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Since the taper of the United States' Quantitative Easing program, a rise in interest rates has been anticipated. Analysts worldwide have been evaluating the potential impact this may have on individual stocks, sectors and portfolios at large. How the market will actually react to a post-easing environment remains to be seen.

Guardian Capital performs *on-going sensitivity analysis to help understand the potential risk within our systematic portfolios* while identifying potential pockets of strength that may mitigate the effect of rising interest rates. Rather than focusing on high-yield stocks, our Global Dividend portfolio follows a strategy that is well diversified across all sectors, with the goal of achieving better downside protection and reduced volatility. The portfolio is naturally geared towards dividend growth – instead of dividend yield -- where the certainty and visibility of cash flows is paramount.

Dividend bearing securities have been the target of much discussion, but as we are all aware not all dividends are created equal. Analyzing the make-up of sectors reveals that *not all stocks are equally interest rate sensitive. Sectors are comprised of diverse industry groups that peak at different points during the business and leverage cycles.* As an example, Telecommunication companies are cited as being highly sensitive to rising rates. However, we find traditional Diversified Telco companies exhibit high sensitivity to rate changes while Wireless Telco companies have little sensitivity.

The following analysis will show how we believe we may *provide clients with a portfolio of strong dividend paying companies that deliver attractive yields, while minimizing interest rate sensitivity.*

We hope you find our insights helpful. We welcome any questions and comments you might have.



Overview

Since December 2008, many central banks have kept interest rates at near zero, prompting a rally in global equities that has seen the MSCI World return over 125%. Much of the capital inflows have been directed towards dividend stocks as investors, starved for income, crowded into the traditional yield-bearing sectors of Utilities, Telecommunications, and REITs. Stocks offering the largest dividends were favoured as the low cost of borrowing boosted the attractiveness of highly levered assets. Today the expectation is that as rates move up, these high-dividend stocks that acted as bond alternatives are likely to experience increased volatility.

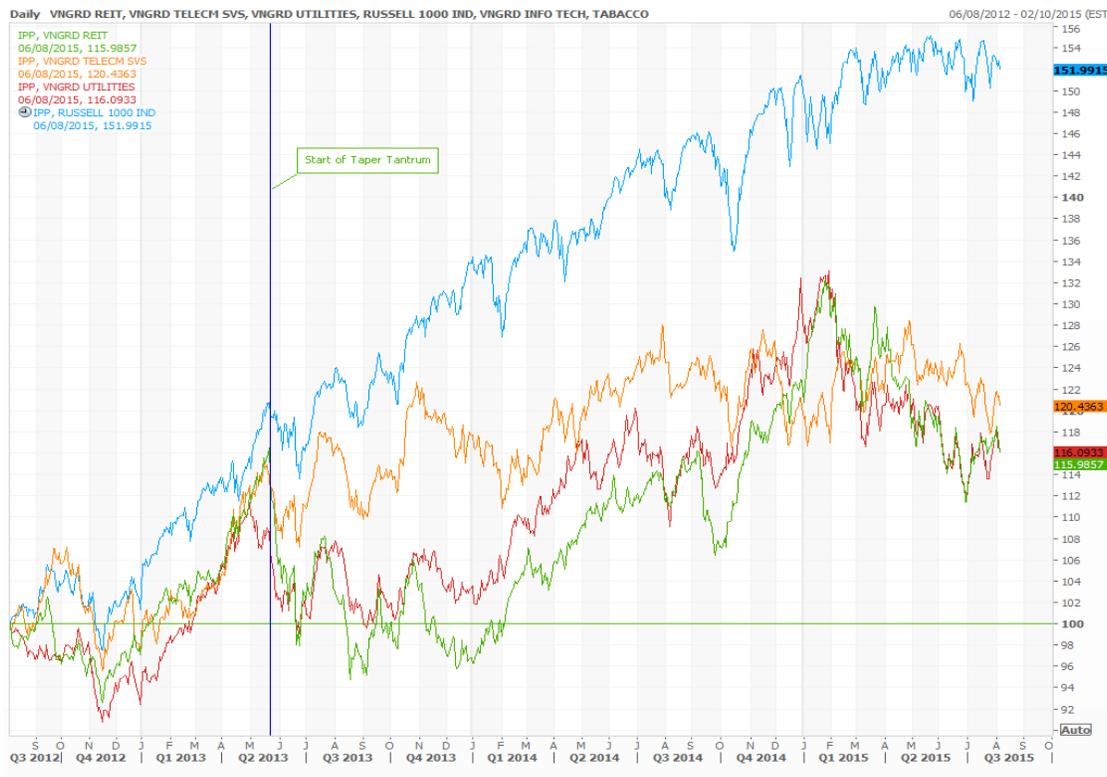
Although the global expectation of higher interest rates has been with us for a few years now, major central banks have been reluctant to tighten monetary policy over this period. The current economic environment has increased the potential divergence of policy across the world's economic regions. The European Union has been mired in the prevention of a Greece default, amid soft growth in the Southern regions. The Northern countries are posting positive economic surprises and accelerating earnings. The ECB is in an easing cycle for the foreseeable future, underpinned by low yields and a weaker currency. The UK is the only EU country that is projected to raise rates in the near future. As part of Shinzu Abe's effort to spark inflation, the Bank of Japan started easing fairly late compared to the US and is still not meeting inflation targets of 2%. The loose fiscal policies espoused by the major central banks, have destabilized currency markets and may be leading a race to the bottom with the hopes of generating local export growth.

China A-shares and H-shares recently experienced a heavy sell-off despite the People's Bank of China intervening to stabilize the market. The volatility may be a prelude to further devaluation and retraction of investors from the markets. A Chinese devaluation may spread deflationary shock waves through the rest of the markets. Decreasing growth in China resulted in lower commodity demand, affecting the exporting economies of Canada, Australia and New Zealand. The latter three are in an easing cycle as a result of falling oil prices and low demand from China.

The only economy on the verge of raising rates is that of the United States, with the Federal Reserve continuing to look for "decisive evidence" of economic growth before initiating the normalization of monetary policy.

The volatility and poor price performance of the Utilities, Telcos and REITs sectors during the taper-tantrum of 2013 demonstrated that some sectors carry significant interest rate sensitivity. Figure 1, shows the divergence of performance between the Russell 1000 and the three Vanguard sector ETFs. Despite the poor sector performance, certain stocks within these sectors have beaten the odds and done relatively well. Grouping all stocks within a sector as being equally interest sensitive is intellectually facile. Sectors are comprised of diverse industry groups that peak at different points during the business and leverage cycles. *In the future, avoiding the most interest sensitive stocks will be key to protecting the downside while providing higher yields.*

Figure 1: Volatility and poor price performance of the Utilities, Telcos and REITs sectors (2013)



Interest rate sensitivity is dependent on the business models underlying different sectors and industries. Through quantitative analysis we examine those underlying drivers, and verify them against our understanding of fundamental forces.

Equities exhibit interest rate sensitivity for a number of reasons:

- Within **Utilities**, regulated businesses operate on fixed margins which are squeezed once borrowing costs increase. Margins will be allowed to widen over time, but only once regulators have a chance to review them.
- **Levered investments** like pipeline owning Master Limited Partnerships (MLPs) and REITs are susceptible as debt servicing costs increase with higher interest rates.
- **Companies with large debt** levels or those with shorter maturity debt are also likely to experience negative returns once refinancing costs increases. Longer maturity debt may be more sensitive to interest rates, but companies may be in a position to reduce debt levels over the long term.
- **Home builders** can be sensitive when interest rates reach a certain level, as the advantages for home buyers will diminish as costs increase.
- **Insurance companies** can be sensitive depending on the corporate structure of the company – the sensitivity is contingent on the assets or liabilities being more exposed to interest rate changes. The clientele effect plays a role in sectors perceived as bond proxies, as income seeking investors switch from dividend paying stocks into fixed income with yield increases. Current fixed income yields do not match those available in equities and are unlikely to rise significantly in the foreseeable future.

However, once rates begin to rise in the United States, the rest of the world may experience additional sensitivity as capital may flow into the market with higher economic growth and higher yields.

Analysis

For our analysis, the US Large Cap Equity universe is composed of 1200 of the largest, liquid names in the US starting December 1984 to May 2015, including dividend and non-dividend paying stocks. We performed a regression analysis of US Large Cap Equity returns using the market risk premium and the change in the real 10 Year Treasury rates. This approach allows controls for fluctuations in the equity market and isolates how changing interest rates affect the performance of each portfolio. The coefficients from this regression represent the sensitivity of sectors to the change in market and interest rates. A sector with a positive sensitivity indicates that it performed better as rates rose. The larger the absolute coefficient value, the stronger the relationship. The negative coefficients reveal that as the Treasury rate increased the sectors experience negative returns.

Figure 2: Sector Sensitivity to Real 10-Year Treasury Rates (1984 - 2015)

