Enter the quant regulator

If regulators want to improve the level of disclosure for retail investment products, they need to abandon a narrative description of the risks in favour of quantitative indicators. This is the only way to close the information gap between the industry and investors, argues ***Marcello Minenna***

Retail investors have always been at a disadvantage when buying non-equity financial products. While structuring banks have access to cutting-edge models, retail investors typically do not have the technical expertise to understand the risks or implicit costs associated with a particular product. Instead, they are reliant on the information provided by the banks or distributors. It is up to regulators to set the rules of the game to ensure there is sufficient transparency, both within the prospectus and at the point of sale.

There has been some improvement in the rules governing the marketing and sale of financial products to retail investors, particularly in the wake of the financial crisis – but there is still some way to go. Regulations still tend to use simplistic labels to group products, and require long descriptions of their main features rather than focusing on information that provides a realistic snapshot of the risks.

Roughly speaking, there have been three phases of evolution in the regulation of retail investment product offerings in Europe. The first covers the period before the implementation of the Markets in Financial Instruments Directive (Mifid) in 2007. During this phase, a prospectus could run to hundreds of pages, with lengthy descriptions of multiple risk factors, written in legal jargon, which were often not specific to the individual features of the product. There was also little analysis of the risks and the possible consequences – either positive or negative – for the investor. As a result, the issuer had significant leeway in choosing what to say to the investor and how to say it.

At the same time, there was a lack of support for investors at the point of sale. Suitability and appropriateness tests tended not to be conducted, and distributors only had to comply with general principles of good conduct – for instance, always operating in the interests of the client. These were not typically backed up by more detailed rules, making it difficult to enforce effectively. Supervisors had minimal responsibility, as long as the prospectus covered all the risks – regardless of whether important information was hidden in long and virtually incomprehensible prose.

The second phase coincided with the introduction of Mifid. Crucially, the regulation imposed disclosure obligations on distributors. It also saw the start of a process to improve the transparency of prospectuses by adding certain key information – essentially, a summary of how the product works and the main risks. However, the information provided by the distributor was independent from that communicated by the issuer via the prospectus, so investors might receive information that was not consistent or comparable.

There were also weaknesses in the two sets of requirements. The summary of key

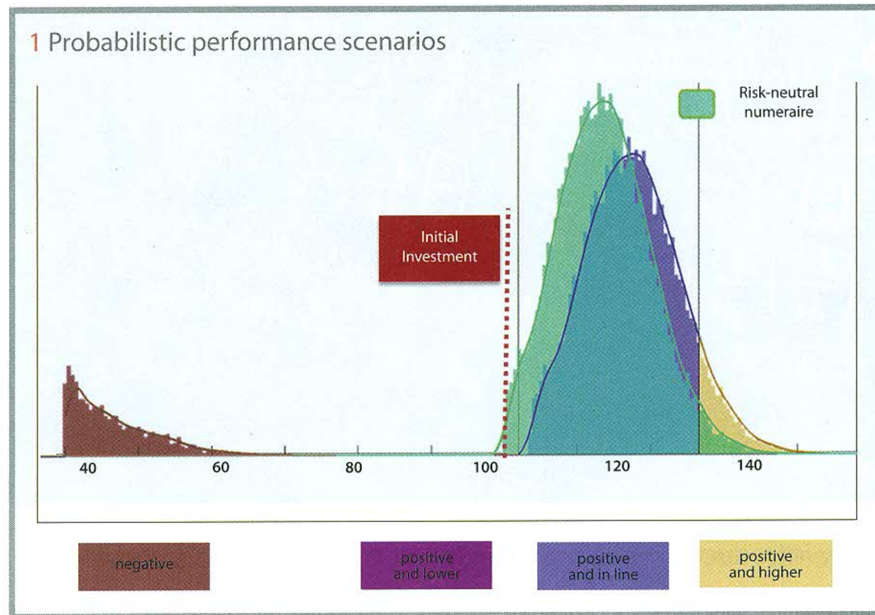
> "There is still a reliance on the old descriptive approach and the classification of products based on legal or commercial labels"
>
> Marcello Minenna, Consob

information was not determined by a robust and objective analysis of the financial structure of the product and the interaction between the different sources of risk. The rules instead stipulated sub-optimal synthetic risk indicators and non-technical solutions to illustrate potential performance – 'what-if' scenarios, for example – leaving a huge amount of discretion to the issuer. Meanwhile, distributors were far removed from the product creation process, so may not have completely understood all the features of the structure. By virtue of the fact the distributor is required to hit certain budget targets, its interests also conflict with those of the customer.

