THE INFLUENCE OF STOCK MARKET INVESTORS’ BEHAVIOR ON BUSINESS CYCLES

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Abstract:
Within the economic literature, the idea that the fluctuations of economy, at a macroeconomic level, are due to psychological factors that affect population, are more and more present and debated. These psychological factors that determine people’s day by day economic actions have been analyzed by psychologists as well as by economists, within high impact studies, both practical and theoretical, and were able to provide with valid explanations on how the evolution of an economy is strongly dependent on its participants states of mind. This paper attempts to show how people’s behavior influences the evolution of an economy at a global level, by taking into consideration existing theories and important papers on this subject on the one hand and by proposing new explanations on how a manipulated investment behavior will dramatically affect the welfare of an economy, on the other hand. The reasoning exposed within this paper shows how investment behavior of individuals, especially of the ones acting within stock markets, determines the succession of business cycle phases, affecting investments, interest rates, production, labor productivity, employment rate, etc. It also discusses the way how erroneous beliefs or preferences of stock market investors affect their cognitive process regarding the investment activity and how manipulated behavior determines negative results. In the end, the paper emphasizes the connection between the evolution of the stock market and the succession of business cycle phases, showing how mass behaviors taking place inside stock markets affect the overall evolution of an economy.

Keywords: investment behavior, stock market, business cycle, overconfidence, manipulative strategies

JEL Classification: D03, E03, G02

1. Introduction

Lately, within the researches regarding economic cycle theory it is stated that fluctuating oscillations of economic activity may be due to changes in individuals’ confidence and expectations. In fact, the researches of Friedman and Lucas in the early 1970s draw attention on the possibility that cyclical fluctuations depend on individuals’ perceptions on their income level. If this idea is valid, then population’s confidence in monetary policy, fiscal policy and in the ability of governments to design and implement viable plans for economic recovery should be one of the factors influencing the transition from one phase of the economic cycle to another. The lack of confidence regarding the possiblity of occurrence of a better future may lead to situations in which individuals’ degree of pessimism becomes so high and rooted in the collective consciousness that their actions become counterproductive, delaying the economic recovery.

Individuals’ degree of pessimism will occur among all social categories and age groups within the economy. Those who own financial resources will be reluctant to channel them into creating directly productive activities, either considering taxes to be too high, or procedures for setting and managing a company to be too bureaucratic and redundant. Inside an economy characterized by a pessimistic current of thought, capital market will no longer be a viable investing option for liquidities, having a much too high associated risk in the potential investors’ point of view. Thus, the available money will target low risk investment options within the money market, which will bring low profits to the investors and will not contribute directly and actively in the process of economic recovery. Conversely, those not having a surplus of cash and acceding to an employee status will depend on the actions of their employers, who are forced to operate within an environment characterized by uncertainty, and the lack of entrepreneurial initiatives and future prospects. From the position of employees within such an economic environment, individuals will become blasé and will be characterized by a level of professional sufficiency, by a lack of open-mindedness, by the absence of any desire of self-improvement and any attempt of obtaining higher levels of skill or performance. This attitude will have negative effects on their labor productivity and hence on the overall productivity of the economy. Professional superficiality and lack of emotional and civic involvement will also occur among children and adolescents whose parents are involved in such an economic and social system. They will become increasingly indifferent to moral value
systems and to academic education, coming to consider that all these standards will not be useful for their future, just as they presently aren’t for their parents’.

Recent works in psychology [20] have shown the effects of unemployment on individuals’ degree of pessimism. Psychologists consider unemployment to be an element of stress, leading to a psychosocial crisis. Economic crises are seen by psychologists as traumatic periods marked by major changes in an individual’s life, which may cause psychosomatic disturbances due to changes in his social and financial status. Psychological studies show that people integrate into society especially through their professional and workplace status. The loss of employment and social status held in parallel with the loss of financial status can have harmful effects on the personal balance of the affected individuals. All these can lead an individual towards a psychosomatic crisis. Kapuvári goes further with her approach, describing the psychological reaction experienced by an individual confronted to employment loss. The author identifies three psychological stages of reaction to employment loss. The first stage is the shock of losing employment, followed by a period during which the individual will engage in a hunt for a new job, maintaining, for the moment, his optimism, as he expects to find another job relatively quickly. As he realizes that his efforts are not successful, the second phase appears, and the individual becomes pessimistic and anxious. If going beyond the second stage, the individual will enter the third phase, adopting a fatalistic behavior and becoming resigned to his new status, no longer trying to improve his situation.

