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The 6th International Conference on "Drivers of Global Economic Recovery" organized by Maharaja Agrasen Institute of Management Studies, Delhi, India on 23 April, 2021 in association with International Academic Partners, Waljat College of Applied Sciences, Oman and Faculty of Economics, Thammasat University, BKK, Thailand.

The objective of the Conference was to provide better insights of the world economy after the recent economic crisis. This International Conference provided a wider platform for academicians, researchers, industrialists, policymakers, and students to present and discuss their views and original research outcomes on various facets of the said population. The thought-provoking insights in the conference offered valuable signposts supporting the global economic recovery. As the world economy fitfully faced many crises in the recent years. Every crisis exemplifies the demand for measures and suitable courses of action. To cope with these crises, experts need to reassess, re-examine the environment in which they make decisions. For the past two decades, globalization is Intensifying innumerable new management models.

This special issue on "Drivers of Global Economic Recovery" contains 12 papers of the conference. All the research papers focus on drivers of global economic recovery, which give insights to the advancement of the theory and practical applications in the field of economics, commerce, management, law, communication, and other related areas.

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Perception About Relevant Factors of TQM Practices

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Abstract

The path towards quality improvement in education will be with success accomplished with the efforts for the adoption of Total Quality Management (TQM) approach. TQM is primarily involved with increasing student satisfaction through associate integrated framework that examines the relationships between numerous system-wide components and makes data-driven choices to scale back errors and waste in processes. The data was collected from 252 faculty members of private universities of Himachal Pradesh. This study concluded that the different point of view of Males and Females on TQM implementation in Private universities of Himachal Pradesh.

Keywords: TQM, TQM practices, Education

INTRODUCTION

The concept of TQM (Total Quality Management) was introduced in the 1920's when the statistical approach was first used in Quality Control in America. This concept was later introduced to the corporate managers in Japan in the 1950's, at a time when the country was gearing itself towards, industrial development. This concept received a further impetus in the 1980's with the increasing awareness worldwide on the importance of quality. These changes directly affected the views and behavior of managers in the public and private organizations. It was realized that the traditional approaches in Quality Control or Quality Management could no longer guarantee the production which satisfy the customers. As a result, attention was shifted towards Total Quality Management which would assist the managers in achieving success. The application of Total Quality Management not only benefits the organizations but also benefits the customers in terms of quality products, savings and much more. TQM is the key to the success of an organization.

The concept of Total Quality Management (TQM) was developed by an American, W. Edwards Deming, after the World War II, for improving the production quality of goods and services. The concept was not taken seriously by Americans but the Japanese adopted it seriously in 1950. The success of TQM in Japan made this concept famous in many countries across the world. Originally, the concept was developed for manufacturing organizations. Later on, it gained popularity in other service institutions including bank, insurance, non-profit organizations, and health care and so on.

The definition of Total Quality Management terms by concept is

described below:

Total = Quality involves everyone and all the activities of the company.

Quality = Conformance to Requirements (Meeting Customer Requirements).

Management = Planning, organizing, directing, controlling and co-coordinating all the activities of the organization for continuous improvement and maintaining a high level of quality.

Total Quality Management is a management approach that tries to achieve and sustain long term organizational success by encouraging employee feedback and participation, satisfying customer wants and expectations, considering societal values and obeying governmental rules and regulations. TQM has become increasingly popular in education, as evidenced by the plethora of books and journal articles especially in the 1990s which showcase that TQM in education focused on the quality of the teaching system used rather than on students' examination results. They argued that examinations are a diagnostic tool for assuring the quality of all system related to education and its teaching system. To satisfy the educational needs of students, continuous improvement efforts need to be directed to curriculum and delivery services.

Quality Management Systems in Higher Education in India

In India, the establishment of universities is regulated by law. Only the parliament of the Government of India (central/union government) and state legislation can establish a university. Various apex institutions have been entrusted, either by an Act of Parliament or by an Act of Legislative Assembly or by central or state governments, with the responsibility to regulate the standards of education. For example, the University Grants Commission (UGC) was established by the UGC Act, 1956, to coordinate and maintain standards of university education. The NAAC was established in 1994 under 12cc of the UGC Act to assess the standards of quality. It assesses and accredits universities along with their constituent and affiliated colleges. Similarly, the AICTE was established under the AICTE Act 1987 to plan and coordinate the development of technical education system in the country. Under Section 10 (U) of the AICTE Act, the National Board of Accreditation (NBA) has been set up to assess and accredit the technical institutions in the country and to make recommendations to the relevant authorities for recognition and de - recognition of qualifications.

REVIEW OF LITERATURE

Bass, et.al. (1996) A national sample of professors was used to investigate four research questions concerning faculty members' practices and perceptions about using total quality management (TQM) principles to improve classroom teaching. The findings suggest that few universities have formal plans for applying TQM principles in the classroom, although most respondents apply them in teaching.

Smith & Lewis (1997) strongly berated total quality management, claiming it to be a tool of management used to adversely manipulate workers in pursuit of corporate gain. This paper questions this supposition, arguing it is the abuse of TQM by management that is at fault. Effective TQM

is based on four principles, customer satisfaction, continuous improvement, speaking with facts and respect for people. It is the lack of the genuine respect for people that is the demise of most TQM initiatives.

Koch & Fisher (1998) stated that those who advocate the use of total quality management (TQM) in higher education issue strong promises that it will unite campuses, increase employee satisfaction and improve nearly any process that it touches. Unfortunately, the empirical evidence in favor of TQM in universities is mostly anecdotal and surprisingly sparse. The evidence that does exist relates primarily to administrative tasks such as bill collection, check writing, financial aid and registration. But, the truly significant problems facing higher education today relate to the nature of the curriculum, uses of faculty time, how to restrain increasing costs, distance learning and the use of technology, cooperative relationships with business and governance and leadership arrangements. TQM has precious little to say about these things and even erects subtle roadblocks to change in these areas because of its strong emphasis upon meetings, consensus and process over product. Further, it turns out to be a costly approach to decision-making because it is so time-intensive. Thus, while TQM appears to have been quite helpful to some business firms, it is only marginally useful in the rapidly changing, indeed revolutionary, environment that universities inhabit today.

Joiner (2006) undertook the study to find out the relationship between the extent of Total Quality Management (TQM) implementation and organization performance and to find out the moderating effect of co-worker support and organization support on the TQM/performance relationship. 80 motor vehicle parts and accessories manufacturing firms in Australia were taken as sample. Mean, Standard deviation, Correlations and Factor analysis were used for data analysis. The results indicated that there is a strong positive relationship between the extent of implementation of TQM practices and organization performance. This study also found that co-worker support and organization support moderated the relationship between TQM implementation and organization performance.

Soltani & Pei-Chun Lai (2007) examined management perception and understanding of the concept of control in the context of TQM and its implications for its success or failure. Three quality driven manufacturing organizations operating in United Kingdom were taken as sample. Multiple Case Study, In Depth Interviews and Content Analysis were used as research methodology. It was concluded that the majority of the managers of TQM-driven organizations at various organizational levels see no difference between process control and control over the workforce.

Sahu & Shrivastava (2008) tried to explore the various factors that affect technical education and to develop a mathematical model to measure the effectiveness of technical institutions based on the factors. The sample of the study constituted the six institutions affiliated to same university imparting technical education. Chi- square, Correlation and Regression Techniques were used for data analysis. The results indicated that there were various factors which directly or indirectly influence the effectiveness (quality) in technical education–

Administration, Infrastructure, Teaching, Effectiveness, Students, Interaction with Industry and Society, Extra Curricular Activities, Research and Development. A mathematical model was evolved for assessing the effectiveness of a technical institution in terms of these factors.

Pour & Yeshodhara (2009) investigated the level of perception of secondary school teachers regarding TQM in education, difference between the level of perception of male and female secondary school teachers and difference between level of perception of Arts and Science secondary school teachers regarding TQM in education. 126 high school teachers of 21 schools in Mysore (India) were taken as sample. Mean, Standard Deviation, T- test and Analysis of Variance (ANOVA) were used for data analysis. According to the study, majority of secondary school teachers have exhibited that average level of TQM in education. It was concluded that female teachers have better perception than male teachers regarding TQM in education. There is no significant difference between Arts and Science secondary school teachers in the perception about TQM in education.

Talib et.al. (2010) conducted the study to identify some critical success factors (CSF) that contribute to the success of TQM in the service industry in India. It was concluded that the Top- management commitment is a vital CSF of a service industry. Customer Focus and Satisfaction is the second most vital factor for effective TQM implementation.

Gorji & Farooquie (2011) examined health care quality and performance in the two countries - India and Iran. 50 hospitals from India and 60 from Iran (government, semi – government and private) were taken as sample. ANOVA was used for the purpose of data analysis. The results did not show any significant difference between practicing the philosophy of total quality management for performance excellence in health care in both the countries. Results showed that there is significant difference between hospitals from India and Iran are not found to be scoring close to the benchmarks.

Din & Cheema (2013) discussed the idea of strategic change with context to TQM & Innovation. Study explained the process of innovation and TQM adopted by organizations. This study described the relationship between Strategic Change, Innovation, and Total Quality Management.

Barros, et.al. (2014) conducted the study on Portuguese companies certified according to the ISO 9001 standard. The objective of the study was to reflect the relationship between the use and implementation of quality management principles and practices and their impact on the companies' quality performance. Literature Review and In Depth Interviews were used as research methodology. The results show a significant and positive relationship between the implementation of quality management principles and practices and their impact on the companies' quality performance.

Samad & Thiyagarajan (2015) described that Total Quality Management has become a key management tool that is currently driving today's industry. TQM successfully applied in multinational firms/organizations. Institutions of higher learning have now begun to reexamine the educational process and the application of TQM principles in academia. In management education course like MBA, where many concepts like management, leadership, TQM are taught to the students, the possibility of knowing how to apply the concepts is less in many institutions. It is

very unfortunate that the place where TQM is taught it is not practiced. When it is not practiced the learning process is at stake. TQM in higher education is a process that involves the institutions adopting a total quality approach to the entire academic process and environment so, that the needs of the students and those of their employers are best served. It is the never ending pursuit of continuous improvement in the quality of education provided to the students and the satisfaction of the other stakeholders. Research attempted to apply the TQM concept in higher education and highlights the dimensions of quality in education. The benefits and the challenges of implementing TQM in higher education were discussed in detail. Conclusion of the study was that stress on applying TQM in higher education and MBA in particular involves interaction and the satisfaction of the stakeholders thereby contributing to the enhancement of quality of education.

Erande & Pimplikar(2016) stated that due to the present policies of globalization, the scenario of economics is changed in past decade. Construction companies in India are facing tougher competition from their counterpart companies due to large trend of global bidding. To be ahead in the bidding process they need to show competitiveness in terms of quality, cost as well as time of a construction project. To lead this competition they need to strive for customer satisfaction and delight. Total quality management (TQM) is the philosophy which can transform Indian construction sector to surpass the global competition and match the global standards. TQM is an effort that improves overall performance of company and it focuses on customer satisfaction, training, teamwork, and process improvement. Authors discussed the TQM concepts and practices adopted by construction companies & also aims at throwing light on problems related to implementation of TQM in construction. The study is carried out using questionnaire survey conducted across different companies in Pune and Nasik districts and also using face to face interview with managers & engineers & then subsequent analysis of the response from companies. The study conducted in the quest of finding solutions for TQM implementation in construction industry. TQM is very powerful philosophy in the quest of achieving business excellence. Construction projects are big budget endeavours so naturally large stakes are involved in it. So every event of rework, wastage as well as time overrun ultimately hits the overall budget of project. So the construction industry need to summon and effective and efficient quality management philosophy like TQM, which has already proven its worth in manufacturing sector and in recent time in construction sector as well.

Sayyad (2017) examined the relationship between Total Quality Management (TQM) practices and their effects on firms' performances' in Palestine. It also aims to discuss management commitment, employee involvement, training and education, reward and recognition on quality improvement within 57 Palestinian firms. The study employs survey data collected from Palestinian manufacturing and service firms. The results of this study revealed that management commitment, employee involvement, training, education, rewards and recognition are significantly positively associated with firms' quality improvement practice. It was perceived that

employee involvement was a dominant factor for quality improvement; it was associated with significant improvements in firms' quality improvement.

Sahoo & Yadav (2018) examined the relationship between quality management dimensions and firm's performance, considering manufacturing SMEs as focal point of research. Furthermore, the intention is to identify the major barriers to adoption of quality management practices in manufacturing SMEs. Empirical data were drawn from a sample of 127 manufacturing SMEs in India to address the research objective. The test of the structural model supports the proposed hypotheses, that total quality management is positively related to manufacturing performance. The findings of this study showed that a positive correlation between quality management dimensions and firm performance and confirmed direct relationship between quality management practices and firm performance.

Fundin et.al. (2020) stated that Quality Management identified as vital and important for research projects within QM during the coming decade. This study is also an attempt to initiate research for the emerging 2030 agenda for QM, here referred to as 'Quality 2030'. This article is based on extensive data gathered during a workshop process conducted in two main steps; first is a collaborative brainstorming workshop with 22 researchers and practitioners and secondly; an appreciative inquiry summit with 20 researchers and practitioners. The process produced five collectively elaborated and designed future research themes for QM: (a) systems perspectives applied, (b) stability in change, (c) models for smart self-organizing, (d) integrating sustainable development, and (e) higher purpose as QM booster. The process also identified a positive core of QM, defined as core values and aspects in the field and practice that need to be preserved and nurtured in the future.

OBJECTIVES OF THE STUDY

The following objectives were formulated in this study:

- To describe the role of various factors as enablers of TQM
- To analysis the relevance of TQM Enablers & Gender

RESEARCH METHODOLOGY

For the primary data, the researcher collected data from 252 faculty members and used structured questionnaire to conduct survey of faculty of the selected private universities around Himachal namely ICFAI, Maharaja Agrasen University, IEC University, Shoolni University, Baddi University, Abhilashi University, Carrer Point University, Shri Sai University, Chitkara University.

Role of Relevant Factors of TQM Implementation

Table 1 there are 3 columns. In the first column the items as enablers were taken. In the next column the frequency of relevant items were given and in the last column percentage relevant items were given. In the first factor Empowering Faculty & Staff (86.5%) was the most relevant statement in the TQM implementation. High Ability People (77.0%) was the most relevant under the Faculty Professionalism, Student Readiness and Demand (60.8%) had highest frequency in Faculty Mission, Drive for Excellence (68.7%) considered

the most frequent statements as per results and Diversity (62.3%) was the most frequent statement in the next factor i.e. Polity and as per the results Powerful Technology based IT system (76.6%) was the most frequent statements as per the perception of faculty under the Mode of Work.

Table 1: Relevant Factors of TQM

	Frequency	%age
Faculty Leadership		
Empowering Faculty & Staff	218	86.5
Effective Training Support	195	77.5
Effective Senior Leadership Commitment	142	56.3
Strong Advisory Board	173	68.7
Empowered lower levels	118	46.8
Regular Assessment	186	73.8
Faculty Professionalism		
High Ability People	194	77.0
Trained Specialist Faculty	91	36.1
TQM seen as new academic material, not change of paradigm	122	48.4
Accountability	115	45.6
Faculty Autonomy	136	54.0
Faculty Mission		
Commitment to Competitiveness	134	53.2
Student Readiness and Demand	176	69.8
Appreciation of Excellence	127	50.4
TQM to be an example of new management paradigm	112	44.4
Faculty Method		
Drive for Excellence	173	68.7
Research Facilities	95	37.7
Polity		
Diversity	157	62.3
Inter-disciplinary Faculty	121	48.0
Mode of Work		
Clear Goals	98	38.9
Little Bureaucracy on Campus	69	27.4
Some departments excel in their fields	137	54.4
Powerful Technology based IT system	193	76.6
Participative, Pleasant and Students' Oriented Work Culture	189	75.0

Relevant Factors of TQM & Gender

Further the interest of the study is to analyze the response of Males and Females respondents for relevant factors of TQM. These are Faculty Leadership, Faculty Professionalism, Faculty Mission, Faculty Method, Polity and Mode of Work.

The responses have been collected from the respondents on relevant factors. Table 2 shows that Male perceives Faculty Leadership less relevant of TQM Implementation as compared to female. Males perceive faculty leadership is highly relevant as well as Females considers TQM as a leadership is Medium relevant.

Table 2: Relevant Factors & Gender

		Low Relevance	Moderate Relevance	High Relevance	Total
Enablers: Faculty Leadership	Male	29(22.5%)	47 (36.4%)	53 (41.1 %)	129 (100%)
	Female	11 (8.9%)	67 (54.5%)	45 (36.6%)	123 (100%)
	Total	**40 (15.9%)**	**114 (45.2%)**	**98 (38.9%)**	**252 (100%)**
Enablers: Faculty Professionalism	Male	65 (50.4%)	35 (27.1%)	29 (22.5%)	129 (100%)
	Female	56 (45.5%)	41 (33.3%)	26 (21.1%)	123 (100%)
	Total	**121 (48.0%)**	**76 (30.2%)**	**55 (21.8%)**	**252 (100%)**
Enablers: Faculty Mission	Male	49 (38.0%)	23 (17.8%)	57 (44.2%)	129 (100%)
	Female	32 (26.0%)	31 (25.2%)	60 (48.8%)	123 (100%)
	Total	**81 (32.1%)**	**54 (21.4%)**	**117 (46.4%)**	**252 (100%)**
Enablers Faculty Method	Male	38 (29.5%)	54 (41.9%)	37 (28.7%)	129 (100%)
	Female	36 (29.3%)	34 (27.6%)	53 (43.1%)	123 (100%)
	Total	**74 (29.4%)**	**88 (34.9%)**	**90 (35.7%)**	**252 (100%)**
Enablers: Polity	Male	48 (37.2%)	18(14.0%)	63 (48.8%)	129 (100%)
	Female	35 (28.5%)	42 (34.1%)	46 (37.4%)	123 (100%)
	Total	**83 (32.9%)**	**60 (23.8%)**	**109 (43.3%)**	**252 (100%)**
Enablers: Mode of Work	Male	64 (49.6%)	9 (7.0%)	56 (43.4%)	129 (100%)
	Female	58 (47.2%)	21 (17.1%)	44 (35.8%)	123 (100%)
	Total	**122 (48.4%)**	**30 (11.9%)**	**100 (39.7%)**	**252 (100%)**

Males and Females both perceive Faculty Professionalism is less relevant of TQM implementation. As much as more than 44.2% males and 48.8% females have perceived that Faculty Mission was most relevant factors of TQM. Males perceived faculty method is medium relevant as females perceived faculty method is highly relevant of TQM implementation. Both Males and Females considered Polity is highly relevant as implementation of TQM practices in Education sector. Mode of Work considered as least relevant as per Males and Females both the gender.

CONCLUSION

Analysis of the study depicted that Faculty Professionalism and Mode of Work are considered least relevant factors as per both Males and Females. Although, perception of Males and Females regarding Faculty Mission and Polity considered as highly relevant factors of TQM implementation. Faculty Leadership and Faculty Method are

highly relevant as per the perception of females but Males does not agree with the females in this regard. Results described the different point of view of Males and Females on TQM implementation in Private universities of Himachal Pradesh.

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Small Finance Banks: New Drivers of Financial Inclusion Accelerating the Growth of Indian Economy

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Abstract

This paper summarizes the progress and performance of Small Finance Banks in India. As we know, banking sector plays vital role in the economic growth of the country. Banks has undergone revolutionary changes in relation with financial inclusion initiative in India. The term financial inclusion first appeared in India in 2005. RBI highlighted its significance in its annual policy statement of 2005-2006. Although, Government take various initiatives to promote financial inclusion in India. But Small finance Banks and Payment Banks are one of the innovative solution to meet objective of financial inclusion. These banks came into existence on 16 Sep, 2015. RBI granted License to 10 Small finance Banks. The objective of these banks is to promote financial inclusion by supply of credit to sections of the society not being served by already established banks, such as small business units, small and marginal farmers, micro and small industries and other unorganized sector entities using low cost operation. The present study aims at examining the progress and performance of Small Finance Banks (SFBs). This study is based on Secondary data which is collected from Annual reports of the SFBs.

Keywords: Financial Inclusion, Small Finance Banks, Performance of SFBs.

INTRODUCTION

In a dynamic growth oriented economy, access to finance for each and every group of society is of high importance. Banking sector in India is important channel to provide financial services. This sector plays very important role in the economic growth of the country. In India banking and financial sector has undergone revolutionary changes in relation with financial inclusion initiative in India. The term financial inclusion first appeared in India in 2005, Reserve bank of India highlighted its importance in its annual policy statement of 2005-2006. Although, Government has taken various initiatives to promote financial inclusion in India. But Small Finance Banks and Payment Banks are one of the innovative solutions to meet the objective of financial inclusion. Small Finance Banks came into existence on 16Sep,2015. RBI granted licenses to 10 SFBs to commence their business. Recently many branches of SFBs are operated across India. The peculiar characteristics of SFBs are that these banks are niche banks different from universal banks. These banks serves the requirements of particular demographic segments of the population. The spirit of differentiation is based on

capital requirement, scope of activities, area of operation and technology used. Because the concept of these banks are new, a very few studies have been conducted on examine the progress and performance of Small Finance Banks.

LITERATURE REVIEW

Neelam (2019) in their paper titled "Tracking Performance of Small Finance Banks against Financial Inclusion Goals" discussed that SFB have performed well in maintaining profitability even after facing more strict regulatory norms of RBI like priority sector lending requirement and loan size restriction, cost of funds for SFB are double than public and private sector banks.

Mukundrao(2016) analysed growth, profitability performance of RRBs for a period of 5 Year(2011-2016) on the basis of various parameters such as no of branches, total deposits, loan and advances, net profit, credit and deposit ratio. The study concluded that there had been increase in no of branches, total deposits and loan and advances. The study suggested that banks should focus on improving profitability and credit and deposit ratio.

Shamshadali et al(2018) in their paper titled " A study on Performance status of Regional rural banks in India" analysed financial performance of Regional Rural Banks (RRB), considering various financial performance indicators for the period of 2005-2006 to 2015-16. Secondary data had been used which is collected from the annual reports of the National Bank for Agriculture and Rural Development(NABARD).This study indicate that RRB in India has made significant improvement.

Ahmed(2015) in their paper titled "Performance Evaluation of RRB : Evidence from Indian Rural Banks" examined the performance of RRB in India using various parameters like no of district covered by RRB, total deposits, total advances, employees per branch, C/D Ratio, deposit and advance per branch by analyzing data for period 2005-06 to 2015-16. The study had concluded that new branches have been opened across India and banks should focus on improving C/D Ratio, deposit and advances.

Iqbal & Sami (2017) in their paper titled "Role of Banks in Financial Inclusion in India" examined the impact of financial inclusion on growth of economy for the period of 7 Years from 2007-08 to 2013-14 .The study revealed that variables like no of branches and C/D Ratio have significant and positive impact on GDP of country, whereas variables like ATM Growth has insignificant impact on Indian economy.

OBJECTIVE OF THE STUDY

To examine the progress and performance of Small Finance Banks in India.