Again, regulators had a limited role, with little attention paid to the value of the information provided to investors. As a result, retail investors were still not able to clearly grasp the material risks of a product and its prospective returns.

The third phase has emerged more recently, with a revision of European regulation on pre-contractual disclosure almost complete. Other initiatives are also under way, including a review of Mifid and the drawing up of guidelines for packaged retail investment products (Prips) by the European Commission (EC). These regulatory changes aim to increase investor protection – and in this regard, significant progress has been made. However, there is still a reliance on the old descriptive approach and the classification of products based on legal or commercial labels. These categories include non-complex, complex and super-complex products, assembled or not assembled, and structured or plain vanilla – but they are always purely qualitative categories that do not provide any clear information on the risks of the investment.

As an illustration, the most recent consultation document on Prips, published by the EC on November 26, 2010, covers structured bonds – for example, a bond plus a call option – but does not include vanilla bonds. Nonetheless, these instruments involve the packaging of two distinct sources of risk: interest rate risk and risk of default. The latter is pure risk – the risk of loss. This highlights the difference in the quality of information disclosed to investors, and encourages issuers to prefer these instruments without adequately compensating the buyer for the risk taken. The recent growth in the offering of subordinated bonds (that is, a plain vanilla bond with a relevant source of credit risk) illustrates the flaws in the status quo.



As this approach is developed further, partly as a result of some regulatory choices, the sector will converge towards a new phase. There are two alternatives – each is different, with distinct implications for the protection of investors and competition between financial institutions.

One possibility is that regulators decide to put constraints on the structure of products or even prohibit the sale of certain instruments simply because they have the wrong label. For instance, a subordinated or inflation-linked product might be automatically classified as very risky and complex and deemed unsuitable for retail investors. This type of approach appears to be gaining ground and typically involves banning the sale of certain products to specific groups of customers.

This would be detrimental to the whole market. Issuers would see important channels of funding closed down, while investors who want higher coupons and exposure to inflation, for instance, would not be able to find a product to suit their needs.

Many have argued that retail customers do not read or understand the information provided within a prospectus, and say further revising the transparency rules would not help enhance investor protection. But few have questioned why they have not engaged with the prospectus – and no-one has considered whether the information provided corresponds with what the investor actually wants. In fact, an alternative to the prohibitionist approach is to enhance transparency and create greater synergy with the rules on conduct.

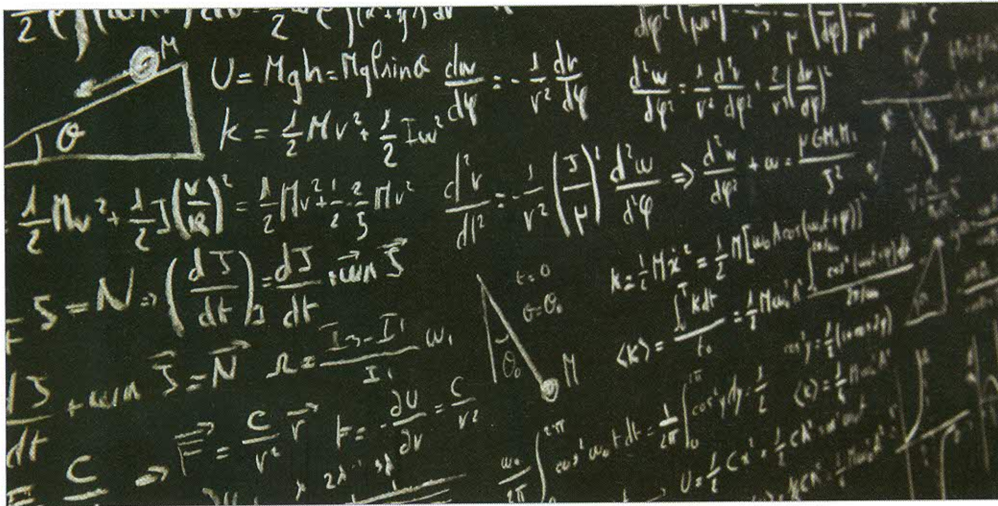
This alternative approach would require transparency that is focused on the financial structure of the product and the provision of information that is genuinely critical to the investor. This can be achieved using quantitative methods.

