The After Market Performance Analysis of Initial Public Offering in Bangladesh: Short Run and Long Run

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ABSTRACT

This article investigates both short and long run performance of 113 IPOs listed on Dhaka Stock Exchange between 2008 and 2019. It examines short run performance to validate the anomaly of short run abnormal returns of stocks. The IPO stocks in the secondary market have underperformed in the three-year long run period and outperformed in the short run. The portfolio of IPO stocks has surpassed the DSEX by 1.17 percent in the short run and underperformed by -26.53 percent in the long run. Apart from these, the variation in the returns of sectors has also been analysed. Even though the overall portfolio underperformed, some sectors have outrun the index by a large margin. Insurance and telecommunication are among the outperforming sectors. Food & allied, Ceramic and Paper & print sectors have always underperformed the market severely. The core reasons behind these anomalies have not been researched in this study, further analysis can be done on this aspect. Variations in the sector-wise returns can also be identified by further investigation.

Keywords-- Adjusted Return, Cumulative Wealth Relative to Index, DSE, Initial Public Offering, Holding Period, Return, JEL Classification, Codes: G11, G12

I. INTRODUCTION

The stock market in Bangladesh has been operating in the country since the liberation which was formerly known as East Pakistan Stock Exchange. The country has two major stock exchanges: Dhaka stock exchange (DSE) and Chittagong stock exchange (CSE). CSE was established after the establishment of the Bangladesh Securities and Exchange Commission (BSEC) in 1993. Since then, BSEC has been working as the regulator of the capital market of Bangladesh. Most of the developments in the market had started to flow since the empowerment of the commission under the 1993 BSEC Act. The purpose of the commission is to protect the interest of the investors, develop the capital market along with formulate and implement rules and policies for the market. After this, a lot of rules and regulations have been introduced for the development of the market, especially related to brokerage houses, general and institutional investors, portfolio managers, merchant bankers, asset management companies, credit rating agencies, and custodians (Mobarek et al., 2008).

Amendments related to different acts have been done from time to time for the transparency and efficiency of the stock market.

Initial Public Offering (IPO) is one of the major sources of finance for many businesses. It also enables investors to own a small part of an organization listed on the stock exchange. In most cases, businesses need to accumulate funds to expand their businesses in terms of introducing new products or improving existing production capacity. IPO is relatively a cost-effective way to do so (Pagano et al., 1998). There are two ways to determine the IPO price, some follow the bookbuilding method and some issuers go with the fixed price method. Firms interested in going public by issuing IPOs must prepare a prospectus which must include financials of the firm, use of IPO proceeds, risk factors of the business, etc with the help of an issue manager and underwriter (Zaman, 2019). Usually, merchant banks in Bangladesh work as issue managers and currently 43 of them are providing the service in the country. BSEC provides the final approval of IPO issuance based on their analysis of the company with the help of analysis and opinions taken from the stock exchange. As this is one of the lucrative ways to generate funds, every year a few companies follow this path.

Apart from owning a small part of the company, stock investment has other benefits as well. The more the business grows, the value of the equity increases as well (Murugesan & Priya, 2016). Alongside this, firms sometimes share earnings with their investors through dividend payments. The dividend policy of the firm depends on the financial policy and investment plan of the company. If the company wants to invest in further business expansion or capital machinery, a portion of the earnings will be retained other than paid out to shareholders. The dividend is not the major earnings instrument for investors. Though in many other countries, a lot of investors' intention is to gain profits in the short run through dividends or capital gain (Filbeck & Visscher, 1997). Before 2021, investing in IPOs was a lucrative investment opportunity as initial returns from the IPOs were much higher. To grab a portion in an IPO, investors used to open a lot of Beneficiary Owner (BO) accounts, the account required for trading in the stock market. As the lottery system was not a good practice and somehow a few investors were getting IPOs, BSEC has changed policies regarding IPO subscriptions. Since 2021, pro-rata basis IPO allocation is being used in exchanges where general investors can get shares based on the percentage of applied shares. So, as the initial return is not a good measure to evaluate the performance of shares, this study wants to measure the performances of IPOs from the first trading day in the secondary market.

