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UK STRUCTURED™ PRODUCTS ASSOCIATION

Monthly Market Report

October 2015

With commentary from David Stevenson

That was fun wasn't it! August is supposed to be a sleepy month, with most investors away, leaving juniors to man the workstations and trading desks. But the last few weeks have proved to be mightily turbulent, prompted by fears that China is about to experience that mythical 'hard landing'. Yet from my own personal perspective I'm not quite sure what we learnt that was new over the summer. Global growth is still patchy, the US is still in fairly good shape and the Eurozone is still slowly, painfully making its way out of a sharp slowdown. We also learnt that Chinese equities were volatile - quelle surprise - and that the Chinese authorities are not omnipotent. Quite why anyone was surprised by this discovery is frankly laughable. China is still trying to execute the financial equivalent of a sudden sharp turn off to the exit whilst motoring in the middle lane driving along at 50mph! It's attempting a restructuring and a balance sheet makeover at the same time, whilst also manfully struggling with booming property markets and declining competitiveness for many of its key industries. Mistakes were inevitable and the fact that many growth orientated stocks on its local stock markets were valued at hundreds of times earnings, propelled along by generous debt for margins positions, was an open invitation for a meltdown.

But I ask again - what's new? What new pieces of information did we observe that reinforce the bearish view that the global economy is perched on the edge of a recession? I'd argue that we haven't in fact learnt much and that equity markets are now a great deal cheaper than they were at the beginning of the summer. That suggests that once investors stop worrying about China/Greece/rising US rates, they'll realise that some equities in some markets are beginning to look attractive again.

One other story caught my eye as well, namely the good old British private investor. The good news is that private investors are still putting money to work, investing for the future, or at least that's what the most recent report by the government's ONS suggests. Apparently 9.5% of FTSE 100 shares are now held by individuals, but the most surprising revelation is that private investors own 30.6% of shares in AIM listed companies! As these numbers were released by the government agency, UK broker The Share Centre chimed in with its own research that revealed that 20% of its ISA account holders invested in the AIM market - a really rather big number when you consider that until fairly recently AIM stocks couldn't be included in an ISA. Even more revealingly The Share Centre revealed its top ten most traded AIM stocks in August. Feast your eyes upon this long list of circus freaks, penny stock wonders and occasional quality stock:

1. African Potash
2. Jubilee Platinum
3. Rare Earth Minerals
4. Marechale
5. Share Plc
6. Quindell
7. Optimal Payments
8. UK Oil & Gas
9. Telford Homes
10. Utility Wise

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Headline Numbers

Measure	Value as of August 11th, 2015	Value as of September 18th, 2015
UK Government 10 year bond rate	1.92%	1.96%
GDP Growth rate YoY	2.60%	2.60%
CPI Core rate	0.80%	1.0%
RPI Inflation rate	1.0%	1.1%
Interest rate	0.50%	0.50%
Interbank rate 3 month	0.55%	0.57%
Government debt to GDP ratio	89.4%	89.4%
Manufacturing PMI	51.9	51.5
Sovereign Western Europe CDS	46.94	
Euro Bank CDS	165.84	
FTSE CDS	88	88

