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The evolution from traditional finance to behavioral finance

Abstract

The purpose of this article is to provide a brief historical overview of the evolution from traditional finance to behavioral finance. Because financial behavior has a critical positive relationship with financial literacy, this will be investigated as well. According to the efficient markets hypothesis (EMH), market prices completely reflect all available information. Psychologists and behavioral economists have consistently criticized the EMH, claiming that it is predicated on irrational beliefs about human behavior. The efficient market hypothesis is directly opposed by behavioral finance, which places the blame for market inefficiencies on investors' imperfect rationality. Over the last 50 years, the area of behavioral finance has grown tremendously.

Keywords

Traditional finance, efficient market hypothesis, behavioral finance, investing, financial literacy

JEL classifications

G1, G4, B26

Introduction

The concept of "efficient markets" has long served as the foundation of the science and study of finance. The Efficient Markets Hypothesis (EMH), on which classical finance theory is based, claims that at any one time, the price of all assets and securities that are being traded is accurate and represents all available information (Hammond, 2015).

Among economists, there is an old joke about an economist walking down the street with a friend. When the companion goes down to pick up a $100 note that is laying on the ground, the economist advises him not to bother, as if that were an actual $100 note, someone would have already picked it up by now. The efficient markets hypothesis (EMH), one of the most divisive ideas in the social sciences, is depicted in this amusing illustration of economic logic gone wrong. It is unexpectedly resistant to empirical validation or rebuttal despite being disarmingly straightforward to articulate, with profound implications for academic ideas and corporate practice (Lo, 2007).

The topic of behavioral finance has expanded significantly over the past three decades in terms of its application to aiding people in making wiser financial decisions (Hirshleifer, 2015). Simply defined, behavioral finance brings a human aspect to investing in an effort to better understand a person's investment choices (Thaler, 1999). It accomplishes this by using psychological principles to examine how individuals make financial decisions, with an emphasis on people's unique cognitive biases (Hirshleifer, 2015). The stock doesn't know you own it, according to Warren Buffett. It doesn't have any sentiments toward you, but you do. What you paid is unknown to the stock. People shouldn't let their investments affect them emotionally (Jordan et al., 2015). One must comprehend behavioral finance's history, its unique psychological pitfalls, and how to completely utilize its tactics while making investing decisions in order to fully benefit from the field of study (Fieger, 2017).

Hence this article will give a short overview of the history and how the shift from traditional finance towards behavioural finance happened. Additionally, to give a short introduction on how an investor makes decision the author will as well look at financial literacy.

1 Traditional finance and its flaws

Classical finance expects investors to be rational and to focus on selecting an efficient portfolio. This entails including a mix of asset classes chosen with the goal of achieving the highest potential long-term returns. The level of risk should be kept under a minimum or at least at a tolerable level.

Even though the research's focus was not the financial market, researchers had long anticipated the idea of an efficient market. Among them were researchers as G. Cardano (1564), R. Brown (1828), J. Regnault (1863), Rayleigh (1880), John Venn (1888), L. Bachelier (1900), Einstein (1905), F.W. Taussing (1921), J.M. Keynes (1923), A. Cowles (1933), M. Friedman (1953), M.G. Kendall (1953) and P.A. Samuelson (1965). (Birău, 2012)

1.1 The Efficient Market Hypothesis

One must first look at the efficient market hypothesis (EMH) suggested by Fama (1965) in order to explain the origins of behavioral finance, as behavioral finance later developed as a counter point of view to the EMH. According to Fama (1965), an efficient market is one that has a large number of rational, profit-maximizing participants who are actively competing with one another to predict future market values of exclusive securities. All participants have almost entirely free access to crucial current information (Shleifer, 2000).

Fama (1965) put forward the theory that stocks function in an effective market where, relative to the information available, stock prices show very specifically the value of the stock and, as soon as new information becomes available, stock prices respond almost instantaneously.

With regard to the consideration of an alternative theory to market efficiency, Fama (1965) stated that an alternative must only predict either overreaction or underreaction. Furthermore, he continues, the current price of an asset in an efficient market will always be an accurate indication of its inherent worth. Technically, no investment strategy can provide excessive risk-adjusted average returns or average returns that are higher than justified by their risk in a market that functions efficiently (Barberis and Thaler, 2003; Subash, 2012)

The random walk hypothesis (RWH), which proposed that the potential price values of a stock were no more predictable than a sequence of random numbers, was one complementary suggestion to the EMH (Fama, 1965).

Fama (1970) continued his pioneering work in the EMH with its key principles that commodity rates completely embody all available knowledge and, as a result, stocks still sell at their fair value.

