A COMPARATIVE STUDY ON THE ROLE OF E-COMMERCE IN REDUCING OPERATIONAL COST IN PRIVATE SECTOR BANKS

Project Report

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ST.TERESA'S COLLEGE (AUTONOMOUS), ERNAKULAM

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CERTIFICATE

This is to certify that the project report titled **'A COMPARATIVE STUDY ON THE ROLE OF E-COMMERCE IN REDUCING OPERATIONAL COST IN PRIVATE SECTOR BANKS'** submitted by **NAVYA ELIZABETH MATHEW, NEHA RAJ, RAINU RIJU** towards partial fulfilment of the requirements for the award of degree of **Bachelor of Commerce** is a record of bonafide work carried out by them during the academic year 2022-23.

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Place: Ernakulam

Date: 31/03/2023

DECLARATION

We, Navya Elizabeth Mathew, Neha Raj, Rainu Riju, do hereby declare that this dissertation entitled, **'A COMPARATIVE STUDY ON THE ROLE OF E-COMMERCE IN REDUCING OPERATIONAL COST IN PRIVATE SECTOR BANKS'** has been prepared by us under the guidance of **Ms Elizabeth Rini K.F,** Assistant Professor, Department of Commerce, St Teresa's College, Ernakulam.

We also declare that this dissertation has not been submitted by us fully or partly for the award of any Degree, Diploma, Title or Recognition before.

Place: Ernakulam

Date:31/03/2023

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CHAPTER 1

INTRODUCTION

1.1 INTRODUCTION

E-Commerce, also known as electronic commerce or internet commerce, refers to the buying and selling of goods or services using the internet. In banks, e-commercehas made it easiest for people to bank internationally or pay for goods and services from one country to another without having to work around banking regulations.

E-Commerce activities are done through the internet and it has the potential to reduce actual transaction time, processing time and operational cost. Internet based e-commerce has been embraced as a means of reducing operational cost and as a high potential means of generating revenue.

E-Commerce compasses all forms of interactive business transactions, which are facilitated by networks of computers. E-Commerce is expanding because of the greater number of businesses and individuals who are able to use these networks and the growing number of ways in which transactions can be conducted electronically. E-Commerce contributes to economic efficiency in five important ways. They include shrinking distances and timescale, lowering distribution and operational costs, speeding product development, providing more information to buyers and sellers and enlarging customer choice and supplier reach. However, this study is focused on the role of E-Commerce in reducing operational cost in banks.

E-Banking changed both the banking sector as well as banking services to its customers. 'Anywhere banking' came to be recognized as an opportunity also for differentiated and competitive services. Apart from the old methods of banking, click and order channels like internet banking, ATM's, Tele-banking and mobile banking are now being popular. Customers are now able to view their accounts, get account statements, transfer funds, purchase drafts with a few clicks. Availability ofATMs and plastic cards to a large extent make it necessary for customers to go to branch premises. E-banking has ultimately reduced operational costs and productivity has tremendously improved, new banking products and services have entered the market.

1.2 STATEMENT OF THE PROBLEM

Electronic commerce is popular in almost all areas including banking. People in India became more aware of E-Commerce since the year 2002 when IRCTC launched its online reservation system. E-Banking which is the automated delivery of new and traditional banking products and services directly to customers through electronic, interactive communication channels came into being in India in the year 1999 through Industrial Credit and Investment Corporation of India which was then followed by many private banks like HDFC bank, IndusInd bank and Citibank. In the recent past, a large number of banking services shifted from traditional banking to E-Banking(ATM, Debit cards, Credit cards, RTGS, Mobile Banking, etc.).All these initiatives have a great impact on the operational cost of banks(present study focuses on the private sector banks).The traditional banking was time consuming and it involved high cost. These constraints are smoothened through E-Banking. The overall operational cost of banks have reduced as they went from traditional to e-Banking.

1.3 SIGNIFICANCE OF THE STUDY

The outcome of this study will educate business managers and the general public on the role of E-commerce in reducing the operational cost of business organizations. Organizations especially private banks that have not adopted E-Commerce yet could have a deep understanding about the significance of E-Commerce in reducing operational costs thereby reducing the overall expenses. Inthis everyday developing world it will be difficult to survive without internet hence every organization must understand the importance of internet and E-Commerce. This project would help every person who have an interest in knowing the significance of electronic commerce. The study mainly focuses on the role of electronic commerce in reducing operational cost in private sector banks in India.

1.4 SCOPE OF THE STUDY

The aim of the study is to understand how helpful is E-Commerce in reducing operational cost in private sector banks in India The study is done through a comparative study. The general public and banks could make use of this study and could have a deep understanding of the importance of E-Commerce. How much have the private sector banks made use of the E-Commerce in the reduction of overall costs can be analysed through this study.

1.5 OBJECTIVES OF THE STUDY

OVERALL OBJECTIVE

- ➢ To examine the role of E-Commerce in reducing operational cost in private sector banks.

SPECIFIC OBJECTIVES

- ➢ To identify other benefits accruable from E-Commerce in India.
- ➢ To analyse the profitability of banks using e-commerce.
- ➢ To understand how E-Commerce benefits the general public and banks.

1.6 RESEARCH METHODOLOGY

1.6.1 RESEARCH DESIGN

The project is mainly descriptive and analytical in nature. Classifying, designing, comparing, and measuring data are the aspects of descriptive research. In our study we have described the concept of e-commerce. Analytical research meanwhile, is more concerned with comparative study of the role of ecommerce in reducing operational cost in Hdfc bank and Axis bank. The financial performance of Hdfc bank and Axis bank from 2015-16 to 2021-22 is analysed.

1.6.2 COLLECTION OF DATA

The study is conducted through the collection of secondary data which is the financial statements of HDFC Bank and Axis Bank. Financial Statements from the time before and after the active usage of E-Commerce are studied. They are analysed thoroughly to identify how E-Commerce has helped in the reduction of operational cost in the banking industry.

1.6.3 TOOLS

For the study, ratio analysis is used for analysing the data. Operating ratio, operating profit ratio, net profit ratio, expense ratio and operating profit to total assets ratio are used for analysing the operational efficiency and profitability of the selected banks. Mean, standard deviation, coefficient of variation and compound annual growth rate are also used for analysis. The collected data are presented with the help of tables and figures. Figure used for analysis is column chart.

1.7 LIMITATIONS OF THE STUDY

- The study takes into account only a limited period of seven years.

- It considers only monetary aspects. Non-monetary aspects like human behaviour, their relationships, etc. are not considered.

- The study possesses the limitations of secondary data i.e, Annual reports of the bank taken from the official website.

1.8 KEYWORDS

E-Commerce : Ecommerce or electronic commerce is the trading of goods and services on the internet.

Operational Cost: Operational costs are the ongoing expenses incurred from the normal day-to-day of running a business.

E-Banking: Electronic Banking is the use of computers andtelecommunications to enable banking transactions to be done by telephone or computer rather than through human interaction.

Compound Annual Growth Rate(CAGR) : The compound annual growth rate (CAGR) is the annualized average rate of revenue growth between two given years, assuming growth takes place at an exponentially compounded rate.

Mean: Mean is the average of the given numbers and is calculated by dividing the sum of given numbers by the total number of numbers.

Standard Deviation: Standard deviation is a statistic that measures the dispersion of a dataset relative to its mean and is calculated as the square root of the variance.

Coefficient of Variation (CV) : The coefficient of variation (CV) is a statistical measure of the dispersion of data points in a data series around the mean.

1.9 RESEARCH QUESTIONS

1. What is the role of e-commerce in reducing operational costs in the banking sector?

2. What are the advantages and disadvantages of e-commerce in private sector banks?

3. What are the other benefits of E-Banking to banks and customers?

1.10 CHAPTERISATION

Chapter 1-Introduction

This chapter gives a brief introduction about the topic, its significance in theresearch area, scope of the study, problem statement, objectives to be achieved, research questions, methodology adopted and limitations of the study.

Chapter 2-Review of Literature

This chapter deals with the literature relating to the topic under study. It also includes analysis of the secondary data relating to the topic under study.

Chapter 3-Theoretical Framework

This chapter includes all the relevant theories related to e-commerce, its features, e-commerce activities done in private banks, uses for customers, benefits for the banks, etc. This chapter also includes theories related to operational cost, how e-commerce and operational cost are related.

Chapter 4-Company Profile

This chapter includes all the details of Axis Bank and HDFC Bank. It also includes the different activities conducted by both the companies, their profits and other expenses and incomes for the past years.

Chapter 5-Data Analysis and Interpretation

This chapter includes the data collected and tools used to find out the relation between e-commerce and operational cost. The data used is secondary data, that is, financial statements of both the banks. The tools used in this project is ratioanalysis, ratios related to operational cost are mainly used.

Chapter 6-Findings, Conclusion and Suggestions

This chapter includes the findings, conclusion and suggestions related toe-commerce and operational cost related to both the banks based on the data analysed and interpreted using the tools.

CHAPTER 2

REVIEW OF LITERATURE

REVIEW OF LITERATURE

The subject of this research is to evaluate the role of E-Commerce in reducing operational cost in private sector banks (HDFC Bank and Axis Bank).This study is necessitated due to the extensive use of E-Commerce in our country during the last decade in the banking industry. Reviewing the literature of different publishers would help understand the different theories made by them and how effective it has been in the sectors.

Muhammad Mehtab Azeem(2015)[1] in his publication 'Impact of E-Commerce on Organization Performance; Evidence from Banking Sector of Pakistan' states that one of the most significant changes to the Pakistani banking industry in recent yearsis e-banking. This study assesses how e-commerce has affected business success (Business operation, Job performance, Customer satisfaction).

Mansour Naser Alraja and Nazem M.M. Al-ahmad Malkawi(2015)[2] in their publication 'E-Business Adoption in Banking Sector: Empirical Study' suggests that Jordanian banks are prepared to adopt electronic commerce and are aware of the advantages that arise with doing so. They also believed that depending on the level of competition, adopting E-business would give them a competitive edge. However, respondents are concerned that their banks' current infrastructure will not be sufficient to adopt E-business. Therefore, these institutions have to make some major changes, particularly to the backbone of their information systems.

Govil, A. (2000)[3] investigated the need to boost return on assets (ROA) and return on capital in order to increase operational efficiency (ROC). The market is shifting toward assessing each player's Economic Value Added (EVA) which is nothing more than capital gain less capital expense. It was implied that the bank needed to make efforts to improve operational effectiveness and organisational effectiveness in order to cope up with the challenges of the financial crisis. This included improving organisational structure, system, and process.

According to **John Wenninger (2000)11**[6], numerous banks have started to offer credit and deposit options online. Banks are also focusing on making offers specifically online. Banks are creating new opportunities as they enter the electronic market, but these potential also come with new operational and strategic concerns.

