



# US Fixed Income Weekly

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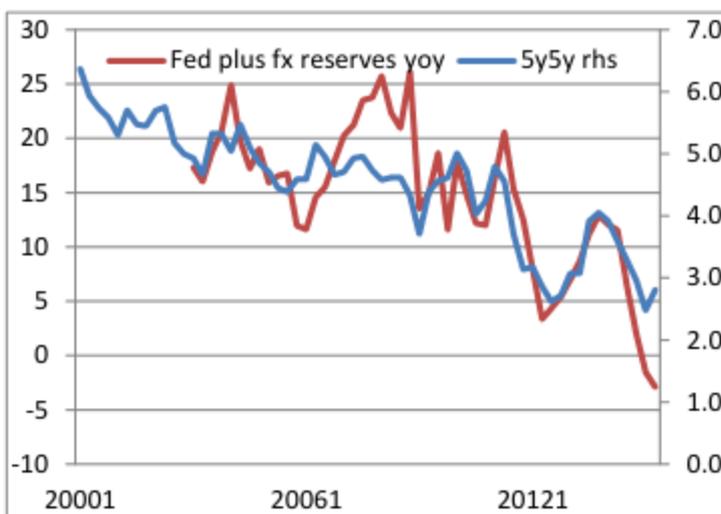
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- Markets are fixated on the potential for Fed normalization to start earlier than currently priced and whether China's recent FX adjustment is the beginning or the end.
- At a superficial level there appears to be conflicting influences on rates. The Fed and China may undermine risk asset performance but the consensus is that if risk assets find support, fewer FX reserves are likely to pressure rates higher.
- On the contrary, we think the most important thing is that both the Fed and China's FX (ongoing?) unwind represent a tightening of global liquidity that clearly is negative for risk assets and clearly, at least for the last decade, has been positive for real rates and the curve. 5y5y is well correlated with changes in global liquidity and based on recent trends should be closer to 2 percent.
- This reinforces our view that the Fed is in danger of committing policy error. Not because one and done is a non issue but because the market will initially struggle to price "done" after "one". And the Fed's communication skills hardly lend themselves to over achievement. More likely in our view, is that one in September will lead to a December pricing and additional hikes in 2016, suggesting 2s could easily trade to 1 1/4 percent. This may well be an overshoot but it could imply another leg lower for risk assets and a sharp reflattening of the yield curve.

Decline in liquidity implies a lower 5y5y



Source: Fed and Deutsche Bank

## Table of Content

US Overview	Page 06
US Credit Strategy	Page 23
Chart Pack	Page 28

## 2015 Outlook Recommendations

	Trade Detail	Rationale	Risks	Opened	Entry	Current	P/L
Option	Buy 1x1, 1y1y receiver spreads with strikes ATMf and ATMs	The post-Fed sell-off has left the spot/forward spread near multi-year post-crisis highs.	Maximum total loss is the premium outlay	12/19/14	29c		
Swaps RV	Pay 3y1y versus 2y1y	This curve segment might be expected to steepen if, for example, higher inflation produces greater pricing power, or if the long-absent cyclical increase in productivity finally materializes.	Curve flattens	12/19/14	+40 bp		
Option	Sell 1X2 payer spreads at the short end: Sell \$100mn 6M3Y ATMf vs. buy \$200mn 34.5bp OTM payers at zero net cost	The repricing of Fed hikes could begin in Q2 with the short end rebounding sharply after initial rally.	Vulnerable to rally below the breakevens, with potentially unlimited downside.	12/19/14			
Option	Sell \$100mn 6M10Y straddles vs. buy \$300mn 6M3Y straddles for a net premium of 175K	With expectations of Fed hikes, volatility should move to the front end of the curve, while the back end movements remains	Unilateral spike in backend vol.	12/19/14			
Option	Quiet flatteners: sell \$1bn 6M 5s/10s 9.5bp OTM curve cap vs. buy \$1bn 6M 5s/10s atm/9.5 curve floor spread at zero cost	Potential for considerable bear flattening should the market reprice the Fed hikes.	Curve steepens.	12/19/14			
Option	Quiet bulls: Sell \$100mn 1Y10Y 50bp OTM payers vs. buy \$100mn 1Y10Y ATMf/33 receiver spreads costless	This captures the risk of bullish flattening of the curve where growth is unable to take off either due to fundamental weakness or in response to a policy mistake of premature hikes.	Sell-off beyond 3.10%.	12/19/14			
Option	Buy \$100mn 1Y30Y receivers, struck at spot, at 1270c	Bull/flatteners at the back end.	Loss equal to the options premium	12/19/14			
Option	6M dual digital: 2s > F+10bp & 10s < F-10bp offer 11.5%	This is a leveraged expression of a policy-mistake trade where premature hikes cause a rally at the back end.	Loss equal to the options premium	12/19/14			

Source: Deutsche Bank



## 2015 Outlook Recommendations

	Trade Detail	Rationale	Risks	Opened	Entry	Current	P/L
<b>Treasury RV</b>	Sell rich bond futures against cheap off-the-run bonds	The classic bond futures look rich in the long end	Further outperformance of the 6.25s of 5/2030 in the long end	12/19/14	+21 bp	+5 bp (Closed on 2/25)	+1,249k
<b>Inflation Swaps</b>	Buy 2yr2yr forward breakevens	The 2yr2yr inflation appears attractive on a long-term history	Further decline in medium-term inflation expectations	12/19/14	1.95%	1.60%	-1,367k
<b>Inflation</b>	Buy long end inflation	The long end inflation market looks undervalued on a long-term perspective, with the 30-year TIPS breakevens trading below 2.00%.	Inflation markets further underperform.	12/19/14	1.92%	1.71%	-3,400k
<b>Inflation</b>	Buy 5yr5yr forward breakevens as a hedge to high rates	The 5yr5yr forward breakevens have dropped to their multi-year lows.	Decline in energy prices and a stronger dollar	12/19/14	2.18%	1.97%	-648k
<b>Agencies</b>	Buy 3nc1y and 5nc6m callables vs. matched-maturity bullets	With the Fed moving closer to its first rate hike in a low-inflation, moderate-growth environment, there are few themes as sure as the flattening of the curve, likely going beyond the forwards.	Higher implied vol cheapens callables relative to bullets	12/19/14			
<b>Agencies</b>	2-year vs. 5-year agency spread curve flattener	On the bullet agency curve, spreads are relatively tight to the level of rates volatility, and they risk widening 5-10bp from current levels on our model incorporating forward vols and the projected level of outstanding debt.	Increased GSE risk widens intermediate spreads	12/19/14			
<b>US Credit</b>	US High Yield: Sell covered puts on HY CDX	With CCC energy bonds trading at 60 cents on the dollar, and oil just \$10 away from matching the most severe percentage drop in oil prices over 1997-8, our sense is that we may be reaching the latter stages of a pronounced move lower in a commodities-driven decline in HY credit valuations	Widening of credit spreads beyond the breakeven point as well as a rally in credit beyond the breakeven, with potentially unlimited downside in either scenario	12/19/14			

Source: Deutsche Bank



## Other Current Recommendations

	Trade Detail	Rationale	Risks	Opened	Entry	Current	P/L
Treasury RV	Short 10s versus 5s and 30s	10s look rich on the curve against 5s and 30s	10s richen further	5/8/15	+9 bp	+8 bp	-6k
Treasury RV	Sell rich bond futures against cheap off-the-run bonds	Sell the rich classic bond futures versus off-the-run bonds in the 2026 to 2028 sector	Classic bond futures richen	11/26/14	+21 bp	+20 bp	-106k
Inflation	10s/30s breakeven curve steepener	Long end TIPS offer good value	30yr underperforms relative to 10yr	6/26/2015	0.13%	0.30%	+1,042k
Inflation	Long front end TIPS breakevens	Front end TIPS look cheap to our inflation forecast	Energy prices drop	4/10/2015	1.23%	-1.45%	-1,563k
Inflation	Real yield curve steepeners, either 10s-30s or 5s-30s.	Possibly delayed first Fed rate hike is likely to help intermediate sector outperform in real yields, steepening the real yield curve.	Long end outperforms	1/20/2015	5s/30s@0.65% 10s/30s@1.60%	5s/30s@0.97% 10s/30s@1.48%	+3,464k
Inflation	Long 10yr inflation swaps versus 10yr TIPS breakevens	The spread between 10yr inflation swaps and TIPS breakevens is too tight	TIPS outperform inflation swaps	1/20/2015	+21 bp	+17 bp	-249k
Inflation	Long 1/2029 breakevens vs 10yr breakevens	10yr TIPS to 1/2029 breakeven curve is too flat	1/2029 breakeven cheapen further	10/3/14	+2 bp	+6 bp	+502k
Inflation	Long 30yr TIPS breakevens	The long end inflation market looks undervalued; 30yr TIPS breakevens near multi-year lows	Long term inflation expectations decline	12/12/14	1.91%	1.71%	-2,107k
Inflation Swaps	Long 1yr1yr inflation swaps	We like 1yr1yr forward inflation swaps. Front end breakevens look attractive.	Inflation expectations decline	3/3/15	1.84%	1.22%	-662k
Inflation Swaps	Long 2yr2yr inflation swaps	We like being long 2yr2yr or 2yr3yr forward breakevens to take advantage of cheap 5s, while avoiding negative carry in front end TIPS	Medium term inflation expectations decline	12/12/14	1.77%	1.68%	-868k
Agencies	Buy long-dated GSE debt: Buy \$100mm FNMA 6.625 11/30s vs. T 5.325 2/31s	Legislative momentum of Johnson-Crapo on GSE reform is credit bullish for long-dated GSE debt.	Reform bill stalls in Congress or language on government guarantee modified.	3/14/14	+48 bp	+62 bp	-953k
Muni	Receive \$100m 3y3y SIFMA ratio at 78.2%. (Sord)	Attractive roll down profile	Further ratio curve steepening	4/25/13	78.2%	72.0%	+941k
Option	1X2 1Y 5Y5Y ATMF/41 receiver spreads costless	Long-end rallies on premature or fast rate hikes (policy mistake)	Rally below the breakevens; unlimited downside	9/26/14	0¢	-18.4¢	-311k

Source: Deutsche Bank



## Other Current Recommendations

	Trade Detail	Rationale	Risks	Opened	Entry	Current	P/L
Option	Buy \$100mn 2Y2Y ATMF receivers vs. sell \$22.7mn 2Y10Y ATMF receivers for the net takeout of \$55K	Trend growth and low inflation limit the rise of long rates	Recessionary mode with bull flattening of forwards	10/3/13	-6 bp	-99 bp	-925k
Option	<b>Payer spreads:</b> Sell \$500mn 2Y2Y 92bp OTM payers vs. buy \$50mn 2Y30Y 25bp OTM payers at zero net cost	Vol differential is favorable for initiating a positive carry bear steepening trade	The curve bear flattens	1/2/14	+2 bp	-0 bp	-25k
Swaps Rv	Receive \$1,023.4mm 2y1y rate versus pay \$1,002.7mm 1y1y rate	Positive carry look at repricing Fed	The curve bear steepens	5/20/14	+95 bp	+95 bp	+2,305k
Swaps Rv	Receive \$1,023.4mm 2y1y rate versus pay \$431.2mm 1y1y rate and \$597mm 3y1y rate	Further rally via Fed delay benefits 2y1y rate	2y1y underperformance	5/20/14	-10 bp	-17 bp	+405k
Swaps Rv	<b>Forward fly:</b> Pay fixed on \$298.6 mm 10y5y versus receive fixed on \$72.9 mm 5y5y and \$257.6 mm 15y5y	5y rate, 10y forward is historically rich versus 5y rate, 5y forward and 5y rate, 15yforward	Further 10y5y outperformance	4/29/14	+22 bp	+21 bp	-416k
Cross Market	Buy \$10m each of SPNTAB 2.95% 3/16; SPABOL 2.625% 5/16; DNBOR 2.90% 3/16 on ASW. (Sord)	Risk-on retightening of covered bonds in stable rates regime	Bank credit underperforms; Eurozone credit crunch; Widening in a rate sell-off	7/25/13	+25 bp +37 bp +31 bp	+30 bp +25 bp +31 bp	-930k
Cross Market	<b>US-Europe spread tightener:</b> Receive fixed in \$244 mm USD 5y5y rate vs. pay fixed on €165.8mm EUR 5y5y rate	US recovery disappoints	Spread widens	1/24/14	+127 bp	+136 bp	-10k

P/L as of 09/03/2015 prices.

We started tracking the performance of our trade recommendations on June 18, 2010. This table shows our current open recommendations; a table of our closed positions is in the back of this publication. Both tables will be a regular feature in the Weekly. Performance numbers are based on trader end-of-day marks, and do not include bid/offer spreads or transaction costs. We consider the relevant benchmark for our trades to be a zero position, given the leveraged or generally market neutral aspects of these trades. Historical performance is not a guarantee of future performance

Source: Deutsche Bank





United States

Rates  
Gov. Bonds & Swaps  
Rates Volatility

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## US Overview

- Markets are fixated on the potential for Fed normalization to start earlier than currently priced and whether China's recent FX adjustment is the beginning or the end.
- At a superficial level there appears to be conflicting influences on rates. The Fed and China may undermine risk asset performance but the consensus is that if risk assets find support, fewer FX reserves are likely to pressure rates higher.
- On the contrary, we think the most important thing is that both the Fed and China's FX (ongoing?) unwind represent a tightening of global liquidity that clearly is negative for risk assets and clearly, at least for the last decade, has been positive for real rates and the curve. 5y5y is well correlated with changes in global liquidity and based on recent trends should be closer to 2 percent.
- This reinforces our view that the Fed is in danger of committing policy error. Not because one and done is a non issue but because the market will initially struggle to price "done" after "one". And the Fed's communication skills hardly lend themselves to over achievement. More likely in our view, is that one in September will lead to a December pricing and additional hikes in 2016, suggesting 2s could easily trade to 1 ¼ percent. This may well be an overshoot but it could imply another leg lower for risk assets and a sharp reflattening of the yield curve.
- We think risk/reward has shifted toward paying spreads in the front end. Financing is challenging with term GC trading high relative to LIBOR, but we think rolling the position overnight should allow investors to average in financing better than LIBOR, providing some backstop against tightening if significant additional intervention-related selling does not materialize.
- We like being long front end breakevens in forwards, e.g., one-year breakevens implied by short maturity TIPS, such as the 7/2016s and the 7/2017s. One can also hedge out energy prices in that trade to create a synthetic exposure to core CPI. A simpler version of the implied front end forward breakevens is to be long front end breakevens outright. They have lagged oil prices.
- 5-year inflation basis has recovered, while 30-year inflation basis has done less well, and remains in the low end of the long term trading range. Investors should consider inflation basis steepeners by being long 30-year inflation basis against 5-year inflation basis.

### The case for more liquidity

Investors are rightly concerned about the impact of both a possible early start to Fed normalization and the probably yet-to-be-resolved Chinese FX adjustment. There is a reasonable consensus that both encourage further downside to risk assets. There is more uncertainty around bond yields. Potential FX intervention might imply selling of Treasuries, especially the front end where most reserves are held. But if higher short rates from either those sales or Fed tightening, undermine equities, bond yields might actually fall.



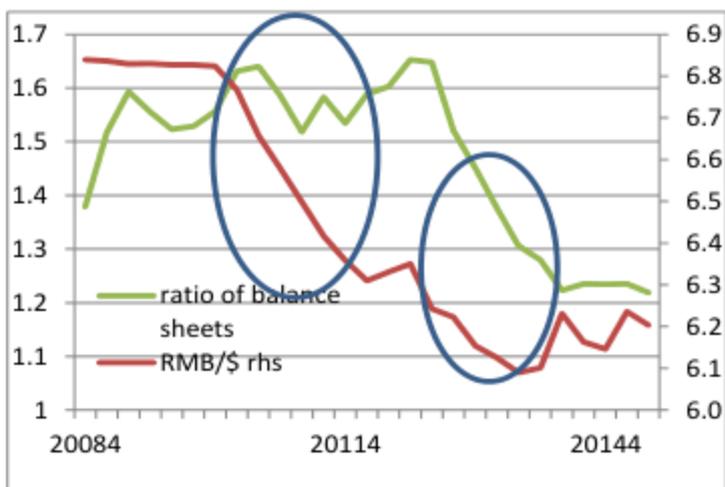
The right framework to view potential Fed tightening as well as China's FX adjustment is in the context of global liquidity and that relationship with financial assets. Liquidity in the broadest sense tends to support growth momentum, particularly when it is in excess of current nominal growth. Positive changes in liquidity should therefore be equity bullish and bond price negative. Central bank liquidity is a large part of broad liquidity and, subject to bank multipliers, the same holds true. Both Fed tightening and China's FX adjustment imply a tightening of liquidity conditions that, all else equal, implies a loss in output momentum. Typically this should be associated with lower yields. This runs counter to a common perception that forex intervention that leads to Treasury sales pushes up yields. To the extent that it does, we suspect this is a short lived temporary affair and will easily be dominated by the more sinister implications of dwindling global liquidity. We note that the recent weakness in global nominal growth that we highlighted last week is highly consistent with weaker global liquidity and that the weakening in liquidity is not new news but has been ongoing since late last year. Not only has it been driven by falling FX reserves but also by the slowing of the Fed's balance sheet. To the extent that other central banks have tried to expand liquidity, in terms of historic relationships to financial assets, FX reserves and the Fed's balance sheet are more important. We think this reflects the role of the dollar as the reserve currency in the global financial system.

Let's start from some basics. Global liquidity can be thought of as the sum of all central banks' balance sheets (liabilities side) expressed in dollar terms. We then have the case of completely flexible exchange rates versus one of fixed exchange rates. In the event that one central bank, say the Fed, is expanding its balance sheet, they will add to global liquidity directly. If exchange rates are flexible this will also mean the dollar tends to weaken so that the value of other central banks' liabilities in the global system goes up in dollar terms. Dollar weakness thus might contribute to a higher dollar price for dollar denominated global commodities, as an example. If exchange rates are pegged then to achieve that peg other central banks will need to expand their own balance sheets and take on dollar FX reserves on the asset side. Global liquidity is therefore increased initially by the Fed but, secondly, by further liability expansion, by the other central banks. Depending on the sensitivity of exchange rates to relative balance sheet adjustments, it is not an *a priori* case that the same balance sheet expansion by the Fed leads to greater or less global liquidity expansion under either exchange rate regime. Hence the mere existence of a massive build up in FX reserves shouldn't be viewed as a massive expansion of global liquidity per se – although as we shall show later, the empirical observation is that this is a more powerful force for the "impact" of changes in global liquidity on financial assets.

The chart below shows the RMB vs. the ratio of PBOC to Fed balance sheets, using prevailing exchange rates at the time as the conversion factor. The initial post crisis period sees the Fed balance sheet expand relatively while the exchange rate is unchanged. There is then a phase of RMB appreciation and relative stability in the balance sheet ratio and then the PBOC balance sheet expands with continued RMB appreciation.



RMB vs. ratio of Fed to PBOC balance sheet



Source: Bloomberg and Deutsche Bank

The table below highlights these three periods in terms of the actual notional impact on global liquidity via the combined effects of revaluing the PBOC balance sheet as well as the changes in the underlying domestic liquidity. Under a relatively stable currency the PBOC expanded its balance sheet aggressively in the first phase, presumably in part being obliged to accelerated FX reserve accumulation; the Fed was more or less in between expanding their balance sheet. The second phase saw the more dramatic currency appreciation with a strong Fed expansion but also strong PBOC liquidity expansion. The third phase saw even stronger Fed balance sheet expansion but weaker PBOC expansion and more modest RMB appreciation. The last two phases combined saw global central bank liquidity expand by notionally similar amounts i.e. \$1500 billion. More than double the first phase when the currency was more stable and the Fed was quieter. However note that as expected, the reserve accumulation was almost the same in each period, around 500-600+ billion. So even though the Fed wasn't expanding the balance sheet much, the hangover of the previous expansion and capital flows in general required a more aggressive intervention by PBOC to acquire reserves and maintain the a stable currency. So a notionally less aggressive expansion in global central bank liquidity under a stable exchange rate regime was disproportionately more skewed to reserve accumulation.

