



## An Analysis of Global versus Indian IPO Markets Through Top 10 IPOs since liberalisation and globalisation of Indian Economy

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### Abstract

A key mechanism in the financial markets, initial public offerings (IPOs) let private businesses raise money by first-time public share sales. Between private ownership and public trading, IPOs act as a link allowing companies to thrive, innovate, and expand economically. Reflecting more general economic trends, regulatory changes, investor attitude, and technological developments, worldwide IPO markets have changed dramatically throughout the years. Still, regional performance, legal environment, and investor behaviour in IPO markets vary. Examining their dynamics, problems, and possibilities, this research seeks to offer a comparison of the worldwide and Indian IPO markets. Policymakers, investors, financial analysts, and business decision-makers among other broad groups of stakeholders depend on an awareness of IPO markets. By channelling capital to high-potential businesses, therefore promoting innovation and job creation, a well-functioning IPO market can dramatically affect economic growth. By offering a thorough comparative analysis of worldwide and Indian IPO markets, the results of this study will add to the body of knowledge already in use and highlight important elements like macroeconomic conditions, investor attitude, regulatory frameworks, and post-IPO success. Especially in developing nations like India, the study seeks to offer insightful analysis of possible legislative changes, investment strategies, and best practices that can increase market efficiency. This paper aims to provide practical suggestions based on analysing the subtleties of IPO markets across various economic settings, therefore strengthening and sustaining capital markets.

**Keywords:** Initial Public Offerings (IPOs); Capital Markets; Economic Growth; Regulatory Framework; Market Efficiency; Global IPO Trends; Indian IPO Market; Post-IPO Performance; Comparative Analysis; Emerging Markets

### 1. Introduction

Initial public offerings (IPOs), an essential financial market vehicle, allow private businesses to raise capital by issuing their initial public stocks. IPOs act as a conduit between private ownership and public trade, allowing businesses to flourish, mature, and economically develop. International IPO markets have changed radically over time, mirroring broader economic patterns, regulatory changes, investor attitudes, and technology progress. Yet there exist variations in the legal framework, investor attitude, and geographical performance in IPO markets. This research contrasts the world and Indian initial public offerings (IPO) markets by examining their dynamics, problems, and opportunities.

#### 1.1 Background and Context

Fintech firms, online giants, and new digital payment platforms have totally altered India's initial public offering (IPO) space, leading to increased valuations and enhanced investor participation. The mass participation of retail investors enabled by the spread of mobile and internet penetration has democratized equity market access (SEBI, 2021). India's market regulator, the Securities and Exchange Board of India (SEBI), has introduced sequential reforms to simplify the IPO

process, promote transparency, and safeguard investors' interests, further enhancing confidence in the Indian IPO market. Moreover, growing interconnectivity among global financial markets has resulted in cross-border initial public offerings (IPOs), where Indian issuers explore foreign listings and foreign companies look at Indian exchanges for secondary listings.

The paradigm of valuation in emerging markets has also been altered due to technology-driven businesses focusing on innovation, scalability, and potential for future development rather than conventional financial measures such as profitability at listing. This movement tracks a wider trend in top initial public offering (IPO) markets globally, where new-wave companies register strong investor interest regardless of poor past financial performance. Understanding these dynamics is critical for investors, policymakers, and business leaders to make informed choices and leverage opportunities in Indian and global markets as the IPO market changes. The US IPO market is among the most advanced and vibrant globally, powered by leading stock markets like the New York Stock Exchange (NYSE). High levels of market liquidity, strong venture capital market, and deep institutional investor participation all fuel the US market's appetite for initial public offerings (IPOs).

Large pension funds, mutual funds, hedge funds, and retail investors actively participate in initial public offerings (IPOs), leading to large cash inflows. Moreover, the US market is also supported by a vibrant private equity and startup funding ecosystem; Silicon Valley particularly strongly supports technology-based ventures that later list on an exchange. Both the Securities Act of 1933 and the Securities Exchange Act of 1934 have stringent disclosure standards and the Securities and Exchange Commission (SEC) mainly regulates the legal framework controlling initial public offerings (IPOs) in the US. Firms intending to go public have to file a detailed S-1 registration statement that comprises financial information, business risks, and operating statistics in an effort to provide transparency and protection to investors. The Jumpstart Our Business Startups (JOBS) Act of 2012 facilitated that EGCs would enjoy lower disclosure requirements and private filing thanks to its simplification of the IPO process.

Besides, direct listings and the newly added Special Purpose Acquisition Companies (SPACs) are changing the conventional IPO scene and offering alternative paths for companies to become public. High-profile initial public offerings (IPOs) of firms like Facebook, Tesla, and Airbnb show the capability of the U.S. market in terms of attracting international investors and achieving substantial post-IPO valuations, thus strengthening its leadership in public listing sites. Major markets like Shanghai Stock Exchange (SSE), Shenzhen Stock Exchange, and Hong Kong Stock Exchange (HKEX) have enabled a high volume of public offerings, making China quickly become a dominant force within the global IPO environment. The distinguishing characteristic of the Chinese IPO market is that it allows firms to utilize a dual listing structure to seek financing on both domestic and foreign shores.

Regulations in China have evolved significantly; investor access, pricing controls, and IPO approvals are now occasionally affected by government decisions.

The expansion of Chinese tech giants such as Alibaba, Tencent, and Meituan via initial public offerings (IPOs) illustrates increased demand for Chinese stocks globally. Japan's initial public offering (IPO) market is one of the major financial centers in Asia, though smaller than those of the US and China. The Tokyo Stock Exchange (TSE) accommodates initial public offerings (IPOs) of established conglomerates as well as young technology companies. Japanese initial public offerings (IPOs) are generally marked by conservative pricing, a large proportion of domestic investor participation, and an emphasis on long-term stability rather than speculative returns. Japan's regulatory framework, overseen by the Financial Services Agency (FSA), maintains a high level of concern for ensuring market integrity while requiring firms to satisfy strict listing requirements.

By comparing these prominent countries with India, this research intends to establish best practices and areas for

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improvement and support investors and politicians in the changing IPO environment. India, a rapidly developing economy, possesses a distinctive initial public offering (IPO) market influenced by its investor community, legal landscape, economic patterns, and past evolution. Large industrial corporations such as Tata Steel were among the pioneers listed on the Indian stock exchange (IPO) market early in the 20th century, when firms for raising public funds for growth approached it. The creation of the Bombay Stock Exchange (BSE) in 1875 and the National Stock Exchange (NSE) in 1992 had a huge impact on India's capital markets by providing a regulated platform for public issues. The Securities and Exchange Board of India (SEBI), established in 1988 and accorded statutory powers in 1992, regulates initial public offerings (IPOs) and provides for transparency, investor protection, and market discipline.

SEBI's reforms involving mandatory book-building processes, imposing strict disclosure norms, and providing faster listing through the use of technology have dramatically enhanced the Indian IPO system's efficiency.

There have been various phases of change in the Indian IPO market. Public issues soared when the Indian economy was opened in 1991 as capital flows were promoted by privatization and FDI policies. Mega IPOs in the banking, telecom, and infrastructure space started making appearances in the early 2000s, though the last few years have witnessed a streak of tech-enabled IPOs by fintech, e-commerce, and digital service firms. Companies on the list such as Zomato, Paytm, and Nykaa reflect the increasing preference of investors in high-growth sectors with advanced technologies. Also, investor involvement in Indian IPOs is radically transforming. Within the Indian initial public offering (IPO) market, long dominated by institutional investors and high-net-worth individuals (HNIs), retail investor participation has grown due to greater financial literacy, online trading platforms, and government support for equity investing. Moreover, the emergence of foreign institutional investors (FIIs) and domestic mutual funds has provided greater market liquidity and stability.

By viewing the Indian and worldwide initial public offerings (IPO) markets side by side, one can understand the similarities, distinctions, and underlying drivers of growth in each market. Government encouragement, solid domestic demand, and a rapidly expanding digital economy support India's IPO market; however, regulatory complexity, price inefficiencies, and post-listing volatility are critical issues. Investors, policymakers, and firms negotiating India's evolving capital market scene all rely on a sensitivity to these dynamics.

## 2. Literature Review

Starting in the earliest financial markets of the 17th and 18th centuries, the concept of an Initial Public Offering (IPO) A widely known with initiating the very first known

IPO in the world in 1602 when it offered shares to the public on the Amsterdam Stock Exchange (Goetzmann & Rouwenhorst, 2005), is the Dutch East India Company (VOC). With this occurrence, the contemporary stock markets started to form, and companies were able to raise capital from a diverse group of investors rather than solely relying on government patronage or private capital.

IPOs were formalized even further in the 18th and 19th centuries as financial markets grew in North America and Europe. Established in 1801, the London Stock Exchange (LSE) was rather important in enabling public share offers (Michie, 1999). Driven by industrialization and the growth of major companies looking to fund infrastructure projects and industry expansions, the New York Stock Exchange (NYSE) had become a dominating venue for public listings by the late 19th century (Sylla, 2002).

IPO markets everywhere in the world experienced significant change in the 20th century. As a response to the Great Depression, the Securities Act of 1933 created strict disclosure regulations and public offer regulation in the United States (Seligman, 2003). This formed the foundation for modern securities regulations, thus promoting market transparency and investor confidence. Especially in the US, where companies such as Ford Motor Company and General Motors came to market, thus allowing large corporate financing, the post-World War II economic boom further fueled IPO activity (Ritter, 1998).

After World War II, Japan's IPO market picked up pace across Asia; the Tokyo Stock Exchange (TSE) matured to become a leading venue for public offerings (Hoshi & Kashyap, 2001). Similarly, the financial markets of China underwent revolutionary changes, particularly during the late 20th century economic reforms. China's IPO landscape was dramatically changed when the Shanghai Stock Exchange (SSE) and Shenzhen Stock Exchange opened in the 1990s, enabling domestic businesses to tap into capital markets more effectively (Allen et al., 2012). Spurred by rapid economic growth and state-led companies seeking to raise capital through public offerings, China emerged as one of the largest IPO markets globally during the early 2000s.

With the development of digital businesses and globalization in the twenty-first century, IPO markets continue to evolve. Technology-driven IPOs, including firms like Google and Amazon, were born out of the dot-com boom of the late 1990s and early 2000s, therefore altering market dynamics (Ljungqvist & Wilhelm, 2003). Though markets recovered with a fresh wave of public listings, especially in emerging nations, the financial crisis of 2008 momentarily curtailed IPO activity. Combining legislative changes, investor mood, economic conditions, and technology developments including digital trading platforms and blockchain-based fundraising strategies (Zhang & Wong, 2020) shapes the worldwide IPO scene today.

Emergent financial hubs like the United States, the United Kingdom, and Hong Kong and emerging

economies like China, India, and Brazil are replete in the global IPO environment. Each market operates under different regulatory frameworks, economic conditions, and investor tendencies that influence the profitability or loss of IPOs (Jenkinson & Ljungqvist, 2001).

Developed markets have traditionally led IPO activity in terms of money raised, liquidity, and institutional participation. Developed markets are attractive to firms planning to float due to strong legal systems, big pools of capital, and aggressive institutional investor participation (Ritter & Welch, 2002). But owing to economic opening, technological advances, increased retail investor participation, and government initiatives to encourage startups and entrepreneurship, emerging markets—India included—experienced a recent surge in IPO activity (Chakrabarti et al., 2010).

Initial public offerings (IPOs) are a very important device for firms that want to raise their corporate value, generate funds, and gain public attention. Research on IPO markets provides a unique view of the financial forces and investor actions within diverse economic settings, particularly in comparison to world and Indian environments. During the last 20 years, the Indian IPO market has also experienced dramatic transformation, as the country's economic development and greater involvement with global financial institutions have developed. Global IPO markets also reflect patterns based on regional legislation, tech innovation, and macroeconomic events.

A study of the European IPO market by Glavina (2013) indicates trends in the performance of IPOs during several periods of the economy, including the 2008 financial crisis. It suggests that the international initial public offering (IPO) market is slowly shifting its attention towards emerging markets, especially those in Europe and Asia, owing to economic volatility. Factors like the number of IPOs, the increase in capital size, and the importance of regional markets such as London and Warsaw are analyzed to reflect their evolving impact on the international IPO landscape.

Gupta et al. (2018) analyze how national cultural dimensions influence initial public offerings (IPOs), especially in nations such as India with high power distance and collectivism. The results illustrate how the conventions and tastes of Indian society play a role in shaping a distinctive IPO culture, which diverges from Western markets, thus influencing IPO size and investor attitudes. This research's understanding of informal institutional contexts, such as entrepreneurial norms and societal expectations, helps position India's initial public offering (IPO) market in relation to other countries.

Mahmood et al. (2011) evaluate the performance of initial public offerings (IPOs) over two major financial crises—the Asian crisis and the 2007-2009 global crisis—based on the Chinese IPO market as an example. Based on the study, the global financial crisis underpricing is an unequivocal symbol of the fall in initial public offerings (IPOs) in times of uncertain economic conditions. This development underscores the relative difficulties of initial public offerings (IPOs) across diverse economic

environments, calling for the consideration of market stability in research on IPO performance.

