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Contents

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Editorial

Dear Reader,

It brings me great pleasure to present to you the March 2024 edition of Artha. As a peer-reviewed e-Journal, Artha continues to attract significant attention from both academics and practitioners. We have witnessed a notable surge in both our subscription base and article submissions, and I extend my sincere gratitude to all the contributors. However, in our commitment to maintaining the rigor of our journal, we must, regrettably, decline many submissions due to space constraints. We tried to provide detailed feedback to every contributor. In this issue, we have included five articles that delve into a diverse range of topics within the realms of Accounting, Finance, and Governance.

The first article, " *The ICE age: A case study on profiting in fragmented markets*" discusses the remarkable journey of the Inter-Continental Exchange (ICE) since its inception in 2000, delving into how ICE navigates and thrives in increasingly fragmented markets, while also highlighting associated risks. It provides insights into ICE's disruptive innovation strategies, leveraging technology to modernize existing platforms and enter new market segments.

In the *second article, "Redefining FinTech Compliances through Self-Regulatory Organizations in India" the* author begins by discussing the importance of effective regulation in today's rapidly evolving markets, emphasizing the role of Self-Regulatory Organizations (SROs) in enhancing market integrity and effectiveness. The article further discusses the proposed framework by the Reserve Bank of India (RBI) to establish institutions/corporations using FinTech. SRO-FT, aiming to mobilize the innovative potential of fintech companies while mitigating risks to the financial system.

The *third article, "Regulation on Neobanks"* discusses the emergence and potential of neobanks in India, their characteristic features, and the evolution of neobanking in the country. The author emphasis on the required regulatory framework for neobanks to accommodate their digital nature and foster innovation.

The *fourth article, "Cloudonomics: Transforming Accounting Practices in India through Cloud Innovation"* explores the transformative impact of cloud accounting on traditional accounting practices. By leveraging internet-based services, cloud accounting offers enhanced accessibility, efficiency, and security, which are particularly beneficial for global operations and small businesses unable to invest heavily in IT infrastructure.

The *fifth article, " Start-Up Governance – Is It Time to Put an End to 'Fake It till You Make It'?"* examines the rapid evolution of India's startup ecosystem, emphasizing the substantial increase in unicorns, particularly in 2021, and the government initiatives bolstering this growth. While startups have significantly contributed to job creation and economic growth, the surge has also brought governance and ethical challenges. It underscores the importance of implementing robust governance mechanisms to prevent unethical behaviour and ensure sustainable growth within the startup sector in India.

I am sure that you will enjoy reading all articles. I again sincerely thank the authors who have contributed to this issue, and I expect that you will consider Artha for publishing your articles. You may send your articles, and feedback to us @ artha@iimcal.ac.in.

Vivek Rajvanshi
Chief Editor

Contributors

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The ICE age: A case study on profiting in fragmented markets

Arvind Ashta

Charles Bélanger

Jeffrey Sprecher started the Inter-Continental Exchange (ICE) in 2000, headquartered in Atlanta, Georgia. In 23 years, the market capitalization went to 72 billion euros, testifying newcomers can make it big. Just like any business, stock exchanges are also susceptible to mergers and acquisitions. Within these 23 years, ICE bought several exchanges, including the New York Stock Exchange (NYSE) in 2014. When ICE bought the NYSE, Jeff Sprecher indicated that he had never traded, worked at a bank, lived in New York, or worked on Wall Street. He has colleagues who have no background in financial services. His basic philosophy is that being an outsider allows him to take a fresh perspective on a business, and by asking questions, he can find new ways of solving old problems. And this adds value. ICE has recently acquired the software and analytics company Black Knight for 12 billion dollars (Mccoll, 2023).

This case study highlights how ICE creates value in increasingly fragmented markets, with caution on the risks. The case study first presents the concept of market segmentation and recent literature. Then it shows key performance indicators at ICE (drawing on publicly available secondary data), explaining how ICE improved the sustainability of the business model in its three main business lines. Third, it presents key risks that ICE manages through its innovative approach. Lastly, this case study concludes by showing how the current context is conducive for innovative businesses like ICE.

Market fragmentation means that various parts of the market may not behave similarly. For example, if stocks are traded on multiple exchanges, on any one exchange, there may not be sufficient depth of transactions to permit price discovery (Brab, 2023). However, if the investors can split orders over two exchanges, they can get better prices (Chen & Duffie, 2021). There is evidence that fragmentation improves market efficiency (Aitken, Chen, & Foley, 2017), but this may be only for large stocks (Haslag & Ringgenberg, 2023). Further, fragmentation allows one to take more risks and invest in higher returns and more disruptive innovative ventures (Baden-Fuller, Dean, McNamara, & Hilliard, 2006). Moreover, heterogeneous investors may like to have a choice of exchanges (Gomber, Sagade, Theissen, Weber, & Westheide, 2017). Another example of market fragmentation could be banks with different default probabilities in various jurisdictions (Vari, 2020). Fragmentation also arises from the diversity of legislation between countries. This diversity could be because

of timing differences in the implementation of laws, inconsistent approaches to implementing standards, or even a difference in the perceived necessity for regulatory oversight (Greenwood, 2023; Hill, 2020). This regulatory diversity is a source of market fragmentation (Hänseler, 2022; Vari, 2020), even between countries of the European Union (Brab, 2023).

While all the above work helps us understand why markets are fragmented and what their benefits and costs are to traders, there is little work in the academic literature on how platforms such as ICE exploit financial market fragmentation to create value for their customers and shareholders.

Adding Value: Sustaining the ICE

ICE is competing with other exchanges such as those operated by Chicago's CME Group (market valuation of about $74 billion), the Nasdaq Inc. (market capitalization of about $37 billion), the London Stock Exchange Group (market cap of about £49 billion) and many exchanges in other countries[1]. Like other exchanges, ICE increased trading during COVID-19, leading to a substantial increase in market capitalization. Since then, the value halved before coming back to pre-COVID levels. Therefore, the fundamentals that are driving the business seem to be sound.

Within ICE, there are three major business lines. The exchanges form the most significant business line. This line includes stock exchanges, commodity exchanges, energy exchanges, futures and options, listings, and data and connectivity services. A second business line is fixed income and data services, including data analytics, execution, and Credit Default Swap clearing. These data services are very extensive and high quality, allowing customers to get insights that drive decision-making. The third business line, which is relatively new, is mortgage technology, including origination technology, closing solutions, and analytics. In this business line, ICE's strategy has also been to digitalize the entire mortgage process to reduce cost and increase efficiencies

Table 1 provides a breakdown of total revenues and operating profits in the three broad business lines. We can see that the mortgage technology revenues are relatively new and shooting up (starting from a lower base), although there was a slight decline in 2022. We can also see that Exchanges still represent two-thirds of the revenues. Although The Mortgage technology business has grown, the operating profit seems very sensitive to sales, indicating that it is close to the break-even point.

[1] All market capitalization figures taken for Yahoo Finance on January 31, 2024

Table 1: Consolidated revenues and earnings of ICE: 2019 to 2022

Millions of Dollars, For the year	2022	2021	2020	2019	CAGR
Revenues:					
Exchanges	6,415	5,878	5,839	4,652	11%
Fixed income	2,092	1,883	1,810	1,756	6%
Mortgage technology	1,129	1,407	595	139	101%
Total Revenues	9,636	9,168	8,244	6,547	14%
Operating Income:					
Exchanges	2,862	2,523	2,389	2,167	10%
Fixed income	719	529	492	439	18%
Mortgage technology	57	397	152	67	-5%
Total Operating income	3,638	3,449	3,033	2,673	11%
Net income	1,498	4,069	2,108	1,960	-9%
Net income divided by Revenue	16%	44%	26%	30%	

Source: ICE Annual Report of 2022 and 2021, CAGR = Compound Annual Growth Rate

ICE has significant strengths that it leverages: world-class digital technology, risk management expertise, broad distribution across many countries, and diverse product offerings. For example, ICE has proprietary real-time and historical pricing data in its exchange business. This proprietary data is a source of value. In addition, ICE has order book and transaction information for the global future markets and the NYSE, which is also valuable. Moreover, it has connectivity services that connect those exchanges with clearing houses, thus reducing time and costs, and increasing efficiency. Future contracts reduce risks for traders since they provide a hedging mechanism against market volatility, adding value. The confidence in such mechanisms increases if the price discovered using futures resembles the price at that time. Research has shown that price discovery using ICE trades in the natural gas futures market is more efficient for long-term price determination than physical trading at various European hubs (Schultz & Swieringa, 2013). Moreover, price discovery using future trades is even more efficient in gasoil using ICE futures than in other markets such as crude oil, heating oil, and natural gas using CME data (Kuruppuarachchi, Premachandra, & Roberts, 2019). Finally, in carbon emissions allowance trading, price discovery is based on futures, and, once again, ICE in London seems to be more efficient in price discovery than EEX in Leipzig (Stefan & Wellenreuther, 2020). However, in currency markets, it was found that CME was better at price discovery than ICE because it had higher trading activity, more volatility, and lower transaction costs (Li, Chen, & Nguyen, 2022).

In the fixed-income and data services business, ICE offers real-time prices on millions of fixed-income securities across 150 countries and eighty currencies. This offer includes sovereign, corporate, and municipal bonds and asset-backed securities. ICE also provides reference information for all these securities, allowing clients to decide on buying, holding, and selling.

In the mortgage technology business line, ICE has been applying machine learning and artificial intelligence to the entire loan origination process, thus increasing the efficiency that customers value. This efficiency is further improved by artificial intelligence-driven real-time risk analysis for the US residential mortgage market. ICE also provides industry benchmarking tools. This comparative analysis allows decision-makers to evaluate transactions.

The key strategy of ICE is to innovate and expand its networks to address the rising demand for transparency and efficiency. For this, it continuously develops its technology and risk management infrastructure while increasing distribution. A strategy focus on technology disrupts the market by offering lower-cost products to underserved markets (Christensen, Raynor, & McDonald, 2013). Entrants can overtake incumbent firms because they invest more heavily in innovation (Lerner, 1997). NASDAQ disrupted the market in the last part of the 20th century by automating the over-the-counter market and reaching out to high-technology firms. The technology-based strategy led ICE to reinforce the attractiveness of NYSE to counter the NASDAQ. It is useful to consider a perspective of disruptive innovation in the case of ICE, as it exemplifies a process of technology-induced market change (Nicholas, 2021) and illustrates the inter-plays between disruptors and incumbents.

