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## REVERSE MORTGAGE – AN EMPIRICAL STUDY IN INDIAN PERSPECTIVE

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# **ABSTRACT**

The growth in the population and predominantly the aging population, old age security had become one of the prime concerns for the Indian Government. The Pension Fund Regulatory and Development Authority's (PFRDA) Bill provide a solid ground for this assumption. Even the establishment of Invest India Micro Pension Services for micro pensions for the people of the unorganized sector in the same direction.

**Keywords:** Equity Release, Risk Mitigation, Life Insurers.

#### 1. INTRODUCTION

The growth in the population and predominantly the aging population, old age security had become one of the prime concerns for the Indian Government. The Pension Fund Regulatory and Development Authority's (PFRDA) Bill provide a solid ground for this assumption. Even the establishment of Invest India Micro Pension Services for micro pensions for the people of the unorganized sector in the same direction.

All these measures are good for people who are into their working life and thus can save for their retirement now. But one of the segments which have been left is the one who cares are in their retirement phase and who may not have enough cash to sustain their life. Pension by central and state governments are not enough to sustain them. These people may not have enough income or saving in cash but may have assets which may not be providing income. To overcome this problem, The National Housing Bank, apex body on housing finance in India came out with its guidelines on reverse mortgage in early 2007. Some public sector banks and one private housing finance company have already come up with their products and the market in India started growing.

### Objective.

The objective of this paper is to provide an overview of the reverse mortgage market with some reference to international markets like USA and UK. The risks involved in the market / products and how actuaries can provide their professional contribution in the development of the market and risk management.

Reverse Mortgage in India still at an infancy stage. The reverse mortgage came into existence in the UK during the crash of 1929. Having evolved genetically from the developed countries and mainly the USA, reverse mortgage is a scheme formulated to benefit the senior citizens the most. Although applicable for the younger people also, 'reverse mortgage loan products for senior citizens' is the basic that every bank of financial institution follows.

## What is Reverse Mortgage?

Reverse mortgage is also known as 'lifetime mortgage'. It is used to release the home equity in the property as onetime payment or multiple installments. The owner's responsibility to pay back the loan is delayed until the owner dies or the home is sold, or the owner leaves e.g. leaves for some old age home. This term has been introduced in the Indian real estate sector recently; however it has been quite popular in the foreign countries from a long time.

A Reverse mortgage is different from the conventional mortgage in the sense that in the conventional mortgage, the homeowner makes has to make a monthly amortized payment to the lender and after each payment his equity increases within his or her property, and typically after the end of the term say after a lease of 30 years, the mortgage has been paid in full and the property is released from the lender. However, in the reverse mortgage, the home owner makes no monthly payments and all interests are added to the lien on the property. In case, the homeowner receives monthly payments, or a lump sum payment of the available equity percentage for their age, then the debt on the property increases each month.

In terms of financial jargon the definition of reverse mortgage can be defined as "an agreement by which a home owner borrows against the equity in his home and receives regular tax free payments from the lender." Here equity is the value of the property over and above any mortgage or other liabilities relating to it. Thus reverse mortgage is a contract between a homeowner and a financier which enables the homeowner to receive a stream of income, especially in retirement, from the future realizable value of the home. One interesting aspect of the Reverse mortgage is that if incase, a property has increased in value after a reverse mortgage is taken out, it is even possible to acquire a second or third reverse mortgage over the increased equity in the home.

The genesis of reverse mortgage can be traced to developed countries where, due to higher standards of living, better access to health care and higher life expectancy, people above 65 years constitute a major chunk of the population. The ever-rising cost of pensions and health care for the old led insurance companies to introduce the reverse mortgage in the US, the UK and Australia. In reverse mortgage, the capital value of a home is converted into an annuity over the homeowner's lifetime. The annuity may be designed to rise, fall or stay steady over the lifetime. The period of such payments is not `a specified number of years,' but `the remaining life time of the owner (and his/her spouse) of the property.' Simply put, reverse mortgage is a life annuity.

## A simple definition of reverse mortgage can be

"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

The loan is available only to senior citizens owning a home.

The loan 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 through selling the house and recovering the loan through its proceeds.

Thus a home owner going for reverse mortgage may take this payment in the following form.

A lump sum at the beginning (can be used for home improvement health expensed 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.

Some lenders have come out with plans different from the above to suit the requirements of the borrows. Some such plans are:-

## 1. Home Reversion / Sale and Lease Back.

The homeowner sells the house but keeps the right to live in the house till the time it is his prime residence. The amount could be used for home improvement, any other health need etc.

### 2. Interest – Only Mortgage.

The borrower takes lump sum and pays only interest during his lifetime. The principal is recovered through the sale of the home

### 3. Mortgage Annuity / Home Incentive.

The loan is used to purchase an annuity for the homeowner. The advantage is that even if the homeowner moves out of the home, the annuity will continue till his death.