The international economic environment, market rules, and economic reforms have each played an important role in creating major fluctuations in the Indian initial public offering (IPO) market. Gupta et al. (2020) inform that there was a marked increase in initial public offerings (IPOs) during the post-2000 period, especially during economic booms. Economic liberalization was followed by a rise in initial public offerings (IPOs); sectors like technology, banking, and infrastructure dominated the listings.

Stringent disclosure norms by SEBI and the "T+2" settlement system have enhanced transparency and speed in the Indian IPO market, says Bansal and Khanna's (2019) study of major determinants that affect IPO performance in India—changes in regulation, investor sentiment, and timing in the market. But problems such as oversubscription, ineffective pricing, and uneven post-listing performance still exist.

Global IPO markets share a wider set of characteristics driven by new economy industries, regulatory policies, and diversity of the regional economy. Ritter (2003) gives an elementary analysis of IPO cycles in developed nations and finds that technical binges and episodes of low interest rates usually accompany IPO peaks. Emerging markets are more volatile and prone to macroeconomic shocks.

US and China lead the world in IPOs due to strong capital markets and technology-oriented listings. Li and Zhang (2021) reported in their study that SPACs and direct listings have reshaped the worldwide IPO market and provided alternatives to conventional IPOs. Additionally, the globalization of capital markets has led to cross-border IPOs where companies from emerging economies list in developed market exchanges to access a wider investor universe.

The Glavina study in 2013 compares post-2008 regulatory impacts on key European exchanges (such as LSE and WSE). It highlights how increasingly pertinent regional exchanges adhering to EU regulations and adapting listing standards to facilitate IPO growth are. In comparing regulatory impacts in India, where SEBI regulations influence market conduct, with those in developed economies with alternative compliance systems, such knowledge is critical.

In spite of macroeconomic difficulties, the Indian IPO market remains strong. Mehta and Shah (2021) illustrate that, fueled by digital transformation and economic rebound, IPO volumes since 2015 have been consistently growing. Adoption of technology in payment systems and trading platforms has allowed Tier 2 and Tier 3 cities to contribute more extensively.

IPO markets everywhere have moved towards tech-enabled and ESG-focused products. Solid ESG credentials assist businesses in attracting more investor interest and higher valuations, Jones (2020) notes. A quicker and less-regulated alternative to traditional IPOs, SPACs have gained popularity.

### 3. Research Objectives

The major aim of the present dissertation is to compare and analyze the global IPO market with the Indian IPO market with a view to determining trends, challenges, and areas of growth opportunity. The objectives are specific:

1. To examine the historical performance of IPO markets globally and in India.
2. To examine the main determinants of IPO success, such as investor sentiment, regulatory frameworks, and economic conditions.
3. To contrast the costs and outcomes of international and Indian initial public offerings.
4. To determine whether the performance of the Indian IPO market is superior to that of the other global IPO markets.

### 4. Research Gap

For many stakeholders, such as investors, policymakers, financial analysts, and corporate decision-makers, knowledge of IPO markets is a necessity. By allocating capital to high-potential firms, a vibrant initial public offering (IPO) market has the potential to significantly contribute to economic growth through job creation and stimulating innovation. Findings of this research will contribute to the existing literature through provision of comprehensive contrast between the Indian and global initial public offerings (IPO) markets, shedding light on significant factors such as investor mood, regulatory environments, post-IPO performance, and overall macroeconomic conditions. Besides, the research aims to provide insightful details regarding potential regulatory reforms, investment strategies, and industry best practices that can enhance market efficiency, particularly in developing countries such as India. This research will seek to offer useful recommendations that will lead to more robust and more sustainable capital markets by studying the nuances of IPO markets in different economic environments.

Further, by providing market timing advice, this research will help corporations and investors make sense of the intricacies involved in initial public offerings (IPO) markets. The research aims to understand where India can enhance its IPO system to attract more investments and enhance market stability through comparison of global and Indian IPO trends.

### 5. Research Methodology

#### 5.1 Returns based performance

The study comprises of the biggest IPOs ever listed in their respective listing market (by IPO size). 10 biggest IPOs from 4 Stock Exchanges have been taken into consideration. Their returns based on different time periods have been calculated and compared with each other and with the benchmark index of the respective stock exchange. Also, a ratio analysis of 5 years period based on 5 different ratios has been computed.

Data Source: Bloomberg

#### 5.2 Data Collection



The 4 major Stock Exchanges taken into consideration are as follows:

1. New York Stock Exchange (NYSE)
2. Shanghai Stock Exchange (SSE)
3. Tokyo Stock Exchange (TSE)
4. National Stock Exchange (NSE)

follows:

The biggest 10 IPOs ever listed in each of these stock exchanges have been chosen. Criteria for the stock selection is:

1. The IPO is listed as per the required rules and regulations of the said stock exchange.
2. The IPO got issued and is currently being traded on the stock exchange.

The list of stocks taken as per the said conditions is as

Top 10 IPOs listed in China, by issue size (Shanghai Stock Exchange)

S R.	ISSUER NAME	DATE ANNOUNCE D	ISSUE SIZE		SECTOR
			CNY (Bn)	USD (Bn)	
1	Agricultural Bank of China Ltd	07/04/2010	68.53	10.11	Banks
2	PetroChina Co Ltd	24/09/2007	66.80	8.96	Oil & Gas
3	China Shenhua Energy Co Ltd	17/09/2007	66.58	8.86	Coal
4	China Construction Bank Corp	09/08/2007	58.05	7.73	Banks
5	China Telecom Corp Ltd	28/04/2021	54.16	8.33	Telecommunications
6	China State Construction Engin	13/07/2009	50.16	7.34	Engineering & Construction
7	Industrial & Commercial Bank of China	04/09/2006	46.64	5.91	Banks
8	China Mobile Ltd	18/08/2021	35.99	8.79	Telecommunications
9	Semiconductor Manufacturing In	01/06/2020	33.23	7.62	Semiconductors
10	CNOOC Ltd	15/11/2021	32.29	5.01	Oil & Gas

Top 10 IPOs listed in the USA, by issue size (New York Stock Exchange)

SR. NO	ISSUER NAME	DATE ANNOUNCED	ISSUE SIZE (USD) Bn	SECTOR
1	Alibaba Group Holding Ltd	05/06/2014	25.03	E-Commerce
2	Visa Inc	11/09/2007	19.65	Finance
3	General Motors Co	08/18/2010	18.14	Automobile
4	Enel SpA	11/02/1999	17.41	Power
5	Meta Platforms Inc	02/01/2012	16.01	IT
6	Rivian Automotive Inc	10/01/2021	13.72	Automobile
7	Deutsche Telekom	17/11/1996	13.03	Telecommunications
8	AT&T	26/4/2000	10.62	Telecommunications
9	Mondelez International Inc	03/16/2001	8.68	FMCG
10	Uber Technologies Inc	04/11/2019	8.10	E-Commerce

Top 10 IPOs listed in India, by issue size (National Stock Exchange)

SR. NO	ISSUER NAME	DATE ANNOUNCED	ISSUE SIZE		SECTOR
			INR (Bn)	USD (Bn)	
1	Life Insurance Corp of India	2/13/2022	210.08	2.73	Insurance
2	One 97 Communications Ltd	10/26/2021	183.00	2.44	Commercial Service
3	Coal India Ltd	5/5/2010	154.75	3.50	Coal
4	SBI Cards & Payment Services Ltd	2/20/2020	103.55	1.40	Finance
5	New India Assurance Co Ltd/The	8/9/2017	96.00	1.47	Insurance
6	Zomato Ltd	7/6/2021	93.26	1.25	E-Commerce
7	DLF Ltd	5/25/2007	91.88	2.27	Real Estate
8	HDFC Life Insurance Co Ltd	4/19/2016	86.95	1.34	Insurance
9	SBI Life Insurance Co Ltd	7/10/2017	84.00	1.30	Insurance

10	NHPC Ltd	8/5/2008	60.39	1.23	Power
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Top 10 IPOs listed in Japan, by issue size (Tokyo Stock Exchange)

### 5.3 Returns Computation

Each of the 10 stocks of 4 exchanges' monthly closing price figures from FY 2019 to FY 2023 have been taken. The calculations done in Microsoft Excel for CAGR returns and formulae used are:

- Year-on-Year CAGR %

$$1 \text{ Year CAGR} = \left( \frac{CP_M}{CP_A} \right)^1 - 1$$

- 3 Years Standard & Moving CAGR %

$$3 \text{ Years CAGR} = \left( \frac{CP_{36}}{CP_1} \right)^3 - 1$$

$$3 \text{ Years Moving CAGR} = \left( \frac{CP_{48}}{CP_{13}} \right)^3 - 1$$

$$3 \text{ Years Moving CAGR} = \left( \frac{CP_{60}}{CP_{25}} \right)^3 - 1$$

- 5 Years CAGR %

SR. NO	ISSUER NAME	DATE ANNOUNCED	ISSUE SIZE		SECTOR
			JPY (Bn)	USD (Bn)	
1	SoftBank Corp	11/12/2018	2405.51	21.44	Telecommunications
2	Dai-ichi Life Holdings Inc	2/22/2010	1008.90	10.75	Insurance
3	East Japan Railway Co	10/5/1993	760.02	7.01	Transportation
4	Japan Post Holdings Co Ltd	9/10/2015	693.01	5.7	Insurance
5	Japan Airlines Co Ltd	8/3/2012	663.25	8.46	Airlines
6	Japan Post Bank Co Ltd	9/10/2015	598.05	4.92	Banks
7	Japan Tobacco Inc	10/27/1994	566.98	5.85	Agriculture
8	Central Japan Railway Co	10/8/1997	538.47	4.42	Transportation
9	Kyushu Railway Co	10/25/2016	416.00	3.99	Transportation
10	Suntory Beverage & Foods	7/3/2013	388.12	3.87	FMCG

$$5 \text{ Years Moving CAGR} = \left( \frac{CP_{60}}{CP_1} \right)^5 - 1$$

- Issue Price to Current Price CAGR

$$\text{Issue price to Current price CAGR} = \left( \frac{CP_{60}}{CP_{LD}} \right)^n - 1$$

Where,

CP<sub>M</sub> - FY end Closing Price

CP<sub>1</sub> - April 2019 Closing Price

CP<sub>A</sub> - FY start Close Price

CP<sub>60</sub> - April 2021 Closing Price

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CP12 – March 2020 Closing Price

n – Number of years since stock issue

CP36 – March 2021 Closing Price

CP<sub>LD</sub> – Issue month Closing Price

CP48 – March 2022 Closing Price

CP13 – April 2020 Closing Price

CP25 – April 2021 Closing Price

### 5.4 Ratio Analysis

The ratios taken here into consideration are based on assessing the stocks based on profitability, credit risk, liquidity and sustainability factors. The ratios chosen are as follows:

1. Return on Invested Capital (RoIC)
2. 5 Years EBITDA Growth Rate
3. Net Debt to Equity Ratio
4. Current Ratio
5. Sustainable Growth Rate

