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Growth and Value Fund Performance Comparison

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Abstract

This article examines and contrasts the performance of small-cap growth and small-cap value funds in the United States. Between May 2016 and May 2022, a total of 139 small-cap growth funds and 97 small-cap value funds were collected via Yahoo Finance. The weekly data was then used to calculate the Treynor ratio, Sharpe ratio, and Jensen alpha. The finding shows that US small-cap value funds appear to be superior to small-cap growth funds. The Sharpe and Treynor ratios demonstrate the higher risk-adjusted performance of small-cap value funds relative to their benchmarks. whereas the Sharpe ratio is the only indicator of outperformance for small-cap growth funds. Regarding the Jensen alpha, value funds possessed positive alphas and outperformed the benchmark. Therefore, the results of this study could aid investors in picking a portfolio with superior risk-adjusted performance.

Keywords: Growth Funds, Value Funds, Treynor Ratio, Sharpe Ratio, Jensen Alpha

Introduction

Investors have spent a great deal of time and energy analysing the differences in performance between growth and value investing (Bauman et al., 1998), particularly in the United States, where numerous mutual funds and portfolios exist for the diversification of investments and increase in income sources. According to a survey, numerous investing firms, including Merrill Lynch and Morgan Stanley in the United States, established small-cap-focused international mutual funds (Eun et al., 2008). In the same study, they demonstrated that the additional return from more intensive diversification with small-cap funds is statistically significant both within and beyond the observed period and that it remains robust despite market volatility. There were only 70 small-cap mutual funds available in the US at the time, but very little is known about their potential and information (Eun et al., 2008). Consequently, this study will provide an overview of small-cap investment styles, focusing primarily on growth and value funds.

For the purpose of capital appreciation, a growth fund invests mostly in companies with above-average growth, as opposed to those that generate income and pay dividends. The majority of growth funds are invested in stocks. Individual investors like dividend-paying stocks, but institutional investors favour high-growth companies (Jain, 2007). On the other hand, value funds only invest in cheap stocks (Indro et al., 1999). But they tend to provide higher returns than growth businesses in global economies. In twelve out of thirteen significant markets from 1975 to 1995, value companies outperformed growth firms based

on book-to-market equity. There are analogous value premiums based on earnings per share, cash flow per share, and dividends per share. The out-of-sample nature of these findings, contrasted to previous tests using U.S. data, indicates that the return premium for value equities is genuine (Fama & French, 1998).

In 21 global stock markets from 1986 to 1996, value equities outperformed growth stocks in terms of total return and risk-adjusted return. When value portfolios did outperform growth portfolios, it was by a substantial margin (Bauman et al., 1998). In the majority of research years, a small-company effect was observed, but the performance gaps between large value and large growth companies were greater than those between small value and small growth firms. Among enterprises of medium and large size, value stocks typically outperform growth equities in terms of total return (Bauman et al., 1998). However, because growth funds concentrate on companies with above-average growth, environmental developments such as the technology revolution are typically associated with a superior growth fund (Arnott et al., 2021). It is hypothesized that the emergence of technology, which has become an integral element of the macroeconomy, is the reason why growth stocks improved more quickly and gained more ground between 2010 and now (Arnott et al., 2021). The same study by Arnott et al (2021) demonstrates that the total value return rapidly shifts from 6.1 percent for the first 44 years to -6.1 percent for the most recent 13 years, which may be a result of environmental and technological changes. In spite of this, there are studies that support the notion that value funds outperform growth funds; these will be explored in the literature review.

In general, this examination of 21 international markets confirms the empirical findings of the US stock market. Because investors and research analysts overreact to the previous profitability patterns of growth and value companies, value companies may outperform growth equities internationally. As shown by Ball and Watts, this systemic overreaction can occur when investors fail to recognise that business development patterns have a mean-reversion tendency or exhibit random walk behaviour (Bauman et al., 1998). This study will focus on two objectives: (i) examining the performance of small-cap growth and small-cap value funds using Treynor, Sharpe, and Jensen Index performance criteria; and (ii) comparing the performance of the two types of funds. Since different types of funds presumably provide variable risk and return outcomes.