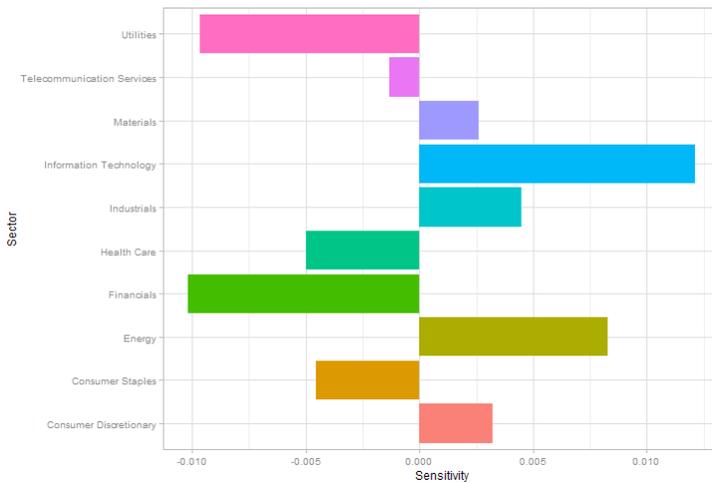


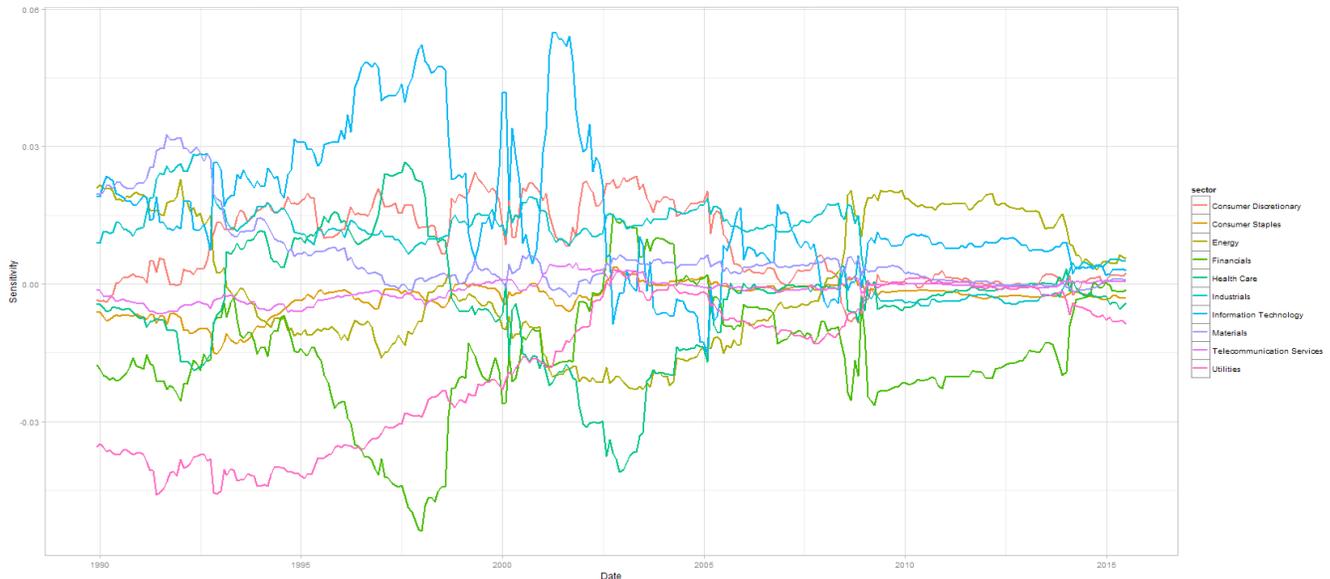
Figure 2, demonstrated that Financials (including REITs), Utilities and Health Care had underperformed as interest rates rose. As anticipated, **Information Technology, Energy and Industrials performed well as interest rates rose**. It is important to examine the presented analysis in the correct context. From 1982 to 2015 we have witnessed a secular decline in interest rates (Figure 3), as a backdrop to a commodity super-cycle. A steady increase in interest rates has not been observed in the past 30 years, decreasing the available sample of returns affected by large positive interest rate shifts. The sensitivities we calculate are assumed to hold for small shifts in interest rates. The Federal Reserve is expected to slowly increase rates, easing the economy into a tighter monetary policy. **The slow increase of rates boosts the likelihood our analysis represents a likely scenario for the historical equity performance.**

Figure 2: Sector Sensitivity to Real 10-Year Treasury Rates (1984 - 2015)



Figure 4, presents a regression of market premia and a changing 10Y Treasury Rate on sector returns over a rolling 5-year period. The rolling window creates a slightly different perspective, demonstrating that the level of sensitivity and even the direction vary over time. **Information Technology had positive sensitivity to interest rate change, meaning that IT companies outperformed in a rising rate environment prior to 2002.** After the Tech Crash (2000 - 2002) and around the Global Financial Crisis (2008 -) mark a definitive switch in the positive sensitivity that corrected post-2010. Over the last decade, sectors' sensitivities to interest rates have been muted, with the exception of Energy, Information Technology and Financials. The time frame also coincides with a period of exceptionally accommodative monetary policy.

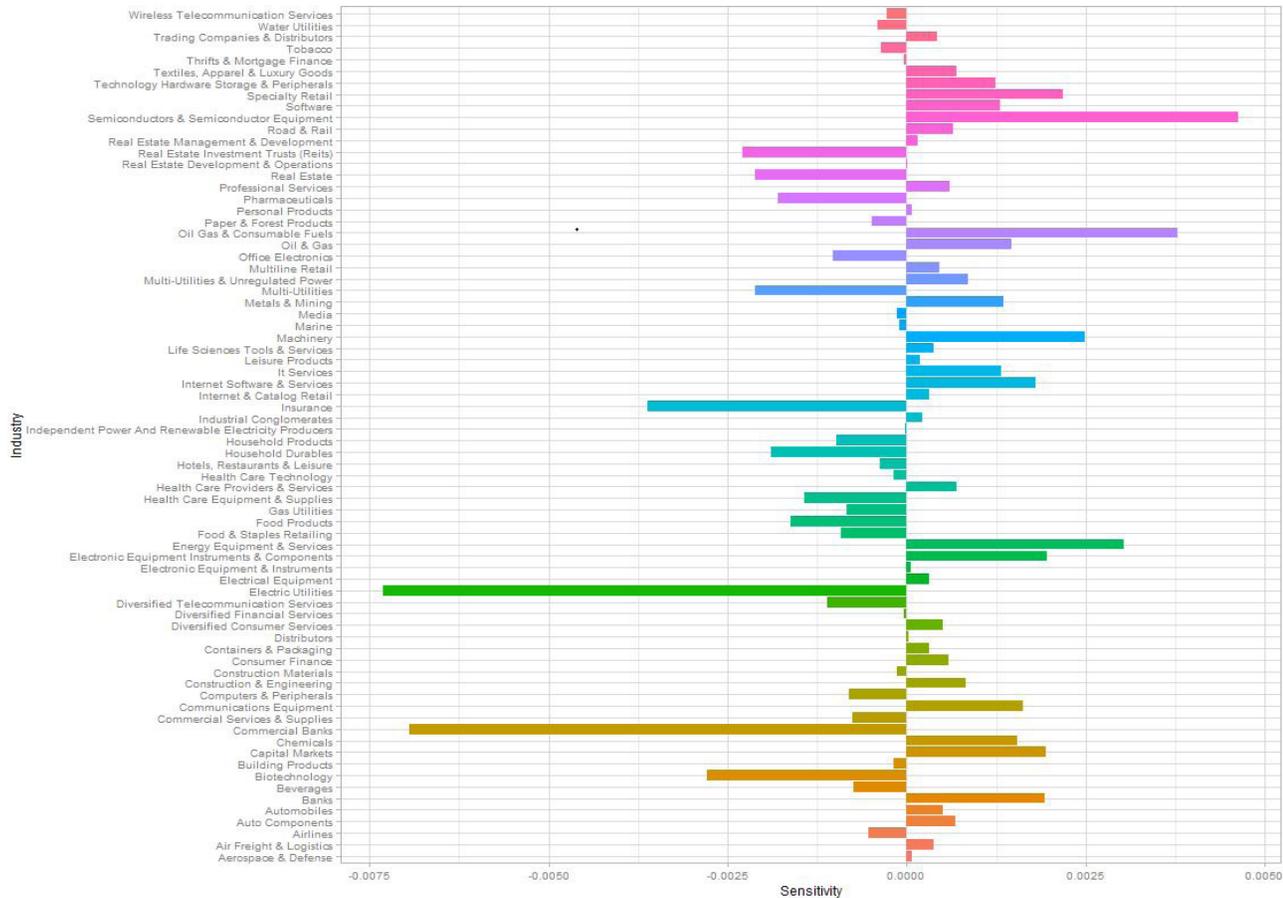
Figure 4: Sector Sensitivity to Real 10-Year Treasury Rates



US equal weight universe of 1200 Large Cap stocks, rebalanced monthly. The sensitivity is calculated based on the monthly change of US 10Y Constant Maturity Real Yields. The bar charts are based on the calculations run over the entire testing period from 1984/12 to 2015/06. The time series charts are based on 5-year rolling regression calculations.

A further breakdown of sectors into industries (Figure 5) provides additional explanation as to why some sectors are not as sensitive to interest rate changes as conventionally believed. Sectors are made up of multiple industries which have different company structures and operate within different technological levels. Traditionally, Telecommunications has been viewed as a rate sensitive sector, but as revealed, the **Diversified Telecommunication Service Industry is considerably more sensitive than the growth oriented Wireless providers.** Financials are shown as being highly sensitive, but in large part, that is due to REITs and related industries. **A further breakdown shows that Consumer Finance and Capital Market companies have a significantly more muted positive sensitivity to rising interest rates, and in effect are positioned to benefit.** Commercial Banks seem to be an unlikely outlier. Analyzing their sensitivity on a 5-year rolling window, shows most of the sensitivity was a result of volatility prior to 2000; a time of massive consolidation and high failure rates amongst the smaller banks. After 2000, the Commercial Bank industry has had very little sensitivity to interest rate moves.

Figure 5: Industry Sensitivity to Real 10-Year Treasury Rates (1984 - 2015)



The Appendix provides a further breakdown of each sector into industries, as well as Dividend Yield quartiles and Market Capitalization breakdown. Below we provide a few highlights:

- Within the **Consumer Discretionary** sector, Hotels, Travel and Specialty Retail may benefit from the expanding economic activity signaled by rising rates.
- **Personal Products** and the second highest yielding Tobacco companies have the least sensitivity to rising rates within the Consumer Staples sector.
- The **Energy** sector as a whole benefits from economic expansion, exhibiting positive sensitivity to rising rates; large cap Oil, Gas and Consumable Fuels companies, and smaller cap Energy, Equipment and Services appear the most sensitive.
- As can be expected, the **Financials** sector holds a lot of industry groups with negative sensitivity to rising rates, but the Banks and Capital Market industries have a positive sensitivity across all market caps.
- Within Health Care, the Life Sciences, Tools and Services industries demonstrates the lowest sensitivity to rising rates.
- Rising rates are often a signal of expanding economic activity and the **Machinery industry** within Industrials sector demonstrates a positive sensitivity.
- **Communications Equipment and Computers & Peripherals** traditionally peak early in the economic cycle which may be why they are among the few industries exhibiting negative sensitivity to rising rates within the Information Technology sector.

- Within the *Materials* sector, Chemicals and Metals & Mining companies exhibit the highest positive sensitivity to rising rates, however they are also the most historically volatile.
- The less regulated Wireless companies are less sensitive to interest rate increases than the more established Diversified Telecom companies.
- Utilities is a highly regulated sector, and it's unsurprising that the only industry with positive sensitivity to rising rates is Multi Utilities & Unregulated Power.

We demonstrate that industries within the same sector have different sensitivities to interest rates. High yielding stocks are not necessarily highly sensitive; rather the nature of the business determines the sensitivity of each company. Once interest rates begin to rise, stocks free of heavy regulations, with defensible cash flows, and a history of dividend growth as opposed to the highest dividend, should exhibit lesser volatility. In the context of gradual increases in interest rates, our analysis may be a useful guide to navigating interest-rate sensitivity of equities.