RESEARCH METHODOLOGY

The present Study relates to exploration of insights regarding contribution of Small finance Banks towards growth of Indian economy. So the research design is Descriptive in nature. The study is based on secondary data which is collected from annual reports of all 10 Small Finance Banks. The study is for 5 year period starting from 2015-16 to 2019-20. Data

collected has been arrange in the form of tables and charts for further analysis or to drive the conclusion.

ANALYSIS AND INTERPRETATION

Revenues, Borrowings, Deposits and No of Branches are the important parameters which depicts the growth of banking Sector in India. It is not only the deposits and borrowing but revenue also plays important role for the success of banking sector especially in the case of Small Finance Banks. So the data has been compiled from the Annual Reports of all 10 Small Finance Banks on the following four parameters – Borrowings, Deposits, Revenues and no of branches. For Some of the banks, the data was not available for initial years. On the basis of analysis and interpretation, following findings has emerged :

Table1: Revenue and Average Revenue (in Cr) of all 10 Small finance Banks from 2015 to 2020

Year Banks	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	Average Revenue
Au Small Finance Bank Ltd	1,015	1,420	2,155	3,411	4,992	2,599
Capital Small Finance Bank Ltd	202	244	294	378	501	324
Fincare Small Finance Bank Ltd	-	-	351	675	1,216	747
Equitas Small Finance Bank Ltd	820	1,236	1,357	2,359	2,936	1,741
Suryoday Small Finance Bank Ltd	200	255	325	597	854	446
Ujjivan Small Finance Bank Ltd	1,028	1,398	1,582	2,038	3,026	1,814
Utkarsh SmallFinance Bank Ltd	-	90	562	939	1,406	749
North East Small Finance Bank Ltd	-	-	104	287	-	196
Jana Small Finance Bank Ltd	-	2,978	1,597	1,368	2,425	2,092

Source- Compiled from Annual reports of SFBs from 2015-16 to 2019-20 (For some of the banks, data was not available for initial years

Table 1 the increasing trend of Revenue during the period 2015-16 to 2019-20 for all 10 Small finance Banks. Both table and chart shows that out of ten SFBs, average revenue of four SFBs were higher than other SFBs. AU small finance banks have the highest average Revenue (Rs 2598.6 Cr) followed by Jana Small Finance Banks (Rs 2092 Cr), Ujjivan Small Finance Banks (Rs 1814.4 Cr), Equitas Small Finance Banks (Rs 1741.3 Cr). North East Small Finance Banks have the lowest Average Revenue (Rs 195.7 Cr).

Table2: Deposits and Average Deposits of All ten SFBs from 2015-16 to 2019-20

	2016	2017	2018	2019	2020	Deposits
Banks						
Au Small Finance Bank Ltd	1,015	1,420	2,155	3,411	4,992	2,599
Capital Small Finance Bank Ltd	1,814	2,378	2,851	3,667	4,447	3,031
Fincare Small Finance Bank Ltd	-	-	727	2,043	4,654	2,475
Equitas Small Finance Bank Ltd	-	-	-	8,880	10,679	9,779
ESAF Small Finance Bank Ltd	-	409	2,523	4,317	7,028	3,569
Suryoday Small Finance Bank Ltd	19	22	750	1,593	2,849	1,046
Ujjivan Small Finance Bank Ltd	-	206	3,772	7,379	10,780	5,534
Utkarsh Small Finance Bank Ltd	-	19	2,194	3,791	5,235	2,810
North East Small Finance Bank Ltd	-	-	125	267	890	427
Jana Small Finance Bank Ltd	-	-	0	4,200	9,652	4,617

Source- Compiled from Annual reports of SFBs from 2015-16 to 2019-20 (For some of the banks, data was not available for initial years

The amount of deposits in banks depends on the saving habits of people. It's also depend on rate of interest offered by banks to their customers. If rate of Interest is high, deposits will be more and vice versa. So Deposits organization plays important role in growth of banking sector. Table 2 and above charts suggests that all these banks showed increasing trend with regard to deposit from period 2015-16 to 2019-20. It also shows that Equitas Small Finance Banks have the highest Average Deposits (Rs 9779.26 Cr) and North East Small Finance banks have the lowest Average deposits (Rs 427.3 Cr).

Table3: Borrowing and Average Borrowing of all ten SFBs from 2015-16 to 2019-20.

Year / Banks	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	Average Borrowing
Au Small Finance Bank Ltd	1,015	1,420	2,155	3,411	4,992	2,599
Capital Small Finance Bank Ltd	100	116	222	3,667	4,447	1,711
Fincare Small Finance Bank Ltd	-	-	1,069	1,283	1,368	4,979
Equitas Small Finance Bank Ltd	-	-	-	3,540	6,417	4,979
Suryoday Small Finance Bank Ltd	956	1,022	718	1,124	1,264	1,017
Ujjivan Small Finance Bank Ltd	-	-	-	4,166	3,953	4,060
Utkarsh Small Finance Bank Ltd	-	2,288	1,788	1,429	2,675	2,045
North East Small Finance Bank Ltd	-	-	1,081	1,100	-	1,091
Jana Small Finance Bank Ltd	-	11,667	7,662	4,086	2,900	6,579

Source-Compiled from Annual Reports of SFBs from 2015-16 to 2019-20 (For some of the banks, data was not available for initial years)

Table 3 and above chart suggests that Jana Small Finance Banks have highest Average borrowing (Rs 6578.7 Cr) followed by Fincare Small Finance Banks and Equitas Small Finance Banks (Rs 4978.6 Cr), Ujjivan Small finance banks (Rs 4059.5 Cr). Suryoday Small Finance banks have lowest Average Borrowing (Rs 1016.6 Cr).

Table4: No of branches of all 10 SFBs from 2015-16 to 2019-20

Year / Banks	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	Average No of Branches
Au Small Finance Bank Ltd	291	301	306	322	528	350
Fincare Small Finance Bank Ltd	-	-	-	417	509	463
Equitas Small Finance Bank Ltd	135	-	375	-	744	418
ESAF Small Finance Bank Ltd		321	401	424	454	400
Suryoday Small Finance Bank Ltd	179	233	241	382	477	302
Ujjivan Small Finance Bank Ltd	-	442	-	524	575	514
Utkarsh Small Finance Bank Ltd	-	378	405	482	507	443
North East Small Finance Bank Ltd	116	131	139	155	179	144
Jana Small Finance Bank Ltd	-	-	-	-	337	337

Sources: Compiled from Annual Reports of SFBs from 2015-16 to 2019-20 (For some of the banks, the data was not available for initial years)

Table 4 depicits that all these banks shows increasing trend with regard to no of branches from period 2015-16 to 2019-20. It also reveals that Ujjivan small finance banks have the highest average no of branches (514) followed by Fincare Small finance banks (463), Utkarsh Small Finance Bank(443) and Capital Small Finance Banks have Lowest Average no of branches(100).

CONCLUSION

It is evident that despite facing issues, challenges and the more strict regulatory measures of the RBI such as higher priority sector lending requirement, loan size

restriction, maintaining high capital adequacy ratio, high cost of deposit mobilization, Small finance banks done well in maintaining profitability. All Small finance Banks shows increasing trend with regards to no of branches from the period 2015-16 to 2019-20.New branches of Small finance Banks have been opened up in under-banked districts of the country.

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Various Types of Efficient Markets Hypothesis and Statistical Tools for Analysis

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Abstract

It is general notion in the market that stock markets are efficient and prices reflect all available information. There is extensive research literature available to see whether stock markets are efficient or not. The present study covers the various types of Efficient Market Hypothesis and the relationship of Efficiency and Market Returns It also includes various statistical tools used to analyze the stock price movements to show that any trend or movements in the market are interdependent and to understand the weak form efficiency of the stock market including Run Test Analysis, Kolmogorov–Smirnov test and Variance Ratio Test.

Keywords: Stock Market, efficient Market Hypothesis, Market Returns

INTRODUCTION

An 'efficient' market is defined as a market where there are large numbers of rational, profit 'maximizes actively competing, with each trying to predict future market values of individual securities, and where important current information is almost freely available to all participants. In an efficient market, competition among the many intelligent participants leads to a situation where, at any point in time, actual prices of individual securities already reflect the effects of information based both on events that have already occurred and on events which, as of now, the market expects to take place in the future. In other words, in an efficient market at any point in time the actual price of a security will be a good estimate of its intrinsic value. (Fama, 1965)

Market efficiency is very important for any stock market because investment decisions of an investor are very much influenced by this. An investor can earn abnormal profits by taking benefit out of inefficient market whereas there is no scope of earning extra profits in an efficient market. The random walk hypothesis states that future prices are not predictable form the past. Successive price changes are not dependent over the past periods and past trends are not followed in future exactly. There is no information available in the market which is not reflected in the stock prices. Random walk basically means that prices vary randomly and there is not any significant pattern which followed in the market. Some academicians believe that stock market is weak efficient (Cootner, 1962; Fama, 1965; Kendall, 1953; Granger & Morgenstern, 1970). While some others have belief that stock markets are not weak efficient (Chaudhary, 1991).

TYPES OF EFFICIENT MARKET HYPOTHESIS

According to Fama (1965), Efficient Market Hypothesis suggests that security prices fully reflect all available information. There are three forms of efficient market hypothesis. These are as follows:

- **Weak Form Efficiency:** This theory states that current prices reflect all past prices information which means if anyone has some extra ordinary information beyond this, he can earn profit by use of that information. It means that past information is reflected in stock price. Beyond past information, no information even publically available information can also have an impact on share price.
- **Semi-Strong Efficiency:** The theory suggests that not only past prices are reflected in the current price but all publicly available information is also adjusted in the stock prices. It states that all relevant publicly available information is going to reflect in the stock price. It means if there is any new information reaches to the market, that is immediately digested by the market resulted into change in demand and supply and a new equilibrium level of prices is attained.
- **Strong Form of Efficiency:** It states that current prices not only reflect publicly available information but insider information such as data given in company's financial statements and company's announcements etc. is also reflected in the present prices. For example, if company is planning to go for corporate restructuring in future, is also can't be used by investor. All information is available to the investors and that is reflected to the market price. In normal circumstances what happens that if someone has nay private information then that person can make the profits by the use of that information by buying shares. He will continue doing that until this excess demand of shares will bring the price below, means no extra information. So he will stop to buy the shares and the stock price will be stable at the equilibrium level. This level is called strong form of market.

EFFICIENCY AND MARKET RETURN

The all three forms of market efficiency have different consequences as far as excess returns are concerned:-

- If market is weak-form efficient, no excess returns can be received on the basis of study of past prices. This type of study is called technical analysis which is based on the past prices study without any further information.
- If market is semi-strong efficient, no excess returns can be received by the study of any publically available information. This study is called fundamental analysis, the study of companies, sectorals and the whole economy can't produce much returns than expected compared to risk involved.
- If market is strong-efficient, as prices are adjusted even for secret or privately held information so no excess return can be received even by insider trading.

Efficiency of stock market has its implications for the whole economy and economic development of any country. As, if stock market is efficient enough then there is no need of government interference in the market movements. But, on the other side, in an inefficient market investor would like to take the benefit of extra

ordinary information available to them. The role of government and the regulators increase in this situation to keep a control on significant high differences in the stock prices. There are three forms of market efficiency i.e. strong form, semi strong and weak form efficiency have different consequences as far as excess returns are concerned. If market is weak-form efficient, no excess returns can be received on the basis of study of past prices. This type of study is called technical analysis which is based on the past prices study without any further information. If market is semi-strong efficient, no excess returns can be received by the study of any publically available information. This study is called fundamental analysis, the study of companies, sectorals and the whole economy can't produce much returns than expected compared to risk involved. If market is strong-efficient, as prices are adjusted even for secret or privately held information so no excess return can be received even by insider trading. A stock market can be said efficient if all past information, new information and even hidden information reflect in the security prices. It is general notion in the market that stock markets are efficient and prices reflect all available information.

The Bombay stock exchange and National Stock Exchange are two major stock exchanges in India as most of the share transactions are done by the investors in these two exchanges, Kaur (2004). While BSE is the oldest stock exchange in India, NSE is fully automated stock exchange. So, the present study is based on the four major indices of Indian stock market i.e. SENSEX, and BSE100 of Bombay Stock Exchange, while NIFTY and CNX500 of National Stock Exchange.

Statistical tools used to analyze the stock price movements to show that any trend or movements in the market are interdependent and to understand the weak form efficiency of the stock market.

RUN TEST ANALYSIS

Run test is a non-parametric test. This test considers the sign of the price changes and not the values as such. Statistical tests based on theory of runs do not consider the absolute values but consider only their directions. This test does require the specification of the probability distribution. A run is defined as a sequence of price changes of same sign, preceded or followed by price changes of different signs. In case of stock indices or stock prices there are three possible types of price changes, they are: increase or decrease or no change in prices. This implies we can have three types of runs, positive runs, negative runs and no change runs. Under the hypothesis that the successive price changes are independent and the sample proportions of positive, negative and no change runs are unbiased estimates of the population proportions, the expected number of runs can be computed by using the following formula :

$$\boldsymbol{M = \frac{N(N+1) - \sum_i^3 n_i^2}{N}}$$

Where

M= Expected number of runs, n_i = Number of price changes of each sign(i=1,2,3)N = Total number of price changes. The standard error of expected number of runs of all signs is given by:

$$\alpha = \left[\frac{\sum_{i=1}^{3} n_t^2\left(\sum_{i=1}^{3} n_t^2 + N(N+1)\right) - 2N\sum_{i=1}^{3} n_t^3 - N^3}{N^3(N+1)}\right]$$

When N is sufficiently large, the sampling distribution of expected number of runs of all types is approximately normally distributed with mean M and standard error ó. The difference between the actual number of runs and expected number of runs is expressed by standard normal variable Z. Where R is the total number of observed runs of all signs. (Sekar and Arasu, 2007; and Aggarwal, 2012) included runs test in their study.

KOLMOGOROV–SMIRNOV TEST

In statistics, the Kolmogorov–Smirnov test (K–S test) is a nonparametric test for the equality of continuous, one-dimensional probability distributions that can be used to compare a sample with a reference probability distribution (one-sample K–S test), or to compare two samples (two-sample K–S test). The Kolmogorov–Smirnov statistic quantifies a distance between the empirical distribution function of the sample and the cumulative distribution function of the reference distribution, or between the empirical distribution functions of two samples. The null distribution of this statistic is calculated under the null hypothesis that the samples are drawn from the same distribution (in the two-sample case) or that the sample is drawn from the reference distribution (in the one-sample case). In each case, the distributions considered under the null hypothesis are continuous distributions but are otherwise unrestricted. The two-sample KS test is one of the most useful and general nonparametric methods for comparing two samples, as it is sensitive to differences in both location and shape of the empirical cumulative distribution functions of the two samples. The empirical distribution
function F_n for n iid observations X_i is defined as

$$\boldsymbol{F_n(x) = \frac{1}{n}\sum_{i=1}^{n} I_{X_i} \leq x}$$

where $I_{X_i} \leq \boldsymbol{x}$ is the indicator function, equal to 1 if $I_{X_i} \leq \boldsymbol{x}$ and equal to 0 otherwise. Earlier, Poshakwale (1996); and Aggarwal (2012); used K-S test for their research.

VARIANCE RATIO TEST

The variance ratio test is used to measure the randomness of markets pre and post liberalization. The test is based on one of the properties of the random walk process, specifically that the variance of the random walk increments must be a linear function of a time interval, say q. The variance ratio is computed by dividing the variance of returns estimated from longer intervals by the variance of returns estimated from shorter intervals, (for the same measurement period), and then normalizing this value to one by dividing it by the ratio of the longer interval to the shorter interval. For independent identically distributed returns rt, q the variance Var(rt,q) must be equal to q times the variance of rt,1. A variance ratio that is greater than one suggests that the returns series is positively serially correlated or that the shorter interval returns trend within the duration of the longer interval. A variance ratio that is less than one suggests that the return series is negatively serially correlated or that the shorter interval returns tend toward mean reversion within the duration of the longer interval. Earlier research work used this model (Sekar & Arasu, 2007).
The variance ratio is calculated as:

$$VR\ (q) = \frac{Var\ (r_{t(q)})}{qVar\ (r_r)}$$

We need to calculate the variance of the longer and the shorter horizons using the following formulae:

$$\sigma^2(q) = \frac{1}{m}\sum_{k=q}^{nq}(P_k - P_{k-q} - q\mu)^2$$

$$\sigma^2(1) = \frac{1}{nq-1}\sum_{k=q}^{nq}(P_k - P_{k-1} - \mu)^2$$

CONCLUSION

The study has highlighted the meaning and concept of Stock Market Efficiency. It also explained various types of Efficient Market Hypothesis and the relationship of Efficiency and Market Returns. Three Statistical tools i.e. Run Test Analysis, Kolmogorov–Smirnov test and Variance Ratio Test were explained for analyzing the Stock Market Efficiency.

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A Study on Empirical Analysis of Indian Stock Market Efficiency

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Abstract

The general belief is that stock market is a place where prices can be easily predicted and some extra profits can be made by making an estimate of the future prices on the basis of past. The present paper made an attempt to specify the efficiency in Indian stock market. SENSEX and BSE100 of Bombay Stock Exchange and S&P CNX Nifty and S&P CNX500 of National Stock Exchange was taken as a proxy to represent the Indian stock market. The daily closing points was taken for the sample period of ten years from January 2003 to December 2012. The data was collected from the official websites of Bombay Stock Exchange and National Stock Exchange i.e. www. bseindia.com and www. nseindia.com. Different statistical tools like Unit Root test, Runs test and Kolmogorov–Smirnov test (K–S test) and Variance Ratio test were used to analyze the data with the help of software Eviews5. The results revealed that Indian stock market does not move random and security prices are totally dependent on the past information. It was concluded that Indian stock markets are not weak form efficient.
Keywords: NSE, BSE, SENSEX, BSE100, S&P CNX Nifty, S&P CNX500.

INTRODUCTION

The three forms of market efficiency i.e. strong form, semi strong and weak form efficiency have different consequences as far as excess returns are concerned. If market is weak-form efficient, no excess returns can be received on the basis of study of past prices. This type of study is called technical analysis which is based on the past prices study without any further information.

If market is semi-strong efficient, no excess returns can be received by the study of any publicly available information. This study is called fundamental analysis, the study of companies, sectoral and the whole economy can't produce much returns than expected compared to risk involved.

If market is strong-efficient, as prices are adjusted even for secret or privately held information so no excess return can be received even by insider trading.

follow random walk and there was an evidence of autocorrelation in both markets.

LITERATURE REVIEW

Poshakwale **(1996)** provided empirical evidence on the weak form efficiency and the day of the week effect in Bombay Stock Exchange. They gave evidence of day of the week effect and that the stock market was not weak form efficient. The day of the week effect observed on the BSE pose interesting buy and hold strategy issues. ***Azarmi et. al. (2005)*** examined the empirical association between stock market development and economic growth for a period of ten years around the Indian market "liberalization" event. They proved that the Indian Stock market is a casino for the sub-period of post liberalization. ***Gupta and Basu (2007)*** explained that hypothesis of market efficiency is an important concept for the investors who wish to hold internationally diversified portfolios. They tested the weak form efficiency in the framework of random walk hypothesis for the two major equity markets in India and suggested that the series did not

Sehgal and Gupta (2007) discussed that technical indicators do not outperform Simple Buy and Hold strategy on net return basis for individual stocks. They suggested that technical analysis provided statistically significant returns for all the nine technical indicator on gross return basis during the entire study period. ***Chander et al. (2008)*** documented extensive evidence on price behavior in the Indian stock markets. The random behavior of stock prices was quite visible, but could not undermine the noted drifts because randomness alone does not signify weak form market efficiency and vice-versa. ***Singh (2008)*** found that the calculations of beta over 1-5 years showed that monthly betas fluctuate more than daily and weekly betas, though the disparity reduces when calculated over longer periods of time. ***Gupta (2010)*** examined the efficient market hypothesis and random walk characterization of returns. The validation of random walk implied that market was efficient and current prices fully reflected available information and hence there was no scope for any investor to make abnormal profits. They indicated that the Indian stock markets are weak form efficient and follow random walk. ***Srinivasan (2010)*** suggested that the Indian stock markets do not show characteristics of random walk and are not efficient in the weak form implying that stock prices remain predictable. This provides an opportunity to the traders for predicting the future prices and earning abnormal profits. ***Singh and Suri (2010)*** tested the Indian stock market for weak form efficiency. The study showed that Indian stock markets were weak form efficient and price changes followed a random walk. ***Khan et al. (2011)*** proposed that testing the efficiency of the market is an important concept for the investors, stock brokers, financial institutions, government etc. and it was proved that Indian Capital market neither follow random walk model nor is a weak form efficient**.** ***Aggarwal (2012)*** emphasized that Indian markets were random and successive index value changes were independent. The past index changes do not help the investor or analyst to forecast the future. ***Rehman et al. (2012)*** explained that how they tested the weak-form efficiency of emerging south Asian stock markets. While the Colombo Stock market was weak form efficient and reacted immediately to all publicly available information rather than past prices. Pakistani and Indian stock markets were emerging market so normally these markets follow rumors.

RESEARCH METHODOLOGY

The study explored the various studies relating to the efficiency of Indian stock markets. According the following objective of the study was developed:

-To analyze the volatility of Indian Stock market taking sample of S&P CNX500 of NSE.

The data used in this study consist of the daily closing points of S&P CNX500 for the period of ten years from January 2003 to December 2012. The data was collected from the official website of National Stock Exchange i.e. www.nseindia.com. With this data set, we computed the daily returns as follows:

$$R_t = (In\ P_t - In\ P_{t-1}) * 100$$

Where Rt is the return in period t, Pt and Pt-1 are the daily closing prices of the SENSEX at time t and t-1 respectively. **Augmented Dickey-Fuller and Phillips-Perron (PP)** was applied to test the null hypothesis of a unit root. The **Unit Root Test** is a necessary condition to check the stationarity of the data set used in the study. The results of ADF and PP test for a unit root for were presented in Data Analysis section.

Run test is a non-parametric test. A run is defined as a sequence of price changes of same sign, preceded or followed by price changes of different signs. Under the hypothesis that the successive price changes are independent and the sample proportions of positive, negative and no change runs are unbiased estimates of the population

proportions, the expected number of runs can be computed by using the following formula proposed by Wallis and Roberts(1956).

$$M = \frac{N(N+1) - \sum_i^3 n_i^2}{N}$$

Where, M= Expected number of runs, n_i = Number of price changes of each sign(i=1,2,3) and N = Total number of price changes.

In statistics, the **Kolmogorov–Smirnov test (K–S test)** is a nonparametric test for the equality of continuous, one dimensional probability distributions that can be used to compare a sample with reference probability distribution (one-sample K–S test), or to compare two samples (two-sample K–S test). The empirical distribution function F_n for n iid observations, X_i is defined as

$$F_n(x) = \frac{1}{n}\sum_{i=1}^{n} I_{X_i} \leq x$$

where $I_{X_i} \leq x$ is the indicator function, equal to 1 if $I_{X_i} \leq x$ and equal to 0 otherwise.

