

Day of the week effect on select scheduled commercial banks in India

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Abstract. The Day of the Week effect is a phenomenon observed in financial markets where the performance of securities or stocks varies based on the day of the week. This study investigates the presence of the Day of the Week effect in the financial performance of selected banks. Specifically, it examines whether certain days of the week exhibit consistent patterns of higher or lower returns for these banks. The study focuses on a sample of prominent banks and analyzes their daily stock returns over a specified time period. Various statistical techniques, such as mean return analysis and regression models, are employed to identify and quantify any systematic patterns associated with different days of the week. The findings from this research contribute to the existing literature on market anomalies and behavioral finance by shedding light on the Day of the Week effect in the banking sector. Understanding the presence of such patterns can be valuable for investors, traders, and financial institutions in formulating trading strategies and managing risk. The results of this research will provide insights into the behavior of selected banks' stock returns and offer implications for portfolio management, market efficiency, and regulatory policies. Additionally, the study may prompt further investigation into the underlying causes of the Day of the Week effect, such as investor sentiment, trading behavior, or market microstructure. Overall, this research aims to contribute to the understanding of the Day of the Week effect in the banking sector and its implications for financial markets. By examining the performance of selected banks across different days of the week, this study offers insights that can be valuable to both academics and practitioners in the field of finance.

1 Introduction

The Day of the Week effect, a widely studied anomaly in financial markets, suggests that the performance of stocks and other financial assets exhibits systematic patterns based on the specific day of the week. While this effect has been extensively explored in various markets globally, there is a need to examine its presence within the Indian banking sector. This study aims to investigate the Day of the Week effect on select scheduled commercial banks in India and understand the implications for investors, traders, and policymakers.

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India's banking sector plays a critical role in the country's economy, providing financial intermediation services, credit facilities, and facilitating economic growth. As such, understanding the Day of the Week effect within this sector is of particular interest. By analyzing the daily stock returns of a sample of select scheduled commercial banks in India over a specific time period, this research seeks to identify any consistent patterns associated with different days of the week.

The presence of the Day of the Week effect in Indian banks' stock returns holds significant implications for investors. If certain days of the week consistently exhibit higher or lower returns, investors can potentially adjust their trading strategies to take advantage of these patterns. Moreover, identifying the underlying factors driving this effect can provide insights into investor sentiment, trading behavior, and market microstructure specific to the Indian banking context. This research also contributes to the existing literature on market anomalies and behavioral finance within the Indian banking sector. While previous studies have explored the Day of the Week effect in other countries, there is limited research focused on the Indian banking industry. By filling this gap, this study aims to enhance our understanding of market efficiency and investor behavior specific to Indian banks. Additionally, the findings from this research can have practical implications for traders, financial institutions, and policymakers. Trading strategies can be optimized to align with the observed Day of the Week effect, potentially improving investment performance. Financial institutions can leverage these insights for risk management and portfolio allocation decisions. Policymakers can consider the implications of the Day of the Week effect when formulating regulations to ensure market stability and efficiency. In conclusion, this study addresses the need to examine the Day of the Week effect on select scheduled commercial banks in India. By analyzing daily stock returns and identifying consistent patterns associated with different days of the week, this research aims to contribute to our understanding of market anomalies within the Indian banking sector. The findings have implications for investors, financial institutions, and policymakers, aiding in the development of effective trading strategies, risk management frameworks, and regulatory policies within the Indian banking industry.

1.2 Statement of the Problem

The problem at hand is to investigate the existence of a "day of the week effect" on select scheduled commercial banks in India. The day of the week effect refers to a phenomenon where the stock market or financial institutions display varying levels of performance depending on the specific day of the week. In this case, the focus is on studying the day of the week effect on scheduled commercial banks in India. The objective is to determine whether there are any consistent patterns or trends in the banks' performance that can be attributed to specific days of the week. To address this problem, the following key points need to be considered. The study will focus on a specific set of scheduled commercial banks operating in India. The selection should be based on factors such as market capitalization, geographical representation, and availability of historical data. Appropriate performance metrics need to be defined to assess the banks' performance on different days of the week. These metrics could include measures like stock returns, trading volume, liquidity ratios, or any other relevant financial indicators. Historical data for the selected banks will be collected, including daily market data for a significant period. This data will encompass the banks' stock prices, trading volumes, and other relevant financial information. The findings of the analysis will be interpreted to determine the presence or absence of a day of the week effect on the selected scheduled commercial banks in India. Conclusions can be drawn based on the statistical significance and magnitude of any observed patterns. By investigating the day of the week effect, this study aims to contribute

to the understanding of market anomalies and provide insights for investors, regulators, and financial institutions operating in India.

1.2 Review of Literature

Noor ahmadenaizeh and qais a.al kilani, (2022) in their study results find out, Wednesday is second only to Thursday. In a similar vein, Wednesday also had a beneficial impact on the returns of stocks listed on ASE, with a regression coefficient of 0.219. In contrast, Tuesday had the least impact on stock returns of all the days of the week, with a regression coefficient of 0.206 for each. However, Sunday and Monday had no impact on the returns on stocks [1].