### 4. Shared Appreciation Mortgage.

This provides loans at a below market interest rate. In return, the lender gets a pre-agreed share in any appreciation in the property value over the accumulated value of the loan.

The various considerations which need to be taken while pricing a product of this nature are:-

Age of the borrower – If it is a joint borrowing then the age of the younger borrower is considered.

Value of the property – Then value of the property plays a major role in determining the price for a Reverse Mortgage product.

Expected Interest Rate – As the product resembles the normal annuity product in some sense, the current and expected interest also plays a major role in pricing the product.



As can be seen from the above, we can find that the product has taken many forms during its evaluation. But is there a real need of reverse mortgage in India?

### Significance of Reverse Mortgage Market for India.

The society in India has undergone huge changes in last 4-5 decades. Nuclear family has replaced the joint family system/ the system of family supporting the older people has gone. As mentioned earlier the public pension system has not been able to provide an alternate support to old people. This condition leaves the older people in jeopardy. They face the following issues:-

Outliving their retirement income

♣ Depending on their children to help pay the expenses

- Getting sick and having no way to pay expenses
- ♣ Not being able to guarantee an income for their spouse after they are gon
- ♣ Being able to live as long as they like in their own home.

Looking at the current scenario, the need for a product which can help these people to solve some of these problems is always a welcome step. Reverse mortgage or equity release products tries to answer all these problems. Every Indian, irrespective of its income level tries to build a home for himself during his working life. Reverse Mortgage will give him/her an opportunity to generate income from that very home. As the ownership remains with the borrower; he can transfer the home to his successors also if the later agrees to pay the loan amount. Such a product relieves the pressure on government also to provide old age security and thus government also needs to support such initiative.

Many economies have been benefited from this arrangement and the market for such products has increase quite a lot in these markets. Two such examples are the UK and the USA markets.

Reversed Mortgage in Developed Markets.

#### UK.

The market for reverse mortgage or Equity Release as it is known in the UK has been growing very fast. The following table provides an overview of the market and its 10 fold growth within a span of 5 years.

Value of new business in year (million pound)

1.	2. 201	3. 201	4. 202	5. 202	6. 202	7. 202
	8	9	0	1	2	3
8. Mortgage	9. 6	10.85	11. 297	12. 359	13. 651	14. 103
Sales						2
15. Reversio	16. 121	17. 155	18. 227	19. 213	20. 201	21. 129
n Sales						
22. Total	23. 127	24. 240	25. 524	26. 572	27. 852	28. 116
						1

(Soruce:SHIP)

There are around 40 providers in the market. Some of the players which have been front runner in this market are Abbey, Northern Rock, Norwich Union, Prudential and Standard Life bank.

#### USA

In US, traditionally mostly reverse mortgages are government backed loans, but now around a dozen other players have also entered into market.

Today, in US about 90% of reverse mortgages are the traditional government-backed product, the most prevalent of which is the Federal housing Administration's home equity conversion mortgage.

Norrowers have taken about 71,500 new FHA-based reverse mortgages in the first 8 months of this fiscal year 2007-08 so far, a 49% jump from about 48,000 loans in the same period a year earlier. From 1990 through to the present, about 3, 10,000 such loans have been taken out.

US property stock is estimated at around \$ 12 trillion, out of which at present reverse mortgage accounts for only 1%, but its pace of growth in recent year is about 5 times the traditional mortgage.

#### Risk inherent in the Reverse Mortgage Product.

Any financial product involves, some risk and reverse mortgage is no exception. The lender faces many type of risk for this product. Some of these risks are Longevity Risk- The lender has to provide the payment upfront either lump sum or installments as the case may be but gets his money back only when the borrowers dies or move into another residence.

As we are aware that the life expectancy of people is increasing, the risk of late recovery of loan is a big risk for the lenders.

The risk is aggravated by the fact that with the payments for reverse mortgage, the lifestyle of the borrower gets better which may become one of the contributors in the improvement of longevity.

The longevity risk is higher for reverse mortgage where the payment is continued till the death of the borrower since not only the recovery gets delayed but also the lender has to make payments for a longer time.

Interest Rate Risk – The payments to the borrower in case of a reverse mortgage is fixed, either for a term or life time but the cash flows for the lender may not be fixed and are dependent on the interest rate markets. Thus the lender runs the risk that the interest rates in the market may move in the opposite direction of that the lender anticipated.

Market Risk (Property Value Risk) – The lender in reverse mortgage can claim back his loan only from the property on which the lain has been granted. He does not have recourse to any other asset of the borrower. If the sales proceeds of the home are not sufficient, the lender cannot clam the balance from the heirs of the borrower. This gives to the risk of adverse movement in property market which affects the profitability of the product. Though this risk can be diversified with increasing the geographical reach of the operations of the lender but the risk still remains.

Early Redemption Risk – Some of the reverse mortgages loans may give the borrowers an option of repay the loan at any point of time. This leads to another risk for the lender of early redemption as the borrower will pay back the loan when it is most beneficial to him which in most cases does not coincide with the interests of the lender. In case the lender has securitized the loan, which in most of the cases it is, the risk becomes higher as the lender cannot closer its position in this case.

