

FROM EFFICIENT MARKET HYPOTHESIS TO BEHAVIOURAL FINANCE: CAN BEHAVIOURAL FINANCE BE THE NEW DOMINANT MODEL FOR INVESTING?

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***Abstract:** the present paper reviews two fundamental investing paradigms, which have had a substantial impact on the manner investors tend to develop their own strategies. specifically, the study elaborates on efficient market hypothesis (emh), which, despite remaining most prominent and popular until the 1990s, is considered rather controversial and often disputed, and the theory of behavioural finance, which has increasingly been implemented in financial institutions. based on an extensive survey of behavioural finance and emh literature, the study demonstrates, despite any assertions, the inherent irrationality of the theory of efficient market, and discusses the potential reasons for its recent decline, arguing in favor of its replacement or co-existence with behavioural finance. in addition, the study highlights that the theory of behavioural finance, which endorses human behavioral and psychological attitudes, should become the theoretical framework for successful and profitable investing.*

***Keywords:** Efficient Market Hypothesis; Behavioural finance; investor psychology; investment portfolio.*

JEL Classification Codes: G02, G11, G14

1. INTRODUCTION

The supremacy of the Efficient Market Hypothesis (EMH) as a theoretical framework of investing ends with the emergence of Behavioural Finance (BF). Since then, the traditional mainstream approach has been in a constant conflict against this new and increasingly accepted paradigm of investing behaviour. The inherent weaknesses of the Hypothesis have become the investing weapons of the new scientific approach. Investing rationality and efficient market processes over time contradict investors' psychology, biased behavioural rules and market bubbles. Information efficiency and the reconciling approach of arbitrage have conflicted the inefficient access to investment information and long-term market anomalies.

Based on an extensive survey, the first part of the present paper attempts to provide a comprehensive discussion of both EMH and BF. The second part discusses the reasons why the traditional paradigm has already become an ineffective model which discourages inefficient investment; furthermore, it makes a thorough analysis of the new theory of investing behaviour,

which is constantly incorporating new theoretical components and is characterized as an emotional, most comprehensive and open-minded market approach (Thaler, 1993). The conclusion emphasizes that the winner of the battle is Behavioural Finance, the new dominant model for investing.

2. AN OVERVIEW OF BASIC INVESTMENT THEORIES

2.1 Efficient Market Hypothesis

The Efficient Market Hypothesis is considered as the backbone of contemporary financial theory and has been the dominant investing theory for more than 30 years (from the early 60s to the mid 90s). Needless to say, a generation ago, it was the most widely accepted approach by academic financial economists.

Efficient markets, according to economists, *'do not allow investors to earn above-average returns without accepting above-average risks'* (Malkiel, 2003). The argument is commonly illustrated by the following well-known story: a professor of Economics and a student come across a \$100 bill. While the student is picking it up, the professor tries to prevent him saying *'Don't bother - if it were really a \$100 bill, it wouldn't be there'*.

In detail, Efficient Market Hypothesis advocates the efficiency of the financial market in terms of the overwhelming information, news, or communication involved. According to Fama (1970), efficient markets are markets where *'there are large numbers of rational profit maximizers actively competing, with each trying to predict future market values of individual securities, and where important current information is almost freely available to all participants'*. In effect, both individual stocks and the aggregate stock market are characterized as efficient when they *'fully reflect'* available information and can integrate it in current stock prices. In Malkiel's (2003) terms, *'the accepted view was that when information arises, the news spreads very quickly and is incorporated into the prices of securities without delay'*.

In Efficient Market Hypothesis, the terms efficiency, *integration, reflection, market and information* are key words. The first reference to market efficiency is found in George Gibson's (1889) book *'The Stock Markets of London, Paris and New York'*, in which he states that *'when shares become publicly known in an open market, the value which they acquire may be regarded as the judgment of the best intelligence concerning them'*. Efficient Market Hypothesis, however, was acknowledged as a prestigious financial model in Eugene Fama's Ph.D dissertation in the 1960s. Karz (2012) states that *'Fama persuasively made the argument that in an active market that includes many well-informed and intelligent investors, securities will be appropriately priced and reflect all available information'*. Apart from Fama, the specific model is also associated with P. Samuelson. It is worth noting that both researchers have independently developed the concept of the efficient market, which remained the only dominant theory in financial studies until 1990.

