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„Growth and Value: An Investigation of  
Growth and Value Stocks With Regard to  
the Validity of the Value Premium”

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# **1 Introduction**

## ***1.1 Statement of the thesis***

In the financial market there are many ways one can decide how to invest their fortune. What asset allocation and what risk parameters to use are just the beginning questions to what a given portfolio would need to take into consideration. After narrowing down the choices, one of the most important remaining questions could be whether to invest in growth or value stocks (assuming that an investment in stocks will be made). This question can have a very large impact on the outlook of the portfolio because the view and choice in this matter make a general statement to what kind of overall opinion the investor has of the market.

But what exactly does it mean to differentiate between growth and value stocks? Just because an investor understands the definition and tendencies of growth and value stocks does not mean that a full understanding behind the diverse assets has been acquired. Gaining a full understanding of these terms and assets can be of great assistance when deciding on the asset allocation of a portfolio and is imperative for making strong investment decisions.

## ***1.2 Objectives of this thesis***

The general objective of this thesis is to define the terms and concepts of growth and value stocks within the context of the financial market. Each term will be taken singly and defined, its determining characteristics will be named and then they will be systematically compared with one another, with the goal of explaining the differences that arise in returns and value premiums.

In addition to the discussion of growth and value premiums, the main characteristics, as mentioned before, will be discussed in depth to create a general understanding of why and how the value premium come to exist. The phenomenon that differing performance

figures can be used to evaluate a company is nothing new, and these same figures can also be used to determine the status of a company within the scope of investment strategies.

One of the main objectives of this thesis is to attempt to explain why there is such high inconsistency between growth and value premiums. The question of whether there truly is a value premium (as often assumed by many investors) over a growth premium will be looked into, and then the typical value premium will be explained through systematic analysis of historical returns and working paper analyses.

Furthermore, different investment opportunities used by growth and value investors will be discussed and broken down according to strategy, expected returns, and what investors have historically gained/expected from such investments. This paper should, in the end, prove that value stocks and value investment strategies tend to result in higher returns as compared to growth stocks and strategies, and therefore are a better investment.

### **1.3 Overview**

Historically, when investing in stocks, there have been two main types of asset categories that are defined: growth and value stocks. The latter, value stocks, have traditionally shown higher long-term returns than the second type, growth stocks. This so-called “value premium” is quite controversial, but continually proved over and over again to be valid.<sup>1</sup>

What exactly are the differences in growth and value stocks? Scientists and investors use many factors to describe each stock type, but to a large extent, there are prevailing factors that are accepted by most investors to hold true for both types. Companies with low price-to-earnings ratios (P/E), low price-to-book ratios (P/B), low price-to-sales ratios (P/S) and high dividend payments are said to be value stocks. On the other hand, companies with high price-to-earnings ratios (P/E), high price-to-book ratios (P/B), high

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<sup>1</sup> Eisenhofer (2005)

price-to-sales ratios (P/S) and either low or no dividend payment are known as growth stocks.

The reason for the investment premiums in each category are somewhat controversial, although there are general phenomenon that have been accepted over time, and even today not all investors can agree upon one single reason for the outstanding results over time. These questions and others will be viewed systematically and through research and other scientific opinions and studies so that a rational explanation can be found.

The following chapters begins by going through each of the indicators singly, describing the characteristics of each and what values could be expected in growth and value stocks. After the indicators have been looked at more in depth, both growth and value stocks are taken on their own and features of each investment style are pointed out and discussed in detail. After defining the stocks, they will be systematically compared with one another.

The reasons for the traditional return performances will then be looked into. Afterwards, the question will be asked whether value stocks have had an overall better performance. This question has been asked many times before and there are numerous studies which will be examined from many notable investors and analysts, mostly arguing for the value premium. This evidence for a value premium will be presented and reasons supporting this phenomenon will be discussed. Finally, the question will be raised if there is an optimal investment strategy regarding growth and value.

## **2 Indicators**

There are many characteristics of growth stocks and there is no perfect formula to identify and classify them as growth. Analysts have identified several of the common characteristics that often are similar when recognizing growth stocks. In general one can say that growth stocks have high indicators whether it be P/E, P/S, P/B or others. Although the thresholds for each indicator are often modified, according to Ken Little, an

experienced financial writer with an extensive finance related résumé, the following are generally applicable<sup>2</sup>:

- Strong growth rate – both historic and projected forward. Historically, you want to see smaller companies with a 10%+ growth rate for the past five years and larger companies with 5% - 7%. You might want these same rates and more for projected five-year growth rates. Big companies will not grow as fast (normally) as small companies, so you need to make some accommodation.
- Strong Return on Equity. How does the company's return on equity (ROE) compare with the industry and its five-year average?
- What about earnings per share (EPS)? Especially look at pre-tax profit margins. Is the company translating sales into earnings? Is management controlling costs? Pre-tax margins should exceed the past five-year average and the industry average.
- What is the projected stock price? Can this stock double in price in five years? Analysts make these projections based on the business model and market position of the company.

Of course, stocks may not fit all the given criteria but even so could still be considered a growth stock. For instance, companies which are relatively new and cannot project a five-year growth rate could still take a significant place within a new and rapidly growing sector<sup>3</sup>.

These are not the only criteria used when determining the status of a stock.

In addition growth stocks generally have high P/E ratios as mentioned earlier. They also can be deemed a "buy" as a growth stock if the PEG ratio is low relative to the other companies in the same sector.<sup>4</sup>

The following are several of the measurements often mentioned as indicators of growth stocks.

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<sup>2</sup> <http://stocks.about.com/od/investingphilisophies/a/Groval061405.htm>

<sup>3</sup> <http://stocks.about.com/od/investingphilisophies/a/Groval061405.htm>

<sup>4</sup> [http://www.moneychimp.com/glossary/growth\\_stock.htm](http://www.moneychimp.com/glossary/growth_stock.htm)

## **2.1 ROE**

Return on Equity (ROE) is one way of measuring the efficiency of a company using its assets to produce earnings and profit. ROE is calculated by dividing net income by shareholder equity book value and is used as a general indicator of the company's efficiency. Said differently, it indicates how much profit the company was able to bring in with the given shareholder resources. Generally companies with ROEs that are high and growing are appealing for investors.<sup>5</sup>

### **ROE= Net Income / Book Value**

Some say that a “healthy” company produces an ROE in the 13% to 15% range. Like all indicators, the numbers are only meaningful if compared with other companies in the same industry.

Although useful, the ROE can be misleading if used as the only indicator alone.<sup>6</sup> The ROE can be deceptively high if a company chooses to raise funds to pay off debt by borrowing or taking out loans instead of issuing out new stock. Consequently the book value will be reduced. This lower book value will boost the ROE because of dividing by the smaller number.

Similarly, write-downs, write-offs, stock buy backs and other accounting changes that result in a reduced book value result in misleading ROE values because there is not an improvement in profit.

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<sup>5</sup> Francis and Ibbotson

<sup>6</sup> <http://stocks.about.com/od/evaluatingstocks/a/re.htm>



## 2.2 EPS

Earning per share is one of the best indicators of a company's profitability<sup>7</sup> because it shows the earning gained from an original investment. In fact it tells what part of the company's profit is being dispensed for every share of stock (common).

EPS is calculated by taking the net earnings and dividing them by the number of outstanding shares. The weighted-average of outstanding shares should be used because the number of shares can change constantly. Even so, often the number of shares at the end of a period is used for simplification purposes.

$$\text{EPS} = \frac{\text{Net Earnings (Net Income - Dividends on Preferred Stock)}}{\text{Outstanding Shares}}$$

Theoretically the company with the higher EPS is "better" – especially if compared with other companies within the same sector. But as with the other indicators, EPS only tells part of the story.

Another type of EPS is the diluted EPS which shows the fully diluted shares outstanding. It expands on the basic EPS because it includes convertibles, warrants and stock options in the outstanding shares. This would produce a lower EPS because of the increase in the outstanding shares. In this way the diluted EPS shows a "worst case" scenario of EPS.<sup>8</sup>

EPS is often considered to be the single most important variable in determining share price and also plays a major roll in the calculation of the P/E ratio as it is the denominator.<sup>9</sup>

## 2.3 P/E

The price to earnings ratio helps give investors an idea what the market and shareholder are willing to pay for the earnings of the company. It looks at the relationship between

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<sup>7</sup> <http://www.investopedia.com/terms/e/eps.asp>

<sup>8</sup> [http://en.wikipedia.org/wiki/Diluted\\_EPS](http://en.wikipedia.org/wiki/Diluted_EPS)

<sup>9</sup> <http://www.investopedia.com/terms/e/eps.asp>

the company earnings and the stock at hand. Probably the most popular and widespread of all the ratios, the P/E ratio is calculated by dividing the share price by the EPS, mentioned above<sup>10</sup>.

### **P/E = Stock Price / EPS**

There are two types of P/E ratios: the trailing and the forward P/E. The trailing, as the name would imply, takes data from the past “trailing” year reported earnings and the forward uses forecasted data which has been projected for the coming year<sup>11</sup>.

The P/E ratio tells the investor how the market values the stock. If the P/E ratio is higher, the investors are paying more than when the P/E ratio is lower. However, if the P/E ratio is high, for instance over 20, and the investor is willing to pay that, then they are expecting high growth, as in a growth stock. Some investors, however, just see an overpriced stock. In this case the high P/E ratio and consequent high price should be compensated for by even more growth in the future. This would mean that the market has high hopes for the stock and the market will bid up the price in the future.<sup>12</sup>

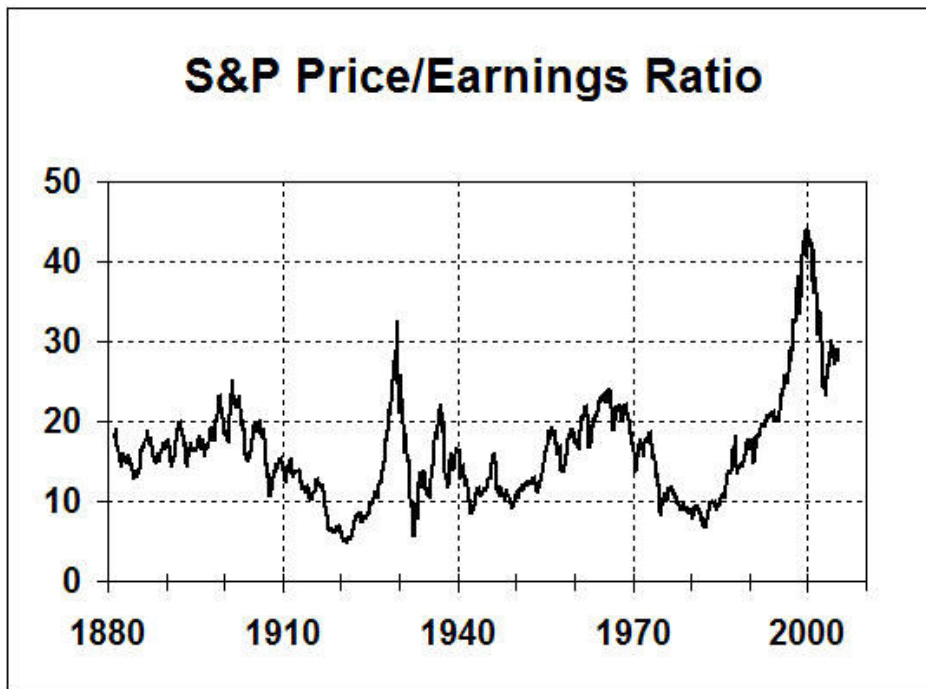
Higher growth would also imply that there would be little to no dividend payments, as this capital would be reinvested for further growth. Most companies with P/E ratios over 20 (taken as a rule of thumb) are often younger companies that are growing at a rapid pace. A lot of this was seen in the early 2000s when the technology bubble occurred. In this case there was such rapid growth, especially in internet start-up companies, that the P/E ratios were sometimes in the 40s and even 50s. Although more of an extreme than a norm, this shows that the high P/E ratios will not necessarily deter investors if the market supports the growth of these companies. These high P/E ratios can be seen in the following graphics. The figure shows that during the internet start-up bubble in the late 1990s, the P/E ratio was much higher than in years before. The average almost reached 30, supporting the growth company boom.

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<sup>10</sup> <http://stocks.about.com/od/evaluatingstocks/a/pe.htm>

<sup>11</sup> <http://www.answers.com/topic/price-earnings-ratio?cat=biz-fin>

<sup>12</sup> <http://stocks.about.com/od/evaluatingstocks/a/pe.htm>



**Figure 1 Average P/E Ratios**  
**Source: Generational Dynamics**

P/E ratios can of course vary significantly over time. However, it can be generally said that an average P/E ratio for the market is around 15. It has gotten to be as low as 6 during recession times or even during a depression, and can far surpass 20 during times of economic expansion.

On the other hand companies with low P/E ratios could be caused by several factors. Either the market shows no support for the stock, as some say a “vote of no confidence” for the stock, or the company could just have a rough period and be overlooked for the time being.<sup>13</sup> Investors who find these valuable stocks (to be discussed later) can make fortunes from the potential they hold.

Of course investing in high P/E ratio stocks is much riskier than in low P/E stocks. Because the stock is already priced higher than valued, as shown by the high P/E ratio, the losses which could be suffered are much greater with these stocks than with those

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<sup>13</sup> <http://stocks.about.com/od/evaluatingstocks/a/pe.htm>

which are undervalued, if the investors expectations regarding the stock prove to be false.

## **2.4 PEG**

The PEG is a ratio used to determine the value of a stock, although it takes the P/E ratio discussed above and goes one step further and takes growth into account. Because future growth can only be projected, the PEG is only a speculation and may not be as accurate as other indicators. It is sometimes, however, favored over the P/E ratio because it does take growth into account, even if only speculatively. The PEG is calculated by taking the P/E ratio and dividing it by the projected EPS growth:

**PEG Ratio= P/E / Annual EPS Growth**

As with the P/E ratio, and because the PEG is an indicator of a company's potential stock value, a higher PEG generally means that the stock is overvalued and the lower PEG means that it is undervalued.

