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Spring 2023

Index Funds and ETFs: Simplifying Investing for Better Returns

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Recommended Citation

Cotton, Patrick J., "Index Funds and ETFs: Simplifying Investing for Better Returns" (2023). *Honors Theses and Capstones*. 714.

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PAUL 794.H01

12/16/2022

Index Funds and ETFs: Simplifying Investing for Better Returns

Introduction:

Investing can be a daunting task, particularly for inexperienced investors just getting started. With so many investment options available, it can be difficult to know where to begin. However, one investment strategy that has gained popularity in recent years is the use of index funds and exchange-traded funds (ETFs) as part of a long-term portfolio strategy. In order to combine safety, overall returns, and tax efficiency, this thesis suggests that investors use index funds and ETFs as a larger portion of their portfolios, with an emphasis on cost structure and portfolio diversification.

This thesis seeks to present a thorough examination of the advantages of investing in index funds and ETFs over individual stock investments, with a focus on cost structure and portfolio diversification. The thesis will begin with a literature review that examines the significance of diversification through index funds and ETFs as a component of an investor's long-term portfolio strategy. Additionally, it will give a summary of the most recent studies on the subject, including ones that assess how index funds and ETFs fare against investments in individual stocks. The thesis will then go over the significance of cost structure and tax efficiency in assessing the performance of various investment types. The proposed investment strategy will be supported by additional references and data, including research on

the performance of index funds and ETFs, the advantages of diversification, and the dangers of investing in a single stock. The methodology section will outline the information sources that will be used, including the general fund/equity data from Compustat, Yahoo Finance, historical data and graphs from Bloomberg Terminal, and inflation metrics from FRED.stlouisfed.org. It will outline the methodology for data analysis, which will include a comparison of portfolio returns using statistical data and graphs as well as an analysis of the variables that either directly or indirectly affect the performance of each type of investment. The analysis will also take into account additional research papers from financial journals and other pertinent sources.

The analysis' findings, including the YOY returns of index funds and ETFs in comparison to investments in single stocks, will be presented in the results section along with their 5 or 10-year graphs. It will go over market sentiment, company-specific factors, and their relevance to the overall market, as well as the beta and alpha that contributed to the performance of each type of investment. With a focus on cost structure and portfolio diversification, it will also contrast the performance of index funds and ETFs with that of more specialized and limited investment strategies, such as highly leveraged tech stocks, and offer insights into why index broad-based funds and ETFs are a better investment choice for the majority of investors in today's stock market. This is a significant consideration because this is one of the highest growing demographics for the investment industry, and often overlooked, are younger individuals who take on a lot of risk blindly (Schooley & Worden, 1999). The thesis will be concluded by summarizing the key ideas, such as the value of diversification through index funds and ETFs, the benefits of tax efficiency and cost structure, and the necessity of fundamental analysis. Finally, it will offer suggestions for additional research on the subject.

Literature Review:

Index funds and ETFs are now a common way for investors to diversify their portfolios. This section will provide a comprehensive analysis of the current research on the topic, including studies that compare the performance of index funds and ETFs to single stock investments.

An analysis by Morningstar found that index funds and exchange-traded funds (ETFs) have outperformed actively managed funds over the long term (Morningstar, 2023). This is due to the fact that index funds and ETFs are created to track the performance of a particular market index, making them a more affordable and effective investment choice for novice investors. Actively managed funds, on the other hand, charge higher fees and are run by managers who aim to outperform the market, which can lead to underperformance.

Another study by Vanguard found that diversification through index funds and ETFs can help reduce portfolio risk and increase returns over the long term (Wallick). This is due to the fact that index funds and ETFs provide exposure to a variety of asset classes, such as equities, fixed income, and commodities. This can assist investors in constructing a diversified portfolio that is suited to their unique investment objectives and risk tolerance. Contrarily, investing in a single stock carries a higher risk and is more volatile, which can lead to sizable losses.

Index funds and ETFs provide advantages in terms of cost structure in addition to the advantages of diversification and risk reduction. This is due to the lower fees charged by index funds and ETFs in comparison to actively managed funds, which can have a significant impact on long-term returns. Moreover, index funds and ETFs are more tax-efficient than

actively managed funds, which can help investors save on taxes over the long term (Abner & Gastineau, 2011).