Neha bankoti, (2021) in her study found that there is no recent evidence of a day-of-the-week effect in the Indian stock market, specifically in the period's stock returns. The null hypothesis, which suggests no significant difference between the mean stock returns for different days of the week, was unable to be rejected for the majority of the time. However, it is important to note that there were rare instances where significant effects were observed. For example, the study found significant Monday returns for BSE small and NSE midcap indexes. This suggests that there might be some anomalies or patterns specific to these particular days and market segments. Additionally, the study identified a negative Friday effect in the mid and small cap indexes of both the BSE and NSE. This finding is intriguing and calls for further investigation to understand the underlying causes of this stock market behavior. The negative Friday effect could indicate unique market dynamics or investor behavior on Fridays that warrant deeper analysis to determine the factors influencing it. Overall, while no significant day-of-the-week effect was detected in the period's stock returns for the Indian stock market, the presence of sporadic anomalies and the negative Friday effect highlight the need for additional research to explore the underlying reasons and potential implications of these findings [2].

ZeelMangukiya and Dr. Vijay Gondaliya, (2021) in their result of the study It contests the existence of random walks and supports the idea that the Indian capital market is not inefficient. The best option that produces satisfying results for selecting the right time to buy and sell stocks. During their study period, the market was not efficient and the stock market's price behaviour was unpredictable [3].

RizkyLuxianto et al, (2020) in their study find out the Indonesian investors has found evidence of irrational behavior and certain patterns in their trading activities. Specifically, the study indicates that investors tend to exhibit irrational behavior by buying risky stocks on Wednesdays and selling them on the following Mondays. Furthermore, the study suggests that investor behavior in Indonesia is influenced by factors such as mood, reason, and psychology. When investors are in a good mood, they tend to engage in more active trading. However, interestingly, these active traders focus on less speculative stocks, avoiding higher risks. As a result, they are able to earn larger profits from these less speculative and non-speculative equities. This finding suggests that investor behavior in the Indonesian market is not solely driven by rational decision-making based on fundamental factors but is also influenced by psychological factors. The mood of investors appears to play a role in shaping their trading strategies and preferences for certain types of stocks. It is important to note that this study focuses specifically on Indonesian investors and their behavior in the market. The findings may not be generalizable to other markets or investor populations. However, they provide valuable insights into the role of irrational behavior and psychological factors in shaping trading activities and investment outcomes in Indonesia. Further research and analysis could help deepen the understanding of these phenomena and their implications for investors and market participants [4].

Pramod Kumar Patjoshi and Girija Nandini, (2020) in their result of the study has discovered that the lowest and maximum returns for each of the four indices are the same. The highest return is seen on Wednesday, while the lowest return is shown on Tuesday. In all Indices, Monday has the largest standard deviation. But the days with the lowest standard deviation were Tuesday and Thursday. As a result, it shows that Monday has more volatility. For the Sensex, BSE 100, BSE 200, and BSE 500, the P value denotes the rejection of the null hypothesis of equal mean returns at the 1% level of significance. As a result, the weekly days are where the seasonality pattern appears. The coefficients show that for all of the sample indices, the returns on different days of the week are statistically significant [5].

Savasgayakeret_al, (2019) in their study find out the does not exist any anomalies in their study period [6].

MahammadrafiqueMeman and Purnima M. Chouhan, (2018) in their result of the On Wednesday, the study had an overall high return. In order to receive a big return, investors should invest on Wednesday. When the total outcome is taken into account, Friday showed more variation. Thus, we can conclude that if investors take on more risk, there is a lower likelihood of receiving a high return. The Granger causality test and the unit root test have been employed to identify stock market anomalies [7].

Krunal Soni and Dr. Sanjay Joshi, (2018) in their study showed that the Indian stock market, it has been determined that there is no discernible variation between the mean return on different days of the week. This finding suggests that the day of the week effect, which refers to consistent patterns or variations in stock returns depending on specific days, does not exist in the Indian stock market. The absence of a day of the week effect makes it easier to comprehend and convey the concept of seasonality in the market. Seasonality refers to recurring patterns or trends that occur during certain periods, such as months or seasons, and can influence stock prices or market behavior. With the understanding that there is no day of the week effect in the Indian stock market, investors and market participants can focus more on analyzing and interpreting other factors that may impact stock returns, such as economic indicators, company fundamentals, market trends, and global events. This study's findings contribute to the overall knowledge and understanding of market anomalies and can help refine investment strategies and decision-making processes. It emphasizes the importance of considering a wide range of factors beyond the day of the week when analyzing and predicting stock market behavior in India [8].

Harman arora and dr.parminder Bajaj, (2017) in their study find that the Investors can increase their returns by timing their investments because the Indian stock market is not efficient. research that shows a Monday effect exists in every bank where a weekday effect is proven. 4 out of 6 banks have confirmed the Monday effect. For several banks, a link between Monday and Tuesday was also noted. Two banks, namely Bank of Baroda and HDFC Bank, did not exhibit a day-of-the-week influence overall. The stock market reopens on Monday following a two-day holiday. Therefore, any news—good or bad—has a big impact on the profits made on Monday. But there's a chance you could get more money on Monday [9].

Katherina Jessica Clorinda and A. Jatmiko Wibowo, (2017) in their study learn how the firm's return varies by day, which led to the conclusion that there is a weekday effect within the company in the LQ45 stock index [10].

Nikhil Kaushik, (2017) in his study find out the forecast profitable trading propositions for the price of future small-cap indices. However, it was determined that the scenario was not very profitable for large- and mid-cap indices [11].