On the other hand, individuals’ optimism has, in its turn, a large impact within the functioning of an economy. Within a society characterized by a high level of optimism, the economic activity will be influenced by entrepreneurial initiatives, with varying degrees of associated risk. Among individuals, there will be a desire for self-improvement, to go beyond everyone’s status, to achieve higher standards of living and to be involved in the problems of the community. In terms of entrepreneurship, both employees and employers will be influenced in a positive manner to carry out a dynamic economic activity with high standards of quality and performance. Economic efficiency will be directly influenced by the degree of optimism of those engaged within a company’s activity. In the same manner, general optimism will influence the way of thinking and the actions of the younger generations through positive examples regarding the influence of education on quality of life.

However, absolute optimism can become a dangerous influence, if it reaches a level that high that makes people neglect and ignore the risk associated with different economic activities. A good example in this respect is the one of the capital market, where the exuberance and optimism can cause market participants to invest significant amounts of money in assets with positive evolutions, which lack any economic or financial substance. High degrees of confidence in the global economic welfare, in the reasoning of other market participants or in acquaintances’ opinions can generate mass behaviors, the main precondition of speculative bubbles and financial crises. Individuals’ degree of confidence, proves thus to be not only a result of macroeconomic movements, but also a determinant of them.

In the most recent decades, worldwide cyclical evolutions, characterized by alternating booms and crashes have reminded researchers about individuals’ degree of confidence [23]. These events lead to assumptions claiming that optimism about the future determines economic expansion and subsequent bouts of pessimism entail crashes. Within this context, there were intense critics on monetary policy, from specialists who discussed how central banks favored, by extremely loose monetary policy, the occurrence of states of illogical exuberance and irrational optimism, which led to the formation on different markets of speculative bubbles and to the subsequent emergence of crashes.

Exogenous theories on business cycles include theories regarding individuals’ psychology and the psychological impact of their actions. Arthur Pigou, the main exponent of psychological theories pointed out that people will be more motivated to work, to save, to invest, to consume if their anticipations about the future are positive [29]. The same opinion was also shared by Keynes, who said that individuals’ decisions to do something positive are pure results of their instinct to act and not of a rational way of thinking that takes into account the presumptive benefits and their associated probabilities of occurrence [21]. Most often, expansive phases of the economic cycle are induced by waves of optimism due to which general opinions are formed, assuming that during the following periods the cyclical fluctuations of the economy will be held under control.

Such an irrational way of thinking appeared after the year 2000, just before the starting point of the current crisis, leading to price escalation in real estate. The same situation was also met before the dot-com crisis in the late 1990’s. The validity of the assumption stating that the degree of confidence influences the business cycle is proved by the imitative tendencies which determine the occurrence of mass behaviors when individuals trust other peoples’ opinions and actions and decide to copy them. For example, such behaviors manifested in the banking sector are those who, because of a rumor – real or not – create mass hysteria and determine all the bank’s customers to withdraw at the same time their deposits after hearing a rumor stating that the banks is no longer solvent. Faced with such a wave of withdrawal requests, even if it has no financial problems, the bank will find it impossible to meet all withdrawal requests simultaneously and immediately, because much of the money raised through deposits are placed within the economic activity through the process of money lending. This situation will, most likely, create serious liquidity problems for the bank in question, and if the phenomenon is repeated, a decrease of the confidence in the banking system will occur, gradually affecting the value of all money market instruments. With a liquidity strongly affected by the customers’ concerted withdrawal requests, the banking system will find itself in the impossibility of granting new
credits, a phenomenon that will lead to the contraction of the whole economic activity, through the lack of financing. The level of confidence in the banking system was severely affected by the bank failures that occurred over time. Since the establishment of the central banks as lenders of last resort and with their imposing prudential measures to commercial banks, population’s confidence in the banking system’s reliability increased.

