iShares Robotics and Artificial Intelligence Multisector ETF Report

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1. Fund Overview

Basic Information

The iShares Robotics and Artificial Intelligence Multisector ETF (IRBO) is an exchange-traded fund (ETF) that was launched on June 26, 2018. As of December 12, 2023, IRBO has net assets of approximately $560.68 million. The fund is structured as an ETF, trading on the NYSE Arca exchange under the ticker symbol IRBO. It is designed to offer exposure to global companies across the robotics and artificial intelligence (AI) value chain. The ETF tracks the NYSE FactSet Global Robotics and Artificial Intelligence Index, which is an equal-weighted index. IRBO's expense ratio stands at 0.47%, and it has 16,800,000 shares outstanding.

Investment Objectives and Strategies

IRBO aims to provide investment results that correspond generally to the price and yield performance of the NYSE FactSet Global Robotics and Artificial Intelligence Index. This index is composed of developed and emerging market companies that stand to benefit from long-term growth and innovation in robotics technologies and artificial intelligence. The fund's investment strategy involves a representative sampling indexing approach, meaning it invests in a representative sample of securities that collectively has an investment profile similar to that of the index. The ETF's holdings include 112 positions, reflecting a diverse range of companies involved in various aspects of robotics and AI, from hardware development to software and services.

Target Market

The target market for IRBO includes investors seeking long-term growth potential through exposure to companies at the forefront of robotics and AI innovation. The fund is suitable for those looking to invest in a thematic ETF that captures the dynamics of the rapidly evolving robotics and AI sectors. It is positioned for investors who are interested in tapping into the transformative effects of the fourth industrial revolution, which encompasses the mass adoption of robotics and AI technologies across multiple industries.

Performance Metrics

IRBO has demonstrated significant growth potential, with a year-to-date NAV total return of 30.53% as of December 11, 2023. The fund's performance has varied over the years, with an average annual total return of 28.37% over the past year, -0.93% over the past three years, and 4.99% over the past five years. The fund's market price has closely tracked its NAV, indicating efficient market trading and liquidity. The ETF's benchmark index has shown a slightly higher performance, with an average annual total return of 27.92% over the past year and 6.07% since inception.

Distribution and Yield

IRBO has a semi-annual distribution frequency, with the most recent distributions occurring on June 13, 2023, and December 19, 2022. The fund's 30-day SEC yield as of October 31, 2023, is 0.46%, and its 12-month trailing yield is 0.73%. These yields reflect the income generated by the fund's investments and distributed to shareholders.

Portfolio Characteristics

The fund's equity beta over three years is 1.09, indicating a slightly higher volatility compared to the broader market. The standard deviation over the same period is 25.28%, which is indicative of the fund's risk level relative to the average. The P/E ratio as of December 12, 2023, is 22.72, and the P/B ratio is 2.54, providing insights into the valuation metrics of the fund's holdings.

Sustainability Characteristics

IRBO does not follow a sustainable, impact, or ESG investment strategy. However, it has been assigned an MSCI ESG Fund Rating of 'A' as of October 25, 2023, with an ESG Quality Score of 5.8 and a Weighted

Average Carbon Intensity of 29.68 Tons CO2E/$M SALES. These metrics offer additional transparency for investors interested in the environmental and social governance aspects of the fund's investments.

Management Team

The fund is managed by a team of experienced portfolio managers from BlackRock Fund Advisors, including Jennifer Hsui, Greg Savage, and Paul Whitehead. The team employs a disciplined investment process and leverages BlackRock's extensive research and technology capabilities to manage the fund's assets effectively.

2. Management Team

Profiles and Experience

- **Jennifer Hsui** is a Portfolio Manager and has been with BlackRock since 2008, initially joining Barclays Global Investors (which merged with BlackRock in 2009). She holds a Bachelor's degree in Biology and Economics from the University of California, Berkeley. Hsui has extensive experience in portfolio management and currently serves as the Co-Head of Index Equity at BlackRock. Her tenure at BlackRock includes roles as Managing Director, Portfolio Manager, and earlier as an Associate, Portfolio Manager. Prior to BlackRock, she was an Equity Research Analyst at RBC Capital Markets and a Research Assistant at Salomon Smith Barney.