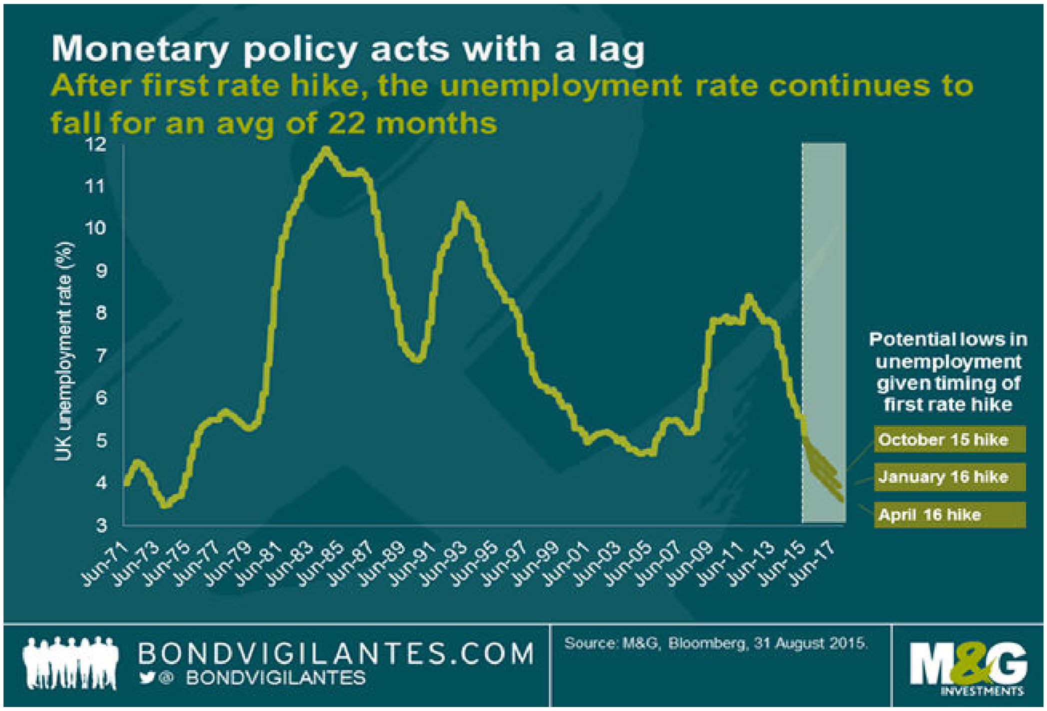
Headline Thought

Perhaps investors should actually stop looking at the impact of rates rises on their portfolios and focus on what might happen to unemployment? If a series of small rates rises indicates a strong recovery we should also expect to see unemployment move even lower. And lest we forget, more jobs is good news for the consumer economy - lower unemployment should feed through into increased aggregate consumer demand and higher corporate profits.

Bond managers from M&G recently examined this relationship in their Bond Vigilante blog (an excellent resource for investors). They remind us that monetary policy works with a lag - the BoE estimates this to be approximately two years in the UK. This means that the relationship between rate hiking cycles and unemployment figures has therefore historically taken time to fully feed through the economy.

Looking at past cycles, what do the numbers tell us? According to M&G: "Since 1971, the BoE have undertaken six separate rate hiking cycles in the UK. After the initial rate increase in each of these, unemployment has continued to fall on average for the next 22 months, which is just shy of the BoE estimation of a 24-month lag. Given that the UK unemployment rate has been on a downward trajectory since mid-2012, history suggests that even if the MPC hikes rates, it will likely fall significantly further from the current level of 5.2%. Indeed, if the BoE rate hiking cycle were to commence in October of this year, the graph to the side forecasts that the corresponding unemployment rate could potentially bottom out at 4.25% in August 2017."

What's startling about these estimates is that if M&G's fund managers are right we could see unemployment rates fall to as 3.61%. That might imply strong wage growth, resurgent consumer demand and an even sharper increase in interest rates.



Investors constantly fret about rising interest rates. Bond investors in particular worry that an upwards move in rates is terrifically bad news, but equity investors also tend to run scared of increased rates. The traditional logic is that a cycle of rising rates indicates that we are near the peak of an economic expansion, with a recession no more than a few years away. Rising interest rates also have an immediate impact on the risk free rate, which is used within most equity valuation models.

But a closer look a past rates hike cycle doesn't actually back up this conclusion. Analysts at ETF firm Source have looked into the history books and they've discovered that in fact market returns tend to be positive and volatility low when the US Federal Reserve (Fed) starts to raise interest rates. The firm notes that the Fed has now kept rates at current historical lows since 2008 – indeed, taking into account the effects of Quantitative Easing and that each $150–200 billion of asset purchases is equivalent to a 25 basis points cut in Fed policy rates, the effective rate of interest in the US is currently -5%.

