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# NAVIGATING THE UNCERTAINTY AROUND COST OF CAPITAL AND VALUATION ASSUMPTIONS

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What a difference a year can make. In 2021, the S&P 500 Index increased by 27% while the NASDAQ Composite Index (a typical benchmark for tech stocks) gained 21%, in price terms. At the beginning of 2022, new record highs were reached by the S&P 500 as optimism about the recovery from the COVID-19 pandemic continued to fuel stock prices, despite some uncertainty on inflationary expectations.

A year later, the picture changed dramatically. The S&P 500 dropped 19% in 2022 (in price terms), entering “bear market” territory sometime during the year. The NASDAQ plunged, settling at a loss of 33% for the year, with many companies seeing their market value collapse by half or more. In fact, 2022 was the worst performance year for the S&P 500 since 2008, at the height of the global financial crisis.

The bleak performance for 2022 reflects volatile economic and geopolitical conditions. Since mid-January of last year, inflation continued to rise, reaching levels not seen in decades in some countries. To make matters worse, when Russia’s war on Ukraine began in late February 2022, there was a sustained spike in energy and other commodity prices, which had a particularly negative impact in Europe. This added uncertainty to what was already a complex environment. For businesses operating in and across these economies, cost of capital and valuation assumptions were impacted, creating challenges for firms in terms of forecasting cash flows and assessing future risks.

## How Did We Get Here?

In October 2022, inflation surged in many developed and emerging economies, hitting a record 25-year high of 10.6% in the eurozone.<sup>1</sup> Since then, inflation has slowly been coming down, standing at an estimated 6.1% at the time of writing (early June 2023). However, core inflation (excluding volatile energy

<sup>1</sup> Monthly inflation readings are calculated on a year-on-year basis. Source of underlying data: Eurostat database, series “HICP - monthly data (annual rate of change),” [https://ec.europa.eu/eurostat/databrowser/view/prc\\_hicp\\_manr/default/table?lang=en](https://ec.europa.eu/eurostat/databrowser/view/prc_hicp_manr/default/table?lang=en). Accessed on June 1, 2023.

and food prices) remains stubbornly high at an estimated 5.3%, far from the European Central Bank’s (ECB) 2.0% target.<sup>2</sup>

In the U.S. and UK it is a similar story. The U.S. saw inflation surge to a 41-year high in June of 2022, which came down to 4.9% in April 2023,<sup>3</sup> still more than double the U.S. Federal Reserve’s target of 2.0%. Moreover, the Personal Consumption Expenditures (PCE) Price Index, the Fed’s preferred gauge for inflation, increased in April to 4.4%.<sup>4</sup> Likewise, the Core PCE index (i.e., excluding food and energy) accelerated to 4.7% in April, demonstrating the challenge the Fed is facing in bringing down inflation.

## But How Did We Get Here?

The origins track back to COVID-19. Around the world, governments implemented stimulus packages to support their economies, similar in magnitude to fighting a world war. At the same time, central banks brought their policy interest rates to zero and launched unprecedented quantitative easing (QE) measures, creating an environment of easy and cheap access to credit.

This left consumers flush with cash, creating pent-up demand for goods; however, lockdowns left manufacturers and businesses struggling with global supply chain disruptions and labour shortages (e.g., China’s zero-COVID policies which exacerbated worldwide supply chain problems). All these factors led to a disconnect between supply and demand, creating the perfect storm for inflation to surge.

At first, lockdowns left businesses unable to keep up with demand for consumer goods. When the economy reopened, inflation expanded to services as people were able to travel and go to restaurants, for example. But industries like hospitality and healthcare continued to struggle with staff shortages. All of this contributed to inflation within “services”—a much harder problem to tackle.

<sup>2</sup> In the eurozone, core inflation also excludes alcohol and tobacco prices. Source of underlying data: Eurostat database, series “Overall index excluding energy, food, alcohol and tobacco.” Accessed on June 1, 2023.

<sup>3</sup> Source of underlying data: U.S. Bureau of Labor Statistics (BLS), series “All items in U.S. city average, all urban consumers, not seasonally adjusted,” 12-Month Percent Change.

<sup>4</sup> Source of underlying data: U.S. Bureau of Economic Analysis (BEA).