- **Greg Savage** is also a Portfolio Manager at BlackRock and has been with the firm for over 24 years. He holds a B.S. in Business, with a focus on Accounting, from the University of Colorado at Boulder. Savage's current role is Head of Index Asset Allocation within the ETF and Index Investment Group, where he is responsible for the investment implementation of LifePath target date funds and various asset allocation funds. His previous positions include Co-Head of Americas Equity iShares ETFs Portfolio Management and Senior Portfolio Manager for iShares ETFs. Before joining BlackRock, Savage was an Associate at PIMCO.

- **Paul Whitehead** is also a Portfolio Manager at BlackRock, with a tenure of over 27 years. He is the Co-Head of Index Equity and has held the position of Global Head of Equity Trading. Whitehead attended the University of Colorado Boulder from 1988 to 1993. His long-standing presence at BlackRock indicates a deep familiarity with the firm's trading operations and index equity strategies.

Team Stability and Succession

The management team exhibits stability, with all members having lengthy tenures at BlackRock. Jennifer Hsui and Greg Savage have been managing the fund since its inception in 2018, and Paul Whitehead joined as a Portfolio Manager in 2022. The team's experience across different roles within BlackRock provides a robust foundation for managing the iShares Robotics and Artificial Intelligence Multisector ETF (IRBO).

Recent Changes

The most recent change in the management team is the addition of Paul Whitehead as a Co-Head of Index Equity in 2022. This addition has likely strengthened the team's expertise, particularly in equity trading and index management.

Succession Plans

While specific succession plans are not detailed in the provided documents, the long tenures and senior roles of the management team members suggest a depth of experience within the team that could facilitate internal succession. BlackRock's size and emphasis on talent development further imply a structured approach to succession planning.

3. Investment Strategy

Overview

The iShares Robotics and Artificial Intelligence Multisector ETF (IRBO) aims to track the investment results of the NYSE FactSet Global Robotics and Artificial Intelligence Index. This index is composed of developed and emerging market companies that stand to benefit from long-term growth and innovation in robotics technologies and artificial intelligence (AI). The fund's strategy is to invest in companies across the robotics and AI value chain, which includes both developers and enablers of these technologies.

Asset Allocation

IRBO's investment strategy involves an equal-weighted index approach, ensuring exposure to a diverse set of global companies within the sector. As of December 12, 2023, the fund holds 112 different equities, with the top sectors being Information Technology (58.29%), Communication (18.91%), and Industrials (11.50%). The geographic breakdown of the fund's market value is predominantly in the United States (52%), followed by China (13%), Japan (10%), Taiwan (9%), and South Korea (3%), with other regions making up the remaining 13%.

Selection Criteria

The selection of assets for IRBO is based on the FactSet Revere Business Industry Classification System (RBICS), which identifies relevant sub-industries related to robotics and AI. Companies included in the fund must derive at least 50% of their revenues from these sub-industries, have a 20% market share, or generate $1 billion or more in absolute annual revenues from robotics and AI themes. Additionally, companies must have a float-adjusted market capitalization of $500 million or greater and a three-month average daily trading value (ADTV) of $2 million or greater.

Investment Process

The fund employs a representative sampling indexing strategy managed by BlackRock Fund Advisors. This strategy involves investing in a representative sample of securities that collectively has an investment profile similar to that of the underlying index. The fund may not hold all the securities in the underlying index but expects to have, in aggregate, similar investment characteristics such as market capitalization, industry weightings, and liquidity measures.

Alignment with Objectives and Market Conditions

IRBO's investment strategy is aligned with its objective to provide long-term growth by investing in companies at the forefront of the robotics and AI innovation. The fund's performance has demonstrated significant growth, with a year-to-date NAV total return of 30.53% as of December 11, 2023. The fund's strategy is designed to capitalize on the fourth industrial revolution's potential, as global spending on AI is predicted to double between 2022 and 2026, reaching $900 billion. The fund's equal-weighted approach and global exposure aim to harness technological growth across the entire value chain of robotics and AI, positioning it to benefit from these transformative megatrends.

4. Performance Analysis

Historical Performance

The iShares Robotics and Artificial Intelligence Multisector ETF (IRBO) has demonstrated a notable year-to-date (YTD) NAV total return of 30.53% as of December 11, 2023. The fund's historical performance shows a 1-year total return of 28.37%, a 3-year annualized return of -0.93%, and a 5-year annualized return of 4.99%. Since its inception on June 26, 2018, IRBO has achieved an annualized return of 5.83%. When compared to its benchmark, the NYSE FactSet Global Robotics and Artificial Intelligence Index, IRBO has slightly underperformed, with the benchmark posting a 1-year return of 27.92%, a 3-year annualized return of -0.75%, and a 5-year annualized return of 5.24%, culminating in a since-inception annualized return of 6.07%.