“A popular rule of thumb in picking growth stocks is to consider a stock underpriced if its PEG falls much below 1, and overpriced if the PEG is much greater than 1.”<sup>14</sup>

Ken Little, a financial analyst, says the following about PEG:

“A few important things to remember about PEG:

- It is about year-to-year earnings *growth* and
- It relies on projections, which may not always be accurate.”<sup>15</sup>

However, since the market is continually asked questions about the future, the PEG can prove to be quite valuable if taken into consideration among other indicators.

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<sup>14</sup> <http://www.stockpickr.com/list/today/>

<sup>15</sup> <http://stocks.about.com/od/evaluatingstocks/a/peg.htm>

## 2.5 P/S

The price to sales ratio is not much different than the P/E ratio discussed earlier. The difference, however, is that instead of earnings as the denominator, sales per share is used.

There are several benefits for using P/S instead of P/E as a valuation gauge. For younger companies that may not have any earnings or at least enough earnings to determine a P/E ratio, the P/S can fill in for this missing link. Otherwise, it is not possible to consider valuation of company earnings. A good example of this was Microsoft which at one point in the company's life, did not have any earnings.<sup>16</sup>

P/S shows the investor what the market values the sales of a company, as the P/E would for the earnings. Similar to the P/E ratio, the lower the number, the better the value, theoretically. If the P/S ratio is high, the stock could be either overvalued or a good candidate as a growth stock.

There are several ways of calculating the P/S ratio. One way is to divide the market capitalization of the stock by the company revenues. Another way is to divide the stock price by the sales per share.<sup>17</sup>

### **P/S = Market Cap / Revenues**

A general rule of thumb is that reasonably priced stocks have a P/S ratio between three and eight.<sup>18</sup> Of course, as with the other indicators and numbers, investors should not consider P/S alone, but rather consider multiple factors to draw conclusions.

## 2.6 P/B

Similar to the previous indicators (P/E and P/S) ratios, the P/B ratio takes market values of a company into consideration. This indicator, however, looks at the value of the

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<sup>16</sup> <http://stocks.about.com/od/evaluatingstocks/a/ps.htm>

<sup>17</sup> Bodie Kane Marcus (2005)

<sup>18</sup> <http://www.stock-investment-made-easy.com/growth-stock.html>

company's books determined by the market.<sup>19</sup> One can also find out a lot about the status of a company by its P/B ratio.

The P/B ratio is calculated by taking the book value taken per share and dividing the share price by this number.

### **P/B = Share Price / Book Value Per Share**

There are not too many differences in P/B to the others, although this indicator can be intuitively understood quite well. A company which is growing will have a higher P/B ratio because it has invested less in assets, mostly because it is growing and can put the money to better use for the growth of the company.

Similarly value stocks and therefore value companies would have a lower P/B because it is more asset-heavy and has more assets to increase the book value. This would be one of the first factors when determining whether a company is a value or growth company.<sup>20</sup> This will be discussed further in the next section, value stocks.

## **2.7 BtM**

One of the most important factors when distinguishing growth and value stocks is the book to market ratio (BtM). Sometimes called the market to book ratio, BtM is calculated with the book value of a company divided by the market value of the company.

### **Book to Market= Book Value of Firm / Market Value of Firm**

This fundamental shows the incurred appreciation of the value of invested capital (including retained earnings).<sup>21</sup> In this way it attempts to find securities which are either undervalued or overvalued by looking at the difference at the amount the market values the company, as opposed to what the book value is supposed to be. The book value

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<sup>19</sup> <http://www.lib.ksu.edu/subguides/business/businessinfo.html>

<sup>20</sup> <http://stocks.about.com/od/evaluatingstocks/a/pb.htm>

<sup>21</sup> <http://www.manalex.de/d/market-to-book-ratio/market-to-book-ratio.php>

takes the company's historical cost (accounting book value) and the market value is based on the market capitalization.<sup>22</sup>

It is generally said that any value above one shows an undervalued and conversely a value of less than one shows an overvalued company.<sup>23</sup>

In this way, value companies generally have higher BtM ratios and growth companies have lower BtM ratios.

## ***2.8 Profit and sales growth***

To determine how a stock has been performing, a common form of measurement is sales growth. This type of gauge for revenue growth measures the rate at which sales or revenue has grown over time. This can be measured in different intervals.<sup>24</sup>

This can be helpful for several reasons. Revenues increase for companies in new and popular sectors inevitably. With time, the growth of these companies can slow down, especially as the company grows in size. Revenues do not always imply that the company and therefore the stocks are making more money. Actually, the larger the company becomes, the easier it is for it to lose money. For this reason, revenues taken alone cannot show whether a company is profitable. Revenue does not necessarily mean profit. In the end earnings not including profits have no value for investors.

For this reason, profit growth is the most important factor to evaluate the company as it grows.

In an ideal world, profit would increase at a steady pace and consistently with revenue. In the real world, however, this is not the case. Most of the time costs increase and eat away at profit so that it is disproportional to revenue.

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<sup>22</sup> <http://www.investopedia.com/terms/b/booktomarketratio.asp>

<sup>23</sup> <http://financial-dictionary.thefreedictionary.com/Book-To-Market+Ratio>

<sup>24</sup> <http://www.stock-investment-made-easy.com/growth-stock.html>

On the flip side, if companies show profit growth outperforming revenue growth, the company could be displaying exceptional numbers and outstanding cost control. Stock prices could, as a result, skyrocket.

As with all the other multiples, when looking at a single indicator the numbers can be misleading if not looked at carefully. Extraordinary growth in earnings can result from business moves, not operations themselves. Mergers and acquisitions can taint the validity of the numbers for the year because the one-time gain increases the earnings for the year. Although correct, the numbers do not tell the entire story. Similarly, if a company disposes of assets or equity, the bookkeeping results in what would look like profit or lowered expenses. This is absolutely legitimate, just not necessarily the entire picture.

For this reason historical data and other multiples need to be looked at from years past to settle the question regarding the strength of the numbers at hand and rule out any unusual factors that would have pumped up performance.

Profit growth rate is definitely an integral part of evaluating growth stocks, although not the only step.

In the following chapter, growth and value stocks will be discussed individually taking into consideration what fundamentals discussed above apply to which asset class and what kinds of implications the definitions have for the type of investing including pros, cons and differences.



## 3 Growth and Value Stocks Defined

### 3.1 Growth Stocks

#### 3.1.1 Definition

In the world of investments, growth stocks have come to mean many things to investors. There is no single definition given to explain what growth stocks mean or for what they stand. With what would seem to be an obvious observation, growth stocks originate from and are stock from a company whose earnings and revenue are growing and have grown faster than the average industry in which the company is in, as well as in the market as a whole within the last few years.<sup>25</sup> Of course this means as well that the profits of such companies were higher than the average and showed tendencies to continue to maintain their higher level of profit growth.<sup>26</sup> They are also expected to continue growing at an above average rate in comparison to the market.<sup>27</sup> Because these companies are growing at a high rate, dividends are rarely paid out on the stock because these dividends are more valuable for reinvestment within the company for further expansion than being paid out to the investors. These reinvestments help to finance capital projects within the company which in turn will hopefully add value to the company over time.<sup>28</sup> Most companies with a technological interest fall into the category of growth stocks. This has proven to be true especially at the end of the 20<sup>th</sup> century.

However, even when a company is classified as a “growth company” this does not necessarily ensure the classification of the company’s stock as growth stock. Often the stocks of growth companies are considered to be overvalued, even if they can continue to grow. Growth companies with growth stocks are often said to be undervalued, albeit their higher prices, because they will continue to grow and achieve their fair value on the market.

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<sup>25</sup> Bodie Kane Marcus (2005)

<sup>26</sup> <http://www.allbusiness.com/glossaries/growth-stock/4946552-1.html>

<sup>27</sup> <http://www.answers.com/topic/growth-stock?cat=biz-fin>

<sup>28</sup> Francis and Ibbotson

For this reason growth stocks are very attractive because they present the possibility of potential earnings stemming from growth within the company.<sup>29</sup> Sometimes growth stocks are called glamour stocks for their glamorous i.e. successful history and potential. However, one must not forget that growth stocks are at the same time a riskier investment than “average stocks” because of their high price to earnings ratio (P/E), which will be discussed in more detail later, and their predisposition to not make dividend payouts. As with any investment, there is no guarantee for the performance of growth stocks.

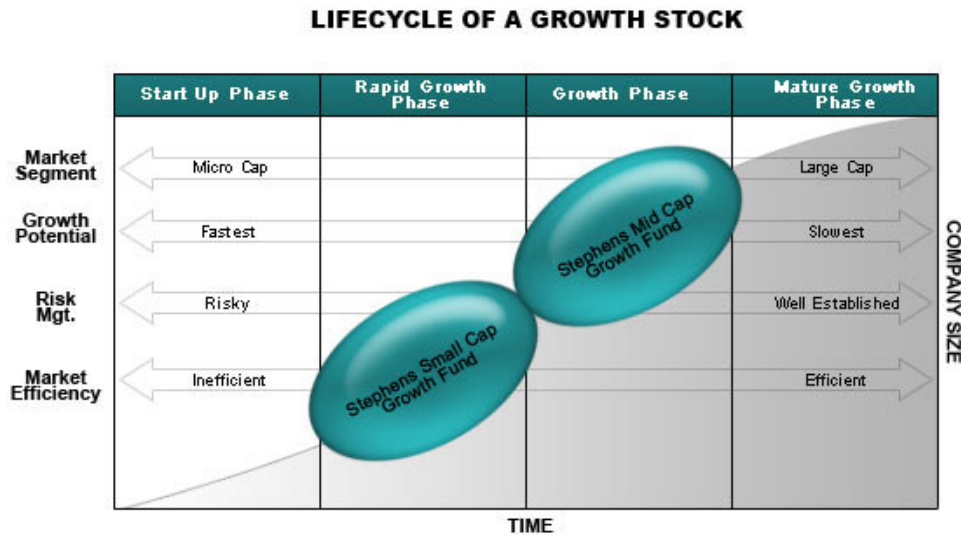
In general investors agree upon the following definition as offered by the Investment Dictionary: A stock trading, relative to the overall market, at a high price-to-earnings ratio (or at a relatively low book-to-market ratio) because the market anticipates, relative to the overall market, rapid earnings growth.<sup>30</sup>

In Figure 2 below, various stages in the life of a growth stock are visualized. Stevens, an investment fund provider, shows several important stages within the lifecycle of a growth stock. As time passes, and the larger the company becomes, growth slows and the company becomes less risky and more efficient.

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<sup>29</sup> [http://www.moneychimp.com/glossary/growth\\_stock.htm](http://www.moneychimp.com/glossary/growth_stock.htm)

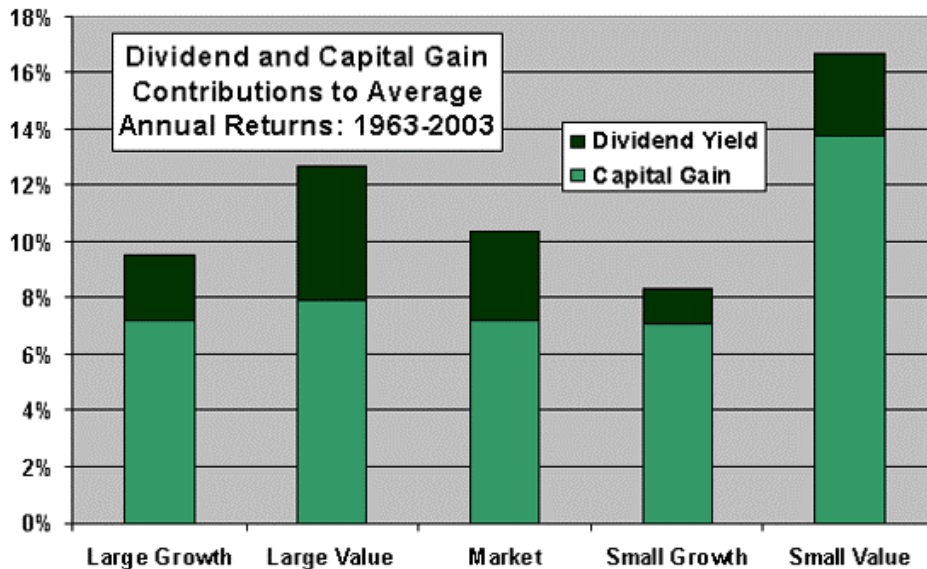
<sup>30</sup> <http://www.investment-dictionary.com/growth-stock.php>



**Figure 2: Lifecycle of Growth Stock**  
**Source: Stephens Funds**

### 3.1.2 Summary

As mentioned before, growth stocks are defined as stock from a company whose earnings or revenue are expected to grow at an excessively high rate. In this way these companies are expected to also outperform the sector average as well as the market. These companies have the potential to surpass value companies in the long run, but carry a great amount of risk at the same time. A lot of companies labeled as growth companies turn out to be misjudged and either go bankrupt or turn out to be overvalued. Another point is that growth stocks rarely pay out dividends or they are extremely insignificant. The money used for dividends is used for reinvestment and further expansion within the company. This is visible in the figure below. The dividend yields from growth stocks account for much less of the entire return than for the value stocks. Proportionally, value stocks' returns consist of a higher percentage of dividend yields than growth stocks.



