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UK Structured™ Products Association

Monthly Market Report

December 2016

With commentary from David Stevenson

Thank goodness the US election is over at last. Now we can all collectively get back to rather more boring issues such as whether we're one step away from a recession in the US (probably - see later), if inflation is about to make a comeback and whether oil prices might slip below $40 a barrel. All of these issues will challenge the new President's inbox, forcing him to adapt policies to messy circumstance. But for me the really big financial tectonic plate shift has been around bonds. We've all been collectively waiting for a bond switch - maybe even a bonds rout - and none has been forthcoming so far. Deflation has continued to be the pesky troublemaker, keeping inflation rates low and bond prices high. But Trump's win has caused jitters. Bonds have sold off and yields have risen. There's clearly going to be even more bond issuance on its way and there's also the possibility that inflation might rise as global trade becomes challenged. All of these factors could prompt investors to worry about a triple whammy: a massive increase in issuance, rising inflation and a buyers strike from China. If buyers do start to head for the hills, we could see bond yields rise sharply just as interest rates start their slow climb in the US. On paper this could all be great news for equities, with massive inflows into dividend yielding equities. But the problem is that over the last few years' correlations between assets have tightened and if there is a big bonds sell off, equities might be dragged down as well.

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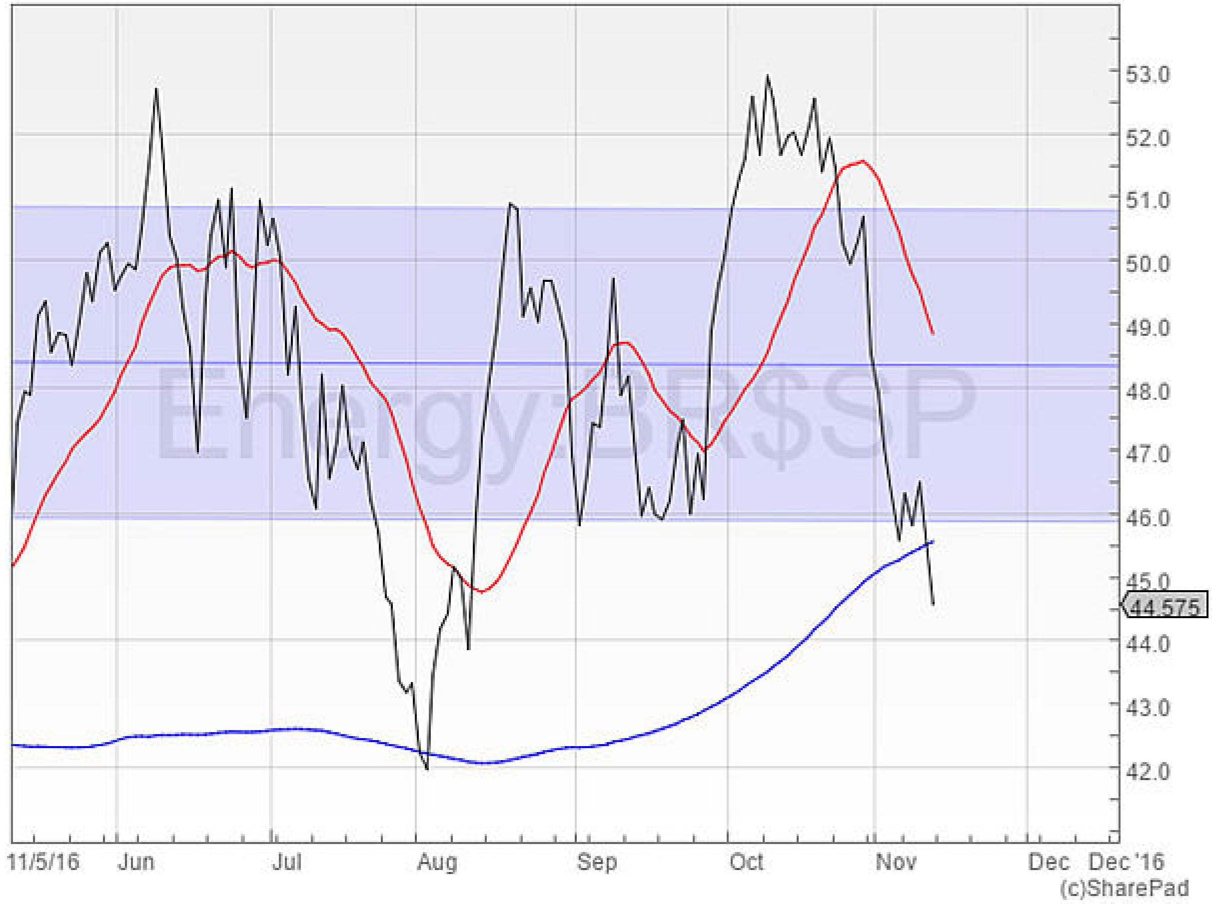
Headline Numbers

