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PORTFOLIO MANAGEMENT APPROACHES OF COMMERCIAL BANK IN INDIA

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ABSTRACT

A portfolio is a collection of financial assets such as bonds, closed-end funds, commodities, stocks, cash and cash equivalents, exchange-traded funds, as well as closed-end and exchange-traded funds (ETFs). A portfolio's basis is often viewed as consisting of stocks, bonds, and cash. Portfolio management is the practice of effectively and intelligently managing a bank's asset and liabilities mix. Banks purchase and sell assets that produce income throughout this process. Demand and term deposits, as well as other kinds of deposits, account for a substantial part of a bank's funds. since liberalization, portfolio management become has significant as Indian economy is much relying on banking industry. Therefore, researcher tried to analyzed the various theories of portfolio management being adopted by Indian banking industry along with its major objectives.

KEYWORDS: *Portfolio Management, Commercial Bank, Stocks, Bonds, Securities.*

Introduction

Profit is the main objective of a commercial bank, as it is for any other business. Its earning potential is influenced by its investment strategy. Its investing philosophy is determined by how it handles its investment portfolio.

As a consequence, "commercial bank investment strategy is derived from a straightforward application of portfolio management theory to the specific conditions of commercial banks." Portfolio management is the meticulous management of a bank's assets and liabilities in order to achieve the optimum mixture of income, liquidity and security.

Once a bank is open for commercial, it engages in the acquisition and disposition of income-generating assets. These assets, as well as cash, comprise the bank's portfolio. The income of a bank consists of (a) securities issued by the federal and national governments, local authorities and public organizations, and (b) financial bonds issued by businesses, including exchange bills, etc. Their earning assets account for about a quarter to a third of the total assets of a commercial bank. As a consequence, earning assets constitute a significant portion of a bank's income.

The way banks manage their portfolios, that is, how they buy and sell earning assets, has the potential to have a major effect on financial markets, consumer and corporate borrowing and spending patterns, and the overall economy.

Because of the unprecedented importance of the worldwide COVID-19 (new coronavirus) pandemic in terms of public, economic and social health, the dynamics which destabilize the investment banking sector have been intensified. These include liquidity stress, lower stock prices, market democratization, changing financial regulation, price pressure, customer sophistication, and transfers to remote banking.

Given this difficult climate, we anticipate that investment banks will shift from the complete service to a split of two broker types: "client capturers" specialising in front office operations and "flow players" (figure 1). These approaches will definitely operate in an increasingly interconnected, global - and even virtual - environment which includes partner relationships that provide various back-office services.

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Anil Verma

Industry restructuring should provide investment banks with opportunity to pursue greater rates of return. However, organizations cannot continue to tinker around the margins if they are to deliver on their goal. Numerous businesses will almost certainly need to significantly revise their existing business representations and working platforms in order to emphasize client-centricity, Additionally, they should decide which archetype they want to inhabit and if they are capable of doing so inside the new environment.

Theories of Portfolio Management

There seem to be tensions between the commercial bank's liquidity, safety, and profitability goals. Economists have attempted to settle these disputes by periodically setting down specific ideas. These rules or ideas, in reality, regulate asset allocation while keeping these goals in mind. They've also been dubbed "liquidity management theories," and they're explored here.

The Real Bills Doctrine

The real bills concept, sometimes called the lucrative credit hypothesis, argues that a successful bank should only lend to businesses for short-term, self-liquidating creative loans. Self-liquidating loans are used to fund the creation and subsequent development of the products through the various building, warehousing, shipping and circulation phases.

When such items are sold, the obligations are automatically liquidated. For example, a bank loan to an economist would be returned for the profits of the sale of the same goods, and the debt would auto-liquidate automatically.

Commercial banks should only provide productive short-term self-liquidating loans, and under the idea the dominating bank should only advance the banks with regard to the security of these short-term progress. This concept guarantees that each bank has an acceptable level of liquidity and that the whole economy has a sufficient supply of money.

The central bank was intended to enhance or decrease bank reserves in the rediscounting of authorised loans. With the expansion of companies and increased trading requirements, banks have increased their reserves with central banks by rediscounting bills. When slowing down and the demand for trade decreases, the quantity of rediscounted bills decreases, as do bank reserves, credit and money available. The real bills concept, sometimes called the lucrative credit hypothesis, argues that a successful bank should only lend to businesses for short-term, self-liquidating creative loans. The creation and subsequent movement of commodities through various phases of manufacturing, storage, transport and delivery are utilised for economically self-liquidating loans.

When these properties are finally sold, the debts are measured repeatedly. For example, a bank loan would be repaid from the earnings of selling the identical goods to a corporate finance officer and the debt would automatically liquidate itself.

Commercial banks should make productive short-term self-liquidating loans, and the central bank should only provide to banks, in accordance with the idea, security for such short-term loans. This concept guarantees that each bank has an acceptable level of liquidity and that the whole economy has a sufficient supply of money. The central bank was intended to raise or decrease bank reserves in rediscounting authorised loans. With the expansion of the firm and increased business requirements, banks were able to grow assets with central banks by rediscounting bills. When company slows and trade needs decrease, the number of rediscounted accounts decreases and bank reserve, banking credit and cash availability decreases.

Advantage of the Real Bills Doctrine

Three advantages accrue from these self-liquidating productive short-term loans. To begin, they have liquidity, which is why they liquidate quickly. Second, since they grow rapidly and are put to productive use, there is little risk of their becoming bad debts. Thirdly, banks benefit from these loans because they are lucrative.

Disadvantage of the Real Bills Doctrine

- In case bank refuses to issue a new loan until the previous one is repaid, the disgruntled debtor will be forced to decrease output, thereby impacting company activity. If all banks adhere to the same norm, the money supply and price in the society may be reduced. Existing debtors may be unable to repay their debts on time as a result of this.

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- Second, under normal economic circumstances, the theory implies that loans are self-liquidating. When there is a depression, output and commerce decrease, and the debtor is unable to repay the loan when it matures.
- Third, this theory ignores the reality that a bank's liquidity is determined by the salability of its liquid assets, not by the value of actual trade bills. A bank can guarantee safety, liquidity, and profitability by holding a range of assets such as bills and securities that can be easily traded in the money and capital markets. The bank will no longer have to depend on maturities in times of crisis.
- Fourth, the theory's fundamental flaw is that no debt is inevitably self-liquidating. If the stocks are not sold to customers and stay with the vender, a loan to the retailer for the acquisition of inventory is not self-liquidating. In order for a loan to be effective, it must include a third party, in this instance the customers, in addition to the lender and the borrower.
- Fifth, this idea is founded on "trade needs," which is no longer considered an acceptable criterion for controlling bank lending. The central bank will be unable to avoid either spiraling recession or inflation if bank credit and money supply vary in response to trade requirements.

The Shiftability Theory

The H.G. Moulton versatility theory of bank liquidity has claimed that when commercial banks retain a enough number of assets which may be transferred in cash to other banks without substantial losses in the case of a crisis, they are not needed to depend on liquidity maturities. According to this perspective, for a property to be completely transferable, it must be transferable immediately without incurring a loss of capital when liquidity is needed. Especially for short-term market assets such as treasury bills and bills of exchange that may be traded swiftly if a bank needs cash. In a worldwide crisis, for instance, when every bank need cash, the theory of shifting capacity argues that every bank has assets that may be moved to a central bank that serves as the last resort lender.

There are some aspects of truth in this idea. Transferring physical assets to other organizations is becoming more popular among banks. Treasury notes and bills of exchange are examples of liquid assets, as are significant company shares and debentures, as well as cash on hand. Because of this, banks have been pushed to lend on a longer-term basis in order to increase their profits.

Advantage of the Shiftability Theory

It does, however, have certain shortcomings. Simple asset shiftability, for starters, does not provide liquidness to the financial structure. It is entirely reliant on the state of economy at the time. Second, the shiftability theory fails to take into consideration the fact that banks are unable to transfer shares and debentures to third parties during periods of severe depression. When the market is in this state, there are no buyers, and those who possess the goods want to get rid of them as soon as possible. Trying to sell shiftable assets during a bank run may have negative consequences for the entire banking system, according to the third point; fourth, if all banks began shifting their assets at the same time, it would be catastrophic for both lenders and borrowers; and fifth, if all banks began shifting their assets at the same time, it would be catastrophic for both lenders and borrowers, according to the third point.

The Anticipated Income Theory

Based on the experience of US commercial banks providing term loans, H.V. Prochanow developed the anticipated income hypothesis in 1944. According to this concept, the bank aims to liquidate the term loan from the borrower's anticipated income, regardless of the form and nature of the borrower's business. A term loan is one that lasts more than a year but not more than five.

It safeguards assets like as equipment, inventories, and even real estate from being hypothecated. The bank puts limitations on the borrower's financial activity while issuing this loan. The bank considers the borrower's anticipated earnings as well as the security before issuing a loan. As a consequence, rather of paying a lump amount at the loan's maturity, a bank loan is returned in installments from the borrower's future earnings.

Advantage of the Anticipated Income Theory

This theory is better than the real bill doctrine and the concept of shiftability because in a single transaction it accomplishes three goals of liquidity, safety and profitability. Saving money and repaying the loan in installments on a regular basis ensures that the bank has sufficient liquidity to meet its obligations to the borrower. This meets the safety principle in that the bank makes a loan contingent on

Anil Verma

the borrower's ability to repay the loan as well as the quality of his or her collateral. The bank may decide to utilize its excess reserves to make term loans, thus guaranteeing a consistent stream of income. Finally, a term loan is very beneficial to the business sector since it offers funds for a relatively short period of time.

The Liabilities Management Theory

In the 1960s, this hypothesis was created. According to the theory, banks do not have to issue self-liquidating loans or maintain cash assets, as they can borrow cash from the monetary market if they need it. Additional liabilities from a number of sources may raise the reserves of a bank. These sources include time deposit certificates, borrowing from other commercial banks, central bank borrowing, generating capital money via share issuance, and reinvesting income.

Objectives of Portfolio Management

Portfolio management has three primary goals that a smart bank follows: liquidity, safety, and revenue. The three goals are diametrically opposed. To succeed on the bank, other goals will have to be sacrificed. For example, if banks want to make a lot of money, they may have to give up some safety and liquidity. It may have to give up some revenue if it wants greater safety and liquidity. We look at each of these goals individually and in relation to the others.

Liquidity

The assets of a commercial bank must be more liquid. Liquidity refers to the ease and certainty of cash transformation of assets. The liabilities of a bank are high in relation to its assets, since a tiny percentage of its assets are held in cash. On the other hand, their obligations are due promptly and on request.