**Figure 3: Dividend contributions**  
**Source: CXO Advisory**

Other common criteria for growth stocks and factors growth investors focus on are high P/E ratios (some say above 20) at least in relation to similar companies, high P/B and high P/S ratios and, as just mentioned, investors do not care much about dividend yields. As “rantaboutit” from Zimbio Personal Finance puts it,

*“In summary, growth investing is defined based on fast growth (high growth rates for earnings, sales, book value, and cash flow) and high valuations (high price ratios and low dividend yields)... Growth investors are generally in for short time frame compared to value investors. In general, value stocks tend to hold up better during stock market downturns.”*

Although growth stocks are valued with a high P/E ratio and therefore cost more in relation to other companies in the same industry, the risk involved can pay off handsomely with colossal profits. Many of the current market leaders and previous sector leaders such as Microsoft, McDonald’s, Wal-Mart and Home Depot filled the criteria of growth stock with high indicator numbers. Because of the high risk of purchasing stock with high indicators, many failed to benefit from the potential of these stocks.<sup>31</sup>

<sup>31</sup> <http://www.streetauthority.com/terms/g/growthstock.asp>

Of course the path of growth stocks does not always pan out to be a money maker. Investors are willing to pay the money for the stocks when they think they have the potential to be money makers; their expectations are very high. However, these high expectations of the stocks will punish the stock severely if the stock shows signs of weakness, regardless of how small or seemingly insignificant. This could be set off even with a reduction of a few cents in the stock price. For instance, internet start-ups faced this same fate of declining prices when investors lost faith in the companies after slight losses.<sup>32</sup>

## **3.2 Value Stocks**

### **3.2.1 Definition**

Similar to growth stocks, value stocks also have many definitions. Investors view value stocks as bargains. For one reason or another, the market has undervalued the stock and the investor wants to take advantage and make a profit before the price is corrected.<sup>33</sup>

Generally these stocks are considered to be undervalued or even a good value because their fundamentals indicate that they are stocks which should be priced higher than they are. They can also be attractive because of multiple important assets held by the company, commonly cash and/or real estate assets.<sup>34</sup>

For this reason price appreciation is expected because the undervalued stock should adjust to demand. In this way, value stocks are considered a good value to the person wanting to purchase it. The expectation of price appreciation would imply that it is a good value to buy when it is under the fair price.<sup>35</sup>

There are several options for identifying growth and value stocks. Under these options, valuation methods are most common. From a fundamentals standpoint, value stocks

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<sup>32</sup> [http://www.mutualofamerica.com/articles/capman/CM21/articles\\_2.asp](http://www.mutualofamerica.com/articles/capman/CM21/articles_2.asp)

<sup>33</sup> <http://stocks.about.com/od/investingphilisophies/a/Groval061405.htm>

<sup>34</sup> [http://www.moneychimp.com/glossary/value\\_stock.htm](http://www.moneychimp.com/glossary/value_stock.htm)

<sup>35</sup> Bodie Kane Marcus (2005)

have low numbered indicators such as P/E, P/B and P/S ratios, and high a dividend yield. Because of their positive fundamentals, their prices should be higher than they really are. As alluded to, the most accepted of indicators are those there is a high dividend yield and low P/E are two commonly understood indicators, although this is not always universal.<sup>36</sup>

According to Ken Little, characteristics of value stock are the following:<sup>37</sup>

- *“The price earnings ratio (P/E) should be in the bottom 10% of all companies.*
- *A price to earning growth ration (PEG) should be less than 1, which indicates the company is undervalued.*
- *There should be at least as much equity as debt.*
- *Current assets at twice current liabilities.*
- *Share price at tangible book value or less.”*

In theory, value stock prices are low because they have gone out of favor with investors and have lost value because investors have lost faith in the company. This can be due to any number of factors, although, this usually tends to be temporary. If the state of the market changes and investor opinions regarding the stocks change, value stocks will most likely also change and the prices will increase.

Value stocks, unlike growth stocks, pay out dividends. Because value companies are not focused as much on further development like growth companies, the dividends are paid out to their investors. Another difference is that value stocks do not tend to perform as well in bullish market conditions, unlike growth stocks.<sup>38</sup> Instead they tend to show better results during bearish times when the glamour stocks of growth companies stumble. For this reason, many investors like to include both in their portfolio and hedge their risk in either market condition.

As mentioned earlier, value stocks have often lost favor among investors, often stemming from bad news about the company through either negative earnings reports,

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<sup>36</sup> <http://www.investorglossary.com/value-stock.htm>

<sup>37</sup> <http://stocks.about.com/od/investingphilisophies/a/Groval061405.htm>

<sup>38</sup> <http://www.investorglossary.com/value-stock.htm>

bad press or legal battles, among others.<sup>39</sup> From this standpoint it becomes clear for many value investors that good stocks, even in bad times, will still perform well in the long run. Also, when they are down there is only one direction for them to go: up.

Even if the stocks are not performing at their best, value stocks are not always a bargain. Even so, a lot of value stock contenders have reached their year lows (52 week low) such as the “dogs of the Dow.”<sup>40</sup>

These are the ten companies posted daily with high dividend yields. They can be considered value stocks because of the dividends yields. Dogs of the Dow invest in ten stocks with the highest dividend yields from the Dow Jones at the start of each year. It is adjusted yearly thereafter.<sup>41</sup>

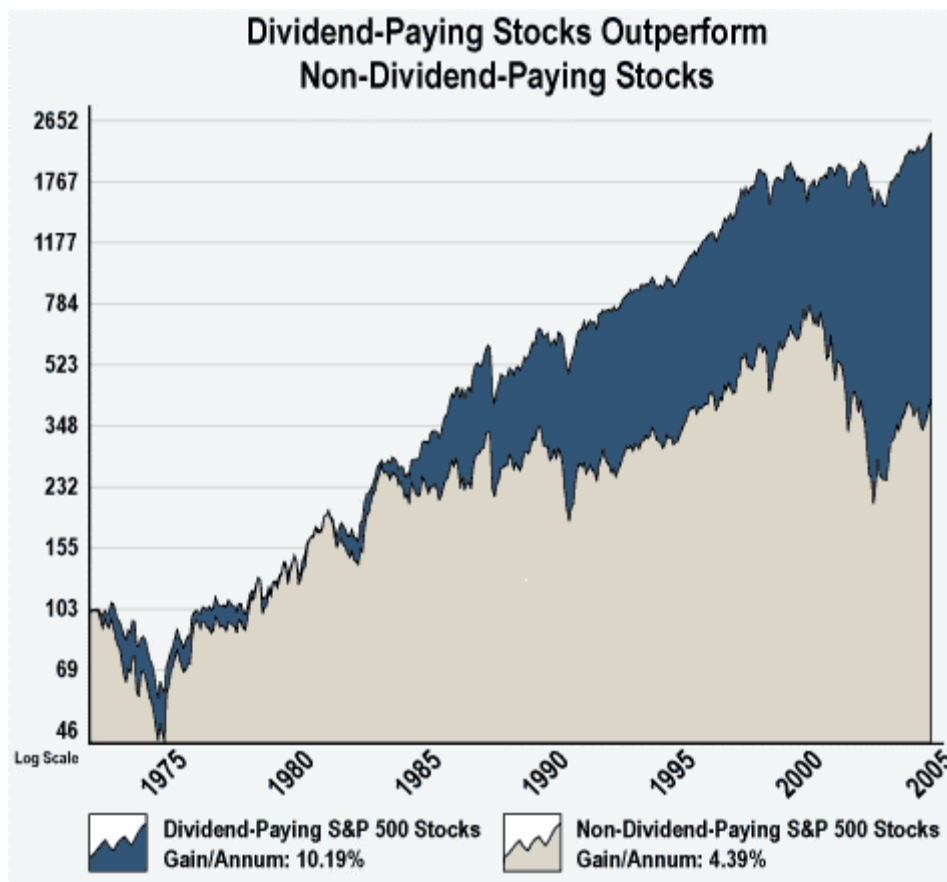
In the figure below, one can see how valuable the dividend yield can be. Between 1970 and 2005 the annual return for non-dividend paying stocks was only 4.39percent whereas dividend paying stocks gained 10.19percent on average per year. This results in an astounding difference.

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<sup>39</sup> [http://www.dogsofthedow.com/Value\\_Stocks.htm](http://www.dogsofthedow.com/Value_Stocks.htm)

<sup>40</sup> Francis and Ibbotson

<sup>41</sup> <http://www.investopedia.com/terms/v/valuestock.asp>



**Figure 4: Dividend vs Non-Dividend Paying Stocks**  
**Source: Ned Davis Research**

One way of finding the value of the value stock and consequently deciding whether any options are worth buying is evaluating the cash per share (book value can also be helpful) and comparing it to the stock price. If it is higher than the price, the stock could be a value candidate.<sup>42</sup>

This poses the biggest problem: how does an investor calculate the intrinsic value of a value stock? Forbes Magazine's Investopedia suggests using a "margin of safety" meaning purchasing value stocks at enough discount so that there is enough room allotted for miscalculation of the estimated value. This is based on an idea from renowned financial analyst Graham.

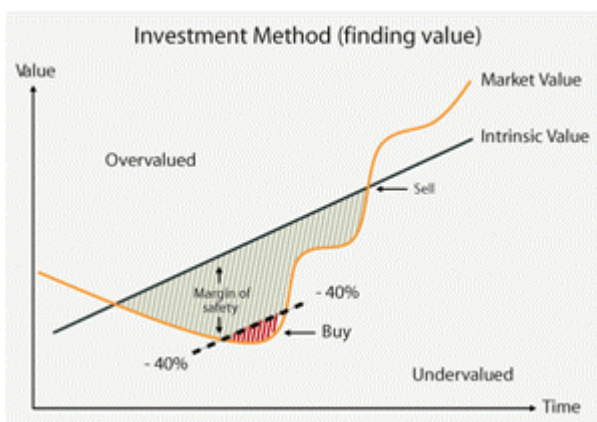
<sup>42</sup> Bodie Kane Marcus (2005)



Value investing originates from ideas in investing, strategies and speculation as studied by Graham and Dodd in 1934. Their paper, “Security Analysis”, looks at market strategies and lays the foundation for value investing, as it is known today. Even though value investing has looked different and had many definitions over the years, the fundamental core to value investing involves identifying underpriced assets due to their fundamentals.

Benjamin Graham, mentioned before, is often considered the “Father of Modern Security Analysis.” He wrote the paper “Security Analysis” which became one of the staple textbooks for modern investment theory. Warren Buffet was also his student and he thought very highly of Graham. Graham has been called the “Dean of Wall Street” and thought of by many as the founder of value investments.

As Warren Buffet puts it, “the essence of value investing is buying stocks at less than their intrinsic value.” The margin of safety mentioned earlier is the number between the market price and the intrinsic value as mentioned by Buffet. This is illustrated in Figure 5 below. The linear line is the intrinsic value and the red area shows the area Warren Buffet would consider a good time to buy a stock because it is below its intrinsic value.



**Figure 5: Intrinsic Value of a stock**  
**Source: Sparinvest**

Warren Buffet has set out over the last 25 years to focus on “finding an outstanding company at a sensible price.” He believes this is more important than finding a “common” company priced as a bargain. This is how he set out his investment strategy which has earned him billions.

Value investing, like growth investing, has been proven as a very successful strategy of investing. In fact, many academics and financial advisors as well as analysts have done studies to prove that value investing is more successful than growth investing over time. Three of these papers are:

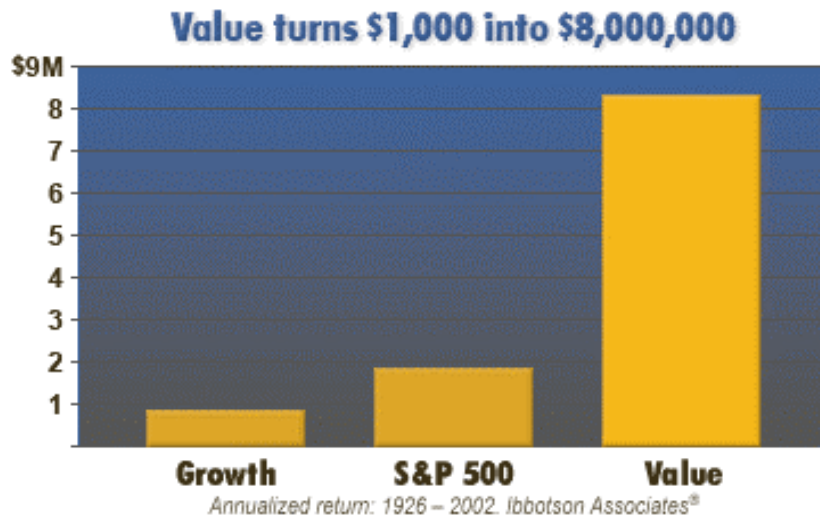
- ⇒ The Cross-Section of Expected Stock Returns, by Fama & French, 1992, Journal of Finance
- ⇒ Firm Size, Book-to-Market Ratio, and Security Returns: A Holdout Sample of Financial Firms, by Lyon & Barber, 1997, Journal of Finance
- ⇒ Overreaction, Underreaction, and the Low-P/E Effect, by Dreman & Berry, 1995, Financial Analysts Journal

Several of these studies along with many additional will be discussed later in the paper.

Value is reputed to often beat all other types of stock investing across all types of markets.<sup>43</sup> Ibbotson, a finance professor and financial analyst, and his associates found that value stocks had returns in the amount of (on average) 12.6percent annual return during 1926-2002, according to a study done in 2003. They found that if \$1,000 was invested in 1926, the portfolio would have a value of more than \$8,000,000 76 years later. In the figure below, this phenomenon can be seen clearly. Value stocks have consistently beaten the other options.

