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A NEWSLETTER OF THE FINANCE LAB

December 2021, Volume 7, Issue 3

INDIAN INSTITUTE OF MANAGEMENT CALCUTTA

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Financial Research & Trading Laboratory

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Editorial

Greetings from FRTL @ IIM Calcutta. I am glad to share with you that a₹tha's editorial board has now 12 members. For the December 2021 issue, we have selected five articles (out of thirteen received) contributed by editorial board members, alumni, and experts.

The *first* article examines the fiduciary duties of a company's board of directors to its various stakeholders under section 166(2) of the Companies Act, 2013 and proposes measures to strengthen the role of the board in balancing the conflicts among and interests of all stakeholders. The *second* article discusses M&A activity in India during the first eleven months of 2021 and the investment themes dominating India's M&A landscape. The *third* article discusses the need for a legal digital currency in India and suggests various features that the digital currency may have. The *fourth* article examines green bonds for funding climate crisis and the premium, greenium, they enjoy. In the *fifth* article, the author discussed the evolution of the Buy Now Pay Later (BNPL) model in India (and around the world) and proposes action points to safeguard the Indian financial sector and the welfare of Indian consumers.

We hope that you enjoy reading these articles. Please consider contributing your article and sharing your feedback to us at artha@iimcal.ac.in.

Please continue to take great care of yourselves and stay healthy!

May you have a very happy New Year 2022!

Sudhir S. Jaiswall

Chief Editor

Board's Fiduciary Duties – To Shareholders or All Stakeholders? Examination of Section 166 (2) of the Companies Act 2013

Asish K Bhattacharyya

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ABSTRACT

Section 166(2) of the Companies Act 2013 creates an impression that the new Companies Act has extended the board's fiduciary duties to all the stakeholders. This view is further strengthened as the Environmental, Social, and Governance (ESG) investment is gathering momentum. This article examines the issue. It concludes that the board has a fiduciary relationship only with the company (collective of shareholders) and not to any particular stakeholder group. However, section 166(2) and ESG investment require significant change in board composition and role.

Introduction

The separation of ownership and control is inherent in the company structure. The governance and management of a company is centralized with its board of directors (hereafter, board). Shareholders have no right to participate in the day-to-day decision-making. They participate in deciding only the issues reserved for the shareholder body. The board derives its power from corporate law, capital market regulations, and the Articles of Association (Articles). The view that the shareholder body delegates power to the board for managing and governing the company is incorrect.

Corporate governance rules are shareholder centric. La Porta et al. (1997, 1998, 1999), who studied shareholder and creditor protection across the countries, hypothesize that the legal environment – law and its enforcement, for protecting shareholders' interest determines the flow of capital to companies and development of the capital market. Many believe that the hypothesis is still valid, for example, Lele and Mathias (2007).

This article endeavors to examine whether section 166 (2) dilutes the board's fiduciary relationship with shareholders by asking it to balance the conflicting and often competing interests of all stakeholders.

Core Objective Function of a Company - ESV

Enlightened Stakeholder Value (ESV) or 'Enlightened value maximization' theory propounded by Jensen (2001) captures the current, dominant view on what should be the core objective function of a company. According to that theory, boards should use resources and efforts to maximize their firm's long-term value. Jensen (2001) argues that managers cannot preserve and create long-term firm value if they ignore or mistreat any important constituency and fail to maintain good relations with customers, employees, financial backers, suppliers, regulators, and communities.

ESV is finding support, at least on paper, from the business. In August 2019, the Business Roundtable adopted a resolution signed by nearly 200 CEOs of large American Corporations, delineating their fundamental commitment to (i) deliver value to customers, (ii) invest in employees, (iii) deal fairly and ethically with suppliers, (iv) support the communities in which they work, and (v) generate long-term value for shareholders.[1]

The model has also found its place in the statute book. For example, section 166 (2) of the Indian Companies Act 2013 stipulates,

> "A director of a company shall act in good faith in order to promote the objects of the company for the benefit of its members as a whole, and in the best interests of the company, its employees, the shareholders, the community and for the protection of environment."

[1] Available at: https://www.businessroundtable.org/purposeanniversary, extracted on December 8, 2021

A close reading of section 166 (2) of the Indian Companies Act 2013 makes it clear that it has two distinct clauses, which are:

1.A director of a company shall act in good faith in order to promote the objects of the company for the benefit of its members as a whole; and

2.While promoting the company's object, it will act in the best interests of the company, its employees, the shareholders, the community and for the protection of environment.

Good faith, also called *bona fides*, is defined as a state of mind which includes honesty, faithfulness, observance of reasonable commercial standards, and absence of intent to defraud.[2]

Directors are duty-bound to promote the objects of the company. Companies usually include a large number of objects in the Memorandum of Association, all of which are in the nature of commercial venture. Therefore, it is appropriate to infer that the board has the fiduciary duty to preserve and create long-term value for the firm. The second part of the clause makes it obligatory that the directors in performing that fiduciary duty shall act in the best interest of the company, its employees, the shareholders, and the community, whose interests are conflicting and often competing. According to Sterzenbach and Sitkoff (2020), the best interest in dealing with competing interests should be construed as *'total fairness'* requiring fair price and fair dealing. Therefore, directors' duties towards the company and that towards the stakeholders are different. The board has fiduciary duties towards the company (and not individual shareholders), and in performing those duties, it should deal with stakeholders applying the principle of total fairness.

Section 166 (2) is yet to be tested in the Indian courts. However, it is unlikely that the court will intervene on a suit filed by employees or members of the local communities (around which the company operates) for a remedy against the board's failure to comply with the requirement of section 166 (2) unless they can establish that directors have taken a decision that a reasonable prudent man will not take while pursuing its goal (in case of a company, commercial considerations).

[2] *Black's Law Dictionary* 713 (8th Ed. 2004).

The Companies Act 2013 retains the shareholder primacy and does not protect the stakeholders' interests. For example, it is only the shareholders who have the voting right. Furthermore, section 241 of the Indian Companies Act 2013 empowers only shareholders and depositors to proceed with class-action suits. It does not provide any remedy against mismanagement to stakeholders other than the shareholders. The interests of stakeholder groups are subordinate that to the company's interest. Section 166 (2) does not require the directors to "balance" the interests of the members of various stakeholder groups. In *Percival* v *Wright*, a case based on the UK company law, a celebrated authority on the subject ruled that the fiduciary duty of the director extends only towards the company and not towards individual shareholders. [3] Section 166 (2) has not changed the settled position in corporate law.

Ernest (2018) observes that although none disputed that recklessness and failure to provide oversight had nearly resulted in collapse of financial institutions during the 2008 financial crisis, but none of those directors were held liable for the collapse of financial institutions, which could only be saved through government bailout.

Pitfalls of ESV

Jenson (2000) in an interview clarified that 'value maximization' is the score card to evaluate the company's and manager's performance like goal scored in football matches in a year is used to measure the performance of the club and the players. Managers should develop the firm's vision and craft the strategy for achieving that goal as the coaches of football clubs craft strategy for winning football matches.

For long analysts and researchers measure firm performance using a proxy for Tobin's Q. Tobin's Q is calculated using the following formula:

$$Tobin's\ Q = \frac{(Market\ Value\ of\ Equity + Market\ Value\ of\ Debt)}{(Book\ Value\ of\ Equity + Book\ Value\ of\ Debt)}$$

In the long-term, a firm's market value converges with its fundamental value. Although mispricing of shares in the capital market is an important issue, market value is considered a good measure to evaluate a manager's performance.

[3] (1902) 2 Ch 421

There are real-life examples, such as the WorldCom scandal (in the calendar year 2002), the Volkswagen scandal (in 2015), and the Boeing 737 Max crashes (in 2019). These examples illustrate that when a firm's market value is used as the guidepost for crafting and implementing strategy, managers get tempted to ignore the interests of stakeholders other than shareholders. The goal of creating long-term firm value acts as a blinder. Investigation of two fatal crashes of Boeing 737 Max within five months reveals how key employees behave in a capital-market-focused organization culture. To make their company more profitable, they defraud the regulators and compromise other stakeholders' interests. A federal grand jury indicted a former key executive of Boeing for fraud, alleging he deceived the Federal Aviation Administration about the design flaws that would cause two fatal crashes. Isidore of CNN news (2021) reported that Nadia Milleron, mother of Samya Rose Stumo, who was killed in the second fatal crash in March of 2019, said the indictment of one former executive does not go far enough. She said that Mark Forkner was operating within a system which rewarded short-term financial gains over safety. Therefore, the board of directors should take the responsibility and directors should be penalized.

Robison (2021) demonstrates that the ultimate blame for the crashes lies with the highly paid executives. They led the transformation of Boeing from a company known for engineering excellence into one of the most shareholder-friendly company.

The second pitfall of the ESV is that it guides managers to take care of the interests of *important constituencies.* Even before the ESV was propounded, managers used to manage stakeholders based on their power and position. They took care of those stakeholder groups who could hurt the company's operations and not those who are hurt by its operations. The ESV theory fails to change this managerial approach.

Company's Purpose and ESG Investment

The purpose of business cannot be anything but to earn money. When entrepreneurs conceive a business idea, their main consideration is whether they will make money by implementing that idea. According to Peter Drucker (1993), "an institution exists for a specific purpose and mission, a specific social function. In the business enterprise, this means economic performance." He further wrote, "Business management must always, in every decision and action, put economic performance first". Drucker's theory is as true today as it was in the past. Managers aim to internalize the benefits of everything they do. Investible funds flow only to those firms that demonstrate better economic performance. Companies invent products (and services) using scientific discoveries and create customers for those products. Their economic performance depends on their ability to sell products at prices that are higher than their production and distribution costs. The price that the customers are ready to pay for a product depends on how they value it, which depends on how good it is in fulfilling their needs. In maximizing firm value, a firm serves those segments of the society which can pay for products and services. Firms look at the 'bottom of the pyramid' to explore the opportunities for making money or to manage reputation risks.

ESG investment should be viewed in the above context. Schanzenbach and Sitkoff (2020) classified ESG factors into two categories – 'collateral benefits ESG' and 'risk-return ESG'. Collateral benefits ESG is the classic socially responsible investing (SRI). The investment strategy is not to invest in sin stocks. Managing Risk-return ESG improves return on investment. Institutional investors (like pension funds and mutual funds) fail in their fiduciary duty when they exclude sin stocks from their portfolios unless the investors in the units of those funds agree to the Fund's approach of screening their investment strategy through collateral benefits ESG factors. Institutional investors fulfill their fiduciary duties when they screen their investment strategy through risk-return ESG factors, as the aim is the preserve and create long-term firm value.

Changing board role

The ESG investment movement has not demolished the basic premise of ESV that the core objective function of a firm is to preserve and create the long-term firm value. Furthermore, it has yet to weaken Drucker's proposition that a firm's economic performance be the metric for management's performance. ESG investment movement has changed the ESV theory's proposition that managers can create value only by managing the interests of and relationships with important constituencies. ESG factors include the overall social and environmental impacts of the company's policy, strategy, and operation.

Companies that ignore ESG factors are considered irresponsible. In the digital environment, the irresponsible behavior of companies spreads fast like a wildfire. It hurts the firm's reputation and the reputation of key actors who drive its mission and strategy. Therefore, irresponsible companies fail to attract talent.

In view of the above discussion, I propose the following:

1. The concept of a monitoring board should give way to an advisory board. The board should not focus too much on its monitoring role. It should concentrate on its advisory roles and thoughtfully design business

models, formulate policy, business and corporate strategy, and manage risk. It should be cautious that the goal of creating firm value acts as a blinder unless the ESV culture percolates down to the bottom. Therefore, it should play an active role in building the right organizational culture. It should set the tone not only at the top but also across the organization.

