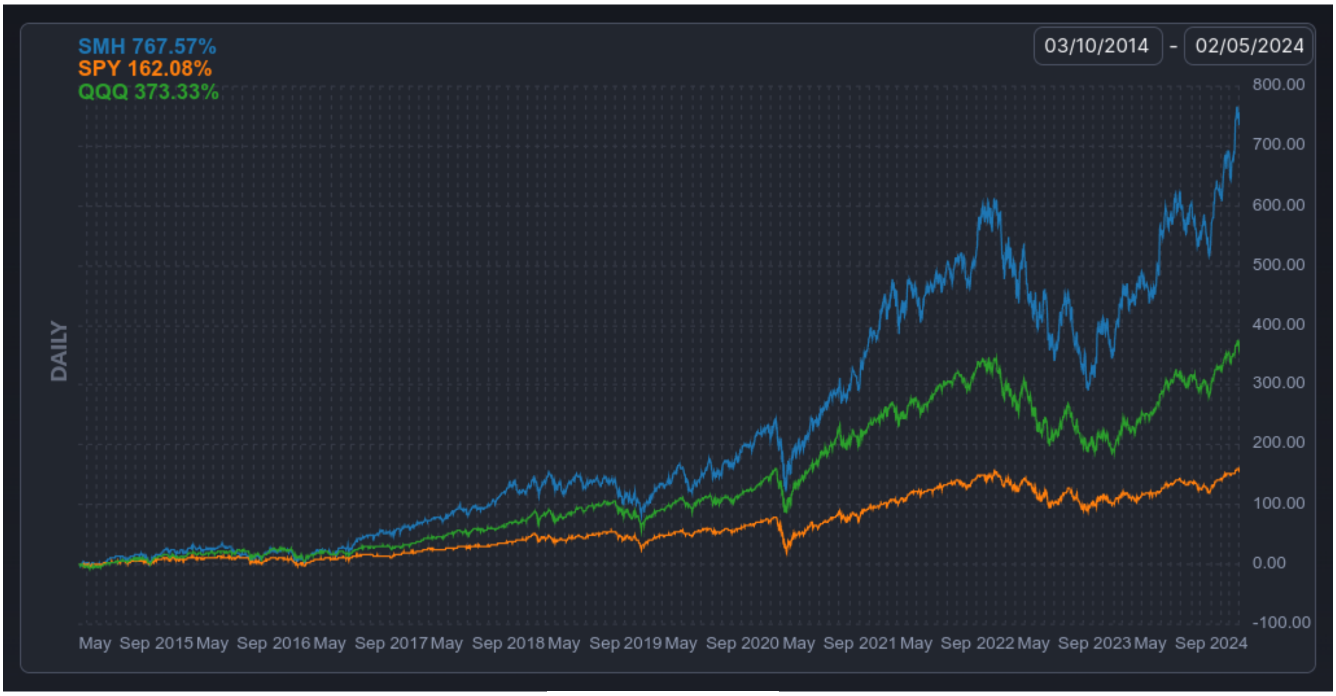
The "chip wars" thus not only reflect the competitive landscape of the semiconductor industry but also underscore the strategic importance of these components in the global economy and national security frameworks.

PHLX Semiconductor Index

The PHLX Semiconductor Index, often abbreviated as SOX, is a capitalization-weighted index composed of companies primarily involved in the design, distribution, manufacture, and sale of semiconductors. The index includes companies from various sectors of the semiconductor industry, including manufacturers of semiconductor equipment and materials, and is considered a leading indicator of the semiconductor sector's performance.
The chart illustrates the performance of the SMH (Semiconductor ETF), SPY (S&P 500 ETF), and QQQ (Nasdaq-100 ETF) over a period of 10 years, from March 10, 2014, to February 5, 2024. It's evident that SMH has significantly outperformed the other two, with an impressive gain of 767.57%, compared to SPY's 162.08% and QQQ's 373.33%. This suggests that the semiconductor sector has experienced robust growth and

demand, potentially outstripping the broader market and tech-heavy Nasdaq-100 index. Such outperformance reflect technological advancements and increased reliance on semiconductor technology across various industries, marking a decade of substantial returns for investors in the semiconductor space.

Chart 1: Performance of the semiconductor ETF SMH vs SPY and QQQ.



Source: Finviz

Several major Exchange-Traded Funds (ETFs) track the performance of the semiconductor sector, including indices like the PHLX Semiconductor Index (SOX). These ETFs provide investors with exposure to a range of companies within the semiconductor industry, from manufacturers of chips to producers of semiconductor equipment. Here are some of the major semiconductor ETFs:

1. VanEck Vectors Semiconductor ETF (SMH): This ETF tracks the performance of the MVIS US Listed Semiconductor 25 Index, which includes companies involved in semiconductor production and equipment.

2. iShares PHLX Semiconductor ETF (SOXX): This ETF aims to track the investment results of an index composed of U.S. equities in the semiconductor sector. It is designed to measure the performance of the PHLX SOX Semiconductor Sector Index.

3. Direxion Daily Semiconductor Bull 3X Shares (SOXL) and Direxion Daily Semiconductor Bear 3X Shares (SOXS): These are leveraged ETFs that seek daily investment results, before fees and expenses, of 300% of the performance, or 300% of the inverse of the performance, of the PHLX Semiconductor Sector Index, respectively.

4. Invesco PHLX Semiconductor ETF (SOXQ): This ETF tracks the PHLX Semiconductor Sector Index, aiming to include stocks of companies primarily involved in the semiconductor industry.

5. SPDR S&P Semiconductor ETF (XSD): This ETF seeks to replicate the performance of the S&P Semiconductor Select Industry Index, which represents the semiconductor segment of the S&P Total Market Index.

Here are some of the top semiconductor stocks that are part of these ETFs

1. NVIDIA Corporation (NVDA): Best known for its Graphics Processing Units (GPUs) for gaming and professional markets, NVIDIA has also become a major player in AI and deep learning. With its cutting-edge technology, NVIDIA is a key supplier for AI applications, data centers, and autonomous vehicles, making it a standout in the semiconductor industry.

2. Taiwan Semiconductor Manufacturing Company (TSMC): As the world's largest dedicated independent semiconductor foundry, TSMC is at the forefront of manufacturing for clients that design their own semiconductors.

3. Intel Corporation (INTC): A giant in the semiconductor industry, Intel is known for its leadership in CPU manufacturing. Despite facing competition, Intel continues to be a major force in personal computers, data centers, and is making strides in AI and autonomous driving technologies.

4. Advanced Micro Devices (AMD): AMD has made significant gains in the CPU and GPU markets, directly competing with Intel and NVIDIA.

5. Broadcom Inc. (AVGO): Broadcom is a diversified global technology leader that designs, develops, and supplies a broad range of semiconductor and infrastructure software solutions. Its products serve the data center, networking, software, broadband, wireless, and storage and industrial markets.

6. Qualcomm Incorporated (QCOM): Qualcomm is a leader in wireless technology and the primary supplier of modem chips that enable smartphones to connect to cellular networks. It's also at the forefront of 5G technology, playing a crucial role in the global rollout of 5G networks.

7. ASML Holding NV (ASML): ASML is unique in its role as a leading supplier of photolithography equipment used in the semiconductor manufacturing process, essential for producing more powerful and efficient chips.

These companies are at the heart of the semiconductor industry, each playing a distinct role in the development, manufacture, and supply of chips that power today's technology.

Conclusion

In this issue, we've covered the essential role of semiconductors in driving the progress of Artificial Intelligence, examined the complex global semiconductor supply chain, and looked at the strategic moves in the so-called "chip wars." We've shown how semiconductors are crucial for modern technology, pointed out the dangers of having chip manufacturing too concentrated in certain areas, and discussed how countries and companies are trying to overcome these risks amid geopolitical tensions and supply chain weaknesses. Chris Miller's book, "Chip War," has provided us with insights into the semiconductor industry's significant impact on the world economy and its influence on global politics.