Changes in central bank balance sheet liquidity

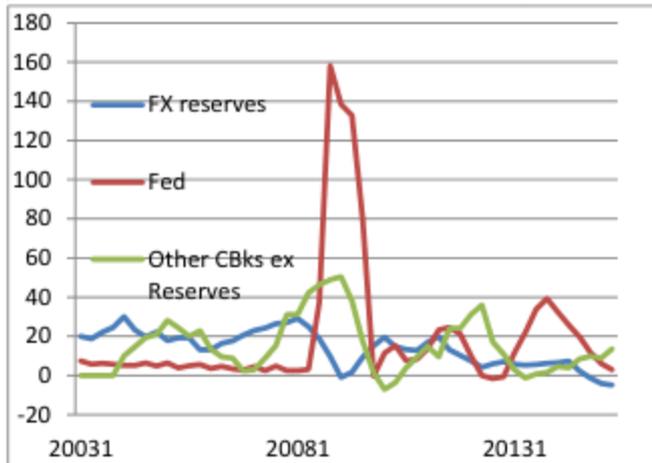
	chg Fed BS	chg	chg Ch BS	RMB change	RMB	RMB	% chg RMB USD change	Total	Reserve chg	
		\$ bn		bn	start	finish	bn		bn	
2010q2-2008q4	4.1%	90	17.3%	3584	6.84	6.82	0.23%	532	622	508
2012q1-2010q3	25.8%	581	14.2%	3534	6.77	6.31	7.26%	827	1408	657
2013q4-2012q4	39.3%	1126	7.7%	2274	6.24	6.09	2.51%	492	1618	510

Source: Haver Analytics and Deutsche Bank

The next issue is given changes to liquidity how does it impact asset prices. We can think of the three components of liquidity: the Fed's balance sheet, the accumulation of FX reserves by other central banks; and the residual of other central banks' liquidity expansion after the accumulation of FX reserves. As the chart below shows in terms of growth the explosion of the Fed stands out during the crisis but there have been strong expansions in other central banks' liquidity excluding reserve increases. FX reserve accumulation has been quite weak since 2012 and is now negative. In absolute terms liquidity is strongest in FX reserves and other central banks ex reserves by a factor of three times for the Fed's balance sheet.

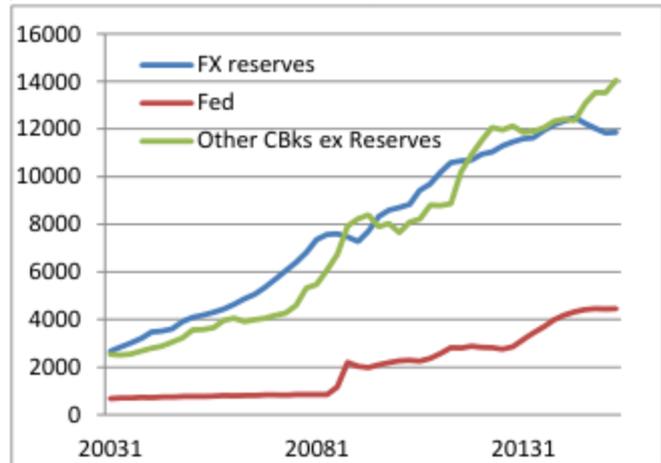


Sources of central bank liquidity – change yoy



Source: Bloomberg and Deutsche Bank

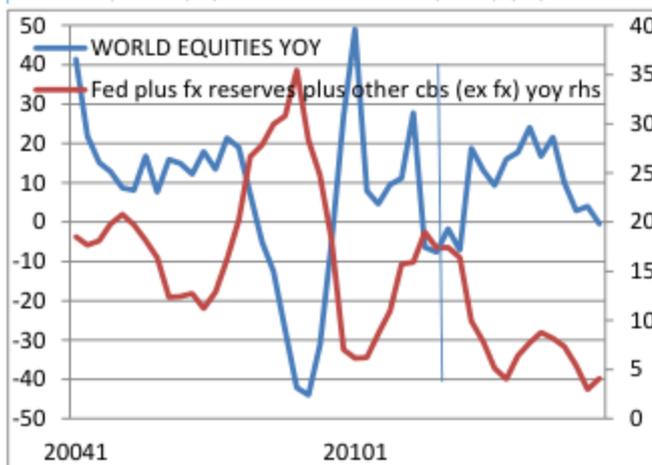
Sources of central bank liquidity – \$ billion



Source: Bloomberg and Deutsche Bank

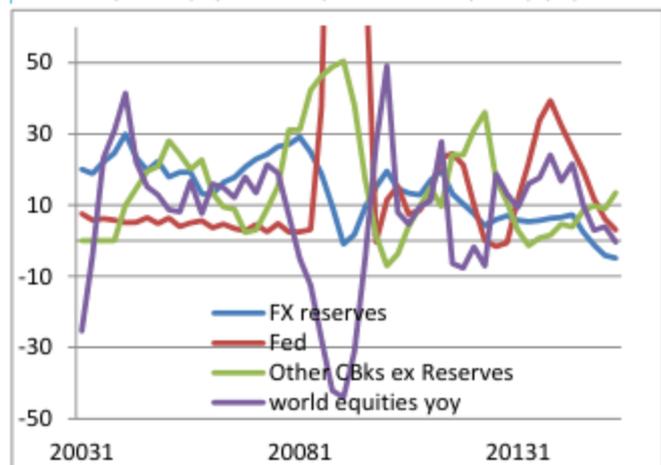
Let's start with risk assets, proxied by global equity prices. It would appear at first glance that the correlation is negative in that when central bank liquidity is expanding, equities are falling and vice versa. Of course this likely suggests a policy response in that central banks are typically "late" so that they react once equities are falling and then equities tend to recover. If we shift liquidity forward 6 quarters we can see that the market "leads" anticipated additional liquidity by something similar. This is very worrying now in that it suggests that equity price appreciation could decelerate easily to -20 or even 40 percent based on near zero central bank liquidity, assuming similar multipliers to the post crisis period. From q2 levels that implies an MSCI level of around 1350 for 2015q4 (reference q2 @ 1735), the end August level was 1645 i.e. still another 10-15 percent decline.

World equities yoy vs. central bank liquidity yoy



Source: Bloomberg and Deutsche Bank

World equities yoy vs. components of liquidity yoy



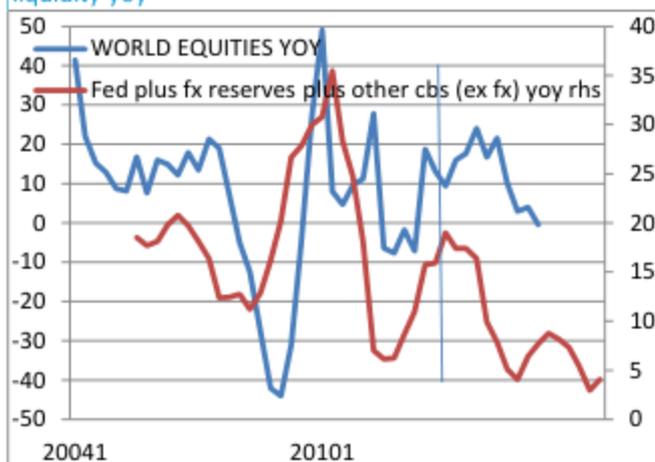
Source: Bloomberg and Deutsche Bank

Interestingly, the components of liquidity themselves behave a little differently with FX reserves and Fed balance sheet being more in line recently than other central bank liquidity. This reflects the ECB and BoJ tardier reactions to balance sheet expansion in the post crisis period. If we only consider the FX and Fed components of liquidity there appears to be a tighter and more contemporaneous relationship with equity prices. The suggestion is at one



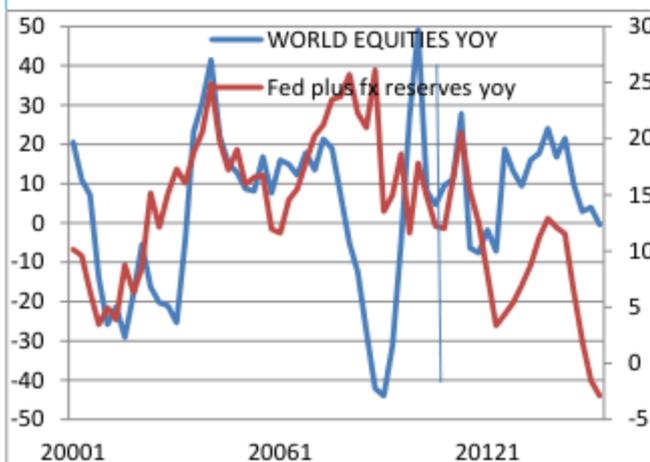
level still the same, absent Fed and FX reserve expansion, equity prices look more likely to decelerate and quite sharply. The tie out, presumably with the “leading” indicator of other central bank action is that other central banks have been instrumental in supporting equities in the past. The largest of course being the ECB and BoJ. If the Fed isn’t going doing its job, it is good to know someone is willing to do the job for them, albeit there is a “lag” before they appreciate the extent of someone else’s policy “failure”. And just to ram home the point – this differential relationship is entirely consistent with the idea that FX reserves are accumulate don the back of Fed balance sheet expansion and so if the Fed’s balance sheet is not expanding then it is a double whammy that FX reserves are also not expanding and as we shall see below are contracting!

World equities yoy lead by 6 qtrs vs. central bank liquidity yoy



Source: Bloomberg and Deutsche Bank

World equities yoy vs. Fed plus FX reserves change yoy



Source: Bloomberg and Deutsche Bank

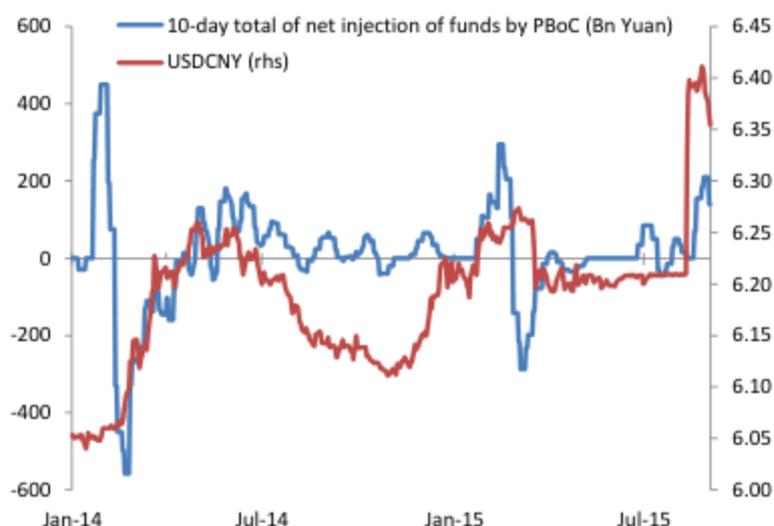
So now let’s be a little more specific on the Fed balance sheet and FX reserves now. The next chart shows both are decelerating sharply. The Fed’s balance sheet is almost flat on the year and reserves are down around 5 percent and counting. The two as we have demonstrated are clearly connected. In the reverse scenario (as opposed to the above, when we demonstrated the connection when the Fed was expanding its balance sheet), tighter Fed policy forces other central banks to spend reserves to defend their currency peg and in principle shrink their balance sheets. This is the example recently with the adjustment in China’s FX regime to accommodate more market based fixings. The ensuing unwind of the China carry trade has solicited what appears to have been significant FX intervention, judging by the move in front end swap spreads and dealer inventory of shorter dated Treasuries. The main point however is that it is not a change in FX regime per se that drives the loss of liquidity but that that change emanates from a tighter Fed balance sheet. Hence in the event that the Fed raises rates and we start to worry about balance sheet unwind this becomes a much more significant issue going forward. The Fed’s balance sheet for example could easily be negative 5 percent this time next year, depending on how they manage the SOMA portfolio and would be associated with further FX reserve loss unless countries, including China allowed for a much weaker currency. This would be a great concern for global (central bank liquidity)

So one counter is that FX reserve loss can be offset by other central banks’ liquidity injection. At one level this is tempting but flawed; at another level it is more plausible. The first level is that FX reserve loss typically is “sterilized”. The shock to a country’s financial system from the sudden loss of liquidity



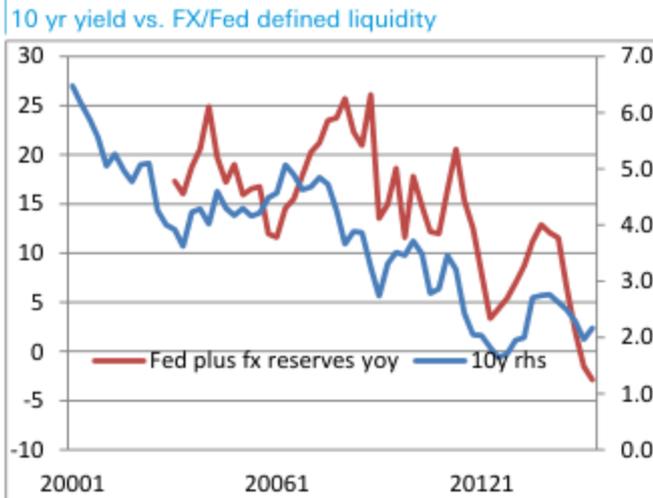
needs to be offset and recently in the case of China the PBOC has acted to reinstate domestic liquidity and also has cut reserve requirements. However as we demonstrated above this component of liquidity seems to have a lagged impact on say (equity) financial assets relative to either the Fed or FX reserves themselves. This is actually quite intuitive. The liquidation of FX reserve holdings reflects forced redemptions of domestic currency holdings. Simply forcing currency back into the system to satisfy those redemptions shouldn't be associated with restoring asset prices to where they were before. Ultimately in a fiat money system asset prices reflect "outside" i.e. central bank money and the extent to which it multiplied through the banking system. The loss of reserves represents not just a direct loss of outside money but also a reduction in the multiplier. There should be no expectation that the multiplier is quickly restored through offsetting central bank operations.

PBOC injection of funds vs. CNY

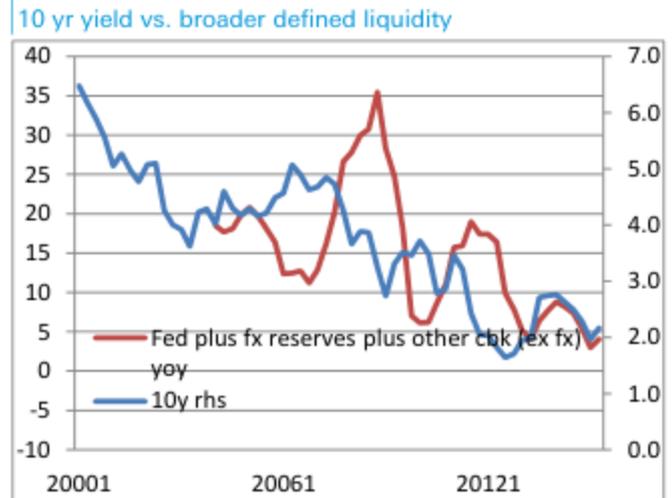


Source: Bloomberg Finance LP and Deutsche Bank

We now move on to interest rates. If equities have a negative correlation with liquidity, it is not surprising to find that interest rates have a positive correlation at least since the crisis. Again in line with the above analysis regarding equities, the correlation in contemporaneous time is better if we focus on Fed and FX reserves. However even then we notice the correlation is a little loose at times. This raises an obvious issue in terms of how one thinks about nominal yields in terms of additional central bank liquidity and FX reserve accumulation. On the one hand the more Fed may help lower real yields but raise inflation expectations; more FX reserve accumulation may be just lower nominal yields and if anything real yields to the extent that by accommodating Fed monetary policy expansion the US "exports" inflation risk. Running across everything is the problem that equities are generally stronger (weaker) of liquidity is expanding (falling).

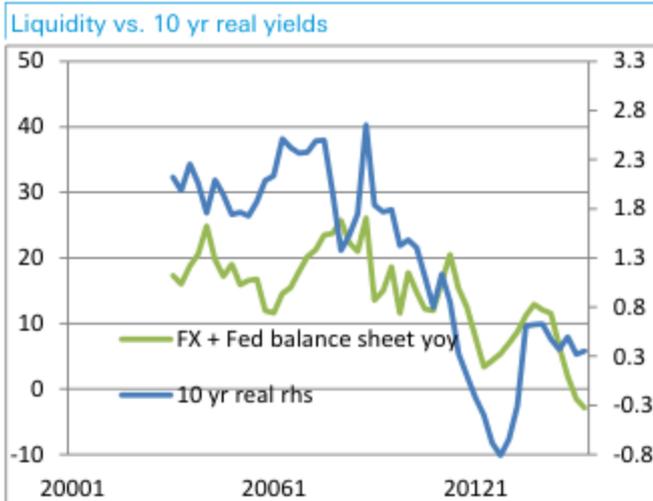


Source: Bloomberg Finance LP and Deutsche Bank

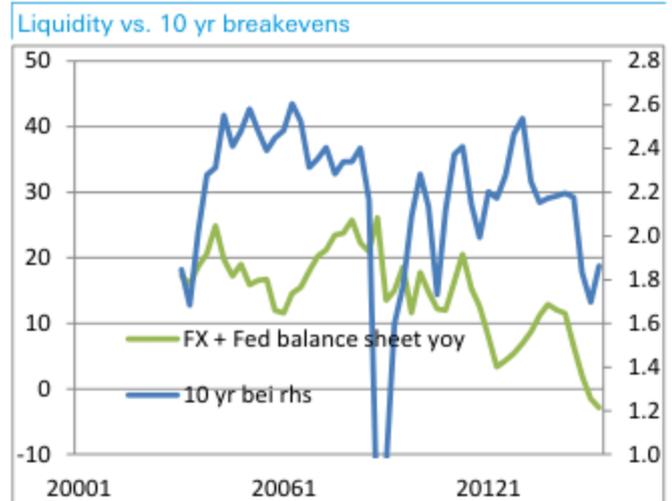


Source: Fed and Deutsche Bank

Breaking down the breakeven and real yield components verifies that central bank liquidity has been more associated with real yields than breakevens, however the relationship is perverse! Real yields have tended to fall when balance sheet expansion is slowing while breakevens have generally been more sticky. This suggests that risk assets drive (real) yields and that breakevens anticipate a (delayed) liquidity injection. This is corroborated by also considering the curve. Like real yields 5s10s is well correlated (positively) with real yields. Note that prior to the crisis the relationship looked more "normal" in that expanding liquidity drive yields lower and vice versa. So something has changed since the crisis – this we think is very important and again, will revisit below.



Source: Bloomberg Finance LP and Deutsche Bank



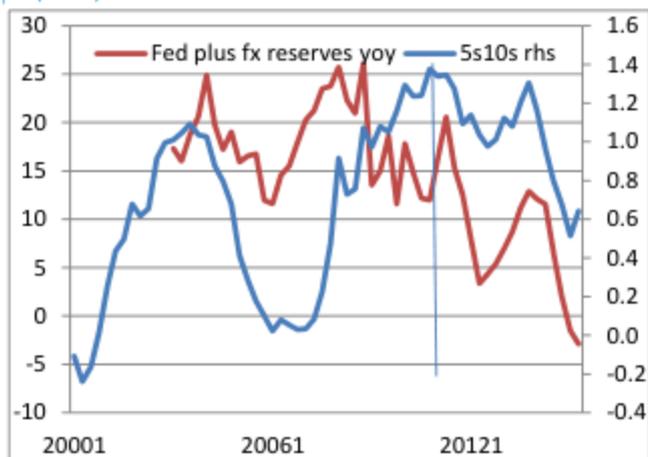
Source: Fed and Deutsche Bank

The relationship between 5s10s and 10s in real terms screams 5y5y! And indeed we overlay 5y5y to liquidity there is a very tight, almost scary, relationship. The relationship even predates the crisis. Tighter liquidity essentially forces the 5y5y nominal rate lower reflecting some combination of a flatter curve and higher yields with a steeper curve and lower yields. Fundamentally we think this ultimately speaks to a lower terminal policy rate so that it doesn't really matter whether the term structure is trying to shift higher or lower but the curve will more than compensate so that if the trend is towards less central bank liquidity, the terminal rate is falling.