Performance Consistency and Volatility

IRBO exhibits a beta of 1.09 relative to the S&P 500 over a 3-year period, indicating a slightly higher volatility compared to the broader market. The fund's standard deviation over the same period is 25.28%, reflecting a higher degree of volatility and potential risk. The equal-weighted index approach, which includes a diverse set of global companies across the robotics and AI value chain, may contribute to this volatility.

Factors Driving Performance

The fund's performance is driven by its exposure to the rapidly evolving sectors of robotics and artificial intelligence. The growth of the fund is closely tied to the innovation and market adoption of these technologies. The fund's top holdings include companies like Meitu Inc., Faraday Technology Corp., and Megaport Ltd., which are at the forefront of technological advancements in their respective fields.

Underperformance and Outperformance Periods

IRBO's performance has fluctuated with periods of both underperformance and outperformance relative to its benchmark. For instance, the fund's market price percentage change was 29.04% over the past year, slightly outperforming the benchmark's return of 27.92%. However, on a 3-year and 5-year basis, the fund underperformed the benchmark by 0.18% and 0.25%, respectively. These discrepancies may be attributed to the fund's specific holdings, sector allocations, and the timing of market movements.

Reasons Behind Performance Trends

The fund's performance trends can be attributed to several factors, including the rapid growth and adoption of AI and robotics technologies, market sentiment towards tech innovation, and the broader economic environment affecting tech sector investments. Additionally, the fund's equal-weighted index strategy ensures that no single company disproportionately impacts the fund's performance, which can lead to both resilience and variability in returns. The fund's expense ratio of 0.47% also plays a role in net performance figures.

5. Portfolio Analysis

Portfolio Composition

As of December 12, 2023, the iShares Robotics and Artificial Intelligence Multisector ETF (IRBO) holds a total of 112 equity positions. The fund's net assets amount to $560,681,169, with an expense ratio of 0.47%. The portfolio is predominantly invested in the Information Technology sector, which constitutes 58.29% of the market value, followed by Communication at 18.91%, and Industrials at 11.50%. Consumer Discretionary, Financials, and Health Care sectors represent smaller allocations of 9.13%, 1.12%, and 0.87% respectively. The remaining 0.17% is held in cash and/or derivatives.

Sector Allocations

The fund's largest holdings include Faraday Technology Corp (1.82%), Alchip Technologies Ltd (1.76%), FuboTV Inc (1.64%), VIA Technologies Inc (1.59%), and Microstrategy Inc Class A (1.58%). These top five holdings represent 8.49% of the fund's total net assets, indicating a relatively diversified portfolio with no excessive concentration in individual stock positions.

Geographic Distributions

Geographically, the fund's holdings span both developed and emerging markets. The United States represents the largest country exposure with 52% of the geographic breakdown, followed by China at 13%, Japan at 10%, Taiwan at 9%, and South Korea at 3%. The remaining 13% is distributed among other countries, reflecting the fund's global investment approach.

Diversification and Concentration Risks

The equal-weighted index approach of IRBO mitigates concentration risks by preventing overexposure to any single company. However, the fund's significant tilt towards the Information Technology sector could expose investors to sector-specific risks, such as rapid technological obsolescence or regulatory changes. Additionally, the fund's performance is closely tied to the robotics and AI industries, which may be subject to high volatility and rapid shifts in market dynamics.

Recent Portfolio Changes

The fund's portfolio characteristics show a Price-to-Earnings (P/E) ratio of 22.72 and a Price-to-Book (P/B) ratio of 2.54, which have likely evolved in response to market conditions and the fund's rebalancing activities. The fund's equity beta over a 3-year period is 1.09, suggesting a higher volatility relative to the broader market. The standard deviation over the same period is 25.28%, indicating a high level of historical volatility in the fund's returns.

