The Rates-Equities Nexus

Sentiment Lagging Hard Data

Robust positive correlation between rates and equities is back
A strong positive and rising correlation (60%) between the S&P 500 and the 10y yield has been evident this year. Europe and Japan show similar patterns. The rates-equities correlation turned positive in late 2007 and remained persistently so until the Fed’s taper communication (Four Years After The Financial Crisis, December 17, 2012). As rates then re-priced abruptly last summer and bond vol rose, the rates-equities correlation fell quickly to zero and stayed there. Since early January it has risen sharply back up to average levels prevailing since the financial crisis.

Positive correlation reflects growth concerns common to both
Stronger growth means higher equities and higher rates, and the recent resurgence in correlation coincided with the weather-induced data slowdown.

Rates key driver of sector rotation over and above growth concerns
Lower rates year to date has meant outperformance of the bond-like sectors, with Utilities in the lead, and underperformance of the Financials where the return on assets is driven by rates. The performance of cyclicals relative to defensives is explained by both our data surprise index (MAPI) and the 10y, implying an impact of rates on relative sector performance over and above the common driver of growth. Indeed, while the underperformance of cyclicals is running short of the turn up in MAPI, it is in line with rates.

What’s driving rates (and equities)? Sentiment lagging hard data

- **Short rates up, longer rates down.** The 5y is up 15bps the last two months as shorter dated policy expectations moved up. The lower 10y reflects a 40bps decline in the 5y5y, a proxy for the Fed’s terminal rate, since mid February.
- **Short rates still being driven by data.** Eurodollar futures continue to follow MAPI, with the yield on June 2017 futures up 25 bps since early March.
- **Longer rates (and equities) following sentiment data.** MAPI has turned positive, but this has reflected a turn up in the hard data while sentiment indicators remain negative. The 5y5y yield and related 10y-5y futures positioning has followed surprises in sentiment data (confidence, ISM, etc), which have trended lower. The painful positioning unwinds this year have increased the importance of sentiment as a driver of rates and equities.

Waiting for sentiment data to catch up to hard data; watch for inflation reset
Hard data Granger causes sentiment data, with an average lag historically of 21 days. With hard data surprising positively and sentiment data bottoming, the pattern is repeating. We expect sentiment data to catch up to the hard data and improve over coming weeks, pushing longer rates and equities higher. Additionally, the March tick up in core CPI reinforces our view that the expected inflation trajectory will reset higher, sooner rather than later (After The Rebound, March 25, 2014).

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Strategy: positioning for a turn up in sentiment
We see a turn up in sentiment data as the key driver of asset prices over the
next few weeks. We analyze asset price correlations to sentiment data to
identify those with the greatest upside and downside risk as sentiment catches
up to stronger hard data. The 30y bond yield has been the biggest beneficiary
of investor cautiousness this year and is likely to revert higher. The USD has
also languished and should resume its uptrend on improved US sentiment
data, particularly versus the Yen. Gold is the most exposed to an alleviation of
growth concerns and a turn up in the USD. EM assets are likely to resume their
underperformance trend.

Equities should obviously do well on a shift in risk appetite, with the VIX most
negatively correlated to sentiment data. In terms of sectors, Industrials and
Financials should benefit the most while Staples, Telecom, Utilities and other
high dividend stocks are likely to again underperform. Japanese equities should
continue to rebound while small and mid cap stock underperformance should
reverse. Finally, value stocks have historically outperformed during periods of
rising sentiment, so the growth to value rotation can continue.
Figure 3: The correlation between equities and bond yields has turned sharply higher this year and at 60% is about the level since late 2007.

Source: Bloomberg Finance LP, Deutsche Bank

Figure 4: European equity and bund yield correlations reveal a similar pattern to the US.

Source: Bloomberg Finance LP, Deutsche Bank
Figure 5: The Fed’s taper communication saw the rates-equities correlation drop to zero as bond vol rose. Starting in early January it has risen sharply.

