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CALYX

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Aims and Scope of the Journal

Aim:

The primary aim of Calyx: Journal of Business Management is to provide a platform for the dissemination of high-quality research and insights related to various aspects of business management. The journal seeks to contribute to the advancement of knowledge in the field by publishing original research articles. Calyx aims to foster a dynamic exchange of ideas and promote a deeper understanding of the challenges, trends, and opportunities within the realm of business management.

Scope:

Calyx: Journal of Business Management covers a wide range of topics within the domain of business management. The scope of the journal includes, but is not limited to the following areas:

- Strategic Management: Exploration of strategies for achieving organizational goals, competitive advantage, and sustainable growth.
- Marketing and Consumer Behaviour: Research on market trends, consumer preferences, branding, digital marketing, and relationship management.
- Human Resource Management: Study of workforce development, talent acquisition, employee engagement, performance evaluation and organizational culture.
- Operations and Supply Chain Management: Analysis of efficient and effective production processes, logistics, inventory management and supply chain optimization.
- Financial Management: Examination of financial planning, investment decisions, risk management, corporate finance and financial reporting.
- Entrepreneurship and Innovation: Exploration of entrepreneurship, start-up strategies, innovation management and fostering a culture of creativity.
- International Business and technology: Investigation of global business trends, cross-cultural management, international trade and market entry strategies and technology.
- Ethics and Corporate Social Responsibility: Discussions on ethical considerations in business practices, corporate social responsibility and sustainable business models.
- Business Analytics and Technology: Analysis of data-driven decision-making, technology adoption, digital transformation and the role of big data in business management.

- Leadership and Organizational Behaviour: Study of leadership styles, organizational behaviour, team dynamics and change management.
- Business Law and Governance: Examination of legal aspects of business operations, corporate governance and regulatory compliance.

Calyx welcomes rigorous research, conceptual papers, empirical studies and interdisciplinary approaches that contribute to the understanding of contemporary business management challenges. The journal aims to serve as a valuable resource for academics, researchers, practitioners, policymakers and students interested in the field of business management.

In summary, Calyx: Journal of Business Management endeavors to be a forum for the exchange of innovative ideas, insights and best practices that advance the theory and practice of business management in today's rapidly evolving global business landscape.



Message from the Editor-in-Chief

Dear Readers,

It is with great pleasure and excitement that I address you as the Editor-in-Chief of Calyx - Journal of Business Management. As we navigate the ever-evolving landscape of business, it is essential that we recognize the importance of adaptation, innovation, and staying ahead of the curve. With this in mind, I envision Calyx to be a beacon of knowledge, a platform that fosters discussions, and a catalyst for transformative ideas in the field of business management.

Our journal seeks to showcase rigorous research and empirical studies that shed light on emerging trends, industry best practices and novel strategies. We invite contributions from scholars and experts who are pushing the boundaries of business management, exploring new dimensions and proposing innovative solutions to the challenges of our time.

To maintain the highest standards of scholarship and ensure the integrity of our content, all submissions to Calyx will undergo a rigorous peer-review process. Our esteemed editorial board, comprising distinguished scholars and industry leaders, will provide invaluable expertise and guidance to shape the direction of the journal.

Calyx is not just a journal; it is a community of forward-thinking individuals who are passionate about making a positive impact on the world of business. We aspire to foster meaningful conversations, encourage networking, and facilitate the exchange of ideas through various platforms, including conferences, webinars and interactive forums.

I invite you all to join us on this journey of exploration, discovery and transformation. Whether you are a seasoned researcher, a budding academic or a practitioner in the field, Calyx provides a platform for your voice to be heard and your ideas to be shared. Together, let us embrace change, challenge conventions and shape the future of business management.

With warm regards,

Subrata Pandey

Editor-in-Chief

Calyx - Journal of Business Management

Editorial Message:

Fostering Collaborative Excellence in Management Research

Dear Esteemed Researchers and Colleagues,

It is with great pleasure and excitement that we extend our warmest greetings to the vibrant and dynamic research community in the field of management. As the editorial team of Calyx: Journal of Business Management, a peer-reviewed Journal, we are honored to serve as the custodians of knowledge and the facilitators of scholarly exchange.

Today, more than ever, the world faces an array of complex challenges that demand innovative and well-informed solutions. Our collective efforts contribute to the transformation of industries, the enhancement of organizational efficiency, and the betterment of society as a whole. At the heart of this journal's mission lies a profound commitment to fostering collaborative excellence. We firmly believe that true breakthroughs and transformative discoveries are born at the crossroads of ideas, perspectives, and disciplines. Therefore, we encourage our research community to embrace diversity and inclusivity, inviting voices from all corners of the globe to enrich our collective knowledge. We aim to provide a platform that not only showcases cutting-edge research but also nurtures intellectual curiosity and ignites passionate debates. We understand that groundbreaking research often emerges from the seeds of curiosity, and we vow to cultivate an environment where curiosity thrives. Our commitment to rigor and integrity is unwavering. We uphold the highest ethical standards in research publication, ensuring that each study contributes to the advancement of the field genuinely. Furthermore, we encourage transparency and openness in sharing methodologies, data, and results, thus promoting a culture of trust and collaboration.

As we step into the future, we acknowledge that the research landscape is evolving rapidly. Technological advancements, societal shifts and global challenges demand that we adapt and innovate. Our journal is dedicated to embracing these changes while remaining anchored in the timeless pursuit of knowledge and excellence. We welcome your contributions with open arms, as they are essential to building a brighter and more inclusive future. Finally, to our esteemed readers, we express our gratitude for your unwavering support. Your intellectual curiosity and thirst for knowledge inspire us to continually raise the bar and provide the best possible content for your enrichment.

With warm regards,

Subhadip Chowdhury

Avick Kumer Dey

Editor

Calyx - Journal of Business Management



Message from Associate Editor: Special Issue

Dear Readers,

We are living in an era of constant change and innovation, where businesses face ever-evolving challenges and opportunities. As Associate Editor of Calyx - Journal of Business Management, I am delighted to welcome you to our esteemed publication — a platform designed to explore the dynamic landscape of business and management.

At Calyx Journal, we recognize the immense importance of staying ahead of the curve and adapting to the shifting paradigms of the business world. Our aim is to foster a culture of continuous learning and knowledge exchange, providing insights and perspectives that empower managers, entrepreneurs and scholars to navigate the complex realm of business successfully.

Calyx - Journal of Business Management serves as a catalyst for interdisciplinary collaboration, bringing together academics, practitioners and thought leaders from diverse backgrounds. We encourage scholarly research that not only pushes the boundaries of knowledge but also holds practical implications for the business community.

As Associate Editor, I am committed to maintaining the highest standards of rigor, quality and integrity in our publication. Our expert editorial team carefully evaluates each submission to ensure that it meets the criteria of originality, relevance and academic excellence.

I invite you, our esteemed readers, to explore the thought-provoking articles, research papers and case studies featured in our journal. Engage with the knowledge shared within these pages, challenge conventional wisdom, and contribute to the on-going discourse on business management. Together, let us embark on a journey of intellectual exploration, collaboration and advancement.

Thank you for joining us on this exciting quest for business excellence. Your support and engagement are invaluable as we work towards shaping a future of sustainable growth and prosperity.

Warm regards,

Dr. Mousami Chatterjee

Associate Editor

Special Issue

Calyx - Journal of Business Management

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Financial Performance Analysis of Select Listed NBFCs in India: A Study

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Abstract:

Non-Banking Financial Companies (NBFCs) are financial entities that provide banking services but do not meet the legal definition of a bank since they do not possess a bank license. An NBFC is a company registered under the Companies Act 1956 that makes loans and advances and purchases stocks, equities, debt, and other marketable securities issued by the government or a local authority, as well as leasing, hire purchase, insurance, and chit business. Non-Banking Financial Companies (NBFCs) have been identified as an important component of the Indian financial system. This sector witnessed a massive proliferation of institutions in the 1980s, and the industry's profile has changed dramatically over the years. NBFCs are effective in providing a variety of services. They were initially designed to meet the demands of savers and investors, NBFCs have evolved into entities capable of providing services comparable to banks. This paper attempts to empirically examine the performance of select listed NBFCs in India from 2012-13 to 2021-22. This study investigates and analyses the Current Ratio, Turnover Ratio and Profitability Ratio of the selected NBFCs. For the study, the companies have been selected based on their net sales.

From the study it is found that the Current Ratio of the selected companies has been increasing from time to time, Turnover Ratio has been increasing for some companies and on average for other companies, Profitability Ratio has also been increasing for most of the companies.

Keywords:

Non-Banking Financial Companies (NBFCs), Financial Performance, Listed NBFCs, Current Ratio, Turnover Ratio, Profitability Ratio.

1. Introduction

Definition: - NBFC or Non-Banking Finance Companies are those companies or Financial institutions that provide several banking services but they don't have any banking license.

Characteristics of NBFCs:

Some characteristics of NBFCs are given below:

- i. These institutions are registered under the Companies Act, 1956.
- ii. These entities act outside the regular banking system. That is why FCB or Financial Stability Board termed NBFCs as “shadow banks”.
- iii. In general, these institutions do not have any right to receive regular demand deposits from the public.
- iv. NBFC does not include institutions where the principal business is based on agricultural/ industrial activities for the purchase or sale of any immovable property / goods other than securities.

Activities of NBFCs:

The main activities of NBFCs are as below:

- a) Providing loans
- b) Acquiring govt. or private shares, debentures, stocks, bonds, securities, etc.
- c) Leasing
- d) Insurance
- e) Chit business
- f) Hire purchase

Types of NBFCs:

NBFCs can be classified in two ways:

1. Based on their activities.
2. Based on deposit acceptance.

They are discussed below:

1. Based on activities: -

Here we will classify NBFCs based on their nature of activities. 8 types of NBFCs are engaged with different types of activities, they are as follows:

- a. Asset Finance company
- b. Mortgage company
- c. Loan company

- d. Investment company
 - e. Microfinance company
 - f. Infrastructure Finance company
 - g. Housing Finance company
 - h. Core Investment company.
2. Based on deposits acceptance:

Here, we will classify NBFCs based on their right to accept deposits and they are as follows:-

- a) Deposit-accepting NBFCs: These types of NBFCs are allowed to accept deposits from the public for a minimum period of one year and a maximum period of 5 years. Unlike regular banks, they can't repay deposits to the depositors on demand.
- b) Non-deposit-accepting NBFCs: These kinds of NBFCs don't have any right to accept deposits from the public.

Background of NBFC:

In 1960 NBFCs were introduced as an alternative to the banking system of the country, for those individuals who wanted to save and invest their money, and their needs were not fulfilled by the existing banking sector.

In the beginning "Companies Act" was the regulator of NBFCs, but as the operations and activities of NBFCs were unique and complex, a separate mechanism was needed to regulate NBFCs. Hence, a new chapter "Chapter III-B" was included in the Reserve Bank of India Act, 1934 on 1st Dec, 1964 by the Reserve Bank Amendment Act, 1963. This new chapter gave limited authority to RBI to control deposit-accepting companies. Since then, RBI has introduced several norms to control NBFC sectors.

Later the Govt. of India assigns several committees to review the operations of NBFCs in India. They are mentioned below:

- i. James Raj Committee:

In 1970 Govt. asked the banking commission to exercise activities and functions of chit funds and NBFCs, so RBI formed a committee under the leadership of James S. Raj.

In 1974, this committee advised Parliament to ban prize cheat and legislate a bill to ascertain resemblance in the provisions of chit funds all over the country. With this recommendation, Parliament passed two acts: -

- a. Prize Cheats and Money Circulation Schemes (Banning) Act, 1978, and
- b. Chit Funds Act, 1982.

ii. Shah Committee:

From 1980 to 1990, in this decade NBFCs gained a large number of customers with the help of their customer-friendly activities. From 1981 to 1992, in these 12 years, the number of NBFCs increased from nearly 7,000 to around 30000 (i.e., increased by nearly 23000). That was the reason RBI felt that this industry should be regulated. RBI formed a committee in 1992 which was led by Mr. A.C. Shah, the former chairman of Bank of Baroda, to suggest regulation to control the industry.

Recommendations given by the committee included some important things like compulsory registration and some other important rules and regulations.

Differences between NBFCs and Banks:

Though NBFCs are alternatives to banks and are called 'shadow banks' there are certain differences between banks and NBFCs. They are stated below:

Basis of comparison	Bank	NBFC
Meaning	Bank is a financial institution that accepts deposits from the public with the intention of lending or investing.	Without a banking license, NBFCs are financial institutions that offer banking services.
Registration	Bank is registered under "Banking Regulation Act, 1949".	NBFC is registered under "Company's Act, 1956".
Demand deposit	Bank has the power to accept deposits.	NBFC has no power to accept deposits.
Foreign investment	Foreign investment is allowed up to some percentage and only for private sector banks. (Up to 74%)	Foreign investment is allowed up to 100%.
Reserve ratio maintenance	Mandatory.	Not-required.
Transaction services	Various transaction services like fund transfers, issuing traveler's cheques, overdraft facilities, etc. are provided by banks.	NBFCs do not provide any such transaction services.
Credit creation	Banks involved in credit creation.	NBFCs do not create credit.
ATM card	Banks can approve ATM cards.	NBFC has no authorization to issue ATM cards.
Deposit insurance	Available.	Not available
Appointment of key personnel	By the Ministry of Finance of India in collaboration with RBI.	By company management.



Listed NBFCs:

NBFCs have a huge role in the financial system of India. It fulfills the requirements of most individuals and micro, small & medium enterprises (MSMEs) by providing loans for the commencement of business, to maintain their working capital, for short-term requirements, to grow business, to install new machinery of advanced technologies, etc. In one sentence, NBFC helps MSMEs to start and enhance their business. On the other hand, NBFC provides insurance to individuals as well as business organizations to protect them from unexpected losses. As per the RBI Act, 1934 section 45-IA, every NBFC should obtain a registration certificate from the bank and should own a fund of Rs. 25 lakhs (since 1999 it is Rs. 2 crores) to carry on business as an NBFC. Though registration of NBFCs with RBI is mandatory there are some NBFCs that are regulated by some other regulators. These NBFCs are exempted from getting registered with RBI. Those NBFCs are: -

- a. Housing Finance Institutions: regulated by National Housing Bank.
- b. Venture capital fund companies, merchant banking companies, collective investment schemes (CIS), and stock broking: regulated by SEBI.
- c. Chit fund companies: regulated by the State government.
- d. Nidhi companies, mutual benefit companies: - regulated by MCA.
- e. Insurance companies: regulated by IRDA.

2. Literature Review:

Akansha Jain (2019) has stated that Non-Banking Financial Companies have expanded in number throughout the years, and their importance in the financial sector of India has increased dramatically. It has also been found that their contributions have enhanced India's GDP. She makes the observation that the liquidity issue is currently afflicting the non-banking financial enterprises of India. She has also examined the ups and downs of NBFCs in India and their influence on the Indian financial industry.

Vijaya Kittu Manda & P. Sai Rani (2019) points out that one-fifth of credit in India is being managed by NBFCs, so it is playing a vital role in the Indian economy. But currently the Indian NBFCs are going through some serious crises. This might lead the Indian economy to recession. So, govt. should handle these problems from time to time. Otherwise, it may turn into a global crisis.

Shanmuganandavadivel & Sasikala Devi (2018) have observed that Non-banking financial Corporations are an essential component of India's financial system. It has been facilitating an increasing share of resource flows to the business sector. They have also found that the asset quality of NBFCs has deteriorated in recent years, although it is still better than that of banks. In addition, NBFCs reported improved profitability and capital balances. The RBI is continually working to implement required regulatory modifications in the NBFC to maintain long-term financial stability.

Sunita Yadav (2017) has attempted to assess the profitability of selected NBFCs in India. Lic Housing Finance Limited, Indiabulls Home Loan, HDFC, Power Financing Corporation Limited, and Bajaj Finserv have been chosen for the research as the major non-banking financing companies in India. From the research, it has been found that the related companies' net profit ratios are increasing over the years, their return on investment and compound annual average growth rate based on profits is on average and their compound annual growth rate based on sales is negative.

Kshetrimayum Ranjan Singh (2014) focus on terms, evolution, development, growth, and supervision of NBFCs. He stated that NBFCs are fulfilling the scarcity of financial resources in any economy. In the organized sector, NBFCs are enjoying a more flexible structure than banks and their financial needs-fulfillment power is very much appreciable.

3. The objectives of the study:

The main objectives of the study are:

- To analyze the importance of NBFCs in the Indian financial sector.
- To understand the difference between the Bank and NBFCs.
- To analyze the financial performance of select Indian NBFCs based on the last 10 years' data.

4. Methodology:

The following study is mainly based on the secondary data available. Data are collected from reports published by RBI and some other reliable sources.

To analyze the financial performance of select Indian NBFCs the behavior of various financial ratios, for example, Current ratio, Turnover ratios (Fixed assets turnover ratio, Interest cover ratio), and Profitability ratios (Gross profit ratio, Net profit ratio) during the period under study have been used in this paper.

5. Findings of the study:

For this study 5 Indian NBFCs have been selected, they are mentioned below:

- i. Bajaj Finance Ltd.
- ii. Shriram Finance
- iii. Muthoot Finance Ltd.
- iv. Cholamandalam Investment and
- v. Mahindra & Mahindra.

