A STUDY ON FINANCIAL DATA VISUALIZATION TECHNIQUES

VALABOJU RAMYA [1] **MBA Student**

DR MOHD ABDUL HAFEEZ [2] **ASSISTANT PROFESSOR**

[1,2]MASTER OF BUSINESS ADMINISTRATION

[1,2]Megha Institute of Engineering and Technology for Women, Sy. No. 7, Edulabad Road, Edulabad, Ghatkesar, Telangana.

ABSTRACT

Financial data visualization techniques play a crucial role in transforming complex financial information into clear, meaningful, and visually appealing representations that support better decision-making. These techniques use charts, graphs, dashboards, heat maps, treemaps, candlestick charts, and interactive visual tools to analyze trends, compare financial performance, identify risks, and forecast future outcomes. By presenting large volumes of financial data in an easy-to-understand format, visualization enhances accuracy, transparency, and efficiency in financial reporting, investment analysis, budgeting, and business intelligence. It enables managers, investors, analysts, and policymakers to quickly identify patterns, detect anomalies, and make informed strategic decisions. With the growing adoption of big data analytics, artificial intelligence, and business intelligence software such as Power BI, Tableau, and Excel, financial data visualization has become an essential component of modern financial management, improving organizational performance and supporting data-driven decision-making across various industries.

INTRODUCTION

Meaning of Financial Data Visualization

Financial Data Visualization at least refer to the two statements which are prepared by a business concern at the end of the year. They are:

- Income statement or trading and profit and loss account which is prepared by a business concern in order to know the profit earned and loss sustained during a specific period.
- Position statement or balance sheet which is prepared by a business concern on a particular date in order to know its financial position.

Nature of Financial Data Visualization

Financial Data Visualization are prepared for the purpose of presenting a periodical review or report by the management and deal with the state of investments in business and result achieved during the period under review. They reflect a combination or recorded facts accounting conventions and personal judgments and conventions applied affect them materially. Form this it is clear that Financial Data Visualization are affected by three things i.e., recorded facts, accounting conventions and personal judgments. Only those facts which are recorded in business books will be reflected in the Financial Performance.

The following points reflect truly the nature of Financial Data Visualization of business entities.

- This are reports are summarized reviews about the performance, achievements and weakness of the business.
- These are prepared at the end of the accounting period so that various parties can take decision of their future actions in respect of the relationship with the business.
- The reliability of Financial Data Visualization depends on the reliability of accounting data. These statements cannot be said to be true and fare representatives of the strength of profitability of the concern if there are numerous Challenges and defalcations in the accounts.

The figures in the Financial Data Visualization are a combination of records facts. There may be certain developments and factors which may be very important for the business are not taken in to account as these are not recorded in the routine of accounting. More over fixed assets are recorded at a historical value without taking in to consideration the changes in their values due to price level fluctuations.

These statements are prepared as per accounting concepts and conventions

These Financial Data Visualization are influence by the judgment of the accountant though he is expected to be more objective in his approach. These judgments may be related to valuation of inventory, depreciation of fixed assets and while making the distinction between capital and revenue.

Importance of Financial Data Visualization

The information given in the Financial Data Visualization is very useful to a number of parties these are the following

- **Owners: -** The Owners provide funds for the operations of a business and they want to know whether their funds are being properly utilized or not. The Financial Data Visualization prepared from time to time satisfy their curiosity.
- **Creditors**: -Creditors (i.e.., suppliers of goods and services on credit, Technologieser"s another lender of money) want to know the financial position of a concern before giving loans or granting credit. The Financial Data Visualization help them in judging such position.
- **Inventors**: - Perspective inventors, who want to invest money in a firm would like to make an analysis of Financial Data Visualization of that firm to know how safe the reposed investment will be.
- **Employees**: - Employees are interested in the financial position of a concern they serve, particularly when payment of bonus depends upon the size of the profits earned, they would like to know that the bonus being paid to them is correct; so they become interested in the preparation of correct profit and loss account.

2.REVIEW OF LITERATURE

Introduction

Methods used by interested parties such as investors, creditors, and management to evaluate the past, current, and projected conditions and performance of the firm. Ratio analysis is the most common form of financial analysis. It provides relative measure of the firm conditions and performance. Horizontal analysis and vertical analysis are also popular firms. Horizontal analysis is use to evaluate the trend in the accounts over the years, while vertical analysis, also called a common size Financial data visualizationdiscloses the internal structure of the firm. It indicates the existing relationship between sales and each Unicom statement account. It indicates the mix of assets that produce income and the mix of sources o f capital, whether by a current or long term debt or by equity funding. When using the financial ratios, a financial analysis makes 2 types of comparisons.