According to Fama, efficiency is distinguished in three different forms:

- *Strong-form*. Information (public, personal, even confidential) contributes to stock pricing, and, therefore, does not enable investors to achieve a competitive advantage in investing processes.
- *Semi-strong form*. Stock prices reflect public financial information (announcements of listed companies, balanced sheets, assets etc.)
- *Weak efficiency*. All past stock prices are integrated in current prices; therefore, they cannot be used for future predictions.

Clearly, the classification of market efficiency enables the understanding of the fundamental principles of Efficient Market Hypothesis. The argument that investors are able to

prevail over markets by employing information as a major investment device-weapon seems to be rather unsubstantiated. Investors cannot outperform markets and, as a result, they cannot achieve high returns, in view of the fact that information is not exclusive, but available to everybody. Thus, individuals cannot be characterized as investment experts or market specialists as the specific attributes can be equally applied to all investors.

On the other hand, any new information cannot elicit abnormal profit, as it is directly available to markets and is easily reflected on stock prices. Fama (1965) postulates that *'in an efficient market, on the average, competition will cause the full effects of new information on intrinsic values to be reflected "instantaneously" in actual prices'*.

The information which is rapidly integrated in market prices is not only public, but also available. Even active managers are not able to achieve a high-return performance by means of exploiting the available confidential information. The market anticipates, in an unbiased manner, future movements and, therefore, information is integrated and evaluated into market price in a much more objective and informative way than insiders. Maximized returns from non-stop trading are prevented when all information (either public or insider) is reflected on stock prices.

Overall, within the framework of EMH, the fundamental analysis of company stocks is conducive to stock assessment rather than prediction or future movements, whereas technical analysis cannot be employed for encountering future changes over time. Graph representation analysis and study based on past stock prices do not produce extra profits for investors because past pricing is integrated in current prices.

To reduce the significance of technical analysis, academics and critics employed the Random Walk Hypothesis. The fundamental principle of the specific investing model involves the non-predictability of stock prices as these prices are perceived as taking a random walk. According to Kendall (1953), *'stock price fluctuations are independent of each other and have the same probability distribution'*. Stock prices are commonly perceived as random and unpredictable (Lo & Hasanhodzic, 2010). Malkiel (1973) advocates that *'the market and stocks could be just as random as flipping a coin'*, whereas Shiller (2000) states that *'stock prices approximately describe random walks through time: the price changes are unpredictable since they occur only in response to genuinely new information, which by the very fact that it is new, is unpredictable'*.

Market efficiency is also contingent upon the investment method employed by individual investors. According to Efficient Market Hypothesis, the individuals who tend to invest in stock markets, are characterized by rationality. Rational investors are concerned with expected-utility characteristics, which direct to high return performance, combined with rational expectations. Lucas (1978) argues that *'in markets, in which all investors have 'rational expectations', prices fully reflect all available information and marginal-utility weighted prices follow martingales'*. In effect, rationality and consistent beliefs lead towards equilibrium (Nash Equilibrium).

Efficient Market Hypothesis asserts that the investors' rational attitude is assumed in all investing actions. Investors may sometimes act with a view to achieving easy and quick profits. When they do not act rationally and their investing decisions are random, equilibrium prices deviate. This is a provisional and short-term deviation since irrational actions are counterbalanced with each other. In effect, the actions taken by irrational investors are offset on account of the fact that there is no communication between investors and their transactions are not interdependent. In addition, due to the fact that irrational investors proceed to overpriced or underpriced investments, they seem to achieve lower returns than rational investors; thus, they are bound to lose money, their assets are likely to diminish, and, consequently, their status in the stock market will diminish, as well (Spyrou, 2003). On the other hand, the involvement of rational investors in arbitrage incurs price equilibrium and efficiency, which implies that markets

continue to be efficient, and, therefore, profit maximizing. In terms of EMH, despite the fact that all investors do not act rationally, markets are always rational and efficient.

