Accommodating profile dynamism in MiFID II

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Introduction

Even though the original MIFID I Directive, which went into force in 2007, was originally crafted with a very noble set of objectives, its actual implementation regarding the "suitability" requirement associated to financial advice (typically portfolio or security investment recommendation) has been hindered with many difficulties. A key obstacle has been the reluctance displayed by many actors in the industry to accept as a regulation what could (or should) have been seen as the set of best practices with respect to investment advice. Because existing practices were typically seen as sufficient and probably also because the perceived expertise of the authors of the regulation was considered as overly bureaucratic and too little grounded in reality, the actual implementation of MiFID I has been, to a large extent (at least in Belgium and France), viewed as a fight between regulators and professionals rather than an opportunity to let the industry and the supervision evolve in harmony towards the "personal finance of the 21st century".

In particular, the guidelines provided in MiFID regarding the dimensions that ought to be addressed and measured in the investor profiling process looked way too much like the administrative translation of what financial advisors were already doing. It is natural, when trying to understand the relevant characteristics of an investor, to gather his/her patrimonial situation, objectives, constraints, experience, knowledge, etc… as well as his/her "risk profile", loosely defined in the regulation (it is even wrongly explained in the informational leaflets spread by the CESR (ex-ESMA), confusing conservative and protective risk profiles). "We already do it, and don't need an additional layer of paperwork to do our job", is what one regularly hears.

The lack of precision in what is meant by "risk profile" has been detrimental to the effectiveness of the suitability dimension of MiFID. A systematic review of banking practices performed by UK's Financial Services Authority (FSA) in 2011 outlines a number of severe anomalies in the profiling process. The document concludes, among others, that: "*Of the investment files assessed as unsuitable between March 2008 and September 2010, we rated half of these as unsuitable on the grounds that the investment selection failed to meet the risk a customer is willing and able to take. The level of failure in this area is unacceptable. We have taken, and continue to take, tough action to address these failings with individual firms*" (FSA, 2011).

In a study ordered by the French AMF, De Palma and Picard (2011) identify three potential sources of complexity of the risk profile. Besides the individual contingencies that characterize the investor's situation at a given point in time, they outline the differences between the notions of risk aversion, loss aversion (or any similar notion that relates to the notion of regret), and the propensity to rely on subjective probabilities. They reach (severe) conclusions similar to the FSA study regarding the insufficient consistency of investor profiling in French banks: basically, one has only a 40% chance of reaching a similar profile in two different banks, even though the person has not changed from one institution to another.

The complexity of what drives the complete profile of an investor concerns both a spatial and a time dimension. Once it is clear that several aspects need to be assessed at once, it becomes illusory to attempt to capture a full risk profile with a single score, like most MiFID questionnaires do. But this also involves the necessity to get a full two-dimensional review of the adequacy of recommendations

with profiles over time. Even though the first dimension (two-dimensional approach) is not explicitly acknowledged in the second wave of MiFID regulation, the time dimension has clearly caught the attention of the regulators, as witnessed in the ESMA guidelines on the implementation of the MiFID suitability requirements.

ESMA (2012) found the following shortcomings in the implementation of the MiFID suitability requirements:

- failure to ask clients the right questions;
- failure to collect the necessary and relevant information;
- failure to interpret correctly the information provided by the client; and
- even where the right information is collected, failure to recommend a suitable investment.

The report suggests "(...) *investment firms to explain to their clients the reasons of the advice provided to them. In most cases, the advices are based on model portfolios issued from the strategic investment policy of the financial institution. Unfortunately, even if the portfolio allocation can be proven to be adequate to a specific investor risk profile at some point in time, this does not necessary stay true for his whole horizon of investment*" (ESMA, 2012).