Loughran and Ritter (1995) found that investors should prepare their portfolio in a way that is highly invested in the IPO stocks so that they can be benefited in the short run and sell them before it's too late. Islam, Malik and Uddin (2011) researched that IPOs in the Bangladeshi market outperformed the market in the short run which is completely different in the long run as the stocks underperformed. The study also found that apart from Banks and NBFIs, other sectors severely underperformed in the long run. There is no indisputable evidence on the core reasons for such phenomena that have been researched in Bangladesh. This analysis aims to investigate this issue of IPO performance and extend the literature and knowledge on the stock market of Bangladesh which can be useful for investors.

II. LITERATURE REVIEW

Widespread analysis of stock performance by researchers all over the world suggests that two scenarios prevail, the first one is the initial high returns and the second one is the long-run underperformance. Research has been done in different countries to find out the evidence of this scenario. Different studies have found different reasons for the long-run underperformance. Haque et al. (2021) found that high earnings forecasting error has resulted in the worst longrun stock performance in the Bangladesh stock market. Initial high return is commonly known as underpricing of IPOs which is studied by Islam (2014) and found that there are numerous reasons for such phenomenon in Bangladesh. The underwriter's reputation, issue size, offer price, etc. have a significant effect on IPO underpricing.

Bangladesh's Apart from perspective, worldwide research has found these two anomalies of IPO performance. Ritter (1991) used firms that went public during the 1975 - 1984 period and found that IPOs underperform significantly in their third anniversary compared to the first day of trading and concluded that initial returns were 16.4 percent where the performance dropped in the long run by 29 percent compared to the market. This variation is also prevalent from sector to sector and year to year. The study concluded that investors tend to value growth firms initially which leads to high returns in the initial stage of the trading. Shiller's (1990) hypothesis backs this variation of performance where he proposed that fads are common in IPO stocks which helps to influence stock prices. Ritter and Welch (2002) again performed

analysis on the US IPOs of 1980-2001 and found the underperformance by 23 percent in the long run period of three years.

Data from London Stock Exchange from 1991 to 1995 were analyzed by Goergen, Khurshed and Mudambi (2007) and found new insights on this matter. They found that the performance of stocks is highly related to their size. Small firms suffer more in the long run compared to large firms. Before that, Levis (1993) also found a similar phenomenon of long-run underperformance during the 80s in the UK's stock market. Similar research from India by Bhatia and Singh (2010) found that issues between 1992 to 2001 in BSE have seen around 185 percent abnormal return after five years of the initial offering. This is comparatively higher than other developed countries. Short-run performance along with issue size and market condition help to explain the long-run performance of the IPOs in the Indian market. Cai et al. (2007) studied this same issue in the Chinese stock market and found that like other stock markets, the Chinese market also underperformed in the long run. The study tried to find any relation between the economic situation and the regulatory environment and found significant evidence of correlation. Laokulrach (2021) found a similar underperformance issue of IPOs in the Thai stock market. The study identified that the IPOs outperform the market in the first trading year and the performance starts to downgrade from the second year of the holding period. Drobetz et al. (2005) investigated that the underperformance of IPOs is significant in the long run only for small firms. Because, usually small firms go public to raise funds. Such small firms issued IPO and still could not outperform other firms of similar size which didn't go public. This clearly indicates that IPO underperformance isn't an effect of IPO. Some studies found that underperformance, in the long run, is somewhat related to the underpricing of stocks initially. Ibbotson's (1975) study shows that IPOs perform better in the first year which drastically goes down in future. The initial high performance is also studied by Krigman, Shaw and Womack (1999) where they said that "winner IPOs" perform better in the short run. IPOs of Greece's stock market during 1994-2002 outperformed the market by 26 percent in the short run by a study by Thomadakis et al. (2007). Kaya's (2012) study about the Istanbul Stock Exchange also supports this short-term high performance. Evidence from Iran (Abdeh & Demuri, 2003) and Sri Lanka (Peter, 2007) also confirms this phenomenon. Schultz (2003) refers to this issue as the 'pseudo market timing'' where he states that firms go public when other IPOs are doing well in the market and eventually others follow the successful IPOs. This continues till market adjustment and thus late IPOs underperform.

