Macro Economic Indicators & Valuation

Parag V. Kulkarni, Harvard Business School Alumni,
ACA (ICAI), CPA (AICPA), ACA (ICAEW), MRICS(RICS)

Founder, Unlock Future Inc.

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Impact on Valuation

Introduction

- In the realm of finance and economics, the dynamics of stock markets and valuations are an intricate web of various factors.
- As investors, analysts, and policymakers, we strive to **decipher** these **complex interactions**.
- In this comprehensive analysis, we embark on a journey through **nine distinct time periods**, each marked by its unique economic landscape.
- Our objective is clear: to unravel how these macroeconomic indicators, crucial in financial decision-making, ripple through stock markets and valuation processes.
- **With a keen eye on the ever-fluctuating interest rates, the ebbing and surging Consumer Price Index (CPI), and the oscillations in Gross Domestic Product (GDP) growth rates, we delve deep into the influences shaping market behaviour.**

Introduction

- The aim is to not only understand how these key metrics affect valuations but also to glean insights into whether stock markets might be signaling overpricing or underpricing.
- This necessarily justifies potential **reconciliations** between **differing value conclusions** under **Income Based Approach** that primarily utilise the intrinsic cashflows of entity and **Multiple Based Approach** that primarily utilise market multiples such as Revenue multiple or Ebitda multiple that are subject to volatility in stock market.
- Through this multifaceted analysis, we aim to paint a vivid picture of the dynamic **interplay between these macroeconomic forces and their profound implications for investors and decision-makers** alike.

Broad View

How Macroeconomic Indicators impact the valuation?

- CPI
- GDP Growth Rate
- Interest Rates

Areas to Impact

- Cash Flows
- Risk Free Rate
- Beta
- Equity Risk Premium

CPI (Consumer Price Index) affects:

- Risk-Free Rate: Through its impact on inflation expectations.
- Equity Risk Premium: Via its influence on inflation expectations and overall market risk.
- Beta (Systemic): If CPI impacts a company's systematic risk due to inflation sensitivity.

GDP Growth Rate impacts:

- Cash Flows: As economic growth affects a company's revenue, expenses, and profitability.
- Discount Rate: Through its influence on risk-free rates and inflation

Interest Rates affect:

- Risk-Free Rate: Directly, as they are a key component.
- Beta (Systemic Risk): If interest rates impact a company's cost of capital or financing structure.

