

## Are Investment Managers Worth Their Keep?

### A 7-year Evaluation of Active and Passive Investment Performance of a University Endowment

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## ABSTRACT

*This study examined the financial performance of Schreiner University's actively managed endowment and compared the performance to a hypothetical passive investment strategy. From 2014 to 2020, the actively managed endowment produced a cumulative return of 71.7%. In comparison, the passive, index-based portfolio produced a cumulative return of 72.9%. The actively managed portfolio outperformed the passively managed portfolio in four out of seven years but underperformed overall. The performance results of the assets classes were inconsistent throughout the seven-year period. Additionally, a passive strategy of 60% US equities and 40% US bonds would have resulted in a cumulative return of 98.9% over seven years.*

**Keywords: ETFs, Endowment Management, Active Versus Passive Investing**

## INTRODUCTION

University endowments play an important role in higher education as distributions from the endowments support academic excellence, maintain facilities, aid ongoing operations, and provide scholarships for deserving students. To maintain their purchasing power, endowments need to earn a return that covers annual inflation and distributions each year. Thus, university administrators often seek the best avenue to earn excess returns for real growth. At Schreiner University a liberal arts institution nestled in the Hill Country of Texas - the target rate of return includes a spending rate of 4.9% plus the inflation rate and an additional 1%. At fiscal year-end 2021, Schreiner University reported endowment net assets of \$89.6M on its audited financial statements, although not all assets were liquid. Because the annual projected distributions from the endowment play an essential role within its operating budget, it is incumbent upon leadership to determine the best investment strategy for maximum gain.

Many universities across the U.S., like Schreiner University, do not have the institutional capacity to actively manage their investments in-house and often call upon experts or external financial investment firms to handle this function. Other large institutions may have the bandwidth to do so, but regardless of where the management is housed, the greatest return is the ultimate goal.

Chief Financial Officers and members of asset/investment committees of boards of trustees should collaboratively evaluate their investment portfolio's return regularly to determine if the adopted investment strategy is the best course of action. They should evaluate whether the ongoing volatility of the stock market, possible recessions,

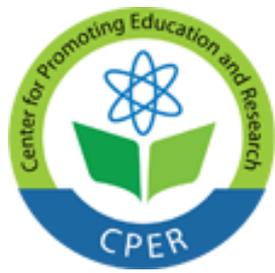
forecasted downturns, inevitable inflation, and other financial drivers can be best managed by an investment firm. Alternatively, leaders should be bold to ask and investigate whether a low-cost, passive investment strategy generates the greatest return.

Well, at Schreiner University, the investigative research has begun with this seven-year study that examines whether the current active investment strategy managed by financial professionals who assess fees earns higher returns than a passive, index-based strategy.

## BACKGROUND

Most of Schreiner University's endowment is entrusted to a nonprofit organization (NO) which provides investment services to educational, religious, and other charitable organizations. The university's assets are invested in a diversified fund. The investment committee of the NO determines the asset classes and the target allocation to each asset class. Management of the asset classes is entrusted to outside advisory firms. Currently, 26 companies invest in different parts of the investment portfolio. The diversified investment portfolio includes domestic large-cap and small-cap equities, international and emerging market equities, alternative investments, fixed income, and real estate. The NO also handles the administrative function of tracking the market values of the more than 300 individual endowments on behalf of the university and makes quarterly distributions in accordance with the university's spend rate policy.

An active strategy involves buying and selling individual securities with the goal of outperforming a benchmark index. The financial professionals (i.e., investment managers) seek to exploit inefficiencies in the market and find



undervalued securities. This high-risk approach requires expertise with market trends, a dependency on investment managers to monitor indices daily, and the financial and strategic acumen to act quickly when necessary. With a passive strategy, an investor buys an index or exchange-traded fund (ETF) that replicates the return of a specific index such as the S&P 500 or Barclays Aggregate bond index. The investor holds a basket of equities, bonds, or other securities without being exposed to the risks of a single security. In addition, the expense ratios of ETFs or index funds are considerably lower than those of actively managed portfolios because investment companies incur costs for trading, portfolio managers, and research analysts. Therefore, passive investing has also frequently outperformed active investing because of lower fees.

Passive investing has become popular with investors in the U.S. and around the world. Between January and July 2021, investors in the U.S. transferred \$512 billion to ETFs, surpassing the \$500 billion investors sent to ETFs in 2020, according to data from Morningstar Inc. Low-cost ETFs that track large-cap and short-term bond indices attracted the most interest. By the end of July 2021, ETFs accounted for over \$6.6 trillion of investors' money, according to the data.

