SIERRA CAPITAL
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# 1st Quarter 2023 – Can't Hurt Me

*Sierra Capital Quarterly Newsletter*

**April 2023**

## Fincnacial Conditions Continue to Tighten But Worst May Not Yet Be Seen

### Key points:

As we enter 1st Quarter earning season, the markets are likely to focus on a few key themes. The first will be how bank balance sheets withstood the banking crisis following the failure of Silicon Valley Bank and Signature Bank. The second will likely be around corporate guidance in both consumer and industrial companies. This color will help market participants determine if the 1st quarter stock performance was just an oversold rebound or a show of corporate earnings strength in a tough economic environment.

Recent inflation prints have been sloping downward, signifying that the work of the Federal Reserve has indeed been working. On 4/12/2023, Core Consumer Price Index came in at 5.6% while Non-Core was below consensus at 5.0%, down from 6.0% in February. This was largely due to the cost of gasoline declining but offset with high rents. This, however, was the smallest gain since May of 2021 yet likely signals that the Federal Reserve will hike rates at their next May 2-3rd meeting.

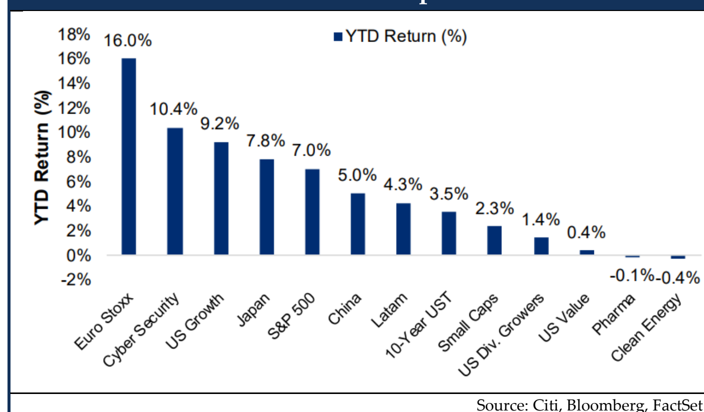
While inflation seems to be moderating, the job market remains strong. We are optimistic given that the labor participation rate has increased, job openings have decreased significantly, and the unemployment rate still remains low at 3.5%. While employment is still posting strong numbers, recent wage gains and services inflation moderated.

It is clear that some corporate and real estate investments were done due to financial engineering at historically low rates over the past few years. The outcome of higher rates coinciding with interest rate swaps and loans requiring to be refinanced has put some investors in a hard place which will likely only continue.

With stress comes opportunities which is why we still remain cautious and diversified in our portfolios as we believe the effects of the Fed hikes coupled with deposit outflows in the banking space have yet to be felt on the economy.

As of 4/6/23, the S&P 500 has returned 7.4% and the Dow Jones Industrial Average notched up 1.6% while the Nasdaq composite increased 15.8%. Last year's biggest losers are this year-to-date winners with European Stocks outperforming the rest of the world given a weaker winter, stronger Euro, and better than expected economic performance. (**Table 1**)

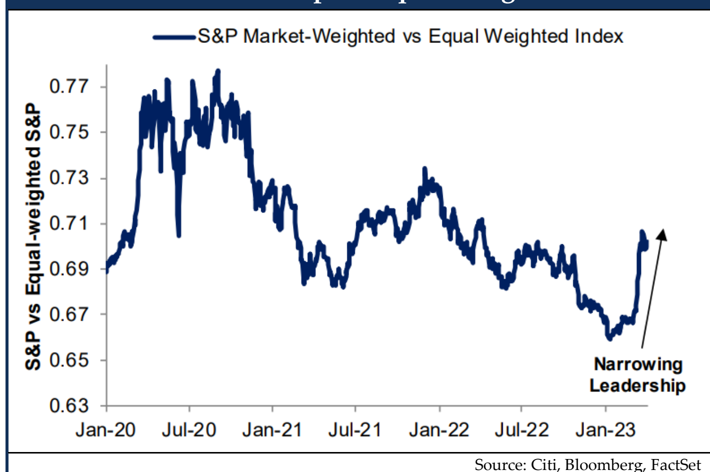
**Table 1: Global and Growth Outperformed S&P**




Source: Citi, Bloomberg, FactSet

The top three S&P Equity sectors' performance was in Communication Services (24%), Information Technology (21%), and Consumer Discretionary (13%). The worst 3 performing sectors' performance came from Financials (-6%), Energy (-2%), and Healthcare (-1%). This is not surprising due to the banking crisis which occurred during the quarter that helped fuel Value stocks underperformance as Financials represent 16% of the Russell 2000, 20% of the Russell 1000 Value, and 13% of the S&P 500. Additionally, the performance in markets so far has been led by a narrow group of the largest cap-weighted companies which typically does not signify an enduring bull market. (**Table 2**)

### Table 2: S&P Market Cap Vs Equal Weight Performance




Source: Citi, Bloomberg, FactSet

Following a volatile quarter in fixed income, the 10-year treasury fell by 43bps to 3.40%. Investment grade spreads increased 7 basis points while the high yield index increased 14bps. The US Aggregate Bond ETF has returned 2.5% given the decrease in yields more than offset the increase in credit spreads.

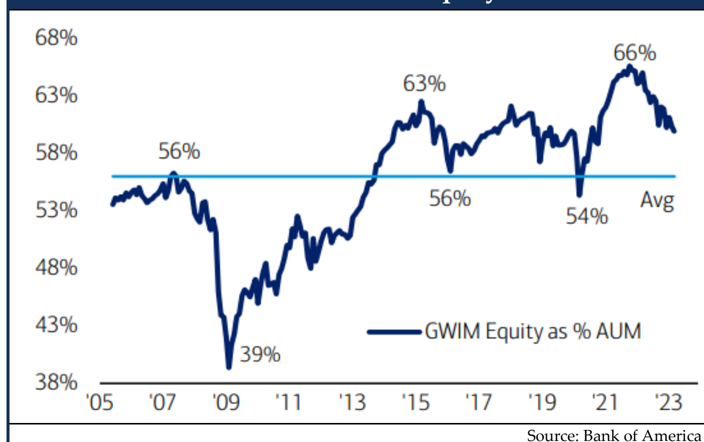
During the market volatility in the first quarter, one could imagine that the stock market would likely be significantly lower, let alone end the quarter in positive territory. One explanation could be that company management teams have been slow to communicate expected profit reductions, analysts have been slow to reduce growth or margins, or the announced cost reductions across many corporations have helped keep earnings per share (EPS) estimates from coming down as significantly as in prior bear markets. Investors need to keep in mind that earnings have declined on average 16.5% in a recessionary period, and thus far this decline is in the low-mid single digits.

