A STUDY ON PERFORMANCE OF IPO ON SHORT TERM RETURNS from the year 2018 – 2021 for selected sectors

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INTRODUCTION

What Is IPO?

IPO stands for initial public offering. As the name suggests, an IPO is a privately held company's debut as a publicly-traded security on a stock exchange. The issuing firm raises capital through what's called the primary market and once the IPO is complete, public investors can trade shares on what's called the secondary market.

Offering shares to the public enables the issuing firm to raise more capital than they would as a private company. From the investor's perspective, an IPO creates the opportunity to buy shares of a company that has potential to grow into a larger, more profitable business.

How Does an IPO Work?

The process of bringing an IPO to the open market is much more involved than it may appear to the everyday investor. From choosing an investment bank to preparing regulatory filings, there are multiple steps for businesses to take before offering new shares of their company's stock to the public.

Not every IPO looks the same but many IPOs come from relatively new companies that have rapidly risen to success. The median IPO valuation has recently trended in the $100 to $200 million range. Larger IPOs, such as a $1 billion "unicorn," tend to get the most attention from the press and from investors.

Here are the five primary steps in the IPO process and what investors can look for along the way:

1. **Choose an IPO Underwriter:** To bring an IPO to market, the issuing firm will need to hire an investment bank, which will act as the underwriter. During the underwriting process, the investment bank will help the issuing firm prepare for the IPO and it may enlist the help of other banks to form what is called a syndicate of underwriters. The underwriter or syndicate will often agree to a firm commitment, which means that they purchase all of the shares to be issued and resell them at the IPO.

2. **Due Diligence and Filings:** In this time-consuming step, the issuer files with the Securities and Exchange Commission (SEC) and completes multiple regulatory filings with help of the underwriter. A key document produced in this step is the Red Herring, which is a preliminary prospectus that includes key financial information for prospective investors.

3. **Marketing:** With the preliminary prospectus in hand, the underwriter will market the issuing company on what is referred to as a "road show," which is intended to create excitement for the IPO. This is the first stage at which an investor may become aware of the pending IPO and gather information from the prospectus.

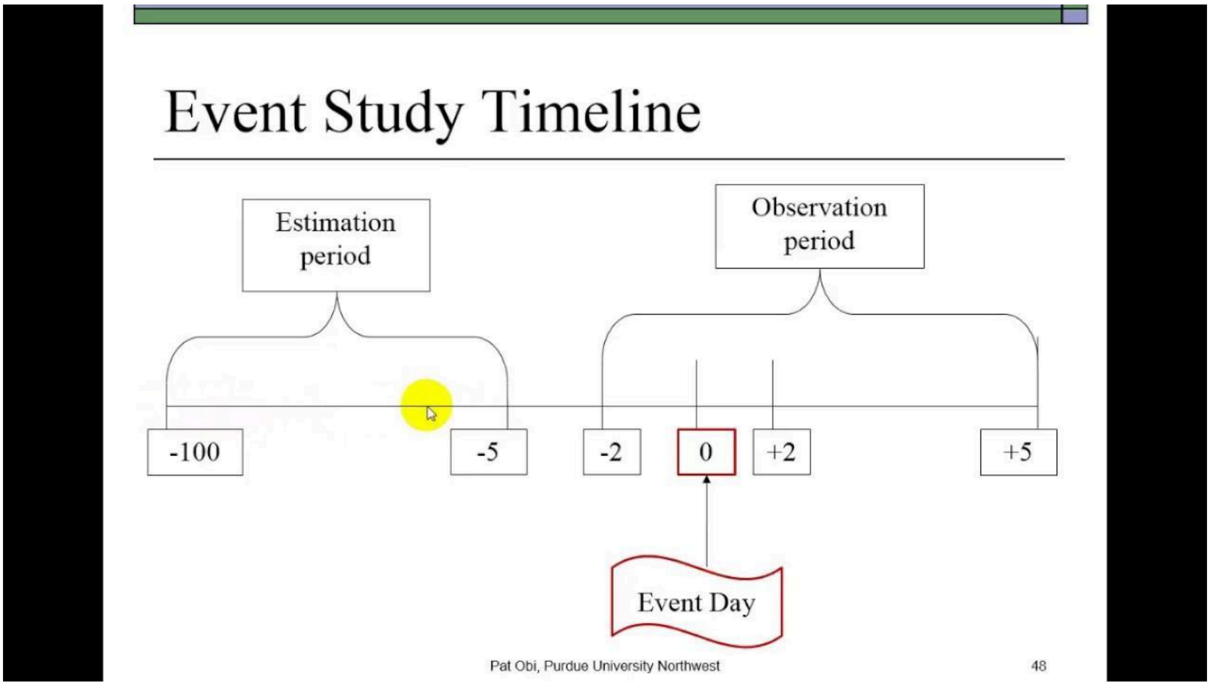
4. **Pricing:** Once the IPO is approved by the SEC, the underwriter and issuing firm can decide the "effective date," or when shares will first be traded, as well as the price and the number of shares to be offered to the public. An IPO may be purposely underpriced, which can reduce risk for underwriters while increasing demand for shares as investors expect the price to rise. At this stage, investors can begin to use key fundamental analysis metrics, such as the price/earnings (P/E) ratio, to determine if the IPO price is a value or not.

5. **Going Public:** Once all is prepared, it's time for the IPO to go public on the stock exchange! For a short period of time, called stabilization, the underwriter will insure stability of price by purchasing more shares when necessary.

What is event study?

An event study is an empirical analysis that examines the impact of a significant catalyst occurrence or contingent event on the value of a security, such as company stock.

Event studies can reveal important information about how a security is likely to react to a given event. Examples of events that influence the value of a security include a company filing for Chapter 11 bankruptcy protection, the positive announcement of a merger, or a company defaulting on its debt obligations.