2. At present, audit committees are in the limelight, and boards are spending too many resources in analyzing quantitative details. Financial statements are losing relevance, as accounting numbers fail to capture the outcome of strategy and efforts in preserving and creating long-term firm value. Even the International Accounting Standard Board is revising its practice statement on management commentary, and the IFRS Foundation has set up a separate board for setting IFRS sustainability standards. The board should spend time and efforts in discussing qualitative ESG issues from different perspectives to clearly understand the impact of its operations on the society beyond the neighboring community.

3. The board should build its capabilities to understand the social issues and the social impact of its decisions. To this end, it should achieve diversification beyond gender diversity. For example, on August 6, 2021, SEC has approved new listing requirements proposed by NASDAQ. The new provisions stipulate issuers to have at least one director from an underrepresented minority and one female director. The new rules prescribe disclosure regarding the gender composition of the board and the demographic background of board members (Board Composition Disclosure) and establish a disclosure-based framework, not a mandate or quota. The board should include representatives of various stakeholder groups. Initially, the board might create positions such as non-voting members and observers to enhance its capabilities.

4. Section 166 (2) should replace the word "employees" with the word "workforce" to ensure fair treatment to gig workers, migrant workers, and other contract workers. The U.K. Corporate Governance Code has used that term instead of employees.

5. Boards should require the CEO to present a structured report on performance using ESG parameters and metrics to be developed by the board. It should ensure that the company policy is aligned with national priorities of eradicating social ills and that the policy is implemented effectively.

6. The board should reconsider top managements' variable compensation based on the stock market performance given the mispricing in stock prices.

Conclusion

Companies will continue to pursue the goal of maximizing long-term firm value. They should evaluate business models and business strategy through risk-return ESG factors. This will not require dismantling the extant corporate governance model. However, it would require reconstitution of the board to build capabilities to examine strategies and policies from a risk-return ESG perspective. The board's monitoring role should give way to the advisory role, and its efforts and resources should be augmented for discussing qualitative issues. Empowering shareholders makes the institutional shareholders more powerful, leading to a higher level of shareholder activism. It is time to examine whether heightened shareholder activism is good for companies that focus on long-term value creation by managing risks using a model that incorporates risk-return ESG factors.

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M&A Deals in India in 2021: A Round-up

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Historically, companies have sought growth, synergies, strategic realignment, scope & scale economies, access to resources and capabilities, market entry, resilience, and a lot more, with the help of mergers and acquisitions (M&A). Despite disrupting every sphere of our lives, the COVID-19 pandemic presented new opportunities that made certain strategic investments attractive and opened avenues for dealmakers to pursue M&A deals. This article presents a brief overview of M&A activity in the first eleven months of 2021 in India and highlights the investment themes that dominated the M&A landscape in the country.

M&A activity involving Indian firms with a known deal value of at least USD 100 million (and meeting additional filtering criteria indicated in the notes of Table 1) showed moderate signs of slowing down in 2020 in terms of the number and the value of deals announced as compared to the previous year. Still, the increase in the aggregate value of these transactions in 2021 showed promising signs of recovery. The analysis of M&A deals meeting the filtering criteria suggests that the total value of M&A transactions that involved Indian firms (as an acquirer or as a target firm) announced in 2020 was around 17% lower than the total value of the similar sample of filtered deals announced in 2019. However, the value of transactions announced between January and November 2021 stood stronger at approximately USD 52.3 billion.

Table 1: M&A activity involving Indian firms

Year	Number of Deals	Total Deal Value (USD, Millions)	Total Deal Value (INR, Millions)
2016	62	34,972.25	2,333,884.51
2017	61	43,895.27	2,853,503.26
2018	110	91,135.38	6,227,516.15
2019	100	49,420.84	3,476,347.69
2020	77	41,134.12	3,048,647.10
2021*	73	52,297.25	3,854,468.81

Notes: The data used for this analysis uses the following filtering criteria: M&A deals involving Indian firms either as an acquirer or a target firm, or both, announced in a calendar year. M&A deals with disclosed deal value of at least USD 100 million where an acquirer seeks to acquire a 5% or more stake. This data also includes deals done in multiple parts, deals undertaken by investor groups, but excludes rumored deals and deals where acquirer and target have the same ultimate parent. Deal status is either completed, pending or withdrawn. The Form of the Deal is Merger, Acquisition, or Acquisition of Assets/Majority interest/partial interest. The sample has been filtered for meaningful analysis.

*Data for 2021 is for 11 months – January to November 2021.

Disclaimer: The data used in this article meets specific filtering criteria as stated in the notes above. Therefore, the aggregate or industry-level deal values correspond to only those that fulfill the above criteria. These statistics could differ from the values or numbers reported in other articles on M&A activity. Further, the use of this analysis is only for academic purposes.

Compiled by author. Data Source: Refinitiv Eikon.

If we consider the value of cross-border mergers and acquisitions, then quite like the activity at the aggregate level, we have observed a moderate fall and a promising recovery in the value of cross-border M&A deals in 2020 and 2021 compared to those in 2019 (see Table 2). This statistic is remarkable given an increased uncertainty posed by the pandemic and even greater complexities associated with deals across borders. The composition of cross-border deals in the aggregate M&A activity in our sample has been similar in 2020 and 2021. As indicated in Table 2, the cross-border deals comprised 42% and 43% of the total transaction value in 2020 and 2021, respectively.

Table 2: Value of Cross-Border and Domestic Deals

Year	Domestic Deals (Total Deal Value in USD, Millions)	Cross Border Deals - Inbound & Outbound (Total Deal Value in USD, Millions)
2016	20,796.47	14,175.78
2017	29,691.90	14,203.37
2018	53,451.90	37,683.48
2019	30,042.51	19,378.34
2020	23,858.02	17,276.09
2021*	29,709.34	22,587.90
Note: Cross-border deals are inbound and outbound M&A deals involving Indian firms (as an acquirer or as a target firm). The data used for this analysis is based on the filtering criteria mentioned in table 1. *Data for 2021 is for 11 months – January to November 2021.		
Compiled by author. Data Source: Refinitiv Eikon.		

Table 3 provides an analysis of the data of announced transactions (with relevant filters outlined in Table 1) and indicates that the industry sectors that witnessed M&A deals of significant value were: energy and power, financial services comprising asset management, credit institutions and insurance, high technology comprising IT consulting, internet software and services. Industry sectors like transportation and infrastructure, educational services, and broadcasting also received significant investments. Dealmakers also found significant attractive investments in sectors like healthcare services, healthcare equipment & supplies, and pharmaceuticals.

Table 3: Deal Values by Target Macro and Mid Industry

Industry	Total Deal Value (USD, Millions)
Consumer Products and Services	
Educational Services	1,931.39
Other Consumer Products	398.12
Energy and Power	
Alternative Energy Sources	672.78

Power	10,137.01
Financials	
Asset Management	2,141.06
Credit Institutions	6,321.89
Insurance	1,296.00
Other Financials	4,837.21
Healthcare	
Healthcare Equipment & Supplies	612.90
Healthcare Providers & Services (HMOs)	1,200.00
Hospitals	123.31
Pharmaceuticals	584.27
High Technology	
Electronics	398.43
Internet Software & Services	767.26
IT Consulting & Services	8,406.88
Software	510.60
Industrials	
Automobiles & Components	252.26
Building/Construction & Engineering	337.18
Transportation & Infrastructure	4,141.94
Media and Entertainment	
Broadcasting	1,570.00
Motion Pictures / Audio Visual	250.00
Publishing	500.00
Recreation & Leisure	100.00
Others (Miscellaneous)	**4,806.75**
Note: The data used in this analysis has been filtered as suggested in table 1.	
Compiled by author. Data Source: Refinitiv Eikon.	

Motivated by the global trends towards clean power generation, decarbonization, and investing in net-zero and clean energy assets, power and alternative energy companies received substantially large strategic investments through the M&A route as Table 4 shows. A key player in this space was Renew Power Pvt. Ltd., one of India's largest renewable energy companies. It merged with a US-based special purpose acquisition company (SPAC), and subsequently, the merged entity was listed on NASDAQ. It was touted as the largest listing of an Indian company through the SPAC route (TOI 2021). After this transaction, Renew Power acquired solar projects of Southern Power Distribution Company of Telangana Ltd. and L&T Uttaranchal Hydropower Ltd. for total cash consideration of USD 382 million.

The Adani group, which has committed to invest over USD 20 billion in alternative energy in the next ten years, acquired SB Energy Holdings and thereby bought a portfolio of renewable energy projects through its group affiliated company – Adani Green Energy Ltd (BS 2021). Driven by a similar investment rationale, Reliance New Energy Solar Ltd. acquired Norway-based REC Solar Holdings with manufacturing facilities in Norway and Singapore. This sector received investments from Actis LLP, a PE firm based in the UK, which acquired solar power plants in India from a Finnish company that wanted to divest these investments to explore further investment options. The sector continued to receive significant interest from investors globally (PWC 2021). And the deals undertaken in this space in India reflected similar investment potential (Table 4).

Table 4: Select M&A Deals in Power and Alternative Energy Sector

Target	Acquirer	Deal Value (USD, million)	Deal Value (INR, million)	Deal Geography
Renew Power Pvt Ltd	RMG Acquisition Corp II	3,584.00	2,59,409.92	The acquirer is a SPAC based in the US
SB Energy Holdings Ltd	Adani Green Energy Ltd	3,500.00	2,55,675.00	Domestic deal
Jindal Power Ltd	Worldone Pvt Ltd	994.09	74,010.00	Domestic deal
REC Solar Holdings AS	Reliance New Energy Solar Ltd	771.00	57,911.20	The target is based in Norway
Warora-Kurnool Transmission Ltd	Adani Transmission Ltd	464.12	33,700.00	Domestic deal

Avaada Energy Pvt Ltd	Global Renewable Synergy Co Ltd	453.78	33,820.24	The acquirer is based in Thailand
Fortum OYJ-500MW Solar Power Plants	Actis LLP	333.62	24,731.25	The acquirer is a PE firm based in the UK
Southern Power Distribution Company Of Telangana Ltd-260mw Solar Projects	Renew Power Pvt Ltd	250.57	18,650.00	Domestic deal
Azure Power Global Ltd	Omers Infrastructure Asia Holdings Pte Ltd	219.00	16,259.65	The acquirer is based in Singapore
L&T Uttaranchal Hydropower Ltd	Renew Power Pvt Ltd	132.34	9,850.00	Domestic deal
Surya Vidyut Ltd	Torrent Power Ltd	107.27	7,900.00	Domestic deal
Note: The data used in this analysis has been filtered as suggested in table 1.				
Compiled by author. Data Source: Refinitiv Eikon.				

In a significant deal in the high technology sector (refer to the select M&A deals summarized in Table 5), Singapore-based BCP Topco, an affiliate of the private equity firm Blackstone and co-investors, acquired a significant stake in Mphasis Ltd for USD 3.13 billion. Interestingly, Blackstone, which had acquired its existing stake (pre-deal ownership stake) in Mphasis from Hewlett Packard in 2016, was considering selling it in the early part of 2021. Investors like Carlye Group, Brookfield, and Bain & Co. were the potential bidders for that transaction (Barman and Chandrashekhar 2021). However, the PE firm shelved the idea of the stake-sale and instead announced the acquisition of additional stake in the company. This deal helped the acquiring group to consolidate its position in the company that has expertise and significant strengths in servicing BFSI clients and has promising prospects in cloud computing and AI – segments that have witnessed surge in demand.

