DERIVATIVES-BASED INVESTMENTS FOR RETAIL AND INSTITUTIONAL INVESTORS

Risk publications

Structured products

SEPTEMBER 2013
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Beyond redemption?

Finding fault with the ETF mechanism

- Germany favours FTT harmony
- Licence fees get out of hand
- Report: ETNs are 'overpriced'
- SG shines in Asia Awards 2013

A starting point

StartPoint Investments has expanded its UK product range with the creation of a six-year autocallable with the return based on a selection of liquid UK stocks, and the capital protection contingent on the FTSE 100

This is a six-year kickout product linked to three underlying stocks and the FTSE 100 Index offering a potential return of 12% per annum (not compounded) if all three stocks are at or above their initial strike levels at any annual observation point from the first to the fifth year. On the final observation date, the required kickout level is reduced to 75%. Capital is not protected at maturity if the final value of the FTSE 100 is below 50% of its initial level.

This type of product is known as an autocall, which is dependent on the common stocks of BP, HSBC and Vodafone. If the closing levels of all three stocks are at or above their required target level on one of the observation dates, the product will mature early, returning the initial investment in addition to a fixed return.

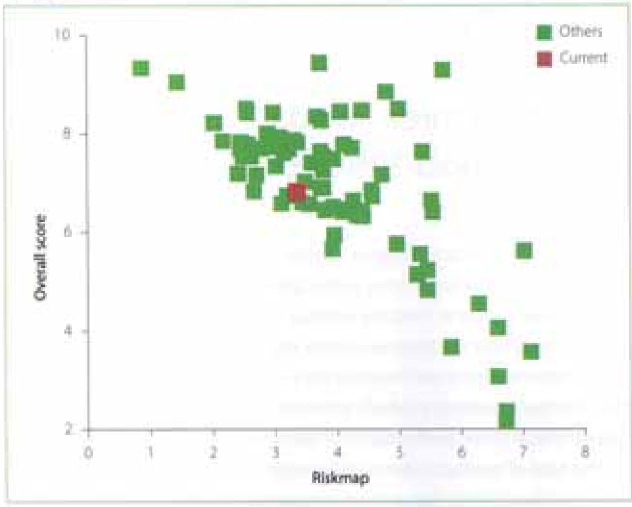
Kickout does not occur if the price of any of the stocks is below its initial index level from year one to five. At maturity, the performance of each underlying is defined as the final level of each stock compared to its initial level. If on June 28, 2019 the closing levels of all three stocks are at or above 75% of their initial levels, the product will return 72% plus principal. If the product is not called on the final valuation date,

Issuer:	BNP Paribas	**Currency of issue:**	Sterling
Country of issue:	UK	**Product type:**	At-risk kickout (capital not protected)

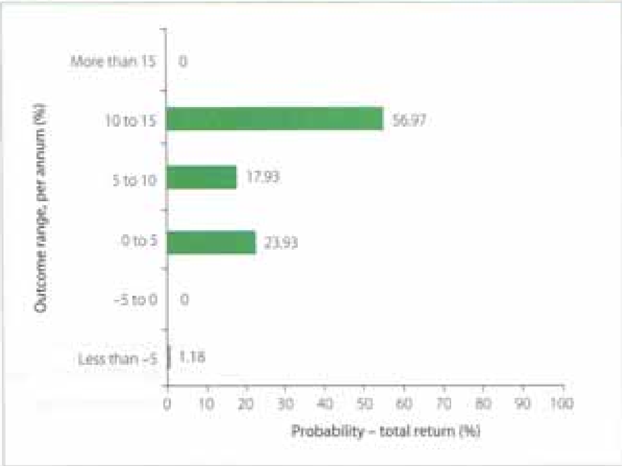
Points for:	1. Potential early return from the first year onwards 2. According to the brochure returns via direct investment are subject to CGT
Points against:	1. Capital not protected at maturity if 50% European barrier breached at maturity by FTSE 100 2. Any growth above the return level is not passed on to the investor
Asset exposure period:	Six years
Underlying asset:	FTSE 100 Index; UK stocks (BP, HSBC, Vodafone)
Final index level:	Defined as the closing level of the index on the final day of investment
Investment limits:	Minimum £5,000 for direct investment and ISA transfers, maximum £11,520 for 2013/2014 ISA investment
Tax treatment outside a tax-free wrapper (according to information from the product provider):	Capital gains tax

