CROSS-ASSET CLASS PRODUCTS

Hybrid structures offer double the opportunities

Hybrid products offer many valuable features that help diversify and thereby stabilise performance of an investment portfolio. They also allow investors to gain exposure to a combination of traditional and alternative asset classes. Barclays Capital outline the structures on offer

This year has been an exciting one for structured investment product design. The growth that the sector has seen over recent years, driven by the continual evolution of product design and delivery mechanisms, has taken a significant step forward with the widespread acceptance of true cross-asset class 'hybrid' structures.

Innovation has long been a feature of the high-net-worth and mass affluent markets for structured investment products. For many years, wealthy investors have been provided with access to some very distinct, and at times complex, payoff profiles. Increasingly, these have been linked not only to the 'traditional' structured asset class linkages such as equities, interest rates and foreign exchange, but also other asset classes such as credit, inflation, commodities, property, mutual funds and alternative investment strategies.

Despite this growth in investment choices, product providers have historically struggled to offer products that give simultaneous access across a range of asset classes and provide investors with any of the benefits that might accrue to them through the existence (or absence) of correlation between the performances of those underlying assets. With a number of banks now having successfully addressed many of the issues that have historically hampered the efficient pricing and, thereby, supply of hybrid structures, we are now seeing that there is actually a great deal of demand for products of this type.

KEY SELLING POINTS

There are a number of positive reasons for investors to consider cross-asset class products. Primary among these is the long-established fact that diversification can bring stability to the performance of an investment portfolio. Investment managers and advisers will regularly discuss with their clients topics such as optimal asset allocation, the need to avoid concentration risk and the potential gains to be made from taking advantage of cyclical market activity. For these investors, hybrid products allow the implementation of very precise or well-defined strategies based on particular investment views.

In the realm of structured products, diversification also offers another benefit. Since diversification typically leads to a reduction in the overall volatility of a portfolio, options on these composite underlyings are cheaper. This allows the market to construct products with higher participation rates for any given level of capital security.

Table one gives correlations between different asset classes, using some sample indices as reference data. Even with this limited range of data, the existence of

Table one: sample correlations between different asset classes

	Equities	Bonds	Hedge Funds	Commodities	Foreign Exchange	Property	Inflation
Equities	1.00						
Bonds	-0.14	1.00					
Hedge Funds	0.44	-0.04	1.00				
Commodities	-0.05	0.02	0.13	1.00			
Foreign Exchange	0.15	-0.14	-0.24	-0.17	1.00		
Property	0.41	0.05	0.28	-0.02	0.10	1.00	
Inflation	0.03	0.01	-0.10	-0.03	0.02	-0.02	1.00

Benchmark indices for each asset class have been taken as proxies

Note: Data full year to mid Sept 05
Source: Barclays Capital

relatively low and even negative correlation can be clearly seen.

There are also the issues of topicality and accessibility. At any point in time it is possible to identify investment opportunities that depend on the performance of more than one asset, whether they are expected to be well-correlated or not. It may not be efficient for many investors to establish, and subsequently manage, positions in each asset so hybrid structured products become very useful tools in making these investment strategies available to a wider audience.

ASSET CLASSES

Equities and bonds still remain the two asset classes that most investors and real money managers would expect to include in their portfolios. It is not surprising, therefore, to see these included in the majority of hybrid structures. The equity asset class is typically represented by indices or individual stocks, while bond exposure may be gained through the use of indices or funds. Exposure can also be provided to floating interest rates such as LIBOR or constant maturity swap rates.

Product providers have been quick to identify the opportunities that hybrids offer to bring 'non-traditional' asset classes closer to the affluent mainstream. Over the past year, the most high-profile example of this has been the inclusion of commodity exposure into a wide array of investment products. The market has moved swiftly beyond 'high profile' commodities, such as gold and oil, and sought to include others such as base metals. A combination of the backwardation that is regularly seen in commodity prices and the low correlation of this asset class with others are features that make individual commodities and aggregate indices popular with product structurers and investors.

Inflation and currencies are two more asset classes that we see being used in hybrid products. The former is popular with investors who typically want to protect the purchasing power of their capital, and exhibits both low volatility and typically low correlation with traditional asset classes. Foreign exchange, on the other hand, is often seen as one of two legs of a contingent investment structure, where for example an equity-linked payoff may be boosted if a particular currency pair view is also realised.

Real estate is another asset class that has attracted interest over the recent past, although investment exposure is typically generated through stock baskets (based on real estate investment trusts or property investment companies) or indices. Finally, we are often asked to produce structures which include allocations to mutual funds and alternative investment managers. This opens the door to a vast array of investment styles and can almost be viewed as a 'super asset class' of its own.