In this paper, we show the implications of this double challenge of addressing a multi-dimensional and dynamic risk profile. Using a framework developed by Gambit Financial Solutions on the basis of research carried out at HEC-University of Liège, we depict the key requirements for an adequate handling of the investor's risk profile and portfolio over time, in the pure spirit of MiFID I and II. A set of optimized portfolios, with and without dynamic rebalancing, is used as an illustration of the shortcomings of the current "best practices" regarding the correct servicing of the investor who seeks portfolio recommendations by the professional financial advisor.

Model portfolios in a multi-dimensional profiling framework

A vast majority of financial institutions are satisfied nowadays with the use of a simple volatility as a measure of risk, setting a maximum level to each investor category. Yet academic research and experimental research have demonstrated about thirty years ago the multidimensionality of perceived risk and proposed to use higher moments of distribution than variance to mathematically describe this multidimensionality (Cooley, 1977; Scott and Horvath [1980] or Coombs and Lehner [1981]). The latest financial crisis has pushed some practitioners towards that direction, and in addition to the volatility dimension, some financial institutions have started to use a second dimension of risk, i.e. the probability of experiencing a loss on the portfolio.

In line with this multi-dimensionality of risk, which have been shown to be investor-specific by Veld and Veld-Merkoulova (2008), Gambit Financial Solutions have developed a methodology to map financial instruments and investment portfolios on a matrix that take into account the four moments of distribution of order 2, 3 and 4 (volatility, skewness and kurtosis), and the specificity of investor, ranging between two extreme behaviors. On one side, investors put very strong emphasis on the stability of returns around their mean (measured by variance) and put significantly less weight on extreme but rare losses. On the other side, investors give more importance to tail risk, that is, to capital losses.

The figure below illustrates the matrix. The vertical axis represents the degree of aversion of the investor (from defensive to dynamic). The horizontal axis represent the two extreme behaviors described above: protector investor want to protect their capital, stable investors want stability of their revenues.

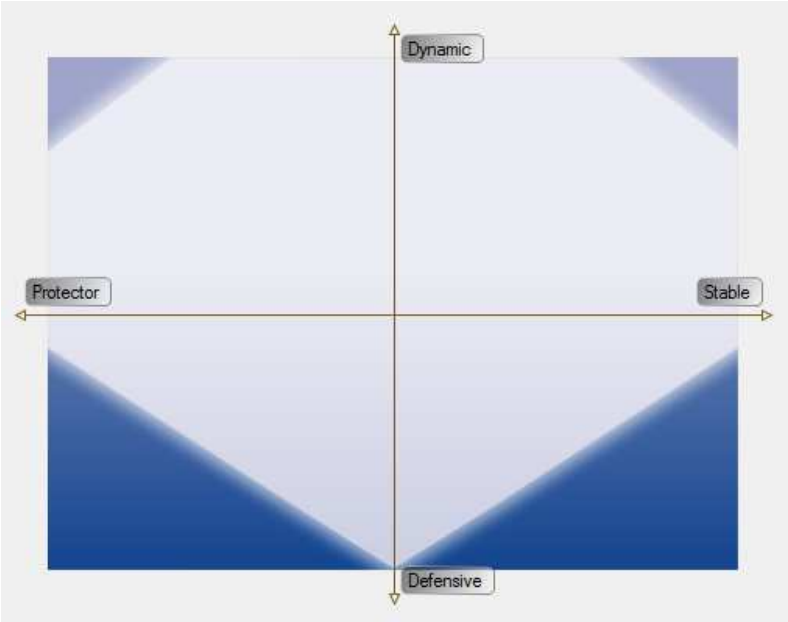

Figure 1 – Gambit Financial Solutions risk profiling matrix.

Any financial instrument from which we have a distribution of returns can be mapped in this matrix. The position of the instrument on the vertical axis depends on the value of a specific risk measure

composed of variance V, skewness S and kurtosis K for a median investor (giving the same weight to the risk of capital loss and the risk of uncertainty of return). The formula is given below:

$$R_x = \frac{1}{2}V_X - \frac{1}{6}CS_X + \frac{1}{24}C^2K_X$$

The C parameter represents the sensitivity (normalized to his/her proportion of risky investments) of an investor to one type of risk by opposition to the other. The higher the C value, the most capital loss averse is the investor. The median investor will have a given C, and for that C, the higher the asset's position on the map, the greater the risk it entails.