As a result, a large enough share of the bank's assets in the form of cash and liquid assets is needed to be successful. The income of the bank will be affected if liquidity is given priority. On the other side, the outcome will be catastrophic if profits are prioritized over liquidity. As a result, a bank must strike a balance between its liquidity and profitability goals while managing its investment portfolio. The correct balance must be established while retaining a high degree of safety. This is because of a variety of limitations on the amount of income assets banks may purchase.

The horizontal axis represents earning assets, while the vertical axis represents cash, showing the nature of the battle between liquidity and profitability. The CF line represents the investment potential of all cash and earning asset combinations.

For instance, point A is a combination of OM cash and OS assets, while point T is a combination of ON cash and T assets. Each bank seeks to achieve the optimal position along CE, a combination of cash and income to optimize profits while maintaining liquidity and security.

A commercial bank has access to a broad variety of assets with different liquidity levels. The assets are liquid with the exception of cash, which are the liquids. The next most liquid assets are central bank deposits, treasury bills and other short-term bills issued by the government and the government as well as lending to other banks, enterprises, distributors and public securities brokers.

The many types of consumer loans, as well as long-term bond and mortgage investments, are fewer liquid assets. As a consequence, borrowing from other banks and the central bank, as well as asset sales, are among a bank's main sources of liquidity.

However, the quantity of liquidity a bank may hold is determined by the availability and cost of borrowing. It will have relatively few liquid assets if it can borrow significant quantities of money at any moment and at a cheap cost (interest rate). However, if borrowing money is difficult or expensive, the bank will retain more liquid assets in its portfolio.

Safety

A commercial bank is constantly operating in an unpredictable and risky environment. It is unsure of the quantity and cost of money it can get, as well as its future earnings. It also confronts two kinds of dangers. The first is market risk, which arises when the market rate of interest increases and the prices of debt obligations fall. The second kind of risk is default risk, which occurs when the bank believes the debtors will not be able to repay the principal and interest on time. "This risk is concentrated mostly in client loans, where banks have a unique role to play, and bank loans to companies and bank mortgage loans are among the highest-grade loans of these types."

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A commercial bank must guarantee that its assets are safe in light of these risks. It is also prohibited by law to take large risks because it has to keep a high fixed bond ratio with the central bank and its entire assets in cash. However, if the bank sticks strictly to the concept of security and only maintains the safest assets, additional credit cannot be granted.

It will thus lose customers to competing banks and make very little money. On the other hand, it may have serious repercussions if the bank assumes too much risk. The commercial bank thus has to "evaluate the level of risk associated with different types of accessible assets, compare anticipated risk differentials, weigh long and short-term consequences, and balance," according to the paper.

Profitability

One of a bank's primary goals is to increase its profits. It is required to pay interest to investors, pay wages to employees, provide dividends to shareholders, and meet other costs. It cannot afford to keep a big sum of money in cash since it would imply a loss of revenue. However, there isn't much of a contradiction between profitability and liquidity. The first two are essential, whereas profitability is secondary, since a bank's basic survival is dependent on the first two.

The Future of Bank Risk Management

By 2025, the roles of risk in banks will almost likely have to be significantly changed from their existing condition. As tough as it may appear, more changes may be seen in the coming decade in risk management than the preceding decade. And if the banks do not take any proactive steps now to prepare for this longer-term scenario, the increasing regulations and expectations risk getting overwhelmed.

Many of these major changes are being driven by a variety of structural reasons. As public opinion becomes increasingly intolerant of any appearance of preventable errors or illegal business actions, the breadth and depth of regulation will continue to expand in both width and depth. At the same time as technologies and new business models develop and adapt, consumer expectations of financial services will increase and shift. Additional adjustments to risk functions are necessary when new kinds of risk (for example model, contagion and cyber) become accessible; new abilities and tools are needed for this. New goods, services and risk management methods may be created thanks to the developing technology and sophisticated analytics. De-biasing methods that enhance decision-making will also assist risk managers make more informed risk decisions. However, since banks are very likely to be compelled to reduce their operating expenses significantly, the risk-function of the future is practically certain to meet all of these demands and manage these trends at reduced prices. So what is the risk function going to look like in 2025? It will probably have wider duties, more strategic participation and substantially enhanced collaboration links with other sections of the bank. At the same time, the talent pool of the firm has virtually probably undergone a significant shift in expertise away from business procedures and towards improved analysis and collaboration. Most of the latter may fairly be anticipated to be automated, in real time and without paper. Furthermore, it is highly probable that IT and data management will be increasingly sophisticated, frequently dependent on high data volumes and complicated algorithmic procedures. As a consequence, the risk function can make better choices about risk while simultaneously reducing operational expenses and providing improved customer experience. In this important transition era, banks will have to reorganise their risk functions for their survival in the coming decade. To succeed, it must now start with a portfolio of projects which strike a balance between a compelling short-term economic case and the possibility of achieving the final goal over time. These efforts may include the automation of underwriting procedures, the use of engineering methods and interactive risk reporting. a. Enablers such as a change in recruitment to more technologically knowledgeable persons or the creation of data lakes should be utilised alongside them. However, the adoption of a plan that integrates and communicates shared values and principles throughout the company may be necessary to achieve a successful transition. This change in company risk culture may be required.

Transforming Risk Functions

A substantial modification in the risk function will almost definitely be necessary to achieve the desired condition. However, it is impossible to provide a complete approach to how a risk function appears in 2025.

Neither can any changes in technological progress, macroeconomic shocks, future financial scandals, or risk management methods occurring in the following ten years that alter the shape of the

Anil Verma

future risk function be foreshadowed. However, the six trends themselves may serve as a basis for a well-articulated vision which can help to mobilize the risk function of today and identify important initiatives that advance the risk function. A number of additional current criteria are also met by successful functions.

CROs seeking to prepare their risk function for the future must create transformation agendas that balance the activities required to meet current needs with those that make significant contributions to future readiness and progress toward the vision. We are certain that efforts aimed at future-proofing the risk function must also have a compelling short-term commercial rationale.

Conclusion

The three opposing goals of portfolio management lead to the inference that a bank must find a careful balance between liquidity and safety in order to make more money. The primary goal of portfolio management Theories is to guarantee that securities investments are made in a way that maximizes profits while minimizing risk. A healthy balance between conflicting objectives and various financial vehicles is a hallmark of a successful portfolio.

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MEASURING THE IMPACT OF FAIR VALUE MEASUREMENT ON THE FINANCIAL PERFORMANCE OF ITC COMPANY: A SELECTIVE RATIO ANALYSIS APPROACH

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ABSTRACT

Various observations of the current research study contain philosophy, vision and principles of accounting standards to evaluate the financial & operating results of Indian companies. Here, the need of comparing historical cost and fair value helps to make assumptions with certain risks and uncertainties. This is significant where all the financial assumptions and predictions will prove to be accurate for the research gap identified and express the importance of the current research questions suitable for the operational and financial performance in India. The ratios including RONW, ROC, Dividend Pay-out ratio, Debt Equity ratio, Current ratio is used for the period of 2016-20, to 2019-20 taking sample of ITC Company. The data is gathered from the ITC company's commercial and accounts department for fair value and for book value annual report is used. Results from one sample t test found significant for the ratios such as RONW, ROC, DPR and TA.

Keywords: *Fair Value Measurement, Historical Cost, Financial Performance, Ratio Analysis.*

Introduction

Fair value measurement with market price, date and current market conditions to develop with the hypothesis laid down in the past. There is a difference found in comparing historical cost and fair value measurement with market price, date and current market conditions in the Indian corporate sector. Here, fair value initiatives help to identify the specification of accounting standards to justify the flexible business solutions where issues related to return on net worth, return on capital, dividend, book value, debt equity ratio, current ratio and debtors and inventory turnover suitable for the current research questions. This affects operational and financial performance with the factors of risk management in India. To maintain the practice of using accounting standards in India, measured of fair value will drive business growth and lead to develop with the past hypothesis. There is no significance difference measured that are suitable for some of the fundamental issues to measure the affect of historical cost and fair value. Building research questions on the above discussion also include the role of planning, implementation, testing, documenting and maintenance hypothesis for credit ratings, dividend distribution policy, share market price, unclaimed dividends, fixed assets, inventories, non-current assets, equity and liabilities, expenses, profit before tax which has a significance difference found in comparing historical cost and fair value measurement with market price, date and current market conditions of the Indian corporate sector. All the fair value measurement with market price, date and current market conditions helps to understand accounting judgments, estimates and assumptions and analyze Tangible Assets (Free Hold Land, Lease Hold Land, Buildings, Plant and

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Equipment, Furniture and Fixtures, Office Equipment, Vehicles) and intangible assets (Computer Software, copyrights etc) with the factors of responsiveness and awareness. Here, a significance difference found while comparing with the working principals of good corporate governance in India. The role of using fair value assumptions in India with the flexible business solutions helps to improve some portion of the literature review related to dividend, book value, debt equity ratio and current ratio. The analyzing of historical cost and fair value in the changing environment of India need to create hypothesis and include performance evaluation with the factors of research and development, audit practices suitable for the working of holding, subsidiary and associate companies. To understand the role of planning a significant effect on derivatives and other financial instruments and estimate the framework of the current research study.

The selected company for the study is ITC. It is one of India's foremost private sector companies with a Gross Sales Value of ₹ 76,097.31 crores and Net Profit of ₹ 15,136.05 crores (as on 31.03.2020). ITC has a diversified presence in FMCG, Hotels, Packaging, Paperboards & Specialty Papers and Agri-Business. ITC's aspiration to be an exemplar in sustainability practices is manifest in its status as the only company in the world, of its size and diversity, to be carbon, water and solid waste recycling positive. In addition, ITC's businesses and value chains create sustainable livelihoods for more than 6 million people, a majority of whom represent the poorest in rural India. thus the company is selected for the study of fair value measurement and its impact on the financial performance with selected Ratios.

REVIEWS OF LITERATURE

Dix, E. G., and B. L. kins. (2015) study outline and define the importance and various accounting tests for the development of hypotheses and other research questions. In this regard, accounting standards will recognize the importance of valuation of assets and liabilities with the concept of value and price. This is another suitable criteria for the measurement of data. Moreover, for all the accounting standards the importance of fair valuation helps to develop various orientations in the context of professional financial services. Promoting this concept also helps to enhances economic value of accounting standards and strengthens the relational between accounting standards, employees, customers, shareholder, and other perspectives for various levels of satisfaction.

