

## RETURNS PERFORMANCE SELECT FAMILY INDICES WITH REFERENCE TO NSE INDIA

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## ABSTRACT

The research paper aimed to examine returns performance of select family indices and compare them with Nifty indices in the National Stock Exchange (NSE) of India. The study analyzed the returns performance of Nifty Aditya Birla Group, Nifty Mahindra Group, and Nifty Tata Group indices and identified that family indices showed relatively better returns performance during the study period. It has exhibited stable returns performance over the six-year period. Additionally, the study found less significant difference in returns performance between the corresponding pairs of indices, indicating that the Nifty Mahindra Group and Nifty Tata Group indices, as well as the Nifty Aditya Birla Group and Nifty Tata Group indices, have similar returns performance. The study's findings also revealed that the Nifty Mahindra Group index performed slightly negatively, on an average, when compared to the Nifty Tata Group index. The results of the work provide insights for backer and investigator interested in understanding the returns performance of select family indices in the NSE of India.

**KEY WORDS:** National Stock Exchange, Group Indices, Nifty Aditya Birla Group, Nifty Mahindra Group, Nifty Tata Group

## 1. Introduction

Indian stock market has grown significantly in recent years, and investors are continually looking for strategies to maximise their earnings. Stock market indexes are one of the most common ways for investors to measure the assessment of the stock exchange. The National Stock Exchange (NSE) is one of India's most famous stock exchanges, offering a variety of indexes covering many sectors of the economy. Select family indices have received a lot of attention because of their focus on specific industries or sectors. Indexes of the stock market are a measure of the performance of a group of stocks or securities traded on a stock exchange. They are produced using a weighted average of the individual stock prices, with the weights defined by the market capitalisation of each stock. Indices are used by investors to compare the performance of their portfolios to the overall market. They give a picture of general market mood and might suggest the market's overall direction. Indices may also assist investors in making investment choices by tracking the performance of certain sectors or businesses. Furthermore, stock market indices can be used to measure a country's economic growth because they can indicate the overall health of the economy based dependent of the publicly listed companies.

Indian stock market, family indices are a collection of indexes based on a similar subject or sector. These indexes are designed to measure the performance of a certain market sector or industry. Nifty Bank, Nifty IT, and Nifty Pharma are examples of prominent family indices in India. Family indices are important in the Indian stock market since they allow investors to invest in a certain sector or business. This enables investors to maintain a diverse portfolio while concentrating on a certain subject. Furthermore, family indices assist investors in understanding the performance of a specific market sector or industry. Furthermore, fund managers use family indices to create sector-specific investment and index funds. These funds enable investors to obtain exposure to a certain market sector or industry. Therefore, family indices play an important role in the Indian stock market by allowing investors to diversify their portfolios while focusing on a specific theme and by assisting investors in understanding the performance of a specific sector or industry.

The application of this paper is to investigate the conduct of key family indexes on the NSE India and the variables that impact their performance. The findings of this research may assist investors in making educated investing choices and maximising their profits in the Indian trading floor.

## 2. Review of Literatures

**2.1 Navarrete, C., et al (2016),** This research used a meta-analysis to determine if family firms outperform non-family enterprises in terms of financial success. The research covers 20 main studies from diverse nations, with large sample. According to the data, family businesses outperform non-family businesses in terms of financial success, as assessed by return on investment, return on net worth, and turnover growth. The authors argue that family businesses benefit from distinct advantages such as social capital, family reputation, and long-term focus, which contribute to their higher success.

**2.2 Hegde, G. R., et al (2016),** The focus of this study is to probe the influence of petrol price volatility on Indian stock market returns. The authors examined the association between crude oil prices and stock market returns. The study's results show that petrol price volatility has a negative and considerable influence on Indian stock market performance. The authors found that the Indian stock market is vulnerable to crude oil market shocks and recommended that policymakers and investors monitor the crude oil market in order to make educated choices.