For a given risk aversion, we will then find on the left part of the map, assets that protect the capital of the investors whilst on the right we should find investments with more stable returns, but with no guarantee on capital.

To illustrate the concept, we have taken three publicly available models portfolios proposed by a European financial institution: one for defensive investors, one for neutral and one for dynamic investors. The allocations of these portfolios are presented in the following table.

	Equity	Bonds	Alternatives
Defensive profile	20%	57%	23%
Neutral profile	41,50%	42,50%	16%
Dynamic profile	60%	24%	16%

Table 1 – Asset allocations of three model portfolios for defensive, neutral and dynamic investors.

In order to have a distribution of return for these portfolios, we replaced the three assets classes by the following indices:

- Equity: S&P 500
- Bonds: BarCap Euro Gov 10Yr
- Alternatives: HFRX Global Hedge Fund

Taking the weekly returns of the three portfolios based on those indices, we are able to map them in the risk profile matrix.

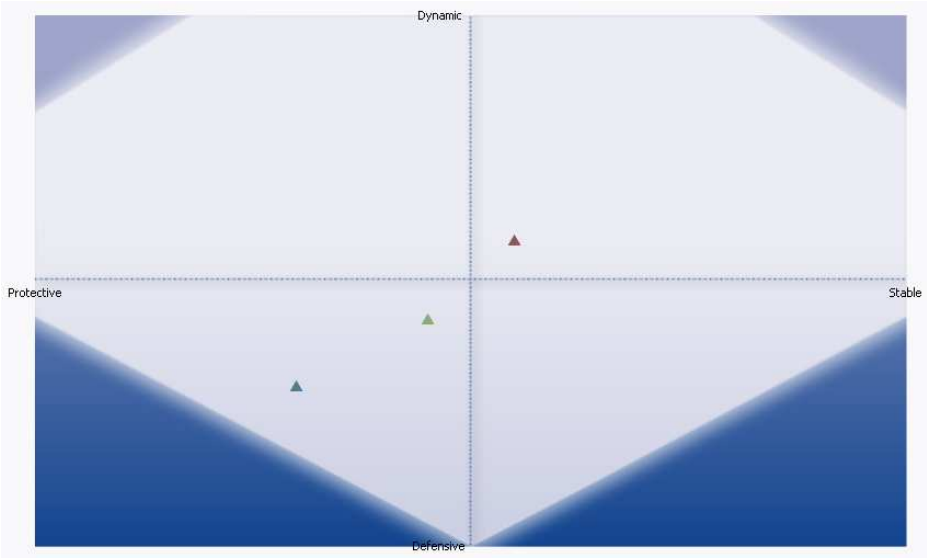

Figure 2 – Mapping of 3 model portfolios corresponding respectively to a dynamic (resp. neutral, defensive) profile.

From a vertical point of view (risk aversion), the alignment of these portfolios occurs as expected: each triangle corresponds to the desired risk aversion profile from an ordinal point of view (the cardinal alignment depends on the definition of the model portfolio for "defensive" and "dynamic" in the profile matrix.

The horizontal dispersion, however, does not deliver the same impression. Besides its more aggressive stance, the red triangle also corresponds to a "stable" perception of risk, while the defensive allocation tends to have a "protective" bias. Thus, portfolios that are designed to only accommodate the level of risk aversion could very well miss the target of risk perception (i.e. the level of loss aversion), and therefore become poorly designed to the true needs of the investor, irrespective of horizon or cash flow constraints.

Model portfolios in a multi-dimensional profiling framework

The MiFID Directive requires investment firms to explain to their clients the reasons of the advice provided to them. In most cases, the advices are based on model portfolios issued from the strategic investment policy of the financial institution. Unfortunately, even if the portfolio allocation can be proven to be adequate to a specific investor risk profile at some point in time, this does not necessary stay true for his/her whole investment horizon.

