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STUDENT RESEARCH JOURNAL

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St. Francis Institute of Management and Research

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Prayer of St. Francis

Lord, make me an instrument of Your peace
Where there is hatred, let me sow love;
Where there is injury, pardon;
Where there is doubt, faith;
Where there is despair, hope;
Where there is darkness, light;
Where there is sadness, joy.

O, Divine Master, grant that I may not so much seek
To be consoled as to console;
To be understood as to understand;
To be loved as to love;
For it is in giving that we receive;
It is in pardoning that we are pardoned;
It is in dying that we are born again to eternal life.

Bro. Paulus Moritz
Founder of CMSF

ABOUT US

The Congregation of Franciscan Brothers was established in Mumbai in 1908, and now has branches in over 84 centres in India and 22 centres abroad in various Asian, European, American and African countries. The Congregation's main purpose is to render service to all strata of humanity especially the vulnerable sections of the society in order to empower them, help them, attain integral development and to live a free, dignified and truthful life.

St. Francis Institute of Management & Research (SFIMAR) was established in 2002 by "The Society of the Congregation of Franciscan Brothers"; to impart quality education in the field of Business Management. It is recognized by AICTE, New Delhi and has been granted permanent affiliation by University of Mumbai. SFIMAR is an ISO 9001:2008 Certified Institute and also recognized under Section 2 (f) & 12 (B) of UGC Act 1956.

St. Francis Institute of Management & Research (SFIMAR) was established in 2002 by "The Society of the Congregation of Franciscan Brothers"; to impart quality education in the field of Business Management (MMS/PGDM/MMM/MFM). It is recognized by AICTE, New Delhi and has been granted permanent affiliation by the University of Mumbai. It is also recognized under Section 2 (f) & 12 (B) of UGC Act 1956. SFIMAR is an ISO 9001:2015 Certified Institute and received Grade 'A' from the National Assessment and Accreditation Council (NAAC) in 2016. It has won several accolades at National level such as 'Most Upcoming B-School' Award 2015 from ASSOCHAM, 'Best Educational Quality Enhancement Team' Award 2014 from National Centre for Quality Management. It has also earned recognition from the University of Mumbai's Department of Lifelong Learning and Extension for being the best participating B-School in Extension and Community Development Projects. SFIMAR is proud to be a part of the St. Francis Group of Institutions which

is run by the Congregation of Franciscan Missionary Brothers having a 115-year old legacy of 'Service Through Enterprise'.

At SFIMAR, we have leveraged the benefits of technology by building up an enviable storehouse of knowledge for our students through our on-going investments in pedagogical resources, a well-developed library as well as in IT solutions that speed up our student services and help us implement useful feedback from all the stakeholders. Our students are aware of current issues and industry trends and have acquired advanced skills by participating in knowledge and skill enhancement programmes such as 'Thought Leader' and 'Lead by Example'. Students develop their leadership skills, improve their concentration, creative thinking and innovation and the ability to lead and mentor others. These are conducted through various Clubs such as Nirmiti (Marketing), Finatics (Finance), Prerna (Entrepreneurship), Institute Social Responsibility (ISR), Green- Environment, Mindfulness Training and Personality Development programmes. Our well-qualified and experienced faculty are supported by competent and dedicated programme coordinators and staff, who ensure that programme delivery adheres to the Institute's strict quality, security and business continuity standards.

We focus on applied research and vital topics such as corporate social responsibility and governance, financial inclusion, investment strategy and asset allocation with forward-looking indicators, digital marketing and so on. SFIMAR facilitates industry (management)-academia (student) interaction through its Eminent Speaker Series, Management Development Programmes, Regular Guest Lectures, Summer Xcellence and Prakalpa (project competitions), Alumni Connect etc. We run a number of certification programmes for our students to make them job-ready.

We also promote interaction between academic institutions through our Visiting Faculty Programme and the Annual Research Conference 'Pathh' and 'Anveshi'. We have recently set up an Entrepreneurship and Business Incubation Zone (SFIMARebiz) to encourage self-employment and empower entrepreneurs to chart successful business ventures, by providing training, networking and cost-efficient solutions for setting up their businesses.

We have a consistent track record of 100% placement. We have started Corporate On-boarding Programme very successfully in which recruiters invest valuable resources in familiarizing our students with their organizational values, goals, roles, norms, and overall work environment. They also provide them job-specific training so that they have the necessary skills to get absorbed into their mainstream roles easily and become effective organizational members. This Corporate On-Boarding is a win-win programme for all, as it leads to positive outcomes for new employees, such as higher job satisfaction, better job performance, greater organizational commitment, reduction in occupational stress and intent to quit.

It's our constant endeavour at SFIMAR to bring up our students holistically with high moral values, ethical standards and an inclination towards societal good. Concepts such as compassion and stewardship are ingrained among our students so that they can adopt ethical business practices and build sustainable businesses. The Franciscan values continue to be a guiding beacon leading SFIMAR to higher standards in teaching, research and community service.

ABOUT THE FOUNDER

St. Francis Group of Institutions are run by the Franciscan Missionary Brothers, an International Congregation headquartered at Borivali (West), Mumbai.

Rev. Brother Paulus Moritz of Germany has founded the Congregation of the Franciscan Brothers in the year 1901 with the vision of reaching out to the poor and the less privileged.

St. Francis Group of Institutions in Mumbai are a chain of Catholic Minority Educational Institutions located in the western suburb of India's Financial Capital Mumbai. St. Francis Group of Institutions have today become a pride of Mumbai and India's most sought academic community for its focus on excellence in value based education and beneficial and educative extracurricular activities.

Today, after 115 years of its inception the Franciscan Brothers continue their commitment of training young minds and finding solutions to address tomorrow's challenges.

FOREWORD

It gives me immense pleasure in writing a Foreword for SFIMAR's students' research publication 'Spandan'. The contents of this publication are a select list of students' summer projects from among 160 project reports which have demonstrated a sound understanding of management concepts, use of analytical skills, ability to generate relevant solutions and evidence-based conclusions.

Through their summer projects our students undertake on-the-job assignments which helps them to demystify organizational complexities, gives them an opportunity to apply their innovative minds in designing creative solutions and test their creativity and problem-solving ability within a defined time frame. At the same time, it places them at the centre of the learning experience as their work supervisors and SFIMAR's excellent faculty continue to provide guidance and monitor their performance through a stringent framework. They get the best of both- the industry and academia.

It is generally recognized that great educational value accrues to students who participate in research and in writing for a journal. This Journal is an integral part of a broader co-curricular programme at SFIMAR, designed to provide an opportunity for students to develop their research skills and communicate their findings, under the supervision of faculty members.

This year's edition includes eight papers from SFIMAR students. Each of these students discovered something new through their research, be it a fresh understanding of an existing topic, or an innovative application with beneficial outcomes. This Journal was made possible by the dedicated and meticulous work of our editing team, faculty reviewers and mentors, student authors, staff and resources of SFIMAR's library. We felt privileged to examine so many insightful research ideas, and new students on the editorial team gained significant experience in reviewing submissions for the journal

We are thankful to the organizations that provided SFIMAR the opportunity to partner with them on these assignments and we are also appreciative of our alumni who are a constant catalyst in bringing out the best in our students. In certain cases, the close relationships that we have built up in the corporate sector motivated some companies to make an extra effort to choose themes that will challenge the students to innovate, deliberate on issues and collaborate with their cross-disciplinary teams in order to achieve the targeted outcomes of the projects.

I hope that this year's volume of Spandan inspires you to discover something new, just as each of these students did. While the primary objective of this Journal is educational, we would like this Journal to also serve as a meeting place for new ideas and lively dialogue between management students and industry professionals in years to come.

Dr. Subhransu Mohanty
Director - SFIMAR

EDITORIAL

Spandan is a student's research journal @ SFIMAR. Over the years, it has provided platform to students to get recognition for their quality research work. SFIMAR has always put great emphasis on qualitative and quantitative research in various areas of management. Students with the help of faculty members have constantly tried to improve the standard of research work.

Spandan is completely managed by students, right from the process of data collection to publishing and disseminating the copies. The editorial team works efficiently in the areas of content management and literature of the journal.

We are delighted to witness Spandan 2017 take its ultimate shape of distinctiveness. We express our gratitude to the members of the editorial board for their continuous involvement in the publication of the journal. We are grateful to the management for their unstinted assistance and support. We acknowledge the contributions of SFIMAR faculty members and the corporate guides that have aided the students towards the successful completion of their research projects.

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Credit Risk Modeling for Comfort Group of Companies

- Ms. Stephina Thomas
MMS II Finance

Introduction

The Project concentrates on Credit Risk Default of corporate clients rather than individuals borrowing funds from the Non Banking Financial Corporations, Comfort Fincap Limited and Comfort Intech Limited, both being subsidiary companies of Comfort Group of Companies. On prior study of the lending process of the NBFCs which involves KYC documentation, extracting the CIBIL scores, taking into record their annual reports etc; there was a need felt to develop a Credit Risk Model, which on implementation would pose as a great advantage to the company. To bring that idea into reality, the Altman's Z Score model was developed, following a DuPont analysis of the companies falling in the Grey and Distress Zone based on the Z Scores of the companies.

This project provides a detailed analysis of three years data and the financial distress of the companies during the mentioned period. The DuPont analysis provides a detail understanding on the tax payment and interest payment levels of the company along with the return on equity and their net margin generated in those years.

This model provides a basis for the NBFCs to analyze on how much of the funds should be provided to which company and which are to be rejected from providing loan to. Banks and NBFC's credit exposures typically cut across geographical locations. The use of credit risk models offer banks a framework for examining this risk in a timely manner and analyzing contributions to risk. These properties of models may contribute to an improvement in an NBFC's/bank's overall ability to identify, measure and manage risk.

It focuses on 'Credit Default Risk', as it involves the NBFCs, Comfort Fincap Ltd and Comfort Intech Ltd. providing funds to corporate clients, on the basis of which the defaulter's position is comprehended according to the Credit Risk Model so developed.

Credit risk models may provide estimates of credit risk (such as unexpected loss) which reflect individual portfolio composition; hence, they may provide a better reflection of concentration risk compared to non-portfolio approaches.

Need for the Study

Over the last decade, a number of the world's largest banks have developed sophisticated systems in an attempt to model the credit risk arising from important aspects of their business lines. By being exposed to credit risk, banks/NBFCs have been faced with a lot of problems. Couple of years ago it was realised that credit risk is important. Bank's/NBFC's need to monitor, identify, control and measure it. Due to this, the effective management of credit risk has become a critical component of approaching risk management. This approach will be especially important in terms of long term success of banks/NBFCs.

Financial companies generally provide loans as their basic business but identifying the borrower with credit worthiness has become a challenge. Such models are intended to aid banks/ NBFCs/financial companies in quantifying, aggregating and managing risk. The outputs of these models also play increasingly important roles in risk management.

During the internship with Comfort Fincap Limited, I paid a close attention to the process of lending loans to corporate clients which included normal manual procedure of verifying the company documents, removing their CIBIL reports, maintaining the KYC documents for further interactions, the role of the directors in the lending process and so on. But what was observed that a credit risk model in place would be of a great support in this whole process where the company would be in a position to obtain clear quantifiable results as it is very important to find out and verify the credit worthiness of a new borrower and at the same time to analyse the financial health of the existing borrowers to minimize the default risk.

Review of Literature

- **By Sangita Mehta, May 13, 2016, RBI proposes measures to tighten up lending to debt-laden companies' – The Economic Times**
  The Reserve Bank of India proposes to make it more onerous for banks to lend to highly leveraged companies. According to a discussion paper released, banks will need to set aside more capital and earnings if they give extra loans to debt-laden companies with effect from FY18.

- **By Ajay Srinivasan, June 19, 2016, 'Opportunity a plenty for NBFC sector'- The Hindu Business Line**

Within the NBFC space, various sub-segments have emerged more dominant than others. Mortgages, microfinance and unsecured loans appear to be driving growth. According to estimates, credit grew at a rapid 30 per cent plus (year-on-year) for mortgages and 80 per cent plus for microfinance as of December 2015. Housing finance companies have increased their share of the overall pie from 26 per cent in FY09 to 38 per cent in FY15. NBFCs also have a large share in niche segments, such as commercial vehicle finance, the share estimated to have increased from 42 per cent to 46 per cent in the last three years ending Fy15.

Objectives of the Study
- To create a financial solvency model of the borrowers as well as of Comfort Group of companies, on prior study of the functionality of the company.
- To find out the reasons of financial distress of the borrowers from their past performance.
- To ascertain the credit worthiness of the borrower for the next two years.
- To analyse whether on an average, the borrowing companies fall in the Distress Zone, the Grey Zone or the Safe Zone according the Altman's Z Score model.
- To identify which category of companies should Comfort Group focus on for the purpose of lending funds.

Research Methodology
• Setting of Hypothesis
The research started by setting a hypothesis which in the course of the research would be thereby proved.
Hence,
Hypothesis 1
Null Hypothesis,
Ho: The sample mean of the Z score of

companies is greater than or equal to 2.99.
Alternative Hypothesis,
H1: The sample mean of the Z score of companies is not greater than 2.99.

Hypothesis 2
Null Hypothesis,
Ho: The sample mean of the Z score of companies is greater than or equal to 1.81.
Alternative Hypothesis,
H1: The sample mean of the Z score of companies is not greater than 1.81.

- **Type of Research**
  For the purpose of the research a Quantitative approach is used to obtain the information. Quantitative approach provides the access to understanding statistical data, percentages etc and also would help to obtain unbiased data. Hypothesis testing plays a major role in this research which falls in the category of Quantitative approach.
- **Research Population**
  A research population is generally a large collection of individuals or objects that is the main focus of a scientific query.
  For the purpose of the research, the population referred to the corporate clients who opted for loan from Comfort Fincap Limited and Comfort Intech Limited, both being NBFCs.
- **Area of coverage**
  Research was done on the basis of the information that could be obtained by Comfort Group, covering as many corporate clients available possible in the time frame.
- **Sample Size**
  The sample size is 40 companies, on the basis of which the credit risk model was prepared. For the purpose of the hypothesis, 34 companies were considered out of 40

companies, only focusing on the borrower companies.

- **Sampling technique**
  Convenience sampling technique was chosen to conduct the research as it is a statistical method of drawing representative data by selecting companies based on their availability or easy access. The advantages of this type of sampling are the availability and the quickness with which data can be gathered.
- **Data collection source**
  To undertake the given research topic, the focus was on:
- **Secondary Data Source:** Considering past data of borrowing companies from Comfort Group of companies.
- **Analysis tools**
  For the purpose of testing and analysing, the tools used are:
  - i **Altman's Z Score Model**
  - ii **DuPont Analysis**
  - iii **t- test Hypothesis Testing**
  - iv **Bucket Analysis**

Results and Discussion

1. Only 3 out of the 34 borrower companies surveyed (8.82%), has a Z score above 2.99, which is the standard score for a company to be in the Safe Zone. This means that the rest 31 companies (91.17%) are prone to being bankrupt in the next two years.

2. The usage of the Five Step DuPont Model rather than the Three Step DuPont Model gives a clear picture on the ability of the company to repay its interest expenses and meet its tax burden.

An example of a company to understand the applicability of the research.

TEAM UNIVERSAL INFRATECH PRIVATE LIMITED:

	2012	2013	2014
Current Assets	619565083	610868291	867264551
Current Liabilities	492126854	368154393	599104519
Working Capital	127438229	242713898	268160032
Retained Earnings	132499139	195377634	280798375
EBIT	101874343	138050290	158060523
Net Sales	1208755607	1278764564	1537568300
Total Assets	962554959	933429797	1283238366

	2012	2013	2014
A	0.13	0.26	0.20
B	0.13	0.20	0.21
C	0.10	0.14	0.12
D	1.25	1.37	1.19
Z=	1.95	2.46	2.16

Since the Z Score of the company is below 2.99, the company does not fall under the safe zone category. Hence, the DuPont Analysis was conducted to ascertain the reasons for which the company's financial viability was under question.
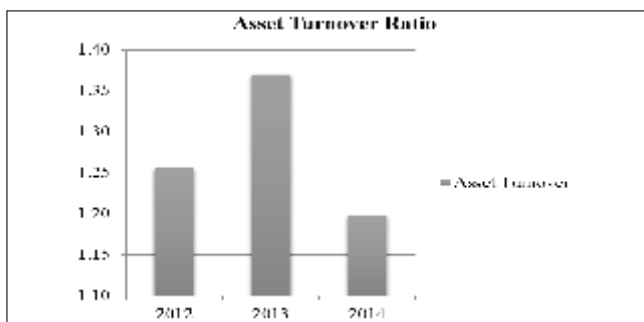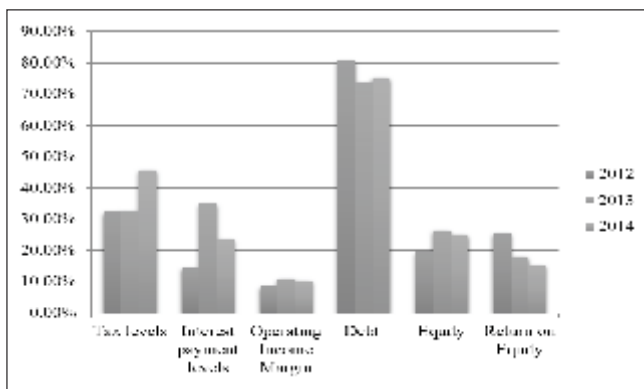

The main culprit: The company falls a prey to heavy tax payment with a percentage increase of 39.3 % (33% to 46%).

3. The Bucket Analysis is a great tool to help identify the different category of companies

Comfort Group provided loans to. Through the data, Infrastructure seems to be an industrial sector which should be very well thought upon before lending funds. Apart from Infrastructure, companies providing financial services should not be considered to provide funds.

4. Through the Bucket Analysis, the following is inferred:
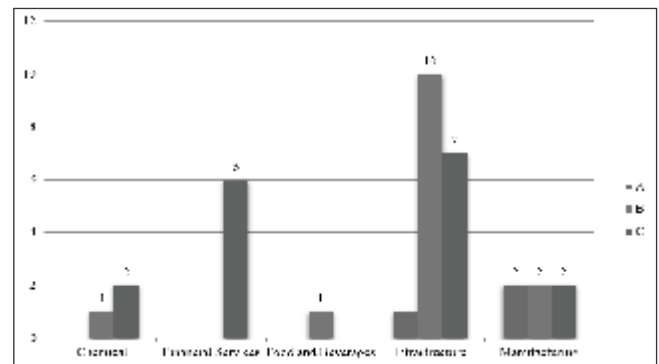
A - denotes companies falling in the Safe Zone,
B - Grey Zone &
C - Distress Zone

I. Out of 34 companies, 18 companies (i.e. 52.9% companies) provided loans to companies that are involved in infrastructure.

ii. All the 6 companies providing financial services fall under the distress zone.

iii. Maximum companies falling in the distress zone (41.1%) that is 7 out of 17 companies are from Infrastructure background.

5. The t-test hypothesis testing so conducted shows the following result:

I. **Hypothesis 1:** There is not enough evidence to prove that sample mean of the Z score of companies is greater than or equal to 2.99.

ii. **Hypothesis 2:** There is enough evidence to prove that the sample mean of the Z score of companies is lesser than 1.81.

On the basis of both the hypothesis testing, ie;

Hypothesis 1 and Hypothesis 2, we can infer that the sample mean Z Score of the companies tested, fall in the Grey Zone category, which is between or equal to 1.81 to 2.99, have a low risk of being bankrupt in the next two years which otherwise would be probable if they belonged to the Distress Zone category.

Recommendations

It is recommended that apart from the regular process of analysing the financial health of the borrower companies, it would be a great support if Altman's Z score model is taken into consideration along with DuPont Analysis to analyse on the reason for which the borrowing company faces a financial distress.

Apart from the above, if Comfort Group chooses to provide loan to a company whose financial health is not sound enough, they should make sure that such clients are provided loan against a security, which could be a property, shares, bank guarantee etc. that keeps the company on the safer side rather than suffer due to an insolvent borrower.

Comfort Group should initially focus on lending to those companies who have a Z score equal to or more than 2.99 to be well assured of timely payments and successful lending. Such companies could be provided long term debts as the fear of insolvency is minimum. For those companies ranging between 1.81 to 2.99, Comfort Group should be careful on its lending terms. It is recommended that medium to short debts are only provided or against a security in case of long term lending.

It is also recommended that Comfort Group pays a close attention to DuPont Analysis for companies falling within the Grey Zone or the Distress Zone, to analyse its tax burden and interest burden particularly for three years minimum.

In addition, with the help of Bucket Analysis, the NBFC would be in a better position to comprehend which category of industries should they be providing loans to and which should not be given loans to avoid insolvency.

Conclusion

The future seem to be very crucial for NBFCs and only those who will be able to face the challenge will be standing the test of time and will survive in the long run. However to survive and to constantly grow, NBFCs have to focus on their core strengths while improving on weaknesses. Therefore, developing a credit risk model like the Altman's Z Score Model and a DuPont Analysis Model, would be an aid in the course of the functioning of NBFCs and ensure its long term survival. Besides, they will have to be very dynamic and constantly endeavor to search for new products and services in order to survive in this ever competitive financialmarket.

