BACK TO NORMAL?

VALUE INVESTING MAY BE A HEDGE TO A RISING RATE ENVIRONMENT

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INTRODUCTION

Economically, there is certainly something about the last several years that has felt abnormal. Low interest rates are one thing; negative interest rates are an entirely different animal. However, interest rates have been rising slowly across much of the world since Brexit. In the US, interest rates surged following the election. What has driven this change? There are several possible explanations: less uncertainty following Brexit and the US election, a relatively robust US economy, the prospect of higher growth and/or inflation under President-elect Trump, and lastly, gravity (meaning interest rates should not be zero or negative). If this new interest rate environment persists, it could have several important implications for investing, including some of the pillars of quantitative equity investing. Some increasingly popular strategies built around bond-like, low volatility, low beta, and defensive equities may struggle in a rising interest rate environment. Value strategies, which struggled for much of the last decade but prospered over the last several months, may serve as a hedge to rising rates as investors focus less on income and safety and more on total return potential.

RISK-ON / RISK-OFF

One well established investment concept is that of the risk-on properties of equities and risk-off properties of US government bonds. This has manifested itself historically in the generally negative correlation between equities and treasuries. On the other hand, there is a belief (which Man Numeric subscribes to) that lower interest rates bolster equity valuations because of discount rates and substitution effects. Paying 150x earnings for Amazon.com or 30x earnings for a Utility company may be much more rational when there is very little discount on future earnings and equivalent bonds earn almost nothing. Both of these effects exist today, though as with many of these relationships, they are not consistent over time.

Figure 1. Shiller P/E vs Long-Term Interest Rates

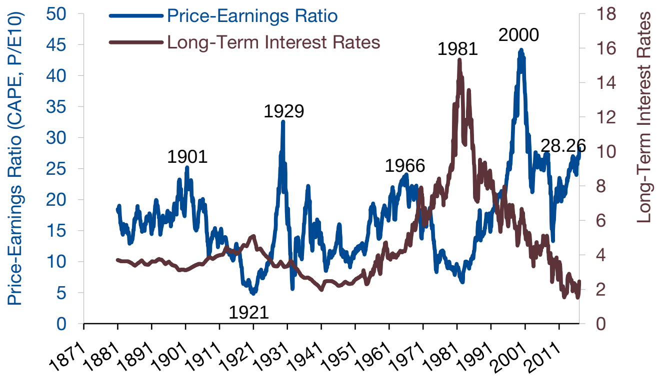


Figure 1 shows the Shiller P/E ratio versus long-term interest rates (in the US)[1]. From 1881 forward, the correlation between the E/P ratio (inverse P/E) and long-term interest rate is +23.8%. From 1960 forward, that correlation jumps to +78.8% (!), indicating valuation levels are historically highly correlated to the level of interest rates. Over either period, it is clear there has been some relationship between earnings yields and long-term interest rates, and over the last half-century, the effect has been dramatic. At the same time, the risk-on/risk-off effect has been real over the last two decades, but there is less precedent for it historically. Figure 2 shows the rolling 5 year correlation between the returns of the S&P 500 and US Treasuries[2]. Though it has been consistently negative over the last two decades, it was actually quite positive from the 1960s to the 1990s.

Figure 2. S&P 500 / US 10 Year Treasury Rolling 5 Year Return Correlation

Focusing on the relationship between equities and US Treasuries, it is clear that there has recently been a negative correlation between returns of the two assets, hence the risk-on, risk-off narrative. But the relationship between equities' earnings yield and long-term interest rates appears to be more consistently positive, so the possibility of a material increase in interest rates could be a downer for the equity markets. Of more interest to us as quantitative equity investors is how the historical and prospective market environments influence factors that are near and dear to our hearts (or at least portfolios).[3]

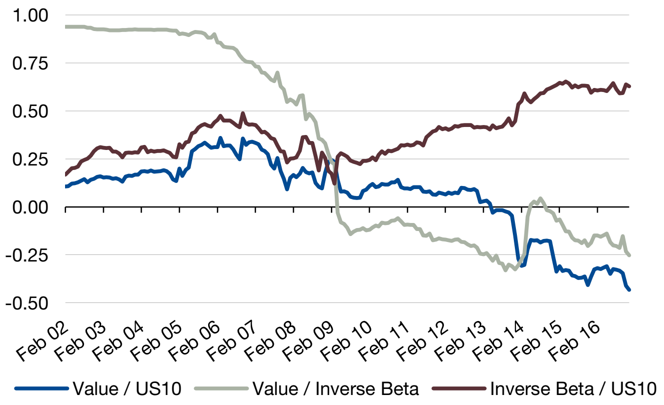
THE BOND-LIKE BUBBLE

Historically, bonds served investors who wanted to preserve capital (at least notionally) and seek a relatively safe income. As long-term interest rates declined materially and below equivalent dividend yields in the developed equity markets, investors started seeking alternatives that would provide them with a more defensive return stream and a stable income. Enter the rise of "bond-like" strategies.