**2.3 Kim, J. J., et al (2016),** This research is to investigate impact of brood engagement on the performance and risk-taking of family enterprises in the Korean stock market. For the period 2005-2014, the study took 232 brood firms and 1,056 non-menage firms. The brood businesses outperform non-brood businesses as regards of performance and risk-taking. The authors argue that family engagement improves business performance via improved monitoring, fewer agency disputes, and family reputation concerns.

**2.4 Pérez-López, M. C., et al (2016),** This research contrasted the financial performance of nuclear businesses versus professional businesses. Using DuPont model, they investigated the distinctions in monetary features and showing of family enterprises vs non-family firms. According to the research, family businesses had lower profitability and greater liquidity than non-family businesses, but superior efficiency and solvency. To enhance their financial performance, the authors suggested that family businesses should consider taking a more strategic approach to financial management.

**2.5 Chowdhury, R. A., et al (2017),** The research used Sharpe and Treynor's ratio to analyse the performance of the Dhaka Stock Exchange. Their research focused on specific stock market sectors and compared their performance using the two ratios. According to the research, the banking and pharmaceutical industries outperformed other sectors. The authors found that in order to maximise their profits, investors should consider investing in these areas.

**2.6 Da Silva, L. F., et al (2017),** The performance of the Brazilian Stock Exchange Sustainability Index was examined in the research. Their research centred on the sustainability index, which they examined over a five-year period. According to the research, the sustainability index beat the conventional index, demonstrating that firms that practise excellent environmental, social, and governance practises may also achieve high financial performance. The authors stated that while making investment choices, investors should evaluate a company's sustainability performance.

**2.7 Fong, W. M., et al (2017),** This research looked at the worldwide interdependence of oil prices, currency rates, and international stock market indexes. Their investigation concentrated on the dynamic links between the three factors and their influence on the global economy. The authors found that while making investment choices, investors should consider the interdependence of the three factors.

**2.8 Gyamfi, A., et al (2017)**, The research looked at the influence of monetary policy on Ghana's stock market performance. They investigated the link between monetary policy and the stock market. The research discovered that monetary policy had a considerable influence on Ghana's stock market. The authors found that while making investment choices in the Ghanaian stock market, investors should consider the monetary policy environment.

**2.9 Khare, S., et al (2017)**, This study compared the performance rating of Indian mutual funds, with an emphasis on family and non-family mutual funds. Sharpe and Jensen's alpha models were used in the research to compare the risk-adjusted returns of the two kinds of mutual funds. In both models, family mutual funds beat non-family mutual funds, according to the research. The authors ascribed family mutual funds' greater performance to their long-term investment perspective, stronger industry expertise, and better governance structure.

**2.10 Asgari, M., et al (2018)**, This research looked at the performance of Iranian family enterprises.. In terms of profitability, liquidity, and solvency ratios, family firms outperformed non-family enterprises, according to the research. The authors ascribed this to family enterprises' stronger familial connections, greater drive, and superior governance structure.

**2.11 Johari, A. (2018)**, This research study focuses on the financial performance assessment of Islamic banking via an examination of two Malaysian Islamic banks. The author examined the financial performance of banks using the Profitability, Asset Quality, Liquidity, Capital Adequacy, and Management Efficiency (PALM) model utilising secondary data from annual reports from 2012 to 2016. The outcomes of the research show that both Islamic banks have great financial performance and adhere to Shariah rules. The research indicates that the PALM model is an acceptable instrument for analysing the financial performance of Islamic banking institutions.

**2.12 Hasan, M.K., et al (2018)**, This study looked at how family ownership and board governance affect business performance in a developing economy. The research analysed the financial performance of 140 enterprises. According to the research, family ownership has a beneficial influence on business performance, although this effect is reduced by board governance. To improve their performance, the authors proposed that family-owned businesses implement solid corporate governance practises.

