

Mutual-Fund Benchmarking and Market Bubbles: A Behavioral Approach

Alberto Bertoni¹, Giorgio Bertinetti², and Chiara Cesari³

¹Centro di Ricerche Economico-Aziendali e sull'Imprenditorialità,
Bocconi University, Milan, Italy

²Dipartimento di Economia e Direzione Aziendale, University Ca' Foscari,
Venice, Italy

³Bocconi University, Milan, Italy

(E-mail: Alberto.Bertoni@uni-bocconi.it, Bertinet@unive.it)

Abstract. Dynamics of equity risk premium is not directly measurable on the market. Numerous studies and empirical research analyse its volatility also considering the time span, concluding that the dynamics of equity risk premium over time is inversely proportional to the economic cycle. This study analyses the passive role that, implicitly, would place institutional investors in such a context. In reality, savings management is delegated to a small number of professional operators (institutional investors), as opposed to pure theoretical models in which every person can act directly on the market thus ensuring unlimited price elasticity. Institutional investors should be rational and completely informed so that they can assume an anticyclical position on the market. Thus, supply and demand should quickly smooth over emerging price pressures and avoid price bubbles. We analyse one possible explanation for this situation not to occur, namely, that professionals suffer from operational limits that prevent them from doing their job in the best possible way. Using empirical evidence from the Italian Stock Exchange (Comit Index), we conclude that three factors reduce the freedom of institutional investors to manage their portfolios – the market target size, the fund structure, and the benchmarking – and discuss some implications for each of them.

Keywords equity risk premium, institutional investors, mutual funds, market bubbles, benchmarking

The equity risk premium is not directly measurable on the market. For this reason, it is necessary to provide an estimate, and many studies all over the world have worked towards this goal. It is not easy to achieve, and the existence of numerous theoretical models (none of which excels over the others) proves this (Mehra and Prescott 1985).

The common conclusion of all studies and relative empirical tests is the volatility of the risk premium value, estimated on an individual basis, not only in accordance with the method used for the calculation but also in accordance with the time span involved in gathering market data (Ibbotson 1999).

This particular aspect has led to the conclusion that the dynamics of equity risk premium dimension over time are inversely proportional to the economic cycle: the premium increases during depressions and falls during expansions (Fama and French 1989, Fornari 2002). In a behavioral finance logic, this evidence shows that investors reduce their risk aversion during good economic periods and return to higher risk aversion levels during bad economic periods. So, euphoria and demand excesses are followed by caution and supply excesses, both of which are hypothetically able to cause price bubbles.

While respecting the evidence mentioned above, this study analyses the passive role that, implicitly, would place institutional investors in such a context. Many studies about the microstructure of the market have shown how the stock market is actually different from that described in neo-classical financial models in which people can act directly on the market and, at the same time, can be both potential buyers and sellers of securities, with unlimited price elasticity. In practice, however, savings management is widely delegated to a small number of professional operators (Cohen et al. 1980).

The role of institutional investors

Discontinuity in equity risk premium dimension and its respective explanations are conceptually plausible if generic investors are the savers, people who are not necessarily rational in their reactions and are also perhaps not fully aware of all the implications. By contrast, it is very difficult to justify these facts in a context of managed savings, where savers rely on professionals to manage their savings.

Indeed, institutional investors should be the basis of information trading, necessary to maintain stock prices in line with their intrinsic value (Garbade 1982). Those investors should be rational and completely informed so they can assume an anticyclical position against the market. They should be able to become sellers when prices are going to increase too much and buyers when prices decrease. So, the supply and demand of securities in these situations should quickly smooth over the emerging pressure in price. They should be driven towards reasonable values and the risk of substantial price bubbles should be avoided.

If this situation does not occur, there are three possible explanations:

- professionals do not operate like information traders but like speculators, who do not hesitate to ride price bubbles;
- professionals are not rational and fully informed and, therefore, they are not able to provide a service which is economically convenient for their customers;
- professionals suffer from operational limits that prevent them from doing their job in the best way.

The first explanation is compatible with the concept of “rational bubbles” (Diba and Grossman 1988). It is a consequence of the Keynesian rule according to which, because of the present “rules of the game”, it is important to choose not what is considered the best investment but the one chosen by most market players (Keynes 1936). The rules of the game in the financial market state that prices of the securities with the highest demand increase, while securities with the greatest level of supply undergo price falls. Consequently, the winning strategy is to buy stocks for which there will be a lot of demand and to sell stock for which there will be a lot of supply in the near future, no matter what their intrinsic value.

The second explanation is compatible with the hypothesis that analysts and professionals are not able to put into practice the rules of a fundamental analysis and, then, to provide accurate estimates about the intrinsic value of securities handled in the market. Consequently, we can consider the criticisms of the U.S. Securities and Exchange Commission and the Italian Commissione Nazionale per le Società della Borsa which have prompted some empirical investigations following the burst of the price bubble in 2000 and during the previous three years, when prices had continuously increased. These analyses have shown the continuous and almost total concentration of financial analysts’ advice to buy.

