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UK Structured™ Products Association

Monthly Market Report

March 2016

With commentary from David Stevenson

One of the more curious aspects of modern investing is the growing evidence that across all forms of markets there's an obvious observer effect at work i.e. the simple act of observation in turn changes behaviour. The Hawthorne effect for instance argues for a form of reactivity in which subjects modify their behaviour in response to knowing they are being studied. Schrodinger's cat and Heisenberg principles suggest similar effects where the mere observation of behaviour changes outcomes.

These intellectual notions will probably be tested to destruction in the coming months of Brexit debate, specifically in relation to any damage to the UK economy and to wider markets. Many Remain enthusiasts argue that the UK will probably suffer immeasurable economic damage whereas Leave fans argue that negative impact will be short lived and manageable.

My guess is that the UK markets are about to offer a grand experiment of whether we need to fear fear itself! How will markets behave about the possibility of a Brexit? Will the fear itself prod markets into mayhem?

Over the last few weeks we've seen a number of big investment banks ruminating on the impact of Brexit for investor's. One of the most interesting reports comes from the French bank SG. They're brave enough to put some actual hard numbers on their estimates. They believe that there "could be a hit to exports averaging 2.5% pa for 10 years which would reduce GDP by 0.3pp pa". Some of the mechanisms for this lower growth are obvious - financial services would be hit as access to core markets is reduced. Foreign direct investment would be hit as well.

Then there's the fear that a Brexit would spark another SNP vote (a racing certainty given recent declarations at the nationalists' recent party conference). The French bank also bravely admits that Brexit "would reduce the pace of immigration from the EU. This would reduce the potential growth rate of the economy". I say bravely because this is exactly what Brexit campaigners probably want!

In terms of market outcomes, the bank sticks with a consensus view on FX rates, which is that we would see GBP/USD trading below 1.30, and EUR/USD below parity. In bond markets investors should expect "the UK Rates curve to steepen beyond 10y... Credit spreads would widen in the UK, but maybe even more so in the periphery....". More controversially they argue that UK Equity markets could be supported by the weaker GBP. This goes against much of the consensus view, which is that the FTSE 100 Index would be hit hard on day one of Brexit.

But perhaps most importantly the French bank's analysts argue that the real big impact will be on market volatility itself - a Brexit might spark off political turmoil throughout Europe and their "Equity Volatility Strategists think that all of this is not yet priced in". Regardless of the hard numbers suggested in this analysis, this central insight is important - maybe we should fear fear itself? Perhaps the greatest danger is not the macro economic impact of Brexit itself but the resulting turmoil in financial markets worldwide?

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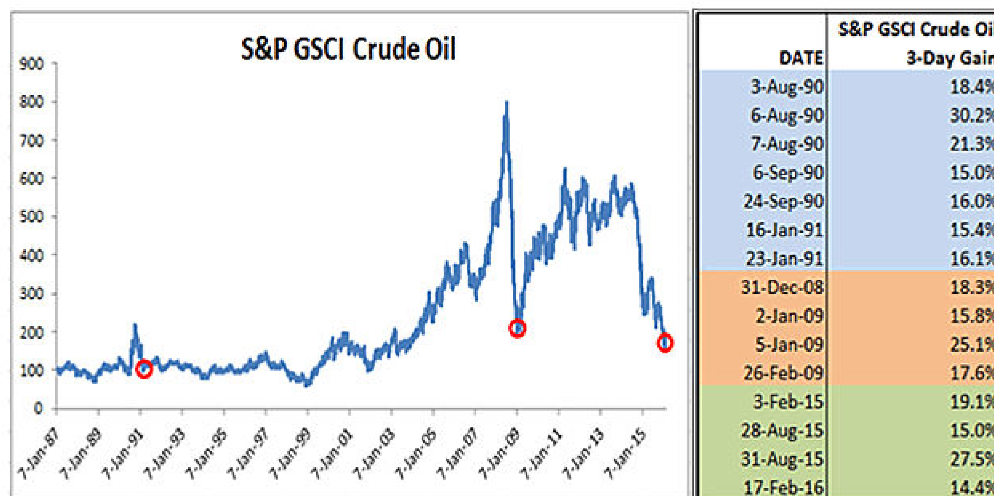
Headline Numbers

Measure	Value as of February 12th, 2016	Value as of March 11th, 2016
UK Government 10 year bond rate	1.31%	1.58%
GDP Growth rate YoY	1.90%	1.90%
CPI Core rate	1.40%	1.20%
RPI Inflation rate	1.20%	1.30%
Interest rate	0.50%	0.50%
Interbank rate 3 month	0.59%	0.59%
Government debt to GDP ratio	88.60%	88.60%
Manufacturing PMI	52.9	52.7

The last few weeks have brought better news for oil markets. Brent and WTI (West Texas light or Intermediate) contract prices have picked up sharply. In fact, the S&P GSCI (WTI) Crude Oil index posted a 3-day gain of 14.4% ending Feb. 17, 2016. According to the firm's analysts this was the biggest 3-day gain in about 6 months for the index, and gains of this magnitude have only happened near oil bottoms. The table below is from S&P Dow Jones and shows that other examples of big three-day gains have usually been followed by rapidly rising oil prices.



