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Strategy Update

Is The Flattening Yield Curve A Concern?

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Not if you focus on the right part

An inverted yield curve has been a good indicator of US recessions historically

The yield curve measures differences in yields at different maturities, with the most popular being the 2s10s slope (10y-2y yield differential). The 2s10s curve has reliably inverted heading into previous recessions in the US, on average about one year ahead and is highly regarded as a leading indicator of recessions. It has been a key market focus over the last year as it has continued to flatten, i.e., the spread has continued to shrink, and is approaching inversion. Equity returns are strongly tied to the state of the business cycle, with the S&P 500 falling an average -21% around recessions, so the timing of the next recession is key.

What does an inverted yield curve indicate?

- **That investors expect short term rates in the future to be lower than nearer term.** This conforms to the notion that in a recession the Fed will cut short term rates.
- **How far out? 2-10 years.** An inverted 2s10s curve reflects market expectations of average rates over the next 10 years relative to those over the next 2 years. So an inverted 2s10s yield curve arguably reflects the pricing in of a recession at some point in 2-10 years.
- **But more than nine years into the current economic recovery, which is already very long compared to past business cycles, a recession in the next 2-10 years would hardly be a surprise.** The current economic recovery is already the second longest on record. If it continues for another year, it will become the longest since World War II. So the pricing in of a recession at some point 2-10 years out seems very reasonable. But what matters for equities is how imminent it is. What do “shorter-term” measures of the yield curve suggest the market is pricing in?
- **Shorter term measures of the yield curve have been moving sideways and actually steepened over the last year and so do not suggest any pricing in of a recession over the next 2 or 3 years.** The 3m3y and 3m2y yield curves have been range bound for the last five years and have in fact steepened since last summer moving to or slightly above the mid-point of these ranges.
- **Historically shorter- and longer-term measures of the yield curve such as the 2s10s spread moved closely together so looking at either**

provided the same signal. The unusual divergence in behavior between the 3m2y or 3m3y and the 2s10s measures of the yield curve reflects in our reading the fact that the Fed has been very late in normalizing rates in this cycle as compared to its historical behavior relative to growth and inflation (Late Cycle With A Twist, April 2018). This has meant that as the Fed is hiking and has communicated it plans to continue to do so, markets expect rates to rise in the near term which has meant upward sloping 3m2y and 3m3y curves while the pricing in of more rate hikes over the last year saw them steepen. Though given how late the Fed has left rate normalization, the market has been hesitant to price in the entire path of the Fed's guidance.

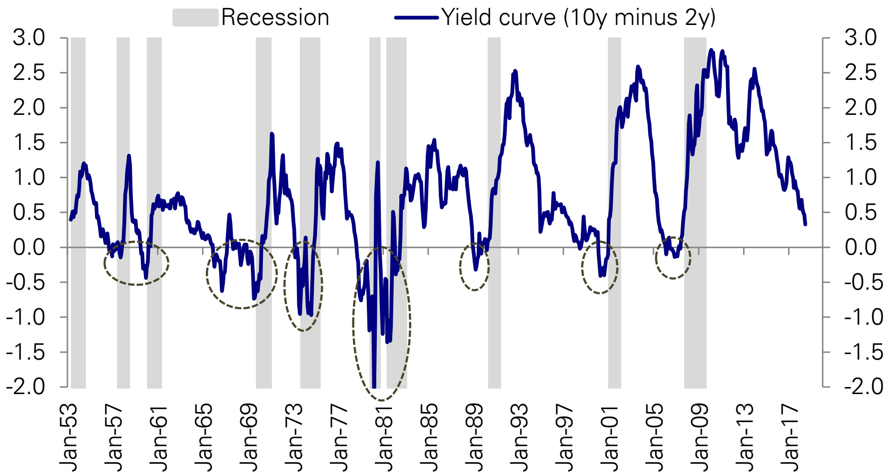
- **What are the prospects for shorter term measures of the yield curve?** Given the market's current pricing in of another 2-3 rate hikes and the Fed's guidance for 6 hikes, it is possible to construct scenarios for shorter term yield curves continuing to move further up or down. Our baseline view is the market continues to price 2-3 rate hikes ahead and the shorter term yield curves move sideways through mid-2019. In our view they are unlikely to begin trending down and point to an inversion until either the Fed is done or close to being done hiking or the market has completely priced in the hiking cycle.