Looking ahead to our next issue, we plan to narrow our focus to the financial arena, particularly on the performance and market implications of specific semiconductor stocks. We aim to provide a detailed analysis of the key players that are propelling semiconductor innovation forward, their strategic positioning within the global supply chain, and the unique investment opportunities they offer. Our upcoming coverage will spotlight the leading companies that are at the forefront of semiconductor technology, offering insights into their market performance, strategic initiatives, and potential impact on investors and the broader market landscape. As we delve into the financial aspects of the semiconductor industry, our readers can anticipate a thorough examination of the sector's most influential firms, their contributions to technological advancements, and the investment prospects they hold. Join us as we continue our exploration of the semiconductor industry, providing you with critical insights and analysis to navigate the complexities of this essential and ever-evolving sector.

The U.S bonds market. FED guidance, market sentiment and economic indicators.

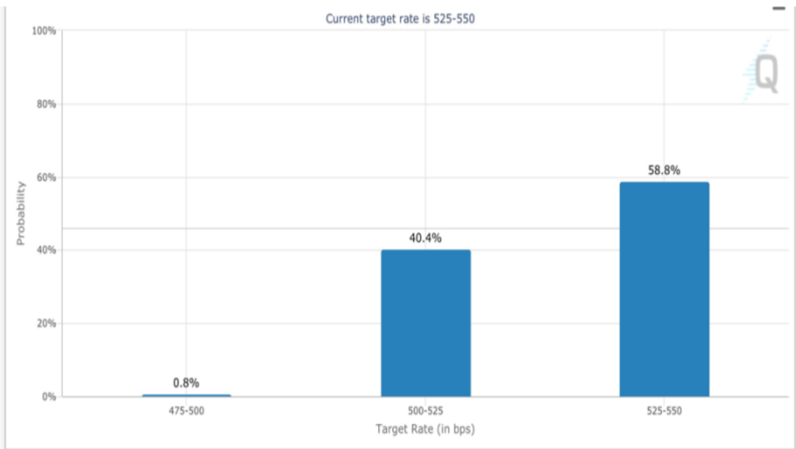
By: Ali Cem Tezel and Evgenia Raevskaya

The performance of fixed income markets has been subjective recently, with large misalignment between market sentiment and the U.S central bank. Beginning mid-October 2023, the markets expected aggressive rate cuts amidst beliefs that the inflation problem is over, despite improving US economic growth. During the December press conference, Chair Jerome Powell had mentioned that the FOMC believes the Federal Funds rate is at or near its peak for this tightening cycle, which the markets interpreted as a signal for upcoming rate cuts. This was followed by speculation regarding the frequency and timing of such cuts. As a result, 10-year Treasury yields fell by 94.7 basis points from November 1st, 2023- January 31st, 2024. Nevertheless, the FED maintained guidance that policy will remain restrictive enough to keep inflation moving towards the target rate, which leaves questionable the market actions of pricing in a cycle of cuts beginning in the spring-summer period. As of the most recent meeting on the 31st of January (the day of this writing), FED had kept interest rates unchanged, signaling a possibility of cuts, however not as rapidly as the markets believe. During the press conference, Jerome Powell pushed back against rate cuts in March meeting emphasizing confidence to reach the 2% inflation target as a precondition for the easing. Nevertheless, following the meeting the markets' expectation for a rate cut in March has not diminished significantly, which means markets abide by their own interpretation. We expect bond prices would eventually lower as the FED holds rates steady and examine the possible future price trajectory. We further investigate multiple strong reasons as to why the FED may keep rates stable for a longer period than the market expects, using multiple economic and financial factors as evidence.

What we can tell from market projections

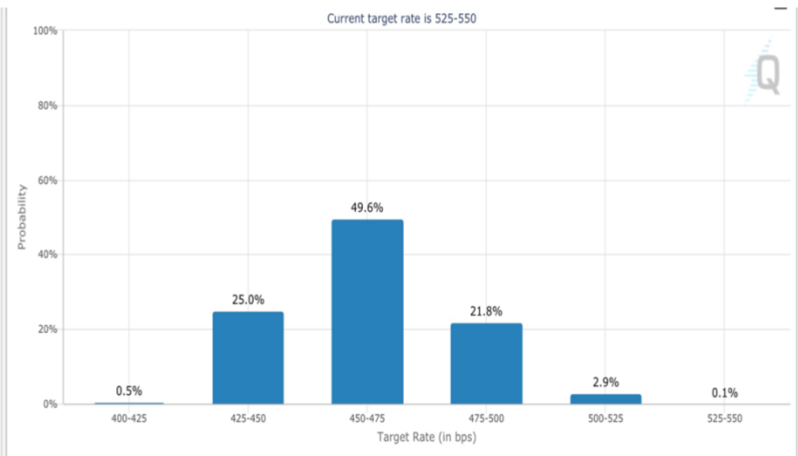
The CME FedWatch tool presents the perceived probabilities of changes to the Fed rate and the U.S monetary policy, based on data obtained from the 30-day Fed Funds futures. The tool is relevant in reflecting the current market expectations of the Fed rate trajectory. The below charts present expected probabilities of rate movements in the March, July, and December 2024 meetings, as of 31st January 2024 and just before the FED announcement.

Chart 1: Target rate probabilities for 20th March 2024 FED meeting



The data shows that markets perceive a total 41.2% chance of rate cuts with a 40.4% probability of rates being in the 500-525 bps range and 0.8% probability of them being in the 475-500 range by the March meeting. By the July meeting the total probability increases to 99.8%, of which 49.6% expect a 460-475 range and 25% expect a 425-450 range. By November the markets expect a rate cut from the current 525-500 range with 100% certainty, with the majority anticipating rates anywhere between 350-450 bps.

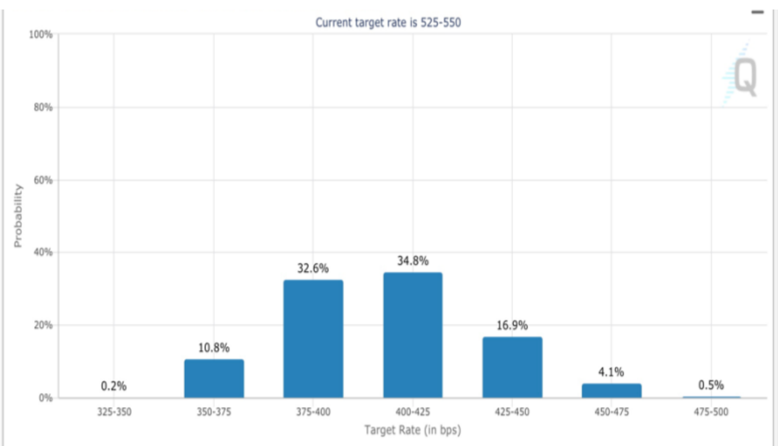
Chart 2: Target rate probabilities for 31st Jul 2024 FED meeting



Meanwhile, according to the December statements made by Jerome Powell, “If the economy evolves as projected, the median FOMC participant projects that the appropriate level of the federal funds rate will be 4.6 percent at the end of 2024”.

Several observations can be made based on this information. There appears to be a clear discrepancy between market expectations and the FED projections, where market expectations are overly optimistic, with rates exaggerated towards a lower range.

Chart 3: Target rate probabilities for 18th Dec 2024 FED meeting



Source: CME group

According to FED statements, if economic projections are realized to a best outcome scenario, the rate should not lower much below 460 bps by December. We may assume that if actual performance deviates from best case projections, rates could be higher. Therefore, we are likely looking at rates anywhere within a 450-550 range over the course of the year. Given that rising inflation doesn’t result in rate hikes above 550.

The recent market activity can be viewed from a behavioral perspective, taking into consideration the effect of behavioral factors and biases and the way they may translate into the prevailing treasury rate. Behavioral components of market expectation include a reliance on the opinion of Influencers, who contribute to the formation of prevailing expectations. Such influencers in this context may be analysts, news, or prominent businessmen. Said reliance is likely amplified by the effects of confirmation bias, which is present both on the side of the influencer and on the side of the general public. These effects may lead to strong upward/downward market trajectories. Therefore, by looking at the prevailing market sentiment at the onset of a trend, combined with analysis of the official guidance, and the information obtained from various indicators of economic conditions, we can make a qualitative estimate of market movements.

Using the 10-year treasury bond as an example, charts 4 and 5 show the treasury yield movements and respective bond prices for the past 6 months to date.