Variance Ratio Test (Lo and MacKinlay1988) is used to measure the randomness of markets pre and post liberalization. The test is based on one of the properties of the random walk process, specifically that the variance of the random walk increments must be a linear function of a time interval, say q. A variance ratio that is greater than one suggests that the returns series is positively serially correlated or that the shorter interval returns trend within the duration of the longer interval. The variance ratio is calculated as:

$$VR(q) = \frac{Var(r_{t(q)})}{qVar(r_r)}$$

1. Analysis of Descriptive Statistics of Daily Returns

A summary of descriptive statistics for returns series of SENSEX and BSE100 of Bombay Stock Exchange and Nifty and S&P CNX500 of National Stock Exchange are presented in Table 1. This includes mean, maximum, minimum value, standard deviation, skewness, kurtosis and jarque-bera test. The Table 1 shows that all Indian stock markets showed sign of positive average daily returns. The highest average daily return was shown by BSE100 index which has .0731%, followed by S&P CNX 500 with .0726%, then SENSEX which has the return of .0712% and the lowest return was of S&P CNX Nifty with .068%. As far as volatility is concerned the standard deviation of Nifty was highest at 1.658%, thereafter BSE100 with standard deviation of 1.645%, SENSEX at 1.638% and the lowest volatility was present in S&P CNX500 with 1.61%. It was seen that NSE index S%P CNX Nifty has lower return as well as more volatile as compared to BSE index SENSEX with high return and less volatile. The coefficients of the skewness were found to be significant and negative for all the returns. Similarly, the coefficients of kurtosis were found to be positive and are significantly higher than 3, indicating highly leptokurtic distribution compared to the normal distribution for all the returns. The jarque- bera test was applied to know whether the return series was normally distributed or not.

Table 1: Descriptive Statistics of Daily Returns of Selected Markets
(January 2003 to December 2012)

	SENSEX	BSE100	NIFTY	CNX500
Mean	0.0712	0.0731	0.068	0.073
Median	0.1246	0.1709	0.1368	0.183
Maximum	15.99	15.49	16.334	15.03
Minimum	-11.81	-11.93	-13.05	-12.88
Std. Dev.	1.6381	1.6449	1.658	1.611
Skewness	-0.078	-0.28	-0.256	-0.509
Kurtosis	10.822	10.721	11.802	11.66
J-B Stat	6328.1	6195.1	8037	7854

The null hypothesis is that the series is normally distributed. The above Table 1 showed that the p-value (0.0000) was less than .01 at 1% significance level so null hypothesis was rejected and hence all return series of SENSEX, BSE100, S&P CNX Nifty and S&P CNX500 were not normally distributed.

The results of ADF test for a unit root for SENSEX and BSE100 of Bombay Stock Exchange and S&P CNX Nifty and S&P CNX500 of National Stock Exchange are presented in Table 2. The optimal lag length is selected with the Schwartz Info Criterion and maximum lag is set to 36.

2.Analysis of Unit Root Test

Table 2: Unit Root Test of Selected Markets (January 2003 to December 2012)

	SENSEX	BSE100	S&P CNX Nifty	S&P CNX 500
ADF test	-46.3191	-45.363	-47.031	-44.582
p-value	0.0001*	0.0001*	0.0001*	0.0001*

***Indicates significance at 1% level of significance**

The above Table 2 shows that the p-value for all the selected markets under study for the entire sample period was significant at 1% level, so null hypothesis that series has a unit root problem was rejected. It means all the series were stationary and therefore it can be concluded that these markets did not have random walk and were not weak form of efficient.

3.Analysis of Kolmogorov-Smirnov Test

The results of the Kolmogorov-Smirnov Test of return series of the SENSEX and BSE100 of Bombay Stock Exchange and S&P CNX Nifty and S&P CNX500 of National Stock Exchange are presented in Table 5.5. K-S test null hypothesis is that return series are normally distributed. During sample period of ten years from January 2003 to December 2012, K-S statswais significant at 1% level which means null hypothesis was rejected. It can be concluded that all markets under study did not follow normal distribution.

Table 3: Kolmogorov-Smirnov Test for Selected Markets
(January 2003 to December 2012)

	Absolute	Positive	Negative	K-S-Z	P-Value
SENSEX	0.070	0.067	-0.070	3.466	0.000*
BSE100	0.077	0.068	-0.077	3.843	0.000*
Nifty	0.069	0.062	-0.069	3.445	0.000*
S&P CNX 500	0.079	0.066	-0.079	3.922	0.000*

***indicates significant at 1% level.**

The results of the Kolmogorov-Smirnov Test of return series of the SENSEX and BSE100 of Bombay Stock Exchange and S&P CNX Nifty and S&P CNX500 of National Stock Exchange are presented in Table 5.5. K-S test null hypothesis is that return series are normally distributed. During sample period of ten years from January 2003 to December 2012, K-S statswais is significant at 1% level which means null hypothesis was rejected. It can be concluded that all markets under study did not follow normal distribution.

4.Analysis of Runs Test

The results of Runs Test for returns series of SENSEX and BSE100 of Bombay Stock Exchange and S&P CNX Nifty and S&P CNX500 of National Stock Exchange for the entire sample period of ten years from January 2003 to December 2012 are presented in Table 4. Actual number of runs, expected number of runs and standard error was calculated in Table 1. Then z-values were calculated so that they can be compared with the critical value ±1.96 in order to find out whether the difference between the actual number of runs and expected number of runs was significant or insignificant.

Table 4: Runs Test for Selected Markets (January 2003 to December 2012)

	SENSEX	BSE 100	Nifty	S&P CNX 500
K=Mean	0.0007	0.00073	0.0007	0.000726
Cases < K	1187	1156	1182	1143
Cases >= K	1294	1325	1299	1338
Total Cases	2481	2481	2481	2481
Number of Runs	1175	1153	1188	1109
Z-Statistic	-2.583	-3.339	-2.042	-5.045
p-value	0.01*	0.001*	0.041**	0.000*

***indicates 1% level of significance. **indicates 5% level of significance.**

A negative Z value indicates a positive serial correlation, whereas a positive Z value indicates a negative serial correlation. The positive serial correlation implies that there is a positive dependence of stock prices, therefore indicating a violation of random walk. The above Table 4 shows that p-value was lesser than .01 at 1% significant level and lesser than .05 at 5% significant level. The p-value of SENSEX was 0.01, BSE100 has 0.001, Nifty with 0.041 and S&P CNX500 at 0.000, so null hypothesis that further price changes are not dependent and move randomly, was rejected. It means price changes were dependent and random walk was not followed so all selected stock markets under study were not weak form efficient which means all past prices of a stock were reflected in current stock price. Therefore, investors looking for profitable companies can get profits by making an estimate of past trends.

5. Autocorrelation Test & L-B Q statistic

The results of the first twelve orders sample autocorrelation coefficients and Ljung- Box statistics return series of the SENSEX and BSE100 of Bombay Stock Exchange and S&P CNX Nifty and S&P CNX500 of National Stock Exchange for the sample period of ten years from January 2003 to December 2012 are presented in Table 5. It presents the Ljung-Box (LB) Q-statistic for high-order serial correlation for the return series of SENSEX up to lag 12.

Table 5: Autocorrelation and Ljung-Box Q-statistic for Selected Markets Ten Years
(January 2003 to December 2012)

Lag	SENSEX			BSE100			S&P CNX Nifty			S&P CNX 500		
	AC	Q-Stat	Prob	AC	Q-Stat	Prob	AC	Q-Stat	Prob	AC	Q-Stat	Prob
1	0.069	11.958	0.001*	0.091	20.386	0.0000*	0.064	10.053	0.002*	0.114	32.516	0.0000*
2	-0.044	16.869	0.0000*	-0.03	22.582	0.0000*	-0.037	13.511	0.001*	-0.02	34.168	0.0000*
3	-0.009	17.077	0.001*	0.004	22.629	0.0000*	-0.003	13.528	0.048*	0.01	34.434	0.0000*
4	0.003	17.096	0.002*	0.002	22.639	0.0000*	0.008	13.691	0.008*	0.011	34.715	0.0000*
5	-0.034	19.904	0.001*	-0.025	24.144	0.0000*	-0.029	15.723	0.008*	-0.02	35.744	0.0000*
6	-0.043	24.52	0.0000*	-0.041	28.348	0.0000*	-0.052	22.569	0.001*	-0.04	39.628	0.0000*
7	0.013	24.955	0.001*	0.02	29.37	0.0000*	0.012	22.91	0.002*	0.028	41.619	0.0000*
8	0.057	32.983	0.0000*	0.052	36.164	0.0000*	0.048	28.695	0.0000*	0.043	46.193	0.0000*
9	0.027	34.742	0.0000*	0.021	37.214	0.0000*	0.024	30.098	0.0000*	0.021	47.267	0.0000*
10	0.025	36.321	0.0000*	0.031	39.636	0.0000*	0.028	32.058	0.0000*	0.036	50.475	0.0000*
11	-0.02	37.3	0.0000*	-0.014	40.148	0.0000*	-0.016	32.714	0.001*	-0.012	50.836	0.0000*
12	0.001	37.306	0.0000*	-0.002	40.156	0.0000*	-0.004	32.754	0.001*	-0.007	50.953	0.0000*

***indicates significant at 5% level**

For higher-order return series also showed a consistent pattern of positive autocorrelation. Positive autocorrelation indicated predictability of returns in short horizon, which is the general evidence against market efficiency. On the other hand, negative autocorrelation, indicated mean reversion in returns. The above Table 5 showed that SENSEX has negative autocorrelation at lag 2, 3, 5, 6 and 11. BSE100 appears negative autocorrelation at lag 2, 5, 6, 11 and 12. S&P CNX Nifty has negative autocorrelation at lag 2, 3, 5, 6, 11 and 12. S&P CNX500 has negative autocorrelation at lag 2, 5, 6, 11 and 12. So, it can be said that at these lags returns could not be predicted and weak market efficiency prevailed but at other lags positive autocorrelation exists which indicated the sign of unpredictability of returns and market was not weakly efficient. L-jung Box represented the null hypothesis that there is no period (*k*). Empirical works examined the variance ratio statistics for several *k* values. The null of random walk was rejected if it was rejected for some *k* value. Under null hypothesis the variance ratio should be approximately equal to 1. If the value is not equal to one then it means that the series is auto correlated in first-order and the variance ratio is sum of first-order autocorrelation coefficient estimator and unit value. The Table 6 showed that variance ratio was less than one and p-value for all the selected markets under study was significant at 1% level. Therefore, null hypothesis that variance ratio should be equal to one can't be accepted. All this points out that variance ratio was less than 1 and hence series were auto correlated. From the above results it can be said that all selected markets, SENSEX, BSE100, S&P CNX Nifty, S&P CNX500 under study do not follow random walk and were not weak form efficient.

autocorrelation. All selected stock markets were significant at 1% level so the null hypothesis was rejected which suggested that there was dependence in returns and market was not weakly efficient. Results of autocorrelation and LB statistics on return series exhibited mixed evidence for serial correlation at the corresponding element of lags. The findings of serial correlation and LB stat were inconclusive on acceptance of weak form of efficiency in Indian stock market.

6.Variance Ratio Test

The results of the Variance Ratio Test of return series of the SENSEX and BSE100 of Bombay Stock Exchange and Nifty and S&P CNX500 of National Stock Exchange are presented in Table 6. It estimated individual variance ratios where one variance ratio was considered at a time, for a particular holding

Table 6: Variance Ratio Test for Selected Markets

(January 2003 to December 2012)

Lags	Period	2	3	4	5	6	7	8	9	10	11	12
	VR Ratio	0.5	0.34	0.24	0.22	0.2	0.16	0.15	0.14	0.13	0.13	0.12
	z-Stats	-13.8	-12.2	-11.2	-9.78	-8.94	-8.49	-7.93	-7.43	-7.07	-6.71	-6.45
SENSEX	p-value	0	0	0	0	0	0	0	0	0	0	0
	VR Ratio	0.53	0.33	0.24	0.21	0.19	0.17	0.16	0.17	0.17	0.16	0.16
	z-Stats	-13.5	-12.9	-11.7	-10.3	-9.42	-8.76	-8.22	-7.57	-7.1	-6.82	-6.47
BSE 100	p-value	0	0	0	0	0	0	0	0	0	0	0
	VR Ratio	0.53	0.38	0.27	0.21	0.19	0.16	0.14	0.14	0.14	0.14	0.12
	z-Stats	-13.1	-11.4	-10.8	-9.92	-9.07	-8.49	-8	-7.49	-7	-6.7	-6.47
Nifty	p-value	0	0	0	0	0	0	0	0	0	0	0
	VR Ratio	0.48	0.33	0.25	0.19	0.19	0.17	0.14	0.14	0.13	0.13	0.12
	z-Stats	-15.2	-13.2	-11.7	-10.8	-9.65	-8.99	-8.49	-7.94	-7.55	-7.2	-6.86
CNX 500	p-value	0	0	0	0	0	0	0	0	0	0	0

CONCLUSIONS

The efficient market hypothesis maintains that the financial markets are information efficient. This means, the prices of traded assets already reflect all the available information and they keep changing to accommodate any new information. In other words, stocks always trade at the fair value based on all the information available. The data was taken for the sample period of ten years from January 2003 to December 2012. The data was collected from the official website of Bombay Stock Exchange and National stock exchange i.e. www.bseindia.com and www.nseindia.com. Various statistical tools were used like Unit Root Test, Runs test, Kolmogorov-Smirnov Test, Autocorrelation, L-Jung Box Test and

Variance Ratio Test to see how informationally efficient Indian stock markets were. Because of the mass mentality of the trendy, short-term shareholder, investors pull in and out of the latest and hottest stocks. This results in stock prices being distorted and the market being inefficient. So prices no longer reflect all available information in the market. Prices are instead being manipulated by profit seekers.

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Performance Evaluation of Payments Bank Using Ratio Analysis

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Abstract

In today's Indian economy, there has been an increase in cashless transactions and the credit goes to the banking sector. Payments Bank was a new initiative by the Reserve Bank of India aimed at promoting financial inclusion and digital banking in the Indian economy. They had to bring banking facilities to such people and areas where it was not available. With the help of these banks, more money will come in the banking system and competition among banks will increase. The main objective of this paper is to evaluate financial performance of Payments Bank. Secondary data is used in this study and the performance is measured through ratio analysis. This study shows that payments bank performance is not good because it's RoA, RoE, operating profit to working fund and profit margin ratios are continuously negative. Payments bank has failed to earn profit due to excess of operating expenses and to provide limited services.

Keyword: Payments Bank, Banking Sector, Financial Inclusion, Digital Banking, Indian

INTRODUCTION

Payments bank is a new type of bank which was formed by the Reserve Bank of India. These banks allowed accepting a restricted deposit up to ₹1 lakh per customer only. Payments bank doesn't permit to issue credit card or loans. Payments bank provides facility of both saving account and current account. It also provides facility of debit cards, mobile banking, remittance services and internet banking etc. The Reserve Bank of India gave in-principle license to 11 entities to setup payments bank on 27th November 2014.The list of entities which got license to set up Payments bank is as follows:

- Aditya Birla Nuvo Ltd.
- Airtel M-Commerce Services Ltd.
- Cholamandalam Distribution Services Ltd.
- India Post Payments Bank
- FINO Paytech Ltd. (FINO Payments Bank)
- National Securities Depository Ltd. (NSDL Payments Bank)
- Reliance Industries Ltd. (Jio Payments Bank)
- Sun Pharmaceutical industries (Shri Dilip Shantilal Shanghvi)
- PayTM Payments Bank Ltd (Shri Vijay Shekhar Sharma, CEO of Paytm)
- Tech Mahindra Ltd.
- Vodafone mobile-pesa Payments Bank

But in present, only six payments bank are active. The list of these six banks is as follows:

- India Post Payments Bank, Department of Posts
- Jio Payments Bank, Reliance Industries Limited
- Airtel Payments Bank
- Paytm Payments Bank, (Shri Vijay Shekhar Sharma,CEO of Paytm)
- FINO Payments Bank, FINO PayTech Limited
- NSDL Payments Bank, (National Securities Depository Ltd.)

HISTORY OF PAYMENTS BANK

On 23rd September 2013, Nachiket Mor formed a Committee on comprehensive financial services for small businesses & low income households which was headed by the Reserve bank of India. On 7th January 2014, the Nachiket Mor committee submitted its final report and among its various recommendations, it was suggested that formation of a new category of bank called Payments Bank. On 17th July 2014, the Central Bank of India discharged the draft guiding principle for Payments Bank and on 27th Nov, Reserve Bank of India released the final guidelines for Payments Bank.

In February 2015, Reserve Bank of India discharged the list of 41 applicants which had been applied for license of Payments Bank. RBI was also declared that an External Advisory Committee which was headed by 'Nachiket Mor' would evaluate the license of applications. On 28th February 2015, at the time of presentation of the budget RBI declared that Department of Post will use its wide network to run Payments bank. On 6th July 2015, Nachiket Mor submitted his report. The aspirant entities were examined for their financial track record & Governance issues. On 19th August 2015, the RBI gave in-principle license to 11 companies to set up Payments Bank and in-principle, the license was valid for 18 months within which the companies must require to fulfill the conditions and they were not permissible to employ in banking activities within the same period. After fulfilling all conditions, the RBI will grant full license under Sec. (22) of Banking Regulation Act, 1949.

Regulatory Framework of Payments Bank

1. The Payments bank requires minimum capital of Rs.100 crore, in the first 5 years, the stake of the promoter should stay with at least 40%. In Private Banks, foreign shareholding will be permitted in these banks as per the rules for Foreign Direct Investments, in India.
2. Under Banking Regulation Act, 1949, the voting rights will be regulated. The voting rights of any shareholder is limited at 10%, which can be increased by RBI to 26% and the Central Bank of India will approve of any acquisition require which is more than 5% & acc. to the guidelines of RBI, the majority of the Bank's board of directors should consist independent directors.
3. From the beginning, the Payments bank should be fully networked and these banks may also accept utility bills, but these banks may not allow forming any subsidiaries to undertake Non-Banking Activities.
4. The Payments Bank accept restricted deposits which is limited up to Rs.1 lakh per customer, but it may be

increased in future by Reserve Bank of India, which depend on the performance of such banks.

5. Payments Bank is not allowed to provide loan to any person including their directors and in unbanked rural area Payments bank must set up 25% of its branches. It is compulsory to use the term "Payments bank" in its name to distinguish it from the other type of banks.

6. Under Section 22 of the Banking Regulation Act, 1949, the banks will be licensed as Payments Bank and will be registered as Public Limited Company under the Companies Act, 2013.

LITERATURE REVIEW

The relevant literature relating to the topic is reviewed as under:

Sikdar & Kumar (2017) investigated that how newly licensed payment banks can favourably achieve inclusion goals of the Indian banking regulator by engaging with marginalised and migrant groups within the population pie, as envisaged by the banking regulator. In addition, the article attempted to critically assess the competitive implications such a new financial institution will have on the existing full-service banks. Secondary data is used in the study. According to the study, a phenomenal boom being observed in the e-commerce space can be leveraged by banks to reach out to new customers, including those in smaller cities and villages. In addition to exploring regular advertising strategies on these websites, joint product offerings can be considered as an innovative opportunity. Tie-up with e-commerce websites and aggregators is another strategy for customer acquisition and sustained engagement. Wallet providers are likely to enter agreements with banks for operational convenience and viability.

Manikandan and Jayakodi (2017) studied the adoption of mobile wallets by customers. Due to the improvement in technology, the smartphone has become a device from which mobile users are making money transactions and payments using application. This study aims at the analysis of consumer's perception regarding mobile wallets and the analysis of the factors that influence customers' adaptation of mobile wallets. Problem faced by the customers while using mobile wallets have also been analyzed in the study. There are many digital wallets in India like Airtel Money, Citimasterpass, Citrus Pay, Ezetap, Freecharge, HDFC PayZapp, ICICI Pocket, Jio Money, Juspay, Lime, Mobikwik, Momoexpress, Moneyon Mobile, Olamoney, Mswipe, Oxigen, Paymate, PayTM, PayUMoney & State Bank Buddy. Primary data has used for the study. The data is collected from 150 Respondents of Chennai City. ANNOVA method is used for analysis of the study. In the study, it was found that the users of mobile wallets are satisfied with its usage and safety of funds and security are challenges factors for the customers. Factors such as brand loyalty, convenience in shopping play an important role in mobile wallet adoption. This study concludes that due to the demonetization policy by the Indian government, awareness has been raised about the mobile wallets in India. Due to its increasing use, there has been a decrease in the security issue and risk factors.

D'SOUZA (2018) talked about the Payments Bank's framework and the expected benefits of the payments bank in its paper. Payments banks are promoting financial inclusion and developing financial technology culture within India. The aim of this study is to find out the emergence of payments banks and how payments banks are differ from traditional banks. This paper is of descriptive and conceptual nature and is based on secondary data. Guidelines of Payments Banks are described inside the paper. The difference between payments banks and traditional banks has defined for which various parameters like making deposits, deposit limits, withdrawal facility, loans, credit and debit cards have been used. This study revealed that the Government's Digital India project is still in nascent stage. 70% of people have deposits less than one lakh in these banks. This study shows that Payments Bank has boosted financial inclusion and IPPB has a network of 2.5 times larger than normal bank network, due to which it has one branch in every district. This study concludes that the payments banks are moving the country towards cashless economy and digital economy. Innovation and business improvisation are key elements to the success of Payments Bank. IPPB is taking advantage of its wide network to reach rural and unbanked people. It is too early to compare the competency of the Payments Bank with well-established banks.

Naik, Firdous, Harika (2018) presented the study about the framework of the payment banks, and the expected benefits from the payment banks. It also attempted to identify major bottlenecks in the development of such banks**.** This paper is a conceptual paper. Here data is collected from national and international journals, published government reports, Newspaper, websites. They concluded that Payment banks have been introduced with the primary objective of increasing the impact of financial inclusion drive. The payment banks plays a significance role in implementing governments direct benefit, transfer schemes, where subsidies on health care , education and gas are paid directly to beneficiaries account. However, the competition between traditional and payment banks will lead to widening and improvement in quality of banking services are reduced costs and which may finally leads results in financial inclusion.

Anithrajathi & Shiva (2018) did its study on the service quality and customer satisfaction of Bharti Airtel. This study will help to improve the SERVQUAL model. Bharti Airtel provides its services in 20 countries across Asia and Africa and has its headquarters in New Delhi, India. It was the first Indian telecom company to get Cisco Gold Certification. The objective of this study was to check the demographic profile of the customers and measure the service quality. In the study, the author tried to determine the customer's preference towards Bharti Airtel mobile services. This study is based on Tiruchirappalli Region. The study found that cost, availability and customer perception are the most motivating customers. Service quality depends on a number of attributes which are tangibility, reliability, response, assurance and empathy. This study concludes that today's customers are much smoother, more challenging, more price conscious, less forward-looking and innovative, which are difficult to judge. People with low income and students still relay on Airtel because

this provide services on low cost. Hence, Airtel has to expand their network coverage area for maintain their future.