- **The yield curve reflects market pricing and does not look to be a fundamental driver.** The yield curve represents the difference between two market prices, though one, short end rates are largely set by central banks. The fact that the yield curve has been a reliable leading indicator of recessions in the US means the long end of the US fixed income markets have had a good track record in predicting recessions. But many observers argue that a flattening or inversion of the 2s10s yield curve is in itself a negative fundamental driver of the economy. In particular that it would discourage bank lending and be negative for economic activity. We don't share this view. First, as others have noted, an inverted yield curve has worked as a reliable indicator of recessions in the US, but it has not in the UK, Japan or Germany (The Yield Curve Is A Very Interesting Topic, May 2018, AQR). We find this striking since the German and Japanese economies in particular are more dependent on bank finance than is the US. So it should have worked at least as well if not better in Germany and Japan. The greater depth and liquidity of US markets also suggests that the yield curve is more likely a reflection of a variety of factors discussed above rather than a driver of lending and the economy. Second, Japan has had the longest experience with extraordinary monetary policy easing. The yield curve there has arguably had little or no relationship with the timing of recessions. This suggests caution in the present US context where the Fed is only beginning to unwind its extraordinary monetary policy easing measures. Third, the empirical evidence on the relationship between the yield curve and bank profits spans the spectrum from some at one end finding that a flatter curve has a small temporary negative impact to others finding that it has a positive impact. Fourth, the empirical evidence is that the level of interest rates not just the slope of the curve matters for bank profits, with higher rates associated with higher profits. Our baseline remains that rates have much further to rise.

What matters for equity sector relative performance: the yield curve or the 10y?

For most of the last 10 years, the US 10y yield and the 2s10s slope were very strongly correlated, making it hard to estimate which was more important. Since last September however they have gone in opposite directions, with the 10y rising steeply but the 2s10s slope continuing to flatten (correlation +85% from 2010 to 2017; -65% since). The performance of rate sensitive sectors (Financials, Utilities, Consumer Staples) has clearly responded more to the level of the 10y with correlations staying very strong but the correlations with the slope of the yield curve going to zero or even reversing.

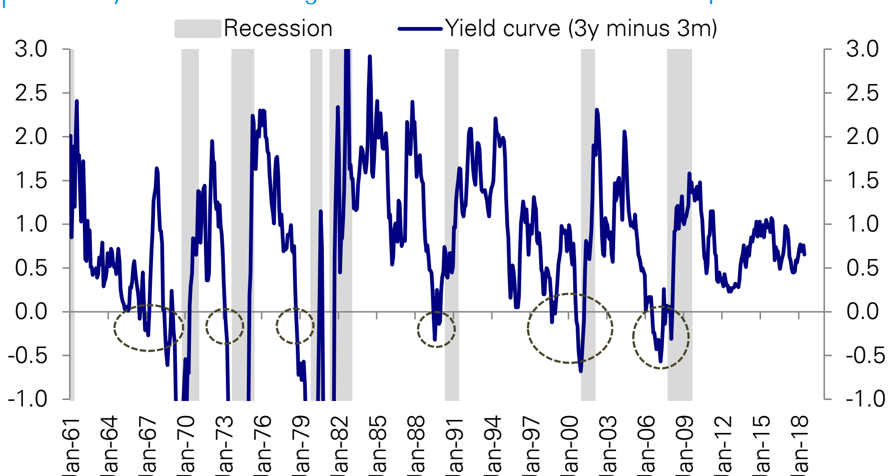
Figure 1: The 2s10s yield curve slope has been flattening steadily and is approaching inversion, which has been a good leading indicator of US recessions historically



*2y rate calculated as average of 1y and 3y prior to 1976

Source: FRB, Haver, Deutsche Bank

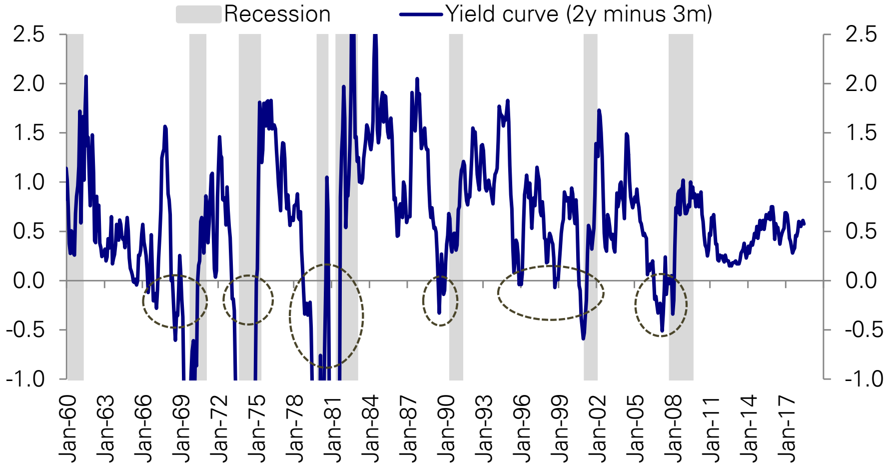
Figure 2: Shorter term measures of the slope of the yield curve like the 3m3y and 3m2y have also been good indicators of recessions in the past …