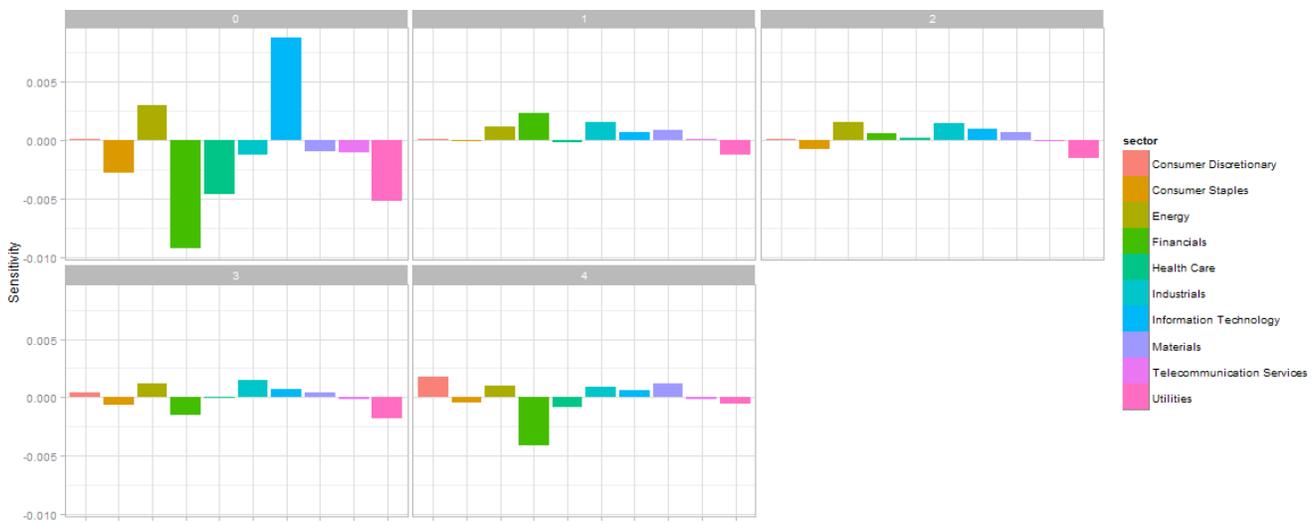
Appendix

The appendix presents additional information on interest rate sensitivity for each of the 10 GICS sectors, breaking them down into their respective industries. To further investigate the changes in sensitivity over time, we ran a 5-year regression and plot the resulting sensitivity of each industry.

Considering dividend paying stocks have come under scrutiny for their interest rate sensitivity, we created additional analysis across dividend yield and market cap fractiles. The dividend yield fractiles were created with 0 being non-dividend paying stocks, and 1 - 4 being stocks with increasing dividend yield. To create the market cap fractiles, the universe was split along 1 - 3, with 1 being the smallest stocks in our US Large Cap universe.

A breakdown along dividend yield fractiles, demonstrates that non-dividend yielding stocks are more sensitive in an absolute sense. Amongst the stocks with the lowest dividend yield, Utilities are the only ones with negative sensitivity to rising rates. Stocks in the highest yielding fractile exhibit greater sensitivity than other dividend paying stocks, and align closer to the conventional notion regarding sector sensitivity. An interesting point, is that Financial stocks that pay a low dividend have a positive sensitivity to interest rate changes.

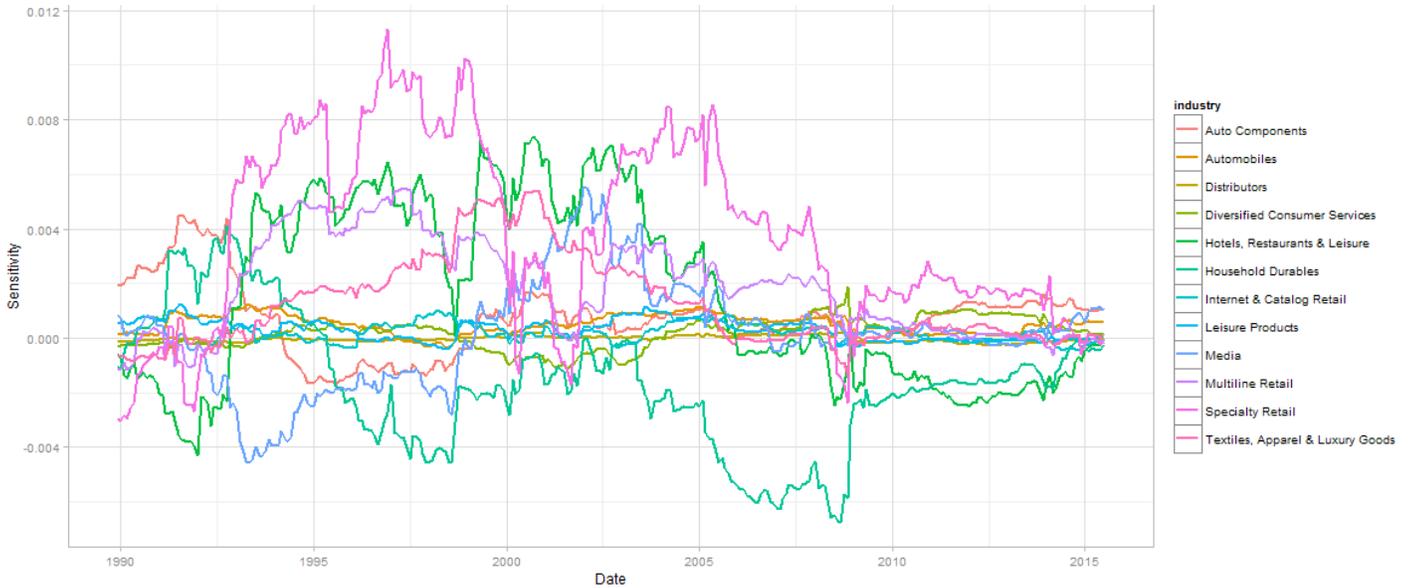
Sector Sensitivity to Real 10Y Treasury Rates per Div Yield Decile



Consumer Discretionary

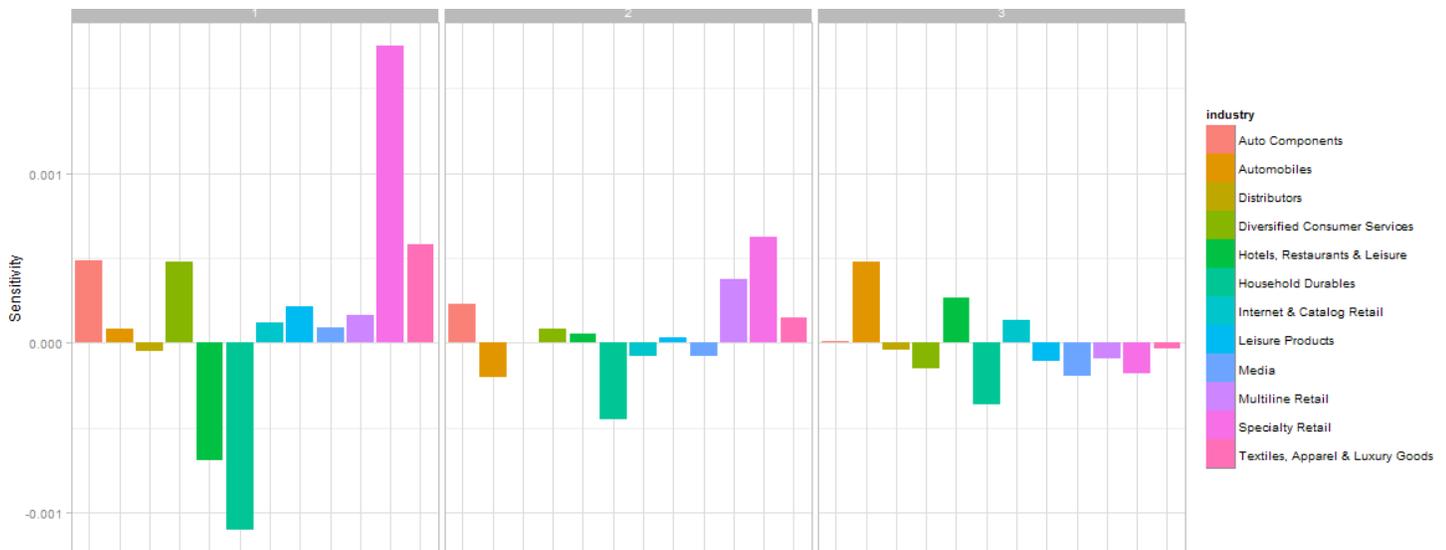
A timeline of sensitivity within Consumer Discretionary shows that Specialty Retail consistently demonstrated positive sensitivity to raising rates, while Household Durables had negative sensitivity to raising rates.

Consumer Discretionary Sensitivity to Real 10-Year Treasury Rates



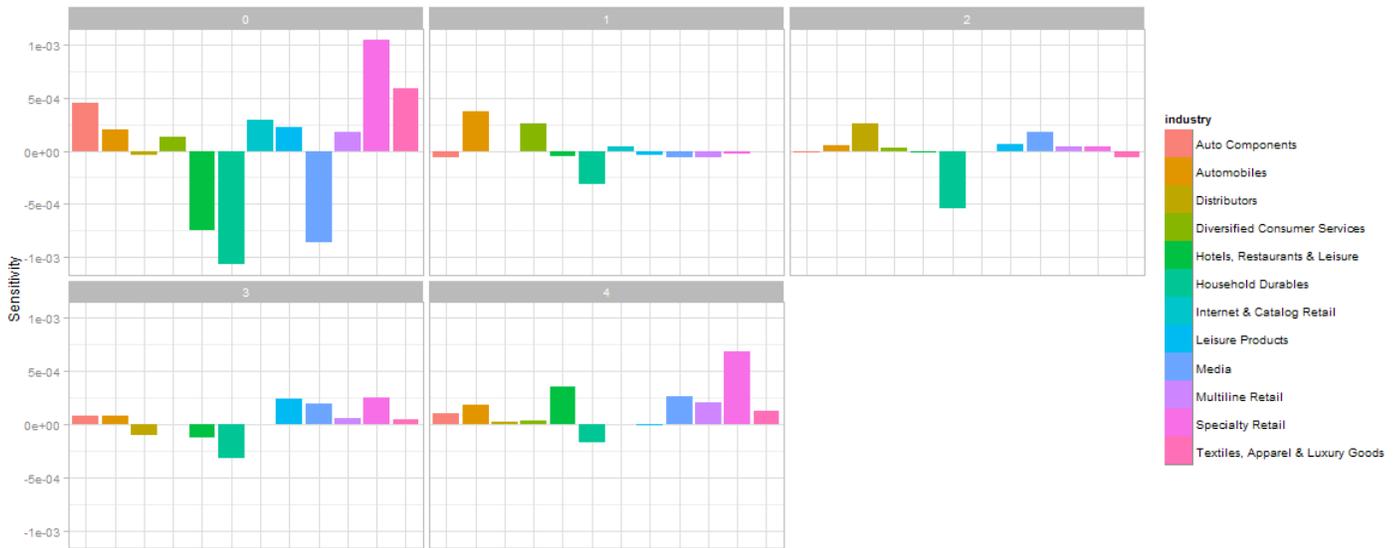
Higher yielding stocks within the Media and Retail cluster have positive sensitivity to raising interest rates. Hotels, Restaurants & Leisure companies that pay a dividend are less sensitive than those that don't.

Consumer Discretionary Sensitivity to Real 10-Year Treasury Rates per Market Value Fractile



Higher yielding stocks within the Media and Retail cluster have positive sensitivity to raising interest rates. Hotels, Restaurants & Leisure companies that pay a dividend are less sensitive than those that don't.

