Stock Market Movements - A Comparative Analysis on Growth Patterns in India's Leading Stock Exchange

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ABSTRACT

Growth in the financial market need not always get reflected in terms of earnings growth for investors. Certain sectors and certain class of investors could remain beyond the growth story. It is thus essential to examine whether growth in the Indian financial market are reflected in terms of real time gains in leading financial indices. The leading stock market institution of the country namely National Stock Exchange (NSE) and its sectoral indices from the subject matter of analysis. This study analyses the gains and performance trends of the Indian financial market over the past decade, focusing on the NSE Nifty and its key sectoral indices—Nifty IT, Nifty Energy, Nifty Infrastructure, and Nifty Bank. Utilizing secondary data from April 2014 to March 2024, the research employs month-to-month and year-to-year change benchmarks to assess index performance and applies the Concurrent Deviation Method to evaluate correlations between indices. The findings reveal overall resilience and growth, with significant recoveries following downturns such as the 2015-2016 economic slump and the COVID-19 pandemic. Notable positive performances were observed across indices, with Nifty IT and Nifty Energy showing substantial gains in the aftermath of the pandemic. The study also highlights strong positive correlations among the indices, indicating interdependence in market movements. Looking forward, the Indian financial market is expected to benefit from government policies and sectoral trends, particularly in clean energy and infrastructure, while global economic conditions and investor sentiment will continue to influence market dynamics. Investors can leverage the findings of this study to make informed decisions and capitalize on strong growth potential.

Keywords: Level of Significance in Gains, Nifty, Nifty Bank, Nifty Energy, Nifty Infrastructure, Nifty IT
JEL Classifications: G1, G12, G15, O16

1. INTRODUCTION

The financial markets play a pivotal role in the global economy by facilitating capital allocation and fostering economic growth. Investors strategically utilize various indices to maximize returns across different investment vehicles. This study is based on a comparison between the growth in the sectoral indices of the National Stock Exchange (NSE) and the broad benchmark of the National Stock Exchange represented by Nifty (National Stock Exchange Fifty – which implies fifty most actively traded securities in NSE). Broad indices offer a comprehensive view of market performance, encompassing diverse sectors and companies.

Conversely, sectoral indices focus on specific industry segments, providing targeted exposure to particular sectors of the economy (Graham & Harvey, 2001).

Over the 10-year period from April 2014 to March 2024, the Nifty index demonstrated substantial growth, increasing by 233.42%. Similarly, sectoral indices such as Nifty IT, Nifty Energy, Nifty Infrastructure, and Nifty Bank saw impressive gains of 278.18%, 369.52%, 219.44%, and 266.56%, respectively, during the same period (Morningstar, 2021) Appendix "A." It is interesting to observe that over a 10-year horizon, all the sectoral indices identified showed a growth rate above the broad Nifty index, with

the exception of the infrastructure sector, which grew at a rate below the broad Nifty index.

This research aims to assess the gains from investments through a comparative analysis of the broad Nifty index and select sectoral indices (Nifty IT, Nifty Energy, Nifty Infrastructure, and Nifty Bank), and to identify the factors influencing these gains or losses.

2. LITERATURE REVIEW

Broad indices serve as benchmarks for portfolio performance, reflecting overall market health over the long term. Fama and French (1992) suggest that these indices are influenced by macroeconomic indicators such as GDP growth, interest rates, and inflation. Chen et al. (1986) further indicate that the inherent diversification of broad indices helps mitigate risks by balancing gains and losses across sectors. According to Markowitz (1952) Elton & Gruber (1997), diversification is a key strategy in minimizing risk within a portfolio.

Sectoral indices, on the other hand, can outperform broad indices during periods of specific sector growth (Ofek and Richardson, 2003). However, Bhojraj and Swaminathan (2006) highlight that they carry higher risk due to their lack of diversification. Durnev et al. (2004) and Shiller (2000) suggest that factors influencing index performance include macroeconomic conditions, geopolitical events, regulatory changes, technological advancements, and investor sentiment.

Moreover, Bekaert and Harvey (1997) examine the integration of emerging markets with global indices, indicating that emerging market indices can offer diversification benefits but also carry higher volatility. According to Jensen (1968), active management of sectoral indices may lead to better performance during periods of market inefficiency, but the costs associated with active management can offset these gains.

Malkiel (2003) argues that broad indices generally outperform actively managed portfolios over the long term due to their lower costs and inherent diversification. This view is supported by Ellis (2017), who emphasizes the importance of low-cost index funds in achieving market-average returns. Dimson et al. (2002) also found that over a long horizon, broad indices tend to capture the overall market growth more effectively than sectoral indices.

Lastly, Goyal and Santa-Clara (2003) explore the predictability of equity returns and found that the volatility of broad indices can be a useful predictor of future returns, further highlighting the importance of understanding the dynamics between different indices.

3. RESEARCH METHODOLOGY

3.1. Sources of Data
The study is based on secondary data. For analysing gains from broad indices, monthly index data of NSE Nifty from April 2014 to March 2024 were selected. For analysing gains from sectoral indices monthly index data of four sectors each, such as IT sector, Energy sector, Infrastructure sector and Banking sector from April 2014 to March 2024 were selected from NSE.

3.2. Identifying Gain Points
The evaluation of gain points was conducted by analysing both month-to-month and year-to-year changes. The benchmarks for these changes were defined as follows:

	Year-on-Year Change	Month-to-Month Change
Very Significant	Gains of 12% and above	Gains of 2% and above
Significant	Gains ranging from 8% to 12%	Gains ranging from 1% to 2%
Not Significant	Gains below 8%	Gains below 1%

These benchmarks were established to ensure a consistent and objective evaluation of gain points across different time frames, allowing for a more accurate interpretation of the data.