That concentration would be logically correct only if the market were constantly and totally undervalued, but this is not only unlikely but also technically difficult to explain. Otherwise, it could only be the result of unethical behavior, driven by “conflicts of interest”, or methodological mistakes in estimates that lead to determine the intrinsic value of listed companies as being systematically higher than current prices.

The arguments to support the first thesis are based on the greater number of intermediary commissions that a bullish market usually produces for brokerage houses; also the same listed companies are often customers of the institutions that make the analyses and who want them to pay considerable consultancy fees and high placement fees when new securities are issued.

The evidence in favor of the second thesis is the prevalence of reports based on market multiples as the only instrument of valuation (something which naturally leads to a system of self-referent valuation) and the concentration of

opinions in accord with the value resulting from the first prominent analysis available in the market (Ackert and Athanassakos 2000).

The third thesis, though, seeks an economic explanation to justify the difficulties faced by professional investors when attempting to stabilize the market. This can be explained by restrictions which limit these investors' freedom and deny them the autonomy to create and move portfolio investments.

Then this study mainly focuses on the last thesis and concentrates on Italian data, comparing them to those from the United States, between 1998 and 2003, and upon the limits imposed by the law and common practice of that time, factors that reduced the freedom of institutional investors to manage their portfolios. The result is a system structurally oriented to the creation of price bubbles and effectively driven by the moods and irrational choices of retail savers and by demographic dynamics.

Empirical evidence

Stock indexes of all principal markets have undergone a swinging tendency during the last five years, with strong growth in the first two years (1998–1999), a “lateral period” in the following year (2000), and two further years of sharp decreases (2001–2002). It was only in the last months of 2003 that the trend seemed to be inverted (Fig. 1).

When combining the Comit Index (monthly) for the Italian Stock Exchange with the monthly net sales of equity mutual funds handled in Italy (Fig. 2), the

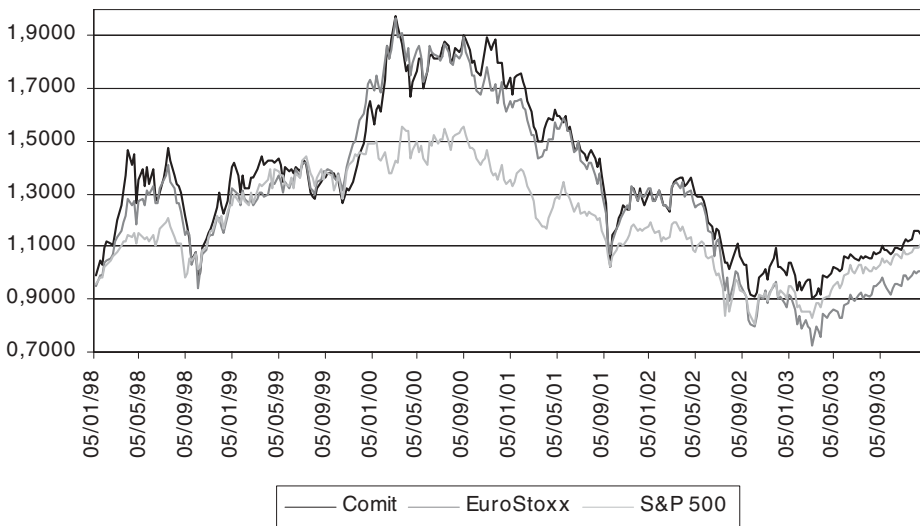


Fig. 1. Stock exchange performance 1998–2003. Source: Datastream

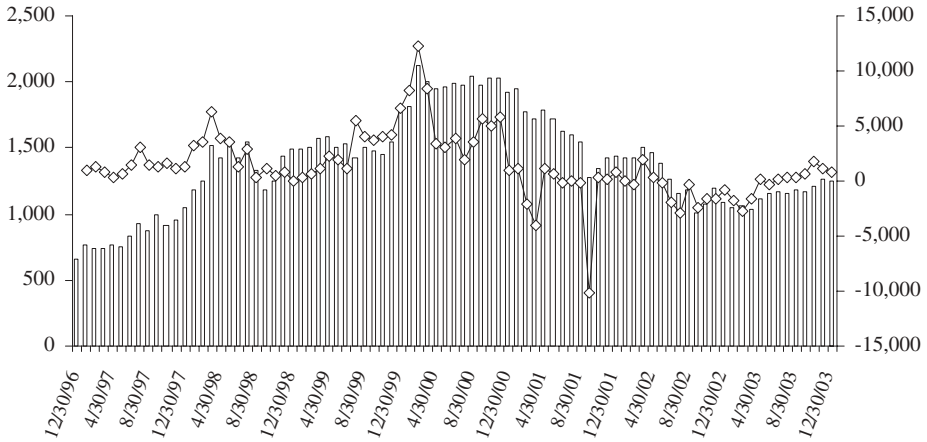


Fig. 2. Comit Index monthly (bars, left ordinate) and net sales of equity mutual funds handled in Italy (diamonds, right ordinate; EUR). Sources: Datastream and Assogestioni

first result points to a lack of homogeneity between the movements of these two elements. The correlation between them, over the entire period, was 0.58.

