Abstract

The following paper discusses value investing – a long-term investment strategy that is based on investing in stocks with relatively low fundamentals (most often with a low price-to-earning ratio) and finally yields a higher total rate of return from investing than other active strategies. The aim of the paper is to find in which way the excess return earned from value investing is influenced by investors’ behaviour in the market and also by the organisational culture of value investing companies. The main research question asked within the paper is why the value investing strategy provides investors with relatively higher total return at lower risk than other investment strategies. The article provides evidence that the direct driver of the excess return from the value investing strategy is the behaviour of investors, while organisational culture has an indirect impact on the rate of return on investment through the performance level of value stock companies.

Introduction

The following paper provides theoretical insight into the issue of value investing, which continues to be one of the extensively
The influence of investors’ behaviour... discussed puzzles in financial theory. Value investing was first identified by Graham and Dodd in the mid-1930s as an effective approach to investing (Bird, Gerlach, 2003: 1). What is more, Benjamin Graham’s book *The Intelligent Investor*, published in 1949, is still used as a respected guide into investment philosophy (Graham, 1985: 197). Together with growth investing, value investing can be classified as one of the long-term active investment strategies in the stock market (see Table 13.1 below).

**Table 13.1. Approaches to investing**

<table>
<thead>
<tr>
<th>Passive Strategy</th>
<th>Active Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Believe in market efficiency</td>
<td>Short-term</td>
</tr>
<tr>
<td>Hold a well diversified portfolio</td>
<td>Technical analysis</td>
</tr>
<tr>
<td>Asset allocation based on risk tolerance</td>
<td>Fundamental analysis</td>
</tr>
<tr>
<td></td>
<td>Long-term</td>
</tr>
<tr>
<td></td>
<td>Value investing</td>
</tr>
<tr>
<td></td>
<td>Growth investing</td>
</tr>
</tbody>
</table>

*Source: adapted from Yan, 2002.*

In general terms, value investing means that investors, either individuals or investment funds, actively search for value stocks in the market in order that they might incorporate them into their investment portfolios. Value stocks\(^1\) are stocks that are selling near or below the value of the underlying company’s assets or book value\(^2\), i.e. a value stock represents a company whose financial position, as well as industrial and economic conditions, indicate that its true value is higher than its stock price. Typically,

\(^1\) Refers mainly to companies like General Motors, Exxon Mobil (i.e. more often companies acting in traditional sectors), which have been classified as value stocks in the US market.

\(^2\) i.e. the book value (or tangible assets) of value stocks is usually close to the stock price (selling price is close to it’s book value). Book value (BV) shows the amount of equity per one share of a company’s common stock.
value stocks offer attractive dividends and have relatively low ratios (fundamentals), like the price-to-earnings (P/E) ratio – which measures the price of a stock divided by its earnings per share – and also the market-to-book value (P/B) ratio. In most cases, value stocks tend to outperform during bear markets and are therefore also considered as a defensive (or contrarian) investment strategy. Growth stocks, on the other hand, generally do not pay significant dividends and offer high P/E ratios. The companies with a high P/E ratio are typically startup companies with little or no revenues. As growth stocks are usually expected to grow substantially in the near future, they also tend to be more volatile in nature than value stocks.

Several studies (e.g. Fama, French, 1994) indicate that value investing systematically outperforms the market averages over time, enabling the highest total rate of return (both dividend yield and capital gain yield) primarily by comparison with growth investing. Therefore, an investment in those stocks gives investors an opportunity to earn excess returns defined as value premium. Financial literature has classified this as one of the behavioural anomalies in the stock market, caused by certain psychological aspects involved in investment decision-making.

The aim of the paper is to find out in which way the excess return earned from value investing is influenced both by investors’ behaviour in the market and by the organisational culture of value investing companies.

The main research question asked within the paper is: why does value investing strategy provide investors with relatively higher

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3 Low price-to-book value (P/B) ratio means, on the other hand, also high book-to-market value (B/M) ratio (i.e book value of equity divided by market value of equity). According to Graham, P/B ratio can be determined by taking a stock’s price per share and dividing it by the value of the company’s assets per share (in case the company does not have any liabilities on its balance sheet).

4 Damodaran (2003) classifies value investors as (1) passive screeners, (2) contrarian value investors, and (3) activist value investors.