3.3. Concurrent Deviation Method
The Concurrent Deviation Method was employed to quantify the correlation between the NSE Nifty and various sectoral indices, as well as the inter-correlation among different sectoral indices. This method comprehensively assesses the magnitude and direction of changes in the variables, providing a straightforward yet effective means to understand the degree of correlation based on the coherence in their directional movements.

The formula used in this method is:

$$r_c = \pm\sqrt{\pm\frac{(2c-m)}{m}}$$

Where, r_c represents the concurrent deviation coefficient, "c" denotes the count of concordant pairs (where both variables change in the same direction), and "m" is the total number of pairs being analysed. Monthly index data of selected indices were utilized for computing the concurrent deviation method. By analysing the directional shifts of variables X and Y, this method gauges their relationship and identifies the correlation between the NSE Nifty and sectoral indices, as well as the inter-correlation among different sectoral indices. This approach allows for a clear understanding of how these indices move in relation to each other.

4. RESULTS AND DISCUSSION

4.1. Year-on-year Change
The study conducted over a 10-year period reveals a predominantly positive performance across various Nifty indices, despite periodic setbacks, particularly during the COVID-19 pandemic. A detailed comparative analysis evaluates the yearly performance, sector-wise trends, and relative gains and losses of the Nifty, Nifty IT, Nifty Energy, Nifty Infrastructure, and Nifty Bank indices.

In 2014-15, Nifty showed a year-on-year growth of 26.08%. Three of the four sectoral indices showed a similar pattern - The Nifty Bank (41.62%) and Nifty IT (30.94%) outperformed the Nifty

while Nifty Infrastructure (24.53%) showed a close similar result. However, Nifty Energy (−0.56%) showed a negative growth. On May 16, 2014, India's equity benchmark indices, the Sensex and Nifty, reached record highs as investors celebrated the Lok Sabha election results, which confirmed Narendra Modi's victory as Prime Minister with a decisive majority (Business Today, 2019). The Bharatiya Janata Party (BJP) secured an absolute majority with 282 out of 543 seats in the 2014 general elections, marking the largest government mandate in three decades. This outcome bolstered investor optimism, with expectations that the newly elected Modi government would swiftly implement reforms and accelerate economic growth. Between mid-2014 and early 2016, the global economy experienced one of the most significant oil price declines in modern history (World Bank Blogs, 2018). The 70% drop during this period was one of the three largest since World War II and the longest-lasting since the supply-driven collapse of 1986. This decline was a key factor in the downturn of the energy sector during 2014-2015.

The period of 2015-2016 was challenging for stock markets globally. It is interesting to observe that in 2015-2016, the benchmark index Nifty (−5.42%) and the sectoral indices Nifty Infrastructure (−19.23%) and Nifty Bank (−11.98%) suffered significant losses. However, Nifty IT (2.80%) and Nifty Energy (1.11%) managed to achieve marginal gains. In India, the market continued to decline, primarily due to the high volume of non-performing assets (NPAs) held by Indian banks and overall global economic weakness. In August 2015, the Nifty index dropped by 6.58%, largely driven by concerns about a potential slowdown in the Chinese economy. This was exacerbated by the devaluation of the Chinese Yuan a few weeks before the crash, which led to a decline in other currencies and triggered high selling volumes in the stock markets. By February 2016, the Nifty had further declined by approximately 7.62%, again primarily due to the significant NPAs in Indian banks and the ongoing global economic instability.

The year 2016-2017 marked a recovery in which two sectors such as Nifty Energy (38.60%) and Nifty Bank (27.68%) outperformed the Nifty (16.87%) while Nifty Infrastructure (17.37%) showed a close similar result. However, Nifty IT (−4.40%) declines. The Union Budget 2016-2017 was favourable for certain sectors (Livemint, 2017). Recognizing the need for long-term stability, the government emphasized diversifying power generation sources (The Economic Times, 2016). A comprehensive plan is being developed to increase investment in nuclear power generation over the next 15-20 years. To support this initiative, the budget has allocated up to Rs 3,000 crore per annum, which, along with public sector investments, will be used to facilitate the necessary funding. This strategy contributed to the gains seen in the energy sector during 2016-2017. On the other hand, the growth in aggregate deposits improved from 9.3% in 2015-2016 to 15.9% in 2016-2017, largely due to the significant influx of funds into the banking system following the demonetization of November 2016 (Business Standard, 2017). This contributed to the rise in the banking sector during 2016-2017. During this period, Britain voted to exit the EU, with the "Leave" camp emerging victorious. The impact was felt across currency markets, and IT stocks also declined (The Economic Times, 2017).

In 2017-2018, moderate gains were recorded across the board, with Nifty IT (25.82%) outperforming the Nifty (8.70%) and Nifty Infrastructure (2.26%), which posted minimal gains. Meanwhile, Nifty Bank (8.52%) and Nifty Energy (7.75%) showed results similar to those of the Nifty. India's IT industry body, Nasscom, forecasted that the sector's export revenues would grow by 7-8% in 2017-2018. This projection contributed to the growth in the IT sector. In 2018-2019, there were mixed results; Nifty Energy (19.71%) and Nifty Bank (19.17%) performed well, while Nifty Infrastructure (−8.43%) declined.

The outbreak of COVID-19 in 2019-2020 resulted in a global pandemic, leading to lockdowns around the world and causing a significant crash in both global and Indian markets. The pandemic year, 2019-2020, brought significant losses across all indices. The Nifty (−26.82%), Nifty Energy (−32.58%) and Nifty Bank (−35.68%) were particularly hard hit. Between January and March 2020, the Nifty index declined by 31.31%, primarily as a result of the economic impact of the pandemic.