Periods characterized by excessive optimism, which induce economic boom and then lead to economic crises have attracted many critics of too permissive monetary policies, which favored the emergence of these extreme phenomena. Christiano, Moto and Rostagno’s 2006 paper [6], shows that central banks focusing excessively on the inflationist phenomenon are guilty of inducing an excessive degree of optimism among population. The paper shows that anticipations regarding the proximity of a period of prosperity exert an upward pressure on real wages, by increasing the supply of labor from employers. For nominal wages to keep up with the increase in real wages, central banks resort to inflation targeting, resulting in a decrease of the inflation rate by procedures designed to contribute to the decrease of prices. As inflation follows the downward trend imposed by the central bank, the central bank will react to this self-induced phenomenon by lowering interest rates. Thus, the central bank gets to play the role of the economic expansion artisan.

In their 2006 paper, Beaudry and Portier [5] emphasize the role of information and changes of the anticipations and expectations of individuals, on the fluctuations of the economic system. They demonstrate that the anticipation of a higher level of productivity has substantial effects on present consumption, on the level of investment, on real gross domestic product and on stock prices. Their article shows that such expectations can raise the level of consumption, investment and working time, with over 40%.

Imitative behaviors can lead to panic, following negative rumors, as shown in previous paragraphs, but can also create excessive exuberance, if the rumors are positive. Such a situation led to the dot-com crash as well as to the current financial crisis, when behaviors were affected by an exaggerated optimism that led individuals to believe that the phase of economic boom and sustained growth will last forever. Some economists [18] believe that overconfidence is a particularly powerful amplification mechanism, able to create overinvestment during phases of expansion and disinvestment during recessions. So, in Jaimovich and Rebelo’s opinion, general volatility is much higher when individuals show excessive confidence than when they exhibit behaviors characterized by rationality. By translating this reasoning to a macroeconomic level, we conclude that these expectations and unrealistic expectations caused by overconfidence will have dramatic effects on individuals’ decisions, regarding consumption, saving or investing.

Based on an unrealistic set of expectations about a future characterized by economic growth, people will create jobs, will invest in fixed capital, etc., actions that will lead to an economic boom without real foundation, an economic boom which will only fuel a speculative bubble. Individuals will expand their consumption level and will take credits hoping for future possibilities to pay them back. When their expectations will prove to be erroneous, and recession will begin to install, the excess of confidence and optimism will show its multiplier nature. Businesses built and grown through investments and new jobs will collapse. Occupancy will drop sharply and with it will decrease the possibility of those who have lost their employment to honor their debts towards the credit institutions. Thus, an expansion created only on the basis of an excess of optimism, will end in a recession much deeper than that which would have been reached if the optimism had been tempered and would not have led individuals to engage in irrational spending. We conclude that the theoretical concept of economic cycle multiplier effect is therefore proved, based on the excess of optimism.

2. Existing and New Theoretical Contributions to Explaining the Subjective Behavior within the Stock Market, Seen as the Cause of Business Cycle Fluctuations

Modern economy admits the importance of understanding economic agents’ behavioral patterns within the process of substantiation and evaluation of economic decisions. Within each segment of microeconomics and macroeconomics, individuals’ expectations play a very important role. The concept of the life cycle [27] and the one of the permanent income [13] reveal the role held, within the consumption theory, by individuals’ expectations about their future income. Within investment decisions, most of the portfolio selection models are substantiated based on the expected value. Therefore, individuals’ expectations influence economy’s movements, but also economy’s movements influence the evolution of individuals’ expectations and needs.

