

The Impacts of Financial Reforms on Households' Savings Behavior

Misu Kim

Hankuk University of Foreign Studies
mskim9@gmail.com

Abstract

The impact of financial sector reforms is that households tend to invest in risky assets, such as shares and debentures and UTI fund, and they are reluctant to invest in less-risky assets, such as provident and pension funds, as estimation by standard deviation shows. Generally risk decreases during the financial sector reforms, on the other hand, in the case of India, risk increases in financial assets except for life insurance fund and provident and pension fund. Estimation result of dummy variables is somewhat different from that of standard deviation.

Keywords: *Households, Financial Savings, India, Financial Reforms*

1. Introduction

India initiated economic reforms including financial sector reforms in the years following 1991 during which year the economy had faced an economic crisis. In general, financial sector reforms are expected to lead to an increase in savings in financial assets due to an increase in competition in the financial sector, and, therefore, its efficiency. After financial sector reforms¹ in India, financial assets savings rate of households has increased; from 1970 to 1991, the share of financial assets savings in GDS was 30.75%, while from 1991 to 2003, it was 43.54%. Furthermore, the financial sector reforms lead to an increase in efficiency of allocation of savings and investment and an increase in more productive and sophisticated financial assets. People are exposed to more information on financial assets and they can have more varieties from which to choose. Therefore, it can be expected that the financial sector reforms in India can affect substantial changes in the composition of financial assets holdings of households. It is, therefore, necessary to analyze how the financial sector reforms affect changes in the financial asset allocation of households [6].

Many studies on households' savings behavior focus mainly on the determinants of aggregate savings. In the Indian context, the impacts of financial sector reforms on households' financial assets holdings are also examined by comparing two periods: before the reform, from 1970 to 1990 and after the reform, from 1991 to 2005. During the period of financial sector reforms, the three explanatory variables above mentioned have changed substantially, thus it is necessary to examine impacts of financial sector reform on financial assets allocation of households. Understanding households' savings behavior is helpful for government policy makers to assess the impacts of changes in economic circumstances on savings. Furthermore, it is expected to suggest policies to improve households' financial savings in a productive way to raise capital formation and investment for economic growth in India and other developing countries.

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This dissertation is organized as follows. Chapter II surveys the literature on households' financial savings in India and Chapter III deals with the household's savings performance in India. Chapter IV encompasses the model, both specification and estimation. Chapter V incorporates the summary and conclusions of this study.

2. Review of the literature

Research on the behavior of households in India has been very limited unlike the case of financially developed countries. Some studies focus on the determinants of private savings and the relationship between saving and economic growth. There are few research to analyze the impacts of financial reforms on savings in India.

In 1991, India faced an economic crisis and the government started implementing a program of Stabilization and Structural Adjustment which included financial sector reforms. It is expected that financial sector reform would have impacts on the financial asset savings. In order to examine the development of India's financial markets and financial instruments, Subrahmanyam and Swami (1995) [8] estimated a five asset direct translog model of households' financial portfolios for the period 1970-71 to 1988-89. The five assets are i) Banking Deposits, ii) Company Deposits, Shares and Debentures plus Net Trade Debt, iii) Claims on Government, iv) Units of UTI and v) Life Insurance, Provident funds and Public Provident Funds. To figure out the substitution and complementarity among financial assets, they employed the 'Direct Hicks Elasticities of Substitution and Complementarity.' The results show that bank deposits were substitutes to private sector lending and life plus pension funds while revealing a complementarity relationship with claims on government and units of UTI. Further, private corporate sector lending and claims on government exhibit competition while UTI units and life insurance investments display substitutability. Salam and Kulum (Year Unknown) [7] studied the impact of financial reforms on savings by logarithm regression. According to their study, the reason for improving corporate savings is the increase in competition and in Foreign Direct Investment (FDI). It has also been observed that the growth of income is not a very effective instrument to influence the savings rate. Furthermore, a favorable macroeconomic environment supported by strong structural reforms including financial sector reform should help domestic savings to increase substantially. However, in contrast, their result shows that an increase in competition in the corporate sector leads to a decrease in profits of corporations and thereby a decline in savings. Jha and Longjam (2004) [2] observed that the financial sector reforms in India have important implications for the user cost of assets and resulted in substantial substitution among them. Nair (2005) [3] examined the impact of financial sector liberalization on households' savings rate in India with variables like real per capital gross personal income, its growth rate, real deposit rate, inflation, young and old age dependency ratios in addition to the financial liberalization index. She found that financial liberalization has a significant negative impact on the households' savings rate in India because credit availability to households increased after the financial liberalization thereby leading to increased consumption rather than savings. Another major reason may be that it may reduce the precautionary motives for savings. From her studies, income is considered the main determinant of households' savings; the real interest rate, and the young and old dependency ratios have insignificant impact.