References
· **Research Paper: Evaluating Credit Risk Models.** By: Jose A. Lopez&Marc R. Saidenberg, April 26, 1999.
· **Research Paper: A Model of Credit Risk, Optimal Policies and Asset Prices.** By: Suleyman Basak & Alex Shapiro, April 2004.
· **Research Paper: Credit Risk Modelling and Valuation, an Introduction.** By: Kay Geisecke, October 24, 2004.
· **Predicting financial distress of companies: The Z-score and zeta®** By: Edward I. Altman, July 2000.

Acknowledgement

A Study on the Performance of Indian IPO's

- Ms. Natasha Corda
Finance

Introduction

A Corporation first decides to issue stock to the public in order to raise funds. It engages in an Initial Public Offering (IPO), which is a first-time offering of shares by a specific firm to the public. It is when an unlisted company makes either a fresh issue of securities or an offer for sale, of its existing securities or both for the first time to the public. This paves way for listing and trading of the issuer's securities. Even after a firm has gone public, it may need to raise additional equity to support its growth. In that case, it can engage in a secondary offering by issuing additional shares of stock to the public. Some firms have had several secondary offerings to support their expansion. Going public means a company is switching from private ownership to public ownership. Going public, raises cash and provides many benefits for a company.

An Initial Public Offer (IPO) is a significant stage in the evolution of a public company. For owners and managers of an unlisted company, such transition from private to public ownership is made after thorough considerations as it entitles the organization as well as its operations to entirely a new level of scrutiny by the public.

Need for the Study

IPO's have emerged as one of the major source of funds for Indian companies as well as an important avenue for common investors to channelize their savings for higher return.

With India being a developing country there is a lot of growth in various sectors which leads a country to ultimate success. As companies grow it becomes very difficult to work with limited finance and this is where IPO plays an important role.

As a company grows and expands it's business it requires more and more funds to undertake its activities and therefore it resorts to either the debt or the equity market. Therefore as an investor it is important to study the performance of IPO's in order to make right investment decision.

With the new initiatives undertaken by the government such as "The Make in India Initiative" entrepreneurship is preferred and the country has paved way to the emergence of a number of new companies. This has resulted in an increase in the demand of foreign investors to invest in the Indian market.

Also as and when a company comes up with the announcement of an IPO there is a lot of hype in the news and exaggeration about the new offer which indirectly affects its performance and hence there has been a need to analyze the performance of IPO's.

Objectives of the Study

The main objectives of this study are:
1. To determine the percentage of overpricing and under pricing of the IPO on the listing day.
2. To understand the span of time an investor needs to invest in an IPO (1D, 3M, 6M and 1YR) in order to maximize profits.

3. To understand the relationship between issue size and underpricing.
4. To study if investing in Non-IPO's generate greater returns than investing in IPO's
5. To determine whether depending only on IPO's is a right investment strategy.
6. To study the survival rate of IPO's in India.

Research Methodology

• **Research Design :** The study is descriptive in nature.

• **Data Types and Sources:** The study is based on secondary data. The lists of IPO's have been collected from the 'NSE' website and www.chittorgrah.com. And the daily prices have been monitored and collected from the 'money control website'.

• **Duration of Study:** The study was carried out for a period of 7 years, from 1st January 2009 to 31st December 2015.

• **Sampling:** The sample size comprises of 298 companies. Out of which 60 are non-active IPO's. Therefore we have considered only 238 companies for the purpose of analysis.(Non active IPO's are those which have either closed down or the company is not trading for the last 30 days)

• **Tools and Techniques of Analysis:** A statistical tool such as Average, Median and Percentage has been used for analysis.

Data Analysis

Objective 1: To determine on the listing day, the percentage of overpricing/ under pricing of an IPO.

Data of 238 active companies have been collected for the purpose of analysis. Data

regarding their issue price and listing day price has been collected. For the purpose of analysis, we assume that the share price of the stock reaches its true value on the listing day.

In order to determine if they are overpriced or underpriced, the percentage difference of the listed day price and the issue price has been taken.

FORMULA: Day 1 Returns =

$$\frac{(Day\ 1\ closing\ price - Issue\ price) \times 100}{Issue\ price}$$

Graph No. 1
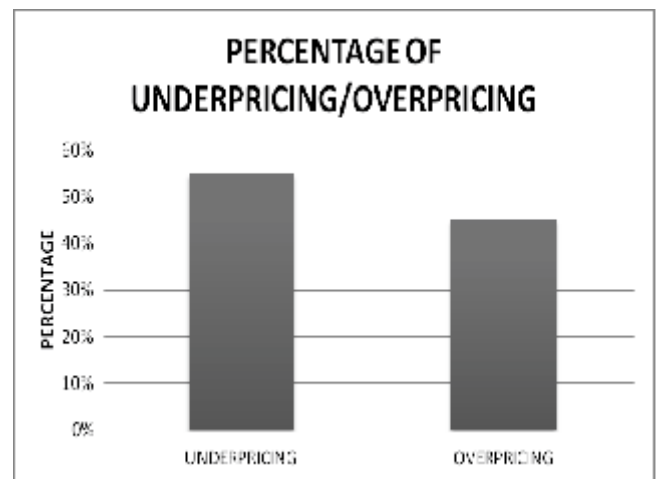
Findings and Interpretation:
Returns of the companies listed on day one have been taken for the purpose of analysis. Of the 238 companies listed 45% were overpriced whereas 55% of them were underpriced.

Objective 2: To understand the span of time an investor needs to invest in an IPO to maximize returns (1D, 3M, 6M, 1YR).

For the purpose of analysis we have considered only those IPO's that have given positive returns on the very first day. Data regarding their 1D price, 3M price, 6M price, 1YR price has been collected.

Graph No. 2
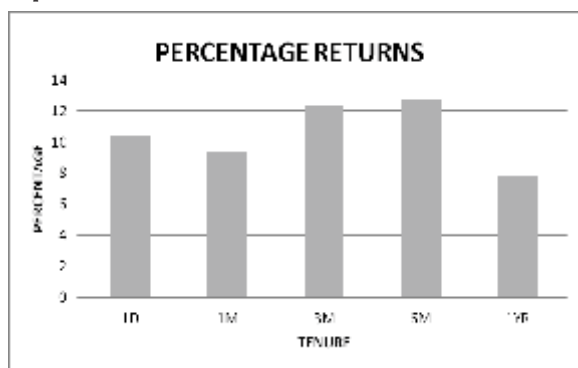
Findings and Interpretation

Through analysis of data it has been found that if an investor invests in an IPO that has been underpriced (an IPO that showed positive returns on the first day) he can earn a median return of 10% on the first day, 9.3% in one month, 12.33% in 3 months, 12.69% in 6 months and 7.83% in one year.

Hence the ideal time for an investor to sell his share would be after a period of 6 months if he want to maximize his profits.

However this analysis would only be applicable provided an investor does a proper study about the background of the company and the purpose of the issue. As every issue cannot be a profitable one.

Objective 3: To understand the relationship between offer size and under pricing. For the purpose of analysis, data regarding 238 companies have been collected. Data regarding the issue size and the listing day price have been analyzed.

To determine a small issue, the median of the issues of all the 238 companies has been taken. All the issues above the median issue have been considered as big issue whereas all the issues below the median issue have been considered as small issue.

In order to determine the under pricing, the data has been divided as small issue and big issue. From the small and big issue the median of under pricing in each of the issue has been calculated.

Table 1: Issue Size And Under pricing	
Median Issue size	60crs
No. of Small Issue	121
No. of Big Issue	117
% of under pricing in small issues	8.33
% of under pricing in big issues	15.11

Findings and Interpretation

From the 238 companies analyzed it has been observed that the median issue size of all the companies has been Rs. 60 crore. All the issues above and under the median issue size have been considered as big and small issues respectively. From the 238 companies 121 companies come under the range of small issue size, whereas 117 companies come under the range of big issue size. From the small and big issue the median returns have been calculated. It has been observed that the under pricing in small issue is to the extent of 8.33% whereas; the under pricing in the big issue is 15.10%. Hence we observe that smaller the issue, smaller is the under pricing; bigger the issue bigger is the under pricing.

Objective 4: To study if investing in Non-IPOs give greater returns than investing in IPOs.

For the purpose of analysis, the IPOs listed in each calendar year have been considered (e.g.: 1st January to 31st December 2009), similarly for the other consecutive years.

The IPOs issued in a particular year were not carried forward to the next year.

For the analysis we have calculated the returns as

FORMULA:

Year End Returns = $\dfrac{(31st\ Dec\ price - Issue\ price)\ x\ 100}{Issue\ price}$

We have also calculated the returns on NIFTY for the years 2009-2015.

FORMULA:

Returns from NIFTY = $\dfrac{(Close\ Price - Open\ Price)\ x\ 100}{Open\ Price}$

We have taken the average of returns of IPO's and Nifty to further analyze the data.

Table 2: Returns From Nifty

Year	Open	Close	% Returns
2009	2963.3	5201.05	75.51547
2010	5200.9	6134.5	17.95074
2011	6177.45	4624.3	-25.1423
2012	4640.2	5905.1	27.2596
2013	6323.8	8282.7	30.97663
2014	6323.8	8282.7	30.97663
2015	8272.8	7946.35	-3.94606

Average Returns from NIFTY = 18.39%

Table 3: Returns from IPO

Year	%
2015	16.67
2014	13.85
2013	31.09
2012	41.78
2011	-27.40
2010	-8.52
2009	3.47

Average Returns from IPO = 10.13%

Findings and Interpretation

Average Returns from IPOs are 10.13%. It has been observed over a period of time that investing in NIFTY would fetch 18% average returns over a period of 7 years, while investing in IPOs would fetch 10.13% average returns.

Hence an investor should not only invest in IPOs if he wants to fetch good returns.

Objective 5: To determine whether depending only on IPOs is a right investment strategy.

Data from the year 2000 onwards has been collected for the purpose of analysis. Data regarding the names and the number of IPOs listed in each year has been collected.

Graph No. 3
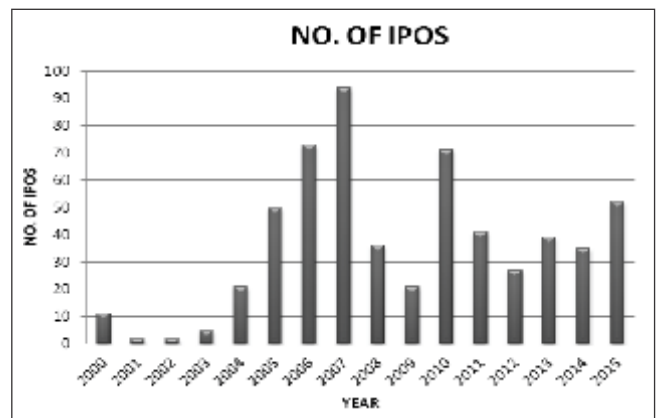
Findings and Interpretation

It has been observed that the number of IPOs fluctuate ever year. This is mainly because the number of IPOs are greatly influenced by the condition of the economy. If the economy is in a boom period ie: industries have a lot of business and making profits, they will surely be in need of funds to carry out their business activities. Similarly if the economy is in a recessionary phase and businesses are not doing so well, borrowing reduces.

The years 2000, 2001 have seen a drastic fall in the number of IPOs mainly due to the financial crisis. Similarly, the number of IPOs in 2009 was barely 21, which was affected due to the subprime crisis of 2008.

The sentiments of people also have a great impact on the performance of IPOS. Immediately after a crisis, people are reluctant to invest their money in stocks and incur huge risks.

Objective 6: To study the survival rate of IPO'S in India.

For the purpose of analysis we have collected data i.e.: the names of the companies issued in a particular year. The Nonexistent companies include all those which have been either closed down or not been traded for more than 30 days. Companies which have not been traded for more than 30 days are considered as non active companies as details of the companies (i.e: the listing price, 1 month price etc) are not available on the website.

Graph No.4
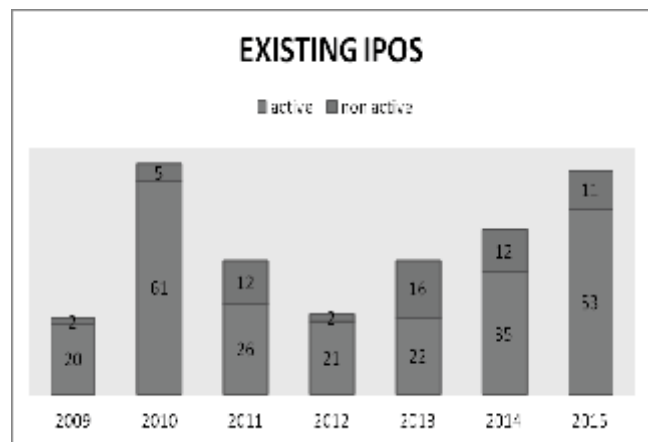
Findings and Interpretation:
It has been observed from the above analysis that 20% percent of the companies are non-active while, 80% of the companies are active. The non-active companies have closed down mainly because they has not been performing too well.

Recommendations
• In order to have maximized returns and reduced risks, have a diversified portfolio.
• Before investing in an IPO, do a proper

analysis of the company, check the quality of management, products offered by the company, financial statements, future scope, market share of the company, do a proper sector analysis before investing in a particular stock.

• Check the offer price of the company carefully and why the company is raising an IPO.

• Keep a target of returns you wish to achieve each year and accordingly invest in various investments.

Conclusion
Performance of IPOs depend on quality of management, products offered by the company, future scope and market share of the company.

Issue price of an IPO is critical from the point of view of investment.

References

http://shodh.inflibnet.ac.in/bitstream/123456789/50/4/04_chapter%202.pdf

https://www.google.co.in/?gfe_rd=cr&ei=DBM2V46uELTR8AeV06yYDg#q=performance+of+ipo+in+indian+stock+market

www.moneycontrol.com
https://www.nseindia.com/products/content/equities/indices/historical_index_data.htmwww.chittorgargh.com

Acknowledgment:

Preliminary Study on the Market Potential of Mediport's Digital Healthcare Technology Platform, in the Ghatkopar Region of Mumbai

- Mr. Aditya Warang

Introduction

The research project presents a preliminary study conducted to assess the nature and characteristics of market for digital healthcare technology platform offered by Mediport Healthtech Private Limited, a start-up company offering web-based and app-based technology platforms to patients and healthcare providers. The project studies the positioning strategy of Mediport along with understanding the usage of digital technology and preference shown by healthcare professionals for using Mediport. The research includes a pilot process conducted to test product functionality. The research draws upon mostly primary sources through in-depth interviews of healthcare professionals including general practitioners, specialists, and pathology laboratories. The findings show that the existing usage among healthcare professional has an impact on their preference for using Mediport's digital healthcare technology platform. The research further highlights issues identified in the current market scenario for using digital technology in healthcare profession.

Mediport Healthtech Private Limited is a start-up company offering web based and app based technology platforms to patients and healthcare providers. Mediport connects patient and healthcare providers in a simplified way to create a healthcare eco-system.

Mediport plans to launch its operation phase wise which includes business-to-business (B2B) and business-to-consumer (B2C) e-commerce platforms. The information for the research was primarily gathered through interaction with General Practitioners, Consultants, Pathology Laboratories and Pharmacies, in the Ghatkopar region of Mumbai.

The project involved an exploratory research to study the usage of digital technology among potential clients of Mediport. The research further helped to identify problems in the market with respect to digital healthcare technology.

Need for the Study

The research project studies the preliminary condition of market for Mediport. Comprehensive market knowledge is necessary for assessing the market potential of Mediport's healthcare technology platform. Mediport product is in a stealth mode and is not operational. Exploratory research will enable to identify problems and gain insights into the market of healthcare start-ups. This information can support market development activities.

Understanding Digital Healthcare Technology

Digital Healthcare (also known as Digital Healthcare Technology) involves the use of information and communication technologies to help address the health problems and challenges faced by the patients. These technologies include both hardware and software solutions and services. (Airedale Digital Healthcare Centre, 'What is digital healthcare?')

Healthcare Industry in India

Healthcare is emerging as one of India's largest sectors, both in terms of revenue and employment. Healthcare industry includes hospitals, medical devices, clinical trials, outsourcing, telemedicine, medical tourism, health insurance and medical equipment. The Indian healthcare sector is growing at a faster pace due to increasing standard of living, growing influx of demand from other countries for affordable care, and innovation and technological developments.

Market Size

The overall Indian healthcare industry is worth US$ 100 billion as of December 2015 and is expected to grow to US$ 280 billion by 2020, a Compound Annual Growth Rate (CAGR) of 22.9 per cent. The Indian medical tourism industry receives 230,000 tourists and stands at US$ 3 billion per annum. The Indian medical tourism industry is expected to reach US$ 6 billion by 2018, with the number of people arriving in the country for medical treatment set to double over the next four years

Objectives of the Study

- To study the positioning strategy of Mediport and identify potential business clients for Mediport.
- To study the usage of digital technology among potential clients and their preference toward using Mediport's digital healthcare technology platform
- To study whether the client's preference for using Mediport platform depends on their existing usage of digital technology in their practice/profession.

Research Methodology

Primary Research

Information collected for this project includes feedbacks and responses collected through interaction with clients who included healthcare providers. Their interactions had multiple purposes like product presentation and conducting of pilot process to test product functionalities.

Geographic Area

The source of primary information was restricted to the Ghatkopar region of Mumbai city.

The prominent areas that were covered in Ghatkopar are LBS Road, Maneklal Estate, Shreyas Talkies, Kapol Wadi and Gangawadi in the West and Jawahar Road, Tilak Road, MG Road, Hingwala Lane, Vallabh Baug Lane, RB Mehta Marg and Pant Nagar.

Judgmental Sampling

A sample of General Practitioner, Consultants, Pathology Laboratories and Pharmacies in the Ghatkopar Region were selected for visit and product presentation based on judgement of senior Sales Managers of Mediport.

Sampling Units

17 General Practitioners, 11 Consultant Specialist Doctors, 12 Pharmacies and 7 Path-Labs were interviewed for collecting market information.

Proof of Concept (POC) Process

Following product presentation, a Proof of Concept (POC) pilot process was conducted at Clinics and Pharmacies to study the use of product by these healthcare providers.

Secondary Data

Existing research and news reports were studied to gather further insights into the digital healthcare technology market.

Classroom Training

Classroom training on the product functionalities and value chain of Mediport was provided by company directors and Sales Manager. The classroom training was conducted over three days from May 2 to May 4, 2016. The classroom training also included study of company's confidential documents and existing research conducted by the Sales Team.

Positioning Strategy of Mediport

India's first 'Continuity of Care' digital healthcare platform Mediport positions itself as a continuity of care digital healthcare platform wherein it provides healthcare services to patients with a view to ensure continuity of care concept.

Continuity of Care

Continuity of care is a continuous therapeutic relationship and has two components:

Relationship continuity is a continuous therapeutic relationship with a clinician who is repeatedly consulting the same doctor and forming a therapeutic relationship.

Management continuity is continuity and consistency of clinical management, including providing and sharing information and care planning, and any necessary co-ordination of care required by the patient.

Product Functionalities of Mediport

A web and mobile based easy to use technology platform that allows the doctors to carry out the complete day-to-day work & connects them with other doctors, labs, pharmacies and hospitals.

| Pre-Consultation	Intra-Consultation	Post-Consultation
Digital Branding	Electronic Out Patient Department(E-OPD) Notes	Home Delivery
Appointments	Drug Formulary	Cross-Reference
Dynamic Pricing	Test Details	Receive Reports
Social	Favourites	Analytics

Value Chain of Mediport

Mediport design partner is a leading design firm with 75+ team members across 4 offices in India, they are responsible for:

• Designing services for both physical & technology products
• Designing of User Interface (UI) and User experience (UX) of the Mediport web and mobile platforms

Of the 17 GPs and 11 Pharmacies initially visited for product presentation, 7 GPs and 2 Pharmacies who expressed preference for using Mediport were selected for pilot process.

The pilot process was conducted with a view to test the Home Delivery functionality of the app and to know the market feedback and response. In the pilot process to test the Home Delivery functionality, prescription written by the doctor for patient was uploaded through the app and a back-end process would ensure home delivery of the medicines with discount.