Meaning of Analysis of Financial data visualization

Analysis is the process of critically examining in details accounting information given in the Financial Data Visualization . For the purpose of analysis, individual items are studied, there interrelationships with other related figures established, the data is sometimes rearranged to have better understanding of the information with the help of different techniques or relationship between component parts of Financial Data Visualization to obtain a better understanding firms position and performance. In the words of Myer, "Financial data visualizationanalysis is largely a study of relationship among the various financial factors in a business as disclosed by a single set of statement and a study of the trend of these factors as shown in a series of statements". The analysis of Financial Data Visualization thus refers to the treatment of the information contained in the Financial Data Visualization in a way so as to afford a full diagnosis of the profitability and financial position of the firm concerned. For this purpose, Financial Data Visualization are classified methodically, analyzed and compared with the figures of previous years or other similar firms.

3.1 INDUSTRY PROFILE

The Non-Banking Financial Company (NBFC) sector, often referred to as the "shadow banking" system, is a critical pillar of the Indian financial ecosystem. NBFCs provide credit to the unbanked and underbanked segments of the population, including retail consumers, MSMEs (Micro, Small, and Medium Enterprises), and rural economies, effectively bridging the massive credit gap left by traditional commercial banks.

- **Regulator:** Reserve Bank of India (RBI). The RBI recently transitioned the sector into a **Scale Based Regulatory (SBR)** framework, subjecting massive "Upper Layer" NBFCs (like Bajaj Finance) to strict, bank-like regulations to prevent systemic risks.
- **Market Position:** NBFCs are the primary drivers of credit inclusion in India. Because they do not have the heavy operational costs of maintaining vast physical

branch networks for cash deposits, they are highly agile, geographically flexible, and deeply integrated into consumer point-of-sale (POS) systems.

- **Key Differentiator from Banks:** Unlike traditional banks, NBFCs cannot accept demand deposits (like savings or current accounts) from the public, and they do not form part of the national payment and settlement system (they cannot issue self-drawn cheques).

Market Size & Key Financial Metrics (2025/2026 Estimates)

The Indian NBFC sector has shown immense resilience, rebounding aggressively from liquidity crises in the past to achieve record profitability and credit expansion today.

- **Total Asset Size:** The combined asset size of the NBFC sector is estimated to be over **₹45 Lakh Crore**.
- **Credit Growth:** The sector is experiencing robust, double-digit credit growth, expanding at approximately **14% to 16%** year-on-year, heavily outperforming traditional banks in specific niche segments like consumer durables and microfinance.
- **Profitability:** The sector maintains high profitability, driven by higher Net Interest Margins (NIMs) than commercial banks. Top-tier NBFCs frequently report Return on Assets (RoA) between **2.5% and 4.0%**.

Market Segmentation

The NBFC sector is highly specialized, with companies dominating specific niches rather than attempting to be universal lenders:

1. **Retail & Consumer Finance (The Bajaj Finance Domain):** Providing unsecured personal loans, No-Cost EMIs, and consumer durable financing. This is the fastest-growing and highest-margin segment.
2. **Vehicle Finance:** Financing commercial vehicles, tractors, and two-wheelers. (Dominated by players like Cholamandalam Investment and Finance, and Mahindra & Mahindra Financial Services).

3. **Housing Finance Companies (HFCs):** Specialized NBFCs focused entirely on home loans and real estate developer financing (e.g., LIC Housing Finance).
4. **Microfinance Institutions (NBFC-MFIs):** Providing small-ticket, collateral-free loans to low-income groups, primarily women in rural areas, to foster grassroots entrepreneurship.
5. **Infrastructure & Corporate Lending:** Massive entities (like Power Finance Corporation or REC) that fund power projects, highways, and heavy industry.

3.2 COMPANY PROFILE

Bajaj Finance Limited (BFL), the lending arm of Bajaj Finserv, has fundamentally rewritten the rules of retail lending in India. Headquartered in Pune, Maharashtra, it has transformed from a captive auto-financier (primarily funding Bajaj two-wheelers) into India's largest, most profitable, and most technologically advanced Non-Banking Financial Company (NBFC).

1. Key Strengths & Market Dominance

Bajaj Finance did not just capture market share; it created an entirely new market segment in India by making consumer credit accessible, instant, and frictionless.