Literature Review

Regarding the research by Cao et al (2017), investors may opt for a small-cap fund when determining an acceptable investing plan across all sorts of investments Cao et al (2017), They are also likely to select small-cap funds when evaluating their best asset allocation across all asset classes, assuming that the vulnerabilities will correspond precisely to a typical group of small enterprises (Falkenstein, 1996) This is because investors desire a diverse small-cap portfolio to complement their entire asset allocation by investing in small-cap funds Cao et al (2017) However, small-cap stocks are typically associated with greater risk due to their volatility. For example, during a "bull" market, small caps typically outperform large caps, and during a "bear" market, small caps tend to underperform (Varamini & Kalash, 2008). . Due to scale limitations, Chen et al (2004) discovered that smaller funds tend to outperform larger funds. In addition, another study demonstrated that small-cap funds serve an important function in global risk diversification (Eun et al., 2008) Small-cap value managers are more successful at providing liquidity services to the market than small-cap growth

managers, allowing them to perform better. On average, value managers hold smaller-cap equities for longer periods of time than growth managers (Shawky & Tian, 2011).

In contrast to value investing, growth investing focuses on rising companies with excellent growth prospects (Kok et al., 2017). Thus, the phrase "growth funds" is derived from the strong growth rates of earnings, cash flow, and book value of these investments. The high valuations of the funds are also a factor, as growth funds are typically associated with high price ratios and low dividend yields. As with other mutual funds, investors typically seek capital appreciation. However, growth funds do not give many dividends because corporations reinvest their profits rather than pay them out (Smart et al., 2013). The small-cap growth fund will pay more attention to rapidly expanding companies with little market capitalization. This fund will prioritise companies that are making significant strides in their respective industries or newer companies in the early stages of growth. As a result of the fact that a company's good growth and high valuation imply that its stock is typically more volatile than that of other companies, such a company's shares are typically more volatile (Wattanatorn & Padungsaksawasdi, 2020). Value funds, on the other hand, attempt to invest in undervalued businesses with low price-to-earnings ratios, strong dividend yields, and moderate financial leverage (Smart et al., 2013). Therefore, value funds are perceived to be less hazardous than other funds, making them suited for conservative investors who seek substantial returns without taking on excessive risk (Smart et al., 2013). Tiny-value funds invest in small U.S. companies with lower valuations and growth rates than comparable small-cap companies. For both growth and value funds, small cap refers to stocks within the bottom 10 percent of the U.S. equity market's capitalization (Wattanatorn & Padungsaksawasdi, 2020).

Varamini & Kalash (2008) conducted a study to see whether the efficient market hypothesis holds true for a variety of investment strategies and market capitalizations utilised by mutual funds between 1994 and 2007. According to the analysis, small-cap value funds have generated the highest risk-adjusted returns over the entire time period, but small-cap growth funds have generated lower returns over the same time period (Varamini & Kalash, 2008) The article by Pettengill & Chang (2014) demonstrated that growth mutual funds had greater average returns than large-cap, mid-cap, and small-cap funds, respectively. In all three size groups, the sample of growth mutual funds was much riskier than the sample of value mutual funds Pettengill & Chang (2014) By computing Sharpe ratios for each size group, they determined that growth businesses in large funds had a larger risk of return, whereas value funds in mid-cap and small-cap funds had a lower risk of return Pettengill & Chang (2014) Investing in value funds is typically less hazardous than investing in growth funds, but the long-term return can be compared to, and even stated to be comparable to, the return from growth investing (Smart et al., 2013).

Compared to the performance of value and growth mutual funds, Chan et al (2002) discovered that growth mutual funds beat value mutual funds Chan et al (2002) According to the findings of Bauman et al (1998), value equities will not outperform growth firms when their market capitalizations are extremely small. This may be due to the fact that the market prices, earnings, and dividends of extremely small companies are so volatile that typical valuation measures based on the companies past financial performance do not provide a reliable indication of whether the companies are value stocks or growth stocks (Bauman et al., 1998).

However, there is limited empirical evidence in the United States that focuses just on small-cap growth and value funds. While a number of studies examine solely growth versus

value funds or the performance of small-cap funds, some examine both. Therefore, our study can fill the void, serve as a guide for future researchers, and shed light on the performance discrepancy between small-cap growth and value funds.