Figure 6: Relative equity-bond flows have continued to follow rates.
Figure 7: Bond-like sectors led by Utilities have outperformed ytd while Financials and other cyclicals have underperformed

S&P 500 Sector Performance: YTD

Source: Factset, Deutsche Bank

Figure 8: Cyclical sectors with Financials in the lead have a positive beta to bond yields and are 2/3 of the S&P 500 market cap

Beta of Sector Returns to 10y bond yields

Market Cap Weight: 66%

Note: Beta of daily relative sector returns to 10y Treasury yields, adjusted for equity beta

Source: Factset, Haver, Deutsche Bank
Figure 9: Utilities have outperformed ytd as bond yields have fallen

![Graph showing the US 10y yield (%), lhs, inverted, and S&P 500 Utilities (rel to S&P 500, rhs)]

Source: Haver, Bloomberg Finance LP, Deutsche Bank

Figure 10: Financials whose return on assets is tied to interest rates have underperformed as bond yields have fallen and the curve flattened

![Graph showing the US 10y yield (%), lhs, and S&P 500 Financials (rel to S&P 500, rhs)]

Source: Haver, Bloomberg Finance LP, Deutsche Bank
Figure 11: Cyclical sector performance relative to defensives follows macro data surprises, but has lagged the recent improvement

Figure 12: Cyclicals/defensives relative performance is tracking bond yields…

Source: Bloomberg Finance LP, Factset, Deutsche Bank
Figure 13: …as is typical historically

Cyc vs def (3m %) = 0.071(MAPI)+0.068(3m change in 10y)+0.008
R sq: 53%

Source: Bloomberg Finance LP, Factset, Deutsche Bank
Figure 14: Short rates have risen since March but the 5y5y forward has fallen

Eurodollar futures yield 3y ahead (lhs) — US 5y5y forward rate (%), rhs

Correl: 2.7%

Source: , Bloomberg Finance LP, Deutsche Bank

Figure 15: Short rates started rising in March but 10y yields have remained flat...

US 10y yield (%) — Eurodollar futures yield 3y ahead (lhs)

Correl: 49%

Source: , Bloomberg Finance LP, Deutsche Bank

Figure 16: ...as the 5y5y forward rate has fallen

US 10y yield (%) — US 5y5y forward rate (%), rhs

Correl: 83.3%

Source: , Bloomberg Finance LP, Deutsche Bank
Figure 17: Short rates have risen, tracking the improvement in overall data

Figure 18: The 5y5y rate on the other hand has continued falling despite better data...
Figure 19: …and is tracking sentiment data which has lagged the hard data

![Graph: US 5y5y rate and MAPI](chart1)

Source: Bloomberg Finance LP, Deutsche Bank

Figure 20: The 5y5y rate has followed the relative futures positioning in 10y vs 5y contracts

![Graph: Diff b/w US 10y and 5y F&O Net Longs ('000s of contracts, lhs) US 5y5y (%, rhs)](chart2)

Source: Deutsche Bank
Figure 21: We expect sentiment data to catch up to hard data...

Granger causality tests indicate Hard Data leads Sentiment
Hard Data does not Granger cause Sentiment: F-Stat: 6.79
Sentiment does not Granger cause Hard Data: F-Stat: 0.33

Source: Deutsche Bank
Figure 23: A string of recent inflation data releases including the CPI have surprised positively

0.8

0.4

0.0

-0.4

-0.8

Jan-10 Apr-10 Jul-10 Oct-10 Jan-11 Apr-11 Jul-11 Oct-11 Jan-12 Apr-12 Jul-12 Oct-12 Jan-13 Apr-13 Jul-13 Oct-13 Jan-14 Apr-14

US Inflation Pulse Index (lhs) US IPI Upper Bound US IPI Lower Bound 2y BE Inflation (% rhs)

Source: Bloomberg Finance LP, Deutsche Bank

Figure 24: Underlying drivers point to higher and rising core inflation

Core Serv Inflation (%) = -0.427 * (UE minus NAIRU 6m lag) - 0.001 *(Chg in vacant houses for rent 6q lag) +3.29

Adj R-Sq: 86.7% Jan 2001 to Aug 2013

Source: BLS, BEA, Deutsche Bank
Figure 25: Asset price correlations to sentiment data

Source: Bloomberg Finance LP, Haver, Factset, Deutsche Bank

Figure 26: Sector and style correlation to sentiment data

Source: Bloomberg Finance LP, Haver, Factset, Deutsche Bank
The primary author of this report, Binky Chadha, wishes to acknowledge the contributions made by Karthik Prabhu, Magesh Kumar, Manish Kothari and Prakash Chithambaram, employees of Irevna, a division of CRISIL Limited, a third-party provider of offshore research support services to Deutsche Bank.
Appendix 1

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