- **The "No Cost EMI" Revolution:** Bajaj Finance single-handedly pioneered the Zero-Percent (No Cost) EMI model in India. By partnering directly with manufacturers (like Apple, Samsung, and Sony) and large retail chains, they shifted the interest burden away from the consumer. This innovation drove a massive boom in the Indian consumer durables and electronics market.
- **The Massive EMI Network:** The company operates an unparalleled Offline-to-Online (O2O) ecosystem. It boasts a merchant network of over **1.5 Lakh** (150,000+) partner stores across India. Whether a customer is in a massive metropolitan mall or a Tier-3 town electronics shop, the "Bajaj EMI Card" ecosystem is omnipresent.
- **Unrivaled Customer Franchise:** Through aggressive retail penetration, Bajaj Finance has built a captive customer base exceeding **8.5 Crore** (85 million) individuals. This massive data pool allows the company to cross-sell personal loans, insurance, and wealth products with near-zero acquisition costs.

- **Algorithmic Underwriting & Data Analytics:** BFL operates more like a fintech data science company than a traditional lender. It utilizes deep analytics and proprietary algorithms to approve loans in a matter of seconds—often under 3 minutes—directly at the point of sale (POS).

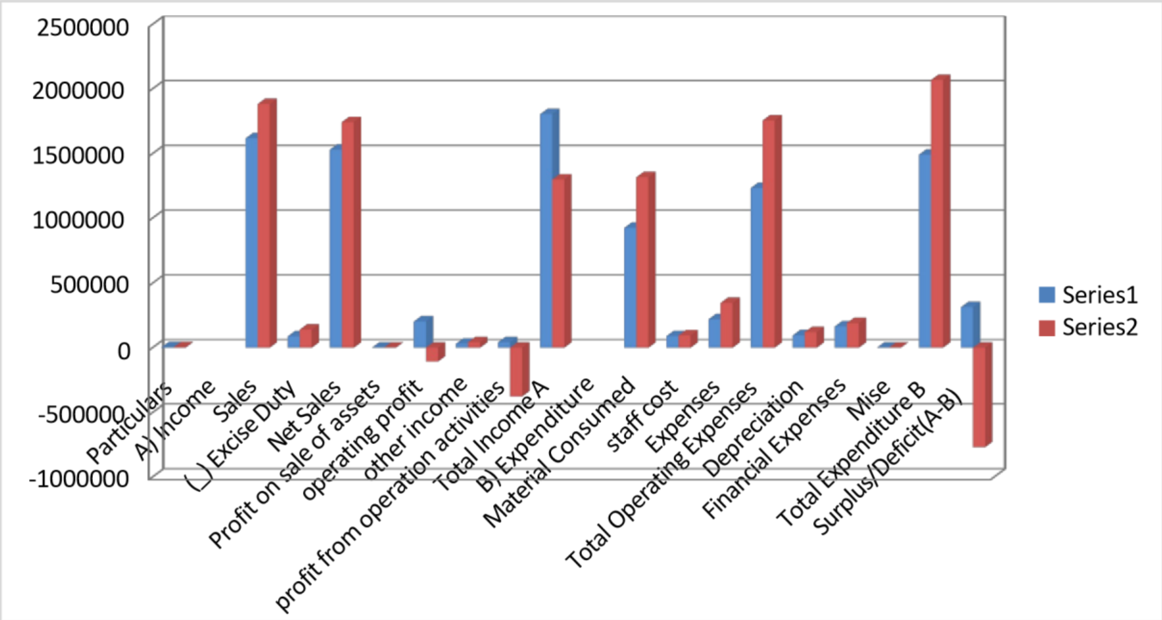
4.DATA ANALYSIS AND INTERPRETATION

TABLE 3.1 Tabular representation of Comparative Income Statement of BAJAJ Finance For the year Ended 1-4-2021 to 31-3-2022

Particulars	2021	2022	Absolute Change	% Change
A) Income				
Sales	1619777	1884162	264385	16.32230856
(_) Excise Duty	87929	139404	51475	58.54155057
Net Sales	**1531848**	**1744758**	**212910**	**13.89889859**
Profit on sale of assets	_	20	_	_
operating profit	203169	-108393	-311562	-153.351151
other income	30002	41781	11779	39.26071595
profit from operation activities	41082	-378304	-419386	-1020.850981
Total Income A	**1806101**	**1299862**	**-506239**	**-28.02938485**
B) Expenditure				
Material Consumed	925939	1318229	392290	42.36672178
staff cost	88436	93956	5520	6.241801981
Expenses	219340	345533	126193	57.53305371
Total Operating Expenses	**1233715**	**1757718**	**524003**	**42.47358588**
Depreciation	94696	120138	25442	26.86702712
Financial Expenses	163590	190170	26580	16.24793692
Mise	268	268		
Total Expenditure B	**1492269**	**2068294**	**576025**	**38.60061423**
Surplus/Deficit(A-B)	**313832**	**-768432**	**-1082264**	**-343.85**