Samuelson (1965) holds that EMH can be better applied in cases of individual stocks rather than the aggregate market. Observing the movement of individual stocks, it becomes evident that stock prices are more efficient than the aggregate stock market. Thus, markets are micro-efficient and also macro-inefficient.

In terms of duration (long-term, short-term market efficiency), long-term markets are considered more efficient. Graham (1965) states that *'the stock market in the short run may be a voting mechanism, in the long run it is a weighing mechanism'*; however, according to Malkiel (2003) *'true value will win out in the end'*. Any possible uncertainty about how efficient a market can be is abolished over time. In the long run, stocks and markets function on the basis of the EMH principles, and equilibrium is finally achieved. As Lo (2007) argues, *'the general thrust is the same: individual investors form expectations rationally, markets aggregate information efficiently, and equilibrium prices incorporate all available information instantaneously'*.

To conclude the discussion on Efficient Market Hypothesis, it is also worth noting that the Hypothesis, apart from the stock market, has expanded to include further areas of financial activity, such as efficiency of funding, efficiency of human resources, prediction, dividends and portfolio construction.

2.2 Behavioural Finance

Efficient Market Hypothesis lost prestige among scholars and financial markets with the emergence of B.F. in the early 90s. The theory of the impact of human behaviour on investing decision making emerged not as a supplementary assumption, but as a contradictory and surrogating approach. In Shefrin's (2001) terms, Behavioural Finance is *'the study of how psychology affects financial decision making and financial markets'*, and, according to Thaler (1993) it is *'simply 'open-minded' finance'*. Endorsed by other disciplines, such as Statistics, Mathematics, Sociology, Psychology, Anthropology, Behavioural Finance attempts to describe how human psychology, and in particular, human behaviour, affects investing decision making. Sewell (2005) states that *'Behavioural finance is the study of the influence of psychology on the behaviour of financial practitioners and the subsequent effect on markets'*. In this respect, some financial effects are likely to depend upon the investors less rational behaviour (Barberis, 2007), which results from biases, psychological variables, and heuristics. Investors are not optimal decision makers, on account of the psychological processes affecting their financial-investing decision making (Alexakis.& Xanthakis, 2008).

Stock markets were first associated with human psychology in 1912, when Selder published his work *'Psychology of the Stock Market'*. However, the forefathers of BF are the prominent psychologists Kahneman and Tversky, who advocate that heuristics and biases affect judgment under uncertainty (1974) and formulated Prospect Theory in their work *'Analysis of Decision under Risk'* in 1979. Thaler has also contributed to the establishment of the new emerging paradigm and, in his work *'Mental Accounting and Consumer Choice'* (1985), suggested that Prospect Theory be the basis of an alternative descriptive model. Subsequently, interest in investors' psychology and behaviour increased and generated a great number of studies and works, which established BF as the dominant paradigm in finance.

Apart from framing and market anomalies, a major premise in Behavioural Finance is heuristics (Shefrin, 2001), which are perceived as patterns regarding how people behave (Ritter, 2003). Heuristics derives from the ancient Greek work *επιρίσκω* (= discover) and refers to acquiring knowledge or a desirable result by employing smart guesswork rather than specified formulas. Heuristics involve simple experience-based techniques for problem solving, known as

rules-of-thumb or shortcuts, which have been proposed to explain how investors make decisions, particularly during periods when, due to poor information, complex investing circumstances and market instability, it is hard to make judgments. Cognitive heuristics work by a process called attribute substitution which happens without conscious awareness (Kahneman & Frederick, 2002).

Typically, the most common cognitive heuristics, which best explain the meaning of these rules and provide evidence of the investors' irrational behaviour are:

Representativeness: people's attempt to fit a new and unknown event into an existing one and, therefore, discover common elements in completely different events. Tversky and Kahneman (1974) maintain that people often judge probabilities *'by the degree to which A is representative of B, that is, by the degree to which A resembles B.'*

Anchoring: it is a cognitive heuristic which involves decision making based on an initial *'anchor'*. In many situations, people tend to make estimates *'by starting from an initial value that is adjusted to yield the final answer. The initial value, or starting point, may be suggested by the formulation of the problem, or it may be the result of a partial computation. In either case, adjustments are typically insufficient'* (Slovic, & Lichtenstein, 1971).

