Interest Rate Sensitivity of the Tech Sector vs. the Utilities Sector

Masen McKinzie and Jeffrey Olsen
Laguna Beach High School

INTRODUCTION

This study examines whether U.S. stock market reactions to Federal Reserve interest rate changes are stronger in the technology sector (XLK ETF) than in the utilities sector (XLU ETF) over the past 27 years. Utilities stocks are typically stable and defensive, while technology stocks are more volatile due to high growth potential. Understanding these differences is important for investors, economists, and policymakers because it can influence investment decisions and strategies. This research is personally valuable because it improves my understanding of how monetary policy affects markets and investing.

RESEARCH METHODOLOGIES

This study analyzed 27 years of interest rate trends, focusing on spikes and dips, and compare how the Technology ETF (XLK) and Utilities ETF (XLU) respond while considering external factors. Then, you will examine the top five companies in each ETF over time, analyzing financial performance through revenue, P/E ratio, and cash flow, along with qualitative factors like business models and management style. The goal is to identify patterns and determine which company traits, such as growth, borrowing, and reinvestment strategies, drive sensitivity to interest rates. This observational research combines quantitative and qualitative analysis to better understand market behavior and inform investment decisions.

DATA AND FINDINGS

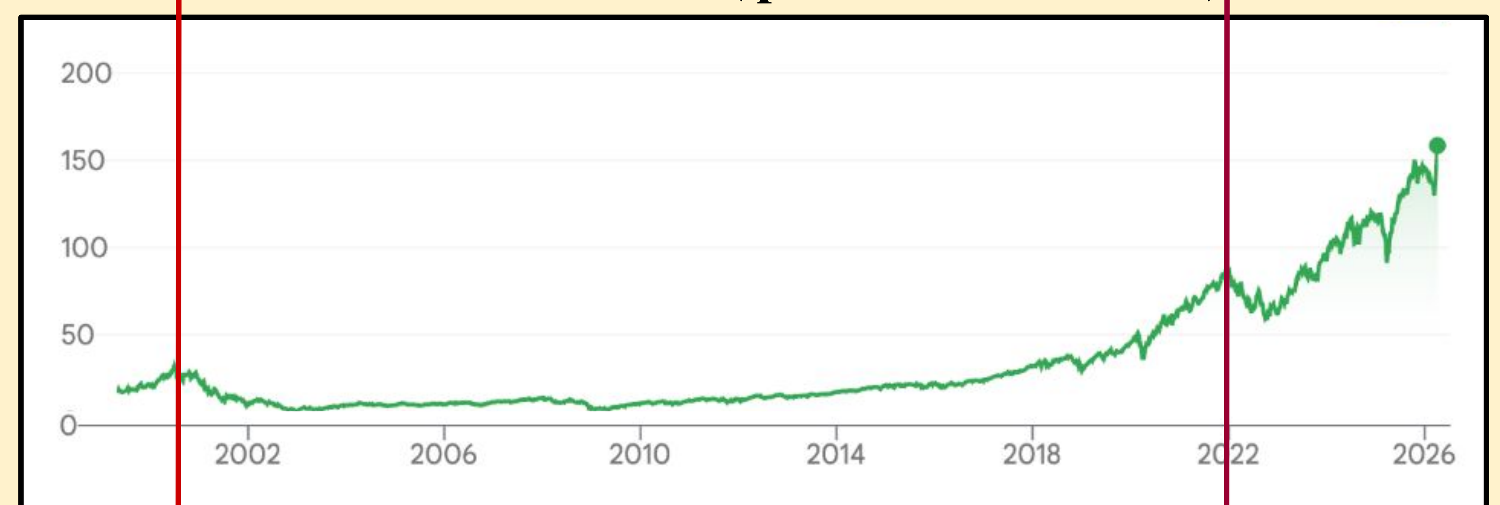
Comparison between an Southern CO. 2001 XLU and Motorola in (2005) XLK

- **Innovation**: Motorola launched the Razr V3 which was a very popular flip phone released in november 2004 and the popularity from it carred through 2005. Motorola also had close relationships with telecom carriers so they were able to have mass distribution and marketing.

- **Regulation**: Southern CO. was a regulated company that distributed energy in south eastern United States and their rates were set by state regulators so they had predictable revenue. Also, they avoided the Enron scandal which hurt many other companies in the Utilites sector. They had consistent cash flow from constant revenue aiding them during rough economic conditions.