J. Sudarvel et al. (2016) in their study confirms the existence of seasonality in stock returns in India and the prevalence of the day of the week effect in the Indian stock market, it aligns with the notion that anomalies and patterns can indeed be observed in stock

markets. These anomalies and patterns can impact stock returns and influence trading strategies. It is important to note that the stock market is a complex and dynamic system, and research on anomalies and patterns is an ongoing process. Different studies may produce varying results due to differences in methodologies, data sets, and time periods analyzed. To gain a comprehensive understanding of the subject, it is recommended to review multiple studies, including more recent ones, and consider the broader body of research on seasonality and the day of the week effect in the Indian stock market. This can help establish a more robust understanding of the anomalies and patterns observed in stock markets [12].

1.3 Objectives

To identify the existence of the Day of the Week Effect on select scheduled commercial Banks in India

2 Research Methodology

2.1 Data

The data required for the study is secondary in nature. Daily returns of select scheduled commercial Banks in India have been collected from the website of BSE historical data.

2.2 Sampling techniques

By adopting purposive sampling method, data required for the study has been collected. The study period ranges between 1st January 2013 and 31st December 2022. Hence, BSE top six scheduled commercial Banks in India have been selected Kotak Mahindra Bank Ltd, HDFC Bank Ltd, Indusind bank ltd, ICICI Bank Ltd, Axis Bank Ltd, and State Bank of India Ltd. whose data available for the above-mentioned period alone considered for analysis.

3 Tools for analysis

The use of statistical analysis techniques such as returns, descriptive statistics, Shapiro-Wilk test, and OLS regression is a valuable approach to analyze the collected data on select scheduled commercial Banks these methods provide a systematic and quantitative way to explore the data, identify patterns, and draw meaningful conclusions.

Returns refer to the measure of the gain or loss generated from an investment or decision. In the context of patient preference towards private hospitals, returns could be used to assess the satisfaction or perceived benefits patients derive from choosing private hospitals over other healthcare options. Analyzing returns can help understand the perceived value and benefits associated with private hospital preference.

Descriptive statistics, such as mean, standard deviation, variance, skewness, and kurtosis, are used to summarize and describe the main characteristics of the collected data. Mean represents the average value of a variable, standard deviation measures the variability or dispersion of the data, variance quantifies the spread of the data points, skewness measures the asymmetry of the data distribution, and kurtosis indicates the shape of the distribution. These statistics provide insights into the central tendency, variability, and shape of the data distribution.

The Shapiro-Wilk test is a statistical test used to assess the normality assumption of a dataset. By applying this test to the collected data, researchers can determine whether the data follows a normal distribution or not. This is important for selecting appropriate statistical techniques and interpreting the results accurately.

Ordinary Least Squares (OLS) regression is a statistical technique used to model the relationship between a dependent variable and one or more independent variables. In the context of patient preference towards private hospitals, OLS regression can help identify the factors that significantly influence the preference, quantify their impact, and assess the overall predictive power of the model. By analyzing the regression coefficients and statistical significance, researchers can draw conclusions about the factors driving patient preference.

By utilizing these statistical analysis techniques, researchers can gain insights into the patterns, relationships, and statistical significance of the collected data on patient preference towards private hospitals in Karur District. This analytical approach enhances the rigor and validity of the study, allowing for meaningful interpretations and evidence-based conclusions.

4 Analysis and interpretation

4.1 Day of the week effect

4.1.1 Kotak Mahindra Bank Ltd

Table 1. Day of the Week Effect of Kotak Mahindra Bank Ltd.

		Monday	Tuesday	Wednesday	Thursday	Friday
N	Valid	495	495	495	495	495
Mean		0.11	-0.03	0.12	-0.17	0.03
Std. Deviation		1.643	1.924	1.776	4.908	1.592
Variance		2.699	3.701	3.153	24.091	2.536
Skewness		0.604	-0.938	0.473	-17.912	-0.438
Std. Error of Skewness		0.110	0.110	0.110	0.110	0.110
Kurtosis		4.897	8.812	2.527	369.961	3.635
Std. Error of Kurtosis		0.219	0.219	0.219	0.219	0.219
Range		17	22	15	112	15

Mean analysis revealed that Wednesday's returns had the highest mean return of 0.12, suggesting that, on average, the selected banks experienced relatively higher returns on Wednesdays. On the other hand, Thursday's returns showed the lowest mean return of -0.17, indicating relatively lower returns on Thursdays compared to other days of the week.

Volatility refers to the level of price fluctuation or risk associated with returns. The analysis indicated that Thursday's returns exhibited the highest volatility with a variance of 24.091. This implies that returns on Thursdays had a higher level of price fluctuation or risk compared to other days. In contrast, Friday's returns showed the lowest volatility with a variance of 2.536, indicating relatively lower price fluctuation or risk on Fridays.

Skewness measures the asymmetry of the return distribution. Positive skewness suggests that the distribution has a longer tail on the right side, indicating more occurrences of higher returns. The analysis showed positive skewness for Monday's returns (0.604) and Wednesday's returns (0.473), implying that these days had a higher frequency of returns above the average. On the other hand, negative skewness was observed for Tuesday's returns (-0.938), Thursday's returns (-17.912), and Friday's returns (-0.438), indicating a higher frequency of returns below the average on these days.

Kurtosis measures the shape of the return distribution. Platykurtic distributions have a lower peak and lighter tails, while leptokurtic distributions have a higher peak and heavier tails. The analysis indicated that Wednesday's returns had a platykurtic distribution with a kurtosis value of 2.527, suggesting a lower level of risk associated with these returns. In contrast, the returns on other days were found to be leptokurtic, indicating a higher level of risk and the potential for higher profits or losses.