1. Source: http://www.econ.yale.edu/~shiller/data.htm
2. Source: Bloomberg, Man Numeric.
3. As a side note, this has interest implications on the realized and prospective performance of risk parity strategies, which tend to pair levered bond exposure with equities. The negative correlation of these two assets over the last two decades has led to very strong realized Sharpe ratios. The future may not be as bright.

There are many names for these strategies, including: minimum variance, low volatility, low beta, defensive, stable, and yield. Value strategies have struggled as investors shunned the associated risks while at the same time bidding up the price of stocks that have the "bond-like" characteristics they crave, making the stocks appear expensive by historical standards. Figure 3 shows the rolling correlation of returns to US 10-year Treasuries, Barra Value, and Inverse[4] Barra Beta over the largest 500 stocks in the US[5]. In the aftermath of the dotcom bubble, value and inverse beta were closely aligned and their returns were highly correlated. Yet, before and after the Global Financial Crisis ('GFC'), value and inverse beta diverged significantly.

Figure 3. Rolling 5 Year Correlations US Top 500



Today, the inverse beta strategy is highly correlated to treasury returns, becoming almost the same trade. In contrast, value is quite the opposite. It is because of the current relationship that we believe value may serve as a hedge to rising interest rates. In our opinion, recent factor performance trends support this relationship (Table 1).

In June, prior to the Brexit vote, equites were cautious while US Treasuries rallied due to risk aversion. Defensive strategies did quite well, while value strategies suffered. Since then, interest rates slowly moved up, and this accelerated after the US election. The performance of defensive strategies has deteriorated over this period, while value strategies have started to perform better.

WHERE ARE WE TODAY?

Though interest rates have risen lately, they are still well below any true sense of historical "normalcy" – whatever that is these days. Generally, long-term rates are now slightly positive in developed markets, but may still have quite a ways to run in our view.

Figure 4. US 10 Year Yield[6]

The recent spike in interest rates (Figure 4), particularly in the US, is fairly dramatic when viewed over the short-term; when looking over the long-term, this spike looks more like a blip. Therefore, we feel it is worth considering the risks and potential opportunities associated with a true reversion towards (not necessarily to) the long-term mean.

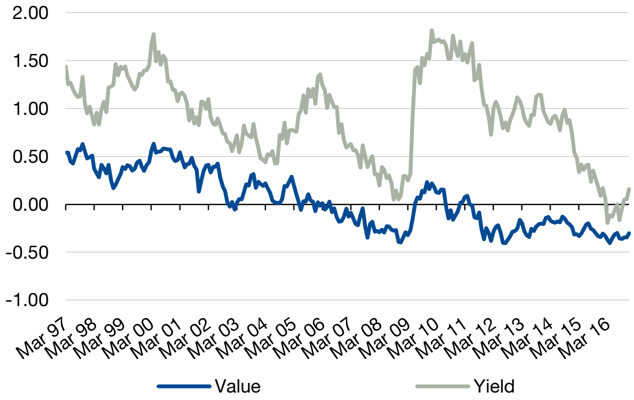
Table 1. Recent Factor Performance[7]

2016	S&P Return	US 10yr Return	US Inverse Total Risk	US Inverse Beta	US Value Spread	Global Inverse Total Risk	Global Inverse Beta	Global Value Spread
Jun	+0.1%	+3.6%	+7.5%	+9.8%	-4.3%	+7.9%	+9.8%	-8.3%
Jul	+3.6%	+0.3%	-6.7%	-6.8%	+0.6%	-6.1%	-6.4%	+1.7%
Aug	-0.1%	-1.0%	-3.3%	-5.9%	+2.7%	-3.2%	-6.8%	+4.4%
Sep	-0.1%	0.0%	-4.6%	-3.5%	-0.8%	-2.3%	-0.9%	-3.0%
Oct	-1.9%	-2.0%	+0.9%	-1.2%	+6.1%	-3.8%	-4.6%	+6.7%
Nov	+3.4%	-4.7%	-7.1%	-12.7%	+6.0%	-3.5%	-10.6%	+5.3%