However, 2020-2021 was a strong recovery year, with Nifty IT (83.26%) and Nifty Bank (54.65%) leading the gains and outperforming the Nifty (48.99%). Nifty Infrastructure (48.48%) showed results similar to those of the Nifty, while Nifty Energy's gains were 38.24%. Following the pandemic, information technology (IT) companies became the primary beneficiaries of the rapid digital transformation, as the crisis accelerated the adoption of digital and cloud-based technologies across various sectors (Livemint, 2021). Organizations were compelled to embrace these technologies to adapt to the new normal. The surge in demand for emerging technologies like cloud computing, artificial intelligence (AI), analytics, and big data is expected to continue even in a post-pandemic world. IT firms capitalized on this digital momentum by providing technology solutions that enabled clients to operate remotely and efficiently, ensuring business continuity during the coronavirus outbreak. This was the primary driver of the significant growth in the IT sector.

This positive trend continued into 2021-2022, with Nifty Energy (43.21%), Nifty IT (41.51%), and Nifty Infrastructure (23.82%) outperforming the Nifty (19.37%). Nifty Bank's gains were 10.96%. India's stock market rally was driven by leading technology companies, as well as the basic materials and industrial sectors. This growth was supported by a robust recovery from the pandemic-induced downturn, facilitated by government stimulus programs, a record number of initial public offerings (IPOs), and a shift in foreign investment from China to India. The government also introduced relief measures for industries severely impacted by the pandemic. The unprecedented number of IPOs further fuelled India's market rally, with over 550 IPOs in 2021, attracting more than $70 billion in capital.

In 2022-2023, the indices showed mixed performance. Bank Nifty (12.53%) outperformed Nifty (1.50%), and Nifty Infrastructure (−0.72%) remained relatively stable, while Nifty Energy (−20.21%) saw significant declines. Nifty IT declined by 9.25%. After peaking in 2022, energy prices have significantly declined.

Oil prices remained flat or decreased, which in turn caused energy stocks to follow a similar trend (CNBC, 2015).

However, 2023-2024 saw a strong resurgence in performance, with Nifty Energy (64.40%), Nifty Infrastructure (55.63%), and Nifty IT (25.95%) achieving the highest gains and outperforming Nifty (23.59%). Nifty Bank gained 9.00%. Government support, strong tailwinds, and ambitious clean energy goals in India are key factors driving the growth of energy sector stocks. India has set an ambitious target to generate 50% of its electricity from non-fossil fuels by 2030 (Livemint, 2023; U.S. Bank, 2023). By 2070, the country aims to achieve 'net zero' emissions, with plans to aggressively focus on clean energy. Robust government backing for decarbonization strategies has significantly heightened investor interest in the sector. There has been a substantial increase in government capital expenditure on infrastructure projects, with significant allocations of ₹10 lakh crore in the Union Budget 2023-2024 and ₹11.1 lakh crore in the Interim Budget 2024-2025. These investments have significantly bolstered the infrastructure sector. Furthermore, the government's strong focus on public infrastructure development and supportive policies have created a favourable environment for these investments. Reforms in the power, railways, and defence sectors have further driven growth in infrastructure sector stocks.

Analysing the indices over the decade, the Nifty showed positive returns in 8 out of 10 years, with significant gains in 2020-21 (48.99%) following a major decline in 2019-2020 (−26.82%). The Nifty IT index exhibited positive returns in 7 out of 10 years, achieving the highest gain in 2020-2021 (83.26%). The Nifty Energy index also had positive returns in 7 out of 10 years, with the highest gain in 2023-2024 (64.40%) and a significant recovery post-pandemic. The Nifty Infrastructure index posted positive returns in 6 out of 10 years, with significant gains in 2023-2024 (55.63%) and 2020-2021 (48.48%). The Nifty Bank index showed positive returns in 8 out of 10 years, with major gains in 2020-2021 (54.65%) following a steep decline in 2019-2020 (−35.68%).

Among the 8 years of positive returns for the Nifty index, 5 years were marked by very significant gains, 2 years by significant gains, and 1 year by not significant gains, highlighting strong overall performance. The Nifty IT index achieved 5 years of very significant gains, with 1 year each of significant and not significant gains, indicating consistent and notable returns within the IT sector. For the Nifty Energy index, out of 7 years of gains, five were very significant, and two were not significant, underscoring substantial returns in most positive years. The Nifty Infrastructure index demonstrated that out of 6 years of gains, five were very significant, and one was not significant, showcasing robust performance in the infrastructure sector. The Nifty Bank index, out of 8 years of gains, had 5 years of very significant gains and 3 years of significant gains, reflecting strong and consistent performance in the banking sector. Overall, the indices displayed a trend of very significant gains in most positive years, indicating robust performance and highlighting the resilience and growth potential across these sectors over the decade.

Over the past decade, the Nifty indices have demonstrated resilience and positive performance amidst significant volatility. Initial strong gains in 2014-2015, buoyed by favourable political developments, were followed by challenges such as the 2015-2016 downturn and the impact of the 2014-2016 oil price collapse. The COVID-19 pandemic led to substantial losses in 2019-2020, but subsequent recovery phases, particularly in 2020-2021, underscored the IT sector's adaptability and the rebound in energy markets. Despite some mixed results in 2022-2023, the indices overall showed robust performance, with notable recoveries in 2023-2024 driven by government support and strategic investments, highlighting their resilience and growth potential throughout the decade. Details are given in Table 1 and Figure 1.

