Reverse Mortgage: Opportunities and Challenges: A Review of Literature

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Ageing is an inevitable trend for all the countries. The main problems plaguing the global demographics are the ageing of the population and the social uncertainty of seniors due to regular income shortage. As a supplement and last resort to finance retirement lives, reverse mortgages are one way to tackle the ageing problem and release some of the burdens from the government. It is expected that in India the number of senior citizens would be 140 Million by 2016 and 220 Million by 2030 (Kasbekar, 2008).

Though reverse mortgage has been introduced in India for some time now, the response to it has not been very encouraging. Even among urban senior citizens its awareness and popularity seems to be very low. This paper is an attempt to summarize the various studies done on the subject and to reflect the gaps that have been responsible for the lack luster performance of Reverse Mortgage products in India. The paper reviews the existing literature on Reverse Mortgage, both in India and abroad. Review of literature on the existing studies in India has been carried out to understand the relevant studies done so far, the possible reasons for the failure of the product, the product features, government policies etc.

Keywords: Reverse Mortgage, studies, elderly, ageing

Introduction

Aging is an inevitable trend for most of the countries. The main problems plaguing the global demographics are the ageing of the population and the social uncertainty of seniors due to regular income shortage. Amongst these, individuals with low monthly income - such as retirees, older agricultural population and the older population without regular income are of special concern. Persons aged 60 and above are increasingly subjected to financial exclusion as they are unable to procure sufficient financing from the lending institutions due to low and unsettled income and old age. It has been noted worldwide that homeownership rates are high among the elderly in most developed countries (Chiuri and Jappelli, 2003). It is thus this characteristics of the ageing population category, which though does not have enough money to take care of their everyday life expenses but are more than usual found owing/living in valuable homes, flats or other real estates (“Home rich – Cash poor”) which they have acquired throughout their working life, without paying much attention to their retirement planning, that the option of Reverse Mortgage becomes more relevant as a means of supplementing their meager current income.

As a supplement and last resort to finance retirement lives, reverse mortgages are one way to tackle the aging problem and release some of the burdens (e.g. high fiscal expense on old age support) from the government. Reverse mortgages are one way to unlock home equity without moving out of the house. Borrowers benefit from liquidating their housing asset while continuing to live in their current home.

A simple definition of reverse mortgage can be as follows:
"A reverse mortgage is a loan available to seniors and is used to release the home equity in the property as one lump sum or multiple payments. The homeowner’s obligation to repay the loan is deferred until the owner dies, the home is sold, or the owner leaves (e.g., into aged care)"

The analysis of definition provides some basic features of reverse mortgage products. These are

- This loan is available only to senior citizens who own a home
- It can be in the form of Lump-sum or multiple payments like annuity etc
- Homeowner does not have obligation to repay the loan till the house is his prime residence

The payback is done once the owner dies or leaves the house. This is done though selling the house and recovering the loan through its proceeds. Thus a home owner going for reverse mortgage may take his payment in the following form.

- A lump sum at the beginning (can be used for home improvement health expenses etc)
- Monthly payments till a fixed term
- Monthly payments as a life-long annuity
- Establishing a credit-line with or without accrual of interest on credit balance
- A combination of the above

From a lender’s perspective reverse mortgages differ from (forward) mortgages largely because of the dependence of cash flows on longevity risks, an area attracting increased interest in the banking and finance literature (Horneff et al., 2010, 2009).

**Purpose of the Study**

The purpose of the study is to highlight the enormous potential for Reverse Mortgage loans and to study the earning possibilities that it offers for the elderly. The relevance of this study lies in the fact that at this moment, there is no similar, appropriate and efficient financial model for seniors apart from reverse mortgage all over the world. Thus, this so far neglected population category from the side of credit institutions is becoming an important target group.

There are numerous opinions concerning the economic potential of the reverse mortgage financing model, but demographic indicators and other prerequisites show that it has a positive influence on the financial security, healthcare and social care for the elderly.

Implementation and demographic studies in the United States, Great Britain, and Australia have presented a promising future for the product as the appropriate means of utilizing home equity and improving the quality of retirement lives. It is natural to wonder whether such a good product will be popular in India.

**Relevance of the Study of Review of Literature**

This review of literature in intended to present the various studies on reverse mortgage in a comprehensive, simplistic pattern. The aim is to condense the studies
done internationally specifically in countries like USA, UK, Australia etc where Reverse Mortgage has been a success. Review of literature on the existing studies in India has also been carried out to understand the relevant studies done so far, the possible reasons for the failure of the product, the product features, government policies etc.