Another explanation could be that equity investors are no longer overallocated to the stock market and instead overallocated to money market funds or fixed income (**Table 3,4**). Therefore, they do not have the need to panic sell during times of market stress and instead can buy equities when the opportunity presents itself.

### Table 3: Retail Money Market AUM at All Time High

Source: Sierra Capital, FRB

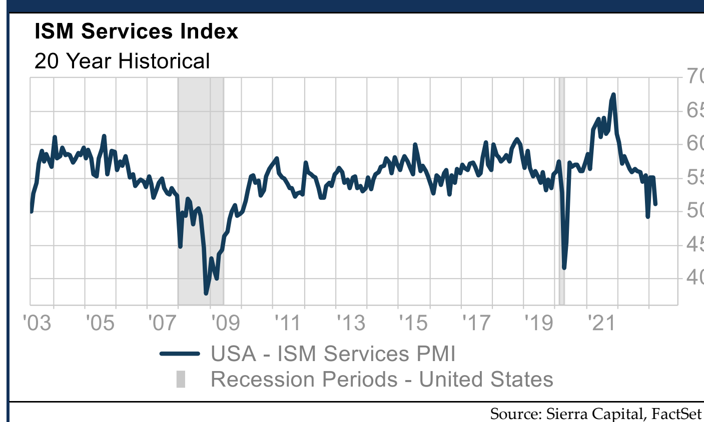
### Table 4: Bank of America Client Equity Allocation




Source: Bank of America

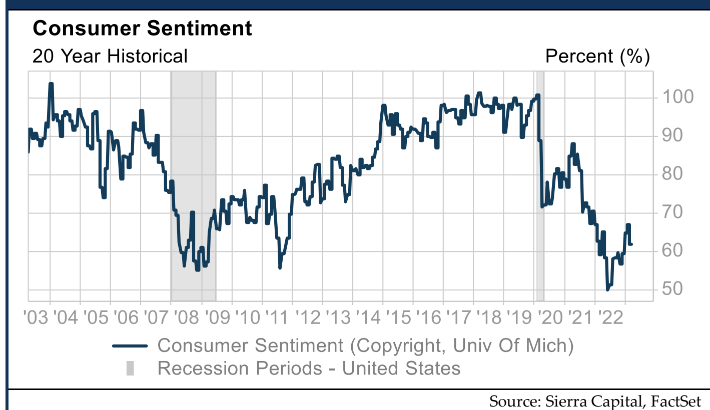
The current Fed Funds Target sits at 5.00% while Core CPI as of 2/28/23 was 5.50%. Unemployment is at cycle lows of 3.50% and GDP as of 12/31/22 came in around 2.60%. Recent jobs reports have been mixed to stronger than expected. Many investors believe that the strong employment theme coupled with a small slide in corporate profits is what the economy needs for a soft landing. The issue is that recent JOLTS data, factory orders, Consumer Sentiment, ISM Services PMI, and ISM Manufacturing PMI were all trending weaker which is all indicative of coming into a recessionary period. (**Table 5,6**)

### Table 5: ISM Services Index




Source: Sierra Capital, FactSet

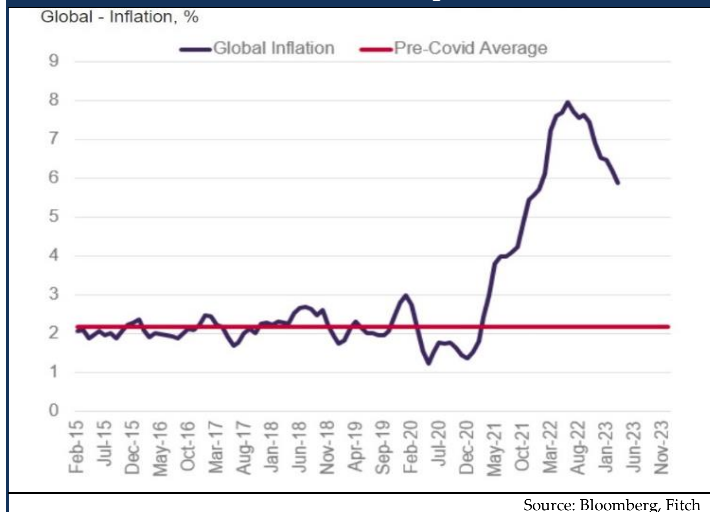
### Table 6: Consumer Sentiment




Source: Sierra Capital, FactSet

While the economy shows signs of slowing, inflation has also shifted its path over the past two quarters and continues to trend lower. (**Table 7**)

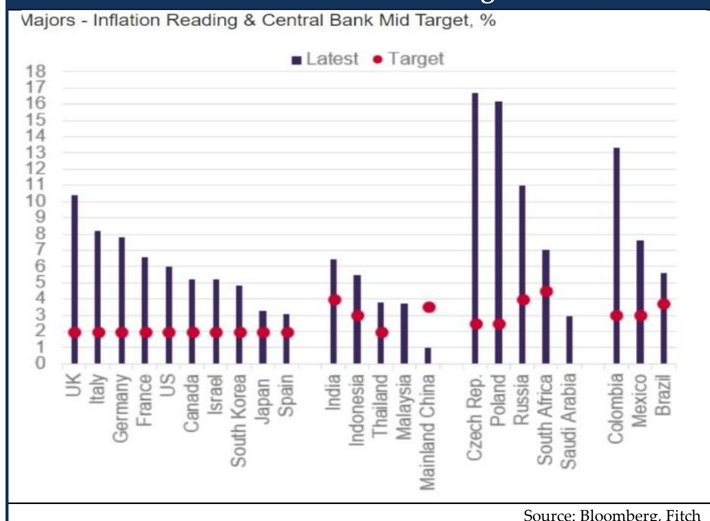
### Table 7: Global Inflation Trending Lower