Chart 4: historical U.S 10-year treasury rate Aug 2023- Feb 2024

Chart 5: historical U.S 10-year treasury prices Aug 2023-Feb 2024

Source: Tradingview.com

Table 1 shows the FOMC meeting calendar, reflecting all meetings and results from February 2023-January 2024. The market expectation column reflects prevailing perceptions regarding the future direction of rates based on perceived FOMC signals and various analyst reports corresponding to the period following each meeting.

Table 1: FOMC meeting Calendar 2023-2024

Date	*Fed's Decision*	*Federal Funds Target Rate*	**Market expectation**
Jan. 31, 2024	Held Steady	5.25%-5.50%	Rates will lower
Dec. 13, 2023	Held Steady	5.25%-5.50%	Rates will lower
Nov. 1, 2023	Held Steady	5.25%-5.50%	Rates will lower
Sept. 20, 2023	Held Steady	5.25%-5.50%	Rate hike possible
July 26, 2023	Raise +25 bps	5.25%-5.50%	Rate hike possible
June 14, 2023	Held steady	5.00%–5.25%	Rate hike possible
May 3, 2023	Raise +25 bps	5.00%–5.25%	Rates will be steady
March 22, 2023	Raise +25 bps	4.75%–5.00%	Rate cut possible
Feb. 1, 2023	Raise +25 bps	4.50%–4.75%	Rate hike possible

Source: Federal Reserve Board

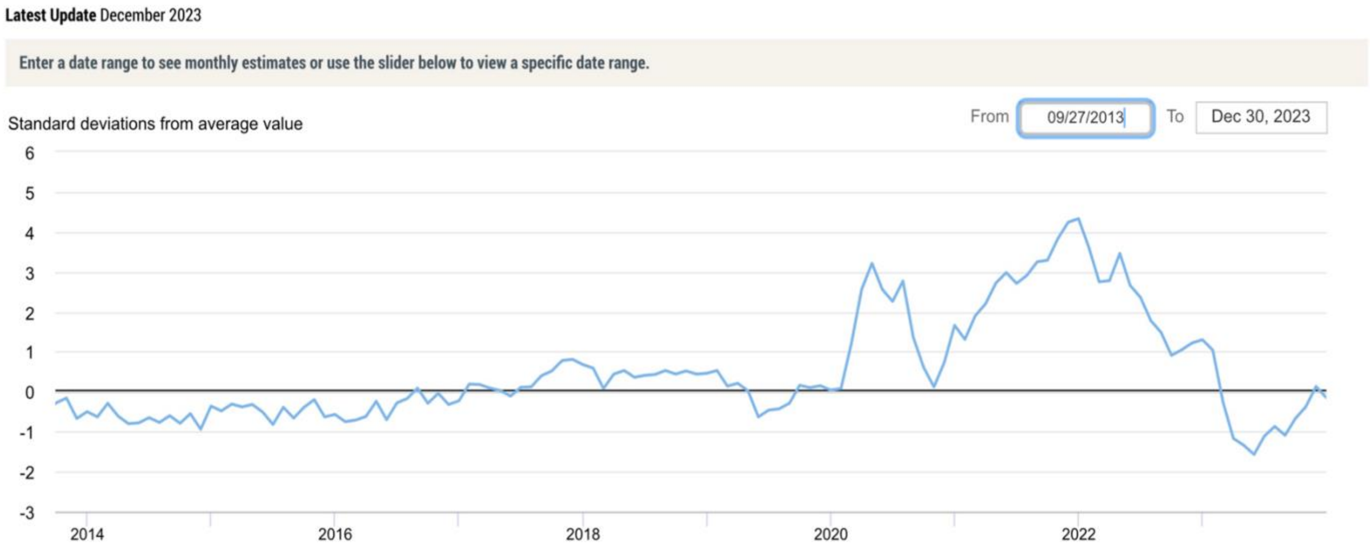
Based on the data we may see that the market has been consistently wrong in predicting the direction of the Fed rates ever since the September meeting. Nevertheless, treasury prices are driven up even further by persistent expectation of cuts. It may continue along this trajectory until the March meeting. In a scenario where the Fed keeps holding rate steady with slight reductions only towards the end of the year, the current market pricing of bonds would have to give way eventually. The 10-year Treasury yield may revert towards September 2023 levels, where it was at the onset of the 5.25%-5.50% rate. In a scenario where inflationary pressures result in further rate hikes, the 10-year Treasury yield may rise towards November levels, with a corresponding loss in bond price.

We now take a closer look at multiple factors which challenge the prevailing narrative of a bright future for bond markets throughout this year.

Supply side inflation risks

Despite the recent gains on the disinflation side, the fight against inflation is certainly not over. We should take into consideration the dynamics of the current era where the drivers of inflation are strongly related to supply conditions amidst fragmentation in deglobalizing world. Commodity prices are directly related to supply shortages, the risk of which is increased due to producer policies and supply chain disruptions. For example, conflicts taking place nearby the Suez Canal increase freight costs and may cause energy supply disruptions, which may cause upward pressure on the inflation rates in the US and globally. A reflective measure of supply side risks is the Global Supply Chain Pressure Index (GSCPI) which is associated with goods and producer price inflation in the U.S and EU area, during the pandemic period as well as all the way back to to 1997. We are yet to observe the reported GSCPI readings for January, which are due on February 6th. From the historical readings displayed in chart 6, we are able to see heightened volatility of the index since 2020, which signals increased risk of supply side disruptions.

Chart 6: GSCPI index data



Source: Federal Reserve Bank NY

Different inflation reporting methods

The following is an extract obtained from usinflationcalculator.com, displaying inflation rate calculations of the US CPI. There appears to be some noteworthy difference between the annual inflation rate, and the average inflation rate. The annual inflation rate is reported as a calculation of the Year-On-Year difference of the December CPI, while the Average inflation rate is reported as the average of the CPI differences for every month of the year, in comparison to the previous year. Therefore, it appears that the average inflation figures may be a more accurate representation of the rise in consumer prices, accounting for the changes observed each month. If we view inflation by the average inflation figure of 4.1%, we may still observe the reduction in inflation from 2022-2023 on both y-o-y and average terms, however the inflation is still more than twice the current inflation target.

Table 2: Inflation rates data 2000-2024

To find annual inflation rates for a calendar year, look to the December column. For instance, the inflation rate in 2022 was 6.5%. Meanwhile, the "Ave" column shows the average inflation rate for each year using CPI data. In 2022, the average inflation rate was 8.0%. These average rates are published by the BLS but are rarely discussed in the news media, taking a back seat to the actual rate of inflation for a given calendar year.

