

Management Techniques for Value Investors

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Abstract

The paper seeks to identify proper management techniques for value investors. Thereby, a literature review is carried out, revealing behavioral aspects in the area of value investing. Even though a large body of literature exists, there are still many concerns regarding the techniques used by the individual investor, leading to poor investment decisions. Against this backdrop, the article shows techniques that are usually when it comes to teaching individuals how to become better investors. By doing so, events influencing human psychology are displayed and approaches to bypass these adverse effects on the value investor are developed. As a result, better long-term results of value investors shall be achieved.

Keywords: Investing, loss aversion, overconfidence bias, delay gratification, patience

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1. Introduction

This research paper seeks to identify management techniques for value investors. To do so, various studies are reviewed to shed more light on the success of value investors. Benjamin Graham and David Dodd started teaching at Columbia Business School in 1928. Both created a stock market approach referred to as value investing in 1920. In 1934, they published their book *Security Analysis*. Ever since the first days of the value investing strategy, investors around the globe have developed many different approaches, while the basic principles remain unchanged.

Even though a large amount of educational literature and work exists that aims at teaching individual investors how to act in financial markets, there are still many concerns regarding the managerial techniques of the individual investor that tend to lead to poor investment decisions.

That said, the article seeks to identify techniques that are usually not mentioned or given much attention to when teaching individuals how to become better investors. By doing so, certain events influencing human psychology are displayed. Following this, ways to bypass these potentially adverse effects on the value investor are developed. As a result, better long-term results of value investors shall be achieved.

2. Literature review

Value investing involves purchasing securities that seem to be undervalued in their underlying intrinsic value at their current price. In addition to that, value investing includes the sale of those securities while the market overvalues them and offers excellent prices. Because undervalued securities at bargain prices are usually found in bear markets, value investing is commonly referred to as a bear market strategy.

On the contrary, growth investing is a bullish market technique as it is mainly feasible or profitable in times of an economic upswing. The technical analysis involved in value investing focuses on the price-earnings ratio, the return on capital, and market valuation. Hence, finding securities which prices are lower than the underlying value of the company is key. By buying those securities and waiting for the securities market to correct itself and adjust prices back to its values a value investor is enabled to gain earnings.

The Intelligent Investor, published in 1949, authored by Graham distinguishes two types of investors. The first one constitutes the so-called defensive investor. Graham characterized the defensive investor as an investor with a low willingness for effort, including only an average expectation of return on his investments. The other type of investor identified in *The Intelligent Investor* is the enterprising investor. The latter is characterized through a higher willingness for effort as well as risk tolerance, and a higher expectation of market return on his investments. Table 1 displays significant differences between the two types of investors.

Table 1: Defensive and enterprising investor

<i>Defensive Investor</i>	<i>Enterprising Investor</i>
Creates a portfolio that runs on autopilot	Researches and invests time in his portfolio
Freedom from the need for effort and constant decision-making	More effort and constant decision-making
Demanding due to market behavior and influences	Physically, intellectually, and emotionally demanding due to intrinsic and extrinsic factors
Average market return.	Above-average market return.

Source: Graham & Zweig (1973)

The original idea of buying good businesses at bargain prices has been thought of by Benjamin Graham and David Dodd (1939). They distinguish investors as either defensive investors or as enterprising investors. The main difference between the two is the amount of time an investor is willing to dedicate to maintaining his portfolio while keeping up with the constantly changing stock market. Graham further elaborates on his approach and strategy in *The Intelligent Investor* (Graham, 1949). Both Table 2 and 3 contain key characteristics of the value investing approach (Graham & Zweig, 1973).

