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Analytical study of inherent risk in reverse mortgage loans

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Abstract
Reverse Mortgage, is an innovative financial product for needy senior citizens in India. But as of now it has not taken off and there are very few takers for it. Reverse Mortgage is being launched in India by 23 banks and 2 HFCs from 2008, but only Rs 1800 crore is sanctioned and Rs. 800 crore is disbursed, as on 30 September 2013.According to conservative estimate, Reverse Mortgage market in India is of Rs. 20000 Crore.9
Many PLIs has cited "Psyche of the Indians" which is working against this product. Dewan Housing, which is one of the largest housing finance companies. Has been able to sell only 4-5 reverse mortgage loans during the last two years. Few large financial institutions, including home finance lenders in the country, do not have reverse mortgage loan in their portfolio. Study aims in determining inherent risk of product from both i.e. Lenders & Borrowers end.

Keywords: financial institutions, inherent risk, mortgage loans, conservative estimate, home finance

1. Introduction
"Reverse Mortgage" means mortgage of capital asset by an eligible senior citizen against a loan obtained by him from an approved lending institution.
A reverse mortgage is a mortgage (a loan on house). It enables senior citizens (age>=60 years), to avail stream of income from a lender against self-occupied, self-acquired house; while maintaining the ownership and staying in the same house. In simple terms it is "opposite" to that of traditional home loan where lender pays the monthly payments to the borrower. Reverse Mortgage Loans are also called as "Reverse EMI Loans". The senior citizen borrower is not required to repay the loan, monthly repayments of principal or interest during their lifetime. On the borrower's death or borrower leaving the house permanently, loan becomes due for repayment; along with accumulated interest, through sale of the property. The borrower(s) or legal heir(s) can repay the loan with accumulated interest and have the mortgage released without resorting to sale of the house.
In 2007, then Finance Minister P. Chidambaram introduced this novel scheme of Reverse Mortgage loan (RML) in India. RML is considered as ideal solution for senior citizens to finance retirement, who owns house. RML is operational in many western countries and quite popular among the senior citizens. The Ministry of Finance vides notification no-SO 2310(E) dated 30th September 2008 has notified the "Reverse Mortgage Scheme 2008".It provides the framework under which the lenders will operate the scheme.
Reverse Mortgage is relatively new concept and is in nascent stage in India. It can make up shortfall in pensions or incomes of senior citizens, required in years to come and help them to maintain same standard of living. At the same time RML can become "golden walking stick" for senior citizens and will also reduce the possible financial burden on the government.

2. Features of Reverse Mortgage Scheme
The draft guidelines of "Reverse Mortgage Loan (RML) in India" are prepared by National Housing Bank (NHB). The salient features of RML are as follows:'
1. Any house owner with minimum age of 60 years and above is eligible for a reverse mortgage loan.
2. Married couples will be joint borrowers for financial assistance. In such a case, the criteria for couples would be at the discretion of Primary Lending Institution (PLI).Most of the PLIs in India have a condition that at least one of them should be above 60 years of age and other not below 55 years of age.

3. The property involved should be self-occupied, self-acquired residential property (house or flat) located in India, with clear title indicating ownership of prospective borrower(s).
   a. The residential property should be free from any encumbrances.
   b. Commercial property will not be eligible for RML.
4. The residual life of the property should be at least 20 years.
5. RMLs are provided by Primary Lending Institutions (PLIs) viz. Scheduled Banks and Housing Finance Companies (HFCs) registered with NHB.
6. The loan amount is dependent on the value of the house property as assessed by the lender, age of the borrower and the prevalent interest rate.
7. The maximum loan amount is up to 60% of the value of the residential property.
8. `The maximum tenure of RML is 20 years.
9. `The payment of RML should be decided mutually between PLI and borrower; should be decided in advance, as following:
   a. Periodic payments- monthly, quarterly, half yearly, and annual
   b. Lump sum payments in one or more tranches
   c. Committed line of credit
   d. Combination of the above three
10. The maximum monthly payments shall be capped at Rs. 50000 and maximum lump-sum payment shall be restricted to 50% of the total eligible amount of loan subject to a cap of Rs. 15 lakh. Lump-sum payments may be conditional and limited to medical exigencies.
11. Eligible end use of RML funds are as follows-
   a. Up gradation, renovation and extension of residential property
   b. Home improvement, maintenance and insurance of residential property.
   c. Medical, emergency expenditure for maintenance of family.
   d. For supplementing pension/other income.
   e. E. Meeting any other genuine need.