Few academic studies examine the performance of university endowments. Most studies include data from the National Association of College and University Business Officers (NACUBO) annual survey. This study firstly expands the literature by comparing the actual investment performance of Schreiner University's endowment over a seven-year period to a hypothetical passive investment portfolio to determine whether active management has generated excess returns. Secondly, this study describes the data used and the research methodology followed by a results section with the findings. The last section concludes with a discussion of our findings and provides recommendations for future research.

## LITERATURE REVIEW

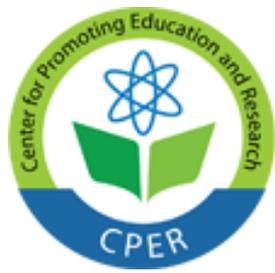
The literature on active versus passive investing suggests that it is difficult for active managers to reliably outperform a passive investment strategy. Jensen (1968) analyzed the performance of 115 actively managed mutual funds in the period 1945 to 1964. The portfolio managers were on average unable to pick stocks that beat a buy-the-market-and-hold strategy. The results of the study did not change even when the mutual funds' returns were measured gross of fees. Sharpe (1991) asserted that, before fees, the return of actively managed portfolios will equal passively managed ones and after fees, the return of actively managed portfolios will be less than the return of their passive counterparts. Malkiel (2003) demonstrated that a passive investment strategy produced superior results across all asset classes domestic and international equities as well as bonds. Jones and Wermers (2011) found that the average active manager did not beat the market but that a small number of active managers consistently outperformed index funds. Finding skilled active managers is

difficult and requires research that goes beyond assessing past performance.

Data from the S&P Dow Jones Indices show that as of December 31, 2017, 182 (or 20%) of the 915 actively managed U.S. large-cap funds had outperformed the S&P 500 benchmark in the previous three years. However, many of those winners were unable to continue beating the benchmark in each of the subsequent three years. The number of funds that outperformed the S&P 500 from 2018 through 2020 was 124, 75, and 71, respectively. The outperformance persistence becomes even worse over time. Of the U.S. large-cap funds that existed in 1990, 6% are still in business and have outperformed the S&P 500 over that time. The low number of winners is disappointing, yet university administrators and their consultants still believe active investment managers can outperform benchmarks consistently.

NACUBO conducts an annual survey among U.S. educational institutions and publishes data regarding endowment size, asset allocation, spending, and average investment returns. The NACUBO endowment study data set provides an excellent source for quantitative analysis. Hammond (2020) analyzed the NACUBO data over 58 years and found that the average endowment did not earn enough to meet its annual return needs, its long-term return objective and would have achieved higher returns by pursuing a passive investment strategy of 60% U.S. stocks and 40% U.S. bonds. Large endowments with assets of more than \$1 billion outperformed the 60/40 benchmark in 4 of the 5 decades for which data was available but underperformed during the most recent decade by 1.5%. Small endowments with assets of less than \$25 million underperformed the 60/40 benchmark for the past 5 decades by 1.8%. Hopkins, Goff, and Cox (2013) came to a similar conclusion. They analyzed the NACUBO data and found that endowments greater than \$100 million outperformed their benchmarks. Endowments greater than \$50 million but less than \$100 million did not earn significantly more by pursuing an active investment strategy, and endowments with less than \$50 million would probably be better off with a passive investment strategy.

The NACUBO data strongly suggest that large endowments earn higher returns than small endowments, but the determinants of higher performance remain a puzzle. Barber and Wang (2013) analyzed the endowments of elite institutions and concluded that strategic allocations to alternative investments were the reason for superior returns. They found that tactical asset allocation, market timing, or access to talented asset managers did not make a difference. Brown, Garlappi, and Tui (2010) studied university endowments for the effect of asset allocation on the performance of multiple-assets class portfolios. They found that actively managed endowments have larger returns than passively managed ones and that the average endowment did not earn meaningful risk-adjusted returns. Asset allocation had no impact on portfolio returns but indirectly influenced



performance, however, Brown et al. did not break down their findings by endowment size. Brinson, Hood, and Beebower (1986) examined the impact of asset allocation, market timing, and securities selection on investment returns and used data from large U.S. pension plans. They determined that asset allocation had the greatest impact on the investment management process and that market timing and securities selection can earn considerable returns but were less effective over time. Haber (2019) analyzed the actively managed portfolios of large private foundations and compared the average return to a hypothetical, index-based portfolio. The active portfolio beat the passive portfolio by 2.3%. However, this study was limited to one year, 2017, and investors are more interested in cumulative returns over many years.