How an Event Study Works

An event study, also known as event-history analysis, employs statistical methods, using time as the dependent variable and then looking for variables that explain the duration of an event—or the time until an event occurs.

Event studies that use time in this way are often employed in the insurance industry to estimate mortality and compute life tables. In business, these types of studies may instead be used to forecast how much time is left before a piece of equipment fails. Alternatively, they could be used to predict how long until a company goes out of business.

Other event studies, such as an interrupted time series analysis (ITSA), compare a trend before and after an event to explain how, and to what degree, the event changed a company or a security. This method may also be employed to see if the implementation of a particular policy measure has resulted in some statistically significant change after it has been put in place. An event study conducted on a specific company examines any changes in its stock price and how it relates to a given event. It can be used as a macroeconomic tool, as well as analyzing the influence of an event on an industry, sector, or the overall market by looking at the impact of the change in supply and demand.

Event Study Methodology

Theoretically, a stock price takes into account all available information and expectations about the future. According to this theory, it is possible to analyze the effect of a specific event on a company by looking at the associated impact on the company's stock.

The market model is the most common analysis used for an event study. This methodology looks at the actual returns of a baseline reference market and tracks the correlation of a company's stock with the baseline.

The market model monitors the abnormal returns on the specific day of an event, studying the stock's returns and comparing them to the normal or average returns. The difference is the actual impact on the company. This technique can be used over time, analyzing consecutive days to understand how an event affects a stock over time.

An event study can reveal greater market trends or patterns. If the same type of model is used to analyze multiple events of the same type, it can predict how stock prices typically respond to a specific event.

We have taken four sectors:

1.Finance(NBFCs) - A Non-Banking Financial Company (NBFC) is a company registered under the Companies Act, 1956 engaged in the business of loans and advances, acquisition of shares/stocks/bonds/debentures/securities issued by Government or local authority or other marketable securities of a like nature, leasing, hire-purchase, insurance business, chit business but does not include any institution whose principal business is that of agriculture activity, industrial activity, purchase or sale of any goods (other than securities) or providing any services and sale/purchase/construction of immovable property. A non-banking institution which is a company and has principal business of receiving deposits under any scheme or arrangement in one lump sum or in installments by way of contributions or in any other manner, is also a non-banking financial company (Residuary non-banking company).
What is difference between banks & NBFCs?

NBFCs lend and make investments and hence their activities are akin to that of banks; however there are a few differences as given below:

- NBFC cannot accept demand deposits;
- NBFCs do not form part of the payment and settlement system and cannot issue cheques drawn on itself;
- deposit insurance facility of Deposit Insurance and Credit Guarantee Corporation is not available to depositors of NBFCs, unlike in case of banks.

What are the different types/categories of NBFCs registered with RBI?
NBFCs are categorized

- in terms of the type of liabilities into Deposit and Non-Deposit accepting NBFCs,
- non deposit taking NBFCs by their size into systemically important and other non-deposit holding companies (NBFC-NDSI and NBFC-ND) and
- by the kind of activity they conduct.

2. Banks - A **bank** is a financial institution that accepts deposits from the public and creates a demand deposit while simultaneously making loans. Lending activities can be directly performed by the bank or indirectly through capital markets.

Because banks play an important role in financial stability and the economy of a country, most jurisdictions exercise a high degree of regulation over banks. Most countries have institutionalised a system known as fractional reserve banking, under which banks hold liquid assets equal to only a portion of their current liabilities. In addition to other regulations intended to ensure liquidity, banks are generally subject to minimum capital requirements based on an international set of capital standards, the Basel Accords.

Banking in its modern sense evolved in the fourteenth century in the prosperous cities of Renaissance Italy but in many ways functioned as a continuation of ideas and concepts of credit and lending that had their roots in the ancient world. In the history of banking, a number of banking dynasties – notably, the Medicis, the Fuggers, the Welsers, the Berenbergs, and the Rothschilds – have played a central role over many centuries. The oldest existing retail bank is Banca Monte dei Paschi di Siena (founded in 1472), while the oldest existing merchant bank is Berenberg Bank (founded in 1590).

"Indian Banks" redirects here. For the historic house in the United States, see Indian Banks (Simonson, Virginia).

Modern **banking in India** originated in the mid of 18th century. Among the first banks were the Bank of Hindustan, which was established in 1770 and liquidated in 1829–32; and the General Bank of India, established in 1786 but failed in 1791.

The largest and the oldest bank which is still in existence is the State Bank of India (SBI). It originated and started working as the Bank of Calcutta in mid-June 1806. In 1809, it was renamed as the Bank of Bengal. This was one of the three banks founded by a presidency government, the other two were the Bank of Bombay in 1840 and the Bank of Madras in 1843. The three banks were merged in 1921 to form the Imperial Bank of India, which upon India's independence, became the State Bank of India in 1955. For many years, the presidency banks had acted as quasi-central banks, as did their successors, until the Reserve Bank of India was established in 1935, under the Reserve Bank of India Act, 1934.

In 1960, the State Banks of India was given control of eight state-associated banks under the State Bank of India (Subsidiary Banks) Act, 1959. However the merger of these associated banks with SBI went into effect on 1 April 2017. In 1969, the Government of India nationalised 14 major private banks; one of the big banks was Bank of India. In 1980, 6 more private banks were nationalised. These nationalised banks are the majority of lenders in the Indian economy. They dominate the banking sector because of their large size and widespread networks.