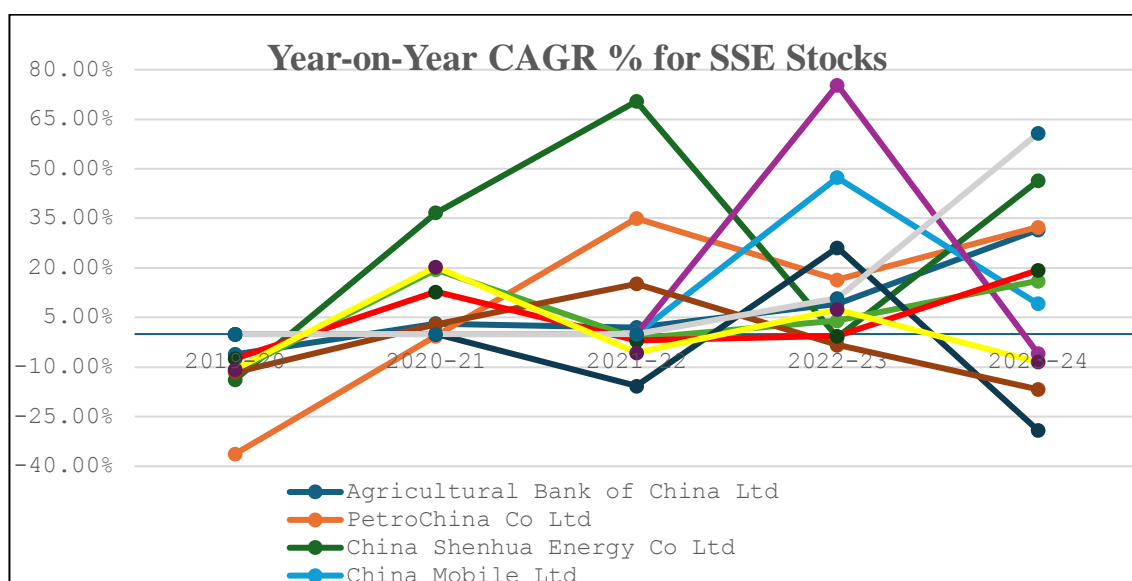
## 6. Data Analysis & Interpretation

### 6.1 Returns Computation

#### 1. Year-on-year CAGR

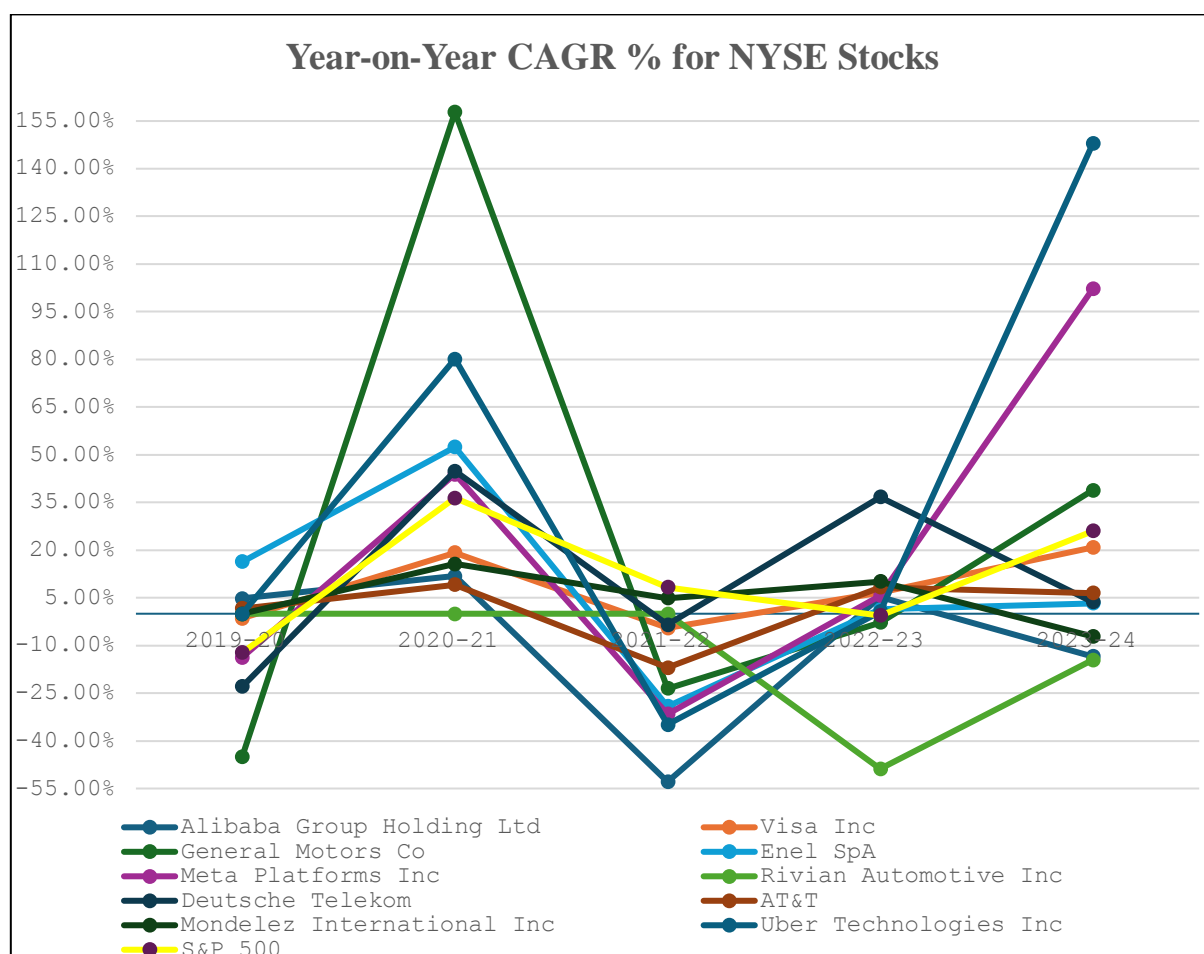
- Stocks listed on Shanghai Stock Exchange

Year-on-Year CAGR % for SSE Stocks						
SR	ISSUER NAME	2019-20	2020-21	2021-22	2022-23	2023-24
1	Agricultural Bank of China Ltd	-6.15%	3.19%	2.05%	9.21%	31.54%
2	PetroChina Co Ltd	-36.31%	-0.57%	35%	16.45%	32.32%
3	China Shenhua Energy Co Ltd	-13.84%	36.72%	70.41%	-0.96%	46.42%
4	China Mobile Ltd	-	-	-	47.31%	9.15%
5	China Telecom Corp Ltd	-	-	-	75.38%	-5.83%
6	China Construction Bank Corp	-11.15%	19.5%	-1.34%	4.02%	16.03%
7	Semiconductor Manufacturing In	-	-	-15.71%	26.16%	-29.1%
8	China State Construction Engin	-11.52%	2.85%	15.18%	-3.27%	-16.72%
9	Industrial & Commercial Bank of China	-7.45%	12.8%	-2%	-0.61%	19.3%
10	CNOOC Ltd	-	-	-	10.87%	60.69%
IN COMPARISON WITH						
	SSE COMPOSITE INDEX	-10.66%	20.34%	-5.65%	7.41%	-8.49%



- Stocks listed on New York Stock Exchange (NYSE)

Year-on-Year CAGR % for NYSE Stocks						
	ISSUER NAME	2019-20	2020-21	2021-22	2022-23	2023-24
1	Alibaba Group Holding Ltd	4.8%	11.87%	-52.89%	5.24%	-13.41%
2	Visa Inc	-1.41%	19.21%	-4.46%	6.62%	20.86%
3	General Motors Co	-44.95%	157.78%	-23.56%	-2.81%	38.82%
4	Enel SpA	16.41%	52.43%	-29.17%	1.38%	3.25%
5	Meta Platforms Inc	-13.75%	43.88%	-31.6%	5.72%	102.27%
6	Rivian Automotive Inc	-	-	-	-48.81%	-14.59%
7	Deutsche Telekom	-22.93%	44.91%	-3.42%	36.74%	3.69%
8	AT&T	1.67%	9.08%	-16.95%	8.32%	6.49%
9	Mondelez International Inc	-0.02%	15.69%	4.93%	10.10%	-7.17%
10	Uber Technologies Inc	-	80.08%	-34.85%	0.7%	147.95%
IN COMPARISON WITH						
	S&P 500	-12.26%	36.41%	8.35%	-0.55%	26.02%

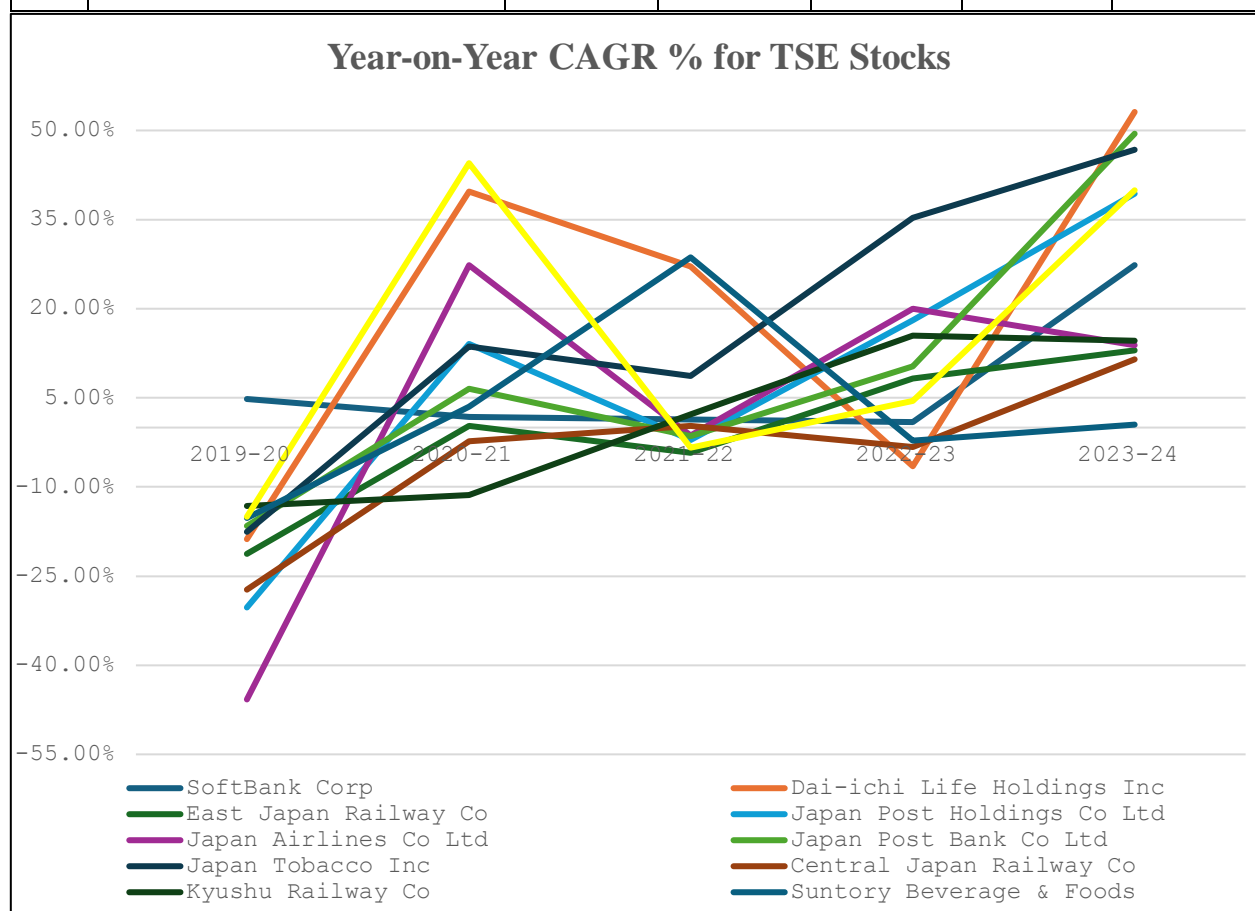


- Stocks listed on Tokyo Stock Exchange (TSE)

Year-on-Year CAGR % for TSE Stocks						
	ISSUER NAME	2019-20	2020-21	2021-22	2022-23	2023-24



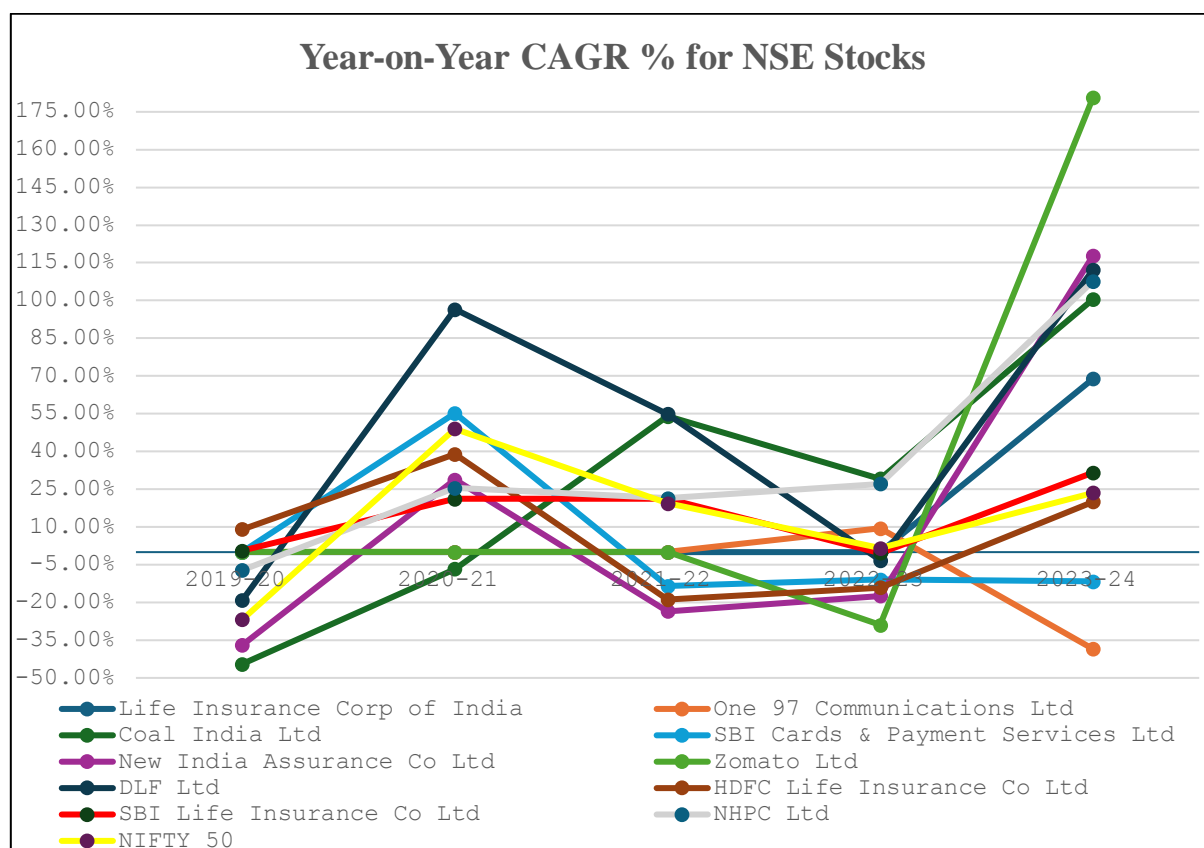
1	SoftBank Corp	4.76%	1.78%	1.31%	0.92%	27.33%
2	Dai-ichi Life Holdings Inc	-18.78%	39.75%	27.14%	-6.51%	53.11%
3	East Japan Railway Co	-21.26%	0.31%	-4.28%	8.3%	12.99%
4	Japan Post Holdings Co Ltd	-30.28%	14.1%	-2.09%	18.1%	39.36%
5	Japan Airlines Co Ltd	-45.76%	27.32%	-1.34%	20.04%	13.81%
6	Japan Post Bank Co Ltd	-16.56%	6.51%	-1.4%	10.29%	49.45%
7	Japan Tobacco Inc	-17.55%	13.69%	8.67%	35.28%	46.75%
8	Central Japan Railway Co	-27.28%	-2.27%	0.25%	-3.28%	11.48%
9	Kyushu Railway Co	-13.2%	-11.33%	2.24%	15.47%	14.62%
10	Suntory Beverage & Foods	-15.22%	3.51%	28.64%	-2.23%	0.54%
IN COMPARISON WITH						
	Nikkei 225	-15.01%	44.49%	-3.44%	4.45%	39.9%