Source: Bloomberg, Fitch

Current inflation, however, is still above most central bank targets which means the fight for inflation is still ongoing. (**Table 8**)

### Table 8: Inflation Remains Above Target

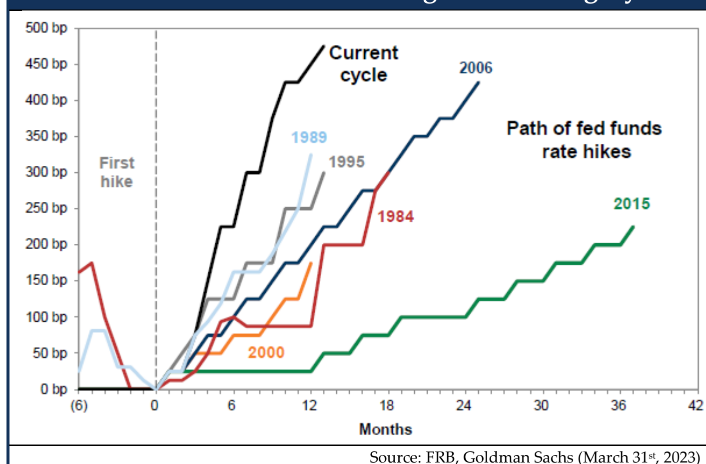



Source: Bloomberg, Fitch

In the US following the banking crisis which we will discuss later, the market quickly moved to price in that the Federal Reserve hiking cycle has ended and rate cuts were imminent. This has been paired back over the past two weeks with a 70% chance of a 25bps hike in May but a higher probability of cuts than hikes in subsequent Fed meetings.

But how does this hiking cycle stack up against history? Amongst the last 6 Fed hiking cycles, the current trajectory is the steepest since 1982. With the average hiking cycle lasting 20 months with ~2.9% of hikes, the current cycle has only lasted 12 months with 4.75% of hikes to date. Market strategists are mixed however many expect one to two more hikes with a peak of 5.25% to 5.5% by June. (Table 9)

### Table 9: Path of Fed Hikes During Prior Hiking Cycles

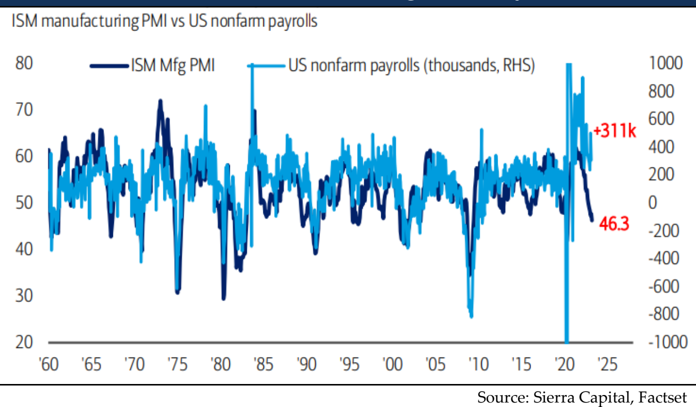



Source: FRB, Goldman Sachs (March 31st, 2023)

While market participants are calling for a Fed pause or reverse policy to help guide the economy to a soft landing, the reasoning to stop the fight against inflation in the form of rate cuts would likely mean the economic outlook is quite negative. With consensus GDP forecasts negative in the 2nd half of the year, tighter lending emanating from the recent banking crisis may help persuade the Fed to conduct this pivot.

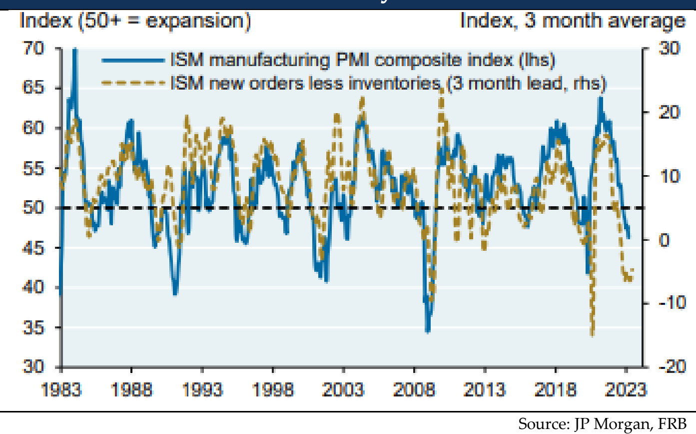
In a note from Bank of America, the bank explained how weak ISM manufacturing PMI typically suggests that domestic labor markets will weaken over the next few months. A PMI print below 45 historically coincided with negative nonfarm payrolls and a US recession. We are currently at 46 for PMI. Falling new orders and rising inventories also point to a manufacturing downturn later this year. (**Table 10,11**)

**Table 10: Weak PMI Leads to Negative Payroll**




Source: Sierra Capital, Factset

**Table 11: Orders Less Inventory Predict Contractions**




Source: JP Morgan, FRB

In a similar bearish tone, the 2-year and 10-year treasury inversion has been evident for over a year. During the issues in the banking system just weeks ago, the curve started to steepen (Bull Steepened) which has historically meant that recession risks have increased. While recessions typically occur within 12 months of a yield curve inversion, the imminent recession signal is when the curve starts to re-steepen. (**Table 12**)

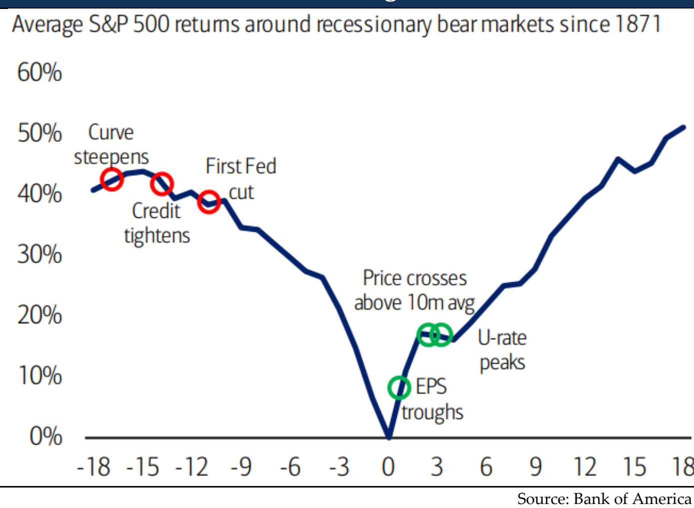
**Table 12: 2 vs 10 Year Treasury Yield**

Source: Morgan Stanley, Bloomberg (March 31st, 2023)

The likely path forward in this current economic cycle is uncertain given the mixed signals around strong employment and slower economic activity. The research committee at Bank of America has pointed towards some key indicators to watch that indicate the coming end of the economic cycle and start of a new bull market.