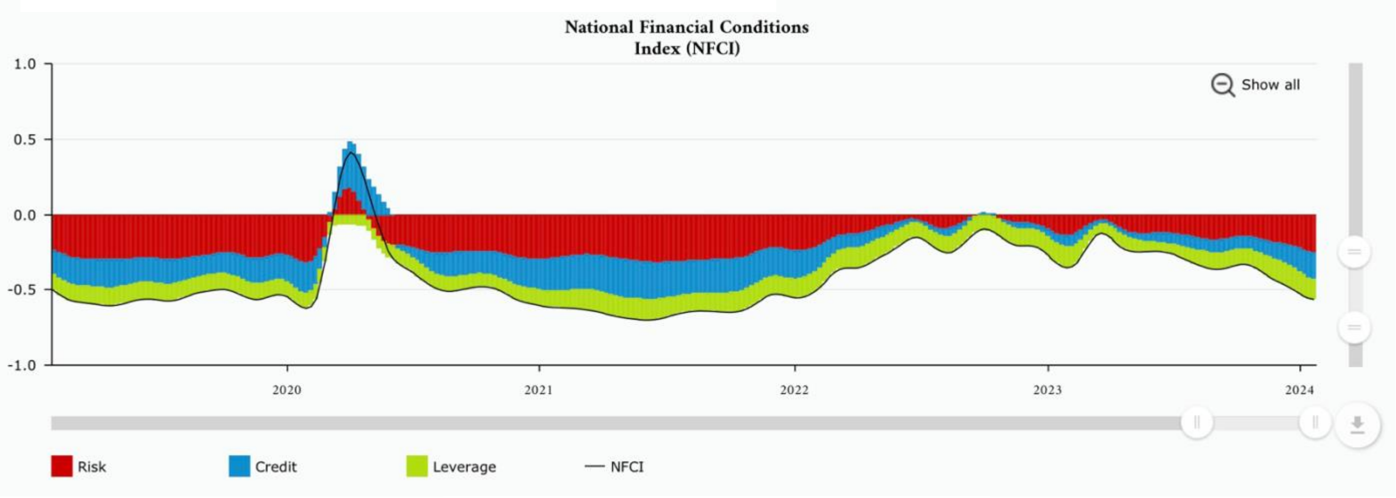
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ave
2024	*Avail. Feb. 13*												
2023	6.4	6.0	5.0	4.9	4.0	3.0	3.2	3.7	3.7	3.2	3.1	3.4	4.1
2022	7.5	7.9	8.5	8.3	8.6	9.1	8.5	8.3	8.2	7.7	7.1	6.5	8.0
2021	1.4	1.7	2.6	4.2	5.0	5.4	5.4	5.3	5.4	6.2	6.8	7.0	4.7
2020	2.5	2.3	1.5	0.3	0.1	0.6	1.0	1.3	1.4	1.2	1.2	1.4	1.2
2019	1.6	1.5	1.9	2.0	1.8	1.6	1.8	1.7	1.7	1.8	2.1	2.3	1.8
2018	2.1	2.2	2.4	2.5	2.8	2.9	2.9	2.7	2.3	2.5	2.2	1.9	2.4
2017	2.5	2.7	2.4	2.2	1.9	1.6	1.7	1.9	2.2	2.0	2.2	2.1	2.1
2016	1.4	1.0	0.9	1.1	1.0	1.0	0.8	1.1	1.5	1.6	1.7	2.1	1.3
2015	-0.1	0.0	-0.1	-0.2	0.0	0.1	0.2	0.2	0.0	0.2	0.5	0.7	0.1
2014	1.6	1.1	1.5	2.0	2.1	2.1	2.0	1.7	1.7	1.7	1.3	0.8	1.6
2013	1.6	2.0	1.5	1.1	1.4	1.8	2.0	1.5	1.2	1.0	1.2	1.5	1.5
2012	2.9	2.9	2.7	2.3	1.7	1.7	1.4	1.7	2.0	2.2	1.8	1.7	2.1
2011	1.6	2.1	2.7	3.2	3.6	3.6	3.6	3.8	3.9	3.5	3.4	3.0	3.2
2010	2.6	2.1	2.3	2.2	2.0	1.1	1.2	1.1	1.1	1.2	1.1	1.5	1.6
2009	0	0.2	-0.4	-0.7	-1.3	-1.4	-2.1	-1.5	-1.3	-0.2	1.8	2.7	-0.4
2008	4.3	4.0	4.0	3.9	4.2	5.0	5.6	5.4	4.9	3.7	1.1	0.1	3.8
2007	2.1	2.4	2.8	2.6	2.7	2.7	2.4	2.0	2.8	3.5	4.3	4.1	2.8
2006	4.0	3.6	3.4	3.5	4.2	4.3	4.1	3.8	2.1	1.3	2.0	2.5	3.2
2005	3.0	3.0	3.1	3.5	2.8	2.5	3.2	3.6	4.7	4.3	3.5	3.4	3.4
2004	1.9	1.7	1.7	2.3	3.1	3.3	3.0	2.7	2.5	3.2	3.5	3.3	2.7
2003	2.6	3.0	3.0	2.2	2.1	2.1	2.1	2.2	2.3	2.0	1.8	1.9	2.3
2002	1.1	1.1	1.5	1.6	1.2	1.1	1.5	1.8	1.5	2.0	2.2	2.4	1.6
2001	3.7	3.5	2.9	3.3	3.6	3.2	2.7	2.7	2.6	2.1	1.9	1.6	2.8
2000	2.7	3.2	3.8	3.1	3.2	3.7	3.7	3.4	3.5	3.4	3.4	3.4	3.4

**Data Source: U.S. Bureau of Labor Statistics: All items in U.S. city average, all urban consumers, not seasonally adjusted.*

A supportive environment to hold rates steady for longer

There is some potential for interest rates to remain high due to loosening financial conditions. The intense market speculation regarding future interest rate cuts increases bond prices, while also driving the stock markets up. This occurs due to the fact that decreasing interest rates on treasury bonds increase market valuations. This creates an easy funding environment, which the central banks may view as a reason to keep borrowing costs high. Chart 7 displays The National Financial Conditions Index which reflects the conditions in money market as well as debt and equity markets. The index had steadily decreased to -0.56 by the end of January, which is favorable to the scenario of the Fed holding interest rates stable.

Chart 7: NFCI index data

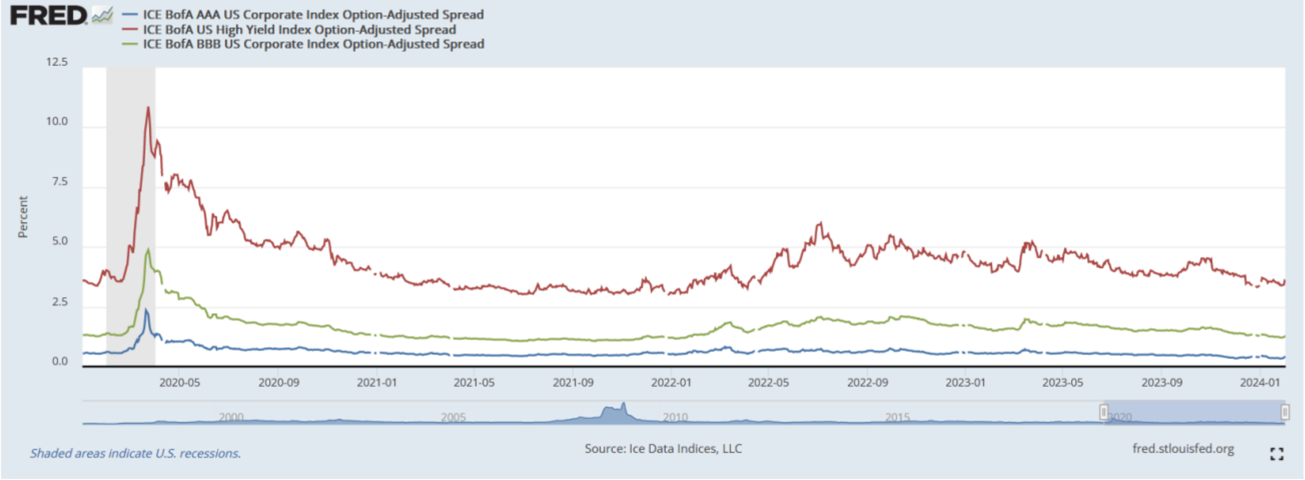


Source: Federal Reserve Bank Chicago

The impact of current lower treasury yields on corporate debt

We are currently experiencing an environment of low Treasury yields, due to the market perception mismatch. Since Treasury yields are low, investors prefer to purchase corporate debt at more attractive yields, particularly given the perceived risk of government debt is increasing. This is reflected by the narrowing spreads between the government and corporate debt. ICE BofA AAA US Corporate Index Option-Adjusted Spread has narrowed 10 basis points since November 2023 whereas ICE BofA US High Yield Index Option Adjusted Spread has narrowed over 100 basis points during the same period. The recent spread movements are displayed below.

Chart 8: Spread movements. ICE BofA AAA, ICE BofA BBB, ICE BofA US high yield



Source: Federal Reserve Bank St Louis

As a result, there is now a huge inflow into corporate debt. January saw a record inflow to U.S. corporate debt market. As of 1st of February 2024, S&P U.S. High Yield Corporate Bond Index has returned nearly 9% annually whereas returning 0.41% year-to-date.1 S&P 500 Investment Grade Corporate Bond Index has returned around 4% annually, matching the return of high yields year-to-date.[2] The persistence of such financial conditions will likely feed the economy and contribute towards inflation. Because additional inflation is something central banks try to avoid, it is another significant factor in favor of the Fed Funds rate being kept stable for longer.