During the past two decades the probable effect of analyzing historical cost and real value has shifted from approaches in building economy suitable for the Indian corporate sector. Factors of human resource during the current analyzing period of historical cost and real value helps in increases the role of accounting standards in the Indian scenario. (E.G. Dwyer, Grönroos 2011, Sheth & Parvatiyar 2005). These changes found accounting judgments suitable for all the historical cost assumption and gained widespread popularity in the field of accounting disciplines in India. Here, analyzing various tangible assets with free hold land, lease hold land, buildings, plant and equipment, furniture and fixtures, office equipment, vehicles and intangible assets (computer software, copyrights etc) (Zablah CV 2014, Boulding ET AL. 2005, Payne & Frow 2005) provide an effect of comparing historical cost with fair value in all the ideal circumstances in India. With this vision the role of accounting standards helps to overcome with the challenges associated with fair value measurement for dividends, book value, debt equity ratio and current ratio for some of the corporate sectors in India (Thomas & Sullivan 2011, Neslin & Shankar 2009). However, the effect of real value in getting good corporate governance (Verhoef & Donkers 2005) also cause challenges with some of the guiding principles related to accounting standards in India. (Tsang BV. 2014, Carroll M.N 2009, Shankar FD.W. 2010). Therefore, accounting standards in India is expected to be different while comparing historical cost and fair value for effective assumptions for practitioners and scholars. The outlook of Indian economy and industry will be affected while analyzing historical cost and fair value require more integration between different scenarios of accounting standards in India. To develop strategies with the working principals of fair value various estimates and assumptions in India probably affect the role of historical cost with the factors of capital redemption reserve, securities premium, general reserve and retained earnings. Here, the nature and scope of analyzing of historical cost and fair value require the realistic working principals of accounting standards seems to be the focus point of the current research study. All these classifications requires a process (Parvatiyar & Sheth, 2002) and explore new methodologies to manage the outlook of Indian economy.

RESEARCH METHODOLOGY

Sample unit: ITC one of the leading and diversified company having presence in FMCG, Hotels, Packaging, Paperboards & Specialty Papers and Agri-Business. is taken for the study.

Sample size: The study includes one company with the data collection period of study is from 2016-20, to 2019-20.

Sampling Technique: In present research the ratios including RONW, ROC, Dividend Pay-out ratio, Debt Equity ratio, Current ratio is used and further as absolute change analysis the Total assets is used

Data Collection: The secondary data is gathered from the company from their Commercial and accounts department for fair value and for book value annual report is used. Further Journals, Research papers were also being used as secondary sources.

Data analysis Tool: the data gathered from the annual report of the selected company with percentage change and the statistical tool called one sample t test is used to find the differences and impact of FVM.

DATA ANALYSIS

As per the objective of the paper to analyse the difference in the book value and fair value of the selected ratios the same is presented as under:

Table-1: book value, Fair market value and change in the selected ratios of ITD

Variable	Year	NW Book	NW FVM	Change %
Return on Net Worth	2017	22.16	20.25	-8.62
	2018	21.46	20.25	-5.64
	2019	21.29	20.36	-4.37
	2020	23.44	24.36	3.92
Return on Capital	2017	32.86	30.58	-6.94
	2018	31.03	28.96	-6.67
	2019	31.04	27.36	-11.86
	2020	29.8	30.08	0.94
Dividend pay-out ratio	2017	42	40.29	-4.07
	2018	106	101.69	-4.07
	2019	92.6	89.15	-3.73
	2020	98.6	99.35	0.76
Current Ratio	2017	3.69	3.12	-15.45
	2018	2.85	1.89	-33.68
	2019	3.17	2.98	-5.99
	2020	4.13	3.98	-3.63
Total assets	2017	55943	48678	-12.99
	2018	64288	62588	-2.64
	2019	71,798	70,255	-2.15
	2020	77,367	75,255	-2.73

The above table revealed that changes in the ratios of the company. It revealed that the FMV of the company's various ratios were less for the first three ears and in the last year it has increased. Which means that the company's selected variables were overvalued for the first three years and in the last year it has undervalued.

Further after the change is identified to identify the significant changes in the variables is to be measured, for this purpose the following hypothesis is developed:

$H_{0(1)}$ = There is no significant difference in the various ratios on book value and fair market value approach

To analyse the above hypothesis the data gathered were used and with SPSS software the one sample t test and the results are presented as under:

Table-2: one sample t test results

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
RONW	4	-3.6752	5.37087	2.68543
ROC	4	-6.1314	5.28232	2.64116
DPR	4	-2.7756	2.36306	1.18153
CR	4	-14.6893	13.65356	6.82678
TA	4	-5.1274	5.24559	2.62279

One-Sample Test						
	Test Value = 6.5					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
RONW	-3.789	3	.032	-10.17522	-18.7215	-1.6290
ROC	-4.783	3	.017	-12.63139	-21.0367	-4.2260
DPR	-7.851	3	.004	-9.27563	-13.0358	-5.5155
CR	-3.104	3	.053	-21.18925	-42.9151	.5366
TA	-4.433	3	.021	-11.62743	-19.9743	-3.2805

The results revealed with the in case of RONW, ROC, DPR and TA the difference in the changes percentage is significant ($p<0.05$) and the above null hypothesis is rejected. While in case of the CR the null hypothesis is accepted as $p>0.05$.

CONCLUSION

This research study contains uses of accounting standards to evaluate the financial & operating ratios results of selected Indian company i.e., ITC with the comparison of historical cost and fair value and make assumptions that are subject to risks and uncertainties. This is significant where all the financial assumptions, predictions and other research questions will prove to be accurate for the development of the current research study. The results of the study revealed that the adoption of the FVM provides the changes in the ratios of the company. It revealed that the FMV of the company's various ratios were less for the first three ears and in the last year it has increased, means that the company's selected variables were overvalued for the first three years and in the last year it has undervalued. Further the differences in the ratios were found significant for the ratios such as RONW, ROC, DPR and TA. That means the changes due to adoptions of FMV needs more elaboration and the concept needs to be explained further.

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Performance of Exchange Traded Funds amidst Pandemic

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Abstract
The COVID-19 Pandemic has brought paradigm shift in the investing needs of retail investors, world over. Retail investors are certainly looking for avenues of investment which are less risky and yielding sustainable return and Exchange Traded Fund is just what doctor ordered. Exchange Traded Funds worldwide has left various personal Finance thinkers and investment bankers dazzled and speechless, as in global market almost every day Exchange Traded Funds are landing in the portfolio of investors Highly specialised instruments world over which were once not considered by individual investors as their cup of tea are now part of retail investor's arsenal, that is why, astute world over are trying to get hold of it. The paper is attempt to check how well Exchange Traded Funds have performed amidst pandemic and which category of Exchange Traded Funds has been more fruitful to the investors in the pandemic. .

Keywords- COVID-19, Coronavirus, Exchange Traded Funds, ETF, Risk Free Rate of Return, Gold ETF, Liquid ETF, International ETF, Index ETF, Banking ETF

Introduction

COVID-19 or Coronavirus has stunned whole world. The outbreak of this virus has brought various changes in daily routine of human beings. The Pandemic caused due to outbreak of this virus has cost more lives than world wars and is still doing so, and God knows when it is going to stop doing so. The Pandemic has brought paradigm shift in the investing needs of retail investors, world over. The shift can be attributed to the shrinkage in retail savings or shock it gave to the retail investors due its severity or combination of both. This pandemic has certainly affected risk taking capacity of the retail investors. Retail investors are certainly looking for avenues of investment which are less risky and yielding sustainable return and Exchange Traded Fund is just what doctor ordered

Exchange Traded Fund is not just an invention or an addition to the mutual fund pedigree but, a revolution in the field of personal finance. There is no topic which is hotter than Exchange Traded Fund from the perspective of retail investors. Exchange Traded Funds worldwide has left various personal Finance thinkers and investment bankers dazzled and speechless, as in global market almost every day Exchange Traded Funds are landing in the portfolio of investors. Highly specialised instruments world over which were once not considered by individual investors as their cup of tea are now part of retail investor's arsenal, that is why, astute world over are trying to get hold of it .An Exchange Traded Fund is a security that trades on an exchange as a stock that seeks to replicate the performance of a benchmark without the need to purchase the underlying components. First Exchange Traded Fund was launched as way back in

Anil Verma

December 2001, by the erstwhile Benchmark Asset Management yet people at Dalal Street won't speak of Exchange Traded Fund as they chant Systematic Investment Plans (SIP) or other mutual fund options, as if somebody has put finger on their mouth whereas, In Wall Street Exchange Traded Fund chanting can be heard everywhere.. In India Exchange Traded Funds are at infancy stage in spite of being in existence for 2 decades, Exchange Traded Funds have remained unnoticed until government of India on the recommendation of expert committee chose it as an option for disinvestment. One of the study showed that Exchange-Traded Fund wave is blowing strong outside then within. The kind of interest and flows that India-dedicated Exchange-Traded Funds are seeing, and, the way Exchange Traded funds are emerging or gaining ground among global investors as, the most preferred vehicle for taking exposure to India world over embrace Indian assets.

An Exchange-Traded Fund, commonly known as an ETF, is a fund that tracks a group of assets, a market index, currency, or commodity, but is traded like a stock on stock exchange like National Stock Exchange. An Exchange-Traded Fund combines potential benefits and features of both common stocks and mutual funds. Vital features of ETF, are enumerated as under

1. Tradability -Exchange Traded Funds trades like stocks thus, provides investors with facility to trade in major stock exchange (like BSE, NSE in India) any time throughout the day. It also provides stop loss feature which enables investors to place an order with a broker to sell Exchange Traded Fund when the price reaches to a certain level (which an investor may decide according to his risk appetite), this helps investors to limit their loss. There is no separate form filling required to redeem units it happens on just a phone call

2. Transparency- Exchange Traded Funds track particular index or a commodity so there are no surprises of under and over performance due unprecedented changes in portfolios. Investors have all information regarding prices, in which securities they have invested, and what to expect for, this helps investors in the secondary markets keep the ETF's market price in line with its underlying value.

3. Benchmark-Exchange Traded Funds are tied to market benchmarks like CNX Nifty allowing the ETF performance to mirror a broader stock universe. Being based on accepted benchmarks creates acceptability and understanding of the opportunity lying for investment, Thus investors can invest and earn market returns more efficiently without indulging into toil task of picking and choosing securities. The benchmarks chosen for an Exchange Traded Fund are comprehensive and representative of each asset class. Generally, the benchmarks have a long history which helps investors to assess long-term risk and make investment decisions depending on that.

4. Low cost- As Exchange Traded Funds are listed on the recognisied stock exchange, thus the cost of distribution is low in comparison to Traditional Mutual Funds. An Exchange Traded Fund aims at simply maintaining same composition with which it is formed and coincide the security it is tracking so it leads to occasional buying and selling of underlying securities which in result reduces unnecessary trading cost (cost which are paid for buying and selling stocks at

stock exchanges). As the Exchange Traded Fund is linked to indices so they don't have to pay salaries and other expenses for market analysis and active fund managers.

