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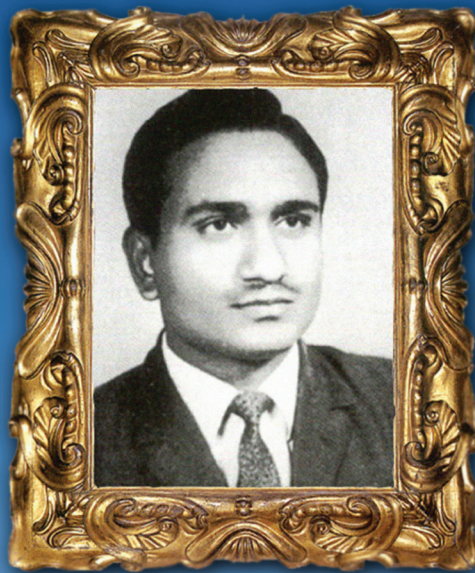
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A TRUE VISIONARY

*“You see things and you say **Why?** But I dream of things that never were and say **Why not?**”*

- George Bernard Shaw



Shri Jagannath Gupta
(1950 - 1980)

*Also a true visionary...who dared to dream!
He lives no more but his dreams live on....and on!*

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And more dreams to come!



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Editor's Desk

Ethics & Governance- For Sustainable Future

In today's world, where globalization and technological advancements have brought us closer, the need for ethical behaviour and governance has become even more critical. Organizations and individuals have the power to affect the lives of people worldwide, and their actions can have far-reaching consequences. Therefore, it is essential to ensure that ethical behaviour is not just a mere afterthought but an integral part of governance. Ethics and governance are two fundamental concepts that are intertwined and crucial in maintaining a just and equitable society. Ethics refers to the moral principles and values that govern individuals' behaviour and decision-making, while governance is the process of decision-making and the implementation of rules and regulations by institutions. Good governance should be guided by ethical principles, such as transparency, accountability, fairness, and respect for human rights. These principles should be upheld by all stakeholders, including individuals, businesses, and governments, to ensure that decision-making processes are fair, just, and equitable.

One of the biggest challenges facing governance today is the increasing complexity of our world. The globalization of trade and the rise of multinational corporations have created new challenges in governance. Companies can now operate across borders, and they may not always be subject to the same laws and regulations that govern domestic companies. This lack of regulation has led to ethical violations, such as labour abuses, environmental degradation, and corruption.

To address these challenges, ethical governance must be a top priority. Governments must work together to create international regulations that protect human rights, prevent corruption, and promote sustainable development. At the same time, businesses must adopt ethical business practices and promote transparency in their operations. By doing so, businesses can build trust with their customers and stakeholders and contribute to the long-term sustainability of their operations.

Finally, individuals also play a crucial role in ethical governance. They must demand ethical behaviour from their leaders and hold them accountable for their actions. This can be done through civic engagement, such as voting, advocacy, and participation in civil society organizations.

In conclusion, ethics and governance are essential components of a just and equitable society. By upholding ethical principles and promoting good governance, we can ensure that decision-making processes are fair, transparent, and equitable. This will create a more sustainable future for all.

(Anuj Verma)

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DOES ESG RATING AFFECT STOCK PERFORMANCE OF INDIAN COMPANIES? AN EMPIRICAL STUDY

Ashutosh Yadav* Deepak Kumar Behera**

Purpose: *The study tries to investigate the influence of the ESG (environmental, social, and governance) ratings on the stock performance of Indian companies. It further compares the stock performance of those companies that are ESG leaders with those that are ESG laggards.*

Design/Methodology/Approach: *The current paper is retrieving the ESG data from a third party to look at the impact of the ESG ratings on the performance of Indian stocks. This is the first study to use a calendar-time approach to assess the impact of 621 ESG rating changes on the stock returns of Indian companies from 2017 to 2022.*

Findings: *The study finds that while an improvement in ESG rating has resulted in statistically significant but unpredictably positive abnormal returns of approximately 0.7% per month, a decline in rating is detrimental to stock performance, resulting in statistically significant monthly risk-adjusted returns of nearly -1.7% on average.*

Originality/Value: *This is one of the primary studies that has investigated the outcome of specialized ESG ratings (improved and declining) on the stock return performance of companies in India.*

KEYWORDS: *Sustainability, ESG, ESG Rating, Socially Responsible Investing, Event Study, Calendar Time Portfolio Approach, Covid-19*

JEL CLASSIFICATION: *G11, C1, Q56, G41*

Environmental, social, and governance (ESG) issues have become part of the global financial mainstream. Sustainability in business indicates integrating social, governance and environmental factors, such as a change in climate and income inequality, into business strategy and practices. Contemplating this, publicly listed companies are being increasingly rated on the ESG front. (Kotsantonis et al., 2016).

Many research studies have emerged to determine the influence of such ESG ratings by the third-party organization on the stock performance and consequently on investment decisions. Many studies (Clark et al., 2014; Friede et al., 2015; Wong et al., 2021) have found direct and positive association between ESG ratings and Companies' stock performance. They further state that even economic uncertainty has lesser impact on the stocks of highly rated ESG Companies as compared to poorly rated ESG companies. For instance, Broadstock et al., 2021 in his study observed that highly rated ESG companies performed better in terms of stock performance than poorly rated companies on ESG parameters.

On the other hand, the Classical Sustainability shareholder theory believes that CSR is solely a donation from a firm's shareholders to stakeholders (Hu et al., 2018). In this regard, socially unreactive firms have lower costs and could earn higher profits than socially reactive firms (Carnahan et al., 2010). Thus, socially reactive firms lose the competitive disadvantages compared to socially unreactive firms (Aupperle et al., 1985). Besides, there are studies by (Clark et

al., 2014; Revelli & Viviani, 2015) that often emphasizes that the previous findings are ambiguous, inconclusive, or contradictory.

The impact of ESG rating on companies' stock price performance is a highly debatable issue. Furthermore, the informational value of ESG ratings has been strongly debated, with some stating that the absence of ESG ratings from rival agencies makes their application in investment strategies and stock screening limited and untrustworthy. (Gyönyörová et al., 2021). Clementino & Perkins, (2021) noted that leaders of highly ESG-compliant companies, therefore having highly rated on ESG front, might abuse reporting methods to look better ethically and attract socially aware investors. Regardless, other investigations underscore the primary pros that ESG brings, including lower outlay on capital requirements and heightened Tobin's Q (Wong et al., 2021)

A voluminous number of studies on the conventional pattern of credit ratings see robust effects of rating changes. (Choy et al., 2006; Norden & Weber, 2004; Poon & Chan, 2008).

* **Ph.D. Research Scholar, Department of Humanities and Social Sciences, National Institute of Technology Patna, Bihar, India,**

** **Associate Professor, Department of Humanities and Social Sciences, National Institute of Technology Patna, Bihar, India**

However, the current research on ESG scores primarily involves their levels, comprising a noteworthy void in the literature this investigation aims to fill. There is some resemblance that exists between the methodology of established credit ratings and new ESG ratings. Some findings by the researcher (like Devalle et al., 2017; Jiraporn et al., 2014) prove that corporates following corporate social responsibility practices relish better-established credit ratings. Shanaev & Ghimire, (2022), in their study, examined the consequence of ESG rating changes, whether improvement or fall, on stock returns.

However, no research has investigated the outcome of specialized ESG rating (improved and declined) on the stock return performance of companies in India. In India, ESG is still in its nascent stage. Although, NSE has started an ESG index, there is no agency authorized officially by the Indian authorities to assign ESG ratings to the Indian companies. The current paper is retrieving the ESG data form the third party to look at the impact of the ESG ratings on the performance of the Indian stocks. There has been no work done on this issue in India, therefore, this is the first study which empirically tries to see the impact of ESG rating changes on stock prices of the Indian firms.

The rest of the paper is arranged as follows: The literature reviewed discussing the theoretical background, data and methodology discusses the sources of data and the methodology used, followed by findings and results, and the last section articulates the conclusion drawn.

I. Review of Literature

ESG investing has begun to gain steam, and investors are becoming increasingly cognizant of ESG parameters of companies prior to making investment decisions. Friede et al., (2015) report that since 1970, more than 2200 academic and investor studies have been undertaken on the relationship between ESG and stock performance. This evolution describes how mainstream financial markets are coming to accept the incorporation of ESG factors into sustainable investments. The transfer of traditional investors to ESG-based sustainable investment is gradual, though.

Several studies have been done on how ESG affects the performance of a company's stock and how much money it makes since Covid-19 hit the world. Some studies discovers that ESG compliance helps companies deal with economic shocks and show resilience (Albuquerque et al., 2020; Engelhardt et al., 2021), while other studies say that ESG has nothing to do with how well companies do (Demers et al., 2020; Shanaev & Ghimire, 2022).

The relationship between ESG and companies' financial performance and stock performance is the topic of contradictory study results. Even during times of crisis,

numerous research (e.g., Clark et al., 2014; Wong et al., 2021) demonstrate a positive correlation between ESG and the stock performance of firms. Classical Sustainability shareholder theory, on the other hand, holds that CSR is essentially a gift from shareholders to stakeholders (Hu et al., 2018). In this aspect, because socially insensitive enterprises have lower costs, they may generate greater profits than socially active businesses (Carnahan et al., 2010). Therefore, socially active enterprises have competitive disadvantages relative to socially inactive businesses, and their valuations should be lower (Aupperle et al., 1985).

During covid-19, in India, the Nifty 100 ESG Sectors index beat the Nifty 100 index. When Covid-19 struck Indian Territory, the businesses of ESG leaders demonstrated more resilience (see Annexure A1). This has led the current study to determine the empirical relationship between ESG ratings and companies' stock performance during economic uncertainty by extending the study period (from FY 2015-2016 to FY 2021-22) and including two more events that heightened the fear of economic uncertainty, namely Demonetization and GST, in addition to the pandemic.

II. Research Design & Methods

This paper put focus on the Companies listed on the National Stock Exchange of India (NSE). It takes the top 200 companies listed on the NSE. Data gathered on ESG scores of all 200 companies listed on the National Stock Exchange of India. The ESG rating data, for the period starting from January 2017 till May 2022, have been collected from Morgan Stanley Capital International (MSCI). Rating highlights companies' performance on ESG-related concerns and classify companies into one category out of total seven categories mentioned. There are seven categories of ratings mentioned starting from CCC to AAA similar to traditionally established rating patterns. ESG compliant companies are described as ESG leaders, whereas defiant companies are termed ESG lingers or doing poorly on the ESG front. The sample has 621 rating variations, encompassing 552 upward movements (upgrades) in the rating and 221 downward movements (downgrades) in the rating. In 93.05 per cent (90.07 per cent) of observations, companies are improved (degraded) by one category. Exclusively 21 (15) company-month observances register additional quick improvements (or fall) in the ratings.

Methodology

The pattern of upward or downward change in rating during the considered period can be observed from Fig. 1. The event study approach has not been considered for the study for the reason being that ESG ratings data is available only on monthly basis. Therefore, to answer the research question this investigation employs the calendar-time portfolio approach.

Prior research on CEO turnover Demirtas & Simsir, (2016) and confidential short-sales disclosure Galema & Gerritsen, (2019) studies effectively used this methodology. In order to distinguish between upgrades and downgrades in ratings, a portfolio of stocks weighted on value, taking ESG rating changes into consideration, is built each month. The impact of its risk-adjusted surplus returns is then examined employing the (i) Carhart, (1997) model (iii) Fama & French, (2015) model and Capital Asset Pricing Model:

$$EZ_{it} = c_i + \beta_{1i}EMZ_t \quad (i)$$

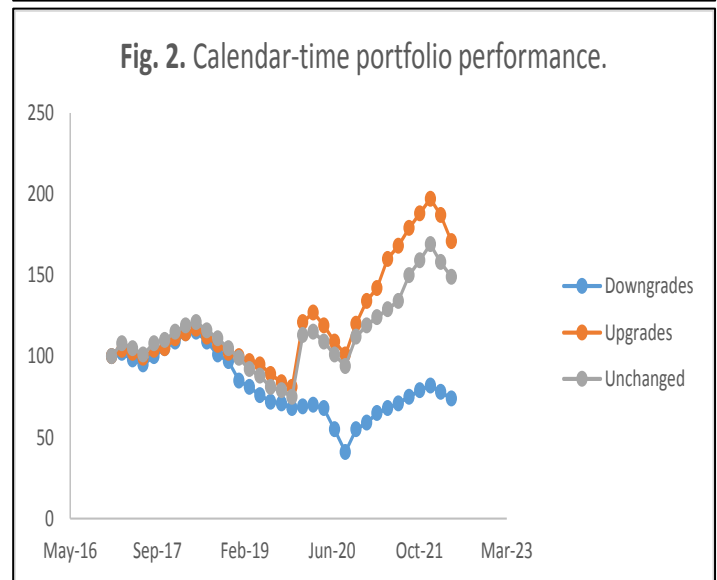
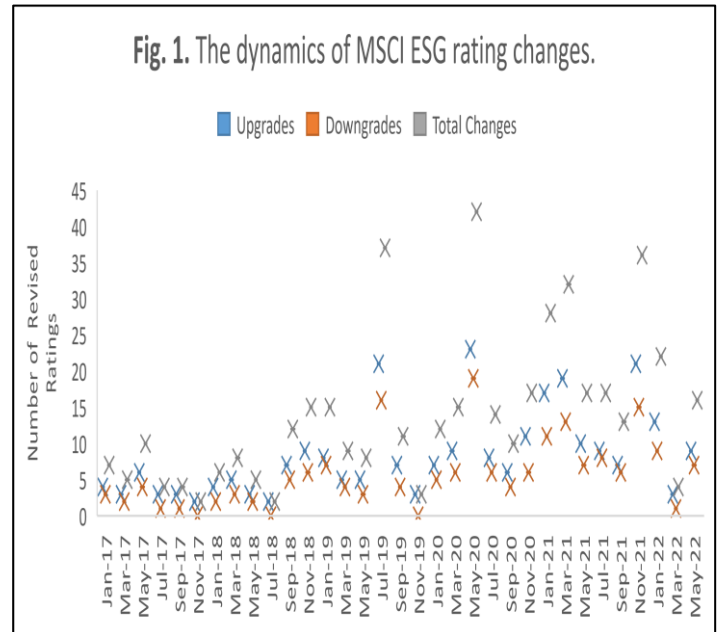
$$EZ_{it} = c_i + \beta_{1i}EMZ_t + \beta_{2i}SMB_t + \beta_{3i}HML_t + \beta_{4i}MOM_t + \varepsilon_{it} \quad (ii)$$

$$EZ_{it} = c_i + \beta_{1i}EMZ_t + \beta_{2i}SMB_t + \beta_{3i}HML_t + \beta_{4i}MOM_t + \beta_{5i}ZMW_t + \beta_{6i}CMA_2 + \varepsilon_{it} \quad (iii)$$

Where, EZ_{it} is the surplus return of portfolio i in month t , whereas EMZ_t , SMB_t , HML_t , MOM_t , ZMW_t , and CMA_2 are India-specific factors named market, size, valuation, price momentum, profitability, and asset. The market variable is weighted on values. These variables are the obtained on monthly basis from the Bloomberg, with β_{ji} indicating the concerned factor loadings. By deducting the corresponding risk-free rate derived from the same source, excess returns have been determined.

The ‘improvements in rating’ and ‘declines in rating’, for improved calendar-time portfolios approach, are calculated along with the ‘comparison group’ of companies rated on ESG parameters provided their ratings are consistent for a particular month. The estimations have also been done for zero-investment portfolios of Improved less declined (I-D), Improved minus Constant (I-C), and Declined minus Constant (D-C). The importance of intercepts, c_i , is utilized to derive ideas pertaining to how the stock has performed due to ESG ratings. Surprisingly, the C_s of the comparison group, improved, and declined portfolios turned out to be as estimators of the impact-shock and the ESG risk respectively.

To ensure the robustness of the model, exact estimates are also determined for calendar-time portfolios based on rating changes (Improved and declined) in a [-1; 1] month duration, i.e., for overlaying the period of three months; for the portion of the sample beginning in January 2017, when rating updates were issued frequently; for ESG leaders and laggards separately; and for double types on market capitalization and price-to-book. In order to analyze the particular impact of the COVID-19 pandemic, the Equations are additionally applied with a differential intercept (δ_i) and a binary dummy variable equal to 1 beginning in April 2020 and 0 otherwise. The superior performance of calendar-time portfolios of equities with improved, deteriorated, and unchanged ESG ratings (comparison group) is estimated.



III. Results and Discussion

The asset-pricing models’ intercepts are presented in Table 1. All remaining tables have the same presentation design. The conclusions stand up to descriptions of covariance matrices and ARCH and GARCH requirements as well. Results from the baseline evaluation demonstrate the below average performance of the ESG-downgraded equities, with economically and significantly significant anomalous negative risk-adjusted returns between -0.8 and -1.3 per cent per month (see Table 1). The zero-investment portfolios regression that contrast companies with declined ratings with their improved and unaltered counterparts maintain the importance.

Improvement in ESG ratings is also associated with positive, albeit negligible, anomalous returns. ESG rating upgrades, therefore, are related to positive though insignificant irregular returns. The comparison of ESG ratings with traditional credit ratings in this regard are possible because both positive and negative rating changes are met with an asymmetric response (Choy et al., 2006). The models are applied, additionally, for

the same period of three-month, which includes the month in which rating is declared, one month prior and after the changes in rating to test the robustness of the outcomes, taking into account expected contemplation and adjustment consequences for changes in ESG changes (see Table 2).

Table 1: Portfolios estimation results for interval.

Models	Portfolio Improved	Declined	Comparison	Difference I-D	I-C	D-C
Capital Asset Pricing Model	0.5914 (0.5437)	-1.1622** (0.4941)	-0.0441 (0.0912)	1.6141*** (0.4417)	0.6323 (0.5761)	-1.1335** (0.4962)
	0.3102	0.0211	0.7201	0.0013	0.2921	0.0362
Carhart	0.6732 (0.6142)	-1.0831** (0.4148)	-0.0301 (0.0214)	1.6603*** (0.4781)	0.6925 (0.5761)	-1.0321** (0.4240)
	0.2108	0.0193	0.3102	0.0011	0.2602	0.2327
Fama-French	0.6903 (0.5710)	-1.7702** (0.4502)	-0.0394 (0.0381)	1.8101*** (0.2103)	0.7547 (0.5836)	-1.1160** (0.0431)
	0.2441	0.0131	0.2902	0.0004	0.2104	0.0182

*, ** and *** shows statistical significance at 1%, 5% and 10% level

The final outcome in this regard shows a consistent monthly anomalous risk-adjusted return for downgraded stocks of -0.8 percent to -1.3 percent in all the three models of asset-pricing,

which is significant both statistically and economically. The results are supported by the noticeable performance distributed between improved and declined companies.

Table 2: Portfolios in the overlapping period: Robustness Check

Models	Portfolio Improved	Declined	Comparison	Difference I-D	I-C	D-C
Capital Asset Pricing Model	1.0351 (0.3148)	-1.1104** (0.5102)	0.0349 (0.0962)	1.6018*** (0.5157)	0.4802 (0.602)	-1.2109*** (0.4207)
	0.0926	0.0052	0.5921	0.0043	0.1039	0.0274
Carhart	0.4732 (0.3102)	-0.9012** (0.4431)	-0.0465 (0.4101)	1.5114** (0.4301)	0.5807 (0.3703)	-1.0161** (0.5901)
	0.1021	0.0411	0.4310	0.0302	0.0965	0.05232
Fama French	0.5235 (0.2914)	-1.0124** (0.5011)	-0.0532 (0.0439)	1.5079** (0.41)	0.6337* (0.2903)	-1.0134** (0.427)
	0.0932	0.0432	0.3754	0.0106	0.0621	0.0547

*, ** and *** shows statistical significance at 1%, 5% and 10% level.

Table 3: Robustness check starting January 2017

Models	Portfolio Improved	Declined	Comparison	Difference I-D	I-C	D-C
Capital Asset Pricing Model	0.4954 (0.3102)	-1.1041*** (0.4124)	-0.0392 (0.0923)	1.8812*** (0.7703)	0.5203 (0.3201)	-1.3962*** (0.4781)

	0.0947	0.0057	0.6120	0.0023	0.0941	0.0074
Carhart	0.5132 (0.3132)	-0.9472** (0.4432)	-0.0461 (0.4101)	1.5814** (0.6103)	0.5748 (0.3304)	-1.0142* (0.5101)
	0.1014	0.0410	0.4132	0.0121	0.0947	0.0523
Fama French	0.5430 (0.2932)	-1.0147** (0.5048)	-0.0470 (0.0491)	1.5947** (0.6132)	0.6112* (0.3371)	-1.0135* (0.5320)
	0.0947	0.0433	0.3704	0.0101	0.0735	0.0647

*, ** and *** shows statistical significance at 1%, 5% and 10% level.

Additionally, a subsample beginning in January 2017 is computed for in the study, and the outcomes of the estimation are shown in Table 3. This specification generally supports the consistency of previously established results, with their magnitude rising in comparison to Tables 1 and 2. There are two possible explanations for such an outcome. First off, the

associated estimators are less noisy because more ESG ratings have been adjusted from the month of January in 2017 and calendar-time portfolios have inevitably become further diversified. Second, it may be argued that when rating modifications increase in activity, they disclose more current and pertinent information to the stock market.

Table 4: Results for ESG leaders

Models	Portfolio Improved	Declined	Comparison	Difference I-D	I-C	D-C
Capital Asset Pricing Model	0.8761* (0.5149)	-1.1341** (0.4101)	0.2141* (0.1132)	1.9603*** (0.6161)	0.5904 (0.5221)	-1.3148*** (0.4624)
	0.0832	0.0132	0.0503	0.0023	0.2542	0.00432
Carhart	0.8801* (0.5310)	-1.0371** (0.4871)	0.1331 (0.1130)	1.672** (0.65)	0.7051 (0.5122)	-1.1420*** (0.4335)
	0.0932	0.3202	0.1561	0.0169	0.1703	0.01203
Fama French	0.8911 (0.5435)	-1.0933** (0.4822)	0.1301 (0.1062)	1.6321** (0.6428)	0.6552 (0.5132)	-1.1941** (0.4123)
	0.1142	0.0253	0.1155	0.1696	0.1821	0.0160

*, ** and *** shows statistical significance at 1%, 5% and 10% level.

The results are shown for ESG leaders and laggards in Tables 4 and 5. In the literatures of credit ratings related studies the response to rating changes were significant in the poorly rated

companies. However, this study finds that impact of ESG rating changes are more profound for companies which were initially highly rated (Avramov et al., 2009).

Table 5: Results for ESG lingers

Models	Portfolio Improved	Declined	Comparison	Difference I-D	I-C	D-C
Capital Asset Pricing Model	0.3132 (0.3815)	0.4605 (0.5932)	-0.3032*** (0.1103)	0.6774 (0.6739)	0.6236 (0.4563)	-0.1024 (0.5303)
	0.4530	0.4974	0.0096	0.2904	0.1904	0.8307
Carhart	0.2221 (0.3781)	-0.4285 (0.6062)	-0.2281** (0.1041)	0.5948 (0.6720)	0.5162 (0.4532)	-0.1331 (0.5841)
	0.4982	0.5324	0.0283	0.3133	0.2803	0.8109
Fama French	0.1632 (0.3801)	-0.4329 (0.6134)	-0.2060** (0.1038)	0.5285 (0.6865)	0.4134 (0.4517)	-0.1624 (0.5426)
	0.5930	0.5114	0.0477	0.3713	0.3964	0.6906

*, ** and *** shows statistical significance at 1%, 5% and 10% level.

This induces more investors towards ESG ratings while taking investment decisions. The studies on credit rating agencies states that their ratings' influence is highly significant for lower-rated companies. However, ESG ratings literature

demonstrates that rating influence is greater for companies with higher ratings than for those with lower ratings (Avramov et al., 2009; Choy et al., 2006). For the portfolios of leaders and laggards in the control group, some significant

but minor aberrant returns are seen, mainly for low-rated companies. In the six-factor model, the difference in monthly performance between companies that are leaders and laggards and have stable ESG ratings is equal to 0.36 percent. These results defy Naffa & Fain, (2022) and confirm Khan, (2019) and Broadstock et al., (2021). They pose a conundrum from a risk-based explanation because investors appear to pay a little premium for holding firms that are less resilient to ESG risks.