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<sup>43</sup> <http://www.fool.com/shop/newsletters/14/index.htm?source=eivotlnk8250001>



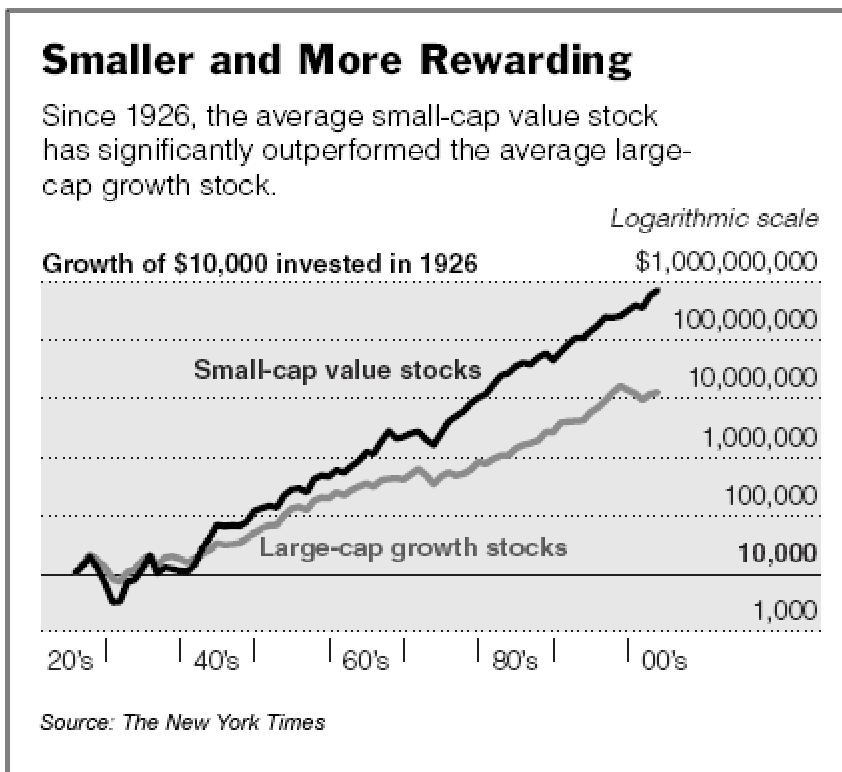
**Figure 6: Value Growth vs Growth and S&P 500 Returns from 1926 til 2002**  
**Source: Ibbotson Associates**

In one of his other studies, Ibbotson took the period between December 1968 and December 2002 and analyzed stock returns. During these 34 years, value stocks had returns upwards of 11.0percent per year, while growth stocks gained 8.8 percent, and the S&P 500 earned only 6.5percent.

This would imply:

- \$10,000 invested in the S&P 500 grew to \$84,710.
- \$10,000 invested in growth stocks grew to \$175,200.
- \$10,000 invested in value stocks grew to \$346,300.

The New York Times also published an article supporting an outperformance of value over growth. They provide data beginning in 1926 showing that small-cap value stocks earn 100 times more than large-cap growth stocks until present times. These results are seen in Figure 7.



**Figure 7: Small-Cap Value versus Large-Cap Growth**  
Source: New York Times

In the chapter to come, growth and value stocks will be compared in several ways, mostly based on their return differences, and reasons for their differences will be looked for as well as the question whether there is a value premium will be asked and finally, this topic will be delved into further.

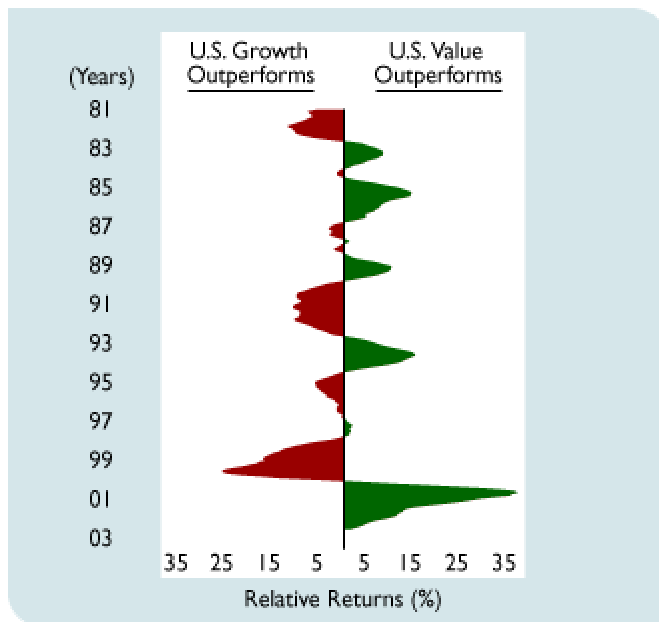
## 4 Comparison of Growth and Value Stocks

Growth and value are more than investment methods; they are a way for investors to narrow the stocks they will invest in. After all, investment strategies are formed because investors want to find the most profitable investment style for the least amount of money. History has shown that growth and value strategies tend to cycle which is performing better. During some periods growth stocks perform better, and during other periods

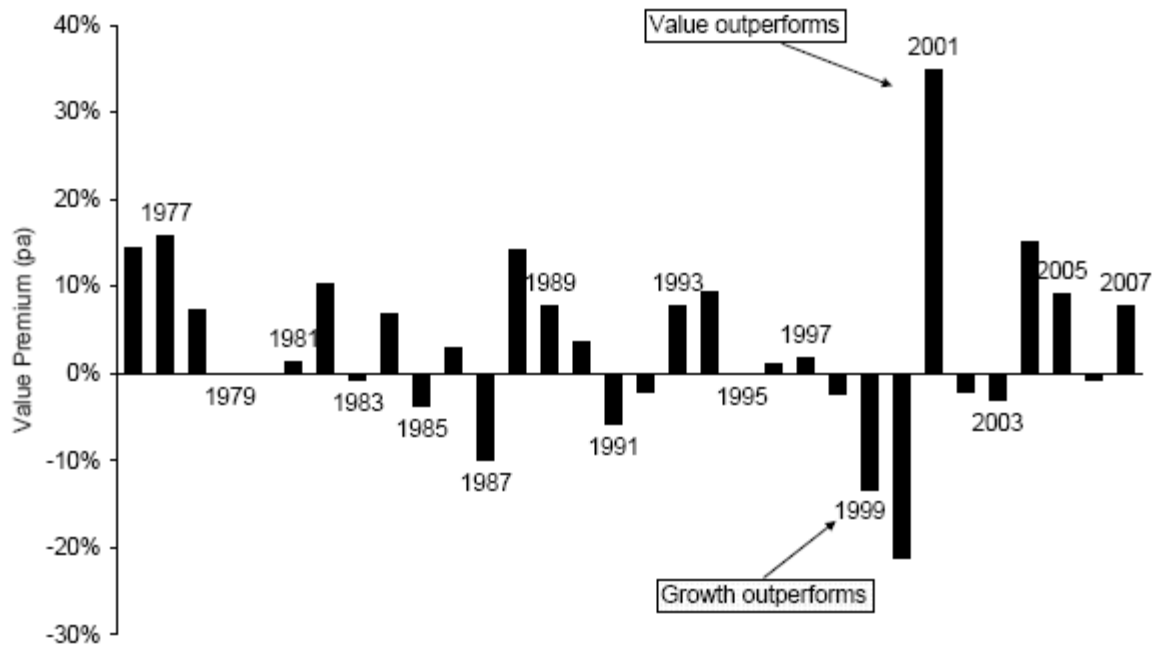
value stocks and strategies show better results. Which is the best investment strategy? Is one strategy better than the other? This is highly debateable, but there has been much evidence of a “value premium” for value investors even counteracting the years when growth stocks are more valuable. This value premium has also be empirically discussed and proved by many analysts, and will be discussed further in a later section.

#### 4.1 Historical premium differences

Historically, financial analysts have gone back and forth as to which asset class, growth or value, has outperformed the other. This can be viewed in Figure XX. Numerous arguments for and against both have surfaced, causing both arguments to seem valid. However, after careful evaluation, it seems to become clearer that value stocks tend to outperform in a “normal” market situation and only in extreme market conditions do growth stocks have the opportunity to overtake value stocks. In this way, growth only performs at its best when there are market extremes, causing an anomaly in stock investing. During the late 1990s this occurrence was at its peak. Internet start-up companies catapulted growth stocks into position number one. In the following figures, this can be seen. Until 2000 growth stocks dominated the market.



**Figure 8: Cyclicality of Returns**  
Source: Bernstein



**Figure 9: Growth and Value Performance**  
Source Melville Jessup Weaver

To illustrate this argument supporting systematic value outperformance of growth historically based on data alone, one of the top companies for growth and value indexing has been taken to assist in demonstrating the differences, Barra. Barra is similar to other growth and value indices and shows the systematic outperformance of value over growth.

Because the Barra growth and value indexes reflect other growth and value indexes of the then current time, it can be taken as a reflection of the greater picture.

On Barra's website the following is stated:<sup>44</sup>

*"In 1992, Standard and Poor's and Barra began a collaboration to produce Growth and Value subsets of S&P's industry-leading equity indexes. Academic research pioneered by Nobel Laureate William Sharpe, and continued by Eugene Fama, Kenneth French and others, have confirmed the validity of the growth/value distinction in terms of differential returns over time. The sole criteria for the S&P/Barra Growth/Value split is the book value of a common equity divided by the market capitalization of a firm."*

<sup>44</sup> <http://www.barra.com/Research/Description.aspx>

The indexes are constructed based on the factor of book to price ratio. The value index has companies with higher ratios and the growth index has lower book to price ratios. All index companies are taken and divided up between the two styles so that all index companies are used within one or the other index. Additionally, similar to the S&P indexes, the indexes are weighted according to market capitalization.

The index strategy has taken the investment approach which Sharpe used for the US stock market.

The index design is based on the research performed by Sharp, a financial analyst who researched the US stock market and was the 1990 Nobel Laureate for his groundbreaking research in equities. Sharp discovered that several factors including the growth vs value phenomenon and the size of the company can explain a large portion of equity return within the US market. These factors can mostly be explained through the P/B ratio and market capitalization. Fama and French also did a large amount of research in the similar field, finding supporting evidence for the same argument of the P/B ratio and market capitalization playing an important role in the variability in stock prices. In their paper from 1992 they proved this. This will be discussed more in detail later.

As touched upon earlier, there is no set definition for growth and value stocks. Instead general guidelines have been assumed by investors including using book to price ratios. This is beneficial because it is straightforward and “captures one of the fundamental differences between companies generally classified as value companies or growth companies.”<sup>45</sup> In addition, they are relatively constant over a period of time, especially more so than the alternatives of P/E, ROE or earnings growth. Consequently, the results are indexes with low yield.

There are more companies in the value index because the market capitalization of the growth index contributors are much higher than those in the value index.

The value index consists, as would be expected, of value companies with characteristics typical to value companies: low P/E ratios, high dividend payouts, as well as predicted earnings growth remaining low. Although the P/E ratio has hardly ever been greater for a

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<sup>45</sup> <http://www.mscibarra.com/products/indices/snp/index.jsp>

value index than a growth index, there have been times in history when this has occurred. One of these instances was between September 1993 and January 1994 when the S&P 500/Barra Value Index's P/E ratio was higher than that of the S&P 500/Barra Growth Index's. The cause stemmed from enormous losses from companies in the growth index being reported, catapulting the P/E ratio above the ratio of the growth index.

Typical industries which have companies in the value index are financial services, energy and utilities. Although it is not limited to them, the growth indexes also have typical industries such the technology sector and consumer concyclically inclined companies.

On another note, beta of the growth and value indexes also differs. Because growth indexes have the tendency to outperform value in times when the market is bullish and naturally in the flip situation underperform when it is bearish, beta for growth indexes are generally high.

According to Barra, there are times in which it is apparent that either a growth or value strategy is more profitable in the market. During a ten-year period starting in 1975 and going through 1984, the S&P 500/Barra Value Index undoubtedly towered above the growth index.

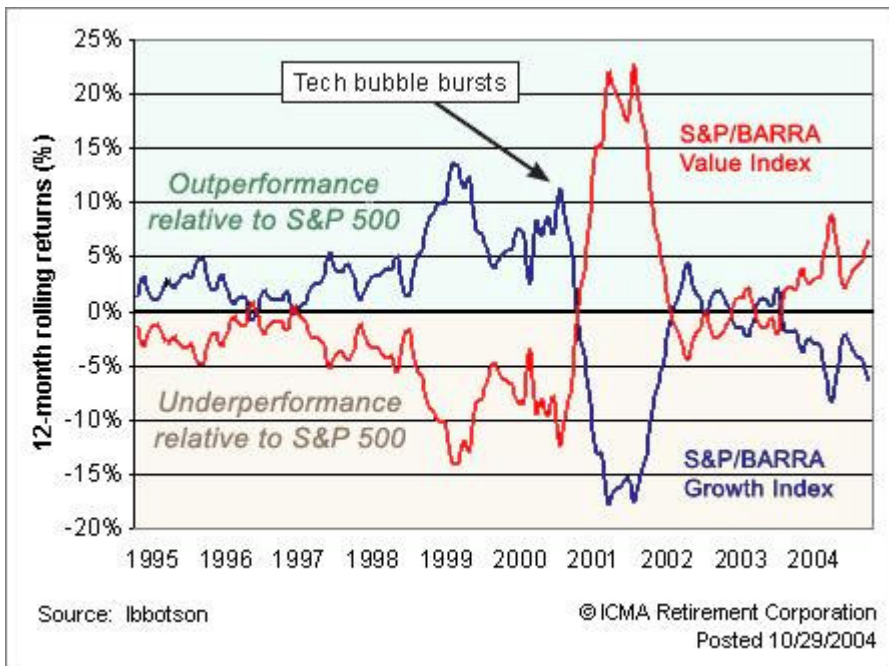
All of the Barra indices were constructed on differing dates, although using historical returns, the indexes were able to be tracked back to cover the dates missing from the later indexes. The following table shows the information regarding inception date and date effective of the S&P / Barra indexes.