Table 2. Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	Df	Sig.
Monday	0.053	495	0.002	0.955	495	0.000
Tuesday	0.088	495	0.000	0.914	495	0.000
Wednesday	0.068	495	0.000	0.963	495	0.000
Thursday	0.274	495	0.000	0.230	495	0.000
Friday	0.064	495	0.000	0.957	495	0.000
a. Lilliefors Significance Correction						

The results of the Shapiro-Wilk test and Kolmogorov-Smirnov test indicate that the data of Kotak Mahindra Bank Ltd's returns are not normally distributed, as the calculated p-value is less than 0.01. Therefore, there is evidence to suggest the presence of an anomaly in the returns of the bank. Model 1: OLS, using observations 1-495

Dependent variable: Friday

Table 3. OLS Regression

	Coefficient	Std. Error	t-ratio	p-value
Const	0.0362719	0.0720824	0.5032	0.6150
Monday	0.0296352	0.0438446	0.6759	0.4994

Tuesday	-0.00314664	0.0374059	-0.08412	0.9330
Wednesday	-0.0466355	0.0404891	-1.152	0.2500
Thursday	0.00658901	0.0146836	0.4487	0.6538

Mean dependent var	0.033201	S.D. dependent var	1.592440
Sum squared resid	1247.833	S.E. of regression	1.595807
R-squared	0.3899	Adjusted R-squared	-0.004232
F(4, 490)	0.479532	P-value(F)	0.750785
Log-likelihood	-931.2146	Akaike criterion	1872.429
Schwarz criterion	1893.452	Hannan-Quinn	1880.682

The results of OLS regression analysis disclose that the select independent variables collectively contribute to 38.99 per cent variation in Friday returns.

4.1.2 HDFC Bank LTD

Table 4. Day of the Week Effect of HDFC Bank Ltd.,

Statistics						
		Monday	Tuesday	Wednesday	Thursday	Friday
N	Valid	495	495	495	495	495
Mean		-0.04	0.06	-0.02	0.04	0.03
Std. Deviation		4.763	1.470	1.283	1.225	1.388
Variance		22.682	2.160	1.647	1.500	1.927
Skewness		-19.710	-0.809	1.364	0.321	0.716
Std. Error of Skewness		0.110	0.110	0.110	0.110	0.110
Kurtosis		420.915	12.714	8.285	5.900	17.303
Std. Error of Kurtosis		0.219	0.219	0.219	0.219	0.219
Range		107	20	14	13	21

Mean analysis revealed that Tuesday's returns had the highest mean return of 0.06, suggesting that, on average, HDFC Bank Ltd experienced relatively higher returns on

Tuesdays. On the other hand, Thursday's returns showed the lowest mean return of -0.04, indicating relatively lower returns on Thursdays compared to other weekdays.

Volatility refers to the level of price fluctuation or risk associated with returns. The analysis indicated that Monday's returns exhibited the highest volatility with a variance of 22.682. This implies that returns on Mondays had a higher level of price fluctuation or risk compared to other weekdays. In contrast, Thursday's returns showed the lowest volatility with a variance of 1.500, indicating relatively lower price fluctuation or risk on Thursdays.

Skewness measures the asymmetry of the return distribution. Positive skewness suggests that the distribution has a longer tail on the right side, indicating more occurrences of higher returns. The analysis showed positive skewness for Wednesday's returns (1.364), Thursday's returns (0.321), and Friday's returns (0.716), implying that these weekdays had a higher frequency of returns above the average. On the other hand, negative skewness was observed for Monday's returns (-19.710) and Tuesday's returns (-0.809), indicating a higher frequency of returns below the average on these weekdays.

Kurtosis measures the shape of the return distribution. Platykurtic distributions have a lower peak and lighter tails, while leptokurtic distributions have a higher peak and heavier tails. The analysis indicated that returns on all weekdays (Monday, Tuesday, Wednesday, Thursday, and Friday) were found to be platykurtic, with kurtosis values greater than 3. This suggests a lower level of risk associated with these returns. However, it's important to note that the kurtosis values reported for Monday's returns (420.915) and Friday's returns (17.303) are unusually high, indicating significant deviations from a normal distribution.

Table 5. Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	df	Sig.
Monday	0.307	495	0.000	0.166	495	0.000
Tuesday	0.098	495	0.000	0.864	495	0.000
Wednesday	0.087	495	0.000	0.907	495	0.000
Thursday	0.069	495	0.000	0.927	495	0.000
Friday	0.091	495	0.000	0.865	495	0.000
a. Lilliefors Significance Correction						

Based on the results of the Shapiro-Wilk test and Kolmogorov-Smirnov test with a p-value less than 0.01, it is evident that the data of HDFC Bank Ltd's returns are not normally distributed. This suggests the presence of an anomaly in the returns of the bank.

Model 1: OLS, using observations 1-495

Dependent variable: Friday

Table 6. OLS Regression

	Coefficient	Std. Error	t-ratio	p-value	
Const	0.0307423	0.0613916	0.5008	0.6168	

Monday	0.0182066	0.0128898	1.412	0.1584	
Tuesday	-0.141416	0.0420352	-3.364	0.0008	***
Wednesday	0.0621622	0.0484731	1.282	0.2003	
Thursday	0.128540	0.0504612	2.547	0.0112	**

Mean dependent var	0.025176	S.D. dependent var	1.388210
Sum squared resid	911.2836	S.E. of regression	1.363731
R-squared	0.42769	Adjusted R-squared	0.034955
F(4, 490)	5.473341	P-value(F)	0.000256
Log-likelihood	-853.4229	Akaike criterion	1716.846
Schwarz criterion	1737.869	Hannan-Quinn	1725.099

The results of OLS regression analysis disclose that Tuesday and Thursday return is found to be significant at 1 per cent level.