Herding: it describes that, typically, individuals feel the need to join in groups (herds) and, consequently, develop herd behaviour in decision making situations. In other words, in the same context, *'people will be doing what others are rather than using their information'* (Banerjee, 1992).

Overconfidence: it is defined as people's tendency to overestimate their skills or abilities, that is, to be too confident of their abilities, knowledge and received information, and, as result, to make incorrect investing options; it also implies people's arrogant attitude towards stock markets. Plous (1993) asserts that *'no problem in judgment and decision making is more prevalent and more potentially catastrophic than overconfidence'*, and DeBondt and Thaler (1995) argue that overconfidence is *'perhaps the most robust finding in the psychology of judgment'*.

Apart from the above heuristics, investors' decisions are also affected by a number of illusions, which are discussed within the theoretical framework of Prospect Theory. The specific theory emerged as a model that enhanced and supplemented Behavioural Economic Theory. It was developed by Kahneman and Tversky, in 1979, and advocated that people value gains and losses differently and, as such, will base decisions on perceived gains rather than perceived losses. It demonstrates that when individuals develop investing behaviour systematically, they violate the axioms of expected utility theory (Kahneman & Tversky, 1979).

By asking questions to which the research subjects had to answer, the specific theory demonstrated that investors are dominated by fallacies, which prevent them from making correct decisions. Among the most common fallacies affecting investors' behaviour are:

Loss aversion: people's tendency to be risk-averse for losses rather than gains. In Kahneman and Tversky's (1984) terms, *'losses loom larger than gains'*. Prior gains reduce risk, whereas prior losses increase it.

Mental accounting: Mental accounting is the set of cognitive operations used by individuals and households to organize, evaluate, and keep track of financial activities (Thaler, 1999). In other words, it involves people's tendency to generate, depending on their special traits, different mental accounts, and register events they have experienced.

Regret aversion: It involves the investors' desire to avoid the pain incurred by a poor investment decision, and, as a result to postpone selling stocks so as not to finalize their loss. According to Pieters and Zeelenberg (2004), *'people can anticipate emotions such as regret, because they compare possible outcomes of a choice with what the outcomes would have been, had a different choice been made'*.

In addition to the above considerations, it is also worth emphasizing that, within the framework of Behavioural Finance, judgment and investing options are greatly affected by people's cognitive biases, the generation and development of which depend on personality, culture and the socio-economic environment. These biases are argued to lead people to logical fallacy. In this respect, the rationality of the traditional mainstream approach is challenged, and irrational investing processes are likely to lead to dangerous paths; investing opportunities are open only to a part of the so called '*smart money*' (Shiller, 2000).

In the context of Behavioural Finance, irrationality and the failure to encounter it by employing arbitrage is corroborated by market anomalies, among which calendar anomalies (weekend effect, January effect), defined as time in a year period during which the investors' behaviour is arbitrarily differentiated. Calendar anomalies are effects that are not discussed in Efficient Market Hypothesis.

Behavioural Finance also demonstrates a concern with investment time and suggests that stock market bubbles are not short-term; thus, the losses bubbles are likely to incur are not easily and immediately reimbursed. It also maintains that information and news are inefficient as they may often be deceptively communicated to investors, who are frequently incapable of exploiting them, since they have already been exploited by other investors (confidential information).

In conclusion, Behavioural Finance emerged as a model which, not only enhanced stagnating finance theories, but also refuted them. In a very short time, it managed to challenge academic and scientific attention and be recognized not simply as an alternative theoretical framework, but as the new dominant model for investing.

3. BEHAVIOURAL FINANCE VS. EFFICIENT MARKET HYPOTHESIS: FUNDAMENTAL CONSIDERATIONS

3.1 Access to information

According to the Efficient Market Hypothesis, investing markets are '*informationally efficient*'. All individuals can have access to available information, and, as a result, investment news cannot be exploited merely by those who are involved in a specific investment process. Remarkably, however, the specific theoretical model has generated considerable debate in terms of two concepts: *access* and *availability*. From a theoretical point of view, all people are able to have access to investing information; in practice, however, they are not. Daily routine and different lifestyles imply different available time and method to have access to information. The rapid movement of events in time, globalized markets and the increasing number of the available investing methods make people incapable of catching up with changes. Information is disseminated through a huge number of different information channels (web sites, blogs, radio, TV), but people are incapable not only of assimilating, but also elaborating on available information. Even individuals or groups of people who are involved in stock market analysis and monitoring are not completely (100%) competent. In effect, constant information on continuously changing investing contexts is commonly perceived as an investing battle with winners and losers, gains and losses.