The Indian banking sector is broadly classified into scheduled and non-scheduled banks. The scheduled banks are those included under the 2nd Schedule of the Reserve Bank of India Act, 1934. The scheduled banks are further classified into: nationalised banks; State Bank of

India and its associates; Regional Rural Banks (RRBs); foreign banks; and other Indian private sector banks. The SBI has merged its Associate banks into itself to create the largest Bank in India on 1 April 2017. With this merger SBI has a global ranking of 236 on Fortune 500 index. The term commercial banks refers to both scheduled and non-scheduled commercial banks regulated under the Banking Regulation Act, 1949.

Generally the supply, product range and reach of banking in India is fairly mature-even though reach in rural India and to the poor still remains a challenge. The government has developed initiatives to address this through the State Bank of India expanding its branch network and through the National Bank for Agriculture and Rural Development (NABARD) with facilities like microfinance.

3. Specialty Chemicals - Speciality chemicals (also called specialties or effect chemicals) are particular chemical products which provide a wide variety of effects on which many other industry sectors rely. Some of the categories of speciality chemicals are adhesives, agrichemicals, cleaning materials, colors, cosmetic additives, construction chemicals, elastomers, flavors, food additives, fragrances, industrial gases, lubricants, paints, polymers, surfactants, and textile auxiliaries. Other industrial sectors such as automotive, aerospace, food, cosmetics, agriculture, manufacturing, and textiles are highly dependent on such products.[1]

Speciality chemicals are materials used on the basis of their performance or function. Consequently, in addition to "effect" chemicals they are sometimes referred to as "performance" chemicals or "formulation" chemicals. They can be unique molecules or mixtures of molecules known as formulations. The physical and chemical characteristics of the single molecules or the formulated mixtures of molecules and the composition of the mixtures influences the performance end product. In commercial applications the companies providing these products more often than not provide targeted customer service to innovative individual technical solutions for their customers.[2] This is a differentiating component of the service provided by speciality chemical producers when they are compared to the other sub-sectors of the chemical industry such as fine chemicals, commodity chemicals, petrochemicals and pharmaceuticals.

In the USA the speciality chemical manufacturers are members of the Society of Chemical Manufacturers and Affiliates (SOCMA). In the United Kingdom such companies are members of the British Association for Chemical Specialties (BACS).[3] SOCMA state that "Specialty chemicals differ from commodity chemicals in that each one may have only one or two uses, while commodities may have dozens of different applications for each chemical. While commodity chemicals make up most of the production volume (by weight) in the global marketplace, specialty chemicals make up most of the diversity (number of different chemicals) in commerce at any given time."

The global speciality chemical market[edit]

In 2011 the Global Specialty Chemicals market had total revenues of $767.5 billion and it is reported that it had a compound annual growth rate (CAGR) of 2.7% between 2007 and 2011. The market is further projected to reach $980 billion by the end of 2016.[5] These speciality products are marketed as pesticides, speciality polymers, electronic chemicals, surfactants, construction chemicals, Industrial Cleaners, flavors and fragrances, speciality coatings, printing inks, water-soluble polymers, food additives, paper chemicals, oil field chemicals, plastic adhesives, adhesives and sealants, cosmetic chemicals, water management chemicals, catalysts, textile chemicals.

The world's top five specialty chemicals segments in 2012 were specialty polymers, industrial and institutional (I&I) cleaners, construction chemicals, electronic chemicals, and flavors and fragrances. These segments had a market share of about 36% The ten largest segments accounted for 62% of total annual specialty chemicals sales.[6]

4. Healthcare services - Health care or healthcare is the maintenance or improvement of health via the prevention, diagnosis, treatment, amelioration, or cure of disease, illness, injury, and other physical and mental impairments in people. Health care is delivered by health professionals and allied health fields. Medicine, dentistry, pharmacy, midwifery, nursing, optometry, audiology, psychology, occupational therapy, physical therapy, athletic training, and other health professions are all part of health care. It includes work done in providing primary care, secondary care, and tertiary care, as well as in public health.

Access to health care may vary across countries, communities, and individuals, influenced by social and economic conditions as well as health policies. Providing health care services means "the timely use of personal health services to achieve the best possible health outcomes".[2] Factors to consider in terms of health care access include financial limitations (such as insurance coverage), geographic barriers (such as additional transportation costs, the possibility to take paid time off of work to use such services), and personal limitations (lack of ability to communicate with health care providers, poor health literacy, low income).[3] Limitations to health care services affects negatively the use of medical services, the efficacy of treatments, and overall outcome (well-being, mortality rates).

Health care systems are organizations established to meet the health needs of targeted populations. According to the World Health Organization (WHO), a well-functioning health care system requires a financing mechanism, a well-trained and adequately paid workforce, reliable information on which to base decisions and policies, and well-maintained health facilities to deliver quality medicines and technologies.

An efficient health care system can contribute to a significant part of a country's economy, development, and industrialization. Health care is conventionally regarded as an important determinant in promoting the general physical and mental health and well-being of people around the world.[4] An example of this was the worldwide eradication of smallpox in 1980, declared by the WHO as the first disease in human history to be eliminated by deliberate health care interventions.[5]

LIST OF COMPANIES (SECTOR WISE)

FINANCE including NBFCs				
SR.NO	**COMPANY NAME**	**DATE**	**ISSUE PRICE (PER EQUITY SHARE)**	**ISSUE SIZE (RS CRORE)**
1	Indian railway finance corporation limited IPO	Jan 29, 2021	26	4633.38
2	SBI cards and payment services ltd IPO	Mar 16, 2020	755	10354.77
3	Spandana Sphoorty Financial Ltd IPO	Aug 19, 2019	856	1202.34
4	CreditAccess Grameen Limited IPO	Aug 23, 2018	422	1131.19
5	IndoStar Capital Finance Limited IPO	May 21, 2018	572	1844