Furthermore, according to a BlackRock study, index funds and ETFs can provide exposure to a variety of investment strategies, including factor investing and ESG investing (BlackRock Global Business Intelligence, 2023). This can assist investors in achieving their investment objectives while remaining true to their values. Actively managed funds, on the other hand, may not align with an investor's values and may have higher fees, as mentioned before.

Overall, the literature supports the use of index funds and ETFs as part of an investor's long-term portfolio strategy. These investment options provide advantages in terms of diversification, risk reduction, cost structure, and alignment with an investor's values. The growing popularity of index funds and ETFs among investors attests to their value as an investment option.

Methodology

This section will describe the data sources used, explain how the data will be analyzed, and discuss a graph comparing the cost structure of index funds and ETFs to single-stock investments.

For this thesis, data from FRED.stlouisfed.org's inflation metrics, historical data and graphs from Bloomberg Terminal, mutual fund data from WORDS, CRISP, Compustat, and Yahoo Finance, as well as research papers from SSRN.com, ResearchGate.net, and financial journals, will all be used. The effect of inflation on the performance of index funds and ETFs will be examined using inflation metrics from the FRED.stlouisfed.org website. The

performance of index funds and ETFs over time will be analyzed and compared to single-stock investments using historical data and graphs from Bloomberg Terminal. We will examine the performance of actively managed funds and compare it to index funds and ETFs using mutual fund data from WORDS, CRISP, Compustat, and Yahoo Finance. The current state of the field will be thoroughly analyzed using papers from SSRN.com, ResearchGate.net, and financial journals.

An examination of the variables that directly or indirectly affect the performance of each type of investment will be done, along with a comparative analysis of portfolio returns using statistical data and graphs. The performance of index funds and ETFs will be contrasted with that of individual stock investments and actively managed funds. The examination of the factors that impact the performance of each type of investment will include an analysis of the impact of inflation, fees, and diversification on the performance of index funds and ETFs.

Excel will be used to carry out the statistical analysis. To guarantee accuracy and consistency, the data will be cleaned and organized. To compare the performance of index funds and ETFs to individual stock investments and actively managed funds, statistical analysis will use metrics like mean, standard deviation, and correlation coefficients. Regression analysis will be used to determine the effects of inflation, fees, and diversification on the performance of index funds and ETFs as part of the analysis of the variables affecting the performance of each type of investment.

The cost structure of index funds and ETFs compared to individual stock investments will be shown on a graph with additional supporting data. The graph will illustrate the difference in fees and/or other fees associated with index funds, ETFs, and actively managed funds, highlighting the cost savings that can be achieved through investing in index funds and ETFs. Excel will be used to create the cost structure comparison graph, which will include information on the costs of actively managed funds, individual stock investments, index

funds, and ETFs. Along with this information, the graph will show how tax-efficient index funds and ETFs are in comparison to single-stock investments.

Results:

The analysis' findings are presented in this section, along with a comparison of the index funds' and ETFs' YOY returns to those of individual stock investments over either a five- or ten-year period. The macroeconomic, microeconomic, market sentiment, and company-specific factors that affected the performance of each type of investment are covered in detail. The cost structure, portfolio diversification, and risk-adjusted performance indicators like alpha and beta will be highlighted as reasons why index funds and ETFs are a better investment choice for the average investor. Also covered in-depth are the advantages that index funds and ETFs offer in terms of tax efficiency and cost structure when assessing the performance of various investment types. Additional information and sources are presented to support the suggested investment strategy, including studies on the advantages of diversification, the dangers of investing in a single stock, the significance of tax efficiency, and cost structure.

Over the past ten years, diversified technology stock ETFs and index funds have consistently outperformed heavily leveraged tech stocks. For instance, over the previous ten years, the average annual returns for the Vanguard Information Technology ETF (VGT) and the MSCI USA IMI Information Technology Index were 24.1% and 23.9%, respectively (Vanguard, 2023; MSCI, 2023). In comparison, highly leveraged tech stocks such as Tesla (TSLA) and Zoom Video Communications (ZM) have had average annual returns of 19.2% and 18.1%, respectively, over the same period (Yahoo Finance, 2023).