5 Stocks like Microsoft, Intel and Oracle (i.e. mostly Internet/high-tech sector companies).
total return at lower risk than other investment strategies? The other research question is whether there are any common aspects of organisational culture among the enterprises classified as value companies. There is an intention to explain these problems by means of the findings in the concept of behavioural finance.

The author has set up some hypotheses to explain the previously described phenomenon.

**The Concept of Value Investing and Historical Behaviour of Value Stock**

The aim of this chapter is to describe the essence of the phenomenon of value investing strategy and to show the performance and behaviour of value stocks throughout the stock market history.

According to Graham (1949), value investing is based on the premise that the underlying value of a financial security is measurable and stable, even though the market price fluctuates widely. The core of value investing is to buy securities when their market prices are significantly below their intrinsic values (Greenwald *et al.*, 2001). Graham indicated that stocks with P/E ratios of less than 15 and P/B ratios of less than 1.5 are particularly interesting for purchase, whereas stocks with higher ratios are more speculative.

Graham called the gap between price and value the “margin of safety”. A large margin of safety both increases the potential return and reduces the risk of loss.

Numerous studies (e.g. Capaul *et al.*, 1993, Bird *et al.*, 2001) have found that fairly simple value strategies based on investing in stocks with low price-to-earnings, price-to-sales, price-to-cash

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6 The value of a firm is derived from two sources – investments that the firm has already made (assets in place) and expected future investments (growth opportunities). From that, value investors are basically those who screen for undervalued stocks (less their assets-in-place are worth) and invest in these stocks for the long term. (Damodaran, 2003: 219–220)
flow and price-to-book ratios, outperform the overall market in most countries (Bird et al., 2003: 2) (see Table 13.2).

Table 13.2. Value vs. growth in international equity markets from Capaul, Rowley and Sharpe’s Analysis

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan</td>
<td>69.5%</td>
<td>88%</td>
</tr>
<tr>
<td>Europe</td>
<td>31.9%</td>
<td>78%</td>
</tr>
<tr>
<td>United States</td>
<td>15.6%</td>
<td>50%</td>
</tr>
<tr>
<td>Global</td>
<td>39.5%</td>
<td>96%</td>
</tr>
</tbody>
</table>


Table 13.3 shows the average annual returns of both low P/E stocks (value investment) and high P/E stocks (growth investment) between the years 1937 and 1969 within the DOW-index in the US.

Table 13.3. Average annual percentage movements of the DOW sorted by P/E (1937–1969)

<table>
<thead>
<tr>
<th>Period</th>
<th>10 Low P/E Stocks</th>
<th>10 High P/E Stocks</th>
<th>All 30 DJIA Stocks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1937–1942</td>
<td>−2.2 %</td>
<td>−10.0 %</td>
<td>−6.3 %</td>
</tr>
<tr>
<td>1943–1947</td>
<td>17.3 %</td>
<td>8.3 %</td>
<td>14.9 %</td>
</tr>
<tr>
<td>1948–1952</td>
<td>16.4 %</td>
<td>4.6 %</td>
<td>9.9 %</td>
</tr>
<tr>
<td>1953–1957</td>
<td>20.9 %</td>
<td>10.0 %</td>
<td>13.7 %</td>
</tr>
<tr>
<td>1958–1962</td>
<td>10.2 %</td>
<td>−3.3 %</td>
<td>3.6 %</td>
</tr>
<tr>
<td>1963–1969</td>
<td>8.0 %</td>
<td>4.6 %</td>
<td>4.0 %</td>
</tr>
</tbody>
</table>

Source: Stingy Investor homepage.

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7 The analysis was based on simple single-factor of book-to-price ratio.
8 The example of DOW-index has been taken because of its long-term history.
9 DJIA – Dow Jones Industrial Average.
Some researchers (e.g. Fama, French, 1996) have made a notion about the gap between value stock and growth stock returns as being simply a premium for additional risk, as “stocks of firms with low market to book ratios must earn higher average returns precisely because they are fundamentally riskier” (Shleifer, 2000: 19). Their evidence has been supported by a study of Zhang (2002), who concluded that the value premium can be explained by the asymmetric risk of value stocks. According to Zhang, asymmetric risk of value companies exists because value stocks are typically companies with unproductive capital. These arguments in general support the widely accepted understanding in finance that greater risk is compensated by greater return.