BANKS				
SR.NO	**COMPANY NAME**	**DATE**	**ISSUE PRICE (PER EQUITY SHARE)**	**ISSUE SIZE (RS CRORE)**
1	Fino Payments Bank Limited IPO	Nov 12, 2021	577	1200.3
2	Suryoday Small Finance Bank Ltd IPO	Mar 26, 2021	305	582.34
3	Equitas Small Finance Bank Ltd IPO	Nov 02, 2020	33	517.6
4	Bandhan Bank Limited IPO	Mar 27, 2018	375	4473
5	Ujjivan Small Finance Bank Ltd IPO	Dec 12, 2019	37	750

SPECIALTY CHEMICALS				
SR.NO	**COMPANY NAME**	**DATE**	**ISSUE PRICE (PER EQUITY SHARE)**	**ISSUE SIZE (RS CRORE)**
1	HP Adhesives Limited IPO	Dec 27, 2021	274	126
2	Chemplast Sanmar Limited IPO	Aug 24, 2021	541	3850
3	Tatva Chintan Pharma Chem Ltd IPO	Jul 29, 2021	1083	500
4	Laxmi Organic Industries Limited IPO	Mar 25, 2021	130	600
5	Neogen Chemicals Limited IPO	May 08, 2019	215	132

HEALTH CARE SERVICES				
SR.NO	**COMPANY NAME**	**DATE**	**ISSUE PRICE (PER EQUITY SHARE)**	**ISSUE SIZE (RS CRORE)**
1	Vijaya Diagnostic Centre Limited IPO	Sep 14, 2021	531	1895
2	Krsnaa Diagnostics Limited IPO	Aug 16, 2021	954	1213
3	Aster DM Healthcare Ltd IPO	Feb 26, 2018	190	980
4	Metropolis Healthcare Limited IPO	Apr 15, 2019	880	1204
5	Deccan Health Care Limited IPO	Dec 31, 2018	100	42.1

INTRODUCTION OF COMPANIES SELECTED FOR ANALYSIS

FINANCE including NBFCs

- **Indian railway finance corporation limited IPO -** IRFC was founded on 12 December 1986.It started borrowing from the market in 1987–88. IRFC raises money through financial bonds and from banks and financial institutions. In 2019 Amitabh Banerjee was appointed as the Managing Director of the company.

- **SBI cards and payment services ltd IPO -** SBI Card was launched in October 1998 by the State Bank of India and GE Capital. Incorporated as SBI Cards and Payment Services Private Limited (SBICPSL), SBI Card is headquartered in Gurgaon, Haryana. In December 2017, State Bank of India and The Carlyle Group acquired GE Capital`s stake in SBI Card.

SPANDANA

Spandana Sphoorty Financial IPO

Spandana Sphoorty IPO Review, Dates, Grey Market Price & Allotment

- **Spandana Sphoorty Financial Ltd IPO -** The Company is a leading rural focused NBFC-MFI with a geographically diversified presence in India. It offers income generation loans under the joint liability group model predominantly to women from low-income households in Rural Areas. As of March 31 2019 the company is the fourth largest NBFC-MFI and the sixth largest amongst NBFC-MFIs and SFBs in India in terms of AUM update.

GrameenKoota
financial services

CREDIT ACCESS GRAMEEN LIMITED IPO

- **CreditAccess Grameen Limited IPO -** CreditAccess Grameen Limited (formerly known as Grameen Koota Financial Services Pvt. Ltd.) is a microfinance institution providing a wide range of financial services to the rural poor and low-income households particularly women. It is registered with the Reserve Bank of India under the NBFC-MFI category.

INDOSTAR
CAPITAL
FINANCE

- **IndoStar Capital Finance Limited IPO -** is a professionally managed and institutionally owned organization which offers structured term financing solutions to corporates and loans to small and medium enterprise (SME) borrowers in India. It has recently expanded its portfolio to offer vehicle finance and housing finance products through its network of 129 branches. The housing finance business is operated through IndoStar's wholly-owned subsidiary IndoStar Home Finance Private Limited.

BANKS

- **Fino Payments Bank Limited IPO -** Fino Payments Bank is the Digital Banking Partner for millions of hardworking Indians. Hamesha. We are present in 90% of India's districts with over 724671 banking outlets, 54 Bank Branches and 130 Customer Service Points. Fino Payments Bank was incorporated on 4th April 2017 .

- **Suryoday Small Finance Bank Ltd IPO -** The Bank was originally incorporated as Suryoday Micro Finance Private Limited at Chennai Tamil Nadu as a private limited company under the Companies Act 1956 pursuant to the certificate of incorporation dated 10 November 2008 issued by the Assistant Registrar of Companies Tamil Nadu Andaman and Nicobar Islands at Chennai.

Equitas Small Finance Bank IPO

- **Equitas Small Finance Bank Ltd IPO -** Equitas Small Finance bank began banking on 5 September 2016. With effect from 4 February 2017, Equitas became a scheduled bank. However, the company missed on RBI's mandate of listing within 3 years of commencement of its operations.

- **Bandhan Bank Limited IPO -** Bandhan was set up in 2001 as a not-for-profit entity with the objective of financial inclusion and women empowerment through sustainable livelihood creation. It started its microfinance operations from Bagnan, a small village, about 60 km from Kolkata. The model followed for delivery of microfinance services was individual lending through group formation. Bandhan focused on serving underbanked and underpenetrated markets.

- **Ujjivan Small Finance Bank Ltd IPO -** Ujjivan Small Finance Bank Limited is an Indian small finance bank based in Bangalore, which commenced operations on 1 February 2017. Ujjivan Financial Services holds an 80 percent stake in the bank. Ujjivan Small Finance Bank is licensed under Section 22 (1) of the Banking Regulation Act, 1949 to carry out small finance bank business and received Scheduled Bank status from the Reserve Bank of India in August 2017.