Performance in the long run depends on many things and one of them is the financing structure of the firm. Brav and Gompers (1997) found that firms that were backed by ventures outperformed others in the long

run. Velamuri and Liu (2017) investigated 763 SME IPOs in the Chinese stock market during the 2009 to 2012 period and concluded that firms with prior investment from venture capital could not outrun firms that did not. Carter, Dark and Singh (1998) found underwriters' familiarity as another attribute to directly influences performance in the long run. The quality of underwriters and issue managers is also evident in the performance of stocks. Dong, Michel and Pandes (2011) investigated that higher-quality underwriters' issues tend to perform better than others. Several researches have been done to identify the relationship between operating performance and stock performance. Hossain and Khan (2021) found that the operating performance of firms with stocks with premiums has deteriorated more. One of the reasons for such phenomena can be that firms use premiums to invest in fixed assets such as capital machinery to expand capacity which decreases their opportunity quickly. Other studies have found different perspectives of long-run performance degradation. Corporate governance, ownership structure, firm size etc. Though Mikkelson et al. (1997) found no significant relationship between ownership structure and long-run performance. Contrarily, in China, Li and Hovey (2009) investigated the relationship between these two and found that both legal and foreign persons have a positive impact on long-run performance. Apart from these, management quality and financial performance of the firms also influence the performance of the stocks. Jain and Kini (1994) found that firms' operating performance declines after they go public which phenomenon is also examined by Kim et al. (2004) in Thailand and the result supports the findings of Jain and Kini (1994).

From the literature review, it is evident that IPOs investors gain substantial returns in the short run which gradually deteriorates in the long run. This also indicates investors' overoptimistic behaviour. Both developing and developed countries have experienced such anomalies in IPO performance and this study will investigate this issue in the context of Bangladesh.

III. RATIONALE FOR THE STUDY

Several literatures have been incorporated in the context of emerging markets like Bangladesh where none of them analyzed the recent scenario of the secondary market in Bangladesh. This research tried to take the initiative to analyze the current stock market of Bangladesh to see the performance fluctuations of IPOs both in the short run and long run as well as tried to find sector-wise performance differences. The dynamics of the stock market has changed after the stock market crash in 2010-2011. Also, the introduction of DSEX in 2013 has played a major role in terms of returns at the investor level.

IV. METHODOLOGY

Between 2008 and 2019, about 123 IPOs were issued in the stock market. But the study excludes 10 stocks from the analysis due to the unavailability of data. On average 10 IPOs were issued per year during this period. Companies going public and raising funds during this period have at least three years of trading history in the stock exchanges. Data on these stocks have been collected from Dhaka Stock Exchanges, company databases and publications. Any required adjustment has been made for the accuracy and efficiency of the analysis. Some of the stock prices have been adjusted for the adjustment of their face values.

Different researchers have adopted different models for long-run performance measurement. But this study has followed the path of Ritter (1991) whose approach is also adopted by many other studies. To evaluate both the short-run and long-run performance of the stocks, buy-and-hold abnormal returns and cumulative wealth relative to the Dhaka Stock Exchange Broad Index (DSEX) have been used in this study. The initial issue price has not been included either as stated earlier because of the lottery system and initial abnormal returns. One month period from the first trading date has been used to calculate the short-run return and three vears period for the long-run return. Long-run aftermarket performance using five years of data have been researched for different time frames by Islam, Malik and Uddin (2011), and Haque and Imam (2017), etc in Bangladesh.

To calculate the return (R) for individual stock, the monthly return of a stock (i) has been calculated by dividing the last trading price(P1) of a stock for the initial month by the first trading price (P0).

Ri = P1/P0-1

To find the benchmark-adjusted return (ar) for individual returns for that same period in the market has also been calculated for DSEX (Rm). ar for a specific stock,

ar = Ri -Rm

Since there is a portfolio of 113 stocks, all the returns for all stocks for their specific month, in this case, the first month, one year, two-year and three years have been used to find the average benchmark-Adjusted returns (AR) for the portfolio.

$AR = (\sum ar)/n$

Apart from this benchmark-adjusted return calculation, Cumulative Wealth Relative to Index (CWRI) has been calculated which is also another measurement in the light of buy and hold period return analysis. The average return for IPOs (RIA) and average return for index (RMA) have been used to calculate CWRI.

CWRI = (1 + RIA)/(1+RMA)

In this case, RIA has been calculated for the average returns of all the stocks and Rma is calculated from the average returns related to the similar timeframe

of the stocks.

Apart from the calculations, the year of issuance, size of the IPO proceeds, and industry-wise IPO have also been discussed in the analysis of the study. Sector-wise return for the both short and long-run has been analyzed using the buy-and-hold method to see variations in the returns of stocks.