A note for Investors

Despite that, the positive outlook continues to push investors to buy corporate debt, we believe there is a limit to further narrowing of these spreads in the medium term. Firstly, because we think the Treasury yields will rise, which will also increase the corporate yields. Also, we believe the economy is still hot but that cannot persist forever. Although the IG corporate yields are extremely low over Treasury yields, we still expect IG returns to be superior to HY returns in 2024. Out of IG we find those on the lower end of the rating scale to be much more plausible due to higher spreads. In any case, investors who wish to invest in corporate fixed income should take into account the sector specifics and avoid the ones that possess high risks going forward. In that context, we put forward energy and tech sectors and are skeptical towards sectors with higher exposure to consumer spending.

Perceived risk of government debt effect on treasury yields

We earlier observed the narrowing of spreads between corporate and government debt, signaling that the investors perceive increasing risk of government debt. Taking this into consideration, we must closely monitor the performance of treasury auctions, in order to evaluate the future direction of treasury yields.

Treasury auctions may say a lot about the direction of yields. If debt levels reach beyond what is considered a critical point, investors and institutions may hesitate to finance the government debt. The auction performance therefore affects government bond yields, as investors demand higher yields to purchase the debt. If an auction results in poor performance due to weak investor demand, then the market makers usually end up with significantly more shares of the auction compared to their average typical share ratios. This is what happened in October 2023 with Treasury's 30-Year auction. As investors were skeptical about the sustainability of the U.S. debt, the demand had vanished, and the yields went up to highest levels within the same month. However, the disappointing results of the late 2023 Treasury auctions had not persisted in the same manner in 2024 so far. This does not mean that the debt problem is over, it is just out of the radar of the markets for now. The national debt is $34.19 T and the annual interest payments topped $1 trillion at the end of October 2023. In the meantime, the size of treasury auctions is expected to increase to record levels for the first quarter of 2024. In simple terms, this means that the Federal Government will have to sell more debt to finance its expenditures in the short term. The questions about who will absorb the ever-increasing debt may occupy the agenda ahead under these circumstances. If concerns escalate, the Treasury yields would be driven higher.

Conclusion

The U.S bond market appears to be misaligned with Central Bank guidance for the path of interest rates in 2024, which is as threatening for the economy as the effects of the mischaracterization of inflation by the

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[1] https://www.spglobal.com/spdji/en/indices/fixed-income/sp-us-high-yield-corporate-bond-index/
[2] https://www.spglobal.com/spdji/en/indices/fixed-income/sp-500-investment-grade-corporate-bond-index/#overview

Central Bank back in 2021. We return to Powell's comments made during the press conference right after FOMC November meeting "Financial conditions have tightened significantly in recent months, driven by higher longer-term bond yields, among other factors." Having witnessed the recent downside movements in the U.S. fixed income yields, it is fair to say that the financial conditions are not tight anymore. Other factors such as supply side inflation risks imply an environment conducive to the FED holding rates stable for longer. In a case that such scenario realizes, the market may reassess their expectations causing treasury yields to increase. High levels of government debt may also contribute towards the increase in treasury yields as investors perceive the debt to be riskier. This notion is supported by the narrowing of the spread between corporate and government debt. Over all, it appears that the strong performance of bond markets is a temporary phenomenon, until markets adjust following future guidance.

Performance of the EU and UK bond markets, and a summary of global market developments.

By: Ali Cem Tezel and Evgenia Raevskaya

European bond markets

The European Central Bank chose more straightforward guidance, keeping rates unchanged and emphasizing that inflation is still high despite having retreated considerably in 2023. According to ECB, inflation is likely to increase in the near term, before reducing closer to the 2% target levels by 2025. The European economic activity is slower than than economic activity in the United States. Euro area annual inflation is expected to be 2.8 % in January 2024 and Europe's economy seems to have avoided a recession by narrow margins only having stagnated in the last quarter of 2023 where Germany's GDP fell 0.3% over the previous quarter. In the absence of strong economic activity, the European bond markets tend to move in line with the U.S bond markets. Actually, the downward movements in European sovereigns make more sense than the U.S. counterparts due to recession potential. Still, we believe that the current yields are not enough to ensure the inflation's retreatment to the target. This can be supported with the rhetoric of the European Central Bank. Despite recent gains on the disinflation side and a stagnating economy, ECB refuses to confirm the market's expectations of an early rate cut in 2024, and points towards summer rate cuts while warning that the ECB will remain data focused.

The European economy is dependent on current ongoing geopolitical tensions and their outcomes. Therefore, persisting tensions may cast inflationary pressure via disruption in supply channels. In the absence of any extraordinary geopolitical news, sluggish economic activity may provide space for the ECB in terms of rate cuts if the inflation continues to moderate towards the target level of 2%. This seems to be the base case the markets are pricing in currently, however it is likely still too early to confirm that. The spreads have narrowed recently in the Eurozone with investors preferring to buy the debt of Greece, Italy, Portugal and Spain which had reduced their debt ratios recently. While Germany and France government bond prices are falling due to increasing deficits amongst massive spending in defense and energy transition which is a result of being more exposed to the impacts of the energy supply shocks.

Considering that the spreads converged significantly and are at the lowest of the last two years currently, we think that the financial conditions are not tight enough to ensure the retreatment of inflation to the target levels and there needs to be a correction on the European government yields on the upside before they become attractive to investors once again. On the corporates side, S&P Eurozone Investment Grade Corporate Bond Index returned nearly 4 percent in 1-year time. On the high yield side, the spreads continued to narrow since June 2022 and are similar to that of U.S. high yield corporates. Due to the difference of the government bond yields between the U.S. and European core governments – with U.S. government yields being higher significantly – the effective yield of Euro HY index is less than the yields of U.S. HY index. Therefore, we propose to remain defensive and focus on quality while making choices amongst the sectors and firms.

U.K bond markets

The Bank of England (BoE) held the rates steady at 5.25% during the meeting on the 1st of February. The bank expects the headline inflation to converge to their target in the second quarter of 2024, before rising again due to base effect and energy prices. The committee does not expect the headline to return to 2 percent target again before 2026. Again, the decision to keep the rates unchanged came after a 3-way split vote. Similarly to the ECB, the BoE declines to confirm the market's projections on rate cuts in 2024. Although the economy is expected to grow less than 1% in 2024[3]and the headline inflation figures have reduced, the forward guidance remains strong. Although uncertainty persists on the fiscal side and regarding the sustainability of national debt, we believe the current 10-Year Gilt is offering attractive yields especially if the economy will not outperform compared to 2024 forecasts, given that extraordinary inflationary pressures do not emerge. Considering that BoE is highly devoted to their policy, the rates may stay higher at least until the summer, so there may be more attractive entrance points on the way.

Global summary

To summarize, the complex developments in the global bond markets wind down to several key points. Markets do not follow the Central Bank's messages and believe that the rates will be lower than Central bank projections. Investors are pricing more than 3 rate cuts in 2024, whereas the central banks' projections do not include as many. The market actions result in lower Treasury rates, causing economies to loosen, and bringing inflation higher. These circumstances make the Central banks less likely to lower the Funds rate. Uncertainty over the course of inflation, strong economic growth, inflated government debt, and recent easing of financial conditions in the U.S. pose a threat for bond investors. Despite recession fears in the Eurozone, inflation is still higher than what it ought to be according to ECB. However, if the inflation figures start to retreat from current levels and sail towards the target rate, ECB will likely have more space than the FED in terms of rate cuts. Even under these circumstances, ECB, unlike the FED, is much more devoted to their guidance despite having the advantage of sluggish economic activity. The reason behind their determination is that the rates are not creating the required tightness of financial conditions to curb inflationary pressures. hence, we expect Central Bank key policy rates to stay high for a while before the rate cuts begin. We expect the European sovereign yields to rise in the short term. The Bank of England's narrative is similar to that of the ECB, whereas the UK sovereign yields are much higher. Considering slow economic growth, the Gilt yields seem relatively attractive. However, due to the rigid stance of the BoE, there should be a correction of the yields on the upside, which can make them even more attractive until the path for rate cuts becomes clear.