Looking at six previous rates hike cycles shows that the tightening phase lasted an average of 13.7 months and the average rate hike was 281 basis points (21 basis points per month). Source suspects that the forthcoming cycle may be slower and longer given the relatively larger headwinds, and is forecasting 25 basis points per quarter over multiple years depending on the rate of inflation.

And what of individual asset classes and regional markets? The table below shows that the best performers proved to be global equities generally, emerging market equities specifically and commodities.

Average annualised returns, in USD, during previous FED tightening cycles

Asset Class	Average annualised returns (%)
Global Equities	9.60%
Global Government Bonds	4.00%
Emerging Markets Equities	11.90%
Emerging Markets Government Bonds	4.80%
Commodities	18.00%
USD Index	2.20%

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CDS Rates

There's not much to report this month in our regular review of bank CDS rates. Remember these options based contracts are in effect an insurance policy against banks defaulting on their bonds. Yet there is one striking fact that is worth noting in passing - of the 16 banks in our list, all but 4 have rates on their 5-year CDS options in a range between 0.65% and 0.95%. Santander's CDS options trade well outside this range at 116 basis points for insuring 5-year contracts, while Nomura and Lloyds trade well under the bottom of this range. Even banks such as HSBC and Rabobank - traditionally regarded as very low risk by CDS traders - have options within this core range. These numbers suggest that amongst the first tier of banks, most investors seem to think that there's not much differentiation in terms of risk. That's a fair presumption as all these banks are first tier, globally integrated and probably a little too big to fail!

Bank	One Year	Five Year	Monthly Change (5yr)	Annual Change (5yr)	Credit Rating (Fitch)
Banco Santander	61	116	4	56	A -
Barclays	34	67	-6	14	A
Citigroup	28	83	1	19	A
Commerzbank	49	93	-4	19	A+
Credit Suisse	41	82	8	32	A
Deutsche Bank	46	89	-1	31	A+
Goldman Sachs	37	91	-1	15	A
HSBC	39	78	3	38	AA-
JP Morgan	31	74	1	20	A+
Lloyds Banking Group	27	58	-6	7	A
Morgan Stanley	31	81	0	8	A
Nomura	21	45	2	-8	A-
Rabobank	22	65	3	22	AA-
RBS	40	79	-4	14	A
Soc Gen	40	79	-5	15	A
UBS	27	61	1	20	A

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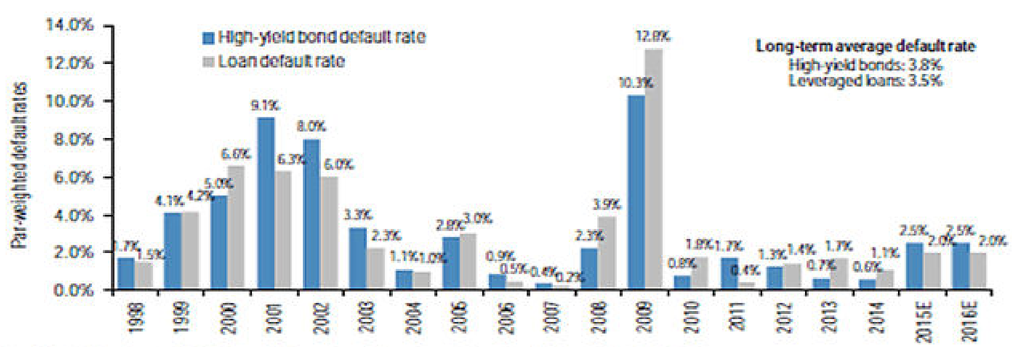
Government Bonds

With interest rates almost certainly on their way up, bond investors are beginning to think long and hard about risks. Some of these concerns focus on obvious risks such as lower prices following an increase in rates but there's also a growing fear that as rates move higher defaults might start to shoot up, especially amongst more vulnerable corporates. Investment grade issuers of corporate bonds are still regarded as fairly safe but there is a sense that amongst high yield bonds - typically though not always classed as junk bonds - there may be some casualties.