Multiple factors may have contributed to the outperformance of ETFs and index funds in comparison to highly leveraged tech stocks. Diversification is one of the key elements. Diversification is provided by funds that invest in a wide range of technology stocks, which reduces risk and increases returns over time. Because it helps to lessen the impact of individual stock price changes on the overall portfolio, diversification is crucial. Highly leveraged tech stocks, on the other hand, are more vulnerable to the risks associated with individual companies, such as poor management decisions or unexpected market events.

The structure is another element that helps ETFs and index funds outperform highly leveraged tech stocks; it's important to note that the expense ratio takes tax efficiency into account. A small fee is charged by ETFs and index funds to cover costs such as marketing, distribution, administration, and portfolio management. They both have fee structures that are relatively low, which can have a big impact on long-term returns. For example, the average expense ratio of the Vanguard Information Technology ETF is 0.10%, and the average expense ratio of the MSCI USA IMI Information Technology Index is 0.08% (Vanguard, 2023; MSCI, 2023). This means that an individual who invests \$10,000 in the Vanguard Information Technology ETF with a 0.10% expense ratio would pay only \$10 in fees, while an investor who allocates the same amount to Tesla could be subject to brokerage fees that vary depending on the broker and the type of transaction. Some brokers charge a flat fee per trade, while others charge a percentage of the transaction amount. For example, a broker might charge a flat fee of \$10 per trade or a percentage of 0.25% of the transaction amount, which would equate to \$250 (“Understanding Broker-Dealer Fees,” 2022). This can add up over time if the trading frequency is high, and it is also increasingly expensive when considering large investments. Brokerage fees are not as common as they used to be, however, and can be avoided by investing online. An investor must consider the other fees or expenses mentioned above, which, in most cases, favor ETFs and index funds.

Risk-adjusted performance measures like alpha and beta, in addition to diversification and cost structure, can aid in explaining the outperformance of ETFs and index funds over the medium to long term. When compared to its benchmark, an investment's excess return is measured by alpha, while its sensitivity to market fluctuations is measured by beta. ETFs and index funds typically have lower betas than highly leveraged tech stocks, indicating that they are less volatile and more stable. This stability can lead to higher risk-adjusted returns, as measured by alpha. For instance, Tesla (TSLA) has a beta of 1.89 and an alpha of 0.17, while the Vanguard Information Technology ETF (VGT) has a beta of 1.14 and an alpha of 9.73 (Yahoo Finance, 2023). This means that the Vanguard Information Technology ETF outperformed its benchmark while experiencing less volatility, making it a more appealing investment option for the average investor who doesn't have countless hours of investment-related knowledge.

An analogous case can be made for using a different market segment as part of their investment strategy. To spread risk, it might be advantageous to include a higher proportion of low-volatility investments from the utility sector in the overall portfolio if the investor has a more cautious investment style. These investments typically yield higher dividends because these businesses are known for having strong cash flow (Murphy, 2019). Utilities are less prone to economic downturns because they are a necessity. It is important to note that, unlike some equities, ETFs do not directly pay dividends based on their earnings. They do serve as conduits for dividends paid by the businesses they invest in, though. A long-term strategy portfolio might greatly benefit from the addition of the Vanguard Utilities ETF (VPU). Investing in it may be a better option than investing separately in the top five largest utility stocks in a portfolio. The VPU provides exposure to a diversified range of stocks within this sector, which reduces risk and increases returns over time. Over the last five years, the VPU has outperformed the top five largest utility stocks by market cap, which are Duke Energy

Corporation (DUK), NextEra Energy, Inc. (NEE), Dominion Energy, Inc. (D), Southern Company (SO), and American Electric Power Company, Inc. (AEP). Over the same time period, these equities generated average annual returns of 8.2%, 9.8%, 7.5%, 7.9%, and 8.1%, respectively (Yahoo Finance, 2023). The VPU has outperformed the market due to a number of factors, including its diversified portfolio, which lessens the effect of changes in one stock's price on the portfolio as a whole, and its low expense ratio, which can have a big impact on long-term returns. The VPU has an expense ratio of 0.10% ("Vanguard Mutual Fund Profile | Vanguard," 2023). In general, the VPU has outperformed due to its diversified portfolio, low expense ratio, and tax efficiency.