3.2 Available information

Information availability is an additional weakness of EMH. Frequently, in investment processes, information is available only to a limited group of investors or it is available to speculators long before it becomes available to the general public. It is argued that, in the case of the Greek financial crisis, the appeal to the International Monetary Fund took place before spreads had increased. Therefore, the individuals who had access to such information (if this is

true) were also able to take full advantage of it. Clearly, when a financial services company, which aims at high-than-average-profits or speculation, analyzes the economic status of countries and is able to downgrade or upgrade economies, it does not exploit the available research-information before it makes it available to investment markets.

Apart from the importance of availability, however, emphasis should also be placed on the method available information is communicated. At this point, the role of impartial financial journals or market analysts is significant. Remarkably, stock ratings have frequently been a part of an expensive promotion project on behalf of a specific investors company. In this context, Behavioural Finance holds that stock markets (both in terms of access and availability) are '*informationally*' inefficient.

3.3 Fundamental Analysis

The methods used to analyze securities and make investment decisions fall into two very broad categories: *fundamental* and *technical* analysis.

In investment processes, in order to develop a most profitable and valid relationship with a company to included in a portfolio, investors should employ an analysis of its fundamental components. In detail, when attempting to assess financial data, investors tend to form a picture of the company to be included in their portfolios, and they, subsequently, foster a confidence relationship with it.

In the context of EMH, the fundamental analysis, which is considered an old and most widely accepted model by economists, has been marginalized and replaced by the model of 'semi-strong form efficiency'. In the relevant literature, the potential of fundamental analysis and its contribution to successful investment projects are strongly highlighted. Proponents of the E.M.H. have often generated serious disputes over the specific analysis by employing tenuous and unsubstantiated arguments, which evidently have led to characterizing EMH as paradoxical, and, have, therefore, triggered arguments in favour of refuting it.

3.4 Technical Analysis

Technical Analysis has produced similar criticism as to its efficacy (*weak efficiency form*), but has increasingly gained recognition in contemporary Western stock markets. Efficient Market Hypothesis contradicts the emphasis placed by technical analysis on forecasting the direction of prices through the study of past market data, and suggests that investment processes should be associated with current information and prices. In effect, the historical direction and development of a company or investment process are definitely reflected on their impact on investment decision making. Charts and past market data should not be the principal focus of research or the means to achieve high returns, but they should not be simply treated as memories.

Nevertheless, the premise that 'history repeats itself' and '*economy is running in a circle*' has been strongly highlighted by people, and, in particular, by investors. It is far from clear, therefore, that traditional financial paradigms, such as EMH and the Random Walk Theory have frequently been disputed and scorned by economists.

3.5 Uniformity of Investment

According to EMH, the individuals who are involved in investment and stock market processes are treated as uniform, colourless groups of investors sharing common investing traits, attitudes, methods and scope. Experience, gender, family and friends do not seem to have a decisive impact on investing behaviour. Components, such as personality, different investing culture, personal details and individual investment attitudes contribute to rendering efficient markets ideal, but, nevertheless, utopian.

3.6 Investment machines

Efficient Market proponents postulate that the individuals who invest in stock markets are characterized as rational. As already mentioned above, they are concerned with expected-utility outcomes, and, therefore, for profit maximizing endorsed by rational expectations.

In this context, the specific implication creates a picture of investors resembling well-preserved machines. Investors, who faithfully abide by the same investing rule, that is, rationality, are compared to stock market soldiers marching in a parade. They are perceived as comics superheroes. Remarkably, in investment processes, rationality is a destination, which is not always reached by investors, and which creates a competitive advantage. However, investors should not be perceived as robots investing in 'war stocks'.

