US monetary policy and stock market performance

With the major developed economies at the peak of a restrictive monetary policy cycle, we wonder how the US stock market has digested it.

How are interest rates and stock markets related?

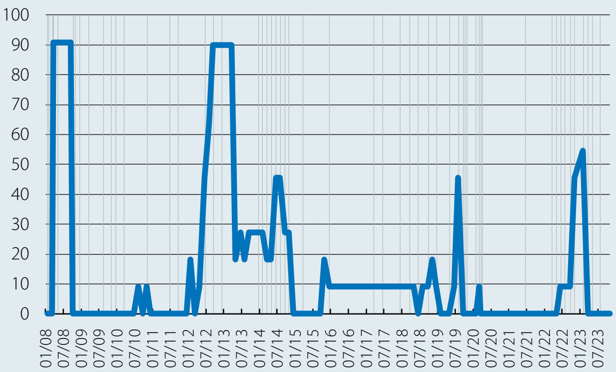
In recent years, the major advanced economies have shifted from a long period of accommodative monetary policy to a sharp monetary tightening, prompted by the need to curb inflation. Beyond the desired effect on the real economy, these changes in monetary policy have an impact on other financial assets which, in fact, occurs much faster than the effects on the real economy. In the case of fixed-income markets there is a direct link with monetary policy: interest rates and bond prices have an inverse relationship, such that when rates rise (fall), prices fall (rise).

In equity markets, the link is neither as direct nor as obvious. On the one hand, rates are a reflection of the macroeconomic context: high rates are associated with an inflationary economy and/or strong economic growth, while low rates tend to reflect weak economic activity and/or low inflation. Rates are also key in company valuation since the present value of a share is calculated as the flow of expected future earnings, discounted by the interest rate, such that if rates change so does the present value reflected in the share price. Additionally, interest rates determine the cost of financing, so they directly impact companies' profitability. To this we can add that, eventually, rates affect demand (whether that of companies, intermediaries or households) and, therefore, sales. Thus, the effect of rates differs depending on which sector a company operates in, as well as on the wider macroeconomic context.

Who is sensitive to monetary policy and who is not?

Traditionally, in financial markets, we talk about cyclical and defensive sectors to refer to those that are more or less sensitive to the business cycle. However, business cycles come in different shapes and sizes, so the role of monetary policy in each cycle and its relationship to the stock market can vary. To answer our question more precisely, we focused our analysis on the sensitivity of the various sectors that make up the S&P 500 to monetary policy surprises.[1] In the periods studied, 6 out of the 11 sectors that make up the S&P 500 are shown to be sensitive to

S&P 500: sectoral proportion of the index sensitive to monetary policy surprises
(%)



Note: *The grey bars indicate Fed meetings where a rate change was announced.*
Source: *CaixaBank Research, based on data from Bloomberg and the Federal Reserve.*

changes in monetary policy, together accounting for 65% of the index: technology, consumer discretionary, consumer staples, financials, utilities and real estate. This sensitivity is not constant over time, that is, these sectors are not always sensitive to surprises in monetary policy, and not always to the same degree (see first chart).

Of the six, the financial sector shows a positive sensitivity, i.e. its response tends to go in the same direction as monetary policy surprises.[2] The other five sectors, however, show a negative sensitivity, i.e. their response tends to move in the opposite direction to rates. Technology is a growth sector whose valuation largely depends on estimated flows of future profits, duly discounted at current interest rates: the higher (lower) the discount rate, the lower (higher) the valuation. The sensitivity of the consumption sectors, on the other hand, can be understood because of their dependence on consumers' purchasing power and, consequently, business sales. Similarly, the activity of the real estate sector is sensitive to mortgage prices and, therefore, interest rates. Finally, utilities are known to be mature companies that offer stable dividend payments, so in the world of equities, they resemble bonds (from where they inherit their «negative» sensitivity to interest rates).

What happened during the two years of monetary tightening?

During 2022, when the Federal Reserve began raising interest rates, the S&P 500 experienced its worst year since 2008, and all sectors, regardless of their sensitivity (positive or negative sensitivity, or no sensitivity), registered

1. We estimate the relationship of the price fluctuation $(P_t^i - P_{t-1}^i)$ for each sub-index of the S&P 500 (11 sectors) with the change in the yield of the 2-year treasury $(Y_t - Y_{t-1})$, which we use as a proxy for monetary policy surprises, in a sample which only includes days on which the outcome of a Fed meeting is announced. The analysis is conducted in rolling 24-month windows, each including 16 Fed meetings, from 2000 to 2023. Thus, the sensitivity is given by the estimate of β in the regression $(P_t^i - P_{t-1}^i) = \alpha + \beta (Y_t - Y_{t-1}) + \varepsilon_t$. We identify a sector as being «sensitive» to monetary policy if the β is significant at the 95% level.