Adverse Selection and moral hazard risk – As with insurance products. Reverse mortgage products also have the scope of adverse selection i.e. only people with expected higher longevity may go for such products. Also as the borrower has really no incentive for keeping the house in proper condition as the risk is borne by the lender, it may lead to depreciation of value of the property.

Condemnation/Sovereign takeover of the property by a government agency – the asset available to the lender is the house and if there are changes like takeover of property by the government for development purposes etc, the lender is the looser.

But as spillover/multiplier effect of releasing the equity value of houses is very large as total household stock in a country ranges between 100% and 150% of GDP, it is good if home equity conversion products become a success in Indi as it can provide a strong dynamism to the economy by unlocking the illiquid wealth represented in India's stock of owned houses. Therefore, this market should be looked favorably both by the regulators and market participants.

#### **Risk Mitigation**

Risk mitigation is the key for the success of any financial product including reverse mortgage. Some of the risk mitigation techniques which the providers can apply to reduce the risk on their books.

Proper eligibility criterions – the first mitigation of risk can be done at the time of providing loans. This can be done through proper verification of the title of the property, age of the borrower; his/her credit analysis etc. this reduces the risk of default by the borrower.

Variable interest rates loan as compared to fixed interest rate loan – To avoid interest rate risk, the lender can for variable interest rates based on some market benchmark like MIBOR. This will also reduce the risk of Pre-payment as the borrower will not have interest arbitrage on prepayment of the loan.

Proper analysis of mortality trend – As the product has significant longevity risk; the lender can do a detailed mortality trend analysis on a macro level and also in the market where it is operating.

Geographical diversification – The lender can look at spreading the business across the country by promoting the product in secondary and tertiary citied also so that the law of large numbers may work properly and if the provider has a bad experience in one market, it can be compensated with good experience in other cities.

Develop the product for lower age groups – The lender can develop home equity conversion mortgages for all households and not just for elderly. This will significantly reduce loan to value ratio and that will take care of many of the risks inherent in the product.

Securitization – One of the most effective ways of mitigation risk is securitization. It involves many other financial players and this it spreads the risk of default/prepayment to many other participants. USA has a history of eight year of securitization of its Reverse Mortgage. One of the recent innovations has been Ginnie Mae's Mortgage Backed Securities of HECM loans. This has helped Ginnie Mae to securitize the Home Equity Conversion Mortgage loans and had a good response from the market.

In the Repayment schedule, some default conditions or changes that affect the security of the loan for the lender that can make reverse mortgages payable should also be added, like: the loan for the lender that can make reverse mortgages payable should also be added, like:

- Declaration of bankruptcy
- Donation or abandonment
- Condemnation/Sovereign Takeover of the property by a government agency;
- Adding a new owner to the homes title
- Taking out new debt against the home.

## Role of life insurers in Reverse Mortgage market.

Life insurance market is growing in India and there are many international players who are entering the market. Without going into details of regulatory frame work, we foresee that life insurers can play a very active role in this segment of business and thus have a good growth in their portfolio. The reasons behind this thinking are

Better understanding of mortality/longevity trends – Life insurers have better research about mortality trends and so they have better ability to measure longevity risks which is one of the major risk in the product. This also helps in development in the market as the life insurers can provide option of life annuity to borrowers rather than payment for fixed term. Alife annuity will help the borrower to have income even at the time when he is very old.

Long Term Player – Reverse Mortgage is a long term product. Life insurers being long term players in the financial market, they have ability to estimate and manage long term interest rate movements and thus manage the interest rate and other risk in better manner.

Natural Hedge – Life insurers are on a better footing to hedge reverse mortgage product risk with their portfolio of life insurance benefits.

## **CONCLUSION**

As at present, India is poised for a strong economic growth, we should not miss any avenue to accelerate or support the growth momentum. Home equity/Reverse Mortgage products are such products that have the potential of not only increasing the liquidity in the economy but also diversifying many risks. Besides insurance and pension products, actuaries with their long term horizon are in the position to play a leading role in designing products like reverse mortgage needing inputs both from actuarial and finance/investment domain.

Thus by investing in a house through a housing loan and repaying the loan during his working life time, one will not only have a roof over his head throughout his life time, but also secure a joint life pension, that keeps in step with inflation,

after retirement. Seen in this perspective, reverse mortgage would motivate people to build or buy their homes and, thereby, save for their retirement voluntarily. Hence reverse mortgage results in a double-whammy: it spurs economic activity and provides economic security.

The trend is also catching popularity in the country owing to the desire of securing future. In India, Dewan Housing Finance Corporation Limited, India's second-largest private housing finance company has launched a reverse mortgage scheme called 'Saksham' that is targeted at retired senior citizens above 60 years of age.

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### **CONFLICT OF INTEREST:**

None.

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