*Using Fed funds rate instead of 3m yield prior to 1981

Source: FRB, Haver, Deutsche Bank

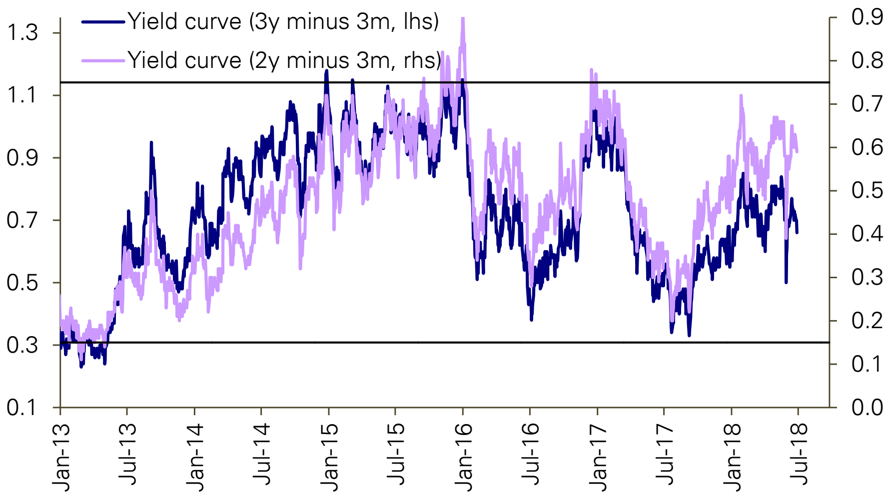
Figure 3: ... but show no signs of inverting any time soon



*Using Fed rate instead of 3m yield prior to 1981; 2y rate calc as avg of 1y and 3y prior to 1976

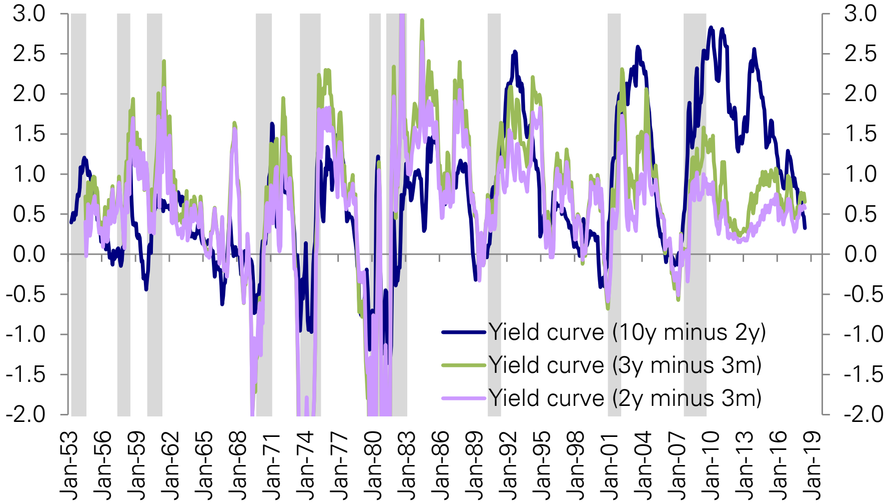
Source: FRB, Haver, Deutsche Bank

Figure 4: The 3m3y and 3m2y slopes are at or above the mid-point of their 5 year range and have in fact steepened over the last year