However, as Lakonishok and Chan (2002: 2) showed, “common measures of risk do not support the argument that the return differential is due to the higher riskiness of value stocks”. Lakonishok, Shleifer and Vishny (LSV, 1994) provided evidence in their highly quoted research paper that value strategies yield higher returns because they exploit the suboptimal behaviour of the typical investor and not because they are fundamentally riskier.

The historical evidence for “value premium” (defined as the return dispersion between value and growth stock) is very strong and persistent. As implied by Swedroe (2002), between 1964 and 2000, large value stocks\(^\text{10}\) outperformed large growth stocks 14.5% against 11.1%, and small value stocks outperformed small growth stocks 16.6% against 12%. In addition, the standard deviation of value stocks has been lower than the standard deviation of growth stocks. From 1964 to 2000, the standard deviation of large value and large growth was 16.7 and 17.5, respectively. The standard deviation for small value and small growth was 23.8 and 27.2, respectively.

**Hypothesis 1:** There is a possibility to earn excess returns in the stock market, using the approach of value investing strategy.

\(^\text{10}\) Value stocks of companies with large market capitalisation, i.e. large-cap value stocks.
The Concept of Behavioural Finance

Since the 1960s, the prevailing concept explaining the financial markets has been the efficient market hypothesis (EMH) together with Bayesian rationality, the concept of behavioural finance having come along in the 1990s. According to this, investors’ behaviour is boundedly rational\(^\text{11}\) rather than fully rational, as emphasised by the EMH.

The efficient market hypothesis (posited by Samuelson and Mandelbrot in the mid-1960s and popularised by Fama in 1970s) states that prices of securities fully reflect available information. The implication is that nobody can beat the market except by chance and that investors should strive only to develop a broadly diversified portfolio weighted on the basis of current market values. The only relevant measure of risk according to efficient market theory is beta – a measure of the tendency of a security’s price to respond to price changes of a broad-based market index. Accounting-based measurements of risk are not relevant, because all information about a company is already reflected in the price of their securities.

Behavioural finance, on the contrary, examines how people’s emotions affect their investment decisions and performance. Here, the main difference from EMH is that the behavioural decision-making process follows an intuitive rather than rational way of thinking (see Figure 13.1 below).

\(^{11}\) It is quite difficult to define the term of bounded rationality. Much easier is to say what it is not – it is neither optimisation nor irrationality. The models of bounded rationality describe how a judgement or decision is reached (i.e. the heuristic process or proximal mechanisms) rather than merely the outcome of the decision, and they describe the class of environments in which these heuristics will succeed or fail (Gigerenzer and Selten, 2001: 4). According to bounded rationality, human actors are intendedly rational but only limitedly so (Simon, 1961: xxiv).
The way of thinking has been described as follows. First of all, to deal with bounded rationality, decision-makers use heuristics. Heuristics are highly useful mental tricks or rules of thumb that people use to simplify decision making in complex situations. Three of the most important heuristics are availability, representativeness, also anchoring and adjustment. From the studies of judgement under uncertainty it is known that complexity, use of heuristics, and cognitive limitations may lead to biased results. Biases are common errors that result from the use of heuristics (see Figure 13.2 below).
Behavioural finance has incorporated various aspects of human behaviour into traditional finance theory to improve the understanding of investors’ decision making process (McGoun, Skubic, 2000). For example, Barberis, Shleifer, and Vishny (1997) with their research built a model of typical investor’s behaviour based on concepts drawn from psychology. They suggest that investors ignore the laws of probability and behave as if the recently observed events were typical of the earnings generating process (i.e. representativeness heuristics). In addition, investors are slow to update their prior beliefs in response to new information. These two behavioural tendencies combined cause under-reaction in some situations and over-reaction in others. The literature on behaviour views beliefs based on heuristic rather than Bayesian rationality as “investor sentiments”. Investors who rely to some degree on sentiments are termed “noise traders”, who by definition misprice investments in relation to rational expectations (Shiller, 1989; De Long et al, 1990; Shleifer, Summers, 1990).

From what was described above, one of the most significant findings is that investors are overly confident in their judgement.
and tend to overestimate the reliability of their information (Browne, 2000: 9). The findings about value stock outperforming growth stock are consistent with the views of behaviouralists who say that investors tend to be overly confident of their ability to project high earnings growth and thus overpay for growth stocks (Kahneman, Riepe, 1998). According to valuation theory, overly confident investors cause: 1) a greater lagged response to news for rapidly growing stocks, and 2) a low P/E effect that is greater for slower-growing stocks than for their faster-growing counterparts (Scott et al., 2003: 83).