Source: Annual Report of BAJAJ FINANCE

GRAPH 3.1Graphical representation of Comparative Income Statement of BAJAJ FINANCE For the year Ended 1-4-2021 to 31-3-2022.



INTERPRETATION

Sales volume is increased by 13.89% during the year 2022,Profit on sale of assets nil in 2021 and in the 2022 it was RS 20,000,Other income is increased by 39.20%,Increases in sales are highlighting increase in Material consumption, staff cost, depreciation, financial expenses, misc exp written off,Surplus is decreased by 343.85%.

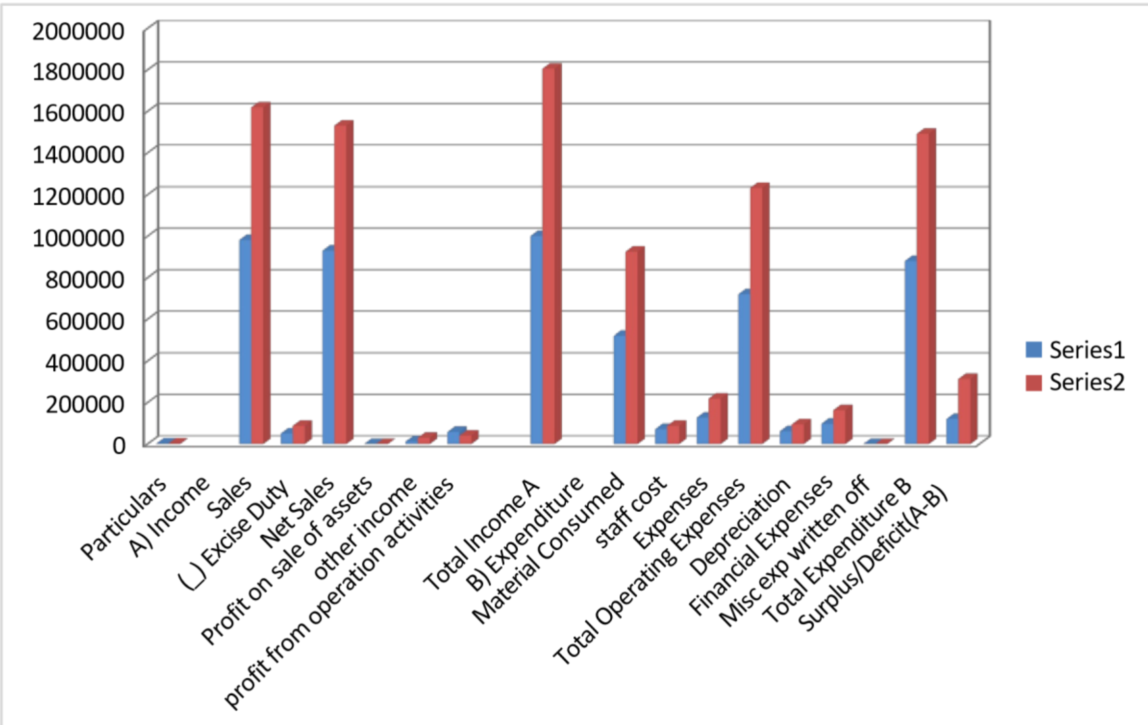
TABLE 3.2 Tabular representation of Comparative Income Statement of BAJAJ FINANCE For the year Ended 1-4-2020 to 31-3-2021.

Particulars	2020	2021	Absolute Change	% Change
A) Income				
Sales	982368	1619777	637409	63.88495146
(_) Excise Duty	51606	87929	36323	70.38522652
Net Sales	**930762**	**1531848**	**601086**	**63.5799893**
Profit on sale of assets	_	_	_	_
other income	12521	30002	17481	139.6134494
profit from operation activities	58564	41082	-17482	-29.85110307

Total Income A	**1001847**	**1806101**	**804254**	**80.27712814**
B) Expenditure				
Material Consumed	520444	925939	405495	77.91328174
staff cost	72145	88436	16291	22.58091344
Expenses	127763	219340	91577	71.67724615
Total Operating Expenses	**720352**	**1233715**	513363	71.26557572
Depreciation	61817	94696	32879	53.18763447
Financial Expenses	98269	163590	65321	66.47162381
Misc exp written off	268	268		
Total Expenditure B	**880706**	**1492269**	**611563**	**69.44008557**
Surplus/Deficit(A-B)	**121141**	**313832**	**192691**	**159.0634055**

Source: Annual Report of BAJAJ Finance .