Silvain de Munck et al.[5] in their 2001 article studied The impact of electronic commerce on the Dutch banking industry. As a result, most of the businesses held positions throughout the banking industry's value chain that were very comparable. It was believed that E-Commerce had improved the operations' efficiency and also reduced costs. It was discovered that the expanded advantages had given clients more access to banks, increasing the number of potential business ventures that the banks had started to investigate.

Aleksandar Andonov et al. (2021)[6] stated that E-commerce has emerged as one of the most successful business models that have provided numerous benefits to businesses in the contemporary environment. Some imperative impacts have been the international marketplace, no time constraints, better relationship building with customers, lesser fixed costs, and some more. This study focuses on assessing the impact of E-commerce on business performance.

Tzavlopoulos et al. (2019)[7] stated that E-commerce has been regarded as buying and selling products and services using the internet. The business model is designedto provide its offerings online and allow the consumers to select and purchase the desired products. Planning for an eCommerce business is critical. This allows the firm to consider the related dynamics and implementation of the business model and consider the probable adversities and challenges that may arise during the process and functionality The planning further considers the associated risks and limitations to which the company may be exposed so that an effective contingency plan may be developed through critical planning and considerations. The other aspect is technology selection along with mediums and approaches. The firm must select adequate technology to carry out the desired tasks and activities to function online. In this regard, the considerations need to be made according to the nature and type of customers and capabilities, resources, and kind of business involved in the process. The technology usage may differ for various businesses and their specific target audiences, and critical analysis in this regard could be conducted to ensure optimum results.

Rajneesh Shahjee (2015)[8] studied the impact of Electronic Commerce on Business. The research study has highlighted the Management Information Systems, Finance and Accounting, Marketing and Computer Sciences of E-Commerce on Business. E-commerce is a way of conducting business over the Internet. Though it is a relatively new concept, it can alter the traditional form of economic activities. It already affects such large sectors as communications, finance, and retail trade and holds education,health, and government promises. The most significant effects may be associated not with many of the impacts thatcommand the most attention but with less visible, but potentially more pervasive, effects on routine business activities. The integration of Electronic Commerce and Business will bring a renaissance in the marketing function. It presents opportunities to get close to the customer to bring the customer inside the company,explore new product ideas, and pretest them against real customers.

Kumar, Sameer, and Petersen, Palo (2006)[9] understood how e-commerce had affected companies' abilities to serve the customers' needs and raise their satisfaction level. The research showed a direct correlation between the use of ecommerce and improved customer service. In particular, e-commerce has improved the availability of information, reduced processing errors, reduced response times, lowered costs of services, and has effectively raised customersatisfaction and the level of service that customers expect to receive. The research revealed that many businesses are transitioning to integrated e-commerce business operations. This is being done with the expectation of lowering operational costs and significantly improving their service offerings.

The study is unique in applying the logistics regression approach to multi-company data across various industries to analyse the impact of e-commerce on the service aspect of business operations. It also addresses the research question- whether e-commerce use in a business effectively raises customer service and overall business operation to a more desirable quality.

Raven et al.(2007)[10] compared India and China's approaches in adoption of e-business. Based on the literature survey and secondary data, the study analysed various factors influencing the growth of e-businesses in the two countries. The factors examined include government policy and focus, existing technology infrastructure, regulatory environment, experience and understanding of business operations, and culture, among others. The study concludes that China appears to be ahead of India in infrastructure, but India is ahead in e-readiness. Further, it states that both countries are poised for rapidly increasing e-business, however, problems of poverty and inequality between urban and rural connectivity must be resolved to really take advantage of e-business in both the countries.

Malhotra and Singh(2007)[11] studied the determinants of Internet banking adoption by banks in India. Panel data of 88 banks in India covering the financial years 1997-1998 to 2004-2005 was collected through the CMIE (Centre for Monitoring Indian Economy) database. Logistic regression analysis was used. the dependent variable is categorical with a value of 1 if a bank adopted Internet banking during the study period and 0 otherwise. Independent variables included in the study are firm size, firm age, bank deposits ratio, average wages, expenses (fixed assets & premises), ROA (ratio of average net profits to average assets), market share,average number of branches, percentage of banks adopted Internet banking. The results of the study prove that Bank type (Private). firm size, bank deposits ratio, firm age, market share, average number of branches, percentage of banks adopted Internet banking and expenses, are found to be significant in adoption decisions. Wage and ROA are found to be insignificant. This study contributes to the empirical literature on diffusion of financial innovations, particularly Internet banking in Indian context. Most of the study on adoption of technology was related to developed markets like the US and Europe.This study is an important contribution to evolving literature as it dealt with the problem of technology adoption in developing countries .

Viswanathan and Pick(2005)[12] examined the issue of e-commerce in India and Mexico from the framework of developing countries as suggested by Tallon and Kraemer. The framework included critical factors that might impact the diffusion of e-commerce. The factors are government policy, legal framework, technology infrastructure, relationship with developed economies and extent of e-commerce usage by individual, corporate and government. The study's primary focus is on India. Mexico is analysed more briefly, and compared with India based on common international datasets. The analysis and the data presented in this paper represent a synthesis of data from secondary research and data from interviews conducted with senior executives in the IT industry in India and Mexico. The study suggests that substantial efforts have to be made to invest in telecommunications infrastructure, and to create a culture of electronic payments and e-commerce usage that will support economic growth.

Dasgupta and Sengupta(2002)[13] paper on e-commerce in the Indian insurance industry discusses the features of e-insurance in comparison with the traditional offline insurance service. The authors put forth that e-insurance offers benefits such as reduction in search cost and hidden cost, price comparison for customers, and benefits such as opportunity to have niche market, first mover advantage andproduct bundling for insurance companies going online. Further, it discusses that the status of e-insurance in India is still in its formative stage, but stands to gain particularly from the rural markets since the availability of insurance agents is very less compared to urban markets. The study is conceptual in nature and offersinsights based on market reports and data from secondary .

Tarafdar and Vaidya(2006)[14], analyses organisational and strategic imperatives that influence Information System (IS) assimilation in Indian organisations. IS assimilation here refers to the extent to which a system or technology becomes diffused in organisational processes. The study is based on multiple case study methods. Data on nine firms which have deployed IS was collected through face to face structured interviews involving middle managers. senior managers of IS and other departments. The study examines the nature of the system present data processing/transaction oriented, operational, strategic and how these systems affected key operational processes. Strategic imperatives are examined by analysing the environmental factors presence or absence of government regulation, pressure from customers, suppliers and competitors, and strategic stance-whether product and process changes, and the consequent IS deployment were proactive or reactive Organisational imperatives were investigated by qualitatively assessing six factors top management support; IS department knowledge of business, technology and involvement in IS deployment, IT literacy of managers, management style; presence of IT champions and availability of IT resources. Data was analysed across-case and within-case. The study identifies three categories of organisations innovative

CHAPTER 3

THEORETICAL FRAMEWORK

THEORETICAL FRAMEWORK

Electronic commerce refers to business transactions that occur over telecommunications networks, most notably the Internet (E-Commerce). Due to its comfort and adaptability as well as advantages linked to transactions including speed, efficiency, and accessibility, e-banking has grown in popularity. E-commerce has facilitated app payments and transactions, paving the way for conventional brick-and-mortar banks to retrain their clientele. Even though many other big banks have gone entirely online, several still have physical facilities in certain regions where they conduct business. Real-time data and analytics about products and customers are provided by an e-commerce system.

Internet banking, sometimes known as e-banking, is a type of electronic commerce that enables users of banking services to conduct safe online transactions for any virtual banking or financial service. E-banking is the practice of offering banking services and goods online. The banking, finance, securities, and insurance functions of e-banking (BFSI). Financial services encompass things like stock trading, mutual funds, payment gateways, etc., whereas banking refers to giving customers of banking services access to virtual banking activities.

E-Commerce Banking includes:

- Bill Payment Service
- Querying the Account Balance
- Shopping Credit cards
- Smart cards
- Cheques Transaction Payment System
- Internet Banking
- Fund Transfers

- Credit Card Customers
- Investment Through Internet Banking
- Automated Teller Machines (ATM)
- Debit Cards
- Electronic Funds Transfer (EFT) System
- Mobile Banking
- Telephone Banking

Since new technologies are just starting to define the boundaries between different communication channels, the study of electronic commerce is a relatively recent field that is constantly experiencing significant development. Consumers and enterprises are collaborating through a greater variety of informational channels, some of which were made possible by the Internet and are connected to ICT applications. All labor-intensive business is quickly being replaced by electronic commerce. eCommerce has developed since the early 1990s to replace labor- and paper-intensive banking procedures across all banks. The widespread usage of ATMbanking, smart cards, credit cards, debit cards, and online lending is evidence of this.

3.1 Shifting Trends in the Banking Sector

In recent years, banks' efforts to increase profitability have undergone significant shifts. Asset quality and capitalization used to be the primary concerns of the banking industry; It was anticipated that a bank would be profitable if it performed well in these two areas. Doing well in terms of asset quality and capitalization is no longer sufficient. Banks must find new ways to increase revenue in a "mature market" for the majority of traditional banking services, particularly consumerlending. Banks must first fully understand the competitive environment before they can define their online strategy.

There are five main factors that influence the new competitive environment, the rise of online shopping is altering the needs of customers. Deregulation has led to cross-industry rivalry and new internet financial products; shifting demographic patterns and the possibility of new consumer markets; and optimization of branch networks to save money.

3.2 Varying Customer Demands

In the past 10 years, consumer tastes have undergone significant change. Online bill payment, money transfers between accounts, and access to account information are all things that customers want to be able to perform. Banks must, of course, be able to offer/guarantee the secrecy and confidentiality that customers need, which is no simple undertaking. A fundamental concept underlies many consumer expectations: both consumers and financial institutions desire closer , more nuanced connections.

Whether it's on the weekend or late at night, customers expect to be able to bank whenever they want. Bankers desire stronger, longer-lasting relationships with their clients.

3.3 Products for Financial Services based on Technology

The expanding importance of computer technology poses another obstacle to predictions about the future organisation of banking. According to some observers, more developments in electronic currency, such smart cards, might promote greater financial consolidation. They draw attention to the fact that the start-up costs of electronic payment technologies can be high, in part because the creation of a secure electronic transaction network requires major investments in computer software and other resources.

These substantial fixed costs have some experts worried that a small number of financial services providers—those with the financial wherewithal to absorb them—could develop to dominate the payments system.

3.4 Advantages of E-Commerce in Banking

Saves time: By enabling direct transactions from any location at any time, including an office or home, online banking saves time. Internet banking eliminates the need to go to a bank, which saves time standing in lines and offers both physical and emotional relaxation from the needless commotion inside.

