

MSDS 451 Final

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Introduction (10 points). Why are you conducting this research? Identify potential users of the knowledge base and application(s) that you intend to develop.

The purpose of conducting this research is to create a well balanced, well informed set of decisions on the basis of establishing a successful ETF. In order to do so, thorough research must be performed to ensure proper decision making can be made every step of the way, leading to the best possible outcome for any future use. This research however can extend beyond just the creation of this ETF, and instead help others who are looking to set up their "Own ETF's", as it provides a strong basis of understanding for those beginning to understand the purpose of ETFs and how to successfully create one. This research should be used by individuals looking to create their "Own ETF's", to establish and understand how to successfully select items to build their ETF. The end application is designed to be used by others as a teaching tool to better see the possibilities of creating their "Own ETFs" and allow for users to track the performance and decision making of the model.

Literature review (10 points).. Who else has conducted research like this?

Stephen Abraham, in their piece for Investopedia, discusses four main decisions that must occur for successful ETF creation

1. **Asset class:** Will your ETF invest in stocks, bonds, or other types of assets? You can diversify the fund across asset classes, although that is not common.
2. **Market capitalization:** What size companies will the ETF invest in? You can focus on large-, medium-, or small-cap companies, or diversify across [market capitalization](#) sizes. Focusing on large-cap stocks generally requires the most seed capital.
3. **Market sector:** Will your ETF focus on a specific industry or invest across sectors? Consider focusing your fund on a market segment in which you have a strong interest and knowledge.
4. **Fees:** What annual fee, known as the [expense ratio](#), will you charge? Most investors understandably pay close attention to the fees they pay for their investments, and ETFs are known

for their very low expense ratios compared to [mutual funds](#) and other investments. (Investopedia, 2024).

Observing these four points, there are also pieces of the prospectus that are advised to be stated listed below:

1. What approaches will you use to select securities?
2. Will you be using fundamental or technical analysis methods?
3. How will you make decisions about buying and selling securities (market timing)?
4. Ensure that your investment philosophy can be defined by explicit rules that you employ for selecting markets, sectors or investment types within markets, and securities within investment types.
5. Ensure that your philosophy translates into explicit rules for buying and selling securities.
6. Are you employing a **buy-and-hold strategy** (Siegel 2022; Morris 2025)?
7. How would you describe your frequency of trading (how much of your portfolio turns over each year)? Is your investment approach based on **fundamental analysis** (Graham 2006) or **technical analysis** (Meyers 2011; Edwards, Magee, and Bassetti 2019; Rockerfeller 2020; Trivedi and Kyal 2021)?
8. To what extent is your portfolio diversified across stocks versus bonds, industry sectors within stocks, or investment types (stocks, bonds, indexes, and commodities)?
9. Is your strategy guided by systematic portfolio selection and optimization (Markowitz 1952, 1956; Sharpe 1963, 1994; Hudson and Thames 2020; Grinold and Kahn 2023)?
10. Are you using a risk-management approach such as **trend following**, going both long and short within asset types (Greyserman and Kaminski 2014; Carver 2015; Covel 2009, 2011, 2017; Radge 2019; Penfold 2020; Clenow 2023; Zakamulin and Giner 2024; Zarattini, Pagani, and Wilcox 2025)?
11. Across a twenty-five-year period, what proportion of your capital can be expected to be invested in assets versus held in cash?
12. Do you have a well-defined hedging strategy to protect the portfolio during market downturns and crashes (Krishnan 2017)?

(Miller, 2025).

By answering each of these points, a strong foundation will be built on which the ETF can be founded.

Methods (10 points). How are you conducting the research? Make sure you address the issues that are the focus of this checkpoint assignment.

In order to complete this assignment, research was done to multiple sources across multiple media forms to compare and contrast different ETF methodologies to determine which fit best for the project. While all options were considered, only those that matched the desire of the founder and correlated with the purpose statement of the fund were chosen to be utilized in final decision making. The research was compared across multiple sources to ensure accuracy and complete evaluation of options.

Results (10 points).. What did you learn from your research so far?