4.2. Month-to-month Change
The Nifty index experienced 71 months of gains and 48 months of losses during the period under study. This indicates a positive trend overall, with gains occurring in approximately 60% of the months and losses in the remaining 40%. Among the 71 months of gains, 49 months were classified as very significant, 14 months as significant, and 8 months as not significant. In April 2020, the Nifty index recorded a substantial gain of 14.68%, following a significant decline of 31.30% earlier in the year due to the impact of the COVID-19 pandemic. This consistent pattern of monthly gains demonstrates the index's resilience and potential for long-term growth, despite periodic downturns. Investors can view this historical performance as a sign of the Nifty index's capacity to recover and grow over time.

Based on the analysis of Nifty IT over the assessment period, the index exhibited 68 months of gains and 51 months of losses, reflecting an overall positive trend. Among the 68 months of gains, 52 months were categorized as very significant, 7 months as significant, and 9 months as not significant. In March 2020, Nifty IT experienced a notable decline of 16.10% due to the COVID-19 pandemic. However, the index demonstrated resilience by rebounding with a 10.54% gain in the following month, April 2020. The highest monthly return during the assessment period was recorded in July 2020, with an impressive gain of 22.49%. Nifty IT achieved more than 10.00% monthly gains 10 times during the period of study.

The analysis revealed that, similar to Nifty IT, both Nifty Energy and Nifty Infrastructure experienced 68 months of gains and

Figure 1: Yearly gain/loss of Nifty, Nifty IT, Nifty Energy, Nifty Infrastructure and Nifty Bank
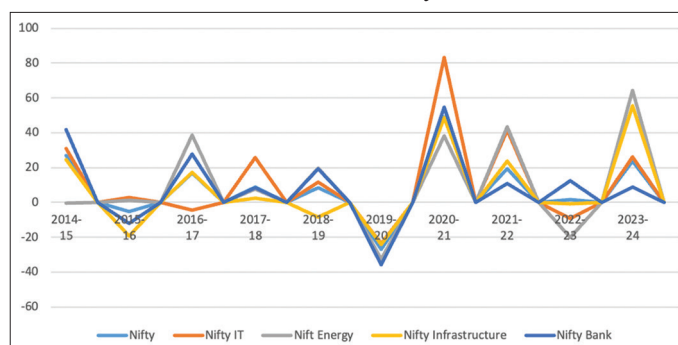
Table 1: Yearly Gains/Loss and Level of Significance of Nifty and selected indices from April 2014 to March 2024

Month	Nifty			Nifty IT			Nifty energy			Nifty infrastructure			Nifty bank		
	Value	Change (%)	Sig Level	Value	Change (%)	Sig Level	Value	Change (%)	Sig Level	Value	Change (%)	Sig Level	Value	Change (%)	Sig Level
April-14	6,696.40	26.8	VS	9,227.95	30.94	VS	8,310.80	−0.56	Loss	2,609.55	24.53	VS	12,855.85	41.62	VS
March-15	8,491.00			12,083.00			8,264.25			3,249.65			18,206.65		
April-15	8,181.50	−5.42	Loss	11,001.05	2.8	NS	8,331.75	1.11	NS	3,154.65	−19.23	Loss	18,338.10	−11.98	Loss
March-16	7,738.40			11,309.30			8,424.60			2,548.15			16,141.65		
April-16	7,849.80	16.87	VS	11,196.25	−4.4	Loss	8,404.65	38.6	VS	2,638.35	17.37	VS	16,795.00	27.68	VS
March-17	9,173.75			10,703.25			11,648.70			3,096.65			21,444.15		
April-17	9,304.05	8.7	S	9,943.70	25.82	VS	12,263.55	7.7	NS	3,255.20	2.26	NS	22,358.25	8.52	S
March-18	10,113.70			12,511.55			13,214.15			3,328.70			24,263.35		
April-18	10,739.35	8.24	S	13,986.25	11.74	S	13,770.15	19.71	VS	3,503.35	−8.43	Loss	25,531.60	19.17	VS
March-19	11,623.90			15,628.20			16,484.00			3,207.90			30,426.80		
April-19	11,748.15	−26.82	Loss	16,705.40	−23.6	Loss	16,500.00	−32.58	Loss	3,107.50	−24.04	Loss	29,764.80	−35.68	Loss
March-20	8,597.75			12,763.65			11,124.15			2,360.50			19,144.00		
April-20	9,859.90	48.99	VS	14,108.40	83.26	VS	13,154.70	38.24	VS	2,753.15	48.48	VS	21,534.50	54.65	VS
March-21	14,690.70			25,855.00			18,185.10			4,087.80			33,303.90		
April-21	14,631.10	19.37	VS	25,664.45	41.51	VS	18,031.10	43.21	VS	4,053.10	23.82	VS	32,781.80	10.96	S
March-22	17,464.75			36,317.20			25,822.00			5,018.55			36,373.60		
April-22	17,102.55	1.5	NS	31,622.40	−9.25	Loss	28,594.15	−20.21	Loss	5,127.85	−0.72	Loss	36,088.15	12.53	VS
March-23	17,359.75			28,698.60			22,814.45			5,090.95			40,608.65		
April-23	18,065.00	23.59	VS	27,708.20	25.95	VS	23,734.55	64.4	VS	5,356.20	55.63	VS	43,233.90	9	S
March-24	22,326.90			34,898.15			39,020.60			8,336.00			47,124.60		

Source: Analysis based on historical data from Nifty 50, Nifty IT, Nifty Energy, Nifty Infrastructure and Nifty Bank covering the period from April 2014 to March 2024. Data was retrieved from different websites i.e., www.nseindia.com, www.finance.yahoo.com and www.investing.com

51 months of losses. This indicates a consistent overall positive trend across these indices.

