Enter the quant enforcer

How good a deal do buyers of structured retail products really get? Italian regulators are using the same quantitative tools to test products that banks use to make them. Other European regulators will follow.
By Matthew Crabbe

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If you want to know about reputational risk and the structured retail product business, ask Vincenzo De Bustis.
De Bustis resigned as chief executive officer of Banca Monte dei Paschi di Siena (MPS) on March 25. According to the bank, this had nothing to do with complaints from customers about the performance of its 4 You structured investment product.

However, De Bustis left the day after MPS issued a statement conceding, after months of pressure from investor groups, that it will have to address those complaints directly. MPS had finally had its hand forced by Italy's competition regulator, which had concluded that the advertising used for the 4 You product had been misleading.

MPS has said it will "settle any incidental problem associated with the sale of the products". But it may not turn out to be that easy. MPS sold 4 You to 90,000 customers, many of whom feel badly cheated.

One quantitative analyst contacted by Risk had run his slide rule over 4 You and calculated that simply by signing up for this product investors were 20% worse off than they would have been investing in a 'risk-free' asset, such as government securities. And, says Enrico Racioppi, a stock market analyst with Julius Baer Italia who follows MPS, the 4 You product could cost MPS as much as E318 million, if it were to make good all its clients' losses.

An engineer by training, Vincenzo De Bustis had been the star of the Italian structured product business. He'd been chief executive officer of the privately owned Banca del Salento, based in Puglia, which specialised in this fast-growing business. In 1997, Banca del Salento created an online bank – Banca 121 – to distribute retail products.

In 1999, Banca del Salento and Banca 121 were acquired by Banca Monte dei Paschi di Siena – the oldest bank in world trading under its original name and which to this day is based in a splendid medieval palace in Siena's Piazza Salimbeni. In July 2000, De Bustis was appointed chief executive officer of MPS.

Already Italy's fifth largest bank ranked by assets, MPS hoped De Bustis would position it in the vanguard of electronic banking and product distribution. But its problems with 4 You has dented that strategy.

The product was invented by De Bustis's team at Banca 121. First marketed as My Way, it was hugely successful, and in total attracted e2.34 billion of investments, according to Julius Baer Italia's calculations. While Italian regulators have focused their public attention on the advertising used to sell 4 You, the core criticism made by analysts who have disentangled the product is that buyers were taking on far more risk than they could have known.

Although it looked like one long-term investment product, akin to an endowment plan, the process of purchasing 4 You in fact involved signing three contracts. The first was a long-term loan agreement – for, say, E100,000 over 15, 20 or 30 years. In total attracted e2.34 billion of investments, according to Julius Baer Italia's calculations. While Italian regulators have focused their public attention on the advertising used to sell 4 You, the core criticism made by analysts who have disentangled the product is that buyers were taking on far more risk than they could have known.

Although it looked like one long-term investment product, akin to an endowment plan, the process of purchasing 4 You in fact involved signing three contracts. The first was a long-term loan agreement – for, say, E100,000 over 15, 20 or 30 years. In taking out that loan, the investor was agreeing to pay the bank a variable rate.

The second was a contract to purchase a zero-coupon bond issued by the bank. At maturity, the zero-coupon bond would repay the loan. This provided a hedge for the bank against the credit risk of the loan it had made to the investor.

The third contract signed by the investor was to purchase a mutual fund, typically chosen from a range of equity funds. This purchase was financed with the difference between the size of the loan (100% par value) and the cost of the zero-coupon bond (say, 55% of par).

To the buyer, this looked like a long-term capital-protected product that offered a leveraged play on the mutual fund investment. In fact, the buyer was getting a loan with which they were buying an illiquid bond investment and a long-term position in volatile stock markets. And, of course, value of the EuroStoxx index has more than halved since its highs of the first half of 2000 when MPS began selling the product to its customers.

While MPS has maintained that the underperformance of 4 You was in line with the market, this does not account for the interest rate risk that many of them were unwittingly taking on – the mis-match between the interest rate on the long-term loan and fixed rate on the zero-coupon bond.

Investors were paying off their loan in monthly instalments at higher rates than the zero coupon. To compensate for that, they should have been exposing themselves to the riskiest, most volatile mutual fund investments available – emerging markets funds, for example. But they weren't. Being typical Italian investors, they were buying middle-of-the road mutual funds. They were being locked into leveraged margin investing, and once the market tanked there was no way they could make up the shortfall.

A proper capital-guaranteed structure works the other way: investors effectively lend money to the seller of the product to buy zero-coupon bonds and options to hedge the guarantee.

