A QUANTITATIVE RISK-BASED APPROACH TO THE TRANSPARENCY ON NON-EQUITY INVESTMENT PRODUCTS

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Transparency regulation on the risk profile of non-equity investment products[1] is one of the main competencies of any financial supervisory Authority. The definition of suitable provisions on this issue has been at the centre of EU debate for some time and, also in the light of the recent events involving the international financial markets, such debate is increasingly focused on searching for synthetic risk indicators, based on quantitative metrics which are robust, objective and backward verifiable. The traditional narrative description of the risks associated with a financial product seems inadequate to allow informed investment choices in a context where the integration of markets, products and financial players often makes it difficult to separately analyze the various types of risk, and instead, allows the measurement and monitoring of the overall risk profile of financial products.

The integration process of non-equity investment products now seems complete. The result is a situation where products can be classified irrespective of the specific ways and vehicles used to carry out the public offering. In fact, even if the heterogeneity in names of the products, categories of the issuers, distribution channels and labels of the costs applied creates the appearance of actual differences also in the underlying financial engineering, the universe of non-equity investment products can effectively be classified into the following three types of financial structures: "risk target" products, "benchmark" products, and "return target" products.

"Risk target" products invest in any market and any financial instrument in order to optimize over time a given target in terms of risk exposure. These products pursue specific target returns only as a secondary goal. In other words, within the context of the traditional risk-return approach, where the choice is between maximizing the return for a given level of risk or minimizing the risk given a specific target return, in these products the asset allocation favours the first objective. To this end, *ex ante* minimum and maximum thresholds are typically defined for the values of a risk measure and such thresholds are the reference point for the risk-taking decisions.

"Benchmark" products have an investment policy which is anchored to a benchmark, and in relation to this benchmark the asset management style may be either passive or active. In the first case, the product is substantially a replica of the benchmark, while in the second case, the composition of the assets' portfolio, differs, to a greater or lesser extent, from that one of the benchmark depending on the specific objectives pursued by the asset manager.

"Return target" products feature a financial engineering (and, in some cases, a consequent investment policy) aimed at pursuing a minimum target return on

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[1] This expression is used, for instance, to refer to open-ended mutual funds, SICAVs, unit-linked and index-linked financial-insurance products, and financial products issued by banks such as covered warrants, certificates and structured bonds.

the financial investment. This type of financial structure includes all products obtained as a static or dynamic combination of one or more risk-free (or low-risk) financial assets and of one or more risky financial assets. The former allow to pursue the target return, while the latter contribute to the generation, at the end of the recommended investment time horizon, of a potential extra-return over the target[2].

The intermixing of the various risk factors and the fact that all products may be classified within one of the three above listed financial structures are a clear indication for the Authorities competent for risk transparency supervision: the regulation on the matter should be standard and should translate into suitable regulatory provisions a coherent approach to risk measurement and to its correct representation to the potential investors. This will create a context compatible with the concrete realization of a levelled playing field and with the prevention of any regulatory arbitrage which could arise due to the fragmentation of the current regulation. In this perspective the only solution is represented by a thorough revision of both the European and the Italian regulatory framework in the direction of a single directive on the transparency for non-equity investment products.

At the European level, such initiative could be promoted in the current process of revision of the three directives which have established heterogeneous standards of disclosure for products sharing the same financial engineering, that is:

- UCITS III directive for harmonized open-ended mutual funds;

- Prospectus directive for non-equity products issued by banks and for closed-ended mutual funds;

- Life Assurance directive for financial products issued by insurance companies.

A first, useful step to favour the natural convergence towards the suggested direction could be the introduction of an European regulatory framework aimed at granting the competent Authorities of each member State the possibility to define the contents of the prospectus for all non-equity investment products being offered in that State, as currently established only for financial-insurance products. Such regulatory framework would also be more consistent with the fact that the competent Authorities of each member State are charged with the surveillance on transparency in order to safeguard investors, even when investors subscribe investment products offered by issuers with registered offices in another member State.

At the Italian level, the transposition of the requirements of a new single directive on transparency into national laws and regulations could contribute to

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[2]It is also possible to have mixed structures, with a double protection mechanism or with the coexistence of both a protection mechanism and a guarantee. In this second case, the protection mechanism typically reduces the role played by the guarantee, and, thus, also its cost.

overcome the current partitioning of competencies between the various financial supervisory Authorities. Moreover it would complete the process of standardization of prospectus requirements and other disclosure information enacted by Consob in exercising its regulatory powers since the beginning of the decade.