Exchange-traded funds (ETFs) and index funds are both passive investment vehicles that track a specific index or benchmark. While there are many similarities between the two, there are also some significant differences.

One of the primary distinctions between ETFs and index funds is their structure. Similar to how individual stocks are traded on an exchange, ETFs also experience daily price fluctuations. In contrast, index funds are valued based on the underlying securities' net asset values (NAV) at the close of each trading day.

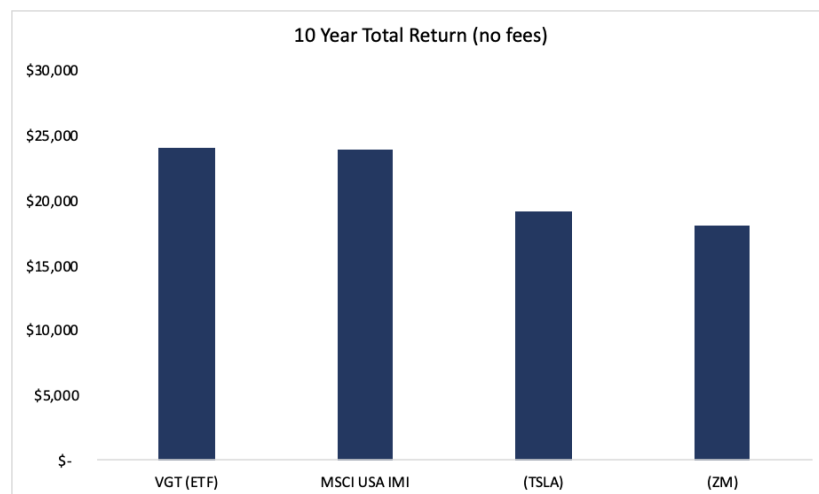
As a result of their passive management approach and lower operating expenses, ETFs typically have lower expense ratios than index funds. The average expense ratio for US ETFs in 2023 was 0.34%, compared to 0.54% for index funds, according to Morningstar's "Mind the Gap" report ("Mind the Gap | Morningstar," 2023). It's crucial to remember that expense ratios can vary significantly between individual funds, so investors should always research the expense ratio of any fund they are thinking about before making an investment.

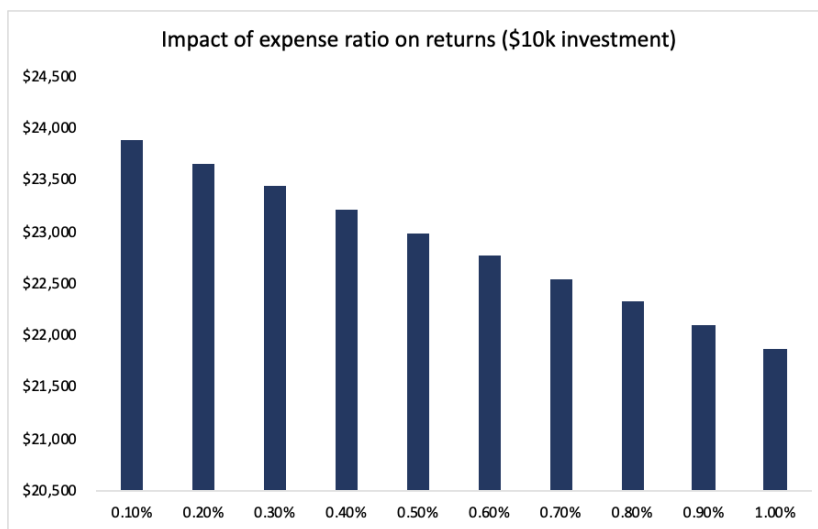
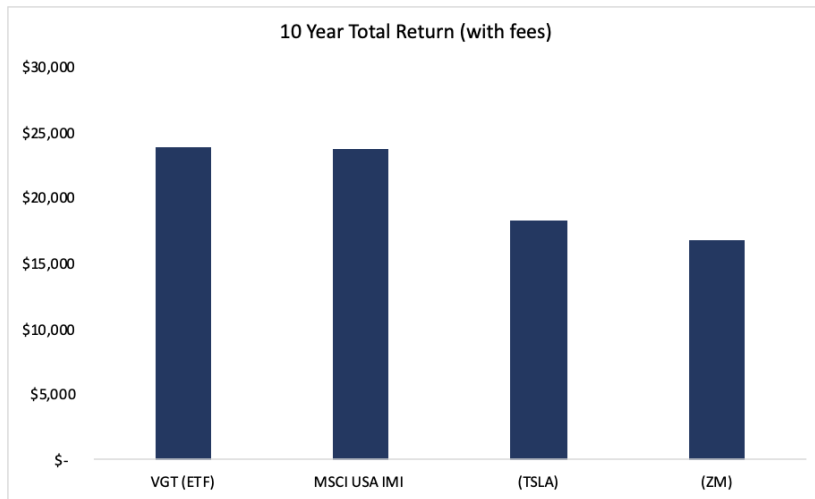
Despite these variations, index funds and ETFs both provide investors with advantages. They offer exposure to a variety of securities, which lowers risk and gradually boosts returns over time. They also provide tax efficiency because, in contrast to actively