The theory of adaptive expectations has its origins in the 1930 work of Irving Fisher, but received its notoriety thanks to Milton Friedman, Phillip Cagan and Marc Nerlove in the 1950’s. According to this theory, individuals base their expectations about the future on what they have experienced in the past. The theory assumes that once an individual makes a prediction which then proves to be incorrect, he will not be able to make any accurate and valid forecasts, as every future prediction have already incorporated an error that iterates endlessly.

The theory of rational expectations [28] is an assumption in economics that argues that individuals’ forecasts on future values of economic variables are not systematically wrong because estimation errors describe white noise processes. Therefore, the expected values of economic variables, at their average, remain equal to their present values. So, within the decision-making process of economic agents, expectations are conditioned by all information available to them. The first references to economic expectations date back to Greek philosophers. Early analyses with
Reinhart and Rogoff [30] have estimated that within the last financial crisis the re was, on average, a 35% decrease in the crisis. Because of these possible repercussions on the real economy, the improvement of knowledge on the of 7% in unemployment for a period of four years, and an increase of 86% in public debt, compared to the level before house prices for a period of six years, a decrease of 9% in production of companies for a period of two years, a growth speculative bubbles. Thus, there are behavioral theories based on individual investors' beliefs and behavioral theories based on their preferences [1]. Among the theories based on investors' beliefs, literature provides with three main directions.

One of the most important contributions to behavioral finance theory is the one of Daniel Kahneman and Amos Tversky, who developed the financial prospect theory [19]. Prospect theory shows the dependence of investment behavior to the reference point established by the investor, which is obviously a subjective target. Thus, the investor is satisfied if his gain exceeds the self-imposed reference point and he is disappointed if the gain is lower than the reference point. The same theory proves mathematically that an investor’s risk aversion should rather be interpreted as loss aversion as individuals do not act symmetrically towards both possible outcomes of risky situations: loss or gain. Thus, we can conclude that individuals’ aversion to engaging in risky situations is not as high as the aversion to the actual loss. Kahneman and Tversky show that the disappointment determined by a loss of a certain size is several times higher than the satisfaction determined by obtaining a gain of the same amount. Analyzing this theory, we distinguish a clear difference from the theory of Friedman and Savage, who defined in 1948 the attitude towards risk, using the relation between investors' behavior and the utility felt by them. Their conclusion, after analyzing the utility function proposed for each identified investment profile was that the attitude towards risk is heavily dependent on the investor’s initial wealth. Friedman and Savage state that risk averse individuals are those who, because of their low wealth, consider small gains as very important as they increase their wealth. After the peak of their utility function, for this category of individuals, it becomes more important not to lose anything than to assume any risks trying to get additional earnings. Conversely, individuals with a high initial fortune will show preference towards risk, preferring to take risks investing in instruments able to generate high incomes than to preserve a small gain, unsatisfactory from their point of view. One can notice the difference between the theory of Friedman and Savage and the one of Kahneman and Tversky. The first claims that there are individuals who may, under certain circumstances, to show preference towards risk by undertaking risks in order to obtain gains even if those risks can also generate losses. Clearly for such an individual, potential gains are more important than potential losses. On the other hand, Kahneman and Tversky’s theory does not accept the existence of such individuals, postulating that for any individual loss is more important than winning.

The failure of rational expectations theory to explain the existence of certain economic phenomena that would not take place if economic agents acted rationally, has led to the creation of behavioral economics and behavioral finance as its subdomain. Behavioral economics studies the influence of psychological factors and of knowledge level of an individual in his decision-making process, regarding the allocation of his budget. Behavioral finance uses the cognitive processes of individuals and the errors affecting these processes to justify breaches of capital market efficiency which, according to experts, occur due to individuals’ deviations from economic rationality and from the principles of rational expectations theory.