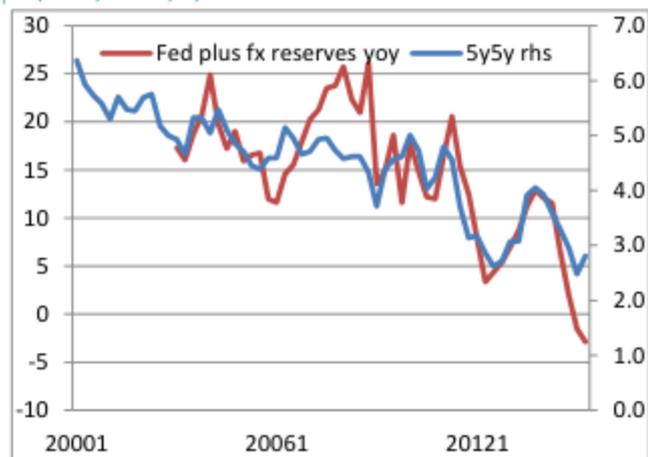
Right now the decline in central bank liquidity suggests 5y5y should be closer to 2 percent or below, not 3 percent or above. And this is before the Fed has tightened and China has potentially "finished" its adjustment.

Liquidity vs. 5s10s



Source: Bloomberg Finance LP and Deutsche Bank

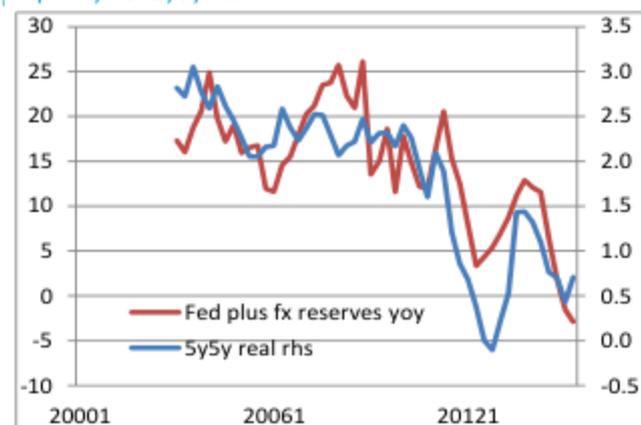
Liquidity vs. 5y5y



Source: Fed and Deutsche Bank

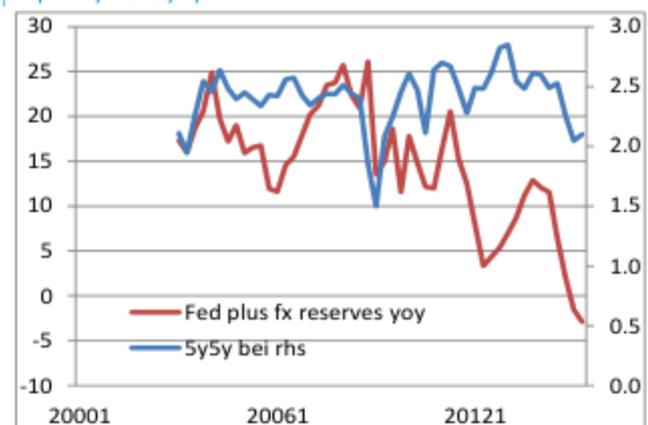
And of course the breakdown in 5y5y between real and inflation reinforces the story that it is the real rate not inflation expectations that drive this result. And this is again consistent with the risk asset concern that it is the lack of liquidity that undermines risk assets that in turn drives real yields lower, despite keeping breakevens relatively inflated. One conclusion is that if investors believe that liquidity is likely to continue to fall one should not sell real yields but buy them and be more worried about risk assets than anything else. This flies in the face of recent concerns that China's potential liquidation of Treasuries for FX intervention is a Treasury negative and should drive real yields higher. It is possible that if risk assets do very well then maybe the correlation with interest rates is broken. But like all these relationships for us, it is easier to work with the correlations that currently persist rather than to predict random breaks. And the potential breaks should be more cheaply hedged rather than making for a core portfolio allocation. I.e. cheap SPX calls based on rates lower. More generally the simple point is that falling reserves should be the least of worries for rates – as they have so far proven to be since late 2014 and instead, rates need to focus more on risk assets.

Liquidity vs. 5y5y real



Source: Bloomberg Finance LP and Deutsche Bank

Liquidity vs. 5y5y BEI

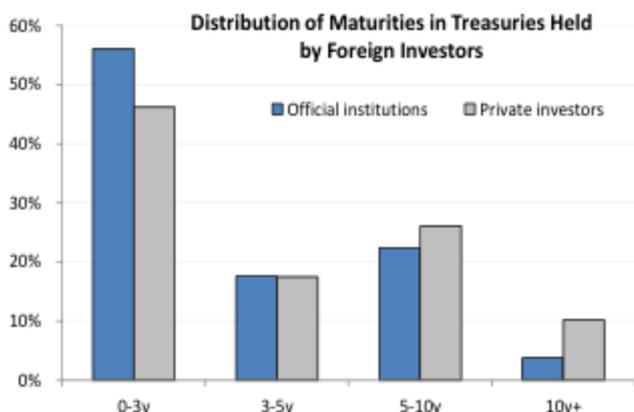


Source: Fed and Deutsche Bank



Even without considering the empirical relationships, it is also clear that FX intervention is very much a short term affair. As the chart below shows the recent jump in dealer positions in less than three years is consistent with the Treasury data for 2014 that shows the preponderance of foreign official Treasury holdings is held in the sub 3 year sector. Very little is held in longer dated maturities so any FX intervention is anyway more likely to flatten the yield curve than steepen it.

About 56% foreign official holdings of Treasuries are under three years in maturity



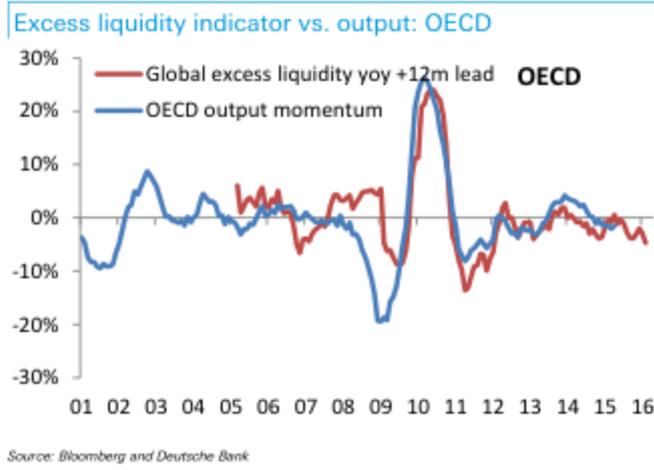
Source: Treasury and Deutsche Bank

Dealer positions in Treasuries maturing in 3 years or less



Source: Fed and Deutsche Bank

The relationship between central bank liquidity and the byproduct of FX reserve accumulation is clearly central to risk asset performance and therefore interest rates. The simplistic error is to assume that all assets are treated equally. They are not – or at least have not been especially since the crisis. If liquidity weakens and risk assets trade badly, rates are most likely to rally not sell off. It doesn't matter how many Treasury bills are redeemed or USD cash is liquidated from foreign central bank assets, US rates are more likely to fall than rise especially further out the curve. In some ways this really shouldn't be that hard to appreciate. After all central bank liquidity drives broader measures of liquidity that also drives, with a lag, economic activity. The indicators of excess liquidity (see below) are but derivatives of central bank liquidity and the bank or "inside" money multipliers. If liquidity is tightening relatively to nominal growth, real growth will tend to slowdown later. Right now the message is not good for the OECD, excess liquidity indicators point to real growth losing momentum. The IMF seems to get the picture. China is probably getting the picture but faces the conundrum of how to manage the carry trade unwind with minimal disruption. The grass is definitely though greener if the currency is weaker and they hang onto most of their reserves. Ironically the excess liquidity indicator has recently improved for China although this is as much to do with decelerating nominal growth.



The more sinister undercurrent is that as the relationship between negative rates has tightened with weaker liquidity since the crisis, there is a sense that policy is being priced to “fail” rather than succeed. Real rates fall when central banks back away from stimulus presumably because they “think” they have done enough and the (global) economy is on a healing trajectory. This could be viewed as a damning indictment of policy and is not unrelated to other structural factors that make policy less effective than it would be otherwise -- including the self evident break in bank multipliers due to new regulations and capital requirements. Of course our definition of “failure” may also be a little zealous. After all why should equities always rise in value? Why should debt holders be expected to afford their debt burden? There are plenty of alternative viable equilibria with SPX half its value, longevity liabilities in default and debt deflation in abundance. In those equilibria traditional QE ceases to work and the only road back to what we think is the current desired equilibrium is via true helicopter money via fiscal stimulus where there are no independent central banks. One step at a time...

**6m1y-2y2y as a carry-efficient flattener**

We recommend a 6m1y-2y2y flattener as an optimal carry proxy for USD 2s5s. The 6m1y-2y2y can be thought of a leveraged version of the 2s5s spot: it has a 98% correlation and a beta of 1.74 with the latter over the last 12 months. Because of the 1.74x leverage, the beta-adjusted 3m carry is -2.0bp instead of -2.9bp for 2s5s, a 31% improvement.

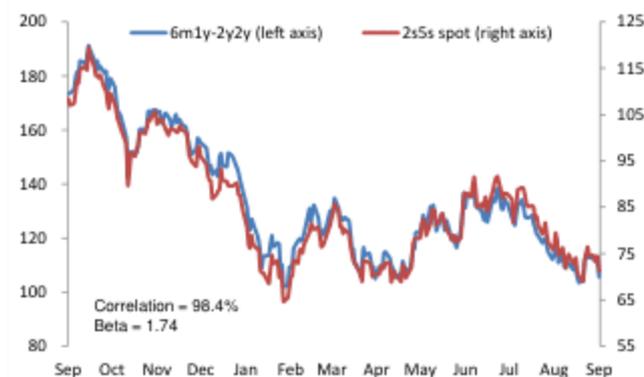
This flattener takes advantage of a recent 2.3 standard deviation decline in the (negative) roll for the 6m1y paying leg, which compares to a 1.7 standard deviation decline in the 2y spot. The positive roll for receiving the 2y2y is also more attractive; it had just a 0.5 standard deviation reduction compared to a 0.7 standard deviation reduction in the 5y spot.

Historically, 2s5s flatteners have performed well going into a tightening cycle, with nearly 70 percent of trades put on within three months of the liftoff beating their ex-ante forwards and thus being profitable. The market clearly thinks Friday’s mixed jobs report was not enough to take a September liftoff completely off the table. DEC15 Fed funds future sold off 1.5bp after payrolls, and the implied probability of hiking in September rose slightly from Thursday to 34% at the time of writing. The 2s5s slope also flattened 2.5bp to 71.5bp, but still remains 7bp+ above its 2015 lows. A policy error by the Fed (i.e. hiking more than once this year in spite of declining global liquidity and falling inflation) can easily flatten 2s5s to 50bp or below. The risk to this trade is if the Fed relents in September but we think they will more likely than not do a



“dirty” relent, which is to keep October and December FOMC dates in play. In this case 2s5s could steepen slightly but such a move would be short lived and limited in magnitude, if not for a hyped expectation of an October liftoff it would be because China’s FX intervention flows continue to exert a flattening pressure on the curve, which we discussed earlier in this note.

6m1y-2y2y as a leveraged proxy for 2s5s spot



Source: Deutsche Bank

Flattening carry is 31% better in 6m1y-2y2y than in 2s5s

	Level (%)	Dv01 / Ratio	3M carry (bp)	Beta	Beta-adjusted carry (bp)	Improvement
2y spot	0.83	1.983	(8.3)			
5y spot	1.54	4.838	5.3			
2y-5y spot	0.71	2.44x	(2.9)	1.00	(2.9)	
6m1y	0.82	0.992	(15.1)			
2y2y	1.87	1.927	11.6			
6m1y-2y2y	1.05	1.94x	(3.5)	1.74	(2.0)	31%

Source: Deutsche Bank

Risk/reward shifting towards paying front end spreads

Front end spread tightening has been considerable given concerns about possible intervention-related selling, and has reached levels we think offer value. At the time of writing the most recent Chinese reserves data have not been released, and markets will naturally be looking for concrete evidence that intervention-related sales have indeed been material. While this may introduce event risk into paid positions in spreads, we think risk reward should be biased toward spread re-widening from current levels.

There are three primary supporting arguments. The first is that China will be increasingly defensive of its reserves, and is more likely to devalue in a larger increment to discourage new speculation against the RMB and trap speculative capital. A large enough increment should significantly reduce further speculation on the margin and hence reduce the need to liquidate Treasury positions to sell dollars and buy domestic currency.

The second is that there remains some possibility that if the Fed does indeed raise rates (which we think would increase the probability of further devaluation in a lumpy increment) that IOER will have to be set higher than the top of the desired band for overnight effective funds in order to create adequate incentive for banks to do the “arb” whereby they absorb cash balances in the overnight market and then deposit them at the Fed. Third, both a devaluation and the likely risk-off market environment that would accompany it should bias spreads wider.

If, as remains our central expectation, the Fed does not raise rates, then we would expect speculative pressure against the RMB to decrease somewhat, slowing reserve loss and Treasury liquidation. So even though diminished financial stress might work against spreads in this scenario, intervention-related selling could well decline.

Financing is obviously critical with front end spreads, and this trade is complicated somewhat by high term repo rates relative to LIBOR. The September 2y note, given current levels, is likely to a reopening of the



September 2017 5y note, which means the large issue is unlikely to trade tighter than GC. We note that as usual this September 2y should be the CTD issue into the December TU contract.

In fact 3m GC has traded at levels above LIBOR as financing markets price defensively for the possibility of a September rate hike. This would effectively mean borrowing to fund the position at higher rates than offered by the Treasury asset itself. In this case investors are likely better served by rolling on open rather than locking in term financing. September month/quarter end could see elevated overnight GC levels, which would argue for exiting the trade at or shortly following the FOMC meeting. Naturally the trade is exposed to further spread tightening, and in theory potential losses are unlimited. However, more pragmatically, financing spreads offer some support against dramatic spread tightening.

#### Dealer positions in Treasuries maturing in 2 years or less



Source: Federal Reserve and Deutsche Bank

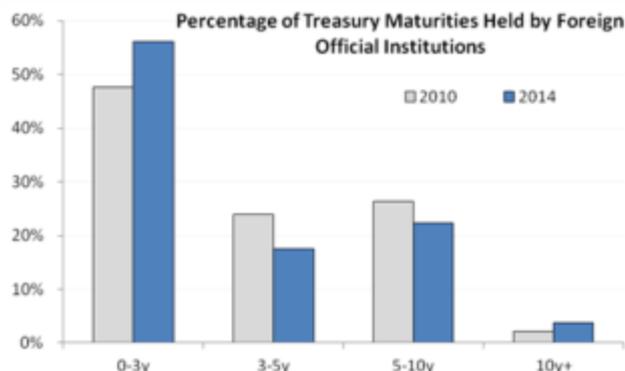
#### Did dealer positions tell much about intervention flows in the past?

The concentration of foreign official holdings of Treasuries in the front end of yield curve suggests foreign reserve losses lead to yield curve flatteners to the extent that central banks sell their Treasury holdings. Treasury's TIC data shows that about 56% foreign official holdings of Treasuries mature within three years as of June 2014, up from about 48% as of June 2010.

We note that primary dealer positions in short dated coupon Treasuries and TIPS have increased rapidly over the past few weeks. For example, dealer positions in Treasuries maturing in three years and less jumped to \$18.6 billion on August 26; they were as low as -\$11 billion in early July. Dealer positions in short dated TIPS set a record high on August 19.

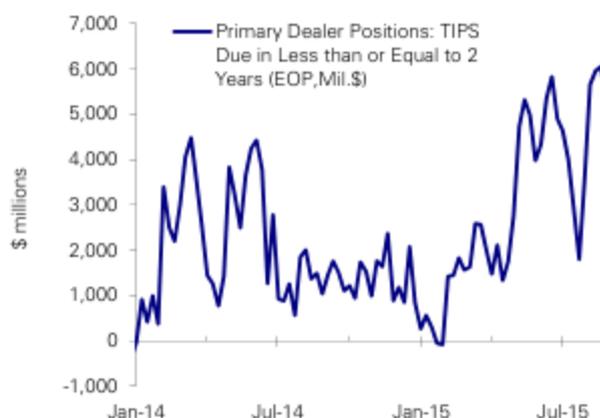


There has been an increased concentration in short dated Treasury holdings by foreign official institutions



Source: Treasury and Deutsche Bank

Dealer positions in TIPS maturing in less than or equal to 2 years



Source: Fed and Deutsche Bank

How much did intervention-related flows affect dealer positions in the past? To answer that question, we analyzed Japan’s foreign exchange operations in US dollars and dealer positions in short dated coupon Treasuries from 1991 to the present. The most recent operations occurred in 2010 and 2011, when Japan bought US dollars and sold yen. The operations that sold US dollars and bought yen were less frequent and have not occurred since 1998. It was evident that dollar buying foreign exchange operations coincided with a decline in dealer positions in short dated Treasuries, but the effects were not overwhelming.

On a related note, there has been an uptick in PBoC’s OMO net injections of funds recently, in the order of CNY215 billion in the second half of August, which came along with the CNY depreciation. Last time when the net injections in this order of magnitude occurred was late February.

Opportunities abound in inflation markets

Volatility in inflation markets has continued along with commodities and equities, creating opportunities for active traders. We like being long front end breakevens in forwards, e.g., one-year breakevens implied by short maturity TIPS, such as the 7/2016s and the 7/2017s, currently trades around 1.3%.

One can also hedge out energy prices in that trade to create a synthetic exposure to core CPI. For example, one can use gasoline RBOB futures Dec16 and Dec17, which have higher open interest than neighboring contracts, taking advantage of the contango. The average core CPI over the past ten years is about 1.9%. Only briefly in 2010, did the year-over-year core CPI dipped below 1.0%.



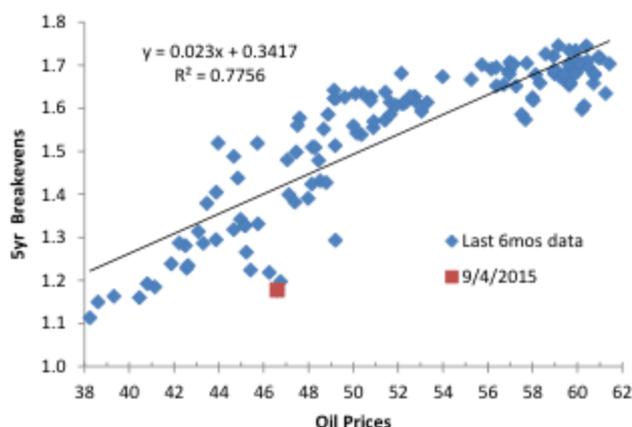
Long forward breakevens, either outright or hedged with energy futures



Source: Bloomberg Finance LP and Deutsche Bank

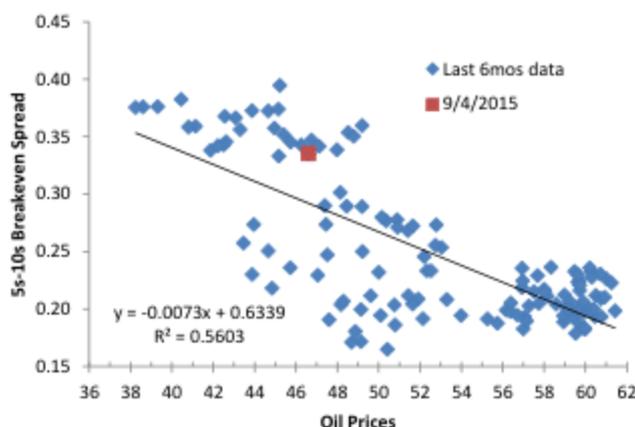
A simpler version of the implied front end forward breakevens is to be long front end breakevens outright. They have lagged oil prices. A regression of five-year TIPS breakevens against oil prices on past six months' data suggests breakevens are too low by 15bp to 20bp, given the current oil prices. Similarly, 5s/10s breakeven curve appears too steep and have room to flatten relative to oil prices. So the weakness in front end breakevens appears to be more than a function of energy prices. Dealer positions in TIPS maturing in less than or equal to 2 years are at a record high.