V. **RESULTS AND DISCUSSION**

Table 1, year-by-year issuance can be seen. The highest number of issues were made in 2014, one year after the inauguration of a revised general index system in the Dhaka Stock Exchange. On average 10 IPOs were issued in the country and 19 were the highest, this doesn't provide strong evidence of the growth of IPO per year.

Table 1: IPO Issuance By Year

Year of issuance	Number of issues	Issues percentage		
2008	4	3.54%		
2009	10	8.85%		
2010	7	6.19%		
2011	6	5.31%		
2012	14	12.39%		
2013	12	10.62%		
2014	19	16.81%		
2015	10	8.85%		
2016	7	6.19%		
2017	6	5.31%		
2018	13	11.50%		
2019	5	4.42%		
Total	113	100%		
Source: (sec gov bd 202^{2})				

Source: (sec.gov.bd, 2022)

As stated earlier, the amount of proceeds from an IPO needs to be verified through prospectus, companies issue IPOs based on their requirements. All the proceeds go into the paid-up capital of the business. Although so many IPOs are traded higher than their face value. Then the proceeds of IPOs go into the share premium section. Of these 113 stocks, companies on average raised around 653 million (63.50 Crore) Bangladeshi Taka through IPO with a standard deviation of 869 million. The standard deviation indicates the deviation of fund collection from average IPO proceeds. In this case, 869 MN BDT is a high number which shows that some companies generated much higher than the average and some generated much lower. The median proceeds from IPO are 300 MN. A company raised around 5,000 MN BDT funds through IPO where

minimum fund collection stands below 50 MN BDT. This is the reason for the variation in the funds raised by companies.

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Tab	le 2:	IPO	Coll	ection

	Mean	Std. Dev
IPO Proceeds (Million BDT)	653	869
Source: Author's own	calculati	on

The short and long run performance of IPOs in terms of benchmark-adjusted return (AR) have been incorporated in the table 3. Benchmark-adjusted return is the return calculated by subtracting index return from the portfolio return. So, this is the excess return an investor would get from the portfolio compared to the index return.

Month-wise performance of IPOs			
Months	AR		
1	1.17%		
12	-4.23%		
24	-6.50%		
36	-26.53%		

Table 3: Performance Comparison For Different Timeframes

Source: Author's own calculation

The one-month AR for all the IPOs stands at 1.17 percent. As the value is positive, this shows that these 113 stocks have outperformed the DSEX by more than 1.17 percent. The AR for the long run is -26.53 percent so the benchmark-adjusted return is negative in the long run. This shows the long-run underperformance. Even for one-year and two-year values are -4.23 percent and -6.50 percent respectively. So, it is evident that IPOs only outperform the Index in the short run while the underperformance issue is prominent the more time IPOs are held. Haque and Imam (2017) also found that the three-year underperformance stands at -31.41 percent and one month out performance stands at 3.96 percent. Evidence from the Indian stock market shows that the stock market underperformed in the long run by -21.15 percent (Bhatia and Singh, 2010). According to Table 4, in the first month, the highest benchmark-adjusted return from a stock stood at 253.4 percent where the lowest value is -52.3 percent which shows that some stocks tend to generate negative returns and therefore investors lose their money. In the long run period of 36 months, the highest 445.1 percent return was generated and the lowest of -123.3 percent had been found. Compared to these IPOs, DSEX had been quite stable. The highest return was around 31 percent whereas the lowest couldn't cross 50 percent. This indicates that if an investor invests in the Index, the investment is likely to generate a maximum of 31 percent return.

Table 4: Highest And Lowest	
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	Ferformance Comparison						
	One Month One-year Two-year Three-year						
lax	253.40%	536.20%	1129.90%	445.10%			
Iin	-52.30%	-112.00%	-164.00%	-123.30%			
	One Month	One-year	Two-year	Three-year			

Source: Author's own calculation

Return					
Short-run holding period return					
IPO IPO HPR DSEX HPR					
S	1M	1M			
1	-58.12%	-19.67%			
29	-20.45%	-3.84%			
57	-5.03%	-0.21%			
85	12.36%	2.99%			
113	256.80%	30.90%			
	1.60%	0.43%			
	run hol IPO s 1 29 57 85 113	Return run holding period re IPO IPO HPR s 1M 1 -58.12% 29 -20.45% 57 -5.03% 85 12.36% 113 256.80% 1.60% 1.60%			

