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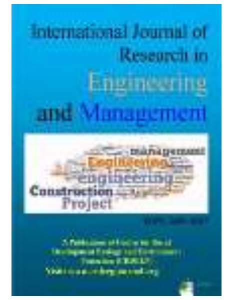

Full Length Research Paper

Role of financial innovations towards nurturing financial growth –A study of SBI

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ABSTRACT

Due to rapid changes in technology, competition, and regulations, all financial service providers try to navigate and shape an environment to face challenges and opportunities. The current research is carried out with the objective to explore whether financial growth and sustainability depend on financial innovation. This study explores the relationship between financial innovation and financial growth in reference to the State Bank of India (SBI).The study is descriptive and analytic in nature. The annual reports of the State of Bank of India, journals and other relevant published documents are used as sources of data collected. The parameters of financial performance are taken for measuring the bank's financial growth and sustainability. The technique used for interpreting the results is Multiple Discriminate Analysis (MDA). The Z score calculated for the studied period shows different trends for the bank. The year 2017-2018, 2019-2020 and 2020-2021 are the period of potentially sick for the firm. For the year 2018-2019, the financial health of the State Bank of India shows risky situation for the bank. For the current financial year 2021-2022, the bank's financial performance is considered healthy. The study finding project that a large number of financial innovations has taken place in the State bank of India and these innovations not only have a positive impact on the financial performance of the bank but also improves the overall economic growth of the nation.

Introduction

Financial innovation has a long history in the culture of the Indian economy and thus is not considered a new phrase or word. It has proven benefits for the success and growth of the Indian economy as India competes with the top economies of the world. Over the period of time, many innovations are introduced with regard to financial products and services. Therefore, financial service providers are forced to adopt various technology-enabled financial products and services to attain sustainability and growth. Taking into account various factors of production Land, labour, Capital, and now financial innovation has become equally important factor for the growth and magnification of the whole Indian financial system. It is also required for social and economic development as it leads to the empowerment of every class of society and brings equality. Globalization has opened the gate to a competition which is rising day by day along with the customer's expectations. Technology has enhanced the awareness level of customers and has made them more demanding.

As rightly quoted "Customer is the king of the market", so is true in the case of the financial industry. In the current scenario of increased developments and technical advancements, the needs and desires of the customers have also risen up with the use of financially innovative products and services and to meet the customer's demand, financial service providers are forced to adopt the digital revolution arising out of digitization and innovative technologies, which is changing the way providers function. The State Bank of India (SBI) being the largest public sector enterprise, provides a large variety of financial products and services to individual and institutional investors. It presents unique opportunities and challenges to test financial innovation and to meet its mandate for advancing economic development in the economy.

In this process, the State Bank of India (SBI) has worked out various strategies and leveraged advanced technologies to take the banking system to new heights.

Innovation

The term innovation is defined as something new or newly introduced. Innovation includes the act of invention and diffusion. Almost all innovations in the area of financial products and services are evolved and revolved around introducing new products and catering financial services innovatively. For any financial system, innovation serves as an important ingredient for its growth and progress. Therefore, a proper mechanism is needed for allowing innovation to be part of the social and economic transformation. Financial innovations add competitive advantage to the providers of financial services which is essential for their growth and survival. Innovations may be categorized as product innovation covering "new derivative contracts, new corporate securities, or new form pooled investment products and process innovation covering new means of distributing securities, processing transactions, or pricing transactions."