Table two: virtual portfolio weightings

Portfolio	Equity	Bond	Commodity	Hedge Fund
Defensive	0%	60%	20%	20%
Balanced	30%	30%	20%	20%
Aggressive	60%	0%	20%	20%

Source: Barclays Capital

MAIN TYPES OF HYBRIDS

Unsurprisingly, given the assets and tools at our disposal, the universe of hybrid structures is almost limitless. Only practical hedging considerations limit product providers' ability to create structures to reflect the full range of possible investment portfolio views. This makes it difficult to categorise the range of products that could be offered, although we can identify some key, common attributes of the products that we have already seen.

Hybrid structures can provide an efficient, diversified way of making an allocation to a particular economic or investment theme, with the inclusion of capital security an important consideration for many investors.

One of the most enduring hybrid themes that we have seen this year has centred on the economic growth of China. A number of investment products have been created with payoffs linked to the performance of a basket of assets, typically including Chinese equities alongside a number of commodities such as base metals and oil.

These products have built on the wealth of fundamental economic analysis that has pointed to the potential implications of ongoing urbanisation, industrialisation and rising living standards within China. Many commentators have shared the view that the sheer size of the Chinese economy will force sustained upward pressure on the price of energy and raw materials alongside a general rise in equity prices. It has been this analysis that has encouraged investors to look for broader ways of gaining exposure to Chinese economic growth and has enabled product providers to create products which include a wider range of assets. We have seen a number of structures of this type, typically with 100 per cent capital security.

Another area in which hybrid pricing technology has been put to use is in the area of asset allocation. One common example of this approach has been the 'rainbow' option. A rainbow option allows an investor to benefit from the best, nth best or even worst performing of a group of underlying assets or to allocate investment weightings to particular assets with hindsight, depending on their individual relative performances.

As an example, we might start by creating three virtual portfolios

Table three: foreign exchange contingent equity investment

Final USD/EUR Exchange Rate	Participation in any rise in Equities
>90% of Initial Level	40%
Between 90% and 85% of Initial Level	60%
Between 85% and 75% of Initial Level	80%
<75% of Initial Level	100%

(For comparison a straightforward equity growth structure would offer 70% of any rise in the equity market.)

Source: Barclays Capital

each with different weightings allocated to particular asset classes (see table two).

The rainbow option could then provide an investor with 100 per cent exposure to the best performing of these three portfolios over a fixed time period. If the different asset classes are not perfectly correlated, then it is easy to see that exposure to growth in the worst performing portfolio will be cheaper to establish than exposure to the best performing portfolio.

This concept allows interesting structures to be created with higher participation rates linked to less well performing assets or portfolios. This is an attractive way for an investor to gain exposure if they believe that correlations will turn out higher than anticipated in the pricing terms.

CONTINGENT PAYOFFS

Contingent payoff structures allow investors to benefit cleanly from a combination of investment views being fulfilled. This is an approach that is typically applied to an equity exposure in conjunction with a view on the future direction of either interest rates or an exchange rate.

For example, a Euro-based investor might hold the view that European equities are likely to rise over the medium term (say five years) and may also believe that over the same time period the US dollar will rally from the relatively low levels at which it has recently been trading against the euro.

He can take advantage of this view by investing in a capital secure equity-linked growth structure, where the participation rate he receives in European stock appreciation increases in discrete steps as the USD/EUR exchange rate falls (i.e. the dollar rallies) and breaches a series of preset hurdles at maturity. As table three shows, if the investor's FX view is not fulfilled he will be left with a product that offers lower equity participation than a traditional equity linked structure. If, however, he is correct, then he will benefit from having achieved greater equity exposure.

True callability and putability are features that have long been a part of the structured interest rate asset product suite. More recently we have seen these starting to appear in conjunction with other asset class payoffs. In their simplest forms, they provide either the product issuer (callability) or the investor (putability) with the option to close out the investment strategy early, on a specified date and at a predetermined price or pricing basis.

Callable and putable structures are often regarded as 'implicit' hybrids. This is because the investor's return at maturity might still be linked to the performance of just one asset class, such as equities, but the option to close out early at a fixed price, requires the structurer to address the issue of correlation between interest rates and the underlying product return during the life of the investment.

This can be a very powerful marketing tool, and a feature that can generate real value for investors. For example, whilst putability has an implicit cost to investors in the form of lower participation rates, imagine being able to put on a medium-term investment position in the knowledge that if your view turns out to be wrong you'll have a chance to unwind early without realising a loss.

The demand from affluent and high net worth investors for new and innovative structured investment products continues to grow. Delivery mechanisms are becoming more efficient, acting as a further spur towards both tactical and bespoke product offerings. The progress that the leading banks have made in developing cost-effective hybrid structures will ensure that we see more of these products offered to investors in the future.

Contacts:
- Hassan Houari, head of equity derivatives structuring
  Tel: +44 (0)20 7773 8058.
- Richard Ager, director equity derivatives structuring
  Tel: +44 (0) 20 7773 9406
  www.barclayscapital.com