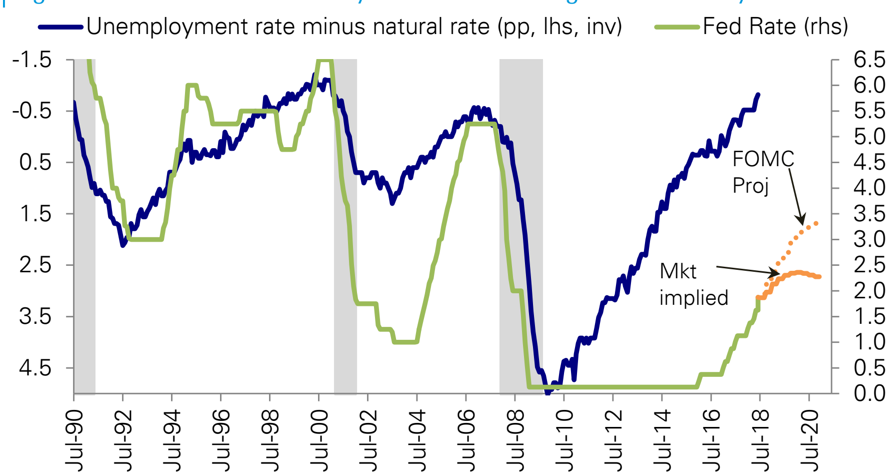
Source: FRB, Haver, Deutsche Bank

Figure 5: Historically shorter- and longer-term measures of the yield curve such as the 2s10s spread moved closely together so looking at either provided the same signal



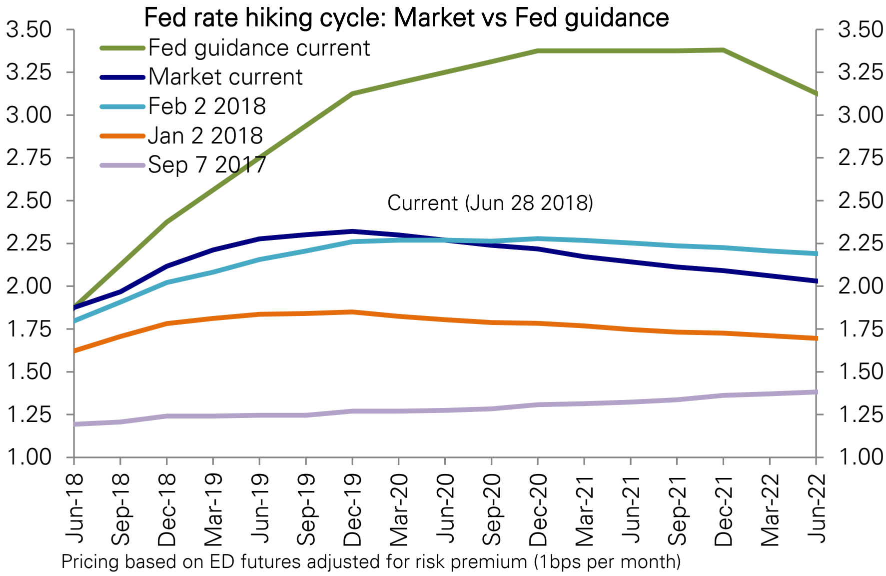
Source: FRB, Haver, Deutsche Bank

Figure 6: The Fed has been very late in normalizing rates in this cycle



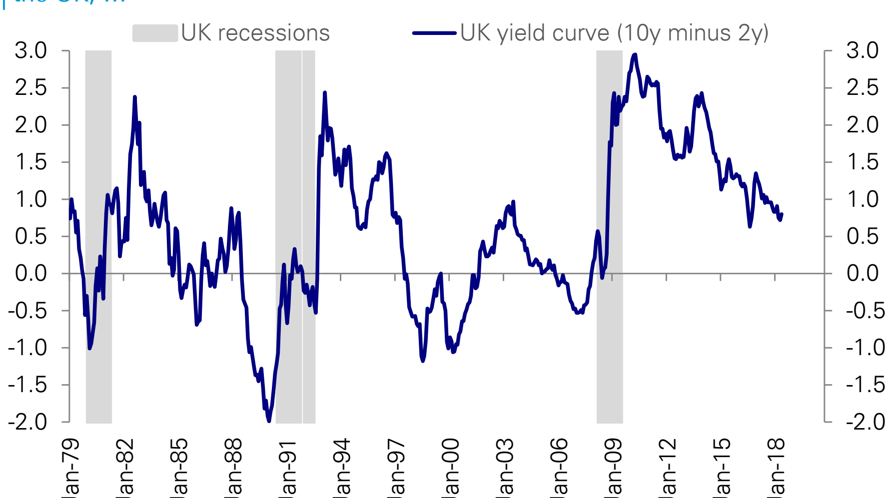
Source: FRB, BLS, Haver, Bloomberg Finance LP, Deutsche Bank

Figure 7: The market has been slowly moving toward Fed guidance in the near term but reluctant to price in the entire hiking path