• Stocks listed on National Stock Exchange (NSE)

Year-on-Year CAGR % for NSE Stocks						
	ISSUER NAME	2019-20	2020-21	2021-22	2022-23	2023-24
1	Life Insurance Corp of India	-	-	-	-	68.86%
2	One 97 Communications Ltd	-	-	-	9.48%	-38.48%
3	Coal India Ltd	-44.46%	-6.77%	54.02%	29.20%	100.47%
4	SBI Cards & Payment Services Ltd	-	55.22%	-13.46%	-10.91%	-11.62%
5	New India Assurance Co Ltd	-36.96%	28.79%	-23.45%	-17.36%	117.77%
6	Zomato Ltd	-	-	-	-28.92%	180.59%

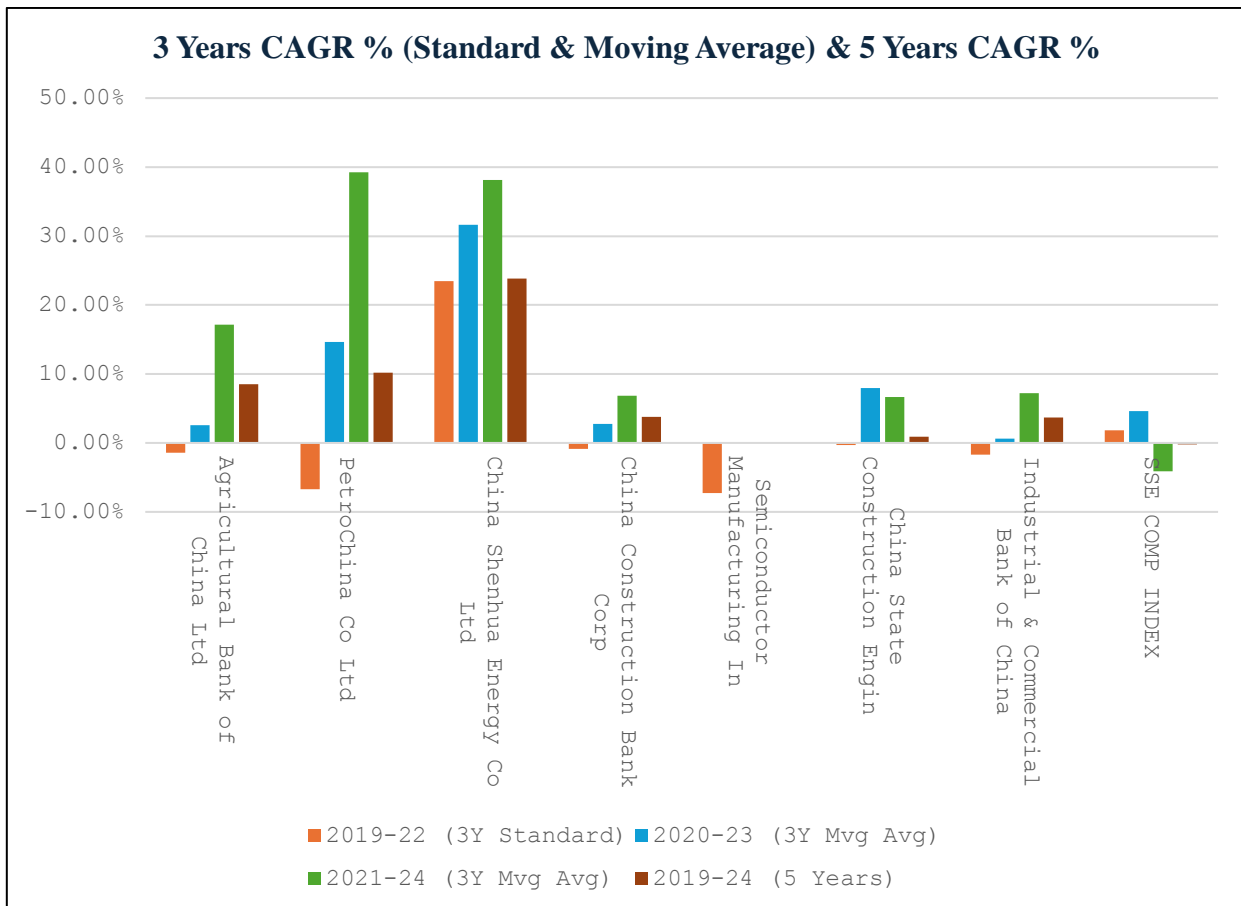
7	DLF Ltd	-19.13%	96.48%	54.84%	-3.32%	112.13%
8	HDFC Life Insurance Co Ltd	9.10%	38.95%	-18.84%	-14.05%	19.95%
9	SBI Life Insurance Co Ltd	0.51%	21.19%	21.10%	-0.40%	31.59%
10	NHPC Ltd	-7.17%	25.44%	21.38%	27.18%	107.69%
IN COMPARISON WITH						
	NIFTY 50	-26.82%	48.99%	19.37%	1.5%	23.59%



## 2. 3 Years (Standard & Moving) CAGR & 5 Years CAGR

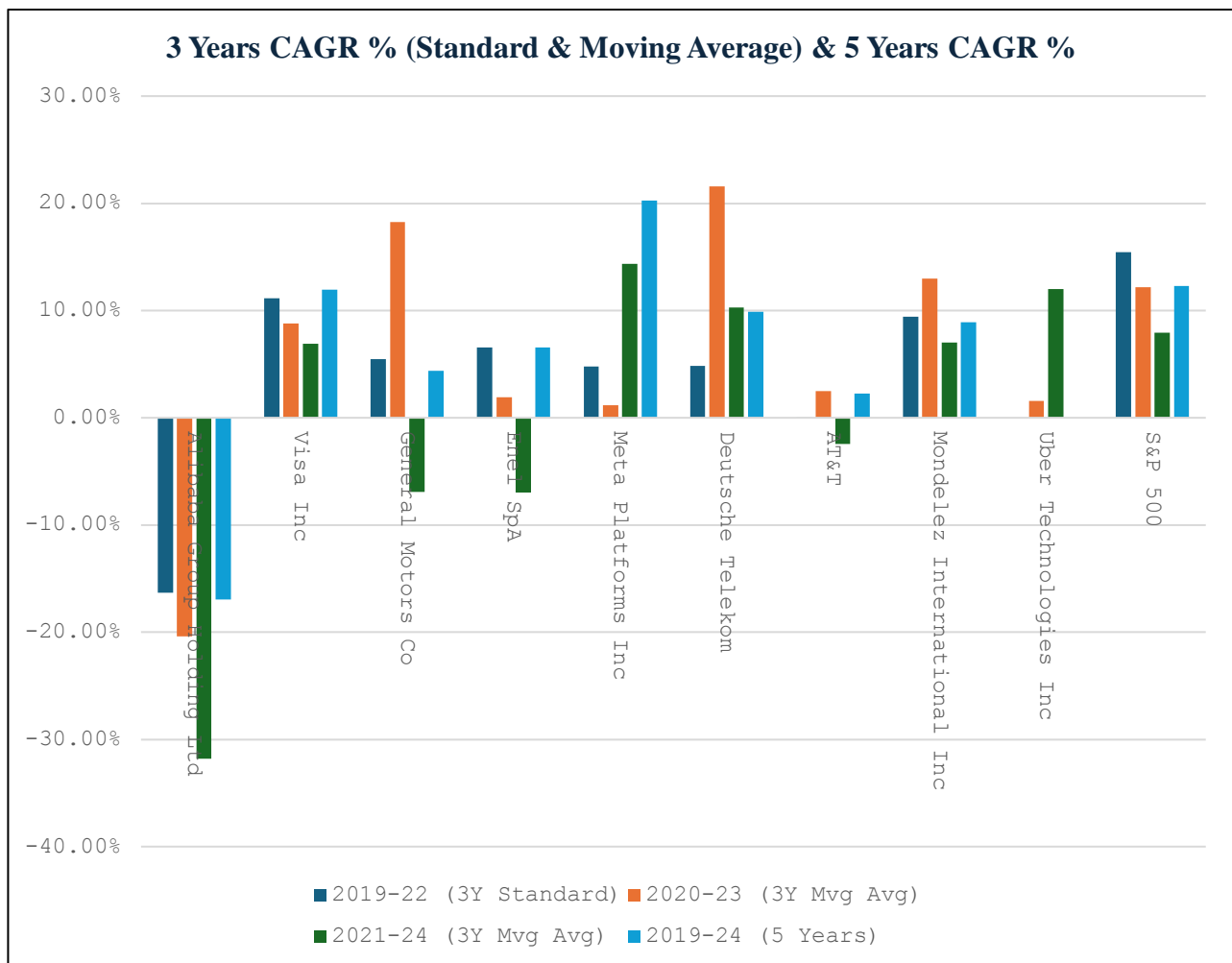
- Stocks listed on Shanghai Stock Exchange

3 Years CAGR % (Standard & Moving Average) & 5 Years CAGR %					
Sr No.	ISSUER NAME	2019-22 (3Y Standard)	2020-23 (3Y Mvg Avg)	2021-24 (3Y Mvg Avg)	2019-24 (5 Years)
1	Agricultural Bank of China Ltd	-1.43%	2.59%	17.12%	8.56%
2	PetroChina Co Ltd	-6.70%	14.62%	39.25%	10.19%
3	China Shenhua Energy Co Ltd	23.47%	31.63%	38.17%	23.85%
4	China Mobile Ltd	-	-	-	-
5	China Telecom Corp Ltd	-	-	-	-
6	China Construction Bank Corp	-0.89%	2.72%	6.86%	3.79%
7	Semiconductor Manufacturing In	-7.23%	-	-	-
8	China State Construction Engin	-0.27%	7.98%	6.66%	0.88%
9	Industrial & Commercial Bank of China	-1.66%	0.65%	7.21%	3.64%
10	CNOOC Ltd	-	-	-	-
IN COMPARISON WITH					
	SSE COMP INDEX	1.85%	4.6%	-4.09%	-0.24%