Proof of Concept **(POC)** Pilot Process to Test the Home Delivery Functionality of Mediport App
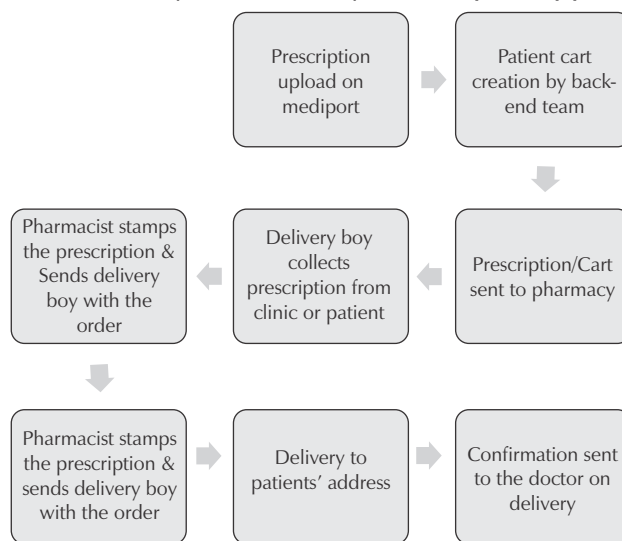
Usage of Digital Technology and Preference for Mediport Platform among Potential Clients
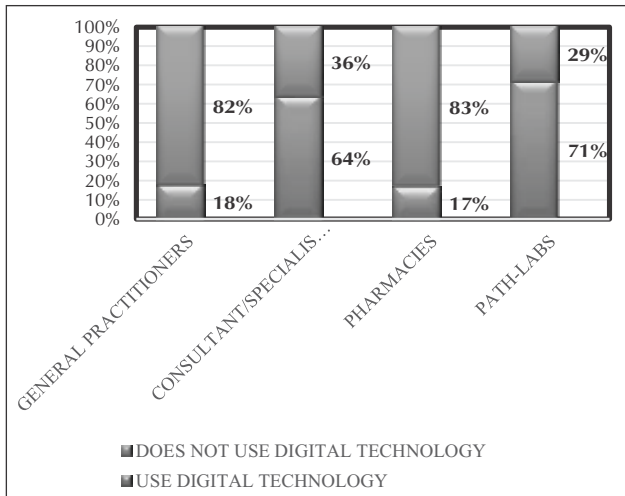
Analysis of data showing Preference for Mediport Platform among Potential Clients

The major reasons provided by potential clients for using digital technology in their practice are summarised as follows:

• Generate electronic medical records for the convenience of patience

• Providing convenience by managing appointments for patients

• To access information from different clinics

The major reasons provided by potential clients for not using digital technology in their practice are summarized as follows:

Using digital technology to support medical practice will require adapting to digitize existing manual process which mainly involves writing prescription and preparing OPD notes.

Accessing to technology platforms or computer or any smart device during diagnosis process will be distracting and will make practice cumbersome.

Analysis of data showing Preference for Mediport Platform among Potential Clients
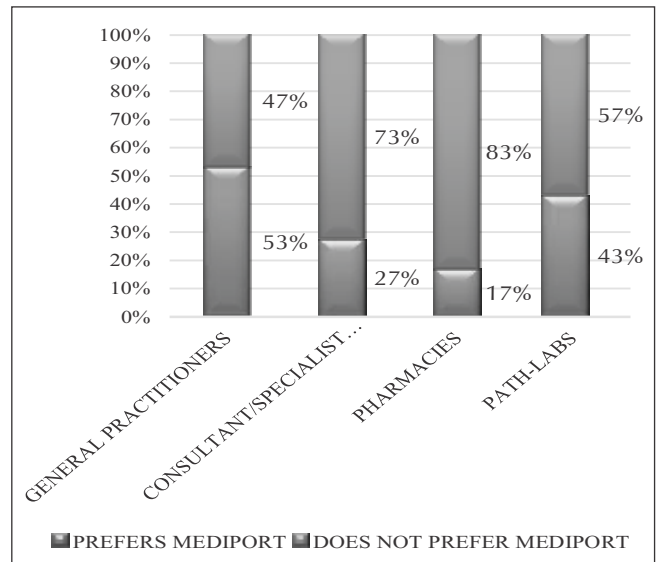
The product functionalities identified as beneficial by General Practitioners were

• Appointments

• E-OPD Notes

• Digital Calendar

The product functionalities identified as beneficial by Consultant/Specialist Doctors were

• Cross Referencing • Online Appointment

• Dynamic Pricing • Advance Payment

The product functionalities identified as beneficial by Path-Labs were

• Cross Referencing • Online Appointment

• Dynamic Pricing • Advance Payment

Hypothesis

H_0 – The client's preference for using Mediport platform does not depend on their use of digital technology in their practice/profession/business.

H_1 – The client's preference for using Mediport platform depends on their use of digital technology in their practice/profession

Observed Values	Prefers Mediport	Does Not Prefer Mediport	Total
Use Technology	13	9	22
Don't Use Technology	4	21	25
Total	**17**	**30**	**47**

Expected Values	Prefers Mediport	Does Not Prefer Mediport	Total
Use Technology	7.95	14.04	22
Don't Use Technology	9.04	15.95	25
Total	**17**	**30**	**47**

Calculated Value	Degree Of Freedom	Significance Level	Chi-Square Table Value
41	1	95%	841

Chi Square Graph

The test statistic, with 1 degree of freedom and 95% significance level, is 3.84.

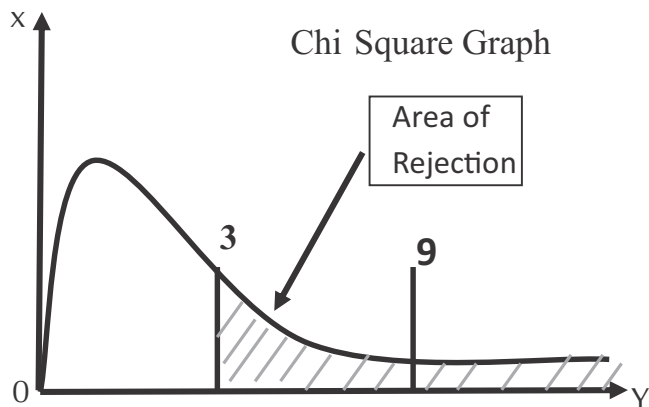As calculated value of Chi-Square 9.41 is more than criteria 3.841, we reject H0, and accept H1. H1 – The client's preference for using Mediport platform depends on their use of digital technology in their practice/profession/business. Thus there is significant evidence that Usage of Digital Technology has an impact on the Preference for Mediport Platform among potential clients

Findings
1. Mediport positions itself as a 'Continuity of care' healthcare technology platform by establishing a comprehensive ecosystem.

Mediport has designed its B2B and B2C platform to make its e-commerce model more doctor centric

2. Problems identified among potential clients with respect to using Mediport technology platform

Problems Identified among Doctors
• Doctors are heavily dependent on manual process in their practice which involves generating OPD notes, writing prescriptions and referring Labs through Notepads.

• Doctors feel apps will create distractions in their practice and the task to use a phone or computer during diagnosis will make things cumbersome.

Problems Identified among Pharmacies
• Pharmacies feel apps will take away their share of revenues by being part of the competition.

• Due to emergence of several similar e-commerce platforms pharmacies are sceptical of their reliability.

Problems Identified among Pathology Labs
• Path-Labs are sceptical of Doctors referring patients through Mediport platform.

3. Through a chi-square hypothesis testing it was observed that the client's preference for using Mediport platform depends on their use of digital technology in their practice/profession

Limitations
The research had few limitations with respect to achieving a comprehensive data to meet research objectives.

Due to different nature of potential clients a common structured questionnaire was not feasible to collect information.

Further judgment sampling and different sample size of different potential clients restricted the use of statistical analysis tools to measure the variations in responses collected. Lack of information from patients perspective restricts the scope of research to B2B platform

Future Scope

A preliminary study can give insights into the nature and characteristics of the market with respect to use of digital healthcare technology.

As the company deals with multiple types of healthcare providers an analysis of variance to understand the variations in the requirements of digital healthcare technology among potential clients can help deliver customised solutions based on their requirements.

This research can form the basis to conduct market potential of Mediport's healthcare technology platform.

Recommendations

- Targeting localities with fewer pharmacies in the area will increase the appeal for the concept of home delivery of medicines.

- Along with home delivery if a notification could be send to patients regarding the dosage and timing of medicines.

Conclusion

- Demonstrating more number of features during the pilot process would help doctors understand the product functionalities with respect to multiple requirements.

The research process has helped in gaining insights into the market of digital healthcare technology with respect to the usage of digital healthcare technology among healthcare providers, understanding their preference for using Mediport's digital healthcare technology platform.

References

http://mediport.com/

Healthcare delivery of the future: How digital technology can bridge time and distance between clinicians and consumers, Health Research Institute November 2014
https://www.pwc.com/us/en/health-industries/top-health-industry-issues/assets/pwc-healthcare-delivery-of-the-future.pdf

"Healthcare's Digital Future," By Stefan Biesdorf and Florian Niedermann
http://www.mckinsey.com/industries/healthcare-systems-and-services/our-insights/healthcares-digital-future

Rcp London
https://www.rcplondon.ac.uk/education-practice/advice/consultant-physicians/

Healthcare Industry in India, Indian Brand Equity Foundation
http://www.ibef.org/industry/healthcare-india.aspx

Digital Healthcare Ecosystem- White Paper
https://www.infosys.com/digital/white-papers/Documents/digital-healthcare-ecosystem.pdf.

A Study on Customer Retention Program - A Case of Speciality Store "CROSSWORD"

– Ms. Vidhi Rathod

MMS II Marketing

Introduction

Crossword Bookstores Ltd. is a wholly owned subsidiary Company of Shopper's Stop Ltd - India's leading departmental store chain with 90 stores, across 28 cities in India and as on today is India's fastest growing chain of bookstores.

Crossword aims to be a point of cultural and social interaction where authors and poets hold court, where children are regaled, where people gravitate to be informed, to be entertained, even enlightened. The name embodies the vision of Crossword as a place and space for people who seek information, knowledge or just the pleasure of reading. Crossword stocks the widest range of Books, Movies, Music, Toys, Stationery, Magazines and CD-ROM's.

Need for the Study

Crossword is a well-established brand with the pan India presence, it is important for the company to be ahead with the pace of its competitors and also to be the trend setters in the market. The study is to understand the service expectation of the customers and their other prolonged expectations from the crossword to enhance their in-store experiences. This will help the company to retain the customers for long run by keeping them happy and satisfied.

Objectives of the Research study

1. To come-up with different ways of retaining the customers and reduce customer defections in Crossword book store
2. To Identify new ways and means to improve customer services
3. To understand customer responses about the existing loyalty card program
4. To analyze and suggest ways and means to enhance customer satisfaction and in store experiences

Research Methodology.

A research process consists of stages or steps that guide the project from its conception through the final analysis, recommendations and ultimate implementation. The research process provides a systematic, planned approach to the research project and ensures that all aspects of the research project are consistent with each other. This chapter aims to understand the research methodology establishing a framework of evaluation and re-evaluation of primary and secondary research. The techniques and concepts used during primary research in order to arrive at findings; which are also dealt with and lead to a logical solution towards the analysis and results.

Research Design: According to the research objectives I plan to choose Exploratory and Descriptive Research Methodology.

Sampling Design:

Population: All Crossword customers of Bandra Turner road store.

Sampling Technique: Convenience sampling (non-probability).

Sample size: 43 Crossword customers were considered as the sample.

Research Instrument: In this project most of the data and information are collected in the form of primary data, so the references and the contacts are very useful instrument in such data collection. Here Structured questionnaire was used for the survey.

Duration of the study: The duration of the interviews taken was 12 days, from 16th June to 28th June 2016.

Data Collection:

- **Primary Data**: For primary data collection a structured questionnaire was prepared and one-on-one interview was conducted with the 43 Crossword customers. The purpose of this interview was to understand the customers' needs and wants from the store, the benefits they receive from the existing services and also to know how satisfied they are from the Crossword membership services.

- **Secondary Data**: This data includes viewing of articles from the internet.

Data Collection and Analysis

Graphical Representation:

Did you find any change in the service quality after being upgraded from yellow card to black card?
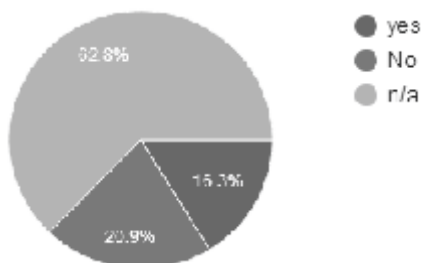
- Interpretation: Yellow and black card has its own different benefits which is somewhere not clearly understood by few customers. While the customer becomes a member there are few things that are promised to him/her, which at some moment not fulfilled by customers which also is a reason for not finding change in the service quality.

Would you like to go for the renewal of the black card after a year?
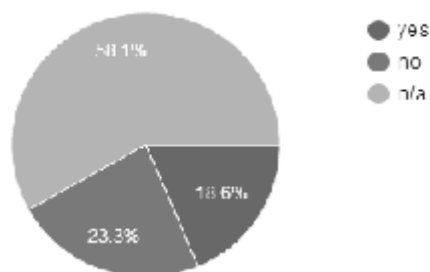
- Interpretation: The customers will go for renewal of the yearly membership only when they receive the book of his choice on time and also the proper service

Research Hypothesis

H0- There is no significant relationship between the improvement in service quality after up-gradation of membership and the intention of renewal by the customers.

H1- There is a significant relationship between the improvement in service quality after up-gradation of membership and the intention of renewal by the customers.

Table 1

Observed Value	YES	NO	N/A	TOTAL
YES	6	1	0	7
NO	2	6	1	9
N/A	0	3	24	27
TOTAL	8	10	25	43

Expected value = Row total*Column total/ grand total

Table 2

EXPECTED VALUE	YES	NO	N/A
YES	1.30	1.63	4.07
NO	1.67	2.09	5.23
N/A	5.02	6.28	15.70

Table 3

Chi square$= \sum (O-E)^2 / E$

O	E	O-E	(O-E)	(O-E)^2
6	1.30	4.70	22.09	16.99
1	1.63	-0.63	0.40	0.25
0	4.07	-4.07	16.56	4.07
2	1.67	0.33	0.11	0.07
6	2.09	3.91	15.28	7.31
1	5.23	-4.23	17.89	3.42
0	5.02	-5.02	25.20	5.02
3	6.28	-3.28	10.76	1.17
24	15.70	8.3	68.89	4.39
TOTAL				**42.69**

(Degrees of freedom) df =
(No of rows -1)*(No of column -1)
= 2x2=4
X² Table value = 14.86 (Given on X² Table)
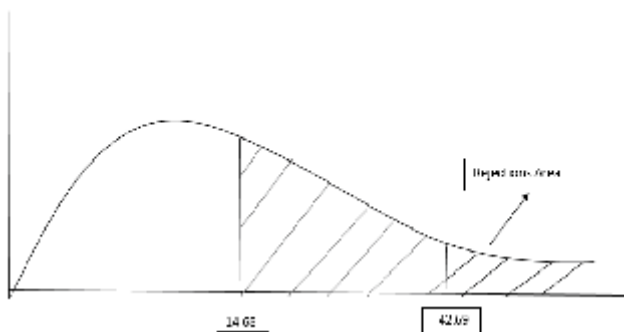
Reject H0: There is a significant relationship between the improvement in service quality after up-gradation of membership and the intention of renewal by the customers

ABC Analysis of Inventory in Crossword Book Store

SECTION	INVENTORY IN %	MARGIN CONTRIBUTION IN %	CATEGORY
Imported books	20%	60%	A
All other books	48%	39.5%	B
Non books	32%	30.4%	C

- **Interpretation:** Imported books comprises of different categories like children books, few fiction and non-fiction books etc. Finness Creation is the vendor from where Crossword orders imported books on which they have maximum margins of 60%

Few books from children's section which were imported were not in the store, like Tin-Tin and Asterisk comics, Crossword should maintain the inventory as it has highest margin.

B category consist of the books which are sourced from the local vendors, Crossword has many different vendors from where they procure books, on an average they receive 39.5% margin on those books

Non-books consists of merchandise like toys, stationery, t-shirts which provide margin of 30.4% to the store.

If Crossword conducts ABC analysis in detail it will help them to understand which of the products are in greater demand and they have to take care that it does not get out of stock.

GMROF Conducted by Crossword Book Store

| Dept Desc	Wall racks	Gondolas	Fixture Area	Actual area	Sales	Margin	GMROF	Area Cont%	Sales Cont%
Arts	1	0	15	17	242495	111790	6463.7	0.6%	0.5%
Regional	0	0.2	5.6	6	19121	14775	2288.2	0.2%	0.0%
Lang Literature & Biogra	2	1	58	67	1095684	111790	1671.6	2.3%	2.2%
Fiction	11	12	501	578	9077412	4184687	7244.2	19.4%	18.0%
Reference information &	0	2	56	65	308505	142221	2202.6	2.2%	0.6%
Humanities	0	3	84	97	1652146	761639	7863.9	3.3%	3.3%
india (BK)	0	1	28	32	681346	314101	9729.2	1.1%	1.4%
Social sciences	2	1	58	67	1321899	609395	9117.5	2.2%	2.6%
Economics Finance Busin	4	1	88	101	2938294	1354553	13350	3.4%	5.8%
Mathematics & Science	0	0.5	14	16	250390	115430	7150.8	0.5%	0.5%
Family Home & Practical	4	5	200	231	3514917	1620377	7026.7	7.8%	7.0%
Sport Travel & Leisure	0	1	28	32	1174803	541584	16775.5	1.1%	2.3%
Childrens & Educational	12	4	292	337	9911445	4569176	13571.3	11.3%	19.7%
Magazines	3	3.5	143	165	1266610	583907	3541.4	5.5%	2.5%
Software	0	0	0	0	0	0	0	0.0%	0.0%
Hardware and Accessories	5.5	2	138.5	160	2121712	978109	6125	5.4%	4.2%
Music	0	0.7	19.6	23	336113	154948	6856.4	0.8%	0.7%
Movies	3.7	0.7	75.1	87	2077783	955553	11035.2	2.9%	4.1%
Chocolates	0	2	56	65	537395	247739	3836.8	2.2%	1.1%
Stationery and Gift	5	4	187	216	3342479	1540883	7146.5	7.2%	6.6%
Toys	18	6	438	505	6495218	2994296	5929.1	17.0%	12.9%
Sports	0	0.3	8.4	10	105982	48858	5044.5	0.3%	20.0%
Gifitng solution	4	1	88	101	1561170	719699	7093.1	3.4%	3.1%
E reader	0	0.5	14	16	628149	289577	17939.2	0.5%	1.2%
	74.2	52.4	2580.2	2975	50413574	22853297	7681.8	100.00%	100.00%

Interpretation:

The manager of the store in every 3 months has to conduct GMROF for their Crossword store and provide it to support office.

GMROF helps the manager to find out which particular category of the product works well in their store so that they can increase the space for that particular product.

The holding capacity of the Crossword Turner road store is 79000 in all which is lower as compared to other Crossword stores. Whenever the new stock is received manager has to make space for the new stock

GMROF helps manager to reduce the dead stock from the store which is less in demand and make place for the new inventory over there which will yield higher returns for the store.

Customer Pyramid for Crossword Turner Road Store.
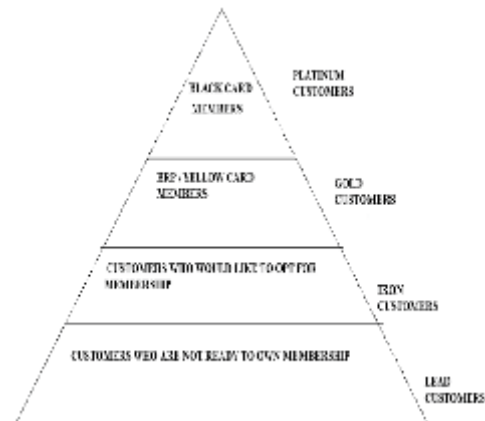
Black card customers are the most profitable customers to the store as they purchase more from Crossword stores due to the discounts they receive. Not only for books but for other merchandise like bags, stationery, clothing they come to shop in Crossword as they are members and receive discount over those merchandise also. From the analysis it was found that 32.6%

customers in the store are holding Black card membership. Crossword tries to convert more and more customers into platinum. Yellow card customers are not that committed as the Black card customers but still they have life-time membership with the store and they utilize it. The store has an opportunity to convert Yellow card customers to Black card membership as they have already opted for Yellow card membership and aware about it benefit it is easier to convince them. According to the study 48.8% customers are Yellow card holders which if converted to Black card will yield higher margins to the store. I have observed that it is very difficult to convince and convert those customers who doesn't own membership as they are rare visitors to the store or due to their busy schedule just don't want to go for membership. But if we try and convince them for the membership their frequency to the store may increase and may lead into higher sales for the store. There are few lead customers in the store who does not want to opt for membership with the store. This customer normally visit the store in some form of emergency or for a visit to café which is in Crossword. Few customers stay in foreign country and visit the store only when they come into India these customers are not that beneficial for the store.

Findings

Major customers are not aware about the Crosswords customer service from where they can avail the books which are not available in any of the Crossword book stores.

Crossword provides excellent loyalty card services but there are few glitches in communicating it to the customers effectively. Customer who has taken membership more than a year ago now does not really remember which membership they hold as they never carried their cards once enrolled for membership.

74.4% customers were not aware of the membership and 22% customers rate the benefit received from the yellow and black card as good.

There is a gap between presenting the service to customers and the way customer understands the service.

The customers in the store are facing lack of variety in the children section books especially for the age group of 3-5 years.

Majority of the customers in the store are already "members" with the store so the store has less pool of customers to convert into membership.

The customers visiting the store are high profile some of them not to go for membership benefits or few take membership just for name sake.

Recommendations

Crossword should complement their customers on their purchase and suggest them always about the new books come up or are about to come up in the store. It will be more effective when you know the type of book customer likes to read and suggest one of those categories. During subsequent visit take feedback about the book read, this will enhance personalized services.