Parallel to this innovation-driven internal growth, ICE strengthens its competitive position through select acquisitions and strategic relationships. These acquisitions could be buying young companies with rapid growth potential or mature companies that need to be reinvented, often through the digitalization of their processes. For example, the NYSE was losing to NASDAQ, and ICE went in to replace the legacy technology with light, modern, and efficient technology. This digitalization allowed ICE to modernize the NYSE and make it relevant again. The reduction in paper transactions (because of digitalization) that ICE has achieved in several areas reduces transaction costs and increases efficiency (Business Wire, 2023). It may also create a green image that could attract socially responsible investors. Another example of acquisitions and consolidation would be from ICE's mortgage business line. ICE has made a series of acquisitions: Mortgage Electronic Registration Systems in 2018, Simplifile in 2019, Ellie May in 2020, and Black Knight in 2023. ICE considers that the acquisition of Black Knight would enable it to obtain synergies and offer a more complete suite of services to its customers in the mortgage industry (Stafford & Asgari, 2022). The ensemble of services would enable ICE to lock in its customers.

Risky business: can the ICE crack?

We can classify the risks ICE faces into those emanating from the broader financial environment in which it operates, legal and regulatory risks in the countries where it operates, operational and liquidity risks common to digitalized businesses, and business model risks.

With globalization, global businesses have been subject to market risks emanating from the international business environment. Some of these, like COVID-19, affect all companies, although the direction of the risk could be positive or negative. In ICE's case, we have already noted that COVID-19 gave a positive boost since more people started trading because they had the time. ICE could capitalize on this because it had already digitalized, allowing it to provide services anytime, anywhere.

A second global phenomenon has emerged from conflicts. These have resulted in inflation, interest rate increases, and financial market volatility, which impact trading. As we can see, ICE's market capitalization fell post-COVID but has gradually returned to normal. Although fluctuation in currency rates could impact ICE's results since it is present in 150 countries, some of this could neutralize, except that most of ICE's business may still be in a few countries. An example of a global risk that impacted ICE is the fallout from the Russia-Ukraine conflict and EU sanctions. As a result of these sanctions, Russia started selling oil to the EU through third countries. Therefore, the EU decided to place caps on petrol and gas originating in Russia. These caps reduce volatility. Since traders and speculators seek volatility, reducing volatility owing to caps could adversely affect ICE's gas trading business (Stafford & Hancock, 2022). Although ICE threatened to move the gas trading platform out of the EU, the EU still imposed the caps and even started to develop a new index for liquefied natural gas.

A third level of business risks is specific to the industry in which ICE operates. For example, all clearing houses are exposed to risks related to the defaults by clearing members. ICE is also impacted by risks relating to investing margins and guarantee funds as well as the cost of operating clearing houses. If margins are linked to volatility, they can amplify procyclicality. However, competition among exchanges may limit margin levels to attract more trading (Park & Abruzzo, 2016).

Legal and regulatory risks emanate from the possibility that laws change, and this change in regulation impacts a business negatively. For ICE, such regulatory changes across 150 countries create market fragmentation and must be monitored carefully. ICE would need to make decisions on entering or withdrawing from countries if its business model can take the opportunity or is no longer viable, respectively. Change in the legal environment often requires changing operations and new reporting obligations, which require updating the systems. These regulatory changes, or even judicial decisions, may harm the operating model of ICE. An example could be risk relating to the administration of Indices such as LIBOR. Another example could be a

political event such as Brexit, which could adversely affect ICE's business. ICE moved EU carbon trading from London to Amsterdam in the wake of Brexit (Stafford & Hancock, 2022). In 2018, ICE transferred trading in energy futures contracts from London to the US to mitigate the burdens of new Mifid II rules in Europe(Stafford & Hancock, 2022). Therefore, the geographical presence of ICE allows it to move its operations to offset such risks.

A different recent example of regulatory risk could be the crash of cryptocurrencies and a significant player like FTX going bankrupt. As a result of this bankruptcy, the US may promulgate new laws increasing the supervision by the US Security and Exchange Commission. These new laws would then have an impact on ICE. As a result, ICE is lobbying that the NYSE be allowed to move into tokenized trading, thus providing transparency and security to investors, obviating the need for new laws (McCrank, 2022). Of course, by entering the cryptocurrency market, ICE's overall risk may increase, but growth may also increase. The final value added would depend on the relative increase in risk and growth.

Another type of risk that impacts ICE is inimical to digitalized businesses. These businesses are vulnerable to cyber-attacks, hacking, and other cyber insecurities. These could result in wrongful manipulation or wrongful disclosure of data, allowing fraudsters to profit and harm the clients of ICE. Therefore, ICE clients could be unable or reluctant to use the electronic platforms. In countries where electricity supply is not regular, an interruption of services may lead to similar losses for clients. In fact, any significant computer failure or communication system failure could cause losses for clients and, eventually, for ICE. Digitalised businesses rely on servers that contribute to the planet's heating, which could, therefore, adversely impact ICE's reputation.

Finally, there are business risks related to growth strategies based on external acquisitions in a time of volatile interest rates. ICE's decision to acquire Black Knight was based on the extremely low-interest rates in early 2022. In late 2023, interest rates had increased by the time ICE got approvals for the merger. Therefore, the value of the acquisition could be lower. Higher interest rates could also upset the mortgage market, providing ICE’s mortgage technology business line a double whammy. Finally, if the merger of Black Knight disrupts ICE’s earlier acquisition in the mortgage technology section, it could even be a triple whammy.

Profiting from a VUCA world

It is often said that we are living in a volatile, uncertain, complex, and ambiguous (VUCA) world, a term attributed to the US Army and first used in management by Bennins and Nanus (1985). These four characteristics are heightened by market fragmentation. While they may threaten specific businesses, they are

also opportunities. In the case of ICE, it can be argued that the VUCA world supported its development of disruptive innovation (Millar, Groth, & Mahon, 2018).

Speculators and traders like volatility. This suits platforms like ICE that provide exchange services and see an increase in transactions in volatile conditions. Other customers like hedging services such as futures contracts that can reduce the risk of volatility, providing ICE with a second market. The low transaction costs and high number of future transactions permit customers to hedge their risks and discover prices in an uncertain future. Finally, by diversifying its businesses, often through acquisitions, ICE has managed to reduce its dependence on volatility and uncertainty in transactions on any one product line.

Globalization, the development of financial markets, and the fragmentation of markets have increased complexity. This complexity creates an opportunity for operators who can provide more transparency and lock in customers by providing inter-connected services. By providing information along with benchmarks, ICE is able to simplify decision-making and attract customers who are saved from the trouble of having to search for information. Using the latest technology allows ICE (and its leading competitors) to stay ahead of other exchanges. Moreover, ICE seems to thrive in buying out exchanges in new segments, providing them with digital technologies and business process innovation. This allows it to add value to businesses that were becoming too complex to manage. If the acquired businesses are servicing different customers, ICE can further offer its services to them.

Finally, ICE is forced to embrace ambiguity because the technologies it uses and the businesses it operates have ambiguous terms that have not yet been interpreted by courts in many countries. Operating in over a hundred countries, ICE faces these legal ambiguities and geographical fragmentation of the markets but is able to shift venues to profit from the differences in regulations.

Can ICE go further? ICE's sustainability report mentions its Corporate Social Responsibility (CSR). This includes financial inclusion with a focus on financial education and financial literacy (ICE, 2022). It supports programs across the US, the UK, Israel, and India – providing education modules to youth and women about budgeting, investment, and data science. Beyond that, ICE could consider supporting value chain actors in developing countries to manage risk. For example, African farmers direly need commodity futures to protect them from volatility. By leveraging its experience and technology in developed markets, ICE could reach out to under-served customers in developing countries.

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Redefining FinTech Compliances through Self-Regulatory Organizations in India

Mansi Sharma

Introduction

In today's rapidly evolving markets, characterized by technological advancements and information proliferation, effective regulation is essential. While ultimate regulatory responsibility lies with official regulatory bodies, the development of Self-Regulatory Organizations (SROs) is seen as a strategic move to enhance market integrity and effectiveness. SROs have varied formats across different global markets, often predating statutory regulation in various sectors.

SROs are voluntary bodies driven by their members, responsible for establishing self-regulatory organisations and enforcing rules to ensure fair, ethical, and efficient practices within their respective industries. Unlike mere industry associations, SROs actively oversee market participants, licensing firms engaged in market activities, and enforcing regulatory standards under the supervision of main regulatory bodies. They serve as the first level of regulation, fostering a disciplinary culture among industry players and assisting regulators in achieving their objectives. The main aim of implementing an SRO model for regulation is to minimize government intervention in industry operations while simultaneously promoting the natural, equitable, and ethical development of entities within the ecosystem.

Historically, the execution of self-regulation by SROs has not always been optimal. Nonetheless, SROs encompass a range of entities such as exchanges, associations, and depositories, playing crucial roles in maintaining market integrity. Prominent examples include the National Association of Securities Dealers (NASD) and National Stock Exchanges like the NYSE in the United States, Sa-dhan[2] and MFIN[3] for microfinance in India as well as the Investment Dealers Association (IDA)[4] in Canada. Beyond financial markets, effective SROs can also be found in other industries, such as the American Arbitration Association

[2] https://www.sa-dhan.net/

[3] https://mfinindia.org/

[4] https://www.osc.ca/en/industry/market-regulation/self-regulatory-organizations-sro/investment-industryregulatory/ida-rule-review [4] https://www.adr.org/

(AAA)[4] and American Medical Association (AMA)[5], where they establish performance standards, safeguard member interests, and work to fortify their respective sectors.

The main objective of the implementation of the SRO model for regulation is to create a robust framework wherein the state intervention is minimal in industrial operations while promoting equitable, organic and ethical growth of entities within the ecosystem. The initial initiation of the SRO model in regulation began when RBI had included Payment System Operators[6] under its purview. However, this approach faced criticism due to doubts originating about the SRO's independence and its being a toothless body.

Financial Inclusion through FinTechs

Access to financial services is pivotal for driving economic growth, alleviating poverty, and nurturing societal progress. However, a substantial segment of the global population remains underserved by conventional banking infrastructures, restricting their access to financial inclusion. In India, the banking and financial sector has undergone significant changes since the global financial crisis of 2008, largely driven by the emergence of fintech companies. Fintech has led to cost optimization, improved customer interaction, and streamlined transactions (Kanupriya Gupta 2023). Since 2010, fintech has played a vital role in decentralizing banking services, managing payments, transforming maturity, sharing risk, and allocating capital. Fintech firms now constitute the fourth segment of the Indian financial system, alongside large and mid-size banks, small finance banks, and regional, rural, and cooperative banks (Pervez 2022).