In the case of Nifty Energy, among the 68 months of gains, 53 months were categorized as very significant, 6 months as significant, and 9 months as not significant. From November 2019 to March 2020, Nifty Energy showed a continuous decline of 36.77%. However, the index rebounded with an 18.25% gain in April 2020 and a 10.23% gain in June 2020. Noteworthy returns were observed in May 2014, with a 16.32% return, and in February 2020, with a 16.30% return. Significant declines of over 12.00% per month were recorded in October 2018 and August 2015. Nifty Energy achieved more than 10.00% monthly gains 13 times during the period of study.

For Nifty Infrastructure, out of the 68 months of gains, 52 months were very significant, 7 months were significant, and 9 months were not significant. The index delivered a notable monthly return of 21.18% in May 2014. However, it experienced a significant monthly loss of 21.61% in March 2020 due to the impact of COVID-19, followed by a robust recovery with a gain of 16.63% in April 2020. Nifty Infrastructure achieved more than 10.00% monthly gains 6 times during the period of study.

The analysis shows that the Nifty Bank experienced 73 months of gains and 46 months of losses, indicating a consistent overall positive trend. Among the 73 months of gains, 52 months were categorized as very significant, 9 months as significant, and 12 months as not significant. From October to December 2020, Nifty Bank delivered a remarkable 40.89% return over the three-month period. However, the index experienced its most significant monthly decline in March 2020, with a drop of 34.32% due to the impact of COVID-19, the largest monthly decline compared to other indices under study. Following this decline, Nifty Bank rebounded with a 12.49% gain in April 2020. Nifty Bank achieved more than 10.00% monthly gains 10 times during the period of study. Details are given Appendix "A".

4.3. Correlation between Indices

The analysis of the study revealed that there is a positive correlation between the NSE Nifty index and its sectoral indices, as well as among different sectoral indices. The highest correlation was observed between the Nifty and Nifty Bank indices, with a correlation coefficient of 0.8352. The correlation between the Nifty and Nifty Infrastructure indices was 0.8044, while the correlation between the Nifty and Nifty Energy indices was 0.7391. The Nifty and Nifty IT indices showed a correlation of 0.5870.

Among the sectoral indices, the correlation between the Nifty Bank and Nifty Infrastructure indices was 0.7832. Similarly, the correlation between the Nifty Bank and Nifty Energy indices was also 0.7832. The Nifty Energy and Nifty Infrastructure indices exhibited a correlation of 0.7724. The correlation between the Nifty Bank and Nifty IT indices was lower, at 0.3780, and the lowest correlation was between the Nifty IT and Nifty Infrastructure indices, at 0.3040.

Table 2: Correlation between the NSE Nifty and sectoral indices as well as the inter-correlation among different sectoral indices

	Nifty	Nifty IT	Nifty Energy	Nifty Bank	Nifty Infrastructure
Nifty	1	0.5870	0.7391	0.8352	0.8044
Nifty IT	0.5870	1	0.3040	0.3780	0.3040
Nifty Energy	0.7391	0.3040	1	0.7832	0.7724
Nifty Bank	0.8352	0.3780	0.7832	1	0.7832
Nifty Infrastructure	0.8044	0.3040	0.7724	0.7832	1

Source: Analysis based on historical data from Nifty 50, Nifty IT, Nifty Energy, Nifty Infrastructure and Nifty Bank covering the period from April 2014 to March 2024. Data was retrieved from different websites i.e., www.nseindia.com, www.finance.yahoo.com and www.investing.com

Overall, the positive correlation values indicate that these indices tend to move in the same direction, reflecting a degree of interdependence among the various sectors and the overall market. Details are given in Table 2.

5. CONCLUSION AND RECOMMENDATIONS

The decade-long analysis of the Indian financial market, particularly focusing on the NSE Nifty and its sectoral indices, revealed a pattern of resilience and growth despite significant volatility. The study highlights that while periods of downturn, such as the 2015-2016 economic slump and the COVID-19 pandemic, affected market performance, the indices demonstrated robust recovery and substantial gains in subsequent years. Notably, the Nifty index and sector-specific indices like Nifty IT, Nifty Energy, Nifty Infrastructure, and Nifty Bank showed positive performance overall, with significant recoveries following major declines. The observed correlations among these indices reflect an interdependence that aligns sectoral performance with broader market trends, underscoring the complexity of the Indian financial market's dynamics.

Looking ahead, the Indian financial market is poised for continued growth, driven by favourable government policies and emerging sectoral trends. The emphasis on clean energy and infrastructure development is expected to bolster the Nifty Energy and Nifty Infrastructure indices, while ongoing digital transformation will likely benefit the Nifty IT sector. However, global economic conditions and investor sentiment will remain pivotal in shaping future market performance. Continued observation of these factors will be essential for capitalizing on growth opportunities and navigating potential challenges in the evolving financial landscape.

Future research could benefit from including a wider range of sectoral indices to provide a more comprehensive picture of the Indian financial market. Comparative studies with other emerging markets might reveal differences in performance and resilience, while longitudinal studies extending beyond the current timeframe could offer a deeper understanding of long-term trends.