Rating changes are more significant for investors than ESG rating levels, which have very little impact on performance. Table 6 presents the distinct intercept δ for the COVID-19 pandemic combined with total-sample intercept c to show the impact of the COVID-19 pandemic on stock performance in relation to ESG grading implications. ESG downgrades continue to have a detrimental impact on stock performance, despite the fact that the differential intercepts are small.

Table 6: Differential impacts in the COVID period

Models		Portfolio Improved	Declined	Comparison	Difference I-D	I-C	D-C
Capital Asset Pricing Model	α	0.1681 (0.3857)	-1.0539* (0.5604)	0.0341 (0.0623)	1.2794* (0.6561)	0.1362 (0.3821)	-1.1342* (0.5762)
		0.6662	0.0534	0.6141	0.0550	0.7232	0.0524
	δ	1.9548** (0.8463)	-0.6091* (1.2437)	-0.4035*** (0.1394)	2.5621* (1.4402)	2.3614*** (0.8410)	-0.2062 (1.2540)
Carhart		0.0242	0.6262	0.0041	0.0802	0.0062	0.8791
	α	0.0906 (0.3946)	-0.9702* (0.5721)	-0.0182 (0.0462)	1.0661 (0.6503)	0.1141 (0.3960)	-0.9561 (0.5741)
	δ	0.8030	0.0902	0.6750	0.1101	0.7705	0.1012
Fama French		2.2651** (0.8724)	-0.7520* (1.2709)	-0.2402** (0.0961)	3.0112** (1.4732)	2.5142*** (0.8730)	-0.5132 (1.2762)
	α	0.0854 (0.3904)	-0.9841* (0.5765)	-0.0179 (0.0403)	1.0641 (0.6542)	0.1012 (0.3943)	-0.9641* (0.5758)
	δ	0.8221	0.0941	0.6736	0.1041	0.7910	0.0914
		0.0126	0.5503	0.0156	0.0448	0.0061	0.6802
		2.2641** (0.89)	-1.0932 (1.3184)	-0.2648*** (0.0912)	3.3541** (1.1902)	2.5224*** (0.8940)	0.8232 (1.3104)
		0.0144	0.4320	0.0064	0.0287	0.0068	0.5332

*, ** and *** shows statistical significance at 1%, 5% and 10% level.

However, following March 2020, rating upgrades spur a statistically and economically significant 2 percent per month increase in stock performance. This extensively supports Broadstock et al., (2021) findings which claim that ESG risk management is essential during market turmoil. Another explanation for such a strong influence would be listed corporations' resilience signaling. Investors may view companies which stick to CSR practices throughout crises as having stronger financial standing, which is vital given the current climate of greater unpredictability. Alternately, this can be attributed to the fact individual investors who have free time during the pandemic due to pandemic restrictions increased their activities to investigate equities, incorporating their ESG compliance or rating or scores (as used by different rating organizations), which also became openly available to the public towards the end of 2019. Besides, these hypotheses if turned out to be true with further studies, ESG ratings may soon play an even bigger role in stock performance. Last but not least, this analysis explores the changes in stock performance as a result of ESG rating changes in double types

on market capitalization and price-to-book ratio in order to contextualize the conclusions concerning traditional asset-pricing determinants (see Tables S1, S2, S3, S4 in the Appendix). The impacts are significantly higher which is obvious for larger and mid-cap stocks, which highlights the importance of ESG ratings in portfolio diversification decisions.

IV. Conclusion

This study, finds that, fall in the ratings are almost always detrimental to stock performance of the Indian companies, causing statistically significant negative returns of abnormal nature at -0.6 percent to -1.2 percent per month. The findings are also found to be robust in various model specifications. ESG rating improvements are linked with moderately smaller and occasionally insignificant positive returns which are abnormal in nature. Results in ESG leaders are significantly more noticeable than in laggards, indicating that performance discrepancies are related to high-net-worth investors utilizing

better positive screening. Nevertheless, during the COVID-19 period, ESG rating improvements show a noticeable positive effect, which may be explained by resilience signaling or by a rise in the use of ESG ratings by private investors as opposed to institutional ones.

The empirical finance studies on ESG parameters have been greatly expanded by this study. Fall in ESG ratings have been found to significantly push stock prices downwards, highlighting the risk linked with ESG ratings and the value of ESG ratings as a source of information for both institutional and retail investors. As more organizations start providing ESG rating data for free in the public, investor communities begin to rely on these to guide their filtering process and equity selection while taking investment decisions, the volume of such effects may rise. Furthermore, this study adds to the debate surrounding ESG and companies' performance by demonstrating that atypical returns are connected with ESG rating changes rather than ESG levels. The importance of ESG ratings for decision-makers shows how these rating companies may help spread knowledge and improve market efficiency.

However, not much data is available for free of cost in the public domain, as and when more high-quality data become available on regular intervals in the public domain, more study could explore the ESG ratings aspects differently and

broadly to further expand the conclusions of this study by employing different approaches like event study.

Disclosure Statement

There are no competing interests to declare, so there are no declarations of interest to make. There was no receipt of funding either in kind or in cash.

Data Availability Statement

Data has been collected from the following sources: Money control for the Financial and Technical Data <https://www.moneycontrol.com/> Morgan Stanley Capital International (MSCI) for ESG data <https://www.msci.com/our-solutions/esg-investing/esg-ratings> ESG data can be available subject to the approval of third party, that is, Morgan Stanley Capital International (MSCI)

Submission declaration and verification

It is declared that this article has not been published before and that it is not currently being considered for publication anywhere else, that its publication is approved by the authors and either tacitly or explicitly by the responsible authorities where the work was carried out, and that, if accepted, it will not be published elsewhere in the same form, in English or in any other language, including electronically, without the written consent of the copyright holder.

Appendix

Table S1: Results for large-cap stocks

Models	Portfolio Improved	Declined	Comparison	Difference I-D	I-C	D-C
Capital Asset Pricing Model	0.6301 (0.4548)	-1.3104*** (0.4321)	-0.0597 (0.0773)	1.8261*** (0.5461)	0.4320 (0.2714)	-1.4340** (0.6161)
	0.2342	0.0094	0.5102	0.0028	0.0902	0.0183
Carhart	0.5174 (0.4621)	-1.1341** (0.4702)	-0.0914** (0.0512)	1.5902** (0.5932)	0.4140 (0.3340)	-1.1803** (0.5940)
	0.2602	0.2231	0.0526	0.0115	0.1140	0.0513
Fama French	0.3576 (0.3781)	-1.0906** (0.4915)	-0.0938** (0.0493)	1.4784** (0.5332)	0.3230 (0.2686)	-1.1740*** (0.6281)
	0.3162	0.03102	0.0413	0.0143	0.1304	0.06304

*, ** and *** shows statistical significance at 1%, 5% and 10% level.

Table S2: Results for small-cap stocks

Models	Portfolio Improved	Declined	Comparison	Difference I-D	I-C	D-C
Capital Asset Pricing Model	0.3562 (0.4145)	-0.0511 (0.6121)	0.0771 (0.1412)	0.3104 (0.7140)	0.2342 (0.3736)	-0.0714 (0.4821)
	0.6702	0.9737	0.6731	0.7206	0.5753	0.7703

Carhart	0.3224 (0.4761)	0.08732 (0.5906)	0.1680 (0.0981)	0.3263 (0.7822)	0.1732 (0.3941)	-0.6235 (0.5114)
	0.5304	0.9361	0.1754	0.7104	0.6104	0.8203
Fama French	0.3726 (0.3932)	0.2141 (0.6709)	0.1993* (0.9731)	0.1832 (0.6901)	0.1374 (0.3221)	-0.0571 (0.3261)
	0.4647	0.8314	0.0933	0.8123	0.5921	0.7440

*, ** and *** shows statistical significance at 1%, 5% and 10% level.

Table S3: Results for Value stocks

Models	Portfolio Improved	Declined	Comparison	Difference I-D	I-C	D-C
Capital Asset Pricing Model	0.1743 (0.4730)	-0.4124 (0.5734)	0.3804** (0.1862)	0.4524 (0.4136)	0.6012 (0.4731)	0.0041 (0.5841)
	0.8154	0.5347	0.0453	0.2762	0.2804	0.9432
Carhart	0.2706 (0.4421)	-0.0982 (0.4862)	-0.1841* (0.0972)	0.2231 (0.2473)	0.4831 (0.3931)	0.6706 (0.4223)
	0.2984	0.8804	0.9413	0.3303	0.1902	0.7831
Fama French	0.2842 (0.3703)	-1.1330 (0.4952)	-0.1501 (0.0983)	0.4809 (0.5216)	0.4116 (0.2931)	0.03914 (0.4704)
	0.3812	0.8706	0.1451	0.4305	0.1914	0.8703

*, ** and *** shows statistical significance at 1%, 5% and 10% level.

Table S4: Results for growth stocks

Models	Portfolio Improved	Declined	Comparison	Difference I-D	I-C	D-C
Capital Asset Pricing Model	0.6307 (0.4632)	-1.3207** (0.5913)	0.1820 (0.1314)	1.0902** (0.7514)	0.5620 (0.5712)	-1.4114** (0.5810)
	0.1303	0.0314	0.1702	0.0131	0.3102	0.0133
Carhart	0.5114 (0.4732)	-1.2130** (0.6041)	0.0283 (0.0794)	1.6761** (0.6841)	0.5706 (0.5632)	-1.2541** (0.6221)
	0.2107	0.0513	0.6832	0.0192	0.2941	0.0451
Fama French	0.4721 (0.4510)	-1.2021** (0.5832)	0.0221 (0.0712)	1.6232** (0.7912)	0.4841 (0.5103)	-1.2330** (0.5812)
	0.2941	0.0464	0.6420	0.2310	0.3612	0.0394

*, ** and *** shows statistical significance at 1%, 5% and 10% level.

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MEASUREMENT OF THE THRESHOLD VALUES OF SALES PERFORMANCE FACTORS: A FORMATIVE SCALE CONSTRUCTION IN ONYX

Sumit Saha*

Purpose – Research has shown a requirement to create the performance measurement scale for the industry decision-makers to take an informed decision. This paper aims to construct and validate a newly created measurement scale's aspects, conditions, reliability and validity check. This research is deeply based on the practical aspects of the researchers and is not explored in many books and literature.

Design/methodology/approach – A new scale building is in mind. This is exploratory research to identify the first the final sales performance determinants in IT/ITes companies through Factor Analysis. The 307 final data sets and responses were considered for the analysis and to form the final four factors. 'Mahalanobis Distance Test' for multivariate analysis helped the Researcher identify the study's unique outliers and delete them from the last data set. Post EFA for Confirmatory factor analysis data is analysed in the Onyx environment to create the model, after the validity and reliability check to make the final scale.

Findings – Formative Scale is constructed in ONYX to measure the sales performance factors threshold values. It's named as sales performance Index of the industry.

Research limitations/implications – The main importance of this paper is that the CEOs and decision-makers of the IT companies will be well equipped in advance to know their company sales performance with respect to similar industries in advance. Also, this research supports researchers in developing and validating their measurement scale in the ONYX environment for the betterment of future research help.

Originality/Value – The created scale itself became a measurement tool for industry performance measurement. Management will be well equipped in advance to understand the business situation with respect to the industry. This will help to identify exactly which department needs more focus or changes that need to be done in case of improvement is required as per the above-created scale.

Keywords: Cross-functional Factors, Confirmatory Factor Analysis, Exploratory Factor Analysis, Onyx, Principal Component Analysis, Scale Development and Validation, Sales Performance.

JEL Classification Code: M10

As per the literature, it came up that more than 90% of the research happens based on the reflective scale and with the help of AMOS in the windows operating system. Only 10% of research is done to form the formative scale, as AMOS does not give the right model for formative type modelling. Hence, for researchers globally, scale or Index creation was needed for the formative model and in the Onyx operating system. ONYX is used for MAC OS. Hence, it was a need for time and situation. This is a methodological paper, and its main finding is its usefulness for researchers. While contributing to the theoretical literature on the Sales Performance scale, research also proposes a tool for sales heads and company decision-makers.

The availability of this scale, and the idea to create a step-by-step explanation of creating a scale here, will stimulate further research focussing on Sales Performance, various dimensions of Sales Performance, and new scale creation. The main implication of this paper is to support researchers on the process of Development & Validation of measurement formative scales in ONYX.

I. Review of Literature

In a competitive market, business houses always need to be cautious about their position in the market. They need to know the problems and how they can improve them for the sales team's betterment. Sales performance means indirectly more and more revenue for the company to run the operation and to make a profit. In this regard, it is important to understand one's current performance and measure them through a valid scale. We frequently hear customer satisfaction ratings, but hardly we hear the sales performance score or the sales performance rating of a company concerning the industry. Hence, this was well required and the most interesting among the Researcher and the industry, especially in the ONYX environment. Using a Likert scale is not advisable as that may not be the accurate and current implementation of that scale for the particular study.

* Associate Professor, Dayananda Sagar Business School (DSBS), Bangalore, Karnataka, India

Rather Likert- like a scale with the score 1-5 or 1-7 attached with it may solve the problem. However, defining the Researcher's scale per the study's requirement is the appropriate method of reaching the goal. Managers focus on customer satisfaction (Szymanski et al., 2001). Here, "Cross-Functional factors" meaning the various item/ parameter/ individual variable/ factor/ indicator(s) for which directly the salesperson is not responsible for his non-performance. Ask a simple question "is this because of a salesperson's inability for which the sales did not happen?"; if the answer is 'yes', then it is a functional issue, or if 'No', then all such variables/ factors would be considered as cross-functional and various other functions (not Sales) reason.

Explanation: Case-1: It will not be sales person's fault and will be considered that due to the legal team's delay (cross-functional), sales do not happen, and sales performance is affected.

Case-2: If the sales skill/ sales person's inefficiency did not happen, it would only be considered a practical reason for his non-performance. Otherwise, all variables/ indicators /factors are considered as the cross-functional variable effect. "Sales Performance Factors" are the Identified Item/parameter/factor affecting the salesperson's efficacy and output. "Sales Person's Performance" is nothing but the Salesperson's efficacy to make sales depends on various functions/ factors /items/ indicators. Minimizing the wrong effect of these factors may improve their performance. After doing EFA and CFA, the scale considers and calculates the 'Error' and 'Constant' terms. This results in a "Sales Performance Score" (A final number) to measure the industry's sales performance score standard/scale. IT/ITes companies (Hardware and Software) and IT-enabled services companies (Services) are considered together. Differentiation is not done and was not required as per the study.

Explanation: IBM sells hardware servers as a product and in the Global Technical Services (GTS) segment. Selling IBM blade servers fall under IT sales, and Selling GTS offerings to customers falls under IBM services. As a researcher, all IBM salespeople who sell hardware or services were considered for this study. Hence, IT or ITes were considered (Saha, S. and Kar, S. (2021)).

Through the literature review, this is coming up to the researchers that the full scale was constructed on the reflective scale and with the help of AMOS in the Windows operating system environment. Creating a formative scale in ONYX and MAC OS environments is necessary. Mohan V. Tatikonda et al. (2001) show that organizational process factors are linked to achieving operational outcome targets for quality, cost, and development capabilities. Quarashi Khanam Tahira opined that Marketing approaches and the consumer's opinion are correlated. Rentz et al. (2002) argue that many types of research focused on selling skills after Churchill et al. (1985).

Cross-selling services has an impact on how it is formed and how well services are sold (Yu, Ting, de Ruyter et al., 2018). Organizations must deal with more complicated consumer expectations (Grewal et al., 2015; Tuli, Kohli, & Bharadwaj, 2007; Ulaga & Kohli, 2018). The key aspect in any organization's success is the sales force's performance, whether in urban or rural locations (Neema Geeta et al., 2015). Unquestionably, the sales function has evolved from a form that is in its infancy to stages that are more distinct (Thomas w Leigh et al., 2001). There are numerous internal and external factors that contributed to the matured IT (es) industry of today's 1990s back-office image (S. Annapoorna et al., 2009).

33 variables, including reasonable target settings (Leon et al., 1998), lead generation support (researcher pre-test), and road blockers/toxic personnel, were discovered by researchers. administrative politics, ineffective gatherings, Customer satisfaction (Mohan V Tatikonda, 2001, Agnihotri et al., 2017), customer feedback (Thomas W Leigh et al., 2001, Dawn R. Deeter-Schmelz, 2020), complaint handling (technical/quality) (Yu, Ting, de Ruyter et al., 2018), incentive achievement (Dawn R. Deeter-Schmelz, 2020), branding, and sales incentive structure are just Job satisfaction, functional alignment, team responsibility, and team co-location are all discussed by Nema Geeta et al. (2015), S. Annapoorna et al. (2009), Dawn R. Deeter-Schmelz (2000), and others; Functional alignment, Team accountability, Team co-location (Nema Geeta et. al, 2015; Sarah Holland et. al.; and, Churchill GA, 1985), Contribution recognition (Nema Geeta et. al, 2015), Job Security (S. Annapoorna et. al., 2009), Business Culture (CII-PwC report, 2010), Company Image (Dawn R. Deeter-Schmelz, 2020).

Table 1: The antecedents found in the literature

Indicators/ Items	Source
Reasonable target settings	Leon Met. Al., 1998
Lead generation support	Researcher Pre Test
Work Engagement	Willem Verbeke et. Al.,2011
Product/service Knowledge	Willem Verbeke et. Al.,2011
Sales achievement	Thomas W Leigh et. Al., 2001
Unit cost	Mohan V Tatikonda, 2001
Product/ Service quality	Mohan V Tatikonda, 2001
Market competition	Ford et. al., 1983
Product acceptance	Pre-test/ Expert opinion
Pre sales support	Thomas W Leigh et. Al., 2001
Sales targets	Willem Verbeke et. Al.,2011
Commercial/legal approvals	Dawn R. Deeter-Schmelz, 2020

Customer satisfaction	Mohan V Tatikonda, 2001, Agnihotri et. al, 2017
Customer feedback	Thomas W Leigh et. Al., 2001, Dawn R. Deeter-Schmelz, 2020
complain handling (Technical/Quality)	Yu, Ting, de Ruyter et. al, 2018
Incentive achievement	Dawn R. Deeter-Schmelz, 2020
Branding	Pre-test/ Expert opinion
Sales incentives structure	Nema Geeta et. al, 2015; S. Annapoorna et. al., 2009; Dawn R. Deeter-Schmelz, 2020
Job Satisfaction	Nema Geeta et. al, 2015
Functional alignment	Nema Geeta et. al, 2015; Sarah Holland et. al.; and, charchil G.A, 1985
Team accountability	Nema Geeta et. al, 2015; Sarah Holland et. al.; and, charchil G.A, 1985
Team co-location	Nema Geeta et. al, 2015; Sarah Holland et. al.; and, charchil G.A, 1985
Road blockers / Toxic employees	Pre-test/ Expert opinion
Organisational politics	Pre-test/ Expert opinion
Job Security	S. Annapoorna et. al., 2009
Contribution recognition	Nema Geeta et. al, 2015
Relationship with Superiors	Nema Geeta et. al, 2015, Dawn R. Deeter-Schmelz, 2020
Unproductive meetings	Pre-test/ Expert opinion
Business Culture	CII-PwC report, 2010
Company Image	Dawn R. Deeter-Schmelz, 2020
Micro-management of Boss	Pre-test/ Expert opinion
Top management's Micro-management	Pre-test/ Expert opinion

The objective of the study

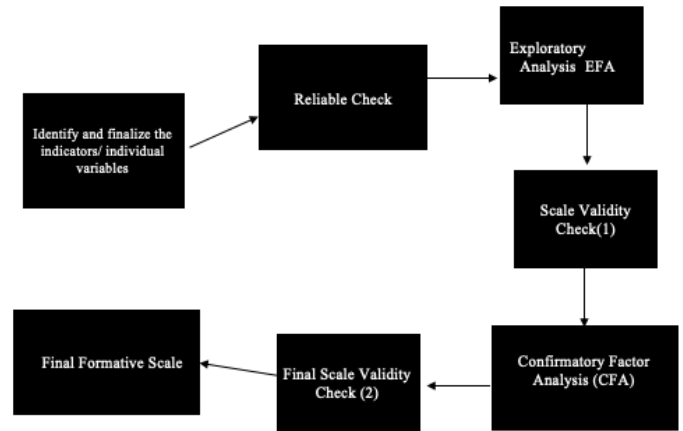
The main aim of this research is to create a reliable and valid measurement scale with the help of SPSS and ONYX environment to measure the threshold value of the sales performance factors

II. Research Design and Methods

To develop a reliable and valid measurement scale, first identified antecedents for factor analysis and scale identification and then validation. The primary data was collected through a well-structured questionnaire through the survey research method. The questionnaire was administered directly to the sales professionals via social media and the google forms randomly. 350+ responses were received, which

was the total sample size. The variable reduction technique is used to do Exploratory Factor Analysis (EFA) and confirmatory Factor Analysis (CFA). Statistical Data Analysis and Exploratory factor analysis SPSS are used for initial data formatting. The **Onyx** data analysis software is used for MacOS operating System to build the predictive modelling.

Fig 1: Scale Construction framework diagram



Scale formation framework diagram

III. Results and Discussion

Data Collection

Saha S, kar, and Subhasree (2021) identified that 33 proper questions were asked to record the responses against the 33 identified variables. Through a valid questionnaire.

Sample Size and its Validity

As the Researcher intends to do the 'Factorial Analysis' and Modelling during data analysis, the KMO value, 'Bartley test of sphericity' Value and 'Anti-image' values are cross-validated by the sample size of 310 final samples through a random sampling method.

- **'KMO value'** tells whether the sample is significant to do an overall factor analysis or not. If the KMO value is ≥ 0.70 , then the sample size is sufficient for the factor analysis and inferences.
 - **'Bartley test of sphericity'** tells whether the correlation matrices are identity matrices or not. If the identity matrix then it will show as many factors, as many indicators/ items/ variables, and factors ana
1. **'Anti-image'** create distinct correlation (0 to +- 1) and covariance matrix (takes any value). It tells whether the sample size is sufficient for every indicator/ item/ variable. It should be > 0.5 to include the indicator; else, we can drop off/ exclude the indicator.

Missing value analysis

✓ According to Donders et al. (2006) and Schafer et al. (2008), the values (Sales accomplishment and Sales Target, actual values) are "Missing Variable Not at Random" (MNAR), with no pattern observed to employ the imputation approach (changing the missing values with an estimate) (2002).

Multivariate outliers analysis

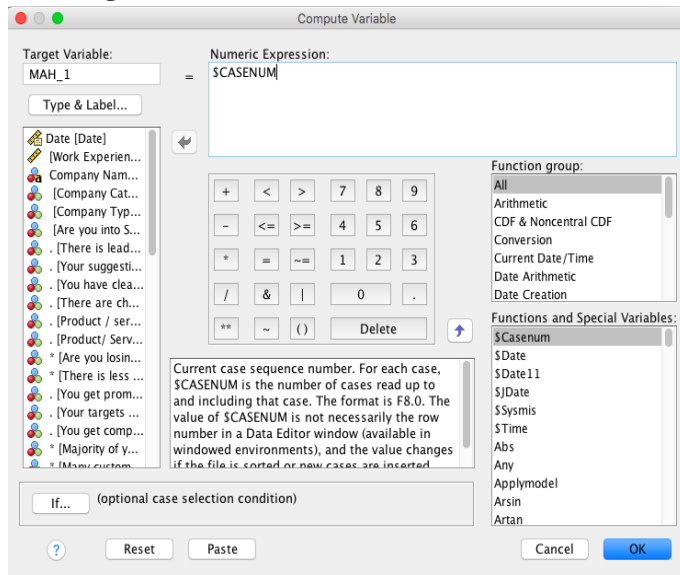
✓ The univariate or bivariate analysis is not useful as the study has 33 individual variables; hence multivariate analysis would be the justified method to understand the outliers present in the data.

✓ The researcher followed **Mahalanobis Distance Test** (threshold value $p \leq .0010$) for Multivariate analysis for outliers' determination. Three ($p > 0.0010$) outliers were identified and removed from the data analysis.

To conduct Mahalanobis Distance Test:

✓ Got to analyze > Regression > Linear > 'Random ID' DV to Dependent box > Move All other variables (which have multivariate outliers) to the independent box (pls. Note we are going to ignore the regression output. Hence, no need to adjust any settings to any other button, (except) > click Save button > Distance > Mahalanobis > continue > ok

Fig 2: Mahalanobis Distance Test in SPSS (i)



✓ - Output window pops up, but we do not need this information (you can close the o/p window).