3. Savings performance in India

In India, households' savings is a more important contributor to domestic savings than the corporate and public savings as households' savings is almost three quarters of the GDS from 1970 to 2003. The share of households' savings has been increasing substantially [Figure 1];

before the financial sector reforms started in 1991, households' savings accounted for 69.5% of domestic savings. After the reforms, its contribution has increased to 82%. However, the share of households' savings has been decreasing since 2000. Obviously, this implies an increase in consumption of households.

In 1991, India faced a severe economic crisis arising from a very large balance of payment deficit. The economic reforms included financial sector reforms which is an integral part of overall economic reform. The objective of financial reforms was to create efficient and competitive financial markets that could contribute to economic growth [9]. Besides, in efficient financial markets, savings and investments can be allocated efficiently and properly [1]. There has been a considerable change in the structure of financial assets of households from 1970 to 2005 in India, in particular since 1991 [Figure 2]. Households have preferred banking deposits, including deposits with co-operative non-credit societies, more than any other financial assets since 1970. Banking deposits are the most popular financial asset for households due to their low risk and stable rate of return. Financial sector reforms encouraged the expansion of the banking sector. However, the share of banking deposits in total financial assets has been decreasing steadily. The reasons are; i) An increase in the diversity of financial assets available and ii) A decrease in the interest rate on banking deposits. While the share of banking deposits decreases, the shares of life insurance funds, non-banking deposits and shares and debentures increase during the study period. The interest rate on banking deposits has decreased by 5% from 1970 to 2005. Further, a decrease in the interest rate also affects holding of non-banking deposits. The interest rate on which is slightly higher than that on banking deposits.

Next to banking deposits, the provident and pension funds account for the second largest share in the total financial assets of households. In the case of provident and pension fund, it is partly because it is compulsory for employees in the organized sector. Thus compulsory part does not change because of macroeconomic factors. However, there is a component of discretionary investment in the provident fund since an individual can invest more than the required minimum and can also open a provident funds account at designated banks. It is not possible to separate the compulsory and discretionary component. The share of provident and pension funds decreased since 2000. This may be because of the lack of growth in steady formal sector employment and the increasing importance of casual employment. The discretionary component may have decreased. On the contrary to provident and pension funds, the shares of life insurance fund² and claims on government³ increased. High growth of GDP induces an economic effect through higher per capita and disposable income and savings, which in turn create a favorable market demand for life insurance [5]. Furthermore, the life insurance market started to open up to the private sector in August 2000. The insurance sector had been monopolized by the public sector company, the Life Insurance Corporation of India, since the mid-1950s, and general insurance by the General Insurance Corporation and its four subsidiaries since the 1970s. Due to the reforms, competition has increased among players in the sector and the existing insurers endeavored to retain their market share.