Index	Construction Date	History Begins
S&P 500/Barra Growth and Value	May 1992	December 31, 1974
S&P MidCap 400/Barra Growth and Value	October 1993	May 31, 1991
S&P SmallCap 600/Barra Growth and Value	September 1996	December 31, 1993

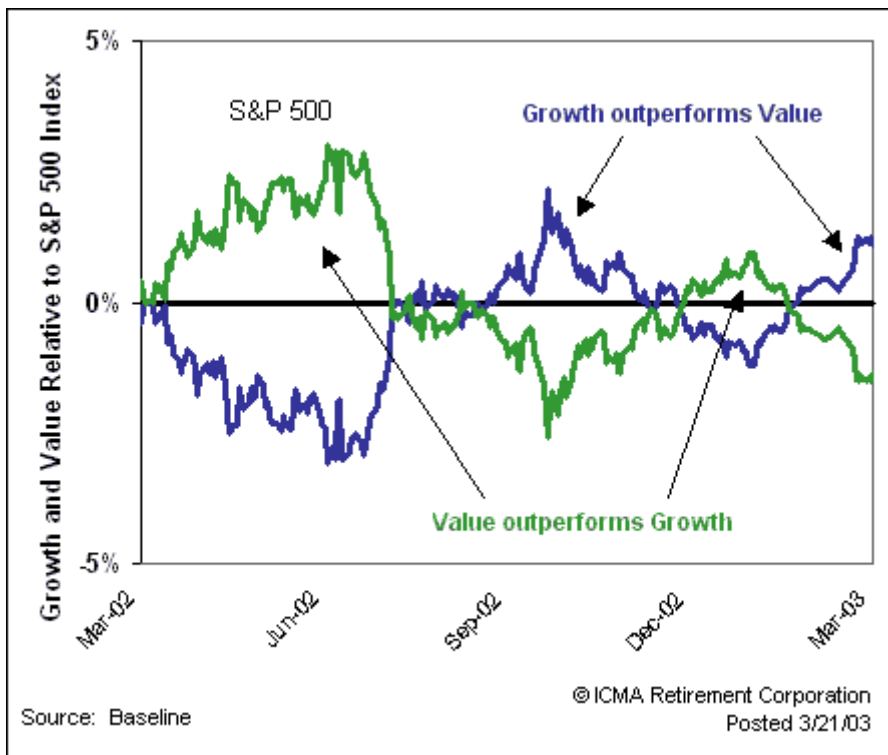
**Figure 10: S&P/Barra Inception Dates**  
**Source: Barra**



Historically, there have been varying results as to which index performed better, growth or value. In the two graphs below taken from S&P/Barra Index data, one can see that during different times in the last years growth and value have flip-flopped as the outperformer. The first picture, Figure 11, shows the two over a two-year span starting in 1995. The second, Figure 12, shows the year from March 2002 until March 2003 in which the outperformer changed several times within several months.



**Figure 11: Growth and value stock outperformance 1995- 2005**  
**Source: ICMA Retirement Corporation**



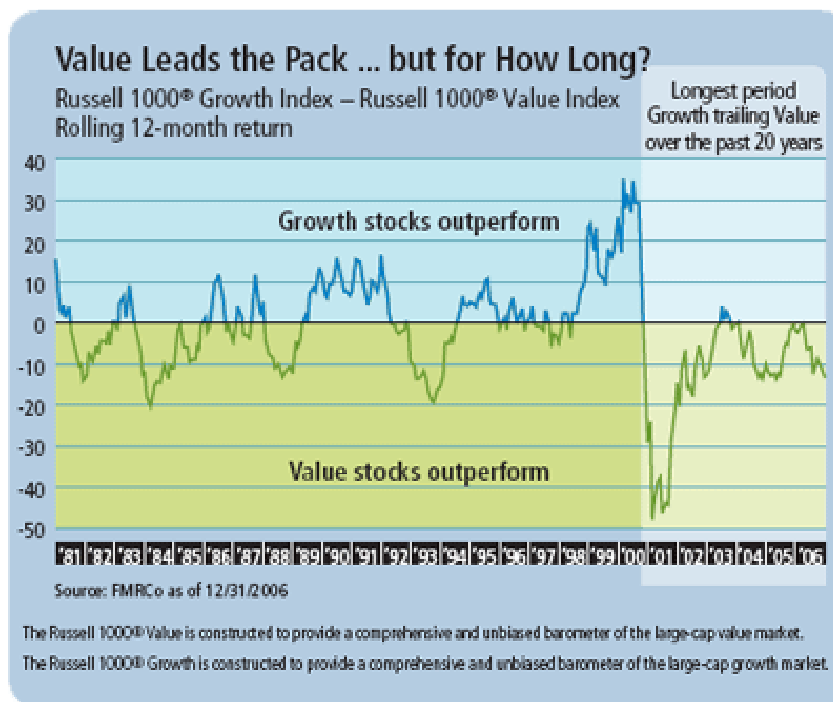
**Figure 12: Growth and value stock outperformance March 2002- March 2003**  
**Source: ICMA Retirement Corporation**

During more recent times, the summer of 2007 to be exact, Bespoke Investment Group noticed that the S&P Growth Index had outperformed the S&P 500 Value index for more than eight days during a time when growth stocks had been doing poorly. In fact, since 1990 this outperformance had only occurred four other times! The table below shows what returns they showed after the outperformance. The S&P 500 Value showed higher returns over further periods of time than the S&P 500 Growth or S&P 500 indexes.

Performance Following Eight Consecutive Days of Outperformance By Growth Over Value Stocks										
Date	Streak	S&P 500 Value (%)			S&P 500 Growth (%)			S&P 500 (%)		
		One Month	Three Months	Six Months	One Month	Three Months	Six Months	One Month	Three Months	Six Months
11/16/93	8	0.30	2.82	-1.59	-1.88	-0.35	-5.85	-0.79	1.24	-3.72
8/15/94	11	0.18	-2.40	1.38	1.96	4.38	7.38	1.08	1.04	4.43
11/11/96	8	3.50	7.34	12.53	1.47	7.32	16.28	2.44	7.32	14.45
11/29/99	8	0.99	-8.05	0.13	5.45	-1.14	-4.30	3.50	-4.25	-2.12
6/5/07	8	-	-	-	-	-	-	-	-	-
Average		1.24	-0.08	3.11	1.75	2.55	3.38	1.56	1.34	3.26

**Figure 13: Performance after Outperformance**  
Source: Bespoke Investment Group

From yet another graph it becomes visible that there are many different return results regarding growth and value indexes.



**Figure 14: Value versus Growth**  
Source: Fidelity

## 4.2 Reasons which lead to difference in returns

Investors can often be confused when confronted with the differences in growth and value stocks. The way in which they are different lays within how they are identified

within the market and most importantly by the investor, not how they are purchased and then sold as well as not being an indicator of value or ownership within a company.

As mentioned earlier, growth and value can be described as styles of stock investing. Although both have the potential of creating great wealth, neither approach can guarantee appreciation in stock market value or an increase in personal wealth; both have significant investment risk involved. Returns and stock prices can fluctuate significantly when changes in market conditions occur. When redeemed, stocks may have gained or lost significant or insignificant value. In addition, the higher the potential of high rates of return, the higher the degree of risk.

Both growth and value investments have shown historically to tend to run in cycles. Depending on a person's investment style and understanding the differences between the options can assist an investor in coming to a decision about specific investment goals. Even so, an investment in both can place a well-invested portfolio in an entirely new category. This strategy may help investors better manage the risk they are ready to take on and potentially enhance their returns over time.

With the assumed risk, which strategy is more likely to show high return probability on a long term basis? Although the battle between growth and value strategies is nothing new, there is still no overwhelmingly consensus from investors as to which style is better. Every investor has his own opinion. Many studies show that value strategies outperform growth strategies when looked at long term. On the same token, these value investors believe that looked at short term, value investors can find great buys because the prices are pushed to levels lower than they are priced at as fair. This has also been supported in various studies. Some of these studies will be looked at further in detail in a later section.

One point is certain, the differences in growth and value investing as well as the inherent characteristics of both inevitably lead to different returns. These intrinsic differences will now be discussed in further detail, to create an understanding of what effect the differences have on the stocks, which in turn support the argument of a value premium existing within growth and value investing.

Growth investing involves focusing on a stock that is growing with a focus on the future and future prospects. On the other hand, value investing entails investing in stocks that the market has underpriced that have a potential for an increase because they are undervalued and expected to overcome their momentarily bad position.<sup>46</sup>

Martin Lukac, a personal investment manager and tax advisor has given significant insight into growth and value investing tips, which in turn can help investors understand why growth and value stocks perform differently. Growth stocks tend to have the feature of solid growth rates. Generally it can be said that small companies having a 10% or greater growth rate for the past five years are desirable, whereas larger companies need to post a 5% to 7% growth rate. ROE is also an important factor to take into consideration. Also of equal importance are EPS and pre-tax margins. Projected stock prices can also lend a hand in potential value of the stock's returns.

One of the most important criteria to remember is that using personal judgment and common sense as well as one's gut feeling are also valuable decision criteria. Just because a stock does not meet all of the mentioned criteria does not automatically mean it cannot fit into a certain category. It is indeed possible for a stock to show signs of being a solid growth stock without filling all the criteria normally associated with this type of stock. For example companies which have not been around long enough to have fundamentals which can compete with top companies are still possible candidates if they are within a new and rapidly growing industry.

On the other side of the coin, Martin Lukac gives his opinion on value stocks as well. "Value stocks are often confused for cheap stocks, which they are not," he says.<sup>47</sup> "However, you may find value stocks listed on the lists of the companies that have hit a 52-week low. Investors look at value stocks as the bargains of investing. The idea is to choose a stock that is underpriced and wait for the market price correction. Consider the P/E ratio, which should be in the bottom 10% of all companies. Look for a PEG ratio of less than 1. A good value stock has at least as much equity as debt, twice as much liability as assets and a share price at tangible book value or less."

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<sup>46</sup>Bodie Kane Marcus (2005)

<sup>47</sup> <http://ezinearticles.com/?The-Difference-Between-Growth-and-Value-Stocks&id=395381>

In growth investing, long term investments with the intention of capital appreciation are what investors seek out. The individual stocks chosen will more than likely than not be stocks believed to produce faster than average share price increases over the next few years. These stocks have the inclination to outperform investments which tend to grow slower- such as income stocks- because the gains earned are reinvested so that the company can achieve further growth instead of paying this money out to investors and not furthering company growth. Of course, growth stocks can be extremely volatile and therefore riskier. One possibility of diminishing the risk added by growth stock to an individual portfolio is to purchase fund shares. This also saves transaction costs in the process.<sup>48</sup>

Growth stocks can be traced back to high quality booming companies with earnings that are anticipated to grow at a rate better than the market. As mentioned before, these stocks almost always have high P/E ratios and P/B ratios. Since the market and investors place a lot of value in these companies, they tend to be more valuable, sometimes considered overvalued, so that investors are willing to shell out the asking price to own shares of what they consider valuable.

Investors purchasing growth stocks are counting on future appreciation of the shares (difference in present value of stock- expected to be higher than purchase price- and amount paid for purchase) as what is valuable about the stock. Dividends cannot play an important roll because they are waived more often than not. Even so, every so often growth stocks do pay out dividends, although this is more the exception than the rule. However, in recent times the tax rate in the US for corporate dividends (through 2010) has been lowered, sparking interest in growth companies considering paying out dividends for the first time.<sup>49</sup>

Because they are highly popular, sometimes growth stocks may appear to be expensive and somewhat overvalued. For this reason, investors can prefer value stocks, undervalued at the other end of the spectrum.

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<http://www.360financialliteracy.org/Life+Stages/Retirement/FAQs/Investments/Whats+the+difference+between+growth+investing+and+value+investing.htm>

<sup>49</sup> <http://www.lasallest.us/content.cfm?ContentID=1022&disclaimer=accept>

Going further, it would make sense as well that growth fund managers, managers of funds consisting of growth stocks, would also look for high quality, booming companies with high prospects of further positive performance to go along with their current track record. As always nothing is guaranteed and all of these assumptions are based on speculation. Although, because of their assumptions the investors are willing to pay high multiples with the hopes that the companies will continue to grow. They are willing to undertake this risk, even though the risk of the overconfident prices falling sharply even with the slightest of negative news coming out about the company. This could especially be the case if earnings start to dip lower on Wall Street; investors are less forgiving for growth stock losses.

On the other side of the spectrum to growth stocks, value stocks are the type of stocks that are being traded at a price lower to that than what the fundamentals- dividends, profit and sales- would portray them to be valued. Although the value stocks generally have steady indicators, the companies have “fallen out of favor” for one reason or another and have lost value, leaving them at a superb price. Sometimes the stocks are under the historic levels the stock had been accustomed to or they are just not yet recognized by investors as having a positive future. Often, bad news or insignificant incidents have affected the companies which in turn raised awareness and skepticism about the company’s long term scenario.

Investors focusing on value stock are generally out for investment over a longer period of time because they believe the stock has yet to perform at its best. In this way they must be very patient to wait for appreciation of the stock. Growth investors, on the contrary, are less patient and see the period of investment being more short term, especially in comparison to the value investors. Because of these characteristics, value stocks often fend better when the market has a recession or turndown.

Value investors make investment choices based on fundamentals such as profit, sales, net current assets, book value etc. Since the fundamentals would indicate otherwise, these stocks are bargains in the eye of the investor. Hence, value investors often avoid blue chip stock because the share price is valued often too high, regardless of the

stability and track record of the company. Instead the investor looks for companies which have lost popularity among investors for the time being. Because it is out of favor, the stock is priced better than a stock that is in high demand. Through this action, the investor is betting that the price will make it back to its fair price at a higher level at a time when the stock becomes more well-liked. Similar to growth funds, there are mutual fund specializing in value stock investments for investors wanting to avoid individual share investments and aiming for more of a diversified value stock portfolio.

The fundamentals of value stocks show usually a low P/E ratio and P/B ratio. As mentioned before, these stocks are purchased with the intention and expectation of the stock to increase in value, living up to its full potential when the market realizes the true value of the company. This would result in rising share prices. Accordingly, if purchased while undervalued, they would have the potential in gaining more in value than a growth stock that has already increased in value and had more to lose than gain.

