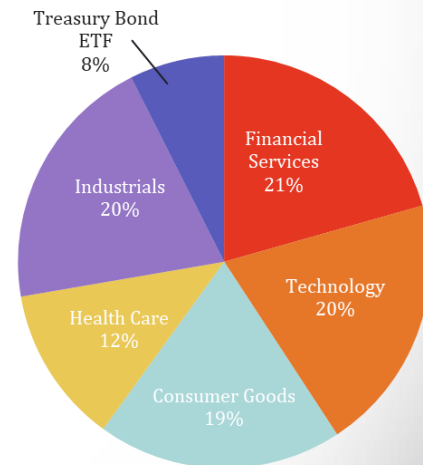


Assessing the Effects of Biblically Responsible Investing (BRI) on an Equity Portfolio through a Monte Carlo Simulation



SAM Fund Background

- The Student Asset Management Fund is Liberty University's sole student-led investment group responsible for investing north of \$300,000 of the university's endowment into the US equity markets.
- Since its inception, the SAM Fund has strived to integrate a Christian Worldview with their investment strategies, avoiding companies that do not align with our Biblical values.
- While investing with a Christian Worldview is present in our bylaws, no research has been done within the fund to explain the impact of biblically responsible investing on an equity portfolio.





- **Abortion Travel:** expense employee travel to states where abortion is legal.
- **LGBTQ:** Support acts that give the LGBTQ communities the same constitutional protection as religion and race.
- **Pornography:** creation of pornographic technology and content.

Research Question

Through devising fundamental research and the use of a Monte Carlo simulation, what identifiable effects does Biblically Responsible Investing have on an equity portfolio in different economic environments?

Research Process

1. Evaluated the construct of Biblically Responsible Investing and the importance of its implementation as Christians.
2. Identified a screening process that filters out publicly traded companies that do not align with the values of Biblically Responsible Investing.
3. Used a Monte Carlo Simulation to forecast the performance of two ETF's- one that incorporates Biblically Responsible Investing and one that doesn't.
4. Compared the mean return, standard deviation, and sharpe ratio of the two ETF's.

Biblically Responsible Investing

- Biblically Responsible Investing (BRI) is an investing framework designed to screen out companies that include scripturally objectionable aspects such as alcohol, gambling, pornography, and abortion (Stalcup, 2015).
- This framework encourages the deployment of capital towards companies promoting positive ethical and social practices.

BRI Screening Process

- **Inspire Insight** is a values-based investment screening tool that utilizes an objective scoring model to consider the negative and positive impact a given company has on their communities, customers, and workplace (Inspire Insight, 2024).
- Inspire's proprietary screening system filters out companies with connections to gambling, alcohol, abortion, and LGBTQ philanthropy (Inspire Insight, 2024).

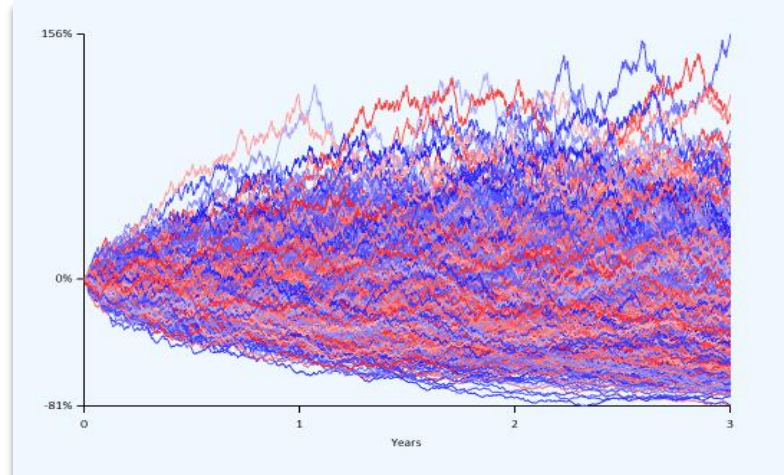


Quantitative Methods in Investing

- Mathematical models are commonly used within the financial sector to value fixed income and equity securities (Inspired Economist, 2023).
- One of these quantitative methods, a Monte Carlo Simulation, uses probability and statistics to assess the risk and future performance of investment securities in different scenarios (Inspired Economist, 2023).

What is a Monte Carlo Simulation?