The treasury curve steepening led by credit tightening which typically precedes the first Fed Cut. We can tick the first two items off and now they believe the next signal to watch is for a Fed Cut. The following chart also shows that patience in buying equities following the first fed cut can help investors find a market low. (**Table 13**)

**Table 13: Indicators Confirming Bear Market Lows**




Source: Bank of America

The banking crisis we keep referring to occurred on March 26th when the FDIC entered into a purchase and assumption agreement for all the assets of Silicon Valley Bank. This marked one of the largest bank collapses in history. What is interesting about this failure versus those in the "great financial crisis" is that Silicon Valley Bank did not fail due to any credit stress and instead failed due to massive deposit concentration coupled with a bad balance sheet strategy. A fierce deposit outflow nearly half the size of the entire bank in just a few days brought SVB into receivership as technology businesses and their founders, a similar group who happened to also have banked at Signature Bank in New York, moved funds to other institutions at the first sign of trouble.

The recent economic events stemming from the failure of Silicon Valley Bank, Signature Bank, and the sale of Credit Suisse to UBS has shown that regulators are serious about mitigating any systematic risks in the banking system. However, while lending standards have been tightening for months (**Table 14**) as deposits exited banks for higher yielding alternatives, recent events will likely exacerbate the process. Incentives to tighten lending standards are broad-based for banks, with three key incentives standing out: equity performance which has rewarded banks that appear better funded; funding costs which have risen and eaten into margins; and regulatory and rating agencies oversight which are increasing scrutiny of the sector.

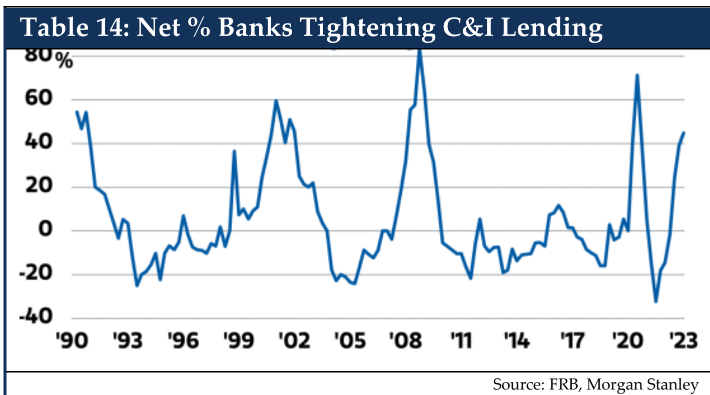



**Table 14: Net % Banks Tightening C&I Lending**

Source: FRB, Morgan Stanley

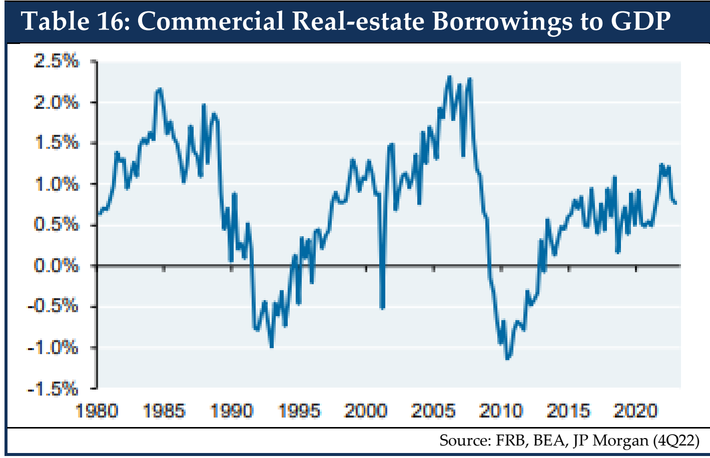



**Table 16: Commercial Real-estate Borrowings to GDP**

Source: FRB, BEA, JP Morgan (4Q22)

We also do not view the federal reserve lending to banks in this time of crisis as quantitative easing. Given that the Fed is lending rather than buying assets, these borrowings must be paid back. When the Fed purchases an asset from a security holder, they replace that asset with cash that can in turn be used to buy additional assets (bonds) or make an investment (loans). This is not likely to be the case as most banks likely borrowed from the Fed solely due to the stress in the system. As of quarter end, the Fed was lending $333bn to banks. $88bn of this was discount window (daily borrowings) while ~$64bn was to the Term Funding Program, and ~$180bn was credit to the new bridge banks (new entity for the failed banks). Our belief is that little to none of these funds will transmit to the real economy as M2 Money Supply alongside the Fed Balance Sheet, but this is yet to be determined. (**Table 15**)