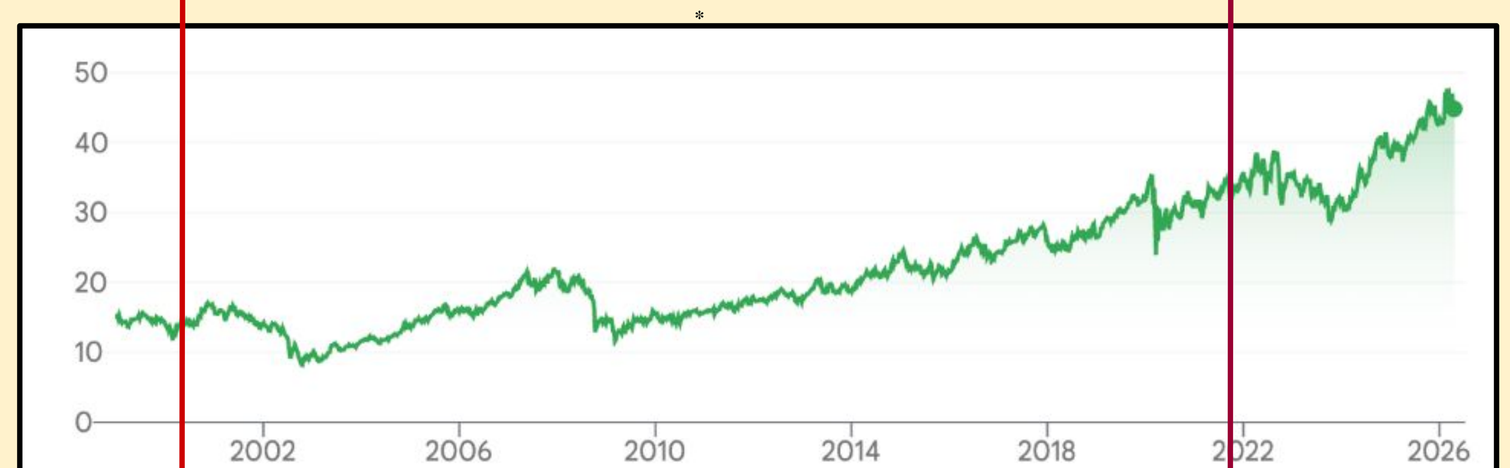
DISCUSSION, ANALYSIS, AND EVALUATION

Advanced XLK Chart (price return 883.5%)



Advanced XLU chart (price return 204.16%)

*Note different scale then XLK chart



Federal Funds Effective Rate

Individual Performance

1	Company	ETF	Time	Performance
2	Southern Company	XLU	2001	Outperform(+48.95%)
3	Exceleon Corporation	XLU	2005	Outperform(+173.1%)
4	PG&E Corporation	XLU	2008	Outperform(+3.8%)
5	Vistra Corporation	XLU	2019	Underperform(+3.8%)
6	Constellation Energy	XLU	2023	Outperform(+42.93%
7	Microsoft	XLK	2001	Outperform(+5.1%)
8	Motorola	XLK	2005	Outperform(+45.5%)
9	Texas Instruments	XLK	2008	Underperform(-51.7%)
10	Nvidia	XLK	2019	Outperform(+65.17%)
11	Cisco Systems	XLK	2023	Underperform(+9.7%)

CONCLUSIONS, IMPLICATIONS, AND NEXT STEPS

Sensitivity Comparison

The Technology sector is more more sensitive to interest rates because the XLK ETF responded much fastest to changes in interest rates than the Utilility sector did represented by the XLU ETF. This conclusion is backed by analysis of the graphs because interest rates plummeted in 2020 and the XLK ETF hit a peak as a result in 2021; however, the XLU ETF did not hit that peak until 2022 which shows how XLU has a much more delayed response.

The Difference in Stock Performance

There is many reasons for why stocks underperform or outperform the ETF but there is very many similarities between the outlying companies. Regulation played an important role in stock performance for the XLU ETF because when interest rates were low the market price was driven down which caused the deregulated companies to sell at the very low price causing a decrease in profits. On the other hand, when interest rates were low regulated companies performed very well because they could sell at a fixed price. This relationship is reversed when interest rates are high because deregulated companies can sell at a very high market price while regulated companies still sell at the same fixed price. For the XLK ETF innovation played the biggest role in the difference in stock performance. There was many companies that outperformed the entire ETF because they had innovated new technology that gained a lot of popularity skyrocketing their sales. On the other hand, many technology companies underperformed because of innovation because they may have previously had the most popular product but then new devices are created and the old product loses popularity rapidly.

Licensing/Subscriptions

Licensing and subscriptions are both very important in the performance of technology companies and utility companies. During rough economic times licensing and subscrtiotions provided companies with cash flow that was key in keeping companies running. As a result, many companies with these licensing and subscriptions outperformed other companies especially during harsh economic times purely because they were able to continue to profit consistently.

ACKNOWLEDGEMENTS / REFERENCES

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