Research Timeline

The Early Pandemic Period

Q1, 2020

The Pandemic Shock

Q2, 2020

Gradual Recovery

Q3, 2020

Inflation Stabilizes

Q4, 2020

Inflation Surge

Q1 to Q4, 2021

Continued Inflation

Q1, 2022

Inflation Peaks

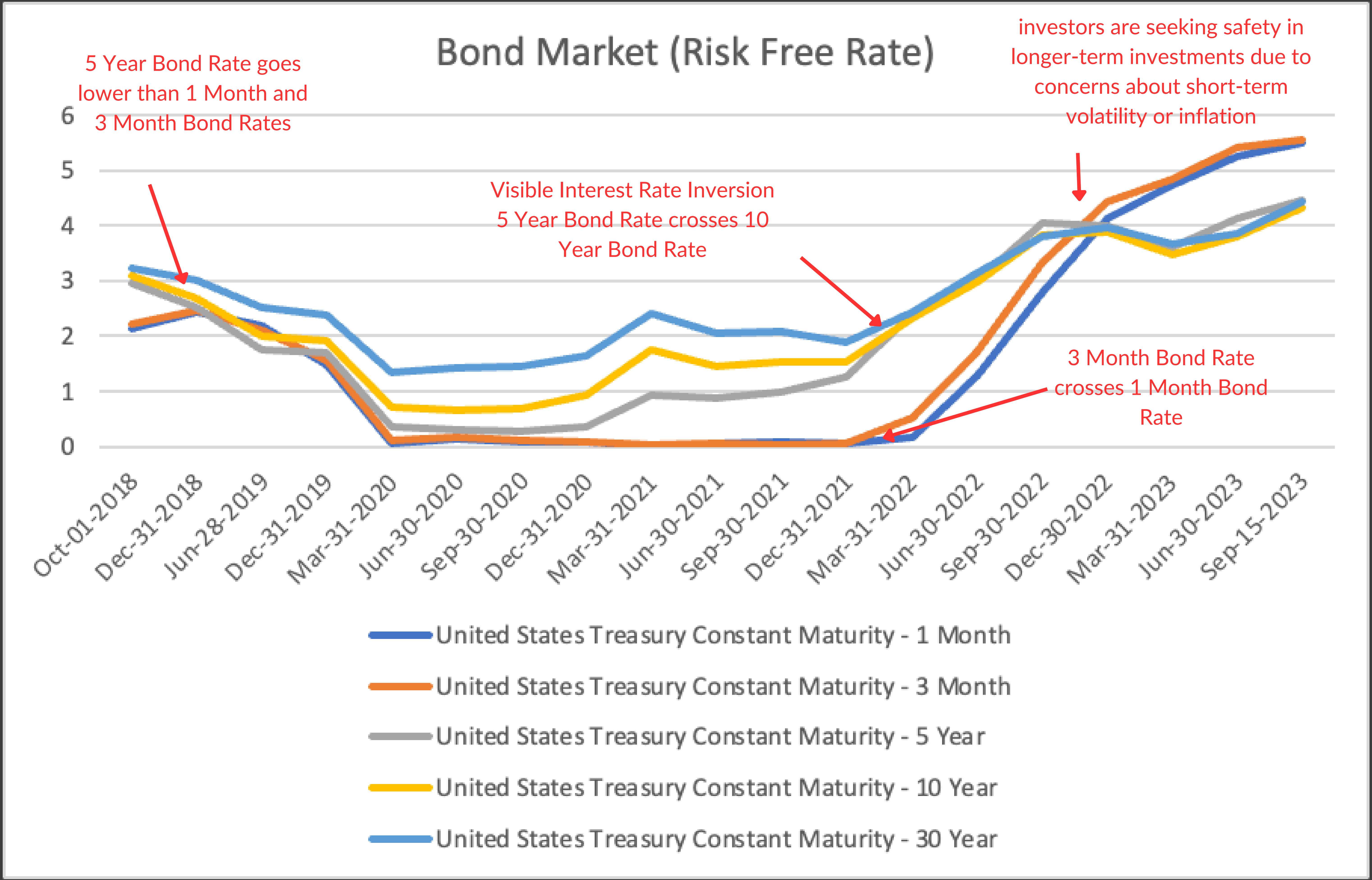
Q2, 2022

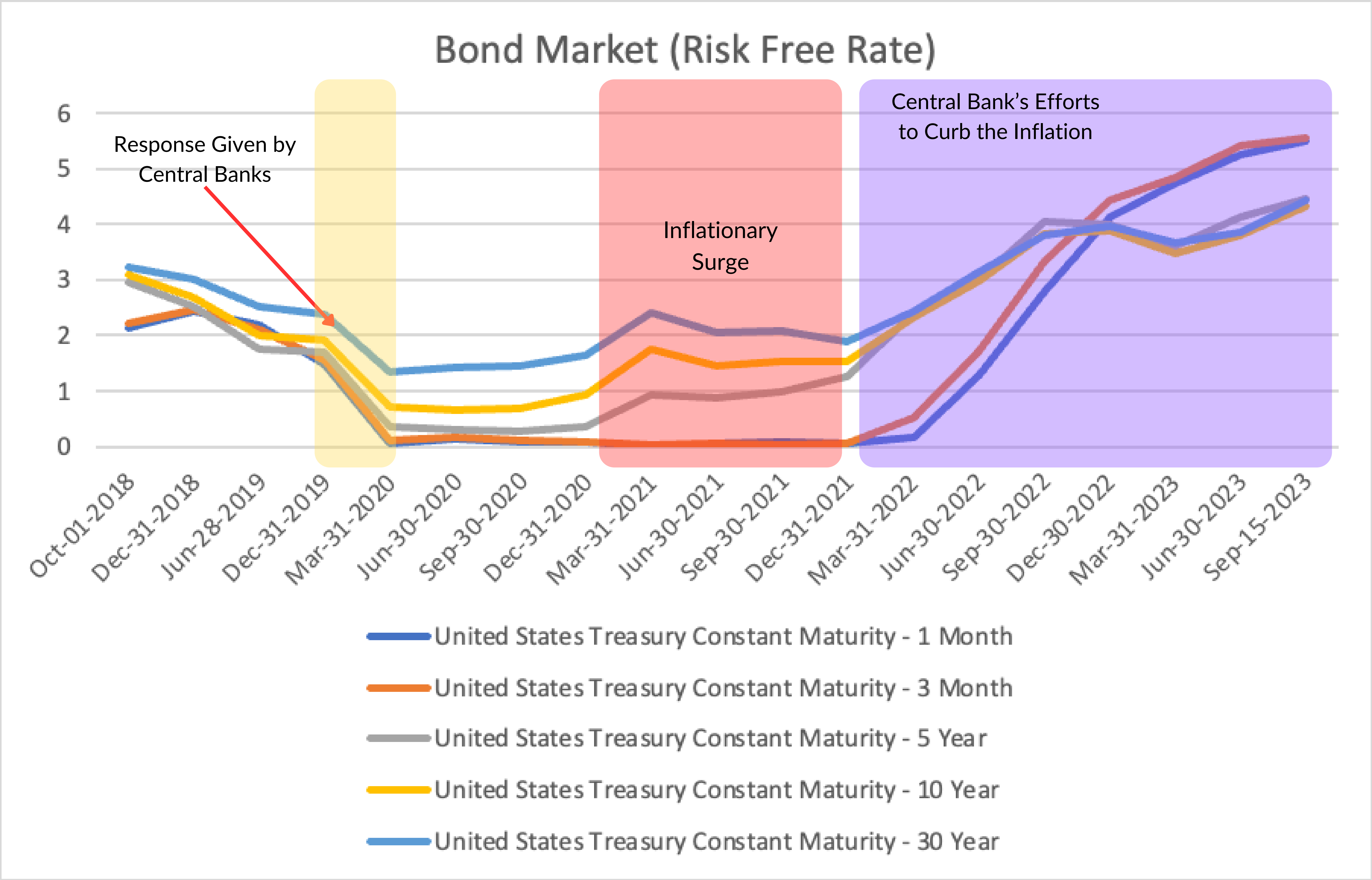
Inflation Moderation

Q3, 2022

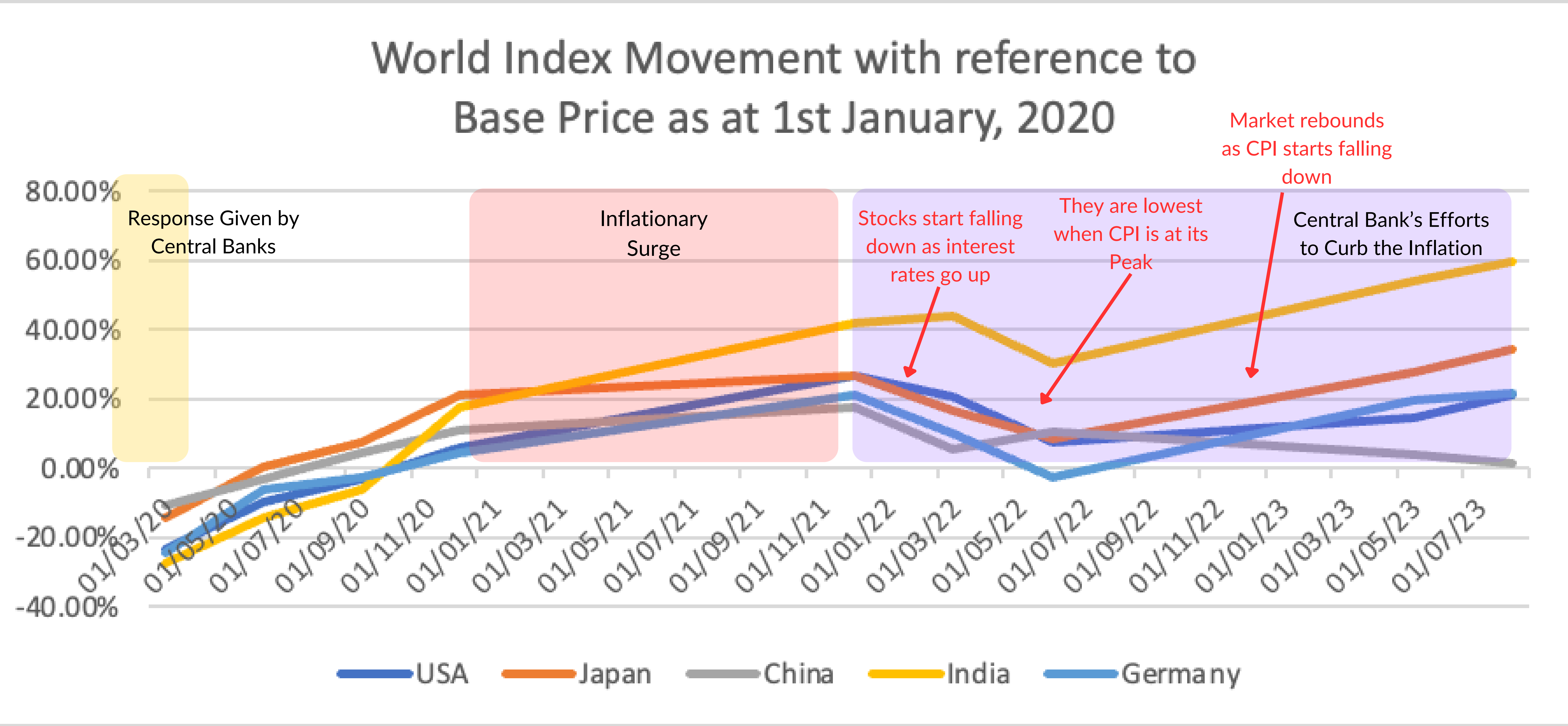
Further Moderation

Q4, 2022


Bond Market (Risk Free Rate)
5 Year Bond Rate goes lower than 1 Month and 3 Month Bond Rates
Visible Interest Rate Inversion 5 Year Bond Rate crosses 10 Year Bond Rate
investors are seeking safety in longer-term investments due to concerns about short-term volatility or inflation
3 Month Bond Rate crosses 1 Month Bond Rate
6
5
4
3
2
1
0
Oct-01-2018
Dec-31-2018
Jun-28-2019
Dec-31-2019
Mar-31-2020
Jun-30-2020
Sep-30-2020
Dec-31-2020
Mar-31-2021
Jun-30-2021
Sep-30-2021
Dec-31-2021
Mar-31-2022
Jun-30-2022
Sep-30-2022
Dec-30-2022
Mar-31-2023
Jun-30-2023
Sep-15-2023
United States Treasury Constant Maturity - 1 Month
United States Treasury Constant Maturity - 3 Month
United States Treasury Constant Maturity - 5 Year
United States Treasury Constant Maturity - 10 Year
United States Treasury Constant Maturity - 30 Year



Bond Market (Risk Free Rate)
Response Given by Central Banks
Inflationary Surge
Central Bank's Efforts to Curb the Inflation
6
5
4
3
2
1
0
Oct-01-2018
Dec-31-2018
Jun-28-2019
Dec-31-2019
Mar-31-2020
Jun-30-2020
Sep-30-2020
Dec-31-2020
Mar-31-2021
Jun-30-2021
Sep-30-2021
Dec-31-2021
Mar-31-2022
Jun-30-2022
Sep-30-2022
Dec-30-2022
Mar-31-2023
Jun-30-2023
Sep-15-2023
United States Treasury Constant Maturity - 1 Month
United States Treasury Constant Maturity - 3 Month
United States Treasury Constant Maturity - 5 Year
United States Treasury Constant Maturity - 10 Year
United States Treasury Constant Maturity - 30 Year