Financial ratios of all the above-mentioned companies in tabular form and analysis of their financial performances using graphical presentations for the last 10 years are presented below:



5.1 Bajaj Finance Ltd.:

Table 1: Selected financial ratios of Bajaj Finance Ltd. for the last 10 years

Financial Year	Current Ratio	Turnover Ratio		Profitability Ratio	
		Fixed Assets Turnover Ratio	Interest Cover Ratio	Gross Profit Ratio	Net Profit Ratio
2012-13	2.68	14.03	1.71	28.66	19.02
2013-14	2.49	14.71	1.69	27.50	17.65
2014-15	2.91	16.64	1.60	25.70	16.57
2015-16	3.38	19.14	1.66	27.56	17.43
2016-17	3.16	19.80	1.73	28.92	18.39
2017-18	6.34	18.48	1.82	31.09	19.64
2018-19	12.99	18.63	2.00	35.48	22.36
2019-20	9.55	15.92	1.85	29.70	20.48
2020-21	11.94	11.64	1.71	24.06	16.80
2021-22	14.02	11.60	2.21	32.08	22.78

Source: Capitaline Databases

In the following paragraphs we are discussing the behavior of these financial ratios one by one.

5.1.1: Current Ratio

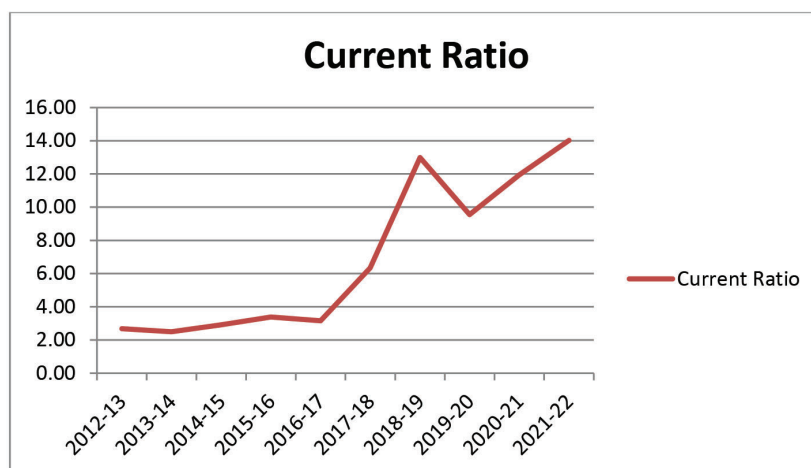


Figure 1: Current Ratio of Bajaj Finance Ltd. for the last 10 years

From the above graph, we can state that the Current Ratio of Bajaj Finance Ltd. shows a very healthy trend as a current ratio over 1.5 represents that a company's capital is sufficient to pay off short-term debt and it has increased tremendously for the last 10 years. From 2.68 in the financial year 2012-13, the Current Ratio of Bajaj Finance Ltd. has been increased to 14.02 in the financial year 2021-22, barring the period 2018-19 to 2019-20, when it declined from 12.99 to 9.55. But during the last two years of the entire period it jumped to 11.94 and 14.02 in 2020-21 and 2021-22. But we wonder about the logic behind maintaining a Current ratio of more than 3.00 for a period of as many as seven years from 2015-16 to 2021-22. Maintaining Current assets at more than 3.0 times the Current liability raises a question about the financial managerial acumen of the company, as it frittered away an opportunity of using excess of current assets over current liabilities for profitable investments like lending, playing a bigger role in the bond, stock, markets etc.

5.1.2 Fixed Assets Turnover Ratio

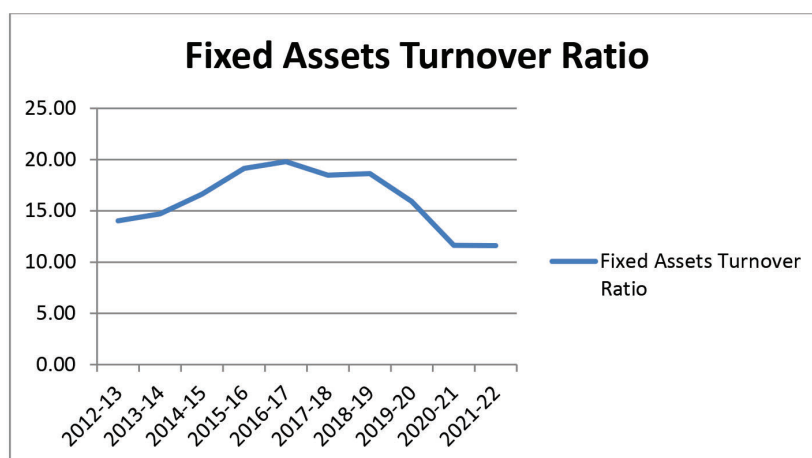


Figure 2: Fixed Assets Turnover Ratio of Bajaj Finance Ltd. for the last 10 years

High Fixed Asset Turnover Ratios imply that a corporation has successfully exploited fixed asset investments to produce revenues. From the above table and graph, we see that the Bajaj Finance Ltd. has maintained an attractive Fixed Assets Turnover Ratio of more than 10.00 for the entire period under study.



5.1.3: Interest Cover Ratio

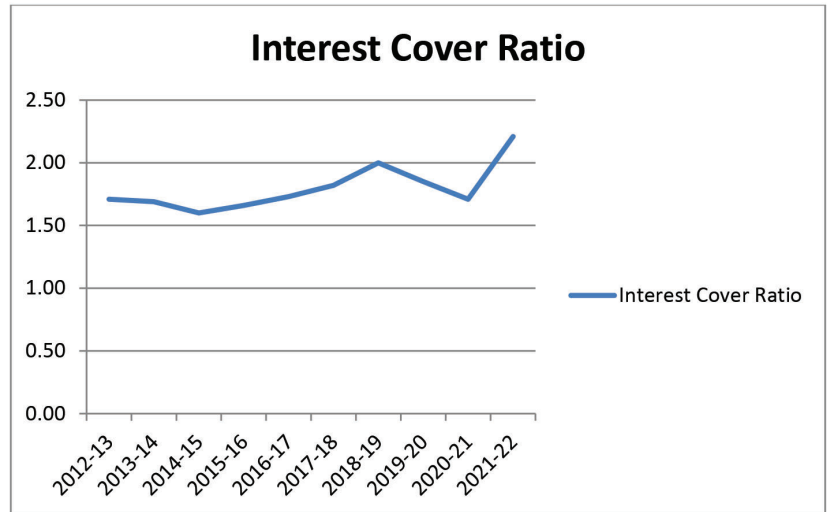


Figure 3: Interest Cover Ratio of Bajaj Finance Ltd. for the last 10 years

An Interest Cover Ratio is a metric that determines how readily an entity can pay interest on existing debts. An Interest Cover ratio of more than 1.5 is considered as good. Bajaj Finance Ltd. has maintained it for the last 10 years and also the Interest Cover Ratio of that entity has increased from 1.71 to 2.21 during the financial years 2012-13 to 2021-22.

5.1.4: Gross Profit Ratio

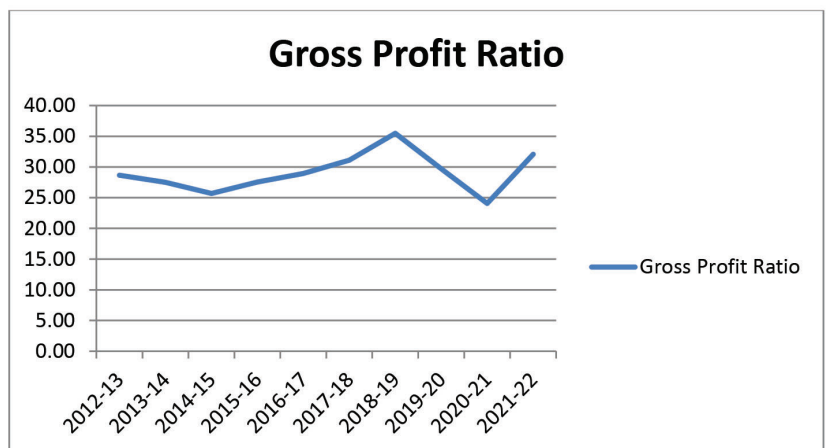


Figure 4: Gross Profit Ratio of Bajaj Finance Ltd. for the last 10 years

The Gross Profit Ratio which is defined as total gross profit divided by total net sales is a financial statistic that assesses a company's profitability and efficiency. Higher Gross Profit Ratios, in general, suggest more lucrative businesses. A high ratio indicates that the firm does not spend an excessive amount of its income on manufacturing expenditures such as salaries and raw materials. Bajaj Finance Ltd. has continuously maintained a higher Gross Profit Ratio of more than 24.00 at an increasing rate from 2012-13 to 2018-19, though at slightly lower rate, on an average during the last three years of the entire period.

5.1.5: Net Profit Ratio

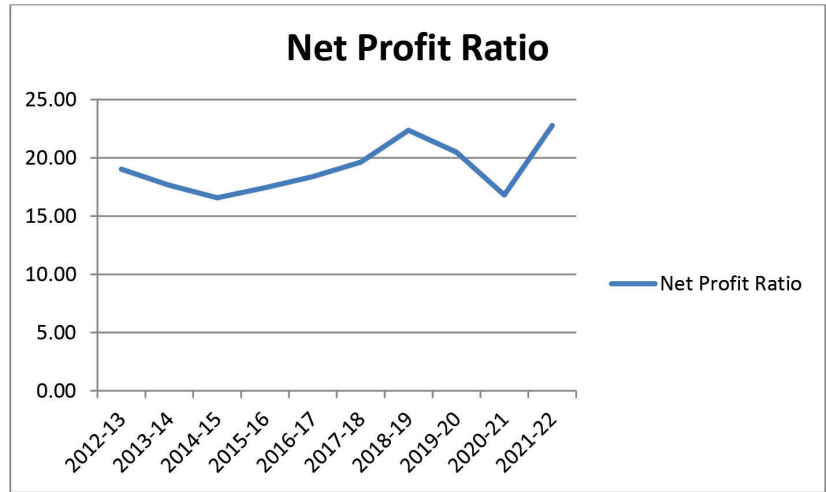


Figure 5: Net Profit Ratio of Bajaj Finance Ltd. for the last 10 years

The net profit margin, often known as the net margin, represents the ratio of a company's net income to its total sales. A corporation that has a greater net profit margin is more effective at transforming sales into revenue. From the table (table 1) and graph (Figure 5) presented above, we can infer that Bajaj Finance Ltd. has fostered a healthy Net Profit Ratio of more than 16 for the entire period under study. It has increased from 19.02 in 2012-13 to 22.78 in 2021-22. However, 'a' may be noted that the upward trend that started from 2013-14 to 2018-19 experienced a sudden break during 2019-20 and declined till 2021, though it went up the last year. This recovery shows that the company has strong potential to face the crisis and come up with a win.



5.2 Shriram Finance:

Table 2: Selected financial ratios of Shriram Finance for the last 10 years

Financial Year	Current Ratio	Turnover Ratio		Profitability Ratio	
		Fixed Assets Turnover Ratio	Interest Cover Ratio	Gross Profit Ratio	Net Profit Ratio
2012-13	1.30	48.90	1.70	31.15	20.87
2013-14	1.38	39.95	1.47	23.62	16.01
2014-15	1.50	32.68	1.35	18.44	11.20
2015-16	2.26	33.29	1.35	17.63	11.42
2016-17	2.88	32.98	1.37	18.09	11.61
2017-18	6.38	56.91	1.61	28.85	18.68
2018-19	22.86	90.51	1.50	24.56	16.48
2019-20	20.72	42.65	1.41	21.60	15.09
2020-21	37.30	30.70	1.36	19.59	14.26
2021-22	41.44	34.33	1.36	19.12	14.05

Source: Capitaline Databases

In the following paragraphs we are discussing the behavior of these financial ratios one by one.

5.2.1 Current Ratio

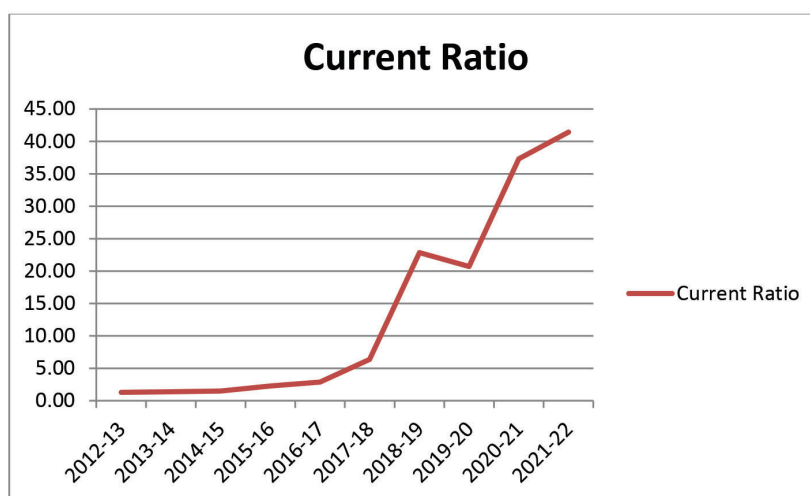


Figure 6: Current Ratio of Shriram Finance for the last 10 years

According to the graph above, the Current Ratio of Shriram Finance is very strong to pay down short-term debts, and it has grown dramatically over the previous ten years. The Current Ratio of this entity has improved from 1.30 in the fiscal year 2012-13 to 41.44 in the fiscal year 2021-22. The high Current ratio maintained by this company indicates the company’s strength to pay back the short term debts, but maintaining it at such a high level, ranging from 22.86 to 41.44 is highly questionable. Maintaining at a safe level of maximum 3 to 4 and investing the excess amount of current assets might have been a much wiser step to generate more project and at the same time and ensuring the company’s clients more financial securities, by vigorously participating in the loan, bond, debt and stock markets.

5.2.2 Current Ratio

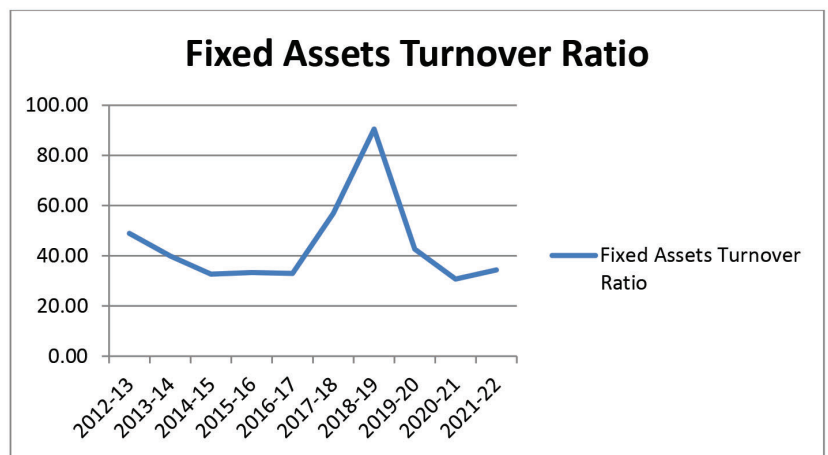


Figure 7: Fixed Assets Turnover Ratio of Shriram Finance for the last 10 years

According to the above table and graph, Shriram Finance has maintained an impressive Fixed Assets Turnover Ratio of more than 30 throughout the previous decade. That means the company has generated more than Rs. 30 in sales for every rupee of fixed assets it has owned.

5.2.3: Interest Cover Ratio

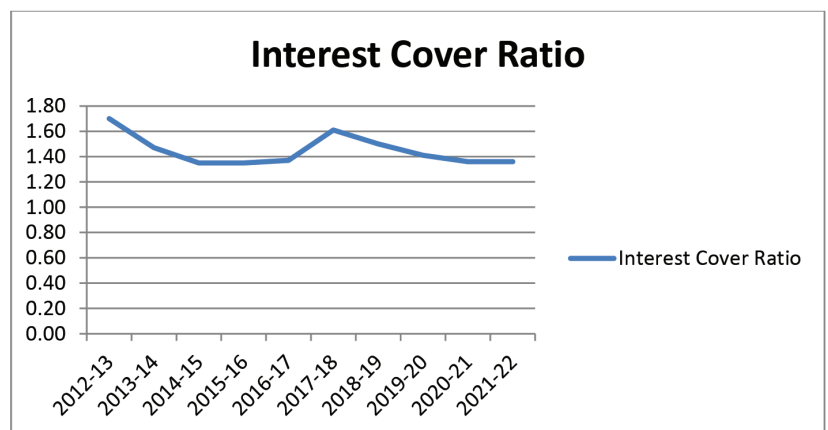


Figure 8: Interest Cover Ratio of Shriram Finance for the last 10 years



From the data provided in the above table, we find that Shriram Finance has maintained an Interest Cover Ratio of more than 1.3 for the last 10 years which is a quite good sign but the ratio has continuously fallen from 1.70 in the financial year 2012-13 to nearly 1.40 in the financial year 2014-15 and maintained stable at this level for four years from 2014-15 to 2017-18, followed by a rise for a brief period of one year and then during the last four years it continuously declined to 1.36. Necessary steps should be taken to arrest this declining trend because it may be a cause of concern to the lenders of fund.

5.2.4: Gross Profit Ratio

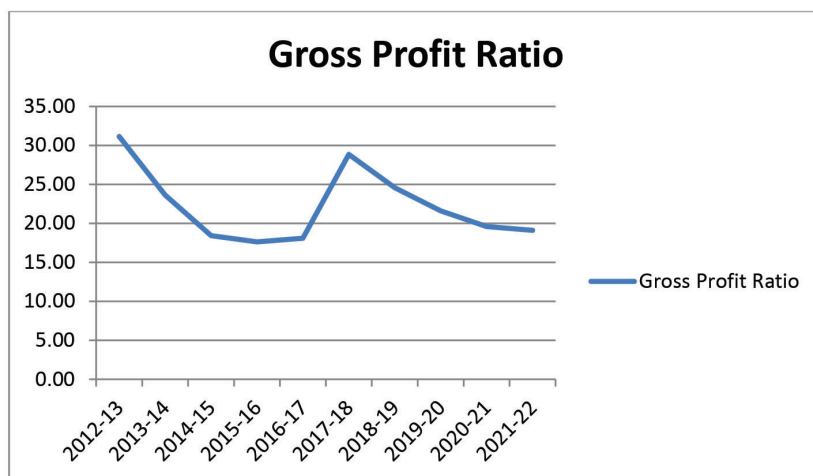


Figure 9: Gross Profit Ratio of Shriram Finance for the last 10 years

Shriram Finance has maintained a Gross Profit Ratio of more than 17 for the last 10 years which is quite satisfactory. The table and the graph show that the Gross Profit Ratio of this entity has decreased from 31.15 in 2012-13 to nearly 18.00 in 2014-15 and remained almost at that level for the next three years and then suddenly jumped to nearly 29.00 and then steadily declined in 2021-22 to nearly 19.00. This volatile nature of the gross profit ratio indicates the volatility in either gross profit or company's net sales or in both of them, which should be properly addressed.