**DATA AND METHODOLOGY**

This study examined whether ETFs are an appropriate choice for Schreiner University’s endowment portfolio. In

doing so, all active investment managers were replaced with ETFs, and they were chosen in the same asset class as the replaced active managers. Following, a comparison of the return of the actively managed endowment to the hypothetical, passively managed endowment is conducted to determine the superior investment strategy.

Data from Schreiner University’s endowment (2014 to 2020) were gathered and compared to the returns of a hypothetical passive, index-based portfolio. The assets classes of the university’s endowment, the ETFs selected as substitutes for each asset class, as well as the index the ETFs track are illustrated in Table 1. Vanguard ETFs (except for a commodities ETF) were selected because of their low management fees as they range from 0.04% to 0.14%. The NO currently charges 0.62% for its investment services.

**Table 1: ETFs and Indices Used for Passive Portfolio Returns**

SCHREINER UNIVERSITY ASSET CLASSES	ALLOCATION	TICKER	ETF	INDEX
Large Cap Equity	30%	VV	20% Vanguard Large Cap Blend	CRSP US Large Cap
		VTV	40% Vanguard Value	CRSP US Large Cap Value
		VUG	40% Vanguard Growth	CRSP US Large Cap Growth
Small Cap Equity	9.0%	VB	Vanguard Small-Cap	CRSP US Small Cap
International Equity	15%	VEA	Vanguard FTSE Developed Markets	FTSE Developed All Cap ex US
Emerging Markets Equity	5.0%	VWO	Vanguard FTSE Emerging Markets	FTSE Emerging Markets All Cap
Real Estate	4.0%	VNQ	Vanguard Real Estate	MSCI US Investable Real Estate
Real Assets	4.0%	VT	40% Vanguard Total World Stock	FTSE Global All Cap
		VAIPX	40% Vanguard Inflation Protected	N/A
		GSG	20% iShares S&P GSCI Commodities	Commodities Futures
Diversified Assets	10%	N/A	N/A	N/A
Fixed Income	23%	VCLT	1/3 Vanguard Long-Term Corporate Bond	Bloomberg US 10+ Year Corp
		VCIT	1/3 Vanguard Intermed-Term Corporate Bond	Bloomberg US 5-10 Year Corp
		VCSH	1/3 Vanguard Short-Term Corporate Bond	Bloomberg US 1-5 Year Corp

The NO allocates 30% to large-cap equity. Within this asset class, 20% is allocated to a blended large-cap fund, 40% to large-cap growth equities, and 40% to large-cap value equities. ETFs that mirror those large-cap equities were selected for the comparison. For fixed income, three ETFs were chosen including long-term, intermediate, and short-term corporate bonds all identified by the ticker symbol. ETFs matching the real assets fund was unable to be found, thus, the ETFs identified reflect the NO’s benchmark which consists of 40% MSCI AC World Index, 40% U.S. Treasury Inflation-Protected Securities (TIPS), and 20% Commodities. Furthermore, an ETF that matched the diversified strategies fund was undiscoverable as it includes a blend of alternative investments such as long/short equity, options, and merger