Convenience: The ease of internet banking is by far its biggest benefit. Instead of visiting one of the many sites where utility bills are collected, phone and electricity bills can be paid online through banking. This assists in preventing payment delays.

24X7 Services: Transactions in online banking may be made at any time and from any location.

Sustainable Method: When opposed to traditional banking, online banking is an environmentally friendly procedure because printing the data on paper is not required, helping to safeguard the environment.

Easy Access: An online banking operation may be completed using just a simple computer system connected to the internet, making it widely available.

Faster Banking: Use online banking to fulfill financial responsibilities more swiftly. Whether making an online purchase, paying a payment, or transferring money, everything happens instantly and quickly.

Cost Savings: The technique of banking online is quite economical. Bill payments and other business operations can be completed online from a company location, saving on the expense of employing a person to handle the firm's banking-related duties.

3.5 E-Commerce and Operational Cost

The importance of e-commerce to reduce costs accrue to the manufacturers or vendors with the speed in the processing of electronic stores and low cost inception compared to the processing that of traditional stores, which ultimately leads to a reduction in the cost of business performance, and increase the scope of supply markets, including beyond the limits of space and time, and thereby increase the competition which results from the high quality products and low prices.

That the lower costs of business processes represent trade transaction costs of gathering information, negotiation and brokerage fees and sales commissions, administrative procedures and other important parts of the price of the product. E-commerce plays a prominent role in reducing these costs by improving information flow and increasing the coordination of the business, as well as lower costs of searching for information relating to potential buyers and sellers in the market.

Contribution to e-commerce to reduce administrative costs to the businesses in distribution, archiving and retrieval of information paper, may end up reducing the administrative costs of procurement operations to what eventually lead to lower product prices. Good management of inventory as contributing to ecommerce to reduce inventory through the use of a drug in the supply chain management system, where the process begins with obtaining commercial demand from the buyer and provide him with his application through industrialization temporary manner, and this would work to reduce business cycle significantly; where the product is shipped directly from the factory to the final buyer. This is shown dramatically in digital products, any goods and services that are delivered electronically. Thus making e-commerce is an important tool in the management of inventory and lowerstorage costs, and this has economic implications at the macro level if we know that10% of the volatility in the quarterly growth rates of production as a result of the volatility of returns in investment in inventory. If e-commerce is working to reduce inventory to a minimum, one of the effects of e-commerce is to mitigate the effects of the business cycle resulting from the change in inventory. With the development of information and communication technology and better information flow, it is expected to decrease the impact of the stock of the business cycle to a minimum and perhaps even nonexistent.

There are different ways through which e-commerce systems can be optimized to save money, such as; Understanding Data Collection and Handling Procedures. These are critical for reducing operational costs in e-commerce systems. Proper data collection enables businesses to understand their customers' needs and preferences, which ultimately can be used to improve customer services and create more efficient sales processes. By understanding customers' needs, better products and services that meet their needs and expectations can be executed.

In order to collect accurate customer data, appropriate technologies such as big data analytics or machine learning shall be used. By using these technologies, customers' behaviour and preferences can be identified, so that the marketing messages and products can be personalised accordingly.

Additionally, using predictive modelling technology to determine customer habits before they happen will help reduce the need for manual steps during customer service interactions. Predictive models are especially valuable when it comes to understanding what customers would like or don't want from a product or service.

Optimising website design helps to save on operating costs. When designing websites, take into consideration how users interact with the site; for example, make sure the site is easy enough for people with limited resources to navigatewhile still providing high-quality content.

Implementing Automatic Discount Programs for E-Commerce Stores is one way in which it automatically reduces operating costs by implementing automatic discount programs in e-commerce systems. By implementing automatic discount programs, it allows businesses to automatically enroll customers into discounts that expire at a specific date or time period. This way, they don’t have to worry about enrolling new customers every time; instead, they simply enroll existing customers into the program and start enjoying their discounts immediately. This approach also allows businesses to track the effectiveness of their discount programs and can makechanges or updates accordingly without having to worry about potential customer dissatisfaction.

The goal of e-commerce is to reduce the cost of selling products and services. To do this, the website and e-commerce system needs to be optimized so that it can sell more products and also serve more customers at reduced cost.

There are different ways of optimization, but the most common approach is to adjust your website’s design, layout, and coding so that the site sells more products at a lower price. Sales processes can be improved, increase customer acquisition rates, or develop marketing strategies that target specific areas.

In order to maximise the value of e-commerce business, it’s important to keep track of all the data that relates to sales and customer behaviour. This information can help in making better decisions about how to market and sell products and services, as well as identify areas where improvement is needed. By taking these steps, operational costs can be reduced while still ensuring that the business remains profitable.

There are various ways which can be adopted to reduce operational costs such as; Overview of Operational Costs and their Impact on E-Commerce Businesses. Operational costs are those expenses that affect the efficiency and effectiveness of a business. Along with direct costs such as wages, benefits, rent, and equipment, operational costs also include indirect costs such as marketing and customer service expenses.

Identifying Operational Costs and Their Impact on E-Commerce Businesses is a method in which operational costs can be identified through cost data collected from operations . However, there are several methods for estimating indirect costs other than simply taking the cost of goods sold from past sales data. One method is to use economic analysis to identify opportunities for reducing cost of goods sold by altering the product mix or pricing strategies. Another method is to use market research which would help in identifying what customers require from their e-commerce businesses and then craft products or services that meet these needs.

Evaluating Operating Costs for E-Commerce Businesses. After identifying which expenses are necessary for day-to-day operations, it is important to identify how these costs impact the overall financial health. The section also provides detailed information on each expense category and how it impacts the overall financial health. The sections will also provide tips on how the spending can be controlledby reducing unnecessary expenses while still running a profitable e-commercebusiness.

CHAPTER 4

COMPANY PROFILE

4.1 PROFILE OF HDFC BANK

Figure 4.1 : Hdfc Bank Logo

HDFC Bank Limited is an Indian banking and financial services company headquartered in Mumbai. It is India's largest private sector bank by assets and also the world's 10th largest bank by market capitalization as of April 2021. It is the third largest company by market capitalization of $127.16 billion on the Indian stock exchanges.

HDFC Bank was incorporated in 1994 as a subsidiary of the Housing Development Finance Corporation, with its registered office in Mumbai. The first corporate office and a full-service branch at Sandoz House, Worli were inaugurated by the Union Finance Minister, Manmohan Singh.

As of 30 June 2022, the bank's distribution network was at 6,378 branches across 3,203 cities. It had installed 430,000 POS terminals and issued 23,570,000 debit cards and 12 million credit cards in the financial year 2017. It has a base of 1,52,511 permanent employees as of June 2022.

HDFC Bank also provides a number of products and services including wholesale banking, retail banking, treasury, auto loans, two-wheeler loans, personal loans, loans against property, consumer durable loan, lifestyle loan and credit cards. Alongwith this it has various digital products such as Payzapp and SmartBUY.

HDFC Bank had merged with Times Bank in February 2000. This was the first merger of two private banks in the New Generation private sector banks category.

Times Bank was established by Bennett, Coleman and Co.Ltd., commonly known as The Times Group, India's largest media conglomerate. In 2008, Centurion Bank of Punjab (CBoP) was acquired by HDFC Bank. HDFC Bank's board approved the acquisition of CBoP for ₹95.1 billion was one of the largest mergers in the financial sector in India.

In September 2021, the bank partnered with Paytm to launch a range of credit cards powered by the global card network Visa.

In March 2020, the Housing Development Finance Corporation, parent company of HDFC Bank, made an investment of ₹1,000 crores in Yes Bank. As per the scheme of reconstruction of Yes Bank, 75% of the total investment by the corporation would be locked in for three years. On 14 March, the Yes Bank allotted 100 crore shares of the face value of ₹2 each for consideration of ₹10 per shares to the Corporation aggregating to 7.97 percent of the post issue equity share capital of Yesbank.

4.1.0 Services Provided by HDFC Bank

The extensive variety of banking services offered by HDFC Bank include transactional and branch banking for retail customers as well as commercial and investment banking for wholesale customers. The bank has three key business segments:

4.1.1 WHOLESALE BANKING

The majority of the large, blue-chip manufacturing organizations in the Indian corporate sector, as well as several smaller and mid-sized corporations and agri-based businesses, are the Bank's target clientele. For these clients, the Bank offers a vast array of commercial and transactional banking services, such as cash management, working capital finance, trade services, and transactional services. Thebank is a top supplier of structured solutions, which integrate vendor and distributorfinancing with cash management services to provide improved supply chain management for its corporate clients. The Bank has achieved substantial inroads into the banking consortia of several top Indian corporates, including multinationals, corporations from the local business houses, and premier public sector enterprises. This is due to its outstanding product delivery / service standards and strong client focus. It is acknowledged as a premier supplier of transactional banking and cash management solutions to banks, mutual funds, stock market participants, and corporate clients.

This business focuses on institutional customers such as;

1. Large corporates including MNCs
2. Government bodies
3. Emerging corporates
4. Business banking/SMEs
5. Infrastructure finance group

Products and Services

- Working capital facilities
- Term lending
- Project finance
- Debt capital markets
- Mergers and acquisitions
- Trade credit
- Supply chain financing
- Forex and derivatives
- Cash management services
- Wholesale deposits
- Letters of credit and guarantees
- Custodial services
- Correspondent banking

4.1.2 TREASURY

The bank's three primary product divisions within this sector are Equities, Local Currency Money Market & Debt Securities, and Foreign Exchange and Derivatives. Corporates now require more sophisticated risk management information, guidance, and product structures as a result of the liberalization of the Indian financial markets. The bank's Treasury division offers these as well as excellent pricing on numerous treasury products. The bank is required to maintain 25% of its deposits in government securities to satisfy statutory reserve requirements. The management of the returns and market risk on this investment portfolio is the responsibility of the Treasury department.

The Treasury oversees the Bank's investments in securities and other market instruments and is the custodian of its cash and liquid assets. In addition to managing the balance sheet's interest rate and liquidity risks, it is also in charge of satisfying the regulatory reserve requirements.

Products and Services

1. Foreign exchange & derivatives
2. Solutions on hedging strategies
3. Trade solutions - domestic and cross border
4. Bullion
5. Debt capital markets
6. Equities
7. Research - Reports & commentary on markets and currencies
8. Asset liability management
9. Statutory reserve

4.1.3 RETAIL BANKING

A broad variety of financial products and banking services are what the retail bank aims to offer to its target market clients, offering them a one-stop shop for all their banking needs. Customers may receive the goods through the expanding branch network, as well as through alternate delivery methods including ATMs, phone banking, online banking, and mobile banking, all of which are supported by first-rate customer care.