World Index Movement with reference to Base Price as at 1st January, 2020
Response Given by Central Banks
Inflationary Surge
Stocks start falling down as interest rates go up
They are lowest when CPI is at its Peak
Market rebounds as CPI starts falling down
Central Bank's Efforts to Curb the Inflation
80.00%
60.00%
40.00%
20.00%
0.00%
-20.00%
-40.00%
01/03/20
01/05/20
01/07/20
01/09/20
01/11/20
01/01/21
01/03/21
01/05/21
01/07/21
01/09/21
01/11/21
01/01/22
01/03/22
01/05/22
01/07/22
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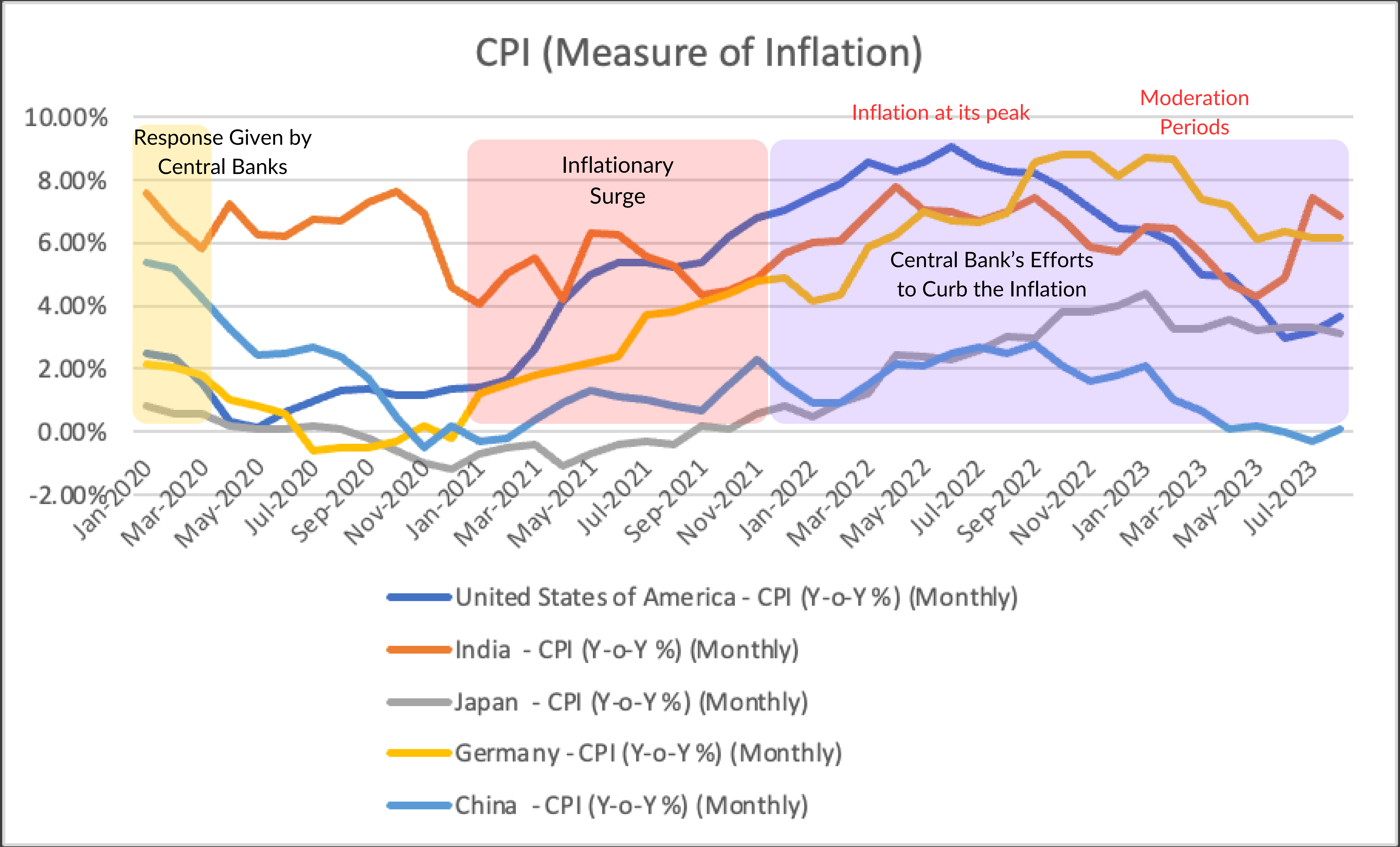
01/07/23
USA
Japan
China
India
Germany



CPI (Measure of Inflation)
10.00%
8.00%
6.00%
4.00%
2.00%
0.00%
-2.00%
Response Given by
Central Banks
Inflationary
Surge
Inflation at its peak
Moderation
Periods
Central Bank's Efforts
to Curb the Inflation
Jan-2020
Mar-2020
May-2020
Jul-2020
Sep-2020
Nov-2020
Jan-2021
Mar-2021
May-2021
Jul-2021
Sep-2021
Nov-2021
Jan-2022
Mar-2022
May-2022
Jul-2022
Sep-2022
Nov-2022
Jan-2023
Mar-2023
May-2023
Jul-2023
United States of America - CPI (Y-o-Y %) (Monthly)
India - CPI (Y-o-Y %) (Monthly)
Japan - CPI (Y-o-Y %) (Monthly)
Germany - CPI (Y-o-Y %) (Monthly)
China - CPI (Y-o-Y %) (Monthly)

Observations from Bond Market

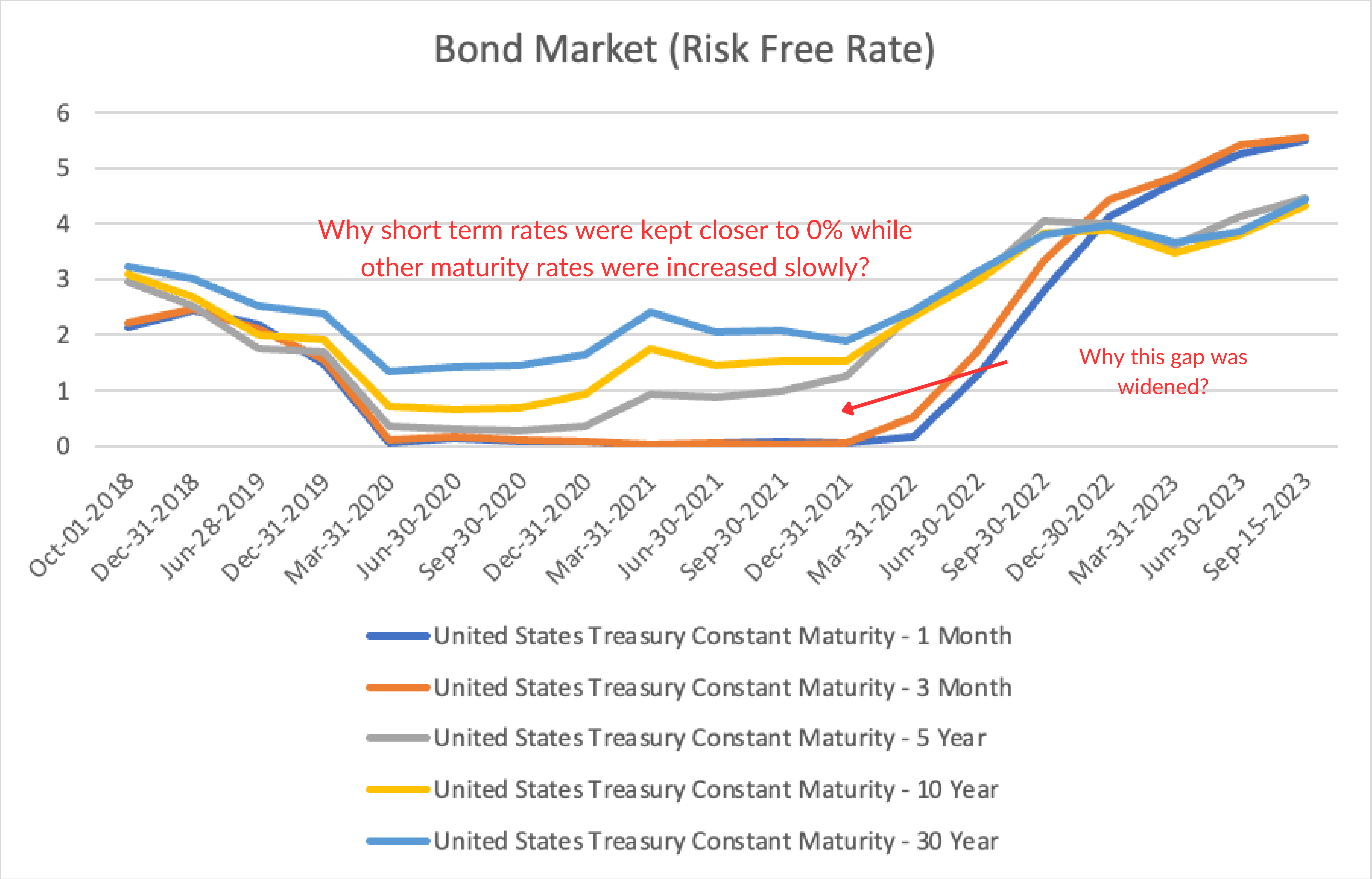
- **Response to the COVID-19 Pandemic:** The substantial reduction in interest rates from December 2019 to March 2020 reflects the immediate response of central banks to the COVID-19 pandemic. To counter economic uncertainty and stimulate borrowing and spending, central banks globally implemented aggressive monetary easing policies, which led to historically low short-term interest rates.
- **Inverted Yield Curve:** The inversion of the yield curve, where short-term rates surpass long-term rates, is a noteworthy phenomenon. Traditionally, an inverted yield curve is viewed as a potential indicator of an impending economic downturn. It suggests that markets anticipate economic challenges in the near term, such as a possible recession or high inflation. The fact that 5-year rates exceeded 10-year rates during this period indicates concerns about medium-term economic stability.

Observations from Bond Market

- **Inflation Expectations:** The data also points to shifting inflation expectations. The increase in short-term rates in December 2022 and June 2023 suggests concerns about rising inflation in the near future. This is consistent with broader economic discussions during this period, where inflation became a prominent topic, partly due to supply chain disruptions and increased government spending.
- **Monetary Policy Dynamics:** The period from March 2020 to the present shows how central banks responded to changing economic conditions. Initially, they maintained low rates to support recovery, but as inflationary pressures mounted, they gradually began to normalize rates. The rise in interest rates, particularly short-term rates, in late 2022 and 2023 reflects central banks' efforts to curb inflation and normalize monetary policy.