Key Insights

IRBO's portfolio analysis reveals a strategic focus on companies poised to benefit from advancements in robotics and AI. The fund's equal-weighted index methodology promotes diversification across various companies within this theme. However, the fund's sector and geographic concentrations, along with its high volatility metrics, suggest that IRBO may be best suited for investors with a higher risk tolerance and a long-term investment horizon. Investors should be cognizant of the fund's exposure to the rapid changes and potential regulatory challenges inherent in the technology sector.

6. Risk Assessment

Market Risk

The iShares Robotics and Artificial Intelligence Multisector ETF (IRBO) is subject to market risk, as evidenced by the 52-week price range of $24.76 to $35.00 and a standard deviation of 25.28% over the past three years. The fund's performance is closely tied to the robotics and AI sectors, which can be highly volatile due to rapid technological changes and competitive pressures.

Credit Risk

IRBO's credit risk is mitigated by its investment in a diversified portfolio of 112 holdings across developed and emerging markets. The fund's exposure to credit risk is further reduced by the absence of holdings in controversial weapons, UN Global Compact violators, nuclear weapons, thermal coal, civilian firearms, oil sands, and tobacco, as indicated by a 0.00% business involvement in these areas.

Liquidity Risk

The ETF's liquidity risk is reflected in its 30-day median bid/ask spread of 0.12%, which suggests that the fund maintains reasonable liquidity under normal market conditions. However, the fund's liquidity can be affected by market disruptions or regulatory changes, potentially impacting the ability to buy or sell shares efficiently.

Operational Risk

Operational risks are inherent in the fund's reliance on third-party service providers and technology systems. While the fund has established risk management systems to address potential failures or breaches, there is no guarantee that these measures will prevent all operational issues.

Concentration Risk

IRBO exhibits concentration risk, with a significant portion of its assets invested in the information technology sector (58.29%) and communication services (18.91%). This concentration could amplify losses if these sectors underperform.

Thematic Investing Risk

As a thematic fund, IRBO's performance may be impacted by the fund's ability to accurately identify companies that benefit from robotics and AI innovation. Any misidentification or unexpected developments in these themes could adversely affect the fund's returns.

Geographic Risk

The fund's geographic distribution shows significant exposure to the United States (52%), China (13%), and other Asian economies, which introduces geographic risk related to political, economic, and social instability in these regions.

ESG Risk

IRBO has an MSCI ESG Fund Rating of 'A' and is positioned in the 30.35th percentile within its peer group. While the fund does not follow a sustainable, impact, or ESG investment strategy, investors may consider these characteristics when assessing the fund.

Management and Tracking Error Risk

Managed by Jennifer Hsui, Greg Savage, and Paul Whitehead, the fund aims to track the NYSE FactSet Global Robotics and Artificial Intelligence Index. However, tracking error risk exists due to potential discrepancies between the fund's portfolio and the index, as well as differences in fees, expenses, and transaction costs.

Valuation Risk

Valuation risk is present due to potential discrepancies between the valuation methodologies used for the fund's holdings and those of the underlying index, particularly for securities that trade in low volume or volatile markets.

Sustainability of Performance

The fund's YTD NAV total return as of Dec 11, 2023, is 30.53%, indicating strong recent performance. However, the sustainability of this performance is uncertain and dependent on continued innovation and growth within the robotics and AI sectors.

7. Legal and Regulatory Compliance

Compliance with Legal and Regulatory Requirements

The iShares Robotics and Artificial Intelligence Multisector ETF (IRBO) operates within a stringent legal and regulatory framework, adhering to the rules set forth by the Securities and Exchange Commission (SEC) and other regulatory bodies. As an exchange-traded fund (ETF) listed on the NYSE Arca, IRBO is subject to the regulatory requirements applicable to investment companies under the Investment Company Act of 1940, as well as the rules and regulations of the exchange on which it is listed. The fund's prospectus, dated December 1, 2023, and its Statement of Additional Information incorporate all regulatory disclosures and are designed to ensure transparency and investor protection.

Historical Legal and Regulatory Issues

As of the latest available data, there have been no public disclosures or reports indicating any significant legal or regulatory issues involving IRBO. The fund's operations have not been subject to any material fines, sanctions, or litigations that could impact its reputation or financial standing. This clean historical record suggests a strong compliance culture and effective risk management practices.