Around the 1970s, academics backed and embraced the concept of market efficiency. The main reasons were arbitrage assumptions. Yet, this vision was labelled as unrealistic after conducting empirical studies (Birău, 2012).

Because the absence of an investing strategy does not indicate the absence of mispricing, rather arbitrage limitations might result in severe mispricing. Sharpe and Alexander (1990) characterize arbitrage as the simultaneous purchase and selling of the same, or substantially identical, securities in two distinct marketplaces at favorably different prices. Gromb and Vayanos (2010) argued that a thorough examination of the arbitrage process is necessary to comprehend why anomalies persist and are not removed. What are the restrictions and limitations faced by the arbitrageurs, who are they, and why does arbitrage fail to get prices near to the underlying values predicted by conventional models?, are questions that need to be answered (Subash, 2012).

A threefold solution to the EMH was suggested by Fama (1970), where each layer built on the principles in the previous layer to make a broader point. The first form of the EMH was the weak form, which concluded that analyzing past stock prices could not forecast future stock prices (1970). This was compatible with the earlier works of Fama (1970), and in his study of the stock market he found very good support for the weak form.

The second model, the semi-strong form, introduced the notion that stock prices would easily respond to new knowledge and in an impartial way, leaving almost no room for the trader to beat the market (1970). This semi-strong form was reinforced by Fama et al. (1969) in finding that data on stock splits, such as potential business dividend payments, are already embedded into the stock leading up to the split, supporting the notion that stock prices are quickly reacting to new information.

The third and most audacious form of the EMH was the strong form that implied that stock prices not only represent all public information, but even all private information, suggesting that there would be little strategic benefit to insider trading (1970).

For all three types of the EMH, Fama (1970) found fair support, and claimed that the EMH model was very well suited as an accurate representation of the stock market.

The EMH, especially its weak form and semi-strong form, was widely regarded and taken for granted by most of the investment community in the 1970s (Shiller, 2003). At the heart of the EMH, it was believed that the speculative price of individual shares often contains the best information on the intrinsic values of the stock and that all price shifts are actually triggered by this positive information being digested by rational buyers (Shiller, 2003).

However, Kahneman and Tversky (1979) first criticized the EMH with their blockbuster study on prospect theory, which started to look directly at how people chose between two different outcomes that require risk, with the probabilities of known outcomes. In particular, their paper offered prospect theory as an alternative to the commonly accepted assumed utility theory, as people frequently considered inaccurate alternatives to weight when faced with risk (Kahneman and Tversky, 1979). They find that one common issue people have in their approach to risk analysis is the tendency to be risk-averse in their financial choices, one example of which is the prevalence of insurance (Kahneman and Tversky, 1979). This was one of the first experiments to open up the possibility that human psychological biases could interfere with their financial decisions (Fieger, 2017).

1.2 Challenging the EMH

Behavioral finance is in stark contrast to the EMH, which, as explained before, brings forth the notion that markets always function well and shifts in security prices always represent actual information (Shiller, 2003). Behavioral finance gives a reason for the reported business inefficiencies and fractures in the EMH (Baker and Ricciardi, 2015) (Hirshleifer, 2015).

Hirshleifer (2015) offered a clear example of this by showing that in a single weekend after the republication of reports that had already been written and made available to the public five

months ago about a potential cancer treatment to be launched shortly, the stock price of the firm EntreMed soared 600 percent. This seems to have violated the rules of the EMH, especially the semi-strong type, which assumes that markets respond quickly to new information and correctly represent all available public information (Hirshleifer, 2015).

Statman (2014) made a further distinction between what he called "standard finance" and behavioral finance (Statman, 2014, p. 65). He argued that traditional finance adherents believe that all individuals are rational, that the market is efficient, and that the expected return of various investments is calculated by the traditional theory of asset pricing, where the differences in investment returns are decided solely by risk (Statman, 2014).

On the other hand, Statman (2014) proposed that behavioral finance theorists believe that humans are average, that the market is not entirely effective, although difficult to beat, and that the predicted returns on investment are better represented in the behavioral asset pricing theory, where different returns on investment are calculated by more variables than just risk (Statman, 2014).

Economics should integrate two different hypotheses, according to Thaler (2016): normative economic models should demonstrate the best solution to particular problems, while descriptive models should capture how humans actually behave (Fieger, 2017).