Financial Innovation

The process of introducing new products, services or processes in the area of finance is termed as financial innovation. The list of products and services that comes under the preview of financial innovation is never-ending. Earlier the term was confined to only introducing new products and services, but now-a-days, the term includes changing the processes of how these products and services are delivered. Reuben (2012) defined financial innovation as the art of introducing new financial products, financial services, and financial processes including technology. Innovation in the area of finance promotes the efficiency of financial intermediation by reducing transaction costs and risks. Financial innovation is defined as a recreation of financial products and services, financial processes, and financial systems in the financial industry so as to meet the rising desires of the customers. It is the act of creating new financial instruments and new financial technologies. A strong relationship exists between "finance and technological innovation" (Beck, Chen, Lin, & Song, 2016). Financial innovation is not limited to finding "new financial instruments or innovations by financial institutions." Still, it is a broader concept covering various financial up-gradation and improvements providing benefits to a larger section of society (Laeven, Levine, & Michalopoulos, 2015). In simple terms, financial innovation may be understood as the interlinked web of complex relationships between "technology," "changes in perceived market conditions," "changes in the regulatory environment," and "high, variable, and unpredictable inflation, interest rates, and financial markets."

Impact of financial innovation on bank growth

Innovation is a process that involves a lot of steps for its successful planning and implementation. Therefore, the focus should be placed on the output of the entire process. It is important for banks to know the process of innovation correctly. The banks should know ways for creating something different and bringing these added values for providing financial products and financial services to current and potential customers. The firms in the financial service industry should focus on ways for identifying the area in which innovation can be done.

Product, Process, Market, Technology and Organization are the five dimensions of financial innovations in the service industry. The banking industry should focus on the dimensions which can explore opportunities for innovations. Banking innovations should be capable of improving the performance of banks and the satisfaction of customers. Financial innovation has become the critical driving force for the growth of banks and other financial service providers which is in turn important for the growth of any economy. Financial innovation plays an important role in economic growth. Financial service providers are investing appropriately in technological infrastructure in order to promote financial inclusion and the growth of an economy.

Financial innovation plays a dominant role in promoting the growth of any economy, therefore it is essential to study the association between financial innovation, financial inclusion and economic growth. There are existing studies that have proven links between financial innovation and economic growth (Gul et al., 2018). In this regard, there are some studies that show a positive relationship between financial innovation and economic growth, while on the other hand, there are some studies that show the relationship to be a negative one.In the development of the financial sector, financial innovation had been the strongest pillar across all economic activities. This leads to the promotion of savings, consumptions, capital accumulations which in turn promotes productivity and economic growth.

Sustainability

A strong relationship exists between "finance and technological innovation" (Beck, Chen, Lin, & Song, 2016). Financial innovation is not limited to finding "new financial instruments or innovations by financial institutions." Still, it is a broader concept covering various financial up-gradation and improvements providing benefits to a larger section of society (Laeven, Levine, & Michalopoulos, 2015). In simple terms, financial innovation may be understood as the interlinked web of complex relationships between "technology," "changes in perceived market conditions," "changes in the regulatory environment," and "high, variable, and unpredictable inflation, interest rates, and financial markets."

Financial Innovation and Sustainability

Digitization has transformed the financial service industry and this shift has compelled legal institutions to evolve their playbooks to be more responsive to consumer needs. Sustainable economic development has become an important factor for various economic, business & financial institutions. Many opportunities are emerging for banking and financial institutions with the development of new technologies that mark the transformation of the financial industry and hence the development of the economy.

According to Pintér et al. (2016), every financial institution performs two major functions that affect economic growth. Banks and financial institutions accumulate savings from households and corporates and utilize these savings efficiently by lending them to firms. This is how the demand and supply of money in the economy are maintained.

For the purpose of sustainable development, financial institutions contribute to a great extent as they play the role of intermediaries between corporates and individuals regarding the shortage and supply of capital. They also play a major role in the activities of development, demand and supply, insurance, and controlling risks and projects.

Literature Review

Agboola (2006) in this study concluded that innovation in technology gives rise to competition among financial service providers. In his study, he examines the role of ATMs, EFTs, and Smart Cards, retail, and corporate banking to help to fulfill the increased demands of the customer and the need for the adoption of technology to face the competition.