5.2.5: Net Profit Ratio

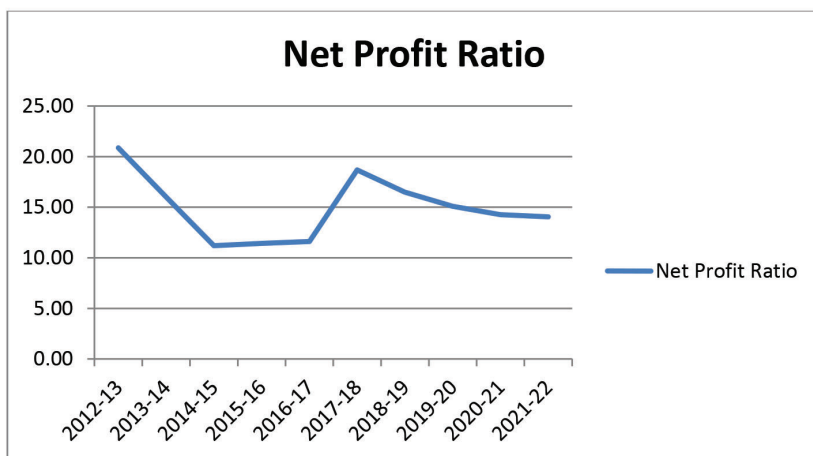


Figure 10: Net Profit Ratio of Shriram Finance for the last 10 years

From the table and graph presented above we can conclude that the average Net Profit Ratio of Shriram Finance for the last 10 years is quite satisfactory but our concern is about its volatile nature which stands in the way of appropriate policy making for making sufficient net profit ratio. Though the lowest level is well above 10, meaning company's net income is ten times its total sales, steps should be taken to reduce its volatility as much as possible to away the fear in the mind of its clients.

5.3 Muthoot Finance Ltd.:

Table 3: Selected financial ratios of Muthoot Finance Ltd for the last 10 years

Financial Year	Current Ratio	Turnover Ratio		Profitability Ratio	
		Fixed Assets Turnover Ratio	Interest Cover Ratio	Gross Profit Ratio	Net Profit Ratio
2012-13	1.67	13.65	1.54	28.90	18.64
2013-14	1.76	10.62	1.45	25.08	15.77
2014-15	1.89	8.37	1.49	25.71	15.50
2015-16	1.84	9.00	1.58	28.19	16.61
2016-17	1.65	10.11	1.84	34.27	20.53
2017-18	1.73	15.23	2.47	45.61	28.07
2018-19	1.94	26.33	2.37	45.33	28.66
2019-20	2.30	27.49	2.45	47.01	34.60
2020-21	2.91	27.06	2.35	47.83	35.20
2021-22	3.57	24.02	2.38	48.32	35.63

Source: Capitaline Databases

In the following paragraphs we are discussing the behavior of these financial ratios one by one.



5.3.1: Current Ratio

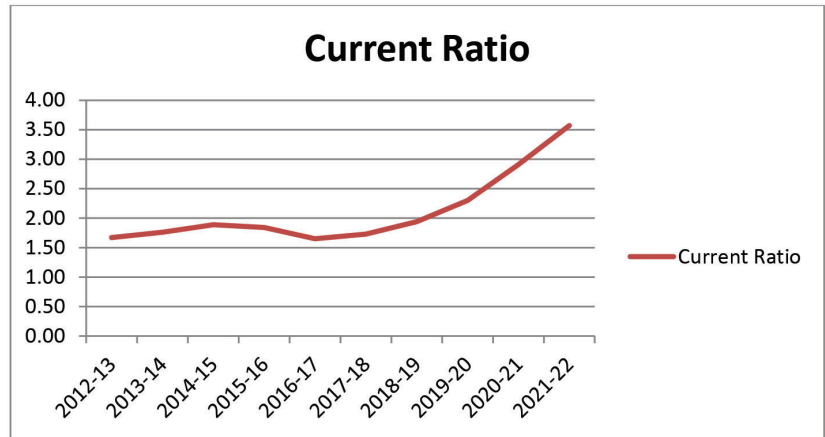


Figure 11: Current Ratio of Muthoot Finance Ltd. for the last 10 years

Since a Current Ratio over 1.5 indicates that a company's capital is sufficient to pay off short-term debts, we can conclude from the above graph that Muthoot Finance Ltd.'s Current Ratio is quite good and has grown over the past ten years at an increasing rate. It has grown on an average from 1.67 in the financial year 2012–2013 to 3.57 in the financial year 2021–2022.

5.3.2: Fixed Assets Turnover Ratio

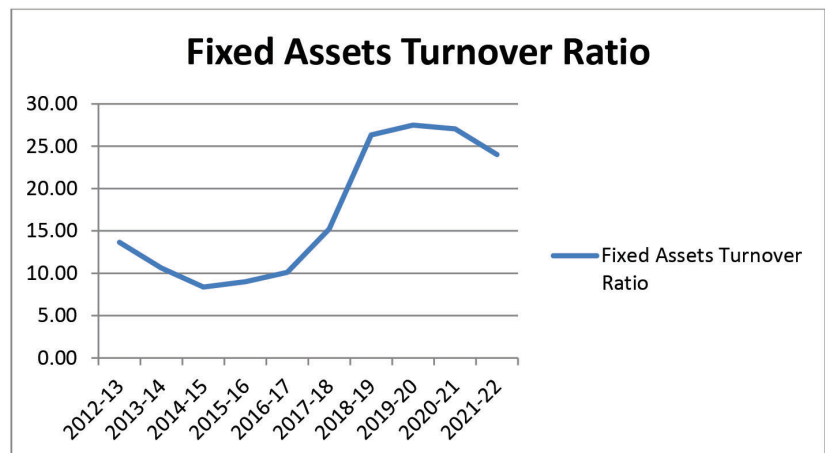


Figure 12: Fixed Assets Turnover Ratio of Muthoot Finance Ltd. for the last 10 years

Based on the above table and graph, we can conclude that Muthoot Finance Ltd. has maintained an attractive Fixed Assets Turnover Ratio for the last 10 years. We can also notice that the Fixed Assets Turnover ratio of the company has grown at an increasing rate from 13.65 in the financial year 2012-13 to nearly 26.00 in the financial year 2018-19, and since then this trend tapered off almost steadily to 2021-22, the end year of the period under study. The causes for a halt to this upward trend and its gradual decline needs attention of the persons concerned.

5.3.3: Interest Cover Ratio

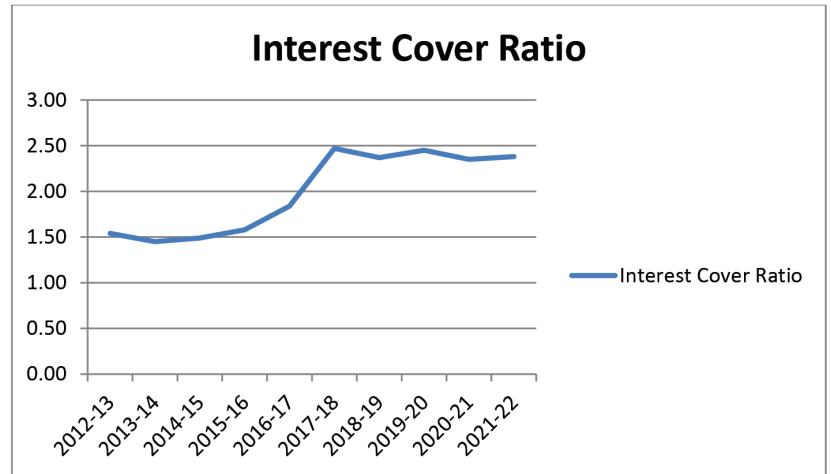


Figure 13: Interest Cover Ratio of Muthoot Finance Ltd. for the last 10 years

A higher Interest Cover Ratio indicates that a corporation is in a better financial position to meet its interest obligation. Based on the above table and graph, we can conclude that Muthoot Finance Ltd. has maintained an attractive Interest Cover Ratio during the previous decade at an increasing rate as it has increased for six years from 1.54 to 2.47 from 2012-13 to 2017-18, and more or less at a stable rate in the last four years. However, over-performance of this entity has been quite satisfactory during the entire period of 10 years.

5.3.4: Gross Profit Ratio

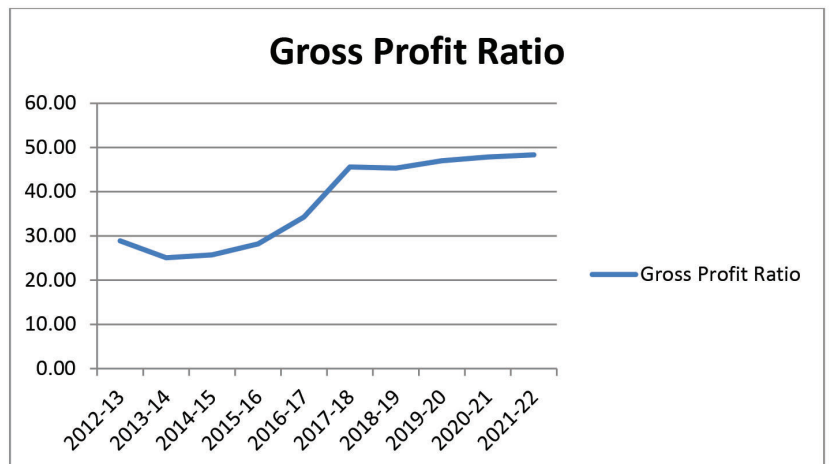


Figure 14: Gross Profit Ratio of Muthoot Finance Ltd. for the last 10 years

In general, higher Gross Profit Ratios indicate more profitable enterprises. A high ratio shows that the company does not spend a disproportionate share of its income on manufacturing expenses. For the previous ten years, Muthoot Finance Ltd. has consistently maintained a higher Gross Profit ratio of more than 25 at a growing pace as it has increased from 28.90 to 48.32 in the last decade.

5.3.5: Net Profit Ratio

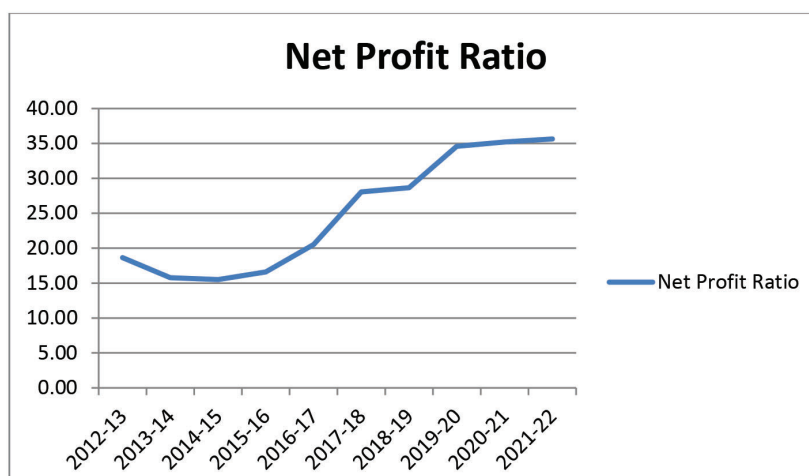


Figure 15: Net Profit Ratio of Muthoot Finance Ltd. for the last 10 years

Muthoot Finance Ltd has maintained an eye-catching Net Profit Ratio for the last decade. It has maintained a ratio of more than 15 for the period of 2012-13 to 2021-22 and also increased the Net Profit Ratio from 18.64 to 35.63 in this period of 10 years, this shows that the company is very much capable of converting sales into revenue at a high rate throughout the period.

5.4 Cholamandalam Investment:

Table 4: Selected financial ratios of Cholamandalam Investment for the last 10 years

Financial Year	Current Ratio	Turnover Ratio		Profitability Ratio	
		Fixed Assets Turnover Ratio	Interest Cover Ratio	Gross Profit Ratio	Net Profit Ratio
2012-13	1.74	19.99	1.32	18.42	11.97
2013-14	2.25	20.70	1.31	17.65	11.23
2014-15	2.58	20.76	1.34	18.74	11.95
2015-16	2.44	19.34	1.43	21.38	13.63
2016-17	2.46	16.70	1.50	24.41	15.29
2017-18	5.48	20.95	1.53	26.11	16.51
2018-19	7.19	29.05	1.51	26.57	16.84
2019-20	6.17	22.82	1.35	19.51	12.10
2020-21	7.32	18.81	1.45	22.31	15.78
2021-22	8.04	17.21	1.68	29.40	21.10

Source: Capitaline Databases

In the following paragraphs we are discussing the behavior of these financial ratios one by one.

5.4.1: Current Ratio

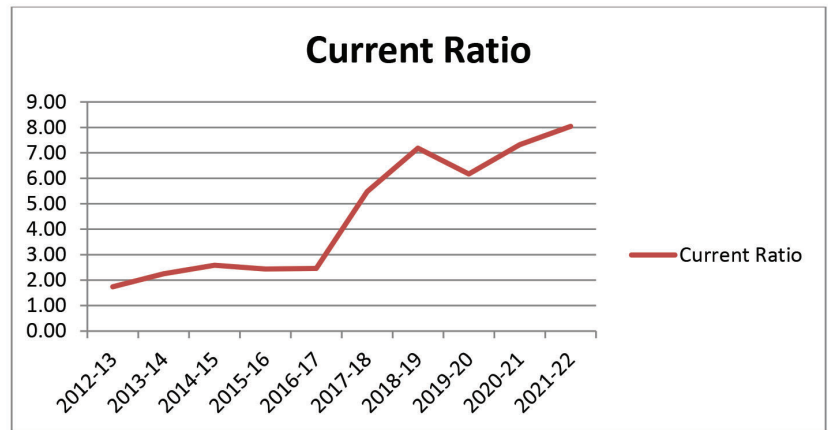


Figure 16: Current Ratio of Cholamandalam Investment for the last 10 years

From the above graph we see that the Current Ratio of Cholamandalam Investment is quite healthy. This indicates that this company has enough cash to pay off its short-term debts, and it has been rising steadily over the past ten years. The Current Ratio of Cholamandalam Investment rose from 1.74 in the fiscal year 2012–2013 to 8.04 in the fiscal year 2021–2022, of course with some breaks on the way to it, highest level of 8.04.

5.4.2: Fixed Assets Turnover Ratio

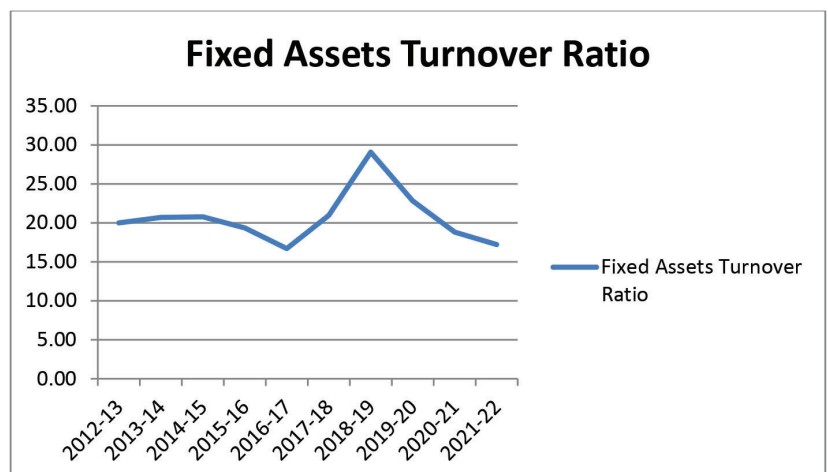


Figure 17: Fixed Assets Turnover Ratio of Cholamandalam Investment for the last 10 years

Cholamandalam Investment has maintained a very healthy Fixed Assets Turnover Ratio of more than 16 for the last decade. This is a positive sign for that organization as it implies that the entity has effectively used fixed-asset investments to generate income. But worry is about its versatile nature. The company's fixed



assets turnover ratio ultimately touched the level of 2012-13 in the year 2021-22. This falling trend during the year 2018-19 to 2021-22 is a cause of concern , because if it declines further the company will have to seriously think over its failure to change this downward trend.

5.4.3: Interest Cover Ratio

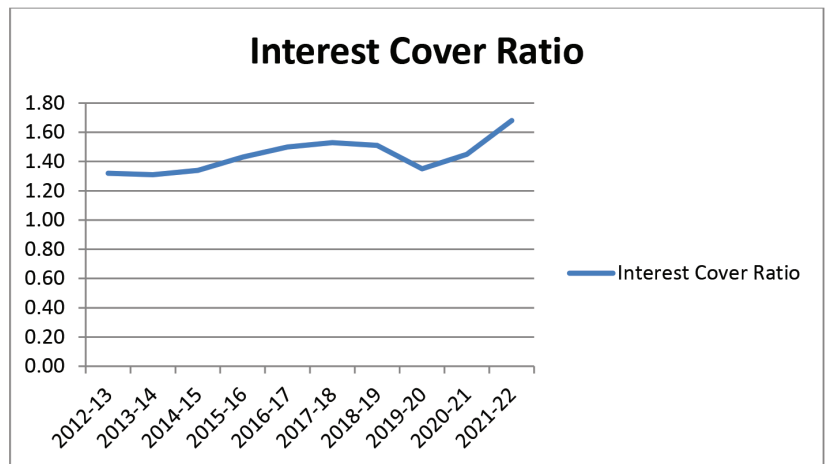


Figure 18: Interest Cover Ratio of Cholamandalam Investment for the last 10 years

The Interest Cover Ratio of Cholamandalam Investment has been quite good for the last 10 years as noticed from the above table. It was 1.32 in the financial year 2012-13 and increased to 1.68 in the financial year 2021-22, though with a minor fall in 2019-20.