Table 2: Portfolio – growth stocks – bargain prices

Portfolio Composition	The enterprising investor should keep at least a minimum of 25% in common stock or high-yield bonds. A 50:50 composition of common stocks and high-yield bonds is recommendable for the <i>defensive investor</i> .
Buying Growth Stocks	Buying undervalued growth stock is a risky undertaking and should therefore be done with extra caution.
Paying Bargain Prices	Graham formulated a formula to determine the intrinsic value for a company; Intrinsic Value = $EPS \times (P/E + 2g)$

Source: Graham & Zweig (1973)

Note: EPS = Earnings per share; P/E = price-earnings ratio; g = expected annual growth rate

Table 1: Diversification – size of enterprises - dividends

Portfolio Diversification	Ten to thirty different stocks
Large and Prominent Enterprises	Industry-leading stocks that are substantially in company size
Continuous Dividend Payments	The longer the continuous dividend payments, the healthier the enterprise.
Paying Bargain Prices	<i>Defensive investor</i> : price-earnings ratio lower than twenty-five over the last seven years; price-earnings ratio of the last twelve months should not surpass twenty

Source: Graham & Zweig (1973); Graham & Dodd (1934)

To begin with, Graham suggests a portfolio composition of a minimum of 25% invested in high-grade bonds and a minimum of 25% in high-grade common stock (Graham & Zweig, 1973). Here, the investor may choose, depending on his sentiment for the current market situation, to increase the percentage invested in bonds or common stock as long as the investor does not fall short of the minimum threshold on either bonds or common stock.

This threshold allows for flexibility to adjust to the market while protecting the portfolio against recession and inflation. For example, during a major economic recession, a value investor would increase its stock component of the portfolio to 75% with common stock of undervalued but good businesses at bargain prices thanks to a bearish market. On the other hand, it allows investors to secure their investments and capital gains during times of incredible growth, which an intelligent investor knows cannot be infinite.

Graham and Dodd lay an essential focus on the diversification of the value investor's portfolio. They suggest a portfolio of a minimum of ten and a maximum of thirty different securities for defensive investors. Enterprising investors are awarded more freedom in portfolio diversification. It is recommended that an investor selects only large and prominent companies. Large and prominent defines a company as industry-leading or a so-called primary stock with its counterpart being the secondary stock. The revised version of *The Intelligent Investor*, commentated by Jason Zweig, states that the company valuation should be above ten billion USD (Graham & Zweig, 1973).

A company must have a history of at least ten years of continuous dividend payments. When looking for continuous dividend payments over ten years, the list of fitting companies might be reduced substantially. The next step for the defensive investor is analyzing the price paid for the actual value of the business by using the price-earnings ratio. Here, the limit on the price-earnings ratio should not be over the factor of twenty-five during the past seven years and not higher than twenty during the last twelve months.

This measurement eliminates all securities considered as *growth stock* from the portfolio of the value investor by ignoring all companies with a high price-earnings ratio. Graham & Dodd (1934) created a formula for the enterprising investor to determine a company's intrinsic value. It multiplies the trailing twelve-month earnings per share with the price-earnings ratio times added with twice its long-term growth rate. Accordingly, the intrinsic value equates $V = EPS \times (P/E + 2g)$.

Lastly, after a value investor has composed a portfolio of common stock and bonds, the investor has to keep an eye on his securities per the rules laid out earlier. Graham and Dodd suggest that most investors, especially the defensive investors, spend not too much time worrying about their portfolio and therefore only check annually or in a similar interval (Graham & Zweig, 1973).

Table 4: Greenblatt Value Approach

Return on Capital	Investors look for companies with a high return on capital. This ratio displays the ability of the company to create profits using its capital.
Paying Bargain Prices	Greenblatt suggests looking for companies with a high earnings yield. The approach depends almost solely on the detection of underpriced and undervalued securities.