So much for the optimism surrounding the OPEC deal to cut output just a few weeks ago! Back then the oil bulls were excitedly talking about oil prices stabilising in a trading range between $45 and $65. Just a few days later and the price of Brent crude is back below $50 a barrel with $40 the next lower target. The chart below is from web site Sharepad and shows prices for the last six months for Brent oil, currently trading below $45 a barrel. The blue line represents the 200 day moving average for Brent and the red the 20 day moving average. The current plunging price looks technically very bearish!



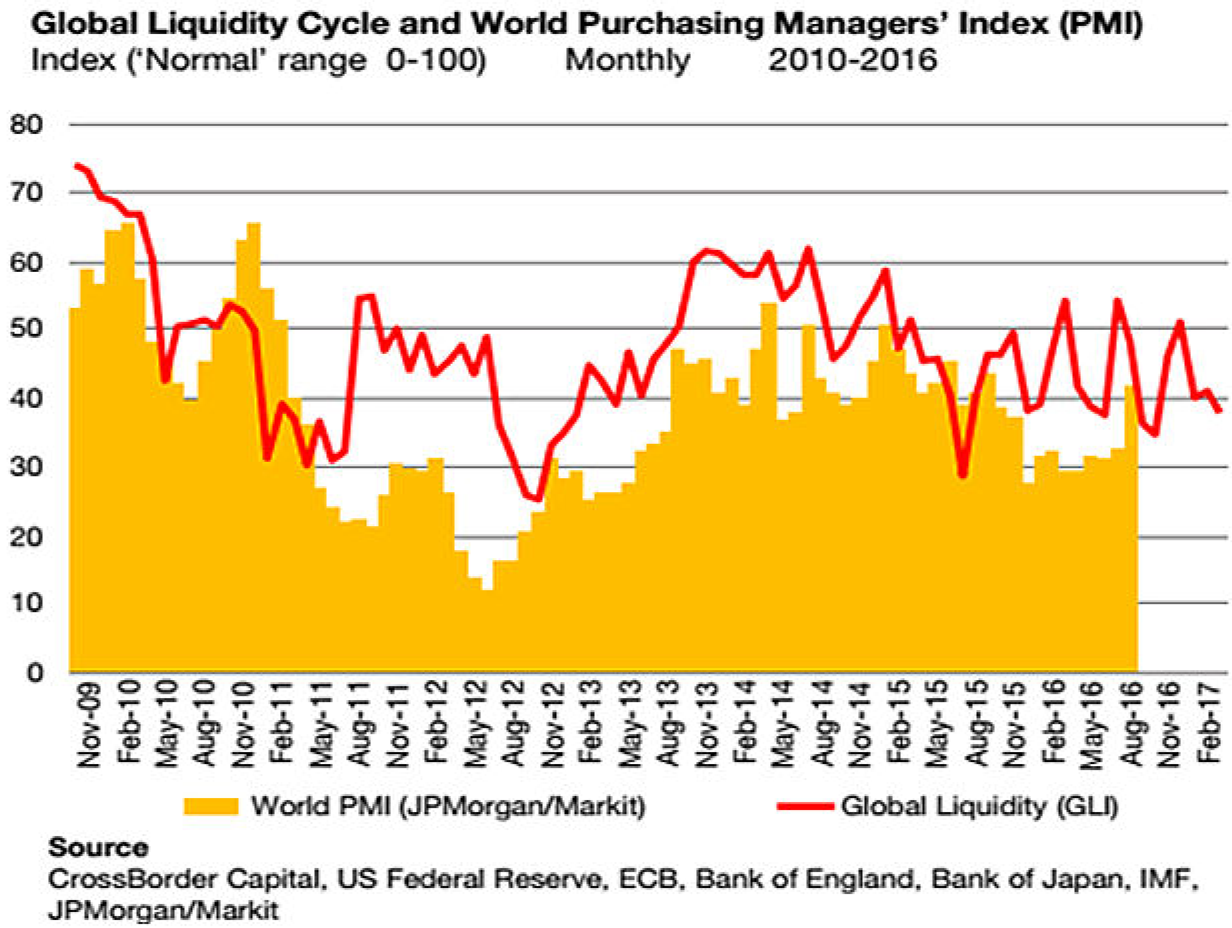
Source: SharePad

At this point it's worth reminding ourselves what OPEC agreed to all thoese weeks ago. The key market movers - the Gulf States of Saudi Arabia plus Kuwait, UAE, and Qatar - proposed to cut 4.0% from their peak output levels. This agreement implied total 2017 OPEC production of 33.2 mb/d and a combined Russian and OPEC output of 44.4 mb/d. Before the deal had been announced OPEC had been forecast to produce 33.8 mb/d, which with Russian output could have implied 45.2 mb/d.