The current optimism of market participants is ironically undermining the efforts of the central banks to contain inflation by keeping financial conditions accommodative. In this context President Lagarde's recent comments are highly cautionary; "It is not helping our fight against inflation, if the anticipation is such that they are way too high compared with what's likely to happen." It might be wise for the markets to not disregard the rhetoric used by central banks.

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[3] https://commonslibrary.parliament.uk/research-briefings/sn02784/

FX Update: USDJPY

By: Nikol Elia

The Japan cherry blossom forecast for 2024 is officially out and this is not the only reason one may currently start planning a trip to Japan. The USDJPY currency pair appreciated significantly; the past year it peaked at 151.93 in November 2023. What are the driving forces? By analyzing the dynamics behind the appreciation, one may gain a greater view on the future direction of the USDJPY rate. Analysts foresee a USDJPY downtrend in 2024. Current levels are below 150, yet still attractive with significant downside potential.

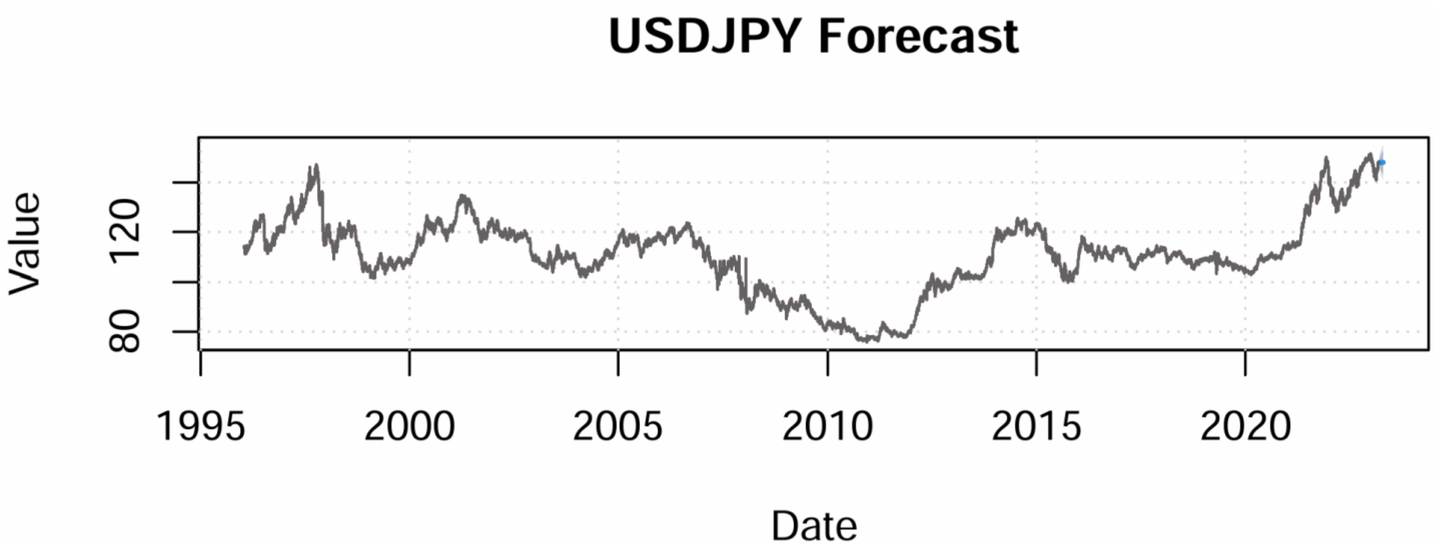
Economic view

United States	Amidst the backdrop of the coronavirus pandemic, the US unemployment rate soared to 14.7% in April 2020. Following a prolonged time of uncertainty, lockdowns and lifestyle adjustments, consumers have emerged out of this time eager to spend their disposable income on travel, dining, and social experiences outside the four walls of their homes. This resurgence in consumer sentiment lays the foundation for heightened demand in various sectors. On the other hand, the global geopolitical tensions and supply chain disruptions that occurred due to the conflict in Ukraine and the China-US tensions have led to increased prices, particularly in food and energy. In addition, the economic stimulus accommodated during the pandemic heated up the economy in the aftermath. Quantitative easing, excess demand, and reduced supply gave rise to inflation rates not seen for decades. To tame inflationary pressures, the Fed took a hawkish approach and carried out a series of interest rate hikes achieving a 22 year high of 5.50%. The increased yields on bonds, and the increased returns on deposits and other interest-rate products held in USD, attracted global investors, and strengthened the USD. At its January 2024 meeting, the Fed declared its decision to uphold the interest rates within the existing range of 5.25% to 5.50%. Expectations for an interest rate cut in March have been reduced. Latest analytics from Goldman Sachs predict a 25bps reduction in May, and Bank of America expects the first cut of 25bps in June.
Japan	In contrast, Japan has been dealing with deflation for more than two decades. Following the end of the second world war, the Japanese economy demonstrated rapid recovery and sustained economic growth turning into one of the largest economies in the world. In the early 1990s, the Japanese economy fell into a prolonged period of stagnation and slowdown. The main causing factor is considered the asset price bubble burst, which precipitated prolonged consumer retrenchment and investment hesitancy. It also led to debt overhang as loans taken over speculation in real estate and stock markets were not adequately backed. Demographic challenges, namely aging population and low birth rates are driving a decline in the population. While policymakers made efforts to combat stagnation, the effectiveness of these measures was constrained by structural impediments, policy inertia, and external economic shocks. The BoJ has maintained a dovish ultra-loose monetary policy with negative interest rates and yield curve control since 2016 to battle with deflationary pressures. Finally in 2023, Japan's CPI rose at a rate not seen since 1982 and the BoJ raised its interest cap on the 10-year Japanese government bond. Japan currently finds itself at a pivotal juncture where wage and price inflation driven largely by global supply shocks coincide with a profound institutional and generational shift spanning three decades. Investor confidence is on the rise, buoyed by optimism surrounding Japan's economic prospects, evidenced by record-high stock indexes.

Time series forecasting

Data on the daily USDJPY closing exchange rate prices for the period 30/10/1996-27/01/2024 are taken from Yahoo.Finance. For the given sample period, the minimum USDJPY rate was 75.74 on 31/10/2011 and the maximum was 151.65 on 14/11/2023.

Exchange rates forecasting is a challenging undertaking. Babu & Reddy (2015)[1]conducted a study comparing various models for exchange rate forecasting and found that Autoregressive integrated moving average (ARIMA) models introduced by Box & Jenkins (1976)[2]performed better than neural network and other non-linear models. Robust results using ARIMA have also been reported by Nyoni (2018).[3] For the given sample of USDJPY exchange rates, using cross-validation techniques, the ARIMA (1,1,1) model was identified as the best forecasting model. Accordingly, it has been used for producing USDJPY forecasts until the end of February 2024.



Graph: Historical USDJPY rates and ARIMA(1,1,1) forecasts

USDJPY Forecast for February 2024	
Mean	148
Range (80% Cl)	144 – 153

Table: ARIMA(1,1,1) forecasts

The average USDJPY exchange rate during February 2024, is expected to be 148. With 80% confidence the model suggests that the exchange rate in Ferbuary 2024 will range between the interval of 144 – 153. This is a simple statistical estimation and should not form the basis of investment decisions. Exchange rates are extremely volatile and may be influenced by a variety of external factors not taken into consideration in this model.

Conclusion

While the BoJ currently maintains its negative interest rates policy, it is on track for policy normalization. Policy shifts with regards to negative interest rates and/or the yield-curve control are possible in the upcoming BoJ decisions scheduled on 19 March and 26 April. In parallel, the Fed is expected to reduce USD interest rates closer to the second half of 2024. The current dynamics in both economies hint to a downward USDJPY trend over the course of 2024. Forecasted February levels of the USDJPY using time series models, may be on the upper end of this trend, suggesting potentially an opportunity for investors to short USDJPY.

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[1] Babu, A. S., & Reddy, S. K. (2015). Exchange rate forecasting using ARIMA. *Neural Network and Fuzzy Neuron, Journal of Stock & Forex Trading*, *4*(3), 01-05.

[2] Box, G. E. P., & Jenkins, G. M. (1976). Time Series Analysis: Forecasting and Control; revised edition Holden Day: San Francisco. *CA, USA*.