6. ACKNOWLEDGEMENT

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APPENDIX

APPENDIX "A": Monthly stock market indices and percentage change of Nifty 50, Nifty IT, Nifty Energy, Nifty Infrastructure and Nifty Bank during the period from April 2014 to March 2024

Month	Nifty		Nifty IT		Nifty Energy		Nifty Infrastructure		Nifty Bank	
	Value	% change	Value	% change	Value	% change	Value	% change	Value	% change
April-14	6,696.40	-	9,227.95	-	8,310.80	-	2,609.55	-	12,855.85	-
May-14	7,229.95	7.97	8,970.30	−2.79	9,667.50	16.32	3,162.25	21.18	14,793.40	15.07
June-14	7,611.35	5.28	9,912.30	10.50	9,968.45	3.11	3,372.75	6.66	15,241.90	3.03
July-14	7,721.30	1.44	10,304.70	3.96	9,510.50	−4.59	3,163.50	−6.20	15,267.60	0.17
August-14	7,954.35	3.02	10,679.65	3.64	9,629.00	1.25	3,113.45	−1.58	15,740.40	3.10
September-14	7,964.80	0.13	11,302.70	5.83	9,275.15	−3.67	3,020.90	−2.97	15,392.25	−2.21
October-14	8,322.20	4.49	11,341.05	0.34	9,758.90	5.22	3,278.00	8.51	17,045.05	10.74
November-14	8,588.25	3.20	11,898.05	4.91	9,465.30	−3.01	3,249.65	−0.86	18,513.15	8.61
December-14	8,282.70	−3.56	11,216.30	−5.73	8,640.90	−8.71	3,039.85	−6.46	18,736.65	1.21
January-15	8,808.90	6.35	11,824.75	5.42	8,920.65	3.24	3,294.40	8.37	19,843.75	5.91
February-15	8,901.85	1.06	12,659.80	7.06	8,696.15	−2.52	3,307.05	0.38	19,691.20	−0.77
March-15	8,491.00	−4.62	12,083.00	−4.56	8,264.25	−4.97	3,249.65	−1.74	18,206.65	−7.54
April-15	8,181.50	−3.65	11,001.05	−8.95	8,331.75	0.82	3,154.65	−2.92	18,338.10	0.72
May-15	8,433.65	3.08	11,575.05	5.22	8,488.10	1.88	3,220.85	2.10	18,721.35	2.09
June-15	8,368.50	−0.77	11,037.40	−4.64	8,892.95	4.77	3,254.40	1.04	18,296.10	−2.27
July-15	8,532.85	1.96	11,594.15	5.04	8,711.85	−2.04	3,297.60	1.33	18,729.85	2.37
August-15	7,971.30	−6.58	11,605.70	0.10	7,645.50	−12.24	2,952.60	−10.46	17,146.55	−8.45
September-15	7,948.90	−0.28	12,032.10	3.67	7,640.90	−0.06	2,825.20	−4.31	17,216.30	0.41
October-15	8,065.80	1.47	11,486.90	−4.53	8,099.35	6.00	2,833.70	0.30	17,354.50	0.80
November-15	7,935.25	−1.62	11,206.00	−2.45	8,242.75	1.77	2,771.40	−2.20	17,430.40	0.44
December-15	7,946.35	0.14	11,212.55	0.06	8,584.10	4.14	2,769.05	−0.08	16,922.20	−2.92
January-16	7,563.55	−4.82	11,236.15	0.21	8,516.85	−0.78	2,424.40	−12.45	15,522.40	−8.27
February-16	6,987.05	−7.62	10,278.40	−8.52	7,664.85	−10.00	2,261.25	−6.73	13,946.40	−10.15
March-16	7,738.40	10.75	11,309.30	10.03	8,424.60	9.91	2,548.15	12.69	16,141.65	15.74
April-16	7,849.80	1.44	11,196.25	−1.00	8,404.65	−0.24	2,638.35	3.54	16,795.00	4.05
May-16	8,160.10	3.95	11,395.85	1.78	8,373.20	−0.37	2,753.55	4.37	17,620.90	4.92
June-16	8,287.75	1.56	11,120.15	−2.42	8,705.10	3.96	2,845.70	3.35	17,935.40	1.78
July-16	8,638.50	4.23	10,913.30	−1.86	9,311.85	6.97	2,966.50	4.25	18,953.15	5.67