Crossword should come up with customer feedback survey every month where questions related to their needs and wants are asked.

Crossword should open an account on social media like Facebook or Twitter, build a crossword community and keep it updated as much as possible so that the customer is in touch about the activities happening in the store

There should be an attractive random contest discount held in the store only for the members

who carry their membership card in the store. This will always make the customer aware about which card they are holding and also feel privileged as they will gain an additional discount.

Crossword can come up with Co-branding with any other company so that customers can use their loyalty points in that brand also.

Conclusion

Retaining existing customer will always be more cost effective rather than increasing new customer base which can be very expensive. The result, however, will be a happy customer base that keeps coming back year after year.

Customer retention will help crossword to build a trust factor and customer loyalty within their existing customer by providing them with quality service.

Customer retention will help Crossword to generate a strong customer base among the competitor's majorly online portals and other local book stores.

Bibliography

• CONNECT THE DOTS – Rashmi Bansal http://www.ukessays.com/essays/business/literature-customer-retention.php·

•http://www.thefullwiki.org/Customer_Pyramid

•https://dmsretailblog.com/tag/gmrof/http://www.ijsrp.org/research_paper_jun2012/ijsrp-June-2012-40.pdf

Business Process Mapping for Navicarna

- Ms. Gauravi A. Vartak
(Operations)

Introduction

Business Process Mapping is describing what activities are carried out in an organisation. It is a graphical representation of all the processes. Process mapping is one of the basic quality or process improvement tools used in organisations. The study is conducted in Navicarna Private Limited. The purpose of the study is to understand and analyze the business process of the company.

In the study, processes of customer registration, customer order, customer payment, vendor registration and order confirmation processes are mapped. Processes are mapped with the help of flowchart tool and E-draw software.

With process mapping, vendor evaluation criteria are also designed to evaluate the performance of the vendors to ensure quality service and customer satisfaction. Vendor evaluation criteria consists of various fields such as quality, lead time, billing and payments and communication. On the basis of these fields vendor performance is measured.

Introduction

The study was conducted in Navicarna Private Limited which is an e-commerce company which provides online car maintenance, selling and buying. Navicarna is a car maintenance platform for car-owners to manage their after-sales car service and repair requirements and a car selling platform that provides suggestions and details of both new and used car dealers. It helps consumers to receive competitive quotations for their car care requirement from a pre-qualified and verified network of car workshops. This study is on business processes of Navicarna and was done with the purpose of understanding and analysing the business processes of the company. In this study, different internal and external processes of the company are mapped and analysed. Since Navicarna Pvt Ltd is an e-commerce company, most of its operations are web-based. Order fulfilment process is the most important and basic process for Navicarna. The study involves detailed mapping of order fulfilment process from customers' as well as vendors' perspective.

Also vendor evaluation criteria to evaluate the performance of the vendors is designed. It will help company ensure quality service and customer satisfaction.

Need for the Study

Study will help the organisation in defining, understanding and analysing the sequence of business activities carried out in the company, and to periodically review it, to achieve business efficiency.

It will also help to understand how each process relates to other processes within the organization and how does it impact Quality Management.

It will assist the organization in becoming more

efficient. As with the help of a clear and detailed business process map or diagram organisation will be able to identify gaps in the existing process and work on improvements.

Objectives

- To design a detailed service order process map (customer perspective) and identifying the areas of improvements in the process that will help in automation of the process

- To design a detailed service order process map (vendor perspective) and identifying the areas of improvements in the process that will help in automation of the process

- To identify vendor evaluation parameters and design a vendor evaluation form.

Methodology

Research Design: Exploratory Research

Data Types and Sources: Primary data was collected through interviews and observations. Company policies and procedures as secondary data.

Sampling: Sampling size was 3 and sampling frame includes 1 Director, 1 HOD-Web development, 1 HOD-App development.

Results and Discussion

The study was to map business processes of Navicarna. The processes mapped were from customers' as well as vendors' perspective. Following are the processes that are mapped in the study:
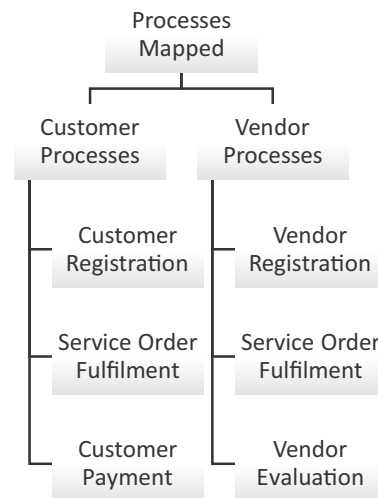
Figure 1: List of processes mapped

I. Customer Registration Process:

Customer registration is done on the website as well as on the application. The procedure is same on both the platforms. Customer will need an email ID and a mobile number, or a Google plus account, or Facebook account. Customer registration process is required when customers select the option of service centre. Customers can register themselves in three ways.

One way is to sign up by filling customer details. Following are the fields that are required:

1. Name
2. Email
3. Mobile number
4. Password
5. Re-type password

From the above details, Email and mobile number will be verified with OTP (one-time password). After verification customer ID will be created and data will be stored in the database. Other ways are to login with Google plus or Facebook. Here the details will be fetched from customer's Google plus or Facebook account and mobile number will be verified with OTP. After verification customer ID will be created and data will be stored in the database.

II. Customer Order Process:

When users open the website or the application to service their car, first they will have to select the location where they want to get their car serviced. There is an option to detect location automatically. Once the location is entered, user will have two options and a search bar. One option will be to search cars and another will be to search service centres. When users select date and service centre, they will be asked to log in. If the user is registered already, he/she will be asked to login by entering Email and Password. User's email and password will be verified by the system from the database. If the details match, they will get the access. If details are not verified, system will show error message as 'Authentication failed' and user will be asked to enter details again.

If the user is not registered, he/she will be asked to register.

Once the user is logged in, he/she will get the access of list of service centres in the selected area. User can also search service centres by entering the desired service in the search bar. In the list, Name, Picture, Category, Address, contact number and Rating of the service centre will be displayed. The User can select any service centre from the suggested list. Once the service centre is selected, details and services provided by that service centre will be displayed on new screen. Services will be displayed in a list where the price and the details of the service will be displayed. User can add desired service or services to the cart from the list and then checkout to see the comparison view. In the comparison view, the prices of the selected service centre will be compared with the prices of three more service centres in the same area. The compared service centre will be chosen on the basis of the price and customer rating. In this comparison view, user can select the new service centre or the chosen service centre and make payment.

Figure 2: Order fulfilment process
(Customers' perspective)


III. Payment process:

Customer can pay for services with three options.

1. Cash payment:

   After servicing at any service centre, customer can pay in cash at service centres if cash option is selected.

2. Online payment:

   Customer can also pay online by credit card or debit card.

3. Navicarna points:

   Third option is to pay by Navicarna points. Customer can pay by credits called as Navicarna points. Navicarna points are given in cashbacks and in transaction issues. One Navicarna point equivalents to one rupee.

Figure 3: Order fulfilment process (Customers' perspective)
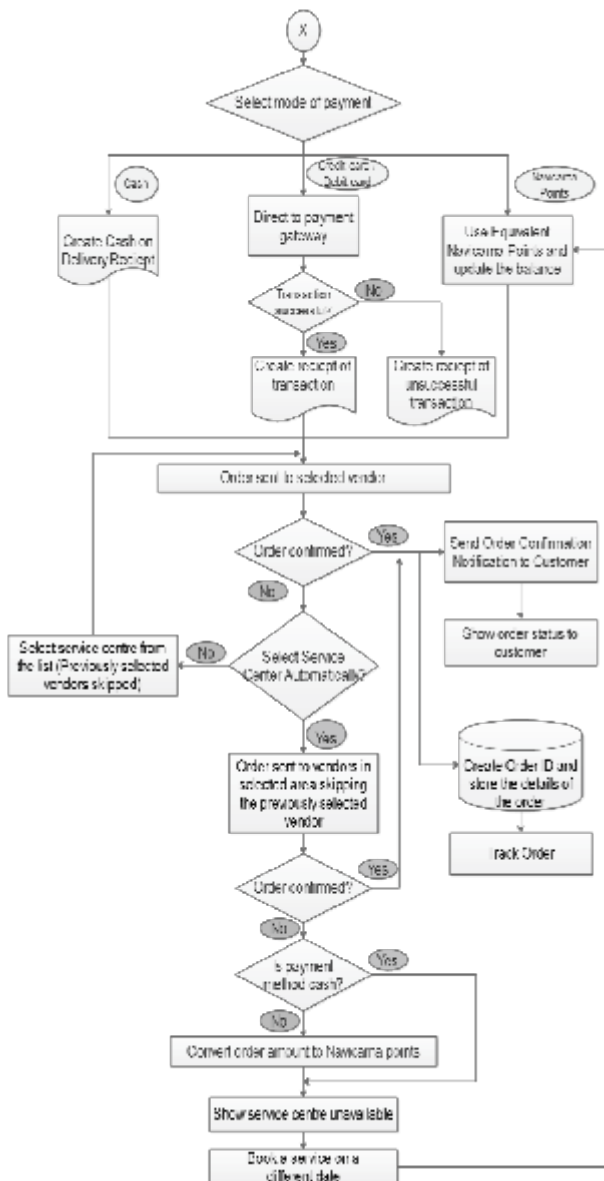
IV. Order Confirmation and Tracking process:

After payment is made, order is sent to the service centre. Once the vendor accepts the order, order Id will be created and confirmation notification, text message and email will be sent to the customer. Customer can further track the order. As vendor will update the status of the order, customer will get notifications. Once the order is complete customer will get the notification, text message and email. The invoice will be created and it will be sent to the customer through email.

If the order is not accepted by the vendor, customer will be given an option to select vendor automatically or manually. If customer selects manual process, customer will be again shown a list of service centres in which previously selected vendor will be skipped. From that list customer will select the new service centre. If customer selects automatic process, automatically the service centre will get selected. Order will be sent to the vendor. If no vendor accepts the order, message will be shown as 'service centre unavailable' and customer will be asked to book an appointment for a different date.

V. Customer Feedback:

After two days of the order completion, customer will be asked to rate the service centre and according to the rating customer will be asked for feedback through questionnaire.

Results

From the mapping of above processes following observations and findings were found.

Since the company is a start-up and in the process of launching its service, it is selecting all the interested vendors, as a promotional strategy

without proper evaluation. Thus, there is a need to introduce a new and continuous process of vendor evaluation for quality assurance.

It is observed that the customer payment is processed prior to the order confirmation from the vendor. Thus, if the order is not accepted from the vendor, it can raise issues related to refund of the payment.

Duplication of data is observed as vendor documents are stored in hard copies as well as soft copies. Vendor is given a right to reject the order received. Thus, if there are frequent rejections, it may lead to customer dissatisfaction.

Recommendations

Vendor evaluation and selection criterion is also designed in this study and it is recommended to the company to implement it. This criterion can be implemented in long run for quality assurance.

To overcome the problem of data duplication and due to space constraints only soft copies of the documents can be maintained as the operations of the company are entirely based on IT system. To avoid order rejections by vendors, rejection charges can be taken from vendors allowing minimum rejections per particular period.

E-wallet facility can be effectively introduced to handle refund issues. There is a facility of navicarna points but introducing e-wallet facility will take care of refund issues as well as can be used to improve functionality of the payment process.

Limitations

Data confidentiality was the major limitation for the project. Since the application and the website was not launched in the market, data was kept confidential.

Scope of the project was limited as the mobile application and website was under development and was not implemented.

Conclusion

Process mapping helps the organization to understand and improve the business processes which makes the organization efficient. It also helps in developing new processes with wider scope.

Process mapping will also help in pinpointing vague problems.

Process mapping also provides the key documentation for compliance with management systems as the ISO 9001 2000 and ISO14000. It will help the organization in quality management and to improve customer satisfaction.

Since the company is a start-up process mapping will be beneficial in streamlining all the processes.

Periodic review of documents, processes and policies will help to improve overall efficiency of the company.

References
- http://www.navicarna.com/·
- https://en.wikipedia.org/wiki/Business_process _mapping·
- http://www.processmaps.com/benefits.php
- https://en.wikipedia.org/wiki/Ecommerce_in_I ndia·
- http://www.pwc.in/assets/pdfs/publications/20 15/ecommerce-in-india-accelerating-growth.pdf·

• http://www.slideshare.net/ankittrip/project-report-after-sales-service-of-automobiles-in-india·

• https://www.firstdata.com/icicimerchantservices/icici-insights/ecommerce-in-india-unique.pdf·

• https://www.cps.gov.uk/publications/finance/process_mapping.html·

• http://www.ciiautoserve.in/document/Auto_Serve_2010Report_by_Mckinsey_on_Opportuniti es_in_the_Indian_Automotive_Aftermarket.pdf·

• http://www.pwc.in/assets/pdfs/publications/2015/ecommerce-in-india-accelerating-growth.pdf·

A Study on the Relationship between Organisational Commitment and Work Engagement of Employees

– Ms. Ravina Lobo (HR)

Introduction

Employee engagement is a measurable degree of an employee's positive or negative emotional attachment to their job. Employees who are engaged in their work and committed to their organizations give companies crucial competitive advantages including higher productivity and lower employee turnover. Main purpose of this study is to determine the level of employee engagement and study its relationship with organisational commitment among employees.

Need for the Study

The challenges today is not just retaining talented people but fully engaging them and capturing their minds at each stage of their work performance. Understanding the challenges of employee engagement enables the organisations to strategize on how to solve engagement and commitment problems to guarantee continued existence in this competitive environment.

Literature Review

Organisational commitment is an attitude possessed by an individual towards an organisation. As an attitude it may vary in its direction (positive or negative) and magnitude (weak or strong). It reflects the extent to which an individual identifies with and is involved in an organisation (Mowday, Porter and Steers, 1979). Understanding such attitudes is important because they are often influential in key aspects of organisational behaviour such as task

performance, absenteeism, and turnover (Baron and Greenberg, 1990). Organisational commitment is viewed either attitudinally (e.g., Mowday et al., 1982), or behaviourally (Becker, 1960), or as some combination (e.g., Buchanan, 1974). Employee engagement is a multidimensional concept (Kahn, 1990). According to Scarlett Surveys (2001) employee engagement is a measurable degree of an employee's positive or negative emotional attachment to their job, colleagues and organization that profoundly influences their willingness to learn and perform is at work. Clearly, to help reap the benefits of an engaged, committed workforce at any organization, there is need to provide guidelines for understanding and measuring employee engagement, and for designing and implementing effective engagement initiatives.

Objectives of the Study

1. To determine the level of employee engagement and organizational commitment by demographic variables (age, work experience and gender).

2. To measure the levels of organizational commitment and employee engagement experienced by employees.

3. To ascertain the extent to which employee engagement relates to organizational commitment.

4. To provide suggestions or changes in various HR policies for better work engagement and organizational commitment

Research Methodology
Research Hypothesis
H1: There is a significant relationship between demographic variables and the parameters of Organizational Commitment and Work Engagement.

H2: There is a significant relationship between parameters of employee engagement and parameters of organisational commitment.

Research Design
Descriptive Research: Descriptive Research is a study designed to depict the participants in an accurate way. It is all about describing people taking part in the survey.

Sampling Technique
Convenience Sampling: It is one of the main types of non-probability sampling methods. A convenience sample is made up of people who are easy to reach.

Description of Sample
62 Respondents were selected (N=62). Data was collected through a structured questionnaire from employees working in ROHA irrespective of their current position.

Sources of Data
Primary Data- Questionnaire
A three section questionnaire was used for data collection.
- The first section of the questionnaire consisted of 10 items inquiring about demographic characteristics of respondents such as employees' gender, designation, tenure of office etc.

- The second section consisted of questions related to organisational commitment of the respondents using Allen and Meyer's (1990) instrument.

- The last section in Employee engagement was assessed with a 17 item version of Utrecht Work Engagement Scale (UWES) (Schaufeli &Bakker, 2003).

Secondary Data
- Internet
- Research papers
- Books

Statistical Techniques
- Correlation
- One – Way ANOVA

DATA ANALYSIS
ONE – WAY ANOVA
Table 1: Results of One – Way ANOVA Test for Parameters of Organizational Commitment and Work Engagement by Demographic Variables

Parameters	Significance at 5%level				
	Age	Tenure	Marital Status	Monthly Income	Status of Service
Vigor	0.513	0.681	0.960	0.715	0.083
Dedication	0.191	0.961	0.163	0.246	0.394
Absorption	0.587	0.921	0.071	0.250	0.769
WE Score	0.263	0.857	0.203	0.249	0.343
Affective Commitment	0.135	0.277	0.464	0.918	0.991
Continuous Commitment	0.768	0.672	0.943	0.226	0.247
Normative Commitment	0.063	0.749	0.376	0.081	0.328
OC Score	0.865	0.958	0.996	0.987	0.895

It can be seen in Table 1, the tests reveals that there is no significance between the demographic variables (age, tenure in Roha, Marital Status, Monthly Income, Status of Service) and any of the parameters of Organizational Commitment and Work Engagement.

Demographic variable: Gender

Table 2: Results of One – Way ANOVA Test for Parameters of Organizational Commitment and Work Engagement by

Parameters	F value	Significance
Vigour	0.04	0.84
Dedication	6.96	0.01
WE score	0.90	0.34
Absorption	1.66	0.20
Affective	5.63	0.02
Continuous	9.98	0.00
Normative	0.65	0.42
OC score	7.46	0.00

Table 3: Mean Scores of Significant Parameters by Gender

Parameters	Gender Groups	Count	Mean
Dedication	Male	31	6.08
	Female	31	5.55
	Total	62	5.81
Affective Commitment	Male	31	3.51
	Female	31	2.93
	Total	62	3.22
Continuous Commitment	Male	31	3.51
	Female	31	3.12
	Total	62	3.31
OC Score	Male	31	3.48
	Female	31	3.16
	Total	62	3.32

It can be observed in Table 2 that there is a significant difference in the levels of dedication, affective and continuous commitment and the overall Organizational Commitment score between Male and Female Employees respectively. While observing the Mean scores in table 3, it can be noted that Male Employees score higher in these levels.

Demographic Variable: Designation

Table 4: Results of One – Way ANOVA Test for Parameters of Organizational Commitment and Work Engagement by Designation

Parameters	F value	Significance
Vigour	1.10	0.33
Dedication	4.18	0.02
WE score	1.94	0.15
Absorption	2.72	0.07
Affective	0.21	0.80
Continuous	0.19	0.82
Normative	1.65	0.20
OC score	0.53	0.58

Table 5: Results of Post Hoc of Significant Parameters by Designation

Dependent Variable			Significance
Dedication	Executive	Manager	0.03
		HOD	0.21
	Manager	Executive	0.03
		HOD	0.77
	HOD	Executive	0.21
		Manager	0.77

It is observed from Table 4 and Table 5 that there is a significant difference in the levels of dedication of employees at the Executive and Managerial levels in the company.

Demographic Variable: Total Work Experience

Table 6: Results of One – Way ANOVA Test for Parameters of Organizational Commitment and

Work Engagement by Total Work Experience

Parameters	F value	Significance
Vigour	3.10	0.93
Dedication	0.73	0.23
WE score	0.08	0.56
Absorption	0.91	0.54
Affective	0.00	0.53
Continuous	1.36	0.71
Normative	0.97	0.03
OC score	0.01	0.90

The normative component as a whole was analysed with the total work experience. However the post hoc tests revealed that there was no significant difference between the groups.

Demographic Variable: Type of Family

Table 7: Results of One – Way ANOVA Test for Parameters of Organizational Commitment and Work Engagement by Type of Family

Parameters	F value	Significance
Vigour	0.78	0.37
Dedication	0.30	0.58
WE score	0.38	0.53
Absorption	0.00	0.92
Affective	4.36	0.04
Continuous	2.77	0.10
Normative	0.45	0.50
OC score	0.03	0.84

Table 8: Mean Scores of Significant Parameters by Type of Family

Affective	Nuclear	31	3.48
commitment	Joint	31	2.96
	Total	62	3.22

It can be seen in Table 7, the test indicates that there is a significant difference in the affective component of employees belonging to different family types. Table 8 indicates that the affective commitment is more significant with employees belonging to Nuclear families.