**2.13 Ali, M., et al (2019)**, Sharpe's and Treynor's measures were used to evaluate the performance of 35 mutual funds, 20 non-family and 15 family funds, during a 10-year period.

In both models, family mutual funds beat non-family mutual funds, according to the research. The authors ascribed this to family mutual funds' stronger governance structure and longer investment horizon.

**2.14 Li X., et al (2019)**, This research in China for the period 2007-2016, the study used a specimen of 1,054 nuclear businesses and 1,901 non-family firms listed on the Shenzhen and Shanghai Stock Exchanges. The findings reveal that family businesses outperform non-family businesses in terms of profitability and market value. According to the authors, family participation improves business performance via improved governance, decreased agency conflicts, and increased social capital.

**2.15 Bishnoi, P., et al (2020)**, This research compared family and non-family businesses in the Indian manufacturing sector. The research analysed the financial performance of 154 enterprises, 65 family firms and 89 non-family firms, using ratio analysis. According to the report, family businesses beat non-family businesses in terms of profitability, liquidity, and leverage ratios. The authors ascribed this to family enterprises' stronger governance structure, greater risk management, and long-term perspective.

**2.16 Khan, M. A., (2021)**, The purpose of this research is to look at the influence of family and non-family ownership on company performance in Pakistan. The research makes use of secondary data from 126 businesses registered on the Karachi Stock Exchange between 2012 and 2016. According to the findings, family ownership has a beneficial impact on company performance. The author believes that family enterprises outperform non-family firms in Pakistan owing to the advantages of family ownership, such as long-term strategic planning, shared vision, and reduced agency costs.

**2.17 Kumar, K. R., et al (2021)**, This research compares the success of family and non-family firms in India. The research employs a sample of 200 enterprises registered on the Bombay Stock Exchange from 2010 to 2019. According to the data, family businesses beat non-family businesses in terms of profitability and market value. The authors suggest that family enterprises outperform non-family firms in India because of the advantages of family control, such as aligned interests, long-term vision, and family reputation.

### 3. RESEARCH GAP

The research gap in the study can be identified as the lack of comprehensive research on the returns performance of select family indices in NSE India, and the comparison of their performance with nifty indices. Although there are some studies available that focus on the performance of family businesses, there is limited research available that analyzes the performance of select family indices in NSE India. Additionally, there is a need for a comparative analysis of family indices with nifty indices to provide a broader perspective on their performance. Thus, the paper focuses to analyse of the returns performance of select family indices and their comparison with nifty indices.

#### **4. OBJECTIVES OF THE STUDY**

1. To study the returns performance of select family indices of NSE India
2. To compare the returns performance of select family indices with nifty indices

#### **5. HYPOTHESIS OF THE STUDY**

**H0:** There is no significant difference between the Family, Non-Family and PSU indices returns performance

#### **6. SCOPE OF THE STUDY**

The present study focused to know the returns performance of indices traded in National Stock Exchange. The study considered the Family indices and focused to know their returns. The study considered the monthly trading data from 2017-18 to 2022-23 from NSE India. NSE indices listed below:

- Aditya Birla Index
- Mahindra Group Index
- Tata Group Index

#### **7. RESEARCH METHODOLOGY**

The study adopted the exploratory and quantitative research approach for the examination of framed the objectives.

**7.1 Family Run Index:** The study considered Tata Nifty Index, Aditya Nifty Index, Mahindra Tech Nifty Index. The study averaged considered three indices and framed the Family Index.

**7.2 Eugene Fama:** The study applied the Eugene Fama to know the returns performance of the selected Family indices. The study considered the Nifty as proxy variable for the equity market bench mark.

**7.3 Paired T test:** The study applied the paired t Test to know the significant difference between the returns of the considered the three indices during the study period.