The cost of other services such as rent and energy also skyrocketed, with the price of energy particularly deepening what many termed a “cost of living crisis.” Dramatic rises in energy and agricultural commodity prices, triggered by Russia’s war on Ukraine, placed renewed pressure on recovering global supply chains, contributing to the knock-on effect of significant inflation spikes in food and certain services across the world.

Inflationary pressures are no longer limited to volatile energy and food prices, creating the perfect breeding ground for “stagflation.”

## The Spectre of Stagflation

From the onset of the pandemic, monetary policies and fiscal spending played a role in surging inflation across the globe. In contrast, today, major central banks have embarked on an interest rate hiking cycle to tame stubbornly high inflation, which has reached levels not seen in 30 to 40 years in some countries.<sup>5</sup>

Amidst this perfect storm of inflationary pressures, major central banks, including the Fed, were forced to increase policy interest rates in 2022 at a much quicker pace than anticipated by investors. This has the potential to lead to a fall in the value of companies due to an increase in their cost of capital assumptions. In addition, it raises the risk of recession, a “double whammy” for business outlook.

In early 2023, economists have significantly downgraded real growth expectations, with several countries expected to experience a recession later in 2023 or in early 2024. In April 2023, the Conference Board estimated there is a 99% likelihood of a recession in the U.S. within the next 12 months, based on its probability model.<sup>6</sup> Meanwhile, a period of “stagflation”—where the economy experiences sluggish or no growth accompanied by high inflation—is still a realistic scenario for the UK and for some economies within the eurozone.

For example, according to recent data, Germany—Europe’s largest economy—entered a technical recession in Q1 2023, after two consecutive quarters of negative real economic growth.<sup>7</sup> There was some optimism in early 2023 that a contraction could be avoided as an unseasonably warm winter in Europe contributed to lower energy prices. However, high overall prices continued to erode German consumer purchasing power. Inflation in Germany remained at an elevated level of 6.3% (estimated) in May and is expected to persist as a key challenge for the rest of the year.<sup>8</sup>

## But What Does This Mean for Businesses?

Companies across the globe are now battling with higher cost of capital estimates, as they struggle to gauge how much money

new investments need to generate to offset upfront costs and achieve profit, while also reflecting their potential risks.

In this highly volatile market, quantifying risk becomes significantly difficult. For example, if a company’s earnings are volatile or cost of capital is higher, share prices (and valuations in general) may plummet. For investors and business leaders alike, dealing with this uncertainty is increasingly important.

Pressure on earnings may force companies to cut costs. For example, we have begun to see layoffs despite continued labour shortages<sup>9</sup> and unemployment rates are expected to rise, although projections are relatively tame compared to past recessionary periods. While cost-cutting initiatives often start with employee reductions, the next step is to cut back spending on big ticket items like advertising and IT.

From a cost of capital perspective, companies can expect an environment of higher interest rates and, as a result, a higher cost of capital. Even if a mild recession is in the cards and the Fed reduces policy interest rates in the latter half of the year, this will not reduce long-term interest rates to pre-pandemic levels.

## Where Are We Now?

Stock markets began recovering in 2023 despite the Fed continuing its policy tightening. Nevertheless, the rapid increase in U.S. interest rates (10 times in a little over a year) has begun to cause anxiety in some pockets of the economy.<sup>10</sup> The housing sector is suffering from higher mortgage rates, while commercial real estate is still struggling with low office occupancy rates but is now facing higher funding rates.

The impact of credit tightening is also being felt in the banking sector, with some spillovers felt in global markets. It began in early March with the failure of Silicon Valley Bank (SVB). The bank’s U.S. operations were seized by the FDIC, while its subsidiary, SVB UK, was bought by HSBC for the symbolic amount of £1.<sup>11</sup> Two days after taking control of SVB, the FDIC seized another institution, Signature Bank.<sup>12</sup> This was followed by Switzerland’s largest bank, UBS, agreeing to take over its smaller rival Credit Suisse after ongoing negotiations with the country’s central bank, Swiss National Bank (SNB). On March 19, the Fed, the Bank of England, the Bank of Japan, the ECB, and the SNB announced a coordinated action to enhance liquidity via standing U.S. dollar liquidity swap lines, in an attempt to ease strains in global funding conditions.<sup>13</sup>

In light of the banking turmoil, the Fed noted at its March meeting that recent developments were likely to result in tighter credit conditions for households and businesses while weighing on economic activity, hiring, and inflation, with the full extent of

<sup>5</sup> Release: *Global inflation: 1970 to 2022*, Figure 1, Office for National Statistics (ONS), November 22, 2022, <https://www.gov.uk/government/statistics/global-inflation-1970-to-2022>.