The HDFC Bank Plus, Investment Advisory Services, and HDFC Bank Preferred programs were created with the interests of clients in mind who are looking for specialised financial solutions, information, and guidance on numerous investment possibilities. Auto Loans, Loans against Marketable Securities, Personal Loans, and

Loans for Two-Wheeled Vehicles are just a few of the several retail lending products offered by the Bank. Additionally, it is a top supplier of DepositoryParticipant (DP) services for retail clients, enabling clients to keep their investmentselectronically.

The MasterCard Maestro debit card is also issued by HDFC Bank, which was the first bank in India to provide an international debit card in collaboration with VISA (VISA Electron). In the latter part of 2001, The Bank started issuing credit cards. The bank's overall card base (debit and credit cards) reached over 25 million by March 2015. With more than 235,000 Point-of-Sale (POS) terminals for accepting debit and credit cards at merchant businesses, the Bank is also among the top participants in the "merchant acquiring" industry. With a comprehensive variety of internet banking services for fixed deposits, loans, bill payments, etc., the Bank is well positioned as a market leader in several web-based business-to-consumerprospects.

This business caters to

1. Individual borrowers
2. Salaried & professional borrowers
3. Micro & medium sized businesses
4. Extremely small businesses like kirana stores
5. Self-help groups (SHGs)
6. Non-resident Indians (NRIs)

Products and Services

- Credit and debit cards
- Personal loans
- Home loans
- Gold loans
- Mortgages
- Commercial vehicles finance
- Retail business banking
- Savings account
- Current account

- Fixed and recurring deposits
- Corporate salary accounts
- Construction equipment finance
- Agri and tractor loans
- SHG loans
- Kisan Gold Card
- Distribution of mutual funds, life, general and health insurance
- Healthcare finance
- Offshore loans to NRIs
- NRI deposits
- Small-ticket working capital loans
- Business loans
- Two-wheeler loans
- Loans against securities
- Auto Loans

4.1.4 Subsidiaries of HDFC Bank

1. HDFC Life
2. HDFC Pension
3. HDFC Mutual Fund
4. HDFC ERGO
5. HDFC SALES
6. HDFC CREDILA
7. HDFC PROPERTY FUNDS
8. HT PAREKH FOUNDATION
9. HDFC EDU

4.2 PROFILE OF AXIS BANK

Figure 4.2 : Axis Bank Logo

The bank was founded on 3 December 1993 as **UTI Bank**, opening its first registered office in Ahmedabad and a corporate office in Mumbai. The bank was promoted jointly by the Administrator of the Unit Trust of India (UTI), Life Insurance Corporation of India (LIC), General Insurance Corporation, National Insurance Company, The New India Assurance Company, The Oriental Insurance Corporation and United India Insurance Company. The first branch was inaugurated and opened on 2 April 1994 in Ahmedabad by Manmohan Singh, former finance minister of India.

In 2001 UTI Bank had agreed to merge with Global Trust Bank, but the Reserve Bank of India (RBI) denied approval and the merger did not take place. In 2004, the RBI then put Global Trust under moratorium and supervised its merger with Oriental Bank of Commerce. In the following year, UTI bank was listed on the London Stock Exchange. In the year 2006, UTI Bank opened its first overseas branch in Singapore. The same year it opened an office in Shanghai, China. In2007, it opened a branch in the Dubai International Financial Centre and branches in Hong Kong.

On 30 July 2007, UTI Bank changed its name to Axis Bank. In 2009, Shikha Sharma was appointed as the Managing Director (MD) and Chief Executive Officer(CEO) of Axis Bank. In 2013, Axis Bank's subsidiary, Axis Bank UK commenced banking operations. On 1 Januar y 2019, Amitabh Chaudhry was appointed as the

MD and CEO. In the year 2021,the Bank had reduced its stake in Yes Bank from 2.39 per cent to 1.96 per cent. As of 12 August 2016, the bank had a network of 4,096 branches and extension counters and 12,922 ATMs.

Axis Bank has the largest ATM network among private banks in India. It even operates an ATM at one of the world's highest sites at Thegu, Sikkim at a height of 4,023 metres above sea level

The bank currently has nine international offices with branches at Singapore, Hong Kong, Dubai, Shanghai, Colombo and representative offices at Dhaka, Dubai, Sharjah and Abu Dhabi, which focus on corporate lending, trade finance, syndication, investment banking and liability businesses. In addition to the above, the bank has a presence in the UK with its wholly owned subsidiary Axis Bank UK Limited.

4.2.0 Services Provided by Axis Bank

Axis Bank's Product Offerings

The following list of Axis Bank products includes some of them:

4.2.1 ACCOUNTS

Accounts offers a variety of goods, some of which are mentioned below:

- **Savings Account**: Axis Bank allows you to start a savings account. Depending on your financial needs, you may pick from a number of different types of savings accounts.
- **Salary Accounts**: Axis Bank offers several salary accounts, each of which has advantages of its own. You can select any one of the six different types of salary accounts based on your monthly pay.
- **Current Account**: Select any one of the 14 current accounts to enable you to make as many deposits or withdrawals as necessary to grow your business.
- **Safe Deposit Locker**: The bank also provides a safe deposit locker option which helps to store all of your belongings in one location.

- **Pension Disbursement Account**: This feature can be used to manage allpension payments.
- **Sukanya Samriddhi Yojana**: This savings program helps to set money aside for your daughter's bright futu re.
- **PMJDY**: Accounts opened under PMJDY are being opened with Zero balance.

4.2.2 DEPOSITS

- **Digital Fixed Deposit**: Open a fixed deposit account online and complete the KYC process online. The entire procedure is quick and easy.
- **Fixed Deposit**: Open a fixed deposit account with a minimum deposit of Rs.5,000 and a term of 7 days to 10 years.
- **Recurring Deposit**: Open a recurring deposit account online with a Rs.500 minimum deposit.
- **Tax Saver FD**: Open a tax-saving FD account and save up to Rs.1.5 lakh in taxes while earning interest on your deposits.
- **Auto Fixed Deposit**: Use this service to have the deposit amount automatically moved from your savings account to your deposit account.
- **Fixed Deposit Plus**: Earn a greater interest rate when you deposit a minimum of Rs.2 crore.

4.2.3 CARDS

- **Credit Card**: Axis Bank offers a variety of credit cards based on your financial capability.
- **Debit Card**: Axis Bank offers a variety of debit cards based on your financial capabilities.
- **Prepaid Card**: You may load it with any amount between Rs.500 and Rs.10,000 and use it as a meal card, gift card, or smart pay card.

- **Transit Card**: Use the Transit Card to make shopping and traveling more convenient.
- **Commercial Credit Card**: Use an Axis Bank commercial credit card to easily manage your corporate costs.
- **Commercial Debit Card**: Use an Axis Bank commercial debit card to easily manage your corporate costs.

4.2.4 LOANS

- **House Loan**: Choose from a variety of house loan packages with maximum tenures of 30 years and loan amounts ranging from Rs.5 crore to Rs.10 crore.
- **Personal Loan:** Axis Bank offers personal loans to help you fulfill your diverse financial demands.
- **Business Loan**: Apply for a business loan to borrow funds to expand your company.
- **Car Loan**: Axis Bank provides vehicle loans so that you can buy the car of your dreams.
- **Two wheeler Loan:** Axis Bank provides two-wheeler loans so that you may buy the bike or scooter of your choosing.
- **24x7 Loan against Securities:** If you need money quickly, you can get a loan in return for your mutual fund bond, insurance policy, shares, and soon.
- **Commercial Vehicle and Construction Equipment Loan**: Use this loan to buy a used commercial vehicle.
- **Education Loan**: Axis Bank provides education loans so that you canfurther your studies in India or abroad.
- **Loan against Property**: You can use your property as collateral for this loan.
- **Gold Loan**: Get a loan for the value of your gold jewellery.

- **Loan against FD**: Apply for a loan against your fixed deposit to cover your immediate financial demands.
- **Holiday Loan**: Get loans ranging from Rs.50,000 to Rs.15 lakh to cover your holiday needs.

4.2.5 FOREX

- **Travel Forex Card**: This sort of card allows you to easily make payments overseas.
- **Send Money Abroad**: Axis Bank assists you in establishing an International Transfer Fund, which allows you to send money to any overseas bank account from any Axis Bank branch.
- **Send Money Abroad Online**: Axis Bank will assist you set up an International Transfer Fund so that you may move money from your Axis Bank account to any foreign bank account.
- **Send Money to India**: A quick and easy way to transfer funds from any international bank account to your Axis Bank account.

4.2.6 INSURANCE

- **Life Insurance**: Depending on your financial needs, select one of the life insurance plans to ensure that your loved ones' future is safe and secure.
- **General Insurance**: Apply for general insurance policies to protect your most valuable things, such as your automobile or home.
- **Health Insurance**: Health insurance covers the cost of medication and hospitalisation in the event that you become ill or injured, preventing you from having to tap into your funds to cover the costs.

4.2.7 INVESTMENTS

- **Mutual Funds**: Axis Bank offers top-performing mutual funds, which youmay invest in according to your needs.
- **Digital Gold**: Invest in gold without physically purchasing the golden metal.Some of the other investment options offered by Axis Bank are:

1. Sovereign Gold Bonds
2. Public Provident Fund
3. National Pension System
4. RBI Floating Rate Savings Bonds 2020
5. Atal Pension Yojana
6. Kisan Vikas Patra
7. AxisDirect
8. IPOSmart
9. Demat Account
10. Alternative Investments

4.2.8 BANKING SERVICES

Some of the banking services that are offered by Axis Bank are given below:

1. Net Banking
2. FASTAG Services
3. Axis Bank customer care

4.2.9 Subsidiaries of Axis Bank

1. Axis Capital Ltd.
2. Axis Private Equity Ltd.
3. Axis Trustee Services Ltd.
4. Axis Asset Management Company Ltd.
5. Axis Mutual Fund Trustee Ltd.
6. Axis Bank UK Ltd.
7. Axis Securities Ltd.
8. Axis Finance Ltd

CHAPTER 5

DATA ANALYSIS AND INTERPRETATION

We will be analysing the financial statements of Hdfc bank and Axis bank from the year 2015-16 to 2021-22 to evaluate the role of E-Commerce in reducing operational cost. The financial statements of banks are taken from the official sitesof these two banks. Ratio analysis is mainly used to find the relationship between E-Commerce and operational cost of the banks. Operating ratio, operating profit ratio, net profit ratio, expense ratio and operating profit to total assets ratio are analysed as part of ratio analysis.

5.1 OPERATING RATIO

The operating ratio shows the efficiency of a company's management by comparing the total operating expense of a company to net sales. The operating ratio shows how efficient a company's management is at keeping costs low while generating revenue or sales. The smaller the ratio, the more efficient the company is at generating revenue vs. total expenses. An operating ratio that is decreasing isviewed as a positive sign, as it indicates that operating expenses are becoming an increasingly smaller percentage of net sales. A limitation of the operating ratio is that it doesn't include debt.