In fact, the regulatory choices Consob has made over time reflect its view of the prospectus as the privileged channels to realize an effective transparency both in the offering and in the distribution of non-equity investment products. Consob's provisions are not based on prior authorizations but on timely *ex-post* enforcement measures consistent with a risk-based approach.

Such approach, developed and progressively implemented by Consob, is based on three pillars, corresponding to three synthetic indicators defined through the application of specific quantitative methods and the preliminary classification of products according to one of the above listed types of financial structures, in line with the practices of financial intermediaries.

Moreover the same three-pillar approach can be successfully used also to realize a more effective transparency on the risks and costs of products involving financial liabilities, as their financial engineering mirrors that of investment products, typically leading to take a specific risk exposure or to modify an outstanding exposure, also through the embedding of derivative-like components.

The first pillar, implemented into Consob regulation since 2004, is a table showing the probability scenarios of the return of the financial investment at the end of the time horizon recommended to investors. The purpose of this indicator is to highlight the main features of the probability distribution of the final payoffs of the product through a synthetic representation of the so-called "pricing at maturity". In this way it supplements the information given by the unbundling of the price at the subscription date with clear and concise indications on the potential results of the investment and on its costs. Moreover, the comparison with the results of the investment in a risk-free asset over the same time period allows a better assessment of the product's "performance risk", meant as the product's likelihood to create added value for the investor, both in absolute terms and in relative terms with respect to the risk-free asset. To this end four different probability scenarios are considered:

1. *negative return scenario;*

2. *scenario where the return is positive or zero but lower than that of the risk-free asset;*

3. *scenario where the return is positive and in line with that of the risk-free asset;*

4. *scenario where the return is positive and higher than that of the risk-free asset.*

The representation of a limited number of scenarios enhance the usability to the reader and minimize the "model-risk", that is the chance of obtaining significantly different probabilities depending on the specific pricing model chosen by the intermediary. Hence, the figures for the probability table can be

produced by using the same solutions developed for the pricing and risk management activities of the intermediary, provided that the parameters and the variables corresponding to all the risk factors which affect the product offered are properly considered and measured by the proprietary model adopted.

The only methodological requirement which intermediaries' models must comply with is the risk-neutrality principle. This requirement is aimed at ensuring that figures in the probability table are meaningful and objective, and, hence, not affected by subjective assessments based on the higher or lower level of risk aversion of each individual player (so-called "real probabilities").

For each of the four events considered, a representative value is also indicated which correspond to the median of the final product's payoff associated with that event and determined via suitable numerical simulations. These median values allow to highlight the most important information on the shape of the probability distribution of the final value of the invested capital, and to associate a synthetic quantification of this final value with the probability of each scenario.

The second pillar, implemented into Consob regulation since 2001, completes the information given in the probability table by providing an explicit representation of the overall riskiness of the product at the time of subscription and during the recommended investment time horizon. This is achieved determining the product's degree of risk by means of synthetic quantitative indicators which process the information contained in the probability scenarios of the first pillar through suitable volatility measures of the potential returns.

More in detail, the degree of risk may take values within an increasing scale of six qualitative classes: *low, medium-low, medium, medium-high, high* and *very high*, which are mapped to six corresponding intervals of the specific quantitative risk measure adopted by intermediaries and based on returns' volatility. This solution constitutes a valid compromise between the complexity of the phenomenon to be described and the need for the investors' univocal comprehension.

For each product, an initial class has to be indicated which is consistent with the risk profile underlying its financial engineering and, where relevant, its investment policy, and hence, taking into account its positioning in terms of the quantitative risk measure adopted. In this perspective, the migration to a class associated with a higher or lower risk than the initial one occurs in relation to the evolution of such measure over time.

In the case of "benchmark" products the six risk classes are supplemented by four classes (so-called "management classes") which signal the intensity of the asset management activity, in terms of deviation from the chosen benchmark, as: *passive, limited, intermediate,* and *considerable*[3]. This additional information for "benchmark" products is aimed at qualifying the specific contribution of the asset management activity to the product's overall riskiness with respect to the exogenous risk source due to the stochastic evolution of the benchmark over time. Passive asset management strategies substantially replicate the

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[3]This approach has been adopted by Consob's transparency regulation on prospectuses of mutual funds and class III and V financial-insurance products, and it is also the basis of the method underlying the revision of EU regulation regarding the *Simplified Prospectus.*

benchmark and thus, inherit its degree of risk. Conversely, in active asset management strategies, asset allocation choices reflect the autonomous investment decisions of the manager, and the associated more or less wide deviations from the benchmark constitute an additional, endogenous risk component. Clearly, also the meaningfulness of this information is ensured by the mapping of the qualitative management classes to properly calibrated intervals of a quantitative measure based on the comparison between the volatility of the product's returns and that of the returns of its benchmark.