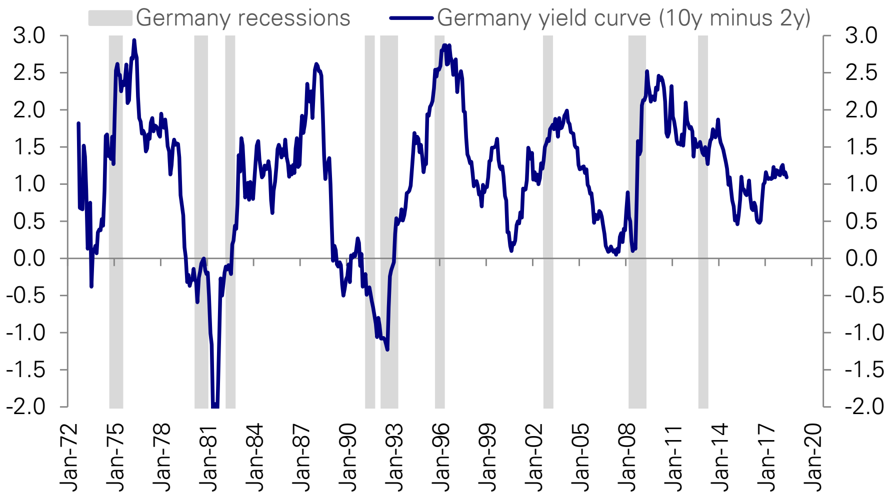
Source: FRB, Bloomberg Finance LP, Deutsche Bank

Figure 8: The yield curve has a mixed track record in predicting recessions in the UK, …



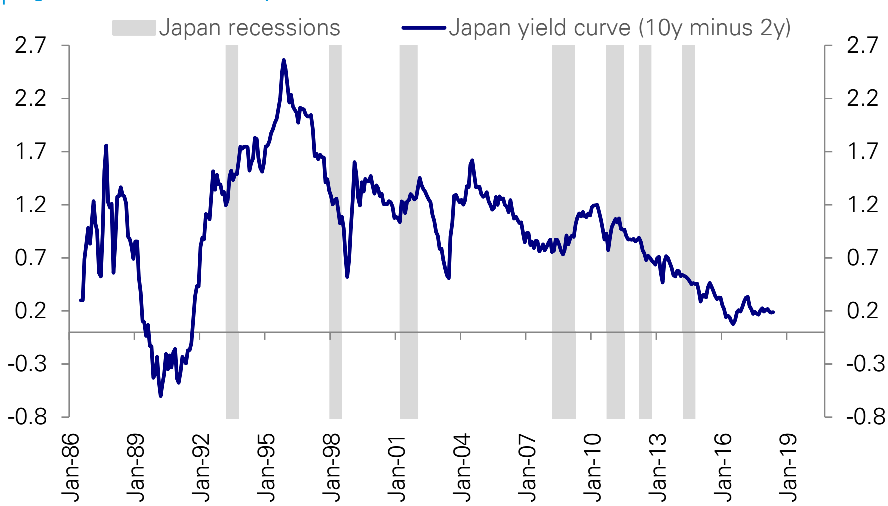
Source: UK ONS, Haver, Deutsche Bank, Note: Recession defined as 2 consecutive quarters of negative real GDP growth

Figure 9: … in Germany …



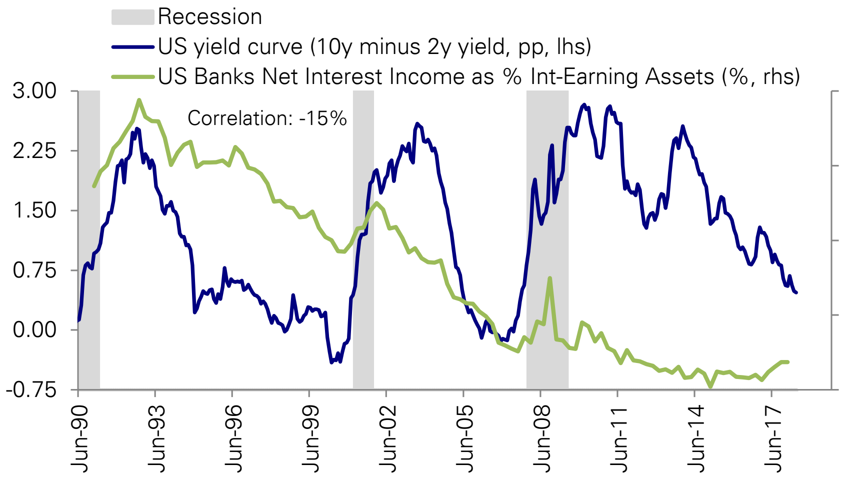
Source: Deutsche Bundesbank, Haver, Deutsche Bank, Note: Recession defined as 2 consecutive quarters of negative real GDP growth