Plan manager:	Meteor Asset Management	**Offer period**	Opens n/a	Transfers by n/a	Closes 26/06/2013
Credit rating of investments made (according to information from the product provider):	A+ (Standard & Poor's)	**Key dates**	Strike set 28/06/2013	Final reading 28/06/2019	Maturity/payout 12/07/2019

Score versus risk plot



Probability table of product return outcomes (based on simulated performances)



Performance statistics	
Annualised volatility (product)	9.89%
Annualised volatility (underlying)	20.00%
Product Sharpe ratio	23.04%
Market Sharpe ratio	37.70%
Equivalent initial portfolio	
Underlying	3,782.5%
Bond	33.44%
Cash	-3,715.94%

Upside and downside measures	
Upside measure	10.96%
Downside measure	0.11%
Upside measure beyond risk-free	8.76%
Downside measure beyond risk-free	0.85%
Initial sensitivities	
Delta	37.83
Rho	-0.19
Vega	-0.64

principal repayment is dependent on the performance of the FTSE 100.

If the product is not called, repayment of capital will depend on whether or not the final level of the FTSE 100 is above or below 50% of its initial level. If the index finishes above the barrier level, the investor will be repaid 100% of their initial investment. If the index finishes below the 50% barrier, the investor will be paid an amount equal to the final level of the index with respect to its starting level. For example, if the final level of the index is 40% of its initial level and therefore the barrier is breached, investors will be returned 40% of their capital investment, a loss of 60%.

By including a 50% final day barrier, the price of the index can decrease below the barrier level during the product term without having an impact on whether full capital is returned to the investor at maturity or not, but will be breached if the final level of the underlying index is below 50% of its initial value.

Pricing and risk

This type of product requires no underlying growth to achieve the return. The price is inversely affected by the volatilities of the underlyings, so the value of the product will increase as the volatilities of stocks and the FTSE decrease.

This product is unusual in that instead of both upside and downside being dependent on the same underlyings, the provider has chosen to link the potential returns of the product to the three stocks and the capital risk element to the performance of the FTSE. All three stocks are components of the FTSE 100 Index and as of July 15, 2013 accounted for approximately 19% of the FTSE holdings between them. The correlation between each of these stocks and the index ranges from 50% to 84% and will be a significant factor in the pricing and expected returns. By using the FTSE 100 rather than the worst-performing of the stocks to determine the capital return at maturity, the risk profile of the product is reduced.

It is worth highlighting that the higher the correlation between the three stocks, the higher the price of the options and therefore the more expensive the product would become to structure.

Product assessment	
Overall rating	6.89/10
Riskmap	3.26/10
Value rating	4.97/10
Simplicity rating	7.50/10
Return rating	6.70/10

European in the UK

HQX is offering UK investors a two-year investment in three liquid UK stocks, with a European barrier set at 80%. An annual coupon of almost 10% is potentially on offer

The two-year, fixed-rate income plan issued by HQX is a capital-at-risk income product linked to three stocks: HSBC, Vodafone and BP, offering an annual income of 9.36% that will be paid each quarter regardless of the performance of the underlying assets. If at maturity the closing level of the worst-performing share has stayed above the barrier level of 80% on the final valuation date, the capital will be returned to an investor in full. If the barrier is breached, the quarterly coupons will go some way to offset against potential capital loss.