Unfortunately, recent comments from Russia, Brazil, and Kazakhstan suggests that we're not actually going to see a freeze in output - or at least they're not going to play ball! And remember that Iraq and Iran remain exempt from the deal anyway! Based on these recent developments analysts at Goldman Sachs "average October OPEC output is already up to 34.2 mb/d". The US bank suspects that combined OPEC and Russia production could hit 45.0 mb/d in 2017, just shy of their pre-Algiers forecasts. The bank also notes that "Libya/Nigeria/Iran/Iraq are targeting another 0.6 mb/d increase from current production. Further, Russia is ramping up production faster than we had expected, with our Russia oil equity analyst forecasting output of 11.7 mb/d in 2017 vs. our base case of 11.4 mb/d".

Next stop $40 a barrel for oil and yet more OPEC panic!

Everyone seems to be transfixed by politics at the moment but back in the real world, economic cycles have a nasty way of interfering with the best laid plans of mice and men - and Presidents! Many economists have been warning for quite some time now that we're due another downturn and analysts from Cross Border Capital reckon they might have spotted the first clear warning sign. This London based research house is a favourite amongst hedge funds and focuses its analysis on liquidity flows - both central bank level and private corporate. Just a few days after the results of the election it announced that its measures suggest that "funding conditions are deteriorating rapidly in the Developed World, led by skidding US cash flows. The Global Liquidity Index (GLI™) fell further in October 2016 to hit another weak reading of 37.8 ('normal' range 0-100)". The chart below shows this liquidity measure measured against global PMI data. The downward trend for liquidity is obvious - and worrying.



This drop hides two divergent trends according to cross Border: (1) US Liquidity tumbled to an index reading of only 17.4, or its lowest level for 10 years, and (2) the EM liquidity recovery continues (67.2), led by China. Index readings below 30 typically warn of recession.

"Based on history" says Cross Border "we put the odds on US recession at 80%. Looking back at 40 years of data, US Liquidity has only been this tight five times before and none ended well: lows in 1980 and 1989 led to recessions; respective lows in 1996 and 2000 heralded the Asian Crisis and the Y2K bust, and the low in late-2006 preceded the Global Financial Crisis (GFC). According to past lead-times, we expect the US economy to skid into recession by Spring 2017." The firm reckons that the main global problem is the "inability of the private sectors to generate liquidity without the help of their Central Banks. This particularly matters when debt burdens are high. Where Central Bank support is forthcoming, such as Eurozone, Britain, China and other Emerging Markets, notably Brazil and Russia, total liquidity levels remain elevated. But when Central Banks step back, such as in the US, liquidity collapses". Maybe President Trump is exactly what the world needs at such a dangerous juncture?

Measure	Value as of Oct 13th, 2016	Value as of Nov 14th, 2016
UK Government 10 year bond rate	1.02%	1.36%
GDP Growth rate YoY	2.10%	2.30%
CPI Core rate	1.30%	1.50%
RPI Inflation rate	1.80%	2.00%
Interest rate	0.25%	0.25%
Interbank rate 3 month	0.40%	0.40%
Government debt to GDP ratio	89.20%	89.20%
Manufacturing PMI	55.4	54.3

Bank CDS options

It's been another quiet month for bank CDS spreads, with most drifting lower in terms of basis point costs, reflecting benign risk conditions. In particular European banks such as RBS, SG, UBS and HSBC have seen their CDS price's fall sharply with Deutsche Bank also benefitting from this trend.