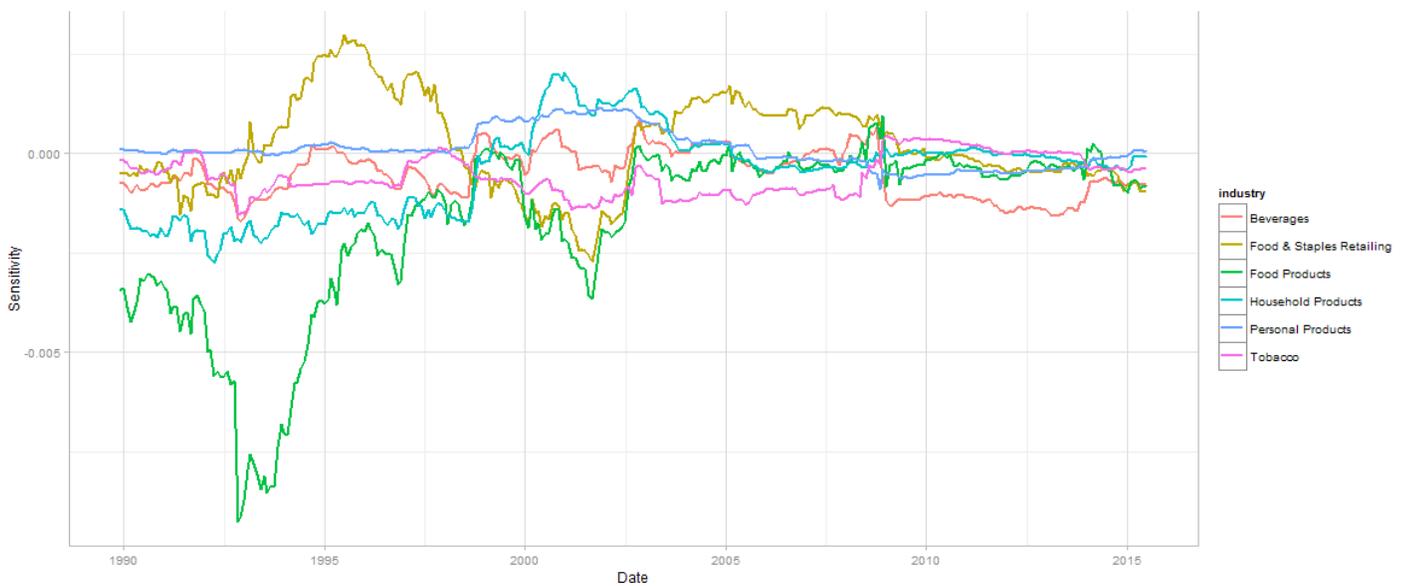
Consumer Discretionary Sensitivity to Real 10-Year Treasury Rates per Div Yield Fractile



Consumer Staples

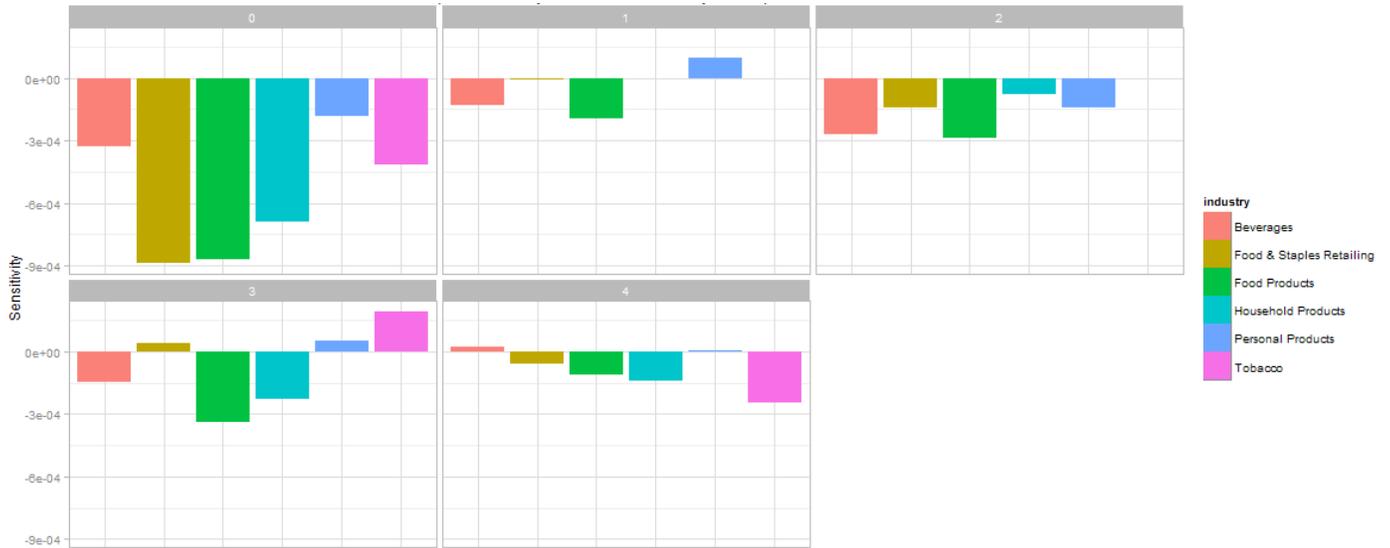
The interest rate sensitivity in the Consumer Staples sector has diminished greatly over time; Beverages remaining the industry with the greatest negative sensitivity to rising rates.

Consumer Staples Sensitivity to Real 10Y Treasury Rates



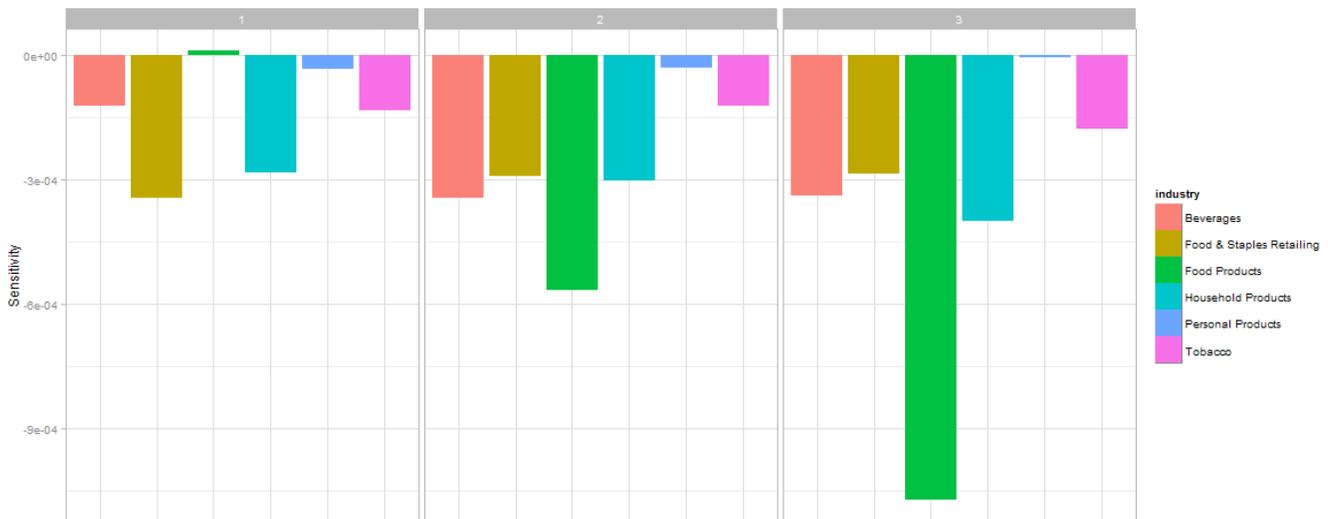
The highest yielding tobacco stocks have a negative sensitivity to interest rates as opposed to those with the 2nd highest dividend yield. Shifting down on the dividend yield ladder may protect us from a decline in values.

Consumer Staples Sensitivity to Real 10Y Treasury Rates per Div Yield Fracile



Companies in the food products business are very sensitive to a rise in interest rates, especially those in the Large Cap space. Personal Products is the industry with the least sensitivity.

Consumer Staples Sensitivity to Real 10Y Treasury Rates per Market Value Fracile



Energy

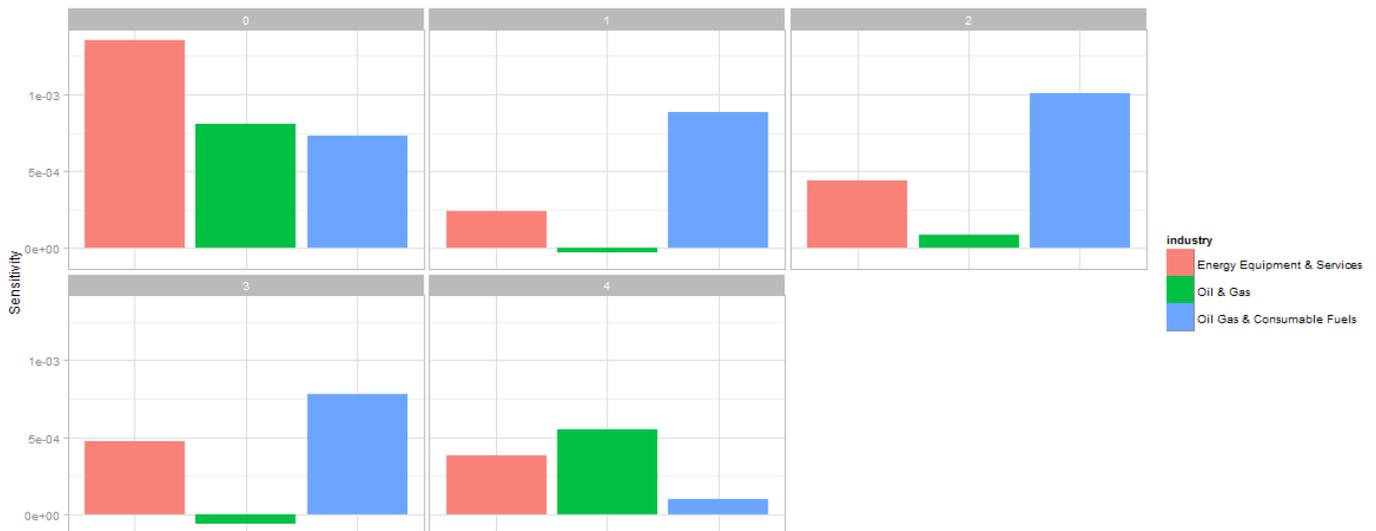
The Energy sector has only three industries and they have cycled between having positive and negative sensitivity to raising rates. Other factors may be driving the returns of the Energy sector, but based on our analysis, the Oil, Gas & Consumable Fuels industry has the most muted sensitivity.