We can conclude that sales are higher in bullish market periods, whereas they decrease in bearish phases, and that is coherent with the nonrational behavior of savers who often believe in stable price trends. This means that they believe that a price rise will probably be followed by a further rise and, by contrast, a decrease will be followed by a further decrease.

The Italian tendencies are very similar to those of the U.S. market during the same period, considering the S&P500 index (Fig. 3) and, particularly, the NASDAQ 100 index (Fig. 4).

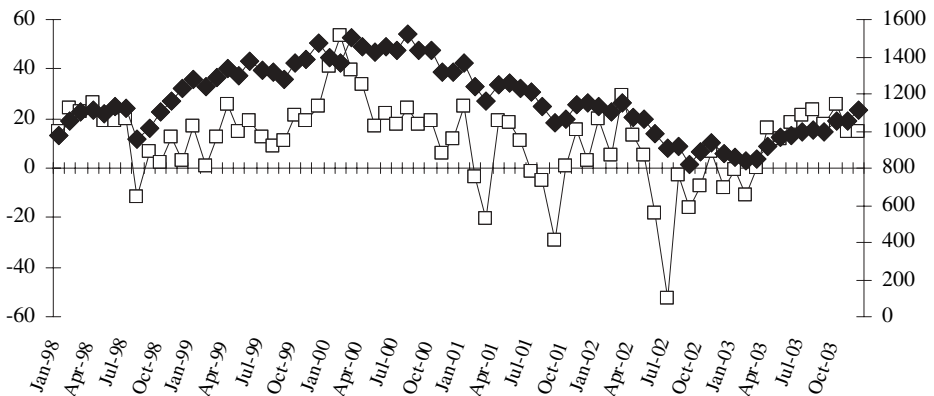


Fig. 3. Net sales of U.S. equity mutual funds (□, left ordinate; billions USD) and S&P 500 performance (◇, right ordinate). Sources: Datastream and Investment Company Institute

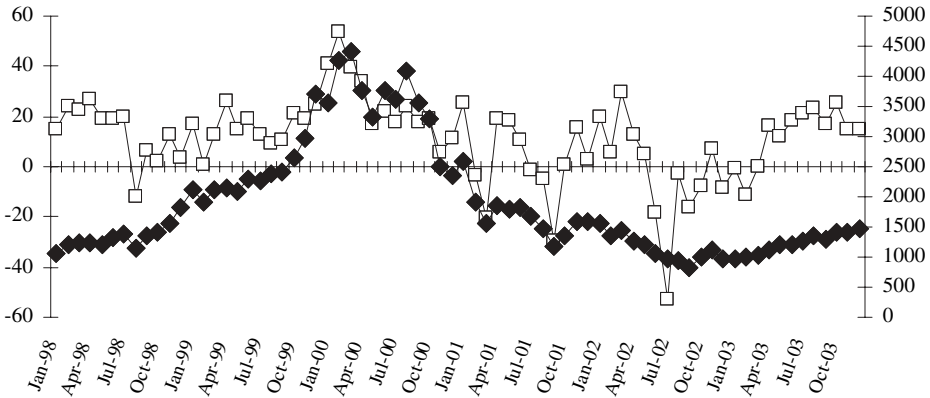


Fig. 4. Net sales of U.S. equity mutual funds (□, left ordinate; billions USD) and NASDAQ 100 performance (◇, right ordinate). Sources: Datastream and Investment Company Institute