The average allocation of shares and debentures⁴ increased because of financial sector reforms, which led to a boom in new issues of shares and a rise in the Sensex average (Stock Exchange Sensitive Index) [4]. The UTI (United Trust of India) holding of households has

2 The life insurance fund data includes Central and State government and postal insurance funds.

3 The claims on government include compulsory deposits, small savings and government securities.

4 The data on shares and debentures includes investment in shares and debentures or credit/ non-credit societies, public sector bonds and investment in mutual funds other than UTI funds.

fluctuated. The sharp deceleration in the growth of mutual funds in the 1990s and early 2000s could be attributed partly to relatively poor performance of the stock market (the BSE Sensex during 1990-2002 on an average increased by 17.5% per annum as compared with 22.4% per annum during 1980s) and partly to withdrawal of tax benefits (Reserve Bank of India 2003). The UTI, set up in 1964, was the only mutual fund in India until 1987-88 when a public sector bank-sponsored mutual fund was established. The mutual fund industry expanded in the 1990s after it was opened to the private sector in 1993. Despite an increase in the number of mutual funds and the schemes operated by them, net resource mobilization by mutual funds decelerated sharply during 1990-2002 in comparison with the 1980s. Net resource mobilization in relation to GDP also declined sharply from 1.7% in 1991-92 to 0.4% in 2001-02⁵.

4. Model and Estimation

To examine the impacts of financial sector reforms on households' financial assets allocation we use two different techniques. In one we introduce the standard deviation of the rates of return on different assets for measuring risk into the regression equations. In the second method we introduce dummy variables to separate the pre-reform period from the post-reform period. We use the SUR model for this part of the analysis. We divide the study period into two periods; the pre-reform period from 1970 to 1990 and the post-reform period from 1991 to 2005.

Generally, financial risk is expected to be reduced during the period of financial sector reforms. However, our standard deviation calculations suggest that the risk on only two assets, such as life insurance fund and provident and pension funds, has decreased as the financial reform proceeded in the Indian case. The standard deviation of the returns has actually increased for the other assets after the reforms.

Equation i of the SUR model is same as above,

Where j is each financial asset and i is year, Y is the financial assets holding of households with $nl \times 1$ matrix, X is the independent variables with $nl \times K$ matrix including standard deviation of each assets, β is the coefficients with $K \times 1$ and ε is the error term with $nl \times 1$ matrix.

SUR estimation with help of standard deviation shows that households tend to invest more in the so-called risky assets after the reforms. This does not indicate, however, that the riskiness of these assets has decreased after the reforms. As we saw above, the standard deviation of the return on these assets had actually increased after the reforms. So, despite an increase in risk households are reluctant to invest in less risky assets and prefer more risky assets after the financial sector reforms. In the more risky assets, such as shares and debentures and UTI fund, the coefficient of standard deviation of the rate of return on asset is significantly positive. On the other hand, in the less risky asset like provident and pension funds, the coefficients of standard deviation and dummy variables for financial sector reform are significantly negative. Furthermore, The coefficients of standard deviation in other less risky assets, banking deposits, life insurance fund, and claims of government are negative but insignificant.

5 This was due to a number of well publicized scams in which small investors lost heavily. Also, a number of shortcomings in the operation of the stock market were revealed. This continues to affect the market, though small investor are now investing mainly in the mutual funds.

6 Results available on request.

This seemingly perverse behavior could be because of a number of reasons which could be investigated in further work. Risky assets may provide a better hedge against inflation than the safer assets. Another explanation could be that we have not been able to incorporate the different tax treatment of the different assets. For instance, dividends from shares and mutual funds are tax exempt in the hands of the investor whereas the exemption for interest income has been removed, and anyway the exemption limit was quite low. Furthermore, transactions costs for investment in shares and mutual funds have decreased with the computerization of deals.

SUR estimations by dummy variables also show that coefficient of dummy variable for financial sector reforms of shares and debentures is significantly positive meaning that households tend to invest in more risky assets. Besides, the coefficient of dummy variable for financial sector reforms of provident and pension funds is significantly negative meaning that households are reluctant to invest in less risky assets, as SUR estimations by standard deviation shows. Unlike standard deviation estimation, coefficients of dummy variables for three periods forms in UTI fund are significantly negative respectively, which can not support the hypothesis that households tend to invest in more risky asset during the reforms period. Moreover, coefficients of dummy variables for pre-reforms and structural changing period of banking deposit, life insurance fund and claim on governments are significantly negative. Coefficients of dummy variable for post-reforms in those three assets are insignificantly positive. This result also can not support the estimation by standard deviation that households are reluctant to invest in less risky assets during the financial reforms.