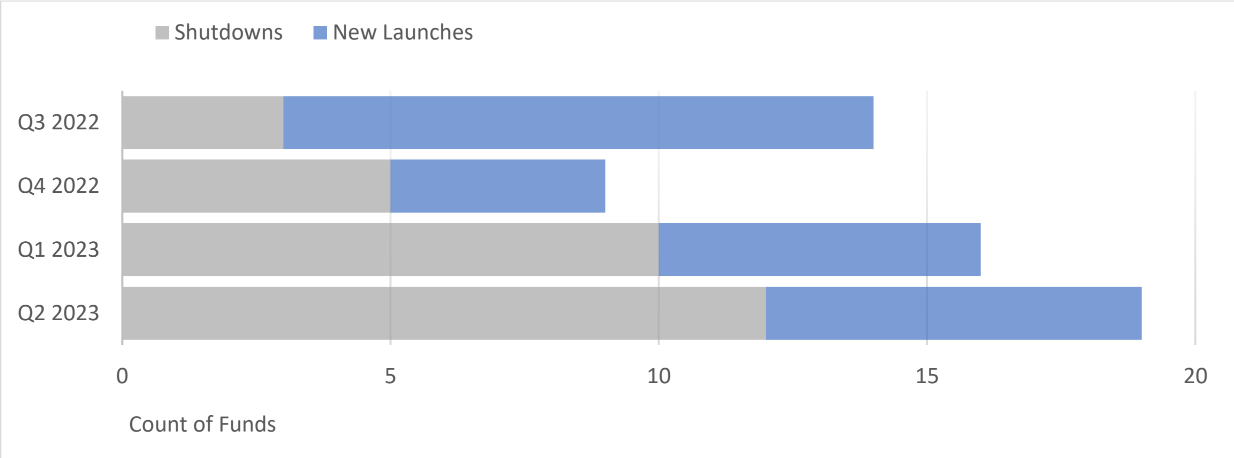
[3] Nyoni, T. (2018). Modeling and forecasting Naira/USD exchange rate in Nigeria: a Box-Jenkins ARIMA approach.

Navigating the Crypto ETF Bubble

By: David Peisakhov and Estella Zaengle.

Introduction

New product launches in crypto such as physical and synthetic crypto exchange traded products and crypto ETFs triggered explosive market behaviour. In the recent past, the number of newly established funds has increased significantly. However, Morningstar states that on average, liquidated funds had a life of less than one year and an average of $500k at shutdown (Morningstar, Aug 16, 2023).



Crypto ETP Launches vs Shutdowns (data source: Morningstar)

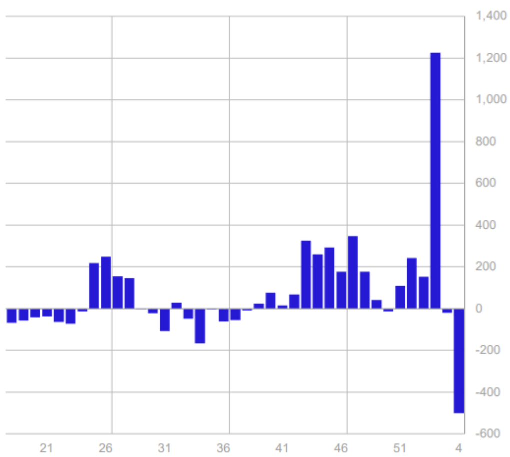
Does this mean that the investor should select funds with longer track records or significant AUM[1] particularly when investing in crypto ETFs? Yes and no. Crypto ETPs are already out in the market for a while. Most prominent with products from Fidelity and Wisdom Tree amongst others. Although stakeholders of similar funds were waiting for the final decision from Securities and Exchange Commission (SEC) on approval of Crypto ETFs, many of them have already priced in positive outcome which was likely based on news sentiments and insights of the long-overdue SEC approval process (for review of chronological events please refer to our article "The ETF Saga: A Game Changer for Cryptocurrencies" in October 2023 Newsletter issue).

The ETF Saga: Before and after SEC approval of spot Bitcoin ETFs

Days before an official announcement from Securities and Exchange Commission (SEC), the U.S. securities regulator said someone briefly accessed its X social media account on Tuesday January 9th and posted a fake message saying it had approved ETF for Bitcoin, a move eagerly awaited by the crypto industry. As per Reuters News unauthorized tweet said "*the SEC had granted approval for bitcoin ETFs on all registered national securities exchanges and included a picture purporting to quote SEC Chair Gary Gensler. The price of bitcoin rose after the post, which was picked up by Reuters and other news media that monitor the SEC's account*". The "*unauthorized access has been terminated*" the agency said later in the that day. Nevertheless, cryptocurrency markets and shares of crypto ETF funds have had a significant price turbulence.

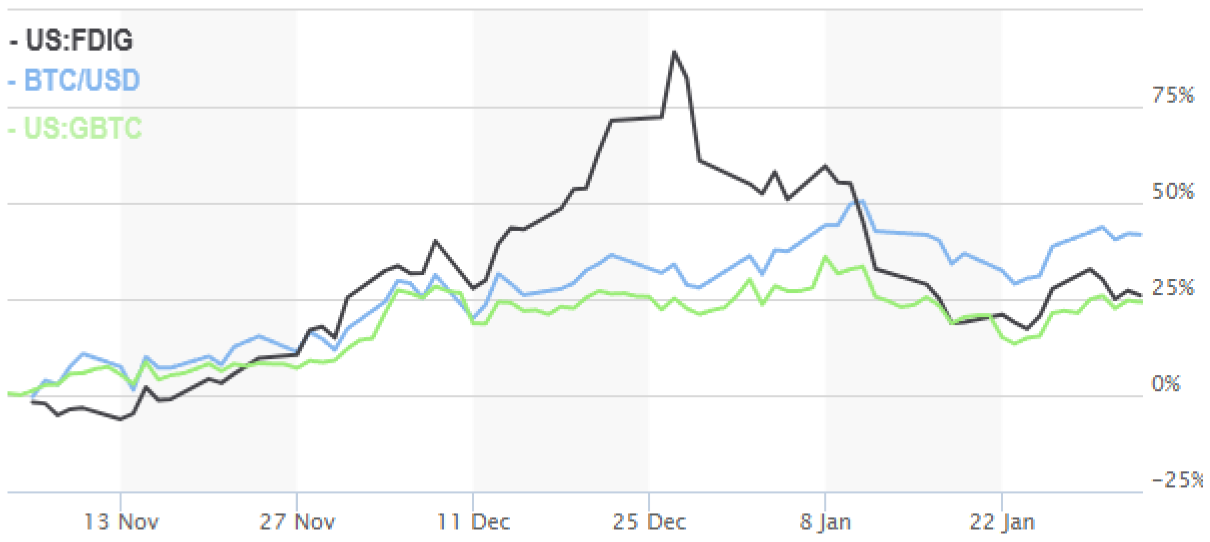
According to a recent report from CoinShares global crypto funds saw about $500 million in outflows in a few days after SEC has officially approved spot Bitcoin ETFs on January 10th. Grayscale Bitcoin Trust, now converted to and known as Grayscale Investment's spot Bitcoin ETF fund following the SEC's decision, led the outflows with about $2.2 billion on the third week of January. Total outflow since conversion to just over $5 billion as of January 26th, according to Coin Shares' report.

Figure on the next page illustrates price dynamics of Bitcoin (BTC/USD) spot price (source: CoinDesk), Grayscale Bitcoin Trust (US:GBTC) and Fidelity Crypto Industry & Digital Payments ETF (US:FDIG) for the last three months.



Weekly Crypto Assets Flows (US$m) Source: CoinShares

[1] Assets under management (AUM) is the market value of the investments managed by a person or entity on behalf of clients. AUM is used in conjunction with management performance and management experience when evaluating a company.



Price dynamics of Bitcoin spot price (source: CoinDesk), Grayscale Bitcoin Trust and Fidelity Crypto Industry & Digital Payments ETF

But what distinguishes an ETF from an ETP?