Kotecha (2018) studied mobile wallets in India. Mobile wallets are also known as digital wallets, e-wallets, online wallets, mobile money, mobile money transfer and mobile payments in India. There are four types of mobile wallets such as open wallet, semi-open wallet, closed wallet and semi-closed wallet. The objective of this study was to understand the concept of mobile wallets, to find out its advantage and disadvantage and to determine the growth of mobile wallets in India. This study is of descriptive and conceptual nature. There are a lot of advantages of mobile wallets like nominal cost, competitive benefit, time-saver, convenience, safety, flexibility, rewards and confidence etc. Along with the merits of mobile wallets, it also has its drawbacks. Mobile wallets have drawbacks such as awareness, limit of amount deposit, availability and dependency on the device. There has been a rapid growth in the growth of mobile wallets from 2012 to 2016. Transactions of mobile wallets in India are Rs. 205.8 billion in 2015-16. This study conveys that people are adopting mobile wallets because it is easy to use and convenient. Mobile wallets are the most commonly used route for online payments. There is a possibility of more growth in the adoption of mobile wallets in the coming years.

Singh (2019) stated that as of December 2018, 88% of the total deposits of India's payments banks were hold together by PayTM Payment Bank and Airtel Payment Bank. According to the RBI, from March 2018 to December 2018, PayTM Payments Bank deposits grew by 240% and reached to Rs. 371.4 crores from Rs. 107.3 crores which is 48% of the total deposits of Payments Banks. Whereas Airtel Payments Bank deposits grew by 10% to Rs. 320 crores which is 41% of the total deposits of Payments Banks of India. As of December 2018, the payment banks in total have a deposit of Rs. 780 crore, combining both savings and current accounts, which has increased by 78% compared to March 2018. India Post Payment Bank has a deposit of Rs. 33.6 crore. There has been negative growth in deposits of Fino Payment Bank and has come down from Rs. 39.23 crores to Rs. 29.41 crores. Jio Payment Bank has a deposit of Rs. 17 .82 crore. Many payment banks have grown significantly by using the network and creating market awareness. Many payment banks have also had to face RBI's penalties and banned Fino, Airtel and PayTM payment banks from adding more customers. Payment Bank was created to accelerate financial inclusion but even today it has not been able to increase its business scale and profitability and lends on transaction fees for the revenue. This alone can't make them profitable and expansion in transactions volume is necessary for growth.

Kumar and Kumar (2019) tried to study the world's largest payment bank, which is India Post Payment Bank. In this paper, we have sought to find out the fundamentals and challenges of Payments Bank. According to the study, IPPB has 650 branches / controlling offices, 3250 access points and more than 10000 GDS / Postmen in India for doorstep / counter services. IPPB provides many services such as deposits, money transfers, utility bill payments, direct benefit transfers and enterprise and merchant payments.

Secondary data is used for this study. In this study, it has been seen whether IPPB will be successful or not. For value proposition, IPPB has three factors namely Accessibility, Approachability and Digital Ecosystem. IPPB offers three types of accounts - Regular Account - Safal, Basic Savings Bank Deposit Account (BSBDA) - Sugam and BSBDA Small - Saral. There are many challenges ahead for Payments Bank such as Capture Market Area, Connectivity, Advance Technology and Awareness about IPPB. This study concludes that at present a lot of people do not know about IPPB. Its biggest weak point is that it cannot do lending activities. The Reserve Bank of India has provided a channel through which full banking services can be reached to all people. IPPB will prove to be a game changer in the coming times and will bring a payment revolution in the banking sector.

OBJECTIVE OF THE STUDY

The objective of the study is as follows:

- To evaluate the financial performance of Payments bank.

RESEARCH METHODOLOGY

This research paper is conceptual and descriptive in nature. The data is collected from secondary sources I.e. journal articles, website, reports and magazines. The study used tables and charts for presentation of the data. APA reference style (7th edition) has been used by the researcher to provide reference of the sources. This style is known as American Psychological Association.

RESULTS & DISCUSSION

Definition of Performance

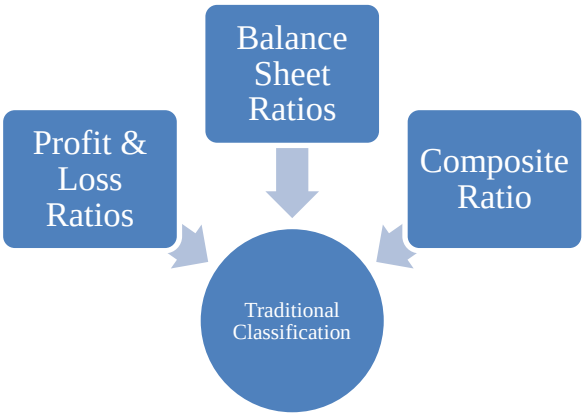
According to Kohlar, "The performance is a general term applied to a part or to all of the conduct of activities of an organization over a period of time, often with reference to past or projected cost, efficiency, management responsibility or accountability or the like."

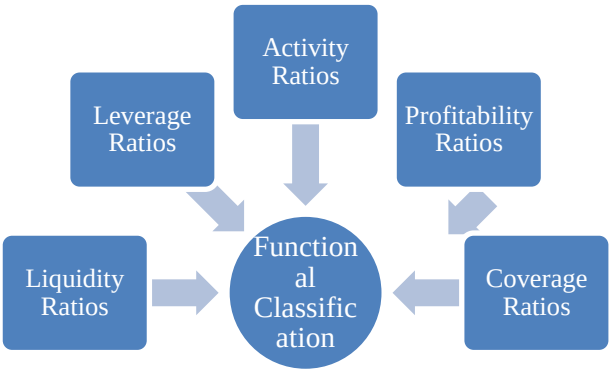
Meaning of Ratio Analysis

"Ratio analysis is a quantitative method of gaining insight into a company's liquidity, operational efficiency, and profitability by studying its financial statements such as the balance sheet and income statement."

Types of Ratio Analysis

Financial ratios are divided into two ways:





The study takes following ratios for measuring performance of payments bank:

- RoA (Return on Assets)
- RoE (Return on Equity)
- Investment to Total Assets
- Net Interest Margin
- Efficiency (Cost-Income Ratio)
- Operating profit to Working Funds
- Profit Margin

These ratios are calculated from the information gathered from the balance sheet and Income statement of the payments bank.

Ratio Analysis for Payments Bank

It interprets the financial statements by systematic use of ratios, which reveals the operating performance and financial position of a firm

Return on Asset

RoA ratio is a profitability ratio which shows that how much profit a company can generate from its assets. This ratio indicates the asset efficiency of a firm.

As a formula, it can be expressed as:

$$Return\ on\ Assets = \frac{Net\ Income}{Total\ Assets}$$

Table 1: Return on Asset

	2017-18	**2018-19**	**2019-20**
Return on Asset	-10.6	-8.9	-9.9

The Table 1 shows the return on asset ratio of payments bank. In 2017-18, the ratio was -10.6 per cent and improved in 2018-19 to -8.9 per cent. Again, it goes down and come to -9.9 per cent which means the RoA of payments bank is consistently negative.

Return on Equity

RoE ratio shows the ability of management to generate profits from its available equity. It's measured how well a firm use its equity for making profits. RoE of 15%-20% considered good.

$$Return\ on\ Equity = \frac{Net\ Income}{Equity}$$

Table 2: Return on Equity

	2017-18	2018-19	2019-20
Return on Equity	-27.9	-34	-44.7

The Table 2 shows the RoE ratio of payments bank. It was -27.9 per cent in 2017-18 and goes down to -34 per cent in 2018-19. In 2019-20, it was -44.7 per cent which indicates a downward trend.

This ratio shows the amount of deployment of assets in investment against advances. It is an amount invested by a bank to protect against the non-performing assets.

Investment to Total Asset

$$Investment\ to\ Total\ Assets\ Ratio = \frac{Total\ Investment}{Total\ Assets}$$

Table 3: Investment to Total Asset

	2017-18	2018-19	2019-20
Investment to Total Asset	50	44	48.4

The Ttable 3 shows the investment to total asset ratio of payments bank. It was 50 per cent in 2017-18 and comes down to 44 per cent in 2018-19. Again, it increased to 48.4 per cent in 2019-20 which shows some improvement from last year.

Net Interest Margin

It is the difference between the amount of interest income generated and the amount of interest paid to the creditors. This ratio shows that the banks are invested their funds efficiently or not.

$$Net\ Interest\ Margin = \frac{Interest\ Revenue - Interest\ Expenses}{Average\ Earning\ Assets}$$

Table 4: Net Interest Margin

	2017-18	2018-19	2019-20
Net Interest Margin	4.5	5.2	4.8

The Table 4 indicate the net interest margin ratio of payments bank. It was 4.5 per cent in 2017-18 and improved to 5.2 per cent in 2018-19. But in 2019-20, it again comes down to 4.8 per cent.

Efficiency (Cost-Income) Ratio

$$\boldsymbol{Efficiency\ Ratio = \frac{Expenses}{Revenue}}$$

This ratio is also called as 'Activity Ratio'. This ratio indicates that how well a firm uses its assets and liabilities. It is used for measuring a firm's current performance and to compare the performance of different firms in an industry.

Table 5: Efficiency

	2017-18	2018-19	2019-20
Efficiency	142.2	124.6	125.2

The Table 5 indicates the efficiency ratio of payments bank. In 2017-18, it was 142.2 per cent and 124.6 per cent in 2018-19. It is 125.2 per cent in 2019-20 which improved a little bit from last year.

Operating Profit to Working Funds

Operating profit to Working fund ratio indicates how much a bank can earn from its operations net of the operating expenses for every rupee spent on working funds.

$$Operating\ Profit\ to\ Working\ Fund\ Ratio = \frac{Operating\ Profits}{Average\ Working\ Funds}$$

Table 6: Operating Profit to Working Fund

	2017-18	2018-19	2019-20
Operating Profit to Working Funds	-10.7	-8.6	-11.1

The Table 6 shows the operating profit to working fund ratio of payments bank. It was -10.7 per cent in 2017-18 and -8.6 per cent in 2018-19. But in 2019-20, it again decreased to -11.1 per cent.

Profit Margin

The profit margin ratio is the ratio which refers to the company's profit divide by its revenue. The profit margin ratio compares the profit to sales and shows how well the company is handling its overall finance.

$$Profit\ Margins = \frac{Profit\ (Sales - Total\ Expenses)}{Revenue} X100$$

Table 7: Profit Margin

	2017-18	2018-19	2019-20
Profit Margin	-43.8	-27	-24

The Table 7 shows the profit margin ratio of payments bank. In 2017-18, it was -43.8 per cent and improved in 2018-19 to -27 per cent. In 2019-20, it again improved to -24 per cent which means profit margin of payments bank are improving continuously.

CONCLUSION

Payments Banks are providing a doorway to the low income and middle income groups. It can support their customers to transfer their payments in the simplest method. Flexible services provided by the Payments Bank are satisfactory and it is a solution to the Indian Demonetization. After Demonetization, the growth rate of Payments Bank has been increase. During Demonetization, Paytm was most used as comparison to other companies.

After going through the whole process of research work, it was found that the financial performance of payments bank is not good. The payments bank is bearing losses consistently and resources are not utilised efficiently to generate profit. The RoA, RoE, profit margin and operating profit to working fund ratio are in negative which means that the payments bank has failed to generate revenue from its assets or available equity. The operating expenses are high and profit margin is also low. The reason for his failure is its limited scope or limited business. The major source of bank revenue is interest from loans and Payments bank is restricted to issue loans. Operating expenses are also a big issue for payments bank. Payments bank can improve if government allows them to work on a large scale or by providing relaxation in rules.

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Brown Goods & Awareness for Channels of Distribution

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Abstract

In any developing country marketing is generally the most neglected field of economic life. The reasons for such neglect are excessive dependence on agriculture, demand exceeding supply for many products, lack of professional management and low evaluation of the economic functions of the marketing. In the advanced countries marketing is considered as the key economic activity for industrial expansion. This research work concluded that respondents were well aware about the On-line Marketing but they are still not aware about Multi-level Marketing. Marketers must make efforts to know about the Channels of Distribution.
Keywords: Marketing, Channels of distribution, On-line Marketing

INTRODUCTION

With the dynamic changes in the country in the course of planned development and the increase in production- agricultural, industrial as well as of consumer goods- that has been consequent upon such planned investment- the need for a deep understanding of marketing functions and practices has grown. This leads to realization of the importance of a need for the organization of a proper marketing network. It argues that "marketing by itself go far toward changing the entire economic tone of the existing system without any change in methods of production, distribution of population or of income". A similar view is "Production may be the door to economic growth of the underdeveloped countries, but Marketing is the key that turns the lock".

With the growing need to expand and find new markets, both internal and external, the importance of a reliable marketing network and its role cannot be neglected. With the compounded process of economic change and development, increase in literacy, rising aspirations, growing awareness of rural population, changes in the character of urban markets, greater purchasing power, consumer sophistication, the demand of brown goods such as Televisions, Radios, Digital media player, Computers etc. has tremendously increased.

LITERATURE REVIEW

Pillai & Bagawathi (2000) stated that marketing mix refer to the appointment of efforts, the combination, the designing and the integration of the elements of marketing into a programme or mix which on the basis

of an appraisal of the market forces could best achieve an enterprises at a given time.

Spears & Nancy (2001) defined sales promotion as a direct inducement that offers an extra value or incentive for the product to the sales force, distributors, or the ultimate consumer with the primary objective of creating an immediate sale. Sales promotion is one of the five aspects of the promotional mix.

Kaur & Singh (2004) made an attempt to know the dynamics of purchase decision making in families and to identify the variables discriminating the role and participation of family members at the time of purchase of durables. Data was collected from 366 respondent families from five districts of Punjab state of India concerning purchase decision- making of four durable items, namely, Refrigerator, Television, two-wheeler and Car. The effect of work status of wives on the level of influence in family decision making varied. The presence of children made the decisions to be shared by the spouses especially in traditional families. Study also found that rural and urban families differ in terms of participation and influence of different members of families and it was suggested that the two markets required separate advertising strategies and message of communication.

Raju & Saravanan (2005) revealed that an analysis of the consumer behavior is the first and foremost requirement for the successful formulation and implementation of marketing strategies. For marketers, it is significant to be sufficiently well versed in the area of consumer behavior so that they make meaningful contribution to the development of marketing strategies.

Singh (2006) enhanced the understanding of the impact of distribution channel conflicts on the channel efficiency. Author modeled the channel conflict-efficiency relationship, for three different types of conflict resolution methods-problem solving, bargaining and politics, in the context of asymmetric power relationships. The managerial implications of these conceptual models lie in making organizations, dealing with their channel partners, foresee the possible impacts of their adopted conflict resolution strategies, on their channel efficiency and accordingly maximize returns on the channel investments.

Bamba et. al. (2011) studied the consumers' preference towards emerging channels of distribution for buying White Goods. This paper also dealt with the consumers' perception about the impact of distribution function on their buying decision. The Indian consumer durables industry has witnessed a considerable change in the past couple of years. Changing lifestyle, higher disposable income coupled with greater affordability and a surge in advertising has been instrumental in bringing about a sea change in the consumer behavior pattern. Apart from steady income gains, consumer financing and hire-purchase schemes have become a major driver in the consumer durables industry. In the case of more expensive white goods, such as .refrigerators, washing machines, microwave ovens etc. retailers are joining forces with banks and finance companies to market their goods more aggressively. The biggest threats to the industry going forward are supply-related issues pertaining to distribution and infrastructure, as well as demand issues due to competition from imported goods. The lack of well-developed distribution networks makes it

especially challenging to penetrate the fastest growing rural areas economically. Distribution plays very significant role in the white goods industry in the absence of many factories at various locations.

Mulky (2013) described that an effective distribution channel can be a source of strategic advantage for companies. However, little research exists about the distribution channel structure in India, which is largely traditional and quite unique. The first part of this study provided an overview of distribution channels, particularly their constituents and structure, with a special focus on distribution channels in India. The second part of the study reported on a panel discussion with eminent academic and industry experts on the challenges that companies in India face in designing, constructing, and managing distribution channels on the ground.

Srivastava (2014) described that the role of consumer durables in the Lucknow city in recent years is critically analyzed in this paper. Various factors were studied in which affects the purchasing behavior of consumers. The contribution of consumer durables for hiking the living standard and livelihood of customers is very imperative. Author tried to know about the changing behavior of customers regarding purchasing of consumer durables. This would help to take steps to enhance the purchasing power ability decisions of customers.

Dagar (2015) stated that the main purpose of marketing information system (MIS) is to support in marketing decision making and marketing efforts of entrepreneurs and farmers. Nevertheless, the information is also useful for various types of organizations, such as government, development organizations, academicians, and researchers. The availability of timely and accurate information to all interested parties is therefore essential, whether it be provided by the government itself or by the private sector. This study looked into the various types of agricultural marketing information systems prevalent and attempts to provide a broad perspective on marketing information system. Using a descriptive approach, it attempted to describe relevant agriculture marketing information systems, and analyzed them to generate ideas and insights which may be useful for developing and strengthening MIS in agriculture sector. The existing practices of MIS generally emphasized only the collection of selling price of different agricultural commodities, volume of arrival and source of origin. It should be noted that farmers are interested, not only in current price information, but also in marketing issues like waste generating problems and demand forecasts. Many institutions attempted to provide market information but these efforts are often not coordinated. As the socio-economic environments continue to change and the private sector were becoming the major providers of services previously managed by the public sector, a properly established and well-coordinated agricultural information system has the potential of promoting free trade based on an open, transparent and competitive agricultural marketing system and could serve as a decision support tool for farmers, traders, and policy makers.

Hemalata & Parimaladevi (2018) examined the purchase decision of brown durable goods with the intention of marketing spur of brown durables goods in Erode district of Tamilnadu. For this purpose authors collected data from 225 respondents through a structured

questionnaire and analyzed by using statistical tools like percentage analysis, mean score analysis, ANOVA analysis and Henry Garrett Ranking Technique. The study found that majority of the female respondents has stimulated to purchase brown durable goods by the intention of marketing spur. The research indicated that the increase of age, monthly family income, and amount spent for purchase positively associated with perception towards brown durable goods. So, it is recommended to the manufacturers that they shall concentrate to less age group and less income level respondents to increase the sales of the consumer durable goods. From the research, it is found that most of the respondents are preferred to full credit method of payment mode for purchase of brown durable goods and so it is recommended to the retailers that they shall take care of the particular consumers to verify their repayment performance through their income and past loan repayment performance if any. It reduces the non-performing assets of the retailers. Successful companies rely on their satisfied customers to return to repurchase and the companies offerings to others. The interest evoked by a stimulus (or stimuli) or the aspects of the person, the product, and the situation all combine to determine the consumer's motivation to buy brown durable products resulting in high involvement purchase.

Banerjee et.al. (2019) described that there is always a great contribution of different factors which impact the buying patterns of customers today. Such factors may be cultural social personal and psychological. This study analyzed the relationship between several such independent variables. The objectives of the study were to identify the factors which affect the customer preferences and consumer behavior while buying consumer durable in India. Primary data was collected through questionnaire. Various kinds of promotion activities like promotional events at the retail stores, advertisement brochures, internet all these should be the main promotion methods at starting. A finding of the study was this study will help the market to understand consumer behavior and improve their strategies for enhanced consumer satisfaction.

OBJECTIVES OF THE STUDY

- To define Brown Goods.
- To know the Awareness regarding Channels of Distribution.

RESEARCH METHODOLOGY

The primary data is used for this research. The sample size for this study is 150. The respondent is selected by random sampling method. The questionnaire was filled from the respondents of Delhi.

Overview of India's Consumer Durables Goods Market

The Indian consumer durables goods segment can be segregated into Three consumers groups. There are:

Consumer Durables These have low volume but high unit value.

- **White goods:** Heavy consumer durable which used to be painted only in white enamel finish. Despite their availability in varied colors now, they are called white goods. It includes air conditioners, refrigerators, stoves, etc.,

- **Brown goods:** Relatively light electronic consumer durables such as TVs, radios, digital media players, and computers, etc.

- **Consumer electronics:** It refers to any electronic devices designed to be purchased to be and used by end users or consumers for daily inside a home. It includes Televisions, DVD players, Refrigerators, Washing machines, Computers, Laptops, Tablets, etc.

Definition of Brown Goods

"Relatively light Electronic Consumer Durables such as TVs, Radio, Digital Media Players, and Computers, as distinct from heavy consumer durables such as Air Conditioners, Refrigerators, and Stoves, which are called White Goods".

Marketing mix consists of 4 Ps i.e. Product, Price, Place and Promotion. Due to any change in conditions, any company can change product, price or promotion but it is very rare that any company changes its distribution channel. In order to retain and increase market share in retail segment it is essential that brown goods companies penetrate in growing markets. In order to have an edge in market, the right design and management of their distribution channels are essential for companies. A proper and methodical system is essential for their growth as effective channel members. The purpose is to ascertain an effective distribution channel system so that committed and motivated dealers are established. The performance of channel members will be critically assessed to find out the gaps in existing system.

Consumer Durables Goods

White Goods	Brown Goods	Consumer Electronics
• Air conditioners • Refrigerators • Washing machines • Sewing machines • Electric fans • Watches and clocks • Cleaning equipment • Microwave ovens • Dishwashers • Cookers	• Mixers • Grinders • DVD players • Games consoles • Personal computers	• Mobile Phones • Televisions • Audio and video systems • Digital cameras • Camcorders

RESULTS & DISCUSSIONS

The sample survey for conducting the research was carried out in Delhi. 150 respondents have been approached in the sample survey. Responses from respondents were collected through a structured questionnaire.

The Researcher was asked from the respondents is whether respondents were aware regarding Emerging Channels of Distribution and Table no. 1 depicts that On-Line Marketing is most popular amongst the respondents of Delhi and Multi-Level Marketing is the least popular among them.

Table No. 1 (Awareness for Channels of Distribution)

Channels of Distribution	Frequency
Tele-Marketing	138
On-line Marketing	148
Multi-Level Marketing	45
Total Respondents	150

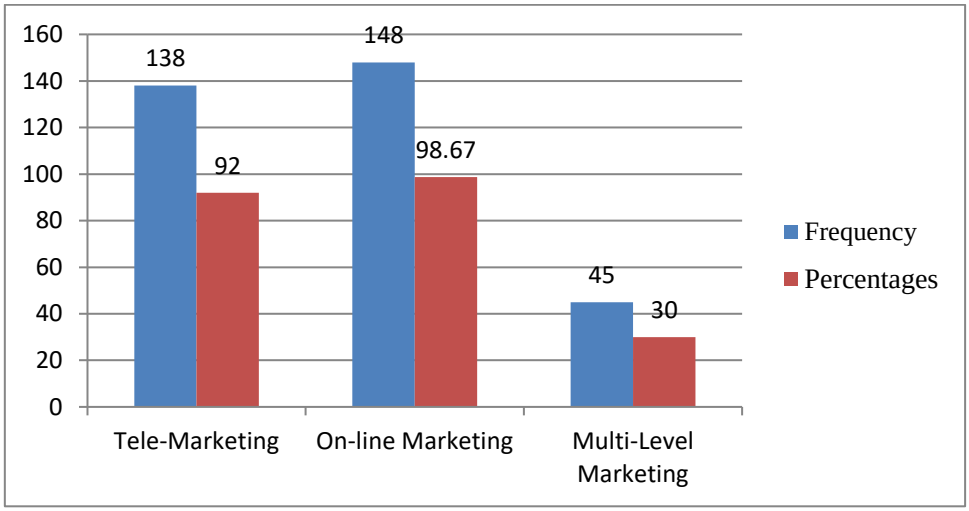

Diagram 1: Awareness regarding Channels of Distribution

Diagram 1 shows clearly that depicted that more than 98 % of respondents were aware about On-line Marketing followed by 93% were aware about Tele-shopping Marketing and 30 % respondents of the city were aware about Multi-Level Marketing and considered last in this study of Awareness.

