Behavioural Finance: Application to Investors and Managers in Spanish Mutual Funds

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CONCEPTUAL FRAMEWORK

The development of this essay is motivated by the new tendencies of research in finance. Though many authors consider that behavioural finance is still in its infancy the academic interest is growing rapidly and the present situation justifies this work. Markets are not always efficient and participants do not always act as they are supposed to. Within this framework, the goal of this Thesis is getting a better understanding of how investors and managers of mutual funds interpret information and take investment decisions.

Recent research and, apparently, the future in academic research will be based on multi-disciplinary applications. Researchers must open their minds to related areas to get more consistent and useful results to the society. In this sense, this empirical work is the application of theories and findings in the psychological research field to financial data. This is especially interesting for the sample analysed given that this kind of studies are slightly developed for the Spanish mutual fund industry.

Behavioural finance has recently emerged in academic studies as a new paradigm to explain the anomalies found when empirically testing the efficient market hypothesis, but it has entered so firmly that it seems it is going to stay for long; in fact, some waves of opinion point it out as a new discipline in the near future. The new approach argues that decision making processes can not be built up on the assumption of a rational investor and offers alternative perspectives from the psychological research field.

From the late 1950s and early 1960s the Modern Portfolio Theory has dominated the framework of standard finance with four foundation blocks: the rationality of investors, the efficiency of the markets, the mean-variance portfolio theory as the rule to design portfolios, and the Capital Asset Pricing Model (CAPM). In an efficient market (Fama, 1965) prices represent at every time a good estimate of the intrinsic value; but it took long for the model to be accepted by academics since a series of return anomalies appeared in the late 1970s and early 1980s. For these reasons, some academics claim for the necessity of alternative models that relax some of the assumptions of modern portfolio theory.

In this ongoing debate, the critics from the behavioural finance approach concern the main cornerstone of the theory of efficient markets, that is to say, the existence of a rational individual taking investment decisions. Rational investors prefer more wealth than less, they are indifferent whether a loss is labelled a paper loss or a realised loss, and they incorporate new information to their predictions. Investors that do not accomplish these features are considered «noise traders» (Friedman, 1953), whose irrational trading is compensated in the long run by efficient rational arbitrage to be able to sustain the idea of efficient markets. The normative theories proposing how individuals «should act» seem to be losing weight because complete rationality only exists in models but it is not valid for actual behaviour. Investors and managers are not always concerned of how human emotions and cognitive biases may affect their investment decisions. In daily trading, agents make mistakes, interpret information, deal with emotions, and have some prefixed ideas about the reality. Therefore, the «noise trading» previously quoted is not so abnormal in financial markets and we could think of a «normal» investor with inherent cognitive biases, rather than a rational investor. Meir Statman (2005) affirms in their survey of rational investors: «Investors were normal before they were described as rational in the early 1960s, and they remain normal today».

METHODOLOGY

The empirical study is focused on two main parts: Spanish mutual funds investors' and managers' behaviour. Regarding investors' attitudes when facing financial investment decisions two databases are used to provide a wide perspective: domestic equity funds and money market funds. Similar methodology is applied to both samples including individual OLS regressions, non-parametric cross-section analysis or multivariate regressions to try to fit the best model. The goal is detecting the factors that influence most investors' decisions and approaching the performance-flow relationship that in previous studies has been shown to be asymmetric (Goetzmann and Peles, 1997; Chevalier and Ellison, 1997; and Sirri and Tufano, 1998). This means that investors disproportionately flock into funds with good performance whilst fail to withdraw in the same proportion from funds with poor performance.

The manager's behaviour is also approached by two different methodologies. We aim to provide empirical evidence of the managers' incentives to modify their portfolios, in particular, to analyse the risk-taking behaviour of mutual fund managers in response to their relative performance. This behaviour has been denominated 'tournament behaviour' since the pioneering work of Brown, Harlow and Starks (1996). In this case, managers would be affected by the psychological bias defined in the Prospect Theory of Kahneman and Tversky (1979) suggests that individuals tend to lock in gains and gamble on losses.