5.4.4: Gross Profit Ratio

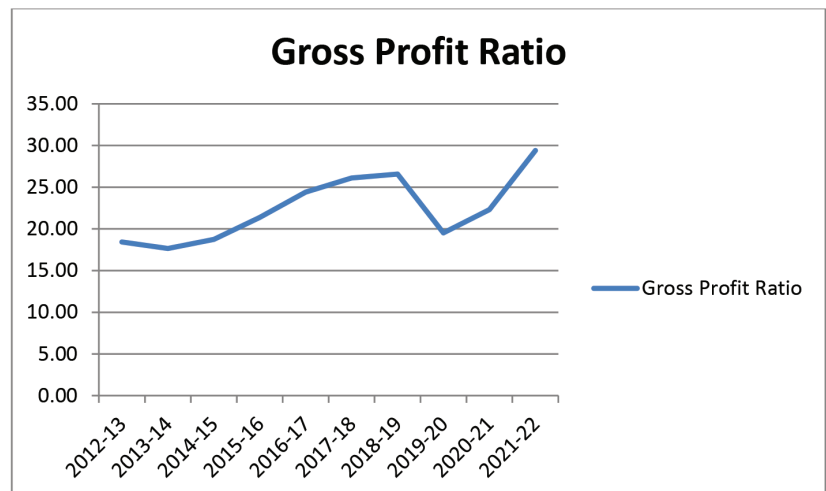


Figure 19: Gross Profit Ratio of Cholamandalam Investment for the last 10 years

The Gross Profit Ratio of Cholamandalam Investment for the last 10 years is quite impressive as it was 18.42

in the financial year 2012-13 and has increased to 29.40 in the financial year 2021-22, again with an unusual behavior during 2018-19 to 2019-20. But the encouraging thing is it has overturned this falling trend and shot back to the highest level in 2021-22.

5.4.5: Net Profit Ratio

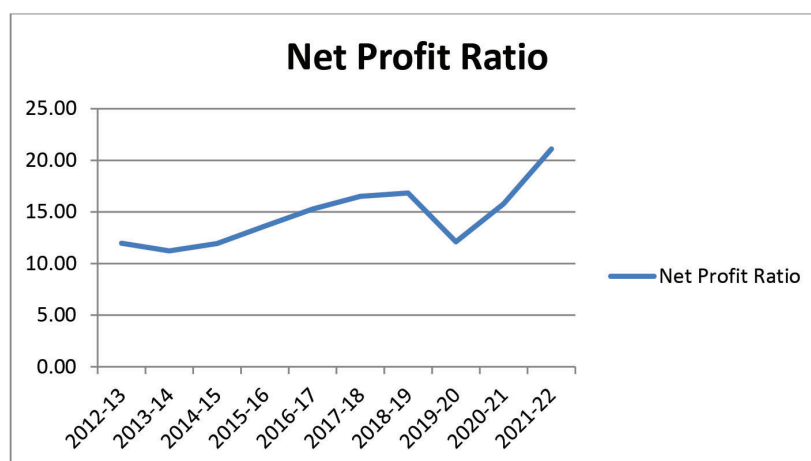


Figure 20: Net Profit Ratio of Cholamandalam Investment for the last 10 years

For the past decade, Cholamandalam Investment has upheld a captivating Net Profit Ratio. In the financial year 2012-13, the ratio was 11.97 and that has increased to 21.10 in the financial year 2021-22 i.e. the ratio has grown at a very good increasing rate. However, the behavioural pattern of net profit ratio, as we see in the graph, is almost the same as that of the GPR. Therefore the same observations on its behavior apply here also.

5.5 Mahindra & Mahindra:

Table 5: Selected financial ratios of Mahindra & Mahindra for the last 10 years

Financial Year	Current Ratio	Turnover Ratio		Profitability Ratio	
		Fixed Assets Turnover Ratio	Interest Cover Ratio	Gross Profit Ratio	Net Profit Ratio
2012-13	1.51	21.93	1.81	32.93	22.23
2013-14	1.53	24.33	1.64	28.07	18.20
2014-15	1.32	24.47	1.53	23.85	15.26
2015-16	1.19	22.76	1.43	19.25	11.93
2016-17	1.18	21.46	1.26	12.38	7.36
2017-18	2.77	20.60	1.55	24.68	15.31
2018-19	7.78	22.28	1.64	27.83	17.82
2019-20	9.99	16.78	1.30	14.52	9.02
2020-21	12.19	13.27	1.13	6.88	5.41
2021-22	13.90	10.93	1.35	14.84	10.03

Source: Capitaline Databases



In the following paragraphs we are discussing the behavior of these financial ratios one by one.

5.5.1: Current Ratio

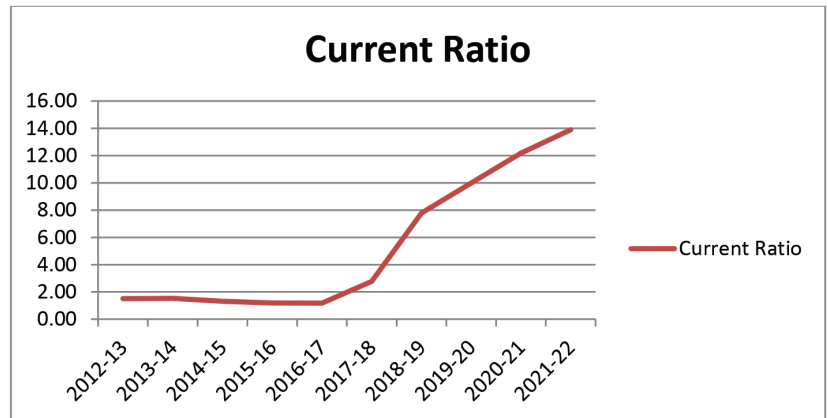


Figure 21: Current Ratio of Mahindra & Mahindra for the last 10 years

Mahindra & Mahindra's Current Ratio is extremely good as revealed from the above graph. In the first half of the decade, the Current Ratio was nearly fixed at slightly below 2, but has risen significantly over the next five years. The Current Ratio of Mahindra & Mahindra has grown from 1.51 in the financial year 2012-13 to 13.90 in the financial year 2021-22. Though it appears highly satisfactory from the company's liability point of view, increasing current ratio at an increasing rate for some years and then followed by increase at decreasing rate in the last few years does not indicate efficient management of this ratio by the company. While the value of 2 is compared as a safe value for current ratio, values of 3 to 14 simply exhibits the inefficiency in current asset and current liability management.

5.5.2: Fixed Assets Turnover Ratio

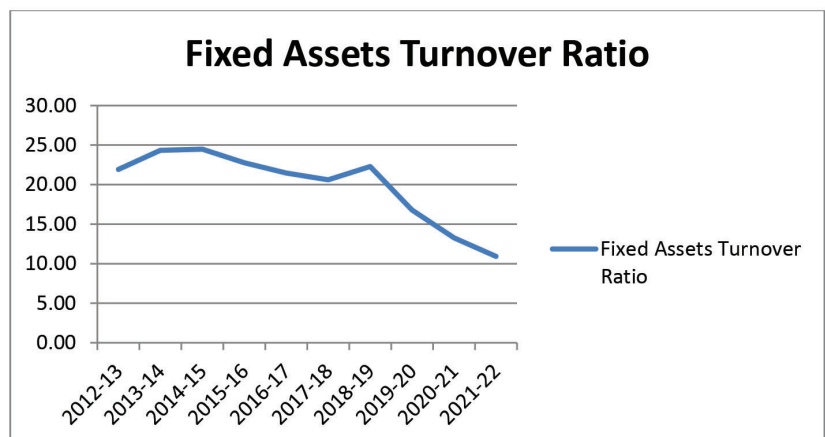


Figure 22: Fixed Assets Turnover Ratio of Mahindra & Mahindra for the last 10 years

Mahindra & Mahindra has maintained a good Fixed Assets Turnover Ratio of more than 10 for the last 10 years but the Fixed Assets Turnover Ratio of this company has continuously declined from 21.93 in 2012-13 to 10.93 in 2021-22. This clearly shows the failure of the company to make efficient use of fixed assets to earn impressive turnover during the last seven years as much as it earned during the first three years.

5.5.3: Interest Cover Ratio

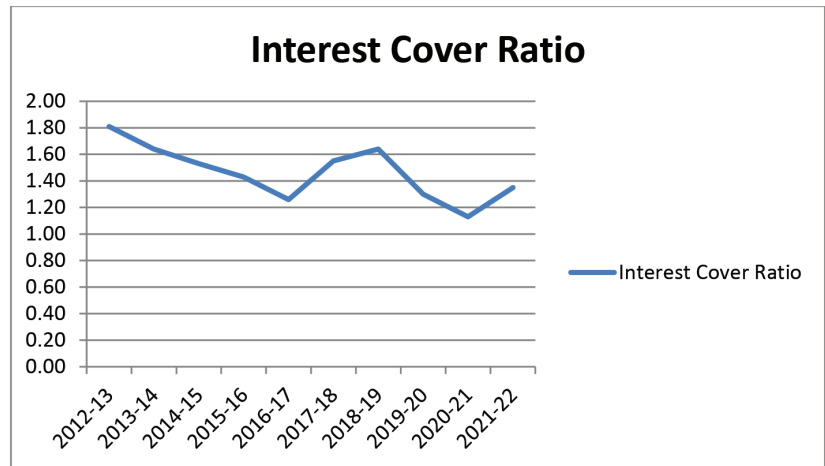


Figure 23: Interest Cover Ratio of Mahindra & Mahindra for the last 10 years

The data in the above table (table 5) and from the above graph we can conclude that Mahindra & Mahindra has maintained an Interest Cover Ratio of more than 1 for the last ten years but the ratio has been steadily declining from 1.81 in the fiscal year 2012-13 to 1.35 in the fiscal year 2021-22, which is not a good sign for the entity. The above graph further makes it clear that the company failed to cope with the volatile behavior of the interest cover ratio during the last six years of total 10 years under consideration. This does not augur well for a bright future of the company.

5.5.4: Gross Profit Ratio

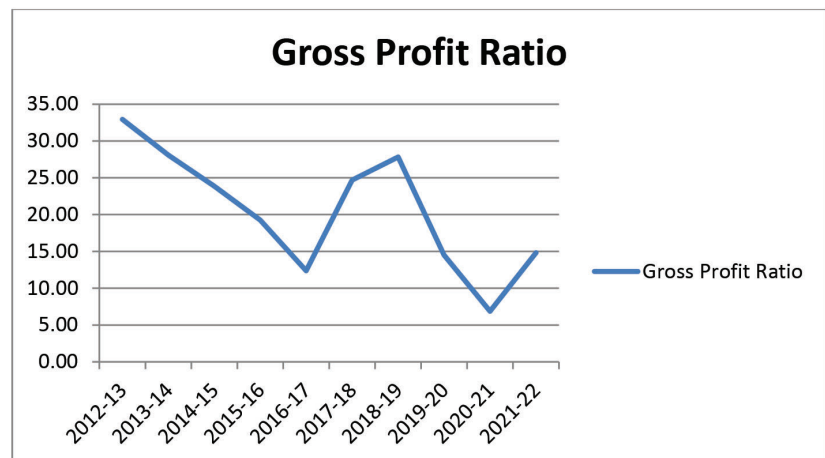


Figure 24: Gross Profit Ratio of Mahindra & Mahindra for the last 10 years



The Gross Profit Ratio of Mahindra & Mahindra has continuously been decreasing since the financial year 2012-13. It was 32.93 in 2012-13 but has decreased to 14.84 in the year 2021-22 which indicates the low efficiency of that entity for the last 10 years in suspect of management of the total net sales of its financial products along with costs to generate profit.

Figure 5.5.5: Net Profit Ratio

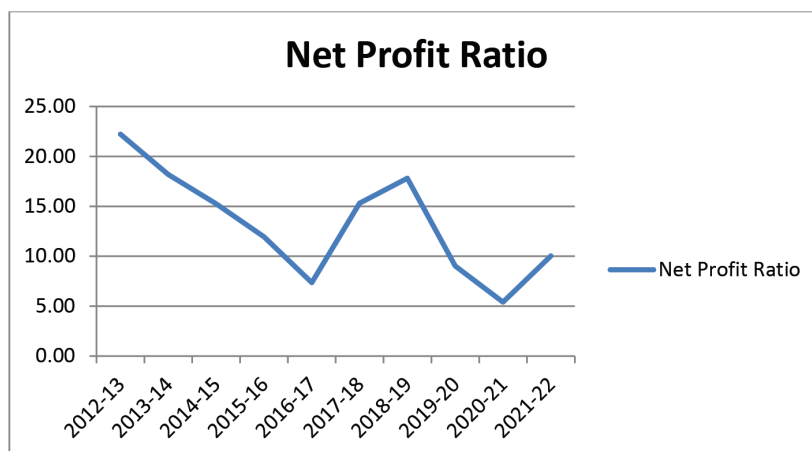


Figure 25: Net Profit Ratio of Mahindra & Mahindra for the last 10 years

The Average Net Profit Ratio of Mahindra & Mahindra for the last 10 years is a little bit satisfactory but the overall scenario is not at all pleasant for the organization as it has decreased to 10.03 in the financial year 2021-22 from 22.23 in the financial year 2012-13. The behavioral pattern of the NPR is same as that of GPR. Therefore through the definition of these differ, the main players in both of them remain the same. Therefore, our observations in this case are the same as in the case of GPR.

6. Conclusion:-

From the above analysis, we can notice a positive growth in the financial performance of all the select NBFCs except Mahindra & Mahindra. From the analysis of the behavior of some key financial ratios, we can state why the popularity of NBFCs in India is increasing day by day. NBFCs were launched as a supplement for the nation's banking system for those people whose demands in terms of saving and investing money were not satisfied by the present banking system. Over the years, NBFCs in India have earned the trust of their consumers through their performance. The Indian economy is passing through a period of rapid transformation and development. The COVID-19 pandemic had a significant impact on the Indian economy, and the financial sector has been recuperating over the past one year. NBFCs have played a significant role in the financial lending industry and have made significant contributions to the rapid development of the country's economy as the trends in the key financial ratios of the companies under study clearly show. There has been a compelling need to make finance more accessible because the government is supporting MSMEs and there

are more established businesses in India. In response to this, NBFCs have emerged as the new norm in the sector. They have excellent abilities to understand the unique needs of their customers and match them with appropriate financial services. Non-Banking Financial Corporations have aided in reforming the financial system of the country and restoring stability amid times of disturbance, particularly in the aftermath of the COVID-19 epidemic. They stimulate innovation and improve competition in the financial industry since they are subject to less strict and more varied rules than banks. The increasing need for advanced technologies has contributed to their spectacular ascent.

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Entrepreneurship Development Programs and its Development in India – A Study Based on Current Scenario of Entrepreneurs

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Abstract:

Entrepreneurship is one of ultimate destinations of employment prospect in India. Most of the country's entrepreneurship programs are vital for job creation and also given economic growth. In our country government has taken various initiatives to promote entrepreneurship. The aim of this article is to analyze the challenges and prospects of entrepreneurship programs in India.

Keywords:

Entrepreneur, Startup, Promotion, Training, Innovation

Abbreviation:

CSCM – Centrally Sponsored Centrally Managed

DGT – Directorate General of training

IIE – Indian Institute of Entrepreneurship

NIESBUD – National Institute for Entrepreneurship and Small Business Development

NSDC – National Skill Development Corporation

PMKVY – Pradhan Mantri Koushal Vikas Yojana

RPL – Recognition of Prior Learning

STT – Short Term Training

Introduction:

The word 'entrepreneurship' is found in Rig Veda era, where the metal handicraft and also other handicraft materials have manufactured in houses. During 18th century karkhanas (workshop) were established to build several handicraft materials by young men and women entrepreneurs. After independence government was more focused on entrepreneurship programs. During such programs several initiatives have been taken by the several organization as well as institutions. Micro, small and medium enterprises are set up to develop economic area also target to set up the next generation youth. Two important measures were taken by the government to encourage entrepreneurship and likely make implement

- 1) Entrepreneurship can set up a tempo of industrialization which is spread to different parts of India.
- 2) Entrepreneurship concentrated in a few dominant communities.

Entrepreneurship basically focuses on the individual who wishes to start or expand new business ideas in there on way. In the recent age entrepreneurship not only focused on individual growth it also focused on innovation where new area will be enlarged.

Literature Review:

As per Indira (2014) information and knowledge can build a valuable concept regarding entrepreneurship development in case of entrepreneurial skills. In this article an attempt has been made to analyze the role of entrepreneurship development program in the economic growth of a nation.

Muhammedsajjad and sathyapriya (2017) explained that entrepreneurship mark as a largest employment fields in India. In this paper an attempt has been made to highlight about the scope of entrepreneurship and also it focuses on entrepreneurship development in Indian economy.

"A study about entrepreneurship in India and its promotion under startup India scheme" (2019) highlighted on startup India concept. Entrepreneurship acts as a pillar for the economic prosperity of a nation and it also a major source of employment generation. The main concept of this paper is to study about entrepreneurship in development and also the promotion scheme of startup India.