Table 9: Results of One – Way ANOVA Test for Parameters of Organizational Commitment and Work Engagement by No. of Dependents

Parameters	F value	Significance
Vigour	3.299	0.043
Dedication	6.017	0.004
WE score	3.598	0.033
Absorption	4.948	0.010
Affective	0.446	0.642
Continuous	4.732	0.012
Normative	0.493	0.613
OC score	2.389	0.100

Table 10: Results of One – Way ANOVA Test for Parameters of Organizational Commitment and Work Engagement by No. of Dependents

Dependent Variable			Significance
Vigour	0 to 2	3 to 5	0.18
		6 & above	0.97
	3 to 5	0 to 2	0.18
		6 & above	0.05
	6 & above	0 to 2	0.97
		3 to 5	0.05
Dedication	0 to 2	3 to 5	0.00
		6 & above	0.01
	3 to 5	0 to 2	0.00
		6 & above	0.93
	6 & above	0 to 2	0.01
		3 to 5	0.93
Absorption	0 to 2	3 to 5	0.04
		6 & above	0.05
	3 to 5	0 to 2	0.04
		6 & above	0.98

	6 & above	0 to 2	0.05
		3 to 5	0.98
WE_Score	0 to 2	3 to 5	0.00
		6 & above	0.11
	3 to 5	0 to 2	0.00
		6 & above	0.51
	6 & above	0 to 2	0.11
		3 to 5	0.51
Continuous Commitment	0 to 2	3 to 5	0.03
		6 & above	0.01
	3 to 5	0 to 2	0.03
		6 & above	0.66
	6 & above	0 to 2	0.01
		3 to 5	0.66

From Table 9 and Table 10 a significant difference is noted in the dedication of employees with 0 to 2 dependants and 3 and above dependants. Also, the test revealed that there is a significant difference between the absorption of employees with 0 to 2 dependants and 3 and above dependants. This in turn shows a significant difference in the work engagement between the two groups. The continuous commitment between employees with 0 to 2 dependants and 3 and above dependants is also significant.

Correlation

Table 11: Results of Correlation between parameters of Organizational Commitment and Work Engagement

	Dedication	Absorption	We score	Affective commitment	Continuous commitment	Normative commitment	OC score
Vigour	.367**	.493**	.785**	0.22	0.01	0.01	0.11
Dedication		.545**	.775**	.514**	.287*	.513**	.547**
Absorption			.849**	.370**	0.19	.279*	.350**
We score				.450**	0.20	.321*	.404**
Affective commitment					.364**	.584**	.819**
Continuous commitment						.427**	.743**
Normative commitment							.837**

***. Correlation is significant at the 1% level*　　　**. Correlation is significant at the 5% level*

Results and Discussion

1. The tests implied that age of employees, their tenure in the organization, marital status, monthly income or their status at work shows no significance with the parameters of organizational commitment and work engagement.

2. Gender was highly significant with dedication, affective commitment, continuous commitment and the overall Organisation Commitment score. On further analysis, the average scores of men on these parameters were higher as compared to women.

3. Designation was highly significant with dedication. Further post hoc tests indicated a considerable difference in the dedication of executives and managers is noticed due to the differences in autonomy, facilities, policy privileges etc.

4. Total work experience was significant with normative commitment. However there was no significant difference in the loyalty of employees in different groups.

5. Type of family that an employee belongs to is highly significant with affective commitment.

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Further the average score of employees imply that employees belonging to nuclear families were more involved in the organization.

6. No. of dependents that an employee has is highly significant with the parameters of work engagement and also with Continuous commitment. Further analysis through post hoc tests indicates a significant difference in the vigor of employees with 3-5 dependents and 6 and above dependents. The test also reveals a significant difference in the levels of dedication and absorption of employees with 1-2 dependents and those with 3-5 and 6 or more dependents. It also affected the way they saw their jobs and the cost associated with leaving the organization. Also a significant difference is noticed in the overall work engagement score of employees with 0-2 dependents and those with 3-5 dependents.

7. Coming to correlation the parameters of work engagement were highly significant with each other. Similarly the parameters of organizational commitment were also highly significant with each other.

8. Comparing the parameters of Organizational Commitment and Employee Engagement it was found that:

   i. Vigour showed no significance with the parameters of organizational commitment.

   ii. Dedication was highly significant with affective commitment, normative commitment and the overall organizational commitment score. It was also moderately significant with continuous commitment. However it did not affect the costs associated with leaving the organization to a great extent.

iii. Absorption was highly significant with affective commitment and the overall organizational commitment score and moderately significant with the normative commitment. Being immersed in one's job triggers an employee's emotional attachment to the organization and to some extent the feeling of loyalty towards the organization.

iv. Also it is observed that the parameters of work engagement are highly significant with the parameters of work engagement

Recommendations

• A Capex Policy for approval and control of all capital expenditure was recommended. A specified expense amount would be decided only beyond which an employee would have to seek prior permission. This would give employees the autonomy to make decisions at smaller levels and only report beyond the limit specified in the policy thus increasing their enthusiasm towards their job.

• An Insurance Policy along with Health Care Plans for employees and their immediate dependants was suggested. Paying attention to employee concerns could help in increasing the emotional commitment employees have towards the organization and also the cost they associate with leaving the organization.

• A Company Car Policy to give employees having excessive travelling as a part of their jobs a company car to ease the pressure was proposed. This would help in employees not being easily fatigued so they could invest a good level of energy in more productive work.

• Restructuring the Leave Policy was recommended to ensure a sense of

organizational justice in the company by determining a fixed number of leaves for every employee, at every level. A compassionate leave was suggested that granted up to a maximum of paid (fixed number) calendar days to attend to personal misfortunes such as death of an immediate member of the staff member's family. This would enhance the employee's emotional attachment to the organization and his feeling of obligation towards the organization. Also, encashment of non-availed leaves would keep employees dedicated to their jobs.

- An Increment Policy to standardize the Performance Appraisal process was suggested. This would ensure organizational justice thus increasing an employee's emotional attachment to the organization. It would also affect his/her dedication and willingness to invest in the job.

- The Employee of the Quarter programme rewarding the performer of the quarter was recommended which would give employees a willingness to invest effort in the organization. It would also make them feel inspired and challenged to work. Employees will self-monitor their performance keeping them immersed in their jobs.

- If employees are in the same job and are unable to advance they feel demotivated. Internal promotions of employees was recommended which would keep them persistent and help them derive a sense of significance from their jobs.

- Salaries could be brought to industry levels to increase the motivation of employees and thus increasing continuous commitment. It would also make them feel good about their jobs.

- Better and cordial relationships between the HR department and the employees of the organization would help in understanding employee needs and providing better work engagement opportunities that will improve organizational commitment.

- Canteen, Library facilities etc. may be provided to ensure the well-being of employees by reducing stress. This would help employees invest high levels of energy in the organization.

- Flexible schedules and work from home facilities, stress relief programs, training events, celebrations, and annual conventions would help employees strike a work life balance making them feel good about the organization. It would also help them invest high levels of energy and work and morally obligates to the organization.

Conclusion
- Work engagement an Organisational Commitment are closely associated with each other.

- Roha needs to work on work engagement to increase organisational commitment of employees.

- Better commitment and engagement levels of employees will lead to higher productivity and lower turnover.

References
Allen, N. &. (1990). The measurement and antecedents of affective, continuance, and normative commitment to the organization. Journal of Occupational Psychology, 1-18.

Altarawneh, A. A. (2014). Employee Engagement

and Organizational Commitment: Evidence from Jordan. 19(2).

Baron, R. a. (1990). Behaviour in Organization: Understanding and Managing the Human Side of Work. Toronto: Allyn and Bacon.

Buchanan, B. (. (1974). Building organizational commitment: the socialization of managers in work organizations. Administrative Science Quarterly, 533-546.

Kahn, W. A. (1990, December). Psychological Conditions of Personal Engagement and Disengagement at Work. Academy of Management Journal, 33(4), 692-724.

Malhotra, D. N. (2011). Marketing Research: An Applied Orientation (6 ed.). India: Pearson India.

Meyer, J. &. (1997). Commitment in the workplace: Theory, research, and application. Ontario: Sage Publications.

Mowday, R. P. (1982). Employee–organization linkages: The psychology of commitment, absenteeism, and turnover. New York: Academic Press.

Steers, R. T. (1979). The Measurement of Organizational Commitment. The Journal of Vocational Behaviour, 224-47.

Vance, R. J. (2006). Employee Engagement and Commitment. (F. P. Morgeson, Ed.) Alexandria, Egypt: SHRM Foundation.

Wilmar B. Schaufeli, A. B. (2006). The Measurement of Work Engagement With a Short Questionnaire. Educational and Psychological Measurement, 66(4), 701-716.

Analytical Study on Volatility of Securities Traded on BSE Sensex

- Mr. Manish C Trivedi
MFM (Third Year)

Introduction

As we know the need for Foreign capital arises due to shortage from domestic side and other reasons. Indian economy has experienced the problem of capital in many instances. While planning to start the steel companies under government control, due to shortage of resources it has taken the aid of foreign countries. It is observed that the Securities on Sensex have shown significant improvement in the liquidity of stock prices of both BSE and NSE.However, it is believed that there exists a high degree of positive correlation between Securities, Investments, Market capitalization and FII

"Volatility" as is called in stock market parlance. This high volatility has given sleepless nights to a lot of investors as well as market regulators.

Bombay Stock Exchange

The Stock Exchange, Mumbai (BSE) came out with a stock index in 1986, which is known as BSE Sensex. The base year of BSE Sensex is 1978-79 and the base value is 100. The exchange is the largest (in terms of market capitalization) in South Asia. In terms of the number of companies traded on the exchange (approximately 4700), it is the largest in the world. The main index that tracks the performance of the exchange is the BSE Sensex.

Bombay Stock Exchange Sensitive Index

The 30 stocks are chosen at random times, whenever the market has significantly changed enough to warrant the changes, and are chosen by their value of free- float shares. Although the index only tracks a very small percentage of the total stocks traded at the BSE, the index typically comprises about one-fifth of the market capitalization of the entire stock exchange.

Meaning of Capital Market

Capital markets are financial markets for the buying and selling of long-term debt or equity-backed securities. These markets channel the wealth of savers to those who can put it to long-term productive use, such as companies or governments making long-term investments. Financial regulators, such as the UK's Bank of England (BoE) or the U.S. Securities and Exchange Commission (SEC), oversee the capital markets in their jurisdictions to protect investors against fraud, among other duties.

Primary Market

The Primary Market consists of arrangements, which facilitate the procurement of long term funds by companies by making fresh issue of shares and debentures, you know that companies make fresh issue of shares and/or debentures at the information stage and, if necessary, subsequently for the expansion of business. It is usually done through private placement to friends, relatives and financial institutions or by making public issue.

Secondary Market

The secondary market known as stock market or stock exchange plays an equally important role in mobilizing long-term funds by providing the necessary liquidity to holdings in shares and debentures. It provides a place where these

securities can be encased without any difficulty and delay. It is an organized market where shares and debentures are traded regularly with high degree of transparency and security.

What is Volatility?

Volatility is a statistical measure of the dispersion of returns for a given security or market index. Volatility can either be measured by using the standard deviation or variance between returns from that same security or market index. Commonly, the higher the volatility, the riskier the security.

Volatility of an asset is measured by the variability in the price over time measured as the variance or the standard deviation of the returns on the asset. The more the standard deviation the more volatile the asset is. This is also a measure of the riskiness of the asset, since the more variation it has the more unpredictability associated with its returns. Many Market Models measure the residual variances to measure volatility.

Factors Responsible for Volatility?

In a securities market, prices or returns show fluctuations for a variety of reasons: changes in fundamental factors of firms, like, investors endowments, tastes or alternatively the attitudes towards risk, correct or incorrect anticipations or expectations of investor and other market participants, differences in information and mode of evaluation, transient imbalances between demand for and supply of securities, and the nature and number of stabilizing forces, among others, cause prices to fluctuate either from one point of equilibrium to another or above and below an equilibrium point.

Types of volatility

Historical volatility :
    It refers to the movements, which have been observed in a particular stock price or index over a given period.

Implied volatility:
    Implied volatility is a key variable required for determining premium on option.

Projected volatility:
    This refer to the estimate of future volatility on the basis of past volatility, current market analysis and perception of the investor

Need for the Study

The temporal relation between stock Index and Index futures has been and continues to be of interest to regulators, academicians and practitioners alike for a number of reasons such as market efficiency, volatility and arbitrage. In perfectly efficient markets, profitable arbitrage should not exist as prices adjust instantaneously and completely to new information. Hence, new information disseminating into the market place should be immediately reflected in demand and supply of Securities in Secondary Market.

One of the purpose of this paper is to understand, examine and discover the Difference and volatility in securities traded on BSE Sensex using secondary data, and Descriptive Method of Analysis which offers several advantages, like Measures the Extent to which securities have achieved long run equilibrium over the another in same industry or other. Here, in this paper the analysis will be done one two to three industries. Finance, Information Technology and Banking sectors will be the main area of interest for analysis

Objectives of the study

• To study the volatility of securities listed in the Bombay Stock Exchange (BSE).

- To find out the various factors which are responsible for volatility.

- To suggest better investment decision based on calculated beta of 6 Companies.

- To suggest better investment decision based on calculated statistical tools of selected companies.

- To understand Internal and External Factors that Explains Volatility.

- To capture the trends, similarities and patterns in the activities and movements of the Indian Stock Market.

- To analyze better returns from these companies.

Literature Review

- Choudhary and Choudhary (2008) studied 20 stock markets of the world using parametric as well as non-parametric tests. He reported that out of twenty, eighteen markets showed significant positive return on various days other than Monday. The scope of the study is restricted to days-of-the-week effect, weekend effect and monthly effect in stock returns of S&PCNX Nifty and select firms. The half-month effect and holiday effect are not studied here.

- Kumari and Mahendra (2006) studied the day of the week effect using data from 1979 to **1998 on BSE and NSE. They reported**

negative returns on Tuesday in the Indian stock market. Moreover, they found returns on Monday were higher compared to the returns of other days in BSE and NSE.

- Ajayi and Al. (2004) examined eleven major stock market indices on Eastern Europe using data from 1990 to 2002. They found negative return on Monday in six stock markets and positive return on Monday in rest of them.

- Suggest that price discovery primarily originates from the Singapore futures market.

Research Methodology

It covers the type of research used in this dissertation, sample size chosen, sample description, data collection. Each will be described separately under the following headings.

Sample Size

For the study, 30 companies have been selected.

Sample Technique

The current study requires no sampling techniques.

Sample Population

Listed Company on BSE Sensex.

Sample Description

Listed Company on BSE Sensex (Based on Capitalization).

Code	Company Name	No. of Trades	Code	Company Name	No. of Trades
53250	Tata consultancy services Ltd.	4,75,089.88	500257	HDFC bank Ltd.	3,27,350.34
50029	Infosys Ltd.	2,41,259.58	500325	State bank of India	1,97,368.61
50765	Wipro Ltd.	1,16,726.67	500112	ICICI bank Ltd.	1,58,259.11

Statistical Tool used for Data Analysis

Beta (ß)

Beta is a measure of the volatility, or systematic risk, of a security or a portfolio in comparison to the market as a whole. Beta is used in the capital asset pricing model (CAPM), which calculates the expected return of an asset based on its beta and expected market returns.

Rate of Return

In finance, return is a profit on an investment. It comprises of any change in value and interest, dividends, or other such cash flows that the investor receives from the investment. It may be measured either in absolute terms (e.g., dollars) or as a percentage of the amount invested.

$$\text{Rate of Return} = \frac{(\text{Closing Price} - \text{Opening Price})}{\text{Opening Price}} \times 100$$

Computation of Beta (β)

$$\beta = \frac{x N\Sigma xy - \Sigma(x) \ \Sigma(y)}{N\Sigma x^2 - (\Sigma x)^2}$$

Where,
N = Number of samples, x = Market return, y = Sensex return

Standard Deviation

This is the most commonly used measure of risk in finance. Its square also is widely used to find out the risk associated with a security.

$$\text{Standard Deviation} = \sqrt{\sigma^2}$$

$$\text{Computation of Variance} = \sum_{i=1}^{n} \frac{(Ri - R)^2}{n-1}$$

Coefficient of Correlation

Coefficient of Correlation is a statistical technique, which measures the degree or extent to which two or more variables fluctuate with reference to one another. Correlation analysis helps in determining the degree of relationship between two variables but correlation does not always imply cause and effect relationship.

$$\text{Computation of Correlation} = \frac{(N\Sigma xy - \Sigma(x) \ \Sigma(y))}{[\{(N\Sigma y^2) - (\Sigma y)^2\} \{(N\Sigma x^2) - (\Sigma x)^2\}]^{1/2}}$$

Collection of Data

The data used in this dissertation are secondary in nature, which is publically available to all investor.

- Mainly we have used Bombay Stock Exchange official website for historical data, all stock price with Opening Price, Closing Price, High-Low Price of the current day, past 52 weeks, past 120 days is collected for analysis from bseindia.com.

- We referred newspaper articles from Business Standard, Economic Times and Business Line for Report and company related news which can be useful for Factors that can influence analysis and volatility in Market.

- We referred company's official website for company profile, line of business, Director's view, Shareholder reports, upcoming events, management information etc.

- The method and Statistical tools are used as per Standard Mathematic and Accounting Guidelines.

- We referred well known Techniques of Analysis for the Study of this particular subject and the prediction and calculations are done in details.
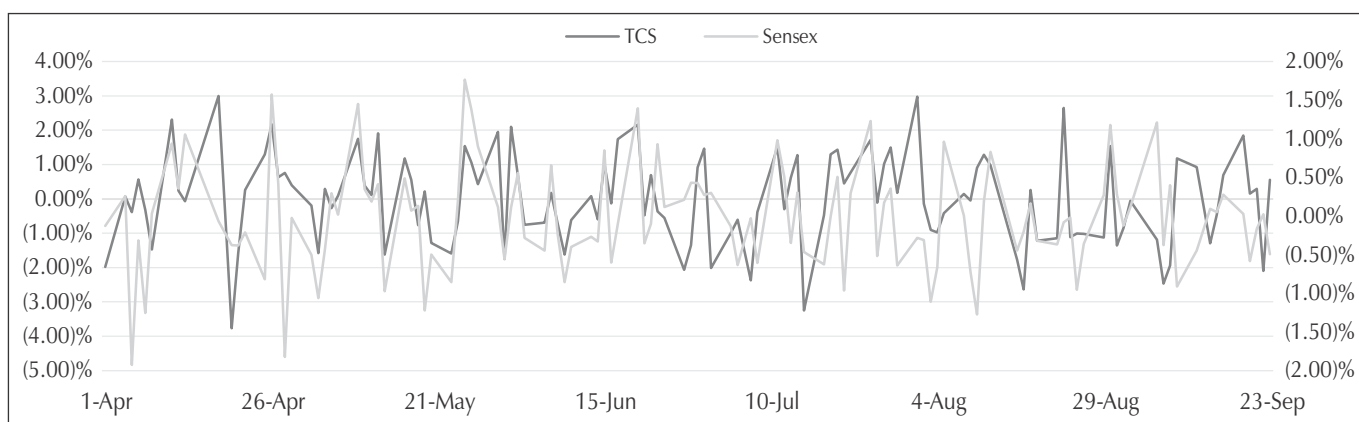
Industry and Company Profile (Returns)

BSE SENSEX
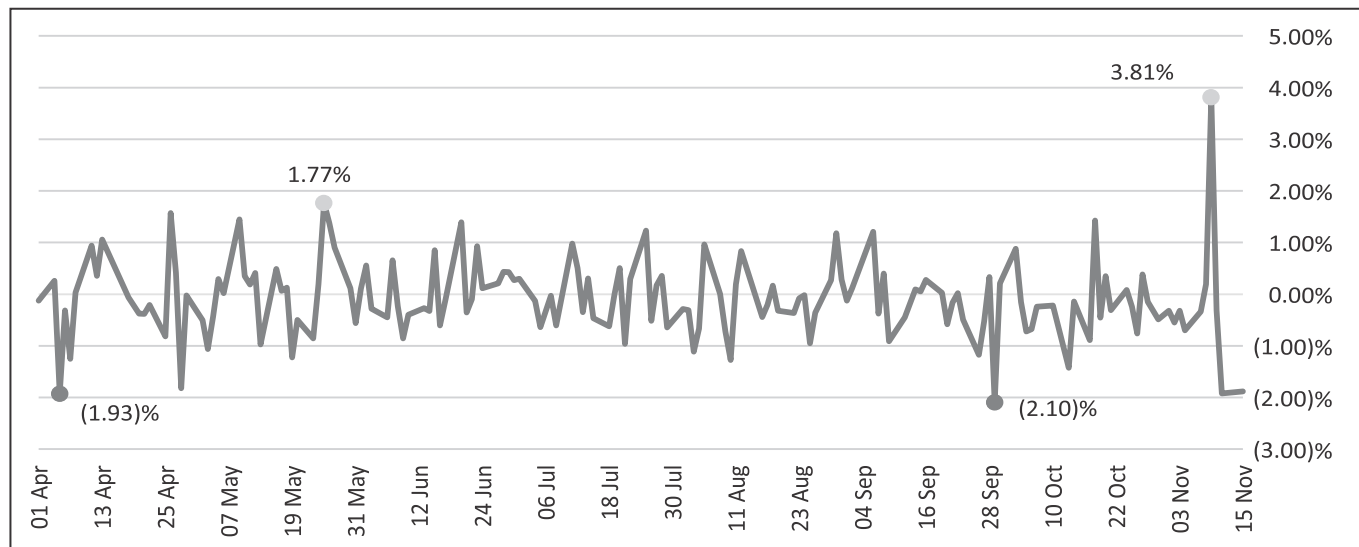
Date	Open	High	Low	Close	Returns
05-Apr-16	25372.44	25372.44	24837.51	24883.59	(1.93)%
25-May-16	25432.1	25897.87	25430.59	25881.17	1.77%
29-Sep-16	28423.14	28475.57	27719.92	27827.53	(2.10)%
09-Nov-16	26251.38	27397.38	25902.45	27252.53	3.81%