CONCLUSION

The study concluded that respondents were well aware about the On-line Marketing but they are still not aware about Multi-level Marketing. Marketers must make efforts to know about the Channels of Distribution.

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A Literature Review of Volatility in World Commodity & Financial Markets during Current Pandemic Times

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Abstract

The virus which emanated from Wuhan, China have taken the World by a surprise. No one would have ever imagined a global calamity of this order, which later on was termed as Covid-19 and also a Global epidemic by the WHO. As it struck, more and more economies of the world, the global economy moved between bouts of pessimism and optimism in a pandemic-ravaged year, all markets, whether Oil, Commodities and Financial markets have seen 2020 as a year of wide fluctuations. In this paper, the impact of Covid-19 is discovered with review of some contemporary research papers of pandemic times in the area of Commodity and Financial Markets world over.

Keywords: Covid impact, Volatility, Global markets, Commodities, Oil, Crude, Financial markets

INTRODUCTION

Futures markets were designed to solve the problems that exist in forward markets. A futures contract is an agreement between two parties to buy or sell an asset at a certain time in the future at a certain price. But unlike forward contracts, the futures contracts are standardized and exchange traded. To facilitate liquidity in the futures contracts, the exchange specifies certain standard features of the contract. A futures contract is standardized contract with standard underlying instrument, a standard quantity and quality of the underlying instrument that can be delivered, (or which can be used for reference purposes in settlement) and a standard timing of such settlement. A futures contract may be offset prior to maturity by entering into an equal and opposite transaction.

The standardized items in a futures contract are:
• Quantity of the underlying
• Quality of the underlying
• The date and the month of delivery
• The units of price quotation and minimum price change
• Location of settlement

The rationale for establishing the Commodity futures market is manifold. Both residents and non-residents purchase

domestic Commodity assets. If the trading rate remains unchanged from the time of purchase of the asset to its sale, no gains and losses are made out of commodity exposures. Commodity futures enable them to hedge these risks. Nominal exchange rates are often random walks with or without drift, while real exchange rates over long run are mean reverting. As such, it is possible that over a long – run, the incentive to hedge Commodity risk may not be large. However, financial planning horizon is much smaller than the long-run, which is typically inter-generational in the context of exchange rates. As such, there is a strong need to hedge Commodity risk and this need has grown manifold with fast growth in cross-border trade and investments flows. The argument for hedging Commodity risks appear to be natural in case of assets, and applies equally to trade in goods and services, which results in income flows with leads and lags and get converted into different commodities at the market rates. Therefore, sometimes argument is advanced against the need for hedging Commodity risks. But there is strong empirical evidence to suggest that hedging reduces the volatility of returns and indeed considering the episodic nature of Commodity returns, there are strong arguments to use instruments to hedge Commodity risks.

Without commodity exchanges, it would be difficult—if not impossible—to establish a standardized price for a commodity. Those in the commodity industry would be personally responsible for finding individual buyers and sellers. Prices would be determined by those who they could manage to contact. There would be a higher possibility of commodity producers going bankrupt if they couldn't hedge their operations with the use of a commodity exchange. That, in turn, would likely lead to higher prices for commodities and higher operational costs around the globe.

DEVELOPMENT OF DERIVATIVES MARKET IN INDIA

In India, derivatives markets have been functioning since the nineteenth century, with organized trading in cotton through the establishment of the Cotton Trade Association in 1875. Derivatives, as exchange traded financial instruments were introduced in India in June 2000. In 1999, the Securities Contracts (Regulation) Act of 1956, or SC(R)A, was amended so that derivatives could be declared as “securities”. This allowed the regulatory framework for trading securities, to be extended to derivatives. The Act considers derivatives on equities to be legal and valid, but only if they are traded on exchanges.
The Securities Contracts (Regulation) Act, 1956 defines "derivatives" to include:
1. A security derived from a debt instrument, share, loan whether secured or unsecured, risk instrument, or contract for differences or any other form of security.
2. A contract which derives its value from the prices, or index of prices, of underlying securities.
At present, the equity derivatives market is the most active derivatives market in India. Trading volumes in equity derivatives are, on an average, more than three and a half times the trading volumes in the cash equity markets.

Derivatives markets have been in existence in India in some form or other for a long time. In the equity markets, a system of

trading called "badla" involving some elements of forwards trading had been in existence for decades. However, the system led to a number of undesirable practices and it was prohibited off and on till the Securities and Exchange Board of India (SEBI) banned it for good in 2001. A series of reforms of the stock market between 1993 and 1996 paved the way for the development of exchange-traded equity derivatives markets in India. In 1993, the government created the NSE in collaboration with state-owned financial institutions. NSE improved the efficiency and transparency of the stock markets by offering a fully automated screen-based trading system and real-time price dissemination. In 1995, a prohibition on trading options was lifted. In 1996, the NSE sent a proposal to SEBI for listing exchange-traded derivatives. .In 1999, the Securities Contracts (Regulation) Act of 1956, or SC(R)A, was amended so that derivatives could be declared "securities." This allowed the regulatory framework for trading securities to be extended to derivatives. The Act considers derivatives to be legal and valid, but only if they are traded on exchanges.

COMMODITY FUTURES

In a commodity futures market, the losses as well as profits for the buyer and the seller of a futures contract are unlimited. As the date of expiration comes near, the basis reduces - there is a *convergence* of the futures price towards the spot price. On the date of expiration, the basis is zero. If it is not, then there is an arbitrage opportunity. Arbitrage opportunities can also arise when the basis (difference between spot and futures price) or the spreads (difference between prices of two futures contracts) during the life of a contract are incorrect.
In determining profits and losses in futures trading, it is essential to know both the contract size (the number of Commodity units being traded) and also the value of tick. A tick is the minimum trading increment or price differential at which traders are able to enter bids and offers. Tick values differ for different Commodity pairs and different underlying.
Commodity futures can be cash settled or settled by delivering the respective obligation of the seller and buyer. All settlements however, unlike in the case of Over The Counter (OTC) markets, go through the exchange.

In this paper, an attempt has been made to do a literature review of current market trends through published papers around pandemic times.

LITERATURE REVIEW

Bakas, D., & Triantafyllou, A. (2020) empirically investigate the impact of economic uncertainty related to global pandemics on the volatility of the broad commodity price index as well as on the sub-indexes of crude oil and gold. The results show that uncertainty related to pandemics have a strong negative impact on the volatility of commodity markets and especially on crude oil market, while the effect on gold market is positive but less significant.

Cepoi, C. O. (2020) contributed to the literature by investigating the stock market's reaction to coronavirus news in the top six most affected countries by the pandemic1. By employing a panel quantile

regression model, I show that the stock markets present asymmetric dependencies with COVID-19 related information. Specifically, the fake news exerts a negative influence on the lower and the middle quantiles throughout the distribution of returns; however, their impact is not statistically significant for the extreme values. Moreover, the media coverage leads to a decrease in returns across middle and upper quantiles and has no effects on the lower ones. Similarly, the financial contagion across companies is detrimental to returns from 50th to 75th quantiles. Furthermore, the estimates show that the gold price dynamic has a nonlinear impact on equity markets, especially during extreme bearish and bullish markets.

Conlon, T., & McGee, R. (2020) found out that the Covid-19 bear market presents the first acute market losses since active trading of Bitcoin began. This market downturn provides a timely test of the frequently expounded safe haven properties of Bitcoin. In this paper, we show that Bitcoin does not act as a safe haven, instead decreasing in price in lockstep with the S&P 500 as the crisis develops. When held alongside the S&P 500, even a small allocation to Bitcoin substantially increases portfolio downside risk. Their empirical findings cast doubt on the ability of Bitcoin to provide shelter from turbulence in traditional markets.

Corbet, S., Larkin, C. and Lucey, B. (2020b) discovered that at the beginning of the 2020 global COVID-2019 pandemic, Chinese financial markets acted as the epicentre of both physical and financial contagion. Their results indicate that a number of characteristics expected during a "flight to safety" were present during the period analysed. The volatility relationship between the main Chinese stock markets and Bitcoin evolved significantly during this period of enormous financial stress. We provide a number of observations as to why this situation occurred. Such dynamic correlations during periods of stress present further evidence to cautiously support the validity of the development of this new financial product within mainstream portfolio design through the diversification benefits provided.

Dahl, R. E., Oglend, A., & Yahya, M. (2019) examined spillover effects among markets of crude oil and ten major agricultural commodities by employing the Diebold and Yılmaz (2009, 2012) spillover frameworks to returns and EGARCH filtered volatilities. We account for structural variations in data by dividing the data into two subsamples: from July 1986 to December 2005 (pre-2006 subsample) and from January 2006 to June 2016 (post-2006 subsample). Their findings indicate that there is minuscule information transmission among crude oil and agricultural commodities over the pre-2006 subsample, however, crude oil becomes the net receiver of information over the post-2006 subsample. Second, Their findings indicate asymmetric and bidirectional flow of information among crude oil and agricultural commodities that intensifies during periods of financial and economic turmoil. Last, net volatility spill over increases in periods of large declines in the crude oil price, such as in 2008 and later in 2014. Overall, we document a more detailed insight into channels of connectedness among the underlying commodities, which may assist developing

policy recommendation, portfolio designs, and risk management decisions.

Goodell, J. W. (2020) highlighted the enormous economic and social impact of COVID-19 with respect to articles that have either prognosticated such a large-scale event, and its economic consequences, or have assessed the impacts of other epidemics and pandemics. A consideration of possible impacts of COVID-19 on financial markets and institutions, either directly or indirectly, is briefly outlined by drawing on a variety of literatures. A consideration of the characteristics of COVID-19, along with what research suggests have been the impacts of other past events that in some ways roughly parallel COVID-19, points toward avenues of future investigation.

Isita Mukherjee & Bhaskar Goswami (2017) examined the pattern of the volatility of the daily return of select commodity futures in India and explores the extent to which the select commodity futures satisfy the Samuelson hypothesis. One commodity future from each group of futures is chosen for the analysis. The select commodities are potato, gold, crude oil, and mentha oil. The data are collected from MCX India over the period 2004–2012. This study uses several econometric techniques for the analysis. The GARCH model is introduced for examining the volatility of commodity futures. One of the key contributions of the paper is the use of the β term of the GARCH model to address the Samuelson hypothesis.

The Samuelson hypothesis, when tested by daily returns and using standard deviation as a crude measure of volatility, is supported for gold futures only, as per the value of β (the GARCH effect). The values of the rolling standard deviation, used as a measure of the trend in the volatility of daily returns, exhibits a decreasing volatility trend for potato futures and an increasing volatility trend for gold futures in all contract cycles. The result of the GARCH (1,1) model suggests the presence of persistent volatility and the prevalence of long memory for the select commodity futures, except potato futures.

The study sheds light on significant characteristics of the daily return volatility of the commodity futures under analysis. The results suggest the existence of a developed market for the gold and crude oil futures (with volatility clustering) and show that the maturity effect is only valid for the gold futures.

J Black, I Tonks (2000) examined the pattern of volatility over time of a series of commodity futures prices, and focuses in particular on the futures price variability as the maturity date of the futures contract approaches. In a rational expectations model of asymmetric information, the article provides conditions under which the Samuelson hypothesis—that the variability of
futures prices increase as maturity approaches—will be true.

Prokopczuk, M., Stancu, A., & Symeonidis, L. (2019) analyzed the relationship between economic uncertainty and commodity market volatility. We find that commodity market volatility comoves strongly with economic and financial uncertainty, especially during recessions. Variables associated with credit risk, financial market

stress, and fluctuations in business conditions bear significant predictive ability for commodity market volatility. The documented predictability is mainly observed in the period after the financialization of commodity markets (i.e. post–2004) and it peaks during the 2008–2009 global financial crisis.

Salisu, A. A., Akanni, L., & Raheem, I. (2020a) subjected the global fear index (GFI) for the COVID-19 pandemic to empirical scrutiny by examining its predictive power in the predictability of commodity price returns during the pandemic. One of the attractions to the index lies in its coverage as all the countries and by extension regions and territories in the world are considered in the construction of the index. Our results show evidence of a positive relationship between commodity price returns and the global fear index, confirming that commodity returns increase as COVID-19 related fear rises. By way of extension, we further establish that commodity market offers better safe-haven properties than the stock market given the negative association between GFI and the latter. Finally, the GFI series improves the forecast accuracy of the predictive model for commodity price returns and its forecast outcome outperforms the historical average (constant returns) model both for the in-sample and out-of-sample forecasts. Our results are robust to alternative measures of pandemics.

Salisu, A. A., Ebuh, G. U., & Usman, N. (2020b) provided some preliminary estimates about the behaviour of oil-stock nexus during COVID-19 pandemic. Consequently, we conduct distinct analyses for periods before and after the announcement of the pandemic. A panel Vector Autoregressive (pVAR) model is constructed to analyse the response of oil and stocks to shocks. A panel Logit model is also formulated to evaluate the probability of having negative oil price and stock returns between the two data samples. The pVAR analyses suggest that both oil and stock markets may experience greater initial and prolonged impacts of own and cross shocks during the pandemic than the period before it. This outcome is further corroborated by the panel Logit estimates suggesting that the probability of having negative oil and stock returns during the pandemic may be due uncertainty associated with the relevant markets.

Sharif, A., Aloui, C., & Yarovaya, L. (2020) analyzed the connectedness between the recent spread of COVID-19, oil price volatility shock, the stock market, geopolitical risk and economic policy uncertainty in the US within a time-frequency framework. The coherence wavelet method and the wavelet-based Granger causality tests applied to US recent daily data unveil the unprecedented impact of COVID-19 and oil price shocks on the geopolitical risk levels, economic policy uncertainty and stock market volatility over the low frequency bands. The effect of the COVID-19 on the geopolitical risk substantially higher than on the US economic uncertainty. The COVID-19 risk is perceived differently over the short and the long-run and may be firstly viewed as an economic crisis. Our study offers several urgent prominent implications and endorsements for policymakers and asset managers.

Tiwari, A. K., Nasreen, S., Shahbaz, M., & Hammoudeh, S. (2020) analysed the lead-lag relationship between the price indices of

energy fuels and each of food, industrial inputs, agriculture raw materials, metals and beverages in the time-frequency domain. To this end, they first use the wavelet coherency and phase-differences. Next, we use the Diebold and Yilmaz (2012) and Barunik and Krehlik (2017) spillover indices to analyse the connectedness among the set of the price indices under consideration. The period of the study is 1990m1 to 2017m5. The wavelet coherency results reveal that there are important and significant relations between the fuel and food prices, the fuel and industrial prices, and the fuel and metal prices. These results also show that there are phase relationships between those paired prices. The volatility spillover results indicate that the agricultural sector is the most affected by shocks from the other markets. The return series of the industrial input prices at all frequencies appears to be the main source of volatility transmission to the prices of the other commodities over the whole period. This finding underlines the relevance of the industrial inputs to policy makers, particularly when they design policies to provide incentives related to industrial production.

Wang, J., Shao, W., & Kim, J. (2020) explored the impact of COVID-19 on the cross-correlations between crude oil and agricultural futures markets. A multifractal detrended cross-correlation analysis (MF-DCCA) approach was utilized to analyze the cross-correlations between the Brent crude oil and agricultural futures such as London Sugar, London Wheat, USA Cotton #2, and USA Orange Juice futures. They initially confirmed their correlations by calculating the DCCA coefficient. Then, from the multifractal aspect, the cross-correlations were further explored, and the sources for forming the correlations were discussed. The results show that the Brent Crude Oil has the strongest cross-correlation with London Sugar Future market among other three agricultural future markets. Then they investigated the influence of COVID-19 on the cross-correlations of multifractality between crude oil and agricultural futures. The experimental results indicated that the persistence under the influence of COVID-19 became stronger, and the cross-correlations of multifractality between crude oil and sugar future market is the strongest. In addition, the cross-correlations of all the agricultural futures increased after the emergence of COVID-19 except the orange juice future market. In general, COVID-19 has a great impact on the cross-correlation of multifractal property between crude oil and most selected agricultural future markets.

Yahya, M., Oglend, A., & Dahl, R. E. (2019) investigated the temporal and frequency domain connectedness between the price of crude oil and ten major agricultural commodities. They decompose returns into short-, medium- and long-run movements using the MODWT and investigate cross-commodities dependence structures in the decomposed returns using a DCC-Student-t copula. The method allowed them to analyze variation in dependencies across time as well as frequencies of return movements. Structural variation is considered through subsample analysis. Consistent with previous research, they found that connectedness between oil and agricultural products increases post-2006 across all

considered frequencies of return movements. However, the rate of increase is higher for longer investment horizons. The wavelet decomposition reveals that interconnectedness as a function of investment horizon is negative during the pre-2006, but positive during the post-2006 subsample. These findings support stronger connectedness primarily due to stronger connection between long-run return movements. Analysis of connectedness dynamics shows no strong pre- and post-2006 differences, suggesting that the recent higher connectedness is primarily a correlation level effect. They do find that persistence of connectedness variation is higher for long-run return movements. Overall, they document a more connected crude oil and agricultural commodities complex after 2006, with lower commodities diversification benefits in general, and higher correlation risk for longer investment horizons.

Yip, P. S., Brooks, R., Do, H. X., & Nguyen, D. K. (2020 discovered a strong volatility spillover between crude oil and agricultural commodity markets reduces the diversification benefits and implies costly risk management process faced by portfolio managers and agricultural producers. This paper proposes a comprehensive study of their dynamic implied volatility spillover effects after the global financial crisis 2008–2009, while considering the transition between oil volatility's regimes. By using implied volatility, their analysis emphasizes on the forward-looking information that market traders usually convey in making decisions. They employ the generalized spillover indices within a fractionally integrated VAR model to capture the dynamic patterns of the volatility spillover effects alongside the Markov Switching Autoregressive model to extract the regimes of oil. Their results show new evidence that the net volatility spillover effect from crude oil to all agricultural commodities tends to decrease when crude oil remains in its low volatility regime. Conversely, this effect experiences an increasing trend when crude oil remains in its relatively high volatility regime. A dynamic strategy that combines oil and the most balanced agricultural commodity in terms of volatility transmission with oil (i.e., close-to-zero net volatility spillovers) depending on oil's regimes consistently outperforms the buy and hold strategy in terms of information ratio.

Zhang, D. and Broadstock, D. C. (2018) documented a dramatic change in the nature of connectedness in global commodity prices following the 2008 global financial crisis. They show that co-dependence in price-changes among seven major commodity classes goes from a pre-crisis average of 14.82% to a strikingly larger average of 47.87% in the period following the crisis, and which has endured until now. Dynamic swings in price co-movements of such a scale present a clear concern for financial investors and are of immediate interest to a wider policy-maker audience. Of particular interest is the empirical behavior of the food commodity price index, whose contribution to the system dynamics rises from less than 20% in the period up to 2008, to more than 80% after. To dispel any concern that these finding may be method-specific, they demonstrated their invariance to modelling procedure by providing analogous-results using a

pairwise Granger causality analysis, as well as different sub-sampling choices.

Shruthi, M.S., & Ramani D. (2020 analysed the impact of Covid 19 and found the solution in two approaches. Initially, this contagious virus resulted in a lockdown of the business world and economy. A ratio at which the virus has been proliferating, the increased uncertainty is exactly the reason for this bad situation which resulted as unsecured initialization investment between traders. They rely on the present environment in evaluating the constricting procedures, fiscal policies and public health actions that were implemented in that time. This study examines volatility transmission over the financial crisis. Recently established causality in impulse response functions and variance test to everyday data from January 2020 has been implied. To recognize the effect of the food cost crisis, statistics are separated into two intervals i.e. post-COVID period and the pre-COVID period. The variance causality test indicates that the risk transmission among agricultural commodity is zero, but oil market volatility spills on the markets for agricultural products excluding sugar in the post-crisis period. Thus, this paper signifies that the statistical volatility transmission differs post food price crisis. Following, risk transmission materializes as an additional element of the statistical interrelations among agricultural and energy markets.

The upward movement in oil and food prices in the 2000s has attracted interest in the information transmission mechanism between the two markets. This paper investigates the volatility spillover between oil, food consumption item, and agricultural raw material price indexes for the period January 1980 to April 2008. The results of the Cheung-Ng procedure show that variation in oil prices does not Granger cause the variance in food and agricultural raw material prices. Since there is no volatility spillover from oil markets to food and agricultural raw material markets, investors can benefit from risk diversification. However, there is bi-directional spillover between agricultural raw material and food markets.

CONCLUSION

The literature review in this paper show that COVID-19 has significant causal effect on the connectedness across the assets. Particularly, the effect of the pandemic on the connectedness across the markets is stronger mostly at the lower- and middle-level quantiles, while only in only a few cases is insignificance established. Investors and policy makers can draw policy insights from these papers. There's a robust alignment between the findings of these research papers and also the postulation of the worldwide business or financial cycle channel which is driven by this COVID-19 pandemic that induces investors' sentiments and risks, and further transmits the identical sentiments across the commodity and financial assets.

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Importance of Big Data Analytics for Global Economy

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Abstract

Big Data is a global technology phenomenon. That has changed the way data is looked at. Big Data being a computer technology is used to analyse huge data and thereby, is generating employment in various sectors. This technological wonder affects the global economy at national and local levels. The big data has some significant opportunities and capabilities to uncover deep insights to offer when explored. Big data touches all potential economic sectors and plays an important role in various economic activities like research, sales, production and business planning, thereby leading to a new industrial revolution. This industrial revolution turns in to economic revolution. The economic revolution comes from the power of decision making. Power of decision making is the result of Big Data analysis. In this paper, we have made an effort to explore and present the important aspects of the big data analytics in context of global economy.

Keywords: Data analytics, big data analytics, global economy driver, big data, key benefits of big data in global economy

INTRODUCTION

Generally, data is defined as a raw and unstructured facts. These facts provide a limited or no important information. The data is collected from a specific source; structured and managed through DBMSs (Database Management System) software thereby a meaningful information is extracted. This information is used in small and medium scale companies.

When data is generated and collected from hybrid, heterogeneous, structured and unstructured sources, the purposes and technologies also changed to store and process. Such data becomes a huge collection, hence data storage technology the DBMS is replaced by bid data. In Big data, data is mammoth, fast and multifaceted, because, it is generated at and collected from heterogeneous sources. Big data is generally characterised by four Vs i.e. volume, variety, velocity, variability of data.