GRAPH 3.2 Graphical representation of Comparative Income Statement of BAJAJ FINANCE For the year Ended 1-4-2020 to 31-3-2021.



INTERPRETATION:

Sales volume is increased by 63.57% during the year 2020,Other income is increased by

139.61%**,**Increases in sales are highlighting increase in Material consumption, staff cost, depreciation, financial expenses, misc exp written off,Surplus has increased tremendously which adds to financial stability.

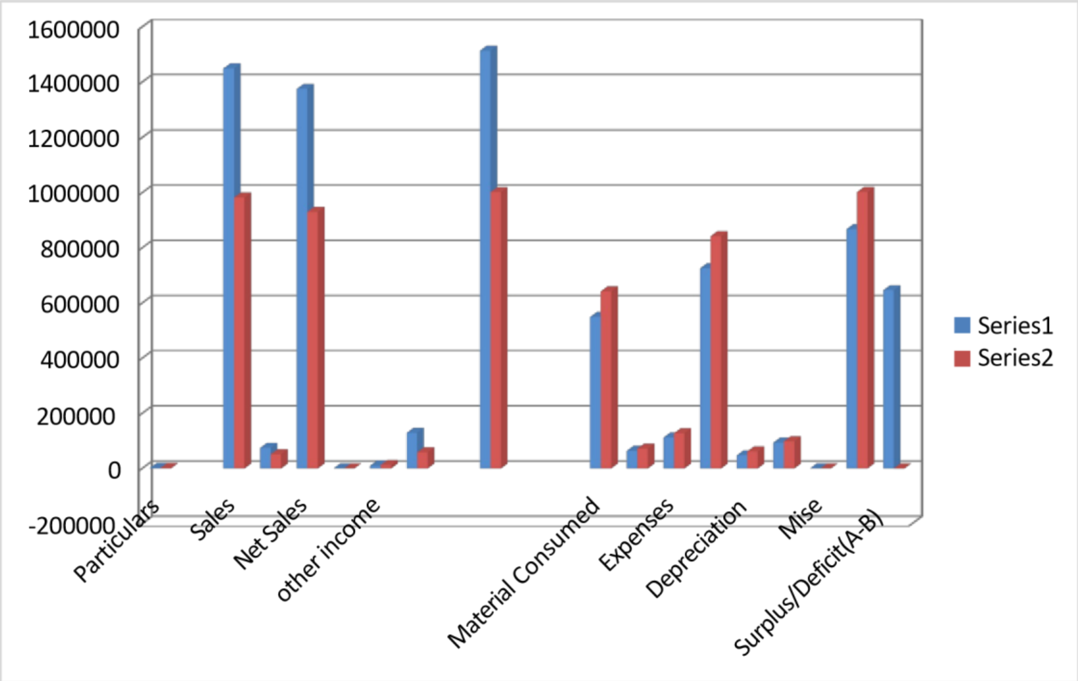
TABLE 3.3 Tabular representation of Comparative Income Statement of BAJAJ FINANCE For the year Ended 1-4-2019 to 31-3-2020.

Particulars	2019	2020	Absolute Change	% Change
A) Income				
Sales	1449748	982368	-467380	-32.23870631
(_) Excise Duty	74687	51606	-23081	-30.90363785
Net Sales	**1375061**	**930762**	**-444299**	**-32.3112211**
Profit on sale of assets	_	_	_	_
other income	9800	12521	2721	27.76530612
profit from operation activities	129043	58564	-70479	-53.61667816
Total Income A	**1513904**	**1001847**	**-512057**	**-33.82361101**
B) Expenditure				
Material Consumed	549709	642137	92428	16.81398704
staff cost	64132	72145	8013	12.49454251
Expenses	112241	127763	15522	13.82917116
Total Operating Expenses	**726082**	**842045**	**115963**	**13.97106112**
Depreciation	47556	61817	14261	29.98780385
Financial Expenses	93815	98269	4454	3.747641635

Mise	268	268	0	0
Total Expenditure B	**867721**	**1002399**	**134678**	**13.52088747**
Surplus/Deficit(A-B)	**646183**	**-552**	**- 646735**	**-100.085424**

Source: Annual Report of BAJAJ Finance .