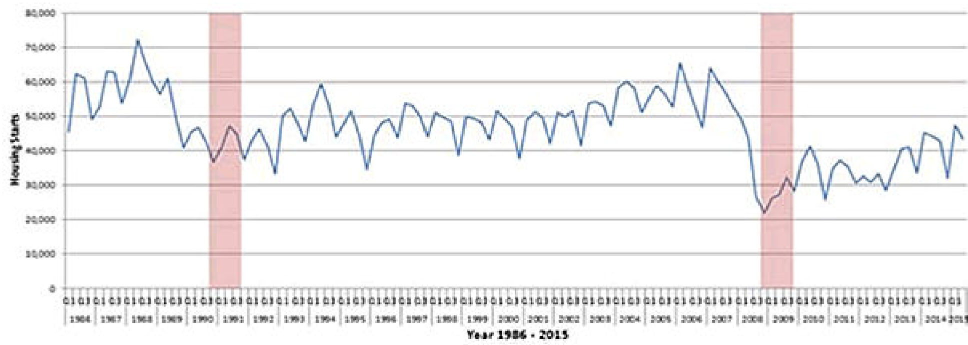
DATE	S&P GSCI Crude Oil 3-Day Gain
3-Aug-90	18.4%
6-Aug-90	30.2%
7-Aug-90	21.3%
6-Sep-90	15.0%
24-Sep-90	16.0%
16-Jan-91	15.4%
23-Jan-91	16.1%
31-Dec-08	18.3%
2-Jan-09	15.8%
5-Jan-09	25.1%
26-Feb-09	17.6%
3-Feb-15	19.1%
28-Aug-15	15.0%
31-Aug-15	27.5%
17-Feb-16	14.4%

Source: S&P Dow Jones

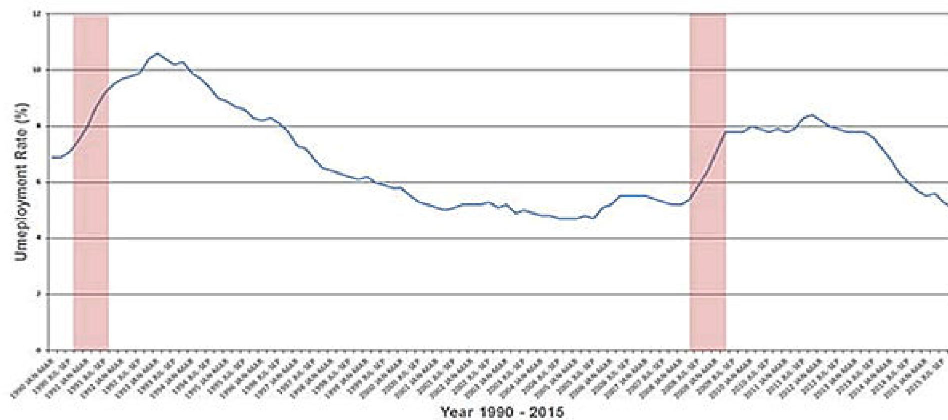
Sadly, this wave of optimism is not shared by all market commentators. Pointy head analyst types at US investment bank Goldman Sachs (whose bullish predictions in earlier years were the subject of much bemusement) are sticking with their grim view of energy markets. They concede that some measures look positive - they accept that non-OPEC producer guidance is finally pointing to declines which should in turn help the consensus expectation for broad-based supply declines in 2016.

But they also remind investors of what seems obvious to many oil bears. If prices are heading back above $40, won't the adjustment process - involving a massive cut in output - be shelved, simply delaying the inevitable process of market capitulation? Or as the bank's analysts put it - " an early rally in prices before a deficit materializes would prove self-defeating, as it would reverse these nascent supply curtailments." In their estimations there's even more bad news on its way. They're especially worried about massive amounts of oil sitting around in mid-Western US storage tanks. "Current US inventory builds are setting new record highs for storage utilization and we expect these builds to continue through April." The net result is that the bank's analysts reckon that a large oversupply in coming months will continue to keep prices in a trendless and volatile range, from $25 to $45.