Energy Sensitivity to Real 10Y Treasury Rates



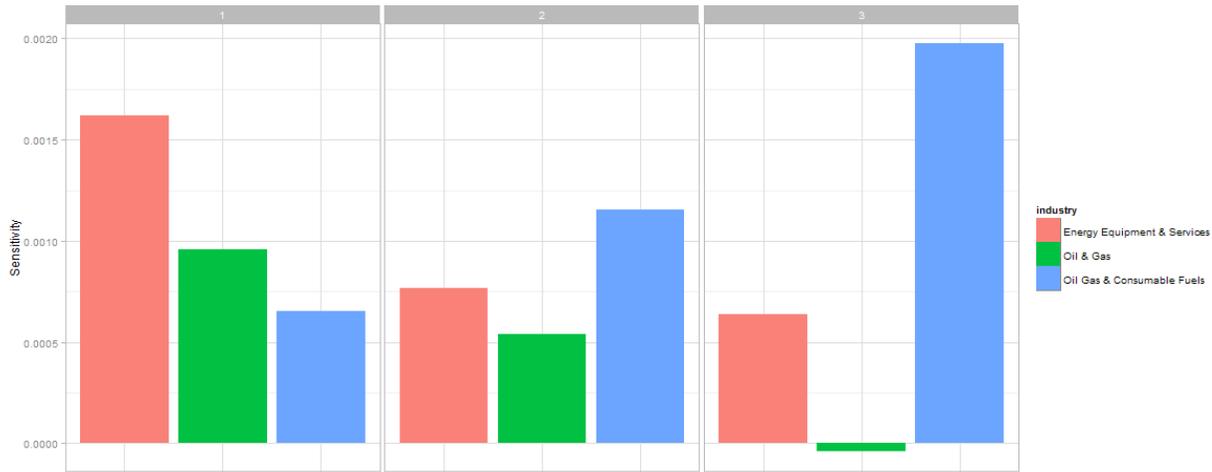
Recently, Energy had a positive sensitivity to interest rates, which may be due to increase energy usage during economic growth periods when interest rates rise

Energy Sensitivity to Real 10Y Treasury Rates per Div Yield Fracile



Large Cap, second quartile dividend yielding stocks in the Equipment and Consumable Fuels business are companies that may do well once rates increase.

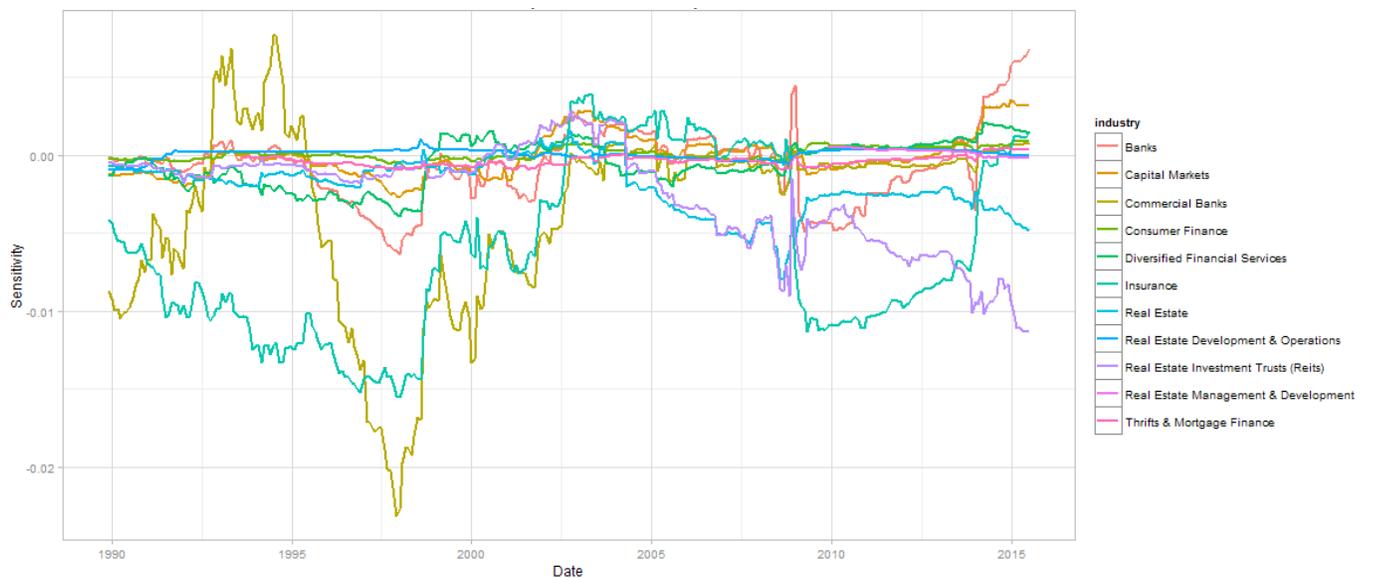
Energy Sensitivity to Real 10Y Treasury Rates per Market Value Fracile



Financials

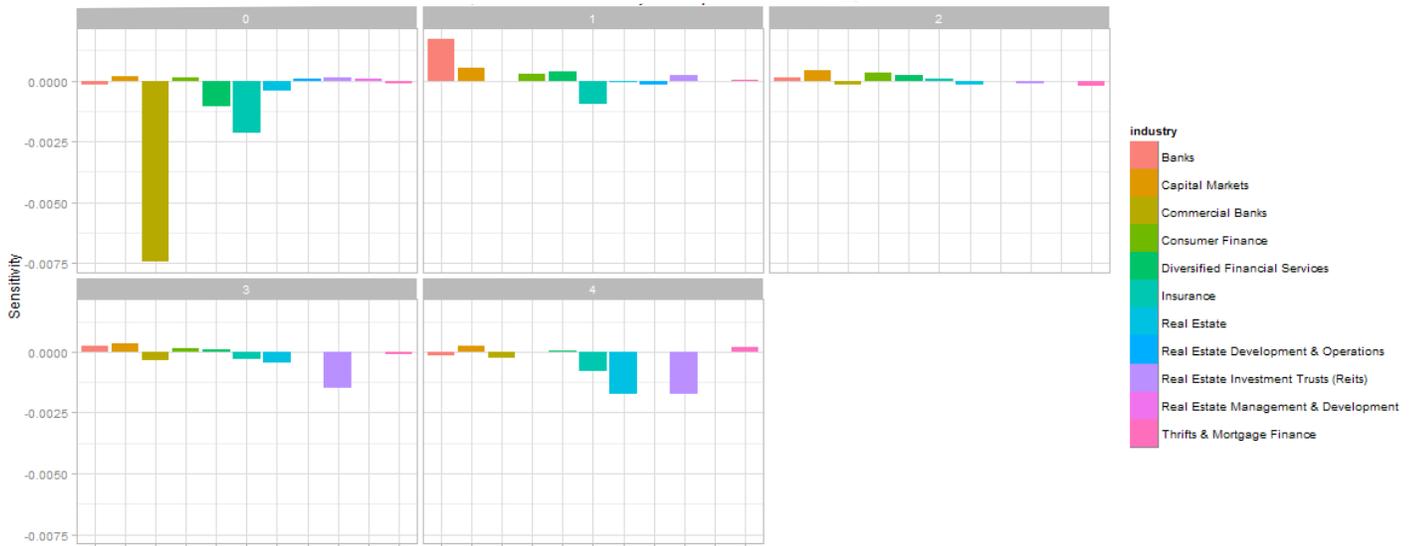
Banks, Capital Markets and Commercial Banks are showing a positive sensitivity to interest rates over the past few years. The Diversified Finance industry has always shown a muted response to interest rates, while the Real Estate cluster has generally had a negative sensitivity.

Financials Sensitivity to Real 10Y Treasury Rates per Treasury Rates



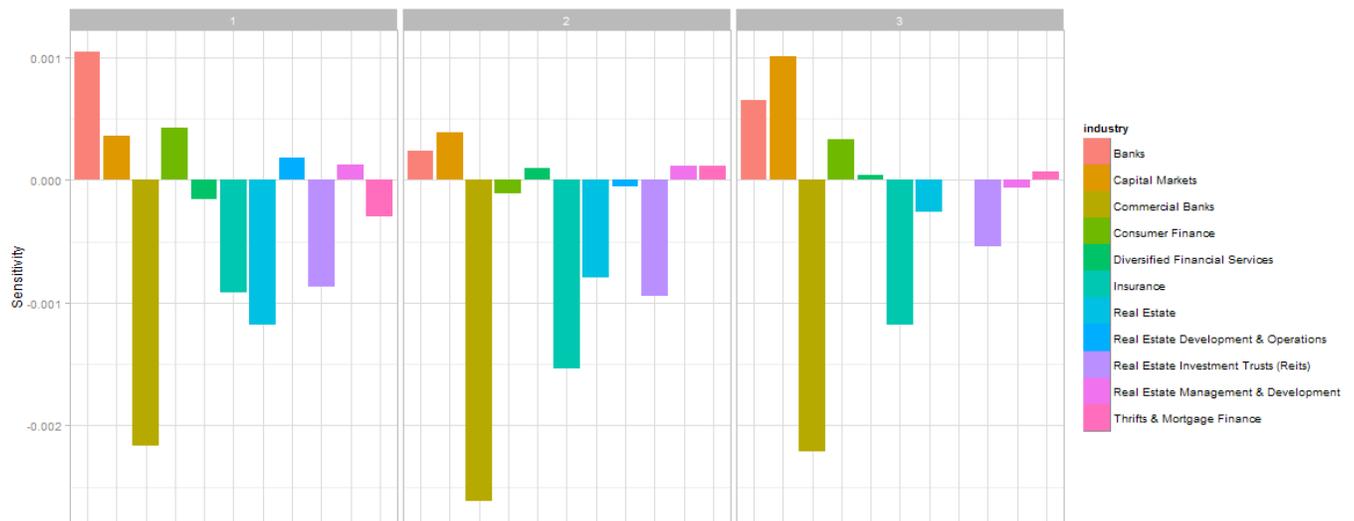
Commercial Banks without a dividend are the ones with the largest negative sensitivity to interest rates. REITs have the largest negative sensitivity from stocks with higher dividend yields.

Financial Sensitivity to Real 10Y Treasury Rates per Div Yield Fracile



Large Cap Banks and Capital Market companies have a positive sensitivity to rising rates, increasing the likelihood of better performance as rates increase.