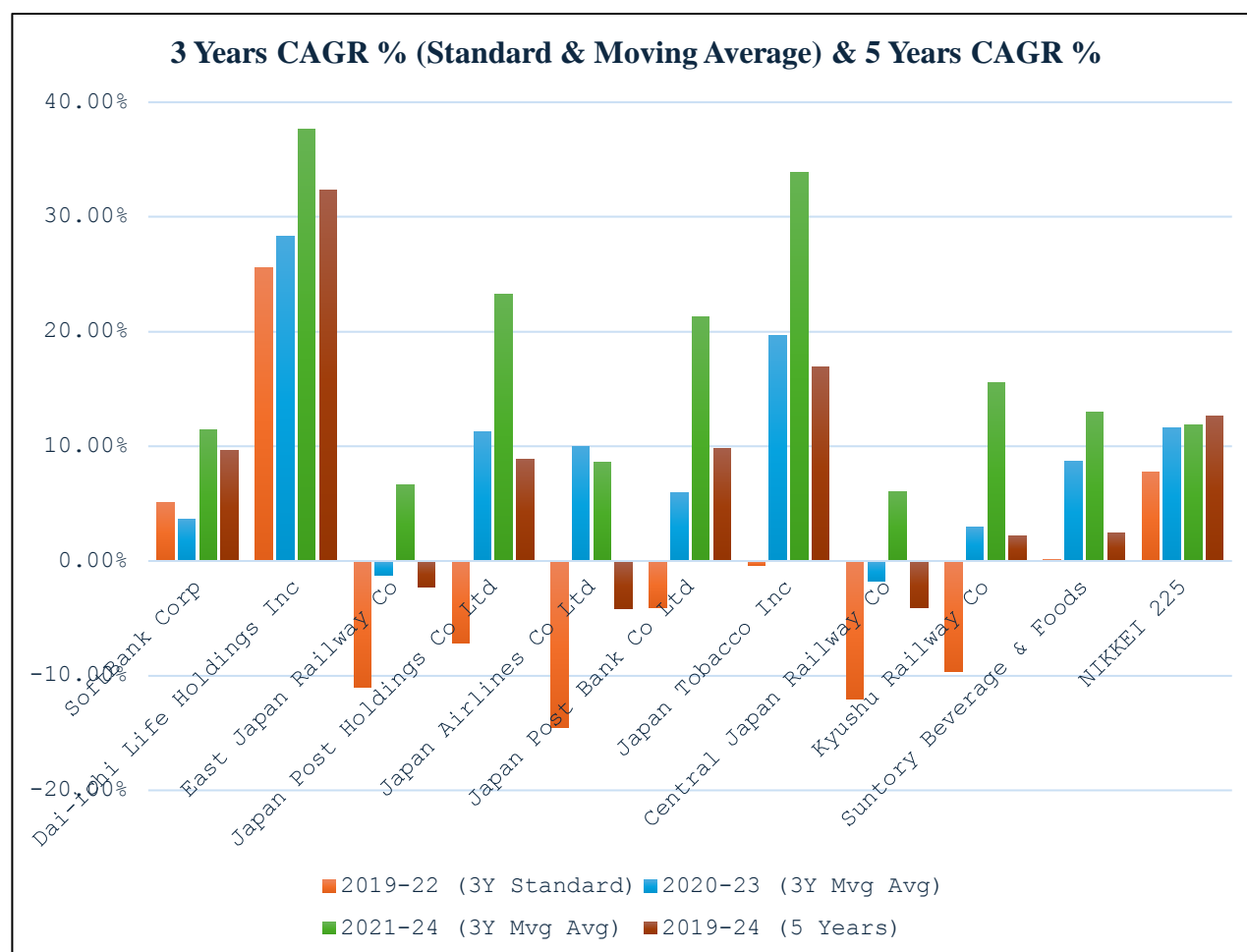
- Stocks listed on New York Stock Exchange (NYSE)

3 Years CAGR % (Standard & Moving Average) & 5 Years CAGR %					
Sr No .	ISSUER NAME	2019-22 (3Y Standard)	2020-23 (3Y Mvg Avg)	2021-24 (3Y Mvg Avg)	2019-24 (5 Years)
1	Alibaba Group Holding Ltd	-16.30%	-20.41%	-31.78%	-16.95%
2	Visa Inc	11.17%	8.79%	6.89%	11.92%
3	General Motors Co	5.46%	18.24%	-6.9%	4.37%
4	Enel SpA	6.53%	1.93%	-6.98%	6.56%
5	Meta Platforms Inc	4.76%	1.16%	14.35%	20.24%
6	Rivian Automotive Inc	-	-	-	-
7	Deutsche Telekom	4.86%	21.59%	10.31%	9.89%
8	AT&T	-0.03%	2.47%	-2.42%	2.25%
9	Mondelez International Inc	9.42%	12.97%	7.02%	8.88%
10	Uber Technologies Inc	-	1.55%	12.02%	-
IN COMPARISON WITH					
	S&P 500	15.43%	12.16%	7.91%	12.27%



- Stocks listed on Tokyo Stock Exchange (TSE)

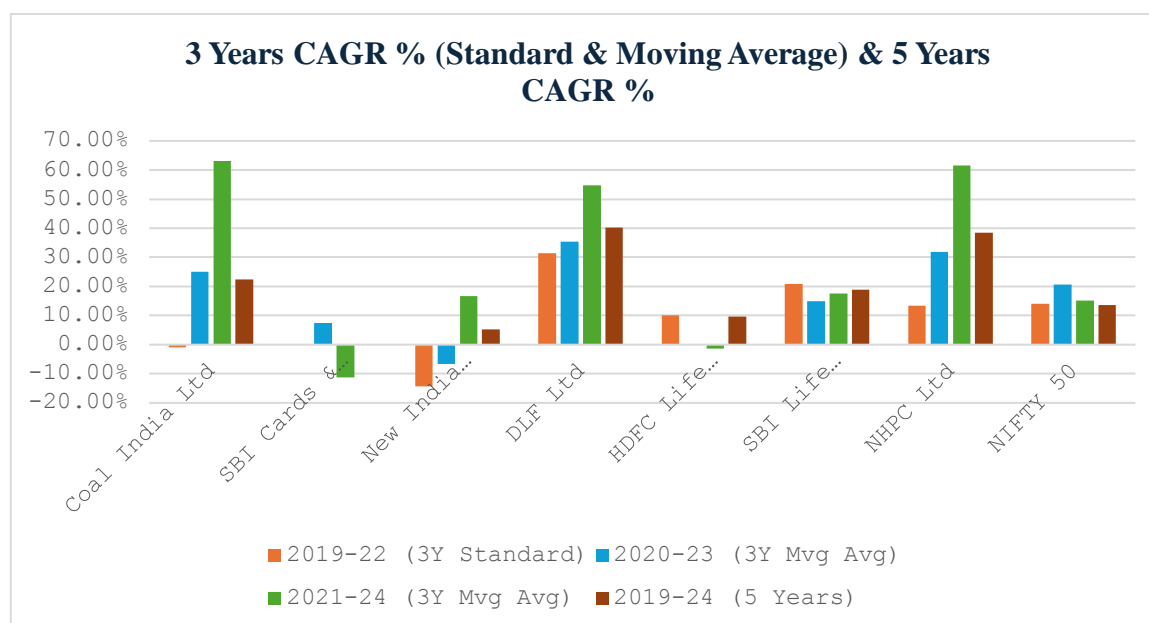
3 Years CAGR % (Standard & Moving Average) & 5 Years CAGR %					
Sr No.	ISSUER NAME	2019-22 (3Y Standard)	2020-23 (3Y Mvg Avg)	2021-24 (3Y Mvg Avg)	2019-24 (5 Years)
1	SoftBank Corp	5.10%	3.66%	11.43%	9.65%
2	Dai-ichi Life Holdings Inc	25.59%	28.32%	37.67%	32.38%
3	East Japan Railway Co	-10.98%	-1.22%	6.61%	-2.23%
4	Japan Post Holdings Co Ltd	-7.19%	11.24%	23.29%	8.88%
5	Japan Airlines Co Ltd	-14.54%	10%	8.59%	-4.12%
6	Japan Post Bank Co Ltd	-4.04%	5.98%	21.28%	9.84%
7	Japan Tobacco Inc	-0.37%	19.63%	33.9%	16.92%
8	Central Japan Railway Co	-12.02%	-1.76%	6.08%	-4.10%
9	Kyushu Railway Co	-9.66%	2.94%	15.56%	2.16%
10	Suntory Beverage & Foods	0.16%	8.72%	12.96%	2.40%
IN COMPARISON WITH					
	NIKKEI 225	7.72%	11.57%	11.9%	12.64%



• Stocks listed on National Stock Exchange (NSE)

3 Years CAGR % (Standard & Moving Average) & 5 Years CAGR %					
SR NO.	ISSUER NAME	2019-22 (3Y Standard)	2020-23 (3Y Mvg Avg)	2021-24 (3Y Mvg Avg)	2019-24 (5 Years)
1	Life Insurance Corp of India	-	-	-	-
2	One 97 Communications Ltd	-	-	-	-
3	Coal India Ltd	-0.89%	25.07%	63.21%	22.40%
4	SBI Cards & Payment Services Ltd	-	7.47%	-11.29%	-
5	New India Assurance Co Ltd/The	-14.42%	-6.61%	16.6%	5.35%
6	Zomato Ltd	-	-	-	-
7	DLF Ltd	31.32%	35.3%	54.79%	40.24%
8	HDFC Life Insurance Co Ltd	10.09%	0.07%	-1.32%	9.58%
9	SBI Life Insurance Co Ltd	20.82%	15.03%	17.61%	18.83%
10	NHPC Ltd	13.49%	31.88%	61.53%	38.39%
IN COMPARISON WITH					
	NIFTY 50	14.13%	20.75%	15.13%	13.70%





### 3. Issue Price to Current Price CAGR

- Stocks listed on Shanghai Stock Exchange

SR. NO	Issuer Name	Offer Date	No. of years since listing	Offer Price (in CNY)	March-24 Price (in CNY)	CAGR
1	Agricultural Bank of China Ltd	7/15/2010	13.6	2.68	3.92	2.83%
2	PetroChina Co Ltd	11/5/2007	16.3	16.7	9.39	-3.46%
3	China Shenhua Energy Co Ltd	10/9/2007	16.4	36.99	37.14	0.02%
4	China Construction Bank Corp	9/25/2007	16.4	6.45	6.37	-0.08%
5	China Telecom Corp Ltd	8/20/2021	2.5	4.53	5.82	10.40%
6	China State Construction Engin	7/29/2009	14.6	4.18	4.98	1.21%
7	Industrial & Commercial Bank of China	10/27/2006	17.4	3.12	4.91	2.65%
8	China Mobile Ltd	1/5/2022	2.2	57.58	101.14	29.90%
9	Semiconductor Manufacturing In	7/16/2020	3.6	27.46	43.66	13.64%
10	CNOOC Ltd	4/21/2022	1.9	10.8	28.04	66.76%

- Stocks listed on New York Stock Exchange (NYSE)

SR. NO	Issuer Name	Offer Date	No. of years since listing	Offer Price (in CNY)	March-24 Price (in CNY)	CAGR
1	Alibaba Group Holding Ltd	9/18/2014	9.5	68	70	0.43%
2	Visa Inc	3/18/2008	16.0	44	277	12.21%
3	General Motors Co	11/17/2010	13.3	33	44	2.24%
4	Enel SpA	11/2/1999	24.3	45	6	-7.73%
5	Meta Platforms Inc	5/17/2012	11.8	38	483	24.07%
6	Rivian Automotive Inc	11/9/2021	2.3	78	10	-57.26%
7	Deutsche Telekom	11/17/1996	27.3	18.9	23	0.78%
8	AT&T	4/26/2000	23.9	29.5	16	-2.37%
9	Mondelez International Inc	6/12/2001	22.7	31	68	3.53%
10	Uber Technologies Inc	5/9/2019	4.8	45	76	11.79%

- Stocks listed on National Stock Exchange (NSE)

SR. NO	Issuer Name	Offer Date	No. of years since listing	Offer Price (in CNY)	March-24 Price (in CNY)	CAGR
1	Life Insurance Corp of India	5/17/2022	1.8	949	911	-2.25%
2	One 97 Communications Ltd	11/18/2021	2.3	2150	402	-51.96%
3	Coal India Ltd	11/4/2010	13.3	245	408	3.91%
4	SBI Cards & Payment Services Ltd	3/16/2020	4.0	755	678	-2.68%

5	New India Assurance Co Ltd/The	11/13/2017	6.3	800	225	-18.22%
6	Zomato Ltd	7/23/2021	2.6	76	182	39.80%
7	DLF Ltd	7/5/2007	16.7	525	891	3.23%
8	HDFC Life Insurance Co Ltd	11/17/2017	6.3	290	631	13.16%
9	SBI Life Insurance Co Ltd	10/3/2017	6.4	700	1491	12.52%
10	NHPC Ltd	9/1/2009	14.5	36	87	6.32%

- Stocks listed on Tokyo Stock Exchange (TSE)

SR. NO	Issuer Name	Offer Date	No. of years since listing	Offer Price (in CNY)	March-24 Price (in CNY)	CAGR
1	SoftBank Corp	12/19/2018	5.2	150	186	4.33%
2	Dai-ichi Life Holdings Inc	4/1/2010	13.9	140	1269	17.15%
3	East Japan Railway Co	10/26/1993	30.4	-	2867	-
4	Japan Post Holdings Co Ltd	11/4/2015	8.3	1400	1476	0.64%
5	Japan Airlines Co Ltd	9/19/2012	11.5	3790	2823	-2.54%
6	Japan Post Bank Co Ltd	11/4/2015	8.3	1450	1573	0.98%
7	Japan Tobacco Inc	10/27/1994	29.4	-	3872	-
8	Central Japan Railway Co	10/8/1997	26.4	359	3710	9.25%
9	Kyushu Railway Co	10/26/2016	7.4	2600	3405	3.74%
10	Suntory Beverage & Foods	7/3/2013	10.7	3100	4951	4.49%