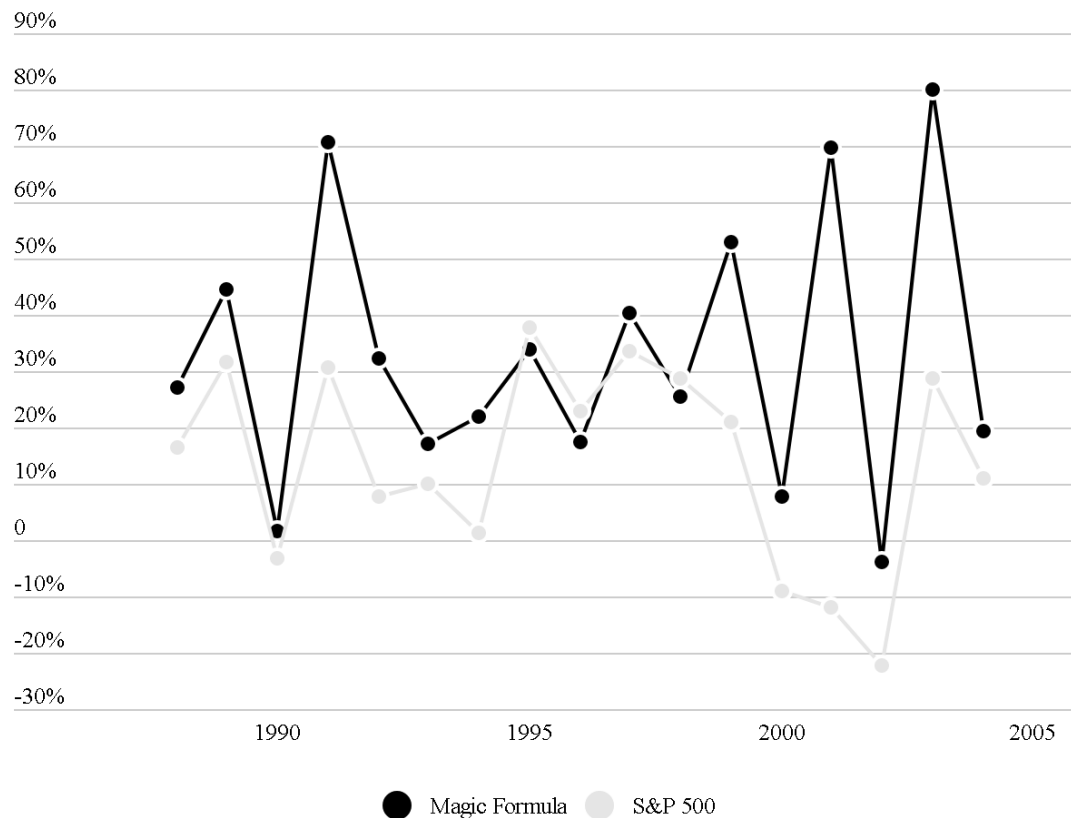
Source: Greenblatt (2006).

As defined by Joel Greenblatt (2006), the first step to the Magic Formula is to only pay bargain prices for business shares. This concept is an essential and vital principle when following the idea of value investing. Value investors believe that the market prices of businesses are not equal to their actual values, making them a profitable value investment. Greenblatt suggests a similar but inverse analysis by recommending choosing companies with a high earnings yield, which is the earnings before interest and taxes divided by the current market price per share. Thus, a value investor seeks a high earnings yield or a low price-earnings ratio to spot bargain prices for common stock.

The second criterion for the Magic Formula strategy is that a business has a high return on capital (Greenblatt, 2006). Accordingly, Greenblatt states that a good business knows how to achieve high returns on its invested capital. Therefore, those businesses are of most importance to the value investor following the *Magic Formula*.

As shown in Figure 1, the *Magic Formula* beats the S&P 500 for over a decade. In addition, a general portfolio policy is being suggested, consisting of around 20 to 30 different stocks from prominent companies.

Figure 1: Magic Formula Performance



Source: Own illustration according to Greenblatt (2006)

Management Techniques

Authors like Graham or Greenblatt addressed investment management techniques in their works. However, other authors who concern themselves with management techniques related to value investing are rare (Graham & Zweig, 1973). Another author, addressing management techniques for value investors, is Parag Parikh, who published *Value Investing and Behavioral Finance* in 2009 (Parikh, 2009).

However, some techniques could be identified through desk research in leading literature for value investors, as shown in Table 5. At a later stage, they were grouped and analyzed based on research studies confirming or rejecting the experts opinion on the respective technique.