GRAPH 3.3Graphical representation of Comparative Income Statement of BAJAJ FINANCE For the year Ended 1-4-2019 to 31-3-2020.



INTERPRETATION:

Sales volume is decreased by 32.31% during the year 2020,Other income is increased by 27.76%,Decrease in sales are highlighting decline in some of the associated expenditure compare to last year,Surplus is decreased by 100.085%.

TABLE 3.4 Tabular representation of Comparative Income Statement of BAJAJ FINANCE For the year Ended 1-4-2018 to 31-3-2019.

Particulars	2018	2019	Absolute Change	% Change
A) Income				

Sales	572977	1449748	876771	153.0202783
(_) Excise Duty	36886	74687	37801	102.480616
Net Sales	**536091**	**1375061**	**838970**	**156.4976842**
Profit on sale of assets	_	_	_	_
other income	8374	9800	1426	17.02889897
profit from operation activities	173154	129043	44111	-23.4750
Total Income A	**723619**	**1513904**	**790285**	**109.212859**
B) Expenditure				
Material Consumed	536049	549709	13660	2.548274505
staff cost	54123	64132	10009	18.4930621
Expenses	102141	112241	10100	9.888291675
Total Operating Expenses	**692313**	**726082**	**33769**	**3.877707049**
Depreciation	39996	47556	7560	18.90189019
Financial Expenses	68127	93815	25688	37.706049
Mise	268	268	0	0
Total Expenditure B	**800704**	**867721**	**67017**	**8.369759612**
Surplus/Deficit(A-B)	**-77085**	**646183**	**723268**	**938.27**

Source: Annual Report of BAJAJ Finance .

5.1 FINDINGS

- The comparative Balance Sheet of the company reveals that during the year 2018 there has been a decrease in current assets of Rs. 12302712 i.e., 0.89%. While current liabilities have decreased by Rs. 19472581 i.e., 3.74%. This fact depicts that the company is suffering with inadequate working capital to meet its short-term obligations.
- While there is increase in fixed assets value to the extent of Rs. 82776289 to that of current liabilities. This fact depicts that the company has diverted its loans in the form of working capital to meet its short-term obligations.

5.2 SUGGESTIONS

- The water industry is huge and has huge potential for growth; the company should its operations.
- The management needs to increase the stock.
- It can be done by increasing production, achieve economies of scale and hen increase market penetration.
- It is suggested for the company to control over the current liabilities.
- The product is doing reasonably well in most of the market so they should promote the product accordingly. Eg: free sampling, discounts etc.

5.3 CONCLUSION

This project of Financial data visualization analysis in the production concern is not merely a work of the project. But a brief knowledge and experience of that how to analyse the financial performance of the firm. The study undertaken has brought in to the light of the following conclusions. According to this project I came to know that from the analysis of Financial Data Visualization it is clear that BAJAJ . This satisfactory level of profits during the period of study. So the firm should focus on maximising the profits in the coming years by taking care of internal as well as external factors. And with regard to resources, the firm is take utilization of the assets properly. And also the firm has a maintained low inventory.

BIBLIOGRAPHY

BOOKS:

1. Cadwick, L.PHL, (The essence of financial accounting), 2nd Edition
2. Paul, (Financial and Accounting), 4th Edition
3. Raj K Agrawal Rupesh Agarwal, (Financial and accounting), 2015 Edition
4. P , C Tulsain, (Financial and accounting), 2012 Edition
5. Dr.R.K Arya, (Elements of Financial Accounting), 2015 Edition

JOURNALS:

1. Management of accounting research, volume 1 issue 3 2002
2. Journal of Financial and Quantitative Analysis volume 7, issue 2 March 1972
3. Kevin,"Sebi"s forensic accounting team is welcome move to expose Challenges ", 2010
4. Journal of Accounting and Economics volume 30, issue 3 December 2000

5. Sumeet Mehta, ICAI drafts norms for interim results , December 7,2001

NEWS PAPERS:

1. BUSINESS TODAY
2. ECONOMIC TIMES
3. BUSINESS STANDARD

WEBSITES

1. https://www.google.com/search?q=http://www.bajajfinance.com/
2. https://www.google.com/search?q=http://www.ibef.org/
3. https://www.moneycontrol.com/