CHEMICALS

HP ADHESIVES LIMITED

- **HP Adhesives Limited IPO -**. The company was originally formed as a partnership firm under the name of M/s. H.P. International on 01 January 1987.M/s. HP International was thereafter converted into a private limited company HP Adhesives Private Limited on 07 May 2019. Subsequently, the company has been converted into a public limited company and the name of the company changed to HP Adhesives Limited pursuant to a special resolution passed at the Extra-Ordinary General Meeting of our Company held on 23 June 2021 and a fresh Certificate of Incorporation dated 01 July 2021.

- **Chemplast Sanmar Limited IPO-** Chemplast Sanmar Limited is part of Sanmar Group which has businesses in Chemicals, Shipping, Engineering and Metals. It has a turnover of over ₹65 billion and a presence in some 25 businesses, with manufacturing units spread over numerous locations in India.

- **Tatva Chintan Pharma Chem Ltd IPO**

LAXMI ORGANIC INDUSTRIES LTD

- **Laxmi Organic Industries Limited IPO -** Laxmi Organic Industries Limited was incorporated as a public limited company on May 15 1989. The Company received a certificate for commencement of business on December 20 1989. The Company is a leading manufacturer of Acetyl Intermediates and Specialty Intermediates with almost three decades of experience in large scale manufacturing of chemicals.

NEOGEN
CHEMICALS LTD.

- **Neogen Chemicals Limited IPO - Neogen Corporation** is an international food safety company that provides test kits and relevant products to detect dangerous substances in food. The company was founded in 1982 and is based in Lansing, Michigan.[1] The company serves a wide range of countries including Canada,[3] United States, the United Kingdom, partsof Europe, Mexico and Brazil, India, and China, among others.

HEALTH CARE SERVICES

- **Vijaya Diagnostic Centre Limited IPO -** S. Surendranath Reddy founded Vijaya Diagnostic Centre in 1981. In the past 4 decades, Vijaya Diagnostic Centre has constantly worked towards providing excellent quality throughout all its centres and has been the pioneer in using the latest technological trends to deliver best-in-class healthcare to its patients.

- **Krsnaa Diagnostics Limited IPO -** (Formerly known as Krsnaa Diagnostics Pvt Ltd) is India's largest diagnostic services provider, both in Radiology and Pathology. Our mission to be easily accessible and affordable to anyone who seeks best quality diagnosis, and our commitment towards the same are what defines and differentiates us.

- **Aster DM Healthcare Ltd IPO -** In November 2014, Aster DM Healthcare finalized Bank of America Merrill Lynch, Goldman Sachs and Kotak Mahindra Bank to manage its Rs 1,200-crore initial public offering (IPO) scheduled for early next year. The company plans to sell 10% shares on the bourses though details of the same are not finalized yet. but sebi the regulator of Indian market asked the company to prove the overseas asset networth of the company.

- **Metropolis Healthcare Limited IPO -** Metropolis was founded by Dr. Sushil Kanubhai Shah in 1980.] The healthcare company was started as a single diagnostic laboratory in Mumbai. Shah's daughter, Ameera Shah, took over the pathology business in 2001. The company started out by partnering with local and regional diagnostic chains, thereby spreading its reach across the country.

REVIEW OF LITERATURE

1. (Iqbal Thonse Hawaldar1 *, K.R. Naveen Kumar2 and T. Mallikarjunappa3)This study examines listing day performance of IPOs, book-built and fixed-price IPOs, post-listing aftermarket performance of IPOs, book-built and fixed-price IPOs in the Indian stock market. We examine pricing as well as long run performance of 464 (365 book-built IPOs and 99 fixed-price IPOs) Indian IPOs that went public between 2001 and 2011. The study covers 15 years from the financial year 2001 to 2015. Analysis of the results reveals that compared to fixed-price IPOs, book-built IPOs are underpriced by lesser magnitude. Moreover, book-built IPOs are associated with negative cumulative average abnormal returns (CAARs) up to five years and beyond, the negative CAARs associated with fixed-price IPOs turn positive after one and one-half year and continue to be positive thereafter.

2. (Ms.Ashwini G K, PG Student, PGDMS &RC, PESITM, Shivamogga. 577204.) The present study has been undertaken to gauge the performance of IPO's of companies listed in NSE, Indian index. Initial public offerings are ahead importance worldwide as an important source of funds for the companies to step up their growth by using the mobilized funds to implement innovative strategies as well as considered as an important tool for investment since it offers huge profits. In this paper the performance of IPO's are analyzed based on the comparison of issue price with closing price on the day of issue. From the year 2015 to 2019 which are listed in National Stock Exchange (NSE) India, most of the investors always prefer to purchase securities at a lower issue price and the comparison will be made with the closing price. The analysis of data using correlation shows whether there is a relationship exists between issue prices and issue size. And also it analyzes the relationship between the subscription ratio and listed day gain ratio. The findings of the research help to analyze the performance of the listed companies and also to make proposed investment decision. Through this it can be concluded that IPO's can be a long term investment tool or a speculative opportunity to earn booming profits.

3. Madan (2003) - "Investments in IPOs in the Indian capital market" examined the relationship between return on listing and issue price, issue size, age of firm, issue capital listing and was found negative. The study found that the relationship between the variables was statistically significant. The researcher also found that the issue rating was positive for relationship between returns on listing of the IPO shares and foreign equity. The study concluded that in the long run, there was a significant fall in IPO returns. The returns of initial public

4. Ganesamoorthy, L., & Shankar, H. (2013) in their study entitled “The performance of initial public offerings based on their size: An empirical analysis of the Indian scenario” focused on the performance of Initial Public Offerings (IPOs) made by the Indian companies on the basis of the IPO size. For this analysis, the researchers used a sample of 219 Indian IPOs that were released during the 2001 to 2010 period. The research used the traditional approach of event study and an event window was built for a span of 75 days from the shares' listing date. The researchers calculated the market-adjusted return by subtracting the market returns from the actual return of shares in order to eliminate market factors. The researchers classified the IPOs into 3 categories namely small, medium and large based on the size of the issues. It was found that large-size IPOs performed better compared to small and medium-size IPOs. The research also found that small-size IPOs were relatively overpriced compared to medium and large-size IPOs.