3.7 Investment and emotion

Investors form beliefs and attitudes on the basis of their emotional involvement. Happy or sad feelings, optimistic or pessimistic attitudes, over- or underreaction encourage or discourage them from investing processes. As emotions are considered a control factor in every form of investment during an individual's life (investment in family, knowledge, career), they must not be excluded from financial investments themselves. In combination with biases, emotions are vital to influencing rational investing attitudes. Contrary to the belief of EMH proponents that emotions have no place in rational decision making processes, Behavioural Finance emphasizes the correlation of emotional reactions with market events and asserts that emotions are the backbone of its theoretical framework.

3.8 Investing bubbles or the bubble of efficient market hypothesis

As long as markets are efficient and investors act rationally, the question remains why investing bubbles have a regular appearance and a longer duration in the stock market. Stiglitz, the prominent Nobel award winner, has stated that *'this crisis has provided numerous examples of markets that cannot be described as efficient in any reasonable way'*.

The dot-com bubble (also known as the Internet bubble and the Information Technology Bubble), which involves the stock market bubble of Internet-based companies that enjoyed a stock price boom by simply adding a '.com' to the end, and the collapse of the real estate market are two of the many examples that corroborate the arguments in favour of the dominance of Behavioural Finance over the Efficient Market Hypothesis. Needless to say, the emphasis placed by BF not only on serious financial anomalies, but also on the less harmful but nevertheless significant calendar effect anomalies (weekend effect, January effect etc.) corroborates its supremacy over EMH.

An additional consideration against arguments in favour of EMH is the fact that the participation of rational investors in arbitrage processes is not efficient and the adjustment of stock prices is slow and rather detrimental.

Ultimately, if we remain proponents of the traditional financial theory, we are likely to believe that recent collective investment in gold and its soaring prices is a rational action, which is not bound to generate a new investing bubble. However, if this action is encountered as an investing behaviour anomaly, we should definitely be more suitably prepared to avoid the detrimental impact of an imminent crisis.

3.9 Contemporary investing and traditional financial theories

Investing has dramatically changed over the last few years and has been modernized by introducing new rules, new investment tools, and a new investing culture, which greatly affected investing profiles, as well. However, Efficient Market Hypothesis has remained rather

unmodified over time, and has not been affected, as far as its approach to investment is concerned. Contemporary and old stock markets, that is, markets fifty years ago, seem to share common features in relation to the investing strategy applied. The concepts of efficiency and rationality are definitely not differentiated in different periods of time. Nevertheless, market efficiency cannot remain the same, and contemporary investors cannot be as irrational as investors in the past, as investing activities have been significantly modified in time.

On the other hand, EMH and the new investing tools cannot share the same territory and significance. Credit default swaps would not have existed in an efficient market; however, the fact that they have become the principal focus of global stock markets and their increasing popularity as investing tools invalidate the Hypothesis.

Needless to say, should we accept that investing markets are becoming efficient in the long run, we are contradicted by the new emerging facts in investment processes. The term 'long-run' has completely changed in the recent years as the investing horizon has become shorter. Investments may be frequently encountered as long-term despite their rather short duration. Investors are concerned with short-term returns due to the fact that market stability is rather disputed.

In conclusion, the conventional considerations of EMH have to be reinforced and amplified with new elements, or preferably, substituted with a new theoretical investing framework, such as Behavioural Finance. Since the focus of BF is investors' behaviour, the theory is perceived as an evolutionary model which is constantly being accommodated in terms of it. In this perspective, it will be always a state-of-the-art and dominant paradigm.

3.10 A naive hypothesis

As already been stated, Behavioural Finance is an interdisciplinary framework combining elements from history, sociology, psychology and anthropology. Therefore, its theoretical perspectives are more complicated, in contrast to Efficient Market Hypothesis, which is characterized as a rather simplified or naive approach. It is far from clear, however, that, to generate successful and profitable outcomes, investing decision making has to combine a number of different aspects; thus, it must be established on a sound and comprehensive theoretical basis.

Efficient Market Hypothesis, despite being a naive paradigm, has been more popular among investors for a long time, as it is characterized by optimism and emphasizes the positive outcomes of investing decision making. The potential consequences for investors, however, are rather serious. In contrast, Behavioural Finance, on account of its complicated and innovative nature, does not seem to be widely accepted by the majority of the investing community as a whole. However, the fact that investing decision making is considerably facilitated by various considerations encompassed in BF from other disciplines is conducive to enhancing its status and establishing its dominance over traditional financial paradigms.