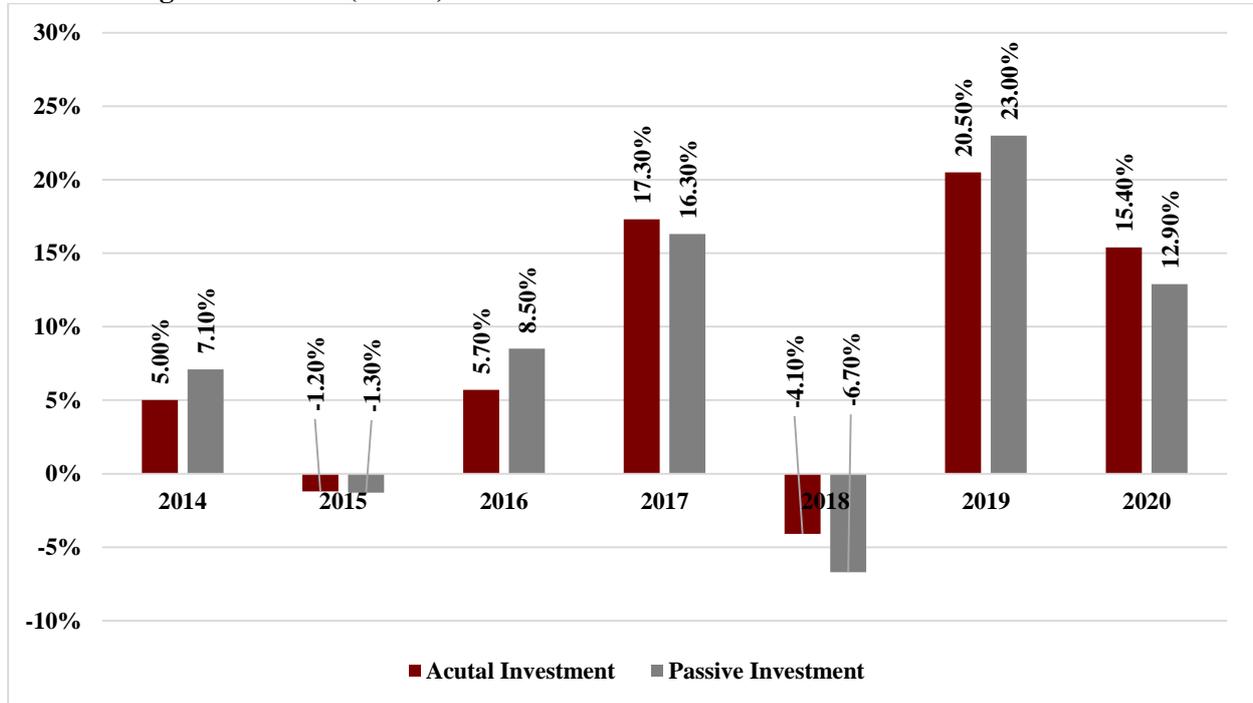
arbitrage. To be equitable, the actual return of the diversified strategies fund was included in the comparison calculation.

**RESULTS**

To calculate the return of the hypothetical passive investment portfolio, the weighted asset allocation was multiplied by the ETF return for each asset class and the results of all asset classes per year were summed. This calculation yielded the ETF portfolio earning 1.2% more than the actively managed portfolio. A comparison of the actual investment performance of the university’s endowment to the hypothetical passive investment portfolio is presented in Figure 1. Each year, both the actual and passive yielded either a negative return when the market was down or a positive return when the market was up.