5. Ambilya. M et al (2016) in their paper entitled “A Study On Performance of IPOs under NSE from issue price to last trading price in the year 2013-2015”, studied the performance of IPO’S listed in National Stock Exchange (NSE) during, 2013 to 2015. The study found that, on average, initial public offerings yield dramatically positive returns. The majority of investors were also found to invest in the IPO primarily on the basis of the company's image and not on the basis of a fundamental analysis. It has also been found that most shareholders tend to buy at a lower cost. It is noted that the last trading price is often greater than the price provided by the IPO. The new trade price comes after the price offered in the analysis by the IPO.

6. Tanted N, Mustafa S (2019) - “ A Study of Returns Between IPO Issue Price and Listing Day Price” (2019) conducted a study to identify the difference in returns between IPO offered price, Listing day opening price, closing price. The goal of the study was to assist investors to make an investment decision through the IPO or buy it directly from the secondary market. Data is collected for the review of all IPOs released over 10 years. The study concluded that the price offered by the IPO, the open-day listing price and the closing-day listing price did not vary statistically significantly. The mean value for the open price listing day was higher than the price provided by the IPO. For the listing day close price, the mean value was high compared to the listing day open price. For the listing day closing price, when the price offered by the IPO was high, the mean value was high.

7. Poornima S, Haji A (2016) - "A study on the performance of initial public offering of companies listed in NSE, India & Gulf base GCC index." The researcher analyzed the short-term performance of the companies in this analysis in order to explain the phenomenon of irregular returns as well as the long-term performance in order to evaluate the long-term performance of the IPOs. Between Jan 2013 and Dec 2014, the thesis was performed. The researchers considered a sample of nine companies listed in NSE for the study. The researchers found that IPO stocks are a good instrument for long term investment. In order to maximize their profits, they recommended that investors subscribe to the initial public offering or buy the shares from the primary market and retain them for a defined time in the secondary market

8. Lowry and Murphy (2007) found no evidence that firms which go public in the US (with IPO options to their top executives) are underpriced as compared to firms not granting such options. This implies that the top executives of firms with such options do not deliberately set the offer price low to increase the value of these options.

9. Roopa P. (2016) investigated on introductory execution of Initial public offerings' in India during 2015-2016 - Valuing Instruments is a significant choice before giving Initial public offerings. The study assumes that any initial public offerings in the stock market are an indispensable job in success and failure. One of the big developments Indian Capital Markets has seen in the past is the presentation of deals through the method of book building.The researchers considered in this paper the execution of 69 initial public offerings on the posting day either by Book Building technique for open initial public offerings or through fixed value strategy during the monetary year 2015-16.

10. Bhanu M et al. (2016) in their article entitled "Long-run performance of IPO market in India" examined the Long-run performance of initial public offerings (IPOs). The data was obtained for 31 IPOs from the period 2000 to 2003. Using SPSS Version 16, the researchers used the Logistic Regression Model to test the relationship between long-term IPO output and short-term company performance variables. The study reveals that long-term variables have no relationship or negative relationship with short-run variables. It has a positive relationship with some of the theory supporting the view that there should be small listing gains, moderate short-run gains and large long-run gains for IPO markets to be successful. Only then will the long-term growth of the IPO sector take place. But the true scenario is the opposite. Companies have listing earnings, short-run earnings, but they do not make long-term gains.

OBJECTIVES / HYPOTHESIS

(a) To analyse the performance of Indian IPOs in the short term.

(b) To determine the significance of abnormal return of the IPOs.

1. H0 (null) = IPO Does not give short term abnormal return
2. H1 (alternate) = Gives short term abnormal return

RESEARCH METHODOLOGY

Our study uses market index returns, stock returns, and announcement dates (event date) between January 2018–december 2021. We utilize the data from different database for different sectors like Finance(NBFCs), Banks , Specialty Chemichals, Healthcare services.

We have used EXPECTED RETURN formula :

E(R_s) = rfr + beta_ind * (R_market - rfr)

We have used ABNORMAL RETURN formula :

AR = Act_ret - Exp_ret

All the calculations are done through event study

Now, what is event study?

- An event study, or event-history analysis, examines the impact of an event on the financial performance of a security, such as company stock.
- An event study employs statistical methods, using time as the dependent variable and then looking for variables that explain the duration of an event—or the time until an event occurs.
- If the same type of statistical analysis is used to analyze multiple events of the same type, a model can predict how stock prices typically respond to a specific event.

The research is done on secondary basis

Now what is secondary data?

Secondary data is the data that has already been collected through primary sources and made readily available for researchers to use for their own research. It is a type of data that has already been collected in the past.

A researcher may have collected the data for a particular project, then made it available to be used by another researcher. The data may also have been collected for general use with no specific research purpose like in the case of the national census.

Data classified as secondary for particular research may be said to be primary for another research. This is the case when data is being reused, making it primary data for the first research and secondary data for the second research it is being used for.

Sources of Secondary Data

Sources of secondary data include books, personal sources, journals, newspapers, websitess, government records etc. Secondary data are known to be readily available compared to that of primary data. It requires very little research and needs for manpower to use these sources.

We have also used t-test

Now what is t-test?

A t-test is a type of inferential statistic used to determine if there is a significant difference between the means of two groups, which may be related in certain features. It is mostly used when the data sets, like the data set recorded as the outcome from flipping a coin 100 times, would follow a normal distribution and may have unknown variances. A t-test is used as a hypothesis testing tool, which allows testing of an assumption applicable to a population.