Front end TIPS breakevens have lagged oil prices



Source: Bloomberg and Deutsche Bank

5s/10s breakeven curve appears to have room to flatten

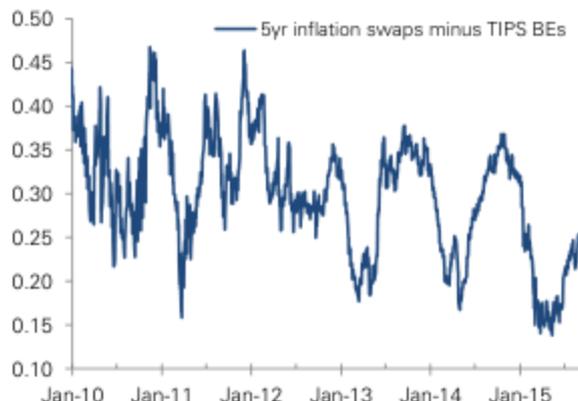


Source: Bloomberg and Deutsche Bank

5-year inflation basis has recovered, while 30-year inflation basis has done less well, and remains in the low end of the long term trading range. The 5-year inflation basis traded as low as +13bp in April and has bounced to about +25bp lately. The 30-year inflation basis currently trades about +25bp as well, having widened from about +18bp in late May. Over the past one year, the spread between the two basis spread has averaged around +6bp. Investors should consider inflation basis steepeners by being long 30-year inflation basis against 5-year inflation basis.

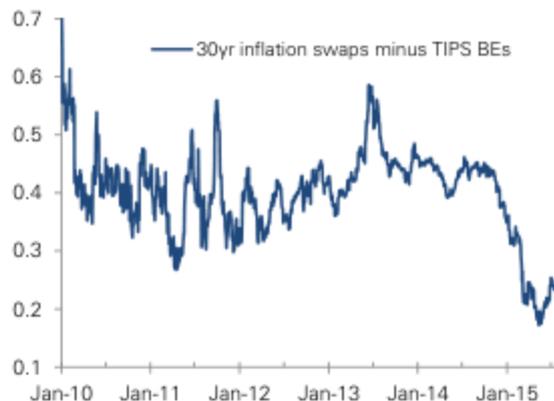


5-year inflation basis has recovered, ...



Source: Bloomberg and Deutsche Bank

...while 30-year inflation basis has remained in the low end of the long term trading range



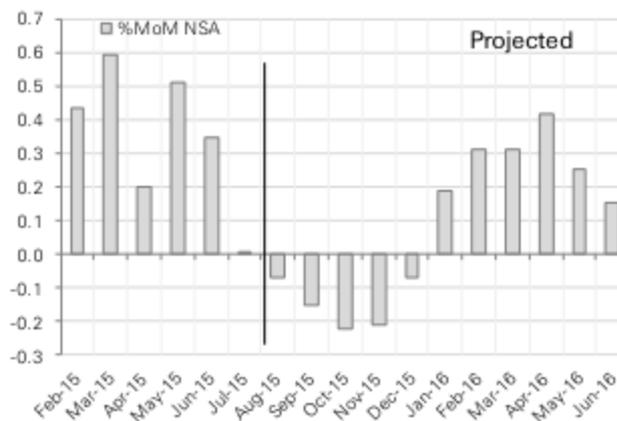
Source: Bloomberg and Deutsche Bank

US CPI-U NSA y/y, actual and forecast



Source: Bureau of Labor Statistics and Deutsche Bank

MoM CPI-U, actual and forecast (non-seasonally-adjusted)



Source: Bureau of Labor Statistics and Deutsche Bank

Auction Preview: 3s, 10s, and Bonds

Treasury will sell a total of \$58 billion notional securities worth roughly the same in ten-year cash equivalent through three- and ten-year notes and 30-year bond auction next week. The auction will settle on Tuesday, September 15, against an estimated \$32 billion of coupon securities on the same day. The combined customer participation of this set of auction decreased for the third straight month to 63% from 64.2% in July, but remained above its one-year average of 62.2%. Direct bidders declined to a three-year record low of 7.7% from 11.9% in July (1yr avg. 12.3%). However, indirect bidders took down 55.3% of the supply up from July's 52.2%, and beat the average 49.9% for the seventh month in a row.

3-year note

Indirect bidder participation increased to 52.8% from July's 47.7%, above the one-year average of 45.7% in every month since last December. However,



direct bidders dropped to 8.2% from 13.9% in July (12.3% average). The combined customer participation of 61.0% was close to the 61.6% in July and remained above its one-year average 58% for the sixth straight month. Allotments share to investment funds rose to a record 45.3% from July's 38.9%, and compares with the one-year average of 35.4%. However, the allotments share to foreign and international investors dropped to 13.5% from July's 20.1%, and was soft as compared to the average 19.2% for the first time since April. The bid-to-cover ratio bounced back to 3.34 from 3.16 in July, above the average of 3.29. The auction stopped on the screws for the second straight month.

Dealer positioning in two- to three-year Treasuries increased by \$1.6 billion from the last auction to \$1billion as of August 26.

### 3-year note auction statistics

	Size (\$bn)	Primary Dealers	Direct Bidders	Indirect Bidders	Cover Ratio	Stop-out Yield	1PM WI Bid	BP Tail
<i>1yr Avg</i>	\$24.8	42.0%	12.3%	45.7%	3.29			-0.2
<b>Aug-15</b>	<b>\$24.0</b>	<b>39.0%</b>	<b>8.2%</b>	<b>52.8%</b>	<b>3.34</b>	<b>1.013</b>	<b>1.013</b>	<b>0.0</b>
Jul-15	\$24.0	38.4%	13.9%	47.7%	3.16	0.932	0.933	0.0
Jun-15	\$24.0	39.6%	9.7%	50.7%	3.33	1.125	1.124	0.1
May-15	\$24.0	35.7%	11.6%	52.7%	3.34	1.000	1.005	-0.5
Apr-15	\$24.0	39.5%	11.1%	49.4%	3.25	0.865	0.866	-0.1
Mar-15	\$24.0	40.5%	8.0%	51.4%	3.33	1.104	1.110	-0.6
Feb-15	\$24.0	43.9%	7.2%	48.9%	3.34	1.050	1.056	-0.6
Jan-15	\$24.0	39.4%	14.8%	45.8%	3.33	0.926	0.933	-0.6
Dec-14	\$25.0	47.7%	10.1%	42.2%	3.24	1.066	1.066	0.0
Nov-14	\$26.0	47.1%	15.2%	37.7%	3.18	0.998	0.997	0.1
Oct-14	\$27.0	47.0%	17.4%	35.5%	3.42	0.994	0.997	-0.3
Sep-14	\$27.0	46.6%	20.3%	33.1%	3.17	1.066	1.064	0.2

Source: US Treasury and Deutsche Bank

### 10-year note

Indirect bidder participation increased to 60.1% from July's 58.1%, beating its one-year average of 54.9% for the seventh straight month. Direct bidders took down 5.8% of the supply, their lowest of the last three years and compares with the average 11.1%. The combined customer participation declined to 66% from 70.2% in July, in line with the one-year average. The allotments share to investment funds decreased to 41.3% from 45.3% of the auction in July, but was still above its one-year average 40.1%. However, foreign and international investor share increased to 22.7% from July's 21.7%, a touch below the average 23.0%. The bid-to-cover ratio fell to 2.40 from July's 2.72, the lowest since March 2009, and well below the average of 2.65. The auction tailed by 0.8bp for the first time in the last seven months.

Dealer net shorts in seven-to eleven-year Treasuries increased by \$1.8 billion from around the last auction to \$3.9 billion as of August 26.



### 10-year note auction statistics

	Size (\$bn)	Primary Dealers	Direct Bidders	Indirect Bidders	Cover Ratio	Stop-out Yield	1PM WI Bid	BP Tail
<i>1yr Avg</i>	\$ 22.0	34.0%	11.1%	54.9%	2.65			-0.2
<b>Aug-15</b>	\$ 24.0	34.0%	5.8%	60.1%	2.40	2.115	2.107	0.8
Jul-15	\$ 21.0	29.8%	12.1%	58.1%	2.72	2.225	2.232	-0.7
Jun-15	\$ 21.0	30.0%	12.1%	57.9%	2.74	2.461	2.473	-1.2
May-15	\$ 24.0	18.9%	20.9%	60.2%	2.72	2.237	2.256	-1.9
Apr-15	\$ 21.0	32.2%	9.3%	58.5%	2.62	1.925	1.928	-0.3
Mar-15	\$ 21.0	31.2%	10.2%	58.6%	2.65	2.139	2.147	-0.8
Feb-15	\$ 24.0	27.8%	12.7%	59.5%	2.62	2.000	2.011	-1.1
Jan-15	\$ 21.0	40.8%	9.2%	50.0%	2.61	1.930	1.917	1.3
Dec-14	\$ 21.0	39.3%	6.9%	53.8%	2.97	2.214	2.217	-0.3
Nov-14	\$ 24.0	42.0%	13.4%	44.7%	2.52	2.365	2.37	-0.5
Oct-14	\$ 21.0	49.0%	6.6%	44.4%	2.52	2.381	2.366	1.5
Sep-14	\$ 21.0	33.5%	13.5%	53.0%	2.71	2.535	2.532	0.3

Source: US Treasury and Deutsche Bank

### 30-year bond

Direct bidder participation increased to 9.9% of the supply from 8.1% in July, but still below the one-year average of 14.4%. Indirect bidders took down 51.9% in August, almost unchanged from July and beat their one-year average of 49.4% for the seventh straight month. The combined customer participation increased to 61.8% from 59.2% in July, but remained below its one-year average of 63.8% for the second straight month. Allotments share to investment funds declined to 48.1% from 49.1% in July, below the one-year average of 48.5% for the first time in the last four months. The allotments share to foreign and international investors increased to 11.4% from 7.7% of the auction in July, but remained below the average of 12.5%. The bid-to-cover ratio of 2.26 was almost the same as in July and compares with the average 2.36. The last auction tailed by 2.2bp, the most in the last five refunding auctions.

Dealer net longs in more than eleven-year Treasuries increased by \$1.1 billion to \$12.6 billion over the week ended on August 26

### 30-year bond auction statistics

	Size (\$bn)	Primary Dealers	Direct Bidders	Indirect Bidders	Cover Ratio	Stop-out Yield	1PM WI Bid	BP Tail
<i>1yr Avg</i>	\$14.0	36.2%	14.4%	49.4%	2.36			0.8
<b>Aug-15</b>	\$ 16.0	38.2%	9.9%	51.9%	2.26	2.880	2.858	2.2
Jul-15	\$ 13.0	40.8%	8.1%	51.1%	2.23	3.084	3.070	1.4
Jun-15	\$ 13.0	33.6%	14.4%	52.0%	2.54	3.138	3.149	-1.1
May-15	\$ 16.0	38.0%	11.1%	50.8%	2.20	3.044	3.023	2.1
Apr-15	\$ 13.0	41.8%	7.0%	51.3%	2.18	2.597	2.567	3.0
Mar-15	\$ 13.0	36.6%	11.6%	51.9%	2.18	2.681	2.662	1.9
Feb-15	\$ 16.0	35.1%	15.5%	49.4%	2.26	2.560	2.555	0.5
Jan-15	\$ 13.0	37.4%	13.7%	48.9%	2.32	2.430	2.411	1.9
Dec-14	\$ 13.0	25.9%	24.3%	49.8%	2.76	2.848	2.872	-2.4
Nov-14	\$ 16.0	42.5%	13.8%	43.8%	2.29	3.092	3.078	1.4
Oct-14	\$ 13.0	32.2%	21.5%	46.2%	2.40	3.074	3.071	0.3
Sep-14	\$ 13.0	32.8%	21.8%	45.5%	2.67	3.240	3.261	-2.1

Source: US Treasury and Deutsche Bank



United States

Credit  
HY Strategy  
IG Strategy

Oleg Melentyev, CFA  
Strategist

Daniel Sorid  
Strategist

## US Credit Strategy

### Volatility This High Tends To Last

#### Aftershocks lasting for weeks/months usually follow spikes like this

As the dust from initial shake-up in global risk assets last week began to settle, markets turned to soul-searching. Was that a flash crash or not? How much did poor summer liquidity contribute? What part did new regulations play? Did markets “overreact”, or was the move supported by deteriorating macro fundamentals? Will the Fed hike or do QE4? Rarely did opinions appear to vary this greatly over such a wide set of important issues.

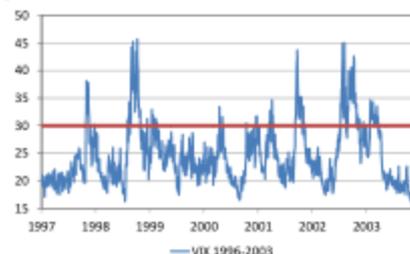
The extent of volatility was of course incredible. From a 7x sigma move in equities and all-time high change in vol of vol on Monday, to 700pts of total travel distance by S&P500 during the week, to four consecutive days of 6x-plus sigma moves in oil, recent trading sessions were nothing short of extraordinary. One particular development that gained some attention but still lacks proper appreciation by the market, in our view, is a failure to price dozens of equity ETFs on last Monday opening, a development that could have long-lasting repercussions for this \$2trln AUM industry. As it often happens, this surprise development exposed how far off the reality perceptions stood on the topic of liquidity. Whereas so many pundits predicted the day when HY/IG ETFs will fail to clear, plain-vanilla equity ETFs failed to do so, while no issues were reported in credit space.

The VIX index has closed at above 30pts for three days in a row early last week, and returned there this Tuesday. The significance of this level comes from historical experience shown in two graphs on the right. Here, for the sake of better readability, we have broken down its time series to 1997-2003 and 2007-2011, and highlighted the 30pt level with a red line (2004-2006 and 2012-2015 are omitted as the index never reached 30pts in those years). The graphs seem to suggest that once volatility jumps to 30pts on the VIX scale, it tends to stay there for at least a few weeks or even months, with a total of seven distinct periods confirming this observation.

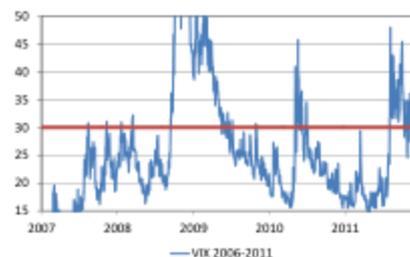
The only exceptions that happened during the past 20 years have taken place in early 2000 and late 2007/early 2008. So technically speaking, even periods of quick reversal from a 30pt VIX levels have previously proven to be prescient indicators of more volatility to come down the road. We would thus caution our readers not to be too quick in dismissing what happened over the past two weeks as simple “overreaction”. We explore the volatility angle of this developing story in greater detail on the following pages.

In the credit world, spreads have naturally widened during this past week, albeit to a much lesser extent than what would have been expected given the volatility in equities. Our DM USD HY index has widened initially from 550bp earlier last week to 600 by Monday, and then retraced most of that range, closing at 566. In IG, the identical range was 157 – 165 – 163. Negative fund flows have reemerged in credit, with EPFR showing \$5bn out of HY last week, the seventh-largest reading on record. Combined HY outflows since June have claimed \$18bn, compared to a \$38bn withdrawal in 2H 2014. The takeaway here is that HY market’s ability to offset outflows was poorer in this episode compared to 2H 2014, as evidenced by a similar degree of widening (+130bp last 3 mo vs +150bp in 2014) on half the size of outflows.

Figure 1: VIX index 1997-2003



VIX index 2006-2011



Source: Deutsche Bank

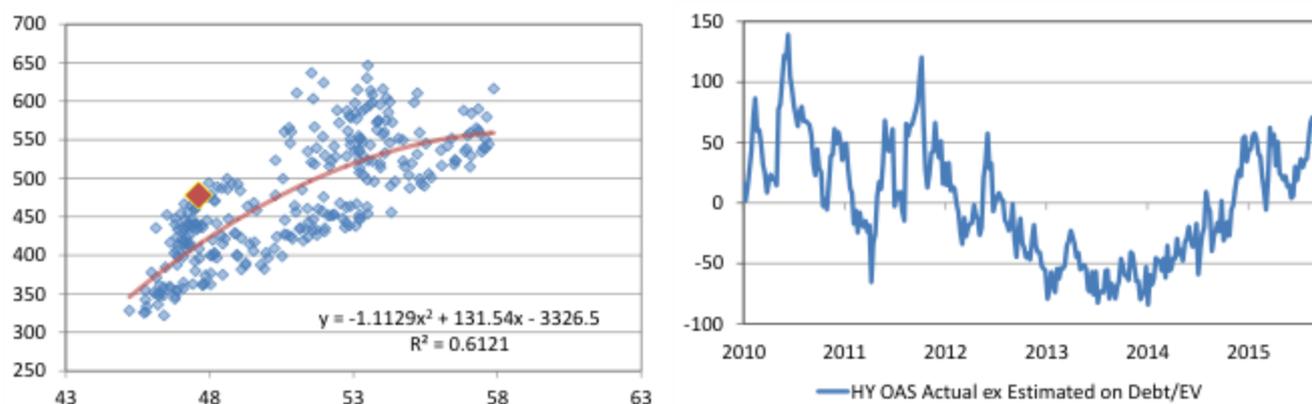


Following the recent moves across asset classes, our relative value models are showing HY as being 50-75bp tight to IG, and 75-85bp tight to implied volatility in equities, FX, and rates. Additionally, we estimate that HY bonds are trading about 65bps wide relative to their equity valuations, as shown in Figure 2 below. In other words, equities still appear to be the most overpriced asset in our relative valuation framework.

To arrive at our relative equity-vs-HY signal, we take all public HY issuers with a minimum of \$1bn of debt outstanding and Total Debt/Enterprise Value ratio in the range of 20% - 85%. The cutoff points here are used to exclude low-levered names with little meaningful spread sensitivity to equity values, and those deeply distressed names with D/EVs approaching 100%. Live equity valuations are reflected in this calculation as components of enterprise value. We then aggregate these values up to a market level and apply total debt weights capped at 2% to each issuer D/EV metric. On the bond side, we take 5yr benchmark-sized most recently issued senior unsecured bond spread levels, and aggregate them up using the same weighting methodology. The resulting combination provides a clean view of relative bond-vs-equity valuations adjusted for leverage and matched issuer-by-issuer. Each dot on the scatter plot represents a weekly observation going back to Jan 2010. Our sample includes only about 120 issuers, given the restrictions on bond liquidity/issuer size described above.

At current levels, spreads in are about 65bps wide to respective debt/EV readings, or equity valuations adjusted for leverage.

Figure 2: US HY Issuer spreads vs Debt/Enterprise Ratio, combined for the market, total-debt weighted



Source: Deutsche Bank

Other measures of relative value we have recently introduced, the proportion of distressed issuers in HY stood at 18.3% in US, versus 23.6% in EM following market repricing. Our argument here remains that this differential should be substantially wider (more EM names trading distressed vs US), given that EM HY market has twice as much weight in commodity names relative to US.

Furthermore, our GDP-weighted basket of EM currencies devalued further in recent days, losing 2% since Aug 21, and bringing the cumulative devaluation in EM to 41% since a year ago. This factor is important in two respects: (a) it points to potential headwinds many EM corp issuers are facing in servicing their USD denominated debt; and (2) currencies continued to devalue even over the past week on top of extreme weakness going into it. As we have



shown in our last [report](#), issuers in many important EM domiciles, such as Chile, Mexico, Brazil, Indonesia, Russia, and Turkey have more than half of their total debt denominated in external currencies, predominantly in USD. It is also important to keep in mind that China's corporates have the lowest external debt burden of all major EM countries, at less than 20%. The focus thus should not be just China, but a potential for spillovers to the rest of EM.

Finally, we have suggested that some EM IG commodity names are still trading tight, in our opinion, given the prevailing macro environment. Following the market repricing last week, all these names are now trading meaningfully wider, including Pemex at 255bp (+25bp), Ecopetrol at 375 (+15), Vale at 310 (+20), Codelco at 235 (+20). While we view this move as one in the right direction, it still falls short of where it needs to be in this environment. In all cases, these EM names are trading roughly in line with US-domiciled issuers in the same industries with similar leverage, something that is unsustainable longer-term, in our opinion. We note that EM oil names have traded wider in the past week even in the face of a net 15% rebound in oil prices.

Additionally, three largest Brazilian banks – Banco do Brasil, Bradesco, and ITAU – are all trading in the 450-500bp spread range, while all being technically rated as IG at this point<sup>1</sup>. We view these levels as incompatible with being IG in the longer run, particularly for a financial institution, relying heavily on its ability to access capital markets.

#### Volatility risk premia

Because the VIX has breached a level of 30 so rarely over the past decade, we looked to expand the number of recent historical parallels to last week's equity market shock through an alternative measure of implied vol *relative to* the level of volatility actually experienced in the market over the prior year. What we find is that such shocks tend to involve an extended period of market choppiness that runs its course over a period measured in weeks and months, not in days.

