A useless model

By IC staff

One effect of low gilt yields is that they make equities seem cheap. This is especially true of the so-called Fed model, which compares 10 year gilt yields to the prospective earnings yield on the FTSE 100. At 7.9 per cent, this earnings yield is now 3.7 percentage points above the 10-year gilt yield. The Fed model therefore tells us that shares are close to the cheapest they’ve been in the last 20 years.

Before you rush out to buy, though, consider one thing – the Fed model is rubbish.

It’s a useless predictor of annual returns. Since 1987 the earnings-gilt yield gap has explained a mere 1 per cent of variation in subsequent annual returns on the All-share.

There have been many cases when the gap would have led investors badly astray. For example, in early 1992, the Fed model said shares were expensive. They rose nicely in the following 12 months. In 1995-96, the Fed model said equities were fairly priced. They subsequently boomed. And in 2000, the Fed model said shares were as reasonably priced as they were in 1995-96. They fell.

It’s not just in the UK that the Fed model is useless. Javier Estrada of the IESE Business School in Barcelona has studied its ability to predict five-yearly equity returns in 20 major markets. He’s found that in 12 of these, the Fed model is actually a contra-indicator; shares rise after they’ve seemed expensive. In another seven markets, including the UK model at least has the right sign but is a weak forecaster. (Read the full treatise here) It’s only in the US, says Mr Estrada, that the Fed model works.

What’s more, there’s no reason in theory why the Fed model should work at all anywhere.

To see why, imagine inflation falling permanently from 10 per cent to nothing, whilst real bond yields stay at 3 per cent, so gilt yields drop from 13 per cent to 3 per cent. The Fed model says the prospective earnings yield should also drop from 13 per cent to 3 per cent – in other words, that share prices should quadruple.

This is cretinous. Lower inflation should mean lower nominal earnings growth. There’s no logical reason (though some illogical ones) why share prices should rise as inflation falls,
except insofar as lower inflation reduces economic risk. But this shouldn’t be enough to quadruple share prices.

There’s another absurdity. Imagine, from a position where earnings and bond yields are equal, that investors anticipate slower future earnings growth. Shares would then fall, and their yields rise, because investors would need a higher yield to compensate them for slower growth.

However, the Fed model would say that shares were cheap in this lower-growth position, because they yielded more than gilts. But this would be drivel.

So, the Fed model is both empirically useless – at least outside the US – and theoretically nonsense.

What can we use instead, you might wonder? Simple – the prospective earnings yield alone. Its correlation with subsequent annual All-share returns is 0.41, and it can explain one-sixth of the variation in subsequent annual returns. These aren’t hugely impressive numbers, but they are massively better than the Fed model.

If the 1987-2005 relationship continues to hold, this points to the All-share rising just over 10 per cent in the next 12 months, with a one-in-five chance of it falling.

There is, then, a case for being mildly bullish of equities. It’s just got nothing to do with gilt yields.

The numbers

Here’s the regressions of annual total All-share returns upon the Fed model and forward earnings yields (for the FTSE 100), lagged 12 months.

I’m using monthly data since 1987, which is when IBES data on prospective earnings began.