The chart below from JPMorgan looks at default rates over the last 17 years for high yield corporate credit and corporate loans. Peak levels of default hit over 12% (for loans) in 2009 before falling back to single digits in the following years, well below long term average default rates for high yield bonds and leveraged loans which are around 3.5%.



Note: 2014 default rate is LTM as of November 30 and excludes the $36bn default of TXU.
Source: J.P. Morgan.

Bloomberg recently ran a fascinating - and arguably worrying - story that suggested that on one measure of distress investors have now priced in a default rate of 4.8% during the next 12 months, according to Martin Fridson, a money manager at Lehmann Livian Fridson Advisors LLC. Most concern is centred on the mining and energy markets where corporates large and small are being buffeted by sliding prices. Oil and gas drillers for instance issued $213 billion of junk-rated bonds the past four years, increasing the share of energy-company debt in a Bank of America Merrill Lynch index of junk bonds to 13% this year from 9.4% in 2005. Oil and gas company debt comprised more than a third of the $128 billion of securities trading at levels considered distressed in August, according to S&P.

Of most concern though is the fact that half of the debt issued by speculative-grade metals, mining and steel companies, was distressed last month. Most investors now expect defaults to spike sharply in 2016, with the overall default rate likely to hit 3.25% by the end of this year, a big jump from current levels of around 2.5%.

UK Government Bonds 10-year Rates 1.92%

Source: http://www.tradingeconomics.com/united-kingdom/government-bond-yield

CDS Rates for Sovereign Debt

Country	Five Year
France	31
Germany	14
Japan	38
United Kingdom	17
Ireland	48
Italy	110
Portugal	165
Spain	99

Eurozone peripheral bond yields

Country	August 11th, 2015	September 18th, 2015	Spread over 10 year
Spain 10 year	1.94%	2.00%	129
Italy 10 year	1.80%	1.80%	109
Greece 10 year	10.37%	8.57%	786

	S&P Rating		Moody's Rating		Fitch Rating
Germany	AAA	Stable	AAA	Negative	AAA
United Kingdom	AAA	Negative	AA1	Stable	AA+
United States	AA+	Stable	AAA	Stable	AAA

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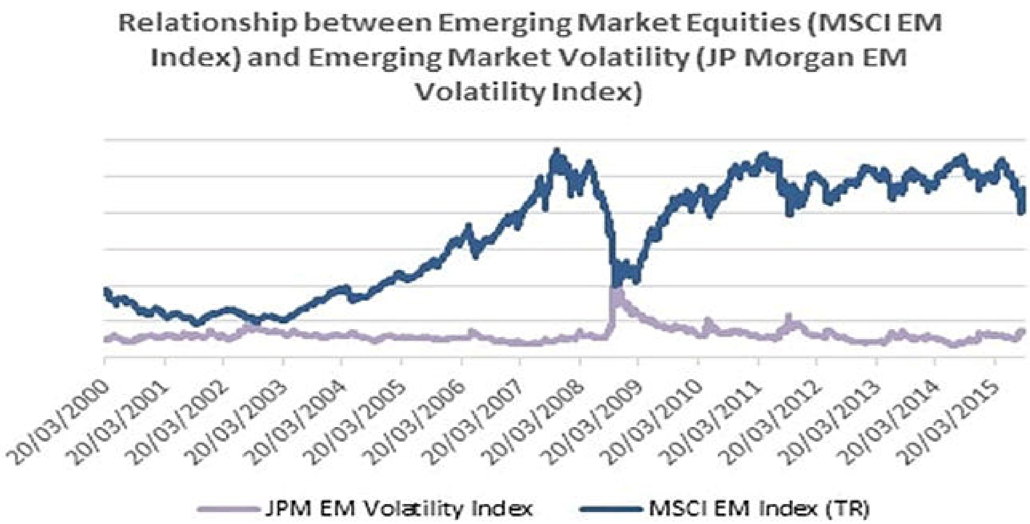
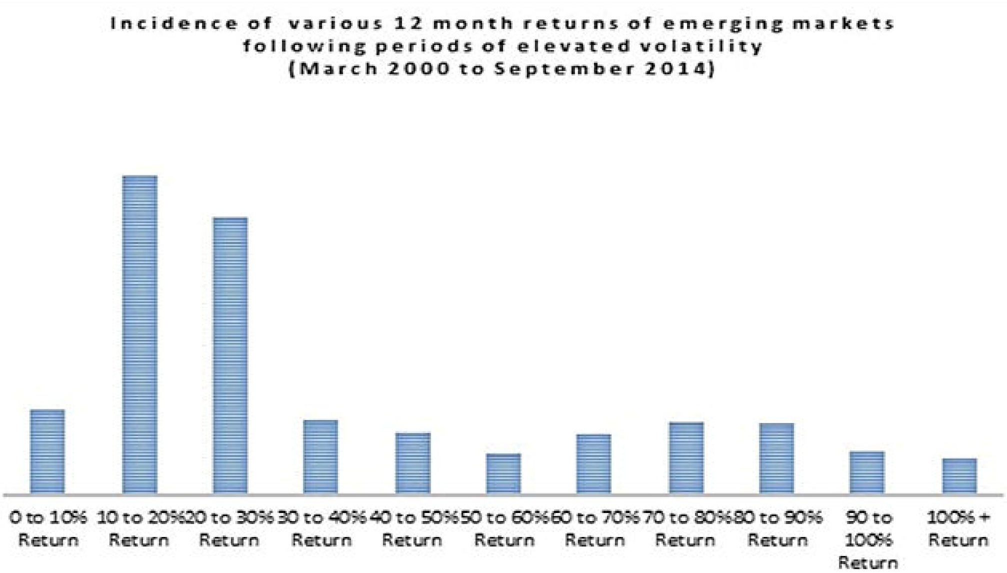
Equity Markets and Dividend Futures