Observations from Bond Market

- **Investor Sentiment:** The fluctuation in interest rates also reflects changing investor sentiment. When short-term rates surpass long-term rates, it can indicate that investors are seeking safety in longer-term investments due to concerns about short-term volatility or inflation.
- **Economic Uncertainty:** The persistence of relatively high rates in 2023 suggests that economic uncertainty continued to prevail. Economists may interpret this as a sign that markets remained cautious, possibly due to ongoing concerns about inflation, geopolitical tensions, or other risk factors.


Bond Market (Risk Free Rate)
6
5
4
3
2
1
0
Why short term rates were kept closer to 0% while
other maturity rates were increased slowly?
Why this gap was
widened?
Oct-01-2018
Dec-31-2018
Jun-28-2019
Dec-31-2019
Mar-31-2020
Jun-30-2020
Sep-30-2020
Dec-31-2020
Mar-31-2021
Jun-30-2021
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United States Treasury Constant Maturity - 1 Month
United States Treasury Constant Maturity - 3 Month
United States Treasury Constant Maturity - 5 Year
United States Treasury Constant Maturity - 10 Year
United States Treasury Constant Maturity - 30 Year

Why short term rates were kept closer to 0% while other maturity rates were increased slowly?

- Central banks provide forward guidance on their future monetary policy intentions. In this case, the Federal Reserve communicated its intention to **keep short-term interest rates low for an extended period to support economic recovery**. This guidance can influence market expectations and keep short-term rates anchored.
- In 2021, while inflation was a concern, it took some time for markets to fully digest the potential impact. **Initially, there may have been skepticism about whether rising inflation would be sustained, which could have kept short-term rates lower.**
- Market forces, such as supply and demand for bonds, play a role. When there is **high demand for short-term bonds**, it can keep their yields low.
- As the economy showed signs of recovery and inflation pressures became more evident, longer-term interest rates started to rise. **The central bank's commitment to keeping short-term rates low while allowing longer-term rates to adjust is a common strategy to support economic growth while managing inflation.**

Observations from Bond Market

In conclusion, the interest rate trends observed in the data reveal a **complex interplay of responses** to the COVID-19 pandemic, shifting inflation expectations, and changing monetary policies. The **inverted yield curve and fluctuations in interest rates** reflect the uncertainty and adjustments in the broader economic landscape during this period.

The Early Pandemic Period

January 2020 - March 2020

January 2020 - March 2020

The Early Pandemic Period

Inflation

- In January 2020, the CPI stood at 2.49%, indicating moderate inflation.
- However, as the COVID-19 pandemic began to grip the United States, the CPI dropped to 1.54% in March 2020. **This decline can be attributed to reduced consumer spending and economic uncertainty.**
- All countries experienced moderate inflation. Notably, India had the highest CPI at 7.59%, while Japan had the lowest at 0.80%.

January 2020 - March 2020

The Early Pandemic Period

Inflation - Why so much CPI in India?

- Supply chains in India began experiencing disruptions due to the COVID-19 pandemic in the latter part of January 2020, which was before the nationwide lockdown was imposed on March 24, 2020.
- These disruptions were initially linked to global supply chain issues as many countries were already grappling with the effects of the pandemic.
- These disruptions in the supply chain led to volatility in commodity prices and contributed to inflationary pressures, which could be one of the factors behind the elevated Consumer Price Index (CPI) during that period.

January 2020 - March 2020

The Early Pandemic Period

Causes of Supply Chain Disruption

- **Global Supply Chain Disruptions:** India relies on imports for various raw materials and components in its manufacturing sector. As the pandemic spread to other parts of the world, *many countries imposed lockdowns and restrictions, leading to delays and disruptions in the supply of goods to India*.
- **Logistical Challenges:** Transportation and logistics faced significant challenges due to lockdowns, quarantine measures, and restrictions on the movement of goods and people. This made it difficult for businesses to procure necessary inputs and distribute finished products.
- **Labor Shortages:** Many labor-intensive industries in India, such as manufacturing and agriculture, faced labor shortages as workers migrated from urban centers to their hometowns and villages in the wake of lockdown announcements.

January 2020 - March 2020

The Early Pandemic Period

Migration before Lockdown

- Migrations began in the weeks leading up to the lockdown.
- People, particularly daily-wage laborers, informal sector workers, and migrant workers, started leaving major cities and urban areas to return to their hometowns and villages.
- While the official lockdown was a significant event that intensified the migration crisis, the migration of workers from urban to rural areas had already commenced before the formal announcement of the lockdown on March 24, 2020.
- The lockdown measures and transport restrictions further complicated the situation, leading to large-scale migrations on foot and by other means.

January 2020 - March 2020

The Early Pandemic Period

Reasons for Early Migration

- **Fear of the Virus**: As news about the COVID-19 pandemic spread, many workers, especially those in overcrowded urban areas with limited access to healthcare, were concerned about the risks associated with the virus. The fear of contracting the virus and the perception that rural areas might be safer prompted many to return home.
- **Loss of Income**: With businesses temporarily shutting down and economic activities slowing down due to the pandemic, many daily-wage laborers and informal sector workers faced immediate income losses. As a result, they chose to leave cities and urban centers in search of better economic prospects in their villages.
- **Uncertainty**: The initial phases of the pandemic were marked by uncertainty about how long the situation would last and how it would impact livelihoods. This uncertainty drove many people to make hasty decisions to return to their native places.

January 2020 - March 2020

The Early Pandemic Period

Interest Rates

Pricing Date	1 Month	3 Months	5 Year	10 Year	30 Years
Dec-31-2019	1.48	1.55	1.69	1.92	2.39
Mar-31-2020	0.05	0.11	0.37	0.7	1.35

- During the early stages of the pandemic, central banks worldwide swiftly responded with rate cuts to stimulate economic activity.
- The United States, for example, saw rates drop from 1.48% to 0.05% during this period.
- This dramatic reduction was a response to the looming economic uncertainty as the pandemic took hold.
- Interest rates, in general, dropped across the yield curve, including both short-term and long-term rates.

January 2020 - March 2020

The Early Pandemic Period

Potential Impact on Valuation

- Falling CPI likely stimulated consumer demand, potentially affecting cash flows positively.
- Lower interest rates reduced the discount rate, which could have inflated asset values.
- Market declines likely raised market risk premiums, increasing discount rates.
- Slowing GDP growth could have impacted company revenues and cash flows.
- Falling stock prices might have led to contracting revenue and EBITDA multiples.

January 2020 - March 2020

The Early Pandemic Period

Why Stock Prices were falling despite falling CPI and lowering Interest Rates?

The relationship between CPI (Consumer Price Index), interest rates, and stock prices can be complex and influenced by various factors. While falling CPI and lower interest rates can theoretically stimulate consumer spending and borrowing, leading to increased economic activity, several other factors may have contributed to falling stock prices during this period:

- **Market Sentiment:** Stock prices are often influenced by investor sentiment and market psychology. **Negative news or uncertainty**, such as the outbreak of the COVID-19 pandemic, **can lead to panic selling and falling stock prices**, despite favorable economic indicators like falling CPI and lower interest rates.

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January 2020 - March 2020

The Early Pandemic Period

Why Stock Prices were falling despite falling CPI and lowering Interest Rates?

- **Earnings Concerns**: Even if CPI is falling, companies may have reported **weaker earnings or lower growth expectations** due to disruptions caused by the pandemic. Earnings performance is a key driver of stock prices.
- **Global Factors**: International events and economic conditions can also impact stock markets. **Global economic uncertainty and the interconnectedness of financial markets** can lead to **synchronized market declines**, even if domestic economic indicators are relatively favorable.
- **Risk Aversion**: In times of uncertainty, investors may become more risk-averse and **shift their investments to safer assets**, including bonds and cash, causing stock prices to decline.
- **Government and Central Bank Actions**: Responses from governments and central banks to economic crises can play a significant role. For example, despite lower interest rates, if investors believe that central banks' policy measures are insufficient to address economic challenges, it can lead to stock market declines.

January 2020 - March 2020

The Early Pandemic Period

Stock Market

End Date	USA	Japan	China	India	Germany
31/03/2020	-23.64%	-14.39%	-10.80%	-27.55%	-24.31%

- The Dow Jones Industrial Average (USA) and Germany's DAX Index experienced significant declines, mirroring the global panic induced by the pandemic.
- Japan's Nikkei Average and China's SSE Composite also faced losses but were somewhat resilient.
- India's Sensex took a substantial hit, reflecting concerns over the virus's economic impact.

The Pandemic Shock

April 2020 - June 2020

April 2020 - June 2020

The Pandemic Shock

Inflation

- The CPI plummeted to 0.33% in April 2020, signifying a severe economic shock due to lockdowns and reduced economic activity.
- In subsequent months, May and June 2020, inflation remained low but showed slight signs of recovery, reaching 0.65% and 0.99%, respectively.
- Most countries, except China, witnessed a drop in CPI as the pandemic struck, reflecting decreased economic activity.
- India experienced high inflation due to supply chain disruptions.