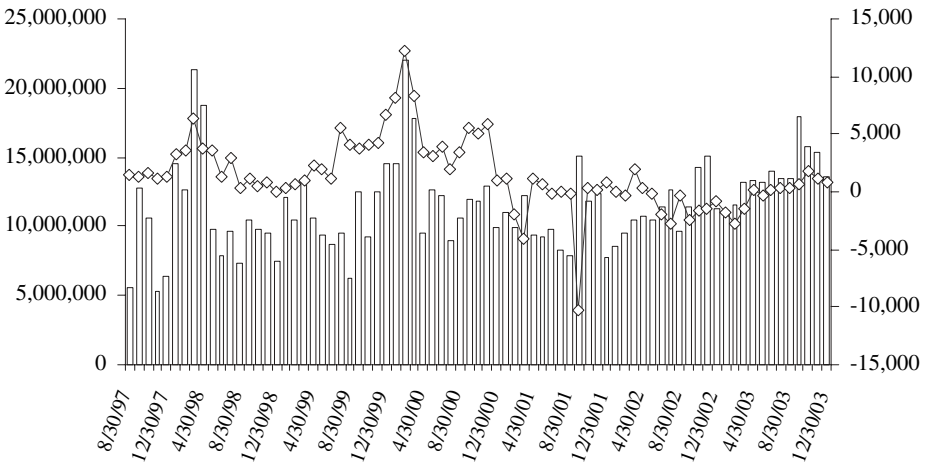


Fig. 5. Net sales of equity mutual funds in Italy (diamonds, right ordinate; EUR) and volumes of transaction in the stock exchange (bars, left ordinate). Sources: Datastream and Assogestioni

The correlation index between the two variables over the entire period was 0.56 for the S&P 500 index and 0.55 for the NASDAQ 100, compared with the value of 0.58 for the Italian market.

The remaining problem is the behavior of institutional investors and the speed with which they convey to the stock market the liquidity dynamics they have to follow. Looking at the correlation between net sales of mutual funds handled in Italy and the volume of transactions in the market, on a monthly basis, the result is only 0.28 (Fig. 5). It is not statistically significant, but it is important to notice that when there are peaks in net sales or redemptions,

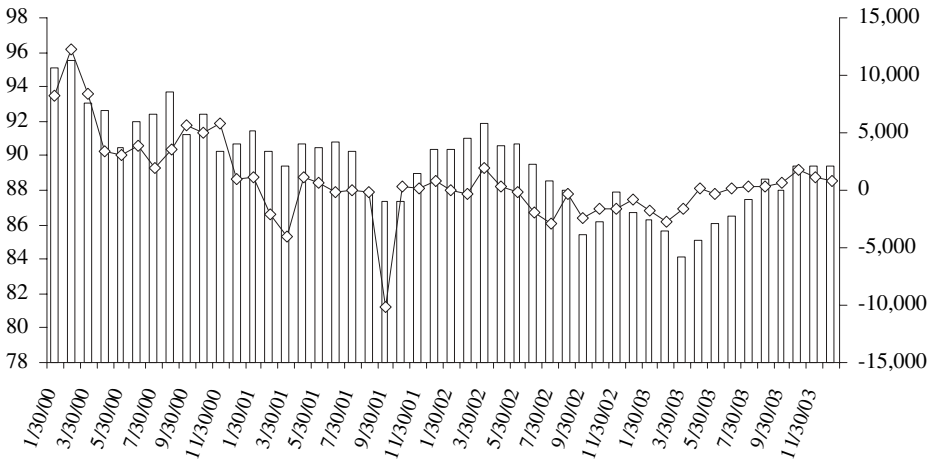


Fig. 6. Net sales of Italian equity funds (diamonds, right ordinate; EUR) and share in percentage of total assets (bars, left ordinate). Source: Assogestioni

usually there is also a peak in volumes traded. This means that, although investors do not convey the choices of smaller savers to the market on a daily basis, when those savers reallocate their portfolios, their ability to soften the impact of behavioral choices of these investors will be very slight.

We can see the existence of a big correlation (0.7) between the net sales of equity funds and the shares held in percentage over the total assets (Fig. 6).

Conclusions

The possible explanations of the above situation could be the following.

1. Target market size. The size of the market could be too small in comparison with the dimension of total assets managed. That could increase the liquidity risk born by institutional investors and oblige them to adopt a “static management”, in order to avoid more violent price movements. This explanation can be valid, even though insufficient. In fact, since 1987, it has been possible to invest in foreign securities also in Italy, so the market target is the worldwide one. For this reason, even if the managed assets are big, a careful portfolio composition should minimize the liquidity risk.

2. Structure of funds. Almost all the Italian mutual funds are “open”; in other words, investors can exit from their investment when they want. So, it is considered very risky to adopt management strategies radically different from those of competitors because if short-term performances are lower than those of competitors, clients could be induced to switch to other professional investors. This reason is often mentioned, but in reality, it seems not very concrete because the Italian investment companies have a stable ranking

of managed assets the appears substantially independent from the funds' performances.

3. Benchmarking. The presence of benchmark indexes limits the possibility for funds managers to differentiate their portfolios' composition from that of the benchmark. The professional investors, indeed, cannot overweight or underweight the shares percentage as they want because they have a narrow range of freedom. For this reason, their possibility to stabilize market movements is greatly reduced and their presence results compatible with price bubbles, both at rise and at fall. As a consequence, price bubbles at fall usually have a smaller dimension. In fact, the net accumulation of saving is normally positive and the persistent amount of resources looking for a financial investment makes prices rise, at least until the increase of new savings will be bigger than the decrease of the previous savings.

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