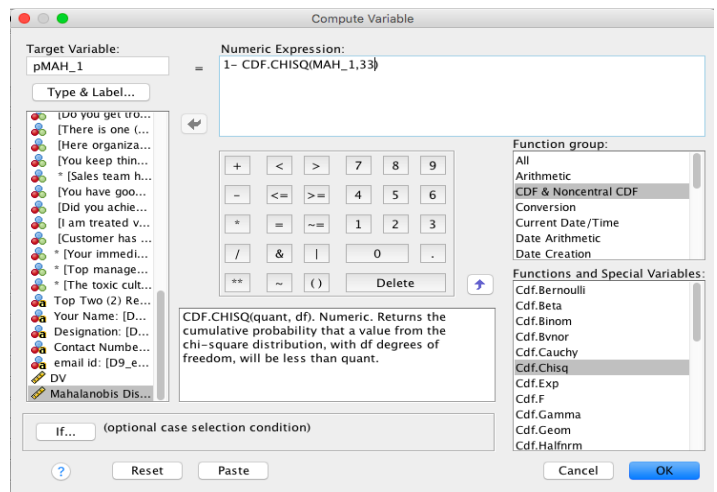
✓ Go to Data view > New variable MAH_1 > Right click > sort descending

Interpretation: we need to know this value's probability to understand how far the variable should lie. A larger MAH value means more distance, i.e., extreme outliers.

SPSS Method to calculate pMAH_1 (probability value of MAH_1)

✓ Now, we need to create a new variable
 ✓ Go to Transform > compute variable > Name Target Variable= pMAH_1 > select CDF and non-central CDF in Function group (CDF stands for Cumulative Data Function) > Select CDF Chi-Square at below box > Click Variable name (MAH_1) and df =n > Make inverse deducting 1 from the formula i.e., $1 - \text{CDF.CHISQ}(\text{MAH}_1, 33)$ (* Note: 33 is the total number of variables in the study) > Ok
 ✓ Double click the new variable in the Variable view > Increase the decimal to 4 > Return to the data set by double-clicking the variable name (row)

Fig 3: Mahalanobis Distance Test in SPSS (ii)



Interpretation:

✓ If Cut-Off probability < 0.001 , then that is a Multivariate Outlier, and that Item/Case/Record should be deleted/removed from the data set/Analysis (Note: This is the item removal test and not to remove Variable/ Indicator.)

Multicollinearity

VIF value < 10 , the Tolerance value is > 0.1 , and No correlation value > 0.90 among any close two variables confirms the Multicollinearity test.

Multivariate normality analysis

Mayers (2013, p. 53) recommended a cut-off of 3.29 (samples > 100) for the values of skewness and kurtosis to understand the normalcy of the data.

Skewness and Kurtosis have values of 3.29. Consequently, permissible values to take into account normalcy. According to Peter Samuel, the correct values for Skewness and Kurtosis' double standard errors are 0.278 and 0.554, respectively. We discovered that only a few variables do not adhere to this criterion in the descriptive table. Slightly Skewed as a result. It is wise to keep in mind that Factor analysis can work with even somewhat biased data.

STEPS TO FOLLOW IN SCALE CONSTRUCTION:

The steps that the Researcher followed are adopted from Slavec, A., & Drnovsek, M. (2012).

- Dimensionality assessment
- Reliability Check, and
- Validity Che

Table 2: Steps to follow in Scale Construction

Steps	Descriptions
Dimensionality assessment	• The dimensionality of a measure is concerned with how the homogenous items form the common factors needed to account for the correlation among items (Netemeyer et al., 2003).
	• Dimensionality can be assessed with either exploratory factor analysis (EFA) or confirmatory factor analysis (CFA) or both.
	• EFA is commonly conducted when a researcher has a limited idea of the new measure's dimensionality, and whether the hypothesized factor model fits the data or not (Netemeyer et al., 2003).
Reliability Check, and	• Scale reliability is the proportion of variance attributable to the true score of the latent variable (DeVellis, 2003).
	• Scale reliability can be assessed with several methods, e.g. temporal stability, split-half reliability, external consistency, and internal consistency.
	• Internal consistency refers to the homogeneity of items within a scale (DeVellis, 2003). Cronbach's (1951) coefficient alpha is most commonly used.
	• Besides this, Hair et al. (2010) suggest that the generally agreed upon lower limit for Cronbach's alpha is 0.70, although it may decrease to 0.60 in exploratory research. Also, Truong, Y., & McColl, R. (2011) used Cronbach's alpha value 0.50 after Factor Analysis.
Validity Check	• Construct validity refers to the extent to which any measuring instrument measures what it is intended to measure (Carmines & Zeller, 1979; Netemeyer et al., 2003) in the context in which it is to be applied (Nunnally & Bernstein, 1994), (Haynes et al., 1995; Netemeyer et al., 2003).
	• Convergent validity is the extent to which responses from alternative measurements of the same construct share variance (Schwab, 1980).
	• Discriminant validity refers to the degree to which two measures designed to measure similar, but conceptually different constructs are related (Netemeyer et al., 2003).

Dimensionality assessment:

- Using the Principal component analysis method, after the final exploratory factor analysis, 04 factors have emerged with % of variance value > 5%, Eigen value > 1.0.

- Correlation matrix determinant is 0.006 (+ve), KMO (0.787), all the anti-image value > 0.5 (min =0.49 and Max=0.88), Bartlett's test of Sphericity (1544.093) is significant (.001), igen value >1.0, and all the communalities >0.5 (min=0.49 Max= 0.730).
- There are no cross-factor loadings, and Cronbach's alpha values for all the factors are in an acceptable range. Hence, reliable.
- The construct together contributes sales performance variance of 59.856%.

Table 3: Final Factor Analysis Table

Results of Exploratory Factor Analysis (N =307)				
	Adaptiveness (1)	Selling-Efficacy (2)	Support (3)	Forces (4)
Job Satisfaction	.733			
Relationship with boss	.694			
Team Accountability	.694			
Reasonable Target	.630			
Lead Generation		.755		
Work Engagement		.680		
Sales Achievement		.661		
Product price		.574		
Complain handling			.718	
Product quality			.690	
Incentive Achievement			.615	
Incentive structure			.580	
Unproductive meetings				.738
Branding				.715
Product Knowledge				.639
% Variance Explained	31.525	10.360	9.891	8.081
Eigen Value	4.729	1.554	1.484	1.212
Cronbach's Alpha	0.75	0.70	0.73	0.55
KMO= 0.787, Bartlett's $\chi^2 = 1544.093$, $p < 0.001$, Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.				

SCALE RELIABILITY TEST

- ✓ The scale is reliable (if) Cronbach's Alpha > .70
- ✓ It is noted that the researchers did not find any justification to use external validity checks (like the Test-Retest method, Half-split method etc.) due to the inappropriateness of these tools for the study and the data collection method.

FACTORS VALIDITY CHECK

- ✓ "Factor structure Validity" (from the EFA Table) refers to the relationships between the variables examined by the EFA. Variables from the pattern matrix organise into factors; more specifically, they "load" onto factors (Table-3). (1994; Nunnally & Bernstein).
- ✓ A very clean factor structure with highly connected 'Convergent validity' variables within each factor. Additionally, it can be shown that the sample size (307) is significantly larger than the necessary sample size (100) for a 0.55-factor loading. (1980 Schwab).

Table 4: Component Transformation Matrix

Component Transformation Matrix				
Factors	1	2	3	4
1	.613	.548	.507	.258
2	.151	.016	-.599	.716
3	-.706	.267	.400	.444
4	.173	-.702	.473	.344

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

- ✓ "Discriminant validity": No significant cross-loadings between factors (difference > 0.2; primary loading > 0.57 is greater than secondary loading) and component transform matrix (below table) The shared variance was only 49% and the correlations between the factors did not go far beyond 0.7, making the confirmatory factor analysis (CFA) in the future feasible. (2003) (Netemeyer et al.)
- ✓ "Face Validity" was endorsed as a term for variables that make sense and are similarly loaded on the same factor. Each of the four elements' "Reliability Test" results in acceptable Cronbach a scores (0.75, 0.70, 0.73, 0.55 respectively). Y. Truong, R. McColl (2011)
- ✓ Hence, the model is completely reliable and valid.

Final FORMATIVE Model after Confirmatory Factor Analysis (CFA):

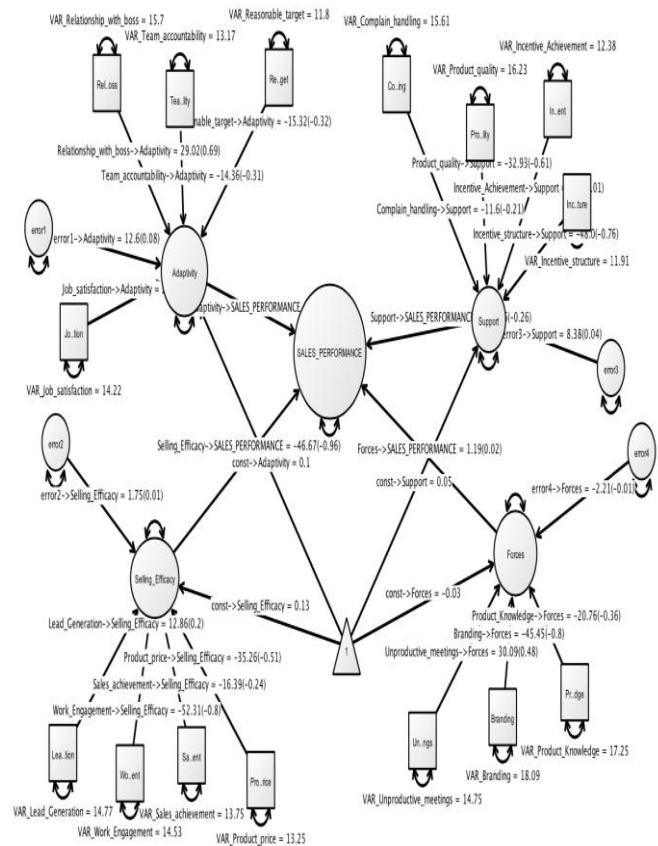
The first step of CFA is correct model building. There are two types of model scales that exist. The reflective scale and Formative Scale are based on the construct of the study.

- **Reflective Scale:** In the reflective scale, the indicators (Xi) are reflected by the parent construct (T). This means if a person smiles (Xi) means, he is Happy (T)). This type of scale is used in most cases. This is also called the measurement model, and we try to find to what extent the

observed score is close to the True score (with minimum error).

- **Formative scale:** when the main construct (T) is formed by the indicators (Xi). In this case, arrows will be reversed. That is from Xi to the main construct (T, say happiness). This type of scale is used when we form an Index (e.g., happiness Index, sales performance, Human Development Index, Quality of life Index, Sales performance Index etc.).

Fig. 04: 'Formative Model' to create a Formative scale in Onyx



Final CFA Model (prepared in Onyx) Validity Check:

Generally, the result interpretation is different from Onyx software for AMOS, or Smart-PLS software. Bagozzi, recommends the following standards for assessing the good fitness of SEM models:

Chi-squared *p-value* ≥ 0.95, CFI ≥ 0.95, and SRMR ≤ .08, RMSEA ≤ .10 "good", and RMSEA ≤ .05 "very good" (Schumacker & Lomax, 2010).

"Overall model fit metrics – is a good fit!", Importantly, we need to keep in mind that the researchers used **free Onyx** software for the model-building exercise. A typical set of model fitting statistics is shown to be **opposite to the**

morality model obtained from the free Onyx software, Robin Beaumont (2018). It means the acceptable reference range is :

Chi- squared p - value ≤ 0.95 , CFI ≤ 0.95 , and SRMR $\geq .08$, RMSEA $\geq .10$ "good" , and RMSEA $\geq .05$ "very good" , Robin Beaumont (2018).

Refereeing the below table,

The overall model indicates a well-fitting model with CFI =0.0 (good fit CFI<0.95), SRMR = 0.195 which is $> .08$, and RMSEA=0.29 (RMSEA>.10 which is a good fit)

Observed Statistics	: 135
Estimated Parameters	: 44
Non-Missing Ratio	: 1.0
Number of Observations	: 307
Minus Two Log Likelihood	: 14313.18
Log Likelihood	: -7156.59
Independent -2LL	: 13457.702
Saturated -2LL	: 11878.458
χ^2	: 2434.722
Restricted Degrees of Freedom	: 91
AIC	: 14401.18
AICc	: 14416.18
BIC	: 14565.162
BIC (sample-size adjusted)	: 14567.647
Kulback-Leibler to Saturated	: 7.931
χ^2 from independent	: 1579.244
Degrees of Freedom (indep.)	: 105
RMSEA (df corrected)	: 0.29
RMSEA (Kulback Leibler)	: 0.29
RMSEA (classic)	: 0.29
SRMR (covariances only)	: 0.195
CFI (to independent model)	: 0.0
TLI (to independent model)	: -0.834
Timestamp : 6.9.2020, 11:24:48	
Runner Individual Time : 0.491167463	
Wall Clock Time : 130.573975884	
Runner Time at convergence : 0.272746468	
Wall Clock at convergence : 0.349470759	

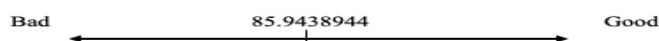
This estimate is the best found.
This estimate is reliably converged.

Table 5: Estimate Summary model table in Onyx output

Explanation of the constructed Scale

The final sales performance score is calculated per the above results taking as reference **85.9438944**. if we consider this Value as the standard Value, then the score measured as per this scale below this Value will be unexpected and reverse, meaning that if you calculate the score as per this scale, considering the same set of questionnaires used for scale creation, is good.

Fig 5: Final performance Formative Scale



The created scale itself became a measurement tool for industry performance measurement.

Management will be well equipped in advance to understand the business situation with respect to the industry. This will

help to identify exactly which department needs more focus or changes that need to be done in case of improvement is required as per the above-created scale.

IV. Conclusion

Sales is a very sensitive and important department for any organization, and so are the salespeople. The business leaders like CEOs and all, need to take the correct decision for their businesses. But this is also true that being a part of a large organization it becomes very natural not to have the right information about all the departments and the link and obvious effect of those cross-functional functions on another department. Most of cases there is an actual need for a quantitative value to make such decisions and to identify the non-performance effectively. The model and the quantitative value mentioned in this research paper IT industry the comparative value with respect to the other companies of the same industry.

If, as an organization, one can make a robust mechanism so that these variables or factors and their responsible departments mentioned above are performing well and with no or negligible errors, then ideally, there will not be any negative effect on salespersons to make sales. That implies that sales will happen smoothly without or with minimal effort from the sales team. This will boost the right decision-making capacity for the companies, and also, can be handled the biggest challenge of the sales team's attrition rate, to do the fine-tuning to the right cross-functional team for the betterment of the sales and to generate the maximum revenue.

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IMPACT OF FINANCIAL DECISION ON START-UP FIRM'S FINANCIAL PERFORMANCE: EMPIRICAL EVIDENCE FROM INDIA

Priyanka* Shubham GargKaram Pal Narwal*****

Purpose: *This paper aims to empirically investigate the relationship between financing decisions and the financial performance of successful startup firms in India.*

Design/methodology/approach: *The panel data regression has been performed on a sample of 25 startups by taking a time frame from 2016-17 to 2020-21. This study looks at how three capital structure indicators, including the short-term debt ratio, trade credit ratio and long-term debt ratio affect the startup financial performance as measured by ROE and ROA.*

Findings: *The results of the study revealed that capital structure decision made by firms have negatively affect on startup's efficiency. Additionally, among the control variables, firm age, asset turnover and growth, all have a positive significant impact on ROA, whereas only firm age and asset turnover are significant in the case of ROE. This research will help startup entrepreneurs to look at their financing patterns and deciding it cautiously so that they will be able to improve their future performance.*

Originality/value: *Past studies have focused upon the relationship between financial decision and firm performance in case of listed matured firms and SMEs, therefore there is a need to explore this relationship in case of startup firms. This study may be the first to examine the impact of financing decision on the performance of successful startup firms in india*

Keywords: *Capital structure choice, finance, financial performance, India, panel data, startups.*

JEL Classification: C33 G30 G32 L25 M40

A company's choice of capital structure is one of the most important financial decisions owing to its effect on the firm's value, which makes it especially important in the finance literature. The combination of various instruments (equity, preferred shares and debt) issued by an organization to fund its assets is usually referred to as the capital structure (Song, 2005). The perfect capital structure can be attained only when debt and equity mix reduces the cost of capital and consequently increase business profitability (Singh and Bagga, 2019). An ideal capital structure also helps a company to operate better and ensures the viability and sustainability of its operations (Burzacka, 2017). It's a quite difficult and complex job for the financial manager to determine how much money is required when it is needed, how to spend the funds most effectively, and most importantly how to secure the necessary finance.

Firms can use different types of capital resources and so they may have distinct capital structures, which would have a different impact on the profitability of these firms (Thanh CO 2021). The business is deemed to be more financially leveraged if it is having a higher percentage of debt in its capital structure. Businesses are trying and constantly looking for their ideal capital structure, one that would increase value while lowering capital costs (Cole *et al.* 2015).

When firms are looking for additional financial sources, whether internal or external, business performance is a crucial factor (Schulz, 2017). It is widely seen that whenever finance managers make changes in their financing choices,

consequently, it would have an effect on the financial performance of firms. One of many crucial factors that significantly affect a company's success is the capital structure of the firm (Salim and Yadav, 2012). The prior literature has suggested that the issue of insufficient or inappropriate financing may lead the firm to its failure, especially in the case of startups in developing countries (Abor 2008).

Numerous studies have been done so far in both developed and developing nations that demonstrate how a firm's choice of capital structure significantly influences its performance (Mesquita and Lara 2003, Abor 2007, Ebaid 2009, Salim and Yadav 2012, Hasan *et al.* 2014, Chadha and Sharma 2015, Schulz 2017, Singh and Bagga 2019, Ahmed and Bhuyan 2020, Rajamani 2021).

* **Research Scholars, Haryana School of Business, Guru Jambheshwar University of Science & Technology Hisar, Haryana.**

** **Research Scholars, Haryana School of Business, Guru Jambheshwar University of Science & Technology Hisar, Haryana.**

*** **Professor, Haryana School of Business, Guru Jambheshwar University of Science & Technology Hisar, Haryana.**

These studies are mainly focused on the large publicly listed firms and small and medium enterprises, therefore, the gap comes out to be is how the leverage affects the financial performance in case of startup firms, thus this new dimension has been explored under this current study.

The present research intends to explore the relationship between leverage ratio and a firm's financial performance by utilizing a sample of 25 startups in Delhi NCR and the Bangalore region for the period 2016-2017 to 2020-2021. The results have shown that firm's capital structure choice significantly negatively influenced its financial performance. The rest of the paper is organized as part 2 gives an overview of the theoretical and empirical evidence on the impact of capital structure on firm performance, part 3 focuses on the methodology employed, part 4 discussed the results and discussions and the last part concludes this research study.

I. Review of Literature

The capital structure of a company describes the kind of capital it has and where it comes from (Thanh CO, 2021). For a long time, this capital structure decision and its impact on firm performance have been an area of interest among various researchers and academicians. They have conducted theoretical and empirical studies to investigate whether capital structure has an influence on a firm's value or not. Many theories have been developed over the years, including trade off theory, pecking order, agency cost and lifecycle theories etc. But till now there is no specific method for determining capital structure that can be called optimum. The first prominent base study of the capital structure has been given by Modigliani and Miller 1958 who proposed that the composition of capital structure is irrelevant to its firm's value under certain assumptions like no taxes, no transaction cost, no bankruptcy cost, the existence of a perfect capital market, investors expect the same future earnings from firms, company debt is risk-free, etc. In later studies, it is being proposed that an optimum capital structure can be achieved by using a debt component which helps in maximizing the value of the firm with a simultaneous reduction in the cost of capital resulting in balancing risk and return of the firm.

Numerous empirical investigations have been done to ascertain whether there is a correlation between a company's financial structure and its performance, whether it be a positive, negative, or no relation at all. A study conducted by Mesquita and Lara (2003) on 70 firms in Brazil during 1995-2001 revealed negative relationship between ROE and LTD while a strong positive association between STD and equity and ROE was found. Abor (2005) showed that ROE and STD and TD have a significant positive relationship, while LTD has a negative relationship for listed firm's in Ghana.

The research by Kutsuna and Honjo (2006) analyzed whether post-entry performance varies depending on the source of funding for startups in Japan. The results indicated that startups backed by business angels more probably have been seen to increase their sales. While startups were financed through entrepreneurs' funds, funds from founding members and families have shown a significantly negative impact on their post-entry performance. Additionally, it has been found that businesses with bank financing didn't likely to grow more. The SMEs performance in Ghana and South Africa was examined by Abor (2007) using panel data regression (1998-2003). They found that SMEs in both countries with STD and TD had a substantial negative relationship with gross profit margin. Additionally, it was discovered that trade credit had a significant inverse relationship with both nations gross profit margins. For Ghana, all capital structure metrics were shown to be negatively related to the ROA variable while ROA had a positive relationship with short-term debt and trade credit, and the LTD and TD were found to be negatively correlated for South African SMEs.

The Ebaid (2009) study's findings indicated that the capital structure decision of Egyptian listed companies has little to no bearing on their financial performance. A positive relationship found in between all debt ratios and profitability in the manufacturing sector in USA, whereas service sector profitability is positively correlated with short-term and total debt ratios only (Gill *et al.* (2011). Salim and Yadav (2012) examined how do the finance decisions affected Malaysian listed firms performance (1995-2011). They found that all debt ratios have negatively influenced ROA, ROE and EPS while STD and LTD have positively influenced Tobin's Q. With regard to listed firms in Pakistan, Sheikh and Wang (2013) showed that ROA is inversely related to short term, long term and total debt ratios whereas a positive relationship found between market-to-book ratio and long term and total debt ratio. Hasan *et al.* (2014) revealed that all debt ratios are negatively related to ROA whereas EPS was found to be positively related to STD whereas a significant negative relationship was found between EPS and LTD. ROE and TobinsQ have no significant relation with listed firm performance in Bangladesh.

Yazdanfar and Ohman (2015) found that all three capital structure variables- Account payables, long-term debt and short-term debt were found to be having a negative relationship with ROA. The control variable size had positively while age negatively influenced ROA. In addition, the industry variable also impacted the profitability of the firms. Silva (2015) used multiple linear regression to study the influence of capital structure on startup growth in Portugal between 2010 and 2011. The findings suggested that debt- the equity ratio which is used as a capital structure measure found

to be negatively related to startup growth measured in terms of relative sales growth. The study by Schulz (2017) revealed a significantly negative relationship between all capital structure metrics and ROA whereas STD was significantly positively related while LTD was significantly negatively related to ROCE and some mixed results were found for TD for Dutch SMEs .

By performing a multiple panel data regression model on the Nifty 50 listed companies, Singh and Bagga (2019) analyzed the Indian firm's profitability. The results indicated that TLTA (total liabilities divided by total assets) was having a significantly negative relation with ROA whereas a positive relation found for TETA (total equity divided by total assets). For the ROE indicator, we found a significantly positive relationship between ROE and TLTA whereas significantly negative relationship between ROE and TETA.

By employing GLS regression, Nguyen and Nguyen (2020) found a negative relationship between all the debt ratios and Vietnamese firm's performance measured through EPS, ROE and ROA for both state and non-state-owned companies but the results are having more strong effect for state-owned companies. Rajamani (2021) revealed that total debt, long term and short term debt are significantly inversely correlated to the listed Indian SME efficiency measured using the three performance indicators (ROE, ROA, GPM).

In conclusion, the empirical evidence has presented varying inconsistent results on the relationship existing between firm's leverage ratios and their performance indicators. In developing countries like India, there is relatively a small number of research that investigates this association. Secondly, these mostly are conducted in the context of listed and SMEs, so the current study adds to the body of knowledge regarding the impact of leverage ratios on company performance by analytically evaluating the link between financial decisions and business performance in the case of startup companies in India.

Research Objective

To study the relationship between debt ratio and financial performance of startup firms headquartered in Delhi NCR and Bangalore region in India.

II. Research Design & Methods

Sample data, variables and hypothesis

The primary purpose of this research is to determine how the capital structure chosen influences the performance of startups in India from 2017 to 2021. The sample of the study includes all the successful business startups that became unicorns and which are headquartered in the Delhi NCR region and Bangalore specifically. These two are chosen because they are

the top two most important startup hubs in the country. The data has been taken from the financial statements of the startups which are extracted from the Tofler database and the government MCA website. While choosing the sample for the current research, those start-ups are excluded from which at least five-year financials are not available or have any missing information in the financials due to which variable calculation is not possible either in dependent or independent variables. Thus, a balanced panel of 25 start-ups from 2017 to 2021 makes up the final sample. To do the data analysis, E-Views 10 software is used for estimating the regression models.