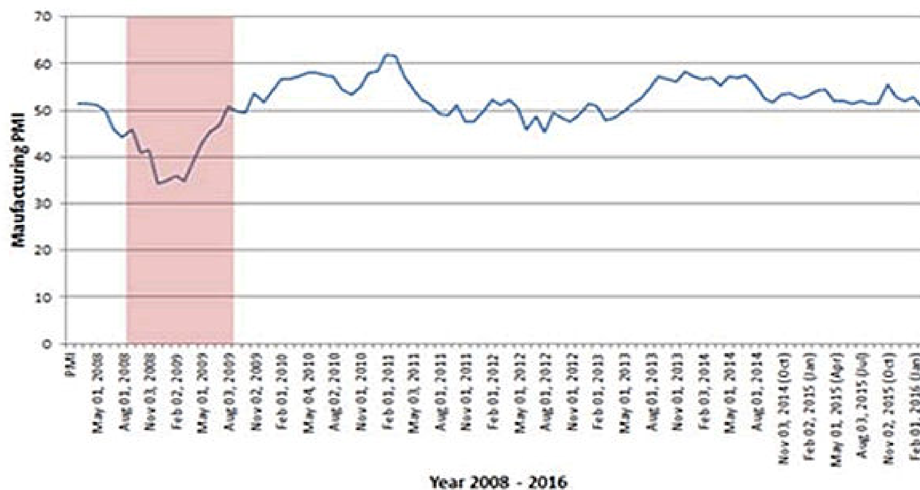
Despite the market rally over the last few weeks, there's still a palpable sense of gloom abroad. Many institutional investors have looked at a small number of key measures and convinced themselves we are one step away from a recession. But is this pessimism wildly overdone? Analysts Daniel Mahoney and Tim Knox from the think tank the Centre for Policy Studies certainly seem to think so. They remind investors of the hugely influential work of Joseph Carson – a US economist for Alliance Bernstein – who relies on just three economic measures for his forecasting model: new manufacturing orders, new building permits and job creation numbers. In the UK, the three metrics that align with these measures are the manufacturing PMI, house building starts and the unemployment rate.



Source: Department for Communities and Local Government link
Note: Red line mark recession period



Source: Office for National Statistics
Note: Red lines mark recession period



The charts above suggest that these measures have some predictive power. Housing starts – which is considered a leading economic indicator – fell by 35% in the two years leading up to the recession in the early 1990s and there was also a dramatic fall in housing starts prior to the financial crisis, declining by nearly 60% from 2007 Q1 to 2008 Q3. There was also a modest fall in manufacturing PMI before the financial crisis.

So what do the charts tell us about our current economic quandary? The numbers all suggest, "a recession is unlikely in the foreseeable future". Highlights include the following:

- UK PMI data remains robust, according to analysis from Market/CPS. UK manufacturing PMI is at a three-month high of 52.9 and improved domestic demand is supporting the expansion of output. Any figure above 50 indicates an expansion in manufacturing activity.

- Data from the Department of Communities and Local Government suggests that the UK's construction

industry continues to improve. House building starts from 2015 Q4 are up 6% compared to the previous quarter and 23% compared to 2014 Q4.

- The employment picture remains very positive, according to the Office for National Statistics. The unemployment rate stands at 5.1%, which is lower than the 5.7% observed a year earlier. Average weekly earnings have also shown reasonable growth, increasing by 2% excluding bonuses.

Crisis? What crisis?

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Bank CDS options

The massive turn around in sentiment towards bank bonds continues. Marvel for one minute at the current pricing for CDS options priced on Deutsche Bank bonds. Barely a few months ago (November) investors could insure their German bank bonds for 40 basis points for one year and 92 basis points for five years. Now that rate is a whopping 225 basis points for one year and 215 basis points for 5 years. As we've mentioned before on these pages, it's quite possible that the earlier prices under estimated risk whereas the current pricing very possibly over estimates the true risks of Germany's leading national bank going bust. What's equally amusing is that many of the old certainties have been reinstated. For many years' Dutch outfit Rabobank was regarded by the CDS markets as by far and away the 'least risky' bank - its CDs pricing is now considerably better than nearly all its rivals expect Nomura. After the global financial crisis, the big US investment banks were also highly regarded - their high place in the pecking order has now been restored, with JPMorgan in particular regarded as relatively low risk.