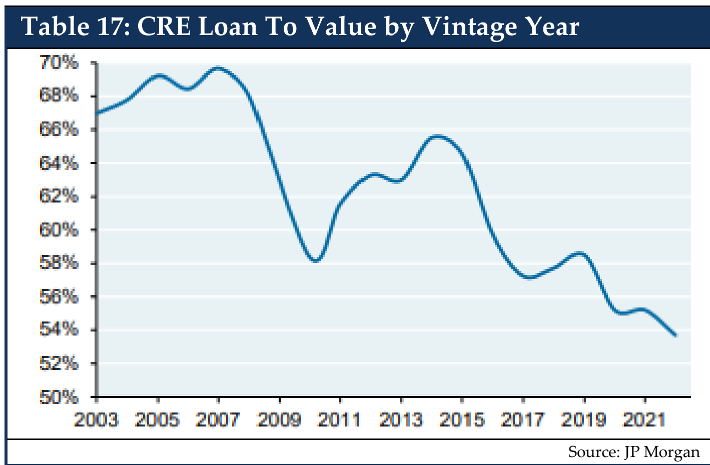



**Table 17: CRE Loan To Value by Vintage Year**

Source: JP Morgan

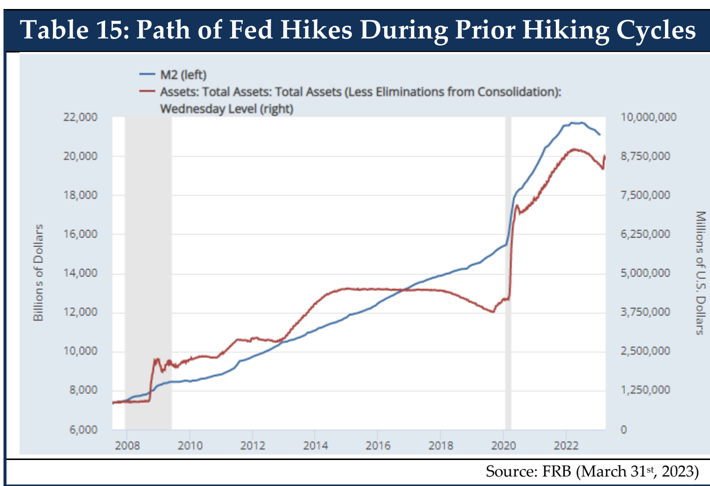



**Table 15: Path of Fed Hikes During Prior Hiking Cycles**

Source: FRB (March 31st, 2023)

The issue is, as JP Morgan notes, that CMBS represents only a small share of the CRE market as regional banks have taken the market share of lending to these borrowers. During Covid as rates fell, many borrowers refinanced their loans or purchased new assets. While maturities are scattered, 2023 and 2024 have the largest notional number of maturities coming due across all commercial mortgages and lender types. (**Table 18**)

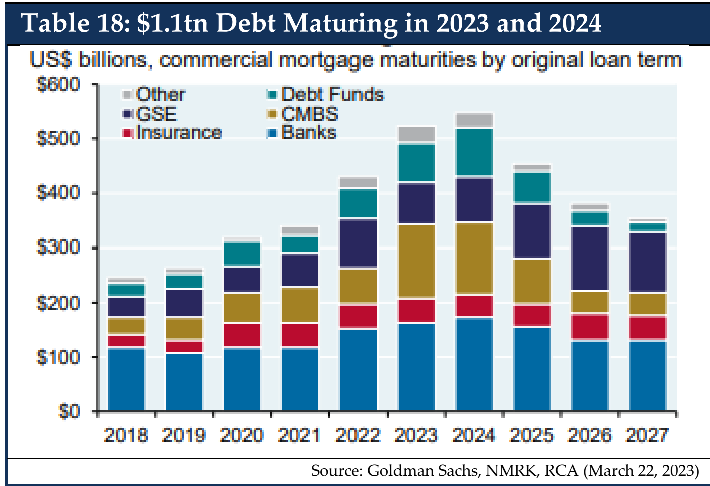


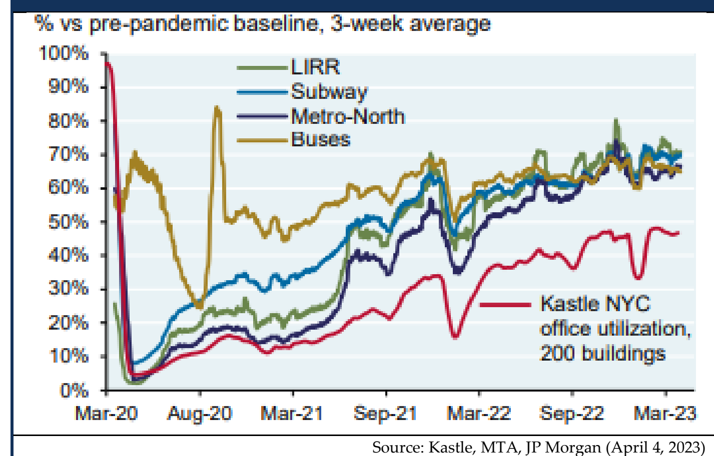

**Table 18: $1.1tn Debt Maturing in 2023 and 2024**

Source: Goldman Sachs, NMRK, RCA (March 22, 2023)

A hot topic with clients stemming from the banking crisis has been around commercial real estate and how pressure in that market could affect the economy. The CMBS, or commercial mortgage-backed securities, market has been much more conservative this cycle as the playbook changed dramatically post the Financial Crisis in 07-09. Loan to values and Commercial Real Estate to GDP are significantly below peaks in the 1980s and 2000s. (**Table 16,17**)

While not typically an issue as refinancing is a normal occurrence, the biggest issue facing commercial real estate beyond the banking crisis and tightening of lending is that office post Covid occupancy has fallen dramatically. In New York City, for example, ID badge swipes from Kastle, a provider of office security, are down 50% from pre Covid levels, however public transport utilization is at 70%. (**Table 19**) We believe true office utilization is likely somewhere in the middle for New York while some Florida markets are at full occupancy.

### Table 19: Kastle Card and NYC Transit Utilization




Source: Kastle, MTA, JP Morgan (April 4, 2023)

The banking stress witnessed in the 1st quarter of 2023 is likely to have a longer second-degree effect on the economy. We have already heard that banks are cutting back on Auto lending as late payments and defaults are on the rise, large consumer bank credit card divisions are cutting their customer acquisition promotions, and more. Goldman Sachs estimated that the recent crisis helped tighten financial conditions similar to two rate hikes, but this is just too early to tell. As the Fed is likely to hike rates slightly further, something will likely occur for the Fed Chairman's tone to turn more dovish. The health of the financial system is still positive, however economic growth is likely on hold as the Federal Reserve, banks, and corporations would likely need to shrink their size to position themselves for a future without ever expanding cheap money. What that does to US valuations is yet to be seen.