The variables for the present study are taken from the forgoing literature. To assess the financial performance, we have employed two metrics: return on equity (ROE), which is defined as net profit divided by shareholder equity, and return on assets (ROA), which is defined as net profit divided by the firm's total assets. The capital structure indicators includes the long-term debt divided by total assets, and the short debt to total assets and trade credit to total assets. The performance of the business is influenced by several different factors in addition to the capital structure. These other factors are firm-level determinants, which are employed in this study as control variables and they are: firm size, growth, age, asset turnover and liquidity.

Based on prior literature, we have designed the following null hypothesis for this current study:

H₁: There is a significantly negative association between firm debt levels and startup financial performance as assessed by ROE.

H₂: There is a significantly negative association between firm debt levels and startup financial performance as assessed by ROA

H₃: firm size will be positively related to financial performance of startup firms

H₄: firm growth will be positively related to startup financial performance.

H₅: firm age will have a significantly positive relationship with financial performance of startup firms

H₆: asset turnover will have a significantly positive relationship with startup financial performance

H₇: liquidity will be positively associated with financial performance of startup firms

The technique employed in the current study

The panel data models are being used here to investigate the influence of capital structure measures on the financial performance of start-ups in India. This methodology has several benefits like being more informative, controlling unexplained heterogeneity, higher efficiency, and lesser collinearity in variables etc. There are three models in panel data: pooled ordinary least square method, fixed effect

method and random effect method. The first model pooled ordinary least square will be considered the best model if the hypothesis that there is no firm- and time-specific effects is accepted. In the second model, the intercept for each firm is allowed to vary but the slope parameters for all firms and time periods are considered to be constant. The third model, known as the random effect model, differs from the fixed effects model in that it posits that variation between businesses is random and unrelated to the explanatory factors included in the model.

The regression equation of the study are:

Model (1):

$$ROE_{it} = \beta_0 + \beta_1 LTDR_{it} + \beta_2 STDR_{it} + \beta_3 TCR_{it} + \beta_4 SIZE_{it} + \beta_5 GROW_{it} + \beta_6 AGE_{it} + \beta_7 ASTURN_{it} + \beta_8 LIQ_{it} + \mu_{it}$$

Model (2):

$$ROA_{it} = \beta_0 + \beta_1 LTDR_{it} + \beta_2 STDR_{it} + \beta_3 TCR_{it} + \beta_4 SIZE_{it} + \beta_5 GROW_{it} + \beta_6 AGE_{it} + \beta_7 ASTURN_{it} + \beta_8 LIQ_{it} + \mu_{it}$$

Where,

ROE_{it} = net profit divided by shareholder's equity of firm i at time t

ROA_{it} = net profit divided by total assets of firm i at time t

$LTDR_{it}$ = long-term debt to total assets of firm i at time t

$STDR_{it}$ = short-term debt to total assets of firm i at time t

TCR_{it} = trade credit to total assets of firm i at time t

$SIZE_{it}$ = a natural log of net sales of firm i at time t

$GROW_{it}$ = growth in total assets of firm i at time t

AGE_{it} = age of firm i at time t

$ASTURN_{it}$ = asset turnover ratio of firm i at time t

LIQ_{it} = current ratio of firm i at time t

μ_{it} = error term

III. Results and Discussion

Descriptive statistics of study

The overview of the descriptive statistics for the dependent and independent variables utilized in this investigation is shown in Table 1. Since startups performed poorly between 2017 and 2021, the mean ROE and ROA values are, respectively, -1.128 and -0.43. The long-term debt ratio (LTDR) is 4 percent, the short-term debt ratio (STDR) is 15 percent, and the trade credit ratio (TCR) is 13 percent on average. This suggests that businesses prefer to finance their total assets more frequently with a short-term loan than with long-term debt. The mean value of firm size is 21.66, and the average age of firms is 7 years since incorporation depicting that firms taken in the sample are young firms. The average growth rate is 0.84 which is quite high. In the growing stage, to meet up these increasing demands in the market, firms need to focus on getting more financial resources but due to newness, the short history of operating activities, and the riskiness involved therein; they face lots of problems in accessing low-cost financial resources from the market. The mean of asset turnover comes out to be 0.98 indicating that asset resources are used effectively to generate sales for the firms and liquidity is 5.06 showing evidence that it's very high in the case of the startups in India.

Table 1. Descriptive statistics of variables studied

Variables	Mean	Std. Dev.	Median	Mini.	Max
ROE	-1.128	2.050	-0.488	-12.778	0.399
ROA	-0.439	0.537	-0.296	-2.943	0.328
LTDR	0.045	0.079	0.003	0.000	0.489
STDR	0.153	0.148	0.089	0.001	0.599
TCR	0.133	0.146	0.065	0.003	0.684
SIZE	21.666	2.006	22.034	15.160	26.785
GROW	0.844	1.778	0.328	-0.691	12.228
AGE	7.960	4.503	7.000	1.000	24.000
ASTURN	0.981	1.004	0.618	0.001	5.220
LIQ	5.068	7.798	2.746	0.729	63.551

Source: Author's calculations

Table 2 shows the correlations existing between the two independent variables which are taken under the present study. The strength of the relationship between the two variables is demonstrated through correlation. Here, there is

no significant association found between any of the aforementioned independent variables, thus we can say that the regression models that are used in the study are free from the multicollinearity issue.

Table 2. Correlation of independent variables

	ROE	ROA	LTDR	STDR	TCR	SIZE	GROW	AGE	ASTURN	LIQ
ROE	1.000									
ROA	0.751	1.000								
LTDR	-0.266	-0.187	1.000							
STDR	-0.366	-0.131	0.278	1.00						
TCR	-0.402	-0.290	-0.074	-0.018	1.000					
SIZE	0.140	0.140	0.152	-0.049	0.162	1.00				
GROW	0.067	0.124	-0.177	-0.013	0.006	-0.196	1.000			
AGE	0.094	0.188	0.08	0.030	-0.073	0.184	-0.183	1.000		
ASTURN	0.087	0.123	-0.00	0.148	0.245	0.387	-0.061	-0.233	1.000	
LIQ	0.219	0.235	-0.169	-0.373	-0.314	-0.080	0.074	0.049	-0.209	1.000

Source: Author's computations

Regression results

To find the best panel model for the considered data, we have applied two tests LR test and the Hausman test. The impact of capital structure proxies on startup firm performance is measured in terms of ROE is represented through model 1 and ROA is represented through model 2. For both the 1 and 2 models, the Chi-square prob. value of the LR test is found to be significant leading to non-acceptance of the null hypothesis that pooled least square method is appropriate. The Hausman test is then used to determine whether the random effect is more suited or the fixed effect model. For the model 1 and 2, the prob. value of the Hausman test is not found to be significant which leads to the acceptance of the null hypothesis of Hausman test that the random effect model is best suitable model over fixed effect model. So, therefore, the results are now presented here through the two tables i.e. Table 3 and Table 4 for both model 1 and model 2 respectively.

ROE stands for the company's ability to make profit using the resources that shareholders have provided to the business. According to Table 3, a strong negatively significant relationship is found between all debt ratios (long-term debt

ratio (LTDR), short-term debt ratio (STDR), and trade credit ratio (TCR)) and the ROE of the firm which indicates that higher debt levels are associated with lower returns for equity shareholders. These all debt ratios are found to be statistically significant at 1 % significance level hence it leads to the acceptance of the first null hypothesis H_1 . As a result, we may conclude that debt in capital structure has a negative impact on the performance of Indian startups. Some the prior studies have reported the same association (Chadha and Sharma 2015, Rajamani 2021) while it is against to some studies that have reported a positive association like (Abor 2005, Gill *et al.* 2011), or no correlation between capital structure and firms performance (Ebaid 2009, Hasan *et al.* 2014).

Among the other independent variables, age and asset turnover are having a significantly positive relationship with ROE resulting in acceptance of H_5 and H_6 . As the firm gets older, its credibility or reputation increases in the market which impacts the firm performance positively. The strong positive impact of asset turnover on ROE shows that startups are effectively utilizing their assets in generating revenue. Firm size, growth and liquidity are found to be insignificant under this model leading to the rejection of H_3 , H_4 and H_7 .

Table 3 Results of regression- model 1

Model 1 ROE as a metric of a company's financial performance			
	ROE	ROE	ROE
Variables	Pooled	Fixed	Random
Constant	-3.077 (0.077)*	-0.104 (0.973)	-2.371 (0.258)
LTDR	-5.893 (0.002)***	-6.059 (0.003)***	-5.594 (0.002)***
STDR	-5.152 (0.000)***	-8.901 (0.000)***	-6.448 (0.000)***
TCR	-7.319 (0.000)***	-9.326 (0.000)***	-7.833 (0.000)***
SIZE	0.139 (0.099)*	-0.037 (0.819)	0.110 (0.280)
GROW	0.113 (0.175)	0.056 (0.497)	0.087 (0.268)
AGE	0.064 (0.065)*	0.261 (0.030)**	0.078 (0.094)*
ASTURN	0.492 (0.004)***	0.614 (0.059)**	0.547 (0.009)***
LIQ	-0.019 (0.346)	-0.009 (0.665)	-0.017 (0.386)
Cross sections	25	25	25
Time period	5	5	5

Total observations	125	125	125
R ²	0.451	0.662	0.424
F-statistics (prob.)	11.926 (0.000)	5.640 (0.000)	10.675 (0.000)
Likelihood Ratio		60.706 (0.000)	
Hausman test			9.203(0.325)
Durbin-watson	1.942	2.791	2.371

Note: ***, **, * indicates that the value is significant at the 1%, 5%, and 10% levels of significance, respectively.

ROA demonstrates how effectively total assets are used to generate profit, this measure also gives a true picture of the company's performance. In line with other studies, Table 4 also revealed that debt ratios negatively impacted the firm's profitability (Abor 2007, Sheikh and Wang 2013, Hasan *et al.* 2014, Ohman and Yazdanfar 2015, Schulz 2017, Nguyen and Nguyen 2020, Rajamani 2021). Table 4 presents model 2 which used ROA as a proxy for a firm's performance. The TCR, LTDR and STDR are found negatively significant at 1%, 5% and 10% levels of significance to ROA respectively. It results in accepting the null hypothesis H₂. This finding may

point to a problem that companies using the debt component have to pay financial costs that lower net income and consequently lower the return on assets (ROA).

We discovered a positive association between firm age, growth, asset turnover, and firm performance as evaluated by ROA for the control variables (Chadha and Sharma 2015). So, thus the hypothesis H₄ H₅ and H₆ are accepted here. The other two independent variables that are found to be statistically insignificant are size and liquidity so therefore rejecting the hypothesis H₃ and H₇.

Table 4 Results of regression analysis- model 2

Model 2 ROA as the measure of firm performance			
	ROA	ROA	ROA
Variables	Pooled	Fixed	Random
Constant	-1.268 (0.015)***	-0.643 (0.469)	-1.243 (0.056)**
LTDR	-1.202 (0.038)**	-1.216 (0.035)**	-1.084 (0.040)**
STDR	-0.319 (0.330)	-0.965 (0.036)**	-0.598 (0.109)*
TCR	-1.245 (0.000)***	-0.823 (0.131)	-1.055 (0.008)***
SIZE	0.029 (0.239)	-0.019 (0.673)	0.027 (0.392)
GROW	0.051 (0.041)**	0.048 (0.043)**	0.050 (0.026)**
AGE	0.029 (0.004)***	0.105 (0.002)***	0.039 (0.010)***
ASTURN	0.143 (0.005)***	0.040 (0.656)	0.112(0.086) *
LIQ	0.007 (0.247)	0.005 (0.384)	0.005 (0.356)
Cross sections	25	25	25
Time period	5	5	5
Total observations	125	125	125
R ²	0.285	0.608	0.207
F-statistics (prob.)	5.790 (0.000)***	4.473 (0.000)***	3.791 (0.000)***
Likelihood Ratio		75.305 (0.000)***	
Hausman test			7.896(0.443)
Durbin-Watson	1.319	2.242	1.847

Note: ***, **, * indicates that the value is significant at the 1%, 5%, and 10% significance levels, respectively.

As evidenced by the results of Tables 3 and 4, the F statistics for models 1 and model 2 are 10.675 and 3.791 respectively and they have a significant p-value of (0.000) indicating the overall fitness of the two models used in the study. The R² value of model 1 and model 2 is 42% and 21% showing the combined effect of all independent variables in explaining the dependent variables. The Durbin Watson value of model 1 and Model 2 are 2.37 and 1.84 respectively which means

there is no autocorrelation found in this model as the values lie within the limit of 1 to 3 (Alsaeed, 2006).

Finally, we summarize the whole findings of the study here, that the debt ratios of firms have significantly negatively affected the startup's performance in India. In addition, control variables like firm age, asset turnover and growth also play a vital role in determining a startup firm's financial performance. The results of the study suggest that firm

managers can boost the firm's profitability and equity shareholder wealth by lowering the debt ratios.

IV. Conclusion

The goal of this study is to contribute to the understanding of financial decisions making which is a crucial component of corporate finance literature, by particularly focusing on Indian startups. In this study, a sample size of 25 startups with their recent financial data from 2016-17 to 2020-21 has been considered. Panel data techniques are employed for the data analysis. The main independent variables of the study are the three measures of capital structure that are long-term debt ratio, short-term debt ratio and trade credit ratio. The dependent variable here is firm performance which is measured by the two proxies that are ROE and ROA. ROE displays the amount of return a company is giving to its equity stockholders while when it comes to generating profit from the firm's assets it is called ROA.

The findings found that all three capital structure measures have negatively influenced the startup's performance. The control variables firm age, asset turnover and growth are found to be positively significant to ROE and ROA. The managers in the business sector will find this study beneficial. Before making any financial decisions to enhance the company's financial performance, managers can take into account the aforementioned factors. Many startup businesses face insolvency and bankruptcy risk due to the use of excessive debt in their financial structure. It has been observed by previous literature also, that unsuitable capital mixes may lead a firm to its failure. So, therefore it becomes crucial for startup companies to have an ideal financial structure in a developing economy like India.

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EMOTIONAL INTELLIGENCE, EXTRA VERSION AND PSYCHOLOGICAL WELL - BEING EXAMINING THE MEDIATING ROLE OF RESILIENCE AMONG GEN Y AND GEN Z

D. Jhansi* Florence John**

Purpose: *The study also focuses on emotional regulation and utilizing that ability to constructive use. Considering this background this study investigates the relationship between EI, Extraversion Personality trait (EPT), RS and Psychological wellbeing (PWB) among Gen Y and Gen Z. The moderating effect of Age group in the association between RS and PWB was investigated, as well as the mediating role of RS in the relationship between EI and PWB and EPT and PWB*

Design/methodology/approach: *Convenience sampling technique was used. A sample of 200 respondents were selected for the study. 55 percentages of respondents are up to 25 years of age. Data was analyzed using AMOS Mediation Effect Analysis and moderation effect analysis*

Findings: *RS mediates the relationship between EI, EPT and PWB among Gen Y and Gen Z. The relationship between RS and PWB is moderated by Age Group. The relationship between RS and PWB is stronger in case of 26-41 years of age as compared with up to 25 years of age*

Originality/value: *Prior research work has found that PWB is dependent on an Individual's EI and PT. However, the role of RS as a mediating factor was not investigated. This research paper establishes relationship between EI, EPT, RS and PWB among Gen Y and Gen Z.*

Keywords: *Emotional Intelligence, Extraversion, Mediation analysis, Moderation analysis, Personality traits, Psychological wellbeing, Resilience.*

JEL Classification Codes: C12, D91, I31, O15, Y10

Emotional intelligence (EI) is the ability to recognize and involve in appraisal of oneself and others' emotions and feelings and it can be used to engage in constructive behavior (Cobb & Mayer, 2000) Individuals with EI are said to be well adjusted and set to have Good mental health and wellbeing as they are able to monitor their own and others' emotions effectively. Emotionally intelligent people view emotional restraint as a beneficial trait that helps them reach bigger goals. Individuals who don't monitor their own and others emotions are side-lined and excluded from a social group (Cobb & Mayer, 2000)

Personality Trait (PT) is the behavior and emotional pattern that is evolved from oneself and the environmental factors. Big five personality traits include Extraversion, Agreeableness, Openness, conscientiousness and Neuroticism (Cuartero & Tur, 2021). Resilience (RS) is the mental ability to cope up with any kind adversity in life. It is the ability to maintain one's physical and mental health in good condition even when confronted with a catastrophe. Psychological wellbeing (PWB) is the positive mental health state and prior research work has found that PWB is dependent on an Individual's EI and PT. However, the role of RS as a mediating factor was not investigated. This research paper establishes relationship between EI, EPT, RS and PWB among Gen Y and Gen Z. The mediating effect of RS in the relationship between EI, EPT and PWB was analysed. Furthermore, age was used as a moderating factor in the

association between RS and PWB in order to see if there was a difference in the relationship due to age. Gen Y is between the age group of 26to 40 years of age and Gen Z is up to 25 years of age

I. Review of Literature

Emotional Intelligence

EI is a sub set of social Intelligence which deals with the ability to understand and manage people. The process of EI includes the ability to appraise and express one's emotion effectively, recognizing and regulating the emotions exhibited by others and utilizing such emotions to engage in adaptive behavior such as problem solving. There can be Individual differences in processing of emotions in oneself and others(Cobb & Mayer, 2000)EI was studied in relationship with many variables both in Organizational and external context. EI acts as a mediating variable in the relationship between Job stress and Employee creativity.

* **Assistant Professor, Department of Commerce, Madras Christian College (Autonomous), East Tambaram, Chennai, India**

** **Assistant Professor, Department of Commerce, Madras Christian College (Autonomous), East Tambaram, Chennai, India**

When employees are emotionally intelligent it reduces Job stress. This is an important finding because EI can be used as a technique to reduce Stress faced by employees in their Job. While recruiting and selecting employees EI can be checked by administering a questionnaire which will enable the recruiters to assess EI of employees and subsequent training if given effectively will help employees cope up with Job stress (Naseem, 2017). EI mediates the relationship between Quality of work life (QOL) and it is the overall wellbeing and fulfilment of an Individual when all his desires reach up to the standard level of life. Among the PT, EI mediates the relationship between QOL and conscientiousness and openness. This research was conducted among Lebanese medical students. Students who have higher level of EI and who exhibit the personality types of conscientiousness and openness can experience good QOL as they are able to monitor their emotions and others' emotions (Maalouf, Hallit & Obeid, 2022) Research on EI gained much attention during Covid 19 pandemic. Covid 19 pandemic has changed the regular functioning of Organizations and the unprecedented situation created much panic and stress and increased worry in Individuals. Social support mediated the relationship between EI and Worry. Individuals with higher EI can garner social support and that reduces their worry (Zysberg & Zisberg, 2022) EI can act as a protective behavior in reducing aggressive behavior experienced by adolescents. According to World Health Organization (WHO) Aggressive behavior is a global health problem faced by adolescents. Individuals with higher level of EI show lower level of aggressive behavior. Research studies that focussed on EI and aggressive behavior tend to show a negative relationship between the above-mentioned variable among adolescents. Minimum research has been done taking Gender as a moderating variable in the relationship between EI and Aggressive behavior. With the minimal research done on this area Gender shows a negative relationship between EI and Aggressive behaviour (Vega et al., 2021) Trait EI was analysed in predicting its relationship with emotional experiences of Individuals during the lockdown period among the Polish adults. Individuals with Trait EI is found to have a positive correlation with frequency and intensity of positive emotions and negative relationship with frequency and intensity of negative emotions. Trait EI reduced negative emotions experienced by Individuals such as anger, fear, anxiety and sadness (Moroń & Biolik-moroń, 2021)

Personality Traits

Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism are the Big Five PT. Even though there is a relationship between educational qualifications and PT, the strength of the relationship varies with educational qualification. Conscientiousness, openness, and agreeableness are three PT that have been linked to academic achievement

(Foster et al., 2017) there is a relationship between PT and postpartum depression. Neuroticism is one of the PT that has a high relationship to postpartum depression. This can be useful in identifying women who have such PT in order to reduce postpartum depression (Puyané et al., 2022). The relationship between PT and academic achievement is mediated through EI. A student's academic success is determined by his or her level of EI and PT. Among the PT Individuals who exhibit the traits of Extraversion, Agreeableness and openness have a positive relationship with EI and academic achievement (Naseer et al., 2022). The relationship between dark and unpleasant personalities and age and gender was investigated. Male are found to exhibit more Dark personality as compared with Female and as people grow older, they show less aversive or dark personality (Hartung et al., 2022) A ten-year longitudinal research was done to determine the association between PT and key life goals from college through midlife. Over decades, PT and significant life goals remained moderately to strongly consistent. Individuals choose goals that are similar to their personalities, and personality attributes have been steady for over two decades (Atherton et al., 2021) During the Covid 19 pandemic, an individual's personality attribute had an effect on health worry and psychological discomfort Health anxiety and covid 19 psychological distress acts as the link between personality qualities and generalised anxiety. Individuals with a neurotic mentality are prone to general anxiety as well as health anxiety. Individuals with Extraversion and Agreeableness personality qualities shown resilience in dealing with the Covid 19 epidemic and connecting with others (Nikevi et al., 2021). Individuals with the personality qualities of agreeableness, extraversion, conscientiousness, and openness have a significant relationship with trait resilience, while those with the PT of neuroticism have a negative relationship with it (Oshio et al., 2018)

Psychological Wellbeing

Individual PWB was affected to a greater extent during the Covid 19 pandemic. The PWB of self-isolating individuals was affected to a higher extent, and depression anxiety levels began to rise. Because of poor psychological health and increasing despair, anxiety, and loneliness, income and working hours were reduced. Sleep pattern was also affected leading to diurnal preference.

The Covid 19 pandemic caused an upsurge in anxiety, sadness, and insomnia among academicians. Family bonding was effective in minimising the poor mental health consequences produced by the covid 19 epidemic, thus individuals who stayed with their families were able to experience less negative impact (Alfawaz et al., 2021). Individuals' PWB throughout the covid epidemic varies according to their age. When compared to younger persons,

older people had less depression, anxiety, and stress. A higher level of pandemic-related stress was linked to a worse level of psychological well-being (Birditt et al., 2020) A healthy lifestyle is linked to PWB. Depression, anxiety, and stress are all reduced when you live a healthy lifestyle (Hanawi et al., 2020)

Emotional Intelligence, Personality Traits, Resilience and Psychological Wellbeing

Individuals who seem to be emotionally intelligent have a greater rate of PWB. The importance of EI in determining a person's PWB cannot be underestimated. In connection to EI, four features of PWB were examined. According to research Individuals with high EI have a positive impact on their PWB(Carmeli et al., 2009)EI, religiosity, and self-efficacy are all effective predictors of teenagers' PWB. The ability to recognise and control one's own and others' emotions has a substantial impact on PWB. The strongest determinants of PWB are EI and self-efficacy (Adeyemo & Adeleye, 2008).PWB is predicted in significant part through PT. Individuals with a high EPT score have a positive PWB, while those with a high Neuroticism Psychological Trait (NPT) score have a poor PWB (Dwan & Ownsworth, 2019). Individual RS aids in the prediction of PWB, and this relationship is mediated by optimism (Souri & Hasanirad, 2011) RS and empathy are linked to PWB in a favourable way. RS and empathy are both predictors of PWB in females, while RS is the only predictor of PWB in males. Individuals who are resilient retain their physical and mental health and can bounce back from any adversity (Vinayak & Judge, 2018) The above review of Literature highlights that EI impacts PWB and RS impacts PWB and PT predicts PWB. But the mediating effect of RS in relationship between EI, EPT, PWB, and RS were not examined. The goal of this study is to analyse all the Factors together and to find if RS acts as a mediator in the relationship between EI and PWB, as well as the EPT and PWB. Gen Y and Gen Z age group was taken as a moderating factor to test the relationship between RS and PWB.

II. Research Design and Methods

Theoretical framework

A theoretical framework is developed based on this literature review, which will serve as the foundation for empirical study of the numerous relationships. By suggesting the following hypothesis, the study will add to the existing body of knowledge.