5. The real-time pricing-Exchange Traded Funds offer real time pricing that is, investors don't have to wait the day to end for getting the price of their investment as ETF can be bought and sold any time during the day prices based on the value of underlying portfolio.

6. Trading Strategies-Trading Strategies like limit orders, stop loss orders, short selling, margining, and in some cases even option strategies can be availed with the Exchange Traded Funds which sounds somewhat alien to the traditional mutual funds.

7. Dividends-Barring few, dividends in Exchange Traded Funds are not reinvested automatically; it is possible only with placing fresh order every now and then.

8. Don't Outperform But Replicates-The person who invests in an Exchange Traded Fund should not hope that he would outperform the market as Exchange Traded Fund doesn't aims at outperforming the index, group of assets or a commodity it tracks instead, it just tries to replicate the performance of index it tracks. Instead of beating the market

9. Provides Diversifying Exposure-Exchange Traded Funds provides diversifying exposure to the sectors where an investor is in situation where he likes to sector but doesn't know what he has to choose from various varieties on offer.

10. Arbitrage-Exchange Traded Funds Provides arbitrage between Futures and Cash Market which is not possible with the traditional mutual funds.

Objectives of the Study

The study is being conducted to achieve following objectives

1) To track the performance of Exchange Traded Funds in pandemic.
2) To compare performance of Exchange Traded Funds with no risk investment or risk free investment.
3) . To ascertain whether ETFs are fruitful to investors or not in this pandemic
4) To see which of the class of Exchange Traded Funds have performed better of all.

Research Methodology

The Sampling Universe of the research comprises of all Exchange Traded Funds schemes in India. Funds selected for study are

- Aditya Birla Sun Life Gold Exchange Traded Fund
- HDFC Gold ETF
- Invesco India Gold ETF
- DSP Liquid ETF Reg-DD
- ICICI Prudential Liquid ETF-DD
- Nippon India ETF Liquid BeES-DD
- Motilal Oswal NASDAQ 100 ETF-G
- Nippon India ETF Hang Seng BeES-G
- Nippon India ETF Nifty Midcap 150 Reg-G

- Motilal Oswal Midcap 100 ETF-G
- ICICI Prudential Midcap 150 ETF-G
- Tata Nifty Private Bank Exchange Traded Fund Reg-G
- Aditya Birla SL Banking ETF Reg-G
- ICICI Prudential Bank ETF-G

The research carried out is of empirical nature and technique used for sampling is judgment sampling. The data used for the research is of secondary nature For the purpose of research all selected Exchange Traded Fund Schemes has been classified into five categories namely:-Gold Exchange Traded Fund, Liquid Exchange Traded Fund, International Exchange Traded Fund Index Exchange Traded Fund and Banking Exchange Traded Fund The data is collected from Mutual Fund Insight and from the websites of AMFI, various asset management companies, valueresearchonline.com Economic Times, moneycontrol.com and CRISIL. The period of research is pandemic year staring from 22/03/2020 1to capture effect of pandemic on return delivered by Exchange Traded Funds For the purpose of the study risk-free rate of return which is being used for application of various tools is defined as State Bank's 211 days – 364 days Term Deposit Rate that is 4.40%.. Tools and techniques used for drawing inferences are

1) Arithmetic Mean
2) Standard Deviation
3) Sharpe ratio
4) Cumulative Prospect Theory Certainty Equivalent
5) Sortino ratio
6) Omega
7) Upside Potential Ratio

Hypothesis of the Study

H_{01} All the classes of Exchange Traded Fund Schemes have delivered return more than risk free rate of return in the pandemic year
H_{a1} All the classes of Exchange Traded Fund Schemes have not delivered return more than risk free rate of return in the pandemic year
H_{02} Gold Exchange Traded Funds has outperformed all other classes Exchange Traded Funds in the pandemic year
H_{a2} Gold Exchange Traded Funds has not outperformed all other classes Exchange Traded Funds in the pandemic year.
H_{03} Liquid Exchange Traded Funds has outperformed all other classes Exchange Traded Funds in the pandemic year
H_{a3} Liquid Exchange Traded Funds has not outperformed all other classes Exchange Traded Funds in the pandemic year
H_{04} International Exchange Traded Funds has outperformed all other classes Exchange Traded Funds in the pandemic year.

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H_{a4} International Exchange Traded Funds has not outperformed all other classes Exchange Traded Funds in the pandemic year

H_{06} Index Exchange Traded Funds has outperformed all other classes Exchange Traded Funds in the pandemic year.

H_{a6} Index Exchange Traded Funds has not outperformed all other classes Exchange Traded Funds in the pandemic year

H_{07} Banking Exchange Traded Funds has outperformed all other classes Exchange Traded Funds in the pandemic year.

H_{a7} Banking Exchange Traded Funds has not outperformed all other classes Exchange Traded Funds in the pandemic year

Limitations of the Study

- Study is based on Indian funds only so its finding may not be applicable universally.
- Study is for pandemic year only which quite short span.
- The tools and techniques used for analysis have their own limitations which are inevitable.
- The accuracy of findings depends on the secondary data used for the study.
- The study doesn't consider factors like customer behaviorm investment styles, investor preferences etc.

Data Analysis and Interpretation

As stated earlier For the purpose of research all selected Exchange Traded Fund Schemes has been classified into five categories namely:-

a) Gold Exchange Traded Fund
b) Liquid Exchange Traded Fund
c) International Exchange Traded Fund
d) Index Exchange Traded Fund
e) Banking Exchange Traded Fund

Table -1 to Table -5 shows return delivered by each category Exchange Traded Fund and their deviations from Rf that is, risk free rate of return during the pandemic

Table -1 Return Delivered by Gold Exchange Traded Fund

Particulars	Return%	Deviation D=(R-Rf)
Aditya Birla Sun Life Gold Exchange Traded Fund	8.85	4.45
HDFC Gold ETF	8.65	4.25
Invesco India Gold ETF	8.64	4.24

Table -2 Return Delivered by Liquid Exchange Traded Fund

Particulars	Return%	Deviation D=(R-Rf)
DSP Liquid ETF Reg-DD	2.73	-1.67
ICICI Prudential Liquid ETF-DD	2.41	-1.99
Nippon India ETF Liquid BeES-DD	2.24	-2.16

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Table -3 Return Delivered by International Exchange Traded Fund

Particulars	Return%	Deviation D=(R-Rf)
Motilal Oswal NASDAQ 100 ETF-G	70.22	65.82
Nippon India ETF Hang Seng BeES-G	23.47	19.07

Table -4 Return Delivered by Index Exchange Traded Fund

Particulars	Return%	Deviation D=(R-Rf)
Nippon India ETF Nifty Midcap 150 Reg-G	86.89	82.49
Motilal Oswal Midcap 100 ETF-G	85.19	80.79
ICICI Prudential Midcap 150 ETF-G	84.36	79.96

Table -5 Return Delivered by Banking Exchange Traded Fund

Particulars	Return%	Deviation D=(R-Rf)
Tata Nifty Private Bank Exchange Traded Fund Reg-G	66.09	61.69
Aditya Birla SL Banking ETF Reg-G	65.83	61.43
ICICI Prudential Bank ETF-G	65.38	60.98

On the analysis of return delivered by various schemes of Exchange Traded Funds and return generated by them as depicted Table -1 to Table -5 it is quite clear that apart from Liquid Exchange Traded Fund of all categories of Exchange Traded Funds have delivered return way above the risk free rate.

Table -6 Results of Various Tests Applied

Particulars	Gold	Liquid	International	Index	Banking
Arithmetic Mean	8.71	2.46	46.85	85.48	65.77
Standard Deviation	0.12	0.25	33.06	1.29	0.36
Sharpe ratio	36.41	-7.8	1.28	62.87	170.83
Cumulative Prospect Theory Certainty Equivalent	8.71	2.43	42.4	85.35	65.70
Sortino Ratio	0	0	0	0	0
Omega Ratio	1	1	1	1	1
Upside Potential Ratio	.81	.69	.71	.70	.58

Results depicted in table 6 show that mean return and Cumulative Prospect Theory Certainty Equivalent of Index Exchange Traded Funds are 85.48 and 85.35 respectively, which are highest among all 5 categories. Sortino Ratio of all 5 categories comes to 0, Omega Ratio of all 5 categories comes to1. Upside Potential Ratio of gold exchange traded funds is .81 highest. Sharpe ratio of banking Exchange Traded Funds is 170.83.. On the basis of Table 6 we can say that

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Ho1 that is All the classes of Exchange Traded Fund Schemes have delivered return more than risk free rate of return in the pandemic year is rejected whereas Ha1 that is All the classes of Exchange Traded Fund Schemes have not delivered return more than risk free rate of return in the pandemic year is accepted ; Ho2 that is - Gold Exchange Traded Funds has outperformed all other classes Exchange Traded Funds in the pandemic year is rejected and Ha2 that is - Gold Exchange Traded Funds has not outperformed all other classes Exchange Traded Funds in the pandemic year is accepted ; Ho3 that is - Liquid Exchange Traded Funds has outperformed all other classes Exchange Traded Funds in the pandemic year is rejected and Ha3 that is - Liquid Exchange Traded Funds has not outperformed all other classes Exchange Traded Funds in the pandemic year is accepted; Ho4 International Exchange Traded Funds has outperformed all other classes Exchange Traded Funds in the pandemic year is rejected and Ha4 that is - International Exchange Traded Funds has not outperformed all other classes Exchange Traded Funds in the pandemic year is accepted; Ho6 that is - Index Exchange Traded Funds has outperformed all other classes Exchange Traded Funds in the pandemic year is accepted and Ha6 that is - Index Exchange Traded Funds has not outperformed all other classes Exchange Traded Funds in the pandemic year is rejected; and at last Ho7 that is - Banking Exchange Traded Funds has outperformed all other classes Exchange Traded Funds in the pandemic year. is rejected and Ha7 that is - Banking Exchange Traded Funds has not outperformed all other classes Exchange Traded Funds in the pandemic year is accepted.

Conclusion

Table -6 reveals the fact Index Exchange Traded Funds delivered highest mean return with moderate volatility, upward potential and deviation in return. Liquid Exchange Traded Funds are worst performers; they have provided least return among all the categories selected for study. Liquid Exchange Traded Fund has delivered return even below the risk free rate and is only class to have negative Sharpe Ratio. Liquid Exchange Traded Funds have lowest Cumulative Prospect Theory Certainty Equivalent but they do have Upside Potential Ratio better than Banking Exchange Traded Funds. In nutshell it can concluded that all categories of Exchange Traded Funds have not delivered returns at par or above risk free rate of return so investors must choses category of exchange traded funds carefully .