A t-test looks at the t-statistic, the t-distribution values, and the degrees of freedom to determine the statistical significance. To conduct a test with three or more means, one must use an analysis of variance.

Explaining the T-Test

Essentially, a t-test allows us to compare the average values of the two data sets and determine if they came from the same population. In the above examples, if we were to take a sample of students from class A and another sample of students from class B, we would not expect them to have exactly the same mean and standard deviation. Similarly, samples taken from the placebo-fed control group and those taken from the drug prescribed group should have a slightly different mean and standard deviation.

Mathematically, the t-test takes a sample from each of the two sets and establishes the problem statement by assuming a null hypothesis that the two means are equal. Based on the applicable formulas, certain values are calculated and compared against the standard values, and the assumed null hypothesis is accepted or rejected accordingly.

If the null hypothesis qualifies to be rejected, it indicates that data readings are strong and are probably not due to chance.

The t-test is just one of many tests used for this purpose. Statisticians must additionally use tests other than the t-test to examine more variables and tests with larger sample sizes. For a large sample size, statisticians use a z-test. Other testing options include the chi-square test and the f-test.

There are three types of t-tests, and they are categorized as dependent and independent t-tests.

ANALYSIS

Name of companies(NBFCs)	p.value	t-test
Indian railway finance corporation limited IPO	0.5215155	-0.058582
SBI cards and payment services ltd IPO	0.5265896	-0.068821
Spandana Sphoorty Financial Ltd IPO	0.1786625	0.98525
CreditAccess Grameen Limited IPO	0.9408579	-1.7088
IndoStar Capital Finance Limited IPO	0.6317115	-0.35241

1. Indian railway finance corporation limited IPO - Since the p-value is greater than 0.05, this implies that we cannot reject the Null Hypothesis i.e. mu <= 0. [Alternative: mu > 0] For our analysis, this implies that the IPO hasn't generated significant positive returns for the investor

2. SBI cards and payment services ltd IPO - Since the p-value is greater than 0.05, this implies that we cannot reject the Null Hypothesis i.e. mu <= 0. [Alternative: mu > 0] For our analysis, this implies that the IPO hasn't generated significant positive returns for the investor.

3. Spandana Sphoorty Financial Ltd IPO - Since the p-value is greater than 0.05, this implies that we cannot reject the Null Hypothesis i.e. mu <= 0. [Alternative: mu > 0] For our analysis, this implies that the IPO hasnt generated significant positive returns for the investor.

4. CreditAccess Grameen Limited IPO - Since the p-value is greater than 0.05, this implies that we cannot reject the Null Hypothesis i.e. mu <= 0. [Alternative: mu > 0] For our analysis, this implies that the IPO hasnt generated significant positive returns for the investor

5. IndoStar Capital Finance Limited IPO - Since the p-value is greater than 0.05, this implies that we cannot reject the Null Hypothesis i.e. mu <= 0. [Alternative: mu > 0] For our analysis, this implies that the IPO hasn't generated significant positive returns for the investor

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Name of companies(BANKS)	p.value	t-test
Fino Payments Bank Limited IPO	0.8235725	-0.93746
Suryoday Small Finance Bank Ltd IPO	0.9750601	-2.0942
Equitas Small Finance Bank Ltd IPO	0.8104686	-0.90316
Bandhan Bank Limited IPO	0.6221349	-0.31539
Ujjivan Small Finance Bank Ltd IPO	0.6403457	-0.36257

1. Fino Payments Bank Limited IPO - Since the p-value is greater than 0.05, this implies that we cannot reject the Null Hypothesis i.e. mu <= 0. [Alternative: mu > 0] For our analysis, this implies that the IPO hasn't generated significant positive returns for the investor

2. Suryoday Small Finance Bank Ltd IPO - Since the p-value is greater than 0.05, this implies that we cannot reject the Null Hypothesis i.e. mu <= 0. [Alternative: mu > 0] For our analysis, this implies that the IPO hasn't generated significant positive returns for the investor

3. Equitas Small Finance Bank Ltd IPO - Since the p-value is greater than 0.05, this implies that we cannot reject the Null Hypothesis i.e. mu <= 0. [Alternative: mu > 0] For our analysis, this implies that the IPO hasn't generated significant positive returns for the investor

4. Bandhan Bank Limited IPO - Since the p-value is greater than 0.05, this implies that we cannot reject the Null Hypothesis i.e. mu <= 0. [Alternative: mu > 0] For our analysis, this implies that the IPO hasn't generated significant positive returns for the investor

5. Ujjivan Small Finance Bank Ltd IPO - Since the p-value is greater than 0.05, this implies that we cannot reject the Null Hypothesis i.e. mu <= 0. [Alternative: mu > 0] For our analysis, this implies that the IPO hasn't generated significant positive returns for the investor

Name of companies(CHEMICALS)	p.value	t-test
HP Adhesives Limited IPO	0.1752791	0.95585
Chemplast Sanmar Limited IPO	0.9795623	-2.1369
Tatva Chintan Pharma Chem Ltd IPO	0.2357584	0.72838
Laxmi Organic Industries Limited IPO	0.6182145	-0.30718
Neogen Chemicals Limited IPO	0.09070591	1.3747

1. HP Adhesives Limited IPO - Since the p-value is greater than 0.05, this implies that we cannot reject the Null Hypothesis i.e. mu <= 0. [Alternative: mu > 0] For our analysis, this implies that the IPO hasn't generated significant positive returns for the investor

2. Chemplast Sanmar Limited IPO - Since the p-value is greater than 0.05, this implies that we cannot reject the Null Hypothesis i.e. mu <= 0. [Alternative: mu > 0] For our analysis, this implies that the IPO hasn't generated significant positive returns for the investor