As alluded to earlier, value funds are managed with the intention of looking for companies that are not at the list of favorable companies, but fit into the good fundamentals category. The fund is managed in the same way as value stocks so that the stocks are bought below their competitors' stock price values. Often these investors believe that these stocks became value stocks because other investors reacted dramatically to negative news.<sup>50</sup>

In a nutshell, the basic idea behind value investing can be summed up by saying that the investor expects the stock of a company to regain its true and fair value when the other investors realize the company's intrinsic value. Because this can take time, value investors must often have a high tolerance for patience while waiting for the market to turn their way.<sup>51</sup>

Finally, growth and value stocks each have times in which they tend to excel. During bull markets growth stocks have a better track record. Conversely, value stock fare better

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<sup>50</sup> [http://planning.tdameritrade.com/srl/tda/library\\_article.jsp?tid=0039&client=tda&catid=000646](http://planning.tdameritrade.com/srl/tda/library_article.jsp?tid=0039&client=tda&catid=000646)

<sup>51</sup> <http://www.axaonline.com/rs/3p/sp/5040.html>



during bearish markets. Naturally this is historic and can change within the blink of an eye, but traditionally this has been the case.<sup>52</sup>

### **4.3 Value outperformance of growth?**

*"This year we're losing ground to growth but over the long haul we're comfortable knowing that history is in our favor" Steven Scruggs*

According to Morningstar, during the past years, going as far back as ten, fifteen and 20 years, small cap value stocks have consistently performed better than growth stocks of any size and large stocks on the whole. In fact, since 1978, small cap value stocks have also outperformed staple benchmarks of the market. Going even further back to 1928, the small-cap value stocks still continued to show better returns than small-cap growth stocks and larger stocks when looked at over time according to financial service managers at Thompson Siegel & Walmsley<sup>53</sup>

Brett Hawkins, manager of the Old Mutual TS&W Mid-Cap Value fund says "Almost any time period really indicates that small-cap value for a long-term investor is just a superior place to be."

In the Figure 15, small value is shown to beat small growth over all taken rolling time periods of one year, three years, five years, ten years, fifteen and twenty years. Also, the longer the rolling period, the better the results look for small-cap value stocks.

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<sup>52</sup> [http://www.mutualofamerica.com/articles/capman/CM21/article\\_2.asp](http://www.mutualofamerica.com/articles/capman/CM21/article_2.asp)

<sup>53</sup> <http://www.smartmoney.com/undertheradar/index.cfm?story=20071115>



**Figure 15: Small-Cap Value vs Small Cap Growth Stocks**  
Source: Index Funds Advisors

Recently, however, it is clear that small-caps value stocks are lagging behind. By the end of October 2007, the Russell 1000's small-cap value index was down 2percent while the Russell 1000's small-cap growth index is up a whopping 14percent, as Morningstar reported. The large-cap growth and value indexes achieved returns upwards of 17percent and 6percent.

Interesting enough, small cap value stock values have been decreasing as well. For the last several years the Russell 2000s value index's P/E ratio had a difference of only nine points in comparison to the growth index. Nowadays this difference is around seventeen.

Ric Dillon who is the manager of the Diamond Hill Small Cap fund has been quoted as saying the following regarding growth and value stocks, "Over short periods of time, stocks move on the basis of emotion. Over long periods of time stocks move on the basis of economics. Growth investors can become like momentum investors who are

seeing things do well and feel like they have to get into it. It happened in the 1990s and we're seeing it today."

Dillon is of the opinion that there are currently numerous value stocks which are underpriced with fantastic continuing prospects. One of these companies is a small-cap which lost 21percent to date. Because it is estimated at being half of what it should be worth, it has high potential of terrific returns.<sup>54</sup>

In addition, Dalbar has found that investors end up hurting their chances in picking successful investments because investors wait too long to invest until markets prices have risen. In this way, many investors have less than perfect market timing because they invest when the prices are already high, then they begin selling immediately after the market dips down, even slightly. For this reason, an average investor took in only 4percent annually (average) although the S&P 500 had average annual returns around 12percent during the last 20 years.<sup>55</sup> The same mistiming influences investors wanting to invest in the first place as well.

"There are certain stocks that are mispriced right now because of the perception that the economy is going into recession," says Jim Tringas, who runs the Evergreen Special Values fund. "When recessionary sentiment is built into a stock we tend to want to own that stock."

Thompson Siegel & Walmsley provide convincing evidence supporting small-cap value stocks being better performers on the long haul. Small-cap value stocks outperformed both small and large growth stocks by 5 and 4 percent respectively during the period between 1928 and 2006. Additionally, small-caps value stocks have shown better performances in fifty of the last sixty years plus showing top performances in the last several years.

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<sup>54</sup> <http://www.smartmoney.com/undertheradar/index.cfm?story=20071115>

<sup>55</sup> <http://www.qaib.com/showresource.aspx?URI=actnowfree&Type=FreeLook>

	Annual return	Inflation Adjusted Return
Total stock market	11.65%	7.47%
Large-cap value	14.89%	10.71%
Large-cap growth	11.22%	7.01%
<b>Small-cap value</b>	<b>17.30%</b>	<b>13.10%</b>
Small-cap growth	9.50%	5.23%
*Average annual returns from 1952-2001, Fama and French definitions of growth and value applied		

**Figure 16. Annual Returns of Growth and Value Stocks**

**Source: Wall Street Mayhem**

Many portfolio managers of renowned investment companies believe in value investing as well.

Paul Magnuson who manages portfolios for the Allianz NFZ Small-Cap Value fund makes a valid point when he says that many of the main value indexes consist of financial companies that all have had a difficult time among the sub prime mortgage crises. He says, "Value investing never goes away. The only thing that changes is the names,"

Similarly, Christian Stadlinger, manager of the Columbia Small Cap Value fund believes the stress of the financial companies from the defaulting debtors is playing a huge part in the lack of performance in many value companies and indexes today.

He mentions, "Over the very long term we believe value will have the upper hand, and the reason for that is simple: the average investor likes a bargain and the cheaper you buy a company, the higher your return."

He adds, "You can still buy very good value companies by focusing on those that are not only cheap, but also where you have positive underlying business fundamentals," Stadlinger declares. "Understand the company you're buying, buy it at a bargain and grow with it."

Another supporter of value investing is Roger Ibbotson, a financial analyst and an avid supporter of value investing by believing that growth falls victim to value more of the time than not, even if growth sometimes prevails. In this case it is only temporary.<sup>56</sup>

To support his theory, Ibbotson took existing growth and value indexes and projected them back to 1979 if they did not already exist at the time. His results showed that during this time span, the Russell 1000 Value Index created more than 1 percent per year more in returns than the Russell 1000 Growth Index during the period between 1979 and 1997. Additionally, the volatility of the value index was significantly lower than that of the growth index.<sup>57</sup> The results for other class sizes alternatively were even greater. The large-cap companies showed the least amount of difference, surprisingly. In other indexes the results were consistent with their findings.

The results supported Ibbotson's initial arguments that through and through value indexes have continually outperformed growth indexes absolutely, and this with less risk.

In another argument in favor of value investing, an internet blog discussing value and growth stocks based on research performed by GMO, there are three arguments supporting the argument that value shows a better performance than growth stocks.<sup>58</sup>

1. **"The Market Has it Mostly Right-- P/E Ratio is, in fact, one of the best indicators of relative 1 year forward earnings.**
2. **Value Stocks have indeed outperformed the market historically**
3. **Given the recent major outperformance of value relative to growth, the argument that value may not have all that much more room to outperform, and indeed may underperform if history is a guide for the future, is false."**

Point one can be supported by the following figure, Figure 17. When the P/E ratio has historically been in the bottom 10 percent, profit had been 23 percent below average. On

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<sup>56</sup> [http://www.fpanet.net/journal/articles/1997\\_Issues/upload/15791\\_1.pdf](http://www.fpanet.net/journal/articles/1997_Issues/upload/15791_1.pdf)

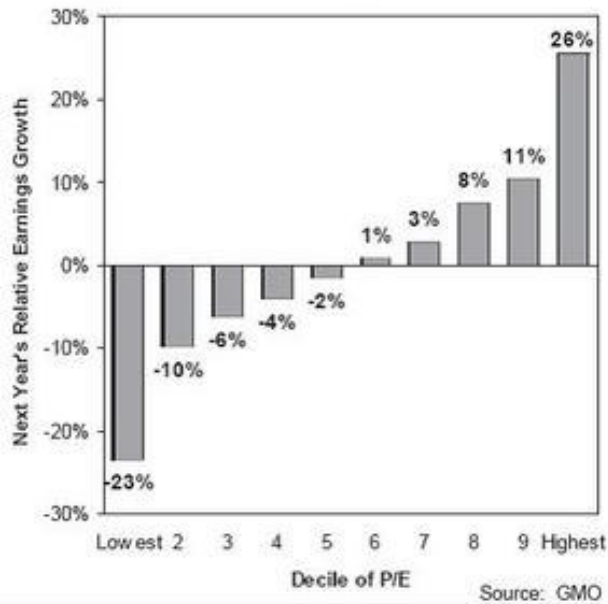
<sup>57</sup> <http://seekingalpha.com/article/12637-choosing-the-right-etf-growth-versus-value-in-asset-allocation>

<sup>58</sup> <http://thelearningblog123.blogspot.com/2005/09/commentary-on-trouble-with-value.html>

the other hand, if the P/E ratio was within the top 10percent historically, profit had been 26percent above average. Because value stocks are almost always represented by a low P/E ratio and growth stocks a high P/E ratio, this argument would be supportive of a value premium, but makes more sense when taken with the next argument.

**Exhibit 1**

**Decile of P/E to Predict Earnings Growth**

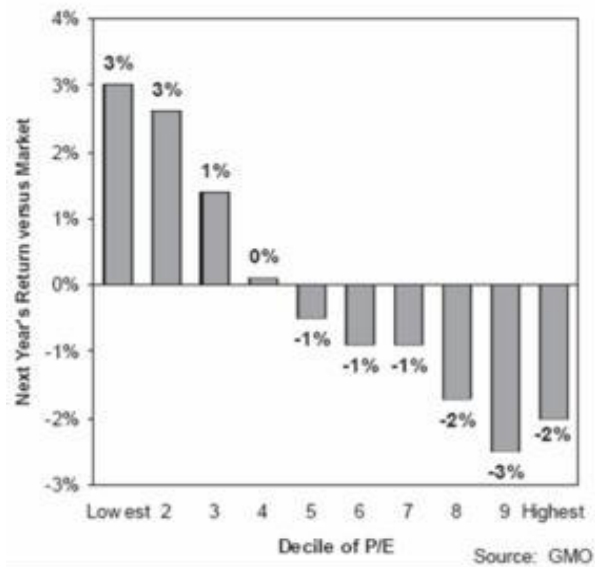


**Figure 17: P/E ratio as profit predictor**  
**Source: GMO**

The second point has been supported by various arguments already in this paper and by others to come. However, in this study, GMO looks at the P/E ratio for support of the argument. Figure 18 shows that if all P/E ratios of the current year were taken and compared with the returns of the following year, the highest decile of P/E ratios performed 2percent less than the market and the lowest decile had an outperformance of 3percent. Again, this supports the hypothesis of low P/E ratios being connected with future returns.

**Exhibit 2**

**Decile of P/E to Predict Next Year's Return**

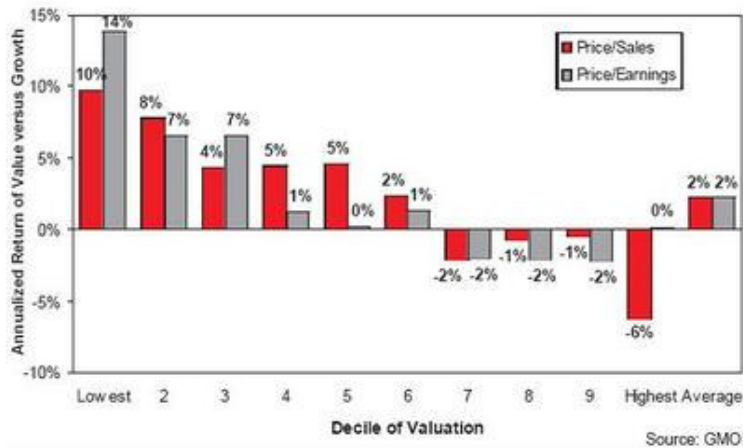


**Figure 18: Value outperformance and P/E ratios**  
Source: GMO

Finally, the third point can be supported by the last figure in this small series.

**Exhibit 6**

**Decile of Valuation to Predict  
Three-Year Outperformance of Value**



**Figure 19: P/S and P/E as predictors of outperformance**  
Source: GMO

This indicates that the lowest decile of P/S and P/E ratios has the highest outperformance of growth. This means for stocks with low P/S and P/E ratios, such as value stocks, the outperformance is at its highest. Intuitively as the deciles increase, such as the top with the highest P/S and P/E ratios which could possibly be growth stocks, there is hardly any outperformance or none at all. This shows that value stocks with lower fundamentals outperform more than growth stocks with higher fundamentals.

While this evidence supporting a value premium from value outperformance uses fundamentals, the following studies used return data for forming opinions.

First and foremost Fama and French did a study looking into growth and value premiums in comparison to one year US government bonds.<sup>59</sup> The thirteen countries looked at were the USA, Japan, Great Britain, France, Germany, Italy, the Netherlands, Belgium, Switzerland, Sweden, Australia, Hong Kong and Singapore and all data was taken from a 21 year period from 1975 until 1995.