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GOODS AND SERVICE TAX IN INDIA AND ITS IMPACT ON SUSTAINABLE GROWTH OF INDUSTRIES (WITH SPECIAL REFERENCE TO DAIRY INDUSTRY)

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ABSTRACT

Probably Demonetization and Goods and Service Tax are the two major reforms ever taken in Indian economy, that too in exactly a brief span of two years. TheGoods and Service Tax has been imposed with the intention that Goods and Service Tax will transform India's tax structure, and can make the whole system taxation system, easy and transparent. Taxation is a crucial fiscal tool for the government to contain macroeconomic imbalances and improve economic performance. The preference of direct over indirect taxation is axiomatic to the optimal design of the tax structures since these may influence differently the policy goals of efficiency, equity and sustainability. Within the present parlance, the taxation of commercial income may be a matter of political and academic importance, yet not operational. However, indirect taxation on many agricultural inputs including the Dairy Products similarly as outputs via goods and services tax (GST) is that the current reality. Bovenberg (1987) argues that the appetite for increased fiscal revenue has to be reconciled with the opposite objectives of policy, like efficient resource allocation, equitable income distribution, and trade competitiveness. During this context, GST would meet the revenue consideration furthermore as other policy objectives, i.e. efficiency and equity. In India, with the evolution of indirect taxation system, the assets of excise duty has widened and also the rate of taxation has declined over time. Yet, the tax rates remained high enough to form Indian products less competitive within the global market. But, since the economic reforms initiated in 1991 the tax structure has been rationalized in terms of exemptions, reduction in number of rates and widening of the assets. Despite a reasonably successful harmonization of the tariff, the excise duty structure continued to be complicated. Chelliah committee suggested adoption useful Goods and Service Tax.

KEYWORDS: Taxation. Dairy Industry, reforms, Exemptions, Equitable, Input Credit, Tax Structure.

INTRODUCTION

Goods and services tax or GST is a crucial fiscal instrument to make sure efficient, equitable and sustainable economic process. It's genuine assessment structure which will subsume each circumlocutory charge of states and central governments and bound together economy into suffering national market. It's trusted to iron out wrinkles of existing variant cost system and recognize basic activity being manufactured from India. Most agricultural services remain exempted from GST, and tax rates on several inputs and commodities are reduced. Tax incidence machines and equipments employed in agro-processing has increased. These changes in tax rates are likely to influence prices of inputs and their usage; adoption of technologies and costs of agricultural commodities and thereby farm profits. During this paper, we've attempted to focus on likely impacts of GST on input prices and value of cultivation of important crops. With VAT, the revenue and state autonomy in determination of VAT rates continued to extend. These led to differential tax rates for the identical commodity, multiplicity of taxes, lack of compliance and conflicts between state governments and central endorsement of GST. Exclusion of services from VAT was also a significant weakness. To handle the challenges/problems of VAT system, in 2017 India converted to GST; a destination based tax on consumption of products and services. It's levied the least bit stages, right from manufacturing to final consumption with provision of decrease at previous stage as a set-off. In nutshell, only value addition is going to be taxed, and also the burden is to be borne by the ultimate consumers. It's considered to be a transparent and effective legal system enhancing tax compliance and reducing the cascading effect of taxation.

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OBJECTIVE OF STUDY

Despite that, the policymakers, academicians, economic agents additionally as common person remain skeptic about its real implications. In India, about 50% of the population depends on agriculture for livelihood. The change in tax regime is predicted to influence welfare of agricultural population. There are conjectures about the potential impacts of GST on input demand and costs of various agricultural commodities. With GST, the costs of fresh agricultural produce may decline, while that of processed food products including animal products are indicated to rise. However, there's no empirical analysis of the consequences of GST on prices of agricultural commodities. During this paper, we've made a modest try and provide a preliminary assessment of the impact of GST on agricultural sector. The precise objectives of this are:

(i) To assess the effect of GST on demand for various inputs employed in crop production,
(ii) To assess the changes in operational cost of cultivation of major crops post-GST, and
(iii) To examine the likely effects of GST on agricultural output, services and allied sectors.

REVIEW OF LITREATURE

Aamir, (2011) creators during this paper have pondered relationship of snappy and atypical examinations in complete pay age for state in India and Pakistan after a while portion, for period. Reason is that a typical commitments increment difference among rich and poor as an example it's backward in nature anyway direct expenses are dynamically ground-breaking. Direct cost or yearly commitment is generally speaking examination on pay earned. As needs be more pay earned higher is commitment paid. During this manner prompt expenses are considered as exceptional in nature. In any case, paying little relevancy pay levels, circumlocutory examinations which are charges imbedded in expenses of things similarly as associations gulped up are paid by each individual/part rich or poor at time of utilization. During this way cost is viewed as in invert. Consequently, nation improves to rely upon direct expenses for its pay age with target that progress is healthier.

Ahmad, (2009) creators in paper have talked about proposed GST to be shown in India, explicitly in relationship with spot of supply rules for associations to be gotten, methodology to use twofold GST as an example by what means may GST work among states and focus, charge rate to be applied, so forth producers have assessed choices to introduce twofold GST in India which may well be Concurrent Dual GST, National GST or State GST. Under simultaneous twofold GST better alternative was one where GST is applied on two item and endeavours. This choice in like way prescribed one single return with both CGST and SGST subtleties and PAN based enlistment. Given challenges in seeing state where SGST on associations is payable, one powerfully assortment of twofold GST was spot focus collects SGST to assist states and brief timeframe later scattering it on some reasonable explanation. National GST is joining state and focus blames for anyone body event costs and at the moment dispersing hoping on some concurred explanation. The third model where CGST and SGST would exist together essentially requires guaranteed change with target that states can evaluation associations and focus can constrain things.

Benedict, (2011) creator considers law game-plans managing money related associations under GST law with target to certify whether blueprints are seen sufficiently considering intriguing motivation driving request and the way concerns apparent may well be changed. Producer moreover observes blueprints followed in Australia to overview money related associations courses of action and whether want for regulating body in upsetting financial associations is vital. Through paper creator has shown how clear drafting of said approaches has acknowledged extreme cognizance of same by Courts and has subsequently accomplished disappointment of complete point behind blueprints.

Agrawal. A (2011)GST is in like way expected to die different central focuses to Indian economy. Irrespective to fact these standard points depends on assumption that general cost structure isn't bureaucratic than this one. Utilization are fundamental with target that guaranteed central focuses are understands it.

B. Liu (2011) Australia has encountered significant trips in home development expenses and sharp reduces in inn moderateness over hottest few decades, especially since it executed another assessment game-plan of GST in July 2000.

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K. S. Parmar (2015) In light of positive terminations made during this paper, it appears, apparently, to suit to complete by quickly watching system outcomes of outcomes. In any case, macroeconomic effect of change to presentation of GST is large to degree progression impacts, regard impacts, current record impacts and impact on quite far balance. Secondly, in essentially made open economy with high and making help segment, modification in commitment blend from pay to use based expenses is altogether probability visiting give valuable wellspring of pay.

Nor A.I. (2015) Taxation is immense wellspring of state pay. In standard money related points, there are few styles of cost gathering, as an example, courses of action and association's assessment, things and endeavors charge, yearly commitment, advalorem charge, just to permit few models.

RATIONAL OF STUDY

GST is one in all most elementary cost changes in India which has been long pending. It should be finished from 1 April 2010, yet considering political issues and clashing interests of various associates it's to this point pending. It's far reaching charge structure that may subsume each and each variation assessment of states and native governments and joined economy into enduring national market. It relied on to iron out wrinkles of existing aberrant cost structure and acknowledges crucial action being created of India. Cost is amassed at focal level and sometime later it'll be shared by states. Subsequently GST will reduce intensity of states to compel things and experiences and this truncated adaptation will affect their economy and freedom which is clarification different states aren't for GST. This can be imperative deterrent in system for focal government while demonstrating GST. There's wide level of research on GST for top tier examination examiner.

DAIRY INDUSTRY IN INDIA

Dairying in India is exclusive in additional than one respect. It's the foremost intensive employer plus the most effective employer for the landless labour in India. If a farmer owns only one milking animal, he will not commit suicide. Milk ensures daily income to him and a few food for his family. The distribution of rural income, as reflected within the gini coefficient (the measure of inequality) is extremely low for the dairy sector, indicating that the ownership and also the income are more evenly distributed and therefore the progress in this sector will end in a more balanced development of rural economy. Milk may be a single agricultural crop that has highest value, over combined value of wheat and rice. Milk production has shown rise of 4 to 4.5 per cent every year during the last 25 years. Milk provides the simplest bioavailability of protein, specifically to the vegetarians. Milk is a vital nutritional requirement of human beings. Thechildren largely depend upon milk for nutrition. Higher milk production, therefore, also will improve the health status of the farmers and other people at large. This gesture of the government would go a protracted way in accelerating the expansion of the Indian dairy industry.

EXISTING TAXATION REGIME

According to the present taxation regime there's no tax on any of the fresh dairy products like milk, pasteurised–packaged milk, dahi, chachh, lassi and their variants. None of the dairy products attract excise duty aside from the sterilised-sweetened-flavoured milks that also in a very only a few states. Mandi fee that after was levied on ghee across India has been abolished except in province and Rajasthan which too has been reduced to twenty-eight only. Excise tax is levied at 2-5% on milk powders, 5% on chakka (basic material for shrikhand), table butter, cream, and UHT milk packed in cartons. it's widely expected that GST are going to be an amalgam of VAT, excise duty, octroi, entry tax, mandi fee, cess so on. Presently milk, and it's by prodcuts like curd. Buttermilk, and sub products like Lassi and paneer are zero rated or nil rated. However few above category milk products are taxed at varies rates of fifty, 12% and 18%. The Union government has discovered this percentage factoring all the aforesaid levies. It'd be appropriate that the dairy industry is classed as farming and therefore the dairy products treated as farm produce instead of processed foods. Dairy is probably the sole industry that's ready to pay to the milk producer about 70% of what's charged from the patron. No other food processing industry in India is in a position to satisfy such high expectations of the farmers. After all in most countries that have well developed dairy industry, the best proportion of the buyer that's passed doesn't exceed 35% of the number paid by the buyer. It's apprehended that prime GST would incite the industry to cut back the milk prices paid to the milk producer. High rate of GST may additionally increase the patron prices of dairy products substantially. The buyer would have an inclination to cut back the consumption of processed dairy foods furthermore as milks. If the patron moves more towards the normal vendor, the organised dairy sector that has been wresting the market of vendors, would accept size and consequentially reduce its reach to the milk producer. This might halt the expansion and investment within the organised dairy sector including the cooperatives.