Increasing 7% YTD while EPS estimates have fallen, the S&P500 is currently trading at nearly 17.8x as of the 1st quarter, higher than its long-term average of ~16.8x based on forward price to earnings. (**Table 20**) Ranking in the 81st percentile versus the past 40 years, the current Price Earnings ratio would be the second highest multiple at the end of previous hiking cycles, behind the year 2000 when the index reached 22x. This likely limits the potential for a multiple expansion rally.

### Table 20: S&P 500 Index Forward P/E Ratio

Source: JP Morgan (1Q23)

Equities are also unlikely to experience significant growth in the near term due to a lack of earnings growth, according to Goldman Sachs. Looking at past non-recession hiking cycles, the average S&P 500 earnings per share (EPS) grew 9%, which contributed 7 percentage points to the 25% 12-month total return. However, Goldman's projections for EPS growth in 2023 at only 1%, with a slight increase to 5% in 2024, worse than bottoms up consensus estimates (**Table 21**). These projections come with the caveat that risks to EPS may be skewed towards the downside, particularly after recent banking stress. Financials make up 18% of S&P 500 2023 EPS, with banks accounting for 7% and regional banks accounting for 1%

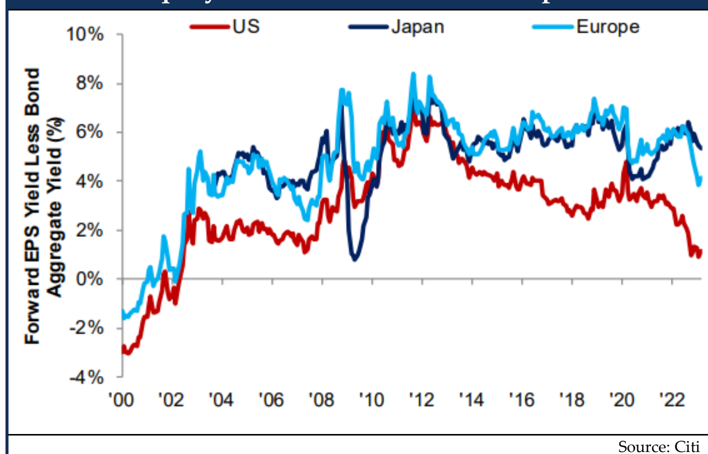
### Table 20: Consensus Bottoms Up Earnings Growth

| | 2023 Earnings Per Share Growth | | | | Annual | |
|---|---|---|---|---|---|---|
| | 1QE | 2QE | 3QE | 4QE | 2023E | 2024E |
| Utilities | (3)% | 12 % | 18 % | 30 % | **12 %** | 4 % |
| Consumer Discretionary | 6 | 11 | 11 | 19 | **12** | 19 |
| Financials | 1 | 9 | 15 | 13 | **9** | 10 |
| Industrials | 13 | 2 | 12 | 9 | **9** | 15 |
| Consumer Staples | (1) | 8 | 9 | 10 | **7** | 8 |
| Communication Services | (18) | (1) | 21 | 34 | **7** | 18 |
| Real Estate | 9 | 4 | 1 | 2 | **4** | 5 |
| **S&P 500 ex. Energy** | **(9)** | **(1)** | **7** | **12** | **2** | **13** |
| **S&P 500** | **(7)** | **(6)** | **2** | **10** | **(0)** | **12** |
| Information Technology | (14) | (4) | 1 | 12 | **(1)** | 17 |
| Health Care | (20) | (12) | (6) | 3 | **(9)** | 9 |
| Materials | (31) | (19) | 3 | 3 | **(13)** | 8 |
| Energy | 11 | (38) | (29) | (14) | **(22)** | 3 |

Source: FirstCall, I/B/E/S, FactSet, Goldman Sachs

Given the absence of meaningful earnings growth estimates with notable risks to the downside due to bank lending tightening coupled with fairly high valuations for this part of the cycle, investors in the US are not getting paid to take on additional equity risk. Despite last year's selloff, ERP (equity risk premiums) narrowed, particularly against other developed markets. (**Table 22**)

**Table 22: Equity Risk Prem. Narrowed Despite Selloff**




Source: Citi

Our belief is that the macroeconomic environment is strong but experiencing slowing growth, with tightening lending standards being a contributing factor. Specifically, the decline in the S&P 500 Index forward earnings relative to three months ago, an inverted or previously inverted yield curve, US Manufacturing Purchasing Managers' Indexes (PMIs) below 50, and more than 40% of US banks tightening lending standards are all indications of this slowing "near" recessionary environment.

Historically, when more of these developments occur, global equity performance tends to be worse. Therefore, the current situation is relatively rare and suggests that investors should consider a more conservative approach in anticipation of the previously strong growth slowing down. The latest events affecting the financial system may only further incentivize banks to maintain their conservative approach and speed up any economic tightening already in motion.

However, as we finalize this quarter's newsletter, markets continue to climb a little bit higher each day. Today's inflation figures have also posted below consensus adding more evidence that run rate inflation is heading back to its mean. This also gives the Federal Reserve more ammunition to halt its hiking cycle earlier than expected. With March's CPI coming in at 5% YoY, the next Fed hike could be the last as Fed Funds rate would then be higher than inflation.

In regard to the S&P 500 targets, the 4,200 mark is an important level as its resistance signifies the start of a new bull market as it is 20% above the October lows. Analysts have marketed 4,100 as their 2023 target (**Table 23**). If earnings and corporate guidance surprises to the upside over the next few weeks, our bearish thesis will likely underperform. Given that the lack of bad news has been good news for markets, any real bad news around corporate profits could snap back gains seen year to date. Therefore, we emphasize our clients to maintain balanced and diversified portfolios with an underweight in US equities or a defensive tilt within their equity portfolios.