In order to illustrate our argument outlining the potential inadequacy of model portfolio over time, we have computed the position of the previous 3 portfolios every 6 months over a period of 5 years. The colored lines represent the evolution of the type and quantity of risk of the model portfolios over time.

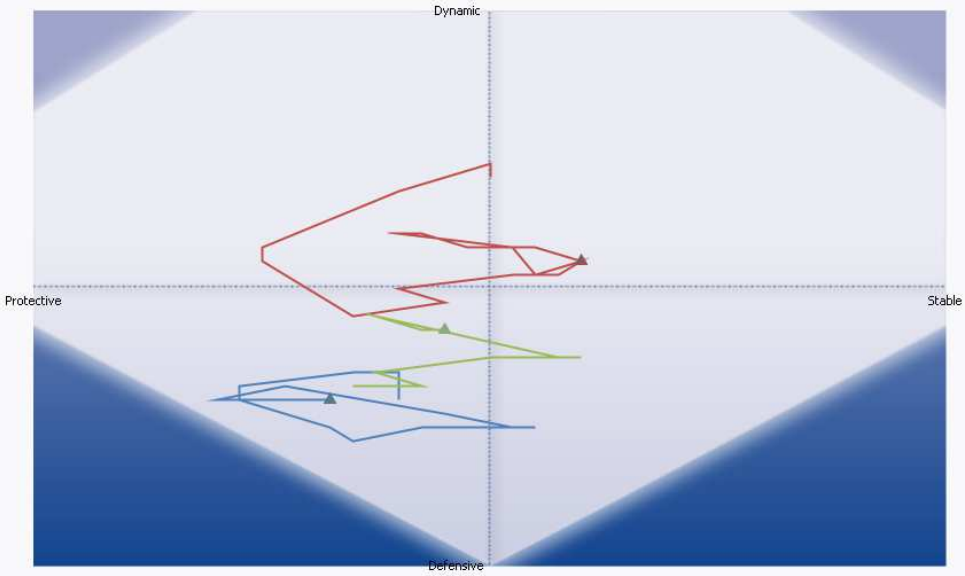

Figure 3 – Evolution of the type and quantity of risk of 3 model portfolios corresponding respectively to a dynamic (resp. neutral, defensive) profile.

As clearly shown in the graph, not taking care for the horizontal dimension (risk perception) of investor profiling induces a much greater variability along this axis than on the risk aversion one. This is a typical outcome of strategic asset allocation (SAA) approaches: even though the relative risk level of different asset classes can be reasonably segregated, their properties in terms of extreme vs. normal risks (thus the exposure to losses) can greatly vary over time. This calls for a tighter, more precise allocation policy that focuses much more on the full spectrum of risks associated to each portfolio rather than on presumably – and falsely – unchanged diversification properties over time.

This exercise illustrates the importance of rebalancing model portfolios, particularly under the new MiFID II Directive recommending financial advisers to provide information on the monitoring of his/her portfolio of investments and on the adequacy of the proposed financial instruments to this profile.

From the evolution of the mapping of the portfolios, we can see that the rebalancing is necessary for a quantity of risk point of view (the selected assets classes risk level vary from time to time), but also because of the variation of the type of risk to which the investor is exposed. Indeed, a same asset class might be more stable than protective during certain periods of time and not being adequate anymore for protective investors, for instance.

Is it possible to construct and maintain “two-dimensional profile portfolios”? Our claim is that the awareness of these two dimensions and the mastering of different asset classes that span these two dimensions are necessary and sufficient conditions to successfully perform this task. An illustration is developed in the next section.

Construction and monitoring of a “suitable” portfolio

In order to ensure the provision of an appropriate investments portfolio to the investor over her investment horizon, we have seen that it is necessary to rebalance the model portfolio, but also to

have a larger set of heterogeneous asset classes, if one wants to be able to propose portfolios that take into account the sensitivity of investors to different types of risk.