Evaluation of Internal Compliance Policies and Procedures

IRBO's internal compliance policies and procedures are overseen by BlackRock Fund Advisors, the fund's investment adviser, which is known for its robust compliance infrastructure. The fund's management team, including Jennifer Hsui, Greg Savage, and Paul Whitehead, brings extensive experience in managing ETFs and ensuring adherence to regulatory standards. The fund's adherence to its stated investment objective, as well as its tracking of the NYSE FactSet Global Robotics and Artificial Intelligence Index, is monitored continuously to prevent deviations from expected performance and to mitigate risks associated with index tracking error.

The fund's expense ratio of 0.47% is disclosed in the prospectus, and the fund has transparently reported all fees and expenses, including management fees and other operational costs. The fund's NAV, market price, premiums, discounts, and bid-ask spreads are publicly available, providing clear information to investors and allowing for informed investment decisions.

8. Conclusion and Recommendations

Summary of Key Findings

- The iShares Robotics and Artificial Intelligence Multisector ETF (IRBO) has demonstrated a notable year-to-date NAV total return of 30.53% as of December 11, 2023.
- The fund's expense ratio stands at 0.47%, which is within a reasonable range for sector-specific ETFs.
- IRBO's investment objective is to track the results of an index composed of companies that could benefit from long-term growth in robotics and artificial intelligence (AI).
- The fund's performance has been volatile, with a 5-year cumulative total return of 4.99% and a 3-year average annual total return of -0.93%.
- IRBO holds a diversified portfolio of 112 holdings, with a significant allocation in the Information Technology sector (58.29%).
- The fund's benchmark, the NYSE FactSet Global Robotics and Artificial Intelligence Index, has slightly outperformed the fund since inception, with a total return of 6.07% compared to the fund's 5.83%.
- The fund's sustainability characteristics indicate a moderate ESG score of 5.8 out of 10, with a weighted average carbon intensity of 29.68 Tons CO2E/$M SALES.

Final Assessment

- IRBO offers investors targeted exposure to the robotics and AI sectors, which are poised for long-term growth due to technological advancements and increased adoption.
- The fund's equal-weighted index approach provides a balanced exposure to various companies within the robotics and AI value chain.
- Given the fund's performance history and the potential for the robotics and AI sectors, IRBO may be suitable for investors seeking growth and willing to tolerate higher volatility.
- The fund's ESG metrics, while not indicative of future performance, suggest a moderate alignment with sustainability considerations, which may appeal to socially conscious investors.

Recommendations for Action

- For investors with a long-term growth focus and an interest in the robotics and AI sectors, an investment in IRBO could be considered as part of a diversified portfolio.
- Due to the fund's historical volatility, it is recommended that IRBO be used as a satellite holding rather than a core investment.

- Continuous monitoring of the fund's performance relative to its benchmark and sector peers is advised to ensure alignment with investment objectives.
- Further research into the fund's holdings, sector allocation, and the impact of technological and regulatory developments on the robotics and AI industries is recommended to maintain an informed investment strategy.

9. Appendix

Figure 1: Sector and Location Distribution
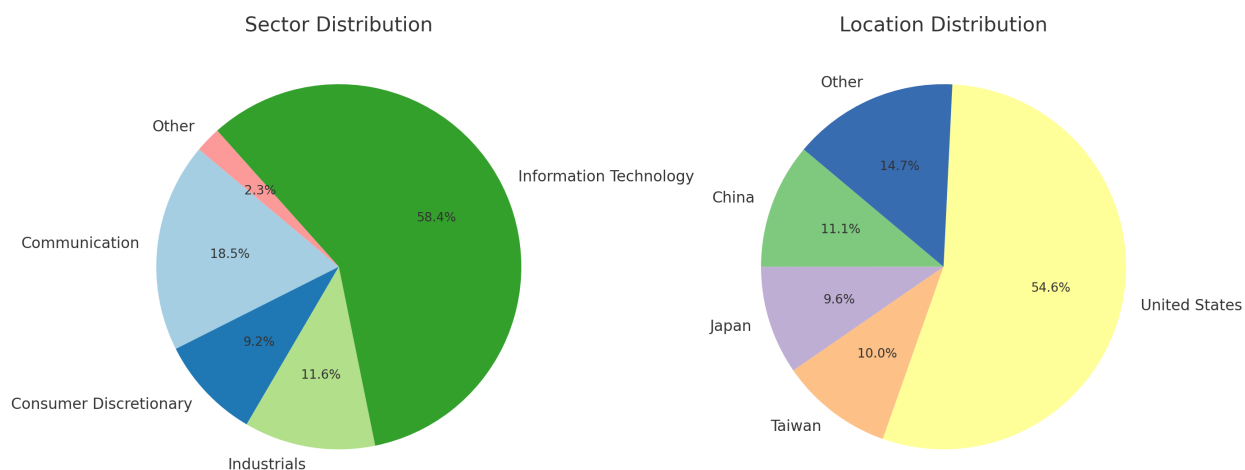
Sector and Location Breakdown: The left pie chart depicts the sector distribution within the iShares Robotics and Artificial Intelligence Multisector ETF, with Information Technology commanding the majority at 58.4%, followed by Communication and Consumer Discretionary sectors. The right pie chart shows the geographical allocation of the ETF's holdings, with a significant concentration in the United States at 54.6%, and notable allocations to China, Taiwan, and Japan, illustrating the fund's diversified global exposure.