**Table 23: Market Strategists 2023 S&P Targets**

| Firm | 2023 S&P 500 | 2023 EPS | Implied P/E |
|---|---|---|---|
| Bank of America | 4000 | 200 | 20.0 |
| Barclays | 3725 | 207 | 18.0 |
| BMO | 4300 | 220 | 19.6 |
| CFRA | 4575 | 227 | 20.1 |
| Citi | 3900 | 215 | 18.1 |
| Credit Suisse | 4050 | 215 | 18.8 |
| Deutsche Bank | 4500 | 195 | 23.1 |
| Evercore ISI | 4150 | 206 | 20.2 |
| Goldman Sachs | 4000 | 224 | 17.9 |
| JPMorgan Chase | 4200 | 205 | 20.5 |
| Morgan Stanley | 3900 | 195 | 20.0 |
| Oppenheimer | 4400 | 230 | 19.1 |
| RBC | 4100 | 199 | 20.6 |
| UBS | 3900 | 198 | 19.7 |
| Wells Fargo | 4100 | 205 | 20 |
| **Median** | **4100** | **206** | **20.0** |

Source: CNBC

More pain has currently been felt in the fixed income markets. Consumer ABS and Residential Mortgage spreads have widened significantly versus corporate credit spreads. Additionally, the municipal bond yield curve is significantly steeper in longer durations than the US treasury curve. Therefore, we are overweight fixed income and continue to barbell short duration with longer duration Residential Mortgages and Municipal credit.

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Investors should consider the additional risks involved in small cap investments. Large capitalization (large cap) investments involve stocks of companies generally having a market capitalization between $10 billion and $200 billion. The value of securities will rise and fall in response to the activities of the company that issued them, general market conditions and/or economic conditions.

**Disclaimers - Definitions:**

**Dow Jones Industrial Average (DJIA):** is a price-weighted measure of 30 U.S. blue-chip companies. The index covers all industries except transportation and utilities. The DJIA was designed to serve as a proxy for the health of the broader U.S. economy.

**EURO STOXX 50:** Index composed of 50 stocks from countries in the Eurozone. EURO STOXX 50 represents Eurozone blue-chip companies considered as leaders in their respective sectors. The index represents the performance of the 50 largest companies among 20 sectors in terms of free-float market cap in Eurozone countries. The index captures about 60% of the free-float market cap of the EURO STOXX Total Market Index (TMI).

**MSCI (Morgan Stanley Capital International) Europe (USD):** Index captures large and mid-cap representation across 15 Developed Markets countries in Europe: Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Italy, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the UK. The index covers approximately 85% of the free float-adjusted market capitalization across the European Developed Markets equity universe.

**MSCI AC (All Country) Europe:** Index that captures large and mid-cap representation across 15 Developed Markets countries and 5 Emerging Markets countries in Europe. The index covers approximately 85% of the free float-adjusted market capitalization in each country.

**MSCI AC Asia ex Japan:** Index that captures large and mid-cap representation across Developed Markets (Hong Kong and Singapore) countries (excluding Japan) and Emerging Markets (China, India, Indonesia, Korea, Malaysia, the Philippines, Taiwan, and Thailand) countries in Asia. The index covers approximately 85% of the free float-adjusted market capitalization in each country.

**MSCI AC World:** Broad global equity index that represents large and mid-cap equity performance across 23 developed and 24 emerging markets. The index covers approximately 85% of the global investable equity opportunity set.

**MSCI Emerging Markets (USD):** Index designed to track the financial performance of key companies in fast-growing nations. The index tracks mid-cap and large-cap stocks in Brazil, Chile, China, Colombia, Czech Republic, Egypt, Greece, Hungary, India, Indonesia, Korea, Kuwait, Malaysia, Mexico, Peru, Philippines, Poland, Qatar, Saudi Arabia, South Africa, Taiwan, Thailand, Turkey and United Arab Emirates. The index covers approximately 85% of the free float-adjusted market capitalization in each country.

**MSCI Emerging Markets:** Index that captures large and mid-cap representation across Emerging Markets (EM) countries. The index covers approximately 85% of the free float-adjusted market capitalization in each country.

**MSCI Japan (USD):** Index designed to measure the performance of the large and mid-cap segments of the Japanese market. The index covers approximately 85% of the free float-adjusted market capitalization in Japan.

**MSCI World:** Cap-weighted stock market index of companies throughout the world. It is used as a common benchmark for 'world' or 'global' stock funds intended to represent a broad cross-section of global markets. The index covers approximately 85% of the free float-adjusted market capitalization in each country.

**NASDAQ (National Association of Securities Dealers Automated Quotations):** Index of more than 3,700 stocks listed on the Nasdaq stock exchange, weighted by market capitalization. The technology sector accounts for just over half the index, more than three times the index weight of any other market sector.

**Nikkei 225:** a price-weighted equity index for the Tokyo Stock Exchange. The Nikkei measures the performance of 225 large, publicly owned companies in Japan from a wide array of industry sectors.

**Russell 2000 Growth:** index composed of small-capitalization U.S. equities of the Russell 2000 Growth Index that exhibit growth characteristics

**Russell 2000 Value:** index composed of small-capitalization U.S. equities of the Russell 2000 Growth Index that exhibit value characteristics.

**Russell 2000:** Small-cap stock market index that makes up the smallest 2,000 stocks in the Russell 3000 Index, a capitalization-weighted stock market index that seeks to be a benchmark of the entire U.S stock market. The Russell 2000 is commonly used as a small-cap proxy.

**S&P 500 Growth:** is a market-cap-weighted index comprised of growth stocks within the S&P 500 Index based on three factors: sales growth, the ratio of earnings change to price, and momentum.

**S&P 500 Index:** The S&P 500 is a stock market index tracking the performance of 500 large companies listed on stock exchanges in the United States. It is market-capitalization weighted and is widely regarded as the best single gauge of large-cap U.S. equities. The index includes 500 U.S. leading companies and captures approximately 80% coverage of available market capitalization

**S&P 500 Value:** is a market-cap-weighted index comprised of value stocks within the S&P 500 Index based on three factors: book/price ratio, earnings/price ratio, and sales/price ratio.

**S&P/BMV Indice de Precios y Cotizaciones (Mexico IPC):** Index seeks to measure the performance of the largest and most liquid stocks listed on the Bolsa Mexicana de Valores (BMV). The constituents are weighted by modified market cap subject to diversification requirements.

**Shanghai Composite:** Market capitalization-weighted index that reflects the performance of the whole Shanghai securities market, including all listed A shares and B shares stocks on the Shanghai Stock Exchange (SSE).