Bank	One Year	Five Year	Monthly Change (5yr)	Annual Change (5yr)	Credit Rating (Fitch)
Banco Santander	84	147	-13	99.77	A -
Barclays	85	121	12.75	178	A
Citigroup	49	105.5	-4.5	41	A
Commerzbank	80	129	-6	88	A+
Credit Suisse	119	146	29	209	A
Deutsche Bank	225	215	23	262	A+
Goldman Sachs	47.5	114.5	3.6	37	A
HSBC	65	110	-11	132	AA-
JP Morgan	35	75	-11.7	17.61	A+
Lloyds Banking Group	43.9	98	5.66	120	A
Morgan Stanley	48	112.5	3.69	52	A
Nomura	36.6	112	32	24	A-
Rabobank	26.4	73	-1	71	AA-
RBS	86	131	23	146	A
Soc Gen	53	95	-7	32	A
UBS	49	73	4.7	82	A

Source: Meteoram.com, 13th March 2016

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Government Bonds

Investor's may worry about stalling growth in the Eurozone (and the inadequacy of ECB bazooka like actions) but that's not stopped bond investors piling back into Club Med government securities - Italian and Spanish yields have fallen sharply as prices have climbed. Spreads over ultra-safe German bunds have also decreased markedly.

These market moves remind us of one iron law of modern QE influenced markets - investor's will scramble for yield in the most unusual places. The great monetary experiments of the last eight years

have pushed investors to consider all sorts of income alternatives. But a recent paper from analysts at fund management firm Vanguard reminds us that many investors have ventured into potentially dangerous terrain in search of income.

Total return Investing by Todd Schlanger observes that allocating to non-traditional bonds such as High yield, emerging market, and strategic bond funds can offer attractive yields when compared to more traditional investment-grade bonds. But this scramble for yield via more adventurous assets comes with an obvious problem. According to Schlanger, many of these unconventional sources of income are much riskier. That means "non-traditional bonds tend to behave more like equities, as demonstrated by their much higher correlation with global equities than hedged global investment-grade bonds, as shown in Figure 4. Therefore, non-traditional bonds do not diversify the same way as traditional bonds and allocating to them could be considered comparable to changing the asset allocation (equity/bond mix) of the portfolio."

Figure 4: Non-traditional bonds have higher correlation with equities than bonds, 1995 to 30 September 2015

Notes: Period covers 1 January 2004 to 30 September 2015 for global high yield and emerging market bonds, global equities, and global bonds (hedged). *Strategic bonds cover the 10 years ending September 30, 2015. Global high yield is defined as the Barclays Global High Index and emerging market bonds are defined as the Barclays USD EM Aggregate Index. Global equities are defined as the MSCI ACWI IMI Index, and global bonds (hedged) are represented by the Barclays Global Aggregate Index (hedged). Strategic bonds are defined as the fund representing the median 10-year return from the Morningstar Database.

Sources: Vanguard calculations, using data from Macrobond, Barclays Live, and Morningstar, Inc.

Income-focused strategy	Impact on portfolio (relative to a broadly diversified market-cap weighted portfolio as the sub-asset class level)
Non-traditional bonds, such as high yield, emerging market and strategic bonds	Increase portfolio, volatility and drawdown risk. Strategic bonds also introduce active manager risk and can lead to opportunity cost.
Property investments (both public and private market)	In public market, increase volatility and drawdown risk. In private market, less transparent, active manager and concentration risk, high cost and illiquid.
Income oriented equity strategies (funded from bonds)	Increase volatility and drawdown risk, tend to be sector concentrated. Dividends do not create wealth in a way equivalent to interest payments.
Income oriented equity strategies (funded from equities)	Increase portfolio's concentration, change factor exposure, increase potential for drawdown.

Source: Vanguard.

9 According to Vanguard calculations using cash flow data over the 5 years ending 31 August 2015, from Morningstar, £20.2 billion has gone into non-traditional bond strategies, £9.4 billion has gone into property investments, and $17.8 billion has gone into equity income strategies.

UK Government Bonds 10-year Rates 1.97%

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

CDS Rates for Sovereign Debt

Country	Five Year
France	30.75
Germany	17.45
Japan	78
United Kingdom	35
Ireland	61
Italy	113
Portugal	243
Spain	86

Eurozone peripheral bond yields

Country	February 12th, 2016	March 11th, 2016	Spread over 10 year
Spain 10 year	1.71%	1.48%	121
Italy 10 year	1.63%	1.32%	105
Greece 10 year	11.39%	8.91%	864

	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

Generous dividends have long been a key support for the FTSE 100 Index. This blue chip benchmark has a long list of generous dividend payers, many of them huge blue chip, globally diversified names. These well endowed, cash rich behemoths have in turn helped support an index that has in recent times yielded well over 3.5% per annum. Buy a major FTSE 100 tracker today for instance and the current yield is at 3.8%.