Figure 2: Top Holdings by Weight
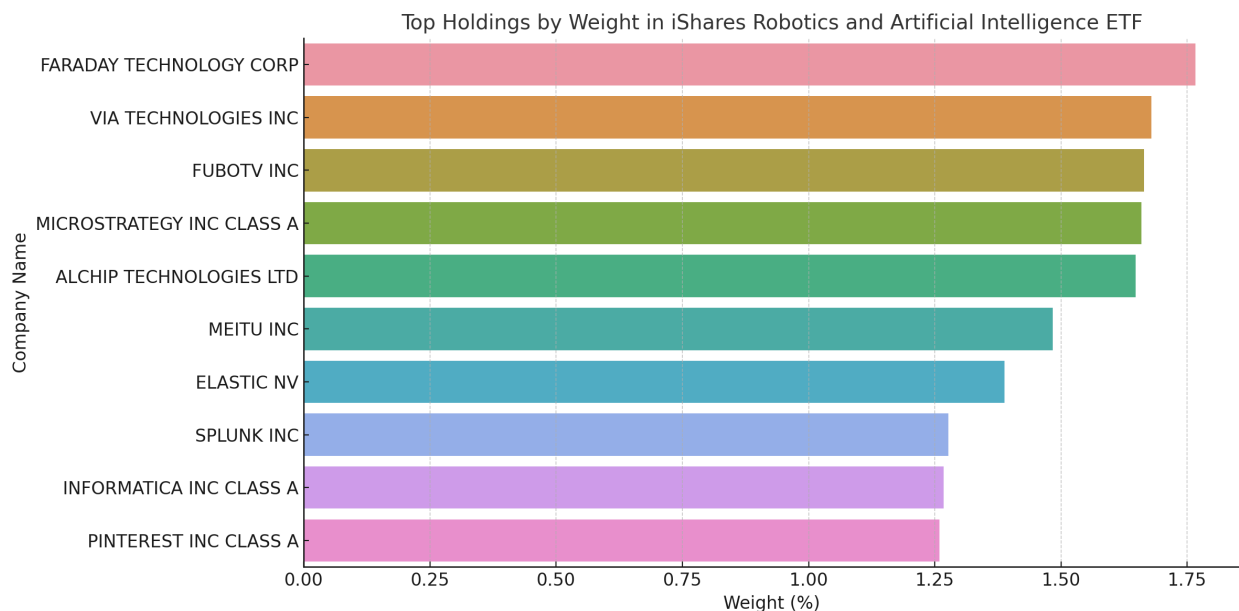
Allocation Breakdown: This bar chart represents the top ten equity positions held by the iShares Robotics
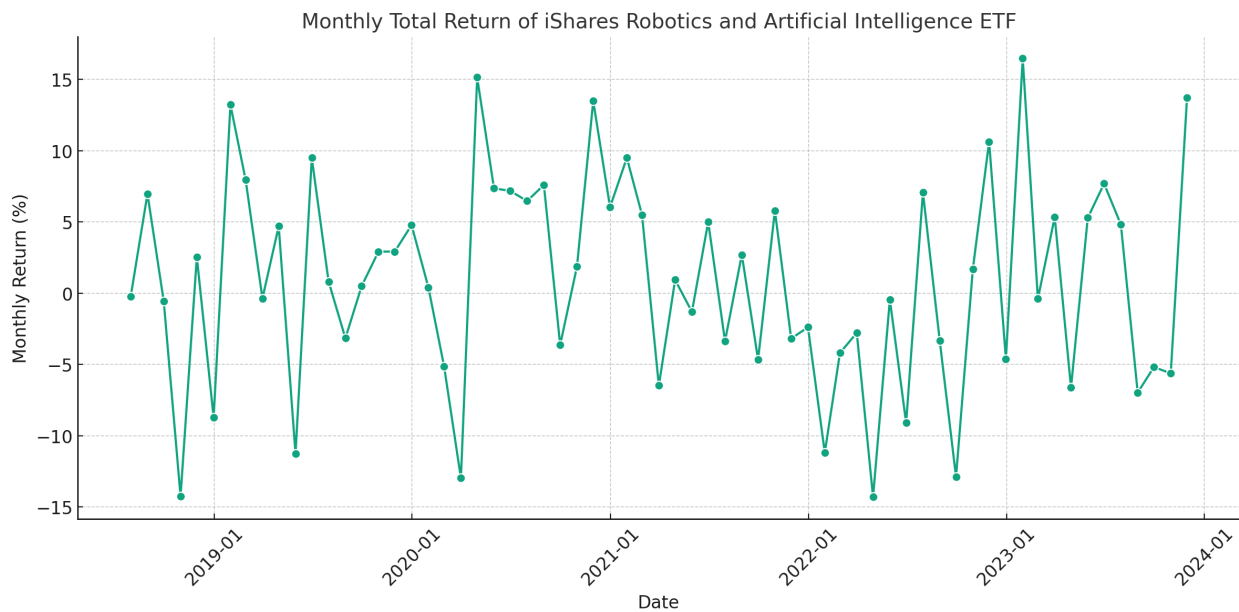
and Artificial Intelligence Multisector ETF, showcasing the diversification within the technology sector. The holdings are ranked by portfolio weight, highlighting Faraday Technology Corp as the largest holding, followed by VIA Technologies Inc and FuboTV Inc, among others.