Tata Consultancy Services Ltd. Sensex vs. TCS

Date	Open	High	Low	Close	Returns
18-Apr-16	2449	2553.15	2449	2522.4	3.00%
20-Apr-16	2548	2548	2442	2451.9	(3.77)%

Calculation

	β
Slope Formula	0.66
Covariance Formula	0.66
Correlation Formula	0.66
Coefficient of Correlation	0.33
Coefficient of Determination (R square)	11.4%
Variance	0.00
SD	0.01

11% of variation of is explained by Sensex remaining 89 % is depends on Various Facts

Infosys Ltd. Sensex vs. Infosys
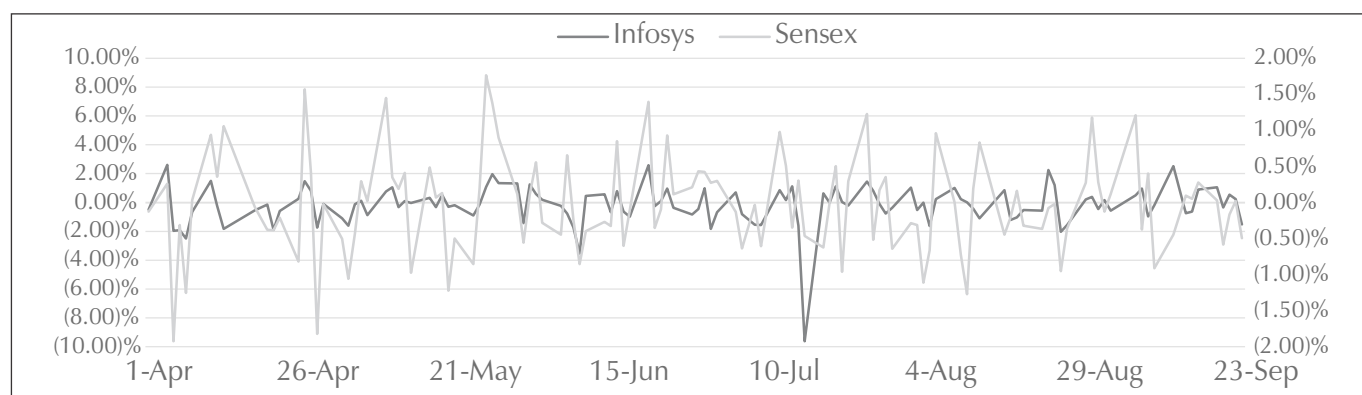
Date	Open	High	Low	Close	Returns
18-Apr -16	2449	2553.15	2449	2522.4	3.00%
20-Apr -16	2548	2548	2442	2451.9	(3.77)%

Calculation

	β
Slope Formula	0.81
Covariance Formula	0.81
Correlation Formula	0.39
Coefficient of Correlation	0.15
Coefficient of Determination (R square)	15%
Variance	0.01
SD	0.81

15% of variation of is explained by Sensex, remaining 85 % is depends on Various Facts

Wipro Ltd. Sensex vs. Wipro
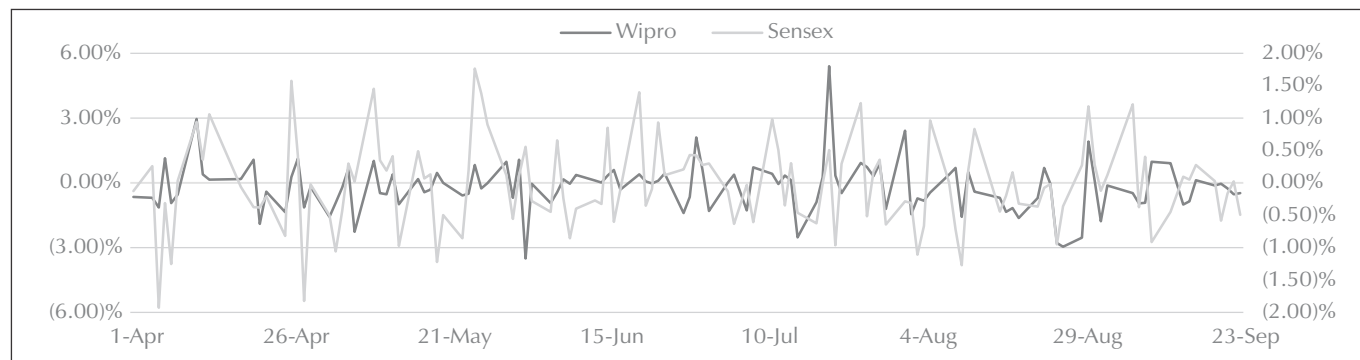
Date	Open	High	Low	Close	Returns
02-Jun-16	559.9	559.9	534.7	540.25	(3.51)%
20-Jul-16	511	542	511	538.6	5.40%

Calculation

	β
Slope Formula	0.49
Covariance Formula	0.49
Correlation Formula	0.49
Coefficient of Correlation	0.29
Coefficient of Determination (R square)	9.0%
Variance	0.00
SD	0.00

9% of variation of is explained by Sensex, remaining 91 % is depends on Various Facts

HDFC Bank Ltd. Sensex vs. HDFC Bank
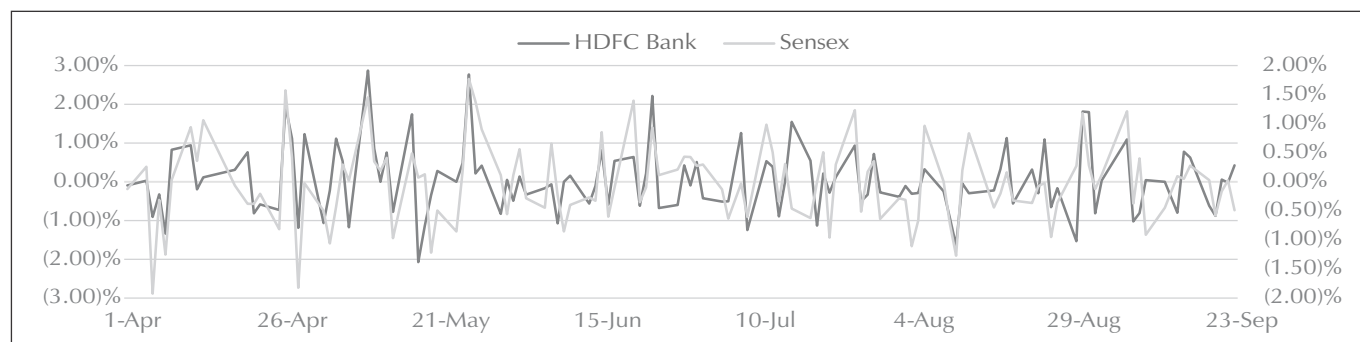
Date	Open	High	Low	Close	Returns
09-May 16	1110.05	1144.8	1110.05	1141.85	2.86%
17-May-16	1178	1178	1151.4	1153.6	(2.07)%

Calculation

	β
Slope Formula	0.73
Covariance Formula	0.73
Correlation Formula	0.73
Coefficient of Correlation	0.56
Coefficient of Determination (R square)	32%
Variance	0.00
SD	0.00

32% of variation of is explained by Sensex, remaining 68 % is depends on Various Facts

State Bank of India Sensex vs. SBI
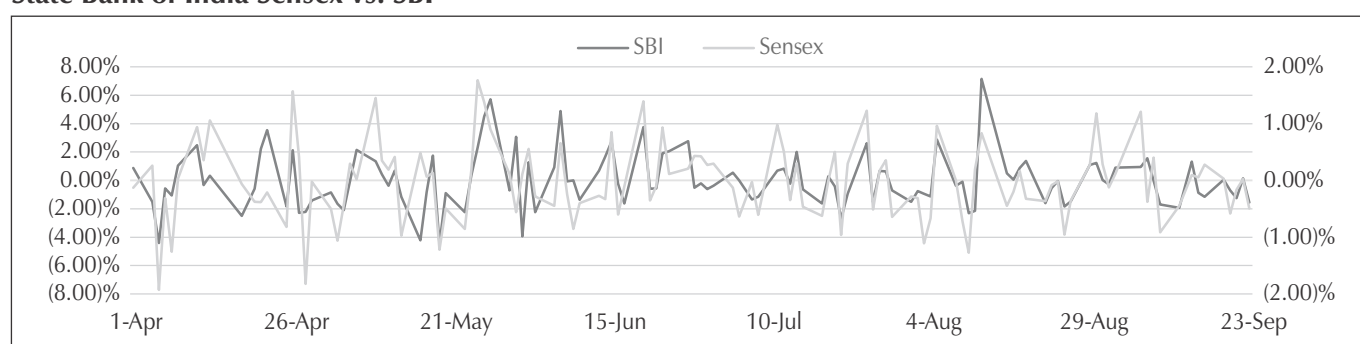
Date	Open	High	Low	Close	Returns
19-May-16	181	181	172.05	172.9	(4.48)%
12-Aug 16	226.95	247.7	224.4	243.2	7.16%

Calculation

	β
Slope Formula	1.69
Covariance Formula	1.69
Correlation Formula	1.69
Coefficient of Correlation	0.59
Coefficient of Determination (R square)	35%
Variance	0.00
SD	0.01

35% of variation of is explained by Sensex, remaining 65% is depends on Various Facts

ICICI Bank Ltd. Sensex vs. ICICI Bank
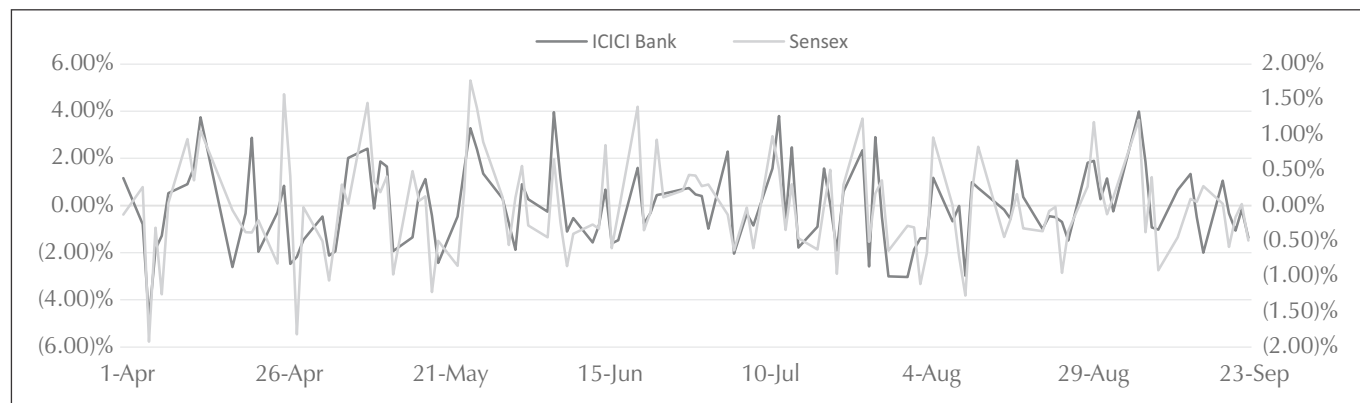
Date	Open	High	Low	Close	Returns
05-Apr-16	236.95	237.4	224.5	225.5	(4.83)%
06-Sep-16	262	273.2	262	272.45	3.99%

Calculation

	β
Slope Formula	1.62
Covariance Formula	1.62
Correlation Formula	1.62
Coefficient of Correlation	0.65
Coefficient of Determination (R square)	43%
Variance	0.00
SD	0.01

43% of variation of is explained by Sensex, remaining 57 % is depends on Various Facts

Internal and External Factors That Explains Volatility

When market is volatile, market price is not the only factor that affects the movement of securities. Any news related to the company can change investors mind, the biasness and human tendency to make errors can also leads to Volatility of particular Stock.

Here are some facts that show, how these above six companies were facing their Share Market price.

Similarly, here, we will see similar Trend in all the companies that when company announces their report or Quarter, YoY, QoQ no matter with positive Results or Negative it will affect their Share Market Price. Mostly the positive result leads to higher returns but it gives high expectations to investor which causes the Drop in the next result.

Tata Consultancy Services
Highest Returns on 18th April, 2016
Tata Consultancy Services Stock on BSE Sensex went up in several ways, High Volume in terms of Trade, High Demand and Very Less Supply, Beta was high compared to other companies in the same sector and in comparison to BSE Sensex itself.

- TCS to Announce Q4 Results.
- Investor demanded more stock in order to maximize their profit.
- Increase in Demand increased Number of Shares traded, Market went up.
- Investor's Biased behavior and Representative Biased played big role in it, TCS's Past Performance was high due to which Demand was created in Secondary Market.
- TCS Announces result after Market closure, and Factsheet shows less Profit compared to Last YoY and QoQ Performance.

Lowest Returns on 20th April, 2016
Tata Consultancy Services Stock on BSE Sensex went down by several ways, Moderate Volume in terms of Trade, Less Demand and Very High Supply, Beta was at par compared to Sensex but Lower than Other companies in the same sector.
- Higher Expectation
- Regret of Commission Effect on Investor.
- 4Q 2016 Report Results explained 3% less profit than previous performance in Terms of Sales, and EPS went down which changed investors mind.
- Irrational Bias behavior played Major Role.

Infosys
Highest Returns on 04th April, 2016
Infosys Stock on BSE Sensex Went up due to many reasons,
- Starting with two Announcement of their Q4 Results.

- ADR and Foreign Market played major role
- Industry-wise Bullish Market and Growth attracted new investor by Announced Profit Margin and Net Worth.

Lowest Returns on 15th July, 2016
- Higher Expectation
- ADR Fluctuation
- Q1 Fiscal Report Announced
- GDP Fluctuation and New Foreign Policies
- Foreign Currency Fluctuations

Wipro
Market Drops on 2nd June, 2016
Wipro Drops to 3.51% Announcing Q1 Consolidated Net Dropped to 8%
- Major Risk Aversion Investors Stepped out
- Loss in Previous Quarter affected current Market price (on 2nd June).

Highest Returns on 20th July, 2016
- Highest Return of 5.40%
- Announcement of Q2 Results with recovered Loss and Improved Net consolidations.
- Investors took opportunity of gaining profit when market was aggressive.

HDFC
Market went high on 9th May and again went down on19th May, 2016
- Went up by 2.80% with announcement of higher Interest Income, Net Revenue, Net Profit, Total Deposits etc.
- Went Down with Announcement of 22nd AGM Invites and Management Change.

SBI
Lowest Market Returns on 19th May 2016 Due to
- Merger of five associate banks with the State Bank of India (SBI) is a government-mandated

move to set the bank consolidation into motion.

- SBI's bad loans burden will deepen with five associates' merger.
- Strike announcement due to Merger and Union.

Market moved up on 12th August, 2016

- With announcement of "The nation's biggest lender by assets, reported a 32 percent slide in quarterly net profit on Friday, although a rise in bad loans was smaller-than-expected."
- Central Bank of India (CBI.NS), the ninth-biggest state lender, by comparison, posted a more than 10 percent sequential rise in gross bad loans in April-June.
- Competition Played Major Role.

ICICI

Lowest Market Returns on 05th April due to

- Top mutual fund houses were seen dumping private lenders such as Axis Bank and ICICI Bank, while bargain hunting was seen on the counters of Coal India, Cipla and IPCA Labs, among others.
- Top mutual fund house HDFC MF, which has an equity AUM of about Rs 50,500 crore, added the stocks of IndusInd Bank, Maruti Suzuki India and NHPC, while reducing stakes in firms like Infosys, Kotak Mahindra Bank and Bajaj Finance Market moved up on 12th August, 2016 (Competition).

Moved up with recovered loss to 3.99% returns on 06th September 2016

- Announced as Best Mutual Fund with High NAV and CAGR upto 40.22%
- ICICI Prudential MF, the second largest MF by equity exposure, increased its stake in Coal India, HDFC and Maruti Suzuki India, while

offloading shares of Lupin, Infosys and M&M Financial Service.

The Trends, Similarities and Patterns in the Activities and Movements of the "Indian Stock Market"

- Announcing Quarter Report
- P&L Statement and AGM Announcement
- Foreign Market
- Currency Fluctuation
- Bullish Market and Industry Growth
- Any Industry related IPO
- Rational Decision in irrational growth,
- Wrong Judgment of Investor in Aggressive Market, Leads them to loss
- Biased Behavior and Traits
  1. Regret of Commission/Omission
  2. Representative Effect
  3. Herd Mentality

  E.g. Mostly companies are coming up with an IPO in Growing Industry.
- Stock prices moves as per demand supply chain.
- No. of Shares Traded.
- High and Low Volume Prices etc.

Findings and Interpretations

Moving Average Method
Estimated Market Price
Using 10-DMA, 30-DMA, 50-DMA, 100-DMA and 200 DMA Average Moving Price Based on Daily Market Analysis we can predict the Future Value of Market Price Based on past 10 days, 30 days, 50 days, 100 days and 200 days.

Days can vary, Investor can take his/her own choice of numbers but it should be more than or equal to 10.
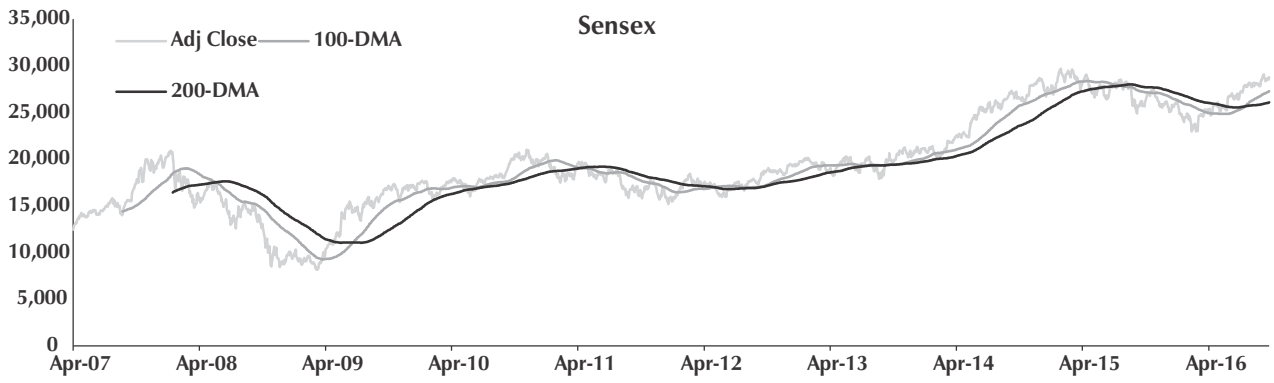
Here, chart 100 DMA and 200 DMA are used to predict Market and as we can see the trend line in Yellow and Red is somewhere exact and somewhere near to actual price.

