TROY
ASSET MANAGEMENT

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Common sense versus common practice

Two wrongs

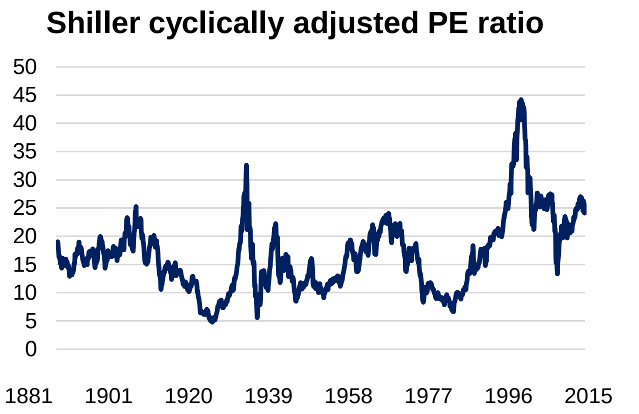

Figure 1 Source: Online Data Robert Shiller, March 2016

Investors and market commentators alike have long relied upon relative valuation to validate security price levels. 2015 saw the S&P 500 Index trade on a higher cyclically adjusted PE ratio than it has 95% of the time since 1881. As stock prices have risen in advance of earnings since the start of this decade, the familiar theme tune of relative attraction has played again. To suppose that one high price justifies another is a dangerous game, particularly when one has reason to believe that the validity of the first is in question. It is not uncommon for equity research notes to conclude with the argument that the stock in question is attractive relative to its peers or that the overall market level is attractive relative to government bonds. This tendency to appraise equities relative to bond yields reminds us of the late 1990s when the Fed Model was a widely accepted method of valuation. It was first articulated in 1997, not by the Fed but by Ed Yardeni at Deutsche Morgan Grenfell. The Fed Model states there is a relationship between the forward earnings yield of the stock market and the 10-year Treasury bond yield to maturity. It posits that equities are cheap when the earnings yield (the inverse of the PE) is materially higher than the yield on government bonds and that they are expensive when it is materially lower. This chart shows the equity to bond yield ratio trading within a narrow range until the post-crisis years over which we have seen a notable breakout. The model has been challenged by many before us but its logic still seems to pervade much of today's conversation about valuation.

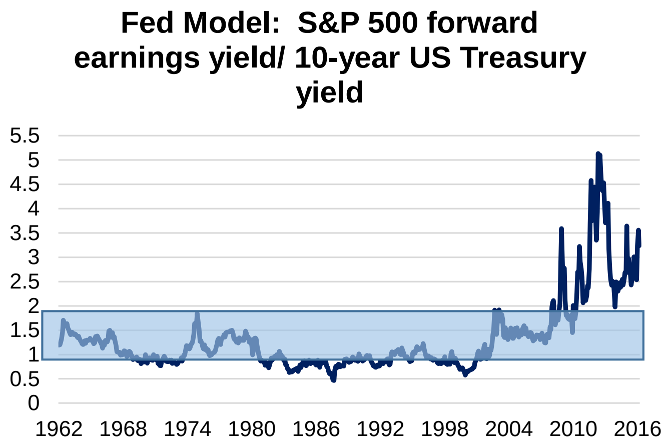

Figure 2 Source: Bloomberg/ Troy Asset Management, March 2016

Adolescent behaviour: why the Fed model is flawed

There are two main arguments in support of the Fed Model. The first is the present value argument. Since the present value of a company is the sum of its future cash flows, discounted at a rate derived from the bond market, a lower bond yield will give a higher present value, all else being equal. However, all else is not equal and the assumption that factors like growth and inflation should remain static is unrealistic. To judge equities against bonds is to underestimate and oversimplify their differences. The former provide a variable, growth-linked real return, the latter a fixed, nominal return.