Table 5: Literature review of behavioral phenomena in investing

Delay or instant gratification / law of the farm
Stock market behavior not in tandem with rational human thinking
Shareholders working against the interest of company where shares are owned
Lack of a good sense of crowd behavior makes investing risky
Growth trap (the act of chasing growth)
Sector bubbles (hype for a whole sector due to changing circumstances)
Crowd psychology / ability to understand investor behavior
Laziness / greed / ambition / self-interest
Ability to exert self-discipline
Hard work / persistence / focus on clear specific goals
The emotional quotient balancing mechanism
Accepting failures / ability to conduct risk management correctly
Error of judgement / loss aversion
Valuation heuristics
Unpredictability of the market and pressures of competing can be distracting
Investment time horizon is too short / long-term strategies that work are not followed
Belief vs value (not price) / over the long-term value becomes the key market aspect
Familiarity leads to complacency
Market should not determine the emotional status of the investor / it offers prices
The goal is to reach financial goals / not just to beat the market

After creating a list of techniques identified through a literature review of leading value investors, all techniques were assigned to three categories, including discipline, management of failures, and market behavior.

Table 6: Reviewed literature

<i>Value Investing and Behavioral Finance</i>	Parag Parikh
<i>The Little Book That Beats The Market</i>	Joel Greenblatt
<i>The Intelligent Investor</i>	Benjamin Graham
<i>Security Analysis</i>	Benjamin Graham & David Dodd
<i>Security Analysis: Revised Edition (1974)</i>	Benjamin Graham & Jason Zweig

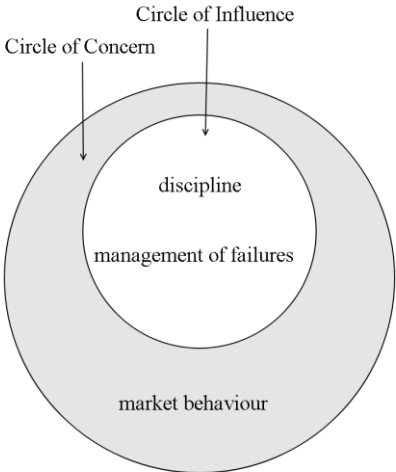
3. Findings

Securing a fortune is a topic of utmost importance to many. However, while most research addresses how, when, and what securities to buy, only a few investors give enough importance to management techniques demanded while trading on the stock market. For example, investors might be willing to sell and cut their losses during times of economic turmoil. However, the financially more smart option would be to stick with the initial analysis and trust in the future market's recovery.

Coveys Circle of Concern

In Figure 2, discipline, management of failures, and market behavior have been incorporated into the circle of control developed by Stephen Covey (1989). Both discipline and management of failures have been assigned to the circle of influence, which can be proactively and directly influenced. In contrast, market behavior has been assigned to an indirect force, as it cannot directly be influenced and therefore can only be reacted to.

Figure 2: Modifying Covey’s Circle of Concern



Source: Own illustration in accordance with Covey (1989)

Discipline, and all the sub-topics included, are a prime example of the circle of influence. An individual can directly influence and change their very own discipline in an instant. Self-control, patience, or overconfidence are just a few disciplinary topics that can be proactively adjusted to an individual's need. The management of failure is another proactive force that includes learning from failures, loss aversion, or the fear of uncertainty. This quality is closely related to risk management, as improving in this area can mitigate risks from reoccurring mistakes.

Market behavior includes any price changes, volatility, or other investors' behavior and poses a circle of concern. However, it cannot be influenced. Both discipline and the management of failures belong to the inner circle of influence. Following this, an investor should focus on the circle of influence, rather than the circle of concern (e.g. market prices).

Table 7: Overcoming investing challenges through proper management techniques

<i>Phenomena</i>	<i>Management Technique</i>
Patience	Exerting self-discipline
Instant gratification	Exerting self-discipline
Valuation heuristics	Exerting self-discipline
Learning from failures	Management of failures
Overconfidence	Management of failures
Loss Aversion	Management of failures
Fear of Uncertainty	Management of failures
Availability Bias	Not paying attention to market behavior
Information Overload	Not paying attention to market behavior

Exerting Self-Discipline

Maybe the single most crucial factor concerning management techniques is the ability to exert self-discipline and consequently learn from past behavior, change one's current behavior, and improve one's long-term investing behavior. Discipline is the key to implementing any emotional behavior and the sole reason an individual investor can master the emotional side of investing. Additionally, Parikh (2009) states that the ability to exert self-control is the most crucial factor for accumulating wealth.