Same way TCS, Infosys, Wipro, HDFC Bank, SBI, and ICICI Bank were observed on their trend and the trend line that suits best is only 100 DMA and 200 DMA
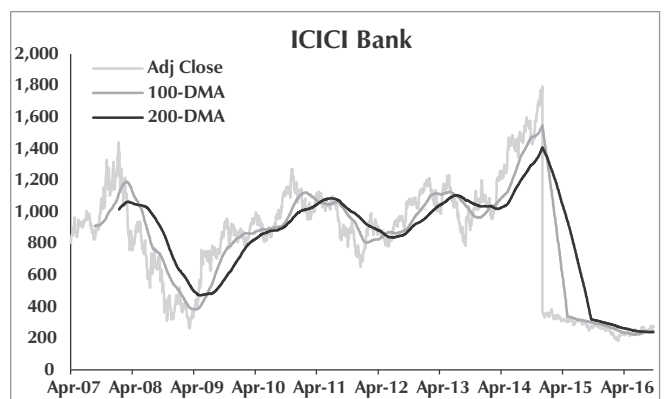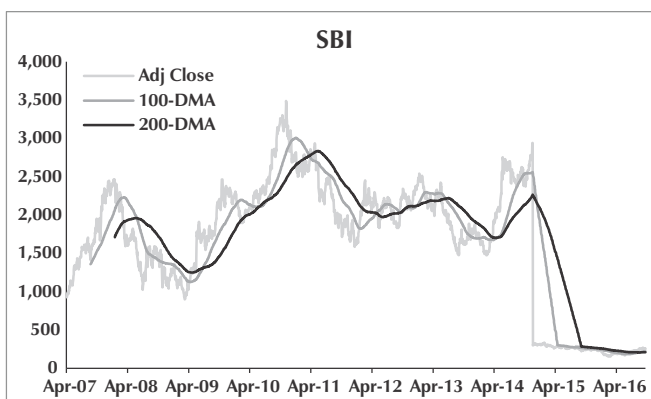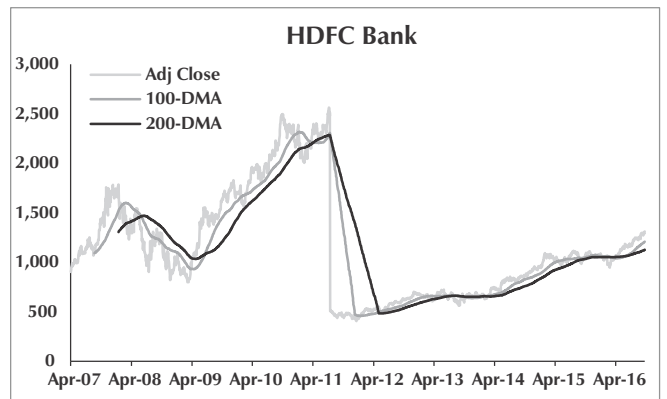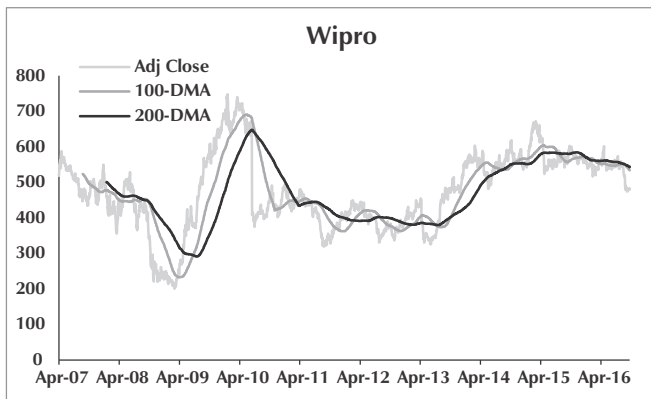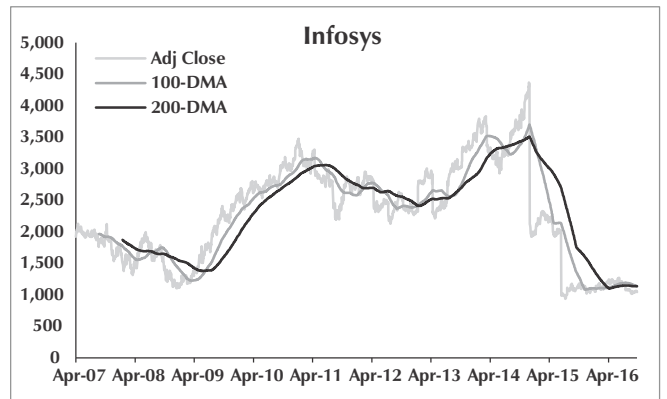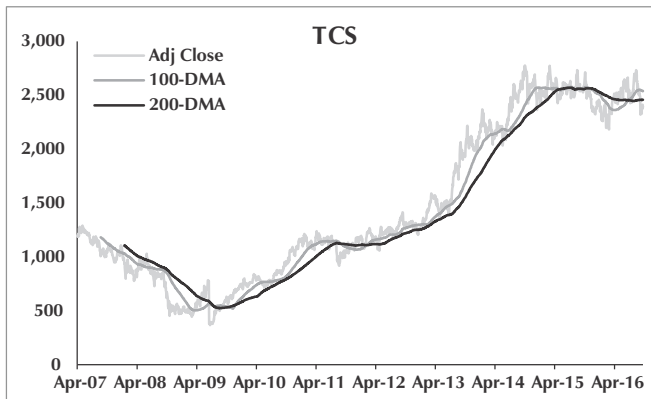
Limitation

- We have selected only IT Companies and Banking Companies based on their Capitalization

- Considered only companies listed in Bombay Stock Exchange.

- Generalization of findings and conclusions of the study are likely to be disputed as security prices are determined by many factors. However, the findings and conclusions drawn upon the secondary data collected are expected to throw some light on volatility of share prices during public issues.

- Data not taken based on volume and no. of shares traded for other SENSEX listed stocks

- Other index also can be used and this would have resulted with detailed analysis on volatility.

- Financial and Mutual Funds companies were not taken due to time restriction.

- Limited to 6 Companies out of 30 Stocks, Time Constraints (Data Taken only for 100 days).

Recommendation

IT Sector

Infosys is recommended if Investor wishes to invest in IT and has Long Term investment plan, Risk Taker can keep up with Wipro as currently Wipro has Less PE and Less Returns compared to TCS and Infosys

Study shows that Infosys has little better movement in Sensex compared to Wipro and Other IT Companies except TCS. TCS is good Competitor to Infosys and have equivalent EPS

and PE Multiple. 15% variations in Infosys is due to BSE Sensex and only 85% is depend on external factors, where in, TCS and Wipro has more variation by internal factors

Banking Sector

Banking sector has tough competition between HDFC and ICICI. Risk Averse Investor may choose SBI as its Scheduled Bank as per RBI Regulations and has good Asset ratio but has Very high number of NPAs as compared to HDFC and ICICI that might divert investors mind and investor might have biased behavior for these Risk takers can choose between ICICI and HDFC as both are Non-Scheduled Bank as per RBI regulation and both have high Asset Value but have High NPAs but less in comparison to SBI.

As per RBI Private and Public sectors bank regulation, SBI has backup from RBI as Public Bank, and can be trusted compared to HDFC and ICICI.

Conclusion

Indian Stock Exchange is the one of the fastest growing stock markets in the emerging economics. This thesis has characterized the behavior of Stock volatility at the market industry and firm levels. It was possible to use standard methods, to understand and evaluate the variation of volatility instead of the complex methods that are necessary when volatility is treated as an unobservable variable.

"IT sectors are more volatile and their Investor exhibits Biased Behavior traits with regards to their Internal Movements, where as in the Banking Sector then, External Factors do not show much volatility even when Inflation or other factors affect the market, investors are open to change"

- There are number of factors, which have an

influence on the price movements. The volatility depends on the internal and external factors. Some of them are controllable and others are non-controllable.

i IT sector has more influence on volatility compared to external factors, IT sectors securities movements from exchange and Equity demand is only 8% to 15%(Wipro: 9%, TCS: 11% and Infosys 15%)remaining 85% to 92% depends on Internal and external factors.

ii Banking sector has Less influence on volatility compared to external factors, Banking sectors securities movements from exchange and Equity demand is 30% to 45% (HDFC: 32%, SBI: 35% and ICICI 45%) remaining 55% to 60% depends on internal and external factors.

- Investors who are risk takers will see their internal and external volatility and will go for Wipro and HDFC Bank. And for Risk Averse Investor can invest in Banking Sector as their Beta (SBI: 1.69 and ICICI:1.62) is preferable.

i. TCS and Infosys have tough competition in Market, as results shows their coefficient of correlation is 0.33 and 0.39 respectively. Whereas, SBI and ICICI are on 0.59 and 0.56 respectively, but not in competition as their Banking regulation differs from each other.

- Internal and external volatility
i. Internal volatility is when Market price of Equity fluctuates due to any decision that companies take and that results in change in Market Price.
    - *For Example, Change in Management Policies, Report and Result Declaration,*

New Product launch, Growth in sector etc.

ii. External volatility is when companies are doing their regular business and nothing special but due to some other factors their Market value changes that is volatility by external factors
    - *For example, due to Change in Government Policy, Inflation, and growth in other sector etc.*

- Trends show that, Indian Markets have different trends during different periods, the data shows that market moves up and down during YoY and QoQ declaration which has 1 day before and 1 day after effects, 5 days before and after effects.

i. In this study we found that all six companies, High returns and Low Returns were only before and after their reports results.

ii. TCS with highest MPS of 2522.40 with 3% change in high returns with Beta of 0.66 on the day when the Results were announced but after 2 days when results were declared it went down to 2451.9 with 3.77% change in returns.

- A Positive Result of Analysis Method 100 DMA and 200 DMA can be used for Investment decision and also can be used to understand variation from sensex if particular stock is more volatile due to variation derived from sensex not the internal, external or any other factors.

- Variations can be tracked using Daily Moving Average method with number of days for analysis as tool, which results 80% to 85% accuracy in price when it is used for more than

or equal to 200 days, results may vary due to external and internal factors.

- Internal and external factors plays major role in BSE SENSEX 30 as investors have rational and irrational decisions that can lead to high volatile market.

Scope of Further Studies
- The Stocks can be Analyzed with more companies, different sectors.

- The Scripts in This Study are analyzed only for 120 days; it can be analyzed further by taking more number of days.

- The Daily Moving Average Method can be used for further study in order to predict future values with more number of daysup to 365 days as a 365 DMA.

- In this study, companies were selected based on high capitalization value, it can be analyzed and studied further by taking similar sector based on number of shares traded, total number of trades etc.

Acknowledgement:
I would like to express my gratitude towards my project guide Dr. Sandeep Poddar from SPDT Lions Juhu College of Commerce for his kind encouragement and insight into the various aspects which helped me in completion of this project.

Brand Choice Preferences by Consumer in FMCG Products (Deodorants) among Working Professionals in Mumbai

- Mr. Leslie Pereira
MMM (Third Year)

Introduction

FMCG products are those that are sold quickly and at relatively low cost. FMCG have short life either as a result of high consumer demand or because the product deteriorates rapidly.

The Fast Moving Consumer Goods (FMCG) sector is the key contributor of the Indian economy. This fourth largest sector of Indian economy provides employment to around 3 million people which accounts for approximately 5% of the total factory employment in the country. These products are daily consumed by each and every strata of the society irrespective of social class, income group, age group etc. FMCG sector is more lucrative because of low penetration levels, well established distribution network, low operating cost, lower per capita consumption, large consumer base and simple manufacturing processes for most of products resulting in fairly low capital investments. The industry is highly competitive due to presence of multinational companies, domestic companies and unorganized sector.

These products includes soaps, beverages, milk, soft drinks, personal care products and many more. we see a lot of trend changes among these products among various group of people depending on various criteria like Demographics, Economic, Geographic, Socio-Economics, and Psychographic etc. Among them we see major trend changes in personal care products like soaps, deodorants and razors.

In this study we would be understanding the variation in the brand choice of one of these product i.e deodorant. Deodorants are very much common among the youth and also slowly becoming a trend among the other age group.

The study would convey or tell us about the brand choice preferred by these age group and what are the quality and factor they see in the brand they use. This study would also bring out the characteristic that individuals would like to see in their product that they use, thus this would help the companies to understand their change in the deodorant preference for their brand.

Scented oils, perfumes and other fragrances have been adorned by people since early civilization. Today, fragrances can be found all around, from scented candles, to all our favourite bath and body products. There are numerous reasons why people wear deodorants, but ultimately it boils down to the fact that they make us feel happy. The reason we feel happy is heavily dependent on the individual, but can range from the presence of pheromones, memories the scent invokes, a feeling of escape and the ability to show individuality through fragrance. Today every individual is becoming aware about the fact that besides having the experience and the knowledge, it is also important for them to be presentable towards the people around them. Men and women use many products from various brands to groom themselves and stand out as presentable individuals in the

environment around. These products include deodorants, face wash, facial creams and other such personal care products from Brands like HUL, P&G, Godrej and many others. Given the wide choice of deodorants available in the market today, a person can truly be original in what they decide to fragrance themselves with. They can change the way they smell to match their mood the occasion or anything they like. The ability to have this kind of individuality through scent directly influences our confidence and self-esteem. The ability of a fragrance to make us feel like desired beings, connect us with memories, help us to escape and help us show individuality is phenomenal. This boost of positivity in our everyday life increases vitality, improves our drive to accomplish and increases our resistance to failure. A deodorant is a substance applied to the body to prevent body odour caused by the bacterial breakdown of perspiration in armpits, feet, and other areas of the body. A subgroup of deodorants, antiperspirants, affect odour as well as prevent sweating by affecting sweat glands. Antiperspirants are typically applied to the underarms, while deodorants may also be used on feet and other areas in the form of body sprays. In the United States, the Food and Drug Administration classifies and regulates most deodorants as cosmetics, but classifies antiperspirants as over-the-counter drugs.

Need for the Study

The wide variety of deodorant brands in the market influences and has a major effect on the brand choice behaviour of a consumer, making the consumer behaviour a complex job. Thus, we need to study the behaviour pattern of every consumer for brand choice of deodorants.

Literature Review

Use of multiple fragrances drives deodorant sales.

Usage of different fragrances by consumers for every occasion appears to be driving growth and penetration in the Rs. 2,300-crore deodorant market in India. This has enabled multiple brand/product entry into heavy-user households. Around 10% of deodorant consumers today are said to be the heavy users who buy multiple brands or multiple variants of a single brand for different occasions. These consumers are said to be segregating their usage of deodorants, depending on whether the fragrance is apt for a usual day at office or an evening dinner or an informal meet. The trend is unique to deodorants because in other mainline FMCG categories, brand loyalty is high and consumers generally buy a single brand, whether it is a detergent or toothpaste. In deodorants, consumers are floating within a repertoire of brands, leading to the category clocking 20-25% annual growth, with some segments within the category growing at 30-35%. On the other hand, the FMCG market as a whole is growing at an average of 9%."We are seeing a trend of consumers buying multiple fragrances to suit the occasion. Consumers generally keep two or three options in fragrances and this is leading to rapid growth in the category," said Darshan Patel, promoter of Vini Cosmetics, which owns the leading deodorant brand Fogg. A qualitative research carried out by McNroe Consumer Products, the maker of Wild Stone, which is the third largest brand of deodorants in India, has observed that Delhi and particularly the NCR region has the highest segment of heavy users and the region contributes 14% to the overall deodorant market. "That's where the trend comes out about a section of consumers buying multiple packs. Interestingly, 70% of deodorant consumers are men. It's the heavy-user segment that normally tends to adopt multiple fragrances for multiple occasions," said Sanjoy Sen, COO, McNroe Consumer Products.

Given this insight into consumer behaviour, six variants have been launched under Wild Stone. Fogg, too, has a specific variant for consumers who wish to wear a different fragrance for an evening out.

Also addressing the multiple consumer preferences in fragrances is ITC's Engage which has not only launched six variants but added ten more fragrance profiles for men and women. Engage has emerged as the second largest brand in the deodorant market, both in volume as well as value. No other FMCG category has as many variants like in deodorants.

"Evolving consumer preferences, lifestyle changes and increase in personal disposable incomes are some of the percentage attributes that have led to significant growth in the deodorant category. The aspirational urban youth is increasingly looking for grooming choices to indulge in and deodorants are becoming an integral lifestyle product," said Nilanjan Mukherjee, head of marketing, personal care products business, ITC.

The industry expects deodorant penetration to increase substantially from the current levels of 16% metro penetration and about 10% all-India urban penetration. "The advertising spend on deodorants is close to Rs 400 crore. Given that kind of messaging taking place, the category is bound to expand," said Sen.

Got Sweat? Use of Deodorant and Antiperspirants Is Just a Social Construct
According to Dr. Joshua Zeichner, a director of cosmetic and clinical research at Mount Sinai Hospital, the use of these products is more a function of social norms rather than necessity. He also said deodorants and antiperspirants don't actually target the underlying cause of sweat and odour — they just mask it.

Do men and women need different deodorants?
Some advertisements feature men who can't get a date because of white marks on their shirts and women who can't catch the bouquet at a wedding because lifting their arms would spell certain odour disaster.

So there you stand in the deodorant aisle, hoping to find a product that will get the job done without breaking the budget. Your eyes are drawn to tags advertising the deodorants that are on sale, but all of the discounted deodorants claim to work for the opposite gender. If you're a guy, do you suck it up and pay extra for a product meant for other men, or do you walk around with deodorant designed for ladies?

Men's deodorants are not stronger or in any other way different than women's deodorants. In the early 1990s, unisex deodorants made up about one-third of the marketplace, but today, they only account for 10 percent of sales [source: Howard]. People are more likely to buy things they feel are targeted directly toward them, another reason why you may see deodorant marketed towards teens.

Objectives
The objective of the proposal is:-

• To find out the usage pattern amongst youth

• To find out their perception about a deodorant brand in terms of its look, design, appeal and communication

• To find out the usage pattern amongst youth and the importance of a deodorant in their daily life & reason for switching brands

• To find what factors affect the buying decision

Research Methodology
Research Question(s):
- This survey would bring out the various factors that would influence the Brand Choice of a Consumer.

- How do they perceive a Particular Deodorant Brand?

- Why would they choose a particular Deodorant Brand?

Hypothesis
Null Hypothesis:
There is no significant relationship between the age group of the respondents and their shop frequency.

Alternate Hypothesis:
There is a significant relationship between the age group of the respondents and their shop frequency.

Null Hypothesis:
There is no significant difference between mean scores of the fragrance and its freshing effect.

Alternate Hypothesis:
There is a significant difference between mean scores of the fragrance and its freshing effect.

Null Hypothesis:
There is no significant relationship between the age group of the respondents and brand switching periodicity.

Alternate Hypothesis:
There is no significant relationship between the age group of the respondents and brand switching periodicity.

Research Design:
The Research design used is descriptive in nature
Sample:
Population/Universe:
Population is from the corporate world and is in the age range from 21-51 years and above.

Sample Size: 112 Participants

Sampling Technique: Convenient Sampling

Data Analysis
Routine Test
Chi-Square Test
Hypothesis Test: (Hypothesis 1)
Null Hypothesis:
There is no significant relationship between the age group of the respondents and their shop frequency.

Alternate Hypothesis
There is a significant relationship between the age group of the respondents and their shop frequency.

Table 1

Observed Data

	Frequency (SHOP)	Every Month	Once in Three Month	Twice in a Month	Once in Six Month	Other	
Age Group	–	1	2	3	4	5	–
21-25 Years	1	16	15	5	7	2	45
26-30 Years	2	17	12	3	7	4	43
31-35 Years	3	4	2	4	3	0	13
36-40 Years	4	1	2	0	3	0	6
41-50 Years	5	0	3	1	0	0	4
51 & above	6	0	0	0	1	0	1
Total		38	34	13	21	6	112

Table 2

Expected Data

	Frequ-ency (SHOP)	Every Month	Once in Three Month	Twice in a Month	Once in Six Month	Other	
Age Group	–	1	2	3	4	5	–
21-25 Years	1	15.26	13.66	5.22	8.43	2.41	1
26-30 Years	2	14.58	13.05	4.99	8.06	2.30	2
31-35 Years	3	4.41	3.94	1.50	2.43	0.69	3
36-40 Years	4	2.03	1.82	0.69	1.12	0.32	4
41-50 Years	5	1.35	1.21	0.46	0.75	0.21	5
51 & above	6	0.33	0.30	0.11	0.18	0.05	6

P Value	0.25	Statistically Insignificant

Alpha Value: 0.05

P Value: 0.25

Result:
As the P value is greater than the alpha, we accept the Null Hypothesis

Conclusion:
There is no significant relationship between the age group of the respondents and their shop frequency.

Statistical Test
t-Test: (Hypothesis 2)
Null Hypothesis:
There is no significant difference between mean scores of the fragrance and its refreshing effect.

Alternate Hypothesis
There is a significant difference between mean scores of the fragrance and its refreshing effect.

Table 3

t-Test: Paired Two Sample for Means		
	3	3
Mean	4.23	3.84
Variance	1.09	0.94
Observations	111	111
Pearson Correlation	0.55	
Hypothesized Mean Difference	0	
Df	110	
t Stat	4.27	
P(T<=t) one-tail	0.00	
t Critical one-tail	1.65	
P(T<=t) two-tail	0.00	
T Critical two-tail	**1.98**	

P Value = 0.00 which is statistically significant

Result:
- Here we come to know that variables age group and shop frequency are moderately correlated to each other by the use of pearson correlation test.

- Also we understand that P Value (0.00) is less than the Alpha value (0.05)
  So we accept the Alternate Hypothesis

Conclusion:
There is a significant difference between mean scores of the fragrance and its refreshing effect.

Routine Test
Chi-Square Test
Hypothesis 3:
Null Hypothesis:
There is no significant relationship between the age group of the respondents and brand switching periodicity.

Alternate Hypothesis

There is a significant relationship between the age group of the respondents and brand switching periodicity.

Table 4

Observed Data

	Brand Switch	Every Month	Never	Once in 3 Month	Once in Six Month	Other	When new Product is Launched	
Age Group	1	3	10	12	8	3	9	**45**
21-25 Years	2	3	10	10	10	4	6	**43**
26-30 Years	3	0	4	2	0	2	5	**13**
31-35 Years	4	0	2	0	1	0	2	**5**
36-40 Years	5	0	1	1	1	0	2	**5**
41-50 Years	6	0	0	0	1	0	0	**1**
51 & above		6	27	25	21	9	24	**112**
		1	3	10	12	8	3	9	45

Table 5

Observed Data

	Brand Switch	Every Month	Never	Once in 3 Month	Once in Six Month	Other	When new Product is Launched
Age Group		1	2	3	4	5	6
21-25 Years	1	2.41	10.84	10.04	8.43	3.61	9.64
26-30 Years	2	2.30	10.36	9.59	8.06	3.45	9.21
31-35 Years	3	0.69	3.13	2.90	2.43	1.04	2.78
36-40 Years	4	0.26	1.20	1.11	0.93	0.40	1.07
41-50 Years	5	0.26	1.20	1.11	0.93	0.40	1.07
51 & above	6	0.05	0.24	0.22	0.18	0.08	0.21

P Value	0.84	which is Statistically Insignificant

Alpha Value: 0.05
P value: 0.84

Result:

As the P value is greater than the Alpha value, so we accept the Null Hypothesis.