1.3 A Shift towards behavioral finance

While the world of finance was taken over by the EMH, in the 1990s more and more of scientific debate moved towards developing models that are in relation with human psychology and away from econometric analyses of dividends, earnings and prices as stated by Shiller (2003). Behavioral finance takes a step back from viewing finance from an appropriate business context, according to Shiller (2003), and also uses a wider viewpoint that integrates the fields of psychology and sociology. According to various researchers that operate in the field of behavioral finance, Shiller (2003) added that the partnership between traditional finance and behavioral finance helped to get a better understanding and knowledge of financial markets (El Kashef, 2017).

This stood in contrast to financial models, which all relied on the assumption that people are rational and make investment decisions based on their logical knowledge.

There are however several anomalies and deviations when looking at research and realistic circumstances (El Kashef, 2017). To make sense of these anomalies and deviations from the presumed rationality of market participants, the findings of psychology started being applied to widely used finance paradigms. For that reason, behavioral finance is an extension

of traditional finance. Traditional finance gets to meet with cognitive and natural sciences to see what they can do to explain the anomalies found in traditional finance theory (Valsová, 2016).

According to Bikas et al. (2012), the main distinction between behavioral finance and traditional finance is that the former asks why investors make decisions, while the latter does not.

According to Nawrocki and Viole (2014), all asset pricing models—including Modern Portfolio Theory (MPT), Capital Asset Pricing Model (CAPM), Arbitrage Pricing Theory (APT), and others—include a number of irrational assumptions (El Kashef, 2017). They are furthermore not proven to be empirically testable.

Sahi et al. (2013) observed that the Modern Portfolio Theory, purposed 1952 by Markowitz, who contended that investors may obtain the best outcomes by selecting an ideal combination of the two depending on their particular risk tolerance, did not succeed explaining how individuals are making decisions under actual circumstances. Meaning that circumstances where principles of expected utility that were violated by people (El Kashef, 2017).

Zhang and Zheng (2015), who conducted a study on the investment behavior based on behavioural in China showed that despite of what the traditional financial theories say investors are not always rational. Investors rather take irrational decisions that are based on cognitive and psychological biases. These findings confirm some deficiencies that traditional financial theories have (El Kashef, 2017).

According to Statman (2014), traditional finance is built on four pillars. However, while examining behavioural finance, each of the four pillars must contend with a different foundational element:

- Humans are rational vs. Humans are irrational
- Markets are efficient vs. Markets are inefficient
- humans should design portfolios (based on portfolio theory) vs. humans should design their portfolios (based on rules of behavioral portfolios)
- Expected returns are described by the standard asset pricing theory vs. The behavioral asset pricing theory describes expected returns (El Kashef, 2017)

To summarize the debate on behavioral finance it has been one of the main economic disputes in the last 50 years, and it is about whether stock markets and prices of other assets (such as bonds or even property) represent all the available information, or in other words,

whether prices reflect the wisdom of crowds or the stupidity of crowds, and, by implication, whether people often (or at all) behave rationally (Holden, 2015).

To date, in both modern economics and modern finance, the rationality side of the argument remains the dominant one, but it is increasingly apparent that market actors are not necessarily as rational and well-informed as academics would like to believe, as demonstrated by various inconsistencies that occur in the implementation of models based on these assumptions.

This is where behavioral finance comes in, helping to understand and control the origins of these anomalies associated with irrational behaviours (Valsová, 2016).

Strictly speaking, behavioral finance is a field of study that aims to clarify and describe how logic or cognitive mistakes affect investment decisions and stock market values. Thus, to explain and highlight the success of capital markets, behavioral finance incorporates ideas from the disciplines of human and social science with classical financial theory (Birău, 2012).

This is also illustrated in a simpler way below.

Figure no. 1: Meaning of Behavioral Finance

Source: Ali, 2020

Behavioral finance analyzes investor irrationality and the biases that investors are prone to. Investors' inability to foresee market fluctuations produces these cognitive biases, pushing them to make biased investment decisions (Stanovich and West, 2008). An investor must be able to make intelligent investment choices to be considered financially literate. On the other hand, the heuristic bias, the framing effect, cognitive illusions, and herd mentality are all variables that contribute to the formation of behavioral biases, also known as illogical behavior, in the decision-making process (Weixiang, 2022).

The author will now turn to the subject of financial literacy as it is directly related to behavioral finance and the decision-making process.

2 Financial literacy

To research behavioral finance, one must comprehend the crucial role that the act of decision-making is playing, yet is a complicated and complex procedure (Weixiang et al., 2022). In addition to market volatility and the possibility of profit maximization, other factors also affect investors' behavior (Kim and Nofsinger, 2008; Puaschunder, 2021). One of the most important traits that can be traced back through history and used to assess the process of making investment decisions is a person's level of financial literacy (Becchetti et al., 2013; Lusardi and Tufano, 2015). Financial literacy is a comprehension or knowledge of the financial world that may help a person apply and manage money in his life in order to achieve success. Financial literacy will be a factor in a person's decision to make an investment, as seen by how that person handles their finances (Baihaqqy et al., 2020). People can be regarded to have a high level of financial literacy if they can manage and plan their finances for the future. However, there are many people who lack financial literacy, both in terms of fundamental information and more advanced knowledge (Natasya et al., 2022).