Hypothesis Development

We are aware of very little research addressing small-cap growth and value funds. The performance of the selected fund depends on the numerators and denominators in the Sharpe and Treynor ratio formula, while Jensen alpha tends to depend on the risk-adjusted components in the computations as well as the CAPM. If all the data was extracted correctly from the ranking based on the Sharpe ratio, then the comparison should provide us with an accurate conclusion.

One of the results indicated, based on the earlier-discussed literature assessment, that small-cap growth funds outperformed small-cap value funds in terms of risk and return (Pettengill & Chang, 2014). Consequently, the following hypotheses have been constructed to reflect the performance of selected funds, H1: the risk-adjusted performance of small-cap growth funds is superior to that of small-cap value funds and H2: Small-cap value funds have superior risk-adjusted performance than small-cap growth funds.

Research Methodology

Based in the United States. According to the Securities and Exchange Commission, there are 7521 growth funds and 5321 value funds in the United States. The study utilises data from several companies in the United States, totaling 236 funds, over the period beginning in 2016 and ending in 2022, in order to detect more changes and fluctuations over the long run. In addition, the net asset value of small-cap growth and small-cap value funds is collected weekly, with all funds picked through Morningstar and data spanning six years taken from Yahoo Finance. Even though there are many growth and value funds in the current US market, only small-cap funds were selected because small-cap funds are seen to be a possible vehicle for effective international diversification (Eun et al., 2008b) Only 139 small-cap growth funds and 97 small-cap value funds met the study's requirements, out of a total of 167 small-cap growth funds and 128 small-cap value funds.

The following criteria were used to choose funds from Morningstar: (1) only small-cap growth and small-cap value funds; (2) data from Yahoo Finance over a 6-year period; (3) the funds are not newly launched; and (4) there is no missing data. The given criterion will be able to provide more accurate results by comparing the two funds objectively. Therefore, we believe the data will give individual investors insight into the performance and risk measurement of the funds. The Treynor ratio, Sharpe ratio, and Jensen alpha were utilised to determine the returns in order to achieve the desired outcome.

The conventional Treynor ratio enables researchers to comprehend the fund's performance per unit of systematic risk (Hubner, 2005) and is typically used to assess its return-generating capacity. For this performance ratio, the portfolio's beta coefficient and its relationship are assumed to be completely diversified. The calculation for the market's fund return is as follows:

$$T_i = \frac{\overline{R_\iota} - \overline{RFR}}{\beta_i}$$

$$\beta_{(fund\,i)} = \frac{Cov_{(fund\,i,\ Vanguard\,Rusell\,1000)}}{\sigma^2{}_{Vanguard\,Rusell\,1000}}$$

Where $\bar{R}_i$ is the average return of the small-cap growth and value funds and represents the average return on US Treasury bills, respectively. While the beta of the selected funds over the past six years is used as a measure of risk, it is beta.

$$S_i = \frac{\bar{R}_i - \overline{RFR}}{\sigma_i}$$

The second way of analysis is the Sharpe (1966) measure, which is one of the comprehensive performance measures. Sharpe (1966) uses the standard deviation of returns to evaluate the whole risk of the funds, rather than merely utilising systematic risk as represented by beta (Wallingford & Reilly, 1979). Since the numerator $(\bar{R}_i - \overline{RFR})$ is the risk premium of the portfolio, this metric represents the risk premium return per unit of total risk (Reilly & Brown, 2012). A higher Sharpe Ratio is typically viewed as a sign of superior performance because it can signify a greater return or less volatility ((Poon et al., 2004). The greater the value of the Sharpe ratio, the greater the risk-adjusted return (Dowd, 2000). In other words, a higher ratio is desirable, but a lower ratio is undesirable. The calculation for σ_i while is as follows:

$$\sigma_i = \sqrt{\frac{\sum(R_i - \bar{R})^2}{(n-1)}}$$

Where;
σ_i = Standard deviation of portfolio i's rate over the period
$\bar{R}_i$ = the average return for portfolio i over a specified time frame.
$\overline{RFR}$ = the average return on a risk-free investment over the same time period
$\bar{R}$ = Fund I's average return on investment
R_i = Return of fund i