Beck, Chen, Lin, & Song (2012) in their study explores financial innovation, economic growth, and volatility and how they affect each other. He further studies the relationship between financial innovation and risk-taking capability of the banks. The results of the study were on both positive and negative sides. It showed that financial innovation is worth making the financial intuition take more risk. This in turn helps the banks and financial institutions to provide more value-added services and products to their customers.

Berk (2002) worked on pieces of literature related to financial innovations impact on the mechanisms of the central bank. He concluded that the central bank may use financial innovation and other new techniques for the implementation of monetary policy which could ease the policymakers in taking decisions.

Harsha (2011) attempts to conceptualize the term financial engineering, its motivating factors, need for product innovations through financial engineering and suggests strategies for the same.

Ibraheem (2013) in his study has investigated the different mechanisms that are used to solve various problems in finance. i.e. about the financial engineering instruments. He worked on the area of financial engineering and its role in impacting the financial system. He also seeks to find out whether there is any impact of financial engineering on the financial system. In his study, he divides the financial engineering activities into three a (1) Designing innovative financial instruments, (2) Implementation of financial instruments, (3) Developing financial products.

Relevance of Study

Due to rapid changes in technology, competition, and regulations, all financial service providers try to navigate and shape an environment to face challenges and opportunities. The current study is carried out to examine the relationship between financial innovation and the growth of the financial industry in India. Further, it is to be studied whether the investments in technology related to banks have contributed to their sustainability.

The objective of this study is to explore whether financial growth and sustainability depend on financial innovation. This study will investigate the relationship between financial innovation and financial growth with reference to SBI.

Objectives

- *To know various forms of financial innovations in the area of financial products and services*
- *To understand the key drivers of financial innovation and their implications*
- *To study the impact of financial innovations on the sustainability of a bank (SBI)*

Methodology

This research study is descriptive in nature. Secondary data is collected for the study from various sources such as annual reports of SBI, sustainability reports of SBI, journals, published and unpublished articles. Five years of data is collected from the period 2017-2022. For the purpose of identifying various innovations that took place in the financial industry with reference to financial products and services, annual reports of SBI are examined.

Results and Discussion

Table 1 : Financial Innovations adopted

Product/ Year	2021-2022	2020-2021	2019-2020	2018-2019	2017-2018
Customers	46.77 crores	45.92 crores	44.89 crores	43.51 crores	42.42 crores
BC Outlets	68016	71968	61102	57467	58274
Branches	22266	22219	22141	22010	22414
Market Share in Debit Card spends	27.58%	29.23%	29.42%	29.89%	30.40%
Market Share in no. of POS	15.15%	13.19%	13.43%	15.93%	20.20%
Share of transactions (Alternate Channels)	95.5%	93%	91%	88.1%	80%
ATM's & ADWM's (Automated Deposits & Withdrawal Machines)	65030	62617	58555	58415	59541
Financial Inclusion Accounts (BC Channels)	14.20 crore	58.78 crore	49.29 crore	39.75 crore	31.22 crore
No. of ATMs	42740	42454	40768	25274	22141
Debit Card Holders	23.30 crores	20.50 crore	15 crores	12 crores	11 crores
Internet Bank Users	2.55 crores	2.20 crores	1.77 crore	94 lakh	89.63 lakh
Mobile Banking Users	1.77 crores	1.35 crores	95 lakh	64 lakh	36.45 Lakh

Table 2 : Loan Segment of SBI

Loan/ Year	2021-2022	2020-2021	2019-2020	2018-2019	2017-2018
Home Loans	503779	561651	455865	341013	400377
Auto Loans	76322	79148	72662	60362	71884
Other Personal Loans	290610	361504	206067	167126	175583
Net Interest Margin (Domestic)	3.26	3.36	3.19	-	-

The sustainability of any financial institution is based on economic performance which is calculated in terms of financial ratios. To examine the financial innovation impact on bank's sustainability, the financial ratio of above mentioned five years are considered. The ratios includes-

Liquidity ratios – Used to know the capacity of the firm to meet its current liabilities

Solvency ratios – Used to know the capacity of the firm to meet its fixed liabilities

Turnover ratios – Used to know the capacity of the firm to utilize its resources fully and properly

Profitability ratios – Used as the ability of the firm to earn profits. It also indicates the overall profitability of the firm for a particular period.