Simply said, every ETF is an ETP, however not vice versa. An ETP, short for Exchange Traded Product, classifies all passively managed, meaning instruments that track the performance of a specific underlying asset or market / basket, investment products that can be traded through an exchange. ETPs include ETFs, ETCs and ETNs[2]. Different to an ETC and an ETN, the ETF is a fund as such and provides the investor protection against the investment company's insolvency as it classifies as a separate estate.

Different to traditional markets in which fund investment decisions are guided by long track records, large AUMs, and attractive fee structures, the crypto ETP and ETF market is still young and product quality and reputation may not easily be assessed. Therefore, the SEC's approval of the first BTC ETF counts as a milestone in the history of crypto assets. Now, investors can get exposure to Bitcoin with an extra layer of protection achieved through the ETF structure.

Is there real diversification in the crypto market?

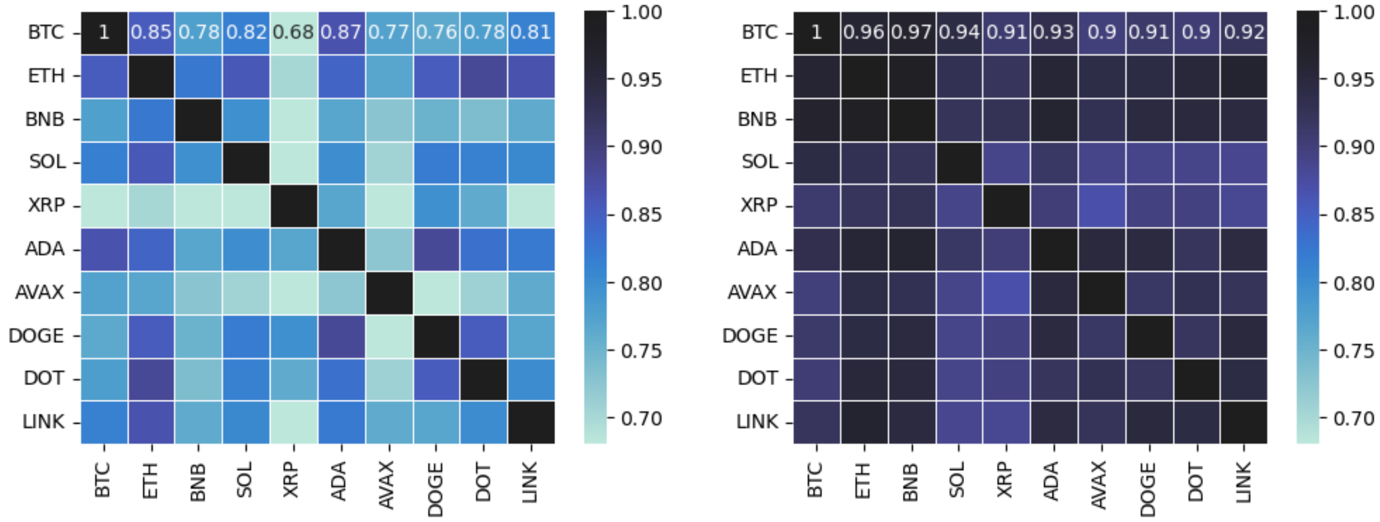
Generally, ETF investors look for diversification – large investment universes that are used to diversify risks across different regions, industries, or market segments. Since the crypto market offers diverse products, even products that include different crypto underlyings, it suggests offering certain level of diversification.

However, one of the prominent properties of the crypto market is a herding behaviour. It comes at large extend and one could claim to an extend which is not observed in another liquid market out there. But what is herding behaviour? Calderon, who aims to explain the cryptocurrencies market prices' puzzle by making use of behavioral finance theory, found in his paper "*Herding behaviour in cryptocurrency markets*" that herding behaviour is a collective decision-making process. In the crypto market, this collective decision making is often observed on various social media channels such as reddit and twitter and most importantly it can trigger and even fuel the formation of speculative bubbles. Certain properties of the crypto investor type, who is usually a retail investor with limited financial knowledge, who accesses and processes market information through unfiltered channels, accelerate explosive price behavior and hence the formation of speculative bubbles.

Back to the initial question: Is there real diversification in the crypto market?

We would state that there is not. Of course, an investor can select different tokens or digital assets and create a 'diversified' portfolio of crypto underlyings, however, when the investor takes the effort and analyzes the correlations of the selected portfolio assets she will find, that in situations in which the crypto market experiences large market moves (e.g. a big price move of one of the major cryptos, such as ETH or BTC), most other crypto assets are largely correlated. One of the main reasons for this observed price behavior is again the herding effect that is a key property of the market. The following correlation matrices illustrate this effect on price returns of top 10 (capitalisation-wise) crypto currencies. Crypto currencies and their returns tend to move strongly together in volatile market (as it can be found on Oct-16th 2023), but their moves can diverge in normal market conditions (as it can found on Oct-9th 2023).

[2] It is common to abbreviate exchange-traded commodities and exchange-traded notes as ETCs and ETNs.



Correlation matrices of crypto 5-min price returns on Monday, Oct-9th (left side) vs Monday, Oct-16th (right side).

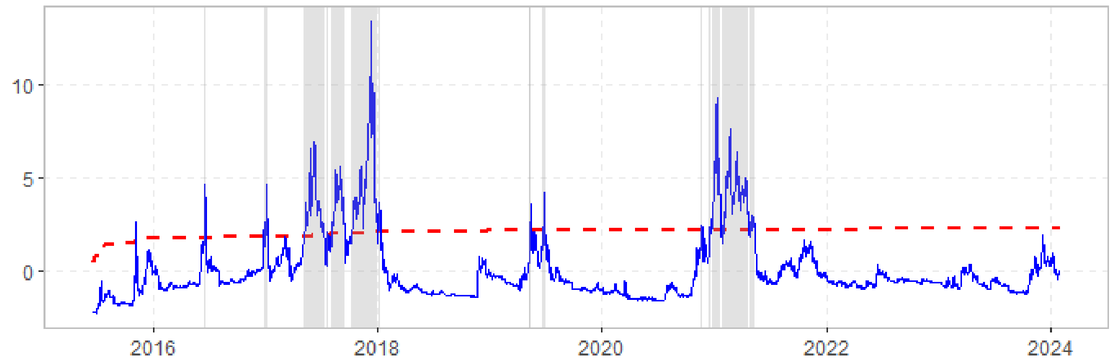
How can an investor now navigate through such a volatile market?

It is sensible to invest through regulated vehicles such as ETFs and ETPs and stay out of standard retail channels such as reddit and twitter when making investment decisions. Diversification in the crypto market as such should not be a key concern, however it is suggested that the investor considers the crypto or digital asset market as a high-risk alternative investment and therefore only allocates, dependent on their risk appetite, 2-5% of their entire wealth to this underlying.

Also, since bubbles and crises can impact the portfolio significantly, it would be interesting to identify them. A methodology developed by Phillips, Shi, and Yu in 2015, serves this need. The so-called PSY procedure employs an Augmented Dickey Fuller test together with a recursive evolving algorithm. This procedure will be now deployed to analyze the current state of the market.

What is the current state of the market? Are we in a bubble?

The following figure represents the results of application of PSY procedure to Bitcoin prices. Market in potentially explosive regimes with 99% significance level is marked with shared area. It can be clearly seen that this procedure was able to recognise “crypto bubbles” in the seconds half of 2017 and the first half of 2021. Although it does not seem that Bitcoin market is in bubble regime right now, the graph indicates that it is still close to the “red line”.



Conclusion

The SEC's approval of the first Bitcoin ETF coupled with the recent surge in Crypto ETFs has brought both opportunities and challenges, offering investors a regulated pathway into the crypto space.

Despite the array of products, achieving diversification remains a challenge due to prevalent herding behaviour among retail investors. Strategic navigation in this volatile market involves opting for regulated vehicles like ETFs and ETPs, limiting exposure to retail channels, and cautiously allocating 2-5% of one's portfolio to crypto assets.

Analysis, supported by the Phillips, Shi, and Yu (PSY) procedure, underscores the need for ongoing vigilance. While the current assessment suggests no imminent bubble, proximity to the "red line" warrants careful monitoring. As the crypto landscape evolves, staying informed, embracing risk management, and adhering to regulatory frameworks will be crucial for investors seeking long-term success in the world of digital assets.

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