DATA ANALYTICS

On a broad scale, data analytics technologies and techniques give organizations a way to analyse data sets and gather new information. Business intelligence (BI) queries answer basic questions about business operations and performance. [2]

Data analytics is a component of data science, used to understand what an organization's data looks like. Generally, the output of data analytics are reports and visualizations. [3]

As the process of analysing raw data to find trends and answer questions, the definition of data analytics captures its broad scope of

the field. However, it includes many techniques with many different goals. [4]

The data analytics process has some components that can help a variety of initiatives. By combining these components, a successful data analytics initiative will provide a clear picture of where you are, where you have been and where you should go. [4]

Big Data Analytics

Big data analytics is the use of advanced analytic techniques against very large, diverse data sets that include structured, semi-structured and unstructured data, from diverse sources, and in dissimilar sizes from terabytes to zettabytes. [5]

Big data analytics is the often-complex process of examining big data to uncover information -- such as hidden patterns, correlations, market trends and customer preferences -- that can help organizations make informed business decisions. **[2]**

Big Data was a broad phenomenon not limited to a few industries. We estimated that, in the US, an average company in any sector has at least 100 terabytes (TB) of data, and many have more than 1 petabytes (PB). For comparison, the library of congress has 235 TB of data in 2011. [1]

Big data techniques

The data is at driver's seat for all known walks of life. To take data to driver's seat, data is collected and processed and put into a refined state. The refined state of data provides all the information to generate reports, that helps in taking timely, more accurate and realistic decisions to run and expand businesses.

The world is driven by data, and it's being analysed every second, whether it's through your phone's Google Maps, your Netflix habits, or what you've reserved in your online shopping cart. [6]

Big data are processed, using various technologies. Let us explore some big data analysis techniques.

Different Types of Big Data Analytics

Here are the four types of Big Data analytics:

1. Descriptive Analytics

This summarizes past data into a form that people can easily read. This helps in creating reports, like a company's revenue, profit, sales, and so on. In addition, it helps in the tabulation of social media metrics.

Use Case: The Dow Chemical Company analysed its past data to increase facility utilization across its office and lab space. Using descriptive analytics, Dow was able to identify underutilized space. This space consolidation helped the company save nearly US $4 million annually.

2. Diagnostic Analytics

This is performed, to know what caused a problem in the first place. Techniques like drill-down, data mining, and data recovery are all examples. Organizations use diagnostic analytics because they provide an in-depth insight into a particular problem.

Use Case: An e-commerce company's report shows that their sales have gone down, although customers are adding products to their carts. This can be due to various reasons like the form did not load correctly, the shipping fee is too high, or

there are not enough payment options available. This is where you can use diagnostic analytics to find the reason.

3. Predictive Analytics

This type of analytics looks into the historical and present data to make predictions of the future. Predictive analytics uses data mining, AI, and machine learning to analyse current data and make predictions about the future. It works on predicting customer trends, market trends, and so on.

Use Case: PayPal determines what kind of precautions they have to take to protect their clients against fraudulent transactions. Using predictive analytics, the company uses all the historical payment data and user behaviour data and builds an algorithm that predicts fraudulent activities.

4. Prescriptive Analytics

This type of analytics prescribes the solution to a particular problem. Perspective analytics works with both descriptive and predictive analytics. Most of the time, it relies on AI and machine learning.

Use Case: Prescriptive analytics can be used to maximize an airline's profit. This type of analytics is used to build an algorithm that will automatically adjust the flight fares based on numerous factors, including customer demand, weather, destination, holiday seasons, and oil prices. [7]

Big Data Analytics Tools

Big Data analytics with Hadoop and Spark is broadly classified into two major categories: data analytics and data science. While data analytics focuses on past and present statistics, data science focuses on future statistics. While data science projects are iterative in nature, data analytics projects are not iterative. Apache Hadoop provides you with distributed storage and resource management and Spark provides you with in-memory performance for Big Data analytics. A variety of tools and techniques are used in Big Data analytics depending on the type of use cases and their feasibility.

The following is a tabular representation of the tools and techniques used in typical Big Data analytics projects: [8]

Table 1

Step	Tools used	Techniques used
Data collection	Apache Flume for real-time data collection and aggregation Apache Sqoop for data import and export from relational data stores and NoSQL databases Apache Kafka for the publish-subscribe messaging system General-purpose tools such as FTP/Copy	Real-time data capture Export Import Message publishing Data APIs Screen scraping
Data storage and formats	HDFS: Primary storage of Hadoop HBase: NoSQL database Parquet: Columnar format Avro: Serialization system on Hadoop Sequence File: Binary key-value pairs RC File: First columnar format in Hadoop ORC File: Optimized RC File XML and JSON: Standard data interchange formats Compression formats: Gzip, Snappy, LZO, Bzip2, Deflate, and others Unstructured Text, images, videos, and so on	Data storage Data archival Data compression Data serialization Schema evolution
Data transformation and enrichment	MapReduce: Hadoop's processing framework Spark: Compute engine Hive: Data warehouse and querying Pig: Data flow language Python: Functional programming Crunch, Cascading, Scalding, and Cascalog: Special MapReduce tools	Data munging Filtering Joining ETL File format conversion Anonymization Re-identification
Data analytics	Hive: Data warehouse and querying Pig: Data flow language Tez: Alternative to MapReduce Impala: Alternative to MapReduce Drill: Alternative to MapReduce Apache Storm: Real-time compute engine Spark Core: Spark core compute engine Spark Streaming: Real-time compute engine Spark SQL: For SQL analytics SolR: Search platform Apache Zeppelin: Web-based notebook Jupyter Notebooks Databricks cloud Apache NiFi: Data flow Spark-on-HBase connector Programming languages: Java, Scala, and Python	**Online Analytical Processing** (**OLAP**) Data mining Data visualization Complex event processing Real-time stream processing Full text search Interactive data analytics
Data science	Python: Functional programming R: Statistical computing language Mahout: Hadoop's machine learning library MLlib: Spark's machine learning library GraphX and GraphFrames: Spark's graph processing framework and DataFrame adoption to graphs.	Predictive analytics Sentiment analytics Text and Natural Language Processing Network analytics Cluster analytics

Applications and Benefits of Big Data analytics

In this phase, we have tried to make it clear that, how and where the big data analytics are used and play a major role as economy driver.

1. **Big Data in general analysis**

As the Big data is generally characterised by four Vs i.e. volume, variety, velocity, variability, veracity of data. All Vs are related almost all types businesses. Big data mobilizes all aspects like skill, social, Leal business, technical and other applications related to a business house or society.

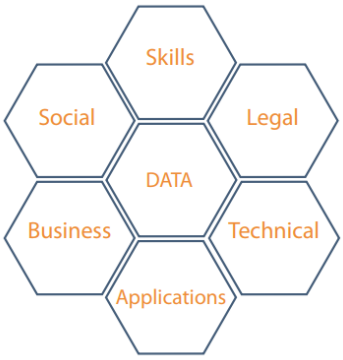

Figure 1 – Showing applications of Big Data Analytics

2. **Big Data in Economic Analysis**
   As per a study carried out by *Balar Khalid* and *Chaabita Rachid* [9], the application of Big Data in economic analysis could therefore be associated with notions:

A-"Multidimensionality": in terms of number of variables per observation, number of observations or both

B- "Granularity": Big data sets often provide useful micro-level data for analysing agent behaviour. The advantages of big data analytics for economy are the following:

1) Improve monitoring and forecasting of economic activity at the government level. Central and local public administrations collect vast amounts of administrative data at the micro level, in areas such as tax collection, social programs, education or demography, among others.

2) A level of periodicity and granularity often higher than traditional survey data. The use of new data to track private sector economic activity, sometimes even in real time (eg the MIT Billion Prices Project [10] which collects prices from several hundred online sales sites to obtain an accurate proxy for inflation, or the Spending Pulse [11] tool from Master Card that tracks household consumption via credit card payments), are powerful tools for monitoring economic activity with a level of frequency and granularity often higher than traditional survey data.

3) Proxies of economic indicators. Indirect measures such as online searches or social media publications can also be used as proxies for economic indicators such as employment or household confidence.[12] "Trends" on Google to "predict the present", suggesting that queries on Google for a specific product accurately reflect the demand for this product). The availability of "real-time" data can provide an

advantage in terms of "now casting" or identifying economic trends as they unfold.

4) A significant amount of data that would contribute to a significant improvement in measurements. The gradual availability of large-scale administrative and private data could lead to better ways of measuring economic effects through broader and more granular data, particularly with respect to the behaviour of individual agents [13]; the large size of the new databases could also solve the statistical problem of the limited number of observations and make the analysis more robust and accurate.

5) A better perception of the effects of different policies and economic shocks. These new data could encourage economists to ask new questions and research themes, in areas as diverse as labor market dynamics [14], the effects of preschool education on future earnings (Chetty et al., See below), stock market dynamics [15] and the functioning of online markets [16]. The ability to combine different databases expands the range of research, as shown for example in the Chetty, Friedman and Rockoff [17] study that combines administrative data on 2.5 million New York schoolchildren with their incomes as that adults 20 years later to show the "added value" of having benefited from a "good" teacher; in this case, the high level of granularity in the data makes it possible to link the individual scores to the school tests and the corresponding tax records for a large sample, which would have been impossible with aggregate data or a smaller sample. Many aspects of individual behaviours, such as social relationships (with data from social networks) or geolocation, may also become easier to observe and analyse; the example of Scott Keeter [18], from Pew Research Center, who advances the idea of using data collected on social networks as a supplement or substitute for public survey data, proves this idea.

6) Make possible "natural experiments". For example, switching from weekly data to
significantly higher frequency data (up to minute per minute), or consumer or individual product data, can detect micro-level details or variations, would be more difficult to isolate and exploit with more aggregated data. The study by Einav, Farronato and Levin [19], which offers an analysis of pricing and sales strategies on the Internet, is a concrete example of the advantage of benefiting from granular data in order to obtain a rich information on the individuals studied and to explore a variety of consequences for a given experience (for example, substitution to other products in the case of a price change). These advantages are of particular interest when applied to the case of companies, and more particularly to online platforms for which it becomes increasingly
simple and inexpensive to experiment when they have granular and personalized pricing strategies and automated methods always easier to capture (and apply) the results of these experiments.

7) New opportunities could also come from new statistical techniques and machine learning [20], which can help build more robust predictive models, particularly in the field of empirical microeconomics. Einav's study, Jenkins and Levin[21] is an example of the use of Big Data techniques in predictive modelling to incorporate heterogeneity into their econometric model;

In this study, the use of predictive modelling techniques allows the construction of "credit risk scores" that help researchers model consumer borrowing behaviours and how lenders should rate loans and set limits for credit risk. Borrowing for the different types of borrowers divided according to their risk of default. Grasping heterogeneity through Big Data techniques and new statistical methodologies could also benefit many other sectors, because of the possibility of going beyond the "average effects" measure and being able to link measurable heterogeneity to specific treatment effects and specific policies; the example of the Safeway[22] food chain, which offers specific discounts to individual customers based on individual price elasticities, shows the progressive ability of companies to go beyond simple price elasticities and develop algorithms to estimate the elasticity and optimal prices specific to each type of consumer; similarly for governments in the development of their economic policies, with the possibility of developing more user-oriented policies (for example, health policies adjusted to the medical environment and the characteristics of the patient, education policies adjusted by level, teacher or mix of students, etc.). [9]

CONCLUSION

In this paper, we have tried to explore the basic technical features related to economic aspect of big data. The data, moreover big data drives everything in this world, we have made an effort figure out the economic benefits of the big data analytics. Big data analytics are like a weapon in the hands of businesses to fight a strategic war to sustain in ever changing world. Global situations like COVID-19 pandemic, enrich the big data, this can help in the evolution of new businesses and it also helps existing businesses to take realistic and need of the hour decisions to stay relevant during tough times. This paper provides a basis to enrich this study and to carry out further research.

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A Theoretical Extension to Financial Literacy in India

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Abstract

In the changing landscape, where the range and complexities of financial products continue to increase, developing an understanding of the word finance. The economic development of any country depends upon the existence of a well-developed financial system, which will result in making informed decisions and choices about the savings, consumption and investment of one's finances. Financial literacy holds a remarkable place in the lives of the people. The reduced role of the government and employers has heightened individuals' responsibility in managing their own finances and securing their financial future. The present paper highlights the different studies done in the area of financial literacy.

Keywords: Financial, literacy, economic, education, investment funds et

INTRODUCTION

The economic development of any country depends upon the existence of a well-developed financial system. For achieving the targeted growth of financial inclusion, there is lack of financial knowledge and attitude among the people. So understanding the level of financial literacy and its factors affecting are equally researchable issues. Financial inclusion aims at drawing the "unbanked" population into the formal financial system so that they have the opportunity to access financial services ranging from savings, payments, and transfers to credit and insurance. Financial inclusion as a policy objective represents the current consensus in a long-standing debate on the contribution of finance to economic development and poverty reduction. There has been significant but uneven progress toward financial inclusion around the world in recent years, but it's not up to the desired level. With the changing economy, a significant change in the social support structure across the world has led to the need and responsibility of an individual for managing their own finance and securing their financial future. The role of government and the employers in managing investments on behalf of the employees has reduced.

The concept of Financial Inclusion is not a new one. It has become a catchphrase now and has attracted the global attention in the recent past. Lack of accessible, affordable and appropriate financial services has always been a global problem. It is estimated that about 2.9 billion people around the world do not have access to formal sources of banking and financial services. Financial Inclusion is considered to be the core objective of many developing nations since from last decade as many research findings correlate the direct link between the financial exclusion and the poverty prevailing in developing nations.

In the changing landscape, where the range and complexities of financial products continue to increase, developing an understanding of the world finance is of paramount importance (Narula, 2015). This calls for the dearth need of getting literate about the financial aspects, being aware about the need and importance of varied financial avenues. For the very purpose the financial literacy has assumed greater importance. In the recent years, as the complexities of the financial markets and it has led to the information asymmetry leading to making informed choices more and more difficult for the common person. Before getting financial education one should get the clear image of what actually is the meaning of financial education.

Financial education is the process by which financial consumers/ investors improve their understanding of financial products, concepts, and risks, and by acquiring knowledge and skills to make sound financial decisions. As, per (Das, 2007)Financial education can broadly be defined as providing the familiarity with and understanding of the financial markets products especially, rewards and risk in order to make informed choices.

Organisation for Economic Co-operation and Development (OECD) has defined financial education as, the process by which financial consumers/ investors improve their understanding of financial products, concepts and risk and through information, instructions and/or objective advice, develop the skills and confidence to become more aware of financial risks and opportunities, to make informed choices, to know where to go for help and to take other effective actions to improve their financial wellbeing.

Thus financial literacy is the ability to grow, monitor and effectively use financial resources to enhance the wellbeing and economic security of oneself, ones family, one's business. Recognising the need for financial education, many countries both developed and developing, have launched financial education and financial literacy programmes for their people (Das, 2007). Financial literacy is mainly concerned with better planning of retirement life, gradual wealth accumulation and better financial decision making. Financial literacy helps an individual to make informed decisions regarding their financial matters by imparting knowledge and understanding about the financial matters, which results in the better outcomes which relates to the wellbeing of the individual. Financial literacy in other words can be defined as the ways how people manage their money in terms of insuring, investing, saving and budgeting (Nurulet.al;hoag 2002) So to be financially literate becomes important from the initial stages of one's career. But due to some personal or professional hindrances they become financially illiterate. This leaves them with inadequate knowledge about financial dealings, inappropriate decisions etc., so, they have to be enhanced with financial knowledge and tools which are needed to make informed decisions.

The capability is developed by experience, expertise and person's need and can have a positive impact on consumers' personal involvement in financial market and services. As per the changing trend and increasing complexities of the financial markets and upcoming financial products has become a tedious task for an individual to understand the risk and return associated with the varied financial avenues. It has

raises the need for an individual to get financially literate. Thus the financially informed literate individual makes effective decision by evaluating the risk and returns aspect of an investment, which further aids in improving the structure/system and contributes to the economic growth and development of the county.

Financial literacy is nothing but the possession of knowledge and understanding of financial matters and it often entrails the knowledge of property making decision pertaining to certain personal finance areas like real estate, insurance, investing, saving, tax planning and retirement. It also involves intimate knowledge of financial concepts like compound interest, financial planning and mechanics of an audit card, advantageous saving methods and consumer rights (V.Mathivathaniet.al., 2014).In India the need for financial literacy is getting greater because of the low level of literacy and large section of population which remains out of the formal financial set up. The meaning of financial stability can be discussed as a condition in which the financial system is capable of withstanding shocks, thereby reducing the likelihood of disruptions in the financial intermediation process which are severe enough to significantly impair the allocation of savings to profitable investment opportunities (Singh,2014).

By being Financial literate the individuals have make a conscious effort to make sound financial decisions. And show varied investment patterns as per their level of understanding. As there is increase in the contribution of the services sector in the total GDP, the need to have a proper channel to use the funds is raised. As the income of the people has increased their propensity, with the sense of securing their future has led them to think for saving and investment. For which they look for varied investment avenues so as to earn a satisfactory returns. Every individual want to invest money in order to get return and for productive use of money. For businessmen it is easier for them to invest in various types of investment assets such as fixed deposits, equity shares, bonds, real assets and saving certificates etc due to number of sources, earnings from their business.

As far as Salaried class is concerned their investment choices are restricted due to fixed salary package, and varied other factors. So, for making a sound financial decisions there is a need to study the level of financial literacy level of the individuals and their investment pattern.

EVIDENCES ON FINANCIAL LITERACY

Mark Taylor (2010). Identify the key determinants of Financial Literacy. Using panel data models, He fined the key determinants to financial literacy are age, health, household size and structure, housing tenure, and the employment status of the individual and other household members. Older men and women in full-time work with an employed spouse have the most financial capability although many of these characteristics have significant impacts on financial capability, but results suggest that age, and employment status has the largest impacts.

TullioJappelli (2009), has done a comprehensive assessment of literacy across the world based on a survey of

executives in 55 countries, in 1995-2008. The survey respondents are a selected group of managers and country experts, Through descriptive analysis he shows that literacy varies quite substantially among countries, and the regression analysis shows that its level depends on educational achievement, social interactions (as proxies by the share of urban population), and mandated savings in the form of social security contributions. The contribution rate is used as an (inverse) proxy for financial market deepening to minimize the risk of reverse causation between financial literacy and financial development, financial knowledge depends on cognitive ability.

Al-Tamimi and Kalli (2009) assessed the financial literacy of the UAE individual investors who invest in the financial markets of UAE. They found that financial literacy of UAE investors is much less from what is actually needed. Their results also suggest that there exists a significant relationship between financial literacy and investment decisions.

Nga et al. (2010) through their study investigated the level of general financial and product awareness among young adults studying in a private higher educational institute in Malaysia. They tried to find out that how demographic factors influence financial awareness of the youth and whether studying a course in business affects financial and product awareness amongst the youth or not. Their findings suggest that males have higher level of financial awareness as compared to females. They also found that education level as well as course taken in business has an influence on general and financial product awareness.

Bhushan and Medury (2013) analysed the gender differences in investment behaviour of employees working in various universities of Himachal Pradesh. India. They found that employees working in various universities of Himachal Pradesh invest in almost all investment avenues available to them. There is an overall inclination of investing in safe investment instruments. Gender differences in investment preferences are significant for health insurance, fixed deposits and market investments.

Haiyang Chen et al (1998) In the study explored that the knowledge of college students on personal finance is inadequate, which was due to systematic lack of sound personal finance education in the college, education has a significant impact on financial knowledge. It was also found the women were less knowledgeable than men. Individuals with less experience have high probability of being less knowledgeable than the experienced ones. Income and race are not the important factors to determine financial literacy level. The other finding was that the businesses major were more knowledgeable than the non-business majors. 95% of knowledgeable kept record and found it important. These is difference in opinion between varied groups which vary with the level of financial knowledge and awareness.

Lewis Mandell (2006) in study the author found that the financial literacy taught at the high school level (critical segment of our population) had the impact on the financial behaviour and financial decision making, it is because at this age, the young could be compelled to learn anything. Whereas it is believed that the educated have full knowledge and behave in a similar

pattern. But it is not the same knowledge of financial literacy. That does affect the behaviour of the individuals to make sound financial decisions.

Lusardi, et al (2007) In many developed nations consumers are poorly informed about financial products and practices. A study was conducted on Baby Boomers divided in sub groups of Black, white, hipains and women. It was found the more educated the people are the more is the level of financial literacy. Moreover blacks, hipanis are less likely to answer correctly than whites when questions asked to check their financial knowledge.

Mwangi Isaac et al (2012) Financial literacy skills serve to create awareness of financial services & the way as to how optimal results can be derived. The distance of separation from bank continues to pose a big challenge on access of financial services. Increase in household size has a tendency of locking households from access to financial services whereas increase in income is highly significant in explaining access to financial services.

Aggarawal, et al(2013) focused on working young in six major cities of urban India; the data is collected through a survey method. The study explored the relationship between the three dimensions of financial literacy i.e, financial knowledge, financial behaviour and financial attitude. Among the three financial knowledge and financial behaviour are positively correlated, whereas the correlation between financial knowledge and financial attitude being independent showed the correlation near to zero. Financial knowledge and financial behaviour showed negative correlation. The young Indians showed positive attitude towards financial planning being self-disinclined mode to get more financially literate.

Bhushan, et al (2013)surveyed 516 salaried individuals of Himachal Pradesh using structured questionnaires and multi stage probability sampling was used to derive the sample and his study indicates that between 68.8% male and 31.2% female respondents fall in the age group of 31-40. The overall financial literacy level of 58.3% among salaried individuals is not encouraging. Financial literacy of male in more than financial literacy of females, the difference is significant. As the age, education level and income level increased the level of financial literacy also increases. Non-government employees from urban area are more financially literate than the government employees and employees from rural areas.

Singh(2014) conducted an exploratory study on secondary data based on Indian conditions and found that for making sound financial decisions financial literacy is must, which is an important component to increase the saving rate. Lower financial literacy is linked to lower household savings as well as higher reported over-indebtness. It was identified that financial literacy appears to be particularly serve for key demographic groups: women; less educated; low income; ethnic minorities and older respondents. Financial literacy substantially increase the demand for banking services, financial literacy appears to also be linked to economic and social development.

Sharma et al (2015)conducted a study using questionnaire on a sample of 85 educated working women of the age group on 20 and

above. It was found that the women who were more equipped with knowledge and are more educated make their own financial decisions on the other hand less empowered women depends on others for making their financial decisions. As the women are more conservative investors than men and they prefer less risky investment. Middle aged women opted for real estate for their investments. The financial confidence of the women is based on the knowledge and education. The need for education and knowledge is on the rise, as women for their empowerment need financial independence.

Bhushan(2015)conducted a study in Himachal Pradesh (Shimla, Solan, Kangra),Where Primary data was collected through non disguised structured questionnaire. A sample size 300 of multistage sampling was used. The study was conducted on investment behaviour of salaried individuals in Himachal Pradesh and found that the level of financial literacy affects the awareness of individuals regarding financial products and their preference of financial products. There was statistical difference between the both with financial literacy level and awareness and preference for financial products. Individual with high financial literacy level preferred mutual funds, stock market, PPF, debentures, LIC, commodity market, bonds for investing. On the other hand, individual without financial literacy opted for traditional means such as bank deposits and post office savings.