4. CONCLUSION

The new theoretical approach accepts people's behavioural weaknesses and asserts that investing failures are a natural consequence of the special traits of human behaviour. The key element of the emerging theory is the investor-human being rather than investors as machines. Within this framework, Behavioural Finance treats investors as individuals and highlights that emotions, biases, and illusions cannot be rationalized; in addition, it emphasizes that information is inefficient. Stock prices are not random; they are rather unpredictable as people's reaction to new information is unpredictable, as well.

Furthermore, Behavioural Finance posits that investors cannot be cut off from their own investing past as they are human beings and, for human beings, past actions are a vital part of

one's own history. In this perspective, past prices and fundamental values of previous years affect and guide their decision making.

Based on a number of disciplines, B.F. enables investors to encounter a number of investing conditions. Efficient markets and investing rationality are perceived as imaginary constructs and ideal or utopian settings which reassure conscience. When profit making is the cause, the effect is envy and avarice, at least for a part of investors.

Remarkably, the weak points of the Efficient Market Hypothesis, which is perceived as a conservative and non-evolutionary paradigm, are the fundamental theoretical principles of BF. Market functions provide evidence against the efficacy of EMH and the new investors' profile seems to encourage a new theoretical perspective.

To conclude, the new paradigm of Behavioural Finance emerged as a model that successfully attempted to challenge and refute the traditional financial theory. In a very short time, it attracted the academia's attention and established itself as the new dominant theory rather than simply an alternative model for investing. By focusing on individual investors, Behavioural Finance, is generally acknowledged as a new, more comprehensive and evolutionary theoretical framework, which is not a mere rival of the conventional theory, but a fundamental approach that enables enhancing investing processes and propositions.

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The efficient markets theory reached the height of its dominance in academic circles around the 1970s. Faith in this theory was eroded by a succession of discoveries. Finance literature in this decade and after suggests a more nuanced view of the value of the efficient markets theory, and, starting in the 1990s, a blossoming of research on behavioral finance. Some important developments in the 1990s and recently include feedback theories, models of the interaction of smart money with ordinary investors, and evidence on obstacles to smart money. Keywords: Speculative Markets, Rational Expectations, Psychology, Anomalies, Excess Volatility, Feedback, Smart Money, Limits to Arbitrage, Short Sales. JEL Classification: G14. Suggested Citation: Suggested Citation From Efficient Markets Theory to Behavioral Finance. Robert J. Shiller. A. The efficient markets theory reached its height of dominance in academic circles around the 1970s. At that time, the rational expectations revolution in economic theory was in its first blush of enthusiasm, a fresh new idea that occupied the center of attention. As such tests were developed, they tended to confirm the overall hypothesis that stock prices had more volatility than an efficient markets hypothesis could explain. For example, West (1988) derived an inequality that the variance of innovations (that is, surprises) in stock prices must be less than or equal to the variance of the innovations in the forecasted present value of dividends based on a subset of information available to the market. Behavioural finance provides four alternative models to explain how investors construct portfolios. Consumption and Savings. Behavioural Asset Pricing Model. What is the Behavioural Asset Pricing Model? This is the Behavioural finance response to CAPM and it is based on the idea market prices are moved by sentiment, which is defined as "erroneous, subjectively determined beliefs." Essentially, the discount rate produced by the CAPM formula is adjusted by a "risk sentiment" factor, which can be determined based on the dispersion of analysts' estimates. But, can't irrational mispricings be arbitrated away? According to Behavioural Portfolio Theory, investors construct portfolios in layers, each of which is meant to satisfy a specific goal. The efficient-market hypothesis (EMH) is a hypothesis in financial economics that states that asset prices reflect all available information. A direct implication is that it is impossible to "beat the market" consistently on a risk-adjusted basis since market prices should only react to new information. Because the EMH is formulated in terms of risk adjustment, it only makes testable predictions when coupled with a particular model of risk. As a result, research in financial economics since at least