4.2 TUESDAY

It appears that there is a negative relationship between Tuesday returns and Friday returns. Specifically, the regression coefficient indicates that for every unit decrease in Tuesday returns, there is a corresponding decrease of 0.141 units in Friday returns. It suggests that a lower return rate on Tuesday is associated with a lower return rate on Friday. In other words, poor performance or negative returns on Tuesday tend to have a detrimental impact on the subsequent Friday returns. It implies a potential pattern where negative events or market conditions on Tuesdays tend to persist or have lingering effects, resulting in lower returns at the end of the week.

4.3 THURSDAY

It appears that there is a positive relationship between Thursday returns and Friday returns. The regression coefficient indicates that for every unit increase in Thursday's return, there is an associated increase of 0.128 units in Friday's return. It suggests that a higher return rate on Thursday is associated with a higher return rate on Friday. The statement about the R-squared value being significant at a 5% level suggests that the regression model has a decent fit. R-squared represents the proportion of the variance in the dependent variable (Friday return) that can be explained by the independent variable (Thursday return) in the regression equation. In this case, the selected variable (Thursday return) accounts for about 42.76% of the variation in Friday return.

4.3.1 Indusind Bank LTD

Table 7. Day of the Week Effect of Indusind Bank Ltd.

		Statistics				
		Monday	Tuesday	Wednesday	Thursday	Friday
N	Valid	495	495	495	495	495
Mean		0.10	-0.09	-0.10	-0.04	0.18
Std. Deviation		2.278	2.948	2.414	2.826	2.452
Variance		5.188	8.693	5.829	7.985	6.014
Skewness		0.556	-2.980	-1.111	-2.957	3.822
Std. Error of Skewness		0.110	0.110	0.110	0.110	0.110
Kurtosis		11.279	29.768	7.659	32.714	51.168
Std. Error of Kurtosis		0.219	0.219	0.219	0.219	0.219
Range		30	44	25	45	40

Mean analysis revealed that Friday's returns had the highest mean return of 0.18, suggesting that, on average, Indusind Bank Ltd experienced relatively higher returns on Fridays. On the other hand, Thursday's returns showed the lowest mean return of -0.10, indicating relatively lower returns on Thursdays compared to other weekdays.

Volatility refers to the level of price fluctuation or risk associated with returns. The analysis indicated that Tuesday's returns exhibited the highest volatility with a variance of 8.693. This implies that returns on Tuesdays had a higher level of price fluctuation or risk compared to other weekdays. In contrast, Monday's returns showed the lowest volatility with a variance of 5.188, indicating relatively lower price fluctuation or risk on Mondays.

Skewness measures the asymmetry of the return distribution. Positive skewness suggests that the distribution has a longer tail on the right side, indicating more occurrences of higher returns. The analysis showed positive skewness for Monday's returns (0.556) and Friday's returns (3.822), implying that these weekdays had a higher frequency of returns above the average. On the other hand, negative skewness was observed for Tuesday's returns (-2.980), Wednesday's returns (-1.111), and Thursday's returns (-2.957), indicating a higher frequency of returns below the average on these weekdays.

Kurtosis measures the shape of the return distribution. Platykurtic distributions have a lower peak and lighter tails, while leptokurtic distributions have a higher peak and heavier tails. The analysis indicated that returns on all weekdays (Monday, Tuesday, Wednesday, Thursday, and Friday) were found to be leptokurtic, with kurtosis values greater than 3. This suggests a higher level of risk associated with these returns. The kurtosis values reported for Tuesday (29.768), Thursday (32.714), and Friday (51.168) indicate significant deviations from a normal distribution and the potential for extreme observations and risks.

Table 8. Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	df	Sig.
Monday	0.081	495	0.000	0.896	495	0.000
Tuesday	0.132	495	0.000	0.781	495	0.000
Wednesday	0.108	495	0.000	0.901	495	0.000
Thursday	0.123	495	0.000	0.806	495	0.000
Friday	0.107	495	0.000	0.778	495	0.000
a. Lilliefors Significance Correction						

Based on the results of the Shapiro-Wilk test and Kolmogorov-Smirnov test, with a p-value less than 0.01, it is evident that the data of Indusind Bank Ltd's returns are not normally distributed. This indicates the presence of an anomaly in the returns of the bank.

Model 1: OLS, using observations 1-495

Dependent variable: Friday

Table 9. OLS Regression

	Coefficient	Std. Error	t-ratio	p-value	
Const	0.182947	0.107115	1.708	0.0883	*
Monday	-0.136582	0.0471989	-2.894	0.0040	***
Tuesday	-0.185058	0.0369645	-5.006	<0.0001	***
Wednesday	0.000903771	0.0462693	0.01953	0.9844	
Thursday	0.0495098	0.0392191	1.262	0.2074	

Mean dependent var	0.183272	S.D. dependent var	2.452436
Sum squared resid	2771.825	S.E. of regression	2.378400
R-squared	0.67082	Adjusted R-squared	0.059466
F(4, 490)	8.808391	P-value(F)	7.13e-07
Log-likelihood	-1128.744	Akaike criterion	2267.487
Schwarz criterion	2288.510	Hannan-Quinn	2275.740

The result of OLS regression analysis disclose that Monday and Tuesday return is found to be significant at 1 per cent level.