In addition, the average weekly return of a portfolio can be determined using the following method for both the Treynor and Sharpe ratios:

$$R_{it} = \frac{NAV_{it} - NAV_{it-1}}{NAV_{it-1}}$$

Where;
R_{it} = the return of portfolio *i* in period *t*
NAV_{it} = Net asset value of portfolio *i* in period *t*
NAV_{it-1} = Net asset value of portfolio *i* in period *t* − 1

Jensen (1967, 1969) proposed the Jensen's alpha, which is another approach to assessing the risk-adjusted return of a portfolio (Phuoc, 2018) but it is based on the capital asset pricing model (CAPM). The majority of the time, this strategy enables researchers to gain a deeper understanding of market risk and various types of talents, such as fund managers' market timing and security selection abilities. The following is the Jensen alpha equation that will be used to calculate the index:

$$R_{it} - RFR = \alpha_i + \beta_i(R_m - RFR) + \check{e}_{it}$$

Where;
$R_{it} - RFR$ = Excess return of portfolio *i* in period *t*
$(R_m - RFR)$ = excess return of market portfolio proxied by Vanguard Rusell 1000 index/
α_i = Jensen's alpha
β_i = systematic risk for the portfolio
$\check{e}_{it}$ = a random error terms

The alpha value enables researchers to comprehend the performance of selected portfolios by comparing them to the market; the higher the alpha value, the better the

portfolio's performance. This is because a higher score shows that the portfolio's return exceeded the CAPM's predicted return (Phuoc, 2018). After collecting the data and assessing the performance of small-cap growth and value funds, an additional observation will be performed to analyse the results and compare the risk-adjusted performance of the two funds. From this point forward, the performance of small-cap growth and value funds will be reordered based on the Sharpe ratio, as the projected return and risk are the most crucial aspects of any portfolio study (Sharpe, 1966). Then, only the top twenty small-cap growth and value funds were selected for comparison.

Results and Discussion of Findings

Table 1 ranks the top twenty growth small cap funds based on their risk-adjusted performance. The Russell 1000 Growth was utilised as the benchmark for the market. The average weekly return for small-cap growth funds is 0.0028%, which is lower than the Russell 1000 Growth (0.0031% each week) and 13-Week Treasury Bills (0.0039% per week) (0.0376 percent). The fund with the highest average return is the American Growth Cannabis Fund Class E, with a weekly average return of 0.019%. The average total risk of small-cap growth funds is 0.0653 percent, ranging from 0.355 percent to 0.4748 percent. In contrast, the systematic risk of small-cap growth funds ranges between 0.1768 and 1.5549, with an average of 1.1307. One-hundred eighty-eight small-cap growth funds have a greater overall risk (systemic risk) than the benchmark. Treasury Bills with a maturity of 13 weeks offer the highest average weekly return, standard deviation, and beta. According to the Treynor measure, three of twenty small-cap growth funds outperformed the Russell 1000 Growth, which had a performance of -0.0067. All small-cap growth funds outperformed the Russell 1000 Growth, which is -0.2361, according to the Sharpe metric. With regard to Jenson Alpha, nine out of twenty small cap growth funds outperformed the Russell 1000 Growth. Only thirteen of these small-cap growth funds had positive alpha returns. The American Growth Cannabis Fund Class E outperforms the top 20 small-cap growth funds on these three metrics, ranking first in Sharpe ratio, Treynor ratio, and Jensen alpha ratio with respective values of 0.0217, 0.0111, and 0.0114.