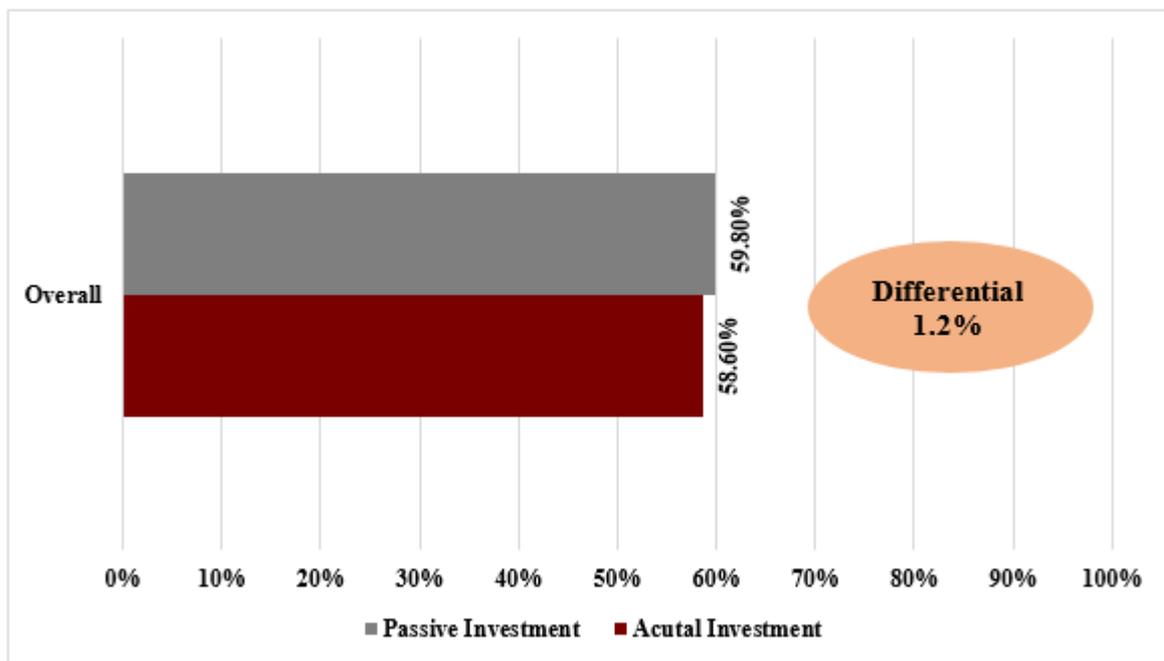


**Figure 1: Actual (Active) versus Passive Investment Portfolio Return 2014-2020**



Overall, the total multi-year return, illustrated in Figure 2, versus the passive investment strategy with a 59.80% return, shows the active investment strategy with a 58.6% return. This is a difference of 1.2%.

**Figure 2: Overall Actual (Active) versus Passive Investment Portfolio Return 2014-2020**



The passive investment strategy produced a greater return overall, albeit not consistently year after year. In 2020 and 2018, the actively managed portfolio outperformed the hypothetical passive portfolio by 2.5% and 2.6%, respectively. In years of great volatility, active investment managers can exploit market inefficiencies, find undervalued stocks, and beat their benchmarks. The COVID-19 pandemic unsettled

financial markets in 2020. Tariffs, interest rate increases, and a slowdown in global economic growth, among others, worried investors in 2018 (Frazee, 2018)

In addition, the returns of the individual asset classes varied considerably from year to year. A comparison of the sum of the actively versus passively managed weighted investment returns of all asset classes is presented in Table 2.



**Table 2: Active vs Passive Investment Return by Asset Class**

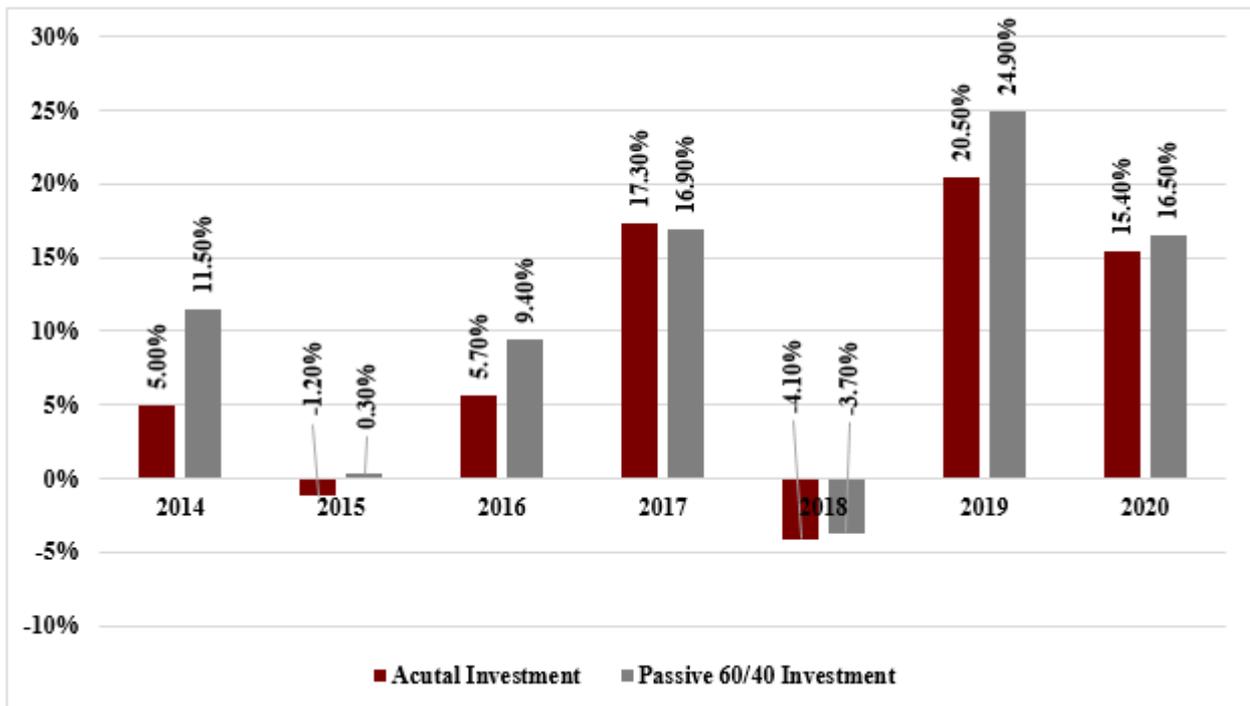
ASSET CLASS	ACTIVE INVESTMENT RETURN	PASSIVE INVESTMENT RETURN	DIFFERENCE
Large Cap Equities	31.4%	29.0%	2.4%
Small Cap Equities	8.9%	6.8%	2.1%
International Equities	4.4%	6.0%	-1.6%
Emerging Market Equities	2.9%	2.5%	0.4%
Real Estate	1.3%	2.6%	-1.3%
Real Assets	0.2%	0.9%	-0.7%
Diversified Strategies	2.4%	2.4%	0.0%
Fixed Income	7.1%	9.6%	-2.5%
<b>Total</b>	<b>58.6%</b>	<b>59.8%</b>	<b>-1.2%</b>