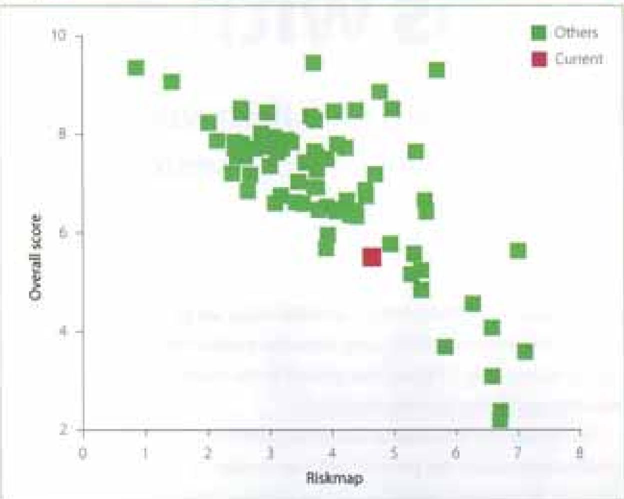
Products that contain more than one asset used to determine the payoff require the calculation of individual volatilities, and the correlations between the underlyings play an important part. A typical reverse convertible product pays a fixed-income stream regardless of the performance of the underlying assets. Due to the fixed coupons, some principal can be lost at maturity without suffering loss on a total return basis. If the barrier has been breached, then the stock needs to finish above 90.64% of its initial value for the investor to be returned at least the principal investment overall. Whether or not the barrier is breached is clearly critical to the performance of this investment.

This type of product is aimed at investors who want fixed income in excess of the risk-free rate and are prepared to take on capital risk if the closing level of any share falls below the barrier level of 80% on the last calculation date instead of being measured on any day during the

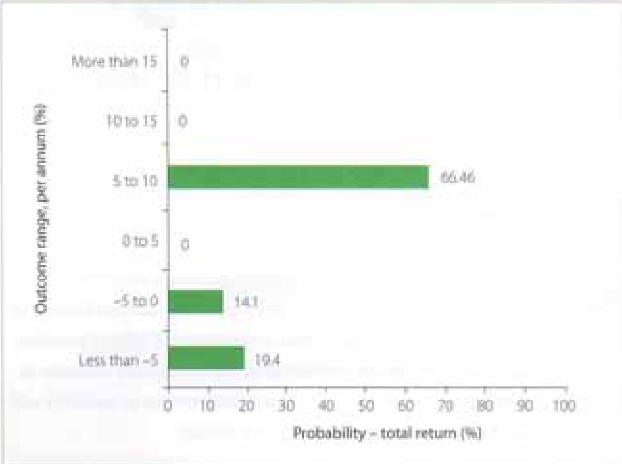
Issuer:	Société Générale	**Currency of issue:**	Sterling
Country of issue:	UK	**Product type:**	At-risk income (capital not protected)

Point for:	1. Fixed income of 2.34% per quarter				
Points against:	1. Capital is not protected at maturity if the final level of the worst-performing share has fallen by more than 20% from its opening level 2. If the 80% European barrier is breached, the amount of capital returned at maturity is determined by the final value of the worst-performing stock				
Asset exposure period:	Two years				
Underlying asset:	UK stocks (HSBC, Vodafone, BP)				
Final index level:	Defined as the closing level of the worst-performing share on the final day of investment				
Investment limits:	Minimum: £3,000				
Tax treatment outside a tax-free wrapper (according to information from the product provider):	Income				
Plan manager:	Meteor Asset Management	**Offer period**	Opens 19/06/2013	Transfers by n/a	Closes 30/07/2013
Credit rating of investments made (according to information from the product provider):	A (Standard & Poor's)	**Key dates**	Strike set 01/08/2013	Final reading 03/08/2015	Maturity/payout 17/08/2015

Score versus risk plot



Probability table of product return outcomes (based on simulated performances)



Performance statistics	
Annualised volatility (product)	10.67%
Annualised volatility (underlying)	20.94%
Product Sharpe ratio	6.13%
Market Sharpe ratio	37.70%
Equivalent initial portfolio	
Underlying	48.41%
Bond	39.64%
Cash	11.95%

Upside and downside measures	
Upside measure	5.86%
Downside measure	2.48%
Upside measure beyond risk-free	5.46%
Downside measure beyond risk-free	2.68%
Initial sensitivities	
Delta	0.48
Rho	–0.08
Vega	–0.09

product term. In market conditions where interest rates are low and volatility levels high, reverse convertibles look very attractive. This product would appeal to investors looking for regular income who are willing to take on some risk to capital.

The product has a European barrier, which is observed at maturity only and set at 80%. It will be breached if the final level of any of the stocks is below 80% of its initial level.