Figure 10: … and in Japan



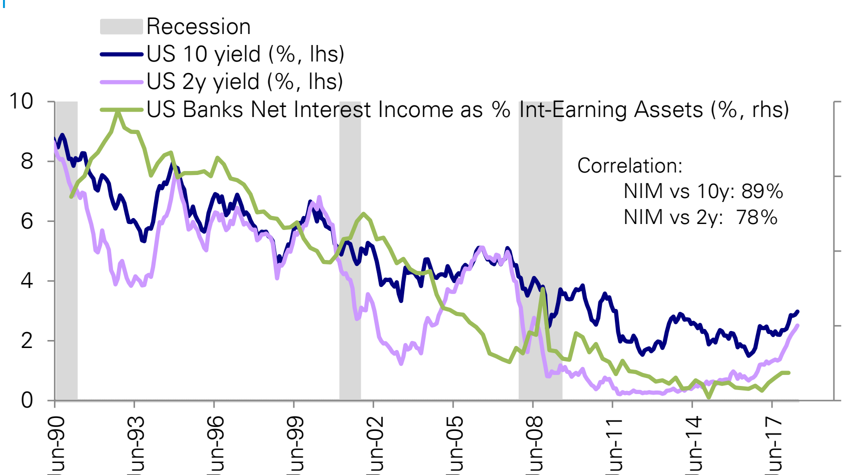
Source: MoF Japan, Haver, Deutsche Bank, Note: Recession defined as 2 consecutive quarters of negative real GDP growth

Figure 11: Various empirical studies have shown that bank net interest margins have a weak correlation with the slope of the yield curve[1][2][3][4][5]



Source: FRB, FRB NY, Haver, Deutsche Bank

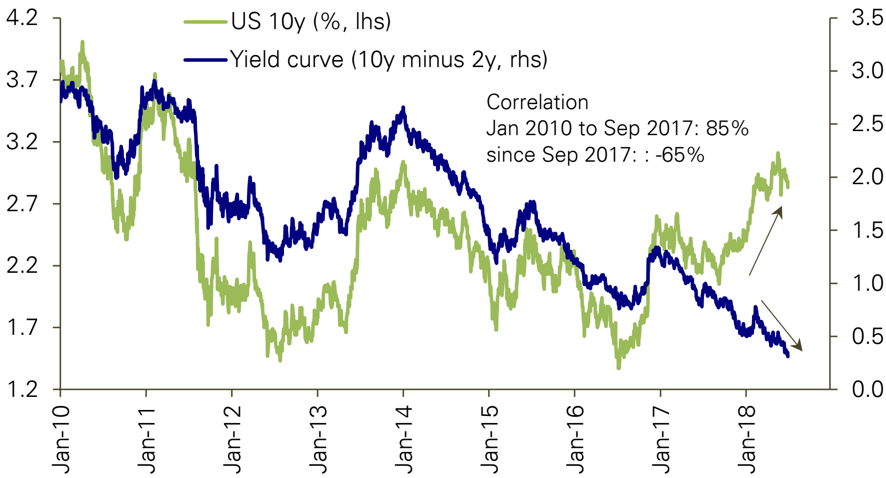
Figure 12: The net interest margin is importantly also clearly linked to the level of interest rates



Source: FRB, FRB NY, Haver, Deutsche Bank

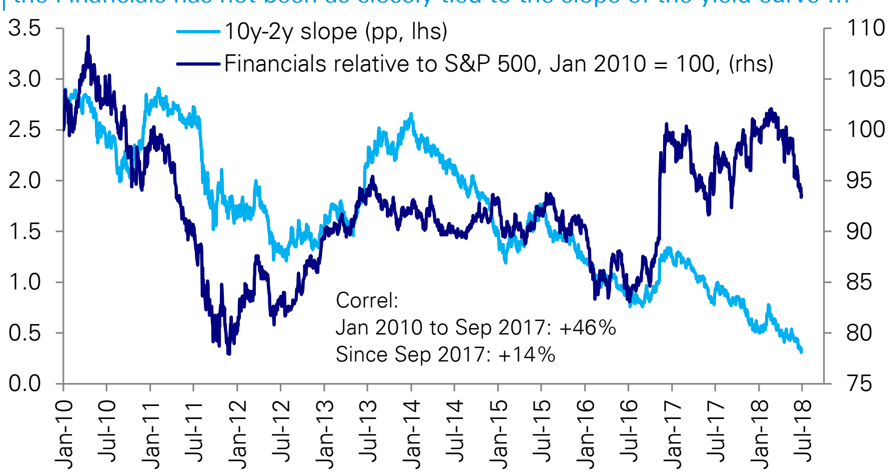
1 Low Interest Rates and Bank Profits, June 2017, NY Fed Liberty Street Economics
2 The influence of monetary policy on bank profitability, October 2015, Bank For International Settlements
3 Low interest rates and banks' net interest margins, May 2016, VOX EU
4 Is a steeper yield curve good news for banks? A challenge to the conventional wisdom, January 2018, Bank of England Bank Underground blog
5 Smaller Banks Less Able to Withstand Flattening Yield Curve, June 2018, FRB of Dallas