Bank	One Year	Five Year	Monthly Change (5yr)	Annual Change (5yr)	Credit Rating (Fitch)
Banco Santander	42.95	86	-7.53	29	A -
Barclays	44	90	-14	64	A
Citigroup	28	82.5	-2	0.66	A
Commerzbank	56	126	-4	51	A+
Credit Suisse	80	142	-0.27	88	A
Deutsche Bank	185	231	6.56	174	A+
Goldman Sachs	33.87	95.9	-2	17	A
HSBC	24	64	-19	1.81	AA-
JP Morgan	26	65	-2.96	-9.45	A+
Lloyds Banking Group	40	74	-20	58	A
Morgan Stanley	34	93	-3.44	13.29	A
Nomura	22.7	84	-4.93	38.84	A-
Rabobank	22.35	62.93	-2.84	20.64	AA-
RBS	66.32	120	-13	93	A
Soc Gen	20.42	69.75	-10	-3.35	A
UBS	27	63	-14.46	26.82	A

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Government Bonds

In amongst all the relief that President Trump might be different from Candidate Trump (one can only pray that is the case), bond prices staged some big moves. The chart below is from website Trading Economics and shows the yield on ten year bonds since the beginning of October. Notice how this has spiked upwards sharply as investors have sold off longer duration bonds, worried that President Trump intends to issue a Mount Rushmore sized quantity of bonds to help fund massive tax cuts and humongous infrastructure spending. Government borrowing is likely to rise in the medium term, which often results in what bond investor's call yield curve steepening.

UK Government Bonds 10-year Rates 1.36%

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

But the bigger concern is that President Trump dislikes low interest rates. He might also choose to undermine the independence of US Federal Reserve. All of these actions might prove problematic for bond investors, especially as an astonishing $62 trillion of new debt has been created since 2008. Global Debt to GDP is now over 300%, and debt has grown faster than GDP for some five decades. Analysts at M and G also observe that "the US bond market is heavily owned by foreigners, including nations like China where Trump has made unfriendly comments. 50% of the US Treasury market is owned by overseas investors (China owns 19%, Japan 18%), and 30% of America's corporate bond market is foreign owned. Foreigners - and especially China - have already turned heavy net sellers of USTs over the past six months." Might we actually, at long last, be close to a proper bonds sell off?

CDS Rates for Sovereign Debt

Country	Five Year
France	37
Germany	23.5
Japan	33.5
United Kingdom	38
Ireland	65.5
Italy	162.5
Portugal	169.95
Spain	86.5

Eurozone peripheral bond yields

Country	Oct 11th 2016	Nov 11th 2016	Spread over 10 year
Spain 10 year	1.10%	1.47%	116
Italy 10 year	1.39%	2.02%	171
Greece 10 year	8.38%	7.15%	684

	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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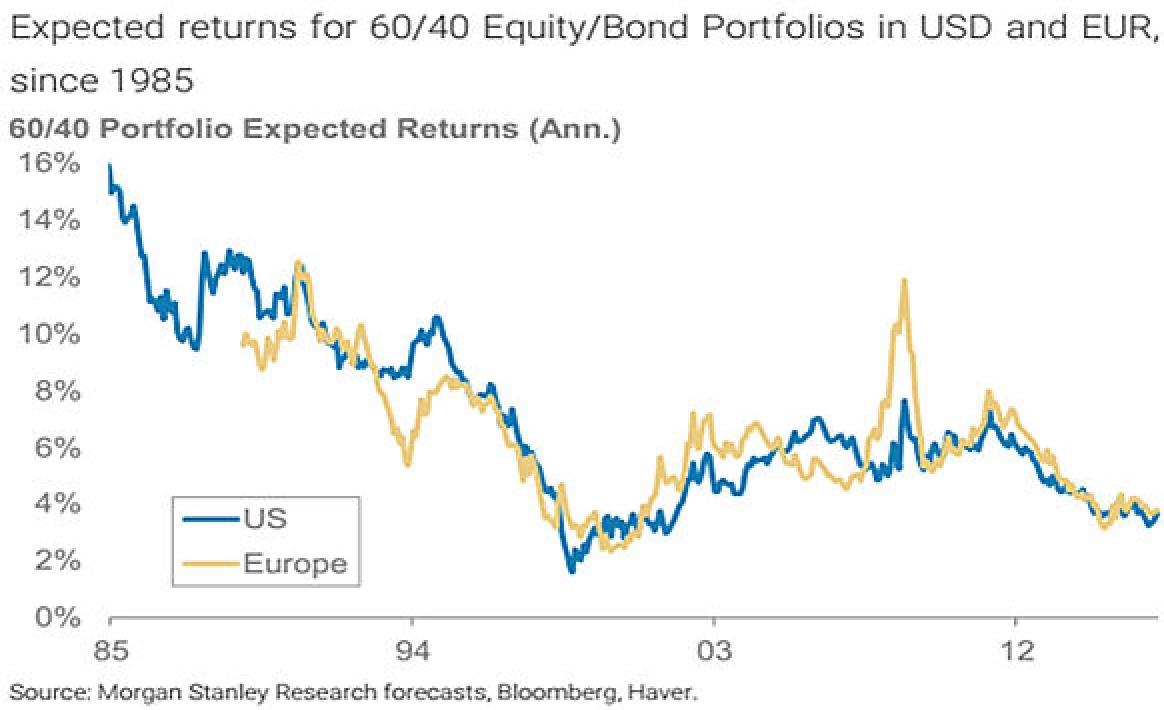
Equity Markets and Dividend Futures