H1. a. RS completely mediates the relationship between EI and PWB

H1. b. RS partially mediates the relationship between EI and PWB

H2.a. RS completely mediates the relationship between EPT and PWB

H2.b. RS partially mediates the relationship between EPT and PWB

H3.a. Age Group completely moderates the relationship between RS and PWB

H3.b Age Group partially moderates the relationship between RS and PWB

Sample

A sample of 200 respondents were selected for the study. Sample includes responses from 85 Male respondents and 115 Female respondents. 55 percentage of respondents are less than 25 years of age

Measures

Wong, C.S. and Law, K.S. (2002) developed a scale to measure Emotional Intelligence by assessing Self emotion appraisal, others emotion appraisal, Use and Regulation of emotion. Warwick-Edinburgh Mental Well-being Scale (WEMWBS) was used to measure Psychological Wellbeing(Tennant et al., 2007)Personality traits were measured using Big five personality test developed by Goldenberg, 1993(Fell, 1998), Resilience using 14 item scale

III. Results and Discussion

Reliability analysis was conducted to check the reliability of Emotional Intelligence, Extraversion, Psychological wellbeing and Resilience scale. Variables with higher Cronbach's alpha value were dropped from the scale and mediation and moderation analysis were computed. Results of the reliability analysis can be referred from Table 1

Table 1: Scale Reliability

Scale Reliability	Cronbach's Alpha
Emotional Intelligence Scale	0.906
Extraversion	0.770
Psychological wellbeing	0.924
Resilience	0.871

(Source: Primary Data)

Mediation Effect Analysis

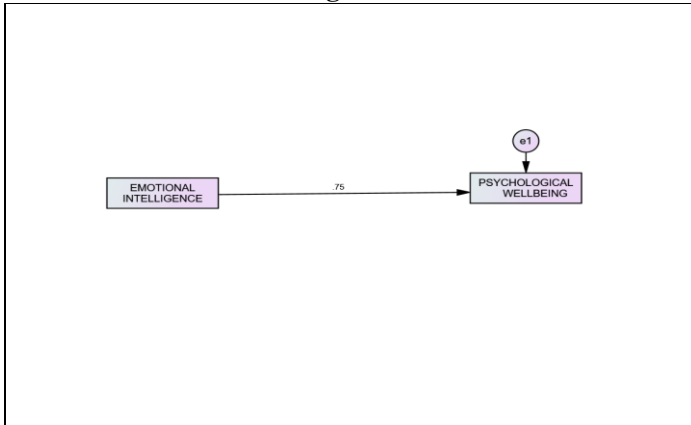
H1. a. RS completely mediates the relationship between EI and PWB

H1. b. RS partially mediates the relationship between EI and PWB

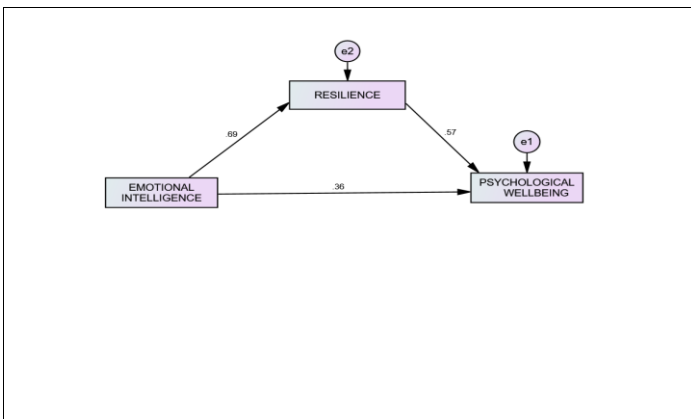
The mediating effect of RS in the relationship between EI and PWB was examined using mediation effect analysis and the result is found in Figure 1. The results of the mediation were obtained using a bootstrap sample size of 200 and a Bias-

corrected confidence level of 90. The direct influence of EI and PWB has been minimized in the presence of the mediator. This demonstrates that RS acts as a mediator between EI and PWB. From the Table 2 of Mediation results indirect effect was found to be significant at (0.393, p value less than 0.05). Hence the Hypothesis H1.a is accepted

Figure 1



(Source: Primary data)



(Source: Primary data)

Table 2: Mediation Results

	Standardized Estimation	P-Value	Result
Total Effect	0.751	0.014	Significant Impact
Direct Effect	0.358	0.009	Significant Impact
Indirect Effect	0.393	0.006	Significant Impact

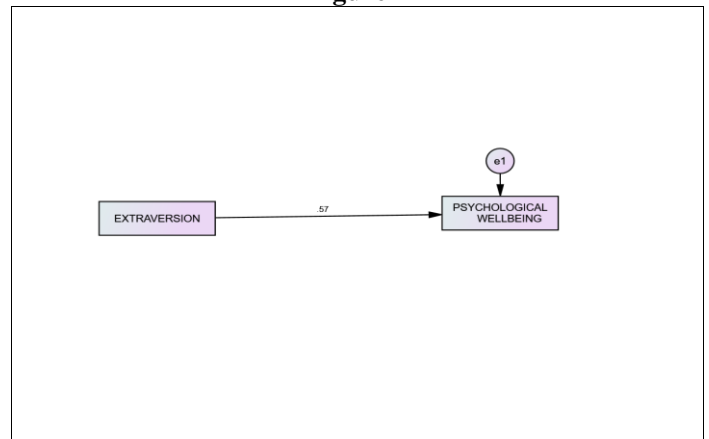
(Source: Primary data)

H2.a. RS completely mediates the relationship between EPT and PWB

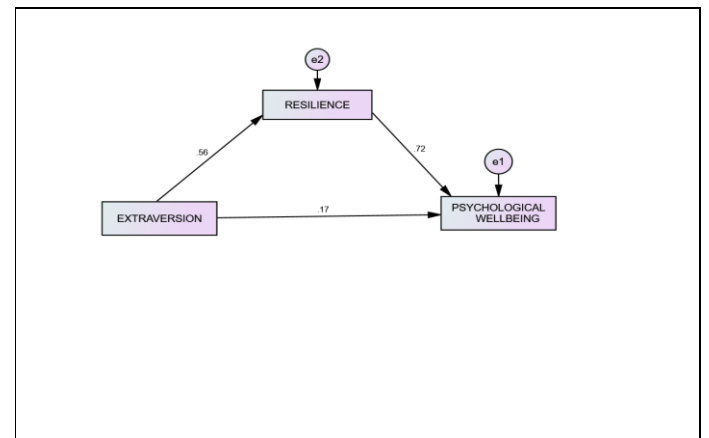
H2.b. RS partially mediates the relationship between EPT and PWB

The mediating effect of RS in the relationship between EPT and PWB was examined using mediation effect analysis and the result is found in figure 2 the results of the mediation were obtained using a bootstrap sample size of 200 and a Bias-corrected confidence level of 90. The direct influence of EPT and PWB has been minimized in the presence of the mediator. This demonstrates that RS acts as a mediator between EPT and PWB. From the Table 3 of Mediation results indirect effect was found to be significant at (0.408, p value less than 0.05). Hence the Hypothesis H2.a is accepted

Figure 2



(Source: Primary data)



(Source: Primary data)

Table 3: Mediation Results

	Standardized Estimation	P-Value	Result
Total Effect	0.573	0.007	Significant Impact
Direct Effect	0.166	0.014	Significant Impact
Indirect Effect	0.408	0.006	Significant Impact

(Source: Primary data)

Moderation Effect Analysis

H3.a. Age Group completely moderates the relationship between RS and PWB

H3.b Age Group partially moderates the relationship between RS and PWB

Moderation analysis results can be referred from Table 4. The relationship between RS and PWB is moderated by Age. The C.R. value is more than 1.98, indicating a significant result at the 1% level. When Age is included as a moderating variable, the relationship between RS and PWB is strengthened. Age differences between two groups in the relationship between RS and PWB were investigated using a categorical moderator

and multi group analysis (refer Table 5) to see if there was a significant difference in the relationship between RS and PWB. The "Constraint 1 model" results showed that the manner RS effects PWB in Up to 25 years of age and 26-41 years of age is not the same, and there is significant difference between the two groups because the P value is less than 0.05. Estimate value of up to 25 years of age is 0.893 and 26-41 years of age is 0.906. Therefore, when the age is included as a moderating variable it is found that the relationship between RS and PWB is stronger in case of 26-41 years of age as compared with up to 25 years of age.

Table 4: Moderation effect

Dependent variable	Independent variable	Age	S.E.	C.R.	P Value	Result
Resilience	Psychological wellbeing	Up to 25 years of age	0.101	8.859	***	Significant
Resilience	Psychological wellbeing	26-41 years of age	0.070	12.969	***	Significant

(Source: Primary data)

Table 5: Multi group analysis

Model	DF	CMIN	P
CONSTRAINT_1	1	0.010	0.920

(Source: Primary data)

IV. Conclusion

Emotional Intelligence, Extraversion, Psychological wellbeing and Resilience were not studied together in prior research. Earlier research studies have shown that EI of an Individual has an impact on their PWB similarly EPT has an impact on PWB of an Individual. But the mediating effect of resilience in this relationship was not analysed. The mediation study shows that RS mediates the relationship between EI and PWB (Figure 1 and Table 6) The direct impact of EI on PWB is reduced in the presence of the mediator. Mediation study also showed that RS mediates the relationship between EPT and PWB. When Individuals exhibit Extraversion personality trait it has an impact on psychological wellbeing and the relationship is mediated in the presence of Resilience (Figure 2 and Table 7). Resilience is found to mediate the relationship between EI, EPT, PWB and RS. Resilience is the connecting link in predicting one's PWB. Similar study can be undertaken to study the relationship between other personality traits and psychological wellbeing and the mediating effect of resilience can be analysed. Gender can be taken as a moderating variable and the relationship between the factors mentioned can be analysed.

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CORPORATE GOVERNANCE COMPLIANCE IN CENTRAL PUBLIC SECTOR ENTERPRISES OF INDIA

Renu Hooda*

Purpose: Abrupt failure of corporations around the world resulted in formulation of guidelines concerning good governance by various authorities. This paper examines the adherence level of the CPSEs of India via CGI.

Design/Methodology/Approach: Data were collected from annual reports of Maharatna status CPSEs of India from 2009-10 to 2018-19 using content analysis and further analyzed using statistics techniques such as mean, standard deviation and coefficient of variation.

Findings: It is found that the compliance score of all the sampled companies was improved during the period under study, except, of ONGC. For variable-wise compliance, sampled companies showed a highest compliance for disclosure reliability variables with minimum variation.

Originality/ Value: This study is among the few studies conducted in India to evaluate companies' as well as variable wise adherence level. This paper assists the policy makers to determine the possible changes and evaluating the present corporate governance guidelines effectiveness.

Keywords: Corporate Governance, Corporate Governance Index (CGI), CPSEs, Board structure, Committees, Disclosure, Senior management.

JEL Classification: G18, G3, G34

Corporate governance has been addressed by the corporate in their functioning since 1900 centenary. But the term has become popular among the corporate in the 1970s following the savings and loans crisis across the world. Further, it has become buzz word in the late 20th century and early 21st contrary due to several corporate failures such as Enron scam, WorldCom (US), Barring Bank (UK), Polly Peck (UK), Satyam Scam 2008 (India), and the global financial crisis 2008 across the world. These corporate failures lead to formation of various corporate guidelines and policies across the world to protect the interest of all stakeholder and management and India is far away from this. The companies act 2013, has defined the term "corporate governance", as, "the relationship between the investor, the management team and the board of directors". However, there were several committees has been formed since 1990s such as Birla committee, Naresh Chandra committee, Naryana Murthy committee and J. J. Irani committee (Hooda & Chhikara, 2020).

There were several studies have been conducted in the past to address the issues of corporate governance in the organisational context (Rajput & Jhunjhunwala, 2019) (Garg, 2007). Literature in this arena is focused towards impact of corporate governance and its impact on performance in the listed companies where as there is paucity of literature in the context of public sector undertakings. To address the corporate governance focusing the public sector undertaking, the researcher has focused on the corporate governance disclosure and its impact on corporate performance using the content analysis method of qualitative research.

This paper is framed as follows; next section discusses the literature review in the corporate governance their impact on performance of public sector undertaking in India.

I. Review of Literature

Dwivedi, N & Jain, A.K. (2005) studied corporate governance compliance of 367 listed companies from 1997-2001. The results of the study show that statistically weak but positive impact of board size and foreign ownership on the firm value. Whereas public shareholding has negative linear relationship and directors' holding has nonlinear association with firm value.

Kumar, N., & Singh, J. P. (2013) studied the corporate governance compliance of BSE listed companies during 2008-09. The findings presents that board size is negatively associated with the firm value. Whereas the promoters' shareholding shown a positive association on firm value.

Chatterjee, C & Nag, T. (2018) assessed the top 20 listed companies of India and China and identified that for Indian companies, CEO duality has favourable influence on economic performance and in case of Chinese firm; higher percentage of independent directors. Auditors' quality and board size have no effect on ROE.

* Assistant Professor, Department of Business Administration, Maharaja Surajmal Institute, GGSIPU, New Delhi, India

Pant, M. & Pattanayak, M. (2010) evaluated the Indian listed firms and found that ownership has insignificant effect on productivity but when competition is intense, then there was strong positive relationship. However, debt intensity and domestic financial institutions holding have negative effect on firm productivity.

Ghosh, S. (2006) analysed the 127 manufacturing companies of India for the year 2003. It found that board size have negatively influenced the market performance. Board independence and CEO remuneration has positive relation with corporate performance.

Garg, A.K. (2007) investigated the 164 companies listed on BSE over the six years and found that the board size has negatively contributed in the firm performance and suggested the board size of six as an ideal. On the other hand there was mixed result of board independence on financial performance while independence that lies between 50 and 60 per cent has higher impact on performance.

Mishra, R. & Kapil, S. (2017) evaluated the sample of 391 listed companies of India and found that higher promoter ownership has significantly contributed in improving performance. Board independence was not related but board size was positively associated with ROA. FII and institutional ownership was positively associated by market but unrelated with accounting measure.

Rajput, M. & Jhunjhunwala, S. (2019) assessed the 1546 listed companies of the period 2006-17 and identified that board independence has significant positive effect on firm's dividend policy and its interaction with family ownership has significant positive effect on dividend payout policy.

Present paper aims to study company-wise and variable-wise corporate governance practices adherence level.

II. Research Design and Methods

Study aims at achieving insights into corporate governance mechanism being followed by CPSEs in India, using a sample of Maharatna status companies for ten years i.e. 2009-10 to 2018-19. Data were collected manually from the annual reports and corporate governance reports of respected companies using content analysis. CGI was designed based on the Corporate Governance Guidelines issued by DPE in 2010 using dichotomous method. CCI consists of sub-indices such as board structure, committees, directors', disclosure and disclosure reliability. Also, data were analyzed using mean, standard deviation, minimum, maximum and coefficient of variation.

III. Results and Discussion

Company's compliance score for various governance variables is calculated as follows:

Table 1 (BHEL)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Mean	SD	COV
Board structure	6	6	6	6	5	5	6	7	7	7	6.1	0.7	11.48
Committees	14	15	15	14	15	14	15	15	14	15	14.6	0.49	3.36
Directors	8	8	8	8	8	7	8	8	8	8	7.9	0.30	3.80
Disclosure	17	19	19	19	19	20	20	20	20	20	19.3	0.90	4.66
Disclosure reliability	4	4	4	4	4	4	4	4	4	4	4	0	0
Total	49	52	52	51	51	50	53	54	53	54	51.9	1.58	3.04
Percentage	81.67	86.67	86.67	85	85	83.33	88.33	90.00	88.33	90			

Source: Researcher's calculations

Table 1 indicates the governance compliance score of BHEL for the ten years. During the period under study, the range of compliance lies from 81.67 per cent to 90 per cent. The

minimum compliance score was 49 in 2010 and maximum was 54 in 2017 and 2019, showing a variation of 3.04 per cent.

Table 2 (BPCL)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Mean	SD	COV
Board structure	7	7	7	6	7	6	7	7	7	7	6.8	0.4	5.88
Committees	15	15	15	15	16	16	15	15	15	15	15.2	0.4	2.63
Directors	8	8	8	8	8	8	8	8	8	8	8	0	0
Disclosure	21	22	22	22	22	22	22	22	22	22	21.9	0.3	1.37
Disclosure reliability	4	4	4	4	4	4	4	4	4	4	4	0	0
Total	55	56	56	55	57	56	56	56	56	56	55.9	0.54	0.96
Percentage	91.67	93.33	93.33	91.67	95	93.33	93.33	93.33	93.33	93.33			

Source: Researcher's calculations

Table 2 consists of data regarding the adherence of governance guidelines by BPCL for the ten years. The range of compliance lies from 91.67 per cent to 95 per cent. The

minimum compliance score was 55 in 2010 and maximum was 57 in 2014, showing a variation of 0.96 per cent.

Table 3 (CIL)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Mean	SD	COV
Board structure	4	4	4	4	4	4	7	7	7	7	5.2	1.47	28.26
Committees	11	13	14	14	11	13	15	14	15	15	13.5	1.43	10.61
Directors	3	8	8	7	7	9	9	9	9	9	7.8	1.78	22.79
Disclosure	6	11	14	15	16	18	18	18	18	18	15.2	3.79	24.93
Disclosure reliability	3	4	4	4	4	4	4	4	4	4	3.9	0.3	7.69
Total	27	40	44	44	42	48	53	52	53	53	45.6	7.79	17.08
Percentage	54	66.67	73.33	73.33	70	80	88.33	86.67	88.33	88.33			

Source: Researcher's calculations

The information regarding the compliance of guidelines for the ten years are depicted through table 3. The compliance score of the CIL lies from 54 per cent to 88.33 percent. The

minimum compliance score was 27 in 2010 and maximum was 53 in 2016, 2018 and 2019, showing a variation of 17.08 per cent.

Table 4 (GAIL)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Mean	SD	COV
Board structure	6	7	6	6	6	6	7	7	7	7	6.5	0.5	7.69
Committees	13	13	15	14	14	11	15	15	15	15	14	1.26	9.04
Directors	9	8	9	8	8	8	9	8	9	9	8.5	0.50	5.88
Disclosure	14	19	20	21	21	22	22	22	22	22	20.5	2.38	11.59
Disclosure reliability	4	4	4	4	4	4	4	4	4	4	4	0	0
Total	46	51	54	53	53	51	57	56	57	57	53.5	3.35	6.27
Percentage	76.67	85	90	88.33	88.33	85	95	93.33	95	95			

Source: Researcher's calculations

Table 4 depicts the governance compliance score of GAIL for the ten years. For the period under study, the company complied with 76.67 per cent to 95 per cent of governance

guidelines. The minimum compliance score was 44 in 2012 and maximum was 57 in 2016, 2018 and 2019, showing a variation of 8.36 per cent.

Table 5 (IOCL)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Mean	SD	COV
Board structure	7	7	7	7	7	6	6	6	7	7	6.7	0.46	6.84
Committees	15	15	15	15	15	15	14	14	14	14	14.6	0.49	3.36
Directors	9	9	8	9	9	9	9	9	9	9	8.9	0.30	3.37
Disclosure	18	18	18	22	22	21	22	22	22	22	20.7	1.79	8.66
Disclosure reliability	4	4	4	4	4	4	4	4	4	4	4	0	0
Total	53	53	52	57	57	55	55	55	56	56	54.9	1.64	2.99
Percentage	88.33	88.33	86.67	95	95	91.67	91.67	91.67	93.33	93.33			

Source: Researcher's calculations

The analytical table 5 presents the information regarding compliance score of IOCL for the ten years. During the period under study company complied with 86.67 per cent to 95 per

cent of guidelines. The minimum compliance score was 52 in 2012 and maximum was 57 in 2013 and 2014, showing a variation of 2.99 per cent.

Table 6 (NTPC)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Mean	SD	COV
Board structure	7	7	7	7	7	6	6	6	7	7	6.7	0.46	6.84
Committees	16	16	16	16	16	15	15	15	16	16	15.7	0.46	2.92
Directors	8	8	8	9	9	9	10	10	10	10	9.1	0.83	9.13
Disclosure	17	17	18	18	19	19	19	19	19	19	18.4	0.80	0.35
Disclosure reliability	4	4	4	4	4	4	4	4	4	4	4	0	0
Total	52	52	53	54	55	53	54	54	56	56	53.9	1.37	2.55
Percentage	86.67	86.67	88.33	90	91.67	88.33	90	90	93.33	93.33			

Source: Researcher's calculations

Table 6 exhibits the compliance score of NTPC for adherence of the corporate governance guidelines for the ten years. During the period under study, the range of compliance lies from 86.67 per cent to 93.33 per cent. The minimum

compliance score was 52 in 2010 and 2011 and maximum was 56 in 2018 and 2019, showing a variation of 2.55 per cent.

Table 7 (ONGC)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Mean	SD	COV
Board structure	6	7	6	6	6	6	7	7	7	7	6.5	0.5	7.69
Committees	15	16	16	16	16	14	15	15	12	12	14.7	1.49	10.11
Directors	9	9	10	10	10	10	10	9	8	9	9.4	0.66	7.06
Disclosure	19	20	20	20	20	21	20	20	22	20	20.2	0.75	3.70
Disclosure reliability	4	4	4	4	4	4	4	4	4	4	4	0	0
Total	53	56	56	56	56	55	56	55	53	52	54.8	1.47	2.68
Percentage	88.33	93.33	93.33	93.33	93.33	91.67	93.33	91.67	88.33	86.67			

Source: Researcher's calculations

The information regarding the compliance score of ONGC for the ten years are depicted through the analytical table 7. For the period under study, the range of compliance lies from

86.67 per cent to 93.33 per cent. The minimum compliance score was 52 in 2019 and maximum was 56 in 2011, 2012, 2013, 2014 and 2016, showing a variation of 10.11 per cent.

Table 8 (SAIL)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Mean	SD	COV
Board structure	5	6	6	6	6	6	7	7	7	7	6.3	0.64	10.16
Committees	7	7	11	12	11	10	12	12	12	12	10.6	1.91	18.00
Directors	6	6	6	6	6	7	7	7	7	7	6.5	0.50	7.69
Disclosure	17	17	18	18	18	18	18	18	18	18	17.8	0.40	2.25
Disclosure reliability	3	3	3	3	3	4	4	4	4	4	3.5	0.5	14.29
Total	38	39	44	45	44	45	48	48	48	48	44.7	3.49	7.82
Percentage	63.33	65	73.33	75	73.33	75	80	80	80	80			

Source: Researcher's calculations

The analytical table 8 indicates the governance compliance score of SAIL for the ten years. During the period under study, the range of compliance lies from 63.3 per cent to 80 per cent. The minimum compliance score was 38 in 2010 and

maximum was 48 in 2016, 2017, 2018 and 2019, showing a variation of 7.82 per cent. Here, compliance and non-compliance of each practice required under Corporate Governance Guidelines is shown for the period under study

Table 9 (Board Structure)

	2010		2011		2012		2013		2014		2015		2016		2017		2018		2019	
	C	NC	C	NC	C	NC	C	NC	C	NC	C	NC	C	NC	C	NC	C	NC	C	NC
Chairman is ED or NED	1	7	1	7	1	7	1	8	0	8	0	8	0	8	0	8	0	8	0	8
% of NED	6	2	8	0	8	0	5	3	6	2	1	7	6	2	6	2	8	0	8	0
Nominee Directors	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0
At least 4 board meetings	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0
Membership of > 10 committees.	7	1	7	1	7	1	7	1	7	1	7	1	8	0	8	0	8	0	8	0
Chairmanship of > 5 committees.	7	1	7	1	7	1	7	1	7	1	7	1	8	0	8	0	8	0	8	0
Familiarization programme	4	4	5	3	3	5	4	4	4	4	6	2	7	1	8	0	8	0	8	0
Code of conduct for directors	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0

Source: Researcher's calculation

Table 9 depicts the level of compliance for board structure variable for the period of 10 years. The table shows that 2014 onwards board were held by EDs. As per the listing requirement of SEBI, board should composed of no less than 50% of independent director in case of executive director is a chairman and one-third of independent director in case of non-executive chairman. In accordance to this, all the sampled companies complied with the requirement during 2011, 2012,

2018 and 2019. Companies have complied with the requirement of 2 nominee directors. Similarly, all companies have met at least four times and complied with code of conduct. Companies that were conducting familiarization programme for its new directors, directors' membership restriction to 10 committees and chairmanship to 5 committees have improved.