Fintech in recent times has disrupted the financial services realm, presenting new avenues for broadening access to financial products and services. Financial inclusion encompasses the availability, accessibility, and affordability of financial services to both individuals and businesses (Jain 2023). Fintech, through its innovative utilization of technology and data, holds the potential to reshape financial services fundamentally. By harnessing digital platforms, mobile devices, and advanced analytics, Fintech solutions can overcome the limitations of traditional banking systems, thereby facilitating the provision of financial services to previously marginalized individuals and businesses.

[5] https://www.ama-assn.org/

[6] https://www.rbi.org.in/Scripts/NotificationUser.aspx?Id=11986&Mode=0

SROs in FinTech

The G20 Financial Inclusion Action Plan (FIAP) report (G20 Financial Inclusion Action Plan 2023) promotes responsible, scalable, and affordable technology to enhance financial inclusion. It emphasizes the need for interoperable and reliable digital infrastructure to accelerate the provision of digital financial services. Fintech firms must act responsibly within regulatory boundaries and prioritize the interests of their customers. Public policy, both in India and globally, is focused on achieving universal financial inclusion through technology and expects firms to demonstrate responsible behaviour.

With numerous players entering the market and the rapid expansion of this sector, SROs have become an essential component of the fintech ecosystem. Establishing an SRO in the fintech industry can play a crucial role in **promoting accountability** and **responsible growth** within the fintech industry. It addresses concerns about market integrity, data privacy, cybersecurity, and risk management. SROs encourage **ethical practices and reduce misconduct**. Leading to a reduction in instances of misconduct among certain fintech entities, such as imposing excessively high-interest rates and engaging in harassment of borrowers. They impartially **oversee self-regulation,** ensuring compliance and imposing penalties when needed. SROs not only protect the interests of industry members but also play a crucial role in safeguarding the rights of workers, customers, and other participants within the ecosystem. Thus, SROs complement existing regulations and enhance the regulatory framework already in place.

Functions of SRO include:

- **Facilitating Communication:** SROs serve as a channel for communication between members and regulatory bodies such as the RBI, enabling dialogue in both directions.
- **Setting Standards:** They establish industry benchmarks and norms, promoting professionalism and upholding market integrity.
- **Education and Training:** SROs offer training for member personnel and organize awareness initiatives to promote best practices.
- **Resolving Disputes:** They institute consistent frameworks for grievance redressal and dispute resolution, ensuring fairness and efficiency.

Benefits of establishing SROs:

- **Sector Proficiency:** SROs bring industry expertise, enhancing discussions and educational ventures.
- **Establishes ethics:** SROs encourage ethical conduct, enhancing trust within the industry.
- **Monitoring:** They act as watchdogs, deterring unscrupulous and unethical behaviours within the sector.

Establishing an SRO is crucial for reducing the influence of unethical lenders, promoting ethical behaviour, improving lending infrastructure, and developing adaptable regulatory strategies. The FinTech SRO (SRO-FT) is envisioned to operate impartially, credibly, and accountably under regulatory oversight. Its primary objective is to promote healthy and sustainable growth of the fintech sector while facilitating a smooth transition to regulatory compliance when required. This collaborative and inclusive approach leads to the overall objective of nurturing a resilient and transparent financial ecosystem, emphasizing integrity and transparency.

Recognition of SROs by a regulatory body (RBI) in India

The Draft Framework released by the Reserve Bank of India (RBI)[7] seeks to establish and endorse a "self-regulatory" strategy, enabling the RBI to mobilize the innovative potential of FinTech companies while mitigating the unique risks they may pose to the financial system. To strike this equilibrium, the RBI has suggested forming an SRO, which, after receiving a formal acknowledgement (though not mandatory), would operate as a FinTech SRO (SRO-FT).

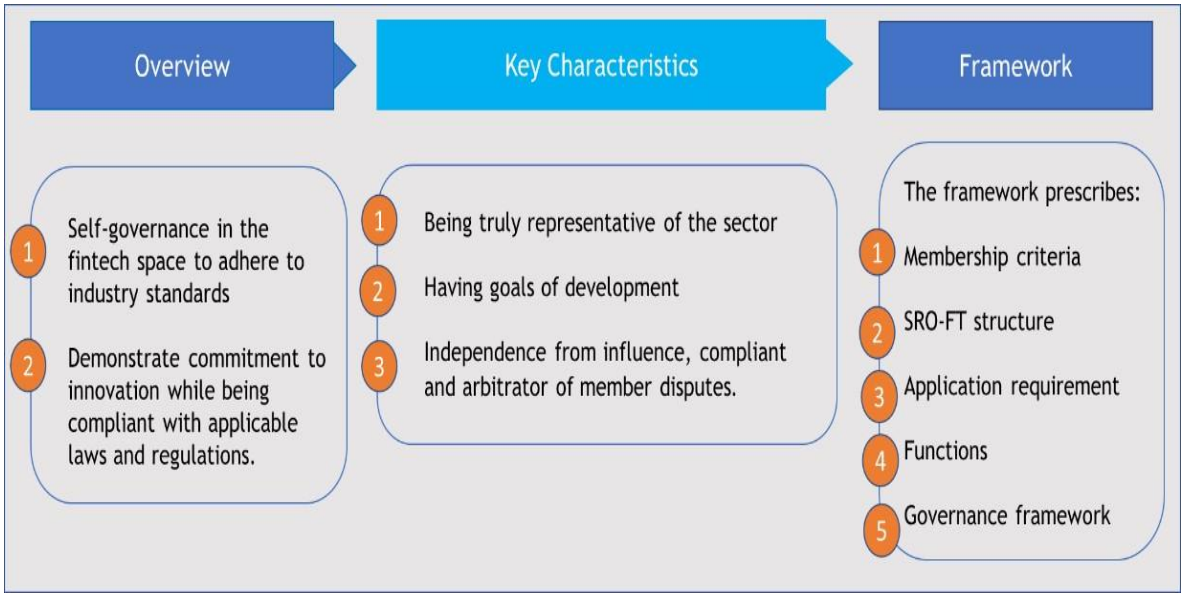

Fig 1: Overview of the draft framework of RBI for SROs

The RBI proposed SRO-FT (Deloitte 2024), outlined in the draft framework is widely being acknowledged by FinTech companies of India, as it is a positive step to offer invaluable guidance moving forward. Within this framework, FinTech firms anticipate benefiting from the SRO-FT's role as a mediator, facilitating

[7] https://rbi.org.in/Scripts/PublicationReportDetails.aspx?UrlPage=&ID=1260

communication between its members and regulatory bodies such as the RBI (Abhishek Ray 2024). This collaborative approach aims to effectively tackle industry-specific challenges and establish a regulatory framework tailored to the unique needs of the FinTech sector. Additionally, planned training and awareness initiatives are expected to keep members abreast of industry advancements and regulatory compliance requirements. Further, consumers would especially gain from the SRO-FT, as it will establish ethical standards and ensure responsible practices among member firms, thereby safeguarding consumer interests.

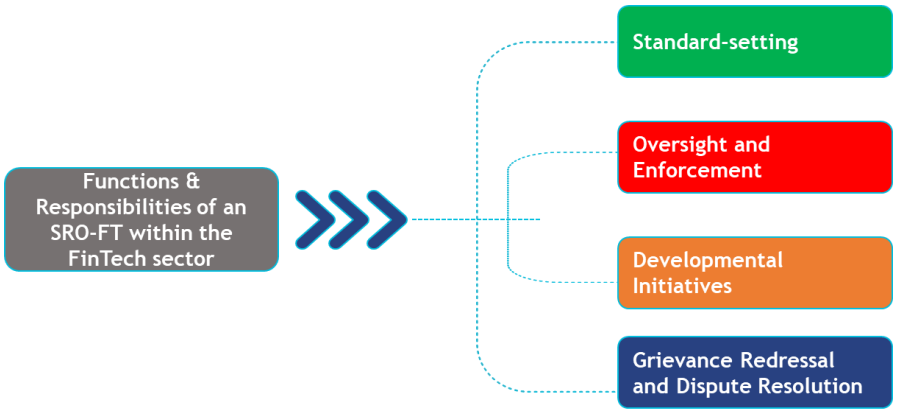

Fig 2: Functions & responsibilities expected from an SRO-FT within the FinTech sector

The Draft Framework mandates that an SRO-FT must fulfil the following responsibilities to the RBI:

- **Collective Representation:** Acting as the unified voice of its members in discussions with the RBI, addressing broader sectoral issues.
- **Information Sharing and Compliance:** Providing regular updates to the RBI on sectoral developments and member violations, ensuring adherence to regulatory standards.
- **Consultation and Collaboration:** Consulting with the RBI on taxonomy development, executing assigned tasks, and providing requested data.
- **Reporting and Engagement:** Submitting annual reports and periodic returns to the RBI, participating in interactions, and offering comprehensive insights into the FinTech sector.
- **Regulatory Oversight:** Allowing the RBI to inspect books and audits, and complying with RBI directives.

A broad eligibility structure for an entity in India to become an SRO-FT has been depicted through an infographic (Bhattacharjee 2024) below:

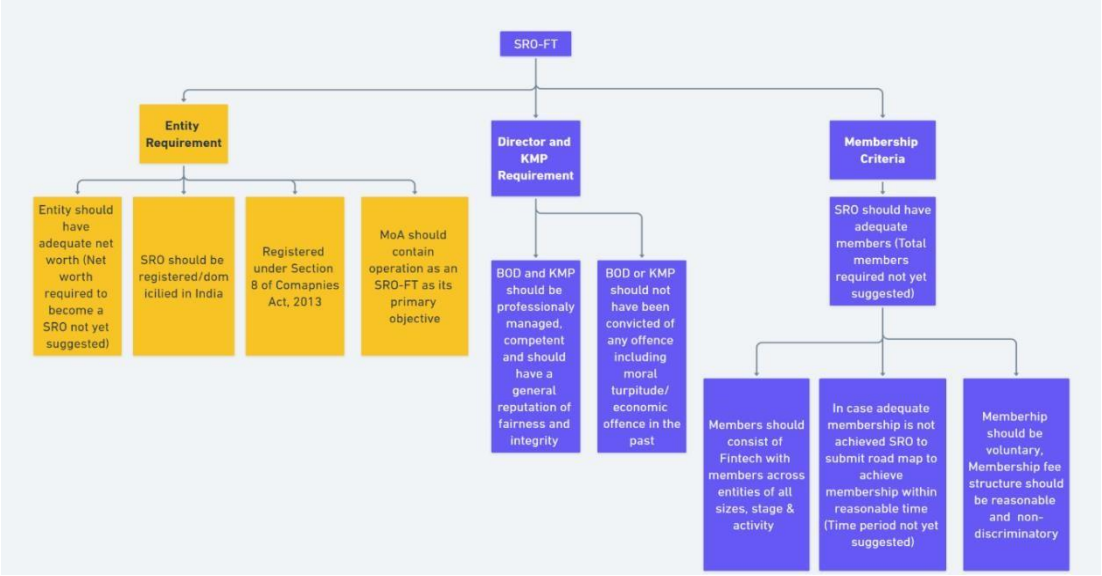

Fig 3: Eligibility criteria to become an SRO-FT in India, Source: (Bhattacharjee 2024)

The RBI may also prescribe such other conditions as may be required to ensure that the functioning of the SRO-FT does not become detrimental to the public interest.