First, I would aim to answer the questions proposed by Miller to establish the basis of the prospectus:

1. What approaches will you use to select securities?
 - a. Securities will be selected based on a similar principal investment strategy as \$BUZZ from VanEck. “The Fund normally invests at least 80% of its total assets in securities that comprise the Fund’s benchmark index. The Sentiment Leaders Index is comprised of common stocks of U.S. companies selected by a rules-based quantitative methodology developed by BUZZ Holdings ULC (the “Index provider”), which is designed to identify the U.S. common stocks with the most “positive insights” collected from online sources including social media, news articles, blog posts and other alternative datasets. “Positive insights” are a measure of the degree of positive company sentiment as well as the breadth of active discussion about each company by participants on online platforms. The 75 companies with the highest positive insight scores that meet certain market capitalization and average daily trading volume requirements will be selected for inclusion in the Sentiment Leaders Index. Such companies may include medium-capitalization companies.” (VanEck, 2025).

- b. **The goal of the fund is to utilize sentiment analysis from various social media platforms to determine the assets with the highest positive sentiment at any given moment, and act upon them. However, unlike \$BUZZ, there will also be a validation component that utilizes technical analysis to make sure the “Online Excitement” is not fabricated, and actually has a basis.**
2. Will you be using fundamental or technical analysis methods?
 - a. **A combination of fundamental and technical analysis methods will be utilized to manage the fund. Primarily, the assets will be selected based on sentiment analysis gathered from social media sites, which falls under fundamental analysis. However, as a validation component, basic technical analysis will be utilized to confirm the potential for the long position, and a decision made (Investopedia, 2024).**
3. How will you make decisions about buying and selling securities (market timing)?
 - a. **Following the model established by \$BUZZ, the trading will occur alphabetically through a list of “The 75 companies with the highest positive insight scores that meet certain market capitalization and average daily trading volume requirements will be selected for inclusion in the Sentiment Leaders Index” (VanEck, 2025).**
4. Are you employing a **buy-and-hold strategy** (Siegel 2022; Morris 2025)?
 - a. **No, a buy-and-hold strategy will not be used in this fund. That is due to the nature of ever-evolving social sentiment. Due to the quick changes that can occur with social sentiment, the concept of using a buy-and-hold strategy becomes voided.**
5. How would you describe your frequency of trading (how much of your portfolio turns over each year)? Is your investment approach based on **fundamental analysis** (Graham 2006) or **technical analysis** (Meyers 2011; Edwards, Magee, and Bassetti 2019; Rockerfeller 2020; Trivedi and Kyal 2021)?
 - a. **The fund will make bulk trades on a daily basis, matching that of the \$BUZZ fund (VanEck, 2025). This approach is largely based on fundamental analysis, as the social media sentiment analysis is much less of a quantitative figure than a qualitative art. A numerical value is assigned through sentiment analysis, but it is simply a measurable item for an unmeasurable concept.**
6. To what extent is your portfolio diversified across stocks versus bonds, industry sectors within stocks, or investment types (stocks, bonds, indexes, and commodities)?
 - a. **The fund is focused on individual stocks (equities) due to equities being the primary asset discussed in public online forums. As Bookmap puts it, “**