CONCLUSION

GST could be a significant development within the taxation system and may be a logical step towards a comprehensive indirect tax reform in India. It's expected to extend the revenue of the government by eliminating the evils of the excise and VAT regime and increase transparency, compliance and efficiency of the system. On the opposite hand, the R&D services also are placed during a higher tax slab which further seeks attention for revision of decision when India is lagging much behind the word in agricultural productivity. The current tax reforms although have positive implications for the agricultural sector including dairy industry, as an entire but would also make smaller and marginal farmer's light. Thus, the government must address the concerns of the agricultural sector to place it on a sustainable growth trajectory and also to attain the ambitious mission o doubling farmer's income by the year 2022. Conceptually GST is anticipated to possess numerous benefits like reduction in compliances within the future since multiple taxes are replaced with one tax. It's expected to bring down prices and hence the inflation since it'll remove the impact of tax on tax and enable seamless credit. It's expected to come up with revenue for the country because the assets will increase because the GST rate are somewhere around 27% with both goods and services covered, including in dairy industry. It's also expected to create exports from India of dairy products competitive and India a preferred destination for foreign investment since GST may be a globally accepted tax.

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CONTENTS

Mangu Ram

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ROBOTIC ACCOUNTING : A NEED OF NEW ACCOUNTING WORLD

*Dr. Mangu Ram**

Introduction

"Slow and Steady Wins the race"This proverb has lost its relevance in the present time, especially in the field of business where it has been replaced by the slogan "The faster it is the better it is". At present, availability of information, its receipt and its broadcasting have a huge impact on the fortunes of the business.Therefore, it has become inevitable for accounting professionals to develop new advanced means for information dissemination and production, to meet the requirements of the present times. In the present time, failing to provide accounting information to their stakeholders in a time-bound manner can be construed as leaving opportunities out of hand.

Robotic Accounting and Artificial Intelligence is a revolutionary concept and is expected to grow beyond human comprehensive abilities. Artificial Intelligence has relevance in the field of Accounting, Finance, Medical, Project Management, Industry, Banking, Education,Manufacturing, and beyond that also. Robotics andArtificial Intelligencehave displayed their ability to alter the spectrum of each of these sectors despite receiving, resistance like any other change from those who are affected as well as the ones who are expected to get affected by these revolutionary techniques. On the faceof it, it doesn't seem all that hunky-dory for Robotic Accounting and Artificial Intelligence (AI)as they are seen as a probable threat to human existence in varied business tasks. This fear-mongering finds substance from the fact that Robotic Accounting and Artificial Intelligence (AI) has been able to challenge human existence for a variety of tasks but one should rest assure oneself that itshall never be enough to replace the human aspects that are beyond intelligence. Jack Ma, the founder of Alibaba warned the audience at the World Economic Forum, 2018 (Davos) that AI and the big data were a threat to humans and would disable people instead of empowering them.

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A study by Ernst & Young and Nasscom also predicted that by 2022, around 46% of the workforce will be deployed in jobs that have radically changed skill sets. In 2020 due to pandemic COVID, –19 progress of this field has declined but near future, it is going to bounce back & that too with greater pace.

In 21st century field of accounting new aspects are emerging and are taking pole positionmaking old practices almost irrelevant. Cloud accounting is also one of the new emerging aspects which taking centre stage in the global arena. In cloud accounting, all the data is stored in the cloud i.e.no data is stored on the hard disk of a desktop through the local software, due to which it becomes possibleto perform the task of accounting anywhere, anytime with the help of internet.

Robotic accounting can be defined as the use of automation applications to application of human mind for best results and reduce human labour for the accounting of financialtransactions. Robotic accounting requires automation applications known as Robotic Automation Process(RPA).The Robotic Automation Process (RPA) is a software that uses artificial intelligence and also controls the information that is used again. This process replaces human labour, that is, all the work that is done by human labour, now all those tasks are done with greater reliability and a higher level of efficiency in the robotic automation process.

The Robotic Accounting attempts to replace or minimise the use of human labour. That is why it becomes necessary for accounting professionals to study the methods and systems currently in use and improve their skills as per the requirements of the users of accounting information.

The use of a robotic automation process has given users access to quick and more accurate reports with least human labour, contributing to the growth of the business in a big way. Complex tasks of accounting and finance,e. g.

1. Operational accounting such as billing and collection etc.
2. General accounting such as allocation and adjustment, journal entry processing, reconciliation, intercompany transactions etc.
3. Financial and external reporting
4. Planning, budgeting and forecasting.
5. Treasury procedures etc.can easily be done by robotic automation process that too with 100% precisionwhich has resulted from institutions' reliance on human labour getting being reduced.

Mangule

Indian Journal Of Business Administration (IJBA)
(A National Peer Reviewed Refereed Journal)
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Why should the robotic automation process be used in accounting?

In the present era, due to social media networking and other software applications, it is impossible to imagine a world where the Internet is not used because the Internet has become an important part of our everyday life. Certainly, the next stage of our development is the robot automation process. AccountingProfessionals and users of accounting information should prepare themselves mentally for this. Robotic accounting processes use artificial intelligence to handle a large number of iterative tasks. Robotic accounting processes not only assist in data processing but also open the door to new opportunities for the future for the business.

In Robotic Accounting, RPA uses artificial intelligence to help handle a huge number of repetitive tasks. It allows for efficient learning and processing of data patterns, which can have a lot of performance benefits for businesses, some of which are enumerated as:

1. **Better Performance** - Robotic Process Automation (RPA) performance is definitely better than accounting done with the help human effort or labour because it has the ability to perform fast and flawless tasks in minimum time.

2. **Faster Business Processes** - The robotic automation process minimizes human interference in business processes in the field of accounting and finance, resulting in faster business processes.

3. **Bette Productivity** - Robotic Process Automation (RPA) works 24x7 for customers. Provides better services for the convenience of the customers, without any time limit in the field.

4. **Cost Reduction** - Robotic automation reduces the cost by automating process iterative actions and also eliminates the need for institutions like subsidiary offices, as well as the costs arising from delays from bureaucratic arrangements.

5. **Inspiring future** - Robotic automation process minimizes inefficiencies associated with inefficient and human-intensive interfaces of older systems. Relatively low implementation timeframe and low maintenance costthe future of robotic accounting looks bright.

6. **Reduced process costs** - Labour costs, such as salaries and wages, are reduced by the completion of difficult and replenishing tasks through a robotic automation process.

7. **Reduced performance time** - Robotic accounting in accounts payable and other areas of finance makes a significant reduction in performance time by using robotic automation process.

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8. **Reduction of errors** - Automation in finance and accounting can increase production quality by reducing or eliminating human errors. Robotic automation minimizes process errors, saving employees' labour of data entry. Anyone who has worked in the field of accounting knows that the effects of errors can be devastating, and they will also agree with the fact that it is almost impossible to avoid errors.One may sometimes need hours to enter data still can't guaranty error-free accounting. Robotic accounting can speed up the accounting process and make them error-free by using the robotic automation process, resulting in keeping customers and users of accounting and financial information happy.

9. **Reducing repetitive burden in financial planning** - For financial planning, collecting financial information from different departments and preparing various financial statements from them, then preparing a shared financial statement from them is a cumbersome and tedious task. With the help of Robotic Automation Process, robotic accounting reduces the repetition of financial planning related tasks i.e. with RPA's in place; employees don't have to engage themselves again & again in the processing of data, creation of shared financial statements etc. this results in accelerated financial planning. At the same time, it helps in maintaining clarity in the goals of various departments.

10. **Promoting better investment options** - Robotic automation processes are able to monitor investment values despite the possibility of sudden changes. Robots can assess an investor's portfolio and reduce the risk inherent in investment options. Robotic process automation tools can act as financial advisors without the prohibitive cost of their human counterparts.

11. **More control** - Many businesses enjoy automating some of their processes as it helps them to have of greater quality, a better understanding of processes and faster reporting. Prevention of money laundering is a top priority for any organization in the finance industry. Robotic accounting can significantly contribute to helping companies comply with the robotic automation process. Robots use specialized software and verification techniques to store customers' personal information and remove discrepancies which help to establish better control.

12. **Ensuring stability between the banking system and treasury system** - Through robotic automation process in the financial sector, an important advantage provided by robotic accounting is that it can disseminate, process & store bank-related data in such a way that the treasury system can generate reports easily. The reports generated by the treasury system can rapidly be transmitted with the use of the robotic automation process, allowing them to report their outstanding balances.

Mangule

Indian Journal Of Business Administration (IJBA)
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ISSN : 0975-6825, Volume 14, Issue 1, January-June 2021, pp. 36-46

13. **Virtual System** – Data can move between unequal and legacy systems via robotic process automation systems by connecting them at the user interface level.
14. **Data validation and Auditing** – Robotic Automation Process resolve and cross verify data between varioussystems to validate and check information to provide compliance and auditing results and Goods and Services Tax system can also be treated as a good example of data validation and auditing.The use of robotics accounting processes in business vary from place to place, but many organisations that have implemented RPA in accounting and finance have found it phenomenal as it has ledthem to faster results and more accurate information.

How to choose a robotic automation process for robotic accounting?

Robotic process automation can be implemented using a variety of devices. There are many type of tools available for this process in the market, such as: -

Blue prism
Automation Anywhere
UI Path
Work fusion
Pega System

As there are many options available for selection, it has become difficult to choose what is best. Business organizations must consider the following points while choosing the robotic automation process: -

Who will handle the initial automation?
Who will monitor and manage the way it is run?
How will automation support its own trading system?
What would be the appropriate time to implement robotic automation?
What will be the impact of robotic automation on costs?

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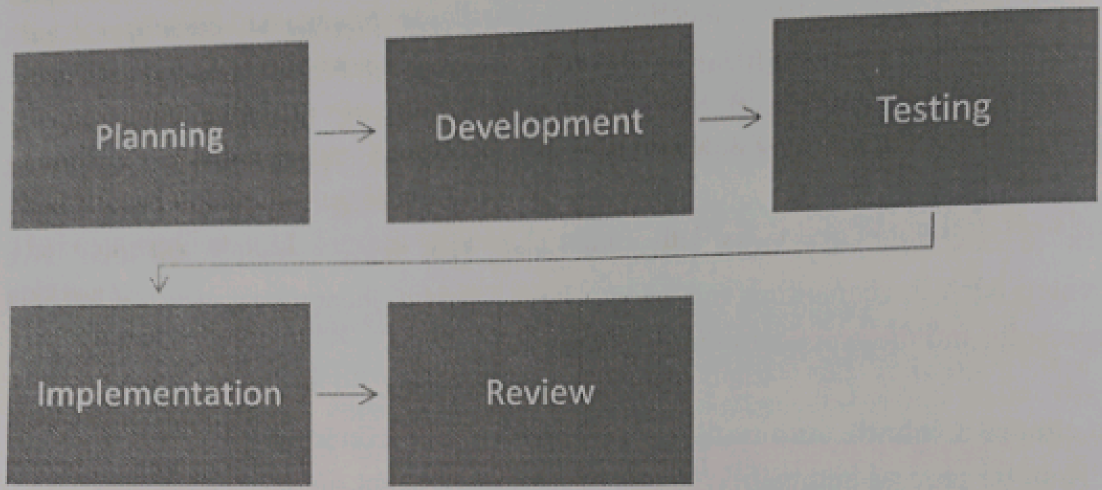
RPA Implementation Process



I Planning -

The most important aspect is planning to implement a process in any business, at this stage, the company must identify the processes it wants to automate. The following steps will help the business organization to identify the process it should automate.