Table 1

Weekly performance of top 20 Growth Funds: May 2006 – May 2022

Funds	Means (%)	SD (%)	Sharpe	Beta	Treynor	Jensen
American Growth Cannabis Fund Class E	0.0196	0.4748	0.0217 (1)	0.1768	0.0111 (1)	0.0114 (1)
Jacob Discovery Fund Institutional Class shares	0.0036	0.0402	-0.1428 (2)	1.0587	-0.0062 (3)	0.0008 (2)
Kinetics Small Cap Opportunities Fund	0.0041	0.0355	-0.1478 (3)	0.8512	-0.0056 (2)	0.0000 (12)
Driehaus Micro Cap Growth Fund	0.0017	0.0494	-0.1541 (4)	1.3363	-0.0082(12)	0.0007 (5)
Jacob Small Cap Growth Fund	0.0017	0.0458	-0.1661 (5)	1.2534	-0.0082 (11)	0.0002 (8)
Lord Abbett Micro Cap Growth Fund Class I	0.0017	0.0454	-0.1681 (6)	1.2613	-0.0082 (13)	0.0002 (7)
WP Smaller Companies Income Plus Instl	0.0005	0.0522	-0.1698 (7)	1.5549	-0.0095 (19)	0.0008 (3)
Baron Discovery Fund Institutional Shares	0.0031	0.0356	-0.1752 (8)	1.1290	-0.0067 (4)	0.0008 (4)
Oberweis Micro-Cap	0.0023	0.0392	-0.1781 (9)	1.1072	-0.0075 (8)	-0.0001 (14)
Penn Capital Special Sits Sm Cp Eq Inst	0.0019	0.0409	-0.1813 (10)	1.1329	-0.0080 (10)	-0.0004 (15)
Morgan Stanley Institutional Fund	0.0006	0.0480	-0.1826 (11)	1.2717	-0.0094 (18)	-0.0009 (18)
Lord Abbett Developing Growth Fund Class A	0.0013	0.0436	-0.1836 (12)	1.2967	-0.0086 (14)	0.0000 (10)
Wasatch Ultra Growth	0.0024	0.0373	-0.1855 (13)	1.1721	-0.0074 (6)	0.0004 (6)
Hood River Small-Cap Growth Fund	0.0025	0.0362	-0.1884 (14)	1.1052	-0.0073 (5)	0.0000 (11)
Neuberger Berman Small Cap Growth	0.0020	0.0379	-0.1928 (15)	1.1858	-0.0078 (9)	0.0001 (9)
Segall Bryant & Hamill Small Cap Gr Ret	0.0023	0.0360	-0.1937 (16)	1.1243	-0.0075 (7)	0.0000 (13)
AMG GW&K Small/Mid Cap Growth N	0.0013	0.0408	-0.1967 (17)	1.0938	-0.0086 (17)	-0.0012 (19)
AMG Frontier Small Cap Growth I	0.0002	0.0458	-0.1995 (18)	1.1152	-0.0098 (20)	-0.0022 (20)
Lisanti Small Cap Growth Fund	0.0013	0.0402	-0.1997 (19)	1.1808	-0.0086 (16)	-0.0007 (17)
VALIC Company I Small Cap Growth	0.0013	0.0400	-0.2000 (20)	1.2069	-0.0086 (15)	-0.0005 (16)
Average	0.0028	0.0632	-0.1692	1.1307	-0.0070	0.0005
Russell 1000 Growth (^RLG)	0.0031	0.0263	-0.2361	1.0000	-0.0067	0.0000
13 Week Treasury Bills	0.0376	0.3500	0.0807	2.5969	0.0303	0.0444

Table 2 displays the risk-adjusted analysis results for the Value Small Cap Funds in the United States. This table lists the top 20 small-cap value funds out of 97 total funds. The average weekly return for small-cap value mutual funds is 0.0021 percent, while the standard deviation is 0.0391 percent. In comparison to the benchmark, which is the Russell 1000 Value (RLV), it has outperformed. The average Russell 1000 Value (RLV) is 0.0017% and the standard deviation is 0.0252%. The 0.0391 percent total risk of small-sized value funds reflects this outperformance. Average systematic risk of small-cap value funds is greater than that of their benchmarks, with a Beta of 1.3041 compared to 1.0000 for Russell 1000 Value (RLV).

According to the Treynor ratio, fifteen of the funds have outperformed their respective benchmarks by -0.0081 percentage points. In terms of the Sharpe ratio, each of the twenty funds is outperforming. Towle Deep Value was placed first (-0.1545) and second in Jensen ratio (0.0045). Twenty of the small cap value funds also outperform the Russell 1000 Value based on the Jensen ratio test. Easterly Snow Capital Small placed first (0.0046) and second in Sharpe ratio (0.2). (-0.1580). In addition, the average Sharpe and Treynor returns for small-cap value funds are higher than their respective benchmark returns of -0.1859 (-0.0035) and -0.0078 (-0.0081). The Jensen result also demonstrated an outperformance, 0.0026 versus 0.0000.