   Use of RML for speculative, trading and business purposes is not allowed.
12. Valuation of residential property is done at such frequency and intervals decided by the PLI in advance. As per regulation, valuation of the property should be done at least once in every 5 years.
13. The amount received through reverse mortgage is considered as loan and not income. It will not attract any tax liability, on the part of borrower. However, a borrower is liable to pay capital gains tax, only at the point of alienation of mortgaged property by the PLIs for the purpose of recovering loan.
14. Borrowers can stay in the same house even after completion of the tenure of reverse mortgage, till one of the borrowers is alive.
15. The borrowers or their heirs can repay the loan along with the accumulated interest at any time and have the mortgage released. The borrowers or the heirs also have an option of prepaying the loan at any time during the loan tenure or later without any prepayment levy.
16. On the death of borrowers or on the borrowers leaving the house property permanently, the loan is due for repayment along with the accumulated interest, through the sale of property.
17. The balance surplus (if any) remaining after settlement of the loan with accrued interest shall be passed on to the legal heirs or beneficiaries of the borrower.
18. All the RML products have clear 'no negative equity' or 'non-recourse' guarantee. The borrower will never owe more than the value of their property, provided the terms and conditions of the loan have been met.
19. The loan shall be liable for foreclosure due to occurrence of following events of default:
   a. Borrower has not stayed in the property for a continuous period of one year or not using the house as primary residence.
   b. Borrower fails to pay property taxes or fails to insure the house or maintain and repair the residential property.
   c. Borrower declares bankruptcy.
   d. If the mortgage property is donated or abandoned by the borrower.
   e. Due to perpetration of fraud or misrepresentation by borrower; like adding owner to the title of the house, making un-authorized structural changes or renting out part of house etc.
   f. If the government under statutory provisions, seeks to acquiring the residential property for public use.
   g. If the government under statutory provisions, seeks to acquire or condemn the residential property, for health or safety reasons.
20. Senior citizens may not understand lengthy documentation and other process. Senior citizens may look it as tedious, complicated and difficult procedure. The PLIs will maintain high standards of conduct in dealing with the senior citizens and their families and treat them with due care.
21. The PLIs shall clearly disclose the terms& conditions and specify all the costs involved in the RMLs. They should also counsel prospective borrowers about possible impacts like movements in interest rates and fluctuations in the prices of residential properties, on payouts.

3. Comparison between Forward and Reverse Mortgages

Reverse mortgages differs significantly from Forward mortgages in terms of purpose, category of borrowers, loan repayment and servicing. Table-1 below gives detailed comparison between forward and reverse mortgages.

Table 1: Comparison between forward mortgages and reverse mortgages

Forward Mortgage	Reverse Mortgage
Purpose is to purchase a home	Purpose is to generate income
Borrower population is general population.	Borrower population consists of senior citizens with equity in their houses
Borrower needs income to qualify	No income qualification is necessary
Before closing, borrower has no equity in the home. At closing, borrower's equity is very less	A borrower has substantial equity in the house at closing.
During the loan term, borrower makes monthly loan	During the loan term, borrower receives monthly payments from the lender and as

payments and as a result loan balance reduces	such loan balance increases
At the end of the loan term, borrower's liability is zero, as entire amount with accrued interest is repaid	At the end of loan term, borrower's liability is more
Borrower's equity increases over time — Loan balance decreases as payments are made to the lender — "Falling debt and rising equity" transactions	Borrower's equity decreases over time. The loan balance rises as loan advances are made to the borrower, interest is added to the outstanding loan balance, and no repayments are made. "Rising debt, falling equity" transactions.
Borrowers have more incentive to make capital investments to maintain the house.	Borrowers have less incentive to make capital investments to maintain the house.
Borrower makes repayment of the loan	No need to make repayment of the loan until death or move out or sale of the property.