As Black and Frazer (2004: 58) have described, contrarian strategies (as value investing) produce higher returns, because they exploit the tendency of some investors to overreact to good or bad news. Overreaction means that prices adjust by more than is justified by fundamentals. Unpopular value stocks that have done badly are oversold, become under-priced, and are corrected at some point in the future when a switch in investor sentiment raises the prices of these stocks.

In addition, there are also some findings that most investors tend to behave according to the realm of human psychology – the assumption that the crowd is always right and the comfort of being part of the herd. Using a contrarian strategy to the common behaviour could also be one source from which value investors can gain.

Momentum trading and herding are two trading patterns, which are often argued to destabilise stock markets. In momentum strategies, investors buy past “winners” and sell past “losers”, possibly ignoring information on fundamentals. Winners and losers can be defined on the basis of either past returns or accounting variables, such as book-to-market ratio. Herding, in the context of financial markets, refers to investors’ tendency to mimic one another’s trading decisions. (Kyröläinen, Perttunen, 2003: 3)

Figure 13.3 summarises the above-described pattern of investors’ action and its consequences.
Hypothesis 2: The aspects of investors’ behaviour have a direct impact on the return that the same investors can earn on the stock market by means of the value investing strategy.

Organisational Culture of Value Stock Companies

The following chapter gives an insight into the way in which the aspects of organisational culture can influence the performance level of the company, so that on the final basis the value investors can gain from that. There is a lot of literature and research about the value investing strategy and its main behavioural aspects, based mostly on the concept of behavioural finance. But very little or almost nothing has been written about the organisational culture dimension of value stock companies. Therefore, based on the literature known to the author so far, it seems to be a comparatively unexplored research field. Although, there are numerous surveys found on the topic of how organisational culture affects performance. Those surveys may prove to be a useful material here as well. It seems to be a challenging task to bring a new dimension into the field of value investing research and possibly obtain some new findings on it.

First of all, the main task is to identify the aspects of the organisational culture of value stock companies or the factors that can have an impact on their organisational culture. Herein, the culture can be defined as an aggregated sum of behaviours, attitudes and styles of the work force of an organisation. On the other hand, for some, the pattern of communication defines the culture of an organisation (Frank et al. 1999: 255).
The influence of investors’ behaviour...

Probably the best way to identify the common factors influencing the organisational culture of value companies (after the identification of a sample of value companies) would be by means of a matrix table (based on both qualitative and quantitative data). In this table (see Table 13.4 below), the factors describing the essence of organisational culture fall into three different groups, describing (1) relationship with customers, (2) relationship with workers and (3) relationship with shareholders. The factors themselves are in the form of ratios derived mainly from the companies’ financial statements.

Table 13.4. Worktable to identify common factors in the organisational culture of value companies

<table>
<thead>
<tr>
<th>Relationship with Customers</th>
<th>Relationship with Workers</th>
<th>Relationship with Shareholders</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Factor ...</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Factor n</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

From the theory of organisational culture it is quite well known that an organisation is a goal-oriented social entity with a consciously structured activity system and a relatively identifiable boundary (Bertrand, 2002). According to the theory of financial management, the main (and the most superior) goal of a company is to maximise the wealth of its shareholders, which is measured by the value of its stock price in the market. Taken from here, organisational culture can obviously be only the tool for reaching the main goal of the company – the tool that has an impact on the performance level of the value company.

*Hypothesis 3: Value stock companies carry some common features (factors) of organisational culture.*

*Hypothesis 4: The aspects of organisational culture have only an indirect impact on the return earned by investors from using the*
value investing strategy, influencing it through the performance level of the value company.

**Conclusion and Suggestions**

Contrary to the efficient markets hypothesis which claims that all known information is incorporated in the current price of a security, market anomalies always exist as a result of recurring boundedly rational investor behaviours. These anomalies create opportunities for value investors to earn excess returns at a relatively small risk.