<sup>6</sup> “Probability of US Recession Remains Elevated,” The Conference Board, April 12, 2023, <https://www.conference-board.org/research/economy-strategy-finance-charts/CoW-Recession-Probability>.

<sup>7</sup> “Gross domestic product: detailed economic performance results for the 1st quarter of 2023,” Statistisches Bundesamt (Destatis), Press release No. 203 of 25 May 2023, [https://www.destatis.de/EN/Press/2023/05/PE23\\_203\\_811.html](https://www.destatis.de/EN/Press/2023/05/PE23_203_811.html).

<sup>8</sup> Monthly inflation readings are calculated on a year-on-year basis. Source of underlying data: Eurostat database, series “HICP - monthly data (annual rate of change),” [https://ec.europa.eu/eurostat/databrowser/view/prc\\_hicp\\_manr/default/table?lang=en](https://ec.europa.eu/eurostat/databrowser/view/prc_hicp_manr/default/table?lang=en). Accessed on June 1, 2023.

<sup>9</sup> The U.S. unemployment rate reached a 54-year low of 3.4% in January and although it saw minor increases thereafter it reverted to 3.4% in April. Source: Bureau of Labor Statistics, Labor Force Statistics from the Current Population Survey, Series Id: LNS14000000. Accessed on June 1, 2023.

<sup>10</sup> See Federal Reserve, Policy Tools, Open Market Operations, <https://www.federalreserve.gov/monetarypolicy/openmarket.htm>.

<sup>11</sup> For more details on SVB’s U.S. operations, see: <https://www.fdic.gov/news/press-releases/2023/pr23019.html>. For more on the SVB UK acquisition, see: <https://www.hsbc.com/news-and-media/media-releases/2023/hsbc-acquires-silicon-valley-bank-uk-limited>.

<sup>12</sup> See <https://www.fdic.gov/news/press-releases/2023/pr23018.html>.

<sup>13</sup> See the Fed’s related press release here: <https://www.federalreserve.gov/newsevents/pressreleases/monetary20230319a.htm>.

these effects being uncertain. However, the Fed reiterated that the banking system remained sound and resilient.<sup>14</sup> This did not lessen the pressure on U.S. regional bank stocks, culminating with First Republic Bank's being seized by regulators and subsequent sale to JP Morgan Chase in early May.<sup>15</sup> This was the second largest bank failure in the U.S., after Washington Mutual's collapse at the height of the 2008 global financial crisis.<sup>16</sup>

Throughout this mini-banking crisis, the Fed continued to raise rates. There is a disconnect between what markets are pricing and what Fed officials are saying will happen for the rest of the year. Markets seemed to be anticipating a rate cut as early as July;<sup>17</sup> meanwhile, the Fed appeared to pause its interest-rate hiking cycle at its May meeting, taking a wait-and-see approach. Although some Fed officials were still thinking another rate hike could be in the cards, this pause helped remove some uncertainty from financial markets.

At the end of May, the S&P 500 was up approximately 17% from its October 2022 low. Showing even greater recovery, the NASDAQ was up 27% from its December 2022 low and 25% from its local low in October. The S&P 500's improvement of 7–9% since the beginning of this year does not compensate for its overall 19% loss in 2022; however, it does reflect greater optimism by investors since the beginning of the year. Or, said another way, perhaps investors are less pessimistic compared to prevailing sentiment during 2022.

In 2023, the Volatility Index (VIX)—known informally as the “fear index”—has been consistently below its long-term average of around 20 (except for at the peak of the mini-banking crisis in March), implying a lower risk aversion. Corporate credit spreads (i.e., the difference in yields of junk-rated bonds and investment-grade bonds) remain low on a historical basis, even though underlying corporate debt yields have gone up significantly since early 2022.

While there is a good chance the U.S. economy will tip into recession later in 2023 or in early 2024, indicators suggest it would not be a deep or prolonged slump. Inflation is still far from the Fed's 2.0% target but is on a steadily downward path, while the global economy appears to have avoided the worst-case scenarios from the Russia-Ukraine conflict.