Figure 13: The 10y yield and the 10y-2y slope have been strongly correlated for most of the last 8 years but have moved in opposite directions since last September



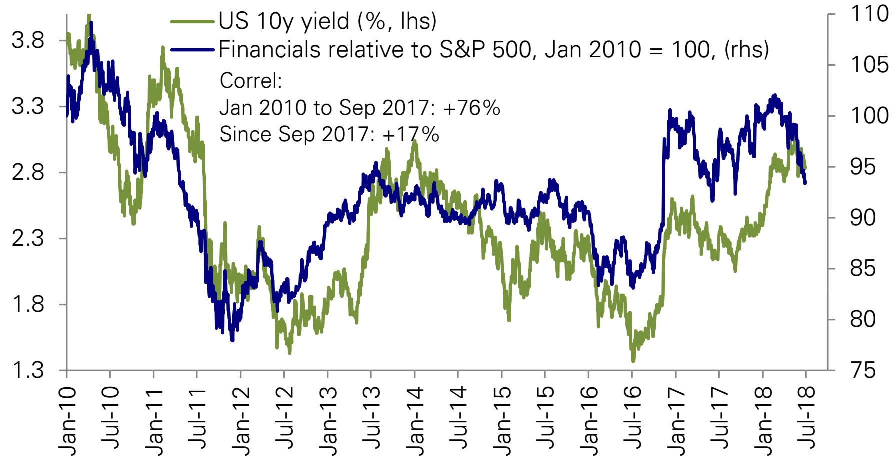
Source: FRB, Haver, Deutsche Bank

Figure 14: It is clear that the relative performance of rate sensitive sectors like the Financials has not been as closely tied to the slope of the yield curve …



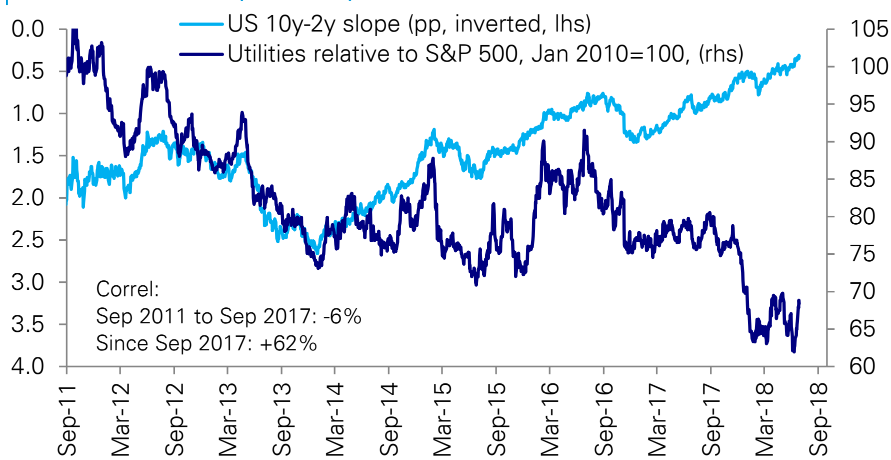
Source: FRB, Haver, Deutsche Bank

Figure 15: … as it has to the level of the 10y yield



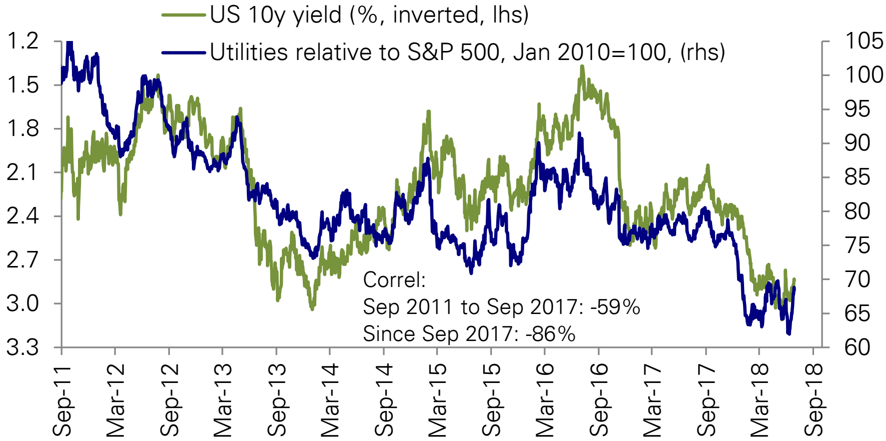
Source: FRB, Haver, Deutsche Bank

Figure 16: Likewise the relative performance of Utilities has not been correlated to the slope of the yield curve …