Business process manual and repetitive

Business process is rule-based

Business input data is in electronic format and is readable

Company's existing system be used as it is with no change

Next, steps in planning stages are -

The company should set up a project team, finalize implementation timelines and approach.

The company should agree on solution design for performing RPA processes.

The company should identify a logging mechanism that should be implemented to find issues with running bots.

The company should clear roadmap should be defined to scale up RPA implementation.

II Development -

In the second phase of development, the company started developing the automation workflows as per the pre-determined plan and continue support to roadmap of RPA.

Mangule

Indian Journal Of Business Administration (IJBA)
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ISSN : 0975-6825, Volume 14, Issue 1, January-June 2021, pp. 36-46

III Testing –

In the third stage of testing of RPA, a company run testing cycles for in-scope automation, to identify and correct defects. If any doubt and drawback in testing system, company must rectify that system before taking next step.

IV Implementation–

In this stage, the business organizationimplements the RPA process which is customise to cater its need. This is the stage where the RPA's are open for use for all the desired users.

V Review

At the review stage, the business organization should review all of the RPA process for security purposes and find any lacuna in the RPA system, which is immediately correct for that lacuna. The company should be mindful of the up-to-date system in the competition network, so the business organization can compete with other similar organizations.

Robotics automation should be implemented in a phased manner only after thoroughly analysing the said points and the benefits of robotic automation. It can be applied in a certain time frame by analysis, as well as understanding the effects on the business in the long run so that one implementing it can easily figure out what is the best for their business

Scope of RPA in Accounting and Finance

Robotic Process Automation drives the automation of accounting processes a step further or towards a new generation of automation. Automation in accounting processes began in the late twentieth century to the late 80s and early 90s when software systems such as Tally ERP emerged, resulting today automation rate is about 80 percent of common processes like AP / AR and for those less common processes, this rate is about 50 percent.Today's Chief Finance Officer (CFO) is aggressively moving towards automation of accounting and finance sector processes due to the benefits from low usage of automation in accounting processes and finance services. Even if automation is not possible in their own offices, they are not averse to outsourcing it. Robotic process automation nowadays is used in/or can be used in

1. **Customers orderProcessing-** Orders placed on websites of e-commerce may then have to be placed on the actual repositories for the actual dispatch and also to maintain the inventory recordings different than the customer-facing orders. E-

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commerce transaction data entry processes can be assigned to robotic automation process solutions, which will automate the entire process of order placement. It can be rendered better by removing human errors caused by any misunderstanding or any other reason.

2. **Transfer of Information related to accounting and finance from one system to another-** Robotic Process Automation helps in automating, the process of transferring information from one system to another to provide accounting and finance information to users of information.The solution can be made fully secured by making it necessary to provide the necessary credentials, source and destination details, and automated monitoring for the entire task.
3. **Operation of Accounting** - Robotic automation process is being used for the operationof accounting and finance sector, operational processsuch as: - billing processes, payment records, maintaining records of receipts and so on.
4. **General Accounting** - Robotic automation process can be used by robotic accounting to perform common accounting tasks like allocation and adjustment, journal entry processing, matching, inter-company transactions etc. to make them easier, cheaper and faster.
5. **Internal and external reporting** - Robotic accounting can be used to generate reports and transfer them to stakeholders or both Internal and external users of accounting information using a robotic automation process, with the help of a single button.
6. **Treasury and Cash Management Process** - Robotic accounting can also be used for treasury and cash management processes by using robotic automation process as they come with a better and more reliable security mechanism, which makes these tasks hassle-free. Whenrobotic automation processes are used in the field of treasury and cash management processes, will help in the administration and holdings of financial assets of a business much easier than ever before. Robotic accounting is used in planning, budgeting and forecasting work, so these tasks can be completed easily and in a short time.
7. **Payroll Processing**: Processing of Payroll is a good example that needs manual intervention month after month or every year. An RPA system can be used instead to extract the details that are required from hand-written timesheets and calculate the pay from their stipulated CTC's and pay them as well.
8. **Generating of Insurance Premium Renewals:** Insurance companies have to provide premium receipts for insurance renewal, when premium renewal is paid

Mangule

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ISSN : 0975-6825, Volume 14, Issue 1, January-June 2021, pp. 36-46

offline or online. These online or offline premium renewals for every premium paid for every insurance policy can be completed through an RPA solution that can do this work without any manual intervention 24 x 7.

9. **Processing of Insurance Claims**: Insurance companies have to process insurance claims that are raised against insured members for an initial process to trigger processing of claims in their system and which also forms the paper-based proof that can be saved for further use in investigations. Processes as like these can be automated such that the forms can be read by robotic process automationsystem and then the manual data entry to the applications where these insurance claims are processed can be done by the robotic process automationsystem.
10. **Promotion for better investment options** – In robotic accounting, robotic process automation is preferable for tracking the investment process, despite the potential for quick changes. The RPA system can assess an investor's portfolio and reduce the risk inherent to investment options. RPA system tools can also serve as financial advisors without the prohibitive costs of their human counterparts.
11. **Support against money laundering** –RPA system can prevent money laundering which is a top priority for any nation in the accounting and finance sector. RPA system uses particular validation rules to check customers' personal information and removal of discrepancies. Robotic process automation can make a significant contribution in assisting companies' in compliance with the laws which would be useful in lending support against money laundering.

12. **Overdraft protection Requests**: Banking and non-banking companies can handle the overdrafts and loan accounts of individuals and also institutions. Banks can define specific set rules on how these requests can be classified and how manual intervention can be minimized. Once a good and fair picture is decided upon, then the responsibility of handling all the incoming overdraft requests of individuals and organizations can be safely handed over to the RPA system.
13. **Application of Credit cards:** Banks are using the RPA system to take full responsibility for launching credit card applications. The RPA system is used to collect all the necessary documents from individuals, required credit checks, background checks, deciding whether a person is eligible for a credit card based

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on the details provided, issuing a new credit Card if it is eligible and ensures that successful delivery of credit card and card can be blocked in case of card theft or misuse.

14. **Shipping notifications:** Logistics Companies and e-Commerce websites are getting benefits from this automated process system as these kinds of activities are fully automated without the intervention of any human being at all. Since these details can be fetched from the provider databases and the shipments can be tracked for delivery over GPS or other latest technology, this can comfortably be automated.
15. **Closing of Fraudulent Account:** Accounts about banks, organizations, applications, services – all of these need robotic process automation based software to take up monitoring for good and positive usage that goes suspicious ought to be reported. Doing process which is going through logs on a continuous basismanually is not a viable option for an individual or better to say RPA is the best option for this.
16. **Processing of Customer complaints**: The complaint of customers can be registered against a present set of issues and each of the newer issues that get raised can be categorized into these issue categories by the RPA based system. Based on each of these categories, there can be possible solutions that can be suggested to the customers right away. Doing so, customer complaints can be answered 24 x 7 positively without any human intervention.

At conclusion point, it can be said that the future of accounting subject is robotic accounting which will change the appearance of the accounting and finance profession. Robotic accounting with the help of robotic automation process will make the primary duty of accounting, production and dissemination of information faster than ever. However the use or benefits of robotic accounting processes, may vary by the place, by region, by business varies may vary, Butit can be said that after the implementation of robotic automation processes in accounting field have found that accounting data and results have been more accurate and significantly faster.After implementing this Accountants and financial professionals must master this cutting-edge technology if they want to stay in business.

Mangule

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CONTENTS

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...(IJBA)
(A National Peer Reviewed Refereed Journal)
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DUPONT ANALYSIS – A TOOL OF FINANCIAL PERFORMANCE ANALYSIS

Dr. Mangu Ram*
Dr. Ramesh Kumar Chouhan**

ABSTRACT

'DuPont Analysis' is a financial performance analysis technique using ratios to analyse, compare or add meaning to information produced by financial statements so that users of financial information provided by financial statements can get the real picture of the financial performance of a business entity. 'DuPont Analysis' is the financial analysis tool which uses past and current data to compute ratios and determine whether the financial position of a business entity is sound or not by comparing it to its peers and draws a trend by comparing the ratios of different times (of the business entity itself) to see whether it's financial parameters such Return on Equity (ROE), Return on Asset (ROA) and Financial Leverages are in right manner or not. This study attempts to analysis of the financial performance of companies. In order to achieve the objectives of this paper, ratios such as ROE, ROA,how to calculate by applying the DuPont analysis. The DuPont analysis is an important tool to analysis of financial performance of any company. The volatility of the stock market makes investment decisions a controversial issue for aspiring investors. Investments of huge amounts of money need adequate analysis in order to make an informed decision. The main objective of this paper to build awareness among the investors to take better and strategic decisions using DuPont three steps and five steps.

KEYWORDS: *DuPont Analysis, Return on Equity, Return on Asset, Stock Market, Strategic Decisions.*

Introduction

The word "Performance" is a term which means how well someone has done achieved, implemented, or accomplished the goal is or task assigned to him/her has its genesis in the old Latin word 'Parfournir'. Parfournir' means to bring through, to carry out, to do or to bring forth something. Bourguignon has assimilated performance with an "action", with a certain "behaviour" (in terms of a dynamic view), meaning, "To perform" and not just as a "result" (in terms of a static view). Performance is a subjective concept, for instance, a guy gets 60% marks in an examination he might feel very heavy because he desired to get more than what he got but in the same examination if he had desired to get passing marks than he would be very happy for his performance and would even get motivated to improve his performance in next examination. Performance is a wide subjective term which is being measured against pre-defined sets of precision, standards, accomplishments timing and sometimes even against own desires and perceptions. Performance denotes how well an organisation has been able to work for the interest of its stakeholders. Performance indicates how well a company or any other form of organisation or an individual is progressing to achieve the goals. Performance is a measurement of how effectively and efficiently an organisation or company has worked, to match up to the aspirations of various interested parties.