To suggest that lower interest rates should automatically justify a higher valuation for equities assumes that the outlook for earnings growth is unchanged or better than when rates were higher. On the contrary, standard economic theory dictates that low interest rates correspond with poor prospects for economic growth as weak demand for borrowing depresses rates. Such theory would dictate a contradictory approach to valuation to that suggested by the Fed Model, with lower rates heralding worse times for corporate earnings growth.

In reality, the relationship between interest rates and earnings growth is more complex. Over the long term, growth rates of earnings (over an investable time horizon of five years, figure 3) have danced to their own tune in a way that has been both highly variable and unpredictable.

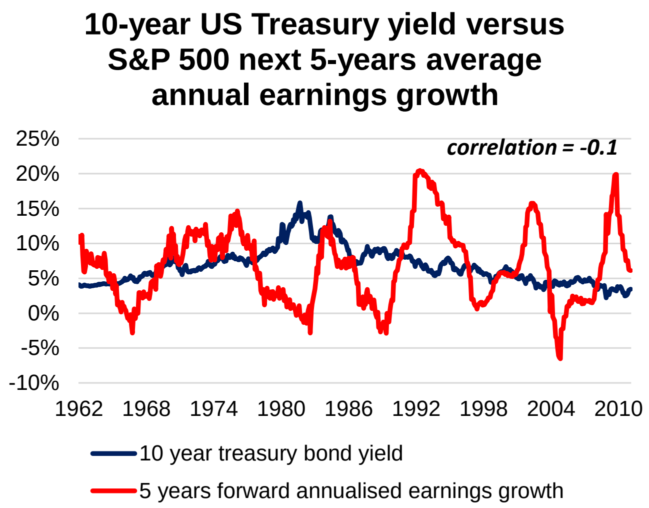

Figure 3 *Source: Bloomberg/ Troy Asset Management, March 2016*

The chart shows that since 1962 there has been minimal correlation between 10-year US government bond yields and the earnings growth on the S&P over the following five years. At the beginning of 1987, the 10-year Treasury was yielding 7% at the beginning of a five-year period over which S&P was to produce average annual earnings growth of 1.3%. Fast forward to 1992 and the yield on the 10 year Treasury was back at its 7% level. However, over the following five years to 1997, the equity market was to produce average annual EPS growth of 20%. With the benefit of hindsight, it is clear that one should have been prepared to accept a much lower earnings yield (or pay a much higher price) for shares in 1992 than in 1987, despite the fact that bond yields were the same.

The second argument often cited in support of the Fed Model is that of competing assets. This contends that investors must choose between equities or bonds so a lower yield on the latter encourages more money into the former and vice versa. This argument implies that equity prices rise because investors are corralled into buying them, not because their fundamental prospects are attractive.

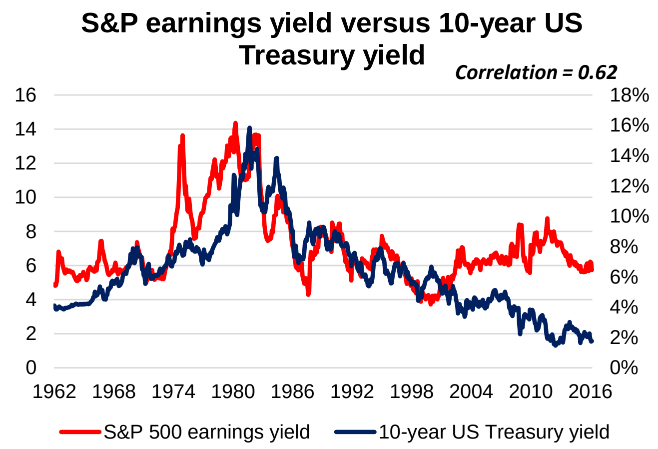

Figure 4 *Source: Bloomberg/ Troy Asset Management, March 2016*

It should be noted that equity and bond yields have been correlated for much of the last 50 years (figure 4), although this has not been the case since the financial crisis (nor was it in the first half of the twentieth century prior to the S&P 500 Index's formation). The logic of the Fed Model seems therefore to have informed investor decision-making even prior to its more formal articulation in the 1990s. However, if the relationship between equities and bonds set out in the Fed Model explains historic price moves, it also explains stock market bubbles. Whilst it can be said to have significant explanatory power, its predictive power is limited. Cliff Asness, co-founder of AQR Capital Management, effectively illustrated the difference between the two in his 2003 piece 'Fight the Fed Model', written in the wake of the steepest de-rating of equity markets since the Great Depression:

Say you can successfully show that teenagers usually drive recklessly after they have been drinking. This is potentially useful to know. But it does not mean that when you observe them drinking, you should then blithely recommend reckless driving to them, simply because that is what usually occurs next. Similarly, the fact that investors drunk on low interest rates usually pay a recklessly high P/E for the stock market (the Fed model as a descriptive tool) does not make such a purchase a good idea, or imply that pundits should recommend this typical behaviour (the Fed model as a forecasting/ allocation tool).

Do low yields herald poor share price performance?

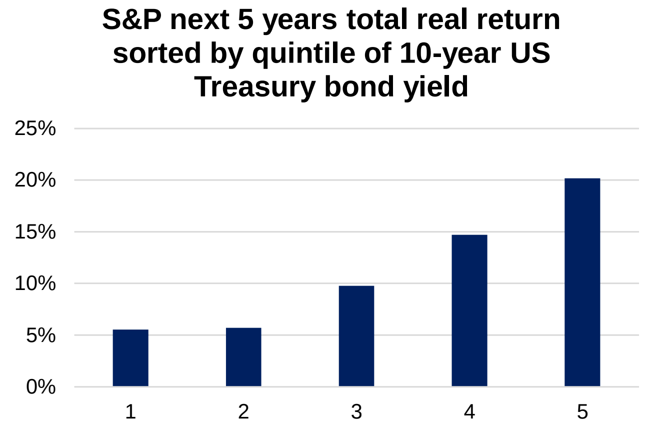

Figure 5 *Source: Bloomberg/ Troy Asset Management, March 2016*

An analysis of S&P real returns going back to 1962 (figure 5) shows that when US 10-year Treasury bond yields were in their lowest two quintiles, the following five years saw much lower real returns for equities than when Treasury bond yields were higher. There have of course been exceptions to this. With the benefit of hindsight one can see that the end of 2008, with US Treasury yields having fallen to historic lows, was a great time to buy equities. The seven years commencing 2009 saw the S&P 500 return an average of over 14.8% per annum. Whilst the first four years saw price rises supported by earnings growth, the last three did not. From 2012 to 2015 S&P companies have generated cumulative earnings growth of 11.3% but share prices have risen well in advance of this, the market generating a total return of 52.5%[1]. This has driven the re-rating of the index's valuation to extreme levels.

If the last decade is an aberration in a half-century-long trend, equity prices could be expected to rise further. Prior to the early noughties, the gap between the S&P earnings yield and the Treasury bond yield was never sustained for long. As at the end of March, the forward earnings yield on the S&P 500 was 5.7% compared to a 1.8% yield on 10-year US Treasuries. Assuming that the mispricing error does not lie in bonds, a not unreasonable assumption, given the current difficulty faced by central bankers in raising interest rates, one would need to see a more than threefold increase in equity prices to see the correlation reinstated. To buy equities on this basis is to hope for further multiple expansion at a time when the cyclically-adjusted PE is already stretched. This amounts to speculation, not investment. Whilst relative attractiveness might be offered as a pretext for current equity market optimism, we will stand by a more sobering analysis of the fundamentals. These point to profit margins and valuations at cyclical highs. In a recent meeting with the management of a long-held Troy stock we were told, 'just because money is cheap does not make assets attractive.' We agree.

Charlotte Yonge
April 2016

[1] Source: Bloomberg (figures to 31 December 2015)