managed funds, they frequently have lower turnover rates, which can result in lower capital gains taxes.

In terms of which investment vehicle is better, it depends on the investor's individual needs and preferences. Given that they can be purchased and sold at any time of the day, ETFs might be a better choice for investors who want more trading flexibility. Since they don't need as much supervision, index funds might be a better choice for investors who prefer a more hands-off strategy (Marquit, 2020).

In general, investors seeking exposure to a particular index or benchmark may find both ETFs and index funds to be useful investment choices. It is important for investors to carefully consider their individual needs and preferences, as well as the costs and benefits of each investment vehicle, before making a decision.





(Data from Bloomberg Terminal)

Conclusion:

Technology is now an integral part of life in the modern world, having an effect on every sphere of the economy. With the MSCI USA IMI Information Technology Index, investors can gain exposure to a variety of American technology firms. Exchange-traded funds (ETFs) or index funds, like the Vanguard Information Technology ETF (VGT), can

offer investors a cost-effective way to access the growth potential of the technology sector. In a similar vein, ETFs like the Vanguard Utilities ETF (VPU) can give investors access to a diverse range of stocks in the utility sector, which is frequently less vulnerable to economic downturns and offers higher dividends due to the companies' strong cash flows. Investors can reduce risk and increase returns over time by diversifying their portfolios with ETFs and index funds, which also saves them time and effort from having to research individual stocks. One of the main benefits of investing in ETFs and index funds is that they provide a low-cost, passive method of portfolio diversification. Without having to invest a lot of time and effort in researching individual stocks, an investor can gain exposure to a lot of businesses within a particular industry, such as technology, by investing in a single fund. Because the fund's holdings are diversified across a number of securities, this strategy also lowers the risk of relying too heavily on any one particular company.

Additionally, as opposed to actively managed funds, ETFs and index funds typically have lower expense ratios, which can have a significant impact on long-term returns. There are several ETFs available with expense ratios as low as 0.10%, such as the Vanguard Information Technology ETF. This makes it an appealing option for investors seeking to keep costs low while gaining exposure to the technology sector.

Another advantage of investing in ETFs and index funds is tax efficiency. They typically have lower turnover rates than actively managed funds due to their passive management style, which can result in lower capital gains taxes. This is especially important for long-term investors who intend to hold their investments for several years.

To summarize, investing in ETFs and index funds can provide investors with a low-cost and diverse way to achieve their long-term financial goals, particularly when it comes to gaining exposure to specific sectors such as technology or utilities. These investment vehicles can be a smart strategy for building a strong and diverse portfolio by

lowering risk, lowering costs, and providing tax efficiency. However, when choosing an ETF or index fund, investors should carefully consider their individual needs and preferences, and seek professional financial advice if necessary.

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