But just how robust and reliable is that income payout? The table below looks at the top ten biggest stocks in the index by market cap. Between them they amount to 41% of the total value (or market cap) of the index. On average these top ten names produce a dividend yield of 5% per annum.

Name	Close	Price % 1 month ago	FTSE 100 Weighting	Yield %
Royal Dutch Shell PLC	16.41	12.59	7.72	7.58
HSBC Holdings PLC	4.455	0.93	5.19	7.63
British American Tobacco PLC	39.845	7.91	4.4	3.86
SABMiller PLC	42.19	1.66	4.05	1.71
GlaxoSmithKline PLC	13.86	1.99	4	5.77
BP PLC	3.432	3.97	3.76	7.71
Vodafone Group PLC	2.1265	5.22	3.34	5.28
AstraZeneca PLC	40.185	0.24	3.01	4.69
Lloyds Banking Group PLC	0.6895	18.07	2.91	3.26
Diageo PLC	18.505	3.84	2.76	3.05

But the second half of the table tells a more worrying story. We show the forecast yield as well as the dividend cover i.e. the ratio between earnings per share and dividends paid per share. We've also featured the operating cash flow per share (where positive) and the forecast dividend per share. The average forecast yelled may be a chunky 5.4% but the average dividend cover for these ten stocks is 0.86 - below the bare minimum of 1 regarded as acceptable by most investors. Many of the big names also feature negative cash flows and very poorly covered dividend payouts. Buyer beware!

Name	Forecast Yield %	Div. Cover	Operating Cash Flow ps (p)	Forecast Dividend
Royal Dutch Shell PLC	7.44	-0.13		122.16
HSBC Holdings PLC	8.19	1.27	6.402	36.507
British American Tobacco PLC	4.11	1.04		163.747
SABMiller PLC	1.89	1.97	242.1	79.716
GlaxoSmithKline PLC	5.77	-0.21		79.963
BP PLC	7.6	-0.51	76.32	26.089
Vodafone Group PLC	5.38	1.98	39.04	11.44
AstraZeneca PLC	4.81	0.85	276.1	193.392
Lloyds Banking Group PLC	6.36	0.64	22.88	4.382
Diageo PLC	3.19	1.72	137.3	59.121
	5.474	0.862		

Index	March	February	Reference Index Value	Level 6 Months Ago
Eurostoxx 50	118	115.6	3073	116.5
FTSE 100 (Dec 14)	246	234.45	61	N/a

Name	Price % change						Close
	1 month	**3 months**	**6 months**	**1 year**	**5 year**	**6 year**	
FTSE 100	6.42	-0.84	-1.93	-994	3.27	7.02	6036.7
S&P 500	7.44	-3.05	1.91	-2.67	53.62	73.67	1989.57
Benchmark for gilt							
iShares FTSE UK All Stocks Gilt	-0.64	3.03	2.44	3.01	21.13	23.94	12.6975
Benchmark for volatility							
VIX New Methodology	-30.24	-5.17	-24.74	9.89	-16.18	-1.24	18.34

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Volatility

One of the more curious aspects of recent market moves has been the odd relationship between stock market volatility and the price of gold. The chart below shows the one-year price of gold per ounce as a spot price. The thick green line refers to the 20 day moving average while the very thin blue line is the 200-day moving average. On either side of the price (black and red) are trend lines. It's immediately obvious that gold has broken through all its technical barriers, pushing well above its upper trend line and its moving averages. In summary, Gold investors are a bullish bunch!

A recent report by researchers at London based firm Cross Border Capital point the finger at another key driver, the dollar. They argue that the "current US dollar bull market is starting to look mature by past standards." If they are right this huge market shift could now be starting to reverse.

US capital market liquidity is now being hit by declining US corporate cash flows as well as the explicit withdrawal of liquidity by the Federal Reserve. Cross Border analysts reckon the dollar could be a difficult place. They argue that demand for the dollar will decline and this in turn could prompt more market mayhem. In these circumstances, they suggest that demand for gold could shoot up - as the dollar weakens. Demand may in fact be so great that investors could, Cross Border argues, push gold prices up to as high as US$2,000/oz. by mid-2017. If this did happen, would the VIX start to pick up speed again?

Measure	March Level	February Level	January Level	December Level
VoxOx Volatility	24.11	36	30.39	24.73
Vets Volatility	17.71	30.38	24.02	16.93
FTSE Put Call Ratio	N/a	N/a	N/a	0.99

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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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