Table 2

Weekly performance of top 20 Value Funds: May 2006 – May 2022

Funds	Means (%)	SD (%)	Sharpe	Beta	Treynor	Jensen
Towle Deep Value	0.0019	0.0481	-0.1545 (1)	1.5737	-0.0080 (13)	0.0045 (2)
Easterly Snow Capital Small Cap Value	0.0026	0.0426	-0.1580 (2)	1.4916	-0.0072 (4)	0.0046 (1)
Rydex S&P SmallCap 600 Pure Value Fund	0.0022	0.0407	-0.1753 (3)	1.3188	-0.0077 (10)	0.0029 (8)
Applied Finance Explorer Fund Investor Shares	0.0029	0.0367	-0.1762 (4)	1.2630	-0.0069 (3)	0.0031 (4)
Pzena Small Cap Value Fund	0.0020	0.0412	-0.1771 (5)	1.4140	-0.0078 (12)	0.0034 (3)
Hodges Small Intrinsic Value Fund	0.0024	0.0388	-0.1778 (6)	1.3146	-0.0074 (6)	0.0031 (7)
PGIM Quant Solutions Small-Cap Value Fund	0.0015	0.0422	-0.1852 (7)	1.4393	-0.0084 (17)	0.0031 (5)
Bridgeway Small-Cap Value	0.0025	0.0370	-0.1853 (8)	1.2259	-0.0074 (5)	0.0024 (14)
Auer Growth Fund	0.0030	0.0339	-0.1860 (9)	1.1390	-0.0068 (2)	0.0023 (15)
Aegis Value Fund	0.0030	0.0337	-0.1863 (10)	0.8571	-0.0067 (1)	0.0002 (20)
Rydex S&P MidCap 400 Pure Value Fund	0.0023	0.0379	-0.1867 (11)	1.3369	-0.0076 (9)	0.0031 (6)
Royce Opportunity Fund	0.0018	0.0403	-0.1872 (12)	1.2973	-0.0081 (15)	0.0023 (16)
Huber Small Cap Value Fund	0.0023	0.0370	-0.1905 (13)	1.3008	-0.0076 (8)	0.0028 (9)
Hotchkis & Wiley Small Cap Value Fund	0.0022	0.0374	-0.1917 (14)	1.2741	-0.0077 (11)	0.0025 (12)
Undiscovered Managers Behavioral Val L	0.0019	0.0388	-0.1920 (15)	1.3501	-0.0080 (14)	0.0028 (11)
LSV Small Cap Value Fund	0.0016	0.0389	-0.1986 (16)	1.3887	-0.0083 (16)	0.0028 (10)
Victory Integrity Small-Cap Value A	0.0013	0.0402	-0.1994 (17)	1.3839	-0.0086 (18)	0.0025 (13)
PIMCO RAE US Small Fund	0.0010	0.0415	-0.2017 (18)	1.2061	-0.0090 (20)	0.0008 (19)
Putnam Small Cap Value Fund	0.0010	0.0407	-0.2042 (19)	1.2969	-0.0089 (19)	0.0015 (18)
Allspring Small Company Value Fund	0.0023	0.0343	-0.2049 (20)	1.2099	-0.0075 (7)	0.0022 (17)
Average	0.0021	0.0391	-0.1859	1.3041	-0.0078	0.0026
Russell 1000 Value (^RLV)	0.0017	0.0252	-0.3005	1.0000	-0.0081	0.0000
13 Week Treasury Bills	0.0376	0.3500	0.0807	2.5969	0.0303	0.0444

Our findings support hypothesis 2, which states that the risk-adjusted performance of small-cap value funds is superior to that of small-cap growth funds. According to the findings of Chan et al (2002) growth mutual funds outperformed value mutual funds. While comparing the performance of small-cap growth funds with small-cap value funds, we discovered that small-cap value funds fared better. Small-cap value funds exceeded the benchmark when utilising the Sharpe and Treynor ratios, in contrast to the average performance of small-cap growth funds, where only the Sharpe ratio surpassed the benchmark. As demonstrated by Varamini and Kalash's (2008) research, small-cap value funds generated the highest risk-

adjusted returns over the same time span, but small-cap growth funds generated lower returns.