On average the value stocks outperformed the growth stocks by 7.68percent and was statistically significant in 12 of 13 countries. Italy was the only country in which there was a negative value premium and furthermore the results from Italy were not even statistically significant with a value of  $-0.91$ . The smallest value premium was shown in the Netherlands with 2.3percent and the highest came from Australia with 12.32percent outperformance. The USA showed slightly underaverage results with a yearly premium of 6.79percent.<sup>60</sup>

Eleswarapu and Reinganum also did several studies regarding growth and value stocks, many of which indirectly show how growth is riskier than value and also less profitable. In 2000 they showed that the historical development of growth stocks could be taken to relate to future statements about the further development of the market as a whole. They found that future average returns of the market as a whole compared with the risk free rate is significantly negatively correlated to growth stocks of the previous 36 months.<sup>61</sup>

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<sup>59</sup> Fama and French (1998)

<sup>60</sup> Eisenhofer (2005)

<sup>61</sup> Eleswarapu and Reinganum (2000)



Furthermore, and more relevant, while both growth and value stocks increase relatively similar to one another in an upwards market, in a downward market growth stocks take a steeper fall when the market hiccups.<sup>62</sup>

In yet another study, Liu and Zhang show that the value spread, which they define as the book to market value of value stocks less the book to market of growth stocks, can be an anticyclic indicator for future market development.<sup>63</sup>

An economic and intuitive reason for this relationship comes from investment and deinvestment behaviors of company within their cyclical cycle:

During a recession, companies invest less. While growth companies can achieve the reduction by inhibiting the expansion of investments, value companies often have to deinvest money. Because of the high deinvestment costs, value companies have a more difficult time parting with unproductive assets. This phenomenon results in a high book to market ratio (and therefore a high value spread).<sup>64</sup>

More recently Ludovic Phalippou, a renowned financial analyst and professor, has taken the question whether risk based theories can explain the value premium and shown that some of the most well-known models and theories fail to capture the value premium returns. These models, he proves, only capture the returns if they are sorted by BtM and size, however fail if sorted by BtM and institutional ownership.<sup>65</sup>

William A. Trent, CFA, summarizes the work of this paper for the CFA Digest in the following<sup>66</sup>:

*"...Given the intention to assess explanations for the value premium, the sorting based on BtM is needed. An alternative sort is to replace the size dimension with another liquidity measure related to stock returns. The author finds that institutional ownership (IO) is most closely related to the value premium and thus forms portfolios sorted on the basis of BtM-IO rather than BtM-size..."*

Phalippou changes the time period used as well as the set of test assets and finds that the traditional risk-based theories are not robust during other times and the alteration in test assets have great impact on the pricing error magnitude.

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<sup>62</sup> Eleswarapu and Reinganum (2000)

<sup>63</sup> Liu and Zhang (2004)

<sup>64</sup> Eisenhofer (2005)

<sup>65</sup> Phalippou (2006)

<sup>66</sup> Trent, CFA Digest, February 2008

Finally, in one of the most important works from recent times, Zhang argues that the value premium is a result of asymmetric risk inherent in value stocks, and can be traced back to cost reversibility and the countercyclical price of risk. In this way it poses a greater risk during bad times during which the cost of risk is much higher.<sup>67</sup>

Points made by Zhang in his paper and are quoted by Larry Swedroe from Index Funds Investors are the following <sup>68</sup>:

- *“Investment is irreversible - after production capacity is put in place it is very hard to reduce. Value companies carry more nonproductive capacity than do growth companies.*
- *In periods of low economic activity companies with nonproductive capacity (value companies) suffer greater negative volatility in earnings because the burden of nonproductive capacity increases and they find it more difficult to adjust capacity than do growth companies.*
- *In periods of high economic activity the previously nonproductive assets of value companies become productive while growth companies find it harder to increase capacity.*
- *In good times capital stock is easily expanded, while in bad times adjusting the level of capital is an extremely difficult task, and is especially so for value companies.”*

The following is also observed in the paper:

- *“Recessions happen with far less frequency than good economic times.*
- *The longevity of recessions is far shorter than good times.”<sup>69</sup>*

All of these factors together with a high risk aversion are argued by Zhang to result in a hefty and persistent value premium.

#### **4.4 Source of value premium**

The so-called value premium is a phenomenon which exists in the opinion of many investors. This term refers to the tendency of value stocks to have greater returns than growth stocks, especially over periods of time taken historically. Fama and French were the first financial analysts to identify the value premium in their 1992 paper while using

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<sup>67</sup> Zhang (2005)

<sup>68</sup> Larry Swedroe, Explaining the Value Premium

<sup>69</sup> [http://www.ifa.com/archives/articles/swedroe\\_larry\\_20020211\\_explaining\\_the\\_value\\_premium.asp](http://www.ifa.com/archives/articles/swedroe_larry_20020211_explaining_the_value_premium.asp)

their HML measurement. HML (high book to market minus low book to market ratios) measures stock returns based on valuation methods.<sup>70 71</sup>

Although others such as John Bogle argue that there is no value premium, there is sufficient evidence supporting the phenomenon such that it seems almost undeniable. The following is in support of the value premium, proving its existence.

#### 4.4.1 Theoretical explanation

In addition to the several theoretical explanations offered by analysts such as Zhang and Phalippou whose theories tend to support the value premium with arguments of differing fixed assets in growth and value companies (both mentioned above in more detail), Eisenhofer attempts to explain why value has higher returns based on a simple differentiation of a cost of capital formula taking dividends into account. His argument supports the theory that the value premium is explained by fundamental indicators and not by assumed risk which will be discussed in the next paragraph.

According to the traditional Capital Asset Pricing Model (CAPM), different returns from differing asset classes are explained by varying risk assumed. Expected return is calculated with the following by CAPM<sup>72</sup>:

$$E(r_k) = r_f + \beta(E(r_m) - r_f) \quad (1)$$

where

$E(r_k)$  = expected return for asset  $k$

$r_f$  = risk free rate

$E(r_m)$  = expected return for market

$\beta_k$  = beta for asset  $k$  ;  $\beta_k = \text{cov}(r_k, r_m) / \sigma_m^2$ <sup>73</sup>

<sup>70</sup> [http://en.wikipedia.org/wiki/Value\\_premium](http://en.wikipedia.org/wiki/Value_premium)

<sup>71</sup> Fama and French (1992)

<sup>72</sup> Eisenhofer (2005)

<sup>73</sup> Sharpe (1964)

If the value premium for value stocks were to stem from CAPM, a higher beta would be implicated. This implication, however, has been proved invalid by Fama and French in their 1992 study where they claim beta cannot explain the differences in returns, as CAPM would explain. In the study, value stocks incur a return of 15.15percent pa, much higher than the growth return of 2.47percent pa. What Fama and French show is that although the value stocks have a much higher return, the beta is much lower. They claim that the return difference is better explained by fundamental indicators, in this case the book to price ratio.

Daniel and Titman go further, taking Fama and French's arguments and examining how fundamentals affect the returns. Furthermore, they follow up by saying that these characteristics of a company say more about a company than the covariance matrix of the returns.<sup>74</sup>

Looking closer at the fundamentals of a company it becomes clearer that value stocks implicate lower risk. In this case the stock value can be calculated as the value of all the future dividend payments, shown in the following:<sup>75</sup>

$$A = \sum_{t=1}^{\infty} \frac{D_t}{(1 + k_t)^t}, \quad (2)$$

where

$D_t$  = dividends during period,  $t$

$K_t$  = costs of equity during period,  $t$

In the case of constant dividend growth,  $\gamma$ , the following is true:

$$A = \sum_{t=1}^{\infty} \frac{(1 + \gamma)^t D}{(1 + k_t)^t} \cdot \quad (3)$$

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<sup>74</sup> Daniel and Titman (1997)

<sup>75</sup> Eisenhofer (2005)

For a company according to CAPM the equity costs are figured with the risk free rate and a company specific risk premium.

Taking (3) with constant  $k_t$  and deriving (3) with respect to  $k$ , the following results:<sup>76</sup>

$$\begin{aligned}\frac{dA}{dk} &= \sum_{t=1}^{\infty} (1 + \gamma)^t D(-t) (1 + k)^{-t-1} \\ &= -\frac{1 + \gamma}{1 + k} \sum_{t=1}^{\infty} t D (1 + \gamma)^{t-1} (1 + k)^{-t}.\end{aligned}$$

In the case of an increase in capital costs, which could be caused by any number of things, the stock price will be reduced. Regardless, the amount of risk is also affected by  $\gamma$ , dividend growth.

High growth companies have a majority of their focus on the future. For this reason, a changed discount factor in the present value formula would have a major effect in the company. Therefore, growth companies are much more cyclically inclined than value companies.

In this way, although the increasing price of the cost of capital is going to lower the price of the stock, in value companies this loss is going to be significantly less because the dividend factor is counteracting this phenomenon. In growth companies where there are no dividends, the decreasing stock price will not be slowed down by this factor. For this reason, the increase in the cost of capital, which is practically inevitable, will have a larger effect on growth companies than on value companies.

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<sup>76</sup> Eisenhofer (2005)

#### 4.4.2 Psychological explanation

The actions of investors are almost impossible to predict because they do not all react similarly to information, nor do they react rationally. In investing, behavioral science can be just as important as empirical evidence to support arguments.

Kahneman and Tversky proved in a psychological experiment in 1982 that people overreact when they encounter unexpected and dramatic events.<sup>77</sup>

De Bondt and Thaler took this study and went a step further by applying the idea to the stock market. They state that many investors are too focused on historical information such as stock prices and returns and for this reason tend to buy the glamour stocks mentioned earlier and defined as growth stocks. Of course, most of the time these stocks are overvalued. On the same note, companies that are out of favor because they do not promise any large growth prognoses and the stock price will supposedly develop at an unspectacular rate are left out of the thought process by short term investors. This naturally leads to an undervalued stock.<sup>78</sup>

This mispricing can be detrimental, but can also be profitable if a “contrarian” strategy or winner-loser portfolio is implemented<sup>79</sup>. In this way the growth stocks are short sold and the not so favorable value stocks are purchased. Because of the arbitrage strategy, the value premium could be lost in an equilibrium state, however, such transactions are not possible for all investors because of institutional limitations and therefore there is always mispricing.<sup>80</sup>

In another study, Barberis et al show through their empirical investigation that investors react too conservatively to normal company information and cause the stock to remain undervalued. On the other hand, if investors hear news from outside the company about the company, they react too strongly and irrationally.<sup>81</sup>

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<sup>77</sup> Kahneman and Tversky (1982)

<sup>78</sup> De Bondt and Thaler (1985)

<sup>79</sup> De Bondt and Thaler (1985)

<sup>80</sup> Nagel (2004)

<sup>81</sup> Barberis et al (1998)

In growth companies, a series of positive pieces of information leads to the stock being overvalued because of the reaction of the investors. Not only do they react strongly to positive information, but as Griffin and Tversky showed in 1992, they do not take the positive information in context and weigh it correctly with other pieces, but rather react rashly and to the extreme. For this reason good information is often overvalued.<sup>82</sup>

Furthermore, the investors look too far into the future when regarding the rate of profit and sales increases. When viewed long term, the expected profits could not be achieved and this led to a further decline in return.<sup>83</sup>

Another study by Dechaow and Sloan went on and looked at the growth rates of US companies six years back and five years forward during the years 1967-1991. The research showed that expensive companies with a high P/E ratio grew quicker historically than in the future.<sup>84</sup>

Lin and McNichols attribute the over-optimism of small investors to the systematic exaggerated valuations of analysts, who therefore want to decrease the capital acquisition costs of growth companies who are often also investment bank clients.<sup>85</sup>

Interestingly enough, investors tend to be positively attuned to investing, a phenomenon which can be seen by the overwhelming number of calls in comparison to puts. In 2005, there were more than double the number of call options than puts in the German finance derivatives market. Additionally, investors tend to purchase well known “good companies” without having even looked at the stock price and going on the name of the company. For this reason and many more, the stocks can become overvalued.

In the final chapter to come, the question will be asked whether there is an investment strategy superior to others if there is so much evidence to support a value premium. Several options will be looked at and a final suggestion to this topic will be made.

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<sup>82</sup> Griffin and Tversky (1992)

<sup>83</sup> Lakonishok (1994)

<sup>84</sup> Dechaowand and Sloan (1997)

<sup>85</sup> Lin and McNichols (1991)

## 5 Optimal investment strategy?

After viewing the material and papers at hand, there is definitely compelling evidence for gains in both growth and value investing, although after proving there is a value premium, value investing is arguably the better investment. Of course, investing is a very subjective decision, but the evidence on the market shows long term success for value investing.