August-16	8,786.20	1.71	10,546.10	−3.36	9,663.65	3.78	2,934.90	−1.07	19,787.60	4.40
September-16	8,611.15	−1.99	10,292.30	−2.41	9,756.20	0.96	2,793.40	−4.82	19,285.70	−2.54
October-16	8,625.70	0.17	10,082.70	−2.04	10,076.20	3.28	2,862.80	2.48	19,523.55	1.23
November-16	8,224.50	−4.65	10,087.70	0.05	9,938.95	−1.36	2,791.95	−2.47	18,627.80	−4.59
December-16	8,185.80	−0.47	10,399.25	3.09	10,271.55	3.35	2,712.25	−2.85	18,177.20	−2.42
January-17	8,561.30	4.59	9,848.50	−5.30	10,674.15	3.92	2,939.60	8.38	19,515.15	7.36
February-17	8,879.60	3.72	10,680.95	8.45	11,360.20	6.43	2,997.85	1.98	20,607.25	5.60
March-17	9,173.75	3.31	10,703.25	0.21	11,648.70	2.54	3,096.65	3.30	21,444.15	4.06
April-17	9,304.05	1.42	9,943.70	−7.10	12,263.55	5.28	3,255.20	5.12	22,358.25	4.26
May-17	9,621.25	3.41	10,549.10	6.09	11,925.65	−2.76	3,213.15	−1.29	23,424.80	4.77
June-17	9,520.90	−1.04	10,155.05	−3.74	11,600.40	−2.73	3,201.35	−0.37	23,211.20	−0.91
July-17	10,077.10	5.84	10,755.75	5.92	12,829.15	10.59	3,401.35	6.25	25,103.65	8.15
August-17	9,917.90	−1.58	10,558.25	−1.84	13,150.05	2.50	3,323.80	−2.28	24,318.40	−3.13
September-17	9,788.60	−1.30	10,475.35	−0.79	12,772.65	−2.87	3,245.65	−2.35	24,053.00	−1.09
October-17	10,335.30	5.59	10,837.90	3.46	14,511.20	13.61	3,581.85	10.36	25,019.35	4.02
November-17	10,226.55	−1.05	11,115.35	2.56	14,124.65	−2.66	3,517.25	−1.80	25,332.40	1.25
December-17	10,530.70	2.97	11,665.75	4.95	14,249.30	0.88	3,637.50	3.42	25,539.45	0.82
January-18	11,027.70	4.72	12,986.40	11.32	14,453.95	1.44	3,619.50	−0.49	27,379.45	7.20
February-18	10,492.85	−4.85	12,809.00	−1.37	13,991.45	−3.20	3,452.35	−4.62	25,107.40	−8.30
March-18	10,113.70	−3.61	12,511.55	−2.32	13,214.15	−5.56	3,328.70	−3.58	24,263.35	−3.36
April-18	10,739.35	6.19	13,986.25	11.79	13,770.15	4.21	3,503.35	5.25	25,531.60	5.23
May-18	10,736.15	−0.03	13,666.00	−2.29	13,523.40	−1.79	3,336.05	−4.78	26,956.20	5.58
Junw-18	10,714.30	−0.20	13,989.50	2.37	13,333.35	−1.41	3,125.70	−6.31	26,364.20	−2.20
July-18	11,356.50	5.99	14,587.80	4.28	15,150.20	13.63	3,158.10	1.04	27,764.15	5.31
August-18	11,680.50	2.85	15,811.40	8.39	15,763.00	4.04	3,289.25	4.15	28,061.75	1.07
September-18	10,930.45	−6.42	15,838.05	0.17	15,697.20	−0.42	2,967.30	−9.79	25,119.85	−10.48
October-18	10,386.60	−4.98	14,940.10	−5.67	13,753.35	−12.38	2,969.90	0.09	25,153.25	0.13
November-18	10,876.75	4.72	14,638.05	−2.02	14,323.95	4.15	3,087.00	3.94	26,862.95	6.80
December-18	10,862.55	−0.13	14,440.30	−1.35	14,334.85	0.08	3,175.30	2.86	27,160.20	1.11
January-19	10,830.95	−0.29	15,499.30	7.33	14,792.95	3.20	2,976.85	−6.25	27,295.45	0.50
February-19	10,792.50	−0.36	15,732.00	1.50	14,818.50	0.17	2,917.70	−1.99	26,789.90	−1.85
March-19	11,623.90	7.70	15,628.20	−0.66	16,484.00	11.24	3,207.90	9.95	30,426.80	13.58