In addition, the results of Jensen alpha indicate that small-cap value funds outperformed, meaning that all 20 value funds outperformed the Russell 1000 value fund and had positive alphas. In contrast, just nine of the twenty small-cap growth funds outperformed the Russell 1000 growth fund, and only thirteen had positive alpha. As is well known, the Jensen alpha can also be used to evaluate the performance of managers. The superior performance of the manager of the small-cap value funds is supported by the superior performance of the funds (Shawky & Tian, 2011). According to this journal, small-cap value managers are more effective at providing liquidity services to the market, allowing them to perform well. In other words, due to their ownership of small-cap stocks, small-cap value fund managers are able to hold their holdings for a longer period of time than growth fund managers.

Our results differ from those of Pettengill & Chang (2014) Studies by Pettengill & Chang (2014) indicated that value funds in small-cap funds had a reduced risk of return, whereas our findings indicated that value funds in small-cap funds had a higher risk of return. Based on the research of (Bauman et al., 1998) the reason small-cap value funds outperform small-cap growth funds may be that the market prices, earnings, and dividends of very small companies are so volatile that standard valuation ratios based on a company's past financial performance do not give an accurate picture of what those companies are really like in terms of whether they are value stocks or growth stocks (Bauman et al., 1998) The fact that small-cap value funds always invest in discounted stocks is a further consideration.

Conclusion

This study examines the performance of both small-cap growth and small-cap value mutual funds using a total of 264 data points. After incorporating risk-adjusted return measures, we conclude that small-cap value funds performed better than small-cap growth funds during the research period. During the 6-year observation period, Sharpe and Treynor ratios indicate that small-cap value funds outperformed their respective benchmarks, while Jensen alpha indicates that small-cap value funds performed better than Russell 1000 value funds. which proves the preceding statement that the returns of small-cap value funds can compete with those of small-cap growth funds over the long term.

Similar to other types of mutual funds, the performance of small-cap growth and small-cap value funds can be affected by market fluctuations that have the potential to affect the portfolio values. In addition, its performance will also be affected by the portfolios' or mutual funds' assets, such as a greater expense ratio that can reduce its performance (Livingston et al., 2019). Not just individual investors but also institutional investors must perform a thorough analysis of current market information. Therefore, the significance of this research is to fill the research gap on the comparison of risk-adjusted returns for small-cap investing styles; and this study not only contributes to the business literature, but it also creates a better understanding from different perspectives and aids investors or researchers in making decisions.

However, the risk and return variability of non-S & P 500 holdings over time must also be considered. The current study can provide a comprehensive evaluation of the current mutual fund optimization methods using a database of all mutual funds that is devoid of bias. For the past three decades, the ability of mutual fund managers to outperform the market has been the topic of fierce discussion. According to Jensen (1968); Sharpe (1966), mutual

funds have underperformed the market due to the fees they charge investors. According to Ippolito (1989) research, the risk-adjusted net returns of U.S. mutual funds are exceptionally high. Several writers have recently asserted that data biases distorted previous findings.

It may be noted that a few adjustments can be made to the results of this study to make them more accurate by including a longer time period and that the results may change in the future. Consequently, depending on the research objective, we may include more variables in the future. To corroborate the findings and use the results as a ranking mechanism in the performance chart, the research might be broadened to include a poll of actual and future consumers, such as investors. It can be stated that making a decision based on market risk enables an investor to track the dynamic behaviour of mutual fund management.

The study contributes to the literature in twofold aspects. Firstly, it contributes to the financial market institution and secondly, a contribution to the body of knowledge. First, assessing the growth and value fund performance on the capital market can help investors improve return on investment and quality of life. With this regard, this allows retail and institutional investors to rebalance their portfolios dynamically according to the marginal contribution of each asset class. Finally, the findings of the current contributed to the body of knowledge. The study will add to the current knowledge of the optimal portfolio of growth and value funds. It can also be used to understand investment decisions better and in a meaningful way, enabling considerable insights into the role of growth and value funds in a mixed-asset portfolio. This knowledge and understanding would increase relevance for retail investors or institutional investors and industry players, namely portfolio managers, to improve the return on investment by identifying the best securities to enhance the portfolio's risk-return profile.

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