On the one hand, Luis Viceira and Jakub Jurek of Harvard in their paper titled “Optimal Value and Growth Tilts in Long-Horizon Portfolios” say that an investor should put almost all of the equity allocation into value stocks for short term investing. Investors looking for long term investment upwards of ten years, however, should consider putting about half of their equity portion into growth stock investments.<sup>86</sup> In this way the investor is hedging himself against market volatility. They are quoted with the following concerning this topic:

***"We find that on average equity-only investors with short horizons optimally choose portfolios heavily tilted toward value and away from growth, regardless of their risk aversion. Aggressive short-term investors find it optimal to hold long large positions in value stocks offset by large short positions in growth stocks, because the mean return spread between value and growth is positive, and their returns are highly positively correlated. Highly risk averse short-term investors hold large positions in value stocks because of their smaller return volatility and high correlation with growth. However, the optimal allocation to value decreases dramatically— and correspondingly the optimal allocation to growth increases— for investors with longer horizons. This effect is strongest for long-horizon, highly risk averse investors, who hold large long positions in growth stocks. The increasing portfolio demand for growth stocks across investment horizons is driven by inter- temporal hedging motives. Growth stocks are better suited than value stocks to hedge against adverse changes in investment opportunities in the equity market, because they are more highly negatively correlated with changes in aggregate stock discount rates than value stocks are. Thus long- horizon “representative”***

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<sup>86</sup> <http://valuediscipline.blogspot.com/2007/07/how-much-in-value-versus-growth-stocks.html>



***investors find value stocks riskier than growth stocks, and see the unconditional value spread as a risk premium for bearing this risk."***

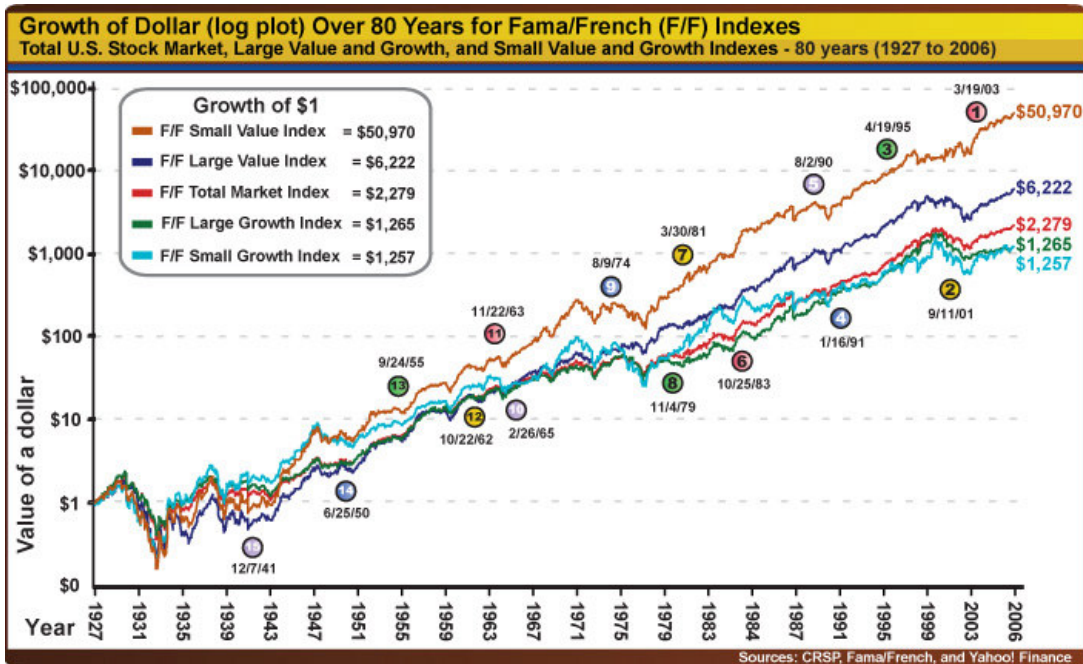
Another method is investing in growth and value 50/50 as proposed by Melville Jessup Weaver, a consulting company in New Zealand. They found growth and value stocks to be lowly, and sometimes negatively correlated so that an investment in both would guarantee performance during any market scenario.<sup>87</sup>

On the other hand, other analysts such as Warren Buffet, Graham, Ibbotson etc. believe an investment in pure value stocks is the way to go. They base their decisions on historical data from their studies as well as figures such as the three listed below. They illustrate the commanding lead value stocks, specifically small-cap value stocks, show over time. Even during times when growth stocks are performing well, value still holds the overall lead. According to the first of the following two figures, Figure 20, small-cap value stocks gain almost ten times as much in returns over an eighty year span than the next competitor.

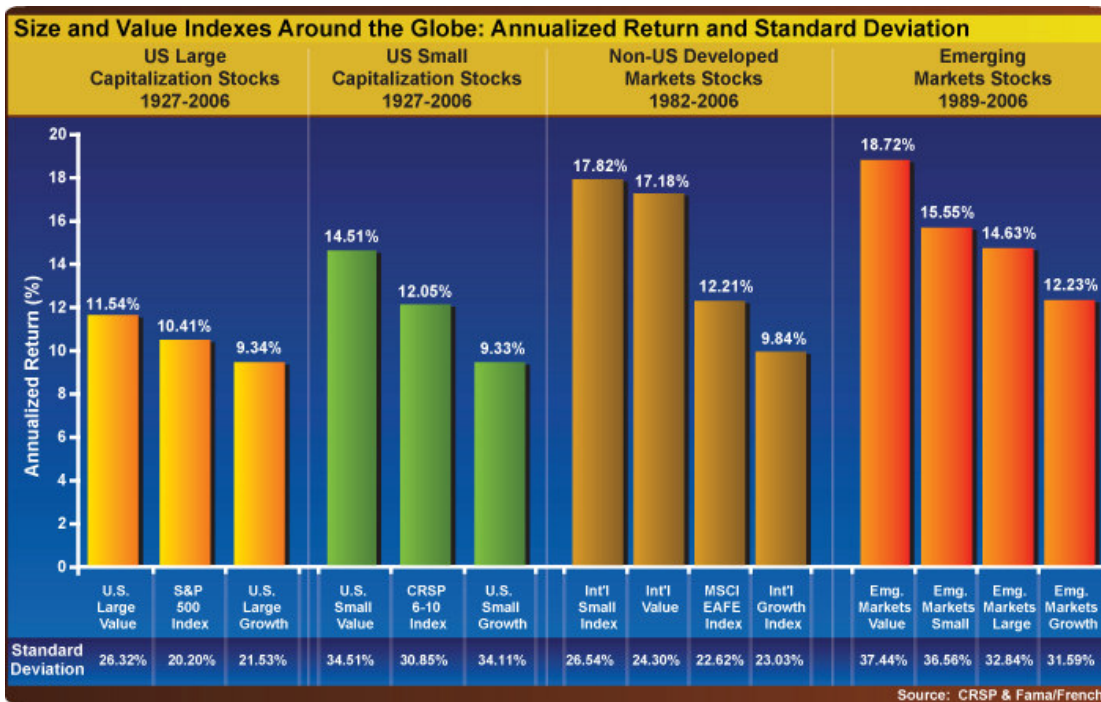
The second figure, Figure 21, supports the data from the first figure. It shows the returns and standard deviations of various groups of stocks: US large-cap stocks, US small-cap stocks, non-US developed stocks and emerging markets. Between the growth and value stocks seen as the yellow and green bars, one can see the difference of performances. In the brown and red results, one must take currency risk into account, as well as the high volatility. However, throughout all the markets, the value stocks always come out on top.

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<sup>87</sup> Melville Jessup Weaver



**Figure 20: Growth of Investments over 80 Years**  
Source: Center for Research in Security Prices



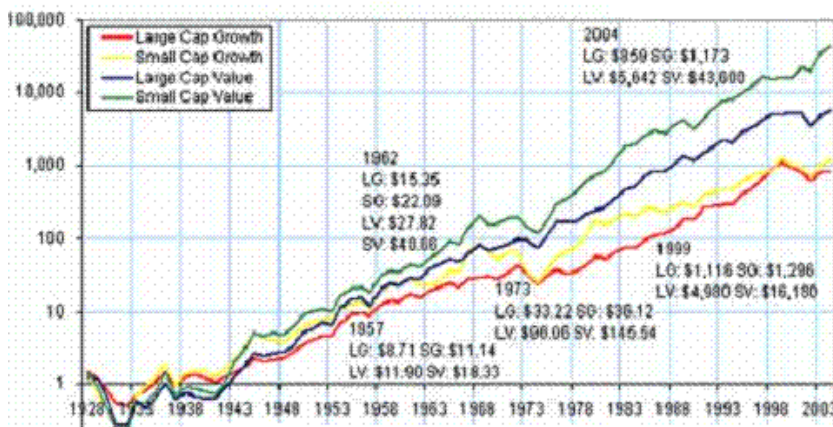
**Figure 21: Annual Returns and Standard Deviation**  
Source: Center for Research in Security Prices

In yet other research, small-cap value stocks come out as the top performer. In fact,

Since 2001 they have had better performances than ever before, as shown by their historical average.

The experts at Wall Street Mayhem, financial advisors, declared the following regarding small-cap value stocks<sup>88</sup>:

**“The logic is simple, small cap stocks have more room to increase in price than large cap stocks and value stocks are less risky and the underlying businesses are more likely to succeed over time. Even if the time frame is expanded all the way back to 1928, small cap value still outperforms the rest of the market.”**



Historical performance of a \$1 investment. LG = Large cap growth, LV = Large cap value, SG = Small cap growth, SV = Small cap value

**Figure 22: Historical Performance of \$1 Investment**  
**Source: Wall Street Mayhem**

Small cap value stocks have proven time and time again that they are a valuable investment. Even throughout the entire US equity market history, they have outperformed the market with considerable distance. In this way, small-cap value stocks have risen to the top of the market, especially among seasoned and experienced investors. Although every investor must decide what his risk/return attitude is and make investments with which he can live, value stocks are most definitely an asset class to take into consideration and integrate into either an existing or new portfolio.

<sup>88</sup> <http://wmayhem.com/2006/12/13/ishares-russell-2000-value-index-iwn/>

## 6 Conclusion

After reviewing two of the financial market's numerous possibilities for investing, growth and value stocks, an overwhelming partiality toward value stocks arises. After looking at the characteristics of growth and value stocks separately, the indicators of each were noted and defined. It became clear that growth stocks, sometimes known as glamour stocks, generally have high fundamentals and little to no dividend payments. In this way, they are considered to have high potential for growth, as a large amount of capital is being invested into further development of the company.

On the other hand, value stocks have low fundamentals, high dividend payments and are considered to be undervalued and out of favor in the market. Because of the underrated prices, value stocks have the potential to achieve their intrinsic value and make significant gains, if the market realizes their true value.

After defining the stocks, they were systematically compared with one another. Historically, there have been periods where each has outperformed the other. In fact there is a tendency of a flip-flopping or cyclical inclination for the asset classes. During recent years this was visible with growth stocks outperforming during the period internet start-ups in the late 1990s until these crashed in early 2000.

The reasons for the traditional return performances were looked into, and the conclusion was drawn that the inherent definitions of the stocks lead them to perform differently under various market conditions. In this way, growth stocks had a tendency to perform better in bullish market conditions and value stocks in bearish conditions.

Even so, it was evaluated whether in spite of the cyclical performances, whether value stocks had an overall better performance. This question has been asked many times before and there are numerous studies which support this theory. Many notable investors and analysts are of the opinion that this hypothesis is true and have many data sets to support this presumption. They show that historically, even since the early 1920s, that there is a value-premium which results from value outperformance of growth.

After the value-premium was established, reasons for its existence were evaluated. Both scientific reasons, such as present value methods of dividend payments, and psychological reasons, such as the overreaction of investors to growth companies, were taken into consideration. The conclusion was drawn that the value-premium is a result of several factors and is difficult to pinpoint, yet the value-premium is undeniable.

After evaluation of all these points, the question is raised if there is an optimal investment strategy regarding growth and value. Of course investing is very subjective and every investor must decide what is right for him, but after reviewing the evidence at hand, value investing and even more precise, small-cap value investing, is superior to all other single investing strategies discussed. For this reason, small-cap value investments over a long-term would appear to have historically been the optimal investing strategy.

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# Anhang

## ***Zusammenfassung***

Diese Diplomarbeit beschäftigt sich mit der Frage, ob eine Investition in „Value Aktien“ vorteilhafter ist als eine Investition in „Growth Aktien“. Beide Alternativen werden analysiert und miteinander systematisch verglichen. Dieser Review zeigt, dass die Value Aktien zu besseren Ergebnissen führen. Beide Strategien, Growth und Value, werden unabhängig voneinander definiert und die Charakteristiken beider Instrumente werden angegeben. Es wird gezeigt, dass die Growth Aktien, auch „glamoröse Aktien“ genannt, höhere Kennzahlen haben und auch geringere bis keine Dividende auszahlen. Aus diesem Grund haben sie höhere Wachstumspotentiale, da Kapital für weitere Firmeninvestition und –wachstum verwendet wird.

Auf der anderen Seite haben Value Aktien niedrigere Kennzahlen, hohe Dividendenauszahlungen und werden sowohl unterbewertet als auch ungünstig am Markt betrachtet. Da die Preise entsprechend niedrig sind, haben Value Aktien große Chancen den „fairen Wert“ zu erreichen und damit signifikante Gewinne zu erwirtschaften.

Danach wurden die Strategien miteinander verglichen. Historisch betrachtet hat es abwechselnde Outperformances gegeben. Tatsächlich gibt es ein „Flipflop Phänomen“ der Ergebnisse beider Strategien. In letzter Zeit wurde dies deutlich, indem die Growth Aktien aufgrund der Neugründung vieler Internetunternehmen in den späten 90er Jahren besser performten. Diese Phase dauerte bis zum Crash in 2000/01.

Die Begründung dieser unterschiedlichen Renditen wurde analysiert und die Schlussfolgerung war, dass die Kerncharakteristika der Strategien zu unterschiedlichen Wertentwicklungen führten. Aus diesem Grund haben die Growth Aktien tendenziell bessere Ergebnisse in bullischen Marktkonditionen während Value Aktien unter bearischen, Umständen besser performen.

Trotz dieser Erkenntnis wurde noch einmal untersucht, ob die Value Aktien tatsächlich bessere Renditen erzielen. Eine Vielzahl wissenschaftlicher Studien hat sich mit dieser Frage schon beschäftigt um die Theorie der Value Prämie zu begutachten. Die Mehrheit der Studien kommt zum Ergebnis, dass es eine Prämie für Value Aktien gibt, die mit Daten unterstützt sogar bis ins Jahr 1920 nachgewiesen werden kann.

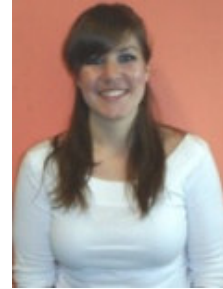
Nach der Begründung der Value Prämie wurden die Gründe dafür näher beleuchtet. Theoretische und wissenschaftliche Gründe, sowie die „Present Value Method of Dividend Payments“ und psychologische Gründe, sowie Investor- Übertreibungen wurden berücksichtigt. Als Schluss wurde gezogen, dass die Value Prämie eine Folge mehrerer Faktoren ist und nicht nur von einem einzelnen Kriterium stammt, wobei jedoch die Value Prämie als Phänomen nicht zu belegen ist.

Nach Evaluierung dieser Faktoren wird die Frage gestellt, ob es eine optimale Investment Strategie in Bezug auf Value und Growth gibt. Natürlich ist eine Investition für jeden Investor eine subjektive Entscheidung und jeder muss für sich die richtige Entscheidung treffen. Allerdings kann nach Bewertung der vorhandenen Beweise die Value Investmentstrategie, vor allem Small-cap, als überlegen angesehen werden. Aus diesem Grund wäre historisch gesehen eine langfristige small-cap Value Investition die bevorzugte Strategie.

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