Consob analysts are conducting their own examination of 4 You and have told MPS to stop selling 4 You or similar products.

But Consob really started to make its mark as a 'quant enforcer' three years ago, when two of its analysts, Marcello Minenna, a mathematician, and Giuseppe D'Agostino, an economist, revealed that, according to their calculations, structured bonds being sold to investors were being mis-priced by anything between 7% and 20%.

Consob was starting a campaign to clean up the reverse convertible bond market – a campaign that led it to report several Italian and international banks to the judicial authorities. Reverse convertibles were highly popular among Italian retail investors, who bought them in the form of high-yielding bonds. What investors often did not know was that these vanilla-looking bonds were in fact structured products containing an embedded put option. Typically, the barriers for those puts would be 20% or so lower than the strike price. Unscrupulous banks were manipulating stock market levels to trigger puts to deliver themselves an in-the-money put and a significant gain. Investors, meanwhile, were losing a large part of their principal investment in the bonds.

Consob's website now features calculators that investors can use to work out the volatility of a range of structured investment products, including covered warrants. And Italian regulators are not just scrutinising the retail market. There have been concerns voiced about some of the derivatives products sold to medium-sized Italian companies, and even the portfolio insurance products sold to asset management companies. More big names in Italian banking could be forced to admit that their products have been too expensive.

Nasty surprises. It is perhaps inevitable that as stock markets have fallen, there have been nasty surprises for investors right across Europe who believed the 'principal-protected' label on their funds meant 'capital guaranteed'. And products structured with equity derivatives to provide high coupons are under the closest scrutiny of all.

The UK investment market is being changed by its own structured product scandal, involving so-called precipice bonds. These stock market-linked bonds offered high-interest income with the downside of principal losses if the equity index to which they were linked fell below a certain level. Sometimes that downside was geared: investors could lose 2% of their capital for every 1% fall in the index. Precipice bonds attracted some £5 billion of investments, and some investors have lost as much as 60% of their principal as a generation of precipice bonds have matured as stock markets touched their lows.

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In March, the UK's Financial Services Authority (FSA) reacted with new guidelines for firms selling instruments such as precipice bonds. While the FSA's guidance note does not mention the word 'derivatives' it does suggest that firms fully disclose the risks involved in their structured products by stating, for example, that: "We have invested in special instruments and this puts your capital at risk."

Again, Italy's Consob appears to be setting the standard for this kind of disclosure. It recently amended its rules to insist that intermediaries in retail asset management contracts must report to their customers exactly what derivatives they are using, together with the expected pay-outs of those derivatives.

Even if other European regulators follow this lead, that still leaves some derivatives dealers worried about a damaging backlash at European Union level against complex structured products. The February 2002 Ucits (undertaking for collective investment in transferable securities) product directive allowed managers of Ucits funds to invest in derivatives instruments, not just for hedging but also for alpha returns. That promises a huge market for derivatives dealers. But they are increasingly concerned that EU bureaucrats and parliamentarians might change their mind if they become convinced that derivatives are synonymous with high-risk, opaque, investments.

It's a particularly testing time for structured products wholesalers: the international investment banks that sell products on to third-party distributors such as regional banks, insurance companies and post office networks. How can they be sure that their customers – the distributors – are correctly informing investors of the risks involved?

JP Morgan Chase uses a 'traffic light' code for the products it sells on to distributors. Green products have the right risk/reward profile for the retail market; red products can only be sold to the most sophisticated buyers.

Even with these precautions, Tim Hailes, a general counsel working at JP Morgan Chase in London, says lawyers working for structuring firms must take account of the range of different regulatory bodies working in different European markets. Product structurers cannot afford to leave liaison with these regulators to third-party distributors. "Whoever distributes the paper, it remains our paper, so there is always a reputational issue to consider," Hailes says. "For example, with equity-guaranteed products sold by third parties but structured by us, the named guarantor on products we structure is usually JP Morgan Chase."

Hailes sits on the International Swaps and Derivatives Association's equity derivatives committee, and he suggests it might be time for the industry body to set some standards for transparency in the European retail structured products market. "We believe we should be setting new standards in an environment where many regulators are re-examining some of the practices that have grown up ad-hoc in the markets"

However, some of the Italian banks whose products have fallen under Consob's spotlight insist that regulators are simply being unreasonable. Even with full disclosure of the derivatives risk embedded in investment products, are retail buyers ever really going to base their investment decisions on detailed maths? And can banks reasonably be expected to make public the pricing models they use for structured products? Some bankers are resigned to the fact that they are on course for more collisions with financial market authorities.

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