Actively managed small-cap equities bested their passive equivalents each year. Actively managed large-cap equities, emerging market equities, and real estate outperformed their respective index funds in four out of seven years. It is worth noting that the large-cap equity ETFs produced a cumulative higher return from 2014 through 2019 than the actively managed large-cap equities. The strong performance of the active investment managers during 2020 changed the overall result. Fixed income, international equity investments, and real assets benefited from a passive strategy and returned higher results in four, five, and six out of seven

years, respectively. The diversified strategies results are added for illustrative purposes only since an ETF that replicated those investment strategies was undiscoverable.

Alternatively, the performance of a traditional mix of 60% US equities and 40% US bonds were of particular interest and noteworthy of examining. For this review, the weighted passive return of the large-cap equity ETFs and the weighted fixed income ETFs were applied, then compared to the results of the actively managed investment returns. The results are illustrated in Figures 3 and 4.

**Figure 3: Active versus Passive Investing with 60/40 Return (Assumed) 2014-2020**

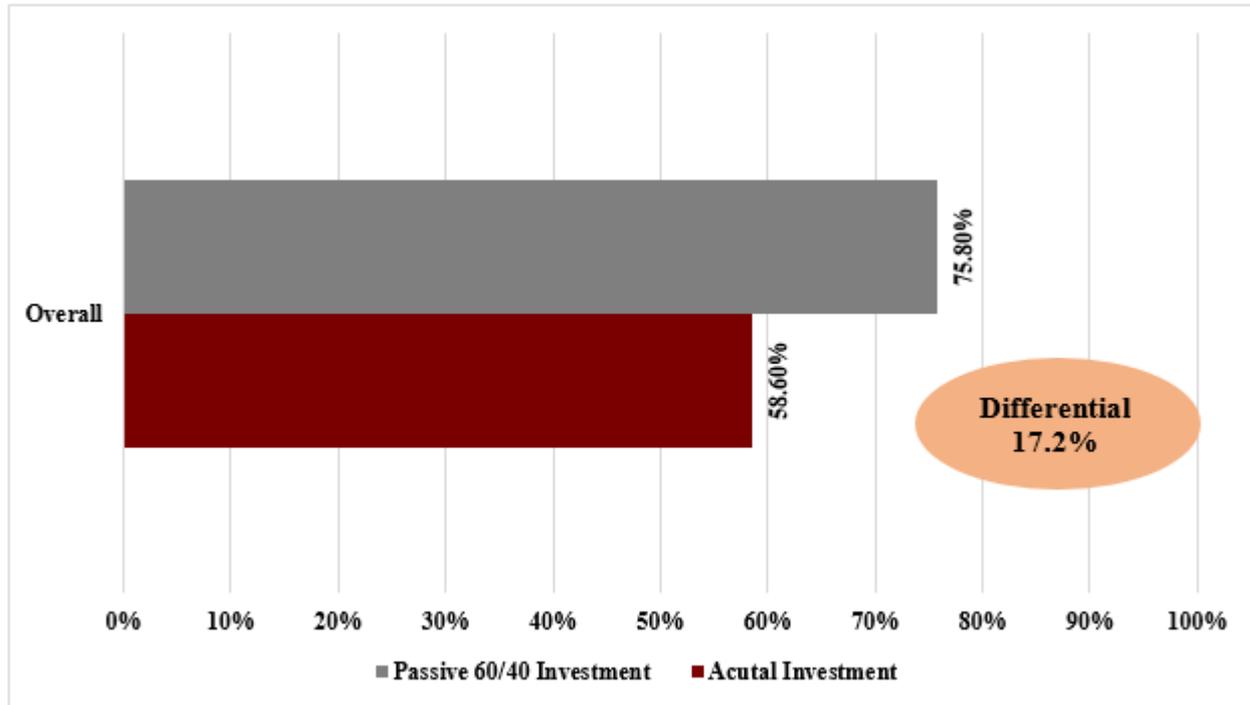


A passive investment portfolio of 60% US equities and 40% US bonds would have greatly increased the market value of Schreiner University's endowment. US equities have

outperformed international and emerging market equities as well as real assets, real estate, and diversified strategies.



**Figure 4: Overall Active versus Passive Investing with 60/40 Return (Assumed) 2014-2020**



**LIMITATIONS**

Notwithstanding, this study is subject to the following limitations. Firstly, the passive investment portfolio does not include cash whereas the actively managed endowment holds a small amount of cash. In a market downturn, cash protects the portfolio from investment losses. Conversely, in a market upturn, cash does not produce an investment return. Secondly, this study uses data from only one university with an endowment portfolio under \$100M and one investment management organization so the results are not generalizable. However, the approach can be replicated to include other small university endowments managed by different investment firms to determine if the outcomes are similar. Thirdly, an ETF that was comparable to the diversified strategies fund was unable to be found, thus, the actual return from the NO was used in the comparison. If a substitute ETF were to be located for the diversified strategies fund, the passive investment return may have been better or worse than presented in this study. Lastly, ETFs follow indices and need to be updated when those indices change. If the update is not done on time, the return of an ETF can be different from the return of the benchmark it is supposed to track (tracking error). However, those limitations noted do not materially change the outcome of the analysis.

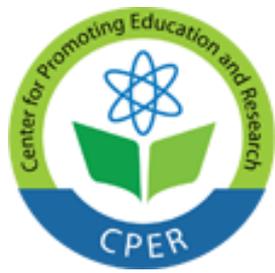