- **Monte Carlo Simulation** uses historical performance data to calculate a probability distribution. Using that probability distribution, it simulates thousands of probable outcomes (Dodds, 2023).
- **Through analyzing the results of the simulation**, investors can estimate risk levels for different investments and assess the impact of variables like commodities prices, GDP, and so on (Dodds, 2023)

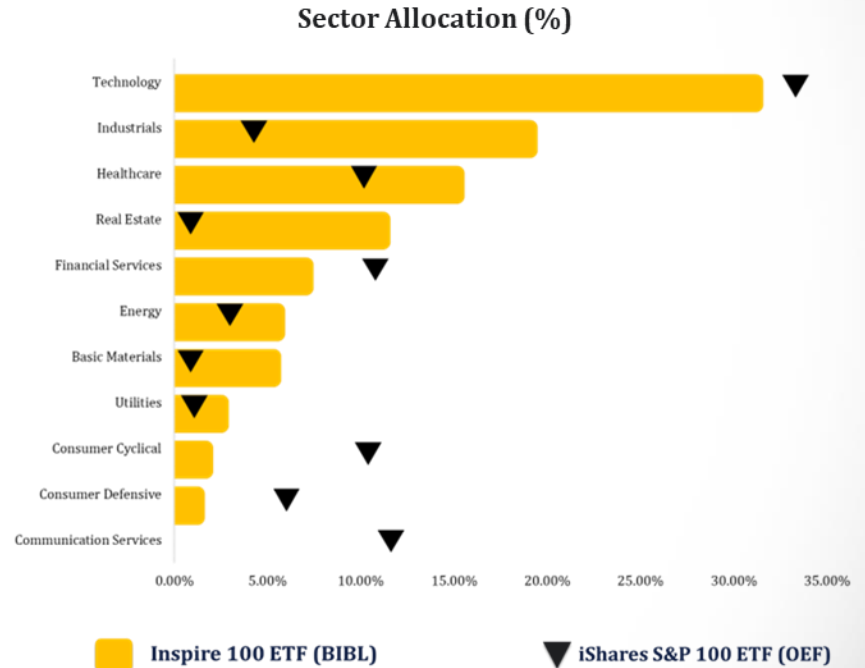


Applying Monte Carlo to BRI

- Through the utilization of the Monte Carlo Simulation, we compared the performance and risk of a BRI and non-BRI ETF to see if a BRI portfolio could provide comparable risk-adjusted returns to a standard portfolio.
- The Inspire 100 ETF (BIBL) represented the BRI portfolio, and the iShares S&P 100 ETF (OEF) represented the standard portfolio.

Inspire 100 vs. iShares S&P 100

- Both ETFs are composed of 100 large-capitalization US equities offering comparable exposure while also allowing comparisons in performance and risk to be made (US News & World Report, 2024).
- BRI ETFs avoid certain sectors due to their tendency to inhabit companies that do not comply with biblical principles.



Simulation 1: Rising Commodity Prices

Historical Period

April 1st, 2020 - May 1st, 2022

Results

Inspire 100 ETF (BIBL)

Mean Return: 134.52%

Standard Deviation: 56.46%

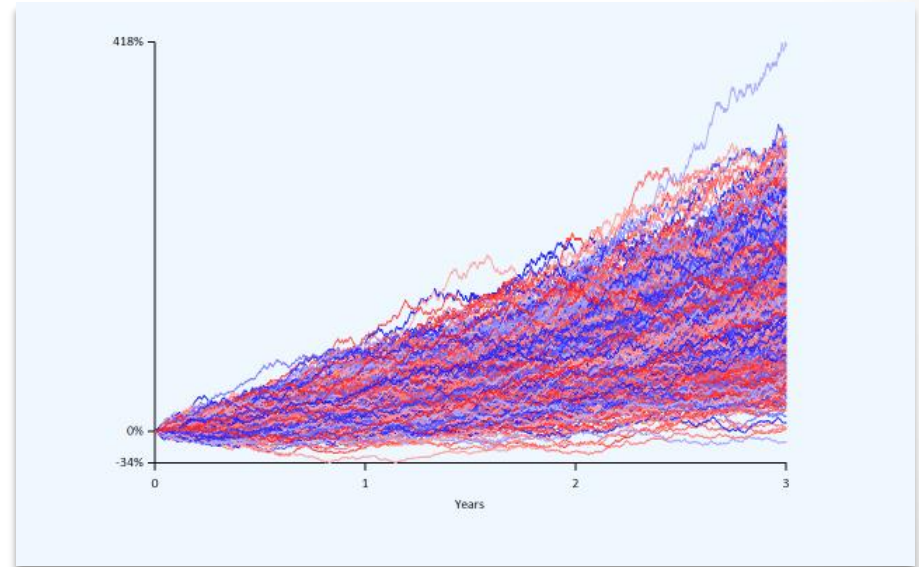
Sharpe Ratio: 2.16

iShares S&P 100 ETF (OEF)

Mean Return: 126.61%

Standard Deviation: 56.63%

Sharpe Ratio: 2.02



Simulation 2: Negative Real GDP Growth

Historical Period

October 1st, 2019 - April 1st, 2020

Results

Inspire 100 ETF (BIBL)