The implied-vs-realized vol measure is considered to be a proxy for the volatility risk premium that rises and falls based upon investor risk version<sup>2</sup> and expectations that volatility might break out from trend levels. In the years leading up to the financial crisis of 2008, for example, realized volatility was substantially lower than it is today, which created a lower threshold for implied volatilities to signal extreme levels of investor fear. Similarly, amid the choppiness of the equity markets during the period immediately after the 2008 financial crisis, implied volatilities remained high on an absolute basis but were actually lower than the trend at the time, suggesting an improvement of market conditions.

Looking most recently, implied volatility on three-month, at-the-money SPX options reached a level that was nearly double the level of realized volatility over the past 12 months, and has since settled into a 50% premium. The table shown here lists the ten prior episodes when the ratio of 3m ATM implied to 12m realized volatility exceeded 1.5x, as well as the number of days that implied vols remained above the equity market performance over the episode. (We measure equity performance beginning a week before the day when the vol risk premium rose above 1.5x against the low print on the S&P 500 over the episode.) One observation is that these episodes are associated with an average decline in the S&P index of 12%, or if the 2007-8 crisis episodes are

Figure 3: High vol premium episodes

Start	Length	S&P Drop	Days to S&P Low
Jul '04	17	-3%	17
May '06	57	-5%	22
Feb '07	6	-6%	6
Jun '07	83	-8%	50
Oct '07	110	-16%	95
Oct '08	45	-35%	44
May '10	57	-15%	57
Aug '11	66	-17%	62
Oct '14	10	-5%	5
Dec '14	50	-5%	5
Aug '15	12	-11%	4
Avg	50	-12%	36
ex '07-8	38	-8%	25

Source: Deutsche Bank

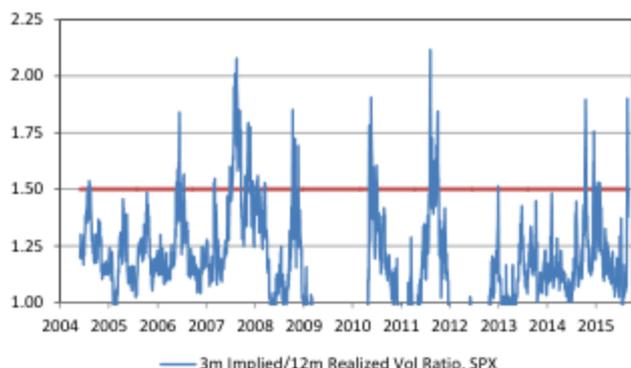
<sup>1</sup> ITAU is a five-B split-rated issuer.

<sup>2</sup> See, for example, [http://www.bis.org/publ/qtrpdf/r\\_qt1409v.htm](http://www.bis.org/publ/qtrpdf/r_qt1409v.htm)



removed, 8%. This puts the current episode's maximum decline of 11% in good company with historical episodes. But other aspects of the historical record suggest that we may not out of the woods yet. For one, previous episodes of shocks to the volatility risk premium tend to last substantially longer than two weeks; they take an average of 50 days, or 38 days if the crisis-era episodes are excluded. (While there are some previous examples of "short" vol shocks in early 2007 and October 2014, these might be more appropriately viewed as early warning indicators for more extended periods of high volatility, and less as standalone examples.) Also, the equity markets have tended to hit rock bottom during these episodes an average of 30 days or so after implied volatility rises. The S&P 500 hit its low just four days after the vol shock, which seems out of line with historical patterns.

Figure 4: Equity implied volatility relative to realized vol



Source: Deutsche Bank

Figure 5: S&P level during elevated volatility episodes



Source: Deutsche Bank

The shock to the VIX index can be attributed to three inter-related measures of equity volatility: the general level of at-the-money volatility relative to the trend of realized volatility, the premium for options expiring in the near-term (1m) relative to somewhat longer-expiry (3m) options, as well as the premium for out-of-the-money strikes over at-the-money strikes. An additional way to measure the magnitude of last week's equity market shock is to consider the elevated level of volatility risk premium, measured here as the degree to which option-implied volatility exceeds realized volatility. Finally, it's worth observing that credit markets are also participating in these developments. The implied-to-realized ratio on the CDX indices is also elevated, sitting in the 90th<sup>h</sup> percentile over the last 3.5 years for 1m options on IG CDX, while the equity risk premium is in the 99th percentile over the same period.

### Conclusions

Overall, we find market moves over the past week were in line with our expectations, directionally, although their speed, volatility, and reversals were certainly as much a surprise to us as they were to most other investors. We thought equities and other risk asset classes were much closer to what we perceive to be fair value at their bottom last Tuesday than they were following a retracement. Developments in China could have significant repercussions for broader EM universe, and we don't find EM credit spreads to be properly reflecting those consequences. We see main risks associated with EM credit assets being forced to re-price more substantially and having second-order effects on US credit markets. Additionally, historical evidence suggests that periods of extreme volatility similar to those witnessed over the past few sessions tend to exhibit propensity for aftershocks, usually lasting for weeks if not months.

Figure 6: Seasonality trends in HY/IG

Average HY OAS monthly change



Average IG OAS monthly change



Source: Deutsche Bank



In terms of relative value we find IG to be priced most attractively here, although this is unlikely to prevent it from widening in absolute terms, if broad market volatility persists. A +120bp repricing in HY over the past three months has moved valuations closer to reality, in our opinion, although it continues to trade 50-75bp tight to IG, and 75-85bp tight to implied volatility in equities, FX, and rates. At the same time HY is trading 65bp wide to a basket of issuer-matched equities adjusted for leverage (via debt/EV ratios), and this still suggests to us further vulnerability in broader equity space. Finally, September is the last month of the May-Sept seasonally-weak stretch in credit (Figure 3). Our targets in US credit thus remain 650bp all-in HY and 575bp ex-energy (+85bp and +70bp from here respectively), and 170bp in IG (+6bp).

#### The Fed

Last week's volatility naturally triggered a discussion whether the Fed is going to be able to proceed with its intentions to raise rates in the near future. Earlier voices and opinions on this matter seemed to side on with the view that it is unlikely to be able to do so, and interest rate derivatives have shown a substantially lower probability of the move in September. And yet Fed speakers who had a chance to react to recent events publicly recently have mostly sided with the narrative that while additional level of uncertainty has been introduced by recent volatility, the initial move in September, and even October, are still very much on the table. As a result, the forwards were still pricing in three full, and potentially four rate hikes before Dec 2016, and the 2yr Treasury yield was at 72bp, or 3bp away from its 2015 highs, at the time of this writing.

This reaction is not surprising to us, as we have expressed our opinion that the bar is set very high for the Fed to pull the plug on its intentions to raise rates later this year. We continue to believe that it would take a lot more than S&P500 at 5% below its average level in 2015, where it stands today, for the Fed to seriously consider changing its plans. We would have to see more volatility and more negative (and sustained) reaction in US markets before the Fed is forced to step back. And while this view almost creates a breeding ground for more volatility, it also sets the stage for its eventual undoing as the risk of Fed weighing in against the market weakness will remain ever more present in coming weeks and months.

The full list of our existing and past trade recommendations is available under [\[REDACTED\]](#) >> Legal >> US Credit Strategy.



## Chart Pack

### DB Treasury Yield Forecasts

	2Y	5Y	10Y	30Y
2015 Q3	0.75	1.60	2.25	2.95
2015 Q4	1.15	1.90	2.45	3.10
2016 Q1	1.20	2.00	2.75	3.15
2016 Q2	1.20	2.25	3.00	3.25

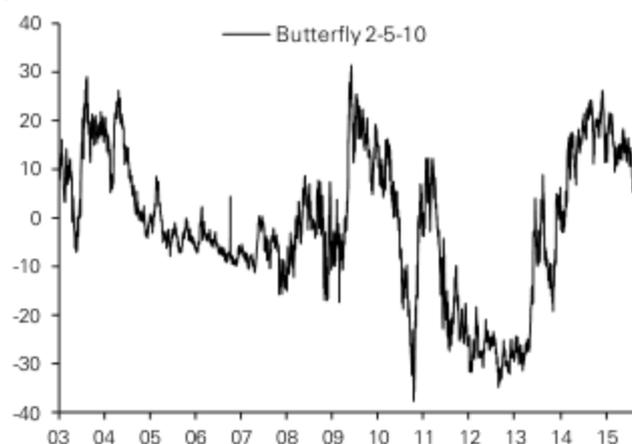
Source: Deutsche Bank  
Note: Forecasts reflect expectations for end-of-period.

### 2-3-5 butterfly, 50/50 weight, long bullet



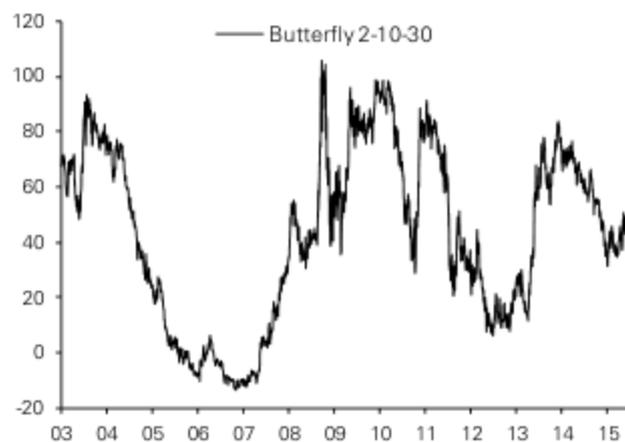
Source: Deutsche Bank

### 2-5-10 butterfly, 50/50 weight, long bullet



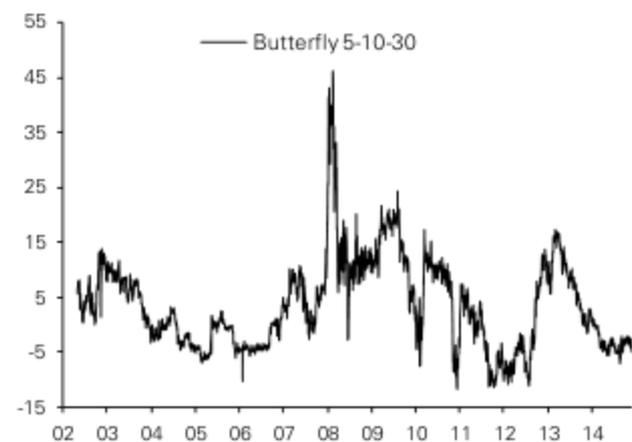
Source: Deutsche Bank

### 2-10-30 butterfly, 50/50 weight, long bullet



Source: Deutsche Bank

### 5-10-30 butterfly, 50/50 weight, long bullet



Source: Deutsche Bank

### 5-7-10 butterfly, 50/50 weight, long bullet



Source: Deutsche Bank

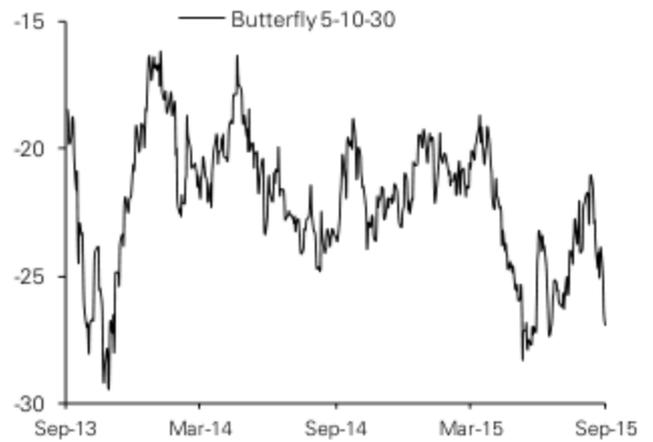


2-5-10 butterfly (PCA 65.88% and 34.12% risk on the wings)



Source: Deutsche Bank

5-10-30 butterfly (PCA 34.92% and 65.08% risk on the wings)



Source: Deutsche Bank

2-10-30 butterfly (PCA 26.14% and 73.86% risk on the wings)



Source: Deutsche Bank

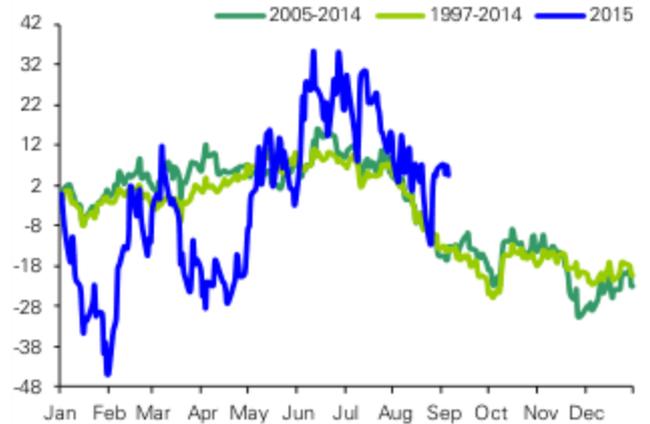


30Y Treasury yield seasonals (Change since Jan-1)



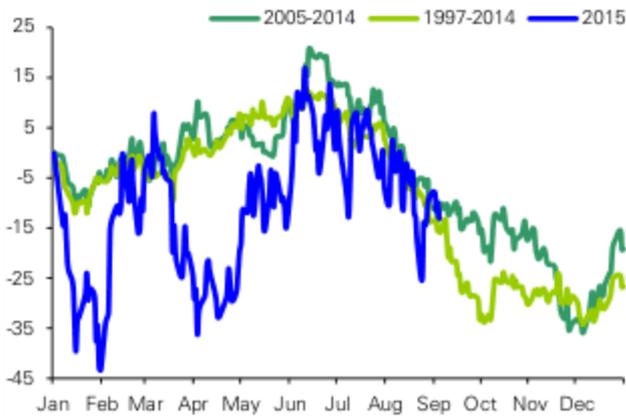
Source: Deutsche Bank

10Y Treasury yield seasonals (Change since Jan-1)



Source: Deutsche Bank

5Y Treasury yield seasonals (Change since Jan-1)



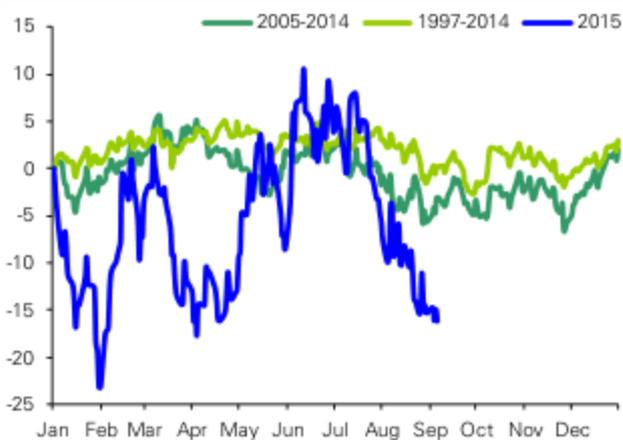
Source: Deutsche Bank

2Y Treasury yield seasonals (Change since Jan-1)



Source: Deutsche Bank

2Y/5Y slope seasonals (Change since Jan-1)



Source: Deutsche Bank

2Y/10Y slope seasonals (Change since Jan-1)



Source: Deutsche Bank

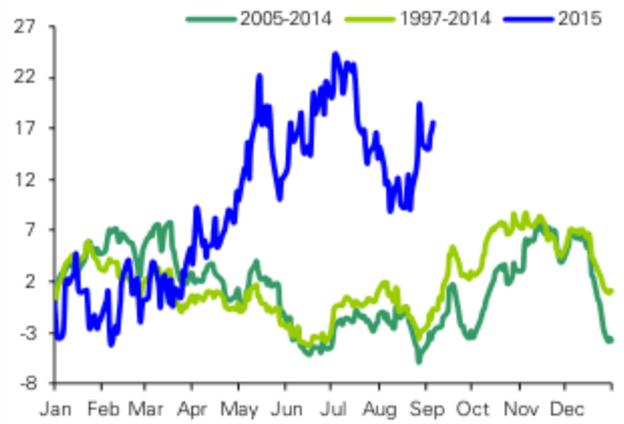


2Y/30Y slope seasonals (Change since Jan-1)



Source: Deutsche Bank

5Y/10Y slope seasonals (Change since Jan-1)



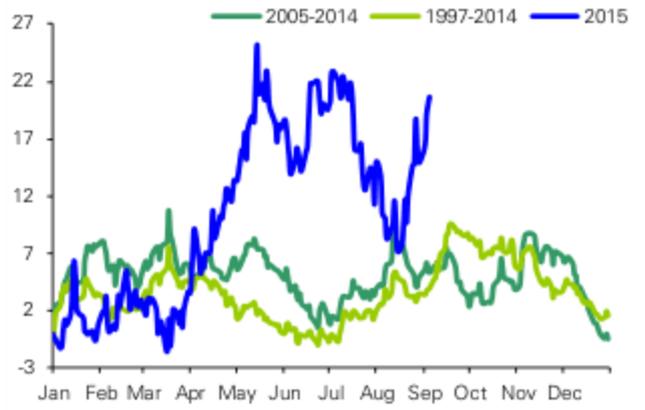
Source: Deutsche Bank

5Y/30Y slope seasonals (Change since Jan-1)



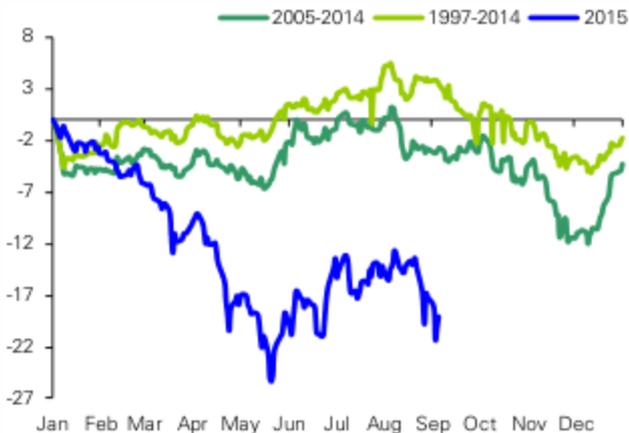
Source: Deutsche Bank

10Y/30Y slope seasonals (Change since Jan-1)



Source: Deutsche Bank

30Y swap spread seasonals (Change since Jan-1)



Source: Deutsche Bank

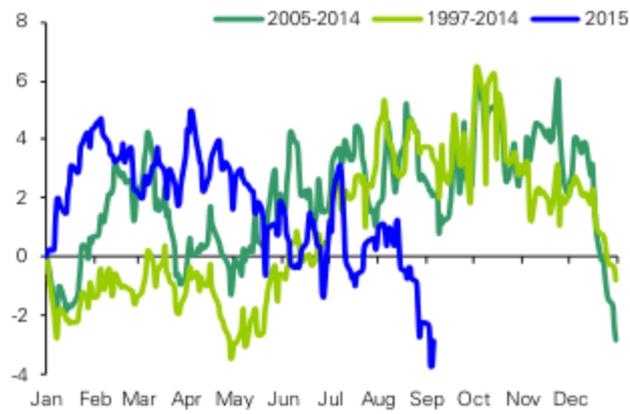
10Y swap spread seasonals (Change since Jan-1)



Source: Deutsche Bank

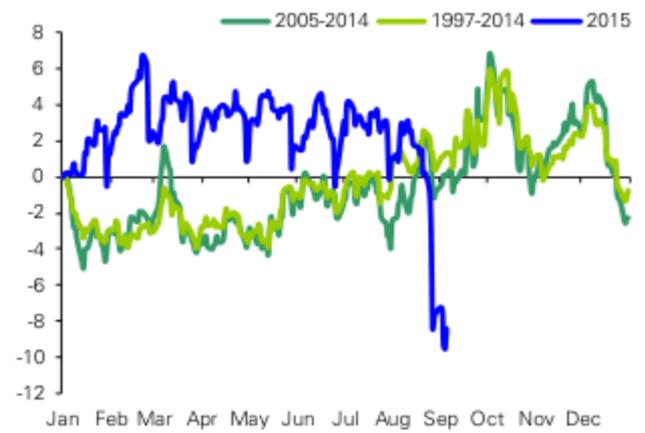


5Y swap spread seasonals (Change since Jan-1)