4. RML Working Example

Let's assume a senior citizen with age 60 years of age, has self-occupied and self-acquired house. He wishes to get a reverse mortgage loan with monthly income stream. After initial valuations, the bank can give loan for the amount of Rs. 50, 00,000. Senior citizen wants monthly payout for 10 years, till the age of 70 years. Considering 6% rate of property appreciation valuation of the home at the end of year 10 is Rs. 89, 54.238.

This value is converted to monthly payout for 10 years using RML interest rate of 10% per annum and monthly payout comes to Rs. 43712. This calculation is done by using PMT formula of excel sheet. Calculation is done as follows:

Table 1: RML and Home Equity Calculation

Year	Age	Monthly Loan Advance	Total Loan at Year End	Projected Cash Value	Balance Cash Value (Home Equity)	LTV
1	61	43712	549269	5300000	4750731	10%
2	62	43712	1156055	5618000	4461945	21%
3	63	43712	1826378	5955080	4128702	31%
4	64	43712	2566893	6312385	3745492	41%
5	65	43712	3384950	6691128	3306178	51%
6	66	43712	4288668	7092596	2803928	60%
7	67	43712	5287017	7518151	2231135	70%
8	68	43712	6389906	7969240	1579334	80%
9	69	43712	7608282	8447395	839113	90%
10	70	43712	8954238	8954238	0	100%

One of the important feature of RML- Rising Debt and Falling Equity" It can be observed that initially home equity is high, total loan is less and thus LTV is less. The loan amount is paid every month for the period of 10 years i.e. till the age of 70 years of the borrower. At the end of the loan term, home equity is zero and LTV is 100%.

5. Reverse Mortgage Loan enabled Annuity (RMLeA)

Till now, RML is launched by 23 Banks and 2 Housing Finance Companies (HFCs) in India. But it remained nonstarter and there are very few takers for the product due to perceived drawbacks like-

1. Limited payout tenure: Maximum payout tenure to the borrower in RML is 20 years. There is a risk for borrowers that they may outlive the payout period and they may not have adequate money to survive.
2. Loan to Value (LTV) Ratio is Low: LTV ratio of 60% is low considering higher equity in houses and rate of appreciation of residential property. It makes RML a low income generating option compared to the value of the asset.
3. Uncertainty of payouts: Payouts may change as per the property revaluation and change in rate of interest. This makes payouts vulnerable to frequent changes and may become uncertain.

NHB has introduced new variant of reverse mortgage in December 2009-RML enabled Annuity (RMLeA). This new product addresses the above drawbacks and more beneficial to the senior citizens. LTV ratio can go up to 75% of the property valuation, which in turn provides higher loan amount to borrowers. RMLeA provides assured life- time payments (annuity) to senior citizens against mortgage of their residential property; thus overcomes the drawbacks of limited payout tenure and uncertainty of payouts.

Table 2: LTV Ratio for RMLeA

Age of the Borrower (Years)	Maximum Loan to Value Ratio
Between 60 and 70	60%
Between 70 and 80	70%
80 and above	75%

Source: www.nhb.org.in

6. RMLeA working example

RMLeA provides more cash in the hands of senior citizens compared to traditional RML. This advantage is illustrated in following example.

Table 3: RMLeA working example

Particulars			Net Monthly RMLeA for Life time (Rs. /per month)		RML (2007)
Age	Property Value (Rs.)	LTV	Option-1	Option-2	Up to 20 years
60	5000000	60%	17295	10955	4214
65	5000000	60%	19935	11335	4214
70	5000000	60%	24080	12095	4214
75	5000000	70%	35830	16555	4916
80	5000000	75%	51597	24941	5267

Option-1: Life Annuity without return of purchase price
Option-2: Life Annuity with return of purchase price

As per recent announcement annuity payments under RMLeA are now exempted for income tax. This makes RMLeA more attractive than earlier.

Central Bank of India is offering RMLeA (Cent Swabhiman Plus) product along with private insurer- SUD Life Insurance Company. It has already acquired 25% of the market share. Union Bank has also started RMLeA- Union Reverse Mortgage.
The product launched in 2009 has shown lackluster performance with only Rs. 30 crore sanctioned, as of 31 March 2011.2 RMLeA was considered as big step towards RML penetration.

