New Technology Adoption in Banking Sectors

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INTRODUCTION

Financial system is composed of Central Bank, financial institutions such as commercial banks, finance companies and non financial institutions such as cooperatives, thrift institutions, and pension funds. Objective of the financial institutions is to make profits. If Central Bank actions, regulations restrict operations of these institutions, they immediately search an alternative way to realize profit maximizations. Therefore, whenever monetary authorities restrict the economic agent's behavior, new financial instrument come into view. Also, there are also other factors playing a role in the emergence of the new financial instrument like technology and economic conditions.

Financial innovations and monetary control are intricately liked to each other. When financial innovation occurs, this will lead decrease the effectiveness of the monetary control. Then Central Banks set new targets, change operating procedure in order to regain direct influence over markets.

The commercial banking business has changed dramatically over the past 25 years, due in large part to technological change. Advances in telecommunications, information technology, and financial theory and practice have jointly transformed many of the relationship focused intermediaries of yesteryear into data-intensive risk management operations of today. Consistent with this, we now find many commercial banks embedded as part of global financial institutions that engage in a wide variety of financial activities. To be more specific, technological changes relating to telecommunications and data processing have spurred financial innovations that have altered bank products and services and production processes. For example, the ability to use applied statistics cost-effectively (via software and computing power) has markedly altered the process of financial intermediation. Retail loan applications are now routinely evaluated using credit scoring tools, rather than using human judgment. Such an approach makes underwriting much more transparent to third parties and hence facilitates secondary markets for retail credits (e.g., mortgages and credit card receivables) via securitization. Statistically based risk measurement tools are also used to measure and manage other types of credit risks – as well as interest rate risks – on an ongoing basis across entire portfolios. Indeed, tools like value-at-risk are even used to determine the appropriate allocation of risk-based capital for actively managed (trading) portfolios. This paper will describe how technological change has spurred financial innovations that have driven the aforementioned changes in commercial banking over the past 25 years.

FINANCIAL INNOVATIONS

Innovation is normally defined as the introduction of a new product to a market or the production of an existing one in a new manner. Financial innovations occur because market participants are constantly searching for new ways to make greater profits. The process of "financial innovation" includes changes in financial instrument, institutions, practices and markets. In broad sense, financial innovation affects the nature and composition of monetary aggregates through new financial instruments or changes in old instruments as well as the term and conditions of debt/credit arrangements. Innovations can be grouped by a functional basis, "aggressive" or "defensive". Aggressive innovation is the introduction of a new product or process, in response to perceived demand. A very large part of innovation since at least the late 1970s is aggressive innovation in the literature. Defensive innovation is response to changed environment or transaction cost.

Financial innovations lower the transaction cost of transferring funds from lower yielding money balances to higher yielding alternatives. Therefore, with financial innovations market participants attempt to minimize risk and to maximize return. Financial innovations are mainly the result of four interrelated factors:

1. High, variable and unpredictable inflation, interest rates and exchange rates, increase in government deficits and their effects on interest rates and financial markets, floating exchange rates: Many financial innovations offer protection against changes in the financial environment, especially changes in exchange and interest rates.
2. Technology: The development of new technology can stimulate financial innovation by lowering the cost of providing new financial services and instruments by using computers and telecommunication. The rapid development of technology in the financial sector, the introduction of new communication and transmission systems also speeds up information flows.
3. Changes in the Regulatory Environment: The relationship between regulation and innovation is the most debated in the literature. It is clear that each can cause the other, but it is not clear how significant such effects have actually been.
4. Changes in Perceived Market Conditions: Financial innovation is fundamentally market driven. Firms offer new products because it is profitable. The existing structure of the financial industry, degree of concentration and competition in the banking sector, ease of entry, profitability, extent of development and of specialization among different types of financial instruments, available choice of portfolio assets, interaction of market forces with regulations effects financial innovations. Changes in the international financial environment and the increasing integration of domestic and international financial markets also lead financial innovation.

Economic conditions, technology and regulations led to emergence of new financial instruments which realized in very short span of time, provide higher profit. These instruments are negotiable order of withdrawal account, certificate of deposits, banks credit cards, mortgages, automatic transfer accounts, overnight repurchase agreements, Eurodollars, commercial papers, money market mutual funds, Bankers Acceptances etc.

The process of monetary transmission could start from interventions by central banks through various monetary policy tools. For example, intervention through the open market operations could affect banks' excess reserves, market interest rates and then on the supply and demand for money in the economy. Then, the supply and demand for money will affect aggregate demand and real economic activity.

It is important to note that the effectiveness of the transmission channels in affecting aggregate demand and thus the real economy varies from one economy to another. In fact, this issue is often subject to debates by economists. In general, however, the effectiveness of these channels depends on factors such as the degree of monetization, efficiency and sophistication of the banking system, and the state of the capital market in the economy concerned.

For many developing economies, the effectiveness of monetary policy transmission, particularly in determining economic activity and thus economic growth, rests on the efficiency of bank lending channel. This is due to the fact that these economies largely depend on bank lending for financing. Therefore, it is not surprising that central banks of these economies apply constant efforts to improve the efficiency of their bank lending channels in order to support economic activity.

CONCLUSION

This paper has reviewed the literature on technological change and financial innovation in banking since 1980. This quarter century has been a period of substantial change in terms of bank services and production technologies, but much less so with respect to organizational form. Although much has been learned about the characteristics of users and adopters of financial innovations and the attendant welfare implications, we still know little about how and why financial innovations are initially developed. This remains an important area for further research.

REFERENCES

[1] M.K.Bajaj, "Customer Relations Management", Central Bank of India, Pune, IBA Bulletin, Sept. 2006.
[2] V.K. Gupta, Marketing of Financial Services, Mohit Publishers, New Delhi, 2008.
[3] R.D.Velankar, "Customer Service-A Perspective", Becon, 20th bank Economist Conference, 2009.