## 6.2 Ratio Analysis

- Stocks listed on Shanghai Stock Exchange

Company Name	Ratio (in%)	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024
Agricultural Bank of China Ltd	RoIC	-	-	-	-	-
	5 Yr. EBITDA	-	-	-	-	-
	Net D/E	-67.43	-21.44	-28.78	-23.40	-15.05
	Current Ratio	-	-	-	-	-
	Sustainable Growth Rate	8.89	7.80	8.57	7.67	7.44
PetroChina Co Ltd	RoIC	4.25	2.24	6.02	8.35	8.60
	5 Yr. EBITDA	-0.20	0.56	10.06	9.64	6.34
	Net D/E	36.19	25.77	21.77	14.59	8.94
	Current Ratio	0.71	0.80	0.93	0.98	0.96
	Sustainable Growth Rate	1.59	-1.06	4.09	5.43	5.73
China Shenhua Energy Co Ltd	RoIC	10.68	9.60	11.83	15.91	13.68
	5 Yr. EBITDA	0.13	5.13	6.86	4.62	3.31
	Net D/E	-6.40	-14.07	-20.88	-23.27	-20.53
	Current Ratio	1.68	2.48	2.27	2.14	2.17
	Sustainable Growth Rate	4.84	0.90	-0.10	5.75	4.88
China Construction Bank Corp	RoIC	-	-	-	-	-
	5 Yr. EBITDA	-	-	-	-	-
	Net D/E	-39.64	-28.55	-5.74	-9.75	12.57
	Current Ratio	-	-	-	-	-
	Sustainable Growth Rate	9.15	8.43	8.71	8.53	8.03
China Telecom Corp Ltd	RoIC	4.26	4.52	4.79	4.88	5.25
	5 Yr. EBITDA	3.95	4.78	5.42	4.99	5.60
	Net D/E	27.24	16.63	-3.78	0.25	-5.96
	Current Ratio	0.28	0.31	0.48	0.50	0.55
	Sustainable Growth Rate	2.67	3.44	2.62	2.24	2.08
China State Construction Engin	RoIC	7.15	6.99	7.34	6.06	6.03
	5 Yr. EBITDA	12.89	11.91	14.65	9.30	6.24
	Net D/E	36.58	36.87	39.95	56.06	64.42
	Current Ratio	1.28	1.32	1.34	1.31	1.29
	Sustainable Growth Rate	14.30	12.87	13.02	11.20	10.84
	RoIC	-	-	-	-	-
	5 Yr. EBITDA	-	-	-	-	-

Industrial & Commercial Bank of China	Net D/E	-70.66	-48.06	-13.52	-18.25	-9.78
	Current Ratio	-	-	-	-	-
	Sustainable Growth Rate	9.08	8.26	8.41	7.88	7.33
China Mobile Ltd	RoIC	9.06	8.43	7.80	7.93	7.96
	5 Yr. EBITDA	4.95	4.13	3.88	3.98	4.35
	Net D/E	-32.67	-34.31	-36.54	-18.09	-16.77
	Current Ratio	1.15	1.12	1.02	0.86	0.89
	Sustainable Growth Rate	4.39	4.58	4.11	3.44	2.83
Semiconductor Manufacturing In	RoIC	0.32	1.34	4.45	5.21	0.86
	5 Yr. EBITDA	11.60	16.86	24.99	30.23	23.26
	Net D/E	16.31	-16.44	-7.42	4.79	12.25
	Current Ratio	2.14	3.90	3.42	2.36	1.79
	Sustainable Growth Rate	3.83	6.68	10.53	10.02	4.60
CNOOC Ltd	RoIC	10.28	4.30	11.83	20.64	15.33
	5 Yr. EBITDA	0.23	-0.82	18.28	20.99	12.24
	Net D/E	-1.52	3.70	-5.61	-12.57	-11.18
	Current Ratio	2.26	2.18	2.21	2.33	2.02
	Sustainable Growth Rate	6.75	1.78	3.12	15.20	11.02

• Stocks listed on New York Stock Exchange (NYSE)

Company Name	Ratio (in%)	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024
Alibaba Group Holding Ltd	RoIC	6.92	7.96	6.67	3.95	5.53
	5 Yr. EBITDA	28.79	38.31	31.91	15.60	11.60
	Net D/E	-36.72	-42.89	-49.76	-46.40	-51.17
	Current Ratio	1.30	1.91	1.70	1.66	1.81
	Sustainable Growth Rate	20.42	23.93	17.76	6.57	5.55
Visa Inc	RoIC	21.99	18.26	18.61	24.33	27.37
	5 Yr. EBITDA	14.00	9.38	14.80	9.28	10.22
	Net D/E	2.45	7.11	-2.46	-0.08	-10.52
	Current Ratio	1.78	1.91	2.06	1.76	1.85
	Sustainable Growth Rate	34.56	28.12	29.60	36.47	40.54
General Motors Co	RoIC	3.09	2.85	3.51	4.21	4.92
	5 Yr. EBITDA	17.87	8.70	3.21	0.94	3.52
	Net D/E	-6.26	-9.61	-7.26	-9.05	-5.02
	Current Ratio	0.88	1.01	1.10	1.10	1.08
	Sustainable Growth Rate	10.95	13.14	18.78	13.78	14.43
Enel SpA	RoIC	5.06	5.20	4.77	5.28	5.21
	5 Yr. EBITDA	1.99	0.42	1.23	5.03	4.80
	Net D/E	108.81	122.43	154.40	175.37	149.90
	Current Ratio	0.91	0.83	0.87	0.95	0.85
	Sustainable Growth Rate	-3.74	-3.50	-2.74	-0.13	-1.68
Meta Platforms Inc	RoIC	17.99	22.52	27.53	15.59	21.78
	5 Yr. EBITDA	37.69	38.02	30.67	11.20	15.48
	Net D/E	-43.60	-39.58	-26.86	-10.71	-17.94
	Current Ratio	4.40	5.05	3.15	2.20	2.67
	Sustainable Growth Rate	19.96	25.42	31.10	18.52	28.04
Rivian Automotive Inc	RoIC	-	-31.48	-34.49	-37.55	-38.62
	5 Yr. EBITDA	-	-	-	-	-
	Net D/E	-92.34	-72.62	-85.29	-72.16	-49.54
	Current Ratio	12.39	4.94	14.13	5.42	4.95
	Sustainable Growth Rate	-	-	-	-	-
Deutsche Telekom	RoIC	5.45	5.39	4.20	5.20	5.78
	5 Yr. EBITDA	8.76	16.01	12.19	11.92	15.33
	Net D/E	170.80	169.32	162.54	158.56	143.17
	Current Ratio	0.75	1.00	1.00	0.86	1.01
	Sustainable Growth Rate	3.26	3.88	2.06	9.42	2.41

AT&T	RoIC	5.45	0.89	3.55	-2.54	5.76
	5 Yr. EBITDA	15.20	-2.70	-0.43	-15.71	-2.59
	Net D/E	87.29	96.65	97.90	145.15	127.04
	Current Ratio	0.79	0.82	1.61	0.59	0.71
	Sustainable Growth Rate	-0.54	-	3.88	-	6.03
Mondelez International Inc	RoIC	8.91	7.48	8.48	5.38	8.81
	5 Yr. EBITDA	3.49	-11.89	12.04	2.54	10.96
	Net D/E	64.85	62.02	58.90	80.92	64.94
	Current Ratio	0.50	0.66	0.74	0.60	0.62
	Sustainable Growth Rate	8.90	6.70	8.71	2.51	9.96
Uber Technologies Inc	RoIC	-47.16	-22.20	-11.13	-13.40	4.74
	5 Yr. EBITDA	-	-	-	-	-
	Net D/E	-23.57	19.99	45.89	84.98	49.99
	Current Ratio	2.47	1.44	0.98	1.04	1.19
	Sustainable Growth Rate	-	-	-	-	19.53

• Stocks listed on Tokyo Stock Exchange (TSE)

Company Name	Ratio (in%)	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024
SoftBank Corp	RoIC	10.98	8.90	7.86	6.97	8.06
	5 Yr. EBITDA	-	-	8.97	8.39	10.34
	Net D/E	128.01	226.85	147.14	135.37	108.53
	Current Ratio	0.89	0.75	0.76	0.77	0.78
	Sustainable Growth Rate	23.93	5.53	6.71	6.43	5.96
Dai-ichi Life Holdings Inc	RoIC	5.78	4.11	1.59	3.51	2.90
	5 Yr. EBITDA	-	-	-	-	-
	Net D/E	23.15	38.10	43.43	58.26	16.39
	Current Ratio	-	-	-	-	-
	Sustainable Growth Rate	4.25	-1.00	6.87	7.04	2.52
East Japan Railway Co	RoIC	5.65	4.32	-7.05	-1.15	1.62
	5 Yr. EBITDA	2.48	-0.66	-	-22.08	-8.98
	Net D/E	94.28	100.08	163.08	188.32	183.30
	Current Ratio	0.68	0.55	0.44	0.54	0.69
	Sustainable Growth Rate	8.03	4.38	-	-	2.53
Japan Post Holdings Co Ltd	RoIC	-	-	-	-	-
	5 Yr. EBITDA	-	9.69	10.24	11.07	7.96
	Net D/E	-	1.73	1.59	2.18	1.73
	Current Ratio	-	-	-	-	-
	Sustainable Growth Rate	-	2.42	2.69	2.4	2.01
Japan Airlines Co Ltd	RoIC	14.94	2.86	-23.64	-13.65	1.80
	5 Yr. EBITDA	3.77	-1.16	-	-	-
	Net D/E	-31.64	-4.93	10.88	51.32	33.40
	Current Ratio	1.68	1.01	1.19	1.60	1.38
	Sustainable Growth Rate	10.10	2.68	-	-	2.91
Japan Post Bank Co Ltd	RoIC	-	-	-	-	-
	5 Yr. EBITDA	-	-	-	-	-
	Net D/E	-399.49	-503.72	-452.59	-508.81	-606.92
	Current Ratio	-	-	-	-	-
	Sustainable Growth Rate	0.69	0.84	0.91	1.55	1.42
Japan Tobacco Inc	RoIC	10.38	9.67	9.84	9.91	11.18
	5 Yr. EBITDA	-2.66	-1.57	-1.28	3.83	3.23
	Net D/E	24.46	18.72	8.92	4.20	4.13
	Current Ratio	1.28	1.51	1.55	1.74	1.69
	Sustainable Growth Rate	2.83	1.43	3.38	3.43	3.74
Central Japan Railway Co	RoIC	6.21	5.45	-1.66	-0.05	3.14
	5 Yr. EBITDA	3.62	2.27	-55.33	-24.39	-7.52
	Net D/E	42.23	43.77	58.79	74.99	66.91

	Current Ratio	5.58	5.41	3.67	3.64	3.72
	Sustainable Growth Rate	12.57	10.09	-	-	5.27
Kyushu Railway Co	RoIC	11.03	7.51	-3.14	1.88	3.86
	5 Yr. EBITDA	-	9.04	-35.49	-14.76	-4.17
	Net D/E	19.37	31.98	51.45	76.31	82.44
	Current Ratio	1.05	0.81	1.39	1.14	1.01
	Sustainable Growth Rate	8.68	4.04	-	-0.35	4.16
Suntory Beverage & Foods	RoIC	7.05	5.61	6.90	7.87	7.64
	5 Yr. EBITDA	2.81	-1.00	1.60	2.97	3.98
	Net D/E	13.16	10.05	4.13	-2.99	-4.37
	Current Ratio	0.97	1.05	1.14	1.20	1.19
	Sustainable Growth Rate	6.09	3.65	5.43	6.31	5.65

• Stocks listed on National Stock Exchange (NSE)