**International Studies**

The review has been divided into broad specific categories and the reviews from various studies have been taken into account.

**Need for Reverse Mortgage loans:**

Alonso et al (2013) have analyzed the option of reverse mortgages as alternative income during old age. This work focuses on the case of Chile, based on information extracted from national surveys that map out the behavior of representative individuals divided into income quintiles. The changes from 2010 to 2050 are observed on the basis of reasonable assumptions. The pension replacement rates have been found to have increased by nearly 30 points as a result of incorporating life annuities derived from property assets. This result supports the concept of not just fixing policies aimed at improving formal pension schemes, but facilitating private financial mechanisms that generate other suitable forms of income during old age derived from other options.

Catherine, Toni et al (2010) have in their research report studied the Australian markets with reference to the reverse mortgage opportunities and challenges. Post their study they concluded that while there are many very satisfied holders of reverse mortgage products, the nature of the product and of the client group presents a number of risks. The research undertaken as part of this study indicates that a number of issues with the current operation of the reverse mortgage market could be improved. A number of education strategies are suggested to improve the awareness of consumers about the nature of the products. It is also suggested that an ongoing monitoring strategy be implemented so that the impact of any new measures can be evaluated.

Clarence (2009) argues upon the need for RM loans by stating that that the average monthly Social security benefit provided to the Americans in January 2009 was a meager $1,153. Around 43% of working individuals above the age of 55 years had less than $50,000 as their total savings and investments, excluding home equity. This lack of adequate personal savings combined with the collapse in the value of homes and the decline in the stock market had created some very hard financial times for many retired Americans. While there were no easy solutions to the hard economic times or the lack of adequate retirement savings, financial planning techniques such as reverse mortgage, that provide the opportunity to retired Americans to generate additional sources of retirement income have been increasing in popularity.

Matic (2009) states that reverse mortgage is created as a financial instrument which should help seniors supplement their current income, without selling their homes. Matic has stated that the rapid growth of the elderly population is of great interest to governmental and financial institutions alike. However, he suggests that the financial institutions should be more informed and aware of the demographic trends of the elderly so they can design and provide the most appropriate financial products to the elderly.
Bartel, et al (1980) have discussed the importance and the need for reverse mortgage. They have discussed two processes through which Reverse mortgage could take place. One method is through the conventional reverse mortgage in which the monthly payment received accumulates over time as a lien against the house and the other is the RAM or Reverse Annuity method which involves the exclusive purchase of an annuity with the proceeds of a mortgage loan.

Determinants of Reverse Mortgage product choice:

Nakajima and Telyukova (2011) in their paper have analyzed reverse mortgage loans using a quantitative model of life in retirement where elderly households make decision of consumption, savings, housing, and reverse mortgages. Their model indicates that under the current environment and RML terms, reverse mortgages are used by the borrowers to pay primarily for medical expenses, while allowing them to retain their home. They also found that RMLs are particularly popular among lower-income and lower-wealth households and households in poor health. Through counterfactual experiments, they have identified that bequest motives, moving shocks, and house price fluctuations all dampen RML demand to various degrees.

Matic (2009) In his empirical paper has studied the relationship between home ownership and the variables affecting home ownership. The paper attempts to ascertain the variables that affect the reverse mortgage market using home ownership rates as proxy dependent variables in the linear regression model. The different independent variables are Age Distribution, GDP, Unemployment Rates, CPI, and Market Capitalization as a percentage of GDP, House Price Changes, Long term interest rates and Legal origin. The data is collected from over 37 countries (both where reverse mortgage has been a success and emerging economies offering scope). Ordinary least square estimation method has been used to develop the empirical model. The regression analysis is based on the data over the period of 2005-2009. The results show positive effects of GDP on home ownership rates and negative relationship between market capitalization and home ownership. The results of the OLS regression analysis show a significant positive effect of the GDP and legal origin on home ownership rates. Moreover, the results indicate significant negative effects of market capitalization as a percentage of GDP on home ownership rates.

Fratantoni (1999) seeks to explain the primary determinants of reverse mortgage product choice. The borrower is faced with the option of choosing between a line of credit plan and the annuity payment plan. The author has stressed on the importance of the line of credit option over the annuity option. The author has approached this problem with both theoretical and an empirical perspective. For the empirical analysis, a simulation model has been developed. The simulation model proves that, the elderly are likely to be better off with a line-of-credit plan. Support for the theoretical results is given by multinomial logit regressions based on a data set of Home Equity Conversion Mortgages. The empirical results are highly supportive of the predictions from the theoretical model.