Figure 3: NAV per Share Over Time

NAV per Share Over Time for iShares Robotics and Artificial Intelligence ETF
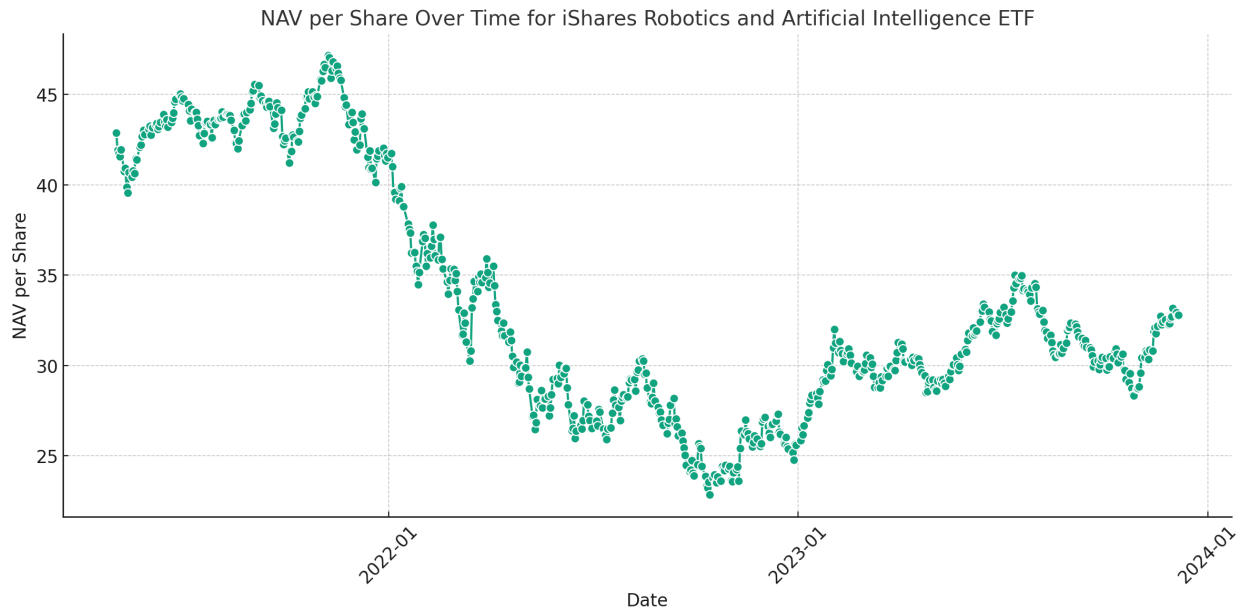
NAV Trajectory: This time series plot tracks the Net Asset Value (NAV) per share of the iShares Robotics and Artificial Intelligence Multisector ETF. The graph delineates the fluctuations in the NAV, with a notable decline starting in early 2022 and a subsequent recovery phase illustrating the fund's volatility.