Economic literature has developed five theories on how individual behavior can lead to the formation of speculative bubbles. Thus, there are behavioral theories based on individual investors’ beliefs and behavioral theories based on their preferences [1]. Among the theories based on investors’ beliefs, literature provides with three main directions.
The first theory based on investors’ beliefs claims that the speculative bubble is formed when there is a deep disagreement among investors about the future development of an asset and when the market has constraints on short sales [16], [17], [25], [31]. If some investors are convinced of an upward future trend of a certain asset’s price and others are equally convinced of a downward future trend of the same price, legislative constraints on short sales will lead to the inability of those investors who predict the price decline to act in their favor, within the market. So, that asset will be intensively traded only by those convinced of the possibility that its price to increase in the future. This will lead to the overestimation of that asset, as its price will indeed increase, but only because of the successive transactions with increasing prices and not because of its intrinsic characteristics. Another explanation for the formation of the speculative bubbles appears when investors will buy an asset regardless of its price, convinced that in the future there will be other investors even more optimistic than them, willing to buy at even higher prices.

Another theory based on investors’ beliefs is the one explaining the formation of speculative bubbles when investors extrapolate from obtaining significant returns from certain assets in the past to also obtaining similar returns from them in the future [4], [14], [22]. Based on this theory, individuals will extrapolate in an absolute manner and at a macroeconomic level, a trend or information they have found valid only for a minor sample, which is not statistically representative.

The third theory in the category of individual investors’ beliefs starts from the overconfidence they may show [9]. According to this theory, when investors try to evaluate a certain asset, and in this respect seek and analyze information about it, they tend to become overconfident regarding the usefulness of their conclusions. This excess of confidence leads them to overtrade that asset, a process that will artificially increase the price. Another problem of this way of thinking lies in the accuracy of those conclusions obtained by nonprofessionals in the field of capital markets, who can reach to right or wrong conclusions about the performance and evolution of the price of a certain asset or whose thinking can be manipulated by professionals willing to speculate within the market.

Within the behavioral theories based on individual investors’ preferences, two directions of study were crystallized. The first theory in this group claims that after obtaining certain gains, investors’ degree of risk aversion decreases as they are less worried about the future losses they may suffer, because these losses can be covered by gains already achieved in the past. This risk aversion decrease determines investors to buy in a more enthusiastic manner, causing significant increases in price [3], [32]. Corollary, risk aversion increases after the occurrence of losses because people will act more cautiously when they know that they can’t cover those losses. Thus, the positive correlation between the degree of individuals’ risk aversion and their financial status is observed. This conclusion is also confirmed by the expected utility theories of Friedman and Savage.

The second preferences based theory argues that the probability of speculative bubbles formation is higher for investment instruments issued by firms in the new technologies area [2]. The reason given for this theory by Barberis and Huang refers to the fact that investors regard these assets as being lotteries. They find investors’ mindset to be based on the following reasoning: if new technologies prove to be reliable and successful, then the prices of assets issued by the companies producing these technologies will increase. Thus, these assets will become overvalued in respect to the actual performance of the new technologies launched by the issuers, only by investors’ subjective preference for them. Such a theory explains very well the way of thinking that led to the speculative bubble behind the dot-com crisis in the late 1990s.

In addition to the above theories, we propose a sixth behavioral theory stating that capital market investors’ actions are conducted in accordance with certain erroneous beliefs and preferences of their own, deliberately induced to them by manipulative strategies.