Conclusion:

There is no significant relationship between the age group of the respondents and brand switching periodicity.
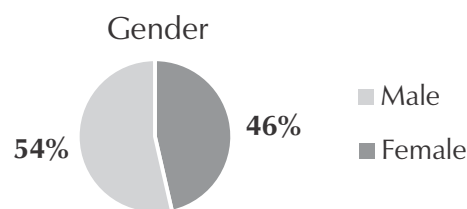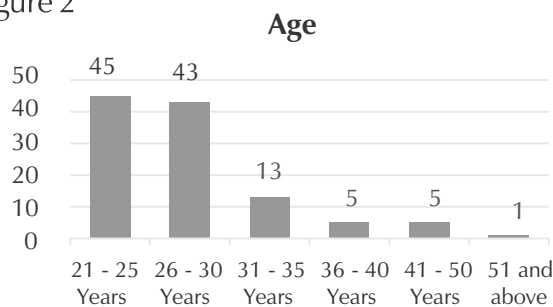
Data Findings and Interpretation

Figure 1

Gender

Male 46%
Female 54%

Figure 2

Age

In Figure 1 and Figure 2 we see that the Most amount of respondents are Males (54%) and the most amount of group that have participated in the survey are in the Age group of 21-25 Years. Thus we understand that use of Deodorants is more prominent among male of the age group 21 – 25 years.

Do you use a Deodorant?

5% 95%

Yes   No
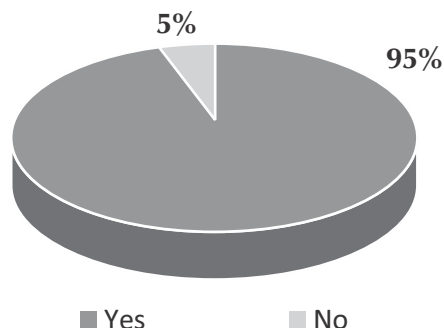
This survey shows us that not all the participants of the survey use deodorants. The consumer have other preferences over using deodorant.
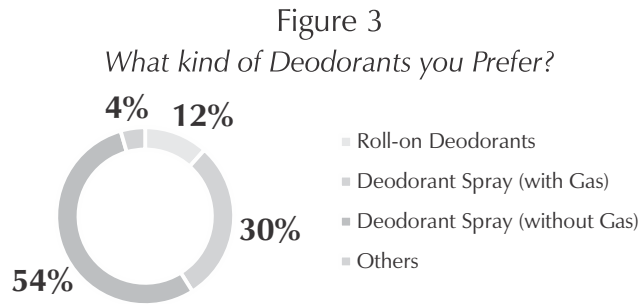
Figure 3
What kind of Deodorants you Prefer?

4% 12%

30%

54%

- Roll-on Deodorants
- Deodorant Spray (with Gas)
- Deodorant Spray (without Gas)
- Others

Figure 3 shows us that **54%** of the Deodorant **users prefer deodorant spray (without gas)** followed by (Deodorant Spray with Gas)

This goes to say that respondent like using deodorant spray as compared to its other variant: Roll-on

Figure 4
How do you know about the Different Brands of Deodorants

4%

24%

54%

13%

5%

- Advertisements
- Word of Mouth
- Trials at the Malls
- Used the Brand once
- Others
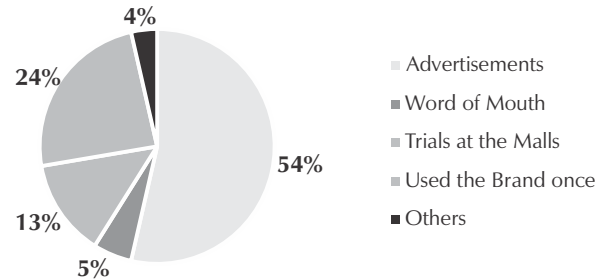
Figure 4 show us that **(54%)** people are aware of the Deodorant Brand mainly by the Advertisements on the TV/Newspaper/ Magazines etc., while some get to know at the Malls or other Shopping Areas

This show that how Media plays an important role in the Promotion of the Deodorant Brands. Thus Deodorant Companies invest most over such Medium to promote their Brands.

Figure 5
What kind of Deodorants you Prefer?

Rate the most important qualities you look for in a Deodorant?

	Cost Effective	Brand name	Involvement of chemicals	Controls Sweat	Prevents Body Odor	Trendy
1	9	11	24	8	5	38
2	21	23	17	23	15	22
3	36	29	22	33	34	22
4	18	27	15	22	16	17
5	28	22	34	26	42	13
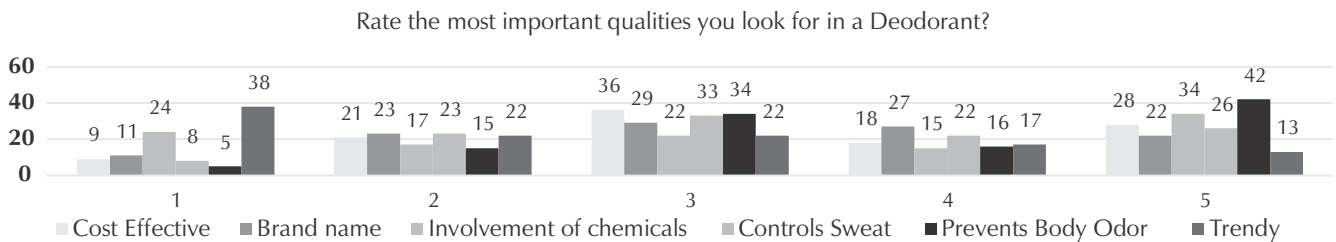
In Figure 5 we see that the respondents felt that the Price, Brand Name and Controlling Sweat are the qualities that would not make a difference to them, rather qualities like involvement of chemical and controlling body odour would be of high consideration among the respondent. The respondents would not look into the trendy part of the deodorants.

This showcases that people use deodorant that are having less chemical and which can eliminate their body odour.

Figure 6
What will be your preferred price range while choosing your deodorant?

5% 1% 7%

12%

25%

50%

- Below Rs 150
- Rs 150 to Rs 200
- Rs 200 to Rs 250
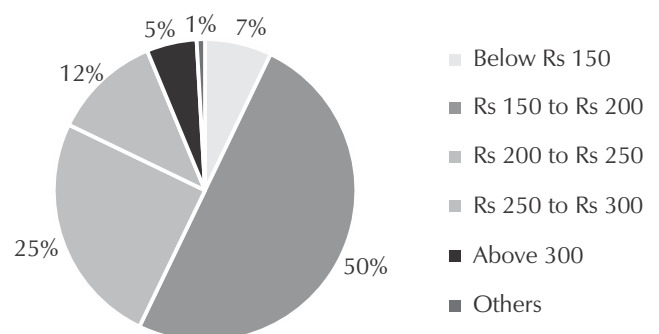- Rs 250 to Rs 300
- Above 300
- Others

Figure 6 tell us that 50% of the respondent would prefer purchasing deodorants that are priced between the price range of Rs. 150 and Rs. 200 followed by the price range of Rs. 200 to Rs. 250 where very few would prefer other price range that are more than Rs. 300.
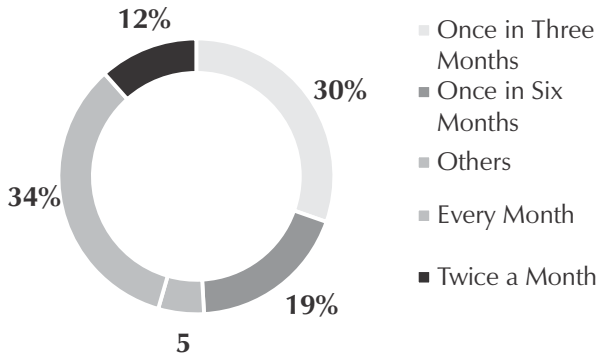
Figure 7
How often you shop for your deodorant?

Figure 7 shows that the 34% of the Respondents purchase or shop for deodorants every month while 30% twice a month.

This shows that there is a very high usage of deodorants among the people thus leading to the Purchase of deodorants once or twice a month.

Kindly rate the below Factors that influences you to apply a Deodorant

Figure 8
It's Fragrance
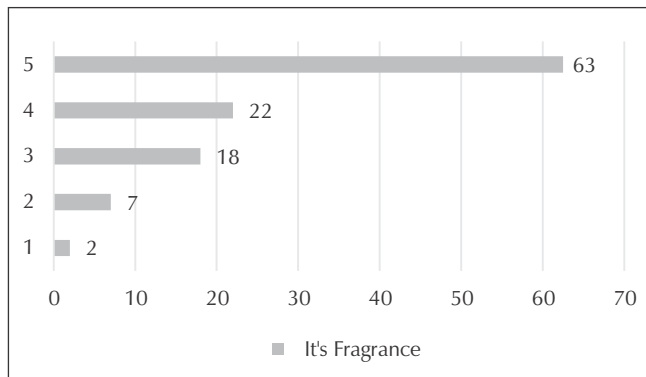
Figure 9
It make me feel confident
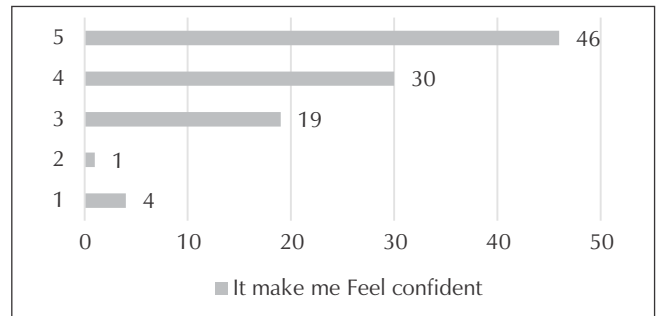
Figure 10
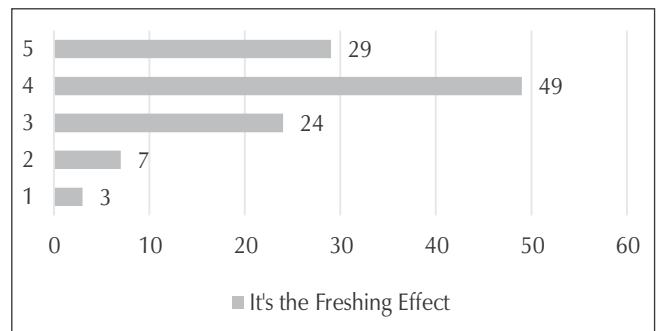*It's the Freshing Effect*

Figure 11
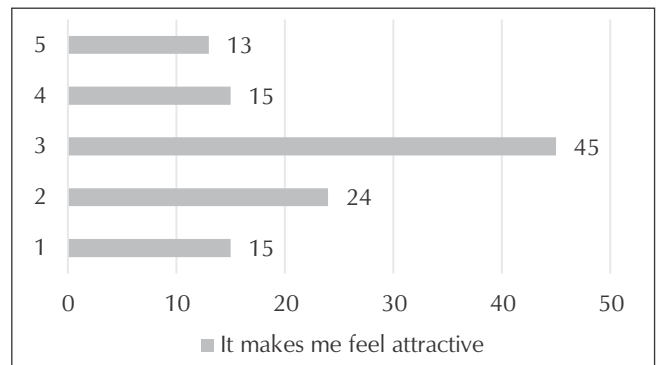*It makes me feel attractive*

Figure 12
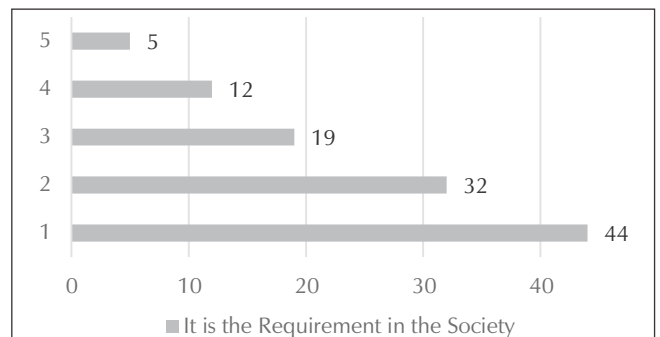*It is the Requirement of the Society*

65

Figure 13

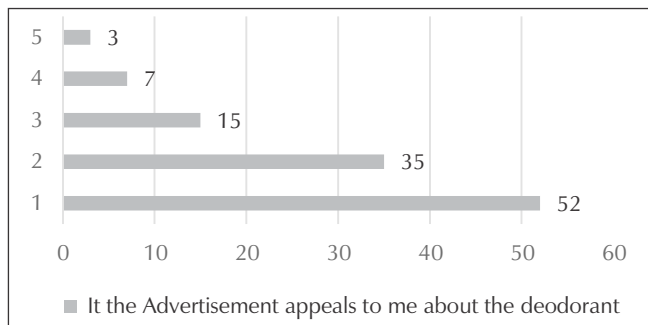*It is the Advertisement that appeals to me about the deodorant*

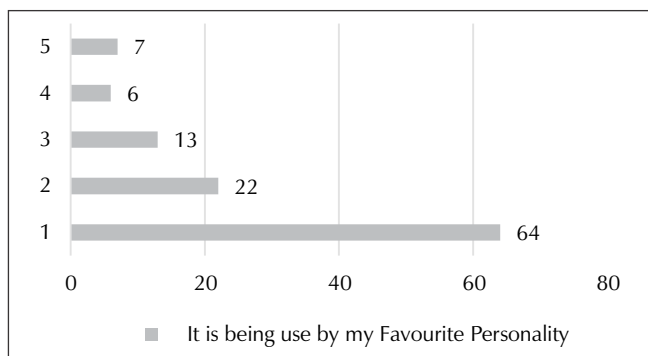Figure 14

It is being used by my Favourite Personality

Figure 8 to Figure 14 conveys that the factors like fragrance and providing a refreshing Feel for the people are influencing factor whereas other factors like being endorsed by famous personalities or making them look attractive or confident are not so much of an influence of which the factor stating the requirement in the society is the least.

This shows that people want their deodorants to be refreshing as they are working individuals and have a fragrance that can eliminate their Body odour.

Do you switch your Brand in spite of Experiencing Satisfaction of using the current Brand? If so what is the periodicity of change?
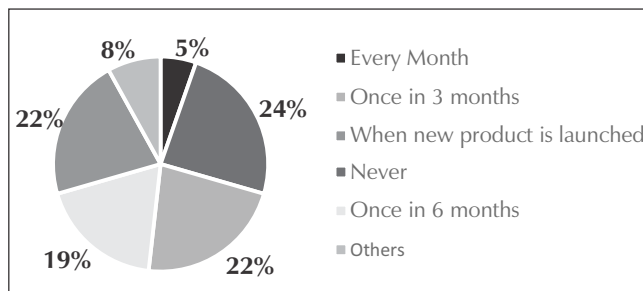
Figure 15

Figure 15 indicates that majority (24%) would never change their deodorant brand and if so then it be either after 3 months (22%) or when a new product is launched (22%).

This shows that people are less likely to change their deodorant brand with some other due to the brand loyalty and the trust built for the brand.

Figure 16

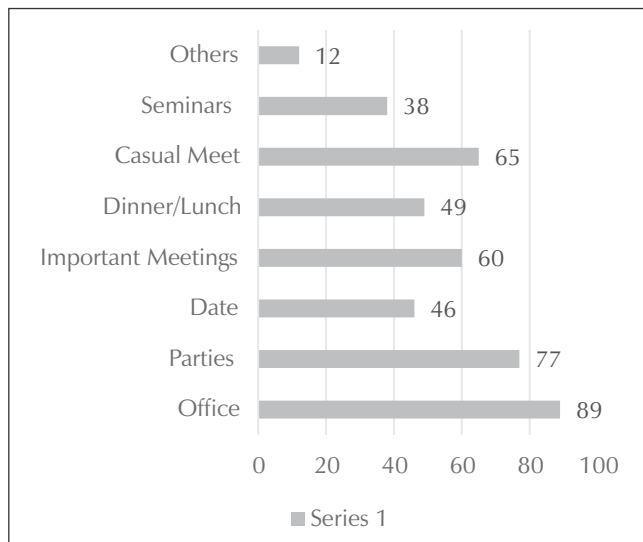*When do you apply a Deodorant the most/Often?*

Figure 16 shows that the people use deodorants while at office, parties or casual meet the most. This indicates that people use deodorants while socializing with other or in the social place.

Simple Frequency Analysis:
From the above data and figures, we see and understand the consumers that make the

maximum use of deodorants are of the age ranging between 21-30 years.

They prefer deodorant sprays without gas the most. The brands are mainly made aware through the advertisement over various mediums.

The consumer prefer deodorants that control Body odour and the Involvement of Chemicals. The consumer prefer the price range Rs. 150 to Rs. 200. The consumer shop for deodorants every month. Factors like fragrance and making an individual feel confident are the more important factors considered by the consumer.

The periodicity of brand switch is in 3months. Most often consumers apply deodorants while going for office.

Routine Analysis: Chi-Square Test

In the Chi-Square Test performed we understand that there can be a change in the brand preferences of the deodorant irrespective of the age of the consumer.

Also we understand that there can be a variation in the purchase pattern of the preferred deodorant brand

t-Test

There is correlation between the fragrances and the refreshing effect of the deodorant.

Limitation

This study is completely based on Convenience Sampling having the population according to my convenience.

The Respondents were not an expert so we cannot have focused group discussions, thus the responses would not form the expert point of view as respondents are primarily from Mumbai. As the number of respondents are not the sample population of the actual population, so we cannot apply the findings on entire population.

As the population is group of working professionals, getting responses is a difficult task to perform as they are busy and don't have time for the any survey.

Future Scope

This study brings out the various decision pattern and the associated criteria for choosing a Brand.

This also brings out the expectation of the consumers and what do they want from their preferred brand products.

This would help companies understand the changing choice pattern and how best would they cater to the needs of the consumers in order to survive the ongoing competition.

This also bring out the awareness of their brand for a company and what needs to be done by the company to promote their brand to consumer so as to be the leaders in this market.

This study also give an idea to the budding companies as what is the current trend in the choice and strategize on these data.

Conclusion

- We can conclude that the consumers, irrespective of this age group, have similar Criteria for purchasing deodorants for them.

- We also see that the younger population have the maximum tendency to change and experiment with a new brand of deodorants.

- The consumers are now aware about the

different brand of deodorants due to the various medium of advertisement.

- As seen in the Literature review, Dr. Joshua Zeichner stated that an individual applies deodorant as a social norms but after the data analysis and test we can conclude that people apply deodorants for their personal satisfaction.

- Due to high usage of the deodorants the deodorant companies are coming up with newer variants of the same brand thus increasing the competition in the consumer market.

- The companies have realised that the taste and preferences of the consumer towards deodorants are changing but on a very slow pace.

Recommendation

The following are the recommendation based on the survey taken:-
- Have a better and mild fragrances
- The companies should find new strategies to manufacture and promote their brand to new market like the rural area as India has it major population in the rural area.

- The promotion should be made in such a way that the consumer in these area should understand the necessity of using the deodorant.

- The deodorants company should manufacture some variants that are easily available and cost effective to the population.

- They should manufacture deodorants that last for longer time and also should manufacture deodorant that are specific to population that perspire a lot like players or people who travel a lot.

- The deodorant companies should manufacture deodorants depending on the skin sensitivity types of various people, having skin problems.

- Companies should manufacture deodorants that can be used medically.

Acknowledgement:

I would like to express my gratitude towards my project guide Dr. G Ramesh from SFIMAR for his kind encouragement and insight into the various aspects which helped me in completion of this project.

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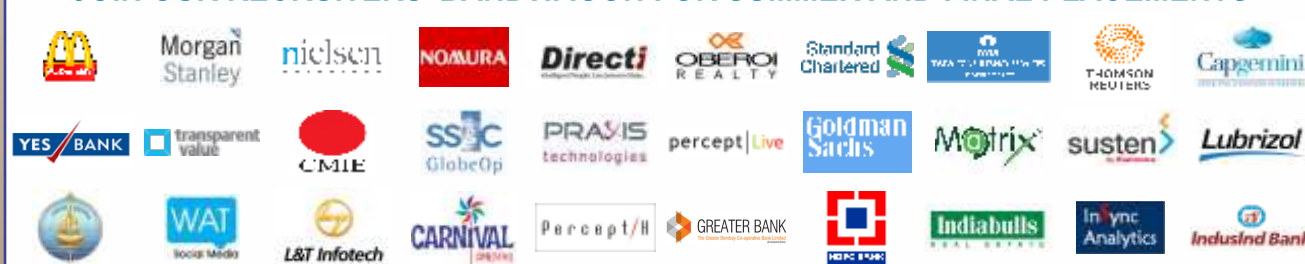**Online Entrance Tests & GD/PI** at Institute level.

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McDonald's | Morgan Stanley | nielsen | NOMURA | Directi | OBEROI REALTY | Standard Chartered | TATA | THOMSON REUTERS | Capgemini

YES BANK | transparent value | CMIE | SSBC GlobeOp | PRAXIS technologies | percept|Live | Goldman Sachs | Motrix | susten | Lubrizol

WAT Social Media | L&T Infotech | CARNIVAL | Percept/H | GREATER BANK | HDFC BANK | Indiabulls | InSync Analytics | IndusInd Bank

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