MC Chandran(2014) gave the premiant issue of financial inclusion, the road India need to travel towards becoming a global player for which financial assets of the country will attract the global players which will create employment and varied business opportunities. Financial inclusion will act as a source of empowerment and allow people to participate more effectively in the economic progress of the country which is possible when the people get aware about the importance of financial literacy

Mandell (2009) An applied research was carried out on primary data collected through questionnaire (close ended) The sample size (60) for study was chosen by probability sampling method. The study was conducted on 5 independent variables. The findings indicated that there is a positive correlation between financial literacy and risk .i.e., as the financial literacy level increases the risk taking capability of an individual increases. Whereas there is an inverse relationship between investor experience and his propensity to risk. Accounting information and risk aversion are positively correlated. Financial literacy and accounting information helps investors in lowering investor asymmetry. And allows the investor to invest in risky instruments.

Brahmabhatt, et al, (2012) In the study is was identified that the proportion of male investor is more than the female 76:24, while investing more than two options are look for, in which women were found more attached to investing in gold than in any other avenue. Stock market is preferred as compared to any other market. As people possessed less knowledge of managing their income and assets, as the age increases there is decrease in level of risk tolerance. Overall it was found that people give more preference to saving and safety but at the same time they want higher interest at low risk in short span.

Khothari (2013) The a descriptive study was conducted on a sample of 100 people using questionnaire and it was found that the people of younger age are more interested as compared to the middle aged or elderly people. The result indicated the there is a difference between the choice of investment avenue of people of different age groups. Younger generation starts investing at early stage on regular basis, which will lead to more investment in future. Perception of different age groups who desires to invest have increased returns and growth prospects.

Bashir et al, (2013) An exploratory research was conducted in Gujrat & Sialkot (cities are in the initial stage of development). The risk perception of the individuals and the preference of investment avenue were studied. The study revealed that there was low participation of females due to low ratio of working women and those interested in stock investments. The education played a vital role in choosing the investment avenue, while the problem lies in the investment of funds because of the dependency on the single bread earner in a family. The people of this category opt for lottery tickets, card playing and gambling to earn, as they are left out with very less funds after meeting the family expenses. The women were risk averse and the people are not aware about risk tolerance profiles.

The mentioned studies were conducted in different parts of the country and giving the results showing the impact of financial literacy level of an individual investor, varied determinates, which influence the level of preference of different investment avenues, their perception towards investment avenues considering the risk aspect of investment, different age groups show different pattern of saving, investment and credit. Highlights of the review of most of the studies:-

- The financial literacy level of women is low as compared to the financial literacy level of men.
- The inclusion of financial knowledge at school and college level helps the better understanding of financial matters.
- The experienced people make better financial decisions.
- The young are risk taker and the older people are risk adverse.
- Low income people opt for gambling, lottery, etc for earning returns.
- The experienced people make better financial decisions.
- The young are risk taker and the older people are risk adverse.
- There is an impact of financial literacy of an individual investor on his investment behaviour.
- To analyse the risk level of salaried individuals according to their income, education and age.
- To study the perception of different age groups towards investment avenues
- The older people are positive saving
- The men and women have different perception about investment.
- There is difference between the saving of men and women.

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Research Gaps in the Area of Consumer Protection Studies

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Abstract

Consumer Protection Act helps the consumers to aware and avail their rights and become a good consumer. The initialization of disputes redressal mechanism by term of Consumer Protection Act is not enough but a lot & lot has to be done in the area of creating awareness on the part of consumer to facilitate his seeking suitable remedy wherever required. Research studies focusing on awareness level of consumers about "Consumer Rights"; complainants' attitude and perception towards consumer grievances redressal; advocates/ legal experts' attitude and perception towards consumer grievances redressal and government's initiatives for effective implementation of Consumer Protection Act were undertaken. These studies are needed in the area of consumer protection. Focusing on various research gaps identified from reviewing the studies.

INTRODUCTION

The Consumer Protection Act has been regarded as the most progressive, comprehensive and unique piece of legislation. An international conference on consumer protection held in Malaysia in 1997, the act hailed as one "which has set in motion a revolution in field of consumer rights, the parallel of which has not been seen anywhere else in the world" (Aswathappa & Reddy (2007).Besides enacting legislation, the government has taken other measures to protect consumer interests. Government has included consumer protection as an item of the 20-Point programme. A consumer advisory council has been set up by agencies including state governments, the Textile Committee and Department of Science and Technology. The media is giving coverage to the subject by "JAGO GRAHAK JAGO" & "SYANI RANI" campaign, AIR and Doordarshan has been organizing programme like Lok Samasyani Sansad and Janavani.

The introduction of disputes redressal mechanism by way of Consumer Protection Act is not enough but a lot more has to be done in the area of creating awareness on the part of consumer to facilitate his seeking suitable remedy wherever there is a need. This became more important in the rural areas, where there is wide spread illiteracy. The new Consumer Protection bill was passed by the Parliament on 06 August 2019 when it was passed through a voice vote in the Rajya Sabha. The bill was earlier presented and
passed in the Lok Sabha on 30 July 2019. This bill would replace Consumer Protection Act, 1986. Central Regulatory Authority & Product Liability among key features of the new act Consumer Protection Act, 2019 has proposed certain new provisions which were not part in the earlier Consumer Protection Act, 1986.
The new bill has defined 6 rights of the consumers. Which include:

- Right to be protected against the marketing of goods, products or services which can
  be hazardous to life and property
- Right to be informed about the quality, quantity, potency, purity, standard and price of

- goods, products and services
- Right to be assured of access to goods, products and services at competitive prices.
- Right to be heard at appropriate forums
- Right to seek redressal against unfair trade practices that are involved in exploitation of customers
- Right to consumer awareness

REVIEW OF LITERATURE

Demeron (1989) described that consumerism is not a concerted movement. Actually, it is a series of efforts having in common the feeling of lack of satisfaction with goods and services and the marketing practice involved in their distribution coupled with the protest in a demand for information and for protection in market.

Jayaraj (1999) wrote that consumer forums have repeatedly held the payment of consideration for goods or service to be the critical aspect in determining a consumer. Therefore the non-maintenance of waiting rooms in railway stations or the non-provision of streetlights, despite being deficient services, cannot be brought before the consumer forum. This narrow definition has let several service providers continue to provide shabby and poor service. A wider interpretation of the act is required to remedy this situation.

Verma (2002) described the developments in the fieldof protection of consumer in India from 1984 and provisions for consumer protection through modifications to the act. Public-sector enterprises and co-operative societies have been brought within the area of the act.

Kishtwaria, Sharma, Vyas& Sharma (2004) concluded that the main source of information related consumer organization and legislation for the male was published/printed media and for the females it was their friends and neighborhood. Male respondents were more aware about consumer forum than female respondents. The main reason considered by female respondents regarding the unawareness was high degree of illiteracy, but it was not so for male respondents.

Bedi (2007), discussed of consumer protection through product knowledge in his study and revealed that, not to talk of the illiterate and semi-illiterate consumers, even highly educated consumers have little knowledge about the products they actually buy and in their purchase decision they go by the reputation of the brands and claims made by the manufacturing companies in their advertisements. Even for a large variety of common and simple products, consumers woefully lack even the basic knowledge. He further added that most consumers are found unable to distinguish between the original and the fake trademarks to identify the product.

Cherunilam (2008) stated that this act was hailed for the set time frame for the redressal/disposal of the complaints/cases. In fact, the act envisages a hassle-free, less expensive and speedy redressal of consumer grievances related to sub-standard goods, less services and unfair and restrictive trade practices. But several problems come in the way of expeditious disposal of cases. The post of higher authorities of the forum remaining vacant is very common. They also suffer from financial problems. Further, taking recourse to the law is affected by lack of consumer awareness and education.

Uppar & Sumangalam (2009) concluded from their studies that many of the consumer welfare programmes such as consumer protection act, consumer forum, procedure of giving complaint to consumer forum, consumer laws and rules, consumer

rights and responsibilities and prevention of food adulteration act were not known by the rural respondents. So this calls for the attention of consumer education in different forms.

Khanooja (2010) stated that the consumers said that they have been cheated in their purchase in one way or the other. Most of the consumers when cheated took no action/compliant. To meet these challenges, the consumer movement should develop into a people's movement which may take in its fold all the consumers of the country. Presently, the movement is confined to cities and towns. It has attracted a small section of intelligentsia. It should expand its base to villages and should attract the whole of the population. To achieve this, here must to develop and design awareness programmes.

Praveen (2010) gave a deep insight of the working of Voluntary Consumer Organizations (VCOs). The author had critically examined the infrastructure and financial positions of VCOs. The study described that most of the VCOs agreed that the problems usually relate to issues such as paucity of funds, lack of co-ordination from business people, lack of cooperation from local politicians and lack of cooperation and awareness among consumers. The author viewed that consumer protection and welfare is not the task of a single entity of the society, rather it is the collective responsibility of the state and various others stakeholders.

Joshi (2010) in his paper examined the notion of consumer protection in India within the larger context of the practice of consumption. He argued that it is necessary to address the issue of consumption somewhat more comprehensively before discussing the strategies of consumer protection or the effectiveness of legislative measures such as Consumer Protection Act, 1986. He suggested that the terms consumer, consumption and consumer protection be read afresh in the light of discourses which have emerged during the new historical conjuncture called globalization.

www.india.gov.in(2010) revealed that the second bench of national commission started functioning from 24h Sep, 2003. Fund for consumer welfare was constituted to provide financial and social assistance to consumers by JagritiShivirYojana, District Consumer Information Centre, Consumer Clubs in school / colleges, promoting involvement of research institutions / universities / colleges etc.

Singh (2012) discussed an effectiveness of consumer forums and their imp[act on corporate and consumers in U.P. region. Author inferred that the difference between the actual and the expected effectiveness was insignificant.

Mittal & Gupta (2014) carried a study on consumers' observation and reporting of unfair trade practices. It described that nearly half of the population or consumers had found to grievances in almost all the sectors but number of lodging the complaints had been found approx. 60% only. Maximum number of complaints was filled about low quality goods sold/adulterated goods.Most of the complaints had been lodged regarding warranty/guarantee of the products.

Rajanikanth (2017) concluded that Consumer protection Act 1986 is treated as one among the best existing Consumer laws in the world, but the Act is not meeting the desired goal of protecting interests of the vast majority of consumers. It may be due to the poor promotion of the Act and its provisions among the rural consumers, by the National and State Commissions.As the government is amending the Act (See the Annexure) further, many issues may be resolved. It is expected that the new

amendments may provide a better relief to the consumer in the market place and prove that the 'Consumer is King'.

Boro (2018). The study prove that awareness level of Consumers is low and no knowledge about consumer rights in depth, so utilization of these rights are not possible by them. Similarly, it proved that no consumers are willing to file case in the consumer court due to complicated procedure of filing complaint and due to wastage of time and money and it is suggested to conduct consumer education and consumer awareness programs, public campaigns among rural and uneducated people and government should take necessary actions to minimize the procedure of filing case, speed up the redressal programs and provide various support to the consumers for their redressal.

Burna (2018) concluded that All customers are purchasing products, branded and unbranded and majority of the customers are observing defects in the quality. Most of the customers are rejecting the product and complaint to the shop keepers and more than 54% of the customers are aware about the Consumer Protection Act and 92% of the people (consumers) are not getting the response within the specified time. In globalization each and every should think about the product i.e., in terms of quality and price because they exist in customer driven market and if any defective product exist must try to reduce the defects and benefits the consumers prompt service are replace the product. The above data clearly states that most of the consumers are unsatisfied and Consumer Protection Act. The present system of consumer protection act is satisfactory but in future this act should be amended to provide better service towards consumer protection.

Priyanka & Sreelatha (2018) concluded that The consumers have been protected through various legislations though they are being affected by the traders. Firstly the consumers should be aware about their rights and responsibilities. They should make use of the rights available to them. Many steps have been introduced from the past 1652 decades for protection of consumers but the violations against them has not been reduced. The consumer cases are not taken as serious issue and they do not get fast and speedy redressal through any of the improvements made for their protection.

Singh & Raju (2019) concluded that there is a need to prescribe the essential infrastructure& facility to the District Forums and State Commissions so that they are not hamstrung functioning effectively. The presence of lawyers should be permitted only where the complainant engages or unavailable for physical presents, a lawyer who will justify the engagement of the lawyer by the respondent. Otherwise a attorney ought to be allowed solely wherever the court specifically permits or considers it necessary. Further, it should be provided that in no case more than two adjournments will be allowed. Furthermore, a procedure should be established that makes it obligatory the court to right away provides a copy of the order to the parties so no excuse is given for the delay in submission of appeals.

Kapoor(2019) In the Consumer Protection Act, the definition of 'Consumer' would include both offline and online consumers. The expressions "buys any goods" and "hires or avails any services" would include offline or online transactions through electronic means or by teleshopping or direct selling or multilevel marketing. The Consumer Protection Act, 2019, with its innovative changes would help in empowering consumers and provide justice to the needy in time.

Nigam (2020), this law introduced the concept of product liability whereby manufacturers and sellers of products are made responsible to compensate for any harm caused to consumer because of defective product. The law also elaborates on the definition of `unfair contracts' to protect consumers. This essay briefly examines the provisions of this new law which has repealed and replaced the Consumer Protection Act 1986 and suggests that the law should be implemented in its true spirit to pave a new way for democratic environment where citizens as consumers could be protected from exploitation in the free market economy.

Nedumaran, Mehala,& .Baladevi (2020), We can say that Consumer Protect Act, 2019, the process of drafting was started in 2010 is one of the sincerest steps taken by the central government for enhancing consumer rights and speedy delivering of justice. The new Act touches on may aspects such as Mediation and Ecommerce, Which the world was unaware in 1986. So, it was important to amend the act when digitalization has changed the way a consumer conduct online transactions and mode of shopping has shifted from offline to online. Certainly 2019 Act is a positive step towards reformation, development and enhancing consumer rights. Socio-economic developments are taking place every year and we can aspect new amendments to 2019 act as well. But the real implementation of the 2019 Act will be seen in coming times by analyzing how much relief it offers to the consumers. All-in-all the 2019 Act is a positive step towards reformation and development of consumer laws, in the light of dynamically changing socio-economic developments. One has seen many other similar steps having recently been taken, for example, home buyers being considered Financial Creditors under the Bankruptcy Code and the coming into effect of RERA.

CONCLUSION

The studies reviewed forwards insights:

- Swiftly increasing variety of goods and services which latest technology has made available
- Growing emphasis over consumerism internationally
- Removal of personal relationship of buyer and seller and consumer's increased mobility
- Sophistication in marketing and selling practices in advertising
- Increased incidents of consumer exploitation
- Significant growth of consumer organizations
- Augmentation of Consumer Protection Act by enactment of Right to Information Act, 2005
- Significant increase in imports of goods from China

The above mentioned research gaps establish the need of a research study focused on various sub-objectives. These may include measuring the level of consumer awareness about "Consumer Rights" and consumer grievances redressal under Consumer Protection Act; the attitudes and perception of consumers and defending parties towards consumer grievances redressal under Consumer Protection Act; the attitudes and perception of advocates/ legal experts towards consumer grievances redressal under Consumer Protection Act and the initiatives taken by the government for effective implementation of Consumer Protection Act.

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Future Aspects of Stock Market Volatility & Mathematical Models

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Abstract

Volatility refers to the frequency with which the market price of an investment fluctuates. The more the market swings, the more volatile is seen. In recent years, a variety of models which forecasts changes in stock market prices have been introduced, but the time series analysis is the most common and fundamental method used to predict forecasting. This paper helps to know the future aspects of Stock market Volatility through mathematical models for estimating & forecasting volatility in Stock specifically.

Keywords: Forecasting, Share Volatility, Mathematical Models

INTRODUCTION

Volatility is an indirect means for predicting risk accompanied with an asset. Volatility explains the variations in return. Forecasting volatility is a stimulating problem in financial system. In simple words, Volatility refers to the frequency with which the market price of an investment fluctuates. The more the market swings, the more volatile is seen. In recent years, a variety of models which forecasts changes in stock market prices have been introduced, but the time series analysis is the most common and fundamental method used to perform forecasting. Every investor is concerned about the intraday changes of the financial assets. Forecasting is the process of making statements about events whose actual outcomes have not yet been indicated. It refers to formal statistical methods employing time series, cross-sectional or longitudinal data. It is used by companies to determine how to allocate their budgets for an upcoming period of time. Also, investors utilize forecasting to determine if any events affect a company will increase or decrease the price of shares of that company. Thus, risk is central to forecasting because it indicates the degree of uncertainty attaching to forecasts. Stock market forecasting is the act of trying to determine the future value of a company stock or other financial instrument. The successful prediction of a stock's future price can lead to a significant profit. Stock market analysts use various forecasting methods to determine the evolution of the stock prices in the future. Forecasting stock market return volatility has great importance because it might enable investors to take risk-free decisions including portfolio selection and option pricing. Recent financial crisis proved the importance of reasonable measurement of uncertainty in financial markets. This uncertainty is usually known as volatility which has crucial significance to financial decision makers as well as policy makers. But in practice, we find a lack of any structural dynamic economic theory explaining the variation in higher order moments.

REVIEW OF LITERATURE

Ramchand & Susmel (1998) compared the unconditional correlations due to time

variation. In this paper the researcher examined the relation between correlation and variance in a conditional time and state varying framework. In this paper, the data covered the period January 1980 through January 1990 and were in terms of dollars, for a total of 522 observations. The researcher used a switching ARCH _SWARCH technique that does two things. This study found that variance is indeed time and state varying and as a result the covariance structure between markets is also changing over time. Specifically, the covariance was such that during periods of high U.S. variance and foreign markets became more highly correlated with the U.S. market.

Yilmaz (1999) presented an empirical analysis of volatility and contagion across 19 emerging and developed stock markets in the 1990s. The results of this paper indicated that volatility contagion effects are carried to ISE through the New York and Hong Kong Stock Exchanges. This paper showed that in the second half of the 1990s, volatility in developed and emerging markets increased substantially.

Gulen & Mayhew (2000) examined before and after stock market volatility the in-production of equity-index futures trading in 25 countries, with the help of different models that which account for asynchronous figures, asymmetric volatility responses, conditional heteroskedasticity and the joint dynamics of the particular country's index with the world-market portfolio.

Batra (2004) analyzed the time variation in volatility in the Indian stock market. The study examined the time variation in volatility during 1979-2003 by using monthly data and asymmetric GARCH methodology used to estimate the element of time variation in volatility. The empirical analysis in the paper revealed that the period around the BOP crisis and subsequent initiation of the economic reforms in India is the most volatile period in the stock market. This paper concluded that liberalization of the stock market does not have any direct inference in the stock return volatility.

Sarma (2004) explores the day-of-the-week effect of the Indian stock market returns in the post-reform ear. Till the late seventies, empirical studies provided ample evidence as to the informational efficiency of the capital markets advocating futility of information in consistently generating abnormal returns. Daily returns generated by the SENSEX, NATES, and BSE 200 during January 1st 1996 to August 10th 2002 comprising a total of 1,667 observations for each of the indices are considered for testing the seasonality. The major findings are as that the Indian stock markets do manifest seasonality in their returns pattern. The Monday-Tuesday, Monday-Friday, and Wednesday-Friday sets have positive deviations for all the indices.

Stredie (2004) stated that the two-dimensional model is first studied using Krasny's vortex blob method, and then a new numerical method based on Wu's theory1 is developed. To begin with, we will implement Krasny's ideas for a couple of examples and then switch to the numerical implementation of the nonlinear analytical mathematical model presented by Wu. We will demonstrate the superiority of this latter method both by applying it to some specific cases and by comparing with the experiments. The nonlinear effects are very well observed and this will be shown by analyzing Wagner's result for a wing abruptly undergoing an increase in

incidence angle, and also by analyzing the vorticity generated by a wing in heaving, pitching and bending motion. The ultimate goal of the thesis is to accurately represent the vortex structure behind a flying wing and its influence on the bound vortex sheet. In the second part of this work we will introduce a three-dimensional method for a flat plate advancing perpendicular to the flow. The accuracy of the method will be shown both by comparing its results with the two-dimensional ones and by validating them versus the experimental results obtained by Ringuette in the towing tank of the Aeronautics Department at Caltech.

Karmakar (2005) conditional volatility models in an effort to capture the salient features of stock market volatility in India and evaluate the models in terms of out-of sample forecast accuracy. The various GARCH models provided good forecasts of volatility and were useful for portfolio allocation, performance measurement, option valuation etc. This study will help diversify international portfolios and formulate hedging strategies.

Hamid & Abdullah (2008) discussed that there is a large element of compromise in mathematical modelling. The majority of interacting systems in the real world are far too complicated to model in their entirety. Hence the first level of compromise is to identify the most important parts of the system. These will be included in the model, the rest will be excluded. The second level of compromise concerns the amount of mathematical manipulation which is worthwhile. Although mathematics has the potential to prove general results, these results depend critically on the form of equations used. Small changes in the structure of equations may require enormous changes in the mathematical methods. Using computers to handle the model equations may never lead to elegant results, but it is much more robust against alterations.

Lawson & Marion (2008) described that there is a large element of compromise in mathematical modelling. The majority of interacting systems in the real world are far too complicated to model in their entirety. Hence the first level of compromise is to identify the most important parts of the system. These will be included in the model, the rest will be excluded. The second level of compromise concerns the amount of mathematical manipulation which is worthwhile. Although mathematics has the potential to prove general results, these results depend critically on the form of equations used. Small changes in the structure of equations may require enormous changes in the mathematical methods. Using computers to handle the model equations may never lead to elegant results, but it is much more robust against alterations.

Mahajan and Singh (2008) examines the empirical relationship between volume and return, and volume and volatility in the light of competing hypothesis about market structure by using daily data of Sensitive Index of the Bombay Stock Exchange. Consistent with mixture of distribution hypothesis, positive contemporaneous relationship between volume and volatility is observed. Causality test further support the sequentially arrival of information hypothesis, which implies that new information is not simultaneously available to all traders and it takes time to absorb, which hampers the price discovery efficiency of the market. The contemporaneous and dynamic relationships between trading volume and

return, and trading volume and return volatility have been subject of recent stream of financial studies which emphasizes the relevance of trading volumes for stock returns. Trading volume is regarded as an important signal providing critical information that influences both future prices and price volatility. Thus volume provides information on the precision and dispersion of information signals rather than serving as a proxy for the information signal itself.

Ladokhin (2009) focused on the problem of volatility modeling in financial market. Study included estimation of conditional volatility, modeling of volatility skews and modeling of the implied volatility skews and surfaces.

Mittal (2009) analyzed volatility and return in the Indian capital market from the perspective of understanding market behavior. Indian capital market has grown exponentially in the last few years; the growth has been in every area from significant transformation brought through electronic form of trading, capital raised through primary market, market indices and market capitalization etc. Day to day swings are often large and intraday volatility elevated, especially at market opening and closing. The analysis utilized daily open-to-open, high-to-high, low-to-low, and close-to-close index returns of India's benchmark Index, the BSE SENSEX. It is observed that annual volatility declined from 2000 to 2007.

Mittal and Jain (2009) believed that market efficiency had always been the concern of market regulators, investors and researchers. Market efficiency tests showed different and mixed evidences in the developing markets. The testing of weak form of efficiency and the efficient market hypothesis on Indian stock market in the form of random walk, during the period of 2007-08 based on closing prices and daily returns on the Indian stock market three representative Indices i.e. S&P 500, CNX100 and BSE 200 was done. It was found that the three types of anomalies i.e. Monday Effect, Friday Effect and Day of the Week effect did not exist in the Indian stock market and the market could be considered as informational efficient.

