

## STRATEGY SELECTION

# Swaying investors to benefits of using structured products

Laurent Seyer, of Société Générale, assesses the differences between structured products and traditional forms of investment, and how they can complement one another

In the 1980s, when the first structured products began to emerge, top financiers believed they could have their cake and eat it. They could offer investors a measure of capital protection without reducing potential gains. Structured asset management is now largely demystified, although this has not hampered its success. It remains a highly effective means of optimising an investment portfolio.

Structured products offer a predetermined redemption formula for a given maturity that involves the performance of one or several underlying assets (equities, indices, funds, etc). For example, a five-year redemption formula could run as follows:

- At least capital invested + 80 per cent of DJ Euro Stoxx 50 performance, if positive.

To honour this commitment, the product will make use of derivatives instruments and dynamic portfolio management techniques that aim to amplify performance by increasing exposure to risky assets when their prices are rising and reserving part of the fund for the constitution of the capital guarantee.

Generally speaking, structured products are as liquid as their underlying assets and investors may withdraw before maturity. They have to bear in mind that the redemption commitment is made to maturity, not at some point before. Apart from this difference with respect to a conventional fund, which just have a 'recom-



mended investment period', structured products have two major distinguishing characteristics.

### Structured products' performance is non-linear.

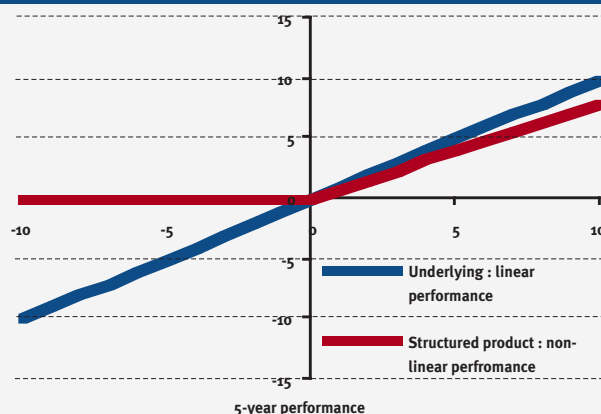
Conventional funds offer exactly the same performance as that of

the assets in which they are invested, minus fees. We refer to this performance as linear. Structured products' performance is not linear with respect to that of its underlying asset or assets to which they are indexed. In the example below, the amount of capital upon maturity is the same as capital invested if DJ Euro Stoxx 50 performance over the period is negative, irrespective of the magnitude of that decline (see figure one).

### Structured products enable investors to gain exposure to variables inaccessible to traditional funds.

The value of derivatives used to guarantee structured products' performance depends on market parameters such as volatility, correlation and dispersion. Issuing banks exploit these parameters to optimise the guarantees offered to investors.

Figure one: five-year performance of a structured product with a capital guarantee and 80% of the increase in the value of underlying asset\*



\*as a function of the performance of the underlying asset's performance at maturity  
Source: SGCIB

Because of their specific characteristics, structured products are appropriate in several contexts.

**Product maturity and investor constraints (e.g. liability constraints)**

Structured products are particularly attractive for investors with specific investment periods, at the end of which they need to recover their assets for other uses. By matching the investment period with the product maturity, assets are managed in optimal fashion during that time.

In these circumstances, investments in equity funds would be more risky, as a market correction just before the withdrawal date could prevent implementation of projects for which the placements were required.

**CAPITAL GUARANTEES**

Most structured products offer capital guarantees. This feature has become so common that its importance is often overlooked. Between the summer of 2000 and the spring of 2003, for example, the MSCI World index shed over half its value. It was no small thing to be able to recover 100 per cent of one's capital over the period. Structured products are therefore attractive to investors with clearly identified maximum loss limits.

**Hidden assets and diversification**

Structured products are effective diversification tools because of their exposure to market parameters inaccessible using traditional fund management. The weak correlation between structured and

**Figure two: the risk/return ratio for an optimal allocation defined on the basis of a mean acceptable risk level, as a function of the structured product's weight**

| Structured products | Allocation |        | Expected return/<br>Cvar* ratio |
|---------------------|------------|--------|---------------------------------|
|                     | Stocks     | Bonds  |                                 |
| 0%                  | 51.69%     | 48.31% | 2.45                            |
| 5%                  | 47.15%     | 47.85% | 2.97                            |
| 10%                 | 42.65%     | 47.35% | 4.01                            |
| 20%                 | 36.54%     | 43.46% | 13.38                           |

\*Cvar: Risk measure  
Source: Edhec Risk and Asset Management Research Centre

traditional management products increases the quality of this diversification.

This last point is fundamental and concerns all investors seeking to obtain a rigorous and all-inclusive approach to their asset allocation. Nobody would dispute that diversification is the key to achieving that goal. It is a means of reducing portfolio risk without altering potential gains, and it may even increase those gains.

The Edhec Risk and Asset Management Research Centre has studied the diversification effect of structured products. More specifically, it sought to establish how far the introduction of a structured product into a conventional 'equities + bonds' asset allocation helped optimise its risk/return profile (ie maintained or raised returns while reducing risk).

What Edhec did was to define a simple structured product and simulated returns and risks for two types of asset allocation, one involving just equities and bonds and the other containing the structured product as well. The results were unequivocal: there are many complementary elements of the

structured product and traditional assets, with a significant improvement in the risk/return profile.

This was especially true where the risk measure used takes particular account of extreme risks.

On the basis of a defined portfolio weight for the structured product ranging from 0 per cent to 20 per cent, Edhec calculated the optimal equities + bonds allocation and its corresponding risk/return ratio. This ratio varies from 2.5 for an allocation without a structured product to over 13 for a 20 per cent allocation in the structured product (see figure two).

These results show how much value added even a modest allocation in structured products can contribute to an investment portfolio.

More and more institutional investors and portfolio managers are coming around to this point of view. While many portfolios already contain structured products, their use is by no means universal. They remain a growth market.

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