Let us take the case a protective neutral investor, who is sensitive to any high loss in capital for his/her portfolio, but ready to take a medium level of risk of instability of returns. We start to rebalance the portfolio in 2007, every 6 months until December 31st, 2012. The universe of assets classes are represented by the following indices;

- Equity indices
  - S&P 500
  - Russel 1000 Value
  - Bel 20
- Bond indices:
  - BarCap Euro Gov 10Yr
  - S&P/LSTA Leveraged BB Loan
- Alternative indices:
  - HFRX Global Hedge Fund
  - S&P Global REIT
  - S&P GSCI Gold Official Close
- Cash index:
  - Eonia total return

In order to take into account the multi-dimensionality of risk of the instruments, and the higher sensibility of the investor to one type of risk, we optimize our portfolios maximizing Bell Utility function as suggested in Plunus, Gillet, Hübner (2013).

$$U(W) = W - be^{-cW} \quad (1)$$

The following figure illustrates the great variability of allocation for a same objective on different date of computation.

The only constraint set on asset allocations was a maximum threshold of 30% for alternative investments. The maximization of the utility function was made over a rolling window of 2 years of weekly returns.

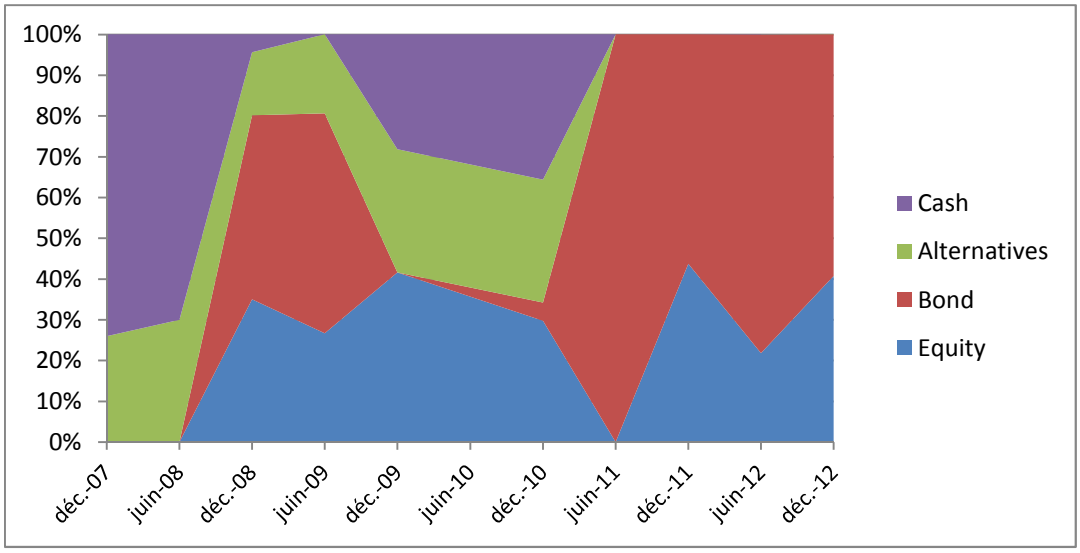

Figure 4 – Asset allocations of a rebalanced portfolio for a protective neutral investor.

Note that not only the asset allocations vary greatly from period to period but also the weights inside a same asset class.

The reverse profiling of this reallocated portfolios shows that the rebuilt portfolio remains on the same side of the vertical axis, that is suitable for protective investors, and remain below the horizontal axis, that is, the risk remains at a 50% degree of risk.

The risk is sometimes below the target, but this is mainly observed during the crisis, during which the implied expected returns of riskier assets are negative, and therefore rejected by the optimization – this effect is desirable as one wants to control the risk level at the benefit of the customer. The same remark holds for the protection level, which can be more conservative than the median, provided that the portfolio does not offer a too high exposure to extreme risks.