Chandrasekar and Ramachandran (2021) observed that entrepreneurship development is not only a recent concept; it had been there since the Vedic age. Entrepreneurship development is considered to be an important tool of industrialization, development and also a solution to the problem of unemployment.



Objectives:

- 1) To explain the several entrepreneurship programs in India.
- 2) To categorize the challenges faced by the entrepreneurs in India.
- 3) To analyze the roles of different states in India on the view of entrepreneurship programs.

Methodology:

This study analyses challenges and prospects of entrepreneurship on the basis of the replies to the structured questionnaire set by the researcher and also several reports collected from different sources. The respondents of the questionnaire belongs to youth generation, entrepreneurs and small and medium business man. Total 10 questions have been considered in the questionnaire, which were mainly scheduled according to the objectives of our study. The variables are startup business (var-1), technology (var-2), human activities (var-3), financial resources (var-4), operations (var-5), women entrepreneurship (var-6), unemployment (var-7), placement (var-8), qualification (var-9) and entrepreneurship centre (var-10). The analytical techniques used in the analysis are factor analysis and various descriptive statistics. The results show the overall conditions of entrepreneurship programs and its impact on employment and also challenges facing entrepreneurs in India.

Startup Business And Its Future:

In last six years startups have increased remarkable numbers in India. From 2016-17 to 2021-22 the number of startups has increased over 14000. After the US and China, India has become third position get in startups. Day by day startup system enlightens a valuable growth in worldwide. Entrepreneurship is crucial because it brings job opportunity. In the current generation start up can change the way of employment opportunity. It is the one of the biggest sources of job creation sector in newly innovation era. It is not only open the job segment it also develop the economic growth of the nations. A series of high level initiative has been taken by the National Institute for Entrepreneurship and Small Business Development organization in training and also research section. Where job seekers can enroll himself to gather some knowledge about entrepreneurship. The key training activities conducted by the institutes include the following:-

- 1) Trainers training program on employability, entrepreneurship and life skills.
- 2) Certification program on strategic marketing for startups.
- 3) Online entrepreneurship development programs.
- 4) Agri-preneurship development program.
- 5) Business opportunities in several places.
- 6) Forestry-brand entrepreneurship development program.

Details of budget allocation by the Ministry of Skill Development and Entrepreneurship in India. (Rs. In Crore)

Table: 1 - 2016-17

Particulars	Budgeted		Actual Expenditure		% Of Actual Exp	
	Revenue	Capital	Revenue	Capital	Revenue	Capital
MSDE	1610	39.50	710.35	19.33	44.12	48.94
DGT	460	63.50	154.83	71.23	33.66	53.01

Source: Data Collected from Ministry of Skill Development and Entrepreneurship, Govt. of India.

Table: 2 -2017-18

Particulars	Budgeted		Actual Expenditure		% Of Actual Exp	
	Revenue	Capital	Revenue	Capital	Revenue	Capital
MSDE	1886.22	7.50	1286.22	6.14	68.19	81.87
DGT	422	40.50	193.08	3.00	48.27	7.41

Source: Data Collected from Ministry of Skill Development and Entrepreneurship, Govt. of India.

Table: 3 -2018-19

Particulars	Budgeted		Actual Expenditure		% Of Actual Exp	
	Revenue	Capital	Revenue	Capital	Revenue	Capital
MSDE	2383.03	3.00	1615.67	0.00	67.80	0
DGT	367.51	66.52	268.11	25.66	72.95	38.57

Source: Data Collected from Ministry of Skill Development and Entrepreneurship, Govt. of India.

**Table: 4 -2019-20**

Particulars	Budgeted		Actual Expenditure		% Of Actual Exp	
	Revenue	Capital	Revenue	Capital	Revenue	Capital
MSDE	2353.04	85.72	1969.55	74.80	83.70	87.26
DGT	92.28	0.00	62.75	0.00	68	00

Source: Data Collected from Ministry of Skill Development and Entrepreneurship, Govt. of India.

Table: 5 -2020-21

Particulars	Budgeted		Actual Expenditure		% Of Actual Exp	
	Revenue	Capital	Revenue	Capital	Revenue	Capital
MSDE	2070.82	47.04	1493	0.02	72.09	00
DGT	579.32	26.68	447.68	20.46	77.28	76.69

Source: Data Collected from Ministry of Skill Development and Entrepreneurship, Govt. of India.

From the above table (No- 1 to 5) it is observed that the budget allocation and actual expenditure is far differences from the year 2016-17 to 2020-21. In 2016-17 it has been observed that in MSDE section only 44.12 per cent revenue fund has been utilized and in capital purpose only 48.94 per cent fund has been utilized. In 2017-18, in MSDE section both revenue and capital expenditure have been used significantly, but in training purpose only 7.41 per cent capital fund has been used. In 2018-19, more than 65 per cent fund has been used in MSDE as well as DGT section, but in capital purpose there have been no fund used. In 2019-20, in MSDE section more than 80 per cent fund has been utilized in entrepreneurship program as well as training purpose. In 2020-21, there have been no fund utilized in MSDE capital purpose but other than this in revenue section there have been more than 70 per cent fund have been utilized. So from the above analysis it has been well observed that the utilization of fund in entrepreneurship program and training purpose are not used constantly.

Table: 6 -State-wise status of PMKVY-CSSM component:

State	2018-19		2019-20		2020-21 (Dec'2020)	
	Trained	Placed	Trained	Placed	Trained	Placed
Andhra Pradesh	12736	4030	32288	16004	42538	17424
Arunachal Pradesh	510	268	5232	865	12372	1455
Assam	5049	189	21277	6655	26295	8400
Bihar	709	0	5444	123	6946	187
Chaatisgarh	167	0	13735	3323	13366	3559
Delhi	59	0	7517	601	14128	1788
Gujarat	4523	16	31629	9022	42243	15241
Haryana	5401	603	29643	4432	30069	6511
Himachal Pradesh	3722	171	9616	1373	15235	2059
Jharkhand	0	0	5066	619	17807	1289
Karnataka	767	0	4761	16	14847	547
Kerala	0	0	11853	1700	16188	2628
Madhya Pradesh	23712	3369	25267	6491	30754	6824
Maharashtra	60	0	16860	1148	50151	2016
Manipur	1329	281	13741	2876	20168	8031
Meghalaya	90	0	2237	918	10667	1419
Mizoram	1573	0	7996	2803	11917	5388
Nagaland	220	0	4820	529	11554	1656
Odisha	1615	0	6022	243	7583	502
Punjab	1909	91	18657	5275	37412	11314
Rajasthan	1591	0	24394	143	27600	144
Tamil Nadu	17926	2115	38780	13312	43367	15110
Telangana	3481	785	16512	4983	22780	7088
Tripura	1911	0	11034	951	14352	2135
Uttar Pradesh	17491	187	78883	9556	79877	12321
Uttarakhand	12234	1951	24977	7131	46492	10718
West Bengal	550	0	21517	3413	26174	3984

Source: Data Collected from Ministry of Skill Development and Entrepreneurship, Govt. of India.

From the above table the state wise status of PMKVY-CSSM component has been discussed. Some of the states like Andhra Pradesh, Madhya Pradesh, Gujraat, Maharashtra, Rajasthan, Tamilnadu, Uttar Pradesh have well behind in the equation of trained and placed personnel. The table has been analyzed in last three years trained and placed personnel. None of the state has been crossed the mark of 50 percent placement in a single year.

Details of candidate trained and placed

Table: 7 -2018-19

Parameter	Candidate Trained	Candidate Placed	% of Candidate Placed
Short Term Training	2380437	1022139	42.94
Recognition of Prior Learning	1105540	-	
Special Project	79501	18639	23.44

Source: Data Collected from Ministry of Skill Development and Entrepreneurship, Govt. of India.

Table: 8 -2019-20

Parameter	Candidate Trained	Candidate Placed	% of Candidate Placed
Short Term Training	3297244	1477822	44.82
Recognition of Prior Learning	3278515	-	
Special Project	159092	45349	28.50

Source: Data Collected from Ministry of Skill Development and Entrepreneurship, Govt. of India.

Table: 9 -2020-21

Parameter	Candidate Trained	Candidate Placed	% of Candidate Placed
Short Term Training	4353089	1803685	41.43
Recognition of Prior Learning	6044032	-	
Special Project	192379	67994	35.34

Source: Data Collected from Ministry of Skill Development and Entrepreneurship, Govt. of India.

The details of overall candidate trained and placed have been analyzed in the above table, where the short term project and special project trained candidates have been placed. In case of short term project the percentage of candidate placed in last three year starting from 2018-19, 2019-20 and 2020-21 were 42.94, 44.82 and 41.43 respectively. But in case of special project the percentages have been brought down to 23.44, 28.50 and 35.34 respectively.

Table: 10 - Reliability Statistics

Cronbach's Alpha	N of Items
.773	10

Source: result calculated by the researcher.

To check the reliability of the data collected from the questionnaire we used Cronbach's alpha statistics. Before we start factor analysis, reliability checking of data is vital for the statistic. From the above table it has been seen that the value 0.773 (above 0.7 standard value) is considered fit for the statistics.

Table: 11 - KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.740
Bartlett's Test of SphericityApprox. Chi-Square	301.655
Df	21
Sig.	.000

Source: result calculated by the researcher.

KMO measure the sampling adequacy. The value KMO 0.740 which is greater than 0.5 which is satisfactory for factor analysis to proceed. Bartlett's test figure (0.00) has also indicated the significance of the data level.

Communalities value also gives the perfect picture of further factor analysis. The value 0.5 or higher value id fit for result. Eigen value also reflects the extracted factor. The value more than 1 is good for result and the variance also (56.849) show that the percentage is well above the target level. The first factor 40.264 percent and the second factor 16.584 percent are stated the good observation in factor table.

**Table: 12 Factor Analysis**

VARIABLES	FACTOR-1 (RESOURCES AND OPERATIONS PROBLEM)	FACTOR-2 (CATEGORICAL PROBLEMS)	COMMUNALITIES
Financial resources (Var-4)	0.807	-	0.653
Operations (Var-5)	0.648	-	0.467
Women entrepreneurs (Var-6)	0.724	-	0.536
Entrepreneurship centre (Var-10)	0.532	-	0.469
Unemployment (Var-7)	-	0.658	0.550
Placement (Var-8)	-	0.779	0.621
Qualification (Var-9)	-	0.826	0.685
Eigen Values	2.819	1.161	
% of Variance	40.264	16.584	56.849

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

Conclusion:

In India, entrepreneurship is not a new concept. In our country various business communities need entrepreneur for the development of the business. The preface of the government in India becomes tighter to promote entrepreneurship. In our survey it has been seen that entrepreneurs faced several problems such as financial, educational, unemployment etc. which we are analyzed in factor analysis table. Variable-4 indicated the financial problem by the respondent, whereas variable-8 represent the placement response from the respondent and variable-9 indicated the educational situation among the respondents, such above problems are coming from the grass root levels. In India government jobs should be the primary carrier objectives for most of the people. But the government has to limit for those government jobs. In current scenario the several government sections promote new entrepreneurship like start up business. In last couple of years government also focus on women entrepreneurship. In the last three years it has been focused that the percentage of placement is too short compared to the percentage of candidate enrolled in entrepreneurship programs.

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Personalization in Digital Marketing across India: A Literature Review

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Abstract

Businesses have discovered a new marketing tactic known as personalized marketing in the market where there are several client types and satisfaction levels. Digital marketing personalization entails the use of client information to produce more pertinent and customized experiences. Ads and marketing communications can be directed at particular client groups depending on their interests, demographics, and behavior. It has developed into a crucial component of marketing in order to attract and keep customers. It's crucial for businesses to show their patrons that they cherish and honor their patrons if they want to win their loyalty. Customers feel like individuals thanks to personalization, which fosters client loyalty. The use of personalization in digital marketing has grown-up expressively over the previous few years, and one of the factors contributing to this development is COVID-19.

Keywords

Personalization, Digital-Marketing, COVID-19, Customer, Individualism.

1. Introduction

Personalization Marketing has its roots in the initial days of direct Mail Marketing. With the advent of Digital Marketing, Personalization became even more powerful. In the initial days of Email Marketing, businesses used Personalization techniques. In the 1990s, the rise of e-commerce gave businesses a new way to personalize their Marketing efforts. By tracking customer behavior and using data analytics, businesses were able to offer personalized product recommendations and tailored promotions to individual customers. The

mid-2000s saw the emergence of behavioral targeting, this made it possible for companies to advertise to customers based on their search and browsing histories. Real-time Personalization and predictive Personalization, two more advanced types of Personalization, were made possible by this technology.

Today, Personalization marketing has become a critical component of many businesses' marketing strategies. Businesses can now provide highly personalized and pertinent experiences to their customers across various channels, including email, social media, and websites, thanks to advances in of channels, email, social media, and websites, thanks to advances in the fields of AI and machine learning techniques.

As Personalization continues to evolve, it is probable that industries will remain to find new ways to use data and technology to deliver more relevant and engaging experiences to their customers.

About Personalization

Personalized Marketing is a new Marketing technique that is gaining popularity in the digital age. Digital Marketing Personalization entails the use of client information to produce more pertinent and customized experiences. This may entail focusing advertisements and marketing messaging on certain customer categories according to their interests, demographics, and behavior. The high-speed internet and technology made it possible for the companies to approach its customers and collect customer data.

About Digital Marketing

The promotion of brands via the internet and other digital communication channels is known as digital marketing, sometimes known as online marketing. This comprises text and multimedia messages as well as email, social media, and web-based advertising as a marketing channel. In essence, a marketing effort is considered to be digital marketing if it uses digital communication.

“It is difficult for one company to keep its clients since consumers have access to a wide range of brand options if they are displeased with a certain brand because there are many competitors in the market and they can be easily accessible. Therefore, in order for marketing to be successful and for the company to be the obvious choice, businesses need to understand how consumer online behavior works in order to build interactions that enable them to compete in the market” (Fahy & Jobber, 2015). With personalized marketing, clients experience a logic of individuality, a logic of importance to the business, and a sense that every rupee they spend on a given product is worthwhile. This is possible because companies are continuously emphasizing on customer value and satisfaction. Businesses must gather and analyze evidence about their customers through a diversity of channels, including website analytics, social media, and email marketing, in directive to establish customer groups and target their marketing efforts.



2. Statement Of The Problem

The persistence of this study is to discuss the customer's perspective related to personalization in digital marketing across India specifically during and after the COVID-19 period.

3. Review Of Existing Literature

Ramnath K. Chellappa and Raymond G. Sin (2005), study examined to establish a simple model of the Personalization vs privacy dilemma for users. This study used primary data of five popular online industry categories: Personal Computers, Automobiles, Apparel, Financial Services, and Travel Services with 243 Valid Responses of Consumers. Gender, Education was not considered in this study. They suggested that e-retailers can improve customer trust through trust-building initiatives. Individual-specific Personalization can be meaningfully more luxurious than group Personalization. Customers are more concerned about privacy while engaging with a financial services website.

Junyeon Moon, Doren Chadee and Surinder Tikoo (2010) studied the consumer's propensity to purchase personalized goods in an online selling scenario. It develops and examines three hypotheses on the effects of product type, price premiums, and national cultural factors on purchase intention. According to the findings, individualism is the only aspect of culture that significantly influences consumers' intent to buy. Additionally, consumers are more likely to purchase personalized search items than personalized experience products, and up to a certain point, price premiums have little effect on customers' intentions to purchase personalized products. The study offers crucial conclusions and recommendations for online marketers who offer personalization.

Farhod P. Karimov and Malaika Brengman (2011), their paper investigated how social media cues affect e-commerce websites and how users' trust, loyalty, and purchasing choices are impacted. This study conducts its analysis utilizing primary methodology. Avatars, recommendation engines, and video streams are just a few of the several social media indicators that the authors discover after analyzing 210 top B2C e-commerce websites. Although many e-retailers use a variety of social media cues, the survey reveals that more sophisticated social media capabilities have not yet gained widespread adoption. The study also demonstrates that social media feature use varies according on the monetary and symbolic worth of the goods supplied by online retailers. The study's overall conclusion is that social media cues are crucial for building social presence and improving customer experience, and that e-retailers must implement more sophisticated social media features to meet customer expectations.

Sriram Thirumalai and Kingshuk K. Sinha (2013) main aspire of this paper was to find the impact of technology-enabled Personalization strategies on customer loyalty in online retailing. The study identifies two types of Personalization strategies - transaction Personalization and decision Personalization - and examines their effectiveness based on the operating characteristics of the retailer. Results show that while transac-

tion Personalization is generally beneficial in improving customer loyalty, decision Personalization is self-selected and dependent on idiosyncratic characteristics of the retailer. Retailers with large-scale operations, greater product variety, and higher customer satisfaction with product selection, but lower satisfaction with prices, are more likely to pursue decision Personalization. The paper provides theoretical contributions and managerial implications for retailers in making informed decisions regarding Personalization strategies.

Ramnath k. Chellappa and Shivendu Shivendu (2014) examined the trade-off between Personalization and privacy for consumers and investigates the optimality of different regulatory regimes for the market of personal and preference information. The research suggests that assigning property rights over personal information to consumers and allowing technological control and contractual abilities for the monopolist is optimal for society. However, the regulator should also prevent the deployment of usage-enforcing technologies, particularly when the market is predominantly composed of privacy seekers, and encourage the market's knowledge of consumers' Personalization-for-privacy preferences and the benefits of preference information to the vendor. Overall, the study contributes to the understanding of the welfare implications of Personalization services and the importance of regulatory regimes in this market.

Gobinda Roy, Biplab Datta and Rituparna Basu (2016) study presented a comprehensive review of scholarly articles published from 2000 to 2014 in 10 top-tier academic journals on the topic of online marketing. The review identifies eight major categories and analyzes the online marketing effectiveness framework. The three most significant subject categories are online marketing issues, internet usage, perception, and attitude, and online shopping and e-commerce. The review also highlights new online marketing research topics such as word-of-mouth, user-generated content, and social network. The article concludes by presenting research topics that received the most attention and suggesting future research directions in the online marketing field.