Roles and responsibilities of an SRO

1. Ensuring adherence to industry standards and ethical conduct within the FinTech sector.
2. Promote responsible innovation while ensuring consumer protection, data security, and privacy.
3. Responsibilities include setting standards, rules, codes of conduct, and governance benchmarks.
4. Overseeing the FinTech sector through surveillance mechanisms, offering guidance on undesirable practices.
5. Promoting understanding of regulatory requirements, conducting training programs, and disseminating sector-specific information.
6. Encouraging research and development, facilitating responsible innovation and studies within the sector.
7. Establishing efficient frameworks for grievance redressal and dispute resolution among members.
8. Emphasizing customer education on FinTech products and services.
9. Acting as a bridge between the FinTech sector and the regulatory body, ensuring compliance with statutory and regulatory frameworks.
10. relaying sector-specific insights, addressing regulatory concerns, and contributing to the overall development of the FinTech sector.
11. Acting as the collective voice of its members in engagements with the regulatory body, prioritizing the sector's interests.

12. Maintaining transparency and equitable treatment for all members, promptly reporting any violations to the regulatory body.
13. Developing scalable technology solutions for detailed insights into FinTech entities' activities.
14. Collaborating with the regulatory body in developing and updating the taxonomy for FinTechs.
15. Carrying out assigned tasks, reviewing proposals, and supplying requested data to the regulatory body.
16. Regular reporting and periodic interactions with the regulatory body.
17. Allowing the regulatory body to inspect its books or arrange audits as required.
18. Discharging additional functions specified by the regulatory body and providing guidance on regulating entities in the FinTech sector.

A critique of the draft framework released by RBI

Self-regulation as suggested by an SRO, being reliant on self-funding, creates uncertainty in balancing stakeholders' conflicting interests. Dominant market players could potentially influence SRO structures by favouring their interests, pooling resources, and further marginalizing smaller players. This may result in autocratic practices by the dominant players such as market entry barriers, restrictive membership, and biased standards. Other possibilities include, excluding certain members from the market, SRO members might collaborate to create a regulatory environment favouring their interests, leading to under-regulation instead of overregulation (Karthika S. Babu 2024). The only oversight mechanism within the organization is independent directors, whose autonomy may be subject to debate. Ultimately, inefficient self-regulation could be a burden to the state regulators with the task of alleviating the resulting costs.

Determining the number of SROs shouldn't only focus on uniformity but also on coordinating the interests of all stakeholders. For example, In the US, multiple SROs alongside state and federal regulators demonstrate how a diverse regulatory ecosystem can represent various stakeholders' interests effectively. The draft framework should clearly outline the limitations of SROs' enforcement authority. Merely assigning and drafting SROs responsibilities with vague guidelines, such as the RBI's discretion on the 'fit and proper status' of applicants, risks introducing subjectivity and arbitrariness into the process.

Conclusion

Regulations don't directly encourage or discourage innovation, however, they can either promote or hinder it based on how regulators approach innovation. Traditionally, regulations are usually adjusted, and legislations are adapted before financial intermediaries can launch new products. However, this process can be slow, taking

years and potentially rendering the regulatory framework outdated by the time it is finalized (Beck 2020). A regulatory approach that is open and adaptable is essential, emphasizing the establishment of a balance between promoting financial innovation and monitoring the anticipated risks.

Regulating the fintech sector is complex due to its diverse entities and activities. Relying on a single SRO may not be effective. Instead, categorizing fintechs into sectors and implementing specific regulations for each could be a better approach. However, in India, a few dominant players hold the majority of the market share, making it challenging to establish fair self-regulation. The draft framework released by RBI lacks measures to address this issue, leaving the responsibility on the sector to decide on the number of SROs, their establishment process, and governance mechanisms. Merely expecting SROs to act impartially and transparently isn't sufficient to address these concerns (Karthika S. Babu 2024).

Introducing a self-regulatory system in India's fintech sector is complex given the current market dynamics. While the RBI's initiative is welcomed, uncertainties remain regarding the effectiveness of SROs. Since SROs derive their authority from members' consent, their performance over time will determine market trust. RBI must proactively oversee SROs due to the possibility of regulatory failures, as seen in the UK and Canada. The RBI needs to coordinate and further regulate to establish the SRO model effectively. Coordinating with unregulated players like payment service providers and technology service providers poses an additional challenge. Effective communication and coordination between SROs and the RBI are essential for overcoming self-regulation challenges. The framework's primary endeavour should be to establish a feedback system benefiting both SROs and consumers. A sustainable ecosystem should be developed wherein RBI could potentially regulate the self-regulators which could help the SROs function fairly and transparently.

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Regulation on Neobanks

Ananta Kansal

Introduction

The banking system has been continuously evolving over the hundreds of years to meet the changing the demands of environment of the financial system. With the advent of the internet, there has been a revolution in banking, offering several services to customers. Neobanks have been at the forefront of leading the revolution of new-age banking to give high customer satisfaction by operating at low cost and high operational efficiency. As every industry has been disrupted by tech in recent years, banking remained Brick and Mortar but neobanks changed that and so would the regulatory framework have to accommodate them.

Problem solved by Neobanks

In India, MSMEs rely on unofficial money lenders to pay off their debt. These borrowers cannot establish a credit history to use typical banks' lending services. It is a combination of informal and formal borrowing, even with exposure. Due diligence costs for banks rise, and their inability to take on more risk makes it unprofitable to lend to MSMEs.

There is a credit market under penetration in India because of these reasons. The primary issue facing regulated retail banking is the lack of innovation, which forces "thin file" borrowers to turn to unregulated and grey markets instead of regulated ones for their financial needs. Product customization and innovation from within the regulated ecosystem niche market for the under-served is one of the potential ways to grow organically. This is the domain where neobanks are trying to fill the gap.

Digital banks: What they hold for India

Three models of banks have come up after the global financial crisis of 2008:

•Neo-banks are established, licensed banks that provide "over-the-top" services to customers by "renting" the bank's balance sheet for deposits and loans.

- Full-Stack (Licenced) Digital Banks: These companies provide loans, accept deposits on their balance sheet, and are fully operational banks subject to banking regulation.

- (Autonomous) unit of traditional banks: These organizations are effectively independent, stand-alone neo-banks that compete with conventional banks' neo-banking operations.

Characteristic features:

- Neo-banks' banking strategy aims to serve populations that traditional banks underserve.
- They offer speed, faster technology deployment, efficient organizational design
- Superior user experience and transparency in consumer transactions.
- Reduced operating costs because of no physical locations, and because of that, they can grow their market share.
- A low barrier to entry into the neobank space is an attractive proposition.
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Evolution of Neobanking in India

Over the past four to five years, there has been a notable surge in the Indian neobanking industry. Each neobank has a distinct product offering and target consumer group that imply colossal development potential for them in the coming years, even though over 36 companies are attempting to scale up their businesses. Innovation and greater emphasis on meeting consumer expectations are all contributing to the growth of India's financial services industry. In addition, efforts by conventional banks to form strategic alliances with neobanks and the involvement of private equity firms are contributing to the growth of neobanking in India.

Services of Neobanks offers specialized services such as:

1. Neobanks have an advantage over regular banks because of their distinctive online presence. They may provide cheap fees and high interest rates on deposits since they do not need physical branches, which lowers their operating costs. This translates to more significant pocket money and a more promising financial future.
2. Neobanks allows you to handle money how you see fit with its mobile-first strategy and round-the-clock digital services. They give you the power and comfort you require by using cutting-edge technology to deliver creative solutions, fast response times, superior customer care, and simple onboarding.
3. Neobanks have streamlined loan procedures with easily accessible online applications and verification. Following the validation of their credit ratings, customers can select the loan they want and get their money immediately.
4. Using cutting-edge technology, Neobanks prioritizes security, offering safe online banking platforms with features like two-factor authentication and biometric verification. They protect your financial data and provide peace of mind by using AI and cloud analytics to thwart cyberattacks.

Existing partnership model

The prevailing Neo-bank business model in India results from a regulatory gap. Without a licensing framework for "full stack" digital banks, fintech companies in India that provide the Neo-bank concept have had to adapt and have started using the "front-end neo-banks" model. As the name suggests, this collaboration between neo-banks and traditional banks, with the former providing the "utility" layer and the latter the engagement layer.

These neo-banks have focused much more on services aimed at customers. Additional conveniences, including digital debit cards, tools for managing personal finances such as spend analytics for better budgeting, investment opportunities through its mobile application through its B2B partnerships, and possibly a credit line, are offered by a typical consumer-facing Neo-bank.

This model has several challenges:

- Limited possibility for revenue: Fintech's monetization issues are readily apparent. Wherever they serve as channel partners, they receive fee-based revenue and may receive a portion of interchange on card payments.
- Difficulty building trust: Consumers view traditional banks as safer and doubt neobanks credibility.
- High capital costs and lack of entry barriers: Neo-banks must rely on pricey equity capital to finance operations and innovation since they cannot offer low-cost deposits. Fintech entry hurdles into the neo-banking industry are minimal without a licensing structure. Two detrimental externalities result from this. First, this context presents an opportunity for unfit and improper actors to enter the market, as with any ecosystem with low barriers to entry. This creates sides risk to consumer protection, particularly on the retail side. Second, it fosters a mindset where people copy company models like a herd.