Singh & Agarwal (2010) assessed the impact of trading of Index Futures on the Returns and volatility of Index by examining the nature and strength of relationship that exist between Nifty Index and Nifty Futures. Study consisted the closing prices of NF & NSI for a period January 2004 to September 2007. Study used Regression Run using GARCH (1, 1) Model showed that the interrelationship between the markets were strong. GARCH effects were stronger in Spot Index Market for Nifty, ARCH effects were stronger in Index Futures Market. Study concluded that there is bi-directional flow of information from futures Market to the Index Market and vice versa. Study also concluded that Nifty Equity Future trading act the same a Mechanism for Price discovery for Nifty Stock Prices and trading in Future Market provide additional payback to investors and speculators.

Kumar & Mukhopadhyay(2011) addressed whether, and to what extent, the introduction of Index Futures contracts trading has changed the volatility structure of the underlying NSE Nifty Index. It was found in this paper that new information is assimilated into prices more rapidly than before, and there is a decline in the

persistence of volatility since the onset of futures trading.

Mehta and Sharma (2011) discussed that Indian stock market has witnessed various confrontations during last two decades resulting into occurrence of alternate phases of the market cycle. The recent financial crisis occurred in the world stock markets has caused vigorous movements in the Indian stock markets, but India has emerged as one of the soundest emerging economies of the world after this crisis. The present study is focused to examine the time varying volatility of Indian stock market specifically in equity market and has considered S&P CNX Nifty index of NSE (National Stock Exchange) for a period of approximately a decade, i.e., March 2001 to October 2010. For the alleged purpose, a total of 2415 daily observations of closing value of market proxy have been considered for all empirical tests for the study period. It is further destined to study whether there is an improvement in the persistence of stock market volatility during last decade or not. The findings of the study documented that the Indian equity market has witnessed the prevalence of time varying volatility where the past volatility has more significant impact on the current volatility. The identification of persistence of conditional volatility can help the investors to forecast their returns from equity market under alternate market phenomenon.

Abdalla (2012) explored stock return volatility in the Saudi stock market by using daily closing prices on the general market index (*Tadawul* All Share Index; TASI) over the period from January 2007 to November 2011. The study employed generalized autoregressive conditional Heteroskedasticity (GARCH) model including both symmetric and asymmetric models. An application of the GARCH (1, 1) model provided strong evidence of the persistence of time varying volatility. The study concluded the existence of a positive risk premium by allowing the mean equation of the returns series to depend on a function of the conditional variance, which supported the positive correlation hypothesis between volatility and the expected stock returns.

Sharma et. al. (2012) proposed that emerging stock markets are characterized by high volatility. A common problem plaguing the low and slow growth of economies is the swallow financial sector. Financial markets have great contribution in the process of economic growth and development by providing savings, channeling funds from savers to investors. Volatility may impair the smooth functioning of the financial system and adversely affect economic performance. Modeling and forecasting financial markets volatility has received considerable attention from policy makers and practitioners during last 25 years. It is the variation of stock returns in time. It is the standard deviation of daily stock returns around the mean value and it is the return volatility of the aggregate market portfolio. Volatility is a variable to show the extent to which return of underlying asset will fluctuate between how and the options expiration.

Singla (2012) analysed for research was the daily closing prices of S&P CNX NIFTY during term June 14, 1999 to June 3, 2002. Researcher calculated the daily index returns by using the formula ln (pt / pt-1). The Research compared the variances and rolling standard deviation in the daily return data in different period and concluded that

there has been statistical significant reduction in the unconditional volatility.

Iqbal & Uduman (2014a) explained the behavior of the digestive system of a paper making plant based on queuing theory. Several methods are used to describe the behavior of some parts of the digestive system of paper making plant based on linear and non-linear circuit. The digestive system of a paper making plant has four main sub-systems that are arranged in series and parallel. The mathematical local balance equations are developed using Markov Sate diagram and then solved it by using normalizing condition. The behavior of each part of the digestive system in a paper making plant has also been deduced, SLAM - II can also be used to simulate the model. Therefore, the finding of this work will be highly useful to the paper plant management for the timely execution of proper maintenance decision and hence to enhance the system

Iqbal & Uduman (2014b) dealt with the study of the stock preparation unit for paper making process in paper plant industry. Stock preparation is conducted to convert the raw stock into finished stock for the paper machine. The stock preparation unit comprises of various sub-systems, including materials feeding, repulping/slushing, defalking, storage and mixing. The mathematical formulation of the problem is done using probabilistic approach, and by considering the exponential distribution of probable failures and repairs. Furthermore, difference differential equations are developed based on Markov birth-death process approach. These equations are further solved by using normalizing conditions for determining the steady state availability of the stock preparation unit. Additionally, the performance of each subsystem of the stock preparation units in a paper plant has been optimized by using genetic algorithm. After that the decision matrices are developed, which provide the diverse availability levels for different combinations of failure and repair rates for all subsystems. The model developed helps in the operations and quantitative of varied maintenance decisions and actions.

Hakan et al (2015) examined expiration impact of the ISE-30 equity future in the Turkish stock exchange using daily data covering the period from February 2005 to April 2015. The comparison period approach is used to compare the return volatility on the expiration period with that of pre-expiration period. Two different volatility measures, close-to-close volatility estimator and an efficient high-low estimator, were used for comparison. The F-tests employed indicate that only 14 of the close-to-close and just 5 of the high-low volatilities of the expiration periods were greater than the pre-expiration period volatility. The results of the F-tests suggested that the expiration of ISE-30 index equity future did not have effects on return volatility on underlying stock market.

This finding is contrary to our assumption that expiration effects should be present in Turkish market, as it is a thinly traded market and as a consequence of thin trading, index futures arbitrage and manipulation related activities should have significant effects on stock market volatility.

Qamruzzaman (2015) examined a wide variety of popular volatility models for stock index return, including Unit Root Test, Random Walk Model, Autoregressive

Model, Generalized Autoregressive Conditional Heteroscedasticity (GARCH) model, and extensive GARCH model, with normal, and student t-distribution assumption. Study suggested that these five models can capture the main characteristics of Chittagong Stock Exchange (CSE).

Juneja & Gupta (2016) recognized whether Indian and sampled international stock markets were volatile or not. The researchers found that different factors not only national but international enlarged the volatility in the market and therefore the returns changed. Lots of studies were studied by the researchers on this issue that supported to calculate the comparison between the volatility of Indian Stock Market and Sampled International stock Markets. This study carried to know the stock market volatility patterns in Indian market and international markets.

Panchal (2017) analyzed different stock price models i.e. Lognormal Model, GBM model and Binomial Tree Model, formulas for option pricing and payoff functions in stock market using mathematics. It included verification of solutions using mathematics and graphical representation of payoff functions in stock market.

Raghavan & Tomar (2017) identified the retail investor‘s perception on derivatives trading. In this paper convenient sampling method was used in Visakhapatnam District. The findings of this study were that derivative equity market facilitate to retail investors to enlarge their investment in the long period.

Rastogi & Agarwal (2020) found the volatility spillover effects across spot, futures and option markets. The NIFTY 50 index is taken into observation. The study period is from January 8, 2010 to October 25, 2019. The main findings of this paper are: a bi-directional volatility spillover effect is found between spot and futures market and is a bit stronger from spot side; no volatility spillover was found between spot and options market in which both call and put contracts are considered; a unidirectional shock volatility spillover was reflected from futures to call options contract but there were no price volatility spillover effects across these markets.

Bivariate BEKK-GARCH model was implemented to find the volatility spillover effects among these markets. Later CCC-GARCH model was used to find the close proximity between the markets to check the robustness of our volatility spillover results obtained from bivariate BEKK-GARCH and the results from CCC GARCH supports the BEKK-GARCH results.

CONCLUSION

Based on the review of literature the following gaps are identified for the present study:

- Estimate the volatility of stock price through Time Series Analysis
- Checking the Stationarity of stock data with the help of ARIMA and other models
- Estimating & forecasting in volatility in Stock Price by GARCH family models
- Identify the retail investor‘s perception on derivatives trading
- Know the stock market volatility patterns in Indian market and international markets
- Comparing the variances and rolling standard deviation in the daily return data in different period and statistical significant reduction in the unconditional volatility

- Explore stock return volatility in the stock market by using daily closing prices on the general market index
- Examine the time varying volatility of Indian stock market specifically in equity market
- Examining the nature and strength of relationship that exist between Nifty Index and Nifty Futures
- Analyze volatility and return in the Indian capital market from the perspective of understanding market behavior
- Focus on the problem of volatility modeling in financial market
- Examine the empirical relationship between volume and return, and volume and volatility about market structure by using daily data of Sensitive Index of the Bombay Stock Exchange. Volatility is an indirect means for predicting risk accompanied with an asset. Volatility explains the variations in return. Forecasting volatility is a stimulating problem in financial system. This paper helps to know the future aspects of Share Volatility through mathematical models for estimating & forecasting volatility in Stock specifically.

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Global View of Diversity: A Theoretical Study of Leading Companies

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ABSTRACT

Companies have become more cognizant of the fact that more diversity supports stronger growth. Diversity is more of a continuously evolving process rather than a promotional step. It demands that the organization bring in multiple dynamics and thoughts from within the team on how best to identify, adopt and deploy the right diversity and inclusion guidelines. Diversity in the workforce is key to ensuring that companies remain competitive and meet the changing needs of their customers. Diversity is no longer an abstraction; it is part of daily life in many countries in the developed world. Diversity is good for business. Diverse businesses perform better both financially and culturally. This paper highlights the study of leading global companies that embraces diversity and different approaches to derive value from a diverse workforce.

Keywords: Global, Diversity, Workforce, Performance, Environment

INTRODUCTION

The key to diversity in the workplace is to foster inclusive working environments for all. Talent comes in all colour, race, genders and orientation, but we will only attract the best talent if everyone knows they will feel comfortable and accepted -- and every company needs to ask itself if it is doing enough to create and sustain that environment and to communicate to the under-represented groups -- not just to those already interested and engaged. We are a global industry. We are a global family. As a sector, everyone with the right skillset and talent is welcome. Diversity has several components. A Development Dimensions International survey of more than 2,000 human resource executives and nearly 16,000 global leaders found that organizations with above-average diversity are eight times more likely to be in the top 10% for financial performance.

DERIVING VALUE FROM A DIVERSE WORK FORCE

Companies wanted to increase the demographic diversity of their workforce, believed that discrimination is legally and morally wrong. Today, companies believe that a more diverse workforce will boost employee morale, make new market segments accessible and increase productivity. In short, increasing demographic diversity of workforce will enhance organizational effectiveness.

Executives assume that workplace diversity is about increasing racial, gender, natural, caste or class representative i.e., workplace diversity is about recruiting and retaining more people from traditionally underrepresented identity groups. Diversity in workplace has 'not resulted in enhanced organizational effectiveness because executives have been thinking of diversity simply in terms identity group representation.

Companies have-usually adopted two methods for managing diversity. In the first method, companies have encouraged members of minority identity groups to blend in with the rest of the employees. They profess to practice equality and

fairness by following this method. In the second method, companies have set members of minority identity groups apart in jobs that relate specifically to their background These companies operate on the premise that the main advantage of having minority identity groups in the' workforce is the knowledge they have of their own people.

The main advantage of having minority identity groups in the workforce is varied perspectives and approaches to work that their members bring. They bring different, important and competitively relevant knowledge and perspectives about how to actually do organizational work, i.e., how to frame and reach goals, frame tasks, create and manage effective teams, communicate ideas, lead, design and run processes. Members of minority identity groups can improve their companies by challenging basic assumptions about .the company's functions, strategies, operations, practices and procedures. They are able to bring more of their whole selves to the workplace, and identify more fully with the work they do when they are allowed to bring their perspectives and approaches to the work.

DISCRIMINATION AND FAIRNESS APPROACH

Discrimination and fairness approach is the most dominant way of understanding diversity. Executives who adhere to discrimination and fairness paradigm focus on equal opportunity and fair treatment They believe that prejudice has kept members of certain demographic groups out of organizations. They work towards restructuring the makeup of their organizations so that it more closely reflects the makeup the society. They install managerial processes that ensure that all employees are equally and with respect, and that some are not given unfair advantage over others. They institute mentoring and career development programmes specifically for members of minority identity groups. Women and people of colour are chartered on career paths toward becoming managers. The company trains other employees to respect cultural differences. In companies that follow discrimination and fairness approach, progress, in diversity is measured by how well the company achieves its recruitment and retention goals rather than by the extent to which conditions in the company allow members of minority identity groups to bring their personal approaches and perspectives to do their work more effectively.

ACCESS AND LEGITIMACY APPROACH

The access and legitimacy approach accepts and celebrates differences. The companies that adhere to access and legitimacy approach believe that the marketplace is multicultural, with minority identity groups gaining consumer power. These companies believe that they need a demographically diverse workforce to gain access to these differentiated customer segments. They feel that they need employees with multicultural skills in order to understand and serve their customers better and to gain legitimacy with them.

In these companies the motivation for diversity usually emerges from very immediate needs of seeking access to a market. A company enters a new country market, and its home bred marketers are not able to woo customers. In desperation, the company employs markets from the host country market to serve the customers of the new country market. For example, a multinational company hires Chinese salespeople to serve Chinese clients. These companies target diverse customer segments by matching the demographics of their organization to those of its customer groups.

DIVERSE WORK PERSPECTIVES

Some companies have realized that their employees frequently make choices at work that draw upon their cultural background, i.e. their choices reflect their being members of a particular identity group. In other words, the employees have approaches to and perspectives of work that reflects their being members of a particular identity group. The senior managers listen to their interest with openness and interest. Their companies seek to incorporate their employees' perspectives into the main work of the organization. These companies are willing to redefine their tasks, markets', products, strategies, business practices and cultures in light of the perspectives and the approaches of employees of different identity groups. These companies internalize differences among employees because they want to use the differences to learn and grow.

Companies that are able to use identity group differences to redefine their mainstream work share the following characteristics:

I. Senior managers understand that a diverse workforce embodies different perspectives and approaches to work. , They truly value variety of opinion and insight.
II. The organizational culture creates an expectation of high standards of performance from everyone. Some companies expect employees of minority identity groups to underperform.
III. The organizational culture stimulates personal development. The organizational culture brings out the full range of knowledge and skills of its employees. Jobs are designed, in a way that allows employees to grow and develop. Training and educational programmes are institutionalized' to further develop the knowledge and skills of employees.
IV. The organizational culture encourages openness. The organizational culture instills high tolerance for debate and supports constructive conflict on work-related matters.
V. The organizational culture makes employees feel valued. The employees feel committed, empowered and comfortable taking the initiative to apply their skills and experiences in new ways to enhance their job performance.
VI. The organization structure is egalitarian and non-bureaucratic. The organization structure promotes the exchange of ideas and welcomes constructive challenges to the usual way of doing things from any employees with valuable experience.
VII. Senior managers play a critical role as facilitators and tone matters in companies that incorporate into the main work of the organization.
VIII. Senior managers actively explore how identity group offerences affect relationships among employees and affect. The way work gets done. They try to understand how members of a particular identity-group define and do their work. They do not dismiss their method of work by attributing it to their being members of a particular identity group, but explore the possibility of their method being adopted throughout the organization. Senior managers understand that an employee may have a very personal style of working, managing and leading which he might have developed as being member of a particular identity group. They understand that the employee has to be allowed to be himself on the job if he has to succeed. Most employ have the feeling that they cannot survive if they became authentic in

the workplace. Senior managers allow employees to be themselves on their jobs. i.e., allow them to follow their own work style which has been influenced by their cultural background. They assure him that they want him to bring his authentic style to the job he is doing.

IX. Senior managers encourage employees to make explicit use of their background cultural experience and the pools of knowledge gained outside their work to enhance their work. Employees of minority identify groups are encouraged to use their cultural competencies at work freely and publicly so that other employees learn from their special skills in working, managing and leading.

X. Senior managers work against all forms of dominance and subordination that inhibit full contribution from employees. Senior managers take responsibility for removing the barriers that inhibit employees from using the full range of their competencies. They have no tolerance for forms of dominance like racism, homophobia, sexism, sexual harassment, etc. They also understand that organizations create their own pattern of dominance and subordination based on the presumed superiority and entitlement of some groups over others.

Senior managers ensure that the organization remains a safe place for employees to be themselves. They understand that tensions will arise when perceptions and methods of employees of minority identity groups start becoming accepted in the organization's mainstream work. Employees may feel vulnerable when they put more of themselves out and open up about their feelings and ideas. Senior managers acknowledge the tensions and the vulnerabilities, and resolve them sensitively and swiftly by setting a tone of honest dialogue.

GLOBAL VIEW OF DIVERSITY OF TOP COMPANIES

Sodexo: Quality Of Life Services

Sodexo is committed to promoting and fostering a culture of diversity and equal opportunities and to providing inclusive workplaces everywhere we operate. Serving communities around the world, teams to be as diverse as the world itself, and contribute to build communities where everyone belongs, feels safe and valued. The goal is to have women represent at least 40% of Sodexo's leadership by 2025 and 100% of employees working within entities having gender-balanced management teams.

Some key figures of the company: Women represent-60% of the Board, 30% of the Executive Committee, 40% of Senior Executive,46% of Middle Management, 44% of all managers, 55% of total workforce.

Sodexo believes in social justice. The company is against racism and discrimination in all their forms. Sodexo is both proud of the work done to date to address biases and racism and ethnic relations, but we are very aware that also have much more work to do. The entire organization is working through tangible actions.

Having a zero-tolerance policy against racism in organization, addressing unconscious biases, ensuring the fair treatment of all our employees, raising awareness, fostering respect and understanding differences, developing Employee Resources Business Groups to support minorities by creating safe spaces for mentoring, addressing issues and recommending change in our workplace. Empowering local minorities by partnering with local businesses to create

opportunities for all. 100% of Sodexo's workforce to have access to initiatives supporting the inclusion of people with disabilities by 2025. Their vision also includes global approach to disability inclusion is driven by a global Disability Voice Taskforce comprised of employees from around the world and sponsored by two Comex members. Although gender, generations and sexual orientation are all part of the diversity hiring strategy at Sodexo. The company states that "gender balance is our business", and their mission is to make it everyone else's business too. 55% of all staff members in Sodexo are women – that's up from just 17% in 2009. 58% of the members on the board of directors are female and the company runs 14 Gender Balance Networks worldwide. There is an optimal gender balance within an organisation, employee engagement increases by 4 percentage points, gross profit increases by 23% and brand image strengthens by 5 percentage points.

Accenture: Professional Services

Accenture, broad view of diversity, which includes people from diverse ethnic and racial backgrounds in every corner of the globe and every country where we operate. The diversity of our people helps us work better together and drives greater innovation for our clients and communities. Company set goals in South Africa, the UK and the US to increase company's ethnic and racial representation. Accenture is a place where everyone can succeed both personally and professionally, has equal opportunity and feels they truly belong.

The future workforce is an equal one. Accenture committed to a gender-balanced workforce by 2025. Accenture empower persons with disabilities through skilling program, leadership development interventions and career experiences to ensure their career progression."

The organisation also hosts a company-wide celebration of International Day of Persons with Disabilities as well as endeavour to help their employees with various supports, like assistive technology, flexible work arrangements and additional training. The three different categories within which company categorized diversity training. Firstly, Diversity Awareness (to help humans to understand the benefits of diverse organisation). Secondly, Diversity Management (to furnish executives to manage diverse teams).Thirdly, Professional Development (to enable women, LGBT and ethnically diverse employees to build skills for success).

Cisco Systems: Networking Hardware And Software

Cisco is a multigenerational, multicultural community that extends around the world. The company is committed to a culture where all people feel welcomed, valued, respected, accepted and heard. It's important to be transparent about diversity, publicly release Cisco data annually in Cisco Corporate Social Responsibility (CSR) Report.

Innovative ideas begin with a team that has diverse work experiences, different skills, and different perspectives based on race, gender, orientation, ability, and age. Cisco introduced The Multiplier Effect, which asks leaders to pledge to sponsor at least one extraordinary diverse person in their organization and challenge their peers to do the same.

At Cisco, diversity is a huge part of our culture, and for International Women's Day 2021, focus is on three key themes that we believe everyone can resonate with: RISE, Thrive and Shine.

At Cisco, the median age is 35 for workers, and this is actually one of the highest median ages for tech companies. This is a good number though, as it shows that they value both innovation and experience. A young median could mean they don't respect the older workers and their experience, whereas a old age could lead to decreased innovation.

Commitment to pay equality within Cisco. Company want everyone to be paid equally. Only minor pay disparities in 1% of their company, with the rest experiencing equal and fair pay.

Cisco is pledging to increase the representation of Black employees at all levels of the company by 25 percent by 2023. The company will also increase representation of Black employees at a director level to vice president or a higher level by 75 percent by 2023.

Cisco is putting up $100 million in financial support and technology to assist historically black colleges and universities recover from the impact of COVID-19 and to help them identify long-term opportunities for innovation and investments in Black-owned startup businesses. Cisco is also launching a $50 million venture capital fund -- the Aspire Fund -- which will invest in venture funds and startups with diverse leadership and founders.

Marriott International: Hospitality Industry

Marriott International, Inc. was recognized as the No.1 company for diversity across industries .The ranking also makes Marriott the highest-ranking hospitality company on the list for more than ten years and the only one to have achieved the top ranking. Marriott: World's Best Multinational Workplaces by Great Place to Work', the world's largest annual study of workplace excellence, Marriott International extends their commitment to creating an inclusive guest experience to their workforce around the globe. Women-owned business enterprises make up approximately 10% of Marriott's supply chain and they spend $1 billion approx. with diverse-owned businesses in 2020.

Since 1927, Marriott has valued diversity. The Marriott foundation built upon the wellbeing and happiness of associates, embracing differences is critical to our success as the largest hospitality company with an evergrowing global portfolio. Diversity - fundamental to Marriott core values and strategic business goals. Taking care of people and putting their wellbeing above all else is in our Company's DNA and most precious cultural inheritance. Marriott has identified three pillars of associate wellbeing: We all need to feel good about ourselves, the workplace, and about our company's role in society.

Marriott's success in the diversity is based on a 360-degree cultural approach encompassing results-oriented metrics and initiatives supporting associates, customers, suppliers and owners. This approach had led to signature accomplishments such as collaborating with leading human rights non-profits on human trafficking prevention training and leveraging TakeCare, its award-winning employee wellbeing program, to advance the practice of diversity and inclusion in the modern workplace.

CONCLUSION

The issue of diversity in the workforce is seeing positive action like never before. These leading organizations are paving the way for the future of diversity . The best way to ensure the development of new ideas, thoughts and opinions is through a diverse and inclusive workforce. A multicultural workforce can give an organisation an important edge in order to expand into new avenues. In a competitive global job market, making diversity an important part of recruitment process will broaden the talent pool of prospective employees. Diversity can breed healthy competition, putting a team in a positive way to achieve their best. Many companies are trying to keep up with the changing business landscape brought on by the Covid-19 pandemic. After a year in which communities were roiled by social unrest and businesses were impacted by a once-in-a-century pandemic, the year 2021 will experience further transformation .

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