If the final level of the worst-performing stock is below its initial level but at or above 80% of its initial, the investor will be returned their full capital investment at maturity. If the final level of the worst-performing stock is below 80% of its initial level, the investor will be paid an amount equal to the final level of the worst-performing stock with respect to its starting level. For example, if the final level of the worst-performing stock is 60% of its initial level and therefore the barrier is breached, the investor will be returned 60% of their capital investment, a loss of 40%.

Because of the risk to capital, risk-reducing tools are often used, the most common being a barrier to prevent an immediate impact on moderate market falls. This helps reduce risk, but will also lead to a cut in the potential yield offered. This is because the barrier feature reduces the value of the put and therefore gives less premium to be spent on income.

Pricing and risk

A scenario that favours reverse convertibles is when volatility levels are high, because then the premium generated from selling the put option is highest, and this will therefore give a high pick-up in yield.

Product assessment	
Overall rating	5.39/10
Riskmap	4.65/10
Value rating	4.09/10
Simplicity rating	7.50/10
Return rating	5.56/10

This is an income-generating capital-at-risk product. The pricing can be broken down into three components. The zero-coupon bond, which is the base payment of 100%, allows for the full repayment of the capital at maturity. In addition, there is the coupon stream of the higher of 2.34% per quarter. The above risk-free-rate income is funded by the sale of a put option with a knock-in European put with a barrier at 80%.

As with all multi-asset products, correlation between the stocks is key when pricing the options and simulating expected returns. Correlation can be hard to quantify, model and trade. It can be defined as the expected co-movement between assets relative to their volatilities.

Double-digit returns with risk

Erik Penser is offering Swedish investors the equity share basket flexo notes series A068 due June 2018, which offers to protect a minimum of 90% of investors' original investment, as long as there is no credit event

> Erik Penser has issued a five-year, partially protected product linked to a basket of four stocks and backed by Nordea Bank. The product is available in Sweden and pays a minimum of 90% of invested capital in addition to returns proportional to the multiplied increase of the underlying basket. The minimum 90% capital return at maturity will be paid regardless of the performance of the basket.

The weightings of each stock in the basket stay fixed for the duration of the deal. All four stocks have been assigned equal weightings and will be calculated so that the initial basket level is equal to 100%. The basket comprises the common stock of Enterprise Products Partners, Kinder Morgan Energy, Plains American Pipeline and Magellan Midstream Partners. Investors will be exposed to currency risk at maturity.

During the offer period, the provider shows only indicative product terms, with the exact terms fixed at the pricing date. Minimum participation is 140% with the indicative value set at 170% at the time of writing. If terms remain the same once the product is priced, returns would be equal to 1.7 times the growth in the basket, subject to monthly averaging over the final year.

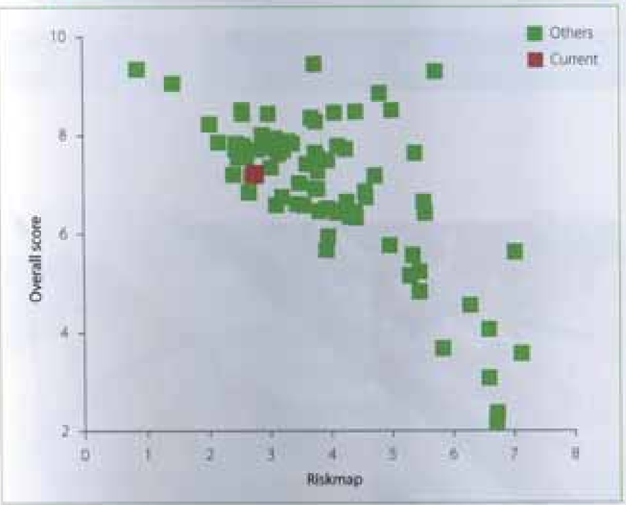
The product is 90% capital protected, which means as long as no credit event occurs the product will pay at least 90% of the principal amount. At maturity, investors will be returned 90% of their investment plus 1.4–1.7% (indicative terms) of the growth in the basket. If the basket growth at maturity is 10%, the product will pay a return of 14–17% in addition to 90% of principal. Returns are not limited by a cap and investors can participate in growth in the underlying asset with no maximum redemption amount. Basket performance is measured as the percentage difference between the initial basket level and the final level.