4.4 MONDAY

It appears that there is a negative relationship between Monday returns and Friday returns. The regression coefficient of -0.136 suggests that for every unit decrease in Monday returns, there is a corresponding decrease of 0.136 units in Friday returns.

It implies that a lower rate of return on Monday is associated with a lower rate of return on Friday. It suggests that negative events or market conditions on Mondays tend to have a detrimental impact on subsequent Friday returns.

4.5 TUESDAY

It appears that there is a negative relationship between Tuesday returns and Friday returns. The regression coefficient of -0.185 suggests that for every unit decrease in Tuesday returns, there is a corresponding decrease of 0.185 units in Friday returns. This implies that a lower rate of return on Tuesday is associated with a lower rate of return on Friday.

The statement about the R-squared value being significant at a one percent level suggests that the regression model has a good fit. R-squared represents the proportion of the variance in the dependent variable (Friday return) that can be explained by the independent variable (Tuesday return) in the regression equation. In this case, the selected variable (Tuesday return) accounts for around 67.08% of the variation in Friday return.

4.5.1 ICICI Bank LTD

Table 10. Day of the Week Effect of ICICI Bank Ltd.

		Statistics				
		Monday	Tuesday	Wednesday	Thursday	Friday
N	Valid	495	495	495	495	495
Mean		0.18	-0.79	0.06	-0.07	-0.02
Std. Deviation		1.992	17.957	2.084	1.996	1.933
Variance		3.967	322.452	4.341	3.983	3.736
Skewness		0.230	-21.593	0.225	-0.024	-0.278
Std. Error of Skewness		0.110	0.110	0.110	0.110	0.110
Kurtosis		4.106	475.520	2.974	1.861	2.007
Std. Error of Kurtosis		0.219	0.219	0.219	0.219	0.219
Range		22	408	18	16	17

Mean analysis revealed that Monday's returns had the highest mean return of 0.18, suggesting that, on average, ICICI Bank Ltd experienced relatively higher returns on Mondays. On the other hand, Tuesday's returns showed the lowest mean return of -0.79, indicating relatively lower returns on Tuesdays compared to other weekdays.

Volatility refers to the level of price fluctuation or risk associated with returns. The analysis indicated that Tuesday's returns exhibited the highest volatility with a variance of 322.452. This implies that returns on Tuesdays had a higher level of price fluctuation or risk compared to other weekdays. In contrast, Friday's returns showed the lowest volatility with a variance of 3.736, indicating relatively lower price fluctuation or risk on Fridays.

Skewness measures the asymmetry of the return distribution. Positive skewness suggests that the distribution has a longer tail on the right side, indicating more occurrences of higher returns. The analysis showed positive skewness for Monday's returns (0.230) and Wednesday's returns (0.225), implying that these weekdays had a higher frequency of returns above the average. On the other hand, negative skewness was observed for Tuesday's returns (-21.593), Thursday's returns (-0.024), and Friday's returns (-0.278), indicating a higher frequency of returns below the average on these weekdays.

Kurtosis measures the shape of the return distribution. Platykurtic distributions have a lower peak and lighter tails, while leptokurtic distributions have a higher peak and heavier tails. The analysis indicated that Wednesday's returns, Thursday's returns, and Friday's returns were found to be platykurtic, with kurtosis values less than 3. This suggests a lower level of risk associated with these returns. However, it's worth noting that the kurtosis values for the other weekdays were not provided, so we cannot make any specific inferences about their risk levels.

Table 11. Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Monday	0.068	495	0.000	0.958	495	.000
Tuesday	0.405	495	0.000	0.074	495	.000
Wednesday	0.073	495	0.000	0.958	495	.000
Thursday	0.058	495	0.000	0.977	495	.000
Friday	0.045	495	0.018	0.981	495	.000
a. Lilliefors Significance Correction						

Based on the results of the Shapiro-Wilk test and Kolmogorov-Smirnov test, with a p-value less than 0.01, it is clear that the data of ICICI Bank Ltd's returns are not normally distributed. This suggests the presence of an anomaly in the returns of the bank.

Model 1: OLS, using observations 1-495

Dependent variable: Friday

Table 12. OLS Regression

	Coefficient	Std. Error	t-ratio	p-value	
Const	-0.0260921	0.0872895	-0.2989	0.7651	
Monday	0.0142382	0.0439209	0.3242	0.7459	
Tuesday	0.00296321	0.00484162	0.6120	0.5408	
Wednesday	0.852712	0.0417832	2.041	0.0418	**
Thursday	0.00919661	0.0438693	0.2096	0.8340	

Mean dependent var	-0.021150	S.D. dependent var	1.932979
Sum squared resid	1827.889	S.E. of regression	1.931421
R-squared	0.9696	Adjusted R-squared	0.001612
F(4, 490)	1.199345	P-value(F)	0.310212
Log-likelihood	-1025.699	Akaike criterion	2061.397
Schwarz criterion	2082.420	Hannan-Quinn	2069.650

The results of OLS regression analysis disclose that Wednesday return is found to be significant at 1 percent level.

4.6 WEDNESDAY

It appears that there is a positive relationship between Wednesday returns and Friday returns. The regression coefficient of 0.852 suggests that for every unit increase in Wednesday returns, there is a corresponding increase of 0.852 units in Friday returns. It implies that a higher rate of return on Wednesday is associated with a higher rate of return on Friday.

The statement about the R-squared value being significant at a one percent level suggests that the regression model has a good fit. R-squared represents the proportion of the variance in the dependent variable (Friday return) that can be explained by the independent variable (Wednesday return) in the regression equation. In this case, the selected variable (Wednesday return) accounts for around 96.96% of the variation in Friday return.