3. Tatva Chintan Pharma Chem Ltd IPO - Since the p-value is greater than 0.05, this implies that we cannot reject the Null Hypothesis i.e. mu <= 0. [Alternative: mu > 0] For our analysis, this implies that the IPO hasn't generated significant positive returns for the investor

4. Laxmi Organic Industries Limited IPO - Since the p-value is greater than 0.05, this implies that we cannot reject the Null Hypothesis i.e. mu <= 0. [Alternative: mu > 0] For our analysis, this implies that the IPO hasn't generated significant positive returns for the investor

5. Neogen Chemicals Limited IPO - Since the p-value is greater than 0.05, this implies that we cannot reject the Null Hypothesis i.e. mu <= 0. [Alternative: mu > 0] For our analysis, this implies that the IPO hasn't generated significant positive returns for the investor

Name of companies(HEALTH)	p.value	t-test
Vijaya Diagnostic Centre Limited IPO	0.42948	0.17989
Krsnaa Diagnostics Limited IPO	0.9827308	-2.2868
Aster DM Healthcare Ltd IPO	0.6785522	-0.46838
Metropolis Healthcare Limited IPO	0.5743768	-0.19059

1. **Vijaya Diagnostic Centre Limited IPO** - Since the p-value is greater than 0.05, this implies that we cannot reject the Null Hypothesis i.e. mu <= 0. [Alternative: mu > 0] For our analysis, this implies that the IPO hasn't generated significant positive returns for the investor

2. **Krsnaa Diagnostics Limited IPO** - Since the p-value is greater than 0.05, this implies that we cannot reject the Null Hypothesis i.e. mu <= 0. [Alternative: mu > 0] For our analysis, this implies that the IPO hasn't generated significant positive returns for the investor

3. **Aster DM Healthcare Ltd IPO -** Since the p-value is greater than 0.05, this implies that we cannot reject the Null Hypothesis i.e. mu <= 0. [Alternative: mu > 0] For our analysis, this implies that the IPO hasn't generated significant positive returns for the investor

4. **Metropolis Healthcare Limited IPO** - Since the p-value is greater than 0.05, this implies that we cannot reject the Null Hypothesis i.e. mu <= 0. [Alternative: mu > 0] For our analysis, this implies that the IPO hasn't generated significant positive returns for the investor

AVERAGE ABNORMAL RETURN (for particular sectors)

SECTORS	AAR
Finance(NBFCs)	-0.00129503
Banks	-0.004485966
Specialty chemicals	0.004351807
Health care services	-0.00220936

```
    One Sample t-test

data:  c(nbfc1, nbfc2, nbfc3, nbfc4, nbfc5)
t = -0.54637, df = 4, p-value = 0.6139
alternative hypothesis: true mean is not equal to 0
95 percent confidence interval:
 -0.007875862  0.005285802
sample estimates:
  mean of x
-0.00129503
```

1. **Finance(NBFCs) -** Since the p-value is greater than 0.05, this implies that we cannot reject the Null Hypothesis i.e. mu <= 0. [Alternative: mu > 0] For our analysis, this implies that the IPO hasn't generated significant positive returns for the investor

```
     One Sample t-test

data:  c(banks1, banks2, banks3, banks4, banks5)
t = -3.3721, df = 4, p-value = 0.02799
alternative hypothesis: true mean is not equal to 0
95 percent confidence interval:
 -0.0081794910 -0.0007924413
sample estimates:
   mean of x
-0.004485966
```

2. **Banks -** Since the p-value is lower than 0.05, this implies that we can reject the Null Hypothesis i.e. mu <= 0. [Alternative: mu > 0] For our analysis, this implies that the IPO has generated significant positive returns for the investor

```
     One Sample t-test

data:  c(chemicals1, chemicals2, chemicals3, chemicals4, chemicals5)
t = 1.3533, df = 4, p-value = 0.2474
alternative hypothesis: true mean is not equal to 0
95 percent confidence interval:
 -0.004576696  0.013280311
sample estimates:
  mean of x
0.004351807
```

3. **Specialty chemicals -** Since the p-value is greater than 0.05, this implies that we cannot reject the Null Hypothesis i.e. mu <= 0. [Alternative: mu > 0] For our analysis, this implies that the IPO hasn't generated significant positive returns for the investor

```
    One Sample t-test

data:  c(health1, health2, health3, health4)
t = -1.1671, df = 3, p-value = 0.3275
alternative hypothesis: true mean is not equal to 0
95 percent confidence interval:
 -0.01029234  0.00476894
sample estimates:
 mean of x
-0.0027617
```

4. **Health care services -** Since the p-value is greater than 0.05, this implies that we cannot reject the Null Hypothesis i.e. mu <= 0. [Alternative: mu > 0] For our analysis, this implies that the IPO hasn't generated significant positive returns for the investor

CONCLUSION

According to our results, in precrisid period, Finance(nbfcs) has the least mean AAR with a value -0.00129503. Banks and Health care services follow Finance(nbfcs) with AAR values -0.004485966and -0.00220936, respectively. Specialty chemicals has the largest mean AAR value, that is, 0.004351807.

The first one is finance(NBFCs) which has negative average abnormal return the second is bank and third is health care this both the sectors are giving negative returns.and the last sector is specialty chemicals which gives positive average abnormal return.

AAR Finance(NBFCs) sector analysis, says that the IPO has not generated significant positive returns for the investor

AAR Banks sector analysis, states that the IPO has generated significant positive returns for the investor

AAR Specialty chemicals sector analysis, says that the IPO hasn't generated significant positive returns for the investor

AAR Health care services sector analysis, states that the IPO hasn't generated significant positive returns for the investor

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