**Bloomberg Emerging Markets USD Aggregate - High Yield:** Index that measures the USD-denominated, high yield, fixed-rate corporate bond market of key companies in fast-growing nations (EM issuers).

**Bloomberg Emerging Markets USD Aggregate:** Flagship hard currency Emerging Markets debt benchmark that includes fixed and floating-rate US dollar-denominated debt issued from sovereign, quasi-sovereign, and corporate EM issuers.

**Bloomberg Global Aggregate Index:** The Bloomberg Global Aggregate Index is a flagship measure of global investment grade debt in local currency. This multi-currency benchmark includes treasury, government-related, corporate, and securitized fixed-rate bonds from both developed and emerging markets issuers

**Bloomberg Global High Yield:** Multi-currency flagship measure of the global high-yield debt market. The index represents the union of the US High Yield, the Pan-European High Yield, and Emerging Markets (EM) Hard Currency High Yield Indices.

**Bloomberg US Aggregate Bond Index:** The Bloomberg US Aggregate Bond Index is a broad-based flagship benchmark that measures the investment grade, US dollar-denominated, fixed-rate taxable bond market in the United States. The index includes Treasuries, government-related and corporate securities, MBS (agency fixed-rate pass-throughs), ABS and CMBS (agency and non-agency)

**Bloomberg US High Yield - Corporate:** Index that measures the USD-denominated, high yield, fixed-rate corporate bond market. Securities are classified as high yield if the middle rating of Moody's, Fitch and S&P is Ba1/BB+/BB+ or below.

**Bloomberg US Treasury Bills 1-3 Month Index:** The Bloomberg US Treasury Bills 1-3 Month Index is designed to measure the performance of public obligations of the U.S. Treasury that have a remaining maturity of greater than or equal to 1 month and less than 3 months

**JPM EMBI Global Diversified:** Unmanaged, market-capitalization weighted, total-return index tracking the traded market for U.S.-dollar-denominated Brady bonds, Eurobonds, traded loans, and local market debt instruments issued by sovereign and quasi-sovereign entities.

**S&P U.S. TIPS (TIPS**): Treasury Inflation-Protected Securities (TIPS) Index seeks to measure the performance of the U.S. TIPS Market. TIPS are treasury bonds that are indexed to an inflationary gauge to protect investors from the decline in the purchasing power of their money.

**Credit Suisse Hedge Fund Index – Event Driven:** Asset-weighted index composed of hedge funds with an event-driven strategy. Event-driven **i**s a hedge fund investment strategy that seeks to exploit pricing inefficiencies that may occur before or after a corporate event, such as an earnings call, bankruptcy, merger, acquisition, or spinoff.

**Credit Suisse Hedge Fund Index – Global Macro:** Asset-weighted index composed of hedge funds with global macro strategy. A global macro strategy is a hedge fund strategy that bases its holdings primarily on the overall economic and political views of various countries or their macroeconomic principles. Holdings may include long and short positions in various equity, fixed-income, currency, commodities, and futures markets.

**Credit Suisse Hedge Fund Index – Long/Short Equity:** Asset-weighted index composed of hedge funds with a long/short strategy. Long/short funds use an investment strategy that seeks to take a long position in underpriced stocks while selling short, overpriced shares. Long/short seeks to augment traditional long-only investing by taking advantage of profit opportunities from securities identified as both under-valued and over-valued.

**Credit Suisse Hedge Fund Index – Multi/ Strategy:** Asset-weighted index composed of hedge funds with a multi-strategy. Multi-strategy hedge funds are the most diverse portfolios in the hedge fund universe. Multi-strategies combine different single hedge fund strategies in one portfolio and differentiate considerably from each other. Most often, such portfolios include a variety of long-short, relative value, and event-driven strategies.

**Credit Suisse Hedge Fund Index:** Asset-weighted hedge fund index that includes open and closed funds. Seeks to measure hedge fund performance and provide the most accurate representation of the hedge fund universe.

**HFRI Fund of Funds Composite:** The Hedge Fund Research Indices Fund of Funds is an index comprised of funds that invest with multiple managers through funds or managed accounts. The strategy designs a diversified portfolio of managers with the objective of significantly lowering the risk (volatility) of investing with an individual manager. The Fund of Funds manager has discretion in choosing which strategies to invest in for the portfolio.

**S&P Goldman Sachs Commodity Index:** Commodities index that tracks the performance of the global commodities market. It is made up of exchange-traded futures contracts that cover physical commodities spanning five sectors: energy products, industrial metals, agricultural products, livestock products and precious metals.

**West Texas Intermediate** (**WTI) Crude Oil NYMEX Near Term ($/bbl) (WTI Crude):** Price of light, sweet, landlocked crude oil that serves as one of the main global oil benchmarks. It is sourced primarily from inland Texas and is useful for pricing any oil produce in the United States, primarily from the Permian Basin.

**Crude Oil Brent Global Spot ICE ($/bbl) (Brent Crude):** Price of waterborne crude oil based on a basket of North Sea crudes. The brent crude oil blend extracted from the North Sea, comprises Brent Blend, Forties Blend, Oseberg, Ekofisk, and Troll crudes, commonly referred to as BFOET.

**Gold Spot:** The purchase price of a single troy ounce of the metal (gold) for immediate delivery, as opposed to a date in the future.

**Silver Spot:** The purchase price of a single troy ounce of the metal (silver) for immediate delivery, as opposed to a date in the future.

**British pound (GBP) /Dollar (USD):** Current exchange rate of the British Pound (GBP) to US Dollar (USD)

**Dollar (USD)/ Mexican Pesos (MXN):** Current exchange rate of US Dollar (USD) to Mexican Pesos

**Dollar (USD)/Japanese Yen (JPY):** Current exchange rate of Dollar (USD) to Japanese Yen (JPY)

**Dollar (USD)/Swiss Franc (CHF):** Current exchange rate Dollar (USD) to Swiss Franc (CHF)

**Euro (EUR)/Dollar (USD):** Current exchange rate of Euro (EUR) to US Dollar (USD)

**Earnings per share (EPS):** Monetary value of earnings per outstanding share of common stock for a company. It is a key measure of corporate profitability and is commonly used to price stocks.