(Contd...)

APPENDIX "A": (*Continued*)

Month	Nifty		Nifty IT		Nifty Energy		Nifty Infrastructure		Nifty Bank	
	Value	% change	Value	% change	Value	% change	Value	% change	Value	% change
April-19	11,748.15	1.07	16,705.40	6.89	16,500.00	0.10	3,107.50	−3.13	29,764.80	−2.18
May-19	11,922.80	1.49	16,160.65	−3.26	16,560.35	0.37	3,338.85	7.44	31,375.40	5.41
June-19	11,788.85	−1.12	15,936.45	−1.39	16,046.80	−3.10	3,369.20	0.91	31,105.20	−0.86
July-19	11,118.00	−5.69	15,620.20	−1.98	14,559.45	−9.27	3,086.65	−8.39	28,876.00	−7.17
August-19	11,023.25	−0.85	16,010.40	2.50	14,382.25	−1.22	3,001.15	−2.77	27,427.85	−5.02
September-19	11,474.45	4.09	15,540.15	−2.94	15,501.60	7.78	3,208.40	6.91	29,103.15	6.11
October-19	11,877.45	3.51	15,559.40	0.12	16,486.15	6.35	3,322.55	3.56	30,066.25	3.31
November-19	12,056.05	1.50	14,998.05	−3.61	16,232.15	−1.54	3,323.30	0.02	31,946.10	6.25
December-19	12,168.45	0.93	15,652.40	4.36	15,908.20	−2.00	3,255.30	−2.05	32,161.65	0.67
January-20	11,962.10	−1.70	16,144.15	3.14	14,838.80	−6.72	3,252.00	−0.10	30,833.60	−4.13
February-20	11,201.75	−6.36	15,212.95	−5.77	13,651.00	−8.00	3,011.25	−7.40	29,147.15	−5.47
March-20	8,597.75	−23.25	12,763.65	−16.10	11,124.15	−18.51	2,360.50	−21.61	19,144.00	−34.32
April-20	9,859.90	14.68	14,108.40	10.54	13,154.70	18.25	2,753.15	16.63	21,534.50	12.49
May-20	9,580.30	−2.84	14,010.50	−0.69	13,060.50	−0.72	2,845.15	3.34	19,297.25	−10.39
June-20	10,302.10	7.53	14,754.30	5.31	14,396.55	10.23	3,032.35	6.58	21,370.15	10.74
July-20	11,073.45	7.49	18,071.85	22.49	15,309.15	6.34	3,153.40	3.99	21,640.05	1.26
August-20	11,387.50	2.84	17,928.85	−0.79	15,605.25	1.93	3,163.50	0.32	23,754.35	9.77
September-20	11,247.55	−1.23	19,951.35	11.28	15,026.95	−3.71	3,080.95	−2.61	21,451.80	−9.69
October-20	11,642.40	3.51	20,916.85	4.84	14,977.80	−0.33	3,129.65	1.58	23,900.90	11.42
November-20	12,968.95	11.39	21,764.90	4.05	16,251.85	8.51	3,424.75	9.43	29,609.05	23.88
December-20	13,981.75	7.81	24,251.35	11.42	16,922.50	4.13	3,650.95	6.60	31,264.05	5.59
January-21	13,634.60	−2.48	24,645.75	1.63	16,159.20	−4.51	3,671.85	0.57	30,565.50	−2.23
February-21	14,529.15	6.56	24,301.45	−1.40	18,793.35	16.30	4,110.35	11.94	34,803.60	13.87
March-21	14,690.70	1.11	25,855.00	6.39	18,185.10	−3.24	4,087.80	−0.55	33,303.90	−4.31
April-21	14,631.10	−0.41	25,664.45	−0.74	18,031.10	−0.85	4,053.10	−0.85	32,781.80	−1.57
May-21	15,582.80	6.50	27,115.05	5.65	19,908.95	10.41	4,327.90	6.78	35,526.65	8.37
June-21	15,721.50	0.89	29,168.00	7.57	19,822.40	−0.43	4,339.25	0.26	34,772.20	−2.12
July-21	15,763.05	0.26	30,480.05	4.50	18,934.15	−4.48	4,432.30	2.14	34,584.35	−0.54
August-21	17,132.20	8.69	34,570.25	13.42	20,289.70	7.16	4,709.85	6.26	36,424.60	5.32
September-21	17,618.15	2.84	35,028.00	1.32	22,858.55	12.66	5,025.35	6.70	37,425.10	2.75
October-21	17,671.65	0.30	34,408.75	−1.77	23,236.10	1.65	5,045.10	0.39	39,115.60	4.52
November-21	16,983.20	−3.90	35,043.75	1.85	22,823.45	−1.78	4,959.35	−1.70	35,695.30	−8.74
December-21	17,354.05	2.18	38,701.05	10.44	22,631.95	−0.84	4,949.90	−0.19	35,481.70	−0.60
January-22	17,339.85	−0.08	34,824.55	−10.02	24,983.95	10.39	5,056.75	2.16	37,975.35	7.03
February-22	16,793.90	−3.15	33,847.85	−2.80	24,212.10	−3.09	4,798.75	−5.10	36,205.30	−4.66
March-22	17,464.75	3.99	36,317.20	7.30	25,822.00	6.65	5,018.55	4.58	36,373.60	0.46
April-22	17,102.55	−2.07	31,622.40	−12.93	28,594.15	10.74	5,127.85	2.18	36,088.15	−0.78
May-22	16,584.55	−3.03	29,679.05	−6.15	25,641.10	−10.33	4,877.30	−4.89	35,487.40	−1.66
June-22	15,780.25	−4.85	27,843.35	−6.19	25,108.50	−2.08	4,619.80	−5.28	33,425.10	−5.81
July-22	17,158.25	8.73	29,152.30	4.70	26,018.40	3.62	4,890.55	5.86	37,491.40	12.17
August-22	17,759.30	3.50	28,407.90	−2.55	28,104.50	8.02	5,127.55	4.85	39,536.75	5.46
September-22	17,094.35	−3.74	26,981.15	−5.02	25,581.30	−8.98	4,957.85	−3.31	38,631.95	−2.29
October-22	18,012.20	5.37	28,727.60	6.47	26,672.65	4.27	5,234.70	5.58	41,307.90	6.93
November-22	18,758.35	4.14	30,391.70	5.79	27,354.00	2.55	5,447.40	4.06	43,231.00	4.66
December-22	18,105.30	−3.48	28,621.70	−5.82	25,869.85	−5.43	5,252.10	−3.59	42,986.45	−0.57
January-23	17,662.15	−2.45	29,740.35	3.91	23,713.50	−8.34	5,061.35	−3.63	40,655.05	−5.42
February-23	17,303.95	−2.03	29,663.95	−0.26	21,682.25	−8.57	5,016.90	−0.88	40,269.05	−0.95
March-23	17,359.75	0.32	28,698.60	−3.25	22,814.45	5.22	5,090.95	1.48	40,608.65	0.84
April-23	18,065.00	4.06	27,708.20	−3.45	23,734.55	4.03	5,356.20	5.21	43,233.90	6.46
May-23	18,534.40	2.60	29,319.75	5.82	23,875.55	0.59	5,459.80	1.93	44,128.15	2.07
June-23	19,189.05	3.53	29,563.00	0.83	24,696.50	3.44	5,738.70	5.11	44,747.35	1.40
July-23	19,753.80	2.94	29,928.45	1.24	26,853.65	8.73	6,115.35	6.56	45,651.10	2.02
August-23	19,253.80	−2.53	31,164.90	4.13	25,722.95	−4.21	5,947.00	−2.75	43,989.15	−3.64
September-23	19,638.30	2.00	31,784.40	1.99	27,321.75	6.22	6,242.85	4.97	44,584.55	1.35
October-23	19,079.60	−2.84	30,582.25	−3.78	26,785.05	−1.96	6,095.40	−2.36	42,845.95	−3.90
November-23	20,133.15	5.52	32,582.20	6.54	29,294.90	9.37	6,585.60	8.04	44,481.75	3.82
December-23	21,731.40	7.94	35,515.00	9.00	33,468.05	14.25	7,303.40	10.90	48,292.25	8.57
January-24	21,725.70	−0.03	36,638.40	3.16	36,748.00	9.80	7,859.90	7.62	45,996.80	−4.75
February-24	21,982.80	1.18	37,720.40	2.95	38,838.00	5.69	8,085.75	2.87	46,120.90	0.27
March-24	22,326.90	1.57	34,898.15	−7.48	39,020.60	0.47	8,336.00	3.09	47,124.60	2.18

Source: Data were collected from different websites i.e., www.nseindia.com, www.finance.yahoo.com and www.investing.com