China's troubles have had a significant knock on effect on other major emerging markets with Brazil and Russia in particular very badly hit although Indian equities have largely avoided most of the carnage. But with a few exceptions prices have fallen sharply pretty much across the board in emerging and frontier markets and now more than a few investor's think that enough is enough, especially as local markets are now trading at a near 40% discount to developed world market valuations, the lowest level since 2003. Alan Miller over at SCM Direct has crunched the numbers and looked at the history of emerging market equity performance (and volatility) from March 2000 to 15th September 2015 - the two charts below outline the overall analysis. Miller finds that the average total return obtained by investing for 12m at times of volatility similar or greater than today, was 24.4%. He also observes that "the volatility we see today is not normal, the volatility has been lower 84% of the time since March 2000." If Miller is right - and he's far from alone in thinking that EM equities are cheap - investors should be slowly increasing their exposure emerging markets equities.



Source: SCM



Source: SCM

Index	September	August	Reference Index Value	Level 6 Months Ago
Eurostoxx 50	114.5	114.8	3176	113.3
FTSE 100 (Dec 14)	247.9	247	6125	N/a

Name	Price % change						Close
	1 month	**3 months**	**6 months**	**1 year**	**5 year**	**6 year**	
FTSE 100	-6	-8.75	-11.9	-10	11.1	18.3	6124
S&P 500	-5	-6	-5	-1	76	86	1990

Benchmark for gilt							
iShares FTSE UK All Stocks Gilt	0.76	2.98	-1.32	6.74	15	17	12.408
Benchmark for volatility							
VIX New Methodology	90	99	87.8	118	19.2	9.66	26.23