The Dunedin Study observed and followed 1007 participants during their everyday life over the last four decades so far (Moffitt et al., 2013). The study aimed at identifying any implications that a lack or surplus of self-control, observed and recorded continuously from their childhood on, had on the overall and financial future of the participants.

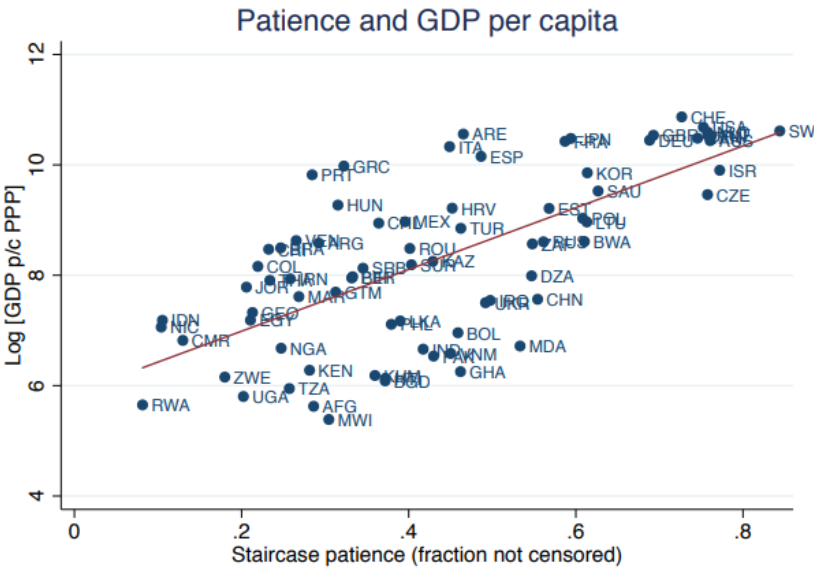
Research in self-control and its implication on later life has always been sparse and always been found to not correlate until the Dunedin Study showed and proved multiple correlations. One of the first observations was that children with high self-control generally come from a socio-economically wealthier background.

Participants showing low levels of self-control during their childhood had a higher chance to encounter financial problems such as low income, low savings, or social welfare dependency during their thirties. The study also cross-checked the participants with the VEDA Credit System for Australia and New Zealand, indicating that a low degree of self-control led to a higher possibility of poor credit rating (Moffitt et al., 2013).

Just as the Dunedin Study proves the long-lasting implications from an early lack of self-control could be severe, it is as crucial for an investor to possess a certain amount of self-control to remain in control of his investments. Furthermore, value investors need to be patient to become successful. The strategy aims to make profits by buying underpriced stocks whose prices will eventually catch up with their actual company value. This process may take many years. Therefore, patience poses an utmost important virtue for the value investor.

Additionally, the correlation between patience and humans' ability to become wealthy was proven by the work *Patience and the Wealth of Nations* (Thomas Dohmen et al., 2016).

Figure 3: Patience and the Wealth of Nations



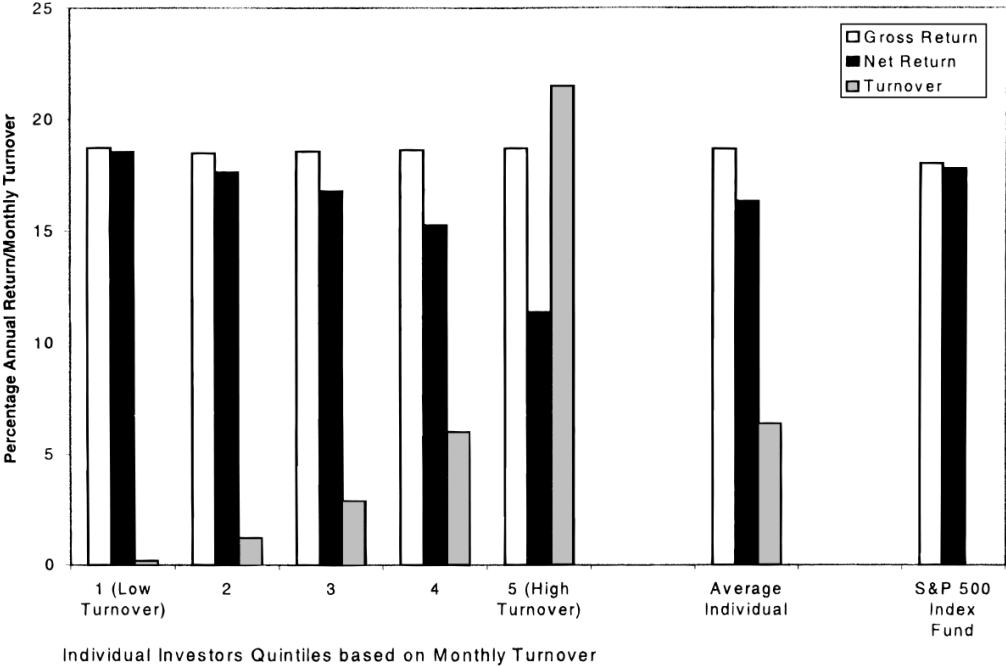
Source: Dohmen et al. (2016).