An example of stock market manipulation will be explained as follows. It is well known that nowadays trading is done by integrated and complex software systems, the so-called trading platforms, within which users can customize certain details and facilities. Buying and selling orders are placed and transmitted to the market, through these trading platforms. The “stop loss” order (the price level for which the system will automatically close the position within the market) is one of the facilities offered by these software systems. An individual, who wants to manipulate the behavior of market participants, will choose for this action a well-known asset, frequently traded, necessarily present within the portfolios of several investment funds, which has brought substantial profits to investors in the past. Suppose that the present market value of that asset market is $10. For the speculator to succeed in manipulating the market, he will have to successfully trigger the stop loss mechanism of the other investors who own that certain asset. On the chosen day, he launches sale orders for that asset, for $2 million (200,000 shares). Such a massive offer, for an extraordinary amount of shares will automatically result in lowering the market price of the asset. The amount offered must be large enough to be able to lower the price by a percentage high enough to trigger the stop loss mechanisms of the other investors owning that asset (usually investment funds established stop loss order around -10%). Trading platforms are starting to issue sell orders for that asset, which began to decrease in value, as investment funds will try to protect themselves from major losses by accepting minor ones. Now, the market is flooded with sell orders for that asset, issued by the investment funds. The price will further decline, reaching, for example, $5 per share (this is only possible if within the market there isn’t an imposed limit under which the price decrease to lead to the asset’s trading suspension). A few minutes before the closing of the trading session, the speculator will massively buy the market flooding shares, at a much lower price than the one at the beginning of the trading session. With his $2 million, he will now buy 400,000
shares at the price of $5 per share. At the end of the day, there will be news about the sharp drop in the price of the targeted asset, trying to explain what really happened on the stock market through various presumptive scenarios, for example that the issuer has lost a major customer or an important member of its management. The issuer will immediately deny the assumptions appeared in the press, saying that no customer has been lost, or that no manager has left the company, which is actually true. As rumors prove to be unreal, confidence in that issuer is restored to its level before the speculation, and the next day all investors try to include back in their portfolios the asset removed a day before. Due to multiple buy orders, the asset’s price increases even over the level of $10 before from the speculation, reaching $12. Somehow, the price increase is also due to the excessive advertising of the asset in the last hours. Now, the speculator owns within his portfolio the targeted asset, at a total value of $4.8 million. He can opt for selling the 200,000 additional shares, with a net profit of $400,000, in addition to having increased the value of his initial 200,000 shares (from $2 million to $2.4 million). All his earnings are obviously obtained by other investors’ losses.

Other manipulation strategies include techniques, some of which completely illegal, others at the limit of legality. Such an example is the anonymously spreading of false rumors about the performance of a certain issuer. Those rumors will be positive, if a price increase is desired and negative if a price decrease is the aim. Those kinds of rumors are spread by speculators and are primarily aimed towards credible news broadcast channels such as journalists from specialized newspapers or directly to potential investors to convince them to buy a certain asset. Investors will buy heavily, increasing the price and the speculator will sell its holding when the price is at its maximum. After the speculator sold his holding, he no longer acts to maintain the upward trend of that asset’s price. Without the influence of rumors, the speculative bubble bursts and the price collapses causing significant losses to the manipulated investors (such as in the case of Stratton Oakmont company, owned by Jordan Belfort). Another manipulation strategy is the one practiced by the issuer himself by falsifying the company’s financial statements, to report a better financial status than the actual one, in order to determine price increases in their own shares (a notorious case of this kind is that of Enron, who published false financial statements with the help of their audit company, Arthur Andersen). Often, issuers are supported with this illegality, by their auditors who should inform the public about the falsity of the audited financial statements, but choose not to.

All these ways to speculatively influence the evolution of the capital market, explain, in fact, the way how, through investors’ various behavioral manifestations, induced in different ways, capital market speculative bubbles are created. In fact, for various reasons, the behavior of individuals contributes to overinvestment within stock markets. The speculative bubbles are created through various strategies that polarize investments towards speculators’ points of interest. These strategies operate by changing the investment behavior of the market participants, especially of the nonprofessionals.

The paper of Cohn, Fehr and Maréchal [8] from University of Zurich, studies the impact of booms and crashes on the behavior of professionals in finance. The experiment is based on the psychological effect of priming [24], which consists of an anchoring of a person’s thinking, in respect to a stimulus to which that person has just been exposed. Before giving them a questionnaire, the subjects were exposed to certain stimuli that would induce the mental state of crossing a boom period or a crash period. Then, they are given the questionnaire. Cohn, Fehr and Maréchal run an experiment that takes place in parallel, based on two lotteries, one characterized by risk and the other by uncertainty. The professional subjects are confronted on the one hand with decision making under risk and on the other hand, with decision making under uncertainty. Subjects could invest a considerable sum of money in two lotteries, one characterized by risk and the other by uncertainty. The result of the experiment leads to the conclusion that during crashes, certain negative emotions are triggered in the mindset of professional subjects, which make them drastically reduce their risk preference. Among the individuals exposed to crossing a crash period, investing in the risky lottery was reduced by 22%, and investing in the uncertain one was reduced by 17%. Among those exposed to crossing a period of boom, investment behavior remained unchanged. This demonstrates that professionals do not become as enthusiastic as the rest of the individuals and that the creation of speculative bubbles is not directly due to the actions of financial professionals, but rather to the actions of the nonprofessionals.