Thus, the sustainability of the State Bank of India (SBI) is measured by taking into consideration liquidity, solvency, asset efficiency, profitability and financial leverage.

Working capital ratio is used to measure the liquidity [working capital/Total assets]

Retained earning ratio is used to measure the total retained earnings or accumulated profits [retained earnings/Total assets]

Profitability ratio is used to measure earnings before interest and taxes (EBIT) relative to its total net assets [EBIT/Total assets]

Debt-Equity ratio is used to measure the financial leverage [Book value of equity/book value of total debt]

Asset turnover ratio is used to measure the asset efficiency [Sales/Total Assets]

The technique used for interpreting the results is Multiple Discriminate Analysis (MDA). The extension of Discriminant

Analysis is known as Multiple D*iscriminant Analysis* (MDA). This technique is used for the analysis of multiple variances and in cases when the dependent variable has more than two categories.

For this technique value of Z, called a single discriminant score, is calculated. For this study, the value of Z is calculated by using five financial ratios and naming them each as a different variable. The formula for Multiple D*iscriminant Analysis* (MDA) is –

$$Z= 0.012x1 + 0.014x2 + 0.033x3 + 0.006x4 + 0.999x5$$

Where, X1= working capital ratio; X2 = Retained earning ratio; X3 = Profitability ratio; X4 = Debt-Equity ratio ;X5 =Asset Turnover ratio

The Z score of 2.99 or 3 and above is considered good and healthy. And the score below 1.8 is considered to be potentially sick for the firm. A score between 2.99 and 1.8 is considered risky.

Table 3 : Multiple Discriminant Analysis

Variable/ Year	2021-2022	2020-2021	2019-2020	2018-2019	2017-2018
X1 (Working Capital Ratio)	1.833	0.90	0.82	1.97	0.99
X2 (Retained Earning Ratio)	0.009	0.009	0.009	0.009	0.007
X3 (Profitability Ratio)	0.013	0.12	0.009	0.009	0.006
X4 (Debt-Equity Ratio)	0.007	0.01	0.008	0.006	0.006
X5 (Asset Turnover Ratio)	0.09	0.08	0.19	0.09	0.08
Z Score	2.084	1.12	1.036	1.95	1.18

The financial performance of the State Bank of India in terms of relevant ratios is depicted in the above table. It can be interpreted from the figures that the liquidity condition of the bank has improved year after year and the current year shows a satisfactory position. In case of retained earnings, the figures reveals a constant trend for the bank. The profitability ratio shows the rising trend for the firm, which means the ability of the firm regarding earning profits has been increased in the current years. The financial leverage ratio shows variations in every year. In case of asset turnover ratio, again the trend is varied, but the figures shows the efficient utilization of assets by the firm.

The Z score calculated for the studied period shows different trends for the bank. The year 2017-2018, 2019-2020 and 2020-2021 are the period of potentially sick for the firm. For the year 2018-2019, the financial health of the State Bank of India shows risky situation for the bank. For the current financial year 2021-2022, the bank's financial performance is considered healthy.

Conclusion

The current financial system is characterized by innovation which is taking place in its every component such as financial markets, financial institutions, financial instruments, financial services. Not only this, the regulations governing the financial system are not left behind from participating and adopting innovations and new techniques. Financial innovation affects the efficiency of any financial institution and is thus required for sustainability development. Financial innovation impacts the economic growth of any economy. The study finding project that a large number of financial innovations has taken place in the State bank of India and these innovations not only have a positive impact on the financial performance of the bank but also improves the overall economic growth of the nation.

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