CA Magnum, an investment vehicle formed by Carlyle Group, announced its plan to acquire Hexaware Technologies - an IT solutions provider and back the acquisition with a dollar-denominated bond issue of over

USD 1 billion. The PE-backed acquisition vehicle would buy Hexaware from Baring Private Equity Asia for USD 3 billion. This buyout had attracted interest from potential bidders like KKR, Bain Capital, and others.

Wipro Ltd. undertook its biggest inorganic investment by acquiring Capco (The Capital Markets Co NV), an IT consulting firm based in the UK and servicing the financial services industry across the American sub-continent, Europe and Asia-Pacific regions (Srinivasan 2021). Reliance Retail, an affiliate of Reliance Industries, acquired Just-dial, a significant player in the domain of online B2B search engines, in a multi-part deal, and thereby surpassed the deal values paid for its earlier investments in Netmeds, Hamleys, and Urban Ladder.

Globally, this industry observed high-value acquisitions led by companies like Microsoft, which acquired Nuance Communications Inc., primarily an AI-based company, in a USD 16.35 billion deal, one of the largest M&A deals announced by the acquirer in the past five years. The transactions in the high technology sector have been significantly driven by the increased investments in digital technology solutions, partly accelerated by the ongoing pandemic and also on account of promising prospects of sub-segments like AI and cloud computing (McKendrick 2021).

Table 5: Select M&A Deals in High Technology Sector

	Acquiror Full Name	**Deal Value (USD, Millions)**	**Deal Value (INR, Millions)**	**Deal Geography**
Mphasis Ltd	BCP Topco IX Pte Ltd	3,133.89	2,34,791.26	The Key investor is from Singapore
Hexaware Technologies Ltd	CA Magnum Holdings	3,000.00	2,23,704.00	The acquirer is from the USA
The Capital Markets Co NV	Wipro Ltd	1,450.00	1,05,748.75	The target is based in the UK
Just Dial Ltd	Reliance Retail Ventures Ltd	767.26	57,191.76	Domestic deal
Note: The data used in this analysis has been filtered as suggested in table 1.				
Data compiled and summarized by author on December 1, 2021. Data Source: Refinitiv Eikon.				

Table 6 lists some key transactions involving Indian firms in the financial services sector in 2021. In a process that was first of its kind for a financial services company, the debt-laden Dewan Housing Finance Corporation Ltd (DHFL) was referred to bankruptcy proceedings by the central bank. A Piramal Group company acquired DHFL for a consideration of USD 4.71 billion (Table 6) through a multi-stage bidding process outbidding other bidders like Oaktree Capital Management and Adani Group.

Another deal that made headlines for the sheer size of the deal value (USD 4.7 billion) was the acquisition of BillDesk (IndiaIdeas.com Ltd.), a significant player in the online payments sector in India. Clearstone Venture Partners, Temasek, General Atlantic, and others sold their stake in BillDesk to PayU in an all-cash deal that made the acquirer PayU a dominant player in the online payments space globally. The digital payments landscape has witnessed significant growth in payment volumes during the pandemic, albeit with declining revenues per transaction, and therefore a move towards consolidation seemed well-timed.

Table 6: Select M&A Deals in Financial Services Sector

Target Full Name	Acquiror Full Name	Deal Value (USD, Millions)	Deal Value (INR, Millions)	Deal Geography
Dewan Housing Finance Corp Ltd	Piramal Capital & Housing Finance Ltd	4,711.14	3,42,500.00	Domestic deal
IndiaIdeas.com Ltd	Payu Payments Pvt Ltd	4,707.20	3,45,000.00	Domestic deal
Fullerton India Credit Co Ltd	Sumitomo Mitsui Financial Group Inc	2,000.00	1,48,576.00	The acquirer is from Japan
Exide Life Insurance Co Ltd	HDFC Life Insurance Co Ltd	916.12	66,870.00	Domestic deal
PNB Housing Finance Ltd	Investor Group	552.49	40,000.00	The investor group is from different countries
Note: The data used in this analysis has been filtered as suggested in table 1.				
Data compiled and summarized by author on December 1, 2021. Data Source: Refinitiv Eikon.				

Sumitomo Mitsui of Japan, looking for investment opportunities in emerging markets in Asia, agreed to acquire Fullerton India Credit Co., a non-banking financial services company, from Fullerton Financial Services Holdings of Singapore owned by Temasek Holdings Pte. (Fuse 2021). This transaction was valued at USD 2 billion and was a significant inbound M&A deal from a Japanese company. The transaction would facilitate market entry for the acquirer and enable it to operate in India's consumer and MSME lending space.

In a move that indicated sector consolidation, HDFC Life Insurance announced its acquisition of Exide Life Insurance company to strengthen its operations in southern India.

An investor group comprising an investment vehicle backed by Carlyle Group and Salisbury Investments had announced their plans to acquire a significant stake (over 37%) in PNB Housing Finance Ltd. in the first half of the year. However, the deal was later terminated.

Table 7 lists some key transactions involving Indian firms in the healthcare sector in 2021. The healthcare sector witnessed investments in healthcare services and technology with deals like the divestment of the healthcare services vertical by Hinduja Global Solutions sold to Baring Private Equity Asia for USD 1.2 billion, and the acquisition of the diagnostic chain Thyrocare Technologies by Docon Technologies (a doctor consultation platform, owned by API Holding Pvt. Ltd. – the parent company of Pharmeasy), in addition to other smaller domestic and cross-border deals.

Table 7: Select M&A Deals in Healthcare Sector

Target Full Name	**Acquiror Full Name**	**Deal Value (USD, Millions)**	**Deal Value (INR, Millions)**	**Deal Geography**
Hinduja Global Solutions Ltd-Healthcare Services business	Baring Private Equity Asia Ltd	1,200.00	89,088.00	The acquirer is from Hong Kong
Thyrocare Technologies Ltd	Docon Technologies Pvt Ltd	612.90	45,465.00	Domestic deal

ZCL Chemicals Ltd	Advent International Corp	272.67	20,000.00	The acquirer is from the US
Ind-Swift Laboratories Ltd-API Business	PI Industries Ltd	206.07	15,300.00	Domestic deal
Note: The data used in this analysis has been filtered as suggested in table 1.				
Data compiled and summarized by author on December 1, 2021. Data Source: Refinitiv Eikon.				

As technology-based educational platforms became enormously important modes of facilitating remote and online learning during the pandemic, the educational services (ed-tech) sector witnessed M&A deals often initiated by startups in India. Think & Learn Pvt. Ltd. (Byju's), a dominant player in the ed-tech sector, acquired Aakash Education Services and Great Learning Education Pte for USD 1 billion and USD 600 million, respectively. Table 8 lists some other transactions announced in this sector in 2021 in India.

Table 8: Select M&A Deals in Educational Services Sector

Target Full Name	Acquiror Full Name	Deal Value (USD, Millions)	Deal Value (INR, Millions)	Deal Geography
Aakash Educational Services Ltd	Think & Learn Pvt Ltd	1,000.00	73,370.00	Domestic deal
Great Learning Education Pte Ltd	Think & Learn Pvt Ltd	600.00	44,655.00	Domestic deal
British Council-India IELTS Business	IDP Education Ltd	179.45	13,344.08	The acquirer is from Australia
Note: The data used in this analysis has been filtered as suggested in table 1.				
Data compiled and summarized by author on December 1, 2021. Data Source: Refinitiv Eikon.				

Conclusion

The key sectors that have recorded significant M&A activity in India in terms of the value of deals announced in 2021 reflect some of the common themes in the global narrative of growth and consolidation opportunities. The enormous interest in clean energy, greener assets, and ESG (environmental, social, and governance) investing across the globe has driven the deal-making in this sector in India. Similarly, the digital transformation accelerated by the pandemic, the surging demand for cloud computing and AI, and the move towards online learning have driven the deals in the country's high-technology and education services sectors. The deals in financial services sector were driven by opportunities for achieving scale and growth into newer geographies including the opportunities for consolidation. These deals also reflect the potential for value creation in the sectors like the ones that have recorded significant IPO activity in recent months (Bhattacharya 2021). It is also important to underline that M&A deals in 2021 have been facilitated by the availability of capital-seeking investment opportunities that have the potential for value creation (Gilchrist 2021). To sum up, the M&A deals announced in 2021 in India indicated recovery, growth and opportunities for long-term value creation as reflected in the significant inorganic investments planned in sectors like power and alternative energy, financial services, high-technology, healthcare, and other areas.

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E-Rupee!

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Introduction

The preamble to the Reserve Bank of India Act, 1934, mentions that "Reserve Bank of India (RBI) is constituted to regulate the issue of banknotes and the keeping of reserves with a view to securing monetary stability in India and generally to operate the currency and credit system of the country." Article 22 of the said Act mentions that "The Bank shall have the sole right to issue banknotes in India".

A report on Central Bank Digital Currency (CBDC) by the Bank for International Settlements (BIS 2020, pp. 2) mentions that "Central banks have a mandate for monetary and financial stability in their jurisdictions and, explicitly or implicitly, to promote broad access to safe and efficient payments. A core instrument by which central banks carry out their public policy objectives is providing the safest form of money to banks, businesses and the public – central bank money."

Thus, it is the responsibility of the RBI to issue cash – coins and banknotes – to banks, institutions, businesses, individuals and all others participating in the Indian financial system, which can be used for the exchange of goods and all other financial transactions. But with the increased digitization of payments, the usage of cash for payments is continuously reducing in most parts of the world.

This article examines the need and implementation of a new digital currency by Reserve bank of India, which may be termed as a Central Bank Digital Currency (may be titled E-Rupee).

Cash Usage by Country

The 2020 McKinsey Global Payment Report provides a comparative picture of the percent of cash used in total transactions by volume, as shown below, pointing to a steady decline in both the mature and emerging markets during the period 2010 to 2020 (E).

Table1

Cash Usage as Percentage of Total Transactions by Volume in 2010 and 2020

Country	2010 (%)	2020 E (%)
India	100	89
China	99	41
Brazil	86	74
Indonesia	100	96
Mexico	97	86
Japan	79	54
Korea	66	34
Singapore	59	39
United States of America	51	28
United Kingdom	55	23
Sweden	56	9
Netherlands	52	14

Source: The 2020 McKinsey Global Payment Report (McKinsey 2020)

In fact, non-cash transactions have been growing all over the world. According to the Capgemini World Payments Report 2020, the compounded annual growth rate (CAGR) has been phenomenal during 2014-19 – Asia-Pacific region at 24.1%, Middle East and Africa at 11.4%, Europe at 11.3%, Latin America at 7.0% and North America at 5.6% (Capgemini Research Institute 2020). The Report further predicts sustained growth in non-cash transactions in all the regions during 2019-2023 - Asia-Pacific region at 13.9%, Middle East and Africa at 11.6%, Europe at 6.2%, Latin America at 5.6% and North America at 3.0%.

Growth of Digital Payments in India

The growth of digital payments in India has also been phenomenal. According to the Indian Payments Handbook 2020-2025 published by the Price Waterhouse Coopers, the value of digital transactions in India by value is estimated at INR 92 trillion in 2019-20 and is likely to grow to INR 238 trillion in 2024-25 with a CAGR of 21% over the same period (PwC 2020). In terms of volume of transactions, the CAGR is 32% over the same period.