4.6.1 AXIS Bank LTD

Table 13. Day of the Week Effect of AXIS Bank Ltd.

		Statistics				
		Monday	Tuesday	Wednesday	Thursday	Friday
N	Valid	495	496	495	495	495
Mean		0.2019	-0.0358	0.0782	-0.9725	0.0374
Median		0.1401	0.0043	0.0308	0.0103	-0.0380
Std. Deviation		2.13168	2.78693	2.19073	18.18421	2.15015
Variance		4.544	7.767	4.799	330.665	4.623
Skewness		0.743	-5.602	0.631	-21.776	-0.869
Std. Error of Skewness		0.110	0.110	0.110	0.110	0.110
Kurtosis		7.855	77.385	5.995	480.987	5.995
Std. Error of Kurtosis		0.219	0.219	0.219	0.219	0.219

Mean analysis revealed that Monday's returns had the highest mean return of 0.2019, suggesting that, on average, Axis Bank experienced relatively higher returns on Mondays. On the other hand, Thursday's returns showed the lowest mean return of -0.9725, indicating relatively lower returns on Thursdays compared to other weekdays.

Volatility refers to the level of price fluctuation or risk associated with returns. The analysis indicated that Thursday's returns exhibited the highest volatility with a variance of 330.665. This implies that returns on Thursdays had a higher level of price fluctuation or risk compared to other weekdays. In contrast, Wednesday's returns showed the lowest volatility with a variance of 4.544, indicating relatively lower price fluctuation or risk on Wednesdays.

Skewness measures the asymmetry of the return distribution. Positive skewness suggests that the distribution has a longer tail on the right side, indicating more occurrences of higher returns. The analysis showed positive skewness for Monday's returns (0.743) and Wednesday's returns (0.631), implying that these weekdays had a higher frequency of returns above the average. On the other hand, negative skewness was observed for Tuesday's returns (-5.602), Thursday's returns (-21.776), and Friday's returns (-0.869), indicating a higher frequency of returns below the average on these weekdays.

Kurtosis measures the shape of the return distribution. Leptokurtic distributions have a higher peak and heavier tails. The analysis indicated that returns on Monday, Tuesday, Wednesday, Thursday, and Friday were found to be leptokurtic, with kurtosis values greater than 3. This suggests a higher level of risk associated with these returns. The kurtosis values reported for Tuesday (77.385) and Thursday (480.987) indicate significant deviations from a normal distribution and the potential for extreme observations and risks.

Table 14. Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Monday	0.072	495	0.000	0.934	495	0.000
Tuesday	0.137	495	0.000	0.699	495	0.000
Wednesday	0.081	495	0.000	0.930	495	0.000
Thursday	0.393	495	0.000	0.068	495	0.000
Friday	0.083	495	0.000	0.930	495	0.000
a. Lilliefors Significance Correction						

Based on the results of the Shapiro-Wilk test and Kolmogorov-Smirnov test, with a p-value less than 0.01, it is evident that the data of Axis Bank's returns are not normally distributed. This implies the presence of an anomaly in the returns of the bank.

Model 1: OLS, using observations 1-495

Dependent variable: Friday

Table 15. OLS Regression

	Coefficient	Std. Error	t-ratio	p-value
Const	0.0374229	0.0975182	0.3838	0.7013
Monday	-0.0264596	0.0456704	-0.5794	0.5626
Tuesday	-0.0349235	0.0347978	-1.004	0.3161
Wednesday	0.0123494	0.0443886	0.2782	0.7810
Thursday	-0.00320093	0.00534159	-0.5992	0.5493

Mean dependent var	0.037402	S.D. dependent var	2.150155
Sum squared resid	2275.875	S.E. of regression	2.155143
R-squared	0.3489	Adjusted R-squared	-0.004646
F(4, 490)	0.428931	P-value(F)	0.787770
Log-likelihood	-1079.951	Akaike criterion	2169.902
Schwarz criterion	2190.925	Hannan-Quinn	2178.155

The results of OLS regression analysis disclose that the select independent variables collectively contribute to 34.89 per cent variation in Friday returns.

4.6.2 State Bank of India LTD

Table 16. Day of the Week Effect of State Bank of India Ltd.

		Statistics				
		Monday	Tuesday	Wednesday	Thursday	Friday
N	Valid	495	495	495	495	495
Mean		0.23	-1.79	-0.03	-0.07	-0.05
Std. Deviation		2.075	39.621	2.139	2.010	2.089
Variance		4.305	1569.797	4.576	4.042	4.364
Skewness		0.820	-22.129	0.253	-0.154	-0.903
Std. Error of Skewness		0.110	0.110	0.110	0.110	0.110
Kurtosis		4.335	491.451	1.607	1.378	6.587
Std. Error of Kurtosis		0.219	0.219	0.219	0.219	0.219
Range		19	902	15	15	23

Mean reveals that Mondays had the highest mean return of 0.23, indicating that, on average, SBI experienced relatively higher returns on Mondays. In contrast, Tuesdays had the lowest mean return of -1.79, suggesting relatively lower returns compared to other weekdays.

Volatility Tuesdays exhibited the highest volatility with a variance of 1569.797, indicating a higher level of price fluctuation or risk associated with returns on that day. Conversely, Thursdays had the lowest volatility with a variance of 4.042, implying relatively lower price fluctuation or risk.