**CONCLUSION**

In this study, seven years of actively managed endowment performance were compared to a passive, index-based investment strategy. Data demonstrate that, overall, a passive strategy would have produced a higher return than the active strategy even though the passive portfolio did not outperform the actively managed portfolio consistently year after year. While the performance of the various asset classes

was mixed, from 2014 to 2020, the actively managed endowment produced a cumulative return of 71.7%. In comparison, the passive, index-based portfolio produced a cumulative return of 72.9%. The actively managed portfolio outperformed the passively managed portfolio in four out of seven years but underperformed overall. In years of high market volatility, investment managers appear to be in a better position to outperform their benchmarks and earn higher returns.

In addition, this study found that a traditional mix of 60% US equities and 40% US bonds would have improved the value of the endowment significantly. From 2014 to 2020, the 60/40 passive portfolio produced a cumulative return of 98.8%. And, the cumulative investment returns improved significantly when the assumed 60/40 asset allocation, resulting in an additional cumulative return of 27.2% over seven years.

Granted, while the findings of this study illustrate that a passive investment approach generates a higher return, there are implications. The passive, index-based portfolio outperformed the actively managed portfolio, but insourcing the endowment management means that Schreiner University staff will have to absorb the administrative function of investment management such as investing the funds at the onset, allocating dividends as well as realized and unrealized gains/losses to more than 300 individual endowments, calculating quarterly distributions and rebalancing the portfolio once a year. These functions are attainable with the support of additional staff within the business office area but only profitable when the costs associated with additional staff do not exceed external investment fees.



It remains clear that these positive outcomes would have generated a higher endowment value throughout the period examined. With a higher endowment value, the annual distribution would have directly impacted an institution's financial ability like Schreiner University to expand academic support, begin a new academic program, or even address deferred maintenance issues. While the possibilities of future growth appear promising, making a change in investment strategy should not be taken lightly. Should a passive approach be adopted, administrators should remain

steadfast in their commitment and not pivot when the market fails to produce a positive return.

These findings also suggest that, regardless of investment strategy, asset allocation matters, and institutions should revisit investment policies regularly. As noted in the results, several actively managed asset classes performed well, while others were disappointing. In the end, maybe a blend of active and passive investment strategies may be beneficial for institutions, but further research would be required.

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