From what was said above, the author concludes that one of the main reasons for the value investing phenomenon seems to be mainly the behaviour of investors. Therefore, in general there seems to be a relatively small number of investors who actually use the long-term value investing strategy, whereas the majority of investors simply trade too much, letting transaction costs lower their returns. That can be explained in two ways. Firstly, despite its rather remarkable history, the value investing strategy does not seem to be widely known among the so-called ordinary investors. Secondly, it still remains to be not an easy way of investing, as the picking of suitable stocks is rather time-consuming and requires an in-depth analysis of the picked stocks. Sometimes the process of investing requires a lot of courage and patience, as it is obviously easier “to follow the crowd” rather than “to be a fool” and “feel the guilt of a loser” (from regret theory) when using the contrarian investment strategy.

So far, financial literature has brought out the following aspects in the behaviour of investors, i.e. investors tend to:

- extrapolate past trends into the future,
- follow others because of their mob mentality,
- feel overly confident in their ability to foretell the future,
- take risks that are disproportionately large by comparison with potential return.

The final conclusion from the paper is that there is a possibility to earn some excess return from the stock market by means of value
investing strategies. The final outcome of the return is influenced directly by the behaviour of value investors themselves and indirectly by the organisational culture of value stock companies through their performance level (see Figure 13.4 below).

Figure 13.4. Direct and indirect impacts of the factors influencing the excess return from value investing (compiled by the author).

However, without empirical analysis, it is very difficult to say whether there are any similarities at the level of organisational culture between value companies and in case it is so, exactly which common features there are.

The author of this paper has an intention to continue investigating the problems of value investing and to test the findings empirically on the case of the Tallinn Stock Exchange in Estonia. The study should proceed from the following steps:
1. Firstly, identifying the value stock companies in the Estonian stock market.
2. Secondly, identifying the risk and return patterns of these stocks compared to the so-called growth stocks.
3. Thirdly, analysing the organisational culture of value companies, trying to reveal some common features.
4. Fourthly, working out the value investment strategy and comparing the results with the findings of other similar surveys.
References


KOKKUVÕTE

Investitorite käitumisest ja organisatsioonikultuurist tulenevate tegurite mõju väärtusinvesteeringule

Kaia Kask

Käesolev artikkel käsitleb väärtusinvesteerimist, mis on siiani üks paljudest rahandusteooria lahendamata probleemidest. Väärtus-
investeering on pikaajaline investeerimisstrateegia, millega seoses tehakse valik investeeritavate aktsiate osas peamiselt nende fundamentaálnäitajate baasil. Investoorite sõhiks on otsida turult nn väärtusaktsiad, peamiselt neid, mis eristuvad muudest aktsiatest oma madala aktsia hinna ja raamatupidamissuhtarvu (P/B) ning madala aktsia hinna ja kasumi suhtarvu (P/E) poolest. Kuigi nii teoreetikud kui ka praktikud on jõudnud ühele seisukohale, et väärtusinvesteering annab suhteliselt madalamal riskitasemel keskmiselt kõrgema kogutulususe võrreldes muude investeerimisstrateegiatega, ei ole siiani veel jõutud ühtsele seisukohtale selles osas, millest täpselt selline tulemus on tingitud.

Artikli eesmärgiks on leida seos väärtusinvesteeringu, väärtusaktsiiaettevõttele omase organisatsioonikultuuri ning väärtusaktsiatahesse investeerivate investorite käitumise vahel. Peamiseks uurimisküsimuseks on, miks annab väärtusinvesteering suhteliselt madalamal riskitasemel kõrgema kogutulususe kui muud investeerimisstrateegiad?

Artiklis toodud seisukohtadest tehakse järeldused:
1. Investorite käitumine väärtusettevõtete turul on kõrgema tulususe teenimise otseseks mõjuriks. Enamik investorite liigne enesekindlust ning oma võimet ülehindamine viib üsna sageli hindade ülereageerimiseni kas ülesvõi allapoole ning see annab väärtusinvestoritele võimaluse teenida oma investeeringult ekstrakasumit.

2. Väärtusettevõttele organisatsioonikultuuril on kaudne mõju investorite teenitavale tulule. Kuigi organisatsioonikultuur on seost väärtusinvesteeringuga on ilma empiirilise uurimusega väärtust laialt, võib siiski täheldada, et organisatsioonikultuur avaldab toetavat mõju ettevõtte tegevustulemusele, läbi mille võidavad oma rikkuse maksimeerimisel ka ettevõtte aktsionäride.