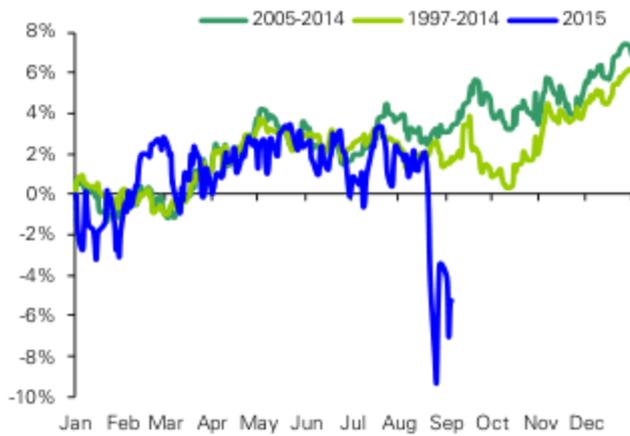
Source: Deutsche Bank

2Y swap spread seasonals (Change since Jan-1)



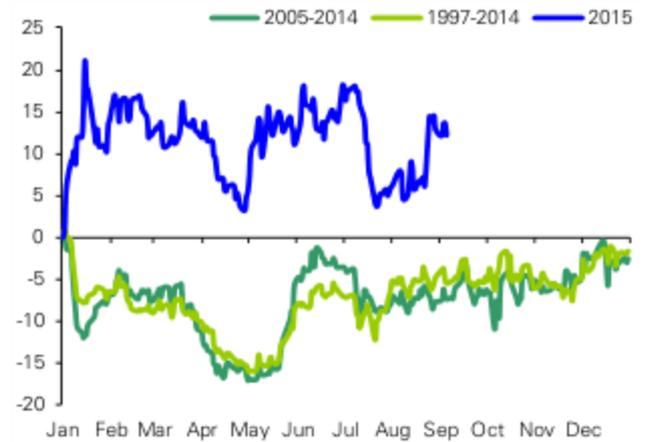
Source: Deutsche Bank

S&P Index seasonals (Change since Dec-31)



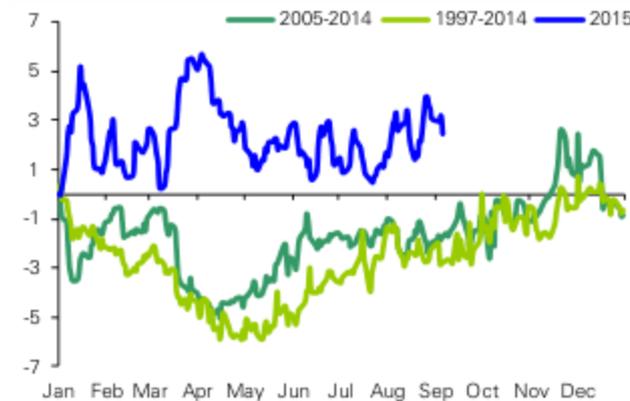
Source: Deutsche Bank

3M10Y Implied vol seasonals (Change since Dec-31)



Source: Deutsche Bank

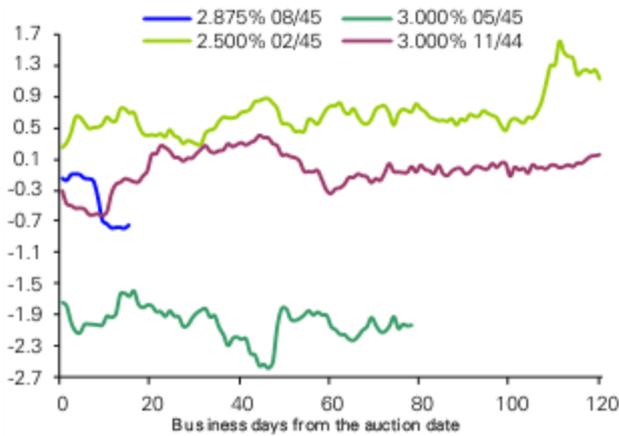
5Y10Y Implied vol seasonals (Change since Dec-31)



Source: Deutsche Bank

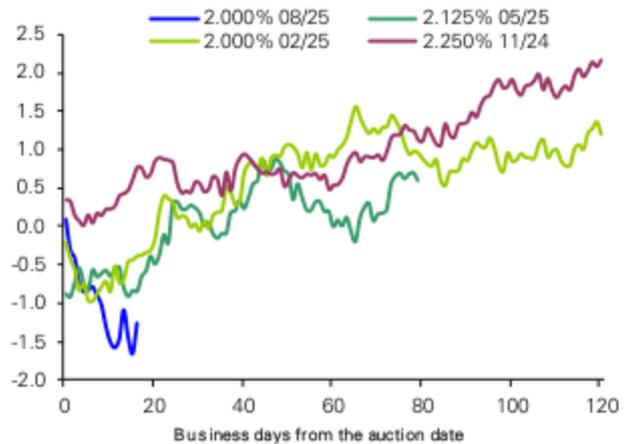


30Y Treasury roll business days from auction



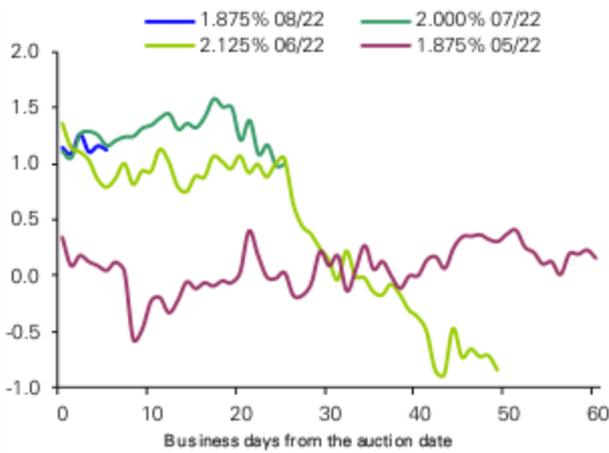
Source: Deutsche Bank

10Y Treasury roll business days from auction



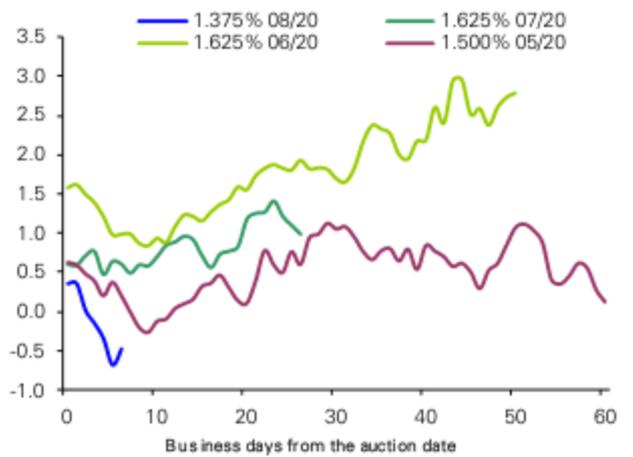
Source: Deutsche Bank

7Y Treasury roll business days from auction



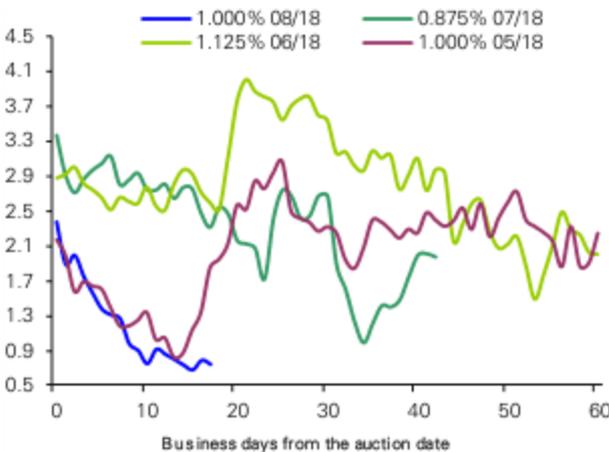
Source: Deutsche Bank

5Y Treasury roll business days from auction



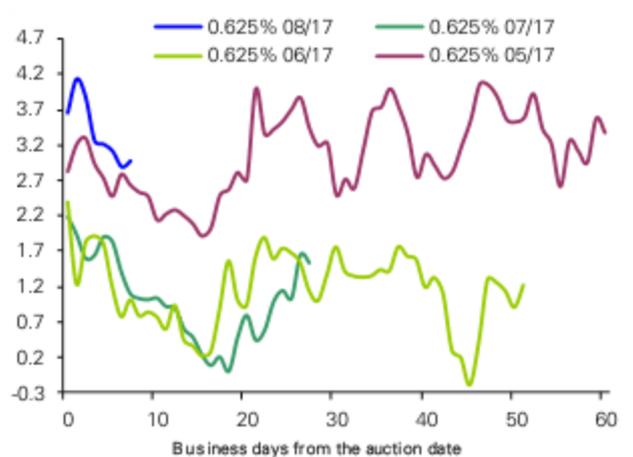
Source: Deutsche Bank

3Y Treasury roll business days from auction



Source: Deutsche Bank

2Y Treasury roll business days from auction



Source: Deutsche Bank



### Top 15 USD Flatteners

Rank	Trade	1y Carry	Imp. Vol	Ratio	Percentile	Min	25th	Median	75th	Max
1	3M 1Y2Y	3.3	17.9	0.2	20	-1.7	0.3	0.7	1.1	4.2
2	6M 1Y2Y	1.1	17.3	0.1	15	-1.4	0.3	0.6	1.1	4.5
3	3M 1Y3Y	-2.6	30.4	-0.1	15	-1.5	0.2	0.5	0.9	3.9
4	6M 1Y3Y	-4.7	29.2	-0.2	15	-1.3	0.1	0.5	0.9	4.0
5	1Y 1Y2Y	-3.4	14.5	-0.2	13	-1.5	0.2	0.6	1.0	4.6
6	3M 1Y5Y	-10.8	45.2	-0.2	17	-1.6	-0.1	0.4	0.8	4.2
7	6M 1Y5Y	-13.2	44.3	-0.3	20	-1.5	-0.1	0.4	0.7	3.9
8	3M 20Y25Y	-1.3	3.6	-0.4	57	-2.5	-0.7	-0.4	-0.1	1.7
9	3M 1Y7Y	-20.5	53.3	-0.4	17	-1.8	-0.2	0.2	0.6	4.3
10	1Y 1Y3Y	-9.4	24.3	-0.4	16	-1.6	-0.1	0.5	0.9	3.4
11	3M 2Y3Y	-5.9	13.9	-0.4	17	-1.9	-0.3	0.3	0.8	3.0
12	6M 1Y7Y	-22.4	52.3	-0.4	20	-1.5	-0.3	0.2	0.5	3.5
13	6M 2Y3Y	-5.9	13.3	-0.4	20	-1.7	-0.3	0.4	0.8	3.2
14	3M 3Y5Y	-8.1	18.4	-0.4	28	-1.7	-0.5	0.0	0.4	3.1
15	6M 3Y5Y	-8.5	18.8	-0.4	32	-1.4	-0.6	0.0	0.4	1.9

Source: Deutsche Bank

### Top 15 USD Steepeners

Rank	Trade	1y Carry	Imp. Vol	Ratio	Percentile	Min	25th	Median	75th	Max
1	3M 25Y30Y	2.0	2.2	1.0	82	-3.2	0.2	0.5	0.8	4.5
2	6M 25Y30Y	1.8	2.1	0.9	85	-2.3	0.2	0.6	0.8	2.3
3	3M 12Y15Y	4.2	5.1	0.8	68	-1.2	0.2	0.6	0.9	1.9
4	3M 5Y20Y	30.9	37.9	0.8	70	-1.4	0.2	0.5	0.9	2.0
5	3M 7Y15Y	17.2	21.2	0.8	70	-1.0	0.2	0.6	0.9	1.9
6	3M 5Y15Y	26.9	33.2	0.8	72	-1.4	0.1	0.5	0.9	1.8
7	3M 7Y20Y	21.2	26.1	0.8	69	-1.0	0.2	0.6	0.9	2.2
8	3M 5Y30Y	34.3	43.0	0.8	68	-1.3	0.2	0.5	0.9	2.0
9	3M 10Y15Y	7.9	10.0	0.8	64	-1.7	0.2	0.7	0.9	2.8
10	1Y 25Y30Y	1.7	2.1	0.8	71	-1.6	0.2	0.6	0.8	1.6
11	3M 12Y20Y	8.2	10.4	0.8	67	-1.4	0.2	0.6	0.9	2.4
12	3M 5Y12Y	22.7	28.9	0.8	74	-1.7	0.1	0.4	0.8	1.7
13	3M 7Y12Y	13.0	16.5	0.8	71	-1.3	0.2	0.5	0.8	1.9
14	3M 5Y25Y	32.2	41.1	0.8	68	-1.3	0.2	0.5	0.9	2.0
15	3M 10Y20Y	11.9	15.2	0.8	64	-1.2	0.2	0.7	0.9	2.3

Source: Deutsche Bank

### Top 15 EUR Flatteners

Rank	Trade	1y Carry	Imp. Vol	Ratio	Percentile	Min	25th	Median	75th	Max
1	3M 2Y3Y	6.6	9.4	0.7	73	-2.0	-0.3	0.3	0.7	3.7
2	6M 2Y3Y	6.0	9.3	0.6	72	-1.7	-0.3	0.2	0.7	2.4
3	1Y 2Y3Y	5.2	9.5	0.5	74	-1.2	-0.2	0.2	0.6	1.5
4	3M 2Y5Y	13.3	28.0	0.5	69	-1.8	-0.4	0.1	0.6	3.0
5	6M 2Y5Y	12.2	26.0	0.5	70	-1.5	-0.3	0.1	0.5	1.8
6	1Y 2Y5Y	10.3	24.4	0.4	75	-1.1	-0.3	0.1	0.4	1.3
7	6M 3Y5Y	6.2	16.9	0.4	72	-1.2	-0.3	0.1	0.4	1.2
8	3M 2Y7Y	15.5	44.3	0.3	67	-1.8	-0.4	0.1	0.5	2.9
9	6M 2Y7Y	14.0	40.5	0.3	70	-1.4	-0.3	0.1	0.4	1.6
10	3M 3Y5Y	6.6	19.3	0.3	69	-1.3	-0.3	0.1	0.4	1.4
11	1Y 3Y5Y	5.1	15.5	0.3	78	-1.0	-0.3	0.1	0.3	1.0
12	1Y 2Y7Y	11.3	37.7	0.3	76	-1.0	-0.3	0.1	0.3	1.1
13	6M 3Y7Y	7.9	31.8	0.3	76	-1.1	-0.4	0.0	0.2	1.0
14	3M 3Y7Y	8.8	35.6	0.2	70	-1.4	-0.4	0.0	0.3	1.4
15	1Y 3Y7Y	6.1	29.5	0.2	80	-0.9	-0.3	0.0	0.2	0.8

Source: Deutsche Bank

### Top 15 EUR Steepeners

Rank	Trade	1y Carry	Imp. Vol	Ratio	Percentile	Min	25th	Median	75th	Max
1	3M 15Y25Y	6.7	9.3	0.7	78	-0.1	0.3	0.5	0.7	1.6
2	1Y 15Y20Y	4.4	6.2	0.7	90	0.0	0.3	0.5	0.6	0.9
3	3M 15Y20Y	4.3	6.1	0.7	80	-0.1	0.3	0.5	0.7	1.4
4	3M 15Y30Y	7.7	11.0	0.7	81	-0.1	0.2	0.4	0.6	1.4
5	1Y 15Y25Y	6.8	9.9	0.7	91	0.0	0.3	0.5	0.6	0.8
6	1Y 10Y25Y	13.6	20.1	0.7	72	-0.1	0.3	0.5	0.7	1.0
7	3M 20Y25Y	2.4	3.5	0.7	85	-0.1	0.2	0.4	0.6	1.3
8	1Y 10Y20Y	11.3	16.9	0.7	69	-0.1	0.3	0.5	0.7	1.1
9	1Y 10Y30Y	14.5	21.8	0.7	77	-0.1	0.3	0.5	0.7	0.9
10	6M 10Y30Y	14.3	21.6	0.7	77	-0.1	0.3	0.5	0.6	1.1
11	6M 10Y25Y	13.3	20.2	0.7	71	0.0	0.3	0.5	0.7	1.2
12	6M 15Y20Y	4.3	6.6	0.7	80	0.0	0.3	0.5	0.6	1.1
13	6M 10Y20Y	10.9	16.7	0.7	69	0.0	0.3	0.5	0.7	1.2
14	6M 15Y25Y	6.7	10.3	0.6	78	0.0	0.3	0.5	0.6	1.1
15	3M 10Y30Y	14.1	21.9	0.6	68	-0.1	0.3	0.5	0.7	1.4

Source: Deutsche Bank

### Top 15 JPY Flatteners

Rank	Trade	1y Carry	Imp. Vol	Ratio	Percent	Min	25th	Median	75th	Max
1	1Y 2Y3Y	3.8	4.3	0.9	99	-1.4	0.1	0.5	0.6	1.0
2	6M 2Y3Y	4.5	5.6	0.8	86	-1.7	0.2	0.5	0.7	1.7
3	1Y 2Y5Y	7.9	11.4	0.7	83	-1.6	0.1	0.5	0.6	1.2
4	3M 2Y3Y	5.4	8.2	0.7	72	-1.4	0.1	0.4	0.7	2.1
5	6M 2Y5Y	9.0	15.2	0.6	63	-1.8	0.1	0.5	0.7	1.6
6	1Y 1Y5Y	10.9	19.6	0.6	54	-1.8	0.3	0.5	0.7	1.4
7	3M 2Y5Y	10.0	18.3	0.5	59	-1.5	0.1	0.5	0.7	2.4
8	6M 1Y5Y	12.1	23.2	0.5	50	-2.0	0.3	0.5	0.7	1.9
9	1Y 1Y3Y	6.8	13.4	0.5	57	-1.8	0.2	0.5	0.7	1.9
10	6M 1Y3Y	7.5	14.9	0.5	53	-1.9	0.2	0.5	0.7	2.9
11	1Y 2Y7Y	9.7	20.0	0.5	58	-1.6	0.1	0.4	0.6	1.1
12	1Y 3Y5Y	4.0	8.4	0.5	55	-1.4	0.0	0.4	0.6	1.2
13	3M 2Y7Y	12.2	25.6	0.5	55	-1.8	0.1	0.4	0.6	2.0
14	6M 2Y7Y	11.1	23.2	0.5	54	-1.8	0.1	0.4	0.6	1.5
15	1Y 1Y7Y	12.7	27.2	0.5	46	-1.8	0.3	0.5	0.6	1.2

Source: Deutsche Bank

### Top 15 JPY Steepeners

Rank	Trade	1y Carry	Imp. Vol	Ratio	Percent	Min	25th	Median	75th	Max
1	6M 15Y20Y	2.1	6.6	0.3	16	-1.3	0.4	0.7	0.9	1.8
2	1Y 15Y20Y	2.4	8.6	0.3	6	-0.3	0.5	0.7	0.9	1.6
3	3M 15Y20Y	1.8	7.2	0.3	14	-3.8	0.4	0.6	0.9	2.4
4	6M 10Y20Y	1.7	13.2	0.1	9	-0.6	0.3	0.6	0.8	1.9
5	1Y 10Y20Y	2.2	18.5	0.1	5	-0.3	0.3	0.6	0.8	1.5
6	3M 10Y20Y	1.2	12.2	0.1	10	-1.2	0.3	0.5	0.8	2.7
7	6M 15Y30Y	5.2	106.9	0.0	1	-0.5	0.1	0.3	0.7	1.7
8	1Y 15Y30Y	5.6	125.1	0.0	1	-0.3	0.1	0.2	0.8	1.2
9	6M 10Y30Y	4.9	109.4	0.0	4	-0.6	0.1	0.3	0.7	1.7
10	1Y 7Y20Y	1.1	24.3	0.0	7	-0.3	0.2	0.4	0.6	1.1
11	1Y 10Y30Y	5.4	130.7	0.0	4	-0.4	0.1	0.3	0.8	1.2
12	3M 15Y30Y	5.0	128.8	0.0	2	-1.3	0.1	0.2	0.6	2.4
13	3M 10Y30Y	4.4	130.9	0.0	4	-0.9	0.1	0.3	0.6	2.4
14	6M 20Y30Y	3.2	102.2	0.0	2	-0.5	0.1	0.1	0.6	1.4
15	1Y 7Y30Y	4.3	137.3	0.0	5	-0.2	0.1	0.3	0.6	1.2

Source: Deutsche Bank

Carry is calculated for next 3 months and shown in annualized form.