Company Name	Ratio (in%)	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024
Life Insurance Corp of India	RoIC	3.28	2.43	0.13	11.25	7.63
	5 Yr. EBITDA	-	-	-	-	-
	Net D/E	-	-	-	-	-
	Current Ratio	3.00	2.23	2.78	3.32	3.09
	Sustainable Growth Rate	-	-	-	90.78	136.82
One 97 Communications Ltd	RoIC	-	-36.54	-23.41	-22.91	-14.47
	5 Yr. EBITDA	-	-	-	-	-
	Net D/E	-34.88	-40.80	-37.01	-35.25	-61.09
	Current Ratio	2.45	4.16	3.57	3.35	3.12
	Sustainable Growth Rate	-	-	-	-	-
Coal India Ltd	RoIC	62.23	40.71	28.98	34.11	48.79
	5 Yr. EBITDA	7.03	4.47	-0.11	14.69	36.64
	Net D/E	-114.12	-67.89	-38.71	-73.21	-62.90
	Current Ratio	1.51	1.71	1.68	1.62	1.57
	Sustainable Growth Rate	40.27	31.80	8.27	17.28	32.25
SBI Cards & Payment Services Ltd	RoIC	-	-	-	-	-
	5 Yr. EBITDA	32.46	36.41	21.71	22.68	23.90
	Net D/E	356	316.32	275.31	282.17	302.70
	Current Ratio	-	-	-	-	-
	Sustainable Growth Rate	29.12	35.56	20.48	23.51	25.69
New India Assurance Co Ltd	RoIC	-	-	-	-	-
	5 Yr. EBITDA	-	-	-	-	-
	Net D/E	-35.57	-39.38	-59.64	-63.69	-58.61
	Current Ratio	-	-	-	-	-
	Sustainable Growth Rate	1.35	5.17	6.79	0.99	3.57
Zomato Ltd	RoIC	-	-138.47	-14.97	-14.08	-7.52
	5 Yr. EBITDA	-	-	-	-	-
	Net D/E	-88.73	-86.83	-37.52	-30.55	-37.40
	Current Ratio	4.21	1.75	8.02	10.60	7.52
	Sustainable Growth Rate	-	-	-	-	-
DLF Ltd	RoIC	4.13	-2.69	3.01	4.36	5.16
	5 Yr. EBITDA	-2.93	-17.80	-18.72	-12.68	-6.20
	Net D/E	29.44	15.96	13.51	8.28	1.57
	Current Ratio	1.31	1.83	2.08	2.32	2.30
	Sustainable Growth Rate	2.54	-	1.72	2.11	2.82
HDFC Life Insurance Co Ltd	RoIC	25.94	17.64	28.61	43.78	1.81
	5 Yr. EBITDA	-	-	-	-	-
	Net D/E	-22.05	-10.15	-5.78	-4.96	-1.68
	Current Ratio	-	-	-	-	-
	Sustainable Growth Rate	18.29	20.84	12.33	7.98	6.71
	RoIC	15.97	13.06	23.61	17.06	15.73



SBI Life Insurance Co Ltd	5 Yr. EBITDA	-	-	-	-	-
	Net D/E	-31.95	-16.28	-26.06	-27.57	-31.99
	Current Ratio	-	-	-	-	-
	Sustainable Growth Rate	15.98	17.43	12.60	11.86	11.93
NHPC Ltd	RoIC	3.85	6.76	5.52	6.70	5.86
	5 Yr. EBITDA	1.60	0.71	2.53	1.49	7.97
	Net D/E	45.19	56.99	53.70	63.88	63.81
	Current Ratio	2.41	1.52	1.51	1.34	2.21
	Sustainable Growth Rate	3.71	4.38	5.00	4.96	6.95

### 6.3 Interpretations

#### 1. Year-on-year CAGR

##### Shanghai Stock Exchange (SSE)

With a robust 20.34% comeback in 2020-21 but finishing in negative territory (-8.49%), the SSE Composite Index had varying performance showing high volatility.

##### Outperformers

- Shenhua Energy of China: Showed great sector growth, outperformed index in 2020-21 (+36.72% vs. +20.34%) and 2021-22 (+70.41% vs. -5.65%).
- PetroChina: Benefiting from rising oil prices, very volatile yet exceeded the index in 2021-22 (+35% vs. -5.65%) and 2023-24 (+32.32% vs. -8.49%).
- China Telecom and Mobile China: Lacked data for early years, however China Telecom greatly exceeded in 2022-23 (+75.38% vs. +7.41%), therefore indicating a telecom boom.

##### Underperformers

- Silicon Manufacturing of Semesters: Underperformed against Index in 2023-24 (-29.1% vs. -8.49%), pointing China's semiconductor industry's weakness.

##### New York Stock Exchange (NYSE)

Showing a tech-led bull run, the S&P 500 recovered powerfully in 2020-21 (+36.41%), and 2023-24 (+26.02%).

##### Outperformers

- Meta: Underperformed in 2021-22 (-31.6% vs. +8.35%), although matched the S&P 500 in 2020-21 (43.88% vs. 36.41%). Big rebound in 2023-24 (+102.27% against +26.02%).
- Alibaba: Underperformed greatly in 2021-22 (-52.89% vs. +8.35%), brought on by government crackdowns. Still poor in 2023-24 (-13.41% against +26.02%).
- Uber: Extreme volatility: After excelling in 2020-21 (+80.08% vs. +36.41%), it collapsed in 2021-22 (-34.85%) before a massive 147.95% increase in 2023-24.

##### Underperformers

- GM: Highly cyclical. Although underperforming in following years, Massive 157.78% outperformance in 2020-21.

##### Tokyo Stock Exchange (TSE)

Market Overview: With recovering 44.49% in 2020-21 and 39.9% in 2023-24 the Nikkei 225 was rather erratic.

##### Outperformers

- Dai-ichi Life Assets: Benefitted from banking sector expansion; outperformed in 2023-24 (+53.11% vs. +39.9%).
- Japan Tobacco: Strong 46.75% return in 2023-24, almost surpassing the index by ~7%.
- Japan Post Corporation: Strong postal/logistics sector success is shown by beating the index in 2022-23 (+18.1% vs. +4.45%) and 2023-24.

##### Underperformers

- Central Japan Railroads: Underperformed the benchmark in every year and showed weakness in post-COVID transportation recovery.

##### National Stock Exchange (NSE)

Strong recovery in 2020-21 (+48.99%), and 2023-24 (+23.59%), NIFTY 50 showed.

##### Outperformers

- Zomato: Benefited from the expansion of the digital economy; outperformed greatly in 2023-24 (+180.59% vs. +23.59%).
- Coal India: Strong outperformance fueled by energy demand in 2023-24 (+100.47% vs. +23.59%).
- DLF: Reflecting India's real estate explosion, huge increase in 2023-24 (+112.13% vs. +23.59%).
- LIC India: debuted in 2023-24 with a tremendous +68.86% return, suggesting great investor insurance interest.

##### Underperformers

- SBI Card: Stuck in a rising rate environment, significantly underperformed in 2022-23 and 2023-24 (-11.62% vs. +23.59%).

#### 2. 3 Years & 5 Years CAGR

##### Shanghai Stock Exchange (SSE)

The compound annual growth rate (CAGR) experienced a decline from 1.85% in 2019-22 to 4.09% in 2021-24, suggesting that the market environment has deteriorated in recent years.

##### Outperformers

- China Shenhua Energy Co Ltd: (23.47% → 38.17% CAGR). A robust performer in all timeframes, substantially surpassing the SSE Index. This reflects the company's strong financials and the increasing demand for energy in China.
- PetroChina Co Ltd: (-6.70% → 39.25% CAGR) A significant shift from negative returns in 2019-22 to a compound annual growth rate (CAGR) of nearly 40% in

2021-24. This is most likely attributable to the global recovery of crude prices following the COVID-19 pandemic, which bolstered energy inventories.

- China Construction Bank Corp: (-0.89% → 6.86% CAGR) Steady but modest progress. Although banks in China are experiencing a recovery, their performance remains inferior to that of energy companies.

#### Underperformers

- Agricultural Bank of China Ltd: (-1.43% → 17.12% CAGR) A feeble 2019-22 period was followed by a robust recovery in 2021-24, which may have been the result of interest rate adjustments made by the Chinese central bank.
- Industrial & Commercial Bank of China: (CAGR of 7.21% → -1.66%) Another substantial state-owned bank that has experienced a gradual recovery, which is indicative of the difficult banking environment in China.

#### New York Stock Exchange (NYSE)

The S&P 500 Index experienced a progressive decrease in CAGR from 15.43% (2019-22) to 7.91% (2021-24), which was influenced by the economic downturn, rising interest rates, and volatility in the tech sector.

#### Outperformers

- Meta Platforms Inc: (4.76% → 14.35% CAGR) Cost-cutting initiatives, AI investments, and revenue growth in advertising are anticipated to contribute to a robust recovery in 2021-24.
- Visa Inc: (11.17% → 6.89% CAGR) Although still optimistic, there is a downward trend, which may be attributed to the global shift in consumer purchasing and the impact of rising interest rates on credit card usage.
- Deutsche Telekom: (4.86% → 10.31% CAGR) A reliable performer, suggesting a consistent demand for telecommunications services.

#### Underperformers

- Alibaba Group Holding Ltd: (-16.30% → -31.78% CAGR) The segment's least successful performer in the United States. The company's stock was adversely affected by regulatory crackdowns in China, declining e-commerce growth, and macroeconomic concerns.
- General Motors Co: (5.46% → -6.90% CAGR) It is probable that supply chain disruptions, elevated material costs, and EV competition will result in negative returns in 2021-24.

#### Tokyo Stock Exchange (TSE)

The Nikkei 225 Index maintained a modest upward trend, increasing from 7.72% (2019-22) to 12.64% (2019-24), indicating a more resilient market in comparison to China and the United States.

#### Outperformers

- Dai-ichi Life Holdings Inc: (25.59% → 37.67% CAGR) Consistent long-term growth is demonstrated by one of the insurance sector's most exceptional performers.

- Japan Tobacco Inc: (-0.37% → 33.9% CAGR) A substantial increase in performance, which is likely attributable to the stable cash flow, increased demand for tobacco products, and strong dividend distributions.

- Japan Post Holdings Co Ltd: (CAGR of 23.29% from -7.19% to 23.29%) A robust recovery, suggesting expansion in financial and postal services.

#### Underperformers

- East Japan Railway Co: (-10.98% → 6.61% CAGR) Despite a recovery, the Nikkei 225 continues to underperform because of the long-term impact of COVID-19 on travel demand.

- Japan Airlines Co Ltd: (-14.54% → 8.59% CAGR) Despite the resumption of international travel, the airline industry has experienced a slow recovery.

#### National Stock Exchange (NSE)

Sector-specific variations were apparent, even though the NIFTY 50 Index demonstrated consistent returns over a five-year period (13.70%).

#### Outperformers

- Coal India Ltd: (-0.89% → 63.21% CAGR) One of the most successful performers in all markets as a result of its robust financials and the increasing global demand for energy.

- DLF Ltd: (31.32% → 54.79% CAGR) A real estate growth is underway in India, which is being bolstered by the increasing demand for property and the low interest rates.

- NHPC Ltd: (13.49% → 61.53% CAGR) India's emphasis on hydropower initiatives and renewable energy sources has resulted in robust performance.

#### Underperformers

- HDFC Life Insurance Co Ltd: (10.09% → -1.32% CAGR) Declining trend, potentially as a result of regulatory changes and increased competition.

- SBI Cards & Payment Services Ltd: (CAGR of -11.29% in 2021-24) Concerns regarding credit card penetration and economic decline.

### 3. Issue Price to Current Price CAGR

Considering that an investor applied for an IPO and is holding the stock from its listing date up to March 2024, the stock CAGR percentage has been calculated as per number of years the stock has been held.

#### Shanghai Stock Exchange (SSE)

##### Good Returns

- China Telecom Corp Ltd → 10.4%
- China Mobile Ltd → 29.9%
- Semiconductor Manufacturing In → 13.64%
- CNOOC Ltd → 66.76%

##### Bad Returns

- Agricultural Bank of China Ltd → 2.83%
- China Shenhua Energy Co Ltd → 0.02%
- China Construction Bank Corp → -0.08%
- China State Construction Engin → 1.21%
- Industrial & Commercial Bank of China → 2.65%

**New York Stock Exchange (NYSE)****Good Returns**

- Visa Inc → 12.21%
- Meta Platforms Inc → 24.07%
- Uber Technologies Inc → 11.79%

**Bad Returns**

- General Motors Co → 2.24%
- Enel SpA → -7.73%
- Rivian Automotive Inc → -57.26%
- Deutsche Telekom → 0.78%
- AT&T → -2.37%
- Mondelez International Inc → 3.53%

**Tokyo Stock Exchange (TSE)****Good Returns**

- Dai-ichi Life Holdings Inc → 17.15%
- Central Japan Railway Co → 9.25%

**Bad Returns**

- SoftBank Corp → 4.33%
- Japan Post Holdings Co Ltd → 0.64%
- Japan Airlines Co Ltd → -2.54%
- Japan Post Bank Co Ltd → 0.98%
- Kyushu Railway Co → 3.74%
- Suntory Beverage & Foods → 4.49%

**National Stock Exchange (NSE)****Good Returns**

- Zomato Ltd → 39.80%
- HDFC Life Insurance Co Ltd → 13.16%
- SBI Life Insurance Co Ltd → 12.52%

**Bad Returns**

- Life Insurance Corp of India → -2.25%
- One 97 Communications Ltd → -51.96%
- Coal India Ltd → 3.91%
- SBI Cards & Payment Services Ltd → -2.68%
- New India Assurance Co Ltd/The → -18.22%
- DLF Ltd → 3.23%
- NHPC Ltd → 6.32%

**6.4 Limitations****1. Limited Historical Data & Financial Transparency:**

- Worldwide IPOs: Strict regulatory rules (SEC in the US, FCA in the UK) can lead companies in developed markets (US, UK) to have thorough financial disclosures. Many IPOs in developing nations (China, Southeast Asia) do, however, lack complete transparency.
- Indian Intellectual Property Orders: Strong disclosure rules are mandated by the Securities and Exchange Board of India (SEBI), although startups or newer enterprises can have little financial past. Many Indian IPOs—especially software startups—show significant pre-IPO losses, which complicates pricing. Investors in India and developing countries may depend more on management quality and market mood than on historical success.