The central hypothesis is that interim losers tend to increase the risk of their portfolios more than interim winners after a performance assessment period within a year. This hypothesis is tested with two methods, the non-parametric methodology with rankings according to the median criterion and with the quartile classification. This last method enables us to enlarge the hypotheses tested, such as the existence of career risks if they fall consistently behind the market, the increasing confidence of managers with good performance.

Additional factors are considered with panel data methodology, in this sense we test for the effect of size, age, prior level of risk (given the portfolio constraints, managers can not systematically increase the risk of the portfolios).

In all the analyses presented, we considered the effect of different sample periods, thus the 1994-2004 is a period that includes a dramatic growth of the mutual fund industry in Spain.

CONCLUSIONS

Regarding the first part from the investors' point of view, individual studies of OLS regressions for different variables have proved that past return is the most important factor for investors when taking investment decisions. However, the computing period is different for two types of funds. Domestic equity funds' investors focus on last year return, whilst for money market fund the period is reduced up to 3-month past return. According to financial portfolio theory, risk should be also considered to evaluate portfolios, but it fails to be a significant variable for money market funds due to the specific characteristics of these funds. The evaluation of risk for equity funds differs from the evaluation of return in the time horizon for computing the variables. It is found that the levels of risk are for longer periods of time. These differences should be had in mind when resuming return and risk in one performance measure. That is, better results are obtained in for the Modified Sharpe Ratio analysis when the ratio includes return and risk computed for different time periods.

Cross-sectional time series regressions provide additional evidence of the framework of investors' decisions. Custodial and management fees have been shown to be a deterrent to investments, especially for the money market funds. The flows of money and investors are also significantly related to the level of flow into the category of funds. That is to say that flows into individual funds depend, to some extent, to the growth of the category, either domestic equity funds or money market funds.

Regarding the effect of fund size, larger funds in Spain have more difficulties to grow than smaller funds in relative terms. However, the situation is different for money market funds in the second part of the sample period that fund size is not so important because the industry is more consolidated and there are not new funds. The effect of being stand-alone funds or belonging to a fund family has also been analysed. It seems that fund complex size is not determinant in the panel data analysis. When individual analyses have been carried out evidence is shown that the influence of the complex size is conditioned to the levels of past return.

According to our results, the so-called asymmetric performance-flow relationship is found in the first subperiod of the sample analysed for money market funds. However, it is not possible to generalise it for domestic equity funds. We confirm that investment flows to good performers are higher than to bad performers but the attention is focused on both extremes, whilst no significant effect of return on mid-performers is found.

Considering managers' attitudes, from empirical analysis we conclude that extreme return losers change the risk exposure to extreme positions, either great increase in a gamble to 'catch up' their peers, or great decrease fearing dismissal. On the other hand, top performers do not show significant risk-shifting behaviour in bull markets, but there is a significant reduction of risk in bear markets. Regarding other variables, the risk level of the first part of the year negatively influences the subsequent risk exposure; and larger funds tend to gamble to a greater extent.

Resumen: La Tesis Doctoral escrita y defendida en inglés en contexto de doctorado Europeo también contiene un resumen en castellano para su completa difusión. De forma muy sintética, podríamos decir que el objetivo de la tesis es la divulgación de los nuevos paradigmas recogidos bajo la perspectiva de las Finanzas del Comportamiento.

Tras un repaso por su evolución y su comparativa con las Finanzas Clásicas y una descripción del mercado español de fondos de inversión la Tesis desarrolla cuatro capítulos empíricos. Dicho análisis empírico comprende dos partes: el análisis del partícipe y del gestor de fondos de inversión. En el análisis del inversor se aprecian diferencias entre la reacción del partícipe de fondos de inversión de renta variable nacional y fondos monetarios.

En definitiva, existen multitud de circunstancias en las que los agentes en el mercado de fondos de inversión no actúan conforme la racionalidad financiera de las finanzas clásicas.

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