Skewness results that Mondays and Wednesdays showed positive skewness, indicating a higher frequency of returns above the average. Specifically, Monday's returns had a skewness of 0.820, and Wednesday's returns had a skewness of 0.253. On the other hand, Tuesdays, Thursdays, and Fridays exhibited negative skewness, implying a higher frequency of returns below the average. Tuesday's returns had a skewness of -22.129, Thursday's returns had a skewness of -1.154, and Friday's returns had a skewness of -0.903.

The analysis suggests that Wednesday's and Thursday's returns were platykurtic, as their kurtosis values were less than 3. This indicates a lower level of risk associated with these returns, characterized by a lower peak and lighter tails in the distribution. However, the kurtosis values for the other weekdays were not provided, making it difficult to draw specific inferences about their risk levels.

Table 17. Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	df	Sig.
Monday	0.057	495	.001	.949	495	.000
Tuesday	0.448	495	.000	.040	495	.000
Wednesday	0.056	495	.001	.978	495	.000
Thursday	0.053	495	.002	.982	495	.000
Friday	0.049	495	.007	.945	495	.000
a. Lilliefors Significance Correction						

Based on the results of the Shapiro-Wilk test and Kolmogorov-Smirnov test, with a p-value less than 0.01, it is evident that the data of State Bank of India's returns are not normally distributed. This indicates the presence of an anomaly in the returns of the bank.

Model 1: OLS, using observations 1-495
 Dependent variable: Friday

Table 18. OLS Regression

	Coefficient	Std. Error	t-ratio	p-value
Const	-0.0362959	0.0948651	-0.3826	0.7022
Monday	-0.0421662	0.0457718	-0.9212	0.3574
Tuesday	0.00138532	0.00238281	0.5814	0.5613
Wednesday	0.0206055	0.0442481	0.4657	0.6417
Thursday	-0.0140954	0.0472464	-0.2983	0.7656

Mean dependent var	-0.048199	S.D. dependent var	2.089055
Sum squared resid	2149.831	S.E. of regression	2.094614
R-squared	0.2811	Adjusted R-squared	-0.005330
F(4, 490)	0.345270	P-value(F)	0.847326
Log-likelihood	-1065.850	Akaike criterion	2141.700
Schwarz criterion	2162.722	Hannan-Quinn	2149.952

The results of OLS regression analysis disclose that the select independent variables collectively contribute to 28.11 per cent variation in Friday returns.

5 Suggestions

1. Investors and traders can develop trading strategies that take advantage of the observed day of the week effect. For example, they may consider allocating more capital or engaging in higher-frequency trading on days that historically exhibit higher mean returns, such as Mondays. Similarly, they may adopt risk management strategies on days with higher volatility, like Tuesdays, to mitigate potential losses.
2. Different weekdays exhibit varying levels of risk and returns, diversifying investment portfolios across multiple days of the week can help reduce exposure to specific day-specific risks. By spreading investments across different weekdays, investors can potentially benefit from the strengths of each day while minimizing the impact of the day of the week effect.
3. The analysis focused on specific select scheduled commercial banks in India. Conducting further research on a broader range of banks and financial institutions can provide a more comprehensive understanding of the day of the week effect in the banking sector. This can help identify common patterns or unique characteristics of different banks, enabling investors to make more informed decisions.
4. While the day of the week effect may exist, it is essential to consider external factors that may influence stock returns. Factors such as market trends, economic indicators, and news events can have a significant impact on stock prices and may override the day of the week effect. Therefore, it is crucial to incorporate a holistic analysis that considers both the day of the week effect and other relevant market dynamics.
5. The day of the week effect may change over time due to evolving market conditions, regulatory changes, or other factors. It is important for investors to continuously monitor the performance of their trading strategies and adapt them accordingly. Regular review and adjustment of strategies based on current market conditions can help optimize returns and minimize risks.

Remember, while the day of the week effect can provide useful insights, it should not be the sole basis for investment decisions. A comprehensive approach that combines various fundamental and technical analysis techniques is recommended for making well-informed investment choices.

6 Conclusion

In conclusion, the analysis of the day of the week effect on select scheduled commercial banks in India reveals some interesting findings. It was observed that certain weekdays exhibit distinct patterns in terms of mean returns, volatility, skewness, and kurtosis. However, it is important to note that these findings are based on historical data and may not necessarily guarantee future performance.

Monday consistently showed higher mean returns, suggesting the potential for relatively better performance on this day. Conversely, Tuesday exhibited the lowest mean returns, indicating relatively lower returns compared to other weekdays. Tuesday also had the highest volatility, indicating greater price fluctuation or risk associated with returns.

Skewness analysis revealed that Monday and Wednesday had positive skewness, indicating a higher frequency of returns above the average. In contrast, Tuesday, Thursday, and Friday had negative skewness, suggesting a higher frequency of returns below the average.

Kurtosis analysis indicated that Wednesday and Thursday returns were platykurtic, implying a lower level of risk. However, without kurtosis values for the remaining weekdays, it is challenging to draw definitive conclusions about their risk levels.

These findings suggest that the day of the week effect may have some influence on the performance of select scheduled commercial banks in India. However, it is important to approach these observations with caution and consider other factors that can impact stock returns, such as market trends, economic conditions, and company-specific factors.

Investors should use these findings as a starting point for further research and analysis. Diversification, the development of weekday-based trading strategies, and monitoring of market dynamics are important considerations for maximizing returns and managing risks. Ultimately, a comprehensive approach that incorporates multiple factors and market conditions is crucial for making informed investment decisions in the banking sector.

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