The author has developed a stochastic dynamic programming model of reverse mortgage product choice, based on borrowers, maximizing the expected discounted value of utility.
Benefits from Reverse Mortgage

Makoto (2012) The author has specifically mentioned about the benefit of the inbuilt insurance cover a reverse mortgage product to insure the house against possible price declines. This benefit to the borrower definitely comes at a cost, through the imposition of an insurance premium and is included in the total costs of a HECM loan. Therefore, in a housing market downturn, reverse mortgage loans can play a particularly important role by protecting older households from being hit by large declines in house prices. The author has highlighted that amongst the many benefits of Reverse mortgage loans, one important benefit is that these loans provide insurance against longevity risk when the tenure option is used. In this sense, the tenure option is similar to the Social Security system with defined benefits, providing an annuity and relieving borrowers from the concerns of outliving their savings.

Disadvantages of Reverse Mortgage

Mokoto (2012) says that amongst the many disadvantages of reverse mortgage which the author discusses, noteworthy is that the borrowers are insured against a possible reduction in house value, it could exacerbate moral hazard problems.

Alternatives to Reverse Mortgage

Clarence (2009) questions the need of reverse mortgage as a source of supplemental income in the old age by giving an option of intra family sale leaseback as an alternative to reverse mortgage loans. Entering into a reverse mortgage contract should be opted only after exploring all other available options from the cost benefit aspect. This paper is unique in the sense that it has studied the reverse mortgage loans from the financial planning viewpoint. The author has explored the option of intra family sale lease back when leaving the estate to the heirs is a priority. It is an arrangement wherein the retired homeowner sells his or her home to a family heir such as a son or daughter, who then immediately leases it back to the (seller) parent. The retiree becomes a renter with a lifetime lease in the home and would usually also finance the sale of the home with seller financing. A typical intra family sale leaseback for a senior homeowner to an heir would set the amount of the rent per month at an amount less than the required mortgage payment to the seller in the financing agreement. As a result, the retired ex-homeowner receives cash each month and still continues to live in his or her home and is helping a son or daughter or other heir create an estate. In addition, the seller no longer has the responsibility of paying the property taxes, insurance, maintenance, and repairs on the home as would be still required when using a reverse mortgage. These expenses would now be paid by the buyer (heir) who is able to deduct these expenses as tax-deductible rental expenses. The costs to set an intra family sale leaseback agreement are generally minimal and the provisions of the sale, financing, and lease agreement can be tailored to meet the needs and desires of the parties involved. A major obstacle to using an intra family sale leaseback agreement is that many retirees may not have a close heir who is financially able to participate in the arrangement. As a final word, the author states that all the available options should be explored and studied before opting for reverse mortgage.
Reasons for low intake of RM loans

Mokoto (2012) states that the fear of moving out of one’s house too soon after taking out a reverse mortgage and the high costs, outweigh their benefits, and thus not many households actually want reverse mortgage loans. Another possible answer is ignorance about the many benefits of reverse mortgage. Third, might be psychological elements due to which, many older households might simply be reluctant to take on debt.

Study of perception regarding Reverse Mortgage loans

Reed (2009) This paper investigates the perception regarding reverse mortgages in Australia and more specifically the potential for reverse mortgages to benefit seniors. It investigates the existing reverse mortgage providers and what products they are currently offering. This paper overviews the reverse mortgage market in Australia, the existing providers and how their products differ. It also reviews two recent reports into the perception of reverse mortgages by (a) an industry body (SEQUAL) and (b) ASIC. A discussion of these findings identifies shortfalls in understanding the perception of reverse mortgages and highlights potential future research areas.

Although concerns have been raised about a borrower’s understanding of a reverse mortgage, there is little consideration given to other influencing factors. The author further states that the reverse mortgages continue to rise in popularity in Australia, in a similar manner to other western societies. However the lack of understanding with complex mortgage documents is a matter of concern. It is critical that older Australians are keep abreast of changes in the reverse mortgage market and the conditions that affect their loan, both at the date of commencement and during the term of the loan. Whilst conducting research for this paper it was acknowledged that there was relatively very little information about reverse mortgages which was available to the public. It is envisaged that raising the awareness about reverse mortgages will assist to educate current and prospective older households about the use and misuse of reverse mortgages.