Table 10 (Committees)

	2010		2011		2012		2013		2014		2015		2016		2017		2018		2019	
	C	NC	C	NC	C	NC	C	NC	C	NC	C	NC	C	NC	C	NC	C	NC	C	NC
Audit Committee																				
Exists	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0
Chairman is ID	8	0	8	0	8	0	8	0	8	0	7	1	8	0	8	0	8	0	8	0
2/3 of members as IDs	8	0	8	0	8	0	8	0	7	1	6	2	8	0	7	1	8	0	8	0
4 meetings	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0
Invitees presence	7	1	7	1	7	1	7	1	7	1	7	1	7	1	7	1	6	2	6	2
Company secretary acts a secretary to committee	7	1	7	1	7	1	7	1	7	1	7	1	7	1	7	1	7	1	7	1
Chairman presence in AGM.	3	5	3	5	3	5	3	5	4	4	3	5	1	7	1	7	1	7	1	7
Presence of accounting or finance expertise.	7	1	7	1	7	1	7	1	6	2	5	3	7	1	7	1	7	1	7	1
Remuneration Committee																				
Exists	7	1	7	1	8	0	8	0	8	0	8	0	7	1	8	0	8	0	8	0
Chairman is ID	7	1	7	1	7	1	6	2	8	0	8	0	8	0	8	0	8	0	8	0

Composition of NEDs	3	5	5	3	7	1	7	1	6	2	4	4	6	2	6	2	5	3	5	3
Meetings	6	2	6	2	7	1	7	1	6	2	8	0	8	0	8	0	7	1	8	0
Shareholders Committee																				
Exists	7	1	8	0	8	0	8	0	8	0	8	0	7	1	8	0	8	0	8	0
Chairman is ID	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0
meeting	6	2	6	2	8	0	8	0	7	1	8	0	8	0	8	0	8	0	8	0
Compliance officer	7	1	7	1	7	1	7	1	8	0	8	0	8	0	8	0	8	0	8	0

Source: Researcher's calculation

Table 10 depicts the compliance level for 'Committees' variable for audit, remuneration and shareholders committee concerning meetings, composition, chairmanship, etc. for the period of 10 years. It observed from the table that all the 8 sampled companies have audit committee. Further, audit committees were chaired by IDs except in 2015. Also, the requirement for two-third of independent director on the audit committee was compiled during 2014, 2015 and 2017.

Further, all companies have conducted four meeting of committee. DPE guidelines require every CPSEs to constitute the committee while under SEBI guidelines it is a non-mandatory requirement. All companies have remuneration committee and were headed by independent director. In case of shareholders committee, companies have constituted the committee and companies have appointed an independent director as its chairman.

Table 11 (Directors)

	2010		2011		2012		2013		2014		2015		2016		2017		2018		2019	
	C	NC	C	NC	C	NC	C	NC	C	NC	C	NC	C	NC	C	NC	C	NC	C	NC
Attendance	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0
Remuneration	7	1	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0
NED's fee	6	2	7	1	7	1	7	1	7	1	7	1	7	1	7	1	7	1	7	1
Pecuniary relationship of NEDs	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0
NEDs shareholding	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0
Directorship, membership	7	1	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0
Details	2	6	5	3	4	4	4	4	4	4	4	4	4	4	4	4	5	3	5	3
Directors' seeking appointment/re-appointment.	7	1	7	1	7	1	6	2	6	2	6	2	7	1	6	2	6	2	6	2
Relationship between directors	3	4	3	4	3	4	3	4	3	4	3	4	4	3	4	3	4	3	4	3
Stock options issued to directors.	5	3	5	3	5	3	6	2	6	2	8	0	8	0	8	0	8	0	8	0

Source: Researcher's calculation

Table 11 exhibits the compliance level for 'Disclosure regarding directors' variable. It revealed from the table that all companies have disclosed the information about attendance and pecuniary relationship of NEDs in the annual reports. Further, 87.5 to 100 per cent companies disclosed the directors' remuneration and 75 to 87.5 per cent companies reported the fee paid to the NEDs in their annual report. Number of companies which have disclosed shareholding of

NEDs and details of directors seeking appointment/re-appointment showed similar characteristics from 2009-10 to 2018-19. It also observed from the table that 87.5 to 100 per cent companies disclosed the information concerning composition of board, number of directorship, etc. in the annual report and 25 to 62.5 per cent companies reported the details of directors.

Table 12 (Disclosure)

	2010		2011		2012		2013		2014		2015		2016		2017		2018		2019	
	C	NC	C	NC	C	NC	C	NC	C	NC	C	NC	C	NC	C	NC	C	NC	C	NC
Philosophy on governance.	7	1	7	1	7	1	7	1	7	1	8	0	7	1	7	1	8	0	8	0
Quarterly financial statements	7	1	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0
Corporate governance report	0	8	1	7	2	6	3	5	3	5	4	4	4	4	4	4	5	3	4	4
Annual reports	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0
Penalties details	6	2	7	1	7	1	7	1	7	1	7	1	7	1	7	1	7	1	7	1
Presidential directives	5	3	7	1	7	1	8	0	8	0	8	0	8	0	8	0	8	0	8	0
Administrative and office expenses	6	2	7	1	7	1	8	0	8	0	8	0	8	0	8	0	8	0	8	0
Other than business purposes expenditure	6	2	4	4	4	4	5	3	5	3	5	3	5	3	5	3	5	3	5	3
Personal nature expenses	6	2	4	4	4	4	5	3	5	3	5	3	5	3	5	3	5	3	5	3
Related party transactions	7	1	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0
Code of conduct	7	1	7	1	7	1	8	0	8	0	8	0	8	0	8	0	8	0	8	0
Current AGM	7	1	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0
Last three years AGMs	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0
Details of special resolution	7	1	7	1	7	1	7	1	7	1	8	0	8	0	8	0	8	0	8	0
Risk management policies	7	1	7	1	8	0	8	0	8	0	7	1	8	0	8	0	8	0	8	0
Shareholders complaints	7	1	7	1	7	1	7	1	8	0	8	0	8	0	8	0	8	0	8	0
Whistle Blowing Policy	3	5	3	5	6	2	6	2	7	1	8	0	8	0	8	0	8	0	8	0
Subsidiary company	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0
Management Discussion & Analysis	7	1	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0
Accounting standard and policies	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0
Shareholders information	7	1	7	1	7	1	7	1	7	1	8	0	8	0	8	0	8	0	8	0
Mandatory and non-mandatory requirements	6	2	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0

Source: Researcher's calculation

The information regarding the compliance of 'disclosure' variable has been depicted in the table 12. During the period under study, all companies have disclosed the quarterly financial statements and annual reports on the company's

website, AGMs details, subsidiary companies, accounting policies and standard in their annual reports. Table also revealed that 95.24 to 100 per cent companies disclosed the related party transactions, current AGM details, special resolution and shareholders information. Further, 90.48 to 100

per cent companies reported the company's philosophy on governance, penalties details, shareholders complaints and mandatory and non-mandatory requirements of SEBI during the year in annual report.

Table 13
(Disclosure Reliability Variables)

	2010		2011		2012		2013		2014		2015		2016		2017		2018		2019	
	C	NC	C	NC	C	NC	C	NC	C	NC	C	NC	C	NC	C	NC	C	NC	C	NC
CEO/CFO certification	5	3	7	1	7	1	7	1	7	1	7	1	7	1	7	1	7	1	7	1
Compliance of Corporate Governance	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0
Compliance of code of business conduct and ethics	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0
Certificate of CAG	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0

Source: Researcher's calculation

Table 13 presents the compliance level for 'disclosure reliability' variable. It observed from the table that 62.5 to 87.5 per companies' annual report contained the CEO/CFO certification, which certifies financial statements fairness.

Further, all companies have certificate by auditor certifying corporate governance compliance, declaration of directors and senior management for compliance of code of conduct and certificate of Comptroller and Auditor General.

Table 14
(Descriptive Statistics)

	Board structure	Committees	Directors	Disclosure	Disclosure reliability	CGI
Mean	91.25	88.20	84.13	89.77	96.25	89.92
Median	91.07	89.06	84.38	92.05	96.88	89.07
Minimum	80.36	83.59	76.25	79.55	90.63	83.50
Maximum	100.00	90.63	87.50	94.32	96.88	93.44
SD	6.60	2.16	3.49	5.03	1.98	3.06

Source: Researcher's calculation

The table 14 exhibits the descriptive analysis of the CGI. The mean value of CGI score was 89.92 which indicate that all the sampled CPSEs have adopted the corporate governance guidelines in better way. Board structure variable has a mean of 91.25, with the deviation of 6.6. Further, committee and

directors' has a mean value of 88.20 and 84.13, respectively. The mean value of disclosure variable was 89.77 and of disclosure reliability was 96.25. In terms of variance, disclosure reliability showed the minimum variation i.e. 1.98.

Table 15
(Overall Compliance)

Company	Board structure	Committees	Directors	Disclosure	Disclosure reliability	Total
BHEL	6.1	14.6	7.9	19.3	4	51.9
BPCL	6.8	15.2	8	21.9	4	55.9
CIL	5.2	13.5	7.8	15.2	3.9	45.6
GAIL	6.5	14	8.5	20.5	4	53.5

IOCL	6.7	14.6	8.9	20.7	4	54.9
NTPC	6.7	15.7	9.1	18.4	4	53.9
ONGC	6.5	14.7	9.4	20.2	4	54.8
SAIL	6.3	10.6	6.5	17.8	3.5	44.7
Average	6.35 (79.38)	14.11 (88.20)	8.26 (82.63)	19.25 (87.50)	3.93 (98.13)	51.9 (86.5)
Max possible score	8	16	10	22	4	60

Source: Researcher's calculation

Table 15 presents the variable-wise score and the individual contribution made by each variable to CGI score. It revealed from the table that there was 98.13 per cent compliance by all the sampled companies in respect of 'disclosure reliability' variable, followed by committee, disclosure, directors' and board structure variable. Table 16 exhibits the CGI score of all the sampled companies.

Table 16
(CGI Score)

Company	CGI score	Rank
BPCL	93.17	1
IOCL	91.50	2
ONGC	91.33	3
NTPC	90	4
GAIL	88	5
BHEL	86.50	6
CIL	77	7
SAIL	74.5	8

Source: Researcher's calculation

IV. Conclusion

The present study aims to describe the corporate governance practices compliance level of eight CPSEs for the period of ten years using CGI. Among sampled companies, BPCL scored highest in CGI, followed by IOCL, ONGC and NTPC. It found that the compliance level of all companies was improved during the period under study, except, of ONGC. With respect to variable-wise compliance, disclosure reliability showed highest compliance with minimum variation, in contrast, board structure variables showed maximum variation during the period of ten years. The study will contribute in enhancing the existing body of knowledge of corporate governance in the context of PSUs in India. The findings of the study will assist the policy makers and managers in evaluating the state of corporate governance in PSUs and its influence on their performance and growth.

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RETIREMENT CONFIDENCE FOR SUCCESSFUL AGEING IN CONTEXT OF THE CHANGING SOCIO ECONOMIC DIMENSIONS IN INDIA

Neha Mangla* Kavita Indapurkar**

Purpose: Retirement is the phase of life when an individual withdraws from the workforce and no longer works in one's primary career role. Self-sufficiency in terms of wealth and happiness sums up the success during retirement. Building confidence for retirement is a long-term process requiring rightly perceiving one's retirement days, planning for them, and putting the timely implementation of plans.

Approach: Through extensive review, the paper builds a conceptual framework to understand and analyze retirement confidence in the changing socio-economic contexts. The framework proposes to analyze the mediating effect of retirement planning to gauge if the perceived confidence is reflective of the preparedness or just a reflection of individual's psychology, attitude, and behavior.

Findings: Not just retirement planning but other social (family dynamics, migration of young, health history), economic (interest rates, inflation, economic shocks), psychological (perception about retirement), demographic (number of dependents, marital status, education) and behavioral factors (personal control, risk aversion) determine the perceived self-confidence of individuals for their retirement.

Value: The paper will put into perspective the current body of research in the field, help identify research gaps and provide opportunities for further research.

Keywords: Retirement Confidence, Socioeconomic Dimensions, Retirement Planning, Successful Ageing

JEL Classification: G41 G53 H55 J11 J14 J26

Population ageing is an increase in the median age of a population. Population is a global phenomenon with developing countries also experiencing growth in the size and proportion of older people (65 years or over) in the population. According to the UN Report "World Population Ageing (2019)", the proportion of the global population aged 65 and up is expected to rise to 16% by 2050. The elderly are increasing not only in number but also in proportion. Life expectancy at birth, on the other hand, has reached 72.3 years, thanks to medical advances and improved health infrastructures, resulting in lower mortality rates. Though increased longevity is a sign of progress, it has an impact on the social and economic security systems that support the elderly. As life expectancy rises and birth rates fall, many retirees will become dependent on a small working population, reflected in the rising old-age dependency ratio. This transition necessitates adequate preparation to ensure well-being during old age. India has transformed its retirement schemes by shifting from the traditional defined benefit schemes to individual defined contribution schemes. This transition has shifted the onus of planning and financing for retirement away from institutions – firms and governments – towards individuals, necessitating the workers to save, invest, and spend over their life cycle responsibly and wisely. Retirement Confidence is a concept which includes the view and attitude of individuals towards their retirement, the

preparations for retirement and the confidence about various aspects of retirement (Kim et al., 2005). All rational individuals save during their earning years to enable them to dis save when they enter the non-working phase of their life (Ando & Modigliani, 1963). However, even though we all are rational individuals do we end up planning and saving enough wealth for our retirement days that we can enjoy a comfortable and confident retirement? In the case of India, unfortunately the data suggests that people do not plan for their retirement rationally. The World Economic Forum report, "We'll Live to 100 – How Can We Afford It?", has estimated that the retirement savings gap is growing at the fastest rate in India, 10% annually. With more than a fifth of the Indian population expected to enter the retirement age group by 2050, there is an increasing focus and concern about the economic security and well-being of this current working class, soon to transition into retirement. It has also been seen that often people do not plan for their retirement appropriately and yet are high on retirement confidence. There are a lot of factors that explain this heterogeneity in behavior.

* Research Scholar, Amity University, Noida

** Professor and Joint Administrator, Amity School of Economics, Amity University Noida

I. Review of Literature

Planning and saving for retirement is an inter play of cognitive, psychological, and social characteristics of individuals (Tomar et al., 2021). Gerhard et al. (2018) demonstrate the importance of accounting of latent heterogeneity, captured through socio-economic-demographic characteristics, when understanding the saving behaviour.

(Shefrin, 2002) explains saving for retirement as a simple process, foreseeing ones' retirement needs during retirement, saving enough and investing the funds such that the required funds are accumulated. Although this seems very easy and straightforward, yet many individuals find saving for retirement very difficult.

As a first step, it is important to understand and develop a theoretical conceptualization of retirement. In the literature, there are varied ways of conceptualizing retirement. The Retirement decision is based on a need gap analysis, a result of comparing the financial resources accumulated and financial resource needed during retirement years (Hatcher, 2003).

A more comprehensive approach to conceptualizing retirement is looking at it as an adjustment process (Wang et al., 2009). Though everyone retires, the timing of the decision to retire, the planning and preparation for the decision, the resources accumulated for the decision and the change in activity status associated with the decision are varied across individuals. Thus, retirement as an adjustment process investigates the complex functional mechanism of retirement, shaped by society and individual family contexts, rather than the simple decision context (Szinovacz, 2003). The adjustment process conceptualization recognizes retirement as a longitudinal process (Wang, 2007).

There are different perspectives that explain the transition process to retirement. The life course perspective reflects retirement transition during the entire lifespan and argues that a person's individual history; work and leisure habits (Morrow-Howell & Leon, 1988), previous workforce participation patterns and preferences (Appold, 2004) and attributes; demographic status, health, and financial status e.g. (E. Kim & Moen, 2002; Szinovacz, 2003), influence the pathways people take for their retirement transition. The social context such as social support is particularly important as the resources available as per their social context help retirees to adjust to retirement (Taylor et al., 2008).

Retirement involves long-term subjective developments and social-psychological adjustments that relate to physical and psychological well-being (Moen, 2001).

Retirement is no longer an "either or" proposition but a process that runs over time. Retirement as an adjustment process that brings in lot of heterogeneity in terms of

individual transition into their retirement years. Understanding of all the dimensions that impact the retirement decisions of individuals is imperative to gauge what drives their retirement confidence; are they really prepared on all dimensions or there are certain dimensions that need to be focused.

Retirement Confidence and Retirement Planning

Planning for retirement is a long-term process encompassing, thinking about your retirement, foreseeing your retirement days, talking and discussing about your retirement, making plans and active financial engagement to prepare for the same. Planning has a conceptual and empirical linkage to building confidence in terms of retirement self-efficacy and the transition to retirement (Taylor- Carter et al., 1997). Engaging in behaviors related to a task help build one's confidence in undertaking that task (Bandura, 1997). Applying the same to retirement, engaging actively in planning for retirement raises the confidence of individuals about their retirement.

India moved to the voluntary defined contribution scheme for retirement planning with the roll out of the National Pension Scheme for both the public and private sector employees in 2009.

However still the current scenario in India depicts inadequate pension coverage. There are only 15 million participants in the National Pension System in India.

With changing social norms and spending patterns, Indians are more inclined towards current spending and they are reluctant to enroll in long term financial commitments (PGIM, 2020). Thus, in the case of India research in this area becomes very important to understand and implement required changes to boost retirement planning and in turn retirement confidence.

As per the authors' hypothesis, as the onus of well-being during one's retirement days depends on individuals themselves, for sustainable ageing, Retirement Planning should mediate the impact of other identified dimensions on retirement confidence.

Financial Literacy

The decision regarding an adequate amount of savings for a comfortable retirement is a complex one involving anticipating future needs and predictions about future values of variables like inflation and interest rates. This requires understanding of working of financial markets, concepts related to compound interest and impact of inflationary expectations.

Ameriks et al. (2003) conclude those who are more technically skilled in financial planning, have good

monitoring and budgeting skills and actively engage in financial affairs, are better able to manage their current spending and accordingly accumulate more wealth in the long run. Those who are more financially literate (understanding of inflation and risk diversification) are more likely to plan for retirement. Hence, higher levels of financial literacy enable individuals to be more financially secure in their retirement. (Lusardi & Mitchell, 2011). The research also concluded that financial literacy is very low around the world, irrespective of the level of development of the financial markets. Also, financial knowledge follows an inverted U-shaped pattern, highest for the middle age and lowest for the younger and the older groups of the life cycle and women are less financially knowledgeable than their male counterparts.

People in general lack financial knowledge and are not well equipped to make optimal and rational financial decisions (Lusardi & Mitchell, 2007)

People who are more confident about their financial knowledge have a higher propensity to plan. Hence, financial literacy results in higher wealth accumulation (Rooij et al., 2012). Studying the impact of Coronavirus on financial health, (Anand et al., 2021) concluded that financial literacy had strong mediating effect on financial health and personal finances of individuals.

Very limited research is available to measure the role of financial literacy in planning for retirement in India. The study by Baker et al. (2021) concludes that advanced financial literacy (concepts related to mutual funds, stocks, bonds) contributes towards higher saving for retirement. The research also concludes that women in India have low levels of financial literacy and they lack knowledge of basic financial concepts like inflation, money illusion and time value of money.

Idea of Retirement

There is a lot of heterogeneity in terms of how people perceive their retirement, that is, the transition from a working phase to a life phase following this transition. While some perceive it as an opportunity to have freedom and flexibility of filling time on their will, others might perceive it as a state of immobility and unproductivity. People's idea and perception about their retirement days impact how they plan for their retirement days as people who perceive negatively about their retirement days do not want to think and plan for it. People negatively relate to retirement and associate it with lack of purpose, boredom, social exclusion (Apouey, 2020). Retirement may also be seen as a phase with greater freedom and autonomy (Gestin, 2003), example, for some, retirement is an opportunity to spend time on things they never had time for before (Apouey, 2020).

(Goodwin & O'Connor, 2014) studied the notion of fantasy and reality in retirement and concluded, regardless of material wealth, the respondent's notion of retirement focused on a life of leisure and consumption, thus reflecting their fantasies of the forthcoming life stage. However, these fantasies may turn out to be very different from the reality of retirement as majority of the respondents recognized that the provisions, they have made to realize their fantasies might well be insufficient.

How people perceive of their retirement translates into their retirement related behavior and planning for retirement. People who are pessimistic and have unfavorable attitudes towards retirement do not plan and seek information for their retirement, and thus are not able to adapt well to retirement (Wang & Shultz, 2009).

Nowadays, Retirement is not associated just with moving out of the workforce. Post retirement bridge employment, entrepreneurial and other vocational opportunities, continuation of education and hobbies are now pursuits perceived for the retirement days (Wang & Shultz, 2009). Research in this area to include these newer outcomes of the retirement process would help better understand the changing nature of retirement and well-being during retirement.

Goal Clarity

The goal setting for retirement differs across age groups and gender not just in terms of goal content but also in terms of the concreteness of the goals set (Hershey et al., 2002). Stawski et al. (2007) noted that retirement goal clarity has a significant impact on retirement planning practices, which in turn impacts saving behavior.

Dudley et al. (2020) concluded, "Acceptors", those who accept goals as a natural part of their retirement process, considered the idea of planning ahead as a valuable practice and having something to look forward to and plan for as a first step to a fulfilling retirement that promotes a positive outlook and a higher self-esteem.

Kim et al. (2005) found that retirement planning factors including appropriate retirement fund calculation for a comfortable retirement and workplace financial education were strong predictors of retirement confidence.

2.5 Personal Biases

Individuals who have a myopic view and a bias towards present needs are unable to visualize and appropriately account for their future consumption expenditures (Howard & Yazdipour, 2014).

Personal control, which relates to individual's belief that they can change the situation and that their life outcomes depend on their own choices and decisions (Mirowsky & Ross, 1998)

also impacts individual financial well-being. People with high personal control are more proactive in managing their financial behavior, including saving for retirement, and limiting their spending thus increasing their financial well-being during retirement (Chhatwani, 2021). Chronic spenders may tell themselves they will enroll in retirement savings plan when they receive their next pay cheque, but month after month that day never comes when they enroll for a plan. They keep on procrastinating the decision to start saving for retirement (Knoll, 2010).

Laibson et al. (1998), noted that insufficiency of savings for retirement can be related to the phenomenon; pull of instant gratification. People's preferences are time inconsistent and they are more patient in the long run than in the short run. When faced with decisions, people compare their knowledge in the field with other's knowledge in the same field or with their knowledge in other fields. If the feeling of ignorance results, people tend to avoid the decision considering the situation as ambiguous (Knoll, 2010). So, if people do not have the required financial knowledge, due to ambiguity aversion, they avoid engaging in financial planning activities.

Economic Variables

The expectation-intention-action analysis for retirement decisions shows that expectations about economic variables also impact retirement decisions. Some people do not retire because they are concerned that the inflationary expectations will impact their financial security and standard of living (Prothero & Beach, 1984).

Low economic growth reflected in terms of low interest rates and low real wage growth in the economy reduces the saving rates consequently reducing consumption in retirement (Scott et al., 2020). At lower interest rates, as future consumption becomes more expensive, there is a bias towards present consumption, discouraging savings for retirement.

Sudden shocks like the ongoing Pandemic have several immediate and will have many long-term impacts on the pension provisions. There is a significant devaluation of assets resulting in lowering the value of pension funds. Higher unemployment and inflation have reduced the pension contributions of individuals. These effects will in turn lead to lower standards of living in retirement (Knox, 2020).

The 2008-2009 recessions brought into focus the role of economic variables in affecting the retirement confidence of American workers. Uncertainty in jobs and declining value of their 401(k) plans resulted in a significant dip in the workers' retirement confidence (Zick et al., 2015)

As per the survey conducted by Nielsen India amongst 3103 adults, most of the Indians are confident about their retirement plans but this confidence may be misplaced as majority of

them do not account for external events like economic slowdown, inflation, interest rate fluctuations etc. while planning for their retirement (PGIM, 2020).

Health Status and Health History

Retirement confidence is inversely related to any of the parents diagnosed with illnesses like cancer and cardiovascular diseases that require considerable medical expenses and bear the risk of being passed on future generations (Zick et al., 2015). Thus, the subjective life expectancy and the forecasted health affect individuals' expectations about health expenditures during retirement and the planning for the same.

In India, there is a significant increase in morbidities over the years which call for further investigation to study and determine its impact on the retirement confidence of the current working population.

Social-relational Aspects

Households in India, the family structures and social relations have changed considerably over the years. Younger generation of the family has started moving outside the household to seek employment opportunities. With increase in number of women joining the workforce, the family care and support that woman provided to the household has now reduced (Hanspal & Chadha, 2008).