This solution is not difficult to implement. Product providers already use quantitative techniques – they hire physicists and mathematicians to develop pricing and hedging models, which are then used to determine whether a particular product should be placed on the market or unwound if the risk exceeds certain thresholds. These same models can be used to create a two-page key information document, giving retail customers crucial information that will help them find the investment they are looking for.

This analysis can be used by distributors or produced by independent financial advisers to help their customers choose between different investment alternatives – hence overcoming the inconsistencies between the information provided at offer and time of placement.

These considerations inspired the risk-based approach to transparency for non-equity investment products, developed by the quantitative analysis unit of the Italian securities regulator, Consob, which I direct. This method differentiates simple products from complex ones by looking at the financial engineering rather than relying on simple labels.

If the product doesn't contain deriva-



> "By introducing strict new transparency requirements, retail customers can identify appropriate investment opportunities, while still enabling product providers to profit fairly from this business" Marcello Minenna, Consob

tives (even implicit) and has marginal credit risk over its time horizon, its simplicity is self-evident. In these circumstances, it does not make sense to overload the investor with unnecessary information: using a few basic indicators such as the internal rate of return, the buyer can determine whether an investment is suitable. A suitability or appropriateness test should not even be required, as these are products that can be purchased at the counter without a prospectus or financial adviser.

If the product is complex – either because it contains one or more derivatives components or incorporates a significant credit risk exposure – the investor must be given information that will truly help make an assessment. The buyer must know the minimum time within which he or she will, with reasonable certainty, recover the costs that have been paid. In this way, the investor is able to check the compatibility of the product with his or her optimal holding period – that is, the liquidity preferences. The customer must also know the overall risk posed by the product to see if it is in line with his or her risk appetite, as well as potential performance to compare it with the target rate of return.

The information needed for this risk-based approach is provided via three interconnected synthetic indicators: the recommended investment time horizon; the degree of risk; and the probabilistic performance scenarios.

The recommended investment time horizon makes use of the stochastic theory of first-passage times to identify the earliest point the investor is likely to recover the costs paid, given the risk of the product. The degree of risk indicates the current level of risk by comparing the volatility of its potential daily returns over the next year with a suitably calibrated grid of volatility intervals. Each one is associated with a description that will be easily understood by the investor – for example, high risk, low risk, and so on. The probabilistic performance scenarios, meanwhile, summarise the probability distribution of the final payout, split into four events of primary interest for any investor: suffering a loss (negative return), or getting back the amount invested plus a return below, above or in line with the risk-free rate (see figure 1).

The validity of the Consob approach has repeatedly been affirmed by international consumers and academia, most recently in responses to the public consultation on Prips, which ended last January. In fact, several consumer groups and nearly 60 professors from universities all over the world, which have formed a group called Movement for Risk Transparency, sent a response to the EC during the consultation period on Prips, calling for greater transparency (*http://circa.europa.eu/Public/irc/markt/markt_consultations/library?l=/financial_services/financial_services&vm=detailed&sb=Title*). Among the signatories are Oldrich Vasicek, founding partner of Moody's KMV, Helyette Geman at Birkbeck College, London, Jaksa Cvitanic at the California Institute of Technology, Riccardo Cesari and Umberto Cherubini at the University of Bologna, Francesco Corielli at the Bocconi University, Svetlozar Rachev at the Karlsruhe Institute of Technology, Zvi Wiener at The Hebrew University of Jerusalem and Rita D'Ecclesia at the University of Rome La Sapienza.

Many of them also signed an open letter sent to the EC and Committee of European Securities Regulators (now called the European Securities and Markets Authority) in December 2010, to highlight the drawbacks of the 'what-if' approach as an informative tool on the potential performance of structured Ucits products (*Risk* February 2011, pages 46–49, www.risk.net/1939516). In particular, the group expressed strong concern that the key investor information (KII) document developed for Ucits products may become a benchmark for the regulation of a much larger universe of packaged investment products.