Regulatory consideration for Neo banks in India:

Even though some international national banks have Indian subsidiaries that primarily offer digital products, virtual banking licenses are still unavailable in India. In addition to emphasizing that banks emphasize having a physical presence, the RBI has recently reiterated that providers of digital banking services must also have a physical presence. Brick-and-mortar branches are crucial because they provide in-person client service and issue resolution. To comply with legal requirements, neo-banks outsource their banking operations to individuals holding banking licenses, forming strategic alliances with established banks, and enhancing

services for already-existing institutions. Some neo-banks are already implementing this concept on a global scale. Neo banks work alongside traditional banks to offer consumer and business banking.

Additionally, neo-banks provide:

- Services that circumvent the jurisdiction of the RBI
- The Securities Exchange Board of India (SEBI)
- The Insurance and Regulatory Development Authority of India (IRDAI) financial authorities

Services provided by neo-banks

- Banking services: utility bill payment, credit/loan, domestic money transfers, and prepaid card services
- Investment advisory products: gold, mutual funds, stock market, initial public offering, and stock market investments
- Corporate representatives: Insurance policy, Insurance web aggregator

Opportunities:

1. Specialised services provided: Neo banks have the potential to offer a notably more comprehensive range of services, hence creating a unique value proposition. Neo banks offer an extensive range of creative and customer-focused solutions, unlike traditional banks, which only offer restricted banking services.
2. Generation tech-savvy: India's smartphone penetration grew at a 14.26% CAGR from 46.44% in 2019 to 60.63% in 2021. This could be related to the COVID-19 pandemic. Fintech has significantly benefited from the widespread increase in smartphone usage, allowing it to implement a much-needed change faster than expected. The COVID-19 epidemic further expedited Neobanks' growth in India. This gives neo-banks a great deal of promise.
3. FinTech Ecosystem: India has the third largest FinTech ecosystem globally after the US and China. However, the country still has untapped potential because financial services are less widely used in India. Given these unexplored prospects and a suitable environment, India has enormous growth potential.

What needs to be done?

- The regulatory framework does not call for the complete digitalization of the financial product offering process. Considering the digital services provided by neo-banks and their connections to financial institutions, the existing indirect restrictions need to be re-examined. It is necessary to think about a

legislative framework that permits regulated entities to handle tasks like fund management and settlements. In contrast, FinTech partners handle the technological interface and user experience.

- The RBI's Branch Authorization guidelines must be changed similarly, which describes "branch" as full-fledged branches, specialized branches, remote offices, off-site ATMs, administrative offices, controlling offices, service branches, etc. This definition does not consider the digital setup of neobanks. Additionally, only banks with a physical presence can provide mobile banking services to their clientele under the RBI's mobile banking criteria.
- Minimum Paid-Up Capital: Depending on how restricted a digital business bank is, its minimum paid-up capital within a regulatory sandbox may correspond to that restriction.
- Application pool and track record: The license may require one or more controlling people of the application organization to have a proven track record in related areas, including e-commerce, payments, and technology, given the "digital-native" character of the banks operating under this license. Potential qualified candidates for application include small finance banks and other regulated businesses (such as incumbent banks that may perceive a chance to obtain a full-stack digital business bank license) or existing neo-banks looking to upgrade.
- Equitable Access to the Infrastructure Enablers: Like traditional banks, digital banks should have equal access to all the essential infrastructure enablers in the Indian financial ecosystem for their license and business model to be viable and foster competition. Access to Aadhaar eKYC and credit information companies, as well as UPI, IMPS, and central payment systems (NEFT/RTGS), are included in this.
- ATM programmes
- Deposit Insurance & Credit Guarantee Corporation (DICGC) (opposing the DICGC's determination of the appropriate premium levy). • The environment of AA.
- Phased relaxation of business limitations: When mapped, several Benchmark Jurisdictions on the Index began with business constraints (such as on the number of deposits and assets) and correspondingly lower minimum paid-up capital levels. That strategy can be replicated in the restricted Digital Business bank license. These company limitations may pertain to the number of assets and deposits handled or clients they serve. Suppose the licensee performs satisfactorily on agreed-upon measures. In that case, the regulator may gradually loosen these requirements until the licensee is prepared to leave the sandbox and function as a "full-scale Digital Business bank."
- Regulation of technological risk: Because digital business and consumer banks utilize their APLs to establish relationships with multiple counterparties from which hazards may arise, they are more sensitive to technological risks than traditional banks.
- Business Continuity Planning: Following the global financial crisis, supervisory authorities, such as the Federal Reserve, mandated that banks operating under their auspices submit "business continuity plans"

(BCPs), commonly referred to as "living wills," outlining an "exit strategy" for depositors and other creditors if the bank failed or was forced to wind down operations for various reasons.

(One of the few nations with a regulatory sandbox ecosystem, the RBI was founded in August 2019. Eligible organizations can test their innovative products or services in real time in a regulated setting within this sandbox. To promote the controlled and orderly expansion of the FinTech ecosystem in India, innovators, regulators, financial service providers, and end

users have joined together to create this initiative. The suggestions of the Financial Stability and Development Council - Sub Committee (FSDC-SC) Working Group on FinTech and Digital Banking were followed in establishing the Regulatory Sandbox. On August 13, 2019, the RBI website released the final Enabling Framework for the Regulatory Sandbox (RS) following significant stakeholder engagements. 'Retail Payments' was announced as the theme for the first batch after that. On December 16, 2020, the Enabling Framework was updated to include lessons learned from the first cohort's implementation. Furthermore, applications with the "Cross Border Payments" theme were allowed for the second cohort. Additionally, word spread that the third cohort's focus will be "MSME Lending.")

Case Analysis of Georgian Neobanks

To increase financial stability and client engagement, the National Bank of Georgia supports the development of novel technology and creative business models in the financial industry.

To do this, the National Bank of Georgia is putting open regulatory concepts and a technology-neutral risk-taking approach into practice. The National Bank's supervisory plan for 2020–2022 is based on these fundamental ideas. The National Bank of Georgia released its guidelines for digital banking licensing in July 2020 for public comment. Benefits can be utilized during the licensing procedure, and the regulations for entering the banking industry have been streamlined. Benefits could include granting a banking license if ten per cent of the required regulatory capital is obtained and the so-called banking operations for conducting business and attracting more investors. Offering a "build-up period," a streamlined form for reporting liquidity, supervisory guidance throughout the process of developing a business plan, and, when necessary, the focused use of a regulatory laboratory to assess the risk associated with specific technologies. To be granted a full banking license, A bank must prove its business plan's viability and effectively fulfil a traditional bank's standards. The National Bank of Georgia views the banking industry as a digital bank that can lower financial intermediation costs and increase access to credit.

The first digital bank in Georgia is SPACE, the country's first neo-bank, which debuted in May 2018 and is being carried out with TBC Bank's assistance. The project involves well-known and seasoned businesses in information security, which is regarded as one of the safest environments in the world. Georgian Bank values protecting security and personal data, which is essential for the client, so the company devotes many resources to this area. The company actively complies with all legal requirements, including those set forth by the National Bank, with the additional goal of safeguarding the interests of its customers.

Way Forward:

The RBI, SEBI, and IRDAI are the main regulatory bodies that oversee the Indian financial sector. These authorities have put out several programs and rules to provide financial products with more uniform, easy, safe, and digital accessibility. It is admirable that all the authorities have worked so hard to create regulations that match the rapid advancements in technology and innovations in the financial industry. Many of the products that neobanks currently offer require direct regulation. On the other hand, indirect regulation (by their affiliation with regulated firms) has guaranteed that their product offers comply with regulatory standards. As a result, these organizations have been able to win over more clients and provide a wide range of financial products to the public.

To revolutionize the financial business in a regulated area, there should be room for innovation from within the financial sector, not simply the front end. Policymakers can take inspiration from the Georgian system and amend it to suit the Indian environment to create value for the segment who were underserved in the traditional banking system.

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Cloudonomics: Transforming Accounting Practices in India through Cloud Innovation

Arushi Mehta, Md. Saifuddin Mujaddidi

Abstract

Cloud accounting has reshaped the field of accounting, helped organisations streamline their processes, and enhanced data access and security along with improving efficiency and also providing cost benefits. In this study we attempt to understand the novel concept of cloud accounting, how it differs from traditional accounting, possible security issues and threats and the present scenario of cloud accounting in India. It can be concluded that cloud accounting though possessing some challenges is a better alternative to traditional accounting.

Introduction

One aspect of today's workplace is the ubiquitous use of information and communication technology in all facets of administration. Both the accounting process and the outdated traditional accounting system have changed due to information communication technology. Companies need to improve their accounting systems to comply with worldwide accounting standards. Cloud accounting, or electronic computing, is a byproduct of information and communication technology. The use of cloud accounting is promoted as a remedy for problems including accounting errors, delays, and data validations. (Gangadhara 2023)

Concept of Cloud Accounting

Cloud computing is a web-based computing model in which consumers receive services via the internet. To put it another way, cloud computing is a paradigm for computing in which systems are linked together over the internet and are quickly and conveniently accessible from any location at any time. A vast pool of computers and subsystems are linked in private or public networks to create a robustly scalable infrastructure for application, data, and file storage. This is known as cloud computing, and it represents a paradigm shift in the computing industry. It has greatly lowered the cost of processing, hosting applications, storing content, and delivering it (Nandi and Banerjee 2018). It can be especially helpful to small businesses that cannot afford to make large investments in their IT infrastructure on-site. On the other hand, cloud accounting revolutionizes

the conventional accounting system by providing accountants from anywhere in the world, with no effort, on-demand access to the company's data, documents, and apps through internet connectivity. The availability and accessibility of financial information at any time and from any location in the world are what have made cloud accounting so popular. Virtualization of accounting systems has emerged as a prerequisite for the drive toward that direction as firms become more global. (Dimitriu and Matei 2014)

Traditional Accounting vs Cloud Accounting

Both cloud accounting and traditional accounting are separate paradigms in the field of financial management, with their advantages and methods. Rooted in traditional methods, traditional accounting includes localised software installations, paper-based records, and human data entry. Cloud accounting, on the other hand, uses online platforms to store data and handle financial operations; it provides real-time cooperation, accessibility, and flexibility. The present article will examine the distinctions between cloud and traditional accounting, emphasising the benefits and drawbacks for modern enterprises.

There are certain key distinctions between the operations of traditional accounting and cloud accounting, even though they both effectively carry out the same tasks. Let's attempt to comprehend a few of these distinctions:

Expenses – To perform traditional accounting, a number of items must be purchased, including software, hard drives for storing financial data, and system installation on all computers that will use the software. This means that in contrast to a cloud-based accounting system, which does not require expensive hardware, both software and hardware are required. All we need to get going is a few pieces of equipment and internet access. The cloud-based accounting software can be used on mobile devices with internet connectivity as well. It costs a monthly membership fee for us to use cloud-based accounting software.