Issuer:	Penser	**Currency of issue:**	Krone
Country of issue:	Sweden	**Product type:**	Growth (protected)

Points for:	1. Principal is 90% protected at maturity 2. Returns are uncapped
Points against:	1. Up to 10% of capital is at risk 2. Averaging can restrain growth in a rising market
Asset exposure period:	Five years
Underlying asset:	Equally weighted basket of: Enterprise Products Partners, Kinder Morgan Energy, Plains American Pipeline and Magellan Midstream Partners
Final index level:	The final is level defined as the monthly averaging of the basket over the last 13 months
Principal:	Partially protected
Strategy:	Long
Maturity:	Fixed

Key dates	Issue date	Maturity date
	18/07/2013	18/07/2018

Score versus risk plot



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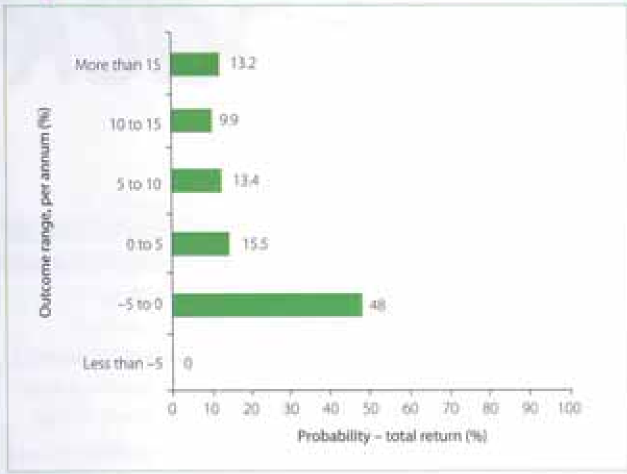

Performance statistics	
Annualised volatility (product)	20.37%
Annualised volatility (underlying)	20.47%
Product Sharpe ratio	18.10%
Market Sharpe ratio	37.70%
Equivalent initial portfolio	
Underlying	46.73%
Bond	53.96%
Cash	-0.69%

Upside and downside measures	
Upside measure	7.56%
Downside measure	0.90%
Upside measure beyond risk-free	7.02%
Downside measure beyond risk-free	1.43%
Initial sensitivities	
Delta	0.47
Rho	-0.26
Vega	0.08

Product assessment	
Overall rating	7.35/10
Riskmap	2.78/10
Value rating	7.49/10
Simplicity rating	9.00/10
Return rating	6.38/10

When analysing the assets that make up the underlying basket, it is worth highlighting the importance of the correlation between the assets, as well as the volatility level of each individual share. The one-year implied volatility levels of the underlying stocks in this basket are between 16% and 21%. The one-year implied volatility of the S&P 500 index is approximately 16%, so the average volatility of the stocks is higher, but only slightly. Using a basket with lower correlation will improve participation rates as the price of the options will fall provided all else remains constant. Correlation will also affect the return distribution of the product and therefore the expected return. When deciding whether to invest in this product, investors must remember that they will have to forgo dividends, which are between 4% and 5%.

Pricing and risk

This product is aimed at low-risk investors looking to gain access to the basket components while reducing the risk profile of direct investment in the assets. Partially protected products are considered as lower risk versions of direct investment in the underlying. The cost of principal protection is paid for by giving up potential dividends.

The product is 90% capital protected and this is reflected in the low risk-map score, but the risk map is higher than most fully capital protected products, which usually offer 100% capital protection. As this product only offers 90% capital protection, the zero-coupon bond component is cheaper for the issuer and leaves more funds available to purchase the options.

This product consists of a zero-coupon bond accounting for the 90% capital protection element and a call option on the basket that provides the returns on the upside. The call has a strike of 100% and a gearing of 140–170%.

This product is aimed at investors seeking to generate returns through growth in the basket. Due to the uncapped nature of the product and the gearing, it will perform best in a high-growth scenario.

The stocks are listed on the New York Stock Exchange and are quoted in dollars. The product pays returns in Swedish krone, so investors are exposed to currency risk.