Operating Ratio= (Operating Expenses/ Total Revenue)*100

OPERATING RATIO OF HDFC BANK

Table 5.1.1 Showing Operating Ratio of Hdfc Bank

YEAR	OPERATING EXPENSE (in crores)	TOTAL REVENUE (in crores)	RATIO (%)
2015-16	17831.88	74373.21	23.97
2016-17	20751.07	86148.98	24.08
2017-18	23927.22	101344.45	23.60
2018-19	27694.76	124107.79	22.31
2019-20	33036.06	147068.27	22.46
2020-21	35001.26	155885.27	22.45
2021-22	40312.43	167695.40	24.03
Mean	28364.95	122374.77	23.27
Standard Deviation	7537.16	33484.36	0.76
Coefficient of Variation	26.57	27.36	3.27
CAGR	-0.67	-0.67	-0.85

Source: Compiled from annual report of HDFC Bank.

Figure 5.1.1 Showing Operating Ratio

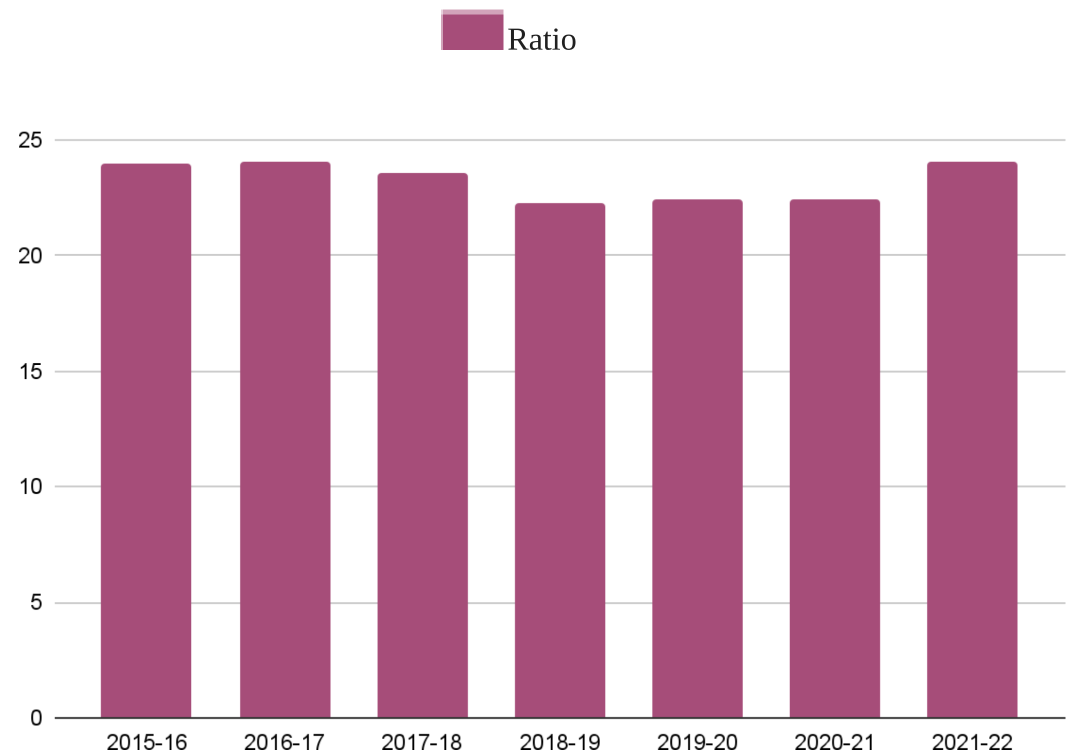


Table 5.1.1 shows the Operating Ratios of HDFC Bank over a period of seven years from 2015-16 to 2021-22.The average ratio is 23.19 and standard deviation is 22.51.The coefficient of variation is 97.11 and CAGR follows a negative trend. Operating Ratio is low during the year 2018-19.This indicates better position and high margin of profit and vice versa.

OPERATING RATIO OF AXIS BANK

Table 5.1.2 Showing Operating Ratio of Axis Bank

YEAR	OPERATING EXPENSES (in crores)	TOTAL REVENUE (in crores)	RATIO (%)
2015-16	10611.37	51364.23	20.65
2016-17	12725.63	57596.70	22.09
2017-18	14788.36	58476.67	25.28
2018-19	16720.19	70232.41	23.80
2019-20	18065.76	80057.67	22.56
2020-21	19174.87	80847.94	23.71
2021-22	24824.23	86114.19	28.82
Mean	16701.49	69241.40	23.84
Standard Deviation	4317.99	12583.71	2.44
Coefficient of Variation	25.85	18.17	10.23
CAGR	-0.66	-0.76	-0.80

Source: Compiled from annual report of Axis Bank

Figure 5.1.2 Showing Operating Ratio of Axis Bank

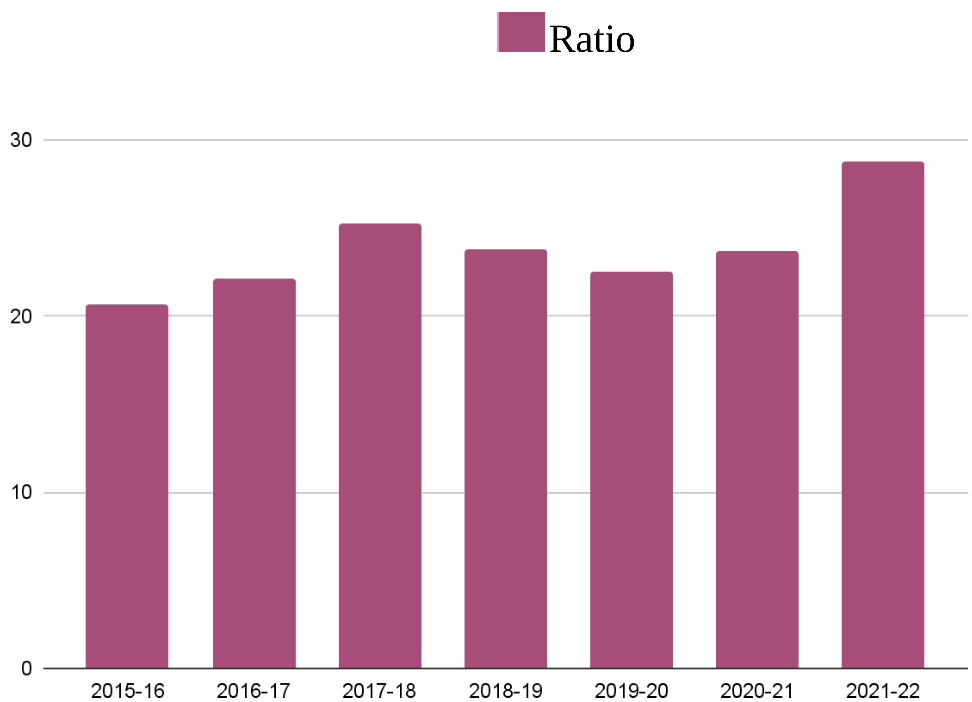


Table 5.1.2 shows the Operating Ratios of Axis Bank over the years from 2015-16 to 2021-22.The average ratio is 24.12, standard deviation is 34.31 and coefficient of variation is 142.24.CAGR follows a negative trend. Operating Ratio is low during the year 2015-16 and high during 2021-22.A low operating ratio indicates better position and high margin of profit and vice versa.

The operating ratios of Hdfc bank from the year 2015-16 to 2021-22 have had only slight fluctuations with 2018-19 being the lowest of all .For banks,50% or below is considered ideal. Here all the ratios are under 50%. The operating ratio of Axis bank from the year 2015-16 to 2021-22 have had many fluctuations from 20% to 28% with 2021-22 being the highest and 2015-16 being the lowest. Even though all the ratios are below 50% they had a 5.11% increase in the year 2021-22.

5.2 OPERATING PROFIT RATIO

The operating profit ratio is the amount of money a company makes from its operations. It is one of the better indicators of how successfully a management team runs a company. The operationalprofit ratio is a measure that determines how much profit a company makes on a rupee of sales. Since they demonstrate a company's effectiveness in managing its operations and capacity to convert sales into profits.

Operating Profit Ratio = (Operating Profit/ Total Revenue)*100

OPERATING PROFIT RATIO OF HDFC BANK

Table 5.2.1 Showing Operating Profit Ratio

YEAR	OPERATING PROFIT (in crores)	TOTAL REVENUE (in crores)	RATIO (%)
2015-16	21363.55	74373.21	28.72
2016-17	25732.99	86148.98	29.87
2017-18	51623.50	101344.45	50.94
2018-19	65302.60	124107.79	52.62
2019-20	71972.74	147068.27	48.94
2020-21	72432.76	155885.27	46.47
2021-22	75249.09	167695.40	44.87
Mean	54811.03	122374.77	43.20
Standard Deviation	21068.81	31321.75	9.12
Coefficient of Variation	38.44	25.59	21.11
CAGR	-0.49	-0.67	-0.77

Source: Compiled from annual report of HDFC Bank

Figure 5.2.1 Showing Operating Profit Ratio of Hdfc Bank

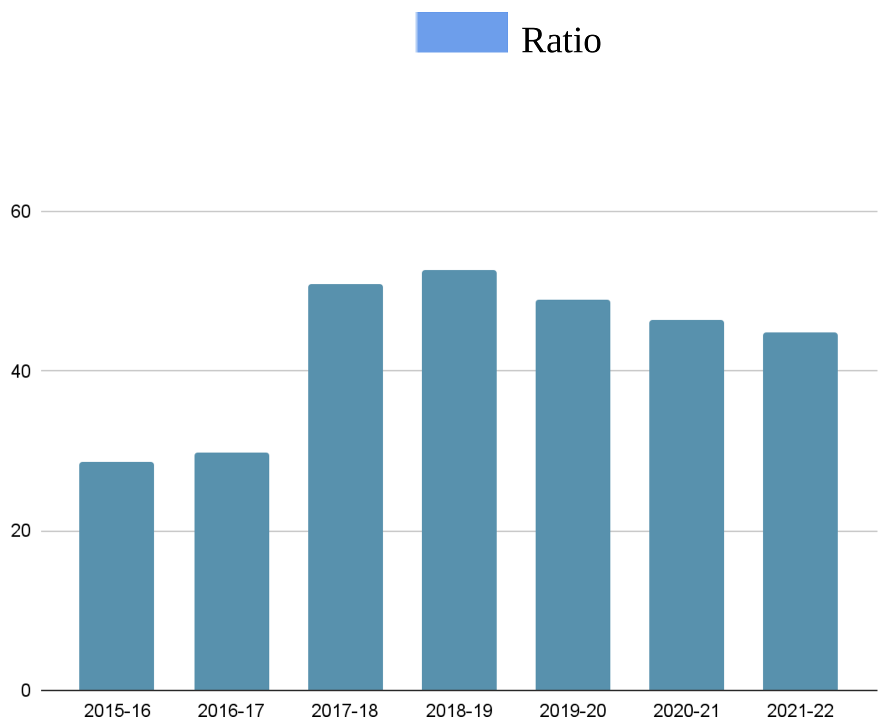


Table 5.2.1 shows the Operating Profit Ratios of Hdfc Bank from year 2015-16 to 2021-22.The average ratio is 43.20 and standard deviation is 9.12.Coefficient of variation is 21.11 and CAGR follows a negative trend. The year 2018-19 has the highest operating profit margin which indicates better operational efficiency.