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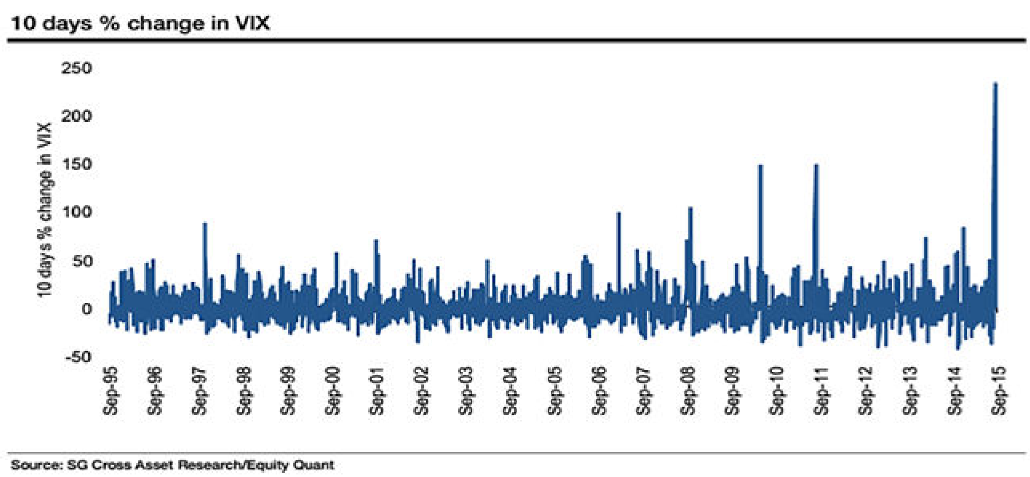
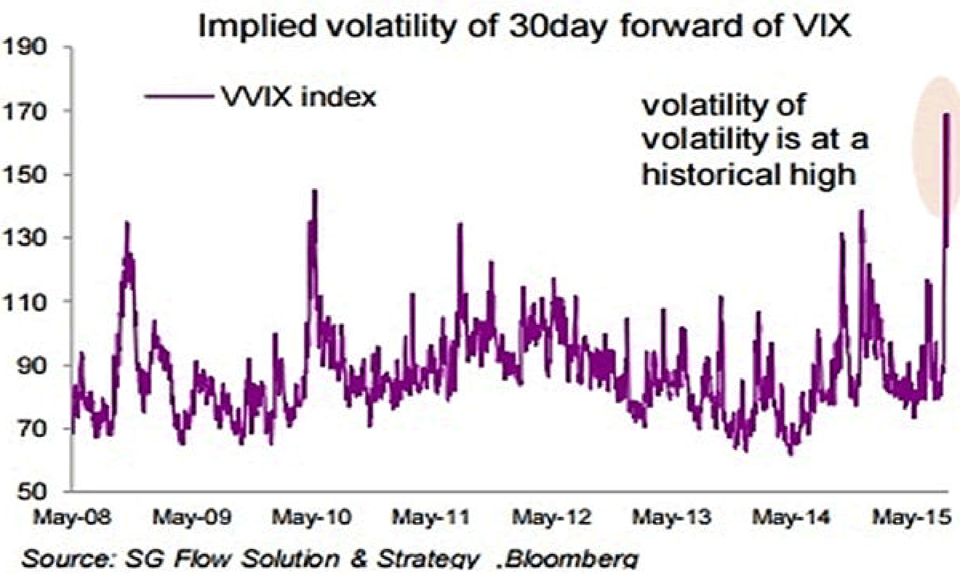
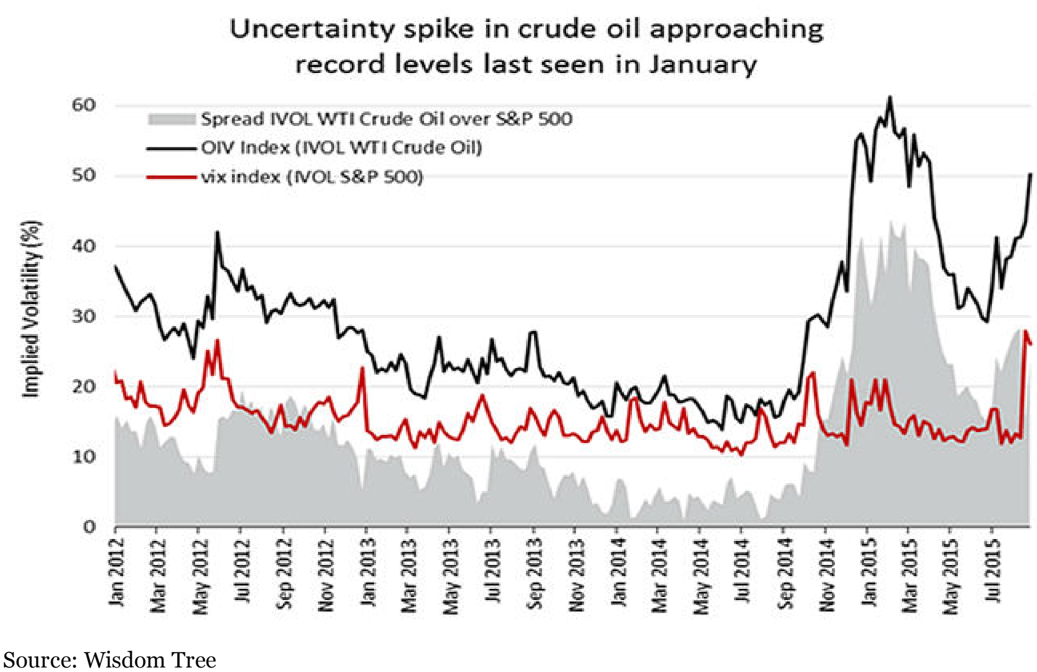
Volatility