According to Lusardi & Mitchell (2014), the relevance of financial literacy has expanded along with the availability of more financial products, their variety, and the significance of household financial product selection. It is assumed that a person will have strong financial literacy while making an investment decision. According to research done by Baihaqqy et al. (2020), financial literacy has a considerable effect on an individual's investing decisions.

The need to improve people's capacity to understand and manage their own money is greater than ever due to the introduction of new financial products, the complexities of the financial markets, and shifting political, demographic, and economic conditions, to name a few (Ahmed et al., 2021). Understanding the global financial system, potential sources of income for investors, and how to manage investments to maximize returns are all components of financial literacy (Giesler and Veresiu, 2014). To gauge a person's level of financial literacy, one might look at their viewpoints, knowledge, and habits regarding various investment vehicles and other monetary issues. Investors who are aware about finances are better equipped to avoid being duped by financial advisors and make wise investment selections. A knowledgeable investor can budget and know their monthly income. Furthermore, every stock market investor must have a thorough understanding of savings, consumption,

borrowing, and investment. Competencies make it easier to choose top-notch stocks for long-term and speculative investing (Ganapathi, 2014).

The extent of an investor's financial competency is mostly determined by their financial understanding. An informed investor takes the time to plan, gather, and put information into practice. Additionally, it enables investors to seek out and act on professional advice at the right times, producing greater returns (Hastings et al., 2013). Individuals' involvement into the capital market is encouraged by regulations such as compulsory dematerialization of equities and the requirement that all citizens have a bank account. People are urged to participate in the stock market since it may be profitable. Financial possibilities have played a vital role in the growth of financial markets and the use of financial expertise. Investors need to have the knowledge and a firm understanding of a wide range of financial ideas and facts in order to make wise, risk-free, and profitable decisions. One has to have a thorough understanding of a wide range of financial products in order to reach a certain degree of financial stability. One needs financial literacy to be able to use their knowledge and effectively communicate it in order to make wise decisions (Andriamahery and Qamruzzaman, 2022). The choice of an investor to invest is positively and significantly influenced by financial literacy (Adil et al., 2021).

Conclusion

Traditional finance theory holds that people are rational and make decisions based purely on relevant information (Mittal, 2010). According to the efficient market hypothesis, the stock price always precisely represents all general information, and the stock market is always perfect and efficient (Putri et al., 2021). When making investing decisions, investors always collect the necessary information and maintain objectivity (Gupta and Shrivastava, 2021).

Yet, how are for example bubbles in stock markets possible if there are genuinely efficient markets? Furthermore, how plausible is the EMH's claim that all humans are 100% rational decision makers? A casual investor, or even a rookie investor, should never be able to trade and invest as rationally as a professional trader for an investment bank, according to basic logic, which should disprove this notion. Traditional theory contends that “smart money” investors, or those with the greatest level of knowledge about financial markets, will dampen any noise produced by those who are trading “irrationally” through arbitrage. However, over the last few decades, a significant amount of data has emerged that refutes the notion of total arbitrage (Hammond, 2015).

This study of the evolution from traditional finance to behavioral finance is designed to provide a thorough introduction to the discipline for new readers while also confirming some major notions. The growth of behavioral finance was determined by their efforts to gain acceptance into the mainstream. Both behavioral approaches have been impacted by this need to fight constantly against the prevailing and even orthodox approach. This is because behavioral economics developed as "science, that is harmful" with the primary objective of rejecting explicit and implicit hypotheses put forth by neoclassical economics and traditional finance. Similarly, being part of the mainstream, behavioral finance (at least at this point) ignores numerous crucial concerns such as methodological individualism and complexity. Behavioral finance increases our understanding of the actual world by including humans into its models.

However, when used in investment, behavioral finance can improve judgment and lower the frequency of expensive mistakes. Financial literacy and cognitive estimates may help people choose good stocks in the face of the complexity and uncertainty that typically define investment decisions. Investors' personality types, levels of financial expertise, and investment philosophies may all have an impact on the investments they make (Sukanya and Thimmarayappa, 2015). When it comes to making educated financial decisions, financial literacy is an important factor to consider. Especially as behavioral finance and financial literacy are closely intertwined when it comes to investment decisions.

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