Volatility is calculated as 1m realized for CAD and extracted from swaptions prices for other currencies.

Percentile statistics are calculated from a 10 year history.



### Top 15 CAD Flatteners

Rank	Trade	1y Carry	Rtld. Vol	Ratio	Percentile	Min	25th	Median	75th	Max
1	1Y 1Y2Y	13.6	17.0	0.8	79	-4.7	-0.1	0.4	0.7	3.5
2	3M 2Y3Y	8.4	10.6	0.8	91	-2.3	-0.3	0.2	0.5	1.5
3	1Y 1Y5Y	27.4	45.1	0.6	87	-2.4	-0.2	0.1	0.4	1.7
4	1Y 1Y3Y	19.5	33.1	0.6	79	-3.4	-0.1	0.2	0.5	2.5
5	6M 1Y3Y	12.1	20.9	0.6	59	-8.8	-0.2	0.4	1.1	6.7
6	1Y 1Y7Y	27.4	47.7	0.6	89	-2.2	-0.2	0.1	0.4	1.5
7	6M 1Y7Y	22.4	42.5	0.5	70	-4.1	-0.3	0.2	0.6	3.5
8	6M 1Y5Y	21.1	40.6	0.5	66	-5.1	-0.3	0.3	0.7	4.3
9	1Y 3Y5Y	7.9	15.5	0.5	97	-2.1	-0.3	-0.1	0.2	1.5
10	6M 2Y3Y	8.0	15.8	0.5	81	-2.5	-0.3	0.1	0.4	1.3
11	3M 2Y7Y	19.0	38.9	0.5	89	-2.8	-0.3	0.1	0.3	1.4
12	6M 2Y7Y	18.3	38.3	0.5	91	-2.5	-0.3	0.0	0.3	1.1
13	3M 2Y5Y	17.2	36.1	0.5	89	-2.6	-0.3	0.1	0.3	1.3
14	1Y 1Y10Y	24.6	52.6	0.5	91	-1.9	-0.2	0.1	0.3	1.1
15	6M 2Y5Y	17.0	36.4	0.5	91	-2.5	-0.3	0.0	0.3	1.2

Source: Deutsche Bank

### Top 15 CAD Steepeners

Rank	Trade	1y Carry	Rtld. Vol	Ratio	Percentile	Min	25th	Median	75th	Max
1	3M 1Y2Y	23.1	10.4	2.2	91	-12.8	-1.5	-0.5	0.5	18.5
2	3M 10Y20Y	12.8	12.6	1.0	81	-2.1	0.3	0.6	0.9	2.3
3	6M 10Y20Y	12.7	13.1	1.0	80	-1.0	0.3	0.6	0.9	1.7
4	3M 10Y25Y	15.1	15.9	1.0	84	-1.7	0.3	0.6	0.9	2.1
5	3M 10Y15Y	7.6	8.2	0.9	88	-3.7	0.2	0.5	0.8	3.1
6	6M 10Y25Y	15.0	16.2	0.9	84	-0.8	0.3	0.6	0.8	1.5
7	1Y 10Y20Y	13.5	15.1	0.9	80	-0.5	0.3	0.6	0.8	1.5
8	6M 10Y15Y	7.7	8.6	0.9	89	-1.9	0.3	0.5	0.7	1.8
9	6M 7Y20Y	14.7	16.7	0.9	80	-0.5	0.2	0.5	0.8	1.6
10	1Y 10Y15Y	8.4	9.7	0.9	90	-1.0	0.3	0.5	0.7	1.3
11	1Y 7Y20Y	16.4	19.0	0.9	81	-0.2	0.2	0.5	0.8	1.7
12	6M 7Y25Y	16.9	20.1	0.8	79	-0.4	0.2	0.5	0.8	1.5
13	6M 10Y30Y	16.5	20.0	0.8	88	-0.7	0.3	0.5	0.7	1.2
14	3M 10Y30Y	16.6	20.1	0.8	85	-1.3	0.3	0.5	0.7	2.3
15	1Y 10Y25Y	15.8	19.3	0.8	81	-0.4	0.3	0.6	0.8	1.3

Source: Deutsche Bank

### Top 15 AUD Flatteners

Rank	Trade	1y Carry	Imp. Vol	Ratio	Percent	Min	25th	Median	75th	Max
1	3M 3Y5Y	41.9	48.7	0.9	89	-1.4	-0.6	0.0	0.6	1.8
2	3M 2Y5Y	66.8	84.1	0.8	90	-1.2	-0.2	0.3	0.6	1.4
3	3M 1Y5Y	93.8	131.8	0.7	76	-1.3	-0.1	0.5	0.7	1.4
4	6M 2Y3Y	26.4	37.8	0.7	77	-1.0	0.3	0.5	0.7	1.5
5	3M 1Y7Y	90.7	147.3	0.6	77	-1.2	-0.1	0.4	0.6	1.3
6	3M 2Y7Y	63.7	109.0	0.6	92	-0.9	-0.2	0.2	0.4	1.0
7	3M 2Y3Y	24.9	44.0	0.6	76	-0.9	0.2	0.4	0.6	1.3
8	6M 2Y5Y	43.4	79.7	0.5	92	-1.0	-0.1	0.3	0.4	0.9
9	1Y 1Y3Y	37.3	71.3	0.5	82	-0.9	0.1	0.3	0.5	1.0
10	6M 1Y5Y	63.3	122.3	0.5	78	-1.1	-0.1	0.4	0.5	1.0
11	3M 1Y3Y	51.9	101.4	0.5	62	-1.0	0.1	0.4	0.6	1.5
12	1Y 2Y3Y	21.7	42.7	0.5	61	-0.9	0.2	0.4	0.6	1.1
13	3M 3Y7Y	38.8	76.9	0.5	93	-0.8	-0.4	0.0	0.3	1.0
14	6M 1Y3Y	46.3	92.8	0.5	73	-1.0	0.1	0.4	0.5	1.2
15	3M 1Y10Y	83.6	170.9	0.5	74	-1.1	-0.1	0.3	0.5	1.1

Source: Deutsche Bank

### Top 15 AUD Steepeners

Rank	Trade	1y Carry	Imp. Vol	Ratio	Percent	Min	25th	Median	75th	Max
1	1Y 7Y10Y	5.3	21.7	0.2	76	-0.1	0.1	0.1	0.2	0.5
2	3M 7Y10Y	7.1	30.8	0.2	78	-0.4	0.0	0.1	0.2	0.7
3	6M 7Y10Y	5.6	28.0	0.2	75	-0.2	0.1	0.1	0.2	0.7
4	1Y 5Y10Y	9.8	54.6	0.2	61	-0.1	0.1	0.2	0.2	0.5
5	3M 5Y10Y	10.2	63.7	0.2	64	-0.3	0.0	0.1	0.2	0.7
6	6M 5Y10Y	8.8	62.1	0.1	55	-0.2	0.1	0.1	0.2	0.5
7	1Y 5Y7Y	4.5	36.1	0.1	37	-0.1	0.1	0.1	0.2	0.4
8	3M 5Y7Y	3.1	34.9	0.1	47	-0.3	0.0	0.1	0.2	0.6
9	6M 5Y7Y	3.1	35.7	0.1	40	-0.1	0.1	0.1	0.2	0.4
10	1Y 3Y10Y	6.4	104.2	0.1	11	-0.1	0.1	0.2	0.3	0.4
11	1Y 3Y7Y	1.1	86.9	0.0	9	-0.1	0.1	0.2	0.3	0.4
12	1Y 3Y5Y	-3.4	55.3	-0.1	8	-0.2	0.0	0.2	0.3	0.6
13	6M 3Y10Y	-8.2	108.8	-0.1	11	-0.3	0.0	0.1	0.3	0.4
14	1Y 2Y10Y	-15.3	132.8	-0.1	8	-0.3	0.0	0.0	0.2	0.5
15	6M 3Y7Y	-13.9	82.7	-0.2	8	-0.4	-0.1	0.1	0.3	0.6

Source: Deutsche Bank

### Top 15 GBP Flatteners

Rank	Trade	1y Carry	Imp. Vol	Ratio	Percentile	Min	25th	Median	75th	Max
1	3M 1Y2Y	3.2	18.4	0.2	21	-0.7	0.2	0.4	0.9	9.8
2	6M 1Y2Y	1.9	18.0	0.1	26	-0.9	0.1	0.3	0.5	3.4
3	3M 1Y3Y	2.0	33.0	0.1	19	-0.8	0.1	0.4	0.7	4.0
4	6M 1Y3Y	-0.2	27.3	0.0	28	-1.1	0.0	0.3	0.5	3.4
5	1Y 1Y2Y	-0.4	14.7	0.0	30	-1.2	-0.1	0.2	0.4	2.5
6	3M 2Y3Y	-1.2	15.7	-0.1	51	-5.2	-0.5	-0.1	0.4	2.0
7	3M 1Y5Y	-5.4	50.2	-0.1	23	-1.1	-0.1	0.3	0.6	3.4
8	1Y 1Y3Y	-3.6	22.5	-0.2	33	-1.2	-0.3	0.1	0.4	2.0
9	6M 2Y3Y	-2.1	12.4	-0.2	49	-3.9	-0.5	-0.2	0.5	1.5
10	6M 1Y5Y	-8.5	42.2	-0.2	29	-1.3	-0.3	0.1	0.5	2.9
11	3M 1Y7Y	-12.5	57.5	-0.2	23	-1.3	-0.2	0.2	0.5	2.9
12	3M 2Y5Y	-8.6	35.5	-0.2	47	-4.7	-0.6	-0.2	0.3	1.6
13	1Y 25Y30Y	-1.2	4.7	-0.3	26	-1.0	-0.3	-0.2	0.0	0.2
14	6M 25Y30Y	-1.2	4.3	-0.3	17	-1.6	-0.3	-0.2	0.0	0.2
15	1Y 2Y3Y	-3.2	11.6	-0.3	42	-2.9	-0.6	-0.2	0.4	1.1

Source: Deutsche Bank

### Top 15 GBP Steepeners

Rank	Trade	1y Carry	Imp. Vol	Ratio	Percentile	Min	25th	Median	75th	Max
1	6M 7Y20Y	14.7	15.6	0.9	82	-0.4	0.1	0.6	0.9	3.2
2	6M 7Y15Y	11.2	11.9	0.9	82	-0.4	0.2	0.5	0.9	3.3
3	6M 5Y20Y	21.9	23.5	0.9	81	-0.4	0.1	0.4	0.9	3.3
4	6M 5Y25Y	23.8	26.4	0.9	81	-0.4	0.1	0.4	0.8	3.3
5	6M 5Y15Y	18.5	21.0	0.9	78	-0.4	0.1	0.3	0.8	3.3
6	6M 5Y30Y	25.0	28.8	0.9	82	-0.4	0.1	0.4	0.8	3.2
7	6M 10Y15Y	5.6	6.5	0.9	70	-0.4	0.1	0.6	0.9	3.3
8	6M 7Y25Y	16.5	19.2	0.9	77	-0.4	0.1	0.5	0.8	3.1
9	6M 3Y25Y	32.1	37.8	0.8	71	-0.6	0.0	0.3	0.9	3.6
10	6M 3Y30Y	33.3	39.6	0.8	71	-0.5	0.1	0.3	0.9	3.6
11	6M 3Y20Y	30.2	36.1	0.8	70	-0.6	0.0	0.3	0.9	3.7
12	6M 10Y20Y	9.1	11.3	0.8	72	-0.4	0.1	0.6	0.8	3.1
13	3M 7Y20Y	14.8	18.6	0.8	65	-0.5	0.1	0.6	0.9	1.6
14	3M 10Y15Y	5.6	7.0	0.8	60	-0.5	0.1	0.7	0.9	2.0
15	6M 7Y30Y	17.7	22.2	0.8	78	-0.4	0.1	0.5	0.8	3.0

Source: Deutsche Bank

Carry is calculated for next 3 months and shown in annualized form.

Volatility is calculated as 1m realized for CAD and extracted from swaptions prices for other currencies.

Percentile statistics are calculated from a 10 year history.



### Top 15 CHF Flatteners

Rank	Trade	1y Carry	Imp. Vol	Ratio	Percent	Min	25th	Median	75th	Max
1	3M3Y5Y	7.0	11.0	0.6	77	-0.7	-0.3	0.3	0.6	2.3
2	3M2Y5Y	9.8	19.3	0.5	63	-1.1	-0.2	0.4	0.6	3.7
3	6M3Y5Y	6.7	13.4	0.5	69	-0.7	-0.3	0.2	0.6	1.5
4	6M2Y5Y	10.0	21.7	0.5	62	-0.9	-0.3	0.3	0.6	1.4
5	3M2Y7Y	9.5	25.6	0.4	59	-1.2	-0.3	0.3	0.5	2.0
6	3M3Y7Y	6.7	18.0	0.4	63	-1.0	-0.3	0.1	0.5	2.6
7	6M2Y3Y	3.2	9.3	0.3	55	-1.4	-0.1	0.3	0.5	1.7
8	1Y2Y5Y	8.8	26.8	0.3	55	-0.8	-0.4	0.2	0.5	1.1
9	3M2Y3Y	2.8	9.1	0.3	58	-1.7	-0.1	0.2	0.5	1.6
10	6M2Y7Y	8.8	29.2	0.3	57	-1.0	-0.4	0.2	0.5	1.4
11	1Y3Y5Y	5.5	18.6	0.3	61	-1.0	-0.4	0.0	0.4	1.2
12	1Y2Y3Y	3.3	11.7	0.3	53	-0.8	-0.2	0.2	0.5	1.2
13	6M3Y7Y	5.6	21.4	0.3	63	-0.9	-0.5	0.0	0.4	1.4
14	1Y2Y7Y	6.5	33.9	0.2	57	-0.9	-0.5	0.0	0.4	1.0
15	3M2Y10Y	4.8	27.0	0.2	60	-1.2	-0.5	0.0	0.3	1.6

Source: Deutsche Bank

### Top 15 CHF Steepeners

Rank	Trade	1y Carry	Imp. Vol	Ratio	Percent	Min	25th	Median	75th	Max
1	3M7Y10Y	4.7	4.6	1.0	91	-0.5	0.2	0.4	0.7	1.6
2	6M7Y10Y	4.9	7.0	0.7	57	-1.0	0.4	0.6	0.9	1.4
3	1Y7Y10Y	5.3	9.4	0.6	36	0.0	0.5	0.7	0.9	1.6
4	3M5Y10Y	5.0	9.6	0.5	55	-1.1	0.1	0.4	0.8	1.5
5	6M5Y10Y	6.1	13.9	0.4	48	-0.7	0.2	0.5	0.8	1.4
6	1Y5Y10Y	7.6	21.3	0.4	32	-0.1	0.3	0.6	0.8	1.3
7	1Y5Y7Y	2.3	17.3	0.1	36	-0.6	0.1	0.4	0.6	1.0
8	6M5Y7Y	1.2	10.2	0.1	41	-1.0	-0.1	0.3	0.6	1.2
9	1Y3Y10Y	2.1	30.1	0.1	35	-0.6	0.0	0.3	0.7	1.1
10	3M5Y7Y	0.3	8.9	0.0	37	-1.6	-0.2	0.1	0.3	1.3
11	6M3Y10Y	-0.7	24.8	0.0	36	-1.0	-0.2	0.2	0.6	1.1
12	1Y2Y10Y	-1.2	38.7	0.0	39	-0.7	-0.2	0.1	0.6	1.0
13	3M3Y10Y	-2.0	19.2	-0.1	36	-1.6	-0.2	0.1	0.6	1.1
14	6M2Y10Y	-3.9	32.1	-0.1	41	-1.1	-0.3	0.0	0.6	1.1
15	1Y3Y7Y	-3.2	24.7	-0.1	37	-1.0	-0.3	0.1	0.6	1.0

Source: Deutsche Bank

### Top 15 SEK Flatteners

Rank	Trade	1y Carry	Imp. Vol	Ratio	Percent	Min	25th	Median	75th	Max
1	3M5Y7Y	122.4	18.4	6.6	99	-3.1	-1.5	-0.5	0.1	8.0
2	1Y7Y10Y	37.1	10.4	3.6	99	-4.6	-1.6	-0.9	-0.2	4.0
3	1Y5Y10Y	75.1	28.8	2.6	99	-4.1	-1.6	-0.6	0.2	2.9
4	1Y1Y10Y	417.9	172.6	2.4	56	-4.5	-1.2	1.8	3.6	7.0
5	3M5Y10Y	276.8	130.8	2.1	100	-3.3	-1.8	-0.8	-0.2	2.2
6	1Y1Y7Y	380.8	181.5	2.1	50	-4.2	-1.0	2.1	3.9	6.8
7	1Y5Y7Y	38.0	19.3	2.0	99	-3.3	-1.2	-0.3	0.5	2.2
8	1Y3Y10Y	169.5	92.4	1.8	97	-4.7	-1.4	0.1	1.1	2.2
9	1Y1Y5Y	342.8	199.0	1.7	41	-4.3	-0.8	2.4	4.2	7.6
10	1Y3Y7Y	132.4	83.0	1.6	82	-4.3	-1.1	0.4	1.4	2.5
11	1Y3Y5Y	94.4	64.8	1.5	68	-4.0	-0.6	0.6	1.7	3.2
12	6M5Y7Y	48.2	34.1	1.4	99	-2.7	-1.5	-0.5	0.2	1.6
13	3M7Y10Y	154.5	112.4	1.4	96	-3.8	-1.6	-1.1	-0.5	3.4
14	6M5Y10Y	111.3	104.8	1.1	96	-3.3	-1.7	-0.9	-0.2	2.5
15	3M3Y10Y	372.8	379.3	1.0	95	-3.4	-1.7	-0.4	0.4	1.5

Source: Deutsche Bank

### Top 15 SEK Steepeners

Rank	Trade	1y Carry	Imp. Vol	Ratio	Percent	Min	25th	Median	75th	Max
1	6M1Y3Y	458.3	1478.4	0.3	1	-0.6	1.3	2.2	3.9	8.1
2	6M1Y5Y	402.1	1480.3	0.3	5	-0.5	1.1	1.7	3.2	6.9
3	6M1Y7Y	353.9	1466.8	0.2	6	-0.5	1.1	1.7	3.2	6.6
4	6M1Y10Y	290.8	1468.5	0.2	5	-0.4	1.1	1.9	3.2	6.3
5	3M1Y3Y	1266.8	11439.0	0.1	1	-0.6	2.1	5.7	9.9	21.1
6	3M1Y5Y	1170.8	11687.5	0.1	1	-0.5	2.3	5.1	9.1	14.6
7	3M1Y7Y	1048.4	11705.9	0.1	1	-0.4	2.4	5.0	8.8	14.9
8	3M1Y10Y	893.9	11818.3	0.1	1	-0.3	2.6	5.0	9.0	15.0
9	3M3Y5Y	-96.0	248.5	-0.4	33	-2.6	-0.6	-0.1	0.9	3.2
10	6M3Y5Y	-56.2	141.8	-0.4	36	-2.9	-0.7	-0.1	0.9	2.8
11	6M3Y7Y	-104.4	171.4	-0.6	24	-2.4	-0.6	0.0	1.3	3.2
12	6M3Y10Y	-167.5	244.6	-0.7	17	-1.9	-0.5	0.4	1.6	3.4
13	3M3Y7Y	-218.4	266.9	-0.8	18	-2.1	-0.6	0.0	1.4	3.5
14	6M7Y10Y	-63.1	73.2	-0.9	8	-3.8	0.5	1.1	1.6	3.8
15	1Y1Y3Y	-248.4	261.7	-0.9	66	-9.5	-4.7	-2.3	0.8	4.9

Source: Deutsche Bank

### Spread of Swap Spreads Trades

Trade	Current Carry	Current Level	Percentile	Min	25th	Median	75th
2Y3Y	1.03	-1.6	59	-4.9	-2.5	-1.8	-1.0
2Y5Y	-0.14	-4.4	70	-13.4	-9.2	-6.6	-3.6
2Y7Y	-0.51	-11.0	52	-22.1	-16.0	-11.4	-5.5
2Y10Y	-0.23	-8.2	47	-22.1	-12.7	-7.5	-2.8
2Y30Y	-0.60	-37.3	25	-53.9	-37.0	-22.1	-14.8
3Y5Y	-1.17	-2.8	69	-11.2	-6.8	-4.6	-2.2
3Y7Y	-1.54	-9.4	49	-19.8	-13.3	-9.2	-4.2
3Y10Y	-1.26	-6.6	44	-19.9	-10.3	-5.6	-1.6
3Y30Y	-1.63	-35.7	23	-50.8	-33.6	-20.3	-13.8
5Y7Y	-0.37	-6.6	25	-10.1	-6.6	-4.2	-1.8
5Y10Y	-0.09	-3.8	24	-10.2	-3.7	-1.6	0.6
5Y30Y	-0.47	-32.9	11	-42.3	-27.2	-16.3	-11.2
7Y10Y	0.28	2.8	52	-3.1	1.1	2.7	3.9
7Y30Y	-0.09	-26.3	10	-33.0	-19.9	-12.4	-9.2
10Y30Y	-0.37	-29.1	10	-35.1	-23.4	-14.8	-12.7