Measures of volatility have been flat lining for much of 2015, but in the last few months key indices such as the VIX (tracking the turbulence of shares in the S&P 500) have shot up in value. This widely followed index briefly jumped to a level not seen since the depths of the financial crisis in August whilst the equally popular VVIX (a measure of the volatility of volatility) reached a multi-year high. Andy Lapthorne at French bank SG has looked carefully at these record breaking numbers. The first chart below looks at the VIX through the prism of 10-day changes over each September period since 1995. We normally expect September to be a bit more turbulent than normal but the most recent spike is hugely worrying. Lapthorne offers what I think is a very sensible explanation for why volatility has increased in this way involving hedge funds and quant driven investing. He observes the "tendency of many quantitative strategies to scale their positions using historical levels of volatility. CTA trend following systems will often scale price momentum signals by the underlying assets' volatility (i.e. gross Sharpe ratio momentum) and risk parity and volatility targeted funds will hold positions proportionate to the historical volatility of each asset, hence the term, risk parity. This then leads to a degree of circularity. If volatility rises sharply, these types of strategies are then forced to reduce their positions, thus adding to the selling pressure and pushing up volatility further."





It's also worth observing that volatility levels are elevated in part because of plummeting oil prices. Oil and gas equities make up a decent chunk of most benchmark indices - mining stocks have also been hit hard by falling energy prices. Elevated volatility has been most noticeable in WTI Crude Oil with implied volatility surpassing 50%, levels not seen since last year's crash in prices and representing a sizable risk premium over other risk assets. Underscoring the downside risk to crude oil is the spread of crude oil volatility over the VIX which, compared to its January peak, has not been hit yet- see the second chart below from Wisdom Tree UK. With approx. 10% of open interest in WTI Crude Oil futures contracts on NYMEX being non-commercial, speculative positioning on crude oil remains elevated. My guess is that we've not seen the end of this oil market volatility, with the possibility of much worse to come if Goldman Sachs are right and oil heads downwards to $20 a barrel. If that is the case expect much more main market volatility, with most market turbulence focused on US Federal Reserve decision days over the next three months.



Source: Wisdom Tree

Measure	September Level	August Level	July Level	June Level	Acc/Dec	Direction Upwards
Vstoxx Volatility	27.76	18.71	18.8	24.15	DEC	No
VFtse Volatility	21.07	1.26	11.97	14.09	ACC	Yes
FTSE Put Call Ratio	1.01	1.02		0.75	DEC	No

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Summary of Pricing Impact on Structured Products

Pricing Parameter	Change	Impact on Structured Product Price
Interest Rates	Up	Down
Underlying Level	Up	Up (unless product offers inverse exposure to the underlying)
Underlying Volatility	Up	Down for capped return/fixed return/capital at risk products. Up for uncapped return/capital protected products.
Investment Term	Up	Down
Issuer Funding Spread	Up	Down
Dividend Yield of Underlying	Up	Down
Correlation (if multiple underlyings)	Up	Up (unless product offers exposure to the best performing underlyings only)

Source: UK Structured Products Association, January 2014

This information is provided for information purposes only, and the impact on a structured product price assumes all other pricing parameters remain constant.