Shubin Yu (2017) aimed to explore Digital Marketing strategies for luxury brands, focusing on digital tracking technologies and extrinsic cues in e-commerce. While integrating digital technologies into marketing research and product design is not a problem, strategies for promotion and distribution may not be compatible with the essence of luxury. The effectiveness of many digital marketing strategies for luxury brands is unknown, so this dissertation aims to test the effectiveness of specific strategies used by generic brands and unravel the underlying mechanisms. Additionally, the study will investigate the role of cultural orientation in influencing the effectiveness of these marketing strategies.

Laura H. Goetz and Nicholas J. Schork (2018) the concept of personalized medicine, which is founded on the notion that individuals exhibit unique traits at many levels and may need specific interventions for diseases, is discussed here after the researchers evaluate a number of articles and papers. The review looks at the rationale behind personalized medicine, its historical precedents, and the cutting-edge technology that make it possible, like wireless health monitoring devices, imaging methods, DNA sequencing, and proteomics. It also covers recent developments, achievements, and failures, methods for screening and using personalized



medicines, and future therapies for those with reproductive and sterility problems. The review acknowledges the existing limitations of personalized medicine, but makes the case that some features of personalized medicine are based on biological truths and are likely to become inevitable as pertinent assays and deployment techniques grow more effective and affordable.

Anshari. et. al. (2019), discussed the use of big data in Customer Relationship Management (CRM) strategies, which supports Personalization of sales, services, and customer experiences. Big data refers to large and varied data sets, both structured and unstructured, which require new tools and techniques for collection, storage, and analysis. The study used a literature review and thematic analysis to explore the use of big data in CRM, and found that it enables businesses to become more aggressive in their marketing strategies, such as using push notifications through smartphones to target potential customers. Overall, big data has transformed the way businesses interact with customers, enhancing customer management and decision-making processes.

Markus Zanker, Laurens Rook and Dietmar Jannach (2019) found that research on Personalization systems draws from multiple disciplines, including AI, ML, HCI, and User Modelling based on psychology. AI and ML focus on optimizing Personalization applications and prediction models, while HCI and Information Systems scholars study user interactions with Personalization systems. Cognitive Science provides theoretical underpinnings for observed effects. This work aims to bring together these different backgrounds to formulate a research agenda and provide a perspective on future developments in the impact of Personalization and recommendation systems.

Alexandros Deligiannis, Charalampos Argyriou and Dimitrios Kourtesis (2020) focused on the issue of automatically selecting the best day and time to give consumer packaged goods recurring customers consent-based personalized marketing messages. The key data used in this investigation. Traditional mass marketing initiatives have low engagement, poor consumer experiences, and low conversion rates. The suggested approach uses a regression model trained on transactional data and instant message metadata to accurately predict customer wants, boost customer engagement, and enhance marketing efficiency. The results of the pilot evaluation point to a significant increase in marketing effectiveness.

Bhat, Mehraj Ud Din (2020), explained that Digital Marketing has both a positive and negative impact on consumer behaviour. 2000 participants were supposed to study for primary research. This study finds that businesses can improve their approach to advertising by understanding customer expectations and interactivity, enhancing the usefulness of social media. Online channels have changed human behaviour, giving consumers more options, access and power. Online advertising allowing them to stay up-to-date with trends, access knowledge, and get brand updates.

Behera. et. al. (2020), described a model for using Recommender Engine (RE) to deliver real-time, Personalized Marketing information to online and offline customers, using different selling strategies to recommend

additional items and boost customer engagement. The model clusters items, customers, and unique selling propositions (USP) gathers and stores transactional data, and displays Personalized Marketing information to support the customer's decision-making process. An experimental study was conducted with a mid-size healthcare retailer in India, showing significant growth in average monthly revenue, Average Order Value (AOV), and Items per Order (IPO) with the adoption of the proposed methodology.

J. Junaidi. et. al. (2020), discussed the increasing use of virtual advertising and promoting, especially through social media and e-commerce platforms, which has significantly impacted the growth of e-commerce businesses. The rise of new technologies and mobile communication devices has influenced consumer behavior and led to changes in advertising trends. To succeed in this environment, businesses must have well-designed advertising plans that utilize specific digital marketing tools and effectively target their desired audience. With the widespread use of high-speed internet and social media by younger generations, businesses must be focused and targeted in their virtual advertising strategies to achieve their goals. Overall, the advertising and promotion landscape has undergone a significant transformation, and businesses must adapt to stay competitive.

Reena Mehta and Udita Kulkarni (2020) focused to understand how Personalized ads on social media platforms affect consumer purchase intention. The study collected data from 110 respondents through a questionnaire and found that factors such as frequency of exposure, relevance, and usefulness of Personalized ads, as well as concerns about privacy controls, and cognitive and affective attitudes, significantly impact consumer perception and purchase intention. Newer social media platforms like TikTok, Instagram reels are becoming popular, providing opportunities for marketers to use Personalized advertising. However, companies need to be cautious in targeting consumers with dynamic data and avoid Over-Personalization. Upgraded privacy controls and permission options can help gain consumer trust. The study found that frequency, relevance, and usefulness of ads, privacy concerns, and perception development impact consumer purchase intentions positively. Customers generally don't mind Personalized ads, but concerns should not be ignored, as they may lead to failure of the Personalization mechanism in the long run. The study did not find any significant influence of social media platforms on consumer perception of Personalized ads.

Revathy Rajendra Prasad, Pramod Damle (2020), discussed the challenges of balancing Personalization and privacy in the emerging home device environment of the Internet of Things (IoT). Personal data has become a valuable commodity, but also raises privacy concerns for customers and legal issues for companies. The paper suggests using machine learning, blockchain, and artificial intelligence tools to preserve privacy and security. The GDPR can help ease some privacy risks posed by IoT devices, but there may be a need for detailed privacy-specific regulation. The paper proposes guidelines for firms to build a better relationship with their customers while complying with data policies, giving importance to consent and transparent processing. Overall, the paper highlights the importance of finding a trade-off between privacy and Personalization to provide quality services without compromising the privacy of users.



Abu Bashar and Mustafa Raza Rabbani (2021), study aimed to explore the relationship between website Personalization and the urge to buy green products and services in the context of e-commerce. Personalization techniques can be used to tailor the web content, design, interface, and overall atmospherics to meet each customer's unique needs and preferences. However, there is limited research on how Personalization can be used to induce online green buying. The study will develop a conceptual model to understand the antecedents of website Personalization that create the urge to buy green products and services. The results will contribute to understanding website-related factors and help marketers adapt suitable strategies for better Personalization, engagement, and green purchases. The study has both theoretical and practical implications for academicians and practitioners.

Jensolin Abitha Kumari and Preeti R. Gotmare (2021) aimed to develop a conceptual model to explore the factors that influence consumers' decision-making decisions, focusing on Personalized dynamic pricing (PDP). The study examines the impact of PDP on customer willingness to pay and the mediating role of stickiness to the online store on PDP fairness and customer willingness to pay. The data was collected from 256 students at a large university in India, and SEM using AMOS software was used to analyze the data. The study identifies the antecedents of price fairness of PDP and emphasizes the importance of a robust recommendation system and stickiness to an online store for marketers to satisfy consumers and track customer value.

Himani Bhardwaj and Uzma Rukhsar (2022) studied that the use of IoT technology for Personalized advertisements in marketing communications has raised concerns about security vulnerabilities and the collection, processing, and use of personal data by government and private entities, particularly in India. This field of study requires further exploration to understand consumer attitudes toward privacy concerns and data collection. The approach is to analyze the literature and develop research objectives and hypotheses. The study aims to analyze the effects of security vulnerabilities on consumer buying behavior and attitudes toward Personalized advertisements in the NCR region of India, focusing on data collection, usage, privacy concerns, and smart device security vulnerabilities. The study aims to contribute to sustainable marketing communications using IoT-enabled smart products in India.

Shobhana Chandra. et. al. (2022), their study used bibliometric analysis and science mapping to give a complete overview of the literature on Personalized Marketing. The study examines publication and citation trends, identifies the most prolific authors, journals, and publications, and identifies six major themes that characterize the body of knowledge on Personalized Marketing. These themes include Personalized recommendations, Personalized relationships, Personalized advertising, ad more. The study concludes with suggestions for future research directions, including the exploration of new technologies such as artificial intelligence, big data, blockchain, the Internet of Things, and wearables to create Personalized experiences across various channels.

Table 1. Brief Summary Of Existing Literature Review

Study	Study Objectives	Major Findings
Ramnath K. Chellappa & Raymond G. Sin (2005)	To establish a simple model of Personalization V/s Primary Dilemma for users.	Online retailers can improve trust through trust-building initiatives.
Junyeon Moon, Doren Chadee and Surinder Tikoo (2010)	Investigate consumer purchase intention towards Personalization products in an online selling situation.	Individualism is the only culture dimension to have a significant effect on purchase intention.
Farhod P. Karimov and Malaika Brengman (2011)	It examines the impact of social media on e-commerce websites and how they affect consumers trust loyalty and purchase decision.	Social media cues play on essential role in creating social presence and enhancing customer experience and e-retailers need to adopt more advanced social media features to keep up with consumer expectations.
Sriram Thirumalai and Kingshuk K. Sinha (2013)	Find the impact of technology enabled Personalization strategies on customer loyalty in online retailing.	Customer loyalty in online mode is also essential. It identifies two types of Personalization strategy.
Ramnath k. Chellappa and Shivendu Shivendu (2014)	Examining the trade-off between Personalization and primary for consumers and investigate the optimality of different regulatory regimes for the market of personal and presence information.	Assigning property rights over personal information to consumers and allowing technological control and contractual abilities for the monopolist is optimal for society.
Gobinda Roy, Biplab Datta and Rituparna Basu (2016)	Comprehensive review of scholarly articles from 2000 to 2014 in 10 top tier academic journals on the topic of online Marketing.	Presenting research topics that most attention and suggesting future research directions in the online Marketing field.
Shubin Yu (2017)	Explore Digital Marketing strategies for luxury brands, focusing on Digital tracking technologies and extrinsic cues in e-commerce.	It will investigate the role of cultural orientation in influencing the effectiveness of these marketing strategies.
Laura H. Goetz and Nicholas J. Schork (2018)	It examines the motivation for Personalized medicine, its historical precedents, and the emerging technologies that enable it, such as DNA sequencing, proteomics, imaging protocols, and wireless health monitoring devices.	The review acknowledges current limitations of Personalized medicine but argues that certain aspects of Personalized Medicine are rooted in biological realities and are likely to be inevitable as relevant essays and deployment strategies become more efficient and cost-effective.
Anshari. et. al. (2019)	The use of big data in Customer Relationship Management (CRM) strategies, which supports Personalization of sales, services, and Customer experiences.	Big data has transformed the way businesses interact with customers, enhancing customer management and decision-making processes.
Markus Zanker, Laurens Rook and Dietmar Jannach (2019)	AI and ML focus on optimizing Personalization applications and prediction models, while HCI and Information Systems scholars study user interactions with Personalization systems.	Bring together these different backgrounds to formulate a research agenda and provide a perspective on future developments in the impact of Personalization and recommendation systems.
Alexandros Deligiannis, Charalampos Argyriou and Dimitrios Kourtesis (2020)	It focuses on the problem of automatically deciding on the optimal date and time for sending consent-based Personalized marketing messages to repeat consumers of consumer-packaged goods.	Significant Improvement in marketing effectiveness.
Bhat, Mehraj Ud Din (2020)	Businesses can improve their approach to Advertising by understanding customer expectations and interactivity, enhancing the Usefulness of social media.	Online advertising allowing them to stay up to-date with trends, access knowledge, and get brand updates.

Behera. Et. Al (2020)	The study proposed a model for using REs to deliver personalized marketing information and evaluate its effectiveness by conducting an experimental study with a healthcare retailer.	The study reported a significant increase in average monthly revenue, AOV, and IPO after implementing the proposed methodology, suggesting it could be a useful tool for retailers.
J. Junaidi. Et. Al. (2020)	The study aims to highlight the changes in advertising trends due to new technologies and mobile communication devices, emphasize the importance of well-designed advertising plans, and emphasize the need for businesses to adapt to the changing advertising environment.	The study found that virtual advertising and promoting through social media and e-commerce platforms has had a significant impact on the growth of e-commerce businesses. To succeed, businesses must have well-designed advertising plans and target their desired audience. Additionally, businesses must stay up-to-date with the latest advertising trends and technologies to effectively reach their target audience.
Reena Mehta and Udit Kulkarni (2020)	It focuses to understand how Personalized ads on social media platforms affect consumer purchase intention.	Frequency, Relevance, and Usefulness of ads, privacy concerns, and perception development impact consumer purchase intentions positively.
Revathy Rajendra Prasad, Pramod Damle (2020)	The paper suggests using Machine learning, block chain, and artificial intelligence tools to preserve privacy and Security.	Overall, the paper highlights the importance of finding a trade-off between privacy and Personalization to provide quality services without compromising the privacy of users.
Abu Bashar and Mustafa Raza Rabbani (2021)	To explore the relationship between website Personalization and the urge to buy green products and services in the context of e-commerce.	The results will contribute to understanding website-related factors and help marketers adapt suitable strategies for better Personalization, engagement, and green purchases.
Jensolin Abitha Kumari and Preeti R. Gotmare (2021)	Develop a conceptual model to explore the factors that influence consumers' decision-making decisions, focusing on Personalized dynamic pricing (PDP).	The study identifies the antecedents of price fairness of PDP and emphasizes the importance of a robust recommendation system and stickiness to an online store for marketers to satisfy consumers and track customer value.
Himani Bhardwaj and Uzma Rukhsar (2022)	The approach is to analyze the literature and develop research objectives and Hypotheses.	The study aims to analyze the effects of security vulnerabilities on consumer buying behavior and attitudes toward Personalized advertisements in the NCR region of India, focusing on data collection, usage, privacy concerns, and smart device security vulnerabilities.
Shobhana Chandra. et. al. (2022)	The study examines publication and citation trends, identifies the most prolific authors, journals, and publications, and identifies six major themes that characterize the body of knowledge on Personalized Marketing.	The study concludes with suggestions for future research directions, including the exploration of new technologies such as artificial intelligence, big data, block chain, the Internet of things, and wearables to create Personalized experiences across various channels.

4. Research Methodology

The study specifically looked at how Personalization in Digital Marketing effected the Indian subcontinent. The secondary data were gathered from an extensive variety of books, journals, theses, articles, websites, and publications. For a better understanding, data from multiple companies and also COVID-19 period were analyzed.

5. Research Gaps

1. The studies did not discuss the growth of Personalization in Digital Marketing during and after the COVID-19 pandemic.
2. The studies did not reflect the negative effects of Personalization in Digital Marketing on its customers concerned with the work interruptions.

6. Objectives Of The Study

1. To study the growth of Personalization in Digital Marketing during and after the COVID-19.
2. To Discuss the customers perspective concerned with the work interruptions they encounter.

7. Findings Of The Study

1. After the outbreak of COVID-19 and lockdown, consumers shifted towards online platforms rather than offline because they had no other option than sitting at home and surfing through online websites, hence many companies found it a great opportunity to invest heavily in Personalization technology such as Artificial Intelligence, Machine learning etc. to grab and retain customers through the Personalization Marketing strategy. Undoubtedly the companies gained many loyal customers during that period and in future, the percentage is expected to increase rapidly.
2. The three biggest obstacle that stand in the way of scaling a Personalization strategy were: - a) Lack of Expertise, b) Limited functionality and c) Lack of time
3. The study also found that while Personalization in Digital Marketing is aiding in customer retention but on the other hand there is a few percentages of customer who find this marketing strategy as work interruption when done in an excessive way.
4. Frequent Emails, SMS and Calls, sometimes interrupts the work of the customers and for them this is a turnoff. The sudden pop up of the advertisement of the product that was searched somewhere on any platforms may annoy the consumers by distracting them with irrelevant or unwanted ads or recommendations and also gives them certain privacy concerns.



8. Managerial Implications

Personalized Marketing messages can help businesses better engage with their customers and build stronger relationships. By understanding the individual needs and preferences of each customer, businesses can create targeted campaigns that resonate with their audience. By demonstrating that a corporation cherishes and comprehends its clients, personalization can help build customer loyalty. Increased customer retention and repeat business may result from this. Personalizations can drive sales by increasing the relevance of marketing messages to individual consumers, leading to higher conversion rates and revenue growth. Businesses must gather and analyse data on the tastes and behaviours of their clients in order to Personalize their offerings. In order to provide Personalized experiences, businesses must make investments in marketing technology and data analytics. Collecting and using customer data raises privacy concerns and businesses need to ensure that they are following best practices and complying with relevant regulations. The process of personalization necessitates a major time, financial, and resource commitment in order to gather and analyse data, create customised campaigns, and assess their efficacy. For these initiatives to be successful, businesses must devote enough resources to them.

9. Future Prospects Of The Study

Personalization is likely to become a highly significant marketing strategy in digital marketing because businesses tend to put more emphasis on customer experiences, increase customer engagement, improve conversion rates, and make marketing more efficient. Personalization in Digital Marketing is going to have a brighter future in India due to the advancement in technology such as Artificial Intelligence, Machine Learning. These technologies are making Personalized content to deliver easily and in an effective manner. Personalization will become even more effective as companies are using real-time data about customers' behaviours, preferences, and needs. This allows the companies to deliver more relevant services and experience to its customers. Personalization will increasingly be integrated with other emerging technologies such as augmented reality, virtual reality, and voice assistants along with AI&ML. This will allow for even more immersive and engaging customer experiences that are tailored to each individual. Small-Scale enterprises in India will also show significant growth in India in the coming years as they tend to opt for digital platforms which will eventually lead them towards Personalized Marketing. Companies continue to influence data and technology to deliver more tailored and engaging experiences to customers. As long as companies are clear and considerate of customer privacy, personalization has the ability to witness significant business growth and customer loyalty in the years to come.