According to Figure 3, the relationship between patience and the gross domestic product per capita of a nation is positively correlated. Since patience is not the only factor influencing the gross domestic product, the study included other factors such as the longitude, percentage of arable land, average temperature, predicted genetic diversity, ethnic fractionalization, and many more.

As a result, the study concluded that the coefficient of patience is statistically significant and quantitatively large. Looking at the individual decision-maker, the study confirms that patience poses a key driver for growth and development (Dohmen et al., 2016). However, in June 2020 the average holding period of NYSE securities amounted to only 5.5 months – compared to 8 years in the end of the 1950s (WEF, 2021).

In 2000, researchers analyzed the impact of frequent trading and patience on investors' bottom line. The study depicts the correlation between a high turnover, a high number of trades, and a diminishing net return on investments (Barber & Odean, 2000). According to the study, shown in Figure 4, trading at a high frequency results in lower net returns than investors who trade at a lower frequency.

Figure 4: Monthly turnover and annual performance of individual investors



Source: Brad & Odean (2000).

According to Greenblatt (2006), most individuals face one challenge: individuals are rather tension-relieving than goal-achieving. The need for individuals to achieve instant gratification is so significant that they would instead take a substantially small profit right now than thinking long-term and take a more significant profit in the long run. Accordingly, any investor trying himself in value investing will have to find a coping strategy to delay his need for instant gratification in exchange for a more substantial profit following the long-term value investing strategy.

Management of failures

The investor's tendency when indulging in instant gratification is nothing new to humanity or science. One of the most famous psychological field studies, the marshmallow test conducted by a Stanford professor, gave many insights into humans' unwillingness to delay gratification (Mischel et al., 1972). The first study was conducted solely to collect data about all the respective participants and their incline from delaying gratification or indulging in it. Later, follow-up studies observed that children that resisted the temptation and therefore had a higher ability to delay gratification did comparatively better in any aspect measured by the scientists (Mischel et al., 1989). That included the history of substance abuse, the ability to handle stress, the lesser likelihood of obesity, and a healthier lifestyle.

Investors suffer heavily under the inability to delay gratification, as reallocating profits to create a chance at a higher future growth of profits is something not many stock market participants can do consistently. Therefore, every investor should delay gratification to such a degree that his future profits are not at risk. Proper analysis and fundamental research takes a lot of time, patience, and discipline. According to Parikh (2009), many investors skip their thorough due diligence when making investments. One of the reasons is the fast-paced stock market and investors wish to make a quick buck before the next investor does.

Miller (2004) published a research article in which he created an empirical test of heuristics and biases affecting professionals when valuing real options. Research shows that inevitable valuation misjudgments or miscalculations occur even to professionals. Further, it proves the impact of underlying or historic values overshadowing current valuations and expectations. Not letting past implications and events influence the investor's current behavior and work by falsifying data and predictions due to valuation heuristics is a critical factor concerning discipline.

An investor should be able to cut his investment losses as early as possible by accepting failures and not hanging on to bad investments, utterly unaffected by any emotional influences. Additionally, investors ought to learn from their own mistakes to become better at their craft. A study showed that humans react differently to failure feedback and learn less from failures than successes (Fishbach, 2019).