7. Variants of Reverse Mortgages
Various variants of Reverse Mortgages are available, around the world. The product has evolved over the period of time considering needs of the senior citizens/borrower. Following are some of the popular RML variants:

7.1. Term
Borrower is eligible to receive monthly payments for a pre decided period of time. The loan is repaid with interest at the end of the set term unless he moves out of the house or dies during the term.

7.2. Split Term
Borrower receives monthly payments for a pre decided term. The payments will be stopped at the end of the set term. The loan has to be repaid only when the home owner dies or moves out of the home. This is in contrast to the term reverse mortgage where loan repayment needs to be done at the end of the loan term.

7.3. Tenure
In this variant of reverse mortgage loan, borrower receives the monthly payments as long as he lives in the house. Loan has to be repaid on death of borrower or when he moves out of the house.

7.4. Line of Credit
Line of credit reverse mortgage offers the borrowers access to a source of loan amount, as per their requirement. They can use the loan amount whenever and however they choose. This is similar to a credit card limit being sanctioned by the bank based on repaying capacity. The principal limit is approved based on the borrower's home value, age, origination fee, and percentage of shared appreciation the lender is entitled to. The entire line of credit may be advanced at the time of loan closing.

7.5. Hybrid Term/Tenure
Hybrid term/tenure reverse mortgage offers the combined benefits of term, tenure, and line of credit plan. It allows the borrower to set aside part of the principal limit at the time of origination to establish a line of credit. The borrower receives the rest of the principal limit in the form of equal monthly payments as long as the term does not expire or the borrower lives in the house. The borrower receives monthly payment as well as lump sum amount set aside as per the need.

7.6. Lifetime
This is in contrast to the term and tenure variants. Borrower receives monthly payments as long as he is alive even if he is not staying in the mortgaged house. The contingency to repay occurs on the death of the borrower. This is mainly an annuity attached product which enables regular income to be provided to the borrower for life.

7.7. Shared Appreciation Mortgage
Borrower agrees with the lender that they can have a share in the capital appreciation value of the mortgaged property, when it is sold. Here the rate of interest may be very less or nothing.

7.8. Roll Up
This is a lifetime reverse mortgage offered in United Kingdom, with an added feature of lending additional cash advance to the borrower, in return for higher interest rate on loan.

8.9. Fixed Payment Loans
In this variant, borrower receives a lump sum at the beginning of the loan period. Instead of being charged interest on the loan, borrower agrees that when the house will be sold he will pay the lender a higher amount of money than the amount borrowed. Thus the amount of repayment to the lender is decided at the beginning of the loan period.

8. Inherent Risks in Reverse Mortgage Loans
Any financial product involves some risk and reverse mortgage is no exception. These risks must be managed in prudent way and should not harm progress of RML in its initial phase. In Indian scenario. Following are risks in reverse mortgages, for both- lenders and borrowers.

8.1. Risks for Borrowers
8.1.1. Difficult to understand-
Many individuals could not understand RML, as it is complex and confusing. Senior citizens entering into reverse mortgages don't fully understand the terms and conditions associated with the loan. It has been suggested that some lenders may take advantage of this to grow the business.

8.1.2. Expensive
Reverse mortgages can cost more to enter into, as compared with other types of loans which often costs less. Apart from processing fee, which is 0.5% to 1% for most of the lenders, borrowers will also have to pay for property insurance premium. This will add up to the initial cost.

8.1.3. Compounding interest
No monthly re payments are made by borrower on reverse mortgages. The interest that accrues is treated as loan advance. Each month, interest is not only calculated on the principal amount received by the borrower but on the interest previously assessed loan. The longer a senior citizen has reverse mortgage, it is more likely that all of the home equity will be depleted, due to compounding interest, when the loan becomes due.

8.1.4. RML for short term
RML can be very expensive, if it taken for short term. It is imperative that senior citizen should take RML considering long term only. This risk is also there if RML is taken too late that is in very old age.

8.1.5. Valuation and interest risk
RML payouts are subject to change, depending upon interest rates and valuation of property. Valuation of property is done frequently, at least once in 5 years. RML payouts will be reduced in case of increase in rate of interest or