April 2020 - June 2020

The Pandemic Shock

Interest Rates

Pricing Date	1 Month	3 Months	5 Year	10 Year	30 Years
Mar-31-2020	0.05	0.11	0.37	0.7	1.35
Jun-30-2020	0.13	0.16	0.29	0.66	1.41

- The pandemic shock led to a global economic standstill.
- Central banks had already initiated rate cuts to combat the economic fallout, with short-term interest rates decreasing significantly.
- **The intention was to ease borrowing costs and encourage spending, which typically leads to a steepening of the yield curve as short-term rates decline more than long-term rates.**
- This yield curve behaviour indicated that markets, while initially cautious about the long-term economic outlook, began to show some signs of confidence as central bank actions took effect.
- However, it's essential to note that while the yield curve was steepening, uncertainty still prevailed in financial markets due to the unprecedented nature of the pandemic.

April 2020 - June 2020

The Pandemic Shock

Potential Impact on Valuation

- Continuing low CPI kept consumer demand weak, impacting cash flows.
- Persistent low-interest rates inflated asset values via lower discount rates.
- Partial market recovery reduced market risk premiums, lowering discount rates.
- Slow GDP growth affected corporate earnings and valuations.
- Investor confidence improvement might have started expanding revenue and EBITDA multiples.

April 2020 - June 2020

The Pandemic Shock

Stock Market

End Date	USA	Japan	China	India	Germany
31/03/2020	-23.64%	-14.39%	-10.80%	-27.55%	-24.31%
30/06/20	-10.07%	0.49%	-3.20%	-14.16%	-6.22%

- During this period, global stock markets saw a sharp decline as the full impact of the COVID-19 pandemic became evident.
- The USA's Dow Jones experienced a double-digit decline, reflecting the initial panic and uncertainty in the financial markets.
- India's Sensex also recorded significant losses as the country implemented lockdown measures to contain the virus.

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April 2020 - June 2020

The Pandemic Shock

Stock Market

End Date	USA	Japan	China	India	Germany
31/03/2020	-23.64%	-14.39%	-10.80%	-27.55%	-24.31%
30/06/20	-10.07%	0.49%	-3.20%	-14.16%	-6.22%

- Japan's Nikkei was the only index that managed to stay in positive territory, albeit with marginal gains.
- China's SSE Composite, despite experiencing a dip, showed resilience compared to other markets.
- Germany's DAX faced substantial losses but performed better than the USA and India.

(Continued on next slide)

April 2020 - June 2020

The Pandemic Shock

Stock Market

End Date	USA	Japan	China	India	Germany
31/03/2020	-23.64%	-14.39%	-10.80%	-27.55%	-24.31%
30/06/20	-10.07%	0.49%	-3.20%	-14.16%	-6.22%

- These market movements highlight the initial shock and uncertainty that gripped investors as they grappled with the unprecedented challenges posed by the pandemic. Japan's Nikkei displayed relative stability, possibly due to the country's effective containment measures. China's resilience could be attributed to its earlier recovery from the pandemic's initial impact.
- Investors closely monitored government responses and central bank interventions to gauge the economic impact of the pandemic.

Gradual Recovery

July 2020 - September 2020

July 2020 - September 2020

Gradual Recovery

Inflation

Month	USA	India	Japan	Germany	China
Jul-2020	0.99%	6.73%	0.20%	-0.60%	2.70%
Aug-2020	1.31%	6.69%	0.10%	-0.50%	2.40%
Sep-2020	1.37%	7.27%	-0.20%	-0.50%	1.70%

- From July to September 2020, inflation continued its gradual upward trajectory, reflecting a slow economic recovery. The CPI reached 1.31% in August 2020.
- Inflation remained subdued in most countries during this period.
- Germany and Japan briefly saw deflation.

July 2020 - September 2020

Gradual Recovery

Interest Rates

Pricing Date	1 Month	3 Months	5 Year	10 Year	30 Years
Jun-30-2020	0.13	0.16	0.29	0.66	1.41
Sep-30-2020	0.08	0.1	0.28	0.69	1.46

- During this phase, economies gradually recovered from the initial pandemic shock. Central banks continued to maintain low-interest rates to provide stability and support nascent economic growth.
- The yield curve started to steepen slightly, reflecting increasing confidence in the economy's prospects.

July 2020 - September 2020

Gradual Recovery

Potential Impact on Valuation

- Stabilizing CPI began restoring consumer demand, positively affecting cash flows.
- Low interest rates supported higher asset valuations.
- Rising stock market returns reduced market risk premiums and discount rates.
- Gradual GDP recovery supported improved corporate earnings.
- Multiples likely expanded as optimism returned.

July 2020 - September 2020

Gradual Recovery

Stock Market

End Date	USA	Japan	China	India	Germany
30/06/20	-10.07%	0.49%	-3.20%	-14.16%	-6.22%
30/09/20	-3.21%	7.60%	4.37%	-6.41%	-2.79%

- During this quarter, stock markets around the world continued to recover from the shock of the COVID-19 pandemic, with varying degrees of success.
- In the USA, the Dow Jones displayed signs of stabilization, with a reduced rate of decline compared to the initial pandemic shock, indicating that investor confidence was gradually returning.

(Continued on next slide)

July 2020 - September 2020

Gradual Recovery

Stock Market

End Date	USA	Japan	China	India	Germany
30/06/20	-10.07%	0.49%	-3.20%	-14.16%	-6.22%
30/09/20	-3.21%	7.60%	4.37%	-6.41%	-2.79%

- Japan's Nikkei index stood out during this period, posting gains and demonstrating remarkable resilience, thanks to effective containment measures and robust economic policies.
- China's SSE Composite also continued its recovery, buoyed by a combination of government stimulus and a swift return to economic activity.
- India's Sensex recorded a smaller decline relative to the previous quarter, reflecting a tentative recovery as lockdowns were eased and economic activity resumed.

(Continued on next slide)

July 2020 - September 2020

Gradual Recovery

Stock Market

End Date	USA	Japan	China	India	Germany
30/06/20	-10.07%	0.49%	-3.20%	-14.16%	-6.22%
30/09/20	-3.21%	7.60%	4.37%	-6.41%	-2.79%

- Germany's DAX exhibited a milder decline as well, aligning with the broader global trend of markets regaining stability.
- It's important to note that during this period, governments and central banks worldwide implemented significant monetary and fiscal measures to bolster their economies.
- Investors began to regain confidence as these efforts translated into a degree of market stability. Japan and China's resilience was particularly noteworthy, reflecting effective public health measures and well-targeted stimulus initiatives.

Inflation Stabilizes

October 2020 - December 2020

October 2020 - December 2020

Inflation Stabilizes

Inflation

Month	USA	India	Japan	Germany	China
Oct-2020	1.18%	7.61%	-0.60%	-0.30%	0.50%
Nov-2020	1.17%	6.93%	-1.00%	0.20%	-0.50%
Dec-2020	1.36%	4.59%	-1.19%	-0.20%	0.20%

- Inflation remained relatively stable in the last quarter of 2020, with December CPI at 1.36%. The economy was still on the path to recovery.
- Inflation started to rise again, with India experiencing higher inflation due to food price increases.
- Germany and Japan still had deflationary pressures.

What Happens in Deflation?

- **Reduced Consumer Spending**: Consumers may delay purchases because they expect prices to continue falling. This can lead to a decrease in overall consumer spending, which is a significant driver of economic growth.
- **Lower Business Investment**: Businesses may delay investments and expansion plans because of decreased consumer demand. This can result in reduced capital spending and, in some cases, job cuts.
- **Increased Real Debt Burden**: While falling prices may seem beneficial, they can increase the burden of debt. Borrowers may find it more challenging to repay loans with money that has more purchasing power, making it harder for them to meet their financial obligations.
- **Decline in Corporate Profits**: As consumer demand weakens, companies may experience declining sales and lower profits. This can negatively impact stock prices and corporate earnings.
- **Monetary Policy Challenges**: Central banks often use interest rates to manage inflation. In a deflationary environment, where prices are falling, central banks may struggle to stimulate economic activity through interest rate cuts since rates are already low.
- **Potential for a Vicious Cycle**: Deflation can lead to a vicious cycle of reduced spending, lower production, and job losses, which, in turn, can result in further deflationary pressures.

October 2020 - December 2020

Inflation Stabilizes

Interest Rates

Pricing Date	1 Month	3 Months	5 Year	10 Year	30 Years
Sep-30-2020	0.08	0.1	0.28	0.69	1.46
Dec-31-2020	0.08	0.09	0.36	0.93	1.65

- Inflation began to stabilize, but rates remained low. Central banks remained watchful, ensuring that monetary conditions supported economic healing.
- For instance, the United States witnessed a slight increase, from 0.7% to 1.35%.
- Despite this, the yield curve continued to indicate concerns about the future, with long-term rates still below pre-pandemic levels.