**2. Market Volatility & Speculation: Worldwide IPOs**

- Due in great part to heavy institutional investor involvement and hedge fund trading, US IPOs—especially tech—show great volatility.
- For instance, Rivian (EV) jumped following IPO but then fell from overvaluation.
- India's IPOs: There is substantial retail involvement, which causes temporary speculative rises. For instance, Zomato's IPO experienced a huge retail spike but subsequently corrected.
- Comparatively to the US, lower institutional engagement results in more volatility. Impact: Retail investor excitement rather than strong institutional support drives Indian IPOs, which causes erratic volatility.
- Global IPOs: Underpricing and overpricing risks. To guarantee robust demand and hence benefit institutional investors, the US and the UK may experience underpricing of IPOs. For instance, price problems first caused trouble for Facebook's IPO.
- Indian intellectual products: Overpricing, in which demand from individual investors drives high values, is common occurrence for Indian IPOs. For instance, Paytm IPO was priced aggressively but dropped dramatically following list-price.
- Impact: Though post-IPO adjustments are typical, Indian firms sometimes profit from enthusiasm.

**3. Lock-in Periods & Insider Selling Worldwide IPOs:**

- Lock-up periods (90–180 days) in the US help to stop pre-IPO investors from selling too quickly. Mass insider selling sometimes causes a price decline following lock-up expiration.
- Indian intellectual property rights: While SEBI lets institutional investors leave early, it requires a one-year lock-in for promoters. Sharp price declines might follow from foreign investors (FIIs) leaving post-IPO.
- Impact: Institutional departures cause great selling pressure for Indian IPOs, hence influencing individual investors.

**4. Policy & Regulatory Risk: Worldwide IPOs**

- US IPOs must follow SEC rules, which could postpone listings. China has tight IPO restrictions and government participation in industries including technology.
- Indian intellectual property ownership: Tightening disclosure rules, SEBI now mandates comprehensive financial data and risk reports. Demand can be changed by government policies on foreign investments (FII limitations, taxes).
- Impact: Particularly in developing sectors, Indian regulatory concerns make IPOs erratic.
- Globally, post-IPO performance and long-term returns: Studies reveal that after three to five years, US IPOs generally lag the larger market. For example, Uber & Lyft IPOs suffered following first excitement.

- Indian intellectual property ownership: Many Indian IPOs are unable to maintain values following list-of-interest. For instance, inadequate foundations caused significant post-IPO price declines at Paytm, PB Fintech, Nykaa.
- Impact: Long-term underperformance results from Indian IPOs being generally momentum-driven rather than essentially strong.

## 7. Conclusion

### US IPO Market

- Pricing Mechanism: The US uses book-building strategies whereby institutional investors dominate price discovery process. Many times, underpriced to generate high initial demand, IPOs have a more consistent post-listing performance.
- Because of great institutional involvement and thorough regulatory control, the market is moderately volatile. For instance, Facebook's 2012 IPO experienced price challenges but institutional support helped it to eventually steady.
- Long term underperformance of IPO is not unusual, particularly in high-growth speculative industries (Uber, Lyft, Rivian).
- Key Reason: Rather than present profitability, many IPOs depend on future development estimates.
- Still the most liquid and evolved IPO market.
- Excellent for institutional investors looking for consistency in big-cap IPOs.
- IPO patterns in the next years will be influenced by regulatory changes (such as SPAC rules).

### China IPO Market

- China's tight IPO price restrictions result in government-imposed valuation ceilings. Excess demand and notable first-day price spikes follow from this. This sometimes results, though, post-IPO revisions motivated by changes in regulations.
- High volatility resulting from geopolitical concerns, foreign ownership limitations, and governmental interference
- For instance, regulatory issues caused Ant Group's IPO to be stopped, therefore highlighting China's erratic IPO scene.
- China Trend: Many IPOs enjoy brief spikes, but subsequent corrections brought on by changes in investor mood and regulations.
- Key Reason: Restraints on international investors and government action produce post-IPO uncertainty.
- China presents great economic potential but, because of governmental meddling, remains quite erratic.
- Under China's increasing data-security regulations, tech IPOs will still find difficulties.

### Japan IPO Market

- Usually quite underpriced, Japanese IPOs provide a balanced demand-supply dynamic. The market's cautious attitude to valuation helps to stop too dramatic price movements.

- Low volatility brought on by organized approval procedures and substantial institutional support
- For instance, unlike the speculative IPO bubbles in the US and China, Japan's IPO market showed consistent increase following COVID.
- Japan Trend: Because of institutional stability and reduced speculation, IPOs often show consistent long-term performance. Key reason being strict listing rules and conservative pricing prohibit significant revisions.
- For cautious investors, a steady IPO market with minimal risk and long-term development promise.
- Perfect for those looking for consistent performance over speculative returns.

### India IPO Market

- Overvaluation results from Indian IPOs often having aggressive pricing. India has great retail investor involvement, so the market is more speculative than in the US where institutional investors rule.
- Driven by retail fervour, FII (Foreign Institutional Investor) engagement, and speculative trading, market volatility is highest among the four markets. For instance, Paytm's 2021 IPO was overvalued, which caused a notable post-IPO drop, hence underscoring poor valuation discipline.
- Although many IPOs show robust first-day gains, overpricing and post-listing FII exits cause long-term underperformance is prevalent.
- Key reason being high retail speculation, aggressive pricing, and uneven profitability of new-age enterprises.
- Though most erratic and speculative, the largest growth potential among developing markets
- Constant reforms by SEBI might help to enhance post-listing stability and price discipline.
- Participating institutions will probably rise in the next years, which will help to lower speculation.

## 8. Future Scope

- Analyze long-term stock returns (5–10 years) and elements driving consistent growth against fall in post-IPO performance.
- Macroeconomic Impact: Examine IPO activity in relation to interest rates, recessions, and cycles of global liquidity.
- Compare performance, investor attitude, and legislative changes across markets between SPACs and traditional IPOs.
- Examine the effects on IPO pricing of speculative retail trading against institutional stability.
- Analyze how altering IPO regulations in the US, China, and India influences market efficiency.
- Explore how environmental and governance criteria affect investor interest and IPO valuation.
- Research the reasons behind and advantages of Indian and Chinese companies listing abroad.
- Analyze how algorithmic trading affects IPO price discovery and post-listing performance in IPO trading.

## 9. References



- Agarwal, R., Pandey, A., & Singh, V. (2022). *The Evolution of IPO Valuation in Emerging Markets*. Journal of Financial Studies, 45(2), 89-112.
- Allen, F., Qian, J., & Qian, M. (2012). *China's Financial System: Growth and Risks*. National Bureau of Economic Research.
- Chakrabarti, R., Huang, W., Jayaraman, N., & Lee, J. (2010). *Emerging Market IPOs: Trends and Challenges*. Emerging Markets Review, 11(2), 150-166.
- Goetzmann, W. N., & Rouwenhorst, K. G. (2005). *The Origins of Value: The Financial Innovations that Created Modern Capital Markets*. Oxford University Press.
- Hoshi, T., & Kashyap, A. (2001). *Corporate Financing and Governance in Japan: The Road to the Future*. MIT Press.
- Jenkinson, T., & Ljungqvist, A. (2001). *Going Public: The Theory and Evidence on How Companies Raise Equity Finance*. Oxford University Press.
- Ljungqvist, A., & Wilhelm, W. J. (2003). *IPO Pricing in the Dot-Com Bubble*. Journal of Finance, 58(2), 723-752.
- Michie, R. (1999). *The London Stock Exchange: A History*. Oxford University Press.
- Ritter, J. R. (1998). *Initial Public Offerings*. Contemporary Finance Digest, 2(1), 5-30.
- Ritter, J. R., & Welch, I. (2002). *A Review of IPO Activity, Pricing, and Allocations*. Journal of Finance, 57(4), 1795-1828.
- SEBI. (2021). *Annual Report on Indian Capital Markets*.
- Seligman, J. (2003). *The Transformation of Wall Street: A History of the Securities and Exchange Commission and Modern Corporate Finance*. Aspen Publishers.
- Sylla, R. (2002). *A Historical Primer on the Business of Credit Ratings*. Journal of Economic Perspectives, 16(2), 73-92.
- Zhang, X., & Wong, W. (2020). *Fintech and IPO Markets: A New Era of Digital Public Offerings*. Financial Markets Review, 28(3), 299-321.
- Alhadab, M., Clacher, I., & Keasey, K. (2015). Real and accrual earnings management and IPO failure risk. Accounting and Business Research, 45-1, 55-92.  
<http://dx.doi.org/10.1080/00014788.2014.969187>
- Borshch, O. O., Ruban, S., & Borshch, O. V. (2021). Review: the influence of genotypic and phenotypic factors on the comfort and welfare rates of cows during the period of global climate changes. DOAJ (DOAJ: Directory of Open Access Journals). <https://doi.org/10.15159/jas.21.12>
- Chen, Y., Goyal, A., Veeraraghavan, M., Leon Zolotoy, Asian Finance Association, T.A. PAI Management Institute Finance and Strategy Area, University of Melbourne Business School, University College Cork Business School, City University of Hong Kong Department of Accountancy, University of Melbourne Business School, T.A. PAI Chair Professorship, & Savitha Heggede. (2019). Media coverage and IPO pricing around the world. Journal of Financial and Quantitative Analysis.  
<https://doi.org/10.1017/S0022109019000486>
- Chen, Y., The City University of Hong Kong College of Business, Goyal, A., University College Cork University Business School, Zolotoy, L., & The University of Melbourne Business School. (2021). Global board reforms and the pricing of IPOs. Journal of Financial and Quantitative Analysis.  
<https://doi.org/10.1017/S0022109021000223>
- Department of Economic and Policy Analysis. (2024). Analysis of investor behavior in initial public offerings (IPOs). In Department of Economic and Policy Analysis (pp. 1-30).
- Doidge, C., Karolyi, G. A., Stulz, R. M., & National Bureau of Economic Research. (2011). THE U.S. LEFT BEHIND: THE RISE OF IPO ACTIVITY AROUND THE WORLD (Working Paper 16916).  
<http://www.nber.org/papers/w16916>
- DuCharme, L. L., Malatesta, P. H., & Sefcik, S. E. (2001). Earnings Management: IPO valuation and subsequent performance. Journal of Accounting, Auditing & Finance, 16, 369-369.  
<https://doi.org/10.1177/0148558X0101600409>
- Durukan, M. B. & Dokuz Eylul University. (2002). The relationship between IPO returns and factors influencing IPO performance: Case of Istanbul Stock Exchange. In Managerial Finance (Vol. 18, pp. 18-28).
- Gao, X., Ritter, J. R., & Zhu, Z. (2013). Where have all the IPOs gone? In MICHAEL G. FOSTER SCHOOL OF BUSINESS, UNIVERSITY OF WASHINGTON, JOURNAL OF FINANCIAL AND QUANTITATIVE ANALYSIS (Vol. 48, Issue 6, pp. 1663-1692).  
<https://doi.org/10.1017/S0022109014000015>
- Glavina, S. (2014). EUROPEAN IPO MARKET. GLOBAL AND REGIONAL STOCK EXCHANGES. ECONOMICS AND MANAGEMENT, 18(4).  
<https://doi.org/10.5755/j01.em.18.4.5726>
- Gupta, D. R., Veliyath, R., Rejie George, Indian Institute of Management Bangalore, & Kennesaw State University. (2018). Influence of national culture on IPO activity. In Journal of Business Research (pp. 226-246) [Journal-article].  
<https://doi.org/10.1016/j.jbusres.2018.04.023>
- Mahmood, F., Xia, X., Ali, M., Usman, M., & Shahid, H. (2011a). How Asian and Global Economic crises Prevail in Chinese IPO and Stock Market Efficiency. International Business Research, 4(2). <https://doi.org/10.5539/ibr.v4n2p226>
- Manu, K. S., & Saini, C. (2020). Valuation Analysis of Initial Public Offer (IPO): The case of India. Paradigm a Management Research Journal, 24(1), 7-21. <https://doi.org/10.1177/0971890720914100>
- Mauer, D. C., Wang, S., Wang, X., Zhang, Y., Department of Finance, Belk College of Business, University of North Carolina at Charlotte, Charlotte, NC 28223, United States, Graham School of



Management, Saint Xavier University, Chicago, IL 60655, United States, & College of Business and Public Administration, University of North Dakota, Grand Forks, ND 58202, United States. (2015). Global diversification and IPO returns [Journal-article].

<http://dx.doi.org/10.1016/j.jbankfin.2015.05.015>

- Ritter, J. R., & Welch, I. (2002). A review of IPO activity, pricing, and allocations. The Journal of Finance, LVII-LVII, 1795–1796.
- Venture capital reputation, Post-IPO performance, and corporate governance. (2011). In JOURNAL OF FINANCIAL AND QUANTITATIVE ANALYSIS (Vol. 46, Issue 5, pp. 1295–1333). <https://doi.org/10.1017/S0022109011000251>