10. Conclusion

To summarize our study on the topic of Personalization in Digital Marketing across India, we discussed in detail about Personalization and the factors that lead to the growth of it in India. The COVID-19 and lockdown were a major factor which lead the companies to gain customers in online platforms. The growth and

heavy investments in technologies like Artificial Intelligence and Machine Learning has a major role in the growth of Personalization in Digital Marketing. It has been observed that customers also prefer brands and companies that provide Personalization experience. Companies must create value for its customers and give them the sense of individualism. Few percentages of consumers found Personalized Marketing as work interruptions when done in an aggressive way, hence companies must collect and research relevant data from its customers to understand its customers in an effective way keeping in mind their privacy concerns. Overall Personalization is going to have a brighter future in India in the coming years.

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Is Cryptocurrency a Real Future of India?

SWOT Analysis based on Indian Context.

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Abstract

Indian Economy is considered as a developing economy where there are a larger number of people investing in the stock market. The main purpose of their investment is to obtain greater returns which a normal banking account or post office savings bank cannot provide to the normal public. Hence, people tend to invest more in shares and debentures or in any other form that will provide greater return on investment. Cryptocurrency has emerged as a modern medium of exchange in trading not initially recognized by the government but later on it has been accepted as a legal asset as per notification issued on 7th March, 2023 by the Government of India and dealings in the same will be governed under Prevention of Money Laundering Act. Even though the return on investments in some cryptocurrencies is highly volatile posing a threat, there is also a rising trend of eagerness in such investment. So, there is a need for analysis of strength, weakness, opportunities & threats of investment and trading in cryptocurrency in this globally traded securities particularly in the context of Indian investors.

Keywords:

Indian Economy, SWOT, Securities Market, Investment, Return on Investment.

1. Introduction:

Cryptocurrency is a kind of digital or a kind of virtual currency that is traded globally using the internet as a source of trading medium. This trading allows the users to trade in currencies that are not initially regulated by the government but later on it was bought under a PML (Prevention of Money Laundering) Act which stated the rules and regulations to trade in this type of currency. The term "Crypto" refers to advanced algorithmic functions that safeguard the money. Crypto wallet is opened to trade in cryptocurrency prior verification of the identity of the investor. Cryptocurrency is basically classified into four categories namely:

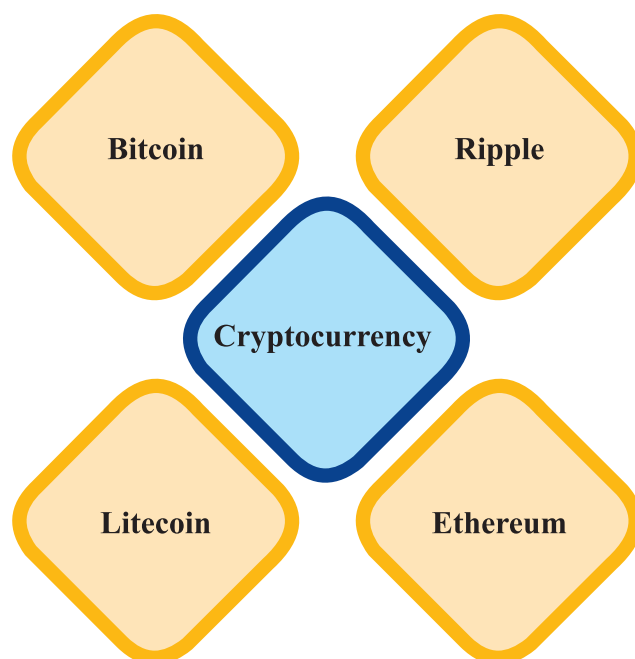


Figure showing types of Cryptocurrencies

Cryptocurrency

Serial No:	Types	Explanation
01.	Bitcoin	In short Bitcoin is also famous in the name BTC. It has the power to act as money which also can be utilized as a medium of payment either by a person or a group or any entity removing the middlemen involved in the financial transaction. It was brought to public domain in the year 2009.
02.	Ripple	It was designed to replace the existing payment settlement system known as SWIFT. Any investor who is interested in buying Crypto in the form of Ripple can directly buy it from the Ripple network. Though it was launched in 2012 it was brought to notice in the year 2020 when XRPL took charge of it.
03.	Litecoin	The developer of Bitcoin was bearing this mindset that Bitcoin will surely be centralized one day or the other so to keep their control going they developed a new form of crypto and named it Litecoin. It was maintained and managed by ASIC minors. Bought in front of public figure by Lee in the year 2011.
04.	Ethereum	ETH is a decentralized software platform which can be globally accessed and developed by blockchain technologies. Investors invest in this with the objective to pay for doing some work chain using blockchain. It was introduced in the year 2014 and brought to public notice in the year 2015.

2. The Concept Of Blockchain Technology:

Blockchain provides a platform to record transactions and also track the assets of the business. Cryptocurrency fully works in the technology of Blockchain. Adoption of blockchain technology brings in transparency in the dealings of Crypto and also enables the user to keep themselves updated. It is a platform where all financial transactions are kept in a secured way and shared to the company as and when required. This concept is working on three broad elements which enables a user to generate trust namely:

01. **Ledger Technology:** The use of this technology enables the users to obtain all kinds of their financial records done up to date which brings in a clear transparency in maintaining their business and investment in a smooth manner.
02. **Permanent Record:** The platform is designed in such a way that once a transaction is registered it becomes impossible to remove or tamper it. Hence there is a minimal chance of financial fraud occurrence
03. **Advance contact card:** The algorithm made while developing such a platform is very hi tech and advanced. It registers all their contact using their verified criteria. Contract card is prepared in a manner which enables the developers to send a uniform message to their contact at any point of time as & when required.

3. Steps To Buy Cryptocurrency:

Steps involved in buying Cryptocurrency:

Platform Selection

There are different platform through which cryptocurrency is traded. An investor needs to choose it wisely as per the their convinence like Gemini, eToro, Robinhood and Webull as per the risk and return provided by the platform

Funding Account

After choosing a particular platform the next important step is to open a account and funding the wallet based on which a investor will buy and sell funds. An investor will get full financial details once login into their account making it open & transperant.

Order Placing

There are two things based on which order can be placed one is market order and the other one is limit order. Buying it in market price termed as market order and When a investor buys or sells at particular price it will be considered as limit order.



4. Literature Reviews:

01. Vries,P.D. (2016) tried to make an attempt to find out the future prospects of cryptocurrency and bitcoin. The main attempt of the author is to find out theoretically the strength, weakness, opportunities and threat in the investment in cryptocurrency in the cloud-based network. From the study the author concluded that there lies a huge potential of Crypto in the coming market and can also replace the current form of money giving the market a new medium of exchange.
02. Puneet et al. (2017) attempted to find out the recent trends, perspective & challenges of cryptocurrency in India and also in the world. This paper focuses on bitcoin. Bitcoin was given importance as a medium of investment due to many advantages primarily because of its decentralized characteristics. This paper focuses on the evolution of Bitcoin and the process through which a buyer can purchase it using different platforms available globally. The conclusion of this paper was done putting light on blockchain.
03. Chiu, J. and Koepl, T. (2017) tried to develop a monetary model based on which cryptocurrency can be traded on blockchain. The study further develops transactional data so as to analyze the impact of bitcoin. It was quite evident from the paper that as cash settles all types of payment very fast similarly this attribute is missing in case of bitcoin as it is not readily acceptable by common people. The efficiency of bitcoin is improved by using the policy of proof-of-stake. It is quite evident that bitcoin will be more useful in case the financial transactional size is large.
04. James,B. and Parashar, M. (2018) chose the Indian economy as a measure of analysis on the acceptance of cryptocurrency as an investment arena. The authors tried to put forward the view that investment in cryptocurrency is equivalent to the investment in Gold. Though the government has made it open for the public by imposing certain rules and regulations, there are certain restrictions in buying and selling of different types of cryptocurrencies. This is theoretically made that discusses basically the present and future prospects of cryptocurrency in India.
05. Jaideep et al. (2019) focuses on the impact and role of Bitcoin in the India economy. This paper is a kind of exploratory research done with the objective to find out whether bitcoin is a boon or results in bane for India in the coming future. Authors have undertaken this present study with the objective to find out whether there lies any positive or negative financial leverage due to the usage of Bitcoin & should the investors of India take up an initiative to invest in Bitcoin. Secondary data was collected during the period 2009-2016 for the analysis. It can be concluded from the paper that it will surely turn into a great financial benefit for the economy, next if firms start accepting it in their normal course of business then the transparency and module of those firms will also change & lastly, it will increase the opportunity of economic progress.
06. Hardle et al. (2020) prepared a paper based on blockchain technology. Data were collected from numerous data sources namely BTC, SPDR, S&P BSE 500 index etc. The time period of study ranges

between 2017 to 2019. Correlation was used as a methodology to find out the impact of interrelationships of cryptocurrency on daily, monthly and yearly basis based on the data obtained from different websites. The conclusion of the study enlightened the potential research areas in the future economics.

07. Doshi,SS. (2020) tried to study the opinion of people staying in India with regards to the future of cryptocurrency and more specifically bitcoin. The craze of bitcoin has increased to such an extent that people without taking care of any rules and regulations have already started investing in such a type of currency in huge numbers. The author advised that since there is huge amount of investment in such type of currencies there is an urgent need of development in tax reforms related to bitcoin. The study is classified into three broad objectives namely: investors opinion, investors level of investment, investor's opinion in context of the area they are residing. The independent variable of the study is area i.e., rural and urban and the other is investment level i.e., big & small. The dependent variable of the study are the scores obtained by giving the investors a set of questionnaires designed to understand the real attitude of the investors. A sample size of 100 investors were selected and belonging 25 each in each sector. Big investors residing in urban areas are very positive than the attitude depicted by the small investors residing in both the sectors.
08. Sharma,S (2021) prepared a project report based on cryptocurrency. The main objective of this project is to find out the impact of crypto in the Indian Economy and also the attitude of the investor towards the investment in different cryptocurrency. This study considers two hypotheses one is based on the impact of the Indian economy and the other one is based on investor decision. The data set considers especially empirical data based on which SWOT is done. The results showed that investors should analyze the strength, weakness, opportunities and threats before investing funds in the same.
09. Grasselli,M. and Lipton,A.(2021) attempted to study the different classes of cryptocurrency and their economic benefit in the economy. The most important thing is that any form of crypto will not be considered as a liability. Since no particular rules were made to control this type of currency in the market the Central Bank did not consider it as a legal tender. This paper provides ideas regarding pure assets coins, blockchain technology, digital currency of the central bank, stable coins. The paper concludes on a positive note providing suggestions regarding the use of technology in the modern business dealings in crypto.
10. Magnusson,C. and Stenberg,T. (2022) made an empirical study with the objective to find out the decisional change in the private financial investment in the leading cryptocurrency market. This study was undertaken focusing the investors of Sweden and their decision in investment with regards to cryptocurrency. The data were collected taking into consideration questionnaires as a method of primary survey. Thematic analysis was done to find out their attitude and views towards investment in cryptocurrencies. The findings portrayed mixed opinions regarding such kinds of investment. It depends upon the risk-taking attitude of the investor and the strength to handle the losses.



5. Research Objective:

This study was undertaken with the objective to find out the Strength, Weakness, Opportunities and Threats with regards to cryptocurrency in the Indian economy and it will also suggest whether an investor should invest in cryptocurrency and its future prospects looking at the current investment scenario.

6. Swot Analysis:

SWOT stands for Strength, Weakness, Opportunities and Threats. The first two i.e., S & W is basically under the control of a business and the latter i.e., O & T is outside the hands of the business. A company who wants to analyze its position & environment in the market should opt for SWOT analysis. Cryptocurrency is an emerging topic in the business and society and the investors are showing their interest in such a type of currency. This currency is very volatile and is unpredictable. Buying a smaller portion of any form of Cryptocurrency either can make you rich or can turn you into a beggar overnight. Previously in India it was not regulated by any authority. Later on looking at the craze of investors it became quite evident to develop rules and regulations so that investors would invest the same safely and also in a transparent way.

A. Strength of Cryptocurrency:

Cryptocurrency is a digital virtual currency secured by cryptography. There are only two parties involved in this block chain network. It has been increasing in popularity. The change in market has created a new demand much greater than its initial showing for cryptocurrencies. There are many factors such as decentralization, data transparency, elimination of middlemen, fast and low-cost money transfer, etc. which together become the strength of cryptocurrency and makes it more beneficial and convenient.

It is different from other methods of transferring currency which involve third parties because the middleman is restricted. So, it can't be tracked or stolen. It is one of the most effective ways of sending money as the transaction fees paid is negligible or zero amount. Due to elimination of third parties such as, bank, visa, etc. it removes the requirement to pay extra fees for a verification of a transaction.

Decentralization is one of the major strengths for Cryptocurrency. In case there is any failure in the system chances of collapse reduces a lot if there exists decentralization. It allows independent control and decision making. It is not dependent on integrity on any single authority. Systems having characteristics like protection and independence from any kind of internal and external threat automatically corruption reduces saving the system from either being compromised or damaged. It is more convenient for people as it is financially independent. They don't have to use a bank to finance a big purchase, and they don't have to make an audit trail that violates their privacy because of cryptocurrency.

To use Cryptocurrency just a computer/laptop or a smartphone will need an internet connection by an

investor to trade. Previously the identification system of the investors was very weak and they could easily open an account but now things have changed and an investor needs to go through proper channels of identification and validation for having a cryptocurrency virtual wallet. It has become quite tough to access funds unless anyone has access to the wallet key. Transactions were basically verified using a scattered network of computers which are provided with top level of security by the blockchain system that verifies each and every transaction before completion. It is more secure if investors keep crypto assets in their own wallets.

Strength in brief can also be explained as:

1. Cryptocurrencies make blockchain secure and tamper proof:

In this case if a company offering cryptocurrency maintains a good system of blockchain then they can easily overcome the defects of traditional ledger maintaining system making it a more advanced system for the users to use. Previously there are chances that ledgers can easily be destroyed or lost along with all past financial records. Vulnerability of fraud increases in case that traditional ledger comes in the hands of some wrong persons bearing negative intentions. Security and privacy both were enhanced by the use of different hash functions and private keys.

2. Cut out the middlemen:

Nearly all fiat currency transactions require a trusted middleman to oversee the transactions like a bank, a money exchanger or a card network which makes the process longer and expensive. Transactions on a public blockchain do not require a middleman to establish trust as on blockchain, they are cheaper and faster.

3. Digitally Native:

You will find no hardcopy existence of such a currency as it fully works on blockchain technology. Blockchains operate globally that too in a massive scale, which require millions of micro-payments in real-time to make transactions impossible to support with normal currency that is not digitally native. Another benefit of this is that any improvement in the code underlying blockchain will almost automatically reflect on the attached cryptocurrency. This makes cryptocurrencies highly adaptable.

4. Governed by the same rules globally:

Cryptocurrency can be used and traded across all jurisdictions which have free access to the internet. With the right set of regulations India can leverage this capability to its advantage. It will allow India based entrepreneurs and businesses to export their goods and services across the world with minimal bureaucratic hindrances.

B. Weakness of Cryptocurrency:

Few years passed, Cryptocurrency gained huge popularity and also entered the stream in due course.



Despite the hype, the wide adoption of Cryptocurrency still faces many challenges and obstacles. From security risks to volatility concerns, there are various factors which become the reason for investors to remain far off from Cryptocurrency.

There is a lack of awareness regarding what Cryptocurrency is and how it functions. It is one of the greatest weaknesses which becomes an obstacle. There is a requirement of education on the subject so that people can understand what they are getting themselves into when they invest as it is quite complex and difficult for many individuals.

For the sake of protecting their digital assets investors are advised to implement many layers of protection such as using strong passwords, etc. to prevent serious risks like theft and hacking. It attracts hackers since some Cryptocurrency activities can't be traced. They tried to steal private keys to get access to Cryptocurrency wallets. It is an excellent opportunity for cyber criminals as Cryptocurrency is not centralized.

Irreversibility of transactions is one of the major causes of Cryptocurrency's weakness. Once a transaction is completed, it cannot be canceled or reversed. Once the transaction is done there is no way for them to get their money back if they make a mistake while using it. So, people should be really very careful when investing in digital currency.

Weakness in brief can also be explained as:

1. Illegal transactions:

It is quite challenging for the government to find any client by their wallet address or watch out for their information on the grounds that cryptocurrency transactions are exceptionally private and secure. Cryptocurrencies as a type of cryptocurrency have previously been used for many illegal activities, like buying drugs on the dark web.

2. Opposition by incumbents:

Cryptocurrencies will surely bring in a change in the business dealings and there also lies a possibility that old players in the financial market like banks & other insurance companies may lose their strong hold. As such cryptocurrencies have caused discomfort to incumbents.

3. Data Loss Risk:

What will you do if you forget the password for your bank account? There are many ways for you to reset, and if nothing works, you can simply visit your bank's branch to get things sorted. Currencies are kept in a wallet and the key to access such wallets are quite complicated in case an investor forget's its key code all the investment will be gone. There is no known way to recover your wallet as it is designed to be untraceable and unhackable.

C. Opportunities of Cryptocurrency:

Cryptocurrency has gained much attention globally among investors since the last several years. Globally known as digital coin and virtual currency, the Cryptocurrency has gained and traded within the blockchain system. The opportunities offered by cryptocurrencies to individuals and businesses are lower transaction costs, higher efficiencies, increased security and privacy, meaningful diversification benefits, alternative financing solutions, financial inclusion, protection from inflation, etc. All these benefits opportune investors to invest in cryptocurrencies even more.