October 2020 - December 2020

Inflation Stabilizes

Potential Impact on Valuation

- Stable inflation restored consumer confidence, positively impacting business cash flows.
- Continued low interest rates contributed to higher asset valuations.
- Positive stock market returns signaled reduced market risk and discount rates.
- Stable GDP growth positively affected corporate earnings.
- Investor confidence improvement might have expanded revenue and EBITDA multiples.

October 2020 - December 2020

Inflation Stabilizes

Stock Market

End Date	USA	Japan	China	India	Germany
30/09/20	-3.21%	7.60%	4.37%	-6.41%	-2.79%
30/12/20	5.94%	20.93%	10.74%	17.38%	4.51%

- In this quarter, stock markets worldwide witnessed a period of relative stability and resurgence.
- The USA experienced a noteworthy uptick, reflecting growing investor confidence and improved economic indicators.
- Japan's Nikkei index surged, largely influenced by robust export performance and aggressive government spending.

(Continued on next slide)

October 2020 - December 2020

Inflation Stabilizes

Stock Market

End Date	USA	Japan	China	India	Germany
30/09/20	-3.21%	7.60%	4.37%	-6.41%	-2.79%
30/12/20	5.94%	20.93%	10.74%	17.38%	4.51%

- China's SSE Composite continued its steady climb, fuelled by strong domestic demand and a well-managed recovery.
- India's Sensex posted substantial gains, benefiting from improved economic conditions and a rebound in business sentiment.

(Continued on next slide)

October 2020 - December 2020

Inflation Stabilizes

Stock Market

End Date	USA	Japan	China	India	Germany
30/09/20	-3.21%	7.60%	4.37%	-6.41%	-2.79%
30/12/20	5.94%	20.93%	10.74%	17.38%	4.51%

- Germany's DAX also witnessed positive growth, in line with the broader global trend of market recovery.
- This period marked a turning point as economies adapted to the new normal, with several countries demonstrating resilience and effective economic management.

(Continued on next slide)

Can stock market perform well in deflation?

The stock market's performance can sometimes appear contradictory when compared to economic indicators like deflation. Several factors could contribute to a stock market recovery despite deflationary pressures:

- Monetary Policy: Central banks often respond to deflationary pressures by implementing expansionary monetary policies. These policies typically involve lowering interest rates and injecting liquidity into the financial system. **Low-interest rates can make stocks more attractive** to investors compared to other investment options like bonds or savings accounts.
- Expectations of Future Growth: Stock markets are forward-looking, and investors often base their decisions on expectations of future economic conditions. Even during deflation, if **investors believe that economic conditions will improve in the future**, they may continue to invest in stocks.
- Corporate Earnings: **In some cases, companies can maintain or even increase profitability during deflation**. This can be due to cost-cutting measures, increased operational efficiency, or strong demand for certain products or services.

Can stock market perform well in deflation?

- Global Economic Factors: Stock markets are influenced by global economic conditions, not just domestic ones. If other major economies are performing well or if **there is optimism about global economic recovery**, it can positively impact stock markets.
- Government Stimulus: **Government stimulus measures, such as fiscal spending packages**, can boost economic activity and support stock markets, even in the face of deflation.
- Foreign Investment: **International investors may be attracted to markets with strong fundamentals**, even if there is deflation, leading to increased foreign investment.
- Sectoral Differences: **Not all sectors are equally affected by deflation**. Some industries, like technology or healthcare, may continue to thrive even in deflationary environments, and this can buoy stock market indices.

It's important to note that stock markets are influenced by a complex interplay of factors, and their movements may not always align with the overall economic situation. Additionally, market recoveries during deflation can be uneven, with some sectors or companies performing better than others.

The Inflation Surge

2021

2021

The Inflation Surge

Inflation

Month	USA	India	Japan	Germany	China
Jan-2021	**1.40%**	**4.06%**	**-0.70%**	**1.20%**	**-0.30%**
Feb-2021	1.68%	5.03%	-0.50%	1.50%	-0.20%
Mar-2021	2.62%	5.52%	-0.40%	1.79%	0.40%
Apr-2021	4.16%	4.23%	-1.10%	1.99%	0.90%
May-2021	4.99%	6.30%	-0.70%	2.19%	1.30%
Jun-2021	5.39%	6.26%	-0.40%	2.39%	1.10%

Month	USA	India	Japan	Germany	China
Jul-2021	5.37%	5.59%	-0.30%	3.71%	1.00%
Aug-2021	5.25%	5.30%	-0.40%	3.81%	0.80%
Sep-2021	5.39%	4.35%	0.20%	4.11%	0.70%
Oct-2021	6.22%	4.48%	0.10%	4.40%	1.50%
Nov-2021	6.81%	4.91%	0.60%	4.81%	2.30%
Dec-2021	**7.04%**	**5.66%**	**0.81%**	**4.91%**	**1.50%**

2021

The Inflation Surge

Inflation

Month	USA	India	Japan	Germany	China
Jan-2021	1.40%	4.06%	-0.70%	1.20%	-0.30%
Jun-2021	5.39%	6.26%	-0.40%	2.39%	1.10%
Dec-2021	7.04%	5.66%	0.81%	4.91%	1.50%

- In **January 2021**, inflation stood at **1.40%**, but it began to accelerate significantly.
- By **November 2021**, the CPI had surged to **6.81%**, indicating a sharp increase in prices across various sectors.
- In **December 2021**, inflation **crossed the 7%** mark, raising concerns among policymakers and economists.
- Inflation surged across all countries, with the United States, India, and Germany recording notable increases.
- India's high inflation was driven by food prices.
- Japan remained an exception with mild deflation.

2021

The Inflation Surge

Interest Rates

Pricing Date	1 Month	3 Months	5 Year	10 Year	30 Years
Dec-31-2020	0.08	0.09	0.36	0.93	1.65
Dec-31-2021	0.06	0.06	1.26	1.52	1.9

- In January 2021, inflation stood at 1.40%, but it began to accelerate significantly.
- By November 2021, the CPI had surged to 6.81%, indicating a sharp increase in prices across various sectors.
- In December 2021, inflation crossed the 7% mark, raising concerns among policymakers and economists.
- Inflation surged across all countries, with the United States, India, and Germany recording notable increases.
- India's high inflation was driven by food prices.
- Japan remained an exception with mild deflation.

2021

The Inflation Surge

Potential Impact on Valuation

- Rising inflation created uncertainty in consumer spending and purchasing power.
- Anticipating higher inflation, rising interest rates elevated discount rates.
- Positive stock market returns counterbalanced rising interest rates on discount rates.
- Economic growth supported corporate earnings and valuations.
- Multiples contracted due to inflation-related uncertainty.

2021

The Inflation Surge

Stock Market

End Date	USA	Japan	China	India	Germany
30/12/20	5.94%	20.93%	10.74%	17.38%	4.51%
30/12/21	26.81%	26.54%	17.38%	42.08%	21.01%

- A strong year for markets, especially in India and Germany, reflecting economic resilience.
- Inflation concerns drove investments into stocks as hedges against eroding purchasing power.

Continued Inflation

January 2022 - March 2022

January 2022 - March 2022

Continued Inflation

Inflation

Month	USA	India	Japan	Germany	China
Jan-2022	7.48%	6.01%	0.50%	4.16%	0.90%
Feb-2022	7.87%	6.07%	0.90%	4.33%	0.90%
Mar-2022	8.54%	6.95%	1.20%	5.88%	1.50%

- Inflation remained elevated in most countries, with USA having the highest CPI.
- Japan finally emerged from deflation.
- In January 2022, CPI reached 7.48%, and by March 2022, it soared to 8.54%, marking the highest inflation rate during this period.
- This surge in inflation was fuelled by a combination of factors, including supply chain disruptions, increased demand, and rising commodity prices.

Interest Rates

Pricing Date	1 Month	3 Months	5 Year	10 Year	30 Years
Dec-31-2020	0.08	0.09	0.36	0.93	1.65
Dec-31-2021	0.06	0.06	1.26	1.52	1.9

2021

Bond Rates from 1 Month to 5 Years are now reversed. They are moved up in the 1st Quarter of 2022.

Pricing Date	1 Month	3 Months	5 Year	10 Year	30 Years
Dec-31-2021	0.06	0.06	1.26	1.52	1.9
Mar-31-2022	0.17	0.52	2.42	2.32	2.44

January 2022 - March 2022

January 2022 - March 2022

Continued Inflation

Interest Rates

Pricing Date	1 Month	3 Months	5 Year	10 Year	30 Years
Dec-31-2021	0.06	0.06	1.26	1.52	1.9
Mar-31-2022	0.17	0.52	2.42	2.32	2.44

- In early 2022, inflation persisted, and central banks confronted the challenge of managing rising prices.
- The Federal Reserve initiated a series of interest rate hikes to combat inflationary pressures, signaling its commitment to price stability.
- The yield curve finally began to steepen, a sign that investors anticipated tighter monetary policy to curb inflation.