Source: Author's own calculation

Holding period return indicates the return if a portfolio of stocks is undertaken for a particular period and not sold within this time, the return generated from the investment is Holding Period Return (HPR). In the percentile, around 75 percent of stocks had provided an HPR of 12.36 percent or less whereas long-term return

In the short run, 85 firms have outperformed the DSE Broad Index by more than 9 percent and also the highest return indicates that individual stock has more chances of outperforming the DSEX by a huge margin and in this case, the margin is 226 percent. It is alarming that around 29 companies out of had generated a highest of -20.45 percent return which shows that there are chances of losing money for investors if not invested carefully.

Table 6: Long-Run Holding Period Return

Long-run holding period return					
	IPOs	IPO HPR	DSEX HPR		
		3YK	3YK		
Lowest	1	-93.05%	-48.41%		
25th percentile	29	-57.44%	1.67%		
Median	57	-32.69%	19.25%		
75th percentile	85	-6.28%	27.14%		
Highest	113	478.40%	114.40%		
Mean		-10.95%	15.58%		

Source: Author's own calculation

75 percent of the companies had underperformed the DSEX index by 21 percent which shows the long-run underperformance of the stocks (Table 6). In the same period, investors would be better off if the investment was done in the index. Even the average performance of the stocks shows a negative return of -10.95 percent and for the index, it has provided a positive return for the most part. This clearly had fallen to -6.28 percent or less (Tables 5 and 6). This is also surprising to state that DSEX had maintained positive returns on both occasions with 2.99 percent and 27.14 percent respectively for the 75th percentile. The percentile indicates the percentage of IPOs that are performing to the corresponding value or less.

Fable 7: 1	Year & 2	Year Holding	Period Return

	1 year & 2 year Holding period return					
Lowest	IPOs	IPO HPR 12M	DSEX HPR 12M	IPO HPR 24M	DSEX HPR 24M	
25th percentile	1	-83.86%	-37.53%	-91.74%	-51.34%	
Median	29	-46.01%	-8.89%	-52.87%	-9.96%	
75th percentile	57	-17.72%	0.01%	-29.33%	2.99%	
Highest	85	22.50%	19.36%	6.86%	23.08%	
Mean	113	542.00%	134.51%	1323.79%	195.28%	
Lowest		6.25%	10.47%	8.47%	14.98%	

Source: Author's own calculation

The HPR in the one year certainly outperformed the index as far as 75 percent of stocks are concerned (Table 7). The performance has degraded in the second year with a maximum of 6.86 percent return whereas DSEX has provided a maximum of 23.08 percent return. From the table, it is evident that the average return from the portfolio of IPOs and DSEX, has shown incredible consistency in terms of positive returns. It is also surprising that the average return has gone up in the second year of investment from 6.25 percent to 8.47 percent. Contrarily, the median value of the portfolio has underperformed in the long run.

Table 8: Wealth Relative Performance

Performance of IPOs (Wealth Relative)						
	One-	One-	Two-	Three-		
	month	year	year	year		
Mean	1.01	0.96	0.94	0.77		
Median	0.95	0.82	0.69	0.56		

Source: Author's own calculation

This long-run underperformance can also be measured with a wealth-relative method which incorporates the Index figures to provide a comparative analysis of stock related to the Index in Table 7. The mean wealth relative value relative to DSEX is 1.01 which shows that IPOs outperformed DSEX in the short run by a little margin. The median value of .95 tells a different story as this shows a decrease in value for half of the stocks. The long-run performance of stocks compared to DSEX has shown a value of 0.77 which

shows that the investor's value had fallen by 23 percent and to support this evidence the median value stood at 0.56 after three year period. Similar research was done by Islam et al. (2011) in the Bangladesh stock market and the result shows that the wealth relative value has decreased to 0.79 after three years. This also supports the findings of this analysis. Even the short-term value of 1.01 indicates a similarity in the findings. Apart from the initial month of trading, the value has fallen continuously, both one-year and two-year periods indicating the same scenario as well. Even the median result of cumulative wealth has shown that investors' value has been decreasing day by day. On average, investors could buy the same stocks for 4 percent less in the first year and 6 percent in the second year.