**8. TABULATION OF DATA ANALYSIS:**

**I – Below is the study on returns performance select family indices of NSE India.**

**Table Returns Performance f selected Family Indices**

YEAR	Return On Investment (Ri)			Risk Free Rate	expected returns	BETA			Jensen Alpha= $R(i) - (R(f) + B \times (R(m) - R(f)))$		
	Nifty Aditya Birla Group	Nifty Tata Group	Nifty Mahindra Group			Rf	Rm	Nifty Aditya Birla Group	Nifty Tata Group	Nifty Mahindra Group	Nifty Aditya Birla Group
2018	-0.0171	-0.0037	0.0077	6.13	0.0090	-0.0013	-0.0007	-0.00034	-6.14	-6.13	-6.12
2019	-0.0139	-0.0039	0.0114	6.54	0.0097	-0.0012	-0.0006	-0.00029	-6.54	-6.13	-6.11
2020	-0.0115	-0.0103	0.0072	5.82	0.0088	-0.0012	-0.0005	-0.00024	-5.83	-6.13	-6.12
2021	-0.0093	-0.0147	0.0111	3.72	-0.0002	-0.0011	-0.0007	-0.00037	-3.73	-6.14	-6.11
2022	-0.0104	-0.0197	0.0041	3.39	-0.0028	-0.0011	-0.0007	-0.00043	-3.40	-6.14	-6.12
2023	-0.0286	-0.0301	0.0009	3.73	0.00543	-0.0009	-0.0006	-0.00029	-3.76	-6.15	-6.13
Average									-4.90	-6.14	-6.12

Source: Secondary Data



The table represents the returns performance of select family indices of NSE India for period of 6 years- 2018 to 2023. It is observed that the family indices have negative Jensen Alpha values for all years, indicating less performance when compared to the expected returns based on their beta. However, the family indices showed some improvement in their Jensen Alpha values from 2021 to 2023, indicating that they performed relatively better during this period. In comparison, the non-family indices and PSU indices have relatively consistent Jensen Alpha values over the six-year period, indicating that their returns performance did not change much. The negative average Jensen Alpha values for the family indices suggest that, on an average, it has performed less when compared to the market and the risk-free rate. Overall, the interpretation of the table suggests that although the family indices have shown some improvement in their returns performance, they still performed low when compared to the market and the risk-free rate, whereas non-family and PSU indices maintained consistent performance.

**Objective-2: To compare the returns performance of select family indices with nifty indices.**

The test applied the Paired t Test to know difference between the returns of the selected three indices.

**Table – 2 Returns Comparison between the Aditya Birla and Mahindra Group**

I		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Nifty Aditya Birla Group - Nifty Mahindra Group	-.00207	.04861	.00633	-.01474	.01060	-.327	58	.745

Source: Secondary Data

The above indicates the results of the paired samples test to compare the returns performance of Nifty Aditya Birla Group and Nifty Mahindra Group indices. The mean difference between the two indices is -0.00207 with a standard deviation of 0.04861. The standard error is 0.00633, at the 5% significance level for difference is between -0.01474 and 0.01060. The t-value is -0.327 with 58 degrees of freedom, and the p-value is 0.745. Based up on the results, we state that there is no statistically significant difference between the returns performance of Nifty Aditya Birla Group and Nifty Mahindra Group indices. The p-value of 0.745 is greater than the significance level of 0.05, indicating that we cannot reject the null hypothesis that there is no difference in the returns performance between the two indices. Therefore, we can conclude that both indices have similar returns performance.

**Table – 3 Returns Comparison between the Aditya Birla and Tata Group**

Pair		Paired Differences					T	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
1	Nifty Aditya Birla Group - Nifty Tata Group	-.00875	.05031	.00655	-.02186	.00436	-1.336	58	.187

Source: Secondary Data

The table represents the results of a paired samples test conducted to compare the returns performance of Nifty Aditya Birla Group index with Nifty Tata Group index. The mean difference in returns between the two indices is -0.00875 with a standard deviation of 0.05031. The standard error of the mean is 0.00655, and the 95% confidence interval of the difference ranges from -0.02186 to 0.00436. The results indicate that there is no statistically significant difference in returns between Nifty Aditya Birla Group and Nifty Tata Group indices, as the p-value (0.187) is greater than the significance level (0.05). Therefore, we can conclude that the returns performance of these two indices is similar.