OPERATING PROFIT RATIO OF AXIS BANK

Table 5.2.2 Showing Operating Profit Ratio of Axis Bank

YEAR	OPERATING PROFIT (in crores)	TOTAL REVENUE (in crores)	RATIO (%)
2015-16	16104	51364.23	31.35
2016-17	17585	57596.70	30.53
2017-18	15623	58476.67	26.72
2018-19	16838	70232.41	23.97
2019-20	21749	80057.67	27.17
2020-21	23128	80847.94	28.61
2021-22	24742	86114.19	28.73
Mean	19395.57	69241.4	28.15
Standard Deviation	3442.18	12583.71	2.15
Coefficient of Variation	17.75	18.17	7.64
CAGR	-0.78	-0.76	-0.86

Source: Compiled from annual report of Axis Bank

Figure 5.2.2 Showing Operating Profit Margin of Axis Bank

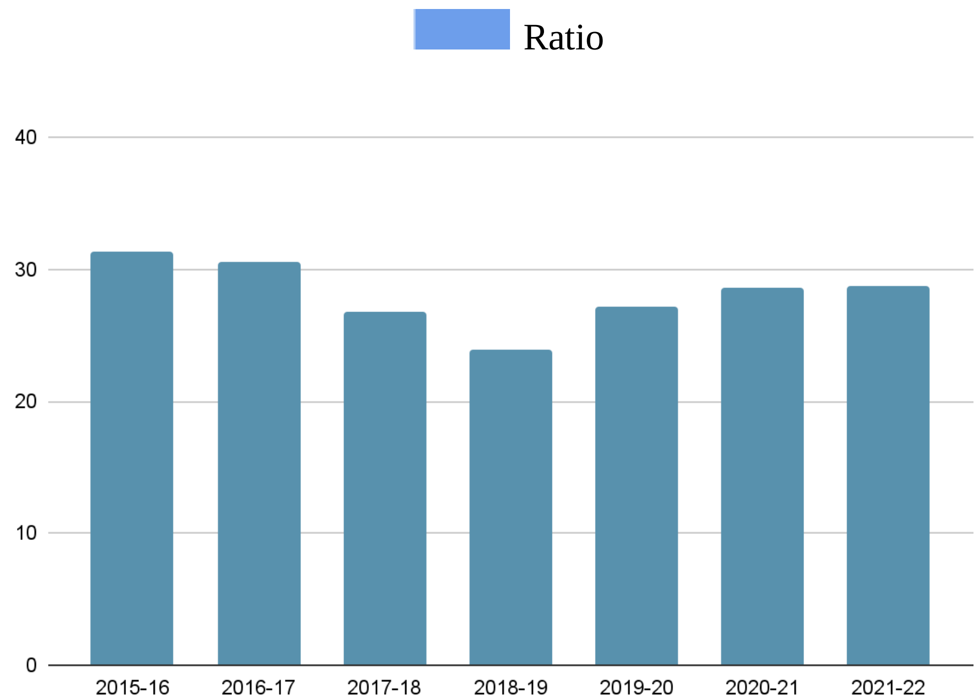


Table 5.2.2 shows the operating profit ratio of Axis Bank from the year 2015-16 to 2021-22.The average ratio is 28.15 and standard deviation is 2.15. Coefficient of variation is 7.64 and CAGR follows a negative trend.The year 2015-16 has the highest operating profit margin of 31.35 which shows better operational efficiency.

The operating profit ratios of Hdfc bank had an escalation from 29.87% to 50.94% in the year 2017-18.The operating profit had been decreasing from 2019-20 with 2021-22 being only 44.87%.The operating profit ratios of Axis bank had a fall from 31.35% to 23.97% in the years 2015-16 to 2018-19.This again started picking up and has reached 28.73% in 2021-22.

5.3 NET PROFIT RATIO

The net profit ratio measures how much net income or profit is generated as a percentage of revenue. It is the ratio of net profits to revenues for a company or business segment. Net profit ratio helps investors assess if a company's management is generating enough profit from its sales and whether operating costsand overhead costs are under control. It is one of the most important indicators of acompany's overall financial health.

Net Profit Ratio = (Net Profit/ Revenue from Operations) *100

NET PROFIT RATIO OF HDFC BANK

Table 5.3.1 Showing Net Profit Ratio of Hdfc Bank

YEAR	NET PROFIT (in crores)	REVENUE FROM OPERATIONS (in crores)	RATIO
2015-16	12296.21	60221.45	20.41
2016-17	14549.64	69305.96	20.99
2017-18	17486.73	80241.36	21.79
2018-19	21078.17	98972.05	21.29
2019-20	26257.32	114812.65	22.86
2020-21	31116.53	120858.23	25.74
2021-22	36961.36	127753.12	28.93
Mean	22820.85	96023.55	23.14
Standard deviation	8377.29	24582.07	2.87
Coefficient of Variation	36.71	25.60	12.40
CAGR	-0.57	-0.99	-0.79

Source: Compiled from annual report of HDFC Bank

Figure 5.3.1 Showing Net Profit Ratio

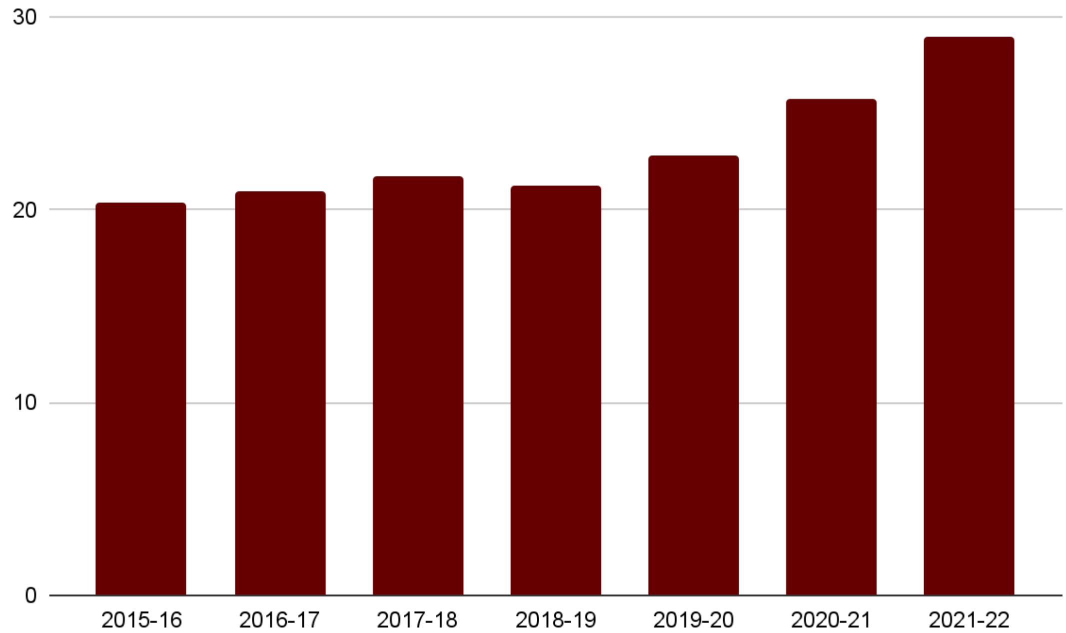


Table 5.3.1 shows Net Profit Ratio of Hdfc Bank from 2015-16 to 2021-22.The average Net Profit Ratio is 23.14 and standard deviation is 2.87.Coefficient of variation is 12.40 and CAGR follows a negative trend.2021-22 has the highest Net Profit Ratio of 28.93 which indicates better profitability.

NET PROFIT RATIO OF AXIS BANK

Table 5.3.2 Showing Net Profit Ratio of Axis Bank

YEAR	NET PROFIT (in crores)	REVENUE FROM OPERATIONS (in crores)	RATIO (%)
2015-16	8,223.66	40988.04	20.06
2016-17	3,679.28	44542.16	8.26
2017-18	2750.68	45780.31	6.01
2018-19	4,676.61	54985.77	8.50
2019-20	1,627.22	62635.16	2.59
2020-21	6,588.50	63645.29	10.35
2021-22	13,025.48	67376.83	19.33
Mean	5795.92	54279.08	10.73
Standard Deviation	3608.98	9807.35	6.10
Coefficient of Variation	62.27	18.07	56.85
CAGR	-0.77	-0.76	-0.86

Source: Compiled from annual report of Axis Bank

Figure 5.3.2 Showing Net Profit Ratio of Axis Bank

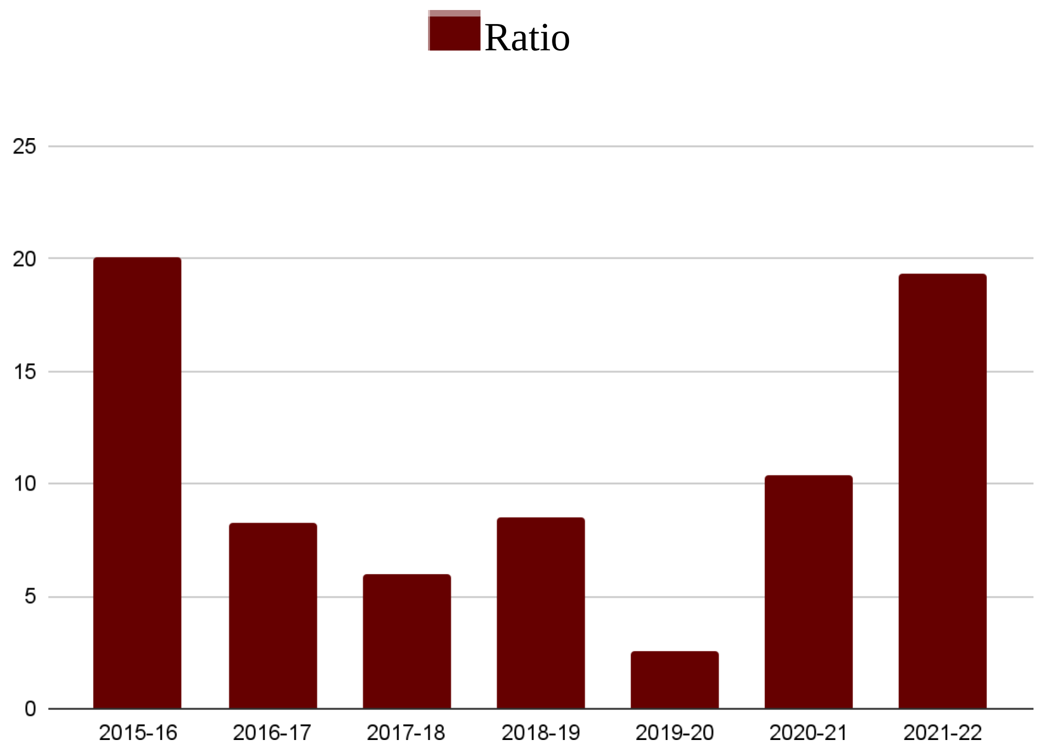


Table 5.3.2 shows Net Profit Ratio of Axis Bank for the years 2015-16 to 2021-22.The average Net Profit Ratio is 10.73 and Standard deviation is 6.10.Coefficient of Variation is 56.85 and CAGR follows a negative trend.2015-16 has the highest Net Profit Ratio which indicates better profitability.