Universal Accessibility- The main difference between cloud and traditional accounting is accessibility. Because conventional systems are on-premises, financial data can only be viewed from a single location or on a specific computer. This could affect the responsibilities, timetable, and output of an organisation. Using safe passwords, one can access data on the cloud from any device that is compatible. There are several advantages to using this off-site configuration. Real-time updates are made to data sources. It guarantees safe data backups and gets rid of redundancy. It allows accountants a lot of freedom in terms of where and when they can travel. It lowers physical labour in terms of maintenance and work hours.

Security of Data - Risks associated with a traditional accounting system include building collapse, data loss from power outages, theft, fires, hardware issues, and flooding. The cloud-based accounting system is more

resilient to these physical issues since the data is frequently backed up and stored in several locations. Additionally protected against malware and identity theft is data kept on cloud servers.

Reliability in Scale- Any company's software must be scalable to adapt to changes in size and scope. Compared to cloud platforms, scalability is more difficult in traditional accounting software solutions. As requirements change, one has to manually manage and upgrade their on-premises software, which adds complexity and drives up costs. On the other side, cloud software promotes business growth and provides sufficient scalability for an expanding organization. This is because it is independent of storage limitations or local servers. The entire platform is web-based, so one doesn't need to acquire new gear or upgrade their existing devices to meet expansion.

Cooperation- Cooperation is a key component of an effective work environment. Financial matters also necessitate discussions, meetings, recurring evaluations, and other cooperative activities. Traditional accounting makes it challenging to collaborate because all data is physically held and can only be transferred in certain ways. In the COVID-19 and post-COVID-19 periods, as businesses transition to virtual workspaces, traditional accounting software will pose additional problems. Getting all the stakeholders together in one place to work on a project is getting harder and harder. Making reports, sending them to several recipients, and collecting all the receipts as a consequence are similarly challenging. These problems are resolved by cloud accounting since it is essentially a virtual space that is accessible from anywhere in the world. Using their login credentials, authorised workers can view data and, if needed, add inputs to the same report. This helps businesses remain transparent in their operations and promotes collaboration. One can share any spreadsheet or accounting report with a group of individuals on demand. Collaboration may be facilitated by features like multi-person access and approval chains, among others.

Sustainability of the Environment: Nowadays, every company aspires to conduct its business in an environmentally responsible manner (Mondal 2022). Ultimately, we bear the duty of minimising our carbon impact and ensuring the sustainability of our world. Due to its reliance on printouts, paper trails, and technology support, traditional accounting poses a risk to the environment. Conversely, cloud accounting is hosted remotely and does not utilise paper records. It uses no resources that pose a threat to the environment. Therefore, for any corporation, this is the more morally right choice. (Marsintauli et al. 2021)

The following table (Table 1A) provides an overview of the details of the distinctions between cloud-based accounting systems and conventional accounting systems mentioned above at a glance:

Table 1A. Traditional Accounting vs. Cloud Accounting

Points of Distinction	Traditional Accounting	Cloud-Based Accounting
Expenses	Demands the acquisition of storage devices, hardware, and software. A monthly membership charge for cloud computing.	Minimum hardware requirements; cloud access requires a monthly membership fee.
Universal Accessibility	Restricted to a single machine or place.	Safe passwords that allow access from any supported device. Safe data backups and real-time upgrades.
Security of Data	Susceptible to external threats such as robbery, hardware malfunctions, and building collapse.	Remotely stored data that is protected from both physical and cyber hazards, with many backups.
Reliability in Scale	Both manual and expensive hardware updates.	Expandable to accommodate business expansion; no hardware updates are required.
Cooperation	Physical data storage has limited collaboration.	Remote cooperation is made simple with virtual workspaces. Access and permission chains involving multiple people.
Sustainability of the Environment	Depends on printouts and paper traces, which have an impact on the environment.	Remotely-hosted and paperless, minimising environmental impact.

Source: Prepared by the Researchers

Security Issues in E-Commerce and Banking

The widespread use of cloud computing in banking and e-commerce in today's digital environment is due to its exceptional cost-effectiveness, scalability, and flexibility. But this ease of use also raises several security issues that need to be properly resolved to protect private financial information and preserve confidence between companies and customers. The upcoming section will explore some of the most important security concerns related to cloud accounting in banking and e-commerce, providing insights into the intricate interactions between risk management, technology, and regulation to protect financial data and transactions:

Multiple Tenancies- It illustrates how multiple independent customers and organisations can share virtualized software resources (organisational memory, hard disc data, grid traffic, hardware measurements, and display shields) as well as physical policies or devices to access statistics.

Examining- The use of confidential information has the same risks as its acquisition. When operating in a cloud environment, security can be breached to detect important events like the creation of new files or execution processes.

Accidental Gap- To close the accidental gap, it is essential to extract useful information from low-level bytes.

Abrupt Decline- All clients forfeit physical control of their data when it is stored on the cloud. This suggests that cloud providers may have access to critical information about their clients and may mine that information, which could lead to a security breach. Additionally, even after deleting their files from all cloud-based providers that store data at several data centre hubs, clients cannot be guaranteed that their information is completely deleted. Because customers are unable to fully control or monitor their information, cloud-based enterprises are now viewed as a "Black-Box."

Faith- Given the fear of losing physical control over data, this functionality is essential to encouraging more individuals to work in the cloud. Consequently, businesses are making an effort to bolster user confidence by guaranteeing certified compliance with organisational norms and protections.

Information Assault- The new virtual architecture's most concerning feature is attacks. In an untrusted cloud computing system, there is a higher chance of information-driven buffer assaults.

Performance Metric - Performance is always a quality factor for an application used in the real world of digital technology. Therefore, security is advantageous if administrators and customers are aware of the performance statistics. (Vinoth et al. 2022)

The following table (Table 1B) provides an overview of some security issues of cloud computing in e-commerce and banking at a glance based on the information provided above:

Table 1B. Security Issues of Cloud Computing

Aspect	Description
Multiple Tenancies	Distribution of physical devices and virtualized software resources among several independent customers and organisations.
Examining	There are security dangers when using private data in a cloud environment. Breach incidents may transpire, possibly jeopardising significant occasions.
Accidental Gap	Obtaining valuable information from low-level bytes to remedy unintentional security gaps.

Abrupt Decline	Physical control over data stored in the cloud is lost, making it more difficult to guarantee total data destruction and opening the door for access by cloud providers.
Trust	User trust in cloud computing is crucial, and efforts are being made to increase that trust by certified adherence to organisational policies and safeguards.
Information Assault	Vulnerabilities in untrusted cloud computing systems to attacks, especially information-driven buffer assaults.
Performance Metric	Performance and security go hand in hand with practical uses of digital technology.

Source: Prepared by the Researchers

Companies offering Cloud services

Several companies are offering Cloud Accounting services across the globe. Some of the companies providing Cloud Accounting services across the world are:

A provider of cloud-based accounting software, Sage is committed to providing companies with the resources they require to thrive. Their expertise lies in fusing real-time, mobile, and social technologies to produce innovative applications that will enable businesses to outperform the competition. They provide a comprehensive selection that may be customised to meet the client's needs, catering to independent bookkeepers, financial directors, small startups, and mid-market businesses.

SAP leads the industry in Enterprise Resource Planning (ERP) software, enabling businesses of all kinds and sectors to function at peak efficiency. With a strong emphasis on digitization, the organisation offers a range of programmes tailored to various corporate needs. SAP makes the world better and enhances people's lives through its extensive worldwide network of partners, consumers, workers, and thought leaders.

Software developer Xero creates cloud-based accounting programmes for small and medium-sized businesses. Rod Drury started it because he believed that desktop accounting software had grown outdated and wanted to provide a cutting-edge cloud-based solution. (Rao 2019)

There are numerous other software which facilitate Cloud Accounting such as ZohoBooks, ProfitBooks, ZipBooks, Reach, etc. All the major providers of Cloud Accounting services provide basic and core accounting services of double-entry, generation of reports instantaneously along with additional services such as Document Management, Multiple currency support, estimation of taxes, payroll facility and training sessions for employees, bank connectivity, etc. (Mondal 2022)

Present Scenario of Cloud Accounting in India

On comparison among various software, it can be said that Zoho Books provides the most features of Cloud Accounting in India as compared to its counterparts like FreshBooks, Scoro, Tipaliti, etc. Many of the software are GST Compliant too which helps with easy reconciliation, filing of returns and compliance.

Every facet of the company has been touched by technology, which has also made accounting easier by simplifying formerly complicated processes. Accountants in India now prefer the usage of technology to make their work more efficient and deliver their roles efficiently. Cloud accounting and computing have helped accountants across organisations in cost-cutting whilst also enhancing their efficiency in their tasks and jobs. For instance, one of the features offered by Real Books is Branch Accounting. This feature saves time for accountants in tallying accounts, tracking transfers and compiling accounts of branches for the final set and other operations.

Conclusion

It can be said that accountants in India are open to adopting newer technology which streamlines their work and enhances their productivity which is also profitable to the organisation. However, there are certain limitations of cloud accounting which become more prevalent in India's case. Issues such as reliable internet connectivity, automation, regulatory requirements, etc. (Kumar 2023). The challenge can be overcome by working with experts who are aware of both technology as well as regulations and the local environment. Along with it, regular training, strategic planning and investment in infrastructure also play a vital role.

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Start-Up Governance – Is It Time to Put an End to 'Fake It till You Make It'?

Punita Rajpurohit

Abstract

The past few years have witnessed a change in the start-up landscape of India. The year 2021 saw an exceptional surge in the number of unicorns. A few unicorns also went public. Government initiatives like Start-up India, Make in India, and Digital India have given further fillip to the wave of entrepreneurship and start-ups in India. Start-ups have contributed to employment generation and economic growth. However, the tremendous growth is coupled with ethical and governance issues. Instances of success stories of start-ups tainted with unethical practices and mismanagement are well-known. It is important to ensure that start-ups do not resort to undesirable practices to achieve/showcase growth. As the start-up landscape is growing and evolving in India, there is a need to strike a balance between incentives to promote start-ups and regulatory architecture for start-ups. The start-up ecosystem requires proper regulatory architecture to ensure that growth is not at the cost of governance and ethical considerations. This step is timely and in the interests of all the stakeholders.