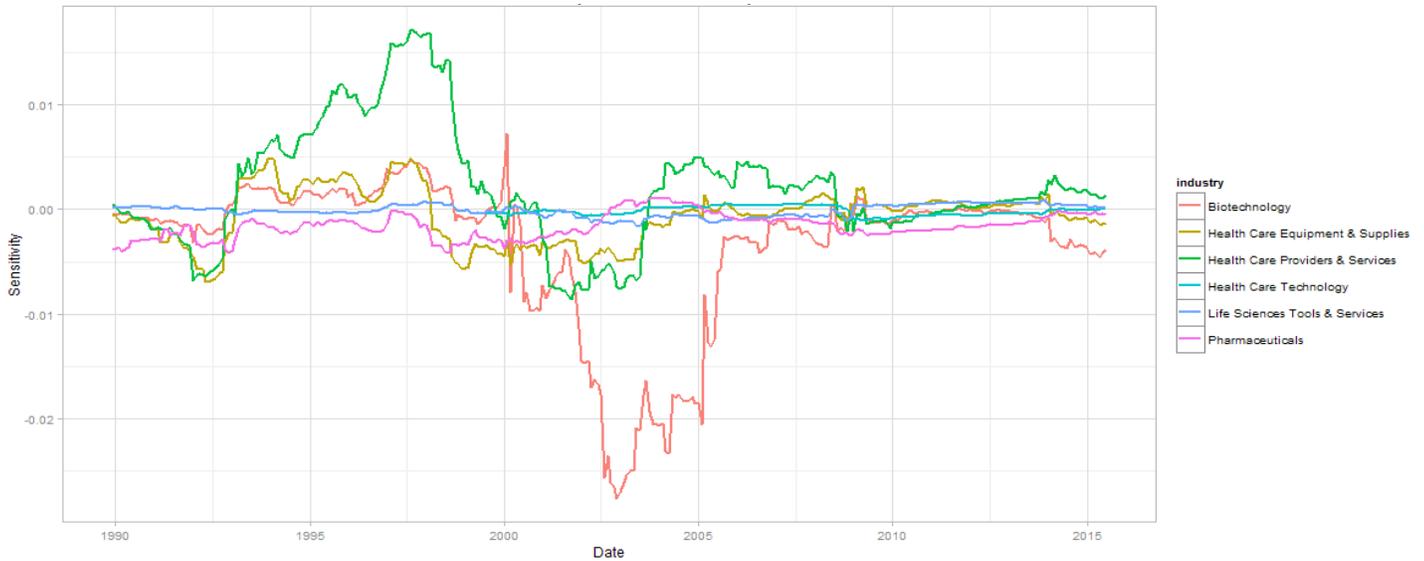
Financials Sensitivity to Real 10Y Treasury Rates per Market Value Fracile



Health Care

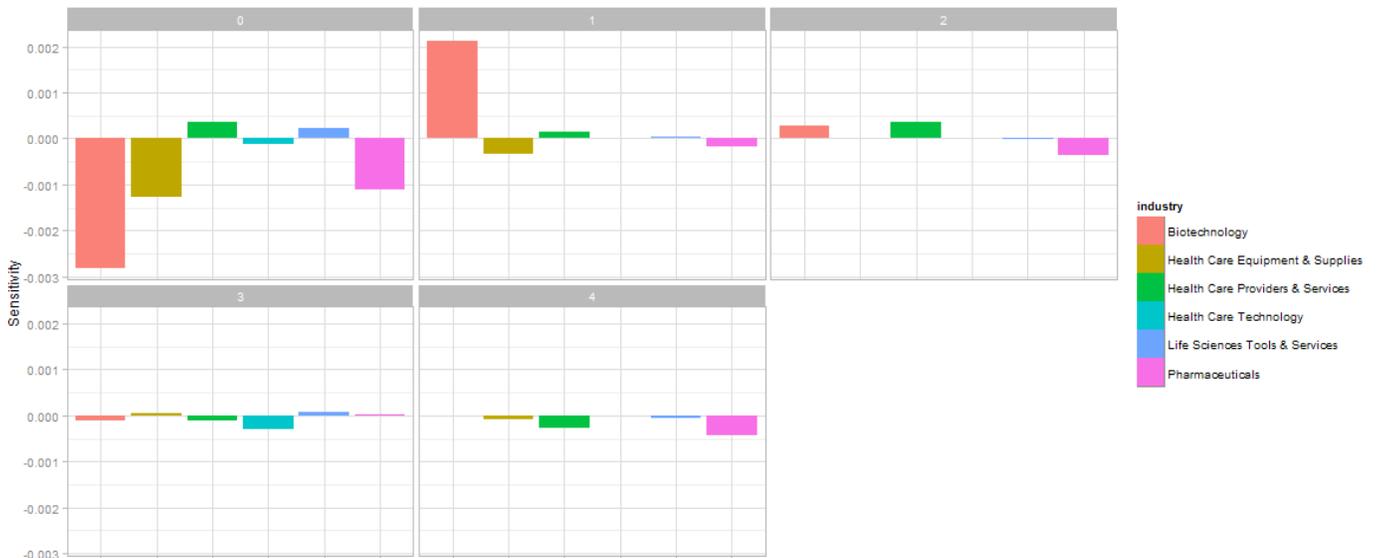
The Health Care sector has generally had positive sensitivity to interest rate increases, with the exception of the Biotechnology industry.

Health Care Sensitivity to Real 10Y Treasury Rates



Biotechnology companies that pay a dividend yield, likely the more established companies, have a positive sensitivity to rising interest rates.

Health Care Sensitivity to Real 10Y Treasury Rates per Div Yield Fracile



Pharmaceuticals in general seem to carry some negative sensitivity to rising rates, especially the Large Cap stocks.

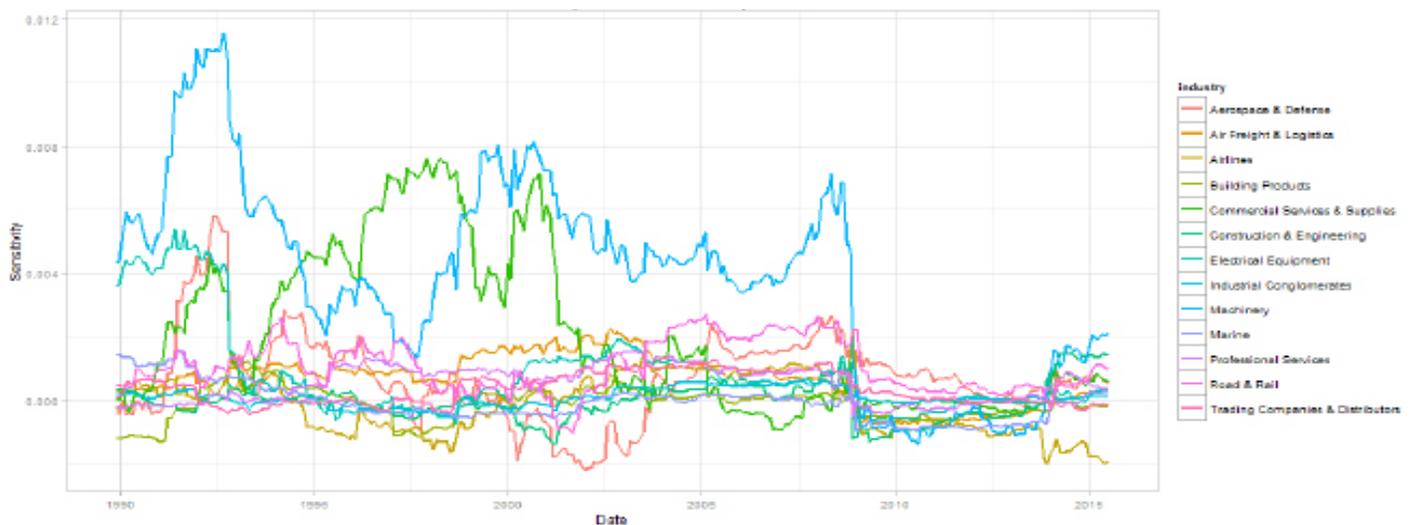
Health Care Sensitivity to Real 10Y Treasury Rates Per Market Value Fracile



Industrials

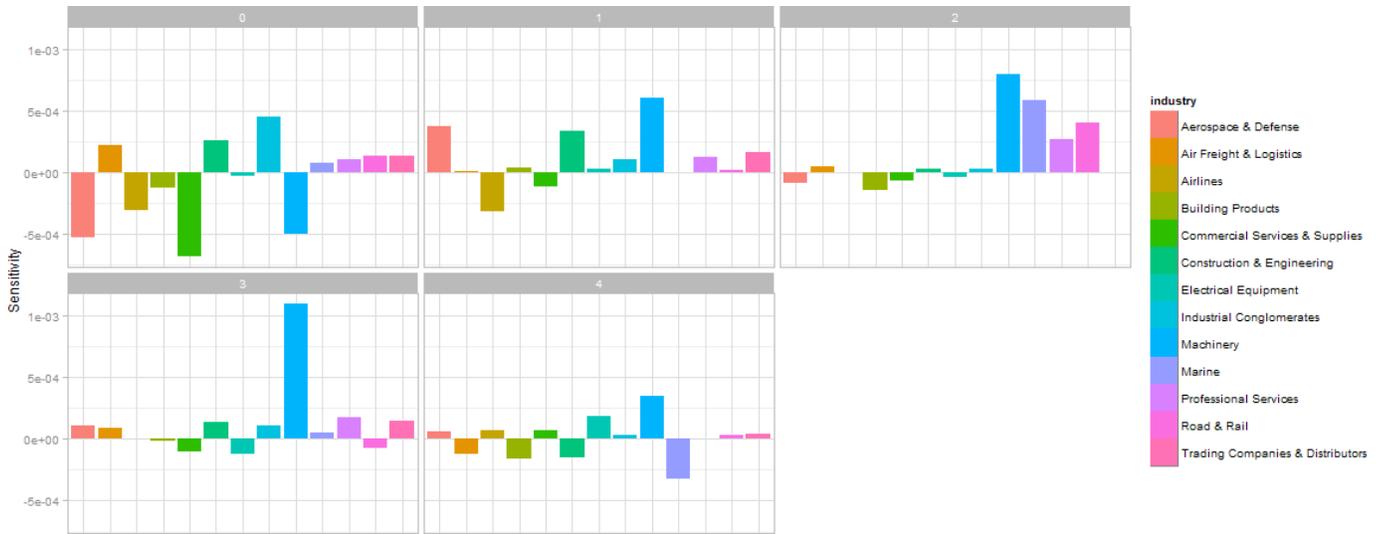
The Industrials sector has had a positive sensitivity to rate increases over the analyzed period. Industrials may benefit, as a small increase in rates is a sign of an economic recovery and catalyst for reinvestment.

Industrials Sensitivity to Real 10Y Treasury Rates



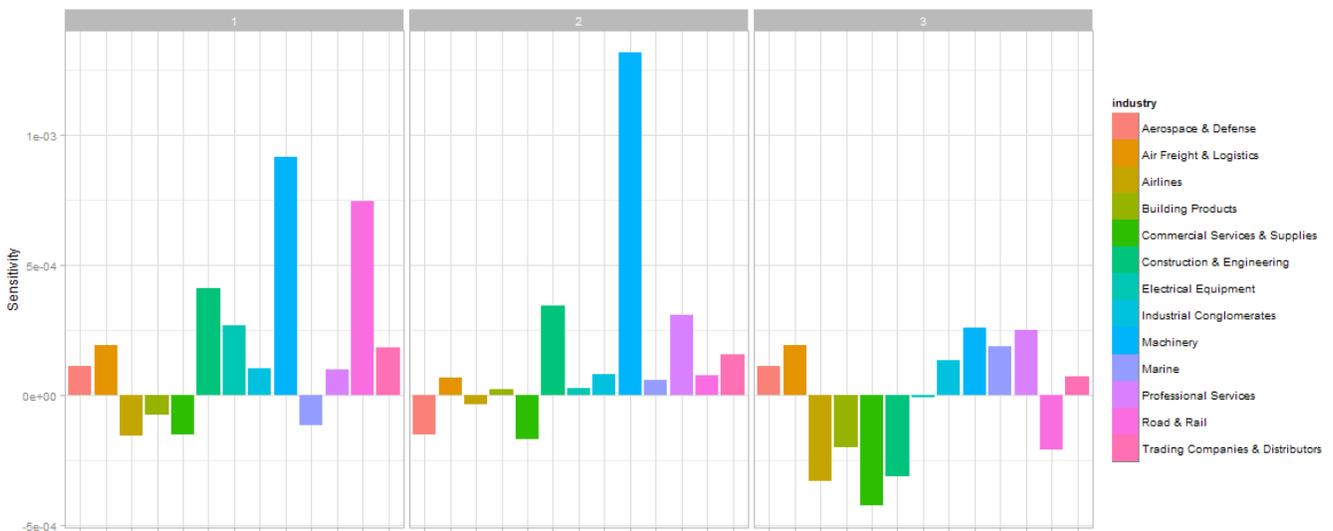
In a rising interest rate environment, Machinery has positive sensitivity to rising rates and could be used to increase the yield of a portfolio. Marine companies with a high dividend yield seem to suffer once rates rise, likely due to heavy debt burdens that become harder to service.