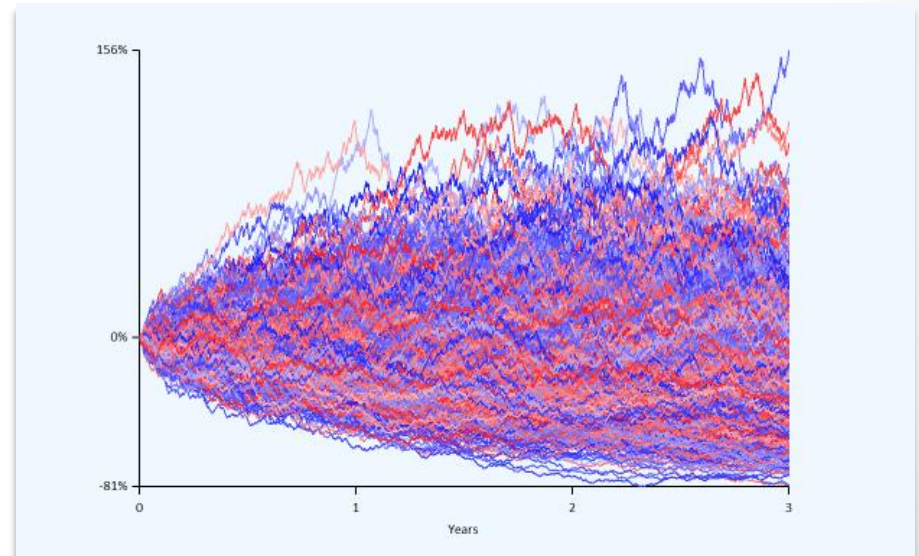
Mean Return: -22.55%

Standard Deviation: 32.33%

iShares S&P 100 ETF (OEF)

Mean Return: -21.78%

Standard Deviation: 30.77%



Simulation 3: Overall Performance

Historical Period

October 31st, 2017 – Present Day

Results

Inspire 100 ETF (BIBL)

Mean Return: 49.92%

Standard Deviation: 40.47%

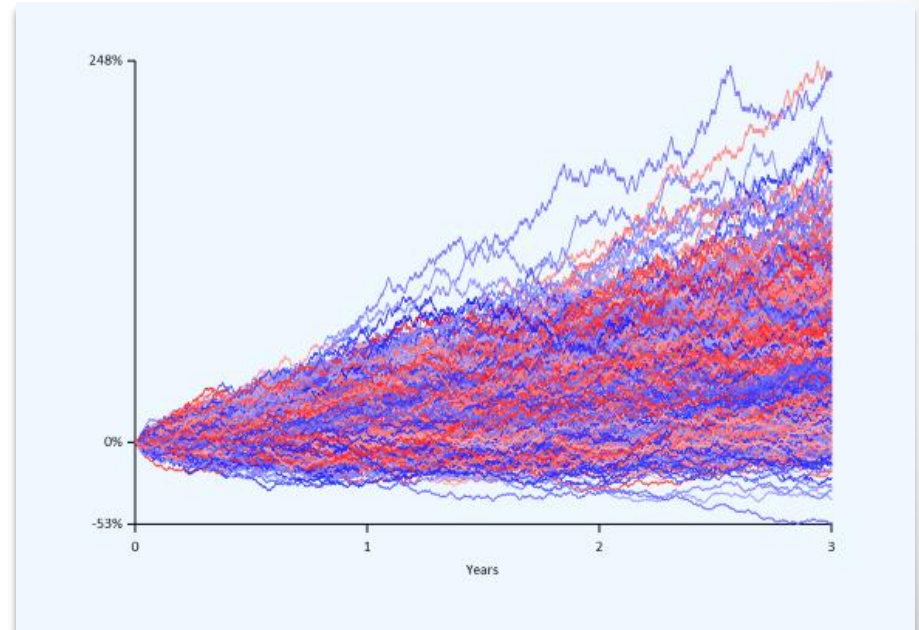
Sharpe Ratio: 0.92

iShares S&P 100 ETF (OEF)

Mean Return: 59.29%

Standard Deviation: 36.54%

Sharpe Ratio: 1.28



Conclusion of our Results

- Applying Biblically Responsible Investing (BRI) to your investment framework serves a unique role in abiding by biblical principles as you invest.
- The Inspire 100 ETF outperformed the iShares S&P 100 ETF in a rising commodity price environment while underperforming in a negative GDP growth environment and in their overall performance.
- The application of Biblically Responsible Investing (BRI) to an equity portfolio provides investors with comparable risk adjusted returns to a standard portfolio.
- Inherent effects from sector allocation and market capitalization.

Biblical Integration

- Ultimately, our goal is not to promote Biblically Responsible Investing as a means of market outperformance. But rather an opportunity to glorify God through the way you steward your investments.
- Colossians 3:17 “And whatever you do in word or deed, do all in the name of the Lord Jesus, giving thanks to God the Father through Him.” (Colossians 3:17, NKJV)

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Questions?