Traditionally, the joint family system with multi-generational setup provided the support and care to all dependent members, including the older adults, in all aspects, economic, social, health and emotional. However, with economic and social transitions such as urbanization, migration, and industrialization, these customs and bonds have weakened over time (Kumar, 2003). Cultural shifts over the years, where earlier close-knit families acted as the biggest support system for the older adults, more than a fourth of the Indians now dread being dependent on their children during their old age (PGIM, 2020). Changes in upbringing in a more liberalized environment has resulted in younger Indians being more aspirational and thinking about financial security as a lesser priority (PGIM, 2020).

Though these factors related to the changing social context in the case of India have been discussed, there is limited research to ascertain the significance and impact of the changing social context on the retirement confidence of individuals.

Demographics

Retirement-oriented behavior is higher amongst people close to their retirement. Preretirement involvement measured using talk with wife, relatives, close friends showed strong relationship with proximity to retirement (Evans et al., 1985).

In line with the life-course perspective, retirement consideration is low amongst workers remote from retirement and it increases steadily with temporal proximity to retirement (Ekerdt et al., 2000). Taylor & Goldhauser (2007) note workers from lower income brackets are less likely to engage in both informal and formal retirement planning partly because of inability to set aside funds for retirement and partly because of lack of information and access to financial planning resources. Hershey et al., (2008) concluded that individuals with higher incomes think more about their retirement days and develop clear goals for their retirement days.

Education and Health Status showed a positive correlation with Retirement Confidence. Also, those who were married were more confident about their retirement than those who were not (Kim et al., 2005). Educated individuals because of their professional knowledge and/or experience may have more opportunities to continue to work in their career field (bridge employment). Thus, they can better maintain their life patterns during retirement (Ekerdt et al., 2000).

Gender is also a key factor that explains heterogeneity in the perception, planning and confidence for the retirement days. Women tend to have a more negative perception about their retirement days, they prepare less and so are less prepared and adjust poorly to retirement (Kim & Moen, 2001). Men have more defined and clear goals (Hershey et al., 2002). Though both genders do not save adequately for retirement, men save more and make more aggressive investments (Glass Jr. & Kilpatrick, 1998). Males showed a higher retirement confidence as compared to their female counterparts (Kim et al., 2005).

Women are at an economic disadvantage as compared to men which in turn results in poor financial preparedness of women for their retirement (Noone et al., 2010) Women often have interrupted careers, shifting between full time employed, not employed and part time employed status during their working life because of family priorities.

The number of children is inversely related to retirement confidence, as more the number of children, parents need to divert resources away from planning for their retirement towards meeting the needs of their children (Zick et al., 2015). The demographic variables moderate the relationship of the identified dimensions with retirement planning, and of retirement planning with retirement confidence, as people with specific demographic profiles (gender, no. of children, marital status) tend to differ in terms of retirement confidence as compared to their counterparts.

The authors of this research basis their experiences and interactions hypothesize that, in the family context, not only the number of children, but their gender also impacts

retirement confidence. As per the authors, people with a male child are high on retirement confidence as compared to those with only girl children. Also, the more is the number of girl children lower the retirement confidence, since more resources are needed to plan for their marriage. A comprehensive analysis to gauge retirement confidence of the working adults in India must incorporate all these aspects.

II. Research Design and Methods

The research synthesizes a conceptual framework to understand and analyze retirement confidence. An extensive review of 60 past researches across the globe in the field of retirement confidence and retirement planning was undertaken to identify the dimensions studied. The conceptual framework proposed incorporates the changing socio-economic contexts in India. In particular, the framework proposes to analyze the mediating effect of retirement planning to gauge if the perceived confidence is reflective of the preparedness or just a reflection of individual's psychology, attitude, and behavior.

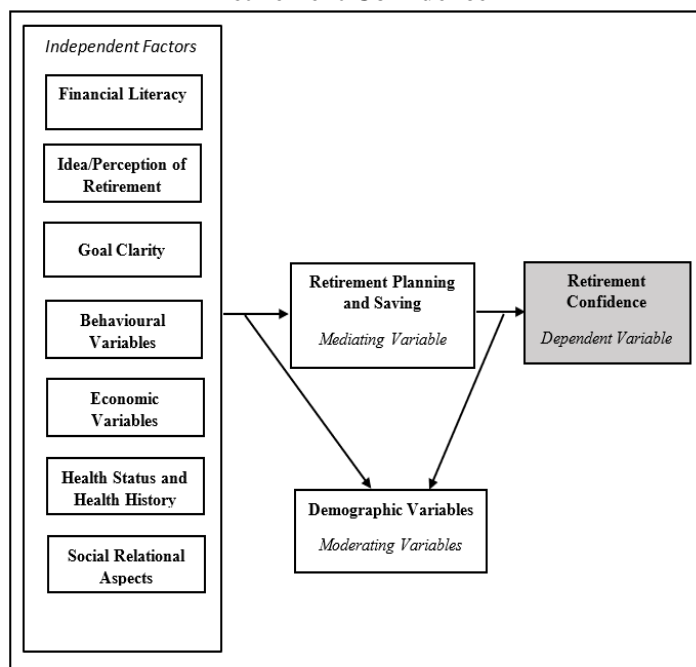
III. Results and Discussion

Building the Conceptual Framework

The review of literature, catalogues the components of retirement confidence basis which the conceptual framework has been defined (refer to Figure 1). The proposed framework proposes to test the relationship between, Financial Literacy, Perception of Retirement, Goal Clarity, Behavioral Variables, Economic Variables, Health Status and Social-Relational Aspects and Retirement Confidence. There is availability of research that gauges the impact of these factors on retirement planning, if not in one study but across researches. However, there is no research that captures if retirement planning in turn impacts the retirement confidence of individuals. Past researches take retirement planning as an independent factor that impacts retirement confidence but no research has so far analyzed the mediating effect of retirement planning on retirement confidence.

The mediation effect will help understand if the perceived confidence is reflective of the real preparedness of individuals or just a reflection of individual's psychology, attitude, and behavior. The framework proposes to analyze and test the moderating effect of the demographic variables. This analysis will help in designing customized policy interventions to induce the required changes towards retirement and planning for retirement.

Figure 1 – Conceptual Framework to Understand Retirement Confidence



Source: Author's Proposed Framework

IV. Conclusion

Retirement is an inevitable natural life transition. However, with improvement in health care systems and increasing life expectancy, retirement is becoming a more significant and longer phase of an individual's life. In order to mitigate the ill effects of ageing population, appropriate social and economic policies need to be made. Hence, it is key to understand how confident the current working population feels to make the transition to retirement. In India, there is limited research, both conceptual and empirical, in the area of retirement confidence. The heterogeneity in terms of the transition process in turn results in differences in the perceived confidence of individuals regarding their retirement. Not just financial well-being but their visualization of retirement, the social set up and their health status play a crucial role in their confidence towards the new phase of life. Many might not be well prepared financially but their optimism about retirement days gives them high confidence in terms of their planning for retirement. Accordingly, it is imperative to look at retirement confidence within a single comprehensive framework and understand the key drivers of retirement confidence; is the confidence reflective of their preparedness?

Marriage as an institution provided the support, both economical and emotional, during retirement days. Now with nuclearization of families, the young migrating out of the house for employment and the increasing incidence of divorce and separation, the support of these family ties is dwindling.

Individuals are now preferring late marriages and fewer number of children. With these changes in the social context, self-preparedness for retirement becomes even more important for India's transitioning social economy.

The ongoing Pandemic has upended lives not just emotionally but financially and physically. Some have lost the earning members in their families, some are rendered unemployed, some have developed health problems and for some the incomes have gone down due to disrupted businesses and salary cuts. All these aspects have an impact on their planning and preparedness for retirement.

As further steps, the model can be empirically tested to estimate the importance of the different dimensions in impacting retirement confidence. The estimated results can be further used to develop an index for measuring Retirement Confidence as a weighted average of the different dimensions.

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STUDY ON LOK ADALAT'S, DRT'S, SARFAESI AND IBC AS RECOVERY MECHANISM IN INDIA

Shraddha Kokane* Atharva Pandit**

Purpose: Banks clean their balance sheets using Lok Adalats, DRTs, SARFAESI, and IBC. According to former RBI Governor C. Rangarajan's November 2021 post, these resolutions were poor. According to former RBI Governor Raghuram Rajan, 2006–2008 bad loans hurt the Indian economy in 2012 and beyond (Sep, 2012). This research aims to determine the efficacy of various bank recovery channels by determining the total amount involved and recovered through each channel.

Design/ Methodology/ Approach: Data was acquired from the RBI database for the years 2012 to 2021, with an emphasis on the four recovery channels of Lok Adalats, DRTs, SARFAESI, and IBC. The efficiency of the redressal procedure is determined by analyzing the amount of NPAs involved and recovered by scheduled commercial banks over the said time using a one-way analysis of variance test.

Findings: In spite of the Insolvency Code of 2016, the report shows that Lok Adalat and SARFAESI are still overburdened with cases. The researchers recognize that IBC is taking a major recovery road and, as such, deserves some time to demonstrate its worth.

Originality/ Value: It was hypothesized that IBC's implementation in 2016 would revolutionize India's recovery channels; this study sought to determine whether this legal shift had altered the banking sector's ability to recoup bad debt.

Keywords: Recovery, Lok Adalat, SARFAESI, Debt Recovery Tribunals, Insolvency and Bankruptcy Code

JEL Codes: G2, G21, G3, G33

Recovery mechanism is the solution to resolve then on-performing assets (NPAs) recovery in a leg always. NPAs are the burning issue for the banking industry since long. Loans which are overdue for more than 90 days from end of the quarter are termed as NPA. The government and the Reserve Bank of India have taken several efforts to address the problem of nonperforming assets (NPAs) and there have been several committees to resolve this issue time and again. The amount of NPAs from 2014 to 2021 has grown to massive Rs 66.5 lakh crore out of which Rs 14.5 lakh crores were written off. Kokane & Nerlekar (2017) studied the public sector banks (PSBs) recapitalization by government due to the massive increase of NPAs in PSBs is putting a great pressure on the Indian government. Dey (2018) studied that banks' credit risk management is a major cause of rising NPA. The report also indicated that the banking industry's overall recovery process and NPA recovery channels are weak. Based on macroeconomic variables and inefficient law to combat defaulters, the recovery mechanism process is weakened.

India & Recovery

The Indian banking system experiences many ongoing changes such as passing of interest rates after monetary policy, dilution of the government's share in public sector banks, capital adequacy & rising of equity, participation of private & foreign players, and mostly about the non-performing assets. NPA management is the crucial of all the topics due to its spillover over the other aspects of the bank like profitability and capital among others. NPA shifts banking sector attitudes, which may impede loan development for constructive objectives.

Lok Adalats were formed in India after 1987 to take care of the poor asset performance and was more of a dispute redressal body than a recovery mechanism. Outside court settlement this being the only body, it proved effective in the initial years with cases of Rs 5 lakh. As banks average loan size grew, Debt Recovery Tribunals (DRTs) were established in 1993 to recovery loan above Rs 10 lakhs. Over the years the DRTs recovery time increased due to piling cases with increasing banks and concerns of due diligence in lending. Ineffectiveness of DRTs in recovery of large borrowers made the Central Government form committees and it was advocated that securitization legislation permitting banks and financial entities to seize and sell securities without court action was passed by Parliament in 2002 for secured loans-the SARFAESI Act.

The Insolvency and Bankruptcy Code (IBC) 2016 is a breakthrough because it time bound recovery mechanism to address Indian banking issues pertaining to retail & corporate loans.

The Insolvency and Bankruptcy Code helps banks recover debt keeping the financial institution pure and safe from stress.

* **Assistant Professor Dr. Vishwanath Karad's, MIT World Peace University, School of Management (PG)**

** **Finance Executive, Corporate Finance Department Kirloskar Brothers Ltd**

The IBC has been a game-changer in economic law, with a remarkable journey and a real attempt to address serious challenges of the industry

I. Review of Literature

The banking industry drives the economy and rightly called as its bloodline. High NPA has shook the Indian banking system, since 2014 the as per RBI data the Gross NPA of Indian banks rose more than 350% and there was a 21% rise in the PSBs loan being written off. Vivek Raja Bahadur (2016) analyzed commercial bank NPAs and its impact on diminishing share value & higher capital costs. They also discuss that a tight policy is needed to reduce loan defaults, which damage banks' profitability.

NPA and Recovery

Jasbir Singh (2010) highlights the most important factors contributing to the problem of underperforming assets from the point of view of the bankers is to have necessary measures to manage NPA such as having credit technical expertise& setting up a tracking service for reforming recovery. The problem of NPA can only be solved by a suitable mechanism for credit assessment and risk management.

Kajal Chaudhary and Monika Sharma (2011), studied the burden of the NPAs on the banks where they discuss how private and the public sector manage their NPAs. The author states that the ratios of the NPAs tend to be lower because of the incorrect NPA records and its disclosure in the financial statements. They recommend that there should be a healthy relationship between the borrower and the banker. This is in the record as to maintain a good relationship and it will be helpful in the debt recovery.

Payal Ghaloth (2019) analyzed factors that contribute to high NPA and their impact on Indian banking operations and NPA. In public sector banks the non-performing assets are mostly due to administration disparities. NPAs affect a bank's profitability, liquidity, and solvency as per a study by Joseph& Prakash (2014). The authors also find that higher NPA shows bank inefficiency; lower NPA suggests better performance and fund management. This paper analyses NPA trends in the banking industry, factors that contribute to NPA growth, and suggestions for alleviating NPA's burden. This research paper also examines the causes of NPAs and the role of ad hoc banking authorities.

Bhardwaj and Chaudhary (2018) wrote an article that study causes that contribute to NPAs, the high impact of NPAs on India's scheduled commercial banks, and the recovery of NPAs through various channels. This study shows that NPA in public sector banks is high where large debtors are the difficulty with recovery as posed to the retail, and a tight policy should be enforced.

Neha Singh (2016) says that the growing number of NPAs affects the country's economic growth and strength. NPAs and a slow credit recovery may restrict banks further credit availability and slow economic growth according to a 2019 Business World article. Unprecedented NPAs have accumulated in Indian banks during FY-2016, mainly PSBs, and our economy's NPA management, credit recovery, and remedial measures must be evaluate din times when the asset performance has had a downfall and thus this gap is captured in this research paper.

Recovery Channels

Sahu and Majhi (2020) say the sole solution to NPA and its recovery is credit rating and recovery management. Along with this it also matters when the financial institution is starting the recovery process. J Khaitan (2016) noted that the government's efforts to put in place a robust bankruptcy framework and the RBI's regulatory initiatives have become important in resolving the NPA's problem and high and increasing percentage of overdue loans from banks, especially from PSBs.

Indian banking system NPA recovery channels have not been effective in the manner that they should have been. The increase in NPA provision continues to weigh on bank's profitability. In a study on SARFAESI Act impact in reducing NPAs in Indian Scheduled Commercial Banks, Panigraha and Chaudhury (2017) used a paired t-test to compare Net NPA before and after the SARFAESI Act and it found that SARFAESI reduced Indian banks' NPAs.

Apart from the recovery channels discussed here, there are other mechanisms of NPA recovery like asset & or corporate reconstructing loans, one time settlement schemes, recovery from private agency or camps etc. The researchers in this paper have focused are state recovery channels namely Lok Adalats, Debt Recovery Tribunals, SARFAESI and Insolvency & Bankruptcy Code.

II. Research Design and Methods

For the study data is collected from the Reserve Bank of India website and IBBI website issued during the period covering 2012 to 2021 regarding various recovery channels like Lok Adalats, DRTs, SARFAESI and IBC. The researchers have done an analysis of variance of the recovery amount involved and recovered with respect to NPAs by Scheduled Commercial Banks through three recovery channels by Anova Single Factor.

Research Objectives

The purpose of this research is

- To study the amount involved in the DRTs, Lok Adalats, SARFAESI and IBC recovery channels.

- To scrutinize amount recovered from cases with DRTs, Lok Adalats, SARFAESI and IBC recovery channels.
- To compare the amount recovered from DRTs, Lok Adalats, SARFAESI and IBC recovery channels.

Hypothesis

The following hypothesis was developed to test the research objective-

H0: There is no significant difference in the amount involved from the recovery channels.

H1: There is significant difference in the amount involved from the recovery channels.

H0: There is no significant difference in the amount recovered from the recovery channels.

H2: There is significant difference in the amount recovered from the recovery channels.

III. Results and Discussion

Amount Involved in Recovery Channels

To determine if there is a financial difference between the four different recovery routes, the researchers collected data from each one and the same is graphed below.

The preceding graph No.1 demonstrates that the sum involved in SARFAESI has growth from 2012 to 2015 when compared to DRTs and Lok Adalat. The amount involved in SARFAESI is in comparison with DRTs is more than double whereas in comparison with Lok Adalat it is times. From the year 2015-16 gradual decrease in the prominence of SARFAESI and the shift in increased cases can be seen in Lok Adalat. Since the introduction of the IBC in 2016, it is observed that this recovery channel has played a significant role in the recovery process. Because of pandemic, the cases have been frizzed since March 2020 due to moratoriums.

Graph: 1

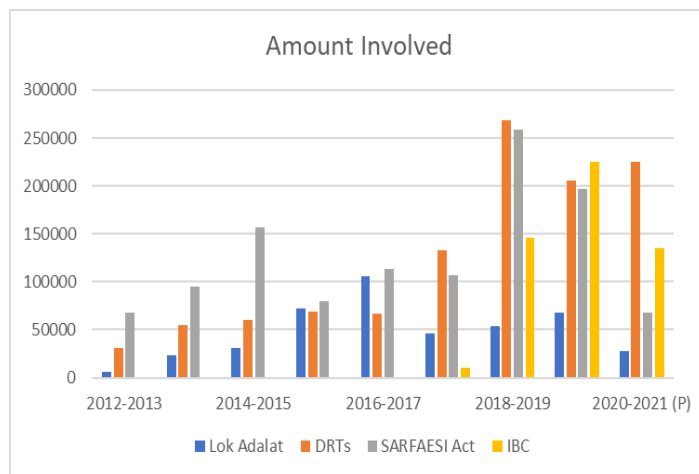


Table No.1 Amount Involved in Various Channel

Years	Lok Adalat	DRTs	SARFAESI	IBC
2012-2013	6,600	31,000	68,100	
2013-2014	23,200	55,300	95,300	
2014-2015	31,000	60,400	1,56,800	
2015-2016	72,000	69,300	80,100	
2016-2017	1,05,787	67,089	1,13,100	
2017-2018	45,700	1,33,300	1,06,700	9,900
2018-2019	53,484	2,68,413	2,58,642	1,45,457
2019-2020	67,801	2,05,032	1,96,582	2,24,935
2020-2021 (P)	28,084	2,25,361	67,510	1,35,139
SUM	4,33,656	11,15,195	11,42,834	5,15,431

Single factor ANOVA results to capture the difference in the NPA Amount Involved from the recovery channels are shown in the following table 2:

Table No. 2

SUMMARY

Groups	Count	Sum	Average	Variance		
Lok Adalat	9	433656	48184	9.20E+08		
DRTs	9	1115195	123910.6	7.68E+09		
SARFAESI Act	9	1142834	126981.6	4.23E+09		
IBC	4	515431	128857.8	7.90E+09		

ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	38822506920	3	1.29E+10	2.765187	0.061191	2.960351
Within Groups	1.26E+11	27	4.68E+09			
Total	1.65E+11	30				

Source: Researchers Own. Statistically significant at 5% level of significance.

The P value for the ANOVA table no 2 shown above is 0.06 which is greater than 0.05 at the 5% threshold of significance. The findings show that there has been no statistically significant change in the amount of non-performing assets (NPAs) participating in recovery channels throughout the years. Thus, the alternative hypothesis is rejected, and the null hypothesis is accepted demonstrating that there is no statistically significant difference between the recovery routes when it comes to the amounts involved. The reason pertaining to this lies in the mean values of the channels as the average amount involved in DRTs, SARFAESI and IBC are same.

Amount Recovered from Recovery Channels

Even if the amount involved or cases going to the recovery channels are the same, the amount recovered from the four recovery channels is critical and in order to evaluate this research objective two was drafted. As per Graph: 2 up until the establishment of the IBC, the cases were recovered primarily under the SARFAESAI Act. Since its inception, IBC has shown to be a game changer, with recovery rates improving to 44.7 percent despite the pandemic.

Until March 31, 2021, lenders got about 186 percent of the liquidation value of the assets of companies that were resolved by the Insolvency and Bankruptcy Board of India (IBBI), according to a report released by the Insolvency and Bankruptcy Board of India (IBBI). As reported by the Reserve Bank of India, recovery under the IBC was 46 percent higher in fiscal year 2020 than recovery through SARFAESI, DRTs, and Lok Adalat combined.

Graph No: 2

Amount Recovered

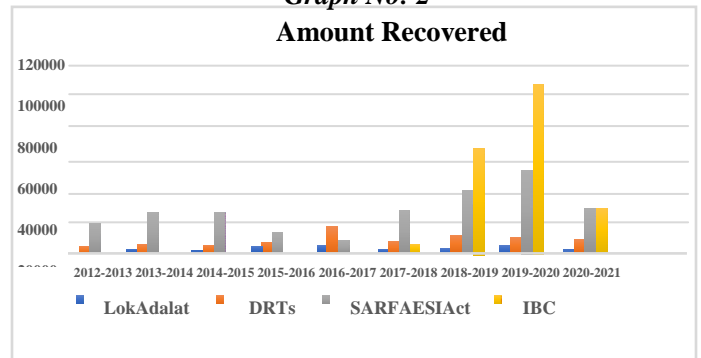


Table No.3 Amount Recovered in Various Channels

Years	Lok Adalat	DRTs	SARFAESI Act	IBC
2012-2013	400	4,400	18,500	
2013-2014	1,400	5,300	25,300	
2014-2015	1,000	4,200	25,600	
2015-2016	3,200	6,400	13,200	
2016-2017	3,803	16,393	7,758	
2017-2018	1,800	7,200	26,500	4,900
2018-2019	2,750	10,552	38,905	66,440
2019-2020	4,211	10,018	52,563	1,05,773
2020-2021 (P)	1,119	8,113	27,686	27,311
SUM	19,683	72,576	2,36,012	2,04,424

Single factor ANOVA to study significant difference in the NPA Amount Recovered from the recovery channels are shown in the following table 4:

Table No.4 Amount Recovered in Various Channels

<u>SUMMARY</u>						
Groups	Count	Sum	Average	Variance		
Lok Adalat	9	19683	2187	1820409		
DRTs	9	72576	8064	14861673		
SARFAESI ACT	9	236012	26223.56	1.79E+08		
IBC	4	204424	51106	1.97E+09		
<u>ANOVA</u>						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	8.11E+09	3	2.70E+09	9.750673	0.000157	2.960351
Within Groups	7.49E+09	27	2.77E+08			
Total	1.56E+10	30				

It is seen that the p value is less than 0.05 in the above ANOVA table no 4, at a significance level of 5%. So, the alternative hypothesis is accepted and the null hypothesis is rejected, proving that there is a statistically significant difference between the recovery channels in terms of the amounts recovered. Thus even though the cases going in the various recovery channels are the same; the amount recovered from NCL's IBC has been the most effective method for resolving NPAs as per the mean/ average value. SARFAESI is also not far behind and follows IBC for recovering the loss assets.