2. A positive surprise would imply an increase in the 2-year sovereign interest rate, and one would expect it to reflect a more hawkish decision from the Fed than expected.

significant losses that reached up to –30% for technology companies and –38% for consumer discretionary firms. However, the group of sectors with negative sensitivity performed relatively poorer, while those with positive sensitivity showed much smaller declines (see second chart). As for the better performance of the non-sensitive sectors, this was entirely due to the energy sector, driven by the high prices of energy commodities (oil and gas).

In 2023, however, the same pattern was not repeated. While the utilities and real estate sectors continued to see their performance weighed down by the high-rate environment, technology and consumer discretionary firms enjoyed significant gains.[3] This suggests that, in 2023, there were other dynamics that offset the interest rate burden. On the one hand, sales in these sectors performed well despite facing high rates. In fact, they were among the sectors with the highest earnings growth in 2023 up to Q3, and moreover they exceeded expectations.[4] The second reason is that these two sectors, together with the communications sector, contain the seven largest US companies by capitalisation, colloquially referred to as the «Magnificent Seven», which had a successful year in terms of earnings growth. Together, these companies (Amazon, Apple, Alphabet, Meta, Microsoft, Nvidia and Tesla) account for 30% of the S&P 500, and with the good performance they have enjoyed in the year due to the strength of their earnings, they have exerted a significant pull effect on the rest of the market (see third chart).

With respect to the other sectors, the financial sector (with positive sensitivity) suffered from the Silicon Valley Bank crisis earlier this year.[5] The non-sensitive sectors showed mixed results and mainly reflected their business earnings for the year to date. On balance, the impact of the recent monetary policy changes on the stock market has been mixed. At first, tight monetary policy was the dominant narrative, but later a confluence of factors, including the high concentration of the index in a handful of stocks and the positive results in a better-than-expected macroeconomic environment, outweighed the more direct impact of the high interest rates.

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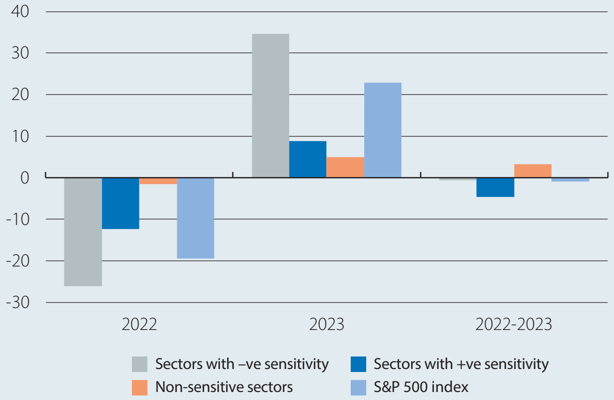
3. When in November the markets assumed the end of the rate hike cycle had been reached and changed their expectations to anticipate rate cuts in 2024, the utilities and real estate sectors once again reacted with negative sensitivity to the expected lower rates, thus recording gains in the closing stages of the year, while the technology and consumption sectors extended their gains.
4. The S&P 500 accumulated a 24% rise in the year, while its EPS rose by 15%, indicating that 65% of its increase in value was due to higher multiples and 35% due to earnings growth.
5. The financial sector fell as much as 16% from its peak in February to the year's low in March. From that low point, it has already erased the losses and closed the year up 10%.

S&P 500: sensitivity groups

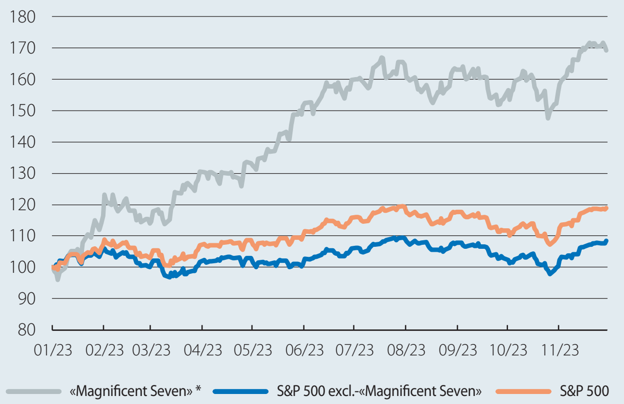
Cumulative change in the year (%)



Note: *Sensitivity is identified as described in footnote 1 of the body of the article.*
Source: *CaixaBank Research, based on data from Bloomberg (data as of 15 December 2023).*

S&P 500: performance of select indices

Index (100 = 1 January 2023)



Note: ** The «Magnificent Seven» are: Alphabet, Amazon, Apple, Meta, Microsoft, Nvidia and Tesla.*
Source: *CaixaBank Research, based on data from Bloomberg.*