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Explanation of Terms

CDS Spreads and Credit Ratings

A CDS effectively acts like an option insuring at a cost in basis points a bank or government bond in case of default. The higher the basis points, the riskier the market perceives that security. Crucially CDS options are dynamic and change in price all the time. A credit rating is issued by a credit rating firm and tells us how risky the issuer is viewed based on the concept that AAA (triple A) is the least risky and ratings at C and below are regarded as much riskier. CDS and ratings are useful for structured product buyers because they give us an indication of how financial risk is viewed by the market. Crucially a high CDS rate indicates that an issuer of a bond will probably have to pay a higher yield or coupon, which could be good for structured product buyers as bonds are usually a prime source of funding for a structured product. G8 government bonds issued by the likes of the UK and US Treasury are also sometimes used as collateral in some form of investments largely because they are viewed as being low risk. One last small note on credit ratings and CDS rates. A is clearly a good rating for a bond (and much better than B) but AA will be viewed as even "safer" with triple AAA the least risky. Terms of CDS rates anything much above 100 basis points (1%) would warrant some attention (implying the market has some, small, concern about the possibility of default) while anything above 250 would indicate that the market has major concerns on that day about default.

Why does the yield matter on a bond?

As we have already explained bonds are usually used as part of a structured product. The bonds yield or coupon helps fund the payout. All things being equal a higher bond yield means more funding for the payout. But rising bond yields, especially for benchmark US and UK Treasury 10 year bonds also indicate that the markets expect interest rates to rise in the future. Rising interest rates are not usually a good sign for risky financial assets such as equities.

Volatility measures

Share prices move up and down, as do the indices (the S&P 500 and FTSE100) that track them. This movement up and down in price is both regular and measurable and is called volatility. It is measured by stand alone indices such as the Vix (tracking the volatility of the S&P 500), VStoxx (the Eurozone Dow Jones Eurostoxx 50 index) and VFtse (our own FTSE index). These indices in turn allow the wider market to price options such as puts and calls that pay out as markets become more volatile. In simple terms more volatility implies higher premiums for issuers of options. That can be useful to structured product issuers as these options are usually built into an investment, especially around the barrier level which is usually only ever broken after a spike in volatility. Again all things being equal an increase in volatility (implying something like the Vix moving above 20 in index terms) usually implies higher funding levels for issuers of structured products.

Dividend Futures

These options based contracts measure the likely total dividend payout from a major index such as the FTSE 100 or the Eurozone DJ Eurostoxx 50 index. In simple terms the contract looks at a specific year (say 2015) then examines the total dividend payout from all the companies in the index, adds up the likely payout, and then fixes it as a futures price usually in basis points. Structured product issuers make extensive use of dividend futures largely because they've based payouts on a benchmark index. That means the bank that is hedging the payout will want to be 'long' the index (in order to balance it's own book of risks) but will not want the dividends that come from investing in that benchmark index. They'll look to sell those future possible dividends via these options and then use the premium income generated to help fund their hedging position. In general terms the longer dated a dividend future (say more than a few years out) the lower the likely payout on the dividend future as the market cannot know dividends will keep on increasing in an uncertain future and must his price in some level of uncertainty.

Equity benchmarks

Most structured products use a mainstream well known index such as the FTSE 100 or S&P 500 as a reference for the payout. For investors the key returns periods are 1 year (for most auto calls) and 5 and six years for most 'growth' products. During most though not all five and six year periods it is reasonable to expect an index to increase in value although there have been many periods where this hasn't been the case especially as we lurch into a recession. Risk measures such as the sharpe ratio effectively measure how much risk was taken for a return over a certain period (in our case the last five years using annualised returns). The higher the number the better the risk adjusted return with any value over 1 seen as very good.

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To find out more about UKSPA, please visit www.ukspassociation.co.uk.

Kind Regards,

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