The net profit ratios of Hdfc bank had an escalation from 20.41% to 28.93%in the years 2015-16 to 2021-22.It had only a microscopic 0.5% fall in the year 2018-19.The net profit ratios of Axis bank have had immense fluctuations during the selected years of study with 2.59% being the least net profit ratio in the year 2019-20.The net profit ratio has started picking upafter this enormous fall which has now reached 19.33% in 2021-22.

5.4 EXPENSE RATIO

Expense ratio equals the fund's total operating expenses divided by the average value of the fund's net assets. Expense-ratio indicates the per-unit cost of managing the funds which are calculated by dividing the total expenses by the total assets under management. The higher the ratio, the higher the funds are being incurred in-order to manage the fund.

Expense Ratio= Operational Cost/Total Assets*100

EXPENSE RATIO OF HDFC BANK

Table 5.4.1 Showing Expense Ratio(Operational Cost/Total Assets*100)

YEAR	OPERATINAL COST (in crores)	TOTAL ASSETS (in crores)	RATIO (%)
2015-16	17831.88	746103.76	2.39
2016-17	20751.07	910134.64	2.28
2017-18	23927.22	1123343.66	2.13
2018-19	27694.76	1300223.47	2.09
2019-20	33036.06	1651803	2.00
2020-21	35001.26	1871725.13	1.87
2021-22	40312.43	2227206.07	1.81
Mean	28364.95	1404362.81	2.08
Standard Deviation	7537.16	496287.42	0.19
Coefficient of Variation	26.57	35.33	9.13
CAGR	-0.67	-0.57	-0.89

Source: Compiled from annual report of HDFC Bank.

Figure 5.4.1 Showing Expense Ratio

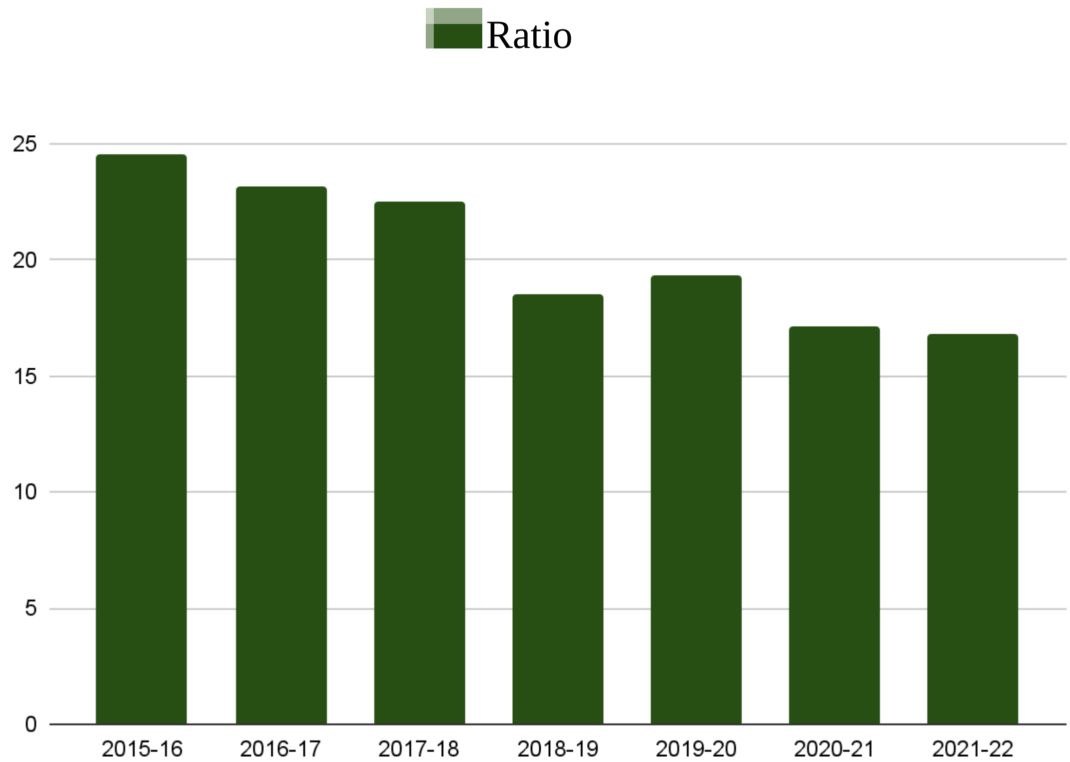


Table 5.4.1 shows the expense ratio of Hdfc bank for the year 2015-16 to 2020-21. The average ratio is 2.08 and standard deviation is 0.19. Coefficient of variable is 9.13and CAGR follows a negative trend.2021-22 has the lowest ratio which indicates higher return to investors.

EXPENSE RATIO OF AXIS BANK

Table 5.4.2 Showing Expense Ratio (Operational Cost / Total Assets*100)

YEAR	OPERATIONAL COST (in crores)	TOTALASSETS (in crores)	RATIO (%)
2015-16	10611.37	552675.52	1.92
2016-17	12725.63	629981.68	2.02
2017-18	14788.36	732097.02	2.02
2018-19	16720.19	848740.60	1.97
2019-20	18065.76	955860.31	1.89
2020-21	19174.87	1042112.5	1.84
2021-22	24824.23	1241211.5	2.00
Mean	16701.49	857525.59	1.95
Standard Deviation	4317.98	224077.86	0.06
Coefficient of Variation	25.85	26.13	3.07
CAGR	-0.66	-0.67	-0.85

Source: Compiled from annual report of Axis Bank

Figure 5.4.2 Showing Expense Ratio

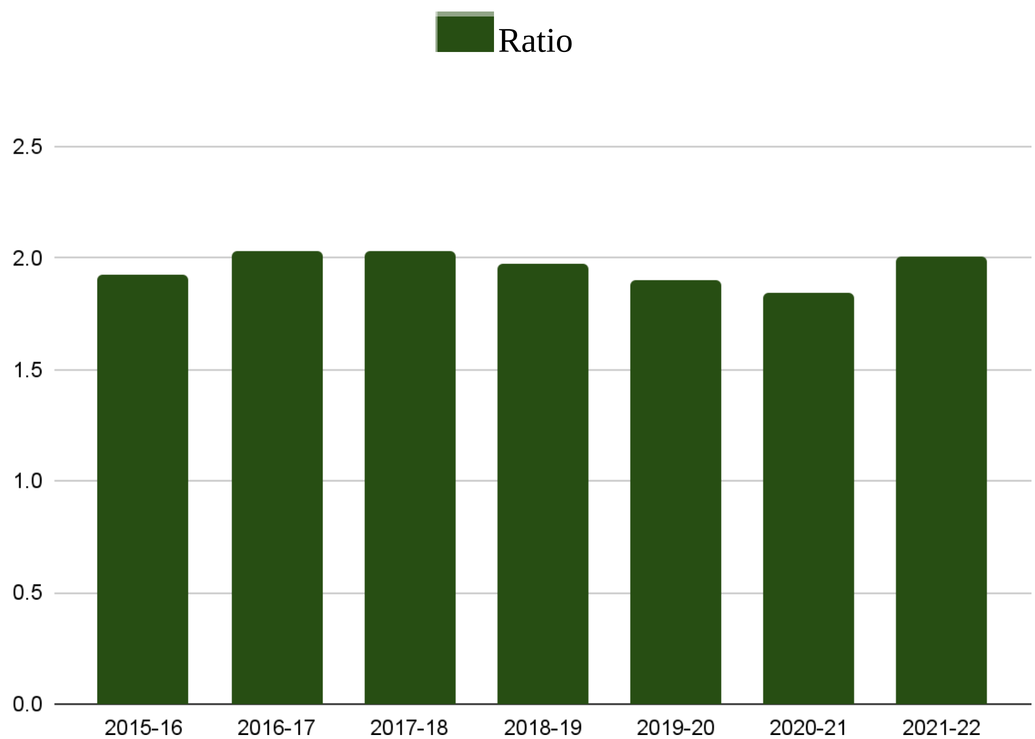


Table 5.4.2 shows the ratio between operational cost and total assets of Axis bank for the year 2015-16 to 2021-22.The average ratio is 1.95 and standard deviation is 0.06 . Coefficient of Variable is 8.84 and CAGR follows a negative trend. The year 2020-21 has the lowest ratio of 1.84 which indicates higher return to investors.

The expense ratio of Hdfc bank in 2021-22 is 1.81 which is the lowest in the selected seven years. This means higher return and less amount is spent on operating expenses. This is a positive result for the bank. The expense ratio of Axis bank in 2020-21 is 1.84 which is the lowest in seven years

5.5 OPERATING PROFITS TO TOTAL ASSETS RATIO

This ratio measures the level of profits relative to the company's assets. The operating profit to total assets ratio measures how much operating income or profit is generated as a percentage of total assets.