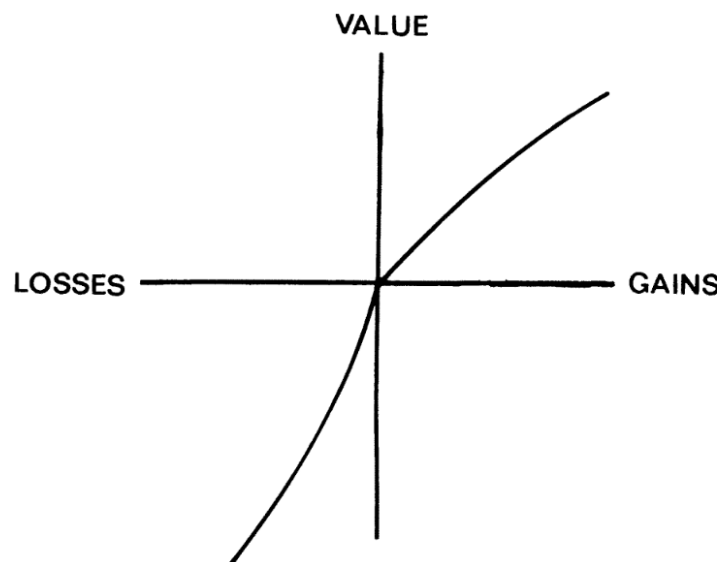
The study was conducted by asking the participants a fifty-fifty question, meaning that there were two options to choose from, with one being the correct answer. Then the participants were split into two different groups, one receiving only feedback if they got the answers wrong and one receiving only feedback if they answered right.

The participants were then later asked the same questions, with the positive feedback group being able to remember and recall the correct information while the negative feedback group underperformed significantly. The result indicates that humans are less capable of learning from mistakes than from successes. However, this tendency can be self-observed and manipulated to the investor's liking allowing for the immense potential to learn. Humans tend to overstate their actual techniques, capabilities, and status. This tendency can be pretty dangerous in investing since overconfidence can lead to costly mistakes.

To understand the overconfidence bias, a study assessed the existence of overconfidence among investors and its impact on investment decisions (Trehan, 2016). The study showed that any of the investment successes of the participants were self-attributed, while any adverse investment outcomes were attributed to any other external factors. It also found that investors who think to have complete control over their investment portfolio more than likely suffer from an illusion of control caused by the overconfidence bias.

Avoiding and controlling overconfidence and the corresponding overconfidence bias will allow the investor to become a more rational investor able to learn from self-inflicted mistakes and other failures.

Figure 5: Prospect theory



Source: Kahnemann & Tversky (1979)

Humans do not like to lose, especially not money. In 1979, the prospect theory identified that humans tend to value any loss twice as much as a similar profit depicted in figure 5 (Kahneman & Tversky, 1979). That is, moving one unit along the x-axis to the right leads to a certain value or enjoyment along the y-axis.

Nevertheless, the same unit along the x-axis to the left indicates a much bigger displeasure or negative value than the potential gain of one unit. This aversion to loss lets people tend to overestimate the actual gravity of the occurrence. Additionally, value investors have to learn that the daily, weekly, or even monthly draw-downs or profits are not representative of the overall state of the investments (Graham & Zweig, 1973).

No one can predict the future 100% accurately. Hence, there will always be a particular uncertainty factor in anything planned for in the future. The same goes for the stock market, which is comprised of an overwhelming amount of uncertainty.

A study published in 2016 has concluded that intolerance towards uncertainty leads to more learned fears from threat and safety cues (Morris et al., 2016). The results essentially show that humans who are more receptive to uncertainty suffer more from the consequent self-taught fears.

Market Behavior

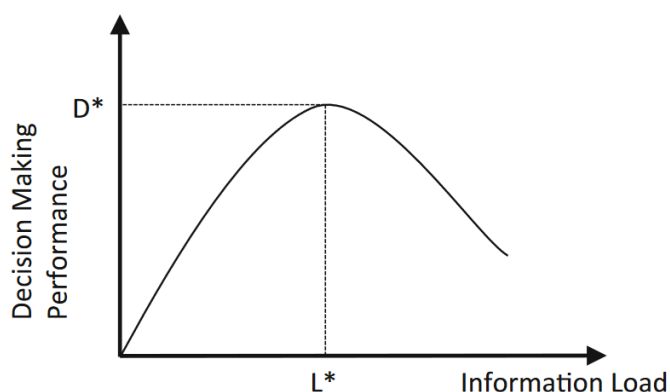
The stock market had become a significant reason for distress among its participants. Instant availability of information gives the investor a huge amount of options at any moment. There are various management techniques with relevance to an investor dealing with the stock market.