The one wrinkle here is the potential for another U.S. debt ceiling debacle, as happened in 2011 when acrimonious political wrangling over the debt ceiling led to S&P's downgrading the U.S. sovereign credit rating from AAA to AA+. The current situation resembles 2011 in some respects—back then, financial markets became significantly volatile and credit spreads spiked, with spillovers being felt in global financial markets. While a

<sup>14</sup> Board of Governors of the Federal Reserve, “Federal Reserve issues FOMC statement,” Press Release, March 22, 2023, <https://www.federalreserve.gov/newsevents/pressreleases/monetary20230322a.htm>.

<sup>15</sup> FDIC, “JPMorgan Chase Bank, National Association, Columbus, Ohio Assumes All the Deposits of First Republic Bank, San Francisco, California,” Press Release, May 1, 2023, <https://www.fdic.gov/news/press-releases/2023/pr23034.html>.

<sup>16</sup> Ken Sweet, “First Republic Bank seized, sold in fire sale to JPMorgan,” AP News, May 1, 2023, <https://apnews.com/article/first-republic-bank-silicon-valley-fdic-5ab48702b7136d42f73ac13e0a20955d>.

<sup>17</sup> CME FedWatch Tool, <https://www.cmegroup.com/markets/interest-rates/cme-fedwatch-tool.html>, accessed June 1, 2023. Probabilities are based on 30-Day Fed Funds futures pricing data and change every trading day.

current U.S. default has been averted as Congress approved a bill to raise the debt limit, there could be residual ramifications from the polarized negotiation process between Democrats and Republicans. For one, Fitch Ratings placed its AAA rating for the U.S. on negative watch. Although Fitch acknowledged the U.S. government debt ratio of 112.5% of GDP at year-end 2022 was 12% above its 2019 pre-pandemic levels, it also pointed out this was much higher than the indebtedness of other AAA-rated countries (36.1% for the AAA median).<sup>18</sup> A U.S. sovereign credit rating downgrade could place further pressure on interest rates, with negative repercussions to corporate funding costs.

## The Growing Spectre of Bankruptcy

Viewing the overall economic environment from the perspective of risk, projected cash flows are subject to the pressures of the current high inflation environment. Consumer demand is decreasing for some industries; for example, the decline in car purchases which shows there is less leeway for companies to increase prices going forward. Many businesses are struggling with stubbornly high inflation which is contributing to compressed margins. Ultimately, these and other factors could lead to more bankruptcies, especially in a “higher for longer” interest rate environment. Moody's and S&P expect default rates to rise between now and Q1 2024, as refinancing at higher rates and lower cash flows restrict the ability to make interest payments.<sup>19</sup> Additionally, compressed margins will make it harder to refinance existing loans.

Cost of capital is a function of both the cost of equity and the cost of debt. Given the current level of uncertainty, the equity risk premium remains high. Startup businesses planning to access liquidity via a near-term IPO have seen those prospects shattered. Meanwhile, corporate debt, which is typically priced as a spread over the risk-free rate, is also expected to command higher yields. Because of the recent mini-banking crisis, lending criteria has tightened, placing further upward pressure on the rates at which companies can borrow. Access to credit is more challenging, which—coupled with lower financial performance—is leading to defaults and debt restructuring activity.

## The Outlook for Risk-Free Rates

When dealing with valuing investments or pricing deals, investors and corporations care about long-term cost of capital estimates. When considering risk-free rates (the building block of any cost of capital estimate), they do not rely on the policy rates that central banks set (which are short-term in nature), but rather on what would be the cost of financing debt and equity over the life of the investment. This means that 10- or 20-year government bond yields are more relevant as a proxy for the risk-free rate.

At the height of COVID-19, those yields were under pressure for safe-haven countries, due to a combination of investor flights to quality and central bank QE policies. Investors were trying to preserve capital and turned to the government bonds of

<sup>18</sup> “Fitch Places United States'AAA' on Rating Watch Negative,” Fitch Ratings, May 24, 2023, <https://www.fitchratings.com/research/sovereigns/fitch-places-united-states-aaa-on-rating-watch-negative-24-05-2023>.