In these articles, we tend to focus on short term market movements such as what might happen next to oil prices, or which way are US voters tilting? But most investor's think long term. They certainly plan on that basis. Any model for long term portfolio planning probably requires some guestimate as to what long term returns might be from investing in bonds and equities. Strategists and academic economists spend inordinate amounts of time peering into their data banks, estimating what the equity risk premium amount to i.e. the extra return from investing in riskier equity assets compared to less risky bonds. The consensus guestimate for the equity risk premium, as it's called, seems to be currently hovering between 3 to 5% per annum (compared to risk free assets) although of course individual year returns will vary enormously. These financial models are simply an attempt to understand what might happen to different asset classes over 10 or even 20-year time frames.

Analysts at US investment bank Morgan Stanley have recently jumped back into this debate. In a Cross Assets strategy dispatch from the very end of October (the 23rd to be precise), the bank's analysts have attempted to work out what markets might return in the future. They observe that traditional 60/40 portfolios' (40% in bonds, 60% in equities) have produced nominal expected returns of between 4 and 10% over the last decade in both the US and Europe.

But the report suggests that bond returns have "never been lower, and while equity risk premiums are reasonable on a 20-year basis, they are below longer-term averages". The chart below shows how these portfolio returns have evolved over time - and where they might go to next!



According to the Morgan Stanley analysts a traditional 60/40 US equity/bond portfolio might now be expected to produce a return over the next decade of "just 3.6% return per year, 2.0% real, close to the lowest in history". If they're right investors could be in for a surprise, especially with their pensions. Returns of close to 2% might bankrupt many DB pensions schemes and force most ordinary investors to save for much longer, thus postponing retirement.

Index	October	November	Reference Index Value	Level 6 Months Ago
Eurostoxx 50	119	118.4	3030	115.5
FTSE 100 (Dec 14)	254.2	255.7	6730	N/a

Name	Price % change						Close
	1 month	**3 months**	**6 months**	**1 year**	**5 year**	**6 year**	
FTSE 100	-4.81	-2.67	9.22	6.88	21.37	15.74	6730.43
S&P 500	1.3	-0.98	4.84	4.31	71.26	78.36	2164.45
Benchmark for gilt							
iShares FTSE UK All Stocks Gilt	-4.47	-8.64	0.6	5.81	11.79	21.89	12.92
Benchmark for volatility							
VIX New Methodology	-7.75	21.32	-3.54	-11.77	-52.83	23.98	14.17

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Volatility

The first chart below tells a story or two. It's from website Sharepad and it's tracking the main equity volatility index called the Vix. This measures the turbulence, up and down, of the S&P 500. The chart tracks returns for this index for the last 12 months. The overall trend line (the very thin blue line) is sharply down with the blue line representing the 200-day moving average and the red line the 20 day moving average. Over the last year we've seen spikes where the Vix has shot above its upper barrier, pushing past 20 before collapsing again. Unsurprisingly the run up to the US election saw a big spike, but not as big as one might have expected. Now the Vix has crashed back again and is currently at around 14.74. We might see the market become even calmer over the next few weeks, pushing the Vix back to historic low levels of not much more than 12.

So, the message is that US equities don't look remotely scary - at least in terms of volatility of prices. If you are looking for a veritable real life roller-coaster ride peek at the next chart below which is for a US exchange traded fund which tracks the MSCI Mexico equities index. It's from BlackRock iShares and the ticker is EWW> You can find trading information on this index tracker at Yahoo finance at https://finance.yahoo.com/quote/EWW?p=EWW. The bottom part of the chart with the green bar charts represents trading volumes. Notice how these have spiked while the value of the ETF has plummeted!

Source: SharePad

But as anyone who has read Nicholas Taleb's Black Swan will know, real world markets have a curious habit of behaving in a seemingly irrational, inefficient manner. Low frequency, high risk events seems to happen more often than expected. The second chart below show's how markets have actually behaved in the last few decades.

Measure	November Level	October Level	September Level	August Level
Vstoxx Volatility	21.96	21.52	19.15	18.43
VFTSE Volatility	16.69	16.82	12.91	12.92

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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.

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