The third pillar of the risk-based approach to transparency is the recommended investment time horizon, meant as an indication of the optimal investment holding period. This indicator, implemented into Consob regulation since 2001, is determined on the basis of the product's financial structure and of the related risks and costs.

For "return target" and guaranteed products the recommended investment time horizon results from the analysis of the underlying mechanisms of protection or guarantee. In simplest financial structures the functioning of these mechanisms allows to immediately determine the optimal investment holding period as the technical horizon of the protection or guarantee. When more complex products are involved, the identification of the recommended investment time horizon requires a careful study of each elementary component comprised in the financial engineering in order to get a clear picture of how any single protection or guarantee mechanism actually works.

In "risk target" or "benchmark" products, the absence of a target return or a financial guarantee that indicates, at least *ex ante,* the best investment time horizon for the investor, requires to determine the recommended investment time horizon according to the criterion of the costs break-even, given the degree of risk of the product. In fact, from the investor's point of view, the recommended investment time horizon for these types of products should express a recommendation on the minimum time period within which the costs incurred may be amortized, taking into account the risks embedded in their financial engineering[4].

The recommended investment time horizon is the key to a coherent view of the first two pillars: the interdependence between the degree of risk and the potential returns can be fully appreciated only over this time horizon. In fact, the information regarding the degree of risk and the future performance of the financial product takes on significance with respect to the goals that drive the investor's choices only if considered in relation to the optimal investment time period implicit in the underlying financial engineering.

The three pillars fully define the contents of a *product information sheet* which should become the core of the prospectus and of the other transparency documentation intended to effectively support investors in the selection process of a non-equity investment product.

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[4]In more formal terms, the recommended investment time horizon for these products is identified as the first year within which the probability of amortizing the costs of the financial investment − calculated under the risk-neutral probability measure − reaches a predetermined threshold at least once.

Indeed, this process typically involves three consecutive steps which intersect the information from the three pillars with the investor's preferences. The first step of the selection process is based on the information about the recommended investment time horizon. This indicator allows the investor to identify the products which match his own *holding period*, meant as the period for which he is willing to give up his cash holdings. In the next level of the process, the focus is on the selection of those products bearing a degree of risk consistent with the investor's risk appetite. Finally, using probability scenarios, the investor identifies the product whose final payoff structure best matches his expectations on the investment's returns.

This risk-based approach to transparency relies on quantitative analysis tools and methodologies specifically aimed at ensuring the significance and the objectivity of the information provided to investors and which do not require the use of specific models. In other words, the proposed approach represents a methodological solution aimed at producing clear, meaningful, comparable and backward verifiable information. The aspects concerning the practical implementation of the approach are left to the proprietary models used by intermediaries to carry out their pricing and risk management activities. In fact, such activities are clearly preliminary to the launch of the public offering of a financial product and are necessarily linked to (and often coincide with) the above mentioned qualitative and quantitative information to be provided in the prospectuses of non-equity products.

This solution also avoids the costly and useless implementation of "parallel models", and favours the convergence towards virtuous market practices to the benefit of both investors and financial intermediaries.

In fact, on the demand side, investors may rely on a coherent and standardized information which summarizes the overall exposure of non-equity financial products to the various risk factors. In this way, thanks to easy and meaningful indicators, investors can autonomously assess even highly sophisticated products; while on the supply side, intermediaries can extend the use of proprietary models to the production of the information required by transparency regulation, with clear advantages for their compliance offices. In addition, compliance with risk-based transparency regulations provides a concrete opportunity to minimize reputational risk by offering a clear and objective representation of the key features underlying the products' financial engineering.

It is hoped that this work may contribute to the ongoing EC work regarding the representation of risk-return profiles in prospectuses, enhance the attention on the need for a single EU directive concerning the offering documentation of non-equity investment products to retail, and provide useful suggestions for the solution of the current international financial crisis.

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