January 2022 - March 2022

Continued Inflation

Potential Impact on Valuation

- High CPI constrained consumer spending, affecting business revenues.
- Rising interest rates elevated discount rates.
- Positive stock market returns partially mitigated rising interest rates' impact.
- Strong economic growth positively impacted corporate earnings and valuations.
- Multiples fluctuated due to inflation concerns and robust economic growth.

January 2022 - March 2022

Continued Inflation

Stock Market

End Date	USA	Japan	China	India	Germany
30/12/21	26.81%	26.54%	17.38%	42.08%	21.01%
31/03/22	20.82%	16.31%	5.47%	43.99%	9.81%

- The Indian stock market maintained its exceptional performance. This impressive growth was underpinned by India's steady economic recovery and investor-friendly government reforms, despite experiencing relatively high inflation.
- Japan’s stock market experienced deceleration in its growth rate compared to the previous quarter. This occurred within an environment characterized by persistent low-interest rates and efforts to combat deflation. *(Continued on next slide)*

January 2022 - March 2022

Continued Inflation

Stock Market

End Date	USA	Japan	China	India	Germany
30/12/21	26.81%	26.54%	17.38%	42.08%	21.01%
31/03/22	20.82%	16.31%	5.47%	43.99%	9.81%

- China's stock market experienced moderate cumulative growth of 5.47% since January 2020, signifying stabilization after a period of rapid expansion. China's economic strategy aimed to maintain steady growth while addressing concerns about rising inflation.

(Continued on next slide)

January 2022 - March 2022

Continued Inflation

Stock Market

End Date	USA	Japan	China	India	Germany
30/12/21	26.81%	26.54%	17.38%	42.08%	21.01%
31/03/22	20.82%	16.31%	5.47%	43.99%	9.81%

- The USA and Germany also displayed negative growth. These countries grappled with similar inflationary pressures, leading to discussions about central bank policies and the implications for interest rates.
- This period demonstrated the intricate relationship between stock market performance, inflation rates, and central bank policies. India's stock market, despite high inflation, continued to thrive due to various economic factors and investor sentiment.

Inflation Peaks

January 2022 - March 2022

April 2022 - June 2022

Inflation Peaks

Inflation

Month	USA	India	Japan	Germany	China
Apr-2022	8.26%	7.79%	2.42%	6.25%	2.13%
May-2022	8.58%	7.04%	2.41%	7.02%	2.10%
Jun-2022	9.06%	7.01%	2.31%	6.71%	2.50%

- Inflation reached peak levels, particularly in India and China.
- Germany experienced its highest inflation during this period.
- Japan saw a surge in inflation, possibly due to energy price hikes.

April 2022 - June 2022

Inflation Peaks

Interest Rates

Pricing Date	1 Month	3 Months	5 Year	10 Year	30 Years
Mar-31-2022	0.17	0.52	2.42	2.32	2.44
Jun-30-2022	1.28	1.72	3.01	2.98	3.14

- The Federal Reserve and other central banks accelerated interest rate hikes to curb inflation.
- The yield curve continued to steepen, reflecting market expectations of sustained tightening.

April 2022 - June 2022

Inflation Peaks

Potential Impact on Valuation

- Peak inflation strained consumer spending, potentially leading to lower revenues.
- Rising interest rates elevated discount rates.
- Positive stock market returns countered some of the effects of rising interest rates.
- Economic growth likely supported corporate earnings.
- Multiples fluctuated due to the battle between inflation concerns and economic growth.

April 2022 - June 2022

Inflation Peaks

Stock Market

End Date	USA	Japan	China	India	Germany
31/03/22	20.82%	16.31%	5.47%	43.99%	9.81%
30/06/22	7.22%	8.52%	10.22%	30.34%	-2.61%

- During this period, China continued to outpace other markets in terms of growth, showcasing its resilience in the face of inflationary pressures. China's economy remained a global growth engine.
- In contrast, the USA experienced a substantial slowdown in market growth, indicating the challenges posed by inflation. This led to discussions about the Federal Reserve's monetary policies.

(Continued on next slide)

April 2022 - June 2022

Inflation Peaks

Stock Market

End Date	USA	Japan	China	India	Germany
31/03/22	20.82%	16.31%	5.47%	43.99%	9.81%
30/06/22	7.22%	8.52%	10.22%	30.34%	-2.61%

- India, while still growing positively, faced a significant slowdown compared to the previous quarter, reflecting the broader concerns about inflationary pressures impacting the country.
- Japan's market, despite exhibiting positive growth, faced a slight deceleration, in line with concerns about inflation and low-interest rate challenges.
- Germany's market, however, saw a decline in growth rates during this period, mirroring broader concerns about inflation and its impact on European economies.

(Continued on next slide)

April 2022 - June 2022

Inflation Peaks

Stock Market

End Date	USA	Japan	China	India	Germany
31/03/22	20.82%	16.31%	5.47%	43.99%	9.81%
30/06/22	7.22%	8.52%	10.22%	30.34%	-2.61%

- This period highlighted the divergent responses of markets to inflation and interest rate dynamics.
- China's robust growth was driven by its economic policies and strong domestic demand.
- Meanwhile, other markets, particularly the USA and Germany, grappled with inflation-induced uncertainties, influencing their market performance.
- It underscored the importance of carefully navigating economic policies and global trends in the face of evolving inflationary pressures.

Inflation Moderation

July 2022 – May 2023

July 2022 – May 2023

Inflation Moderation

Inflation

Month	USA	India	Japan	Germany	China
Jul-2022	8.52%	6.71%	2.61%	6.67%	2.70%
Aug-2022	8.26%	7.00%	3.01%	6.96%	2.50%
Sep-2022	8.20%	7.41%	3.00%	8.57%	2.80%
Oct-2022	7.75%	6.77%	3.80%	8.82%	2.10%
Nov-2022	7.11%	5.88%	3.80%	8.80%	1.60%
Dec-2022	6.45%	5.72%	4.00%	8.12%	1.80%
Jan-2023	6.41%	6.52%	4.39%	8.70%	2.10%
Feb-2023	6.04%	6.44%	3.28%	8.68%	1.00%
Mar-2023	4.98%	5.66%	3.26%	7.40%	0.70%

July 2022 – May 2023

Inflation Moderation

Inflation

- Inflation started to moderate in most countries, although levels remained high.
- India still had the highest inflation.
- From January 2023 onwards, there was a noticeable moderation in inflation. By June 2023, the CPI had declined to 2.97%.
- This moderation could be attributed to various factors, including **central bank actions (we will observe these rate hike actions in subsequent slides)** and adjustments in supply chains.

July 2022 – May 2023

Inflation Moderation

Interest Rates

Pricing Date	1 Month	3 Months	5 Year	10 Year	30 Years
Jun-30-2022	1.28	1.72	3.01	2.98	3.14
May-31-2023	5.28	5.52	3.74	3.64	3.85

- Central banks' vigilance bore fruit as inflation began to moderate. Gradual rate increases had their intended effect, although they contributed to a slowdown in economic activity.
- The yield curve, which had steepened significantly earlier, started to flatten as markets anticipated that the tightening cycle might soon conclude.

Pricing Date	1 Month	3 Months	5 Year	10 Year	30 Years
Jun-30-2021	0.05	0.05	0.87	1.45	2.06
Sep-30-2021	0.07	0.04	0.98	1.52	2.08
Dec-31-2021	0.06	0.06	1.26	1.52	1.9
Mar-31-2022	0.17	0.52	2.42	2.32	2.44
Jun-30-2022	1.28	1.72	3.01	2.98	3.14

Pricing Date	1 Month	3 Months	5 Year	10 Year	30 Years
Jun-30-2022	1.28	1.72	3.01	2.98	3.14
Sep-30-2022	2.79	3.33	4.06	3.83	3.79
Dec-30-2022	4.12	4.42	3.99	3.88	3.97
Mar-31-2023	4.74	4.85	3.6	3.48	3.67
May-31-2023	5.28	5.52	3.74	3.64	3.85
Jun-30-2023	5.24	5.43	4.13	3.81	3.85

July 2022 – May 2023

Inflation Moderation

When interest rates goes up will valuations go down?

July 2022 – May 2023

Inflation Moderation

Will incremental discount rate have more impact than changing perception about the expected cash flows?

July 2022 – May 2023

Inflation Moderation

Was this also a period of adjustments in supply chain?

July 2022 – May 2023

Inflation Moderation

Potential Impact on Valuation

- As inflation moderated, consumer confidence likely improved, supporting business revenues.
- Moderate inflation eased pressure on rising interest rates.
- Strong stock market returns reduced market risk premiums, lowering discount rates.
- Robust economic growth positively impacted corporate earnings.
- Multiples likely expanded as inflation concerns eased.