Operating Profits to Total Assets Ratio= Operating Profit/Total Assets*100

OPERATING PROFITS TO TOTAL ASSETS RATIO OF HDFC BANK

Table 5.5.1 Showing Operating Profit / Total assets

YEAR	OPERATING PROFIT (in crores)	TOTAL ASSETS (in crores)	OPERATING PROFIT / TOTAL ASSETS*100
2015-16	21363.55	746103.76	2.86
2016-17	25732.99	910134.64	2.86
2017-18	51623.50	1123343.66	4.59
2018-19	65302.60	1300223.47	5.02
2019-20	71972.74	1651803	4.35
2020-21	72432.76	1871725.13	3.86
2021-22	75249.09	2227206.07	3.37
Mean	54811.03	1404362.81	3.84
Standard Deviation	21068.81	496287.42	0.79
Coefficient of Variation	38.44	35.33	0.20
CAGR	-0.49	-0.57	-0.83

Source: Compiled from annual report of HDFC Bank

Figure 5.5.1 Showing Net Profit / Total Assets

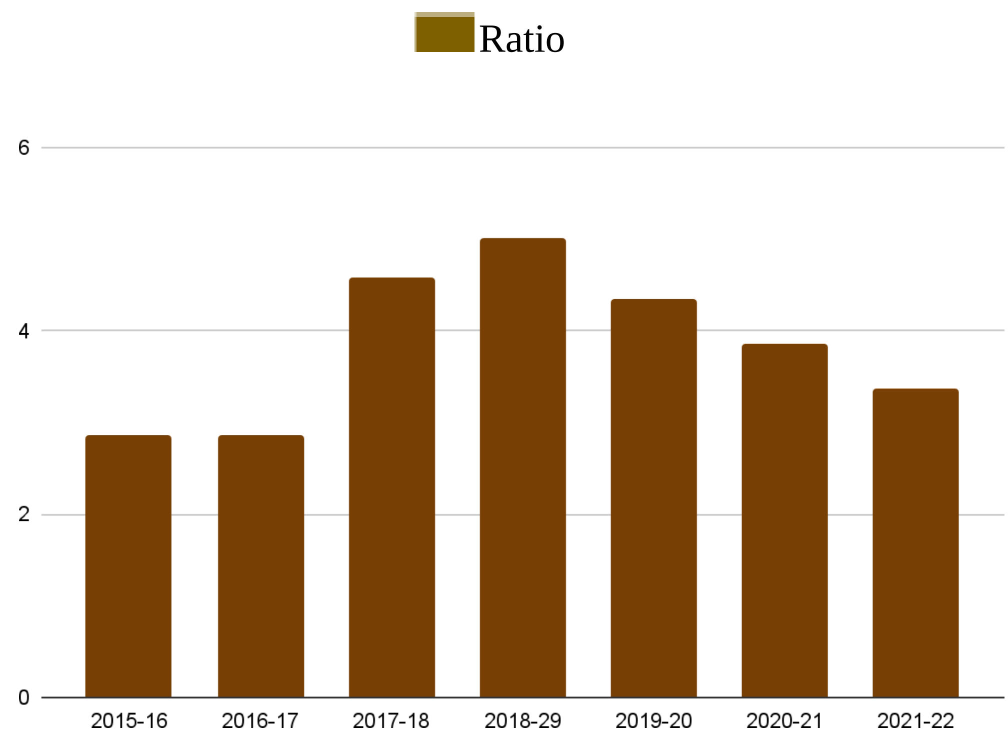


Table 5.5.1 Shows the ratio between Operational Profit and Total Assets of Hdfc Bank for the year 2015-16 to 2021-22.The average ratio is 15.67,standard deviation is 0.864 and CV is 5.51. 2015-16 has the highest ratio of 16.91

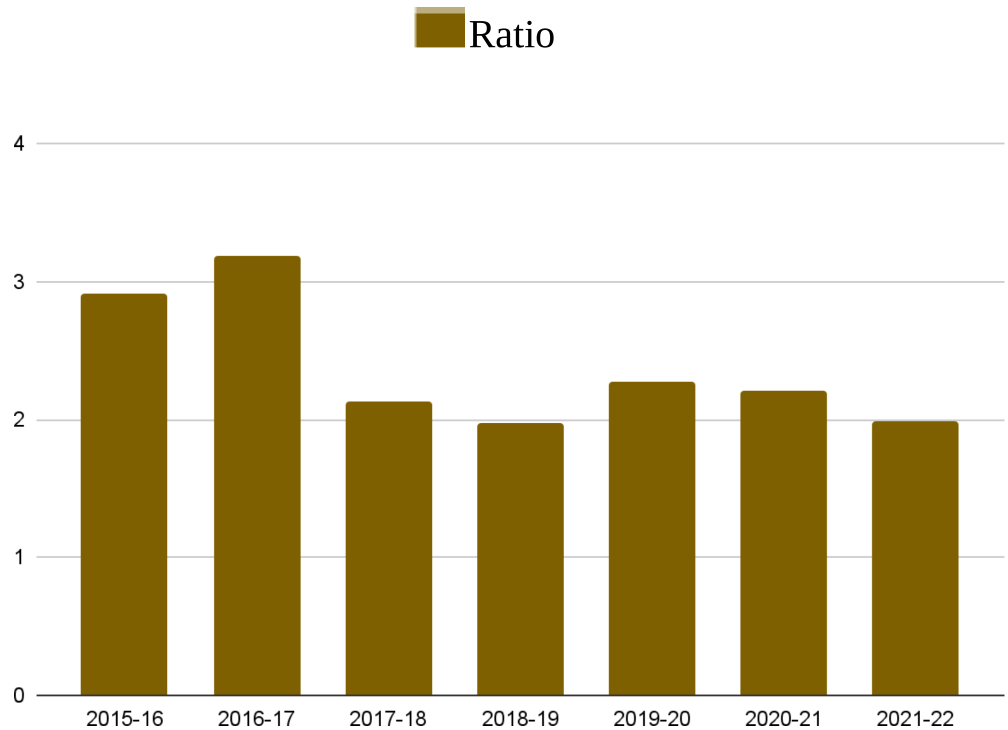
OPERATING PROFIT TO TOTAL ASSETS RATIO OF AXIS BANK

Table 5.5.2 Showing Operating Profit / Total Assets

YEAR	OPERATING PROFIT (in crores)	TOTAL ASSETS (in crores)	OPERATING PROFIT/TOTAL ASSETS*100
2015-16	16104	552675.52	2.91
2016-17	17585	629981.68	3.18
2017-18	15623	732097.02	2.13
2018-19	16838	848740.60	1.98
2019-20	21749	955860.31	2.27
2020-21	23128	1042112.5	2.21
2021-22	24742	1241211.5	1.99
Mean	19395.57	857525.59	2.38
Standard Deviation	3442.18	224077.86	0.43
Coefficient of Variation	17.75	26.13	0.18
CAGR	-0.78	-0.67	0.90

Source: Compiled from annual report of Axis Bank

Figure 5.5.2 Showing Operating Profit/ Total Assets



The table 5.5.2 shows the ratio between Operational profit and total assets for the years 2015-16 to 2021-22 of Axis bank. The average ratio is 7.02,standard deviation is 4.77 and CV is 67.94.2015-16 has the highest ratio of 15.46.

CHAPTER 6

SUMMARY, FINDINGS,CONCLUSION AND SUGGESTIONS

6.1 SUMMARY

Investment in new digital technologies that reduce costs while enabling new business models has been one of the most significant strategic concerns for banks inrecent years, and it continues to grow in importance. In this scenario this project is relevant because it studies how ecommerce helps banks in reducing operational costs by comparing Hdfc bank and Axis bank. Ratio analysis is done to compare the profitability and efficiency of these two banks. The operating ratio, operating profit ratio, net profit margin, expense ratio and operating cost to assets ratio are analysed for ratio analysis. Many possible benefits of cost reduction include increased profitability, cash flow, and competitiveness. Cost reduction, when done appropriately, may also assist enhance quality and service levels while maintaining or enhancing bottom-line outcomes.

6.2 FINDINGS

1. Hdfc bank has a lower average operating ratio of 23.27% compared to Axis bank's average ratio of 23.84%.This indicates higher efficiency of management to generate revenue while keeping costs low.
2. Hdfc bank has a higher operating profit ratio of 43.20% compared to Axis bank's average ratio of 28.15%.This indicates the bank's effectiveness in managing its operations and capacity to convert sales into profits.
3. Hdfc bank has a higher net profit ratio of 23.14 compared to Axis bank's average net profit ratio of 10.73.This shows better financial health of Hdfc bank.
4. The average expense ratio of Axis bank is 1.95% which is lower than the average expense ratio of Hdfc bank of 2.08%,but when analysing eachyear's ratio, it can be understood that the expense ratio of Hdfc bank has come down from 2.39% to 1.81% in 2021-22 which is the lowest. This shows higher return to investors.

5. The average operating profits to total assets ratio of Hdfc bank is 3.84% which is higher than the average ratio of Axis bank's average ratio of2.38.This indicates proper utilisation of assets.
6. The study clearly states that the use of e-commerce has brought changes in the operating expenses as well as the revenue of the banks. The operating expenses of the banks have increased every year but only in accordance with revenue, this is due to use of e-commerce and also the use of this has helped the banks in increasing their revenues..
7. It can be understood that e-commerce activities have benefited Hdfc bank more than Axis bank while analysing the ratios. The ratios of Hdfc bank have only improved over the years but ratios of Axis bank have been fluctuating despite the active usage of e- commerce activities.
8. Even though both the banks have equal level of e-commerce activities, Hdfc bank has more operational efficiency and profitability than Axis bank so,Axis bank has to work more on the products and services .

6.3 SUGGESTIONS

- Both banks have to pay more attention in reducing their operating expenses.
- E-Commerce facilities in the banks should be provided properly so that it would help increase the banks operating profits.
- Axis bank must carefully design its products and services so as to improve its operations.
- The net profits of the banks need to improve as there isn't any drastic change in profits over the years.
- Axis bank should be more consistent in its activities because there are huge fluctuations in profits.
- The E-Commerce facilities provided till date in these banks need to be improved and expanded as per the needs of customers.

- Data collection and handling procedures are critical for lowering operational costs in e-commerce systems. Data collecting correctly allows banks to understand their consumers' wants and preferences, which can subsequently be utilized to improve customer service or establish more effective sales processes. Understanding your clients' wants allows banks to design better goods and services that match their needs and expectations.

6.4 CONCLUSION

From the study of financial performance of Hdfc bank and Axis bank it can be concluded that Hdfc bank has higher profitability and. Private sector banks using E-commerce must retain a competitive advantage or face closure. It is vital to keep your operating expenditures as low as possible in order to compete with other banks and to maintain a healthy, self-regulating, and developing organisation. When these elements are considered, there are several techniques for minimising your E-commerce operational expenditures. Other techniques to keep in mind include focusing on providing top-notch services in order to boost customer retention and lower consumer purchase costs. In every aspect ecommerce has helped hdfc bank than axis bank when comparing their operating ratio, operating profit ratio, net profitratio, expense ratio and operating expense to total assets ratio.

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