<sup>19</sup> See for example, S&P Global Ratings, “Default, Transition, and Recovery: The U.S. Leveraged Loan Default Rate Could Hit 2.5% By March 2024 Given Persistent Inflation and Higher Interest Rates,” May 25, 2023.

countries that are considered relatively safe, including the U.S., Germany, and the UK. Additionally, unprecedented QE policies placed downward pressure on long-term interest rates.

Now, we face a situation in reverse. We are not only seeing the size of balance sheets decreasing (quantitative tightening), but also central banks raising policy rates much more quickly than before. Long-term interest rates for major economies are back to levels observed in the aftermath of the 2008-2009 global financial crisis. This is unlikely to change substantially by the end of 2023, as central banks will continue to raise policy interest rates through at least mid-2023, and keep them at those levels through the rest of the year.

## Winners and Losers

While economic recession is a real risk, central banks may need to hold interest rates at a much higher level than pre-pandemic until inflation is brought under control. Some financial institutions may benefit from higher rates, if their earnings stem primarily from a spread between the interest rates they charge on loans versus what they pay on deposits. However, there are negative headwinds to deal with: recessions are typically accompanied by a rise in bad debts, which hurts banks' bottom lines. We could see consumers defaulting on their car loans or home mortgages, for example, or businesses being forced to restructure their debt or file for bankruptcy protection.

Non-financial corporations with high brand recognition have been successful at passing on higher prices to their customers, thereby maintaining or improving margins; but this is not the case across the board and many companies are struggling. Moreover, borrowing costs make financing the purchase of another company more expensive. We have already seen a significant drop in reported M&A activity and financing day-to-day operations has become more expensive. Consequently, businesses may further decrease or delay planned M&A investments or capital expenditures, such as building new plants or opening new stores. High risk-free rates will have a significant impact on those decisions. The higher interest rate environment will thus continue to weigh negatively on economic activity.

All this uncertainty also contributes to a higher equity (or market) risk premium—the additional return that investors require to induce them to invest in equities rather than government securities considered free of default risk. While investors have become more optimistic recently (compared to 2022), in recessionary environments the earnings volatility of businesses rises, which increases the risk of investing in the equity of those companies.

## Long-term Inflation Expectations

Global financial markets are still trying to ascertain if central banks will manage a soft landing while attempting to get inflation under control. Amidst this highly uncertain environment, costs of capital inputs have risen substantially relative to the beginning of 2022 and are again approaching levels observed just after the 2008-2009 global financial crisis.

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The challenge will be whether central banks are able to get inflation back to their target level (typically around 2.0% for major developed economies) in a speedy fashion. If history is of any guidance, we should recall that the 1970s and 1980s were periods of central bank policy mistakes, when many countries had to deal with painful double-digit interest rates as the process of bringing down inflation turned into a protracted affair.

The danger right now is that market participants are starting to incorporate higher inflation expectations into long-term decisions. Economists call this a de-anchoring of inflation expectations. Certainly, we have seen long-term inflation expectations for the U.S. rise significantly since the height of the pandemic. Back in June 2020, Kroll's analysis found that consensus expectations for long-term inflation (5 to 10 years out) in the U.S. stood at 2.0%. Fast forward to October 2022, those expectations rose to 2.9%, subsequently coming back down to 2.4% in May 2023.<sup>20</sup>

While these may not seem like big swings, in economic terms the rise is quite significant. The U.S. grappled with subdued inflation for much of the period following the global financial crisis, all the way through the height of the pandemic. The fear back then was that the developed world would enter a deflationary spiral akin to what Japan struggled with for two decades. During this period the Fed tried with little success to bring inflation up to its 2.0% target.

A major objective of global central banks is to ensure price stability, which has now been compromised. We are seeing a pendulum swing as central banks attempt to recover some of their credibility and achieve their main mission. To lose the fight against inflation has negative reverberations on the stability and functioning of global financial markets.

In that context, the aggressive monetary policy stand is understandable. However, this has a direct bearing on long-term risk-free rates and cost of capital estimates. Businesses may have to deal with an environment of higher cost of capital for the foreseeable future.

*Note: Statements and rate references in this article were accurate at the time of writing.*

<sup>20</sup> See Kroll's Cost of Capital Infographics, <https://www.kroll.com/en/cost-of-capital/cost-of-capital-infographics>.

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