- b. **“Accessibility and popularity: Stocks are the most common and well-known asset class, readily accessible to individual investors through platforms like the Nasdaq and the New York Stock Exchange (NYSE).**
 - c. **Day trading and speculative interest: Many online trading forums cater to day traders and those interested in short-term speculation, for whom stocks present more frequent trading opportunities and potential for quick gains than bonds or commodities.**
 - d. **Social media influence: Platforms like Reddit and StockTwits have become major hubs for retail investors to share ideas and discuss stock picks, fostering communities and driving interest in specific companies or sectors.**
 - e. **Information availability: A vast amount of news and analysis is dedicated to individual stocks and the stock market as a whole, fueling online discussions.” (Bookmap, 2024). Due to these factors, the fund will be primarily focused on equities.**
7. Is your strategy guided by systematic portfolio selection and optimization (Markowitz 1952, 1956; Sharpe 1963, 1994; Hudson and Thames 2020; Grinold and Kahn 2023)?
- a. **Yes, as the fund closely resembles the \$BUZZ fund,”Systematic Portfolio Selection: BUZZ tracks the BUZZ NextGen AI US Sentiment Leaders Index, which is constructed using a rules-based, quantitative methodology. This methodology uses artificial intelligence, machine learning, and natural language processing to analyze online data (social media, news articles, blog posts, etc.) to identify U.S. large-cap stocks with the most positive investor sentiment.” (VanEck, 2025)**
8. Are you using a risk-management approach such as **trend following**, going both long and short within asset types (Greyserman and Kaminski 2014; Carver 2015; Covel 2009, 2011, 2017; Radge 2019; Penfold 2020; Clenow 2023; Zakamulin and Giner 2024; Zarattini, Pagani, and Wilcox 2025)?
- a. **No, the fund will not utilize a combination of long and short asset types. The fund will primarily utilize long selling as its mode of investment, focusing on positive sentiment gathered from social media insights.**
9. Across a twenty-five-year period, what proportion of your capital can be expected to be invested in assets versus held in cash?
- a. **As the fund closely resembles \$BUZZ, “As of December 31, 2024, the Sentiment Leaders Index included 75 securities of companies with a market capitalization range of between approximately \$4.3 billion and \$3.79 trillion and a weighted average market capitalization of \$554.7 billion. These amounts are subject to change. The Fund’s 80% investment policy is non-fundamental and may be changed without shareholder approval upon 60 days’ prior**

written notice to shareholders.” (VanEck, 2025). Therefore, the fund will invest 80% of its holdings, while keeping 20% liquid.

10. Do you have a well-defined hedging strategy to protect the portfolio during market downturns and crashes (Krishnan 2017)?

- a. **As of now, no. In order to closely resemble the \$BUZZ fund, “Investors in the Fund should be willing to accept a high degree of volatility in the price of the Fund’s Shares and the possibility of significant losses. An investment in the Fund involves a substantial degree of risk. An investment in the Fund is not a deposit with a bank and is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. Therefore, you should consider carefully the following risks before investing in the Fund, each of which could significantly and adversely affect the value of an investment in the Fund. Social Media Analytics Risk. The Index provider relies heavily on social media analytics, which are relatively new and untested. “Social media” is an umbrella term that encompasses various activities that integrate technology, social interaction and content creation. Investing in companies based on social media analytics involves the potential risk of market manipulation because social media posts may be made with an intent to inflate, or otherwise manipulate, the public perception of a company stock or other investment. Although the Index provider attempts to mitigate the potential risk of such manipulation by employing screens to identify posts which may be computer generated or deceptive and by employing market capitalization and trading volume criteria to remove companies which may be more likely targets for such manipulation, there is no guarantee that the Index’s model will successfully reduce such risk. Furthermore, text and sentiment analysis of social media postings may prove inaccurate in predicting a company’s stock performance; that is, high positive sentiment may not correlate with positive change in the value of a company’s stock and low positive or negative sentiment may not correlate with negative change in the value of a company’s stock. Additionally, social media companies are susceptible to the following risks which may disrupt the Index provider’s ability to receive meaningful data from such sites: permanent cessation of operations, disruption in service caused by hardware or software failure, interruptions or delays in service by third-party data center hosting facilities and maintenance providers, security breaches involving certain private, sensitive, proprietary and confidential information managed and transmitted by social media companies, and privacy concerns and laws, evolving internet regulation and other foreign or domestic regulations that may limit or otherwise affect the operations of social media companies.” (VanEck, 2025)**

Conclusions (10 points).. So, what does it all mean? Do you have any concerns about the term project at this point?

All in all, I feel fairly comfortable with my progress so far in this assignment. As I continue to work through the creation of the fund, and begin tracking performance, I may see that I had a great oversight in certain areas and desire to change my thought process. While I feel that the rules established above give a strong direction to the goals and objectives of the fund, there will always be more detail that can be added into the official prospectus to provide any future users with the maximum level of comfort and legal understanding of the fund as possible.

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