Figure 4: Monthly Total Return

Monthly Total Return of iShares Robotics and Artificial Intelligence ETF

Monthly Returns Analysis: The line chart outlines the monthly total returns of the iShares Robotics and Artificial Intelligence Multisector ETF, underscoring the fund's performance variability. Notable peaks and troughs reflect periods of outperformance and underperformance relative to market conditions.

Figure 5: Total Distribution Over Time

Total Distribution Over Time of iShares Robotics and Artificial Intelligence ETF
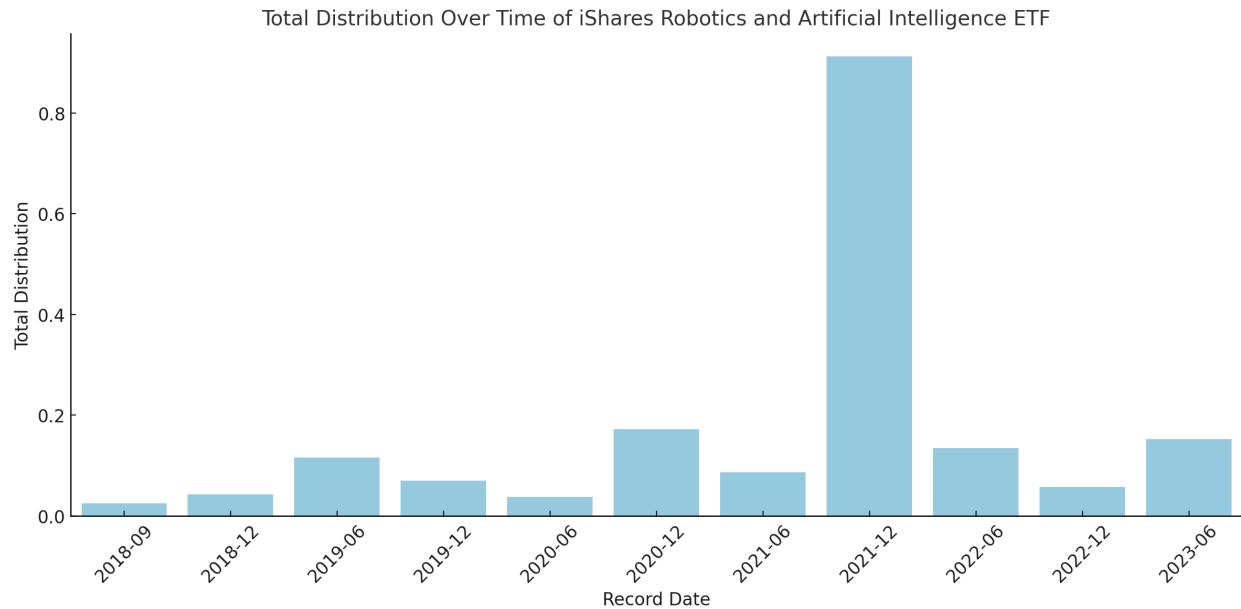
Distribution Timeline: Illustrated here is the total distribution of payouts from the iShares Robotics and Artificial Intelligence Multisector ETF over time. A significant peak is observed in December 2021, indicative of a substantial capital gains distribution or dividend payout to investors.

10. References

- iShares Robotics and Artificial Intelligence Multisector ETF | IRBO
- Product Brief
- Megatrends Product Brief
- Fact Sheet
- Prospectus
- Summary Prospectus
- Statement Of Additional Information
- Annual Report
- Semi-Annual Report
- First Quarter Report
- Third Quarter Report
- iShares and BlackRock ETF Distribution Schedule
- iShares U.S. ETF Product List
- Data Download | Holdings, Historical, Performance, Distributions
- Jennifer Hsui | LinkedIn
- Greg Savage | LinkedIn
- Paul Whitehead | LinkedIn