Now let us understand the factors contributing to the decline of percentage of cash transactions through digitization of payments. The major factors are:

a) **Improved mobile and internet penetration**

The number of mobile phone internet users in India is estimated at 744 million in 2020 and is expected to rise to 1,133 million by 2025 (Statista 2021). Telecom operators are also offering easy and cheap data services, and there is a continuous development of apps for easy access to entertainment platforms, online shopping, gaming, etc.

b) **Regulatory and Government intervention**

The regulator of payments in India, the RBI, has been proactive by playing a catalytic role in digitizing payments. Their Master directions for Digital Payment Security Controls, 2021, Payment Aggregators and Payment Gateways, 2021, Issuance and Operation of Prepaid Payment Instruments, 2017 and Know Your Customer (KYC), 2016, have created the necessary regulatory infrastructure to support digital payment. The Government of India is also playing a stellar role through various measures like digitizing payment acceptance in Government departments and facilities, electronic toll collection, etc.

c) **Tech-savvy millennial population**

Tech-savvy millennials are driving the adoption of digital payments. They want faster, cheaper and convenient payment options using mobiles.

d) **Innovative products and platforms**

Mobile wallets are proving to be a significant contributor. The launch of the Unified Payments Interface (UPI) by the National Payments Corporation of India has been a game-changer in facilitating digital payments. Quick response (QR) code-enabled payment instruments make digital payments simpler, cheaper and have reduced entry barriers for merchant acquirers.

What is the Future of Cash? Is it coming to an end?

The emphatic answer is no. Mobile phone is not going to replace cash. Cash transactions are anonymous and not registered, and hence, it is difficult to monitor the usage of cash. But cashless payments are growing faster than cash-based payments. And with the growing population of alternative electronic payments methods, cash will probably not have its dominant presence in the payment system over time.

Alternative payment methods are emerging rapidly, but does this growth of electronic payments affect cash payments? That does not seem to be the case because the total amount of cash payments is not reducing and instead increasing.

In the emerging situation with the rapid growth of alternative payment methods and the gradual decline of the percentage of cash-based payments, it is thus imperative for central banks to come up with a new form of central bank money – Central Bank Digital Currency (CBDC).

Role of E-Payments

An electronic payment (e-payment in short) can be defined as paying for goods or services on the internet. It includes all financial operations using electronic devices, such as computers, smartphones, or tablets.

One of the most popular payment forms online is credit and debit cards. There are also other alternative payment methods, such as bank transfers, electronic wallets, smart cards, bitcoin wallets, etc. Major e-payment instruments are credit card, e-wallet, smart card, direct debit, e-check and stored-value card. The major online payment providers in India are PayPal India, PayUMoney, Paytm, CC Avenue, Razorpay, Instamojo, Cashfree, EBS, etc. They provide payment options such as Visa, Mastercard, Maestro, Rupay, Amex, various net banking options, and popular mobile wallets.

E-payment systems are made to facilitate electronic payments for online transactions. It comes with many benefits, such as:

- Reaching more clients from all over the world, which results in more sales.
- More effective and efficient transactions — It is because transactions are made in seconds (with one-click), without wasting a customer's time. It comes with speed and simplicity.

- Convenience - Customers can pay for items on an e-commerce website at any time and anywhere. They need an internet-connected device.
- Lower transaction cost and decreased technology costs.

E-payment systems also have drawbacks like the following.

- Some estimate that the e-commerce fraud is growing at 30% per year. If you follow the security rules, there shouldn't be such problems, but when a merchant chooses a payment system which is not highly secure, there is a risk of sensitive data breach which may cause identity theft.
- The lack of anonymity — For most, it's not a problem at all, but one has to remember that some personal data is stored in the database of the payment system.
- The need for internet access — If the internet connection fails, it's impossible to complete a transaction, get to your online account, etc.

Still, one of the most popular payment methods is credit and debit card payments.

Role of Cryptocurrencies in Payments

A cryptocurrency is a digital asset designed to work as a medium of exchange that uses strong cryptography to secure financial transactions, control the creation of additional units, and verify the transfer of assets. Cryptocurrencies are a kind of alternative currency and digital currency. Cryptocurrencies use decentralized control as opposed to centralized digital currency and central banking systems. The decentralized control of each cryptocurrency works through distributed ledger technology, typically a blockchain, that serves as a public financial transaction database. Bitcoin, first released as open-source software in 2009, is generally considered the first decentralized cryptocurrency. Since the release of bitcoin, over 6,000 *altcoins* (alternative variants of bitcoin and other crypto currencies) have been created (GP Bullhound, The Motley Fool, & Investing.com 2021).

The advantages of digital currencies are:

- Freedom in payment: It is possible to send and get money anywhere in the world at any given time. One is in control of own money, and there is no central authority in the network or a third party for the deal to go through.

- Control and Security: Allowing users to control their transactions, merchants cannot charge without being noticed if a cryptocurrency is used to settle a transaction. Digital currency network is more secure since payments in crypto can be made without one's personal information being tied to the transaction.
- Fraud protection: Cryptocurrencies are digital and cannot be counterfeited or reversed arbitrarily by the sender, as with credit card chargebacks.
- Transparent information: All finalized transactions are available for everyone to see. Personal information is, however, hidden. The public address of any user is what is visible. A cryptocurrency protocol cannot be manipulated by any person, organization, or government.
- Very low fees: Currently, there are either no fees or very low fees. Fees are lower than credit cards or PayPal.

Cryptocurrencies do have many disadvantages as noted below.

- Lack of awareness and understanding: People have to be educated about cryptocurrencies to be of practical use.
- Risk and volatility: Digital currencies have volatility since there is a limited supply of such coins, and demand is increasing with each passing day. Currently, the market prices bounce every day mainly due to current events related to digital currencies.
- Still developing: Digital currencies are at their infancy stage with new features being developed. New features, tools and services are being developed to make digital currency more secure and accessible.
- Regulatory control: Regulatory permissions are either limited or non-existent.
- Complex technical details: High degree of complexity in blockchains and their scalability. Issues regarding bandwidth, TPS, Ddos attack (denial-of-service) by hackers and blockchain size need to be tackled.
- Architecture of consensus: Proof-of-work algorithm requires lots of time and energy. Proof-of-stake can give attackers a golden opportunity.
- Transparent transactions may be a threat to security. However, one need not worry if one has a good way of remembering or retrieving passwords and protecting the computer from viruses.

At this point, it is impossible to perceive the use of cryptocurrencies as a replacement for cash. However, Ripple cryptocurrency is being used for international money transfer with great convenience, speed and lower costs.

"Diem" Cryptocurrency of Meta (Facebook)

Can Diem be an alternative?

Diem (formerly known as Libra) is a permissioned blockchain-based payment system proposed by Meta Platforms. The plan also includes a private currency implemented as a cryptocurrency.

The mission for Diem is a simple global currency with financial infrastructure to move money globally with ease, cost-effectiveness, and in a safe and secure way.

The sponsors claim that Diem will be a stable coin – a low-inflation currency backed by a reserve, bank deposits, real assets, and short-term government securities in currencies from stable and reputable central banks. It will allow its billions of users to make financial transactions across the globe.

The project, currency and transactions are to be managed and cryptographically entrusted to the Diem Association, a membership organization of companies from payments, technology, telecommunication, online marketplace, VC firms, blockchain platforms, non-profit and multilateral organizations, universities, etc.

The plan is for the Diem token to be pegged to individual currencies. Diem service partners within the Diem Association will create new Diem currency units based on demand. Diem currency units will be retired as they are redeemed for conventional currency.

In contrast to cryptocurrencies, such as bitcoin which use permissionless blockchains, Diem is not decentralized, relying on trust in the Diem Association as "a de facto central bank."

As of now, the coin does not exist since no regulator has approved it as yet. Critics assume the initiative is being concentrated in the wrong "private" hands. European financial regulators have concerns over the possibility of Diem becoming a *"shadow bank*." The Bank for International Settlements said that there are potential benefits as the adoption of digital currencies outside the current financial system could reduce competition and create data privacy issues.

Central Bank Digital Currency (CBDC)

CBDC has been used to refer to various proposals involving digital currency issued by a central bank. A report by the Bank for International Settlements states that, although the term "central bank digital currency" is not well-defined, "it is envisioned by most to be a new form of central bank money [...] that is different from balances in traditional reserve or settlement accounts." CBDCs are also called digital fiat currencies or digital base money.

The present concept of CBDCs was directly inspired by Bitcoin, although a CBDC is different from virtual currency and cryptocurrency, which are not issued by a state and lack the legal tender status declared by the government. CBDCs are unlikely to use any distributed ledger such as a blockchain.

Cash, Bank Deposits and CBDC

Today, central banks issue two types of money and provide infrastructure to support a third. Physical cash and electronic central bank deposits, also known as reserves or settlement balances, are issued by central banks.

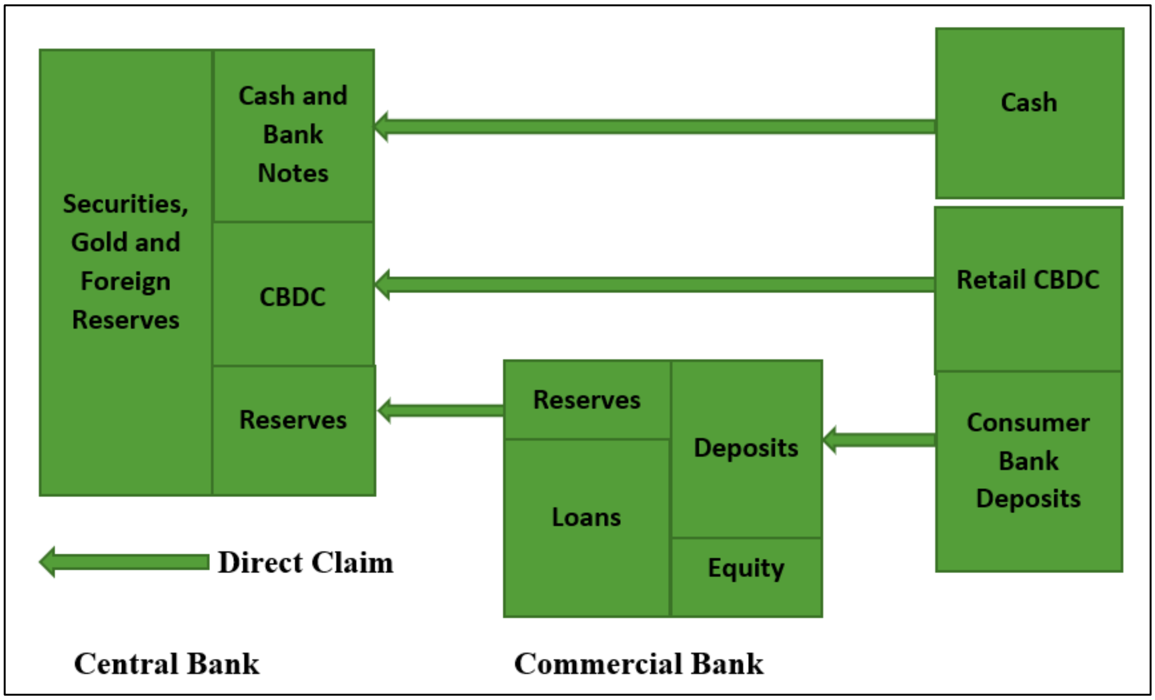
Physical cash is widely accessible and transacted peer-to-peer. In contrast, central bank reserves are electronic and typically only accessible to qualifying financial institutions. The third type of money is private money, principally available through widely accessible and electronic commercial bank deposits.