Characteristics of Reverse Mortgage borrowers:

Shan (2009) This paper examines all the reverse mortgage loans that originated from 1989-2007 in US and presents a number of findings. Firstly, it concludes that the reverse mortgage borrowers in the recent years are significantly different from earlier borrowers in respect of age, demographics, amount of loan etc. The next finding is regarding the exit phenomena of borrowers. It states that the borrowers who take the line-of-credit payment plan, single male borrowers and borrowers with higher house values exit their homes sooner as compared to the other reverse mortgage borrowers. It also finds that when the local housing market is at its peak, more elderly home owners tend to purchase reverse mortgages. His finding reflects that recent borrowers are younger than early borrowers at the time of loan origination. Secondly, homeowners younger than age 62 may want to purchase reverse mortgages if allowed. These two features imply that the demand for reverse mortgages has been growing most rapidly among younger elderly homeowners.

Case and Schnare (1994) studied in detail the characteristics of HECM borrower, specifically the determinants of product choice, using a sample of approximately 2,500
loans. The study was primarily to calculate the probability of a borrower choosing each payment option as a function of age, family composition, property value, property location, and other characteristics. Their findings are as follows: 1) younger borrowers are more likely to select tenure payments; 2) that the product choice was very highly dependent on the income 3) that women or couples are more likely to choose the line-of-credit option than single men; 4) The line of credit option was chosen more by borrowers with lesser-valued properties; and 5) rural borrowers were more likely to choose the line-of-credit option than suburban or urban borrowers.

**Risks in RM Loans**

Cho, Hanewald et al (2013) have analyzed the risk and profitability of reverse mortgage loans with different payout options from the lender’s perspective. In particular, they have investigated how lump-sum reverse mortgages and income stream reverse mortgages with fixed or inflation-indexed payments are impacted differently by house price risk, interest rate risk and termination risk. They have employed a multi-period stochastic framework for modeling and pricing reverse mortgage cash flows. The results of their study shows that lump-sum reverse mortgages have lower risks and are more profitable than income stream products. A VAR model is used to simulate economic scenarios and to derive stochastic discount factors for pricing the no negative equity guarantee embedded in reverse mortgage contracts. Their results show that lump-sum reverse mortgages are more profitable and require less risk-based capital than income stream reverse mortgages, which explains why this product design dominates in most markets.

**Social aspect of RM Loans**

Shaan (2009) treats housing as a consumable income. Here he emphasises on the attachments to homes. He concludes that if elderly homeowners have strong psychological attachments to their homes, then by opting for reverse mortgages (which generate additional income and liquid assets) they can continue to live in their homes which may be welfare-improving for many households. Reverse mortgages can potentially be of great benefit to an aging population, but at the same time it is important that its products be structured to meet the needs of this group. This article also talks about the inclusion of unavoidable expenditure shocks on the well being of the elderly into the designing of the RM loans. Therefore, products such as line-of-credit plans allow households to protect against these shocks at a relatively low cost while continuing to live in their homes.

**Indian Study**

**Relevance of RM products in the Indian Context**

Paul, Chakravani (2007) have studied the relevance of reverse mortgage loans in the Indian context. The author has studied the Indian market and done a comparative analysis of the various Banks/Financial Institutions offering the loan. The various advantages, disadvantages to both the borrower and the lender have also been studied in detail. As per the author, at the macro level, implementation of reverse mortgage schemes could reduce the burden on the Government and employers who are paying pensions, whether in the
public or in the private sector, and would thus be an indirect measure to bring in pension reforms. It spurs economic activity, provides security and retains the principal flavour of a defined-benefit scheme. It can bring about a great degree of regulation and transparency in the Indian market which as of now is missing.

The author concludes by analysing the impact of the risk of moral hazard on the lender. Losses due to moral hazard may take many years to develop. Competitive pressures for achieving volumes in future may increase this risk. During the tenure of the loan, an elderly borrower may simply be physically incapable of maintaining the home as per loan requirements. Though the loan contract provides for foreclosure under such conditions, this seems to be impractical and sure to result in litigation and bad publicity for the lender.

Risk Aspect to the Lenders

Rajagopalan (2006) describes the RM loans as “Rising Debt instruments”, because the lender can never predict the future loan balances at the time of loan origination. Secondly RM loans being non-recourse in nature, the lending institution cannot proceed against the other properties of the buyer if the house value falls below the loan amount. Further the author states that amongst the various risks faced on RM loans, the Interest rate risk is substantial as it cannot be fully diversifiable here.