Today's economies are all money-based economies, because all economies have accepted certain currencies as medium of exchange and Cryptocurrency plays an important role in the exchange system of India. Cryptocurrency is the asset with highest returns for investors. It also enables equality and availability of opportunities to access financial services to everyone.

As the internet is becoming more accessible and convenient, a larger number of people are shifting towards digital transactions. They are cheaper, quicker and more efficient so apparently cryptocurrencies would be of great use. Cryptocurrencies is a decentralized finance system that's becoming increasingly popular with investors, businesses and people interested in finance.

The reason that more people and business organizations use cryptocurrencies as it is completely digital, is the demand for jobs increasing in cryptocurrency development, trading and support. Cryptocurrency jobs are often found in computer science and programming fields but this field also has many opportunities for those who want to work outside the technical aspects.

One more important factor of Cryptocurrency is it saves transaction cost which is convenient for marketers. It helps transfer funds globally very easily. Entrepreneurs within the country are seeing this as a natural opportunity for expansion of bitcoin and other cryptocurrencies within the country. Currently in India, around 30,000 bitcoin owners in the country and that is expected to grow. Cryptocurrency is also said to be as fuel for the remote economy of India.

Opportunities in brief can also be explained as:

- Competitive advantage (if efforts to reduce/hide the complexity behind blockchain are successful, or in case of diffusion of Internet of Things IOT).
- Generation to new markets for investment.
- Asset with the highest return can be considered as the largest wealth creation opportunity ever seen.
- Fight corruption as through a combination of smart contracts and cryptocurrencies, citizens and the state keep a tab on how state funds are spent.
- Cryptocurrency transactions are not tax free; they also started serving as a source of revenue to the government.



D. Threats of Cryptocurrency:

Everything comes with both benefits and threats and here's the same with Cryptocurrency too. There are major threats posing to cryptocurrencies. Cryptocurrencies are mostly subjected to security risks. That means as a crypto owner, you may lose the private key that lets you access your coins, and also your holdings on Cryptocurrency. Major threats relating to Cryptocurrency are hacking, theft, scams, frauds, black market activity, price volatility, piracy, etc. which leads to cryptocurrency's downfall in India.

The decentralized and digital nature of Cryptocurrency makes it a prime target for cybercriminals from hacking and theft to scams and frauds. These risks are very high when using cryptocurrencies so individuals and organizations must be aware of these risks and take the necessary precautions to protect themselves and their investment. People have less knowledge about Bitcoins or other cryptocurrencies which leads to fraudulent activities such as fake websites and apps selling currencies.

Cryptocurrency payments do not come with legal protections and once if payments are done it is irreversible as you can only get back your money if the person you paid, sends it back to you. There are no government regulations on cryptocurrencies this becomes a subject to security risks as there's no government control, so it ultimately makes it susceptible to scams and frauds. This also becomes a major cause of threat to organizations holding cryptocurrencies.

Bitcoins or other cryptocurrencies are not widely accepted. They are accepted by a very few groups of online merchants. This makes it impractical to completely rely on bitcoin or any other cryptocurrencies as a currency. There is a possibility that the government might force merchants to not use cryptocurrencies. The valuation of these currencies fluctuates a lot which is another threat to the environment. There is no guarantee of valuation of cryptos to increase, in fact it might get dumped which will definitely lead to great decrease in value ultimately leading to loss and damage to an organization which nobody wants.

Threats in brief can also be explained as:

- Could be perceived as unsecure/unreliable.
- Governments could consider blockchain and smart contracts “dangerous”.
- Is a medium long term investment not suitable for all existing processes.
- Customers would still consider personal interaction important.
- Lack of regulatory framework in the cryptocurrency sector in order to safeguard investors from criminal activities and scams.
- Transactions involving cryptocurrencies are irreversible- once performed cannot be canceled or reversed.

6. Conclusion:

It is well evident from the research that Cryptocurrency has got a high-rise future in the coming future. As pros and cons are the single side of a coin, similarly both the internal and as well as external factors affect the investment of cryptocurrency. Central Government has laid its norms regarding buying and selling of cryptocurrency then also a proper network needs to be developed. To deal in cryptocurrency a well-established platform should be prepared and transparency in dealings should also be given. It is well predicted that emergence of bitcoin and other form of currency will surely take a great share in the market and further business dealings will be done in such currency just like any other form of online payment system like G-Pay, Phone pay, Paytm etc. It will also develop the E-Commerce business in India.

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Navigating the Hazards of Search Engine Optimization in Business Management Strategies for Safeguarding Online Reputation.

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Abstract:

The increasing velocity of malware's transmission online over the past few years has given attackers additional avenues to attack in addition to the conventional methods of malware distribution. Search engine optimization (SEO) tactics are frequently employed to promote websites among search results (such as through links or attachments in spam emails). Attackers are constantly coming up with more effective ways to launch attacks, and one strategy that has recently gained attention is the choice of search engines for distributing malware that has a high potential to have disastrous effects. Although they are relatively new, SEO attacks that distribute malware contaminate popular search results by generating a huge number of phoney pages that target trendy keywords. This happens when trustworthy websites are infiltrated.

Keywords:

Poisoning, Search Engine Optimization (SEO), Digital Marketing, Malwares, Websites, Organic Search, Unpaid Search, Search Engine Redirection, Detection.

Introduction:

In order to increase a specific URL's ranking in search engine results listings and to increase both the overall quality and quantity of free website traffic coming from organic search engine results, search engine optimization, or SEO, is a term that describes the techniques used to make websites more visible online. A large impact on the amount of traffic to a site can be realised if correctly implemented. More than 70% of visitors to most websites arrive at their pages thanks to effective usage of Search Engines. Users now place a high priority on Search Engine Optimization (SEO) tactics while looking for information online since they can weed out the most pertinent information from vast amounts of data. Website owners constantly strive to increase and attract more visitors by optimising their exposure in relevant search results. To meet this need, digital marketing experts and web developers use a variety of Search Engine Optimization (SEO) techniques that can increase a website's visibility and promote its ranking in the search results by highlighting its relevance under specific search terms.

Search engine relevancy is determined by the features on the pages in relation to user searches. To stop spammers from attacking, search engines don't publicly divulge the precise attributes that are officially used to evaluate rank and relevancy. Among the most well-known elements are the words in the page's title, URL, and content. The words in the title and URL typically sum up the information on the page, thus they are given a lot of weight. Many search engines utilise variations of page ranking algorithms to rank the Online pages in their search index, and there are billions of indexed web pages. The quantity of inbound links determines a page's rank, which indicates how likely it is that a user will click on links at random and land on that page.

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There are two categories of SEO tactics:

- **White-Hat SEO techniques:** Many organizations will recruit marketing consultants to boost the search engine ranking and to optimize their site content for search engine indexing. On the other end of the spectrum in an unscrupulous way, a range of techniques may be used to achieve the same boost. Primarily, the sites are created keeping the end-user in mind, but structured in a way that search engine crawlers can easily navigate the site without encountering any difficulty. Following the quality guidelines recommended by search engines the white-hat techniques are creating a sitemap, having appropriate headings and subheadings, etc.
- **Black-Hat SEO techniques:** These types of techniques try to game the rankings, and do not follow the search engine guidelines. Keyword stuffing (filling the page with lots of irrelevant keywords), hidden text and links, redirects and participating in link farms are considered black-hat techniques. These practices are frowned upon by the search engines, a site could be removed from the search index if caught using such techniques.

Figure 1: Example of Black-Hat SEO poisoning

A brief introduction to some of the terms that are discussed while explaining the SEO attacks is enunciated below:

- Fake antivirus – Class of malware with fake security alerts in order to trick them into paying to register the rogue security product.

The image shows a Google search interface for the query "Oscars 2010 winners". The search results are dominated by malicious pages. A red arrow points from the text "Malicious pages that infect with FakeAV scareware" to the search results. The search results include:

- Who will be Oscar winners in 2010? - Times Online**: Who will be Oscar winners in 2010? The Oscars started this year's awards by Clint Eastwood and Matt Damon. Scores could make a very different result. ...
- Oscar.com - Home**: Oscar.com, the official online home of the 82nd Academy Awards. ... Oscar.com's mission is to certify, select, a category to explore. ... ©2010 The Academy of Motion Picture Arts and Sciences & AMPAS, Inc. All Rights Reserved. ...
- Oscar Winners 2010 List of Academy Award Winners**: Oscar winners 2010 list - find out who won Oscars at the 82nd annual Academy Awards. ...
- Oscars 2010 Winners**: Mar 7, 2010. Enjoy 2010 Oscars with a list of the Oscar winners and nominees. ...
- Oscars 2010 Winners**: Mar 7, 2010. Oscars 2010 Date And Time: Oscars 2010 Winners, Predictions & Live Channel. ...

At the bottom, there is a small line graph showing search volume over time, with a peak at 10PM. The source is cited as "Source: Sophos security blog March 8, 2010".

- SEO page – The pages designed to rank highly in search engine results with stuffed keywords yet redirect users to rogue sites sometimes called SEO poisoned pages.
- SEO kit – These are the application used to create and manage an SEO attack site.
- SEO poisoning – A technique used to describe the process of tricking the search engines into ranking an SEO page high up in the search results.

While search engine optimization (SEO) strategies are effectively used to produce favourable outcomes that would ultimately boost the website's ranking and increase the amount of visitors in terms of both quantity and quality. Blackhat SEO is a practise where dishonest web developers may choose to abuse these techniques in various ways to gain (or cheat) a favourable ranking in the search results. While legitimate uses of SEO techniques are accepted and even encouraged by search engines, they are also frequently abused to promote websites among search results. In blackhat SEO, misleading views of a website are created and supplied to search crawlers that contain WebPages that have been cleverly created and are inflatedly relevant to a set of desired searchable terms. The debates to date call for an explanation of a few terms that are now essential to SEO and without which the true intent of search engine optimization tactics cannot be fully understood. They are stated as follows:

Quality of Traffic: The main goal is to draw customers who are genuinely interested in the goods that a certain website has to offer. This kind of customer can be referred to as quality traffic.

Quantity of traffic: Adequate number of users who clicked over from those SERPs (SERPs).

Organic Results: With organic search, also known as unpaid search, users don't have to pay to use web search engines to find the information they're looking for. As a result, there are no search fees for the traffic here.

In 2007, the first examples of Search poisoning that attracted users to malware websites were seen. Because of its authentic appearance and inexpensive expenditure, search engine application is appealing to attackers. Malicious web sites are hosted on infected web servers, thereby providing the attackers with free resources. Users typically have faith in search engines, and they frequently click on search results without reservation or question. These malicious pages will continue to be indexed and shown to visitors in order to deliver harmful results as long as search engines perceive them to be relevant. Despite being a relatively new assault method, search engine poisoning has already had a significant impact on several major search engines.

Attacks by SEO: An Overview

In SEO-driven attacks, the attackers use SEO kits (PHP scripts generally filled with well-known keywords and phrases) to produce web pages that search engine crawlers will ingest. When a user searches for keywords, a link to the SEO page is displayed prominently in the search engine results, and all it takes for a person to be exposed to malware that drives them to a malicious site is for them to click on the link. Once diverted from the SEO page, there may be a number of extra stages of redirection before the actual delivery of the ultimate payload.

For instance, in the current SEO attacks used to disseminate fake antivirus malware, the victim is typically redirected at least twice before being shown the fake antivirus web page, which deceives them into thinking their system is infected and prompts them to install the malware that poses as a security product. To successfully begin an SEO attack, the keywords selected are crucial. A practise known as scraping or splogging, which includes copying page material for the sake of either sending people to a malicious website to make money through ads or promoting affiliated sites, is frequently mentioned in the hazy history of SEO.

Cloaking method:

Attackers frequently utilise cloaking tactics, which include serving the user alternate content based on the HTTP headers included in the web request. The many viewpoints seen can be summed up as follows:

Crawler perspective:

The SEO URL will produce a web response that is more geared toward devaluing the relevant search phrase in the search engine results. As a result, the URL will show up higher in the search results.

Depending on the campaign, the SEO URL in this example will drive the user through several redirects before arriving at the final landing page.



Referer view: In this case, the SEO will provide the user with various material based on the URL specified in the referer HTTP header.

Important prerequisites have been established for the application of several (trendy) keywords and the automatic production of pertinent content across a large number of pages in order to successfully launch an SEO poisoning attack. Since trendy keywords are frequently used search terms, tainting their search results can have an impact on a sizable number of internet users. By creating false pages and using various keywords, attackers can successfully broaden the scope of their attacks.

Working mechanism and flow of the above-mentioned figure:

The victim types a popular search term into a search engine (SE) and clicks on one of the results, which turns out to be a malicious page on a server that has been hacked (CS). The hacked server sends the request to a server that redirects traffic (RS). The victim is sent to an exploit server that the redirection server has chosen (ES). The exploit server tries to take advantage of the victim's browser or shows a "scareware" page to trick the victim into downloading malware.

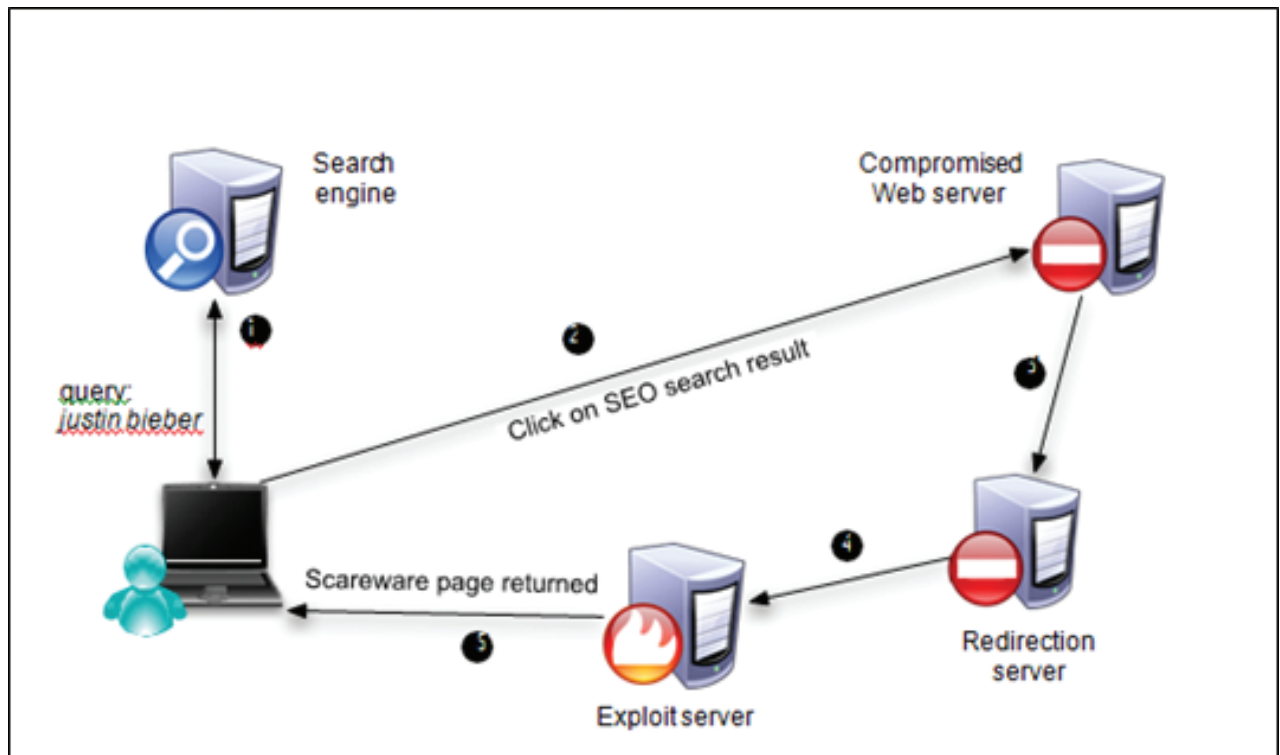
From the point of view of a normal user, it is easy to see how a victim falls for an SEO keyword poisoning attack. The attackers poison the most popular search terms so that their malicious links show up in the search results. When the victim uses a search engine to look for such common terms, some of the results would lead to servers that the attackers control. Most of the time, these servers are the real ones that host SEO pages and have been taken over by the attackers so they can launch the attack. When you click on the search results, you go to an SEO page that, after a few hops, sends you to an exploit server that shows a scareware page. For example, the scareware page might trick the user into downloading and installing a "anti-virus" programme by showing an anti-virus scan with big, flashing warnings that multiple infections were found on the victim's system.

Industry Applications

Malware distribution through SEO attacks could easily be described as beautiful in its simplicity by tricking the search engines into indexing rogue SEO pages as well as users into running the fake antivirus malware. The users are redirected to different targets using the SEO URL. Two modes of operation in the pages can be observed:

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- The users go through a series of redirects to reach the final landing page.
- The users are redirected to a MaaS (Malware-as-a-Service) platform which starts another redirection chain leading to final landing page.

The final landing page sites belongs to the following top web categories :

- Adult and pornographic websites
- Internet services sites; in this case, the SEO campaign's purpose is advertising
- Exploit servers leading to adware/malware payloads



Conclusion

The attackers use search poisoning, which is sometimes referred to as an abuse of SEO techniques, to target any search term that can effectively increase the number of search users to their malicious websites. By using these techniques, compromised legitimate websites offer an easy-to-use network of hosts that are being used as a platform for these attacks. By successfully poisoning search engine data, the scammers are able to steer unwary users to malicious SEO pages, starting the attack. These assaults are being carried out in order to disseminate bogus antivirus viruses. Some SEO tools have the ability to track the most popular search phrases at any given time automatically and offer a central point of control. There is little reason for the creators and distributors of malware to alter the strategy as long as the attacks continue to be successful.

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