Central banks support commercial bank money in various ways: (i) allowing commercial banks to settle interbank payments using central bank money; (ii) enabling convertibility between commercial and central bank money through payment systems, and (iii) offering contingent liquidity by being the lender of last resort. Importantly, while cash and reserves are a liability of the central bank, commercial bank deposits are not.

CBDC would be a new type of central bank money. A general-purpose CBDC would require an underlying system to provide and distribute it conveniently to the public. This system would comprise the central bank, operator(s), participating payment service providers and banks. A wider ecosystem will comprise data service providers, companies providing and maintaining applications, and providers of point-of-sale devices to initiate and accept payments.

A pictorial presentation of the emerging scenario with the use of CBDCs will be as follows.

Figure 1



Likely Features of CBDC

According to the Bank for International Settlements, there are three foundational principles that central banks should follow while developing CBDCs in view of their mandate for monetary and financial stability in their jurisdictions. These are: 1) CBDCs should not interfere with or impede a central bank in carrying out its mandate, (ii) CBDCs would coexist with cash and robust private money, and (iii) Central banks should enable innovation and efficiency in services for end-users. In view of these requirements, the likely features of CBDCs may be as follows:

- CBDCs will be programmable and will operate in predictable ways.
- Money supply can be controlled.
- CBDCs will be pegged to local fiat currency in value.
- Exchange rates should match existing fiat exchange rates.
- CBDCs cannot be photocopied or forged.
- Transactions with CBDC will be traceable/auditable.

- Beneficiaries can be controlled. Certain parties could be prevented from receiving the currency.
- Settlements will be instant and not in batches.
- Transactions will be irreversible like cash.

Why Should Central Banks Issue CBDCs?

CBDCs can provide a number of advantages to the central banks including the following:

- Implementing digital cash can allow new monetary policy tools to be used.
- It can make the financial system safer. Allowing individuals, private sector companies, and non-bank financial institutions to settle directly in central bank money (rather than bank deposits) significantly reduces the concentration of liquidity and credit risk in payment systems.
- It can encourage competition and innovation in the payment systems.
- As physical payments are gradually replaced with electronic payments, central banks want to replace physical cash with its electronic equivalent.
- It can improve financial inclusion.

Potential Disintermediation of Commercial Banks due to CBDCs

It is difficult to predict the extent of such disintermediation since the same will depend on the design and adoption of CBDCs in specific jurisdictions. There is, of course, the risk of disintermediation of commercial banks. However, since CBDC is a currency that should not pay any interest, its impact on bank deposits may "actually" be limited. Depositors that require CBDCs for transactional purposes are likely to sweep day-end balances to interest-earning deposit accounts. But commercial banks also do not pay any interest in current accounts used for running a business.

Current Status of CBDCs in the World

As of October 2021, seven countries have launched CBDCs. The Bahamas was the first to launch. Nigeria has also launched for retail and other transactions. Sixteen countries including China, Singapore, Thailand, Sweden, Ukraine and others are in the pilot stage. Fifteen countries including Russia, Canada, Brazil, Australia, Japan and others are in the development stage. Thirty-nine countries including India, USA, UK, Germany, Spain and others are still in the research phase. In all, 87 countries (representing over 90 percent of global GDP) are now exploring CBDCs. Of the countries with the four largest central banks (the US Federal Reserve, the European Central Bank, the Bank of Japan, and the Bank of England), the United States is furthest behind.

Welcome, E-Rupee!

As it appears, the introduction of CBDC in India is probably both inevitable and desirable. The design of CBDC should be well thought out and pilot studies through the sandbox approach should be carefully conducted before final launch.

Let us welcome E-Rupee.

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Green Bonds and Greenium

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The climate crisis is upon us. Floods in Chennai, forest fires in Australia and droughts in South Africa, ice melting faster in Greenland, Ghoromara island disappearing due to rising water levels. All these are due to the rise of greenhouse gases. To mitigate the impact of climatic changes, governments worldwide came together in Paris in 2015 and agreed to limit global warming to 1.5 degrees Celsius. The recent IPCC report (IPCC, 2021)has painted a rather grim picture for the planet. The Glasgow Summit (UNFCC, 2021) held in November 2021 has shown urgency is needed to tackle the climate crisis. Technology and finance are two essential weapons in this fight. Since a largescale transition to lower greenhouse gas emissions is required, large sums of money are needed to bring about this transition. This article looks at green bonds used to finance this transition. It also looks at greenium, a premium for green bonds that recently attracted significant interest.

Green bonds

A green bonds is a type of a fixed income security. The objective of the bond is to raise money for predetermined projects that have climate or environmental benefits. This type of bond contrasts to a plain vanilla debt instrument where the end-use of the proceeds is not specified in the terms. Green bonds are issued for funding a variety of end uses (ICMA, 2021).[1]

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[1]. ICMA provides a list of eligible activities for raising green bonds These uses include "renewable energy, energy efficiency, pollution prevention and control, environmentally sustainable management of living natural resources and land use, terrestrial and aquatic biodiversity, clean transportation, sustainable water and wastewater management, climate change adaptation, circular economy adapted products, production technologies and processes, and green buildings."(ICMA, 2021)

The first green bond came about in 2008. In 2007 a group of Swedish pension funds asked the World Bank how they could invest in projects that can help the climate. Unfortunately, they did not know how to find such projects. To meet this need, The World Bank had issued the world's first green bond in 2008. (The World Bank, 2019)

Green bonds help "internalize environmental externalities and adjust risk perceptions" (G20 Green Finance Study Group, 2016, p. 20). Compared to the baseline of investing in classical bonds, investing in green bonds provides information to investors on the use of their funds and the impact of their investments. This information also helps investors assess risks better and help understand the issuers' strategy and approach to environmental issues. Given that green bonds are plain vanilla bonds, they help investors extract and capture additional information without incurring additional costs. Green bonds also help build greater sustainability awareness and build capacity in the market.

Green bonds help institutional investors like insurance companies and pension funds to invest in low-carbon transition projects. By doing so, they can offset the long-term climate-related risks in their investment portfolio (Novethic, 2015). Green bonds also act as a signal to other firms who wish to undertake environmentally friendly projects. The green label on these bonds help institutional investors identify green investments and act as a discovery tool. The ability to identify green projects helps reduce friction in the investment process. (Climate Bonds Inititive, 2015). Green markets will expand as a result of both the imitation effect and competition among investors in the market and result in a greater understanding of issues around low carbon transition.

While most issues of green bonds are the plain vanilla use of proceeds bonds, there are several variations in green bonds (Shishlov et al., 2016; Weber & Saravade, 2019). The first type is *corporate bonds*, also called the use of proceeds bonds, and are backed by a corporation's balance sheet. Then there are *project bonds* that are backed by the earnings of project(s). Here the issue is made by the SPV[2] and disbursals are made out of the earnings of the SPV. Some bonds are collateralized by a group of projects and are called *asset-backed securities*. *Green covered bonds* are collateralized against green mortgages. They help the issuer buy a sustainable building or retrofit an existing building. *Green sukuk* are Shariah compliant green bonds. For short term funding, *green commercial papers* are available.

[2] SPV is Special Purpose Vehicle that is set up as a subsidiary to undertake a specific business purpose or activity. A typical infrastructure project is structured as a SPV.

Bonds can also be classified by the nature of the issuer. Green bonds issued by international financial institutions and development agencies are termed *Supranational, sub-sovereign, and agency (SSA) bonds*. Then, there are bonds issued by municipal governments, regions, or cities. These are called *municipal bonds*. Bonds issued by financial institutions are called *financial sector bonds*. These institutions use the funds for their 'on balance-sheet lending.'

According to Climate Bonds Initiative (CBI) (*Climate Bonds Initiative*, 2021), USD 1.524 trillion of green bonds have been issued till November 2021. CBI also indicates that the principal end uses of green bonds are energy (35%), buildings (26%), transport (19%), and water (10%). A study by International Monetary Fund (International Monetary Fund, 2019) suggests that while green bond issues have been rising, the proportion high-quality papers (AAA to AA) has been gradually reducing over time – highlighting increasing risk in green bonds. While Europe has driven the global issuance of green bonds, China is fast emerging as an important issuer.

Let us look at some examples.

JSW Hydro Energy Ltd (JSWHEL), a company of the JSW Group, raised green bond financing recently (Sarkar, 2021). The lead structuring agent for the issue was Deutsche Bank. The company raised funding for its hydropower project. Through the issue of US dollar-denominated green bonds the company raised $707 million. These bonds have a coupon rate of 4.125 percent per annum payable semi-annually and are due for repayment in 2031. These bonds are listed on the Singapore Exchange.

The Ghaziabad Nagar Nigam (GNN) launched India's first Green Municipal Bond issue (The Hindu Businessline, 2021). In April 2021, GNN announced that it had successfully raised Rs 150 crores at a cost of 8.1 percent. The issue attracted forty investors who were prepared to invest Rs 401 crores. This indicated a good demand for similar projects. The proceeds of issue will be used for setting up a territory water treatment plant. It would also be used install water meters and provide piped water to Sahibabad.

The green bond market developed out of voluntary action by issuers without any governmental or regulatory intervention. There has been little regulation. Companies have defined what constitutes a "green" project and have their own procedures for the utilization of funds. International Capital Markets Association (ICMA) has been at the forefront of defining and regulating green bonds. To provide a structure to the green bond market, The Green Bond Principles (ICMA, 2021) were launched in 2014. Some of the leading financial institutions such as Citi, JP Morgan, Credit Agricole and Bank of America Merrill Lynch were behind the Principles. ICMA was given the responsibility to manage them. According to the Principles document, "The Principles outline best practices when issuing bonds serving social and/or environmental purposes through global guidelines and recommendations that promote transparency and disclosure, thereby underpinning the integrity of the market." The GBP outlines four components for alignment:

1. Use of proceeds: The use of the proceeds should be clearly described in the documentation of the bond. The documentation should provide clear environmental benefits. These benefits should preferably be measurable and should be assessed periodically.
2. Process for Project Evaluation and Selection: The documentation should clearly list the environmental sustainability objectives of the project. It should also indicate how the project meets the green project categorisation. Supplementary information pertaining to social and environmental risks of the project may be provided.

3. Management of Proceeds: The net proceeds of the issue should be credited to a specific account and tracked by the issuer towards allocation to green projects.

4. Reporting: The issuer should keep track of all use of proceeds annually till the time all the money raised is utilized.

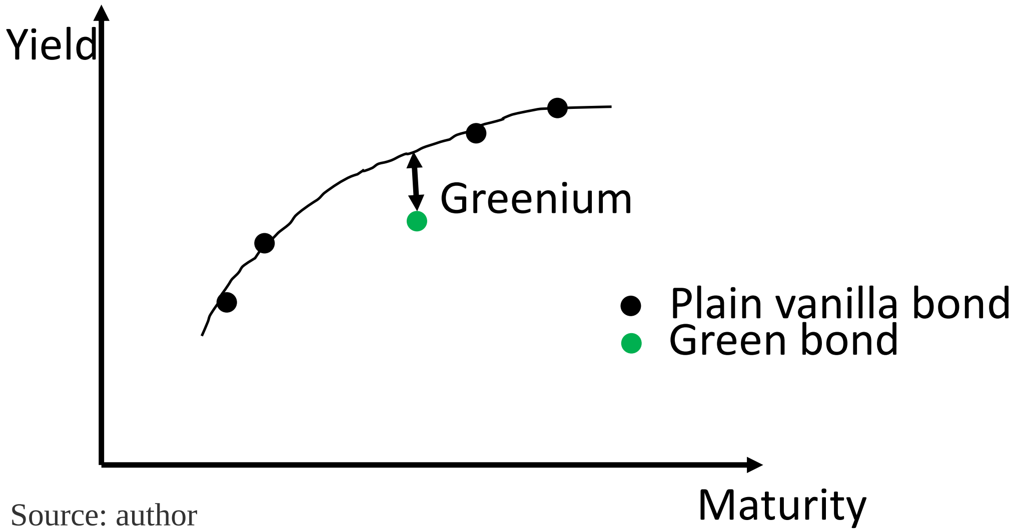
We now look at an interesting regularity seen in green bonds – greenium.