Kumar et al (2007) highlights the two most critical risks in RM loans from lender’s perspective – the Crossover and the Longevity Risks. The paper clearly identifies these two risks and suggests ways to manage these risks by the banks. Finally, they also discuss the relevance of Reverse Mortgages in the Indian market.

Future Prospects of RM loans in India

Kumar et al (2007) have identified a few potential target segments to enhance marketability of these products in India and suggests a survey to be conducted to assess the potential of these segments in different geographies like Metros, Urban and Semi-urban areas and the survey results can be used to design new Reverse Mortgage products for better marketability. The most significant contribution is in the suggestion segment wherein they say that banks and insurance companies should enter into a joint venture and market the reverse mortgage products on the lines of Banc assurance. This way the benefit can be passed on to the customer.

Tripathi and Iyer (2009) studied the characteristics of beneficiaries, existing regulatory mechanism, comparison of existing products, opportunities and threats, current issues and challenges pertaining to Reverse Mortgage. They concluded that Reverse Mortgage Loan schemes have an excellent potential as the requirement for RML exists and is increasing as well. The Government of India is promoting it because other social security systems do not exist. RML seems to be advantageous to all the stakeholders i.e. borrowers, lenders and the regulator (GOI). The size and composition of population, ensures that India might turn out to be as big as $500 Billion markets for RML products.

Rajagopalan (2002) This paper has explored the prospects for reverse mortgage (RM) products in India. It has studied the Indian market in detail about the existing structure in India for these products. He is of the view that demographic projections indicate that
this segment is the fastest growing segment all over the world. He concludes that the products are designed properly and offered by an empathetic lender, RM might turn out to be the vanguard product to build up brand equity for the lender in this niche segment. RM, if widely available, might in fact encourage more people in the working population to increase the proportion of their savings invested in housing.

Findings

Review of Literature of the Indian market as compared to the International market reveal that the work done here in India on Reverse Mortgage is very limited. The findings in India are restricted to the prospects and the suitability of this product in India. Future research on Reverse Mortgage can be carried along two fronts. As new data become available, additional empirical research could address the potential sample biases present in these results. Additional theoretical and simulation research could be more helpful in realistically modelling the income and expenditure experiences of elderly households, both before and after opting for a Reverse Mortgage. Studies can be carried out to estimate the financial impact of Reverse Mortgage loans on the elderly. Finally, application of similar stochastic dynamic programming techniques to other areas within mortgage finance could be quiet insightful.

Study of the risks faced by lending institutions such as banks and the financial institutions is still an unexplored area in India. Exploratory financial modeling can be carried out to assess the lender’s risk and to study the options for managing those risks.

International studies can give further insights into the policy perspectives. Inferences can be drawn from developed nations as well as developing nations where this product has been implemented. This research can advise lenders on a tactful marketing strategy. If through further studies, it becomes evident that the consumers are aware of only the annuity plan, then it could also advise the consumers about the availability of line of credit option through aggressive marketing strategy. On the policy front small monthly additions to an elderly household’s income would not really benefit the elderly much, whereas different forms of insurance to guard against expenditure shocks can have larger effects.

Conclusion

Assuming that the Indian economy continues at its current pace of growth, India has enormous potential to become a significant market for reverse mortgage loans which may lead to increase in prosperity, real estate prices and disposable incomes.

Demographic projections indicate that this segment is the fastest growing segment all over the world. Reverse Mortgage, if widely available, might in fact encourage more people in the working population to increase the proportion of their savings invested in housing. Despite the potential for reverse mortgage, there are several issues that are slowing its spread as a reliable and acceptable means of income generation. It is a complex instrument and exposes the typical uninformed elderly borrower to fears of a debt burden, eviction and inability to leave a legacy behind by way of a bequest. The real estate market is not mature in India and much longer term trends in home appreciation are required to accurately value the real estate prices.
Reverse mortgage will be a useful tool for the house-rich, cash-poor elderly in India, as it will help them unlock all or part of their working-age savings for their old age needs without any debt or relocation burden. Key to the efficacy of reverse mortgages is the development of a strong financial and regulatory infrastructure that will minimize loopholes, prevent fraud, and make this product successful in serving the needs of the senior citizens in India. Education and counseling about this concept would make the elderly understand the crucial differences between the vulnerability they feel with traditional loans, as opposed to the emotional, social and psychological advantages that reverse mortgages confer. Reverse Mortgage loans, if designed properly, might infact turn out to be the vanguard product to build up brand equity for the lender as well as offer financial security to the elderly.

References