Besides this conclusion, also taking into account the results of the study of Cohn, Engelmann, Fehr and Maréchal [7], it appears that in times of crises, risk aversion increases. When the market is on a downward trend, the forecast of a financial crisis induces an increase in individuals’ risk aversion, causing them to close their positions within the market, in order to limit losses. Such a motivation leads investors to place simultaneously sell orders, leading to an even more drastic drop in prices. This proves the negative correlation between the direction of cyclical evolution of the economy and the risk aversion. Risk aversion is reduced during periods of prosperity and increases during recessions.

Moreover, important papers in the field of finance [12] demonstrate that there is a negative correlation between the risk premium demanded by investors and the direction of cyclical evolution of the economy. Forecasting a recession or crisis will increase the risk premium required by capital market investors, fact which will increase the cost of capital [15]. Interest in low-risk investment instruments increases, investors’ attention being drawn from the risky instruments to the risk free ones, leading to a decrease in return for risky instruments.

Therefore, we conclude that the aggregate dynamics of the capital market may provoke emotional reactions that will cause large fluctuations in the degree of risk aversion. In addition, we can conclude that changes in the degree
of risk aversion influence the type of investment instruments included in the portfolio. If during recessions individuals have high risk aversion, then they will migrate towards low risk assets. This is the explanation of price increases of risk-free assets, such as gold, during recessions. Thus, there is a positive correlation between increases in risk aversion and increases in prices of risk-free assets.

Following certain changes and manipulations into changing investors’ beliefs and preferences, the polarization of investments towards certain points of interest ultimately leads to the formation of speculative bubbles of different dimensions and different durations. Regardless of the relevance, correctness or source of investors’ beliefs, the existence of informational efficiency of the capital market will lead to their reflection within prices and, sometimes, to the formation of speculative bubbles. This fact is proven by the article “Informational efficiency and stock market crashes” [10], which demonstrates the property of random walk of stock prices just before crashes, which proves the existence of the weak form of informational efficiency around crashes. Thus, the paper demonstrates that market efficiency is not affected by the presence of mass behaviors as these do not prevent stock prices to integrate historical information. Therefore, investors use the information they find, regardless of its source, within the trading process, to decide whether to act as buyers or as sellers. This is immediately reflected by the price, which is formed at the confluence of supply and demand. It is proven that, in essence, mass behaviors are not contrary to the existence of the weak form of informational efficiency, being only a means of confirming it. The conclusion goes even further, saying that in fact “crashes appear because of informational efficiency” as informational efficiency is responsible for integrating subjective information into the price. Informational efficiency, by incorporating all available information into prices, produces an amplifying effect of investors’ pessimistic forecasts, leading to the crash occurrence. So informational efficiency is not contrary to allocational efficiency anomalies, it even enhances them.

Within these processes, an increase in the value of a certain asset is carried out, in the beginning, by investors reallocating their budgets towards interesting assets. Then, the increase in value occurs through an intensive overtrading of that asset, with a supply higher than the demand. The previous statement is supported by the well-known fact of the exponential increase in the total volume of transactions during speculative bubbles. This shows that within the market “new money” appear, an extra amount of money that just as easy as it appeared, will disappear during the crash. Therefore, the extra value is created absolutely similar to the process through which banks issue new currency. We observe, thus, an analogy with the overinvestment theory promoted by the Austrian School representatives, von Hayek and von Mises, confirming their theory on the artificial stimuli which only give the impression of prosperity.