Greenium

For a long time green bonds have attracted a premium – investors have been willing to pay more for these bonds. Thus, they reward companies or governments that have environmental or sustainability issues at heart. This reward comes in the form of lower borrowing costs. The premium that investors are willing to pay for green bonds is called *greenium*.

Greenium can be conceptually understood from the diagram below.

Figure 1: Greenium illustrated



Source: author

As one can see from the diagram, the green bond offers a lower yield than a plain vanilla bond of the same maturity. Because of the inverse relationship between yields and price, the lower yield translates into a higher bond price. The difference between the prices of green bond and plain vanilla is the premium for the green bond or the greenium. Greenium is usually computed as

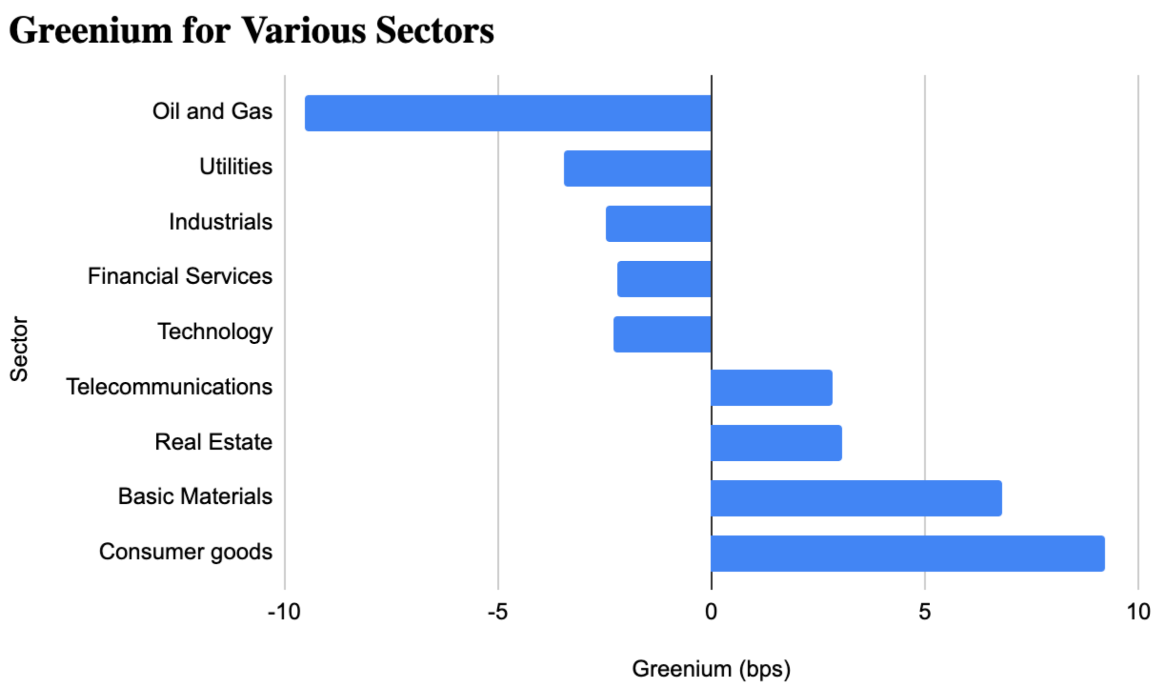
Greenium = Yield of a green bond – Yield of a pain vanilla bond

While calculating care should be taken that both the bonds are of the same maturity.

Greenium is believed to range from two to nine basis points (bps) for government bonds (Prala, 2021). In the corporate bond market, greenium varies in a wider range of 0 to 25 bps, with an average of 5 bps (Prala, 2021). Relative to that for government bonds, greenium for corporate bonds increases with maturity. It is also seen that higher-yielding (and hence lower-rated bonds) tend to have significantly higher premiums. These premiums are often in excess of 10 bps (Prala, 2021). Interestingly the euro area exhibits lower premiums (Stubbington, 2021).

Greeniums also differ across industries. According to a study by HIS Markit, the greeniums for different industries were:

Figure 2: Greenium for various sectors



Source: Based on Sebastian Meyer and Karim Henide, Searching for Greenium, HIS Markit, (Novethic, 2015)

Figure 2 indicates that the greenium tends to be high for industries that have high greenhouse gas emissions and where greenhouse has abatement is difficult.

Recent studies have shown that the greenium has shrunk mainly due to a glut in green bond issues (Bacheli, 2021). However, the German green bond has consistently lower yields than its plain vanilla twins (Jones, 2021).

So, what explains greenium. There is no theoretical explanation for greenium. Ideally, if there is an arbitrage available between a green and a plain vanilla bond, actions by investors will wipe out the greenium. The persistence of greenium indicates a relative lack of trading in the green bond market. The investor is simply compensating for the lack of liquidity. Alternatively, the greenium could merely reflect the higher utility (doing something good for the society or the environment) that an investor expects from a green bond.

The future of green bonds

Issues of green bonds are not likely to slow down anytime soon. There are several reasons for this:

a. Green bonds are a great marketing tool. They are also a way to signal to the green credentials of the issuer. Green bonds create trust in the eyes of the investors and consumers that the company cares about the environment and trying to be sustainable. This is true for institutional investors too as they are seen as holding green portfolios and are thus less susceptible to environmental risks.
b. There has been rising pressure from activist investors that companies need to clean up their act. Recently an activist investor wrested three seats on the board of Royal Dutch Shell company. The issue of green bonds acts as insurance against shareholder activism. Thus, more companies are likely to make pre-emptive moves. Take the case of PepsiCo (Deschryver & de Mariz, 2020) that issued green bonds where there was little difference between the green bond yield and a hypothetical senior unsecured note. Yet, the green bond issue was seen as critical to the company's sustainability strategy.
c. The issuance of green bonds also affects employee interest and morale. Companies with superior sustainability credentials attract and retain employees by increasing their interest in sustainability. Thus, the issue of green bonds leads to increased pride and commitment among the employees.

Concerns remain on the use of proceeds, diversion of funds, and greenwashing by companies. Still, increased regulation and investor scrutiny would deter companies from cheating. The future of the green bond market looks bright and cheerful!

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BNPL but ... Walk Don't Run

Ujjal Choudhury

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I. Is Debt Dangerous?[1]

Half a century back, when TIME Magazine launched a campaign to rename the Air Force One in response to President Nixon's visit to China, one of the special mention entries was 'Go Mao Pay Later.' Unlike India, deferred payments were very much a part of the lifestyle in the U.S., where Singer Sewing Machines popularized the installment plan in the 1890s. With globalization and advanced technology, a staggered payments product called '*Buy Now, Pay Later'* (BNPL) came to focus from the early 2010s. It spread in developed and emerging economies, growing in the pandemic era, and India has not been able to buck this trend.

In many ways, BNPL is old wine in a new bottle and is popular with younger consumers. An unsecured retail credit product, lenders find it attractive – at the portfolio level, higher margins and spread-out risks make it more profitable.

"Alongside the step-change in the use of these products, there has been a rise in concerns about whether BNPL is giving rise to consumer detriment." (HM Treasury 2021, 2). These have become more pronounced after COVID, leading to interventions from consumer advocates and regulators.

Research specific to BNPL in India is scant. Scattered media reports indicate its growing use and mixed sentiments of consumers, as elsewhere. Since it is a retail unsecured credit product offered primarily online, I have used Digital Loans and Personal Loans, including Payday Loans, as proxies for analyses. This simplification of using BNPL as a generic (the title of the very interesting Harvard Business Review document "Buy Now Pay Later: A History of Personal Credit" reflects a similar thought process) does not detract from the message that I

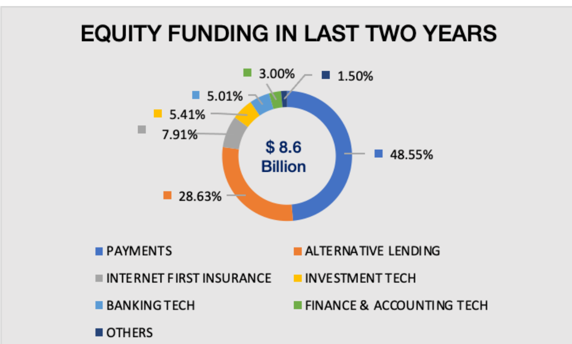
[1] Inspiration – Mian and Sufi (2014).

have tried to articulate – learning from experience elsewhere, and the Indian environment, the unsecured personal credit segment merit scrutiny for various policy purposes.

In this article, Retail Credit is essentially non-corporate loans and includes personal credit – loans extended to individuals. Other than a few exceptions like housing loans, they are unsecured or clean loans, uncollateralized by any asset. Consumer durable loans and personal loans for consumption expenditures are the two most important categories.

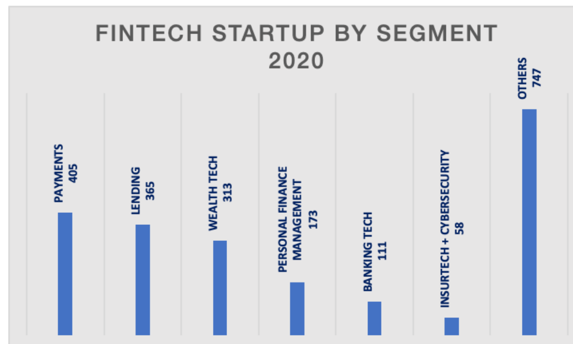
An overview of LendTech (Technology-enabled Lending) or Alternative Lending and the Personal Loans segment in India follows.

FIGURE 1: DISTRIBUTION OF FINTECH FUNDING



SOURCE: EY. SEPTEMBER 2021.

FIGURE 2: FINTECH STARTUPS BY SEGMENT



SOURCE: EXPERIAN 2021.

LendTech is now the second most important segment of FinTech as an equity funding destination and market presence in terms of numbers (**Figures 1 and 2**).

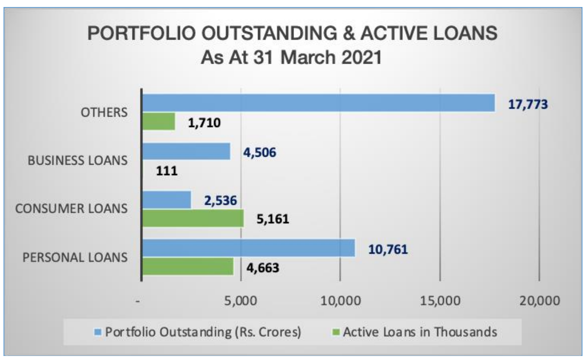
The market remains attractive. PhonePe, a leading Payments player, and Visa and Mastercard building on their existing strengths plan to enter the market in 2022. Though only seven LendTech startups are currently profitable, lender brands disbursing 6,000 or more consumption loans annually registered a 42% growth during 2020.