Comparison of amount recovered from different recovery channels

As the hypothesis that amount recovered from various recovery channels is different, the following table 5 captures the percentage of amount recovered:

Table No.5 Percentage of Number of Cases filed to Amount Recovered of Recovery Channel

Year	Lok Adalat	DRTs	SARFAESI Act	IBC
2012-2013	6.06%	14.19%	27.17%	
2013-2014	6.03%	9.58%	26.55%	
2014-2015	3.23%	6.95%	16.33%	
2015-2016	4.44%	9.24%	16.48%	
2016-2017	3.59%	24.43%	6.86%	
2017-2018	3.94%	5.40%	24.84%	49.49%
2018-2019	5.14%	3.93%	15.04%	45.68%
2019-2020	6.21%	4.89%	26.74%	47.02%
2020-2021	3.98%	3.60%	41.01%	20.21%

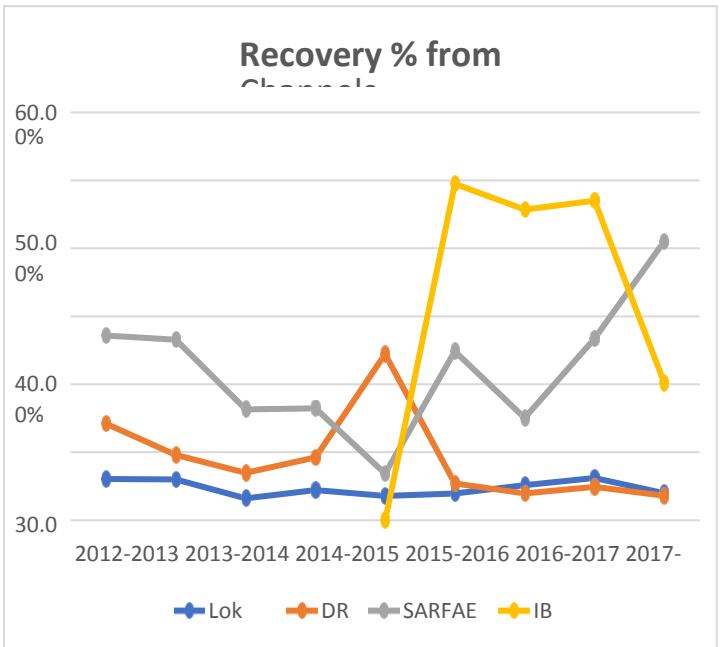
The trend line of the amount involved to the amount recovered from the period 2012-2021 of Lok Adalat may be seen in the graph 3. Lok Adalat after peaking in 2012, the proportion of recovery has been steadily dropping since then. Lok Adalat was a speedy, spot-resolution, and cost-effective affair for both the borrower and the lender but over the years this channel's recovery dropped.

For the purpose of recovering bank and financial institution loans, debt recovery tribunals (DRTs) were established. In contrast to the normal length of 5 to 7 years necessary in civil suits, DRT recovery in less than a year. A good recovery percent has been observed for DRT from the years 2014 to 2017-2018, which corresponds to the time period before the implementation of IBC. However, while the DRTs initially

performed admirably, their progress stalled as they became overburdened by the large number of cases that were brought to them.

Graph: 3

Securitization and reconstruction of financial assets as well as



enforcement of security rights by secured creditors are governed by the SARFAESI ACT, which was enacted in 2002. The SARFAESI's amount recovered from the period 2012-2021 is seen in the trend line. SARFAESI has made significant success compared to Lok Adalat and DRT over the past two years in terms of percentage recovery. As a model reform in Indian banking, the SARFAESI was enacted and this legislation has made tremendous progress is proof of that. Although the Indian Bankruptcy Code (IBC) has effectively charted a new era in the history of bankruptcy resolution in India and enhanced the fractal dimension of the country's business friendliness, it should only be seen as the first correct step in the right direction.

The chart illustrates the amount of money involved & recovered from the period 2012-2021 of IBC. Loan recovery rates were lowered in half to 20 percent in 2020-21 as a result of the pandemic's impact - and the embargo on taking cases to court was finally lifted at the end of the year. By the end of 2020, the estimated recovery rate through the Insolvency and Bankruptcy Code (IBC) mechanism would have reached 47 percent of the total cases.

IBC cases increased since its launch and the major reason for the same is the range of legal processes that forced banks to incur significant costs while also being inefficient and time-consuming in their pursuit of debt recovery. Several pieces of legislation were known to take advantage of the lending institutions.

IV. Conclusion

Lok Adalat (1987) could not be challenged in the courts of superior jurisdiction and also were unable to recover more than ten large integer amounts of non-performing assets. So, DRT were set (1993) but were less and were taking longer time to resolve cases. As DRT and DRAT centers were expanded, the rate of recovery of NPAs improved significantly under this channel. Bankers anticipated that the adoption of the SARFAESI Act (2002) would resolve existing issues in recovery and provide adequate strength by speeding up collections without the need for court intervention. The SARFAESI Act did played a significant impact in the amount recovered as our data shows that there is a significant difference between the mean score of cases and the quantity retrieved.

The recently implemented International Bankruptcy Code (IBC 2016) assisted in the prompt resolution of business defaults. It can be seen from the analysis that there has been a significant increase in the amount of money recovered through the IBC channel since the implementation. Despite the fact that the number decreased in fiscal year 2021 due to the government's respite for approximately six months as a result of the pandemic, as part of the moratorium period following the lockdown in fiscal year 2020.

IBC is advantageous in many ways as it protects the operational creditors and financial creditors and secondly as stated explicitly in the code, the code takes precedence over SARFAESI during the Insolvency Resolution Process (IRP). Famous IBC recovery cases include Essar Steel, Amtek Auto, Monnet Isapt, Binani Cement, Ruchi Soya etc. but inspite of the same, the recovery body has come into question when due to delays in settlement, low recovery rates, and an increase in liquidation cases. (Mint August 4).

Strategic Implications

It is necessary to conduct a thorough investigation in the root cause of the factors contributing towards the failure to repay the debts towards bank by the borrowers. K.V. Kamath was appointed as the chairman of a committee set up by the Reserve Bank of India to offer suggestions on the financial metrics that should be considered when developing resolution plan. Several financial institutions are taking as high as a 95 percent haircut, and more than 71 percent of the same cases are currently on hold for more than 180 days, according to the report of the standing committee. Banks need to enhance its current credit risk management practices towards large borrowers which are a pain point for most banks.

Further Study

The researchers further intend to study the recovery channels across developed economies and the recovery rates under the channels. The study would compare the process and

mechanisms in India and other countries and what recovery resolution mechanisms are better suitable for the economy.

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THE RISE AND FALL OF THE MOOC'S –WHAT'S IN STORE?

A. Latha* M.Kirupa Priyadarsini**

Massive open online courses in short referred as MOOC have grown exponentially in the last decade. While most of the institutions have made their presence in MOOC platforms, they face competition from tech giants in the recent years. However, dropout rates and lower completion rates is yet another major challenge faced in most of the MOOC Courses. The case typically analyzes the rise of the MOOC platforms, the reasons for low success rate. The case also explores the changing landscapes of the revenue model, retention and declining enrolments, the reasons for failure of MOOC courses from different research experiments. It requires exploration from the consumer motives, analyses business that are at crossroads and discuss on -.It builds around the marketing concepts specifically - Consumer Behavior, customer value and customer engagement and challenges faced by online learning industry (MOOC). The case has provided various stakeholders motive in running and learning a MOOC course. The case seeks suggestions for learner retention through learner engagement and delivering better value to the students in the field of online learning. Will MOOC become the learning model of the future, will MOOC's fade away?

Keywords: Digital Learning, Massive Open Online Course, learner engagement, Customer Behavior, Customer Value

JEL Classification Code - I21 Analysis of Education

THE RISE AND FALL OF THE MOOC'S – WHAT'S IN STORE?

With 220M students, 950 universities and 19.4K courses, 1670 micro credentials and 70-degree programs, Massive Open Online Courses'(MOOC's) have become the go to place for learning. Most of the world's leading institutions are looking MOOC as a forum to reach global audience. This not only enables them in having a presence in international market, chances for better brand visibility which leads to higher market share and profitability. Simple procedure, any time anywhere, nominal fees, self-paced learning, micro modules and ease of access are the few features which made MOOC very popular with in a very short span of time. Institutions offering online courses are investing almost (Fiona M. Hollands¹ and Devayani Tirthal 2014) \$38,980 to \$325,330 on producing MOOC courses. In spite of huge popularity and high enrollment, success rate becomes major challenge in Massive Open Online course.

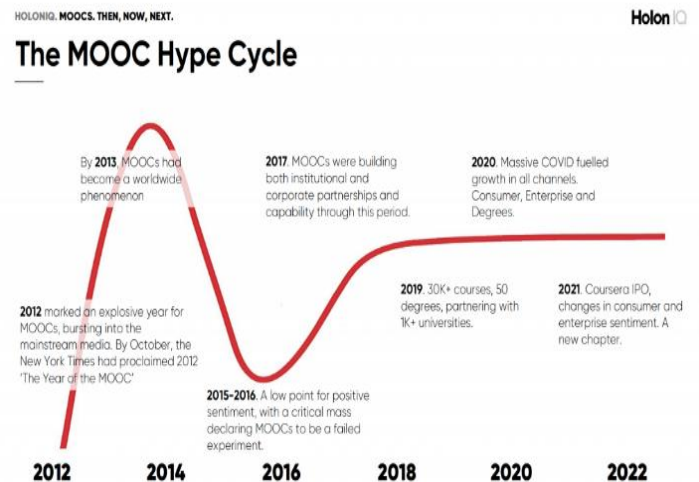
MOOC'S SCENARIO - GLOBAL AND INDIAN

The Global market for MOOC in 2020 is valued at USD 6845.4 million. The same is expected to reach USD 18925.18 million by 2026. The annual growth rate being 18.13%, during the period from 2021 to 2026. The availability of MOOCs is expanding rapidly however, the completion rates of the participants remain highly debated.

In its seventh year, the modern MOOC movement crossed 100 million learners in 2018, to reach a total of 101 million. Despite a slowdown in the growth rate of new users, MOOC platforms witnessed an increase in paying customers. More and more degrees are being offered through MOOC platforms, pointing toward what may ultimately be a lasting

revenue model. The MOOC players across the world are reported to be 59000

Figure 1



Source: <https://www.holoniq.com/notes/moocs-then-now-next/>

* **Assistant Professor KCT Business School, Kumaraguru College of Technology, Chinnavedampatti, Coimbatore, Tamil Nadu, India**

** **Associate Professor PSG Institute of Management PSG College of Technology Coimbatore, Tamil Nadu, India**

According to the US News World Report rankings, about 22 of the top 25 US universities are now offering free online courses. While India is trying to catch up to the global trend, and trying to make MOOC a part of the education systems with their platforms like SWAYAM and seven leading IITs, Infosys, TCS, Cognizant, and NASSCOM launching a bunch of free online courses that could potentially help 100,000-150,000 people a year to get a high-quality education and increase their chances of employment as reported by economic times.

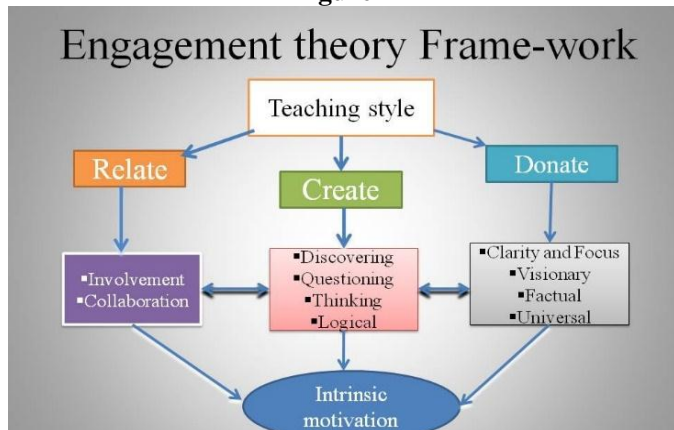
WHAT’S TICKING IN MOOC?

Xiong et al., (2015) Learners basic motive to enroll in MOOC course is one of the major factors which influence success on online learning. The motivation could be intrinsic where the consumer acquire satisfaction by actively participating in online course, or the motive could be extrinsic where the learner participates merely to get an extrinsic reward like course completion certificate or to fulfill the existing requirements of job demand, the motivation also could be social where the learner may take part in the course to build a network

THE FOUNDATIONS OF MOOC

The engagement theory proposed by Kearsley & Schneiderman, 1999 is one of the popular frame works for technology-based teaching and learning. The model emphasis application of three principles – Relate, Create and Donate to drive learner engagement in online learning. The first principle on relate refers to engaging students in learning activities by actively collaborating themselves with other peers using communication, social and planning skills. While the second principle on create refers to creation of purposeful project-based activities to focus team efforts on the application of the concepts and theories learned as a part of course. while the last principle on donate refers to applying the results of project-based learning activities to the real-world problems and indicates the importance of making useful contribution to the community.

Figure 2



Source: Kersley & Schneider man, 1999

COMMUNITY OF INQUIRY FRAMEWORK:

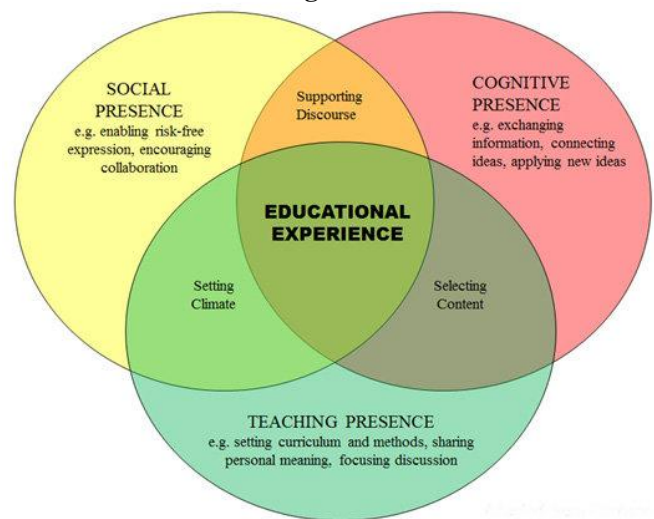
Garrison, Anderson, and Archer developed community of inquiry model to enhance educational experience in online learning environment. The model highlights the application of three elements including “Teaching Presence, Cognitive presence and social presence” in enhancing learning experience.

Social presence refers to the ability of a person to interact with the instructor and other participants of the class and interpersonal relationship by reflecting individual personalities with in the community.

Cognitive presence refers to ability of the system to motivate the learners to engage cognitively with course content and activities by carrying meaningful interaction with the team members.

Teaching presence refers to design of course content, facilitation of course discussion and providing direct instruction on resolving the issues. Teaching presence plays a significant role in determining the student satisfaction, perceived learning and sense of community. Garrison D.R (2007).

Figure 3



Source: Garrison, Anderson, and Archer (1999)

WHAT ADDS VALUE TO THE CUSTOMER IN DISTANCE EDUCATION (MARIAN PETRE AND MARY SHAW 2012)

Value proposition for any business implies the value that the organization promises to customer. All the elements that contribute value in an on-campus education need to be considered and handled on online education. Providing wide spread access to the information, possibility of providing more detailed and personalized feed back to the learners on course assignment, ability to provide opportunity for professional networking, Reputation of the institution offering course, type of sophisticated technology used, ability to interpret and take appropriate decision on the data generated

by the students while interacting with course resources, facilitating online communities and conversation between student and instructor, placement opportunities are the examples for the value elements which need to be considered in distance program

THE CHANGING REVENUE MODEL

Two of the biggest MOOC players namely Coursera and EdX had their Exit events. Coursera went from Zero to IPO. Coursera was listed on the NYSE and went public raising \$519 million. In spite of their growing revenue (Figure 6), their stock price has been steadily falling. In July 2021 edX was acquired by 2U for \$800 million in cash losing its non-profit status, the CEO Anant Agarwal was redesigned as Chief Open Education Officer at 2U. All MOOC platforms which were started as a free service, today have shifted gears to a “Free to Audit” Mode, so that they can generate revenues for verified certificates, and also generate revenue from corporate clientele. Likewise, the platforms were offering universities-based courses earlier, now they are less dependent on universities and have started allowing entry of corporate giants like Google, Microsoft, Amazon, and Facebook to offer courses online, further making their business revenue model strong. While Coursera, Edx and Future Learn had 31%, 16% and 38% tech giants offering courses in 2020, they have increased to 39%, 26% and 51% respectively in 2021.

Figure 5

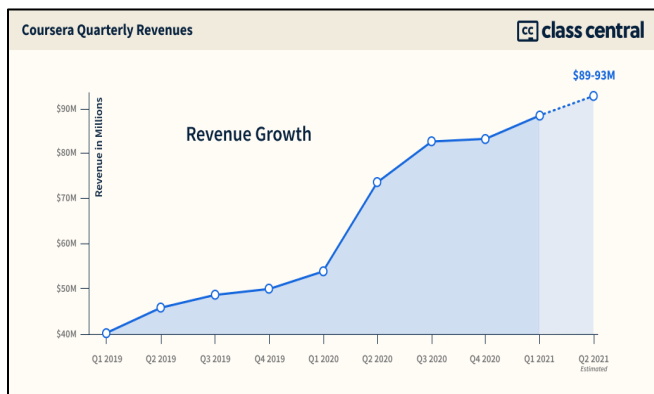
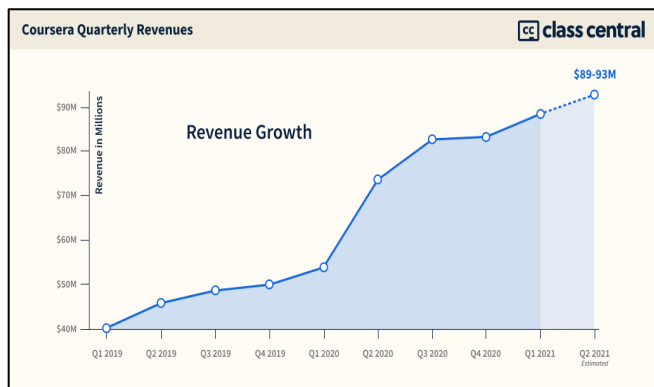


Figure 6



ARE MOOC'S FAILING?

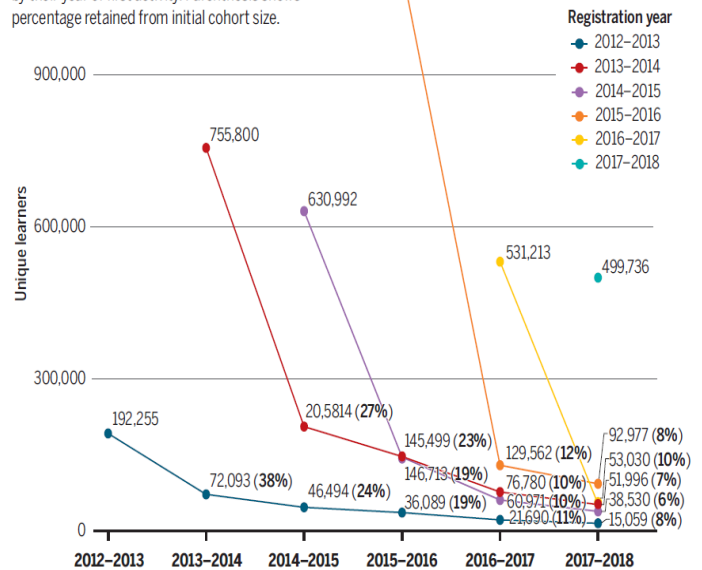
In spite of such a huge popularity and massive enrollment (Rowe et al, 2019), High dropout rate is the major issues faced in MOOC courses (Ma & Lee, 2019; Mubarak et al., 2021, Reich & Ruipérez-Valiente, 2019), and the completion rates are still 7% – 10% (Fu et al., 2021; Gütl et al., 2014) have never crossed 25% (Jordan, 2015).

According to Aldowah, H., Al-Samarraie, H., Alzahrani, A.I. et al. (2020) six core factors that directly influenced student dropout in MOOCs, were academic skills and abilities, prior experience, course design, feedback, social presence, and social support. Secondary factors such as interaction, course difficulty and time, commitment, motivation, and family/work circumstances were found to play a secondary role in relation to student dropout in MOOCs, (Rai & Chunrao, 2016) academic reviews states that Minimum amount of learning, lack of personal support and Human Intervention, Lack of motivation, and High level of difficulty, Un controlled environment are the major reasons for failures. A serious problem also surges with the low retention rates and decline in enrolments after the pandemic (Figure 7)

Figure 7

Consistently low retention and recent enrollment declines

Year-to-year enrollment of learner cohorts defined by their year of first activity. Parenthesis shows percentage retained from initial cohort size.



THE UNWAVERING ATTEMPTS TO RISE AGAIN

While world over there is lot of research that has gone in to theorize the reasons for reducing dropout rates and increase completion rates, one final work conducted in 2020- 22 by National academy of science in USA stands seminal. A team of nine prominent authors undertook a massive study the results of which are said to be frustrating, depressing and disheartening by a MIT Professor. In one of the largest field

experiments conducted for a span of two years in the higher education space covering 250000 MOOC learners, attempted to study the scope of interventions to improve completion rates.

The interventions included well thought out, planned and carefully executed interventions like Long term planning, Self-regulation by learner Prompts, social interventions – all tactics that have earlier shown to improve social behavior. All in Vain, none of the five interventions worked. Though some interventions boosted the student engagement for one or two weeks they did not aid in course completion. The learners that were part of the research were from big reputed service providers like Harvard, MIT, and Stanford. What is more interesting is that Machine learning algorithms to optimize the interventions, trying to attempt the right intervention for the appropriate student or course, the results were slightly but not significantly higher than estimated average completion rate. Are MOOC's here to stay, or will they eventually fade off, only time can tell.

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A BOOK REVIEW ON “MANAGEMENT OF BANKS: TEXT AND CASES”

Author: Deepak Tandon & Neelam Tandon

Publisher: Taxmann’s Publications Pvt. Ltd

Year of Publication: 2022

Price: Rs. 575

Samir Kumar*

This book combines the underlying principles of bank management with practical case studies to challenge the reader and to help them grow as finance professional and leaders in their respective areas. This book is also useful for bankers who wish to acquire up-to-date knowledge about key challenge areas and processes to compete with their peer banks. The book has been highly acclaimed by bankers, academia and corporate mentors & trainers.

The narrative of the book builds the perspective about Indian Banking System which traces the evolution of Indian banking, growth of commercial banks, regional rural banks and co-operative banking over last few decades. Different types of banking systems like universal banking, narrow banking and e-banking are discussed. The genesis of regulatory guidelines to strengthen Indian banking systems are analyzed. Riders for new entrants in the Banking Sector have been deliberated upon. It critically analyses the challenges and opportunities for Indian banks in next decade. The current topics like Non-Performing Assets, Capital Adequacy Requirements, Basel - III Capital Adequacy norms, Financial Inclusion, Priority Credit and Corporate Governance and Intricacies of Negotiable Instruments Act 1881, the back-bone of Indian banking, have been dealt thoroughly to provide a starting point for the readers about bank’s financial statements and asset-liability management. It explains the significance and inter-relation of different components of bank balance sheets like capital, assets, liabilities and their comparisons. The authors have highlighted the importance of asset-liability management in banks as this is one of the prime reasons for bank failures in the past. The book also deals with the profitability parameters in banks and for the reference; David Cole Profitability Model has been explained in detail with the help of a case study. The importance of non-interest income, return on assessment-interest margin and burden for banking companies have been highlighted.

Customer Relationship Management in Banks has been discussed in detail. It explains the different facets of customer

relationships and 7P’s of marketing with a case study drawn from ICICI bank, the largest private sector bank in India. The authors conclude the chapter emphasizing the role of BCSBI and Banking Ombudsman in improving customer service in banks. Closing Case of E-CRM at IndusInd Bank has been elaborated. Along with this, another major thrust area for banks, today, is Retail Banking. Growing Avenues in retail banking amidst technological advancements & products has been discussed upon. It starts with developing perspective and awareness about retail banking and insurance services and highlights various opportunities and challenges for effective retail banking. Leveraging technology and e-commerce for modern banking, the book covers various e-products like internet and mobile banking, ATMs, core banking solutions and challenges posed by technology. Green Banking and e-banking have been also added upon.

Risk Management and portfolio management in banking sector is a strategic operational focus for banks. Different Basel committees and different types of risk and their mitigation have been dealt in this book. The management of credit risk, market risk, interest rate risk and operational risks has been handled in an effective and easy to understand manner to groom the reader in managing risks in banking. Journey of risk Mitigation of Commercial Banks from Basel I to Basel III have been elaborated upon. Book discusses in detail the Non-performing Assets for better banking and different methods to handle it. Sale of NPA through securitization and role of asset recovery companies in reduction of NPAs gives an insight to the reader. Insolvency & Bankruptcy Code 2016 – Origin, Institutional Framework, Process, advantages & disadvantages of IBC Code and implications have been discussed. Latest Changes in The IBC

* **Ex- Deputy General Manger (Forex), SIDBI New Delhi**

Code 2016 and amendments find its way in the Chapter Pre-Packaged insolvency Resolution Process (PPIRP) also has been added and deliberated.

Finally, the book deals with International Banking-exports, imports, remittances and forex markets. The authors have successfully used case studies to explain the risk of unheeded exposures. Case studies on international banking Frauds –

PNB and Nirav Modi, Retail Banking -Canara Bank Turnaround, Risk management – Basel III provisions & Indian banking revisited find justifications to the newer avenues in banking. Thus, this book is a ‘must read’ for all practical bankers and finance students interested in mastering the working of commercial banks and designing suitable strategies for ever changing financial scenario.

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