From two estimations, we, thus, find that financial sector reforms have positive impacts on saving in shares and debentures, one of more risky assets, and negative impacts on provident and pension funds, one of less-risky assets.

According to our estimation results, the impacts of financial sector reforms are not clear. The financial sector reforms started in 1991. Therefore, Indian financial market is not mature yet and it is still changing a lot. To see the impacts of financial sector reforms, it is better to wait for a few years more.

5. Conclusions

In the Indian context, financial savings by households is important in capital formation and investment. Among financial assets, long-term financial assets savings is required for economic growth, because those can be invested in infrastructures and it leads to increase productivity.

The impact of financial sector reforms is that households tend to invest in risky assets, such as shares and debentures and UTI fund, and they are reluctant to invest in less-risky assets, such as provident and pension funds, as estimation by standard deviation shows. Generally risk decreases during the financial sector reforms, on the other hand, in the case of India, risk increases in financial assets except for life insurance fund and provident and pension fund. Estimation result of dummy variables is somewhat different from that of standard deviation. The coefficient of dummy variable from 1996 to 2005 of shares and debentures is significantly positive and that of provident and pension funds is significantly negative like estimation by help of standard deviation. However, that of UTI fund is significantly negative, which is contradicted to the estimation result of standard deviation. Furthermore, coefficients of dummy variable from 1996 to 2005 of banking deposits, life insurance fund and claims on government are insignificantly positive, which is also contradicted to standard deviation estimation.

To increase overall savings rate of households, stable financial market is required which can be achieved through proper regulations and transparent management. Even financial sector reforms can not lead to reduce risk in financial assets as standard deviation calculation shows. As households become to have more information on the financial market, they might not invest in long-term risky asset like shares and debentures, in which Indian household tends to save during the study period from 1970 to 2005. As the Permanent Income Hypothesis is applicable to Indian case, we can expect that an increase in households' income following by the high economic growth can lead to an increase in savings rate of household.

References

- [1] B.B. Bhattacharya, "Financial Reforms and Financial Development in India", Ghaziabad: Institute of Management Technology, (1998).
- [2] R. Jha, and I. Longjam, "Structure of Financial Savings during Indian Economic Reforms", Working Paper, Australia South Asia Research Center, Division of Economics, Australian National University, [Web: Internet] Accessed August 27, (2007), URL: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=397180. (2003).
- [3] L.R. Nair, "Financial Sector Liberalization and Household Saving in India", Conference on at 9th Capital Market Conference, Indian Institute of Capital Market, (2005).
- [4] B.V. Pathak, "Indian Financial System", Delhi: Dorling Kindersley (India) Pvt. Ltd., (2006).
- [5] H. Sadhak, Economic and Political Weekly, March 18. (2006).
- [6] S. Sahu, and A. Virmani, "Structure of the Household Sector Asset Portfolio in India", ICRIER Working Paper No. 15, New Delhi: Indian Council for Research on International Economic Relations, (2005).
- [7] A. Salam, and U. Kulsum, "Saving Behaviour in India: An Empirical Study", The Indian Economic Journal, Vol. 50, No. 3, pp. 77-80, (2005). [Online: Web] Accessed August 16, 2005, URL: http://unpan1.un.org/intradoc/groups/public/documents/APCITY/UNPAN_019746.pdf (Unknown)
- [8] G. Subrahmanyam, and S.B. Swami, Indian Economic Review, Vol. 15, No. 3, pp. 265-274, (1995).
- [9] The Reserve Bank of India, "The Report on Currency and Finance", Mumbai: The Reserve Bank of India, (2003).