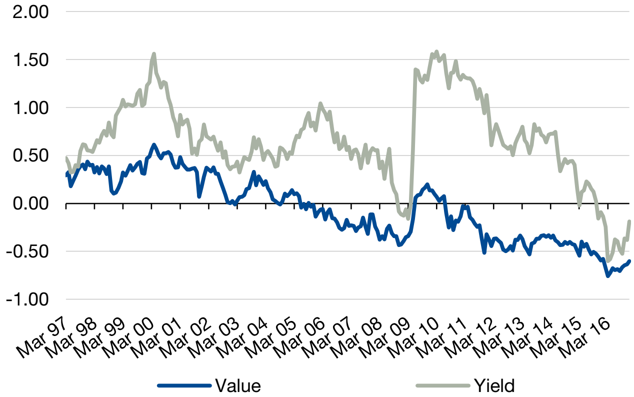
4. Inverse Beta is used as a proxy for defensive or low risk/beta.
5. Source: Barra, Man Numeric.
6. Source: Bloomberg.
7. Source: Barra, Man Numeric. US universe is largest 500 stocks monthly by market cap. Global universe is largest 1,000 stocks monthly by market cap (inclusive of EM). Returns are quintile spreads.

Low volatility strategies still appear expensive to us relative to their long-term history, even after the move of the last several months. Figure 5 shows the Barra Value and Yield of the lowest 20% of Total Risk stocks in the US and Global universes[8]. Over the last 20 years, low risk stocks have gradually become more expensive, and this has not changed recently. Should interest rates continue to rise, these sorts of strategies may be at risk of further underperformance.[9]

Figure 5.
Lowest 20% Total Risk vs Rest of Top 500 US Stocks

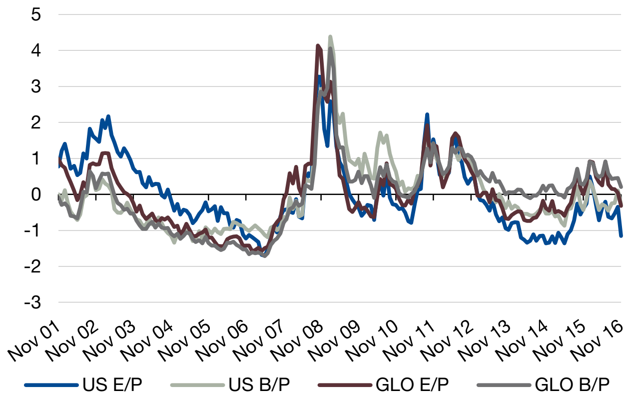


Lowest 20% Total Risk vs Rest of Top 1000 Global Stocks



The valuation story is a little more mixed (Figure 6). Globally, valuation spreads (the spread between the cheapest and most expensive names) are at average levels with respect to history, suggesting to us potentially average performance going forward. In the US, book-based value spreads are still at average levels, while earnings-based spreads are close to 1 standard deviation, narrower than average. The difference between the book and earnings based metrics speaks to relatively large differences in profitability across sectors. For example, the Financials sector has been "under-earning" for years relative to other sectors due to the low interest rate environment, and value has been a powerful tool within Financials over the last several months. So if we focus purely on value spreads, we might say the potential opportunity for value appears somewhere between average and a little below average. Empirically, value historically does appear to be positively leveraged to interest rates (recall Figure 3).

Figure 6. US and Global Valuation Spreads[10]



SUMMARY

In some ways, regardless of Brexit or the US election, we believe the last few months have moved us closer to normal – more "reasonable" interest rates in the US and less negative or slightly positive interest rates outside the US. Though the US market has been rising since the election, under the surface there has been a very interesting rotation away from defensive and towards value. This has led to underperformance in low volatility strategies and a noticeable recovery in value strategies. Though it is difficult to determine the future course of interest rates, there is some evidence that there is a real historical relationship between interest rates, the defensive equity trade, and value. We believe that valuation models struggled post GFC in part due to the declining interest rate environment. Central bank policy continues to be an unknown, especially outside the US, but we feel it is likely that regardless of policy, interest rates have reached absolute minimums across much of the developed world (i.e., less than zero). Assuming interest rates have stabilized, value could regain efficacy, and may serve as an effective hedge to a rising interest rate environment.

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Dan is Co-Chief Investment Officer of Man Numeric ('Numeric'). Dan has had multiple roles at Numeric, including Director of Small Cap Strategies from 2004-2010, Head of Hedge Fund Strategies from 2010-present, member of the Investment Committee from 2004-present, and senior member of the Strategic Alpha Research Team from 2010-2015. He has conducted a wide range of research, including areas such as momentum, earnings quality, valuation, investor behavior, and market timing. He joined Numeric as an intern in 1998 and began working full time in 1999 after receiving his B.A. in Economics with honors from Harvard University. Dan is a CFA charterholder.

8. Source: Barra, Man Numeric.
9. More thoughtfully constructed defensive strategies need not meet the same fate.
10. Source: Barra, Man Numeric. US universe is largest 500 stocks monthly by market cap. Global universe is largest 1,000 stocks monthly by market cap (inclusive of EM). Returns are quintile spreads.

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