Source: Author's own calculation

Apart from the analysis of all the stocks, sector-wise performance has been analyzed as well in Table 8. The sectors included in the DSE have been slightly changed for this analysis. DSE considers both life and general insurance as one sector which is divided into general insurance and life insurance. The Engineering sector is used here as the Industrial sector and Financial Institutions as NBFI. The Fuel & Power sector showed the maximum return generated in the short run followed by the Tourism & Leisure sector with 12.62 percent. Of the 15 sectors, only 5 sectors produced have positive returns. Apart from the mentioned two, General insurance and Textile had shown notable performance. Both Food & Allied and Tannery had performed worse with -26.24 percent and -27.95 percent respectively. This clearly indicates the sector-wise performance differences in the short run. Though the contribution of total tannery stock is one.

Table 9: Sector-Wise Returns				
Sector-wise Average Holding Returns				
	One- month	One-year	Two-year	Three- year
Fuel & Power	33.55%	58.27%	43.15%	31.80%
Tourism & Leisure	12.62%	58.14%	-22.80%	-7.84%
General Insurance	8.89%	99.31%	109.63%	43.82%
Textile	6.62%	-6.27%	26.56%	-6.13%
Telecomm unication	1.47%	135.19%	101.45%	41.19%
Industrial	-0.64%	-5.48%	-5.41%	-17.91%
Life Insurance	-2.84%	-5.07%	-36.25%	-53.74%
Cement	-3.39%	-7.72%	-39.24%	-20.61%
Pharmace uticals	-6.42%	-23.01%	-33.23%	-38.70%
Paper & Print	-13.48%	-46.60%	-72.08%	-67.49%
NBFI	-16.13%	6.64%	22.71%	-35.47%
IT	-16.46%	0.30%	-26.88%	24.37%
Ceramic	-18.14%	-52.17%	-66.89%	-73.87%
Foods & Allied	-26.24%	-32.85%	-29.04%	-44.38%
Tannery	-27.95%	-17.47%	-49.08%	-54.24%
Source: Author's own coloulation				

Source: Author's own calculation

Some of the stocks which performed better in the short run also performed in the long run such as Fuel & Power, General Insurance and Telecommunication. Sectors such as Ceramic, Paper & Print and Tannery had performed below the benchmark on both occasions. The Fuel & Power sector maintained its performance in the long run as well with a 31.80 percent return. IT, General Insurance. and Telecommunication performed tremendously in the long run; this indicates that investors who were patient with their investments in these sectors had earned a lot from these stocks.

Figure 2: Sector-wise Average Holding Returns



Source: Author's own calculation

Analysis of these IPOs shows that IPOs underperform in the long run which shows that the stocks become cheaper in the long run and holders of these stocks lose value. Comparatively, investors who follow the short-term holding strategy gain returns better than the market index. This phenomenon is true in terms of both methods cumulative wealth relative to Index and abnormal return measures. The performance of these stocks also varies from sector to sector. Some of the sectors have outperformed the Index in the long run irrespective of this phenomenon of short-run performance.

VI. CONCLUSION

IPOs issued between July 2008 and December 2019 have been used in this study to analyze their both short-run and long-run performance. The purpose of this study is to find any anomalies in both short and longterm performance and variations in sector-wise performance. The literature has showcased different theories of long-run underperformance and provided evidence of such a phenomenon. This analysis has found similar anomalies of short-run high return and long-run negative return compared to the market. Investors' value decreases the more time the IPOs are held in possession. IPOs become cheaper in the long run and thus less funds are required to attain similar IPOs. IPOs have lost 4 percent value after the first year of issuance and 6 percent in the third year. Compared to the findings of literature and other markets, Bangladesh's stock market has performed among the worst. The three-year adjusted return is around -27 percent though sector-wise performance difference notable is here Telecommunication, General Insurance and Fuel & Power have continuously outperformed the Dhaka Stock Exchange Broad Index (DSEX). This indicates the evidence of sector-wise performance differences in the stock market.

This study will be useful for investors looking to invest in the stock market. The findings suggest that investors should always try to gather IPOs as early as possible of their issuance to avoid value degradation in the long run. IPOs provide good returns initially which deteriorates with time. The findings also suggest that this phenomenon is not true for some sectors. So, apart from investment in IPOs, some sectors can easily generate good returns in the long run. The core reasons behind these anomalies have not been researched in this study, further analysis can be done on this aspect. Variations in the sector-wise returns can also be identified by further investigation.

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