Industrials Sensitivity to Real 10Y Treasury Rates Per Div Yield Fracile



The negative sensitivity of stocks in the Industrials sector increases for Larger Cap companies. Amongst Large Cap stocks, those in the Industrial Conglomerates, Machinery, Marine and Professional Services have a positive sensitivity to rising rates.

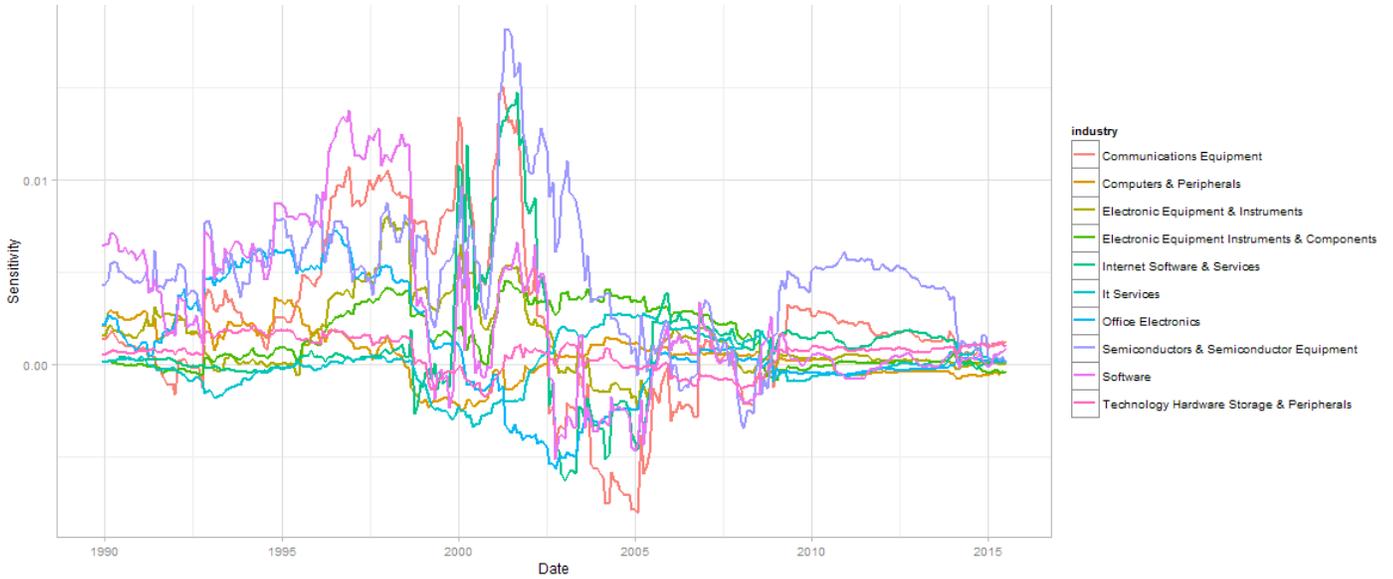
Industrials Sensitivity to Real 10Y Treasury Rates per Market Value Fracile



Information Technology

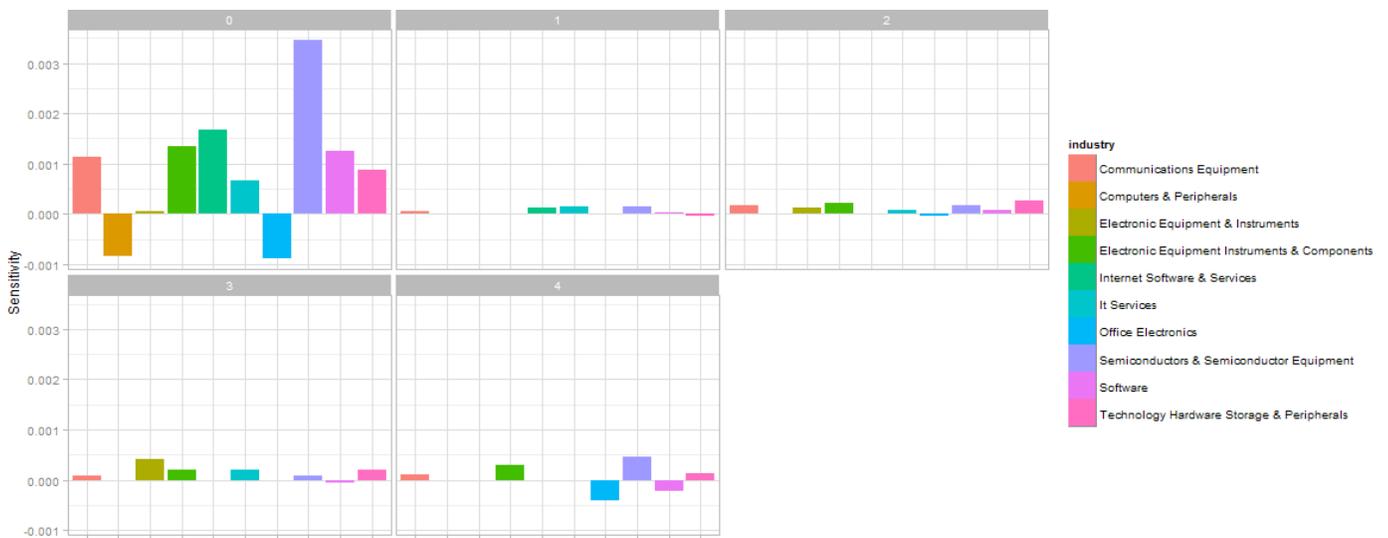
The Information Technology sector is composed of a variety of different industries. Electronic Equipment Instruments & Components is one of the industries with a highly muted response to interest rate change.

Information Technology Sensitivity to Real 10Y Treasury Rates



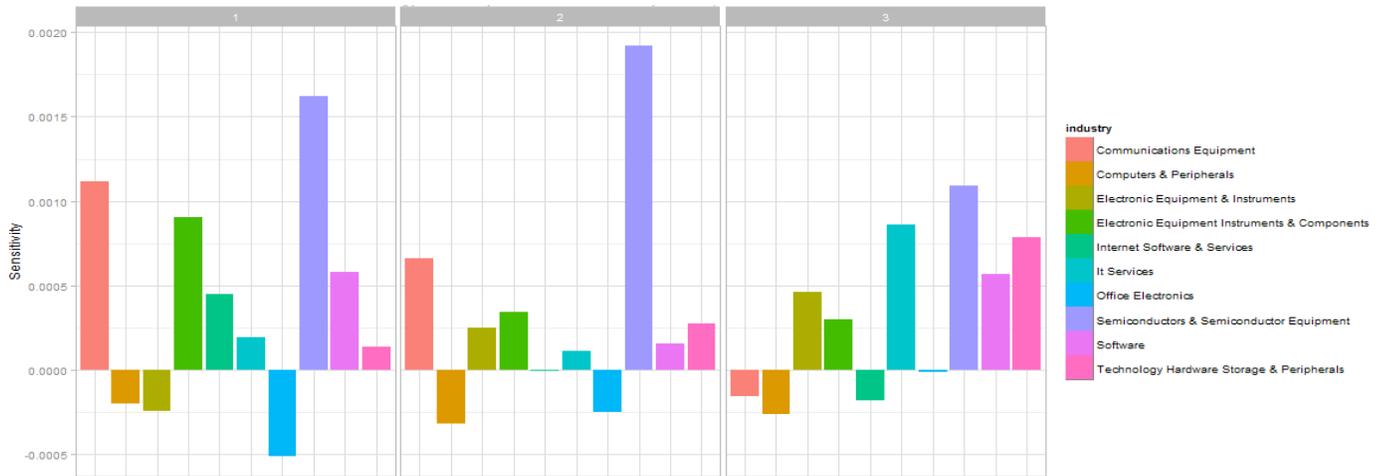
Information Technology stocks that pay a dividend are mostly immune from negative sensitivity to interest rates; the only exception seems to be Office Electronics.

Information Technology Sensitivity to Real 10Y Treasury Rates per Div Yield Fracile



Amongst the Larger Cap stocks, only Communications Equipment, Computers & Peripherals and Internet Software & Services have a negative sensitivity to rising rates.

Information Technology Sensitivity to Real 10Y Treasury Rates Per Market Value Fracile



Materials

Over the last few decades the response to interest rate increases of Materials stocks has been fairly muted; Chemicals and Metals & Mining are the only to show volatility.

Materials Sensitivity to Real 10Y Treasury Rates



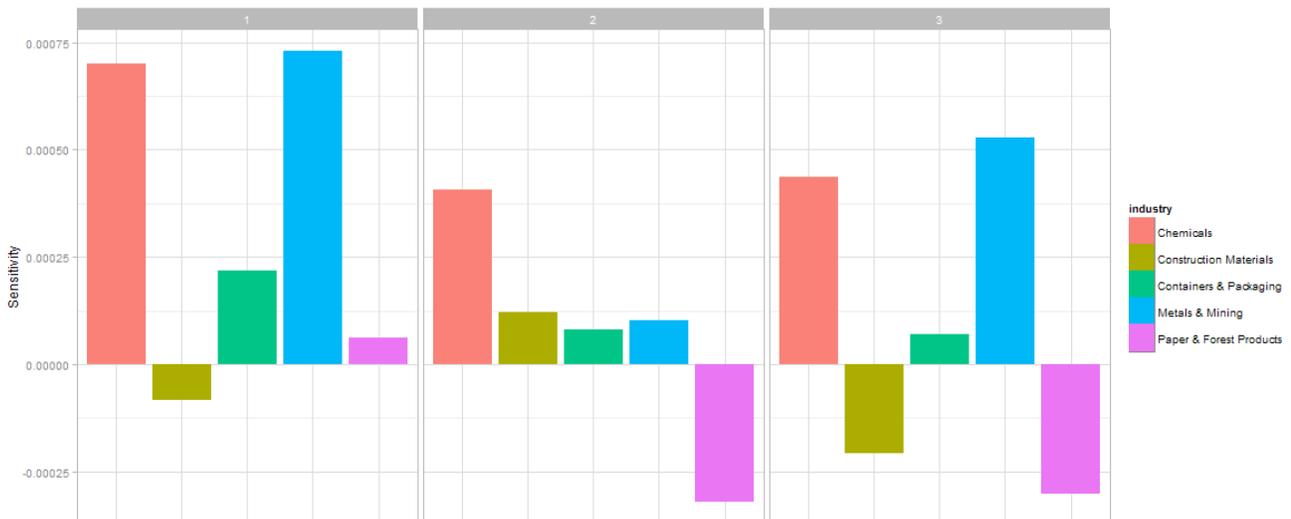
Chemical companies that pay the highest dividend yields have a positive sensitivity in a rising interest rate environment.