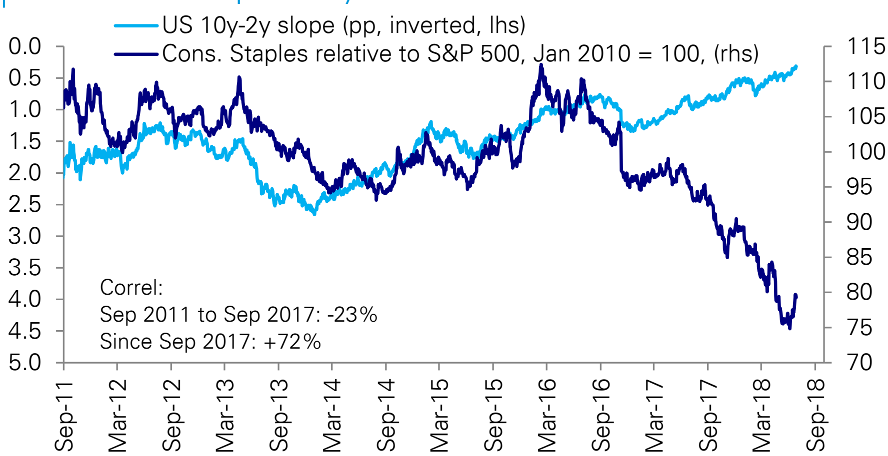
Source: FRB, Haver, Deutsche Bank

Figure 17: … but has been strongly inversely correlated to the level of the 10y yield



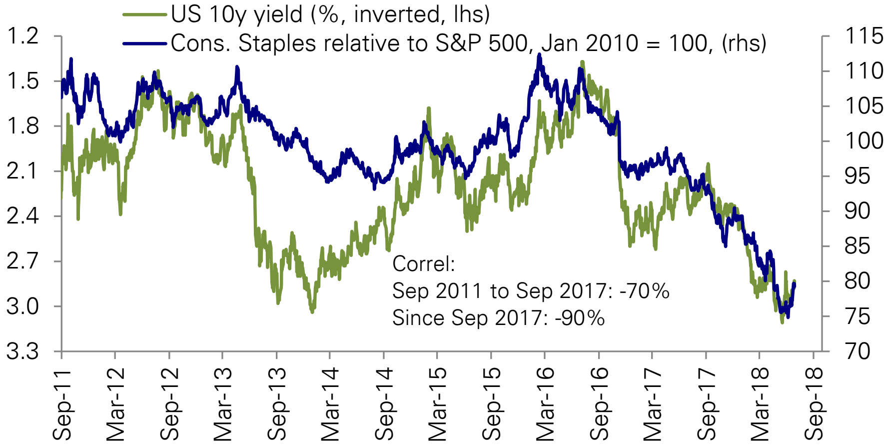
Source: FRB, Haver, Deutsche Bank

Figure 18: The relative performance of Consumer Staples has also not been correlated to the slope of the yield curve …



Source: FRB, Haver, Deutsche Bank

Figure 19: … but to the level of the 10y yield



Source: FRB, Haver, Deutsche Bank

Appendix 1

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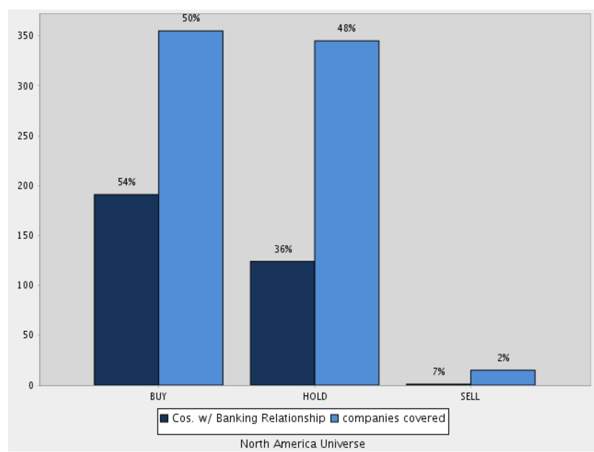

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