Currently, structured Ucits investments must contain at least three scenarios of potential performance within the KII document to show the payouts under certain market conditions – defined as unfavourable, favourable and neutral. In addition, the KII document for all Ucits investments must include a synthetic risk and reward indicator – essentially, a single numerical gauge of the risk a product poses, ranked on a scale of one to seven. The indicator is based on the volatility of the fund using weekly or monthly returns covering the previous five years. For structured funds, the indicator should be calculated on the basis of the annualised volatility corresponding to the 99% value-at-risk at maturity.

The group of academics highlighted some serious drawbacks with this approach. The synthetic risk indicator for Ucits correctly relies on volatility, but by using weekly returns observed over the past five years, it is not representative of the current riskiness of the product – and hence is useless or even misleading to investors. Meanwhile, performance information cannot rely on the what-if approach. This deterministic and

arbitrary representation of only three elementary events fosters biased beliefs, as investors might think they are an exhaustive list of all possible performances, each with the same 33% probability of occurring.

The probabilistic approach developed by Consob is a much better alternative to what-if scenarios. The recommended investment time horizon should be included in the KII document for Prips, as retail investors want to know how long they will have to wait before they get their money back and maximise potential returns. On the basis of this argument, the Movement for Risk Transparency hopes its comments will be considered, and suggests consumer tests and public seminars, with the participation of academics and regulators, to support the EC in drawing up new transparency regulation for Prips.

If the EC upholds these proposals, it would be a crucial step towards a fourth phase in the regulation of retail structured products, which has investor protection at its heart and promotes healthy competition among financial institutions.

Complex or structured products are not evil *per se* – they are only a problem if they are opaque and generate undue profits for banks and other institutional operators. On the contrary: by introducing strict new transparency requirements, retail customers can identify appropriate investment opportunities, while still enabling product providers to profit fairly from this business.

Such a big challenge requires a revolution in the current mechanisms at both financial institutions and regulators. Financial institutions will have to modify their internal organisation to create strong co-operation between the departments responsible for product engineering, risk management and compliance. Regulators, on the other hand, will have to build units responsible for implementing quantitative models, which would be used for surveillance, to analyse data provided by financial institutions and identify anomalies that could lead to enforcement actions.

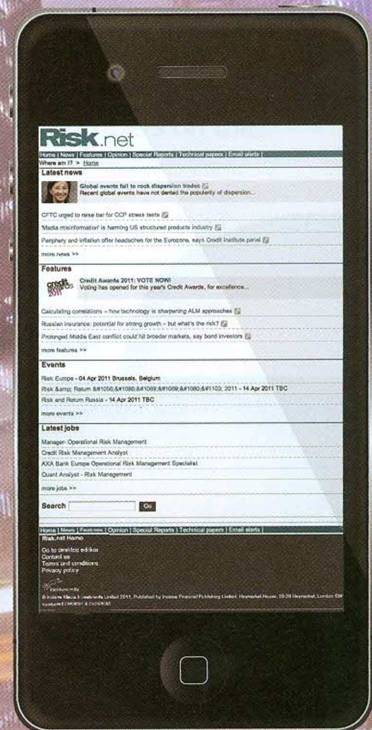
In the case of false or inconsistent information, these interventions could occur immediately after the start of an offer period, and lead to a quick update in the information provided by the KII document. Where the information is correct but is inconsistent with the profile of the client, it would signal an episode of mis-selling, and consequently the rules of conduct should be engaged.

Despite the challenges, the benefits are obvious – retail investors would have a clear, statistically meaningful summary of risks posed by a particular product. That would represent a huge improvement in the transparency provided to retail customers and give supervisors a more defined role in their bid to prevent product mis-selling and protect investors. ■

Marcello Minenna is head of the quantitative analysis unit at Consob. The opinions expressed in this article are those of the author and do not necessarily reflect the views of Consob. Email: m.minenna@consob.it

Risk.net

Financial risk management news and analysis...
ANY TIME, ANY WHERE



Accessibility – Relevant content immediately to hand
Updated Design – Clear navigation & improved usability
Informative content – In-depth analysis and news wherever you are

Bookmark the site on your mobile today m.Risk.net

An incisivemedia website
incisivemedia.com