Source: Deutsche Bank

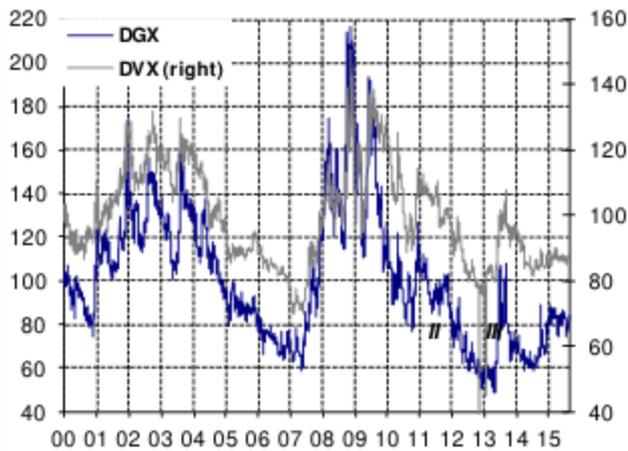
### Values as of September 3rd 2015

Tenor	Repo	Spot Swap Spread	1M Fwd. Swap Spread
2	15.00	13.5	13.8
3	16.00	11.9	13.3
5	7.50	9.1	9.3
7	9.50	2.5	2.3
10	2.50	5.3	5.4
30	11.50	-23.8	-24.1

Source: Deutsche Bank

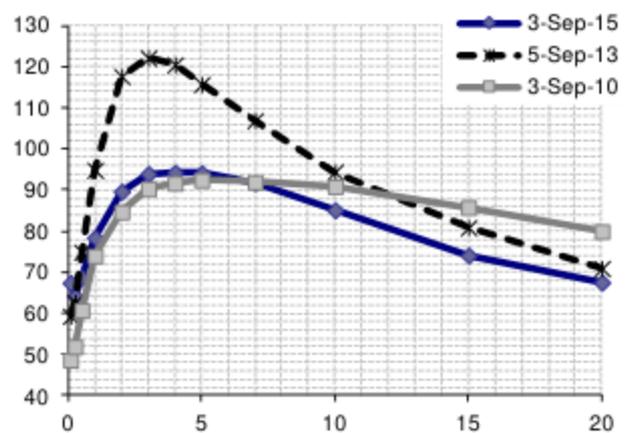


DGX and DVX across different market regimes



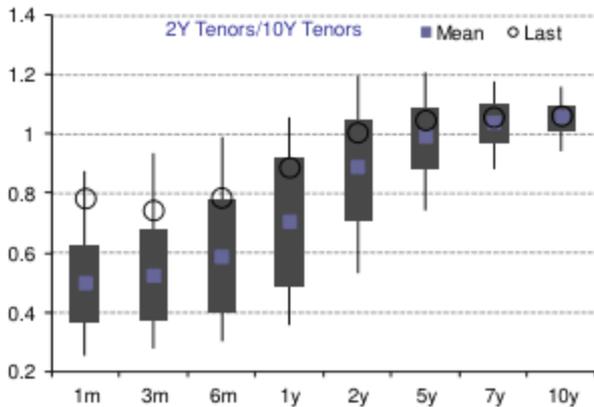
Source: Deutsche Bank

Term structure of 2Y vol



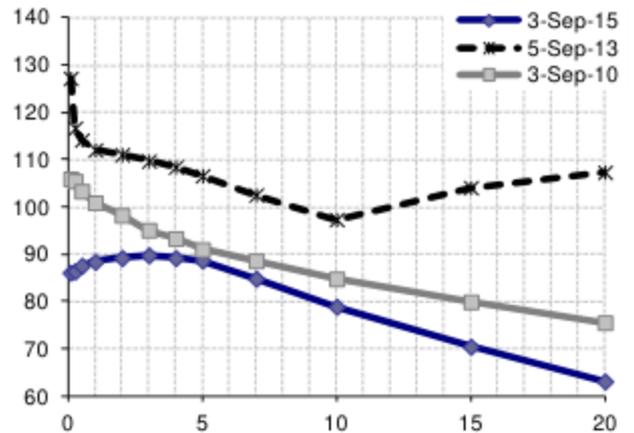
Source: Deutsche Bank

Ratios of 2Y to 10Y tenors (quartiles, 5-year history)



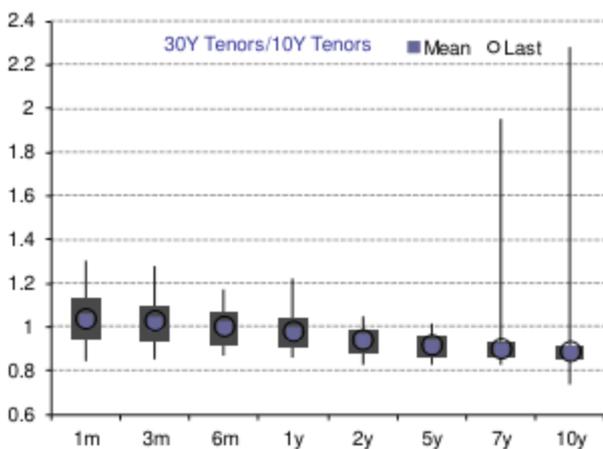
Source: Deutsche Bank

Term structure of 10Y vol



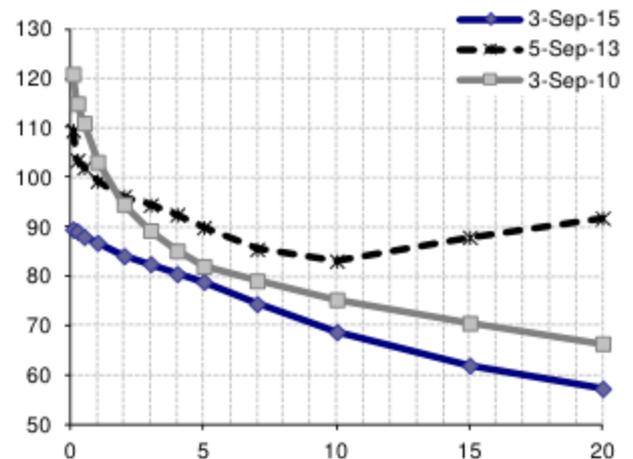
Source: Deutsche Bank

Ratios of 30Y to 10Y tenors (quartiles, 5-year history)



Source: Deutsche Bank

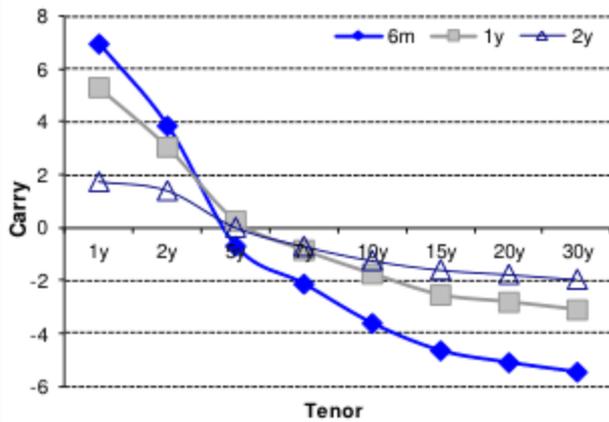
Term structure of 30Y vol



Source: Deutsche Bank

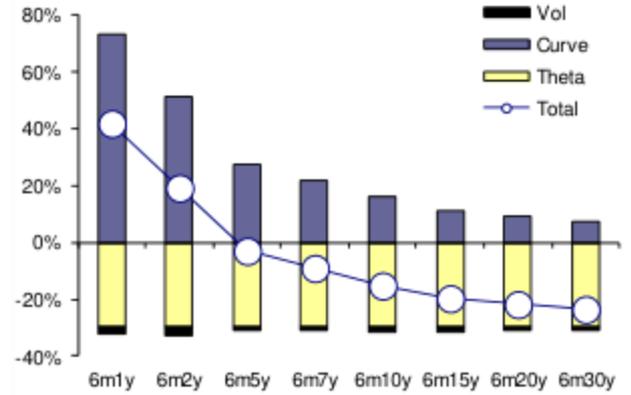


3M carry across different expiries (ATMF receivers)



Source: Deutsche Bank

Breakdown of 3M carry for 6M expiries (% premium)



Source: Deutsche Bank

US surprise index: 10Y Treasury yield



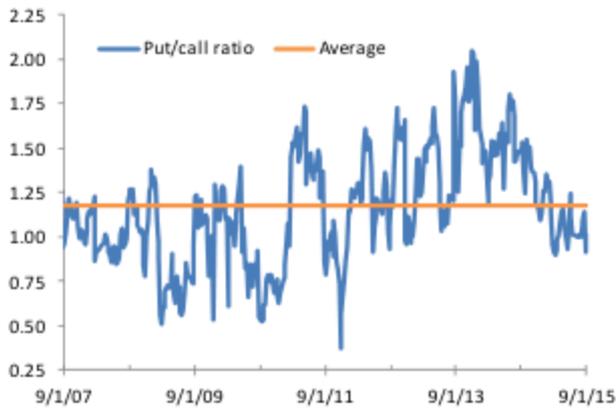
Source: Deutsche Bank

Trade weighted dollar surprise index



Source: Deutsche Bank

Combined put/call ratio in Treasury futures



Source: Deutsche Bank and CME Group



**US Treasury Coupon Auction Calendar**

Ticker/Coupon/Maturity	Date	Tap/New Issue	Size
T TBA 9/18	Tuesday , September 08	New Issue	24bln
T 2.00% 8/25	Wednesday, September 09	Tap	21bln
T 2.875% 8/45	Thursday, September 10	Tap	13bln

**US Economics & Events Calendar**

	Event	DB Forecast
Mon, Sep 07 2015	Labor Day Holiday	All markets closed
Tue, Sep 08 2015	Consumer Credit	+20.0B
Wed, Sep 09 2015	July JOLTS data released	10:00 AM
Thu, Sep 10 2015	Wholesale Inventories	+0.1%
	PPI	
	Total	-0.1%
Fri, Sep 11 2015	Core	+0.2%
	Consumer Sentiment	95.0



### European Economics & Events Calendar

Date	Economic Releases	Political Events	Bond Redemption/Supply
Sep 07	Germany: Industrial Production SA YoY		
Sep 08	Eurozone: GDP SA YoY	Germany: Schaeuble Presents 2016 Federal Draft Budget in Parliament	Germany to Sell EUR1 Bln 0.5% I/L 2030 Bonds (DE0001030559)
Sep 09	Greece: CPI EU Harmonized YoY	Germany: Merkel Delivers Remarks in Parliament Keyed to 2016 Budget	Germany to Sell EUR4 Bln 1.0% 2025 Bonds (DE0001102382) Italy to Sell Bonds
Sep 10	Spain: Industrial Output NSA YoY Portugal: CPI EU Harmonized YoY France: Industrial Production YoY Ireland: CPI EU Harmonized YoY		Ireland to Sell Bonds
Sep 11	Spain: CPI EU Harmonized YoY Germany: CPI EU Harmonized YoY Italy: Industrial Production YoY		

### Total/excess return forecasts in HY, IG, leveraged loans

	HY	IG	5yr Trsy	10yr Trsy		Loans	2yr Trsy
Spreads/Yields					Spreads/Yields		
Current	561	163	149	218	Current	540	57
Target	650	170	160	225	Target	575	75
Change	89	7	11	7	Predicted Change	35	18
Normal HY vs IG Beta = 4:1							
Duration	4.6	6.5	4.8	8.5	Rate Duration	1.0	
Change in Yield	100	17	11	7	Spread Duration	2.7	
Change in Price	-462	-107	-53	-60	Avg Par Coupon	440	
Current Yield	701	409			Libor/Tsy Change	18	
Current Price	95.8	104.3			Total Change in Yield	53	
Default Rate	3.5	0.0			Repricings	-50	
Recovery	40	--			Capital Gain	-163	
Credit Loss	-204	0			Current Yield	440	
Price Return	-6.9	-1.0			Default Rate	3.5	
<b>Total Return</b>	<b>0.1</b>	<b>3.1</b>			Price	99.9	
<b>Excess Return</b>	<b>-0.9</b>	<b>1.9</b>			Credit Loss	87	
					<b>Total Return</b>	<b>1.9</b>	

Source: Deutsche Bank

Closed Trade Recommendations

	Trade Detail	Rationale	Risks	Opened	Entry	Closed	Exit	P/L
<b>Inflation</b>	Underweight 30yr TIPS	30yr tends to cheapen ahead of supply	30yr outperforms	6/5/15	+11 bp	6/17/15	+12 bp	-60k
<b>Inflation</b>	Short 1/2026 breakevens vs 5yr and 30yr breakevens	10s look rich; sell the rich 1/2026s	10s richen further	1/23/15	+15 bp	6/11/15	+5 bp	+308k
<b>Inflation</b>	Long 30yr TIPS breakevens versus 10yr TIPS breakevens	10s-30s breakeven curve appears too flat on a long term basis	Long term inflation expectations decline	11/26/14	+16 bp	6/5/15	6.54 bp	152K
<b>Inflation</b>	Long 2019 TIPS breakevens versus 2016 TIPS breakevens	Being long 2019 BEs versus 2016 BEs has positive carry, and is less correlated with energy prices than 1yr BEs	2019 breakevens drop more than 2016 breakevens	11/26/14	+41 bp	2/25/15	+22 bp	+4,014k
<b>Inflation</b>	Long 30yr TIPS breakevens	Bond TIPS look cheap on a relative value basis	Inflation expectations decline	10/17/14	2.08%	12/9/14	1.97%	-1,171k
<b>Inflation</b>	Buy 2023 TIPS vs. 7/2019 and 1/2025 TIPS on ASW	The intermediate sector in inflation markets is cheap relative to the wings	Further cheapening of the belly in inflation markets relative to the wings	12/6/13	+38 bp	12/19/14	+8 bp	+2,263k
<b>Inflation Swaps</b>	Long 2y2y inflation swap	2y2y inflation looks attractive on historical basis	Forward inflation falls	10/3/14	2.1%	12/9/14	2.0%	-309k
<b>Inflation Swaps</b>	Sell the 5yr5yr inflation swaps	The spread between 5yr5yr inflation swaps and 5yr5yr TIPS breakevens is wide. Selling the 5yr5yr inflation swaps looks attractive.	5yr5yr inflation swaps rise	11/7/14	2.58%	12/18/14	2.43%	+1,361k
<b>Option</b>	Buy \$100mn 6M 2y1y 25bp OTM MC payers vs. Sell 100mn 1Y 4Y1Y 45bp OTM MC payers at zero net cost	Curve flattens on a hawkish FOMC	Curve bear steepens	9/12/14	0¢	3/11/15	-0.7¢	-32k
<b>Option</b>	Sell \$100mn 6M5Y ATMF vs. buy \$200mn 6M5Y 30bp OTM payers at zero net cost	Skew trades rich in a sell-off	Rates sell off half-way and stay there till the expiry	9/12/14	0 bp	3/11/15	0.0 bp	-2k
<b>Option</b>	<b>Mid-curve payer:</b> Sell \$100mn 1Y 5Y5Y ATMF mid-curve payers vs. buy \$200mn 1Y2Y ATMF payers for the net takeout of 28c	5Y5Y has a limited upside while 1Y2Y could see significant repricing due to adjustments of monetary policy	The curve bear steepens	3/14/14	-18¢	3/13/15	0.0¢	+184k
<b>Option</b>	Conditional bull steepeners: Sell \$32.8mn 3M10Y ATMF receivers vs. buy \$100mn 3M3Y ATMF receivers at net takeout 1c	Front-end gets re-priced in a delayed Fed hike	Curve bull flattens; unlimited downside	9/26/14	-1 bp	12/30/14	0 bp	+19k
<b>Option</b>	Buy 1X2 3M3Y ATMF/13.5bp receiver spreads for zero net cost	Short-term risk off and short covering	Rally below the breakevens; unlimited downside	9/26/14	0 bp	12/30/14	0 bp	+28k
<b>Option</b>	Buy \$1,000mm 6m single reset cap on CMS10-CMS5 strike 89bp for 9.75c	Carry pays for option, repriced fed suggests 5y outperformance	Curve flattening, max loss premium	5/20/14	+9 bp	11/20/14	0 bp	-875k
<b>Option</b>	Sell \$100mn 3M5Y straddles vs. buy \$100mn 3M5Y 22bp OTM payers for net takeout of 100c.	No big changes in vol near term	Rates rally	9/19/14	-100 bp	12/30/14	0 bp	+1,028k

Source: Deutsche Bank



## 2014 Outlook Closed Trades

	Trade Detail	Rationale	Risks	Opened	Entry	Closed	Exit	P/L
Option	1y 3s10s conditional bearish flattener for zero premium: Buy 1y3y + 25 bp payer, sell DV01 weighted 1y10y +41.5 bp payer for zero premium.	The curve should bear flatten as soon the Fed tapers and front end sells off	Curve steepens as rates rise	12/6/13	+212.5 bp	12/19/14	+17 bp	0k
Option	Receiver spreads: Buy \$100mm 2y2y ATMF/25 bp receiver spreads at 28 bp	Macro data disappoints, curve bull flattens	Rates rise as recovery strengthens	12/6/13	+28 bp	12/19/14	+29 bp	+19k
Option	Contingent payers: Buy 1y30y ATMF payers subject to 5s< ATMF+50 bp at 259 bp, a 57% discount to vanilla	Rate hikes unbundled from taper, long end sells off while 5y remains anchored	Curve flattens	12/6/13		12/19/14		
Option	Dual digital option on 5s and 10s: Buy a 6m dual digital that pays out if 5s > 2% & 10s< 3.50%, offer 17% (6:1 leverage)	Curve flattens beyond the current forwards; adding additional leverage by shorting the correlation between 5y and 10y rates	Either of the two conditions is not true at expiration; maximum loss is premium outlay	12/6/13		12/19/14		
Option	Contingent curve cap: Buy 6M 5s10s ATMF curve caps subject to 10s < 3.50%, 5.25c offer, a 40% discount to vanilla at 9c	Front-end of the curve remains anchored, limited sell off in 10s	Curve flattens	12/6/13		12/19/14		
Option	Curve caps: Buy 1y single reset, ATMF 5s30s curve cap at 21.5 bp	Economic recovery disappoints and curve remains steep	Curve flattens	12/6/13	+21.5 bp	12/19/14	0 bp	-197k
Swaps Rv	<b>Forward steepener:</b> Receive fixed on \$115.71 mm 1y10, pay fixed on \$54.85 mm 1y30y	Slope of 10s30s too flat given level of 10y Rate	Curve flattens	3/28/14	+45 bp	3/27/15	+33 bp	-3,109k
Swaps RV	Receive \$208.2mm 6m5y rate versus pay \$292.9mm 10y5y rate	15y par rate rich, 6m5y exposed to repricing Fed with positive carry	Curve flattening	5/20/14	+219 bp	11/19/14	+320 bp	-7,274k
Swaps RV	Receive 3y1y/2y1y rate spread at 108 bp	Curve slope is near its historic levels; curve is likely to flatten in both sell-off or rally	Curve steepens	12/6/13	+108 bp	12/19/14	+80bp	+222k
US Credit	Underweight high-yield into Taper	HY spreads should widen upon the onset of the taper	Tapers gets delayed	12/6/13		12/19/14		

Source: Deutsche Bank

Performance numbers are based on trader end-of-day marks, and do not include bid/offer spreads or transaction costs. We consider the relevant benchmark for our trades to be a zero position, given the leveraged or generally market neutral aspects of these trades. Historical performance is not a guarantee of future performance.\*





# Appendix 1

## Important Disclosures

Additional information available upon request

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## Regulatory Disclosures

### 1.Important Additional Conflict Disclosures

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