Estimates of digital lending penetration in India vary. CGAP (Blog. 2021) estimates that there are almost 200 digital consumer credit apps in India, even after Google removed 30 apps from its Play store after complaints of consumer detriments. According to the more recent Report of the Reserve Bank of India (RBI) Working Group on Digital Lending (2021), during the period January 01, 2021, to February 28, 2021, approximately 1100 lending apps were available to Indian Android users across 80+ application stores. The herding seems based on a belief in Say's Law – that supply will create its own demand.

Market share, major products, and providers

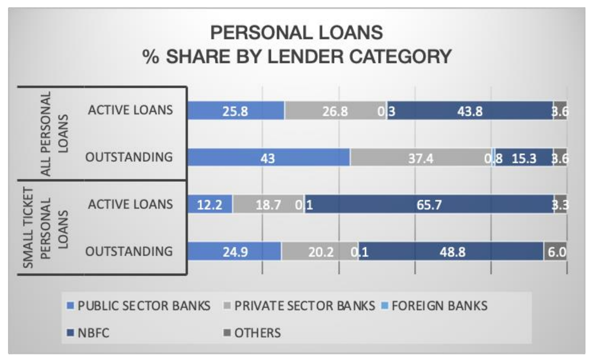
1. LendTech's share (0.043% of outstanding and 2.87% of active loans) of total retail loans as of March 31, 2021, is miniscule.
2. Consumer Loans and Personal Loans contribute the most to digital lending (**Figure 3**), irrespective of geographical market segments.
3. Demand for Personal Loans is expected to increase due to the need to bridge the personal finance gap, have a flexible product structure, and provide greater access via digital channels.
4. Non-Banking Financial Companies (NBFCs) lead the market for Small Ticket Personal Loans (STPL, less than Rs. 1 lakh) by volume and value; and for all Personal Loans by number of active loans (**Figure 4**). 45% of all Personal Loan originations come from FinTech NBFCs. Small loans account for 97% of the portfolio of FinTech NBFCs.

FIGURE 3: STATUS OF LOAN CATEGORIES



SOURCE: FINTECH PULSE – VOL III.

FIGURE 4: LENDER CATEGORIES FOR PERSONAL LOANS



SOURCE: CRIF. 2021

Subsequent sections of the article are a bird's eye view of the various contextual issues, concluding with a suggested roadmap for addressing them. Increased consumer awareness of environmental sustainability and digital financial literacy, enhanced regulation and better consumer protection, and the participation of civil society and corporate bodies in the process are the three factors that can help moving in the right direction.

II. When The Bough Breaks

Consumer credit can arguably catalyze growth by increasing consumption and demand, thus boosting income and employment at the macroeconomic level. However, any widespread default due to subprime lending and economic uncertainties can lead to shocks like the 2008 recession. Credit quality is therefore highly relevant in the current pandemic situation.

Household credit and recession are well-researched topics and have several noteworthy studies such as Rajan (2010) and Mian and Sufi (2014). Their focus, however, is on the mortgage market in the USA and the 2008 financial crisis and their theories relate to the larger problem of an economic divide predicted by Galbraith (1958).

The first chapter of Rajan (2010) is titled 'Let them eat credit.' Khang (2019) succinctly lays out Princeton Professor Atif Mian's perspective that excess borrowing is the sign of increasing disparity in household income that has distorted an economic system.

This perspective is worth noting for us given India's high level of income inequality (World Inequality Report. 2018). According to Ghatak (July 2021), growth is necessary but not sufficient for poverty alleviation.

Other analyses across emerging economies provide insights into some of the effects of consumer credit on various economic metrics. A recent study by Garber et al. (2021) reveals the potential downside of using household credit as a stimulus in emerging markets, and how a Brazilian government program to facilitate credit resulted in a substantial rise in borrowing by government employees, particularly those with low financial literacy. Therefore, the recent growth in personal credit in India, whether government sponsored or externally induced, may not be beneficial.

III. There is no planet B (Berners-Lee 2019)

Gross Domestic Product (GDP), the conventional primary measure of economic activity, serves only a limited purpose for short-run macroeconomic analysis and management and does not consider the depreciation of assets – most importantly, the natural environment. This leads to the pursuit of unsustainable objectives that has severely impacted human habitat and should be a cause of concern for all. (The Dasgupta Review. 2021)

The IPCC 2021 report indicates that the clear and present danger from environmental degradation and global warming can no longer be wished away, and two of the 2021 Nobel Laureate physicists jointly won the prize "for the physical modelling of Earth's climate, quantifying variability and reliably predicting global warming." Indeed, the environmental effects and sustainability of mobile networks that form the very backbone of digital transactions are being studied closely by researchers.

Woetzel et al. (2020), National Intelligence Estimate Council (2021), and MoEs, Government of India (2020), to name a few, have highlighted India's grim future that is likely to result from climate change and the need for course corrections. Increased consumerism fueled by easy credit can make things worse.

The 2021 Annual Report of the International Finance Corporation (IFC) highlights the irony that the most vulnerable population of the world stand to suffer the most from climate change despite having contributed the least to it. The vulnerable population of India, currently growing from the impact of COVID, would become the frontline victims of this paradox.

IV. BNPL – Features and Issues

A consumer credit product enabling online and offline purchases at Points of Sale (POS); without paying the full price upfront, BNPL is a tripartite transaction involving the consumer, retailer, and the lender – the BNPL service provider who organizes the funding.

Consumers can purchase products with unaffordable upfront prices and benefit from short term liquidity. This short duration facility is offered purportedly without interest or charges and without rigorous checks on the creditworthiness of consumers, particularly for small value 'sachet' loans. With its ease of availability without the scrutiny associated with other channels, the facility is attractive for subprime and New to Credit (NTC) consumers and the Credit Invisibles (those without a credit history).

The merchant-lender nexus is symbiotic – benefitting the merchant from increased turnover with lower cart abandonment from free credit, consumers typically spending more than usual with BNPL, and repeat purchases. Smaller retailers can compete with price warriors who offer no installment facilities. BNPL providers help direct traffic to their merchant associates through their platforms. The lender benefits from multiple revenue streams – discounts for funding merchants, delay payment charges from consumers, advertising revenue from merchant partners, and white label services fees from merchants providing the facility in their own names.

BNPL can be seen through two different lenses, giving it a duality. Its virtues are sometimes extolled in hyperboles without considering the nuanced aspects. The skeptics call out the enticement to overspend in pursuit of wants rather than needs, hidden costs, and the impact of default on credit rating and debt collection-related stresses.

BNPL could also be a sign of impending harms. The Woolard Review (2021) lists several externalities from the growth of BNPL. Consumers may suffer due to promotion of BNPL, their poor understanding of the product, their lack of affordability assessments, and the BNPL provider's uneven treatment of distressed borrowers (HM Treasury 2021, 2).

Other risks identified in the Woolard Review include the BNPL provider and retailer nexus being detrimental for the consumer and the product being sales driven without taking any cognizance of its affordability for the consumer. The access to multiple BNPL providers limits the impact of checks on creditworthiness and carries the potential hazard of stacking up of debts. (p 47-49).

Supply-side actors use instruments such as advertisements to influence consumer behavior. Coupled with low financial literacy, which in the present context extends to digital financial literacy and debt literacy, it creates a toxic combination potentially detrimental for the consumer. (Lusardi and Mitchell 2014; Lusardi and Tufano 2009, Gurun et al. 2016, Dick and Jaroszek 2013). Many of the transaction processes are highly gamified – rewards from purchases often restrict redemption to future purchases. Negative feedback from consumers indicates a trust deficit, using the product without a full understanding, feeling shortchanged, and regretting using the product.

Credit underwriting processes for digital lending are mostly algorithm-based and subject to Moravec's paradox – algorithms' ability to solve financial calculations without addressing complex ethical perspectives (Johnson et al., 2021). Algorithms can reduce competition and harm consumers (CMA 2021). In the absence of an evaluation of the overall quality of the BNPL book, which will eventually be securitized, there are apprehensions about the consequences of default in the portfolio.

Consumer advocates have highlighted the impact of BNPL on vulnerable populations and the potential for abuse. Cybercrimes pose a significant threat. In the U.K., it has been likened to quicksand (Shaw 2021); in India, it might become a veritable *Chakravyuha*.

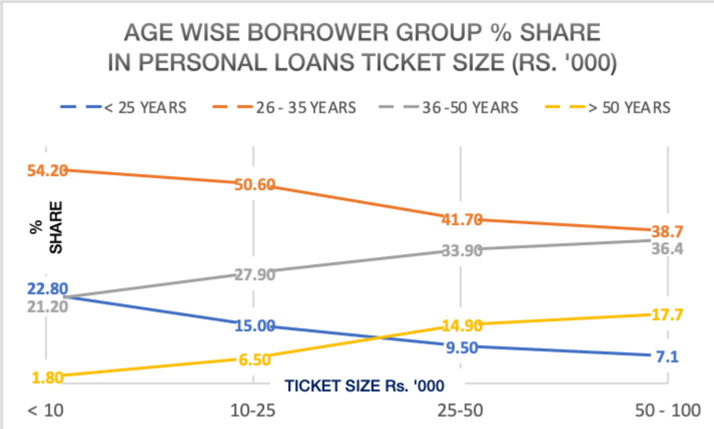
V. Retail Credit in India

The digital lending ecosystem in India is "still evolving and presents a patchy picture" (RBI 2021). Data on the retail credit sector in India available from different sources are disparate. Segmentations are based on different criteria. It is challenging to ensure homogeneity and have a reasonably uniform and comprehensive overview of Retail LendTech trends in India from such a mixed bag of apples and oranges. A few exciting features from which it is possible to draw inferences and test relevant hypotheses for further research nevertheless stand out.

I. *Demand Drivers:* Let us look at two demand drivers: demographics and buying behavior.

   i. Demographics: Percentage shares in Loan Ticket sizes and Age Groups are directly correlated (**Figure 5**). Small cities play a big role. 71% of FinTech Personal Loans and 73% of STPL in 2020 originated from non-Tier 1 (population 40 lacs or less) cities. Average ticket size (Rs. 1.3 lacs) for Personal Loans is highest in Tier 4 (population less than 5 lacs) cities against Rs. 1.14 lacs in Tier 1 (population more than 40 lacs). 68% of enquiries for Personal Loans are from NTCs.

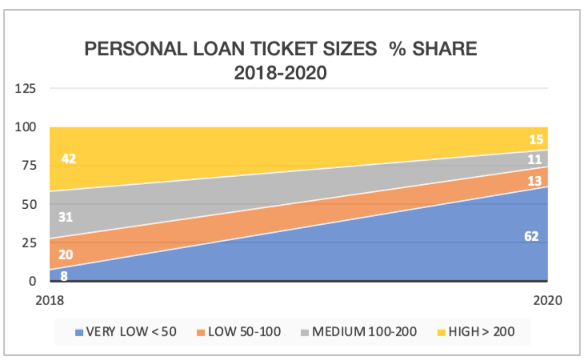
FIGURE 5: AGE GROUP & PERSONAL LOANS TICKET SIZES



SOURCE: CRIF. 2021

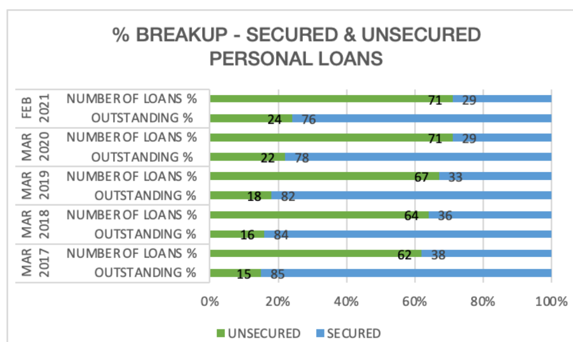
ii. Buying Behavior: The percentage share of unsecured loans has grown from 2017 to 2021 (**Figure 7**). Between 2018 and 2020, the share of STPL (Rs. 50,000 and less) increased by tradeoff with larger sized loans (**Figure 6**). STPL of ticket size Rs. 25,000 and below grew 23 times between 2017 and 2020. Average Ticket Size for Personal Loans from NBFCs (Rs. 15,571) is 75% higher than that for Consumer Loans and 75% of that for all products. 32% of consumers who took a consumption loan changed to a different lender type on their subsequent loan. 45% Growth in average consumption loan taken per borrower since 2017. Lenders are having increasingly larger shares of the loans wallet of consumers. Consumers are conscious about repayment obligations – personal loans generally have the highest payment priority among unsecured loans. Loan aversion is also common among some.