1. Introduction

India is emerging as one of the prominent start-up ecosystems in the world. It has witnessed unprecedented growth in the number of start-ups (figure 1). As of February 2023, the number of start-ups officially recognized by the Department for Promotion of Industry and Internal Trade (DPIIT) is 1,23,864[8]. As per the Ministry of Commerce and Industry (DPIIT), a start-up is defined as an entity with an age of 10 years or less from the date of incorporation and; a turnover of less than Rs. One billion in any of the financial years from the date of incorporation; and is engaged in *innovation, development or improvement of product, processes, or service*[9]. *It also includes a scalable business model with a high potential for employment generation or wealth creation*[2].

[8] https://www.startupindia.gov.in/content/sih/en/startup-scheme.html accessed on 13-3-24

[9] https://dpiit.gov.in/sites/default/files/notification_Definition_StartupIndia_06July2021.pdf

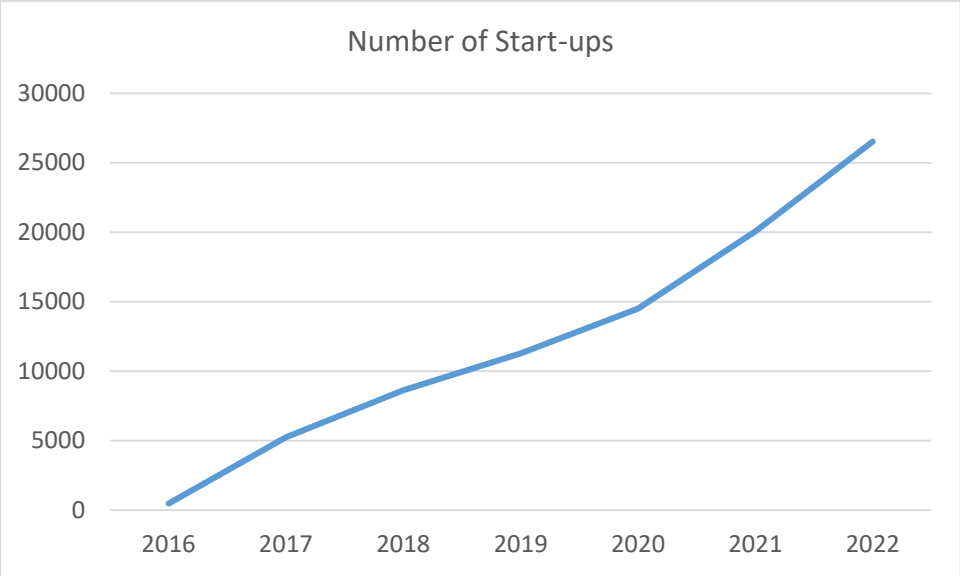

Figure 1: Number of Start-Ups in India
Source: https://www.statista.com/statistics/1155602/india-start-up-recognized-businesses/

Several factors such as easy access to funds, a skilled workforce, robust infrastructure, government support, and an enabling business environment have propelled the growth of start-ups in India. The Start-up India, Make in India, and Digital India initiatives by the Government of India have further cemented the growth of the start-up ecosystem by providing tax incentives, and access to capital, incubators, and accelerators. These incentives have not only acted as a catalyst for the growth of start-ups but also for the generation of employment (figure 2).

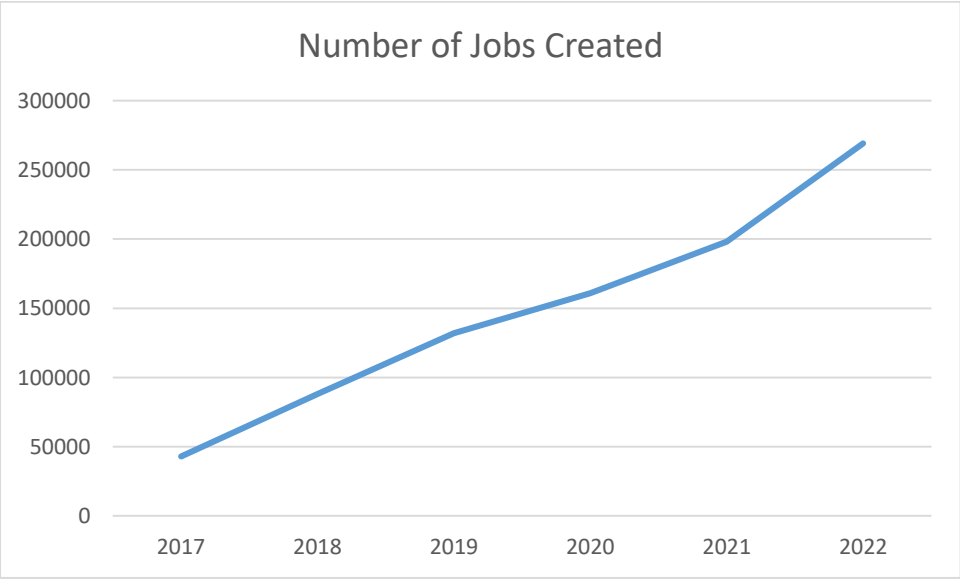

Figure 2: Number of Jobs Created by DPIIT Recognized Start-ups
Source: Economic survey 2022-23 (total number of jobs created (self-reported) by DPIIT recognized start-ups)

The conducive environment has stimulated the confidence of investors. India is viewed as one of the preferred destinations for investment. Indian Startups have witnessed a surge in valuations and unicorn status (figure 3). Start-ups with a valuation of more than one billion dollars are termed as unicorns. However, after an unprecedented increase in the year 2021, there has been a decline. The year 2023 witnessed only two unicorns – Zepto and InCred Finance[10]. Since 2021, a few unicorns have gone public – Zomato, Nykaa, Paytm, MamaEarth, Delhivery etc.

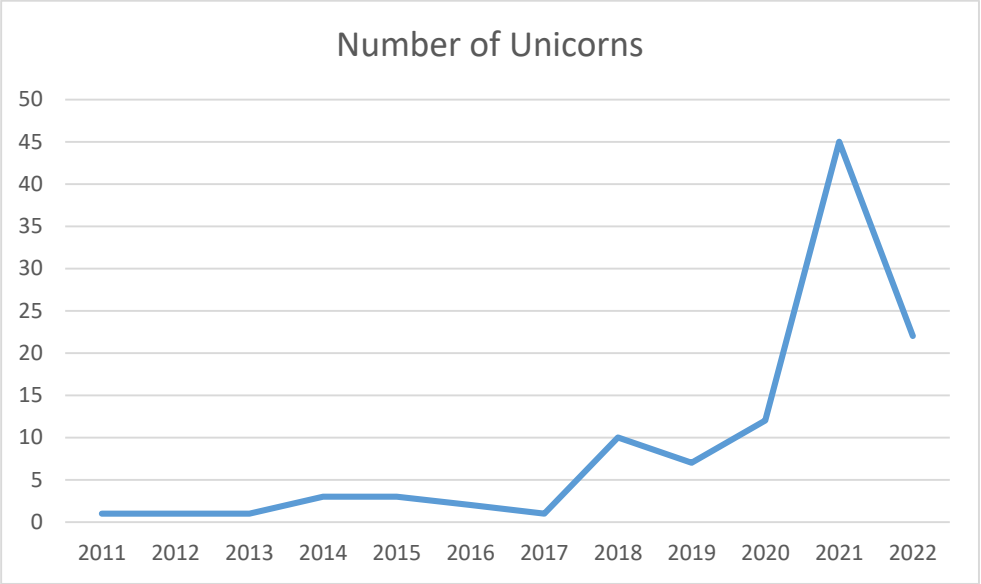

Figure 3: Number of Unicorn Start-ups in India
Source: https://inc42.com/the-indian-unicorn-tracker/

Unicorn status is viewed as a status symbol in the investing community. It attracts attention from investors, industry, and media. It also augments the reputational capital of the existing venture capital investors. However, on the flip side, it also increases the pressure to consistently grow, meet expectations, increase revenue, increase customers, scale operations, raise funds, break even, and become profitable. Owing to the pressure, the start-ups might resort to undesirable business practices to showcase a rosy picture. They take the route of *'Fake It till You Make It'*. The situation appears bleak once you view this rosy picture closely through the lens of governance and ethics. Instances at BYJU's, WeWork etc. underscores the need for relooking at the regulatory architecture for start-ups, specifically in terms of governance and ethics.

2. Need for start-up governance

The genesis of governance issues in any organisation is the conflict of interest between two or more interested parties. As Jensen and Meckling (1976) explain all the interested parties in any organisation are utility maximizers. When one party tries to maximize its utility at the cost of the other party, a conflict of interest

[10] https://www.ventureintelligence.com/Indian-Unicorn-Tracker.php

arises. To resolve and mitigate these conflicting interests, oversight and monitoring becomes important. This has resulted in different governance mechanisms to protect the interests of either party. However, the role of governance mechanisms extends beyond oversight and monitoring to provide strategic direction and guide decision-making. Good governance rests on pillars of transparency, stewardship, accountability, ethics, and integrity.

The financing structure of an entity and division of managerial control and decision-making define the governance mechanisms and their effectiveness. In the case of listed widely held corporations, the financing structure is primarily debt and equity. Equity is the prominent source of financing. Equity holders are the owners of the corporation. The managerial control and decision-making are in the hands of managers and they act as agents of owners.

The seminal work on governance by Jensen and Meckling (1976), and Fama and Jensen (1983a, 1983b) focus on widely held corporations. Such corporations have conflicting interests between owners/shareholders and managers. Managers act on behalf of owners and might make decisions which are not in the best interests of shareholders to maximize their gains. Information asymmetry also arises in such situations. In the extant literature, it is referred to as agency problems. To mitigate these problems, reduce information asymmetry, and enhance transparency, several governance mechanisms are used. Governance mechanisms consist of internal as well as external mechanisms (Cohen et al., 2004). Internal governance mechanisms include the board of directors and its sub-committees while external mechanisms include auditors, takeover market, and regulations. Moreover, these corporations are subject to listing requirements, regulations for publicly held companies, scrutiny of regulators etc.

However, in the case of a start-up, the prominent financing source is venture capital (VC) investment or owner's investment. Managerial control and decision-making rest with owners. Thus, the two main interested parties in a start-up are the owner/founder and VC investors. Governance issues in start-ups arise from conflicts of interest between founders and VC investors. Start-ups are unlisted entities and subject to less stringent requirements than listed entities as far as governance and disclosure aspects are concerned. Some start-ups are larger than many listed companies in terms of valuation and size. Thus, effective governance and disclosure become even more crucial.