3. Conclusions

By analyzing the individual behavior of capital market investors, we discover the crucial role of individual preferences, overconfidence and manipulation within the process of formation of speculative bubbles. Investment behavior proves to be heavily dependent on budgetary constraint, through the positive correlation between the individuals’ degree of risk aversion and their financial status. Also, the negative correlation between the direction of cyclical evolution of the economy and the risk aversion emerges, as risk aversion decreases in times of prosperity, and it increases during recessions. In fact, it is inferred that individuals show a loss aversion more than a risk aversion, because they are not always able to properly assess the risks they take. Thus, their dissatisfaction is not determined by the assumed risk, but by its occurrence and by the financial losses generated along. The theoretical study conducted shows that the perception of risk is purely subjective, especially for those uninitiated, their behavior not always being rational, but influenced by expectations and acquaintances and manipulated by the initiated, able to exploit market conditions.

Economic literature also shows a negative correlation between the risk premium required by investors and the direction of cyclical evolution of the economy. The required risk premium changes according to the cyclical phases of the economy. When macroeconomic conditions are considered to be risky, the expectations also become higher along with taking higher risks. Hence a positive correlation between an increase in risk aversion and an increase in prices of assets considered to be risk-free.

It is well known that after a short term downturn in the stock market, its further evolution will be in line with the overall evolution of the economy. The general opinion of capital market experts is that stock market movements reflect rather the future evolution of the economy, then the historical one. Thus, if the economy is dominated by an inflationary pressure, the stock market will gradually enter a downward trend consistent with the anticipation of the recession that will follow. Conversely, if the economy is at the end of a recession period, the stock market will anticipate the economic recovery before it actually happens, and stock prices will begin to rise before the end of the recession phase. This means that if the economy is going through a recession phase, the stock market prices will increase even before an increase in the Gross Domestic Product. The explanation of this statement lies primarily in the fact that, the stock market is, in most cases, dominated by efficiency. The existence of efficiency leads to the failure of portfolio selection models. Therefore, the capital market will never react to what has already happened, but will evolve in line with what is about to happen. Information about the state of the economy will be accumulated by the capital market’s dynamics not after they have been made public, but the complex market system will detect them before this time, dynamically adapting to signals from the economy. In a boom phase economy, productivity is at its highest level,
unemployment rate is low, and demand and consumption are high. Prices are at their peak and inflation is on an upward trend. As available resources decrease and production capacities reach their maximum points, the risk of reaching the turning point in the overall development of the economy appears, marking the beginning of the decline. Moreover, the principles of the accelerator and multiplier will augment the downward trend. To avoid reaching this point, the central bank will try to limit the consumption by reducing aggregate demand. In this respect, the average interest rate will be increased. While there are speculative bubbles inside the capital market (for behavioral reasons described above), an interest rate decrease will act as a warning for the investors within the stock market.

Firstly, they will know that the authorities anticipate a recession and therefore they increased the interest rate. According to the above psychological studies, individuals who foresee the recession by reading between the lines within the actions of the central bank will immediately feel an increase in their risk aversion level, which will lead to their fast migration towards the money market.

Secondly, higher interest rates within the money market will become attractive for some investors, who prefer low risk investment instruments, specific to the money market.

Thirdly, the forecasting of a recession will make capital market investors, according to the inverse relationship between the state of the economy and the required risk premium, await higher and higher risk premiums in exchange for the risk assumed by investing within this market. While interest in low-risk investment instruments begins growing, and attention is drawn towards the money market, for the last investors who have not yet migrated, profits are not as high as they were before. Risk premiums become unsatisfactory determining them to migrate to low-risk investment instruments, often simultaneously. It thus comes to mass behaviors which cause the speculative bubble to burst. Within the stock market, artificially created money evaporates. Investors lose huge sums of money. A high absolute aversion towards risk appears and aggregate demand falls in parallel with the evaporation of artificially created money. The falling demand drags the economy into recession. This demonstrates that the stock market is one step ahead of the evolution of the economy, being the main catalyst in the establishment of the crisis, mainly due to mass psychology acting under the impulse of manipulation, emotions, fear or exuberance.

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