FIGURE 6: PERSONAL LOAN TICKET SIZES



SOURCE: EXPERIAN. 2021

FIGURE 7: SECURED & UNSECURED LOAN MIX



SOURCE: EXPERIAN. 2021

Inferences from Demand Drivers:

1. Despite their higher pricing, the demand for Unsecured Loans is the highest due to easy availability for short-term income expenditure mismatches. This can lead to unsustainable indebtedness in the long run.
2. Increase in small ticket borrowings and growth in average consumption loan per borrower can indicate indebtedness of consumers with lower income (and hence lower financial literacy) and higher probabilities of default.
3. Switching lenders can indicate overleveraging from stacking of loans and perpetual indebtedness.
4. Higher demand from smaller towns (with higher likelihood of lower financial literacy) and younger consumers (which would include a cohort with lower financial literacy) can be due to lower financial literacy and influencer impact of advertisements.

II. Supply Trends

i. Lender Risk Appetite: Digital First' FinTech' NBFCs account for the largest shares of below prime and NTC borrowers. Share of STPL prime and near-prime borrowers increased from 20 to 37% and 9 to 36% between 2017 to 2020. Share of the portfolio in the very high-risk segment (consumers who have moved from above subprime segment to subprime segment in the next 6 months) had increased for credit cards and personal loans even between 2018 and 2019.

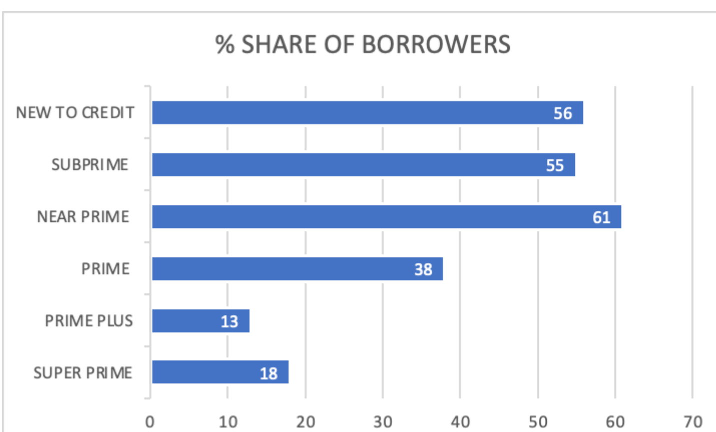


FIGURE 8: FINTECH BORROWERS ACROSS RISK PROFILE

SOURCE: TRANSUNION CIBIL – GOOGLE. 2020

ii. Asset Quality: STPL delinquencies are higher than that for Personal Loans; a trend that is more pronounced in 2021, presumably as a fallout of the pandemic (**Figure 8**). FinTech Personal Loan delinquencies (5.92%) were almost double the overall delinquencies for FinTech lending (3.08%) between March 2020 and March 2021. Asset quality for unsecured products is likely to be impacted more severely than asset backed products. Personal loans and credit cards are likely to be impacted most.

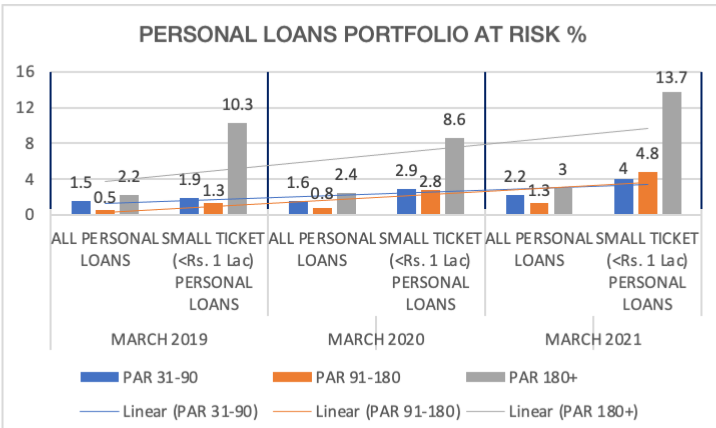


FIGURE 9: PERSONAL LOANS PORTFOLION AT RISK PROFILE

SOURCE: CRIF. 2021

iii. Pricing: Pricing in the personal loan segment is the most attractive for lenders, average spread being 5.85% over 3-year G-Sec rates (2019 Estimates).

Inferences from Supply Trends

1. There is an increased risk appetite of lenders (mostly NBFCs) due to technology-enabled underwriting and their objective of increasing market shares.
2. There is aggressive marketing of personal loans (a more profitable product) that increases delinquencies.
3. Increased delinquencies can lead to aggressive collection and recovery processes, resulting in consumer detriment.
4. Increased competition and losses from overcrowding of lenders can lead to predatory lending and lack of transparency and increase subprime lending and delinquencies.
5. There is no risk-based differential pricing to help preserve asset quality.

VI. Consumer detriment – the Indian experience

Several media reports that would make stones weep have described the unfortunate outcome of defaulting on personal loans availed through some digital channels. . These were priced usuriously with annualized interest rates from 360% to 1,200%. Recovery processes include debt-shaming and other harassment (Duflos et al. August 2021). Approximately 55% loan apps available in India are illegal (RBI. 2021) and the process of initiating actions against them has been painfully slow.

Official channels for grievance redressal are onerous and advisories on illegal financial activities based on the principle of *caveat emptor*. Abusive collection practices have been reported on social media. A separate mechanism for redressal of complaints relating to digital payments does not include any provision for digital lending *per se*.

VII. Action Points

Based on the inferences drawn earlier, I have given below a suggested approach for implementing a set of interventions for consideration by policymakers and stakeholders to mitigate potential consumer detriment. There are obvious overlaps that reinforce the need for working in a synchronized manner.

1. According to Prasad (August 2021), while private sector players work on building critical business enablers, governments are responsible for the oversight of risk management and fair business practices.
    a. Regulators and Supervisors should:
        i. Strengthen relevant regulatory framework for LendTech, supervise cybersecurity, and leverage innovative technology for supervision (SupTech) for enhancing consumer protection. Consumer Lending should be included among the cohorts for the Regulatory Sandbox process of the Reserve Bank of India (RBI).
        ii. Initiate financial literacy and consumer protection campaigns.
        iii. Ensure that institutions do not become systematically important.
    b. Monetary policy authority should ensure optimal flow of credit.
    c. Government should:
        i. Provide regulatory framework and advocacies for responsible consumption, internet and telecom policies, and cybersecurity; and monitor I.T. enabled processes like online algorithms, and media campaigns.
        ii. Notify and implement the provisions for individual bankruptcy under the Insolvency and Bankruptcy Code (IBC), 2016.
        iii. Improve medical infrastructure to help mitigate distress borrowing for medical emergencies; and promote green transport initiatives like bicycle lanes and mass transport systems.

2. Corporate and civil society should carry out advocacies and provide necessary enablers for consumer protection, financial literacy programs, and environmental awareness, with technology support wherever possible.
3. Self-regulatory bodies like the Advertisement Standards Council of India (ASCI) should ensure that advertisers do not act perfunctorily to ensure compliance and just pay lip service – celebrities should endorse products responsibly. Financial institutions can join initiatives like 'The Principles for Responsible Banking'.
4. Development partners and corporate should promote initiatives for affordable finance. Development partners can play an influencer role in strengthening regulatory and supervisory processes for consumer protection; and ensure that funding for FinTech has an inclusive impact at the Bottom of the Pyramid.

VIII. "The discipline to draw on Nature sustainably must, ultimately, be provided by us as individuals." (The Dasgupta Review 2021).

Opinions about whether personal credit is desirable often have a moral perspective and border on the extremes. While the classic sermon has been to cut one's coat according to one's cloth, in an economy focused on optimum utilization of resources, credit cannot be labeled as evil, necessary or otherwise.

In ancient India, typically associated with asceticism, the Lokayata school preached the philosophy of borrowing in pursuit of hedonism. More recent times have seen movies like 'Dawn of the Dead' on the ghoulish face of consumerism. The need therefore is to strike the right balance.

Members of the credit ecosystem acting concertedly can enable consumers who are not adequately equipped, to use credit judiciously for effective management of personal finances. This would promote financial inclusion. The suggested interventions make a long wish-list, but they are not blue-skies – there are parallels, remote and recent, and best practices guidelines.

From the philanthropic lending of 1890s in the USA inspired by the monti di pietà of the Middle Ages (HBR. n.d.) to initiatives in current times by The Financial Times (https://ftflic.com/), and Experian (April 2021) to serve disenfranchised and vulnerable groups; corporate have contributed to consumer support. "Companies can easily add a debt literacy component to employee assistance program."; and have an internal credit support program (Lusardi and Tufano 2009).

And the romantically inclined social crusader may draw inspiration from the story of Budhu (Corbett 2018, 142-147).

Role of Technology

The need for being digitally literate raises the bar for financial literacy. Technology enabled personal financial management tools can help consumers but should be affordable. "Credit counselling provides a safety net for poor financial literacy" (Disney et al. 2015) and can complement it. There is no thumb rule for 'excessive borrowing' (the Debt-to-Income Ratio used as a benchmark must be contextualized for the borrower) and counselling can help provide customized answers. Credit counselling initiatives like those for farmers should be available for individuals as well. Civil society can catalyze this by leveraging technology (Duflos et al. 2021).

Globally, the clarion call is for appropriate regulations. While the Open Credit Enablement Network (OCEN) is expected to democratize credit in India, several important initiatives in the pipeline need to be implemented on priority basis to strengthen the regulatory framework.

RBI's initiative for proactive supervision (RBI 2021) is an encouraging development. Using SupTech in line with global practices (e.g., Broeders and Prenio 2018; Discussion Note. World Bank Group. June 2018; Fintech Note No. 7. World Bank Group. 2020; FinCoNet. 2020; OECD 2021) can enhance its robustness.

Digitalized financial advertising needs specialized regulation and supervision. This can be supported by leveraging technology and developing internal expertise. (FinCoNet. November 2020; Duflos et al. September 2021). Organizations like the Digital Lenders Association of India (DLAI) can play a critical role.

The Report of the Working Group (RBI. 2021), taking cognizance of many of these issues has recommended a phased approach for addressing the issue in a holistic manner. One of the key recommendations is enacting separate legislations and imposition of statutory provisions for strengthening the oversight of digital lending in India.

Last but not least, development funders may be able to create sustainable and inclusive fintech markets through strategic investment decisions and promote responsible lending (Baur-Yazbeck 2021; Murthy and Faz 2021).

The issues related to personal credit are multifaceted. Only a long-term balanced approach can help consumers benefit from credit while avoiding over-indebtedness.

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