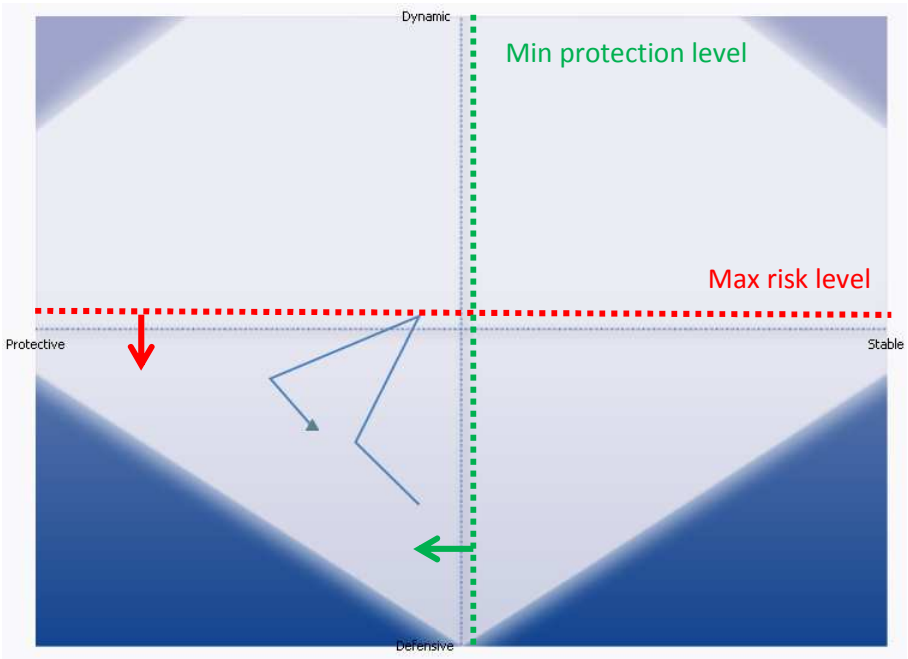

Figure 5 – Mapping of a rebalanced portfolio for a protective neutral investor.

Thanks to this technique, we can now give the investor all the relevant information necessary to show the good adequacy of the recommendation made to the clients over his horizon of investment. In a way, science meets regulation.

Conclusion

Can a financial advisor provide *client-centric portfolio recommendations* that are not only in line with MiFID I, but also with the forthcoming *MiFID II Directive*? At first glance, the italicized notions are perceived, amongst many professionals of the industry, as irremediably irreconcilable. The equations "MiFID = administrative burden" and "client-centricity = nothing boring" appear to be incompatible. This is essentially wrong, because client profiling is the most important source of intrinsic information about the investor.

The richness of a person's attitudes towards risk represents a clear challenge, and it is unfortunately true that many financial advisors, from the most sophisticated to the amateurish boutique, have not yet fully grasped the importance and the complexity of this challenge. Nevertheless, hiding behind justifications like "this is the way we've always done, and clients have never complained that the profiling stage was expedited through a 5-minutes questionnaire" is a fundamentally flawed and even suicidal attitude. It would be similar to a doctor sticking to grandmother's remedies (let's remember that Markowitz's modern portfolio theory, which serves as the basis for many advisory procedures, is 60 years old) while not recognizing that medicine has evolved since then. Before the 2008 financial crisis, one could probably have lived with such backward-looking approaches; nowadays, investors are more demanding, and it is time to deliver what they are paying for.

Our illustrative examples clearly show that adopting a more modern stance has the potential to fulfill this apparent attempt to square the circle. By explicitly integrating loss aversion in the profiling process, and integrating quantitative constraints in the portfolio formation and rebalancing processes, it is perfectly possible to convince the investor of the value-added of the profiling and re-profiling processes. Just like each individual likes to have a regular checkup if he/she feels that it is provided by a competent, state-of-the-art MD, the same person would like to be convinced that the same holds for his/her financial portfolio. Fostering this conviction is a clear goal of the profession, and MiFID is a sting that could lead to such an achievement. In this paper, we have illustrated how this is possible and accessible.

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