Materials Sensitivity to Real 10Y Treasury Rates per Div Yield Fracile



Large Cap, High Dividend paying Metals & Mining companies perform well when interest rates rise (this is in a commodity super cycle).

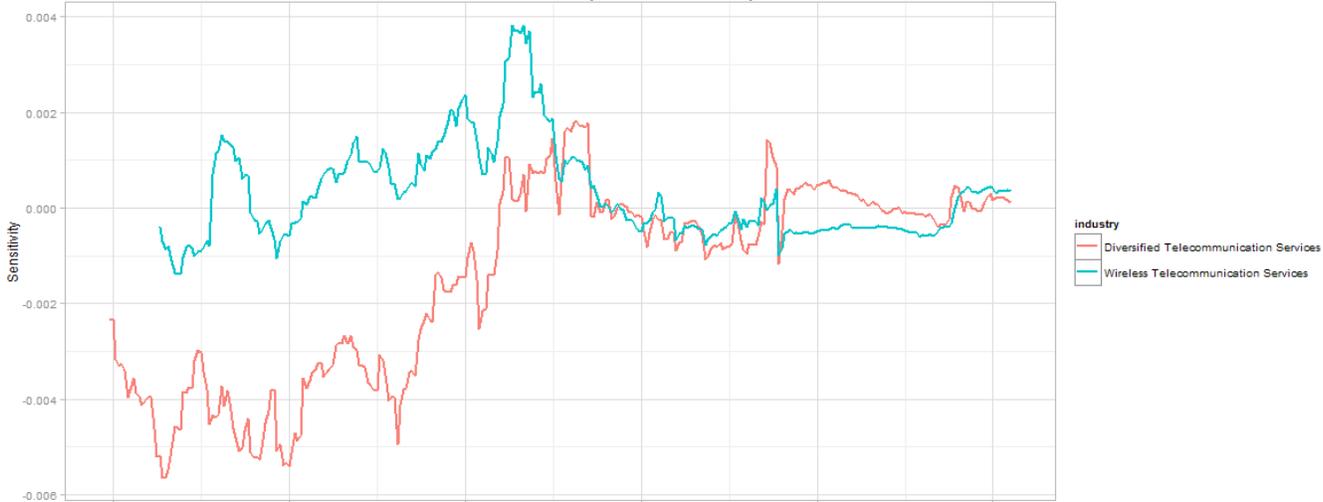
Materials Sensitivity to Real 10Y Treasury Rates per Market Value Fracile



Telecommunication Services

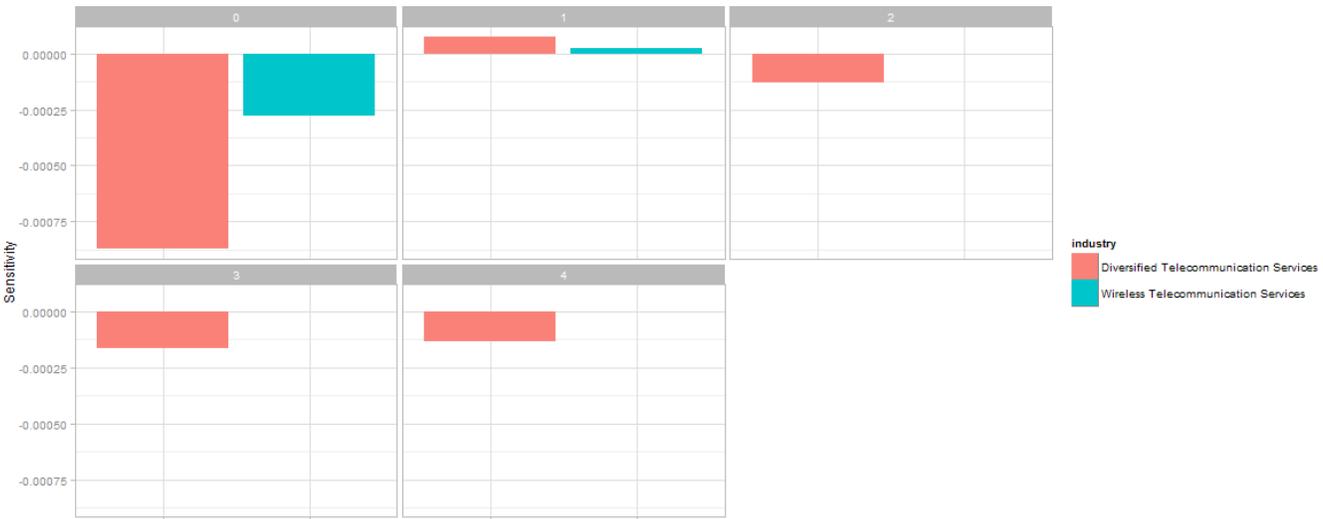
Within Telecommunication Services, Wireless Telecommunication Services have been less affected by interest rate changes over time.

Telecommunication Services Sensitivity to Real 10Y Treasury Rates



Telecommunication companies that pay a dividend yield display some sensitivity to rising rates, but the more sensitive companies are those that do not pay dividends.

Telecommunication Services Sensitivity to Real 10Y Treasury Rates per Market Value Fracile



Large Cap Wireless Telecommunication Service companies are a good hedge for rising rates.

Telecommunication Services Sensitivity to Real 10Y Treasury Rates



Utilities

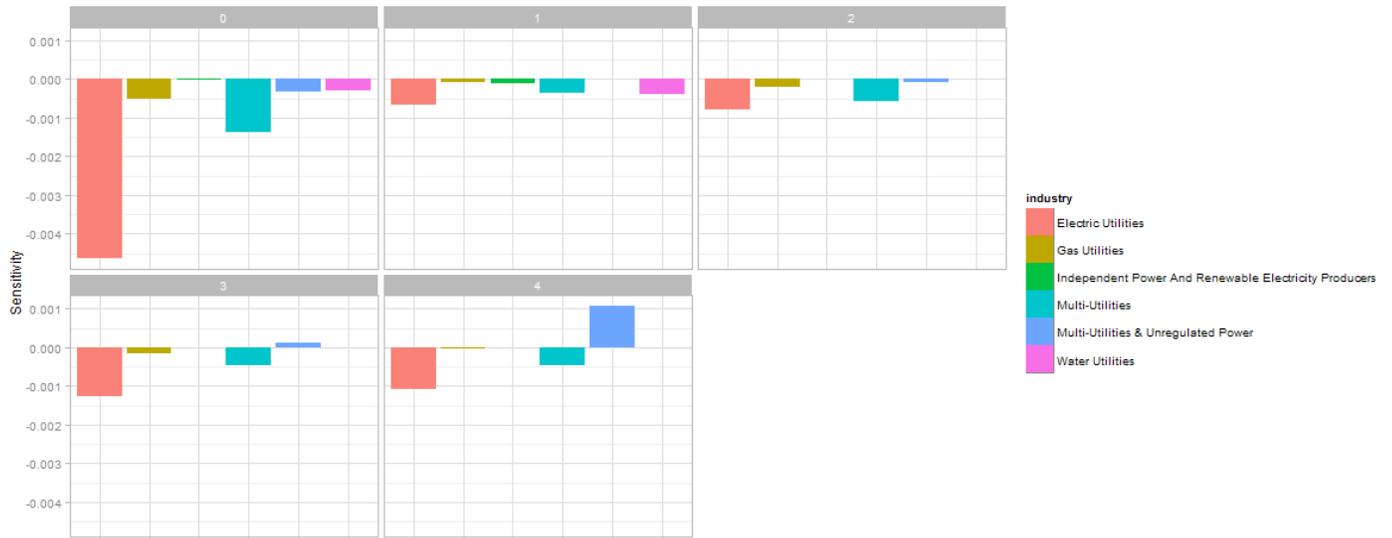
Most industries within the Utilities sector have negative sensitivity to interest rates. Electric Utilities are the most sensitive to interest rate changes, while Multi-Utilities & Unregulated Power have demonstrated a positive sensitivity over the past decade. Independent Power and Renewable Electricity Producers have always had positive sensitivity to rising rates.

Utilities Sensitivities to Real 10Y Treasury Rates



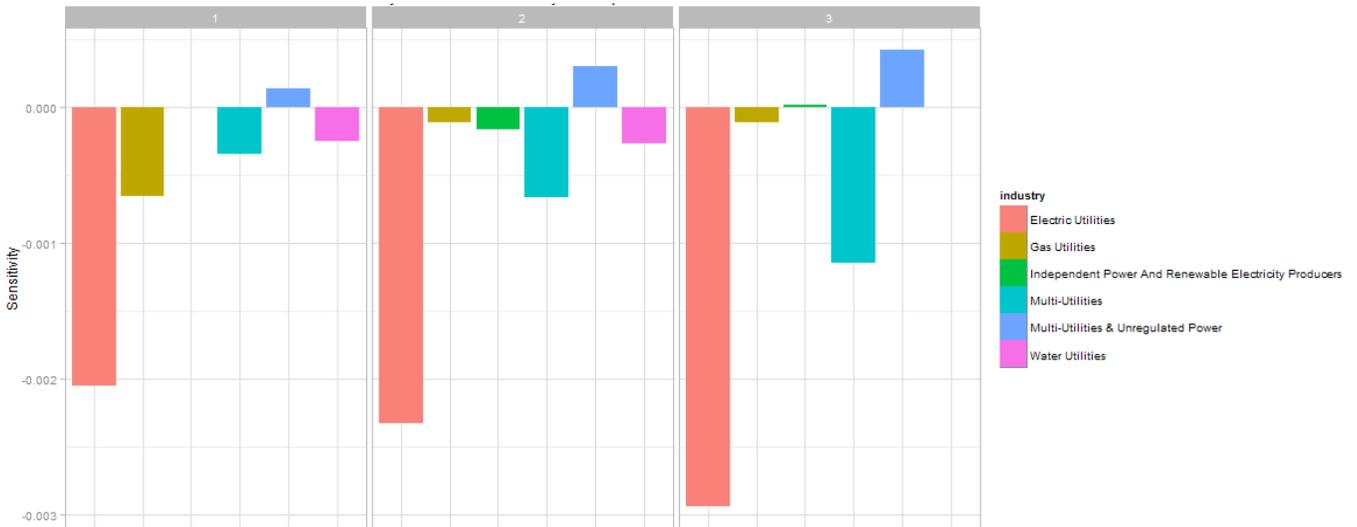
Amongst the highest dividend yielding stocks, Multi-Utilities & Unregulated Power are the only to have a positive sensitivity to rising rates. Unregulated utility companies can adjust pricing based on market forces.

Utilities Sensitivity to Real 10Y per Div Yield Fracile



The negative sensitivity of Electric Utilities and Multi-Utilities companies increases with the market cap of the stocks. Larger companies suffer greater regulation, and have a harder time adjusting to rising rates.

Utilities Sensitivity to Real 10Y Treasury Rates per Market Value Fracile



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