**Table – 4 Returns Comparison between the Tata Group and Mahindra Group**

I		Paired Differences					T	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Nifty Mahindra Group - Nifty Tata Group	-.00668	.04461	.00581	-.01830	.00495	-1.149	58	.255

Source: Secondary Data

The table shows the results of a paired samples test that compares the returns performance of the Nifty Mahindra Group index with the Nifty Tata Group index. The mean difference between the two indices is -.00668, indicating that, on an average, the Nifty Mahindra Group index has performed low when compared with the Nifty Tata Group index. However, the standard deviation of the differences is relatively high at .04461, suggesting that there is a considerable degree of variability in the performance of the two indices. The t-statistic value is -1.149, and the p-value is .255, which is greater than the commonly used significance level of .05. Therefore, we cannot reject the null hypothesis that there is no significant difference between the returns of the two indices. The table suggests that there is no significant difference in the returns performance of the Nifty Mahindra Group and Nifty Tata Group indices.

## 9. FINDINGS OF THE STUDY

- 9.1 The study identified that there was a slight improvement in the Jensen Alpha values of family indices from 2021 to 2023 (-3.7314, -3.4022 and -3.7636), indicating relatively better returns performance during the period.
- 9.2 The study examined that the non-family and PSU indices (-6.1422, -6.1235) showed consistent Jensen Alpha values over the six-year period, indicating stable returns performance.
- 9.3 The research found that because there is no significant difference in returns between the corresponding pairs of indices, the returns performance of the Nifty Mahindra Group and Nifty Tata Group indices(-.008), as well as the Nifty Aditya Birla Group and Nifty Tata Group indices(-.006), are also similar.

9.4 The study's finding (-.006) that the Nifty Mahindra Group index has performed slightly negatively on average than the Nifty Tata Group index.

## 10. CONCLUSION OF THE STUDY

The study focused on examining the returns performance of select family indices listed on NSE India and comparing them with the widely followed Nifty indices. The findings of the study revealed some interesting insights into the performance of these family indices over a specific time period. One key finding of the study was the slight improvement in the Jensen Alpha values of the family indices during the period of 2021 to 2023. The Jensen Alpha is a measure of risk-adjusted returns, and the positive values suggest that the family indices outperformed their respective risk-adjusted benchmarks. This indicates that the family indices exhibited relatively better returns performance compared to the overall market represented by the Nifty indices.

Another significant observation from the study was the consistent Jensen Alpha values over the six-year period. This suggests that the family indices maintained a stable performance in terms of risk-adjusted returns throughout the analyzed time frame. This stability in returns performance can be an appealing characteristic for investors looking for consistent returns from their investments. The study further conducted a paired samples test to compare the returns between corresponding pairs of family and Nifty indices. The results indicated that there was no significant difference in returns performance between these pairs of indices. This implies that both the family indices and the Nifty indices delivered similar returns on average. Therefore, investors seeking exposure to family-owned businesses through the family indices can expect comparable returns to those provided by the broader market represented by the Nifty indices.

However, when examining the performance of specific sub-indices within the family indices, the study noted that the Nifty Mahindra Group index performed slightly negatively on average compared to the Nifty Tata Group index. This suggests that there may be variations in the returns performance among different family indices, and investors should consider such distinctions when making investment decisions. Overall, the findings of the study indicate that select family indices listed on NSE India have demonstrated a favorable returns performance. These indices have shown a slight improvement in risk-adjusted returns, consistent performance over time, and comparable returns to the broader market indices. These insights

can be valuable for investors interested in investing in family-owned businesses and seeking stable and competitive returns from their investment portfolios.

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