3. Case of BYJU's

BYJU was considered the poster child of Indian start-ups. It is registered as Think and Learn Pvt. Ltd. It was one of the fastest-growing EdTech start-ups and the first unicorn in the EdTech space. The pandemic propelled its rapid expansion. In 2022, its valuation surged to $22 billion. However, the year 2023 shows a different story altogether. BYJU's faced backlash from auditors and investors. Consequently, its valuation and

popularity declined. The issues concerning BYJU are used as a reference to highlight the need for governance mechanisms to ensure proper oversight, monitoring, and direction of start-ups.

[11]**Accounting policies:** In FY 2021, BYJU' suffered a loss of Rs. 4564 crore and a decline in revenues by 3.3%. The company said the reason for the decline in revenue is due to a change in the revenue recognition policy. This new policy has resulted in deferment of 40% of revenues to the subsequent years.

[12]**Auditors:** Deloitte Haskins and Sells LLP was BYJU's auditor. Deloitte – one of the Big 4's resigned as the auditor of BYJU citing the delay in accessing documents and financial statements necessary to complete the audit. It clearly stated that this delay impacted its ability to assess books of accounts. The resignation was triggered by a delay in presenting and filing the financial statements. As per the Companies Act of 2013, the audited financial statements should be presented in the annual general meeting to the shareholders by September (for the financial year ending in March). The auditor's resignation during the ongoing term is viewed as a red flag by the stakeholders. Such instances raise questions about the credibility of the company. Subsequently, MSKA & Associates was appointed as the new auditor. In addition to this, there has been speculation on the company's ability to continue as a going concern.

Analysis: One of the primary pillars of governance is transparency. Financial statements are one of the primary sources of information. It helps in evaluating the financial performance of an entity. It is a means of reducing information asymmetry between founders and VC investors. The credibility of financial statements depends on the auditor's opinion on financial statements. Hence, auditor and auditing requirements are one of the key governance mechanisms. The auditor's resignation during the ongoing term and qualified opinion should be viewed as a red flag. Such actions by auditors are generally to safeguard their credibility. It is vital to stress start-ups to abide by auditing requirements.

Board and Key Investors' Activism: The board and key investors play an important role in any entity. BYJU's board members representing investors such as Sequoia Capital India, Naspers Ventures, and Chan-Zuckerberg Initiative had quit the board[13]. They cited dissatisfaction with the audit, internal controls and processes, compliance, transparency, governance, financial management, and disregard of their advice as

[11] https://indianexpress.com/article/business/companies/byjus-auditor-quits-amid-mounting-financial-worries-8680682/

[12] https://www.bbc.com/news/world-asia-india-66126095

[13] https://www.reuters.com/technology/three-board-members-indias-byjus-step-down-sources-2023-06-22/

reasons to quit[14]. Investors have also marked down the valuation of BYJU's. Apart from this, inquiries from the Enforcement Directorate for violations of the Foreign Exchange Management Act, the Ministry of Corporate Affairs, and disputes with lenders have further exacerbated the situation. Investors have voted for leadership change in extraordinary general meetings, while the founders say investors do not have the right to change management. The tussle between founders and investors is going on.

Analysis: The resignation of key investors from the board is also viewed as a red flag. It is also perceived as a move to protect investors' credibility, lack of confidence in the management of the company, governance and compliance issues, mismanagement, ethical dilemmas, and differences of opinions. Whatever might be the reason, the market views such instances negatively. It puts the company under scrutiny and bad light. Ideally, the board is responsible for oversight, monitoring, and strategic guidance to protect the interests of investors. In the case of start-ups, the investors are generally few but the stakes are substantial. VCs also intend to guide the founders to grow the business sustainably and ultimately go public. BYJU's case does highlight the efforts of key investors and their activism. Though founders and investors have hurled allegations against each other and every coin has two sides, the role of investors and board in governance cannot be undermined.

[8] Business Strategies and Management: BYJU saw the pandemic as an opportunity to promote online education. It engaged in rapid expansion by aggressively acquiring start-ups in India and overseas. It spent approximately $ 2 billion to acquire Aakash, WhiteHat Jr, Toppr, Great Learning and Epic[15]. This has led to issues in integrating different platforms. They resorted to aggressive marketing strategies such as sponsoring major events and onboarding celebrities for endorsements. They acquired sponsorship rights for the Indian cricket team. Football icon Lionel Messi was signed as a global ambassador for their social impact initiative 'Education for All'. Heavy marketing spending when the company laid off a large number of employees has not gone well with the public at large. BYJU faced difficulty in paying salaries to employees. The situation reached a point where the founders had to mortgage their personal properties to meet the salary expense. It also defaulted on dues to lenders. Investors are also concerned about the revenue model dependent heavily on subscription-based services.

Analysis: Strategies and management of a company should be guided by taking into consideration the interests of key stakeholders. According more importance to discretionary expenses, the cost of statutory dues,

[14] https://www.wionews.com/business-economy/prosus-led-shareholders-push-forleadership-change-at-byjus-report-686236

[15] https://www.bbc.com/news/world-asia-india-66126095

employee salaries, and interest payments is contradicting in nature. Resorting to strategies to manage the top line is not sustainable in the long term.

[16,17,18]**Employees, Customers and Lenders:** There have been allegations of toxic work culture and undue pressure for acquiring more and more customers against BYJU's. BYJU have also faced inquiries for non-payment of provident fund money to the employees. Key managerial personnel like the chief financial officer and chief technology officer have also resigned from the company. It also engaged in mass layoffs. There have been allegations regarding mis-selling of courses and undesirable practices by parents. BYJU also defaulted on payment of dues to Google and Facebook for Ads and faced suspension. Lenders in the US have sued them and filed insolvency petitions. Investors and lenders also raised concerns regarding the conversion of loan to equity by Mr Pai at a lower valuation[19].

Analysis: The scope of governance is not limited to investors. Governance mechanisms need to ensure that the interests of other key stakeholders such as employees, customers, and lenders are safeguarded. Activities resulting in the expropriation of employees, customers, and lenders need equal attention.

The above instances reflect the grave situation at BYJU. It is evident that intentionally or unintentionally the key stakeholders had to suffer due to financial mismanagement, liquidity crunch, and governance and compliance issues. BYJU has decided to come up with a rights issue to deal with financial constraints. They are also considering establishing an advisory committee comprising independent directors to guide the management on board composition and governance.

4. Case of Zomato[20]

Zomato – a food delivery and restaurant search app was accorded unicorn status in February 2018. It was listed on the stock exchange in July 2021. Zomato provides a good case to evaluate a start-up which went

[16] https://www.ndtv.com/business-news/byjus-unraveled-the-meteoric-rise-and-staggering-fall-of-ed-tech-titan-500360

[17] https://www.moneycontrol.com/news/trends/byju-raveendran-byjus-saw-my-father-breaking-down-after-seeing-the-news-12197311.html

[18] https://www.livemint.com/opinion/online-views/does-the-collapse-of-byju-s-mean-the-end-of-edtech-11707136891702.html

[19] https://www.indiatoday.in/business/story/byjus-byju-raveendran-win-dispute-aakash-institue-stake-ranjan-pai-manipal-group-2498258-2024-02-06

[20] https://www.zomato.com/investor-relations/financials

public from the lens of corporate governance. A comparison across financial years 2019 to 2023 reveals some important changes in corporate governance and disclosure.

Table 1: Comparison of Governance Parameters of Zomato Prior and Post-Listing

Basis of Comparison	Prior Listing	Post Listing
Board size[21]	3	8
Board Composition	Managing director and nominee directors	Independent chairman, independent directors, executive director
No. of independent directors	Nil	5
Board meetings	12, 13, 21 (three years before listing)	14, 12 (2 years since listing)
Audit committee (AC)	Existed	Mandatory
Composition of AC	Managing director and nominee director	Independent directors
Meetings of AC	5, 7, 5 (three years before listing)	6, 4 (2 years since listing)
Other board committees	Corporate Social Responsibility Committee	Nomination and remuneration committee, stakeholders' relationship committee, risk management committee, IPO committee, investment committee, corporate social responsibility committee
Statutory auditors	Yes	Yes
Business responsibility report	No	Yes
Management discussion and analysis	Yes	Yes

[21] As per red herring prospectus, the size and composition are different. It was changed after the financial year.

Table 1 underscores the changes in the governance structure of Zomato. There is a stark change in board composition and leadership. The company has moved away from CEO duality. The same change is visible in the composition of AC. The number of board committees has increased drastically. One of the notable findings of this comparison is that Zomato started making changes in board composition and independence before issuing a red herring prospectus. It indicates the company started aligning its practices with listing requirements. In terms of requirements concerning statutory auditors, their reports, audit of financial statements, and internal controls there has been no change.

5. Conclusion

India has witnessed a surge in several start-ups and unicorns. The start-up ecosystem is gradually evolving in India and government initiatives are providing the required push to entrepreneurs. But the growth story has its challenges. One of the key challenges is regulatory architecture for start-ups. Growth should be real growth and not optics management. It is important to sensitize the players in the start-up ecosystem 'Fake It till You Make It' is not sustainable. Critics have rightly pointed out the gap between the value and valuation of start-ups. Valuation should be based on and reflective of sustainable growth, realistic expectations of profitability, ability to manage cash flows, and effective strategy for scalable and sustainable operations. The race to achieve unicorn status and go public is gaining momentum. Start-ups are reeling under pressure from all corners to be in the race. A competitive landscape is crucial but with checks and balances to curb undesirable practices. Imbierowicz and Rauch (2021) examined a sample of 98 unicorns and their analysis suggests that each unicorn is sued seven times a year. The majority of these lawsuits are for undesirable and fraudulent practices.

India has always strived to match international best practices of corporate governance for listed companies. The regulations and listing requirements have been updated accordingly. It is known for a fact that certain start-ups are larger than listed companies in terms of size and valuation. Governance and disclosure requirements are similar to those of listed companies must apply to them. Requirements such as independent directors, internal audit, audit committee and other regulations for listed companies are applicable for start-ups reaching certain valuations. India has reached a stage to frame specific regulations about transparency and disclosure, investor activism, effectiveness and independence of board, code of conduct, and founder's rights for start-ups. It is in the interest of all the stakeholders including founders. At this point, it is important to note regulatory requirements can be time-consuming and involve lengthy procedures. It might act as an impediment to fast-growing start-ups. It is necessary to strengthen the regulatory machinery for timely processing along with devising regulations.

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