July 2022 – May 2023

Inflation Moderation

Stock Market

End Date	USA	Japan	China	India	Germany
30/06/22	7.22%	8.52%	10.22%	30.34%	-2.61%
31/05/23	14.65%	27.65%	3.93%	53.95%	19.33%

- A This period witnessed a remarkable rebound in the performance of most major economies' stock markets, indicating a recovery from the previous quarter's challenges.
- India emerged as a standout performer, with a substantial increase in its market growth rate, reflecting renewed investor confidence and economic recovery.
- Japan also experienced a significant surge in market growth, demonstrating resilience despite previous challenges.

(Continued on next slide)

July 2022 – May 2023

Inflation Moderation

Stock Market

End Date	USA	Japan	China	India	Germany
30/06/22	7.22%	8.52%	10.22%	30.34%	-2.61%
31/05/23	14.65%	27.65%	3.93%	53.95%	19.33%

- Germany's market rebounded strongly, likely driven by improving economic conditions and corporate performance.
- The USA continued to exhibit positive market growth, though at a slightly reduced rate compared to the previous quarter.
- Notably, China's market faced headwinds, as its growth rate significantly declined. This may be attributed to evolving economic policies and external factors impacting investor sentiment.

(Continued on next slide)

July 2022 – May 2023

Inflation Moderation

Stock Market

End Date	USA	Japan	China	India	Germany
30/06/22	7.22%	8.52%	10.22%	30.34%	-2.61%
31/05/23	14.65%	27.65%	3.93%	53.95%	19.33%

- This period highlighted the dynamic nature of global stock markets. While most economies experienced a resurgence in market performance, China faced unique challenges that contributed to a decline in its growth rate.
- The ability to adapt to changing economic conditions and policy dynamics played a crucial role in shaping market outcomes during this period.

Further Moderation

June 2023 - August 2023

June 2023 - August 2023

Further Moderation

Inflation

Month	USA	India	Japan	Germany	China
Jun-2023	2.97%	4.87%	3.34%	6.38%	0.00%
Jul-2023	3.18%	7.44%	3.32%	6.17%	-0.30%
Aug-2023	3.67%	6.83%	3.12%	6.14%	0.10%

- In August 2023, inflation remained relatively stable at 3.67%, suggesting that the central bank's policies may have helped control the surge in prices.
- Inflation continued to moderate, with some countries, like China, experiencing deflation.

June 2023 - August 2023

Further Moderation

Interest Rates

Pricing Date	1 Month	3 Months	5 Year	10 Year	30 Years
May-31-2023	5.28	5.52	3.74	3.64	3.85
Aug-31-2023	5.52	5.56	4.23	4.09	4.2

- In the most recent period, inflation continued its moderation, albeit at a slower pace. Central banks contemplated a cautious approach to interest rates, emphasizing stability and sustainability.
- The yield curve's behaviour indicated expectations of a slower pace of rate hikes and perhaps an impending economic softening.

June 2023 - August 2023

Further Moderation

Potential Impact on Valuation

- Continued CPI moderation sustained consumer confidence and business revenues.
- Stable or declining interest rates kept discount rates lower.
- Stable stock market conditions maintained discount rates.
- Robust economic growth likely continued to support corporate earnings.
- Multiples may have expanded as inflation concerns further eased.

June 2023 - August 2023

Further Moderation

Stock Market

End Date	USA	Japan	China	India	Germany
31/05/23	14.65%	27.65%	3.93%	53.95%	19.33%
31/08/23	20.97%	34.36%	1.18%	59.38%	21.48%

- In this recent period, global stock markets continued to rally, with impressive gains across major economies.
- India maintained its stellar performance, with the stock market growth rate reaching remarkable heights, reflecting robust economic fundamentals and investor optimism.
- Japan also sustained its positive momentum, registering substantial growth.

(Continued on next slide)

June 2023 - August 2023

Further Moderation

Stock Market

End Date	USA	Japan	China	India	Germany
31/05/23	14.65%	27.65%	3.93%	53.95%	19.33%
31/08/23	20.97%	34.36%	1.18%	59.38%	21.48%

- Germany experienced strong market growth, aligning with its stable economic environment.
- The USA maintained a healthy growth rate, driven by a resilient economy.
- China, after facing challenges in previous quarters, saw a rebound in its market performance, although it remained the lowest performer among these economies.

(Continued on next slide)

June 2023 - August 2023

Further Moderation

Stock Market

End Date	USA	Japan	China	India	Germany
31/05/23	14.65%	27.65%	3.93%	53.95%	19.33%
31/08/23	20.97%	34.36%	1.18%	59.38%	21.48%

- The markets in this period exhibited strength and resilience, suggesting a broad-based global economic recovery.
- India continued to shine as a top-performing market, with Japan, Germany, and the USA also posting impressive gains. China, while recovering, still faced relative challenges in its stock market.
- This underscores the complex interplay of economic factors and government policies influencing market dynamics.

GDP

GDP (current US$ Trillion)

Country Name	31/12/20	31/12/21	31/12/22
United States	21.06	23.32	25.46
China	14.69	17.82	17.96
Germany	3.89	4.26	4.07
Japan	5.05	5.01	4.23
India	2.67	3.15	3.39

GDP growth (annual %)

Country Name	31/12/20	31/12/21	31/12/22
United States	-2.77%	5.95%	2.06%
China	2.24%	8.45%	2.99%
Germany	-3.70%	2.63%	1.79%
Japan	-4.28%	2.14%	1.03%
India	-5.83%	9.05%	7.00%

GDP per capita (current US$ Thousand)

Country Name	31/12/20	31/12/21	31/12/22
United States	63.53	70.22	76.40
China	10.41	12.62	12.72
Germany	46.77	51.20	48.43
Japan	39.99	39.83	33.82
India	1.91	2.24	2.39

GDP per capita growth (annual %)

Country Name	31/12/20	31/12/21	31/12/22
United States	-3.70%	5.78%	1.68%
China	2.00%	8.35%	3.00%
Germany	-3.78%	2.58%	0.72%
Japan	-4.00%	2.61%	1.48%
India	-6.73%	8.18%	6.28%

GDP

- The United States experienced a roller-coaster ride in GDP growth, from a sharp decline in early 2020 to robust recovery and stabilization in 2021 and 2022, reflecting the pandemic's impact and swift policy responses. Similarly, China exhibited remarkable resilience with steady growth throughout the analyzed period.
- Germany demonstrated remarkable economic stability, registering consistent growth. Japan faced challenges with a declining GDP but displayed signs of recovery in 2022. India's economy showcased remarkable resilience, rebounding impressively after the early pandemic setback, a testament to its dynamic economic landscape.
- These GDP trends not only mirror the challenges posed by the pandemic but also reflect the intricate dance of monetary and fiscal policies, as well as global economic interdependencies. While the path ahead remains uncertain, these countries' responses to evolving macroeconomic factors will continue to shape their economic destinies.

Summary

- The CPI data from January 2020 to August 2023 reflects the impact of the COVID-19 pandemic, subsequent recovery, and a significant inflation surge.
- The surge in inflation in 2021 and early 2022 was a cause for concern and prompted central bank actions.
- The recent moderation in inflation rates suggests that these measures may be having an effect, although ongoing monitoring is necessary.
- The data reveals that all countries faced inflationary pressures during the analyzed period.
- The pandemic-induced shock led to deflationary pressures initially, but these were followed by a resurgence of inflation.
- India consistently experienced higher inflation due to factors like supply disruptions and food prices.

(Continued on next slide)

Summary

- Inflationary pressures moderated in mid-2023, suggesting some stabilization in global prices.
- The pandemic-induced shocks, inflation surges, and subsequent moderation all required astute policy adjustments.
- The central theme remains maintaining economic stability while adapting to the evolving economic landscape.
- The yield curve's movements underscore the delicate balance between short-term economic concerns and long-term outlook, a crucial consideration for policymakers and investors alike.

Conclusion

- High Macroeconomic indicators wield a substantial influence on the inputs for valuation under the Discounted Cash Flow (DCF) model and multiple-based valuation methods.
- In the realm of DCF, the cash flows that form the crux of the valuation are intrinsically linked to the broader economic environment.
- Fluctuations in GDP growth rates directly impact revenue projections, as higher growth often translates to increased sales and, consequently, higher cash flows.
- Similarly, CPI figures come into play when estimating operating expenses and discount rates.
- Elevated inflation can erode the purchasing power of a company's earnings, affecting both revenues and costs.

(Continued on next slide)

Conclusion

- Moreover, interest rates, a linchpin in discount rate determination, can swing valuations significantly.
- When rates are low, as they were in the aftermath of the 2008 financial crisis and during the COVID-19 pandemic, future cash flows are worth more in today's dollars, bolstering valuations.
- Conversely, rising interest rates have the opposite effect. In the world of multiple-based valuation, macroeconomic factors like GDP and CPI can influence investor sentiment and risk perceptions, impacting the multiples used for valuation.
- In essence, macroeconomic indicators are the foundational bedrock upon which the art and science of valuation are built, shaping both the cash flows we project and the rates we use to discount them.

End

29th September, 2023

Author - Parag V. Kulkarni,
Founder Unlock Future Inc.