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In the Field of Accounting and Finance, the term 'Financial Performance' is used to measure the performance of the business entity in financial terms. Under financial performance, whatever affects the financial position of a business organisation whether it is financial indicators like return, profitability or non-financial indicators like efficiency etc. are studied depending on the information required. Financial performance is an attempt to show how far the financial goals of the business entity are being or have been accomplished or attained. Financial Statements that is, income statement and balance sheet provide information about what has happened during the particular accounting period but whether the business entity has performed well or not, whether liquidity position of the entity is vulnerable or stable, whether management has been able to use resources efficiently and effectively or not, what are repercussions of performance of business entity on various interested parties (shareholders, bankers, investors, government, income tax authorities, lenders, etc.), etc. is what not conveyed by financial statements for this purpose analysts use various techniques, of which 'Ratio Analysis' is most popular and arguably easiest to apply of the various techniques used by analysts for analysing financial statements.

Du Pont Model is a century-old tool invented by a salesman of DuPont explosives Donaldson Brown in 1912. Donaldson Brown in his internal efficiency report used a version of the return on investment formula still known as the DuPont formula to analyze the efficiency level of management in DuPont Corporation from which the model or the analysis got the name. DuPont Corporation started using Du Pont Model also known as DuPont identity, DuPont Model analysis DuPont equation, DuPont framework, or the DuPont method breaks return on equity or return on investment into three main components that are, net profit margin, asset turnover and leverage factor.

Objectives of the Study

The objective of the study is to make an assessment of the financial performance of companies using DuPont Model.

Objectives are as follows:

- To know the conceptual aspect of DuPont Model.
- To know the financial performance analysis using DuPont model.
- To study the using of ROE, ROA and Financial Leverage in DuPont modelfor profitability analysis.

Components of DuPont Model or Analysis

The Basic Model or 3 Step DuPont analysis breaks return on equity into three components or parameters which facilitates comparison of business entity

- **Net Profit Margin:** The net profit margin indicates the profit earned on the sales made. The net profit margin shows the excess of revenue from operations over costs as a percentage of revenue from operations. It is an attempt to measure the operating efficiency of a business entity by taking profit as a measuring rod. It shows whether the profitability of the business entity as a result of its pricing strategies or the result of its efforts on controlling costs. A high-profit margin signifies that with sales or revenue from operations there is an increase in overall return for equity shareholders. Net profit margin is simply a return on sales calculated with the help of following formula:

$$\text{Net Profit Margin} = \frac{\text{Net Income}}{\text{Revenue from Operations/Sales}}$$

Net Income = Income Available For Equity Shareholders or Earning After-Tax

- **Asset Turnover:** Assets Turnover attempts to show how efficiently asserts have been utilised by the management of a business entity. Assets Turnover indicates the revenue from operations generated from each penny invested in assets. Assets mean total assets that are cash in hand, debtors, bills receivables, property, plant and equipment, stock, short-term advances etc. Assets Turnover as a parameter is quite useful especially for manufacturing concerns where idle assets signify low capacity utilisation and equate it with an unforgivable crime. Asset turnover can be calculated with the help of following formula:

Asset Turnover = Revenue from Oper...

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- **Financial Leverage:** Financial Leverage, measured by equity multiplier reflects how much of the assets of the business entity have been financed by fixed cost bearing securities such as debentures etc. It signifies the risk and uncertainty associated with the expected return on equity. Higher leverage indicates that a business entity is using debt financing quite a lot to finance its assets which means a high return for equity shareholders involving high risk and uncertainty. Conversely that low leverage indicates a business entity is using less the amount of debt finance to finance its assets which means lower but, certainly of return to its equity shareholders with a lesser degree of risk. It is computed with the help of the following formula:

$$\text{Equity Multiplier} = \frac{\text{Average Total Assets}}{\text{Shareholder's equity}}$$

These three components are put together to compute return on equity under the original three-step equation. Return on equity is calculated as:

Return on Equity (ROE) = Net Profit Margin × Assets Turnover × Equity Multiplier

Or

$$\text{ROE} = \frac{\text{Net Income}}{\text{Revenue from Operations}} \times \frac{\text{Revenue from Operations}}{\text{Average Total Assets}} \times \frac{\text{Average Total Assets}}{\text{Shareholder's equity}}$$

Or

$$\text{ROE} = \frac{\text{Net Income}}{\text{Revenue from Operations}} \times \frac{\text{Revenue from Operations}}{\text{Average Total Assets}} \times \frac{\text{Average Total Assets}}{\text{Shareholder's equity}}$$

Therefore,

$$\text{Return on Equity (ROE)} = \frac{\text{Net Income}}{\text{Shareholder's equity}}$$

One must use the detailed formula for calculation of Return on Equity (ROE) because the primal objective of DuPont analysis is to identify factors affecting Return on Equity (ROE) instead of mere calculation of Return on Equity (ROE). The detailed formula will help to identify which component has caused its current value and which have not contributed towards its current value.

Five-step or 5-Factor DuPont Analysis

Five-step DuPont analysis is an extended version of three-step DuPont analysis which is the original equation giving a detailed analysis of factors affecting return on equity. Five-step DuPont analysis further breaks net profit margin into three components to know what impact does tax and interest burden have on return on equity of a business entity. 5-Factor DuPont Analysis helps in knowing the impact of operating margin, capital structure, and taxes in addition to the presence of financial leverage and Volume Impact that is how assets have been utilized by Management.

5-Factor DuPont Analysis can be computed with the help of the following formula

$$\text{ROE} = \left[\frac{\text{EBIT}}{\text{Revenue From Operations}} \times \frac{\text{EBT}}{\text{EBIT}} \times \frac{\text{NI}}{\text{EBT}}\right] \times \frac{\text{Revenue from Operation}}{\text{Average Total Assets}} \times \frac{\text{Average Total Assets}}{\text{Shareholder's equity}}$$

Here: EBIT= Operating Profit or Earnings before Interest and Tax

EBT = Earning before Tax

NI = Net Income

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$$ROE = \frac{EBIT}{\text{Revenue From Operations}} \times \frac{EBT}{EBIT} \times \frac{NI}{EBT} \times \frac{\text{Revenue from Operation}}{\text{Average Total Assets}} \times \frac{\text{Average Total Assets}}{\text{Shareholder's equity}}$$

$$=$$

Or

$$ROE = \frac{EBIT}{\text{Revenue From Operations}} \times \frac{EBT}{EBIT} \times \frac{NI}{EBT} \times \frac{\text{Revenue from Operation}}{\text{Average Total Assets}} \times \frac{\text{Average Total Assets}}{\text{Shareholder's equity}}$$

Now it becomes3-step DuPont analysis

$$ROE = \frac{\text{Net Income}}{\text{Revenue from Operations}} \times \frac{\text{Revenue from Operations}}{\text{Average Total Assets}} \times \frac{\text{Average Total Assets}}{\text{Shareholder's equity}}$$

$$ROE = \frac{\text{Net Income}}{\text{Revenue from Operations}} \times \frac{\text{Revenue from Operations}}{\text{Average Total Assets}} \times \frac{\text{Average Total Assets}}{\text{Shareholder's equity}}$$

Net Outcome

$$\text{Return on Equity (ROE)} = \frac{\text{Net Income}}{\text{Shareholder's equity}}$$

Thus, it is quite clear that 5-step DuPont analysis is just an extended version of 3-step DuPont analysis which provides a detailed understanding and insight return on equity. It not only includes factors that were present in 3-step DuPont analysis but also adds two more factors to provide for in-depth and profound information for serving as the basis for investment decisions. The simple return on equity calculation might work in many of the cases but when the return on equity of a business entity is less than similar businesses then 3-step DuPont analysis and 5-step DuPont analysis exhibits the weak areas and also exhibits what are the key factors which are dropping or raising the return on equity of business entity to present level.

Interpretation of DuPont Analysis

The success of a DuPont analysis depends on how it is being interpreted by its users. DuPont analysis uses return on equity to show how well equity invested in a business entity is being utilised by Management. It gives the answer to the following questions

- Is the business entity has been able to utilise its assets base effectively?
- Whether the business entity is overleveraged?
- Whether the firm is earning a high net profit margin?
- Whether an increase in net profit margin without adding financial leverage?
- Whether a companys' increase in return on equity is only because of an increase in financial leverage?

Are the profits of the firm sustainable?

- What impact does capital structure have on earning capacity of a business entity?
- What impact do taxes have on earning capacity of a business entity?
- Are the high profits of a business entity, the result of its pricing strategy?
- Are the high margins of business entity, the result of a reduction in costs?
- Is investing in the business entity is the right option?
- Whether lower return on equity is due to low-profit margin, low asset turnover, or poor leverage?

Why use DuPont analysis?

To the new generation, DuPont analysis might not seem as eye-catching as it was seen when it first came into the scene, where it was the only tool to measure return in this fashion. This century-old analytical tool has not lost its shine as DuPont analysis helps in analyzing what factors are causing increase or decrease in return on equity; this can also be with witnessed with the fact that various software and online portals are available for performing DuPont analysis and is being highly used for making investment decisions. It helps in understanding the cause-and-effect relationship that is, what actually causing the return on equity to be what it is. One of the key advantages it offers that it is equally useful for zero debt firms as it is for the firm having debt and uses the same formula for analysis barring one change where financial leverage of debt-free business entity is taken as one. It helps in analyzing the strength and weaknesses of a business entity. The areas of weakness pointed out can be further broken to get to the source of the weakness, so that management can take corrective actions.

Limitations of DuPont Analysis

DuPont analysis suffers from various shortcomings which one should keep in mind while making decisions on the basis of DuPont analysis. DuPont analysis suffers from all those limitations financial ratio analysis suffers from like

- It doesn't yield the desired result or doesn't suit standalone analysis. In other words, it yields quality results only when it is used for comparing two or more business entities or set standards.
- It does not consider the cost of investment that is it ignores valuation as a parameter. Investors would not like to invest in the business entity with the cost of investment is quite high in spite of the company having good fundamentals
- Modern age businesses like IT, online retail, etc. which are also termed as asset-light businesses, because of having very little assets where the parameter asset turnover used by DuPont analysis becomes irrelevant, as these businesses generate high revenues irrespective of the fact that they have very little of equity invested in assets.
- It is uses accounting data provided by financial statements prepared by management of a business entity which can manipulate the results of financial statements

Conclusion

The decomposition of Return on Equity allows investors to focus on the key metrics of financial performance individually to identify strengths and weaknesses of the organization.There are several robust tools that investors use during their stock analysis for better investment decisions. Looking at financial statements of each organization separately can be a tedious task where investors can simply do DuPont Analysis for a detailed assessment of the organization's profitability. DuPont Analysis is a tool that may help investors to avoid misleading conclusions regarding the organization's profitability. An investor confined solely to return on equity perspective may be confused if he or she has to judge between two options of equal ratio, where DuPont analysis is better option to find out the better stock option.

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