The first one, identified initially by Tversky and Kahnemann (1973), is the availability heuristic. It states that humans predict the current likelihood for an event based on how vivid memories about similar occurrences are. However, the availability heuristic has been found to lead to many more biases due to the distortion through memories.

This heuristic has been further studied to identify availability heuristics with investment success and financial risk. The study shows that the vividness of recent memories about either losses or profits on the securities market strongly influences an investor's opinion and outlook (Kliger & Kudryavtsev, 2010). This tendency can be especially dangerous when this behavior is adapted without being conscious of heuristics.

Research done in information-processing has identified that an overflow of information leads to decreased decision-making ability (Driver & Streufert, 1969). Figure 6 shows that after a certain amount of information is processed, the decision-making performance decreases as the information load increases.

Figure 6: Decision Making and Information Load



Source: Driver & Streufert (1969).

The instant availability of information is something that Benjamin Graham and David Dodd might not have encountered when writing *Security Analysis* (1934). Today, an investor can sell or buy at any moment during the market opening hours. This constant decision-making process coupled with up-to-date international news informing investors about changing market circumstances leads to information overload. Market behavior is a factor in the circle of concern, making it a low priority for investors. Accordingly, investors should rather focus their energy on the circle of influence and influenceable factors and hence not pay too much attention to market behavior.

4. Discussion

The results suggest that most management techniques identified by the expert authors Graham, Dodd, Greenblatt, and Parikh are efficient management techniques for value investors. Various studies showed that directly influenceable factors such as discipline and the management of failures are crucial topics for investors.

In addition, the expert literature correctly identified non-influenceable factors, such as market behavior. The main topics, which are made up of multiple sub-topics, are a reoccurring subject through most of the literature by Graham, Dodd, Greenblatt, and Parikh. This reoccurrence shows that expert literature on value investing and behavioral finance already involves management techniques to increase the value investors' bottom line.

Also, the findings have proven that these management techniques are essential to any value investor but might also serve other investment strategies. While loss aversion might be especially tough for value investors in an economic growth spurt, it is also valuable to anyone interested in management techniques. Finally, it can be shown that exerting patience and reducing the amount of trades favorably influences the investor's outcome.

5. Conclusion

The findings suggest that the management techniques initially identified by Graham, Dodd, Greenblatt, and Parikh are influential to the value investor. To get to the result, the management techniques have further been grouped into three main topics self-discipline, management of failures, and market behavior. This grouping was done with the aid of Coveys' Circle of Control, stating that specific influences like discipline and management of failures are proactive while the market behavior is reactive. The different factors influencing the techniques have been proven by the utilization of previously existing studies.

It is recommended that individual investors start becoming more conscious about the impact that different management techniques have on their performance. Furthermore, a proper understanding of management techniques allows for more self-reflective behavior when they occur. The two pro-active topics, discipline and management of failures, are directly influenceable and should be the focus for any energy directed at becoming a better investor.

The reactive force, the market behavior, is not directly influenceable and should therefore be observed to allow for an appropriate reaction. In addition to that, there exist certainly more management techniques that can be used to help investors reach their goals.

The field of management techniques for value investors has been sparsely researched so far. This might be due to limited information on the topic, having to rely on literature works and research studies that are rarely close enough to the exact research question. The impact and effect of management techniques on value investors have been separated by looking at how specific management techniques affect the human or rather value investor.

The collection of management techniques should not be interpreted as complete. Instead, it should be seen as a work in progress. It can be continued in compiling a more comprehensive list of management techniques. And lastly, it showed that value investors' management techniques is a field that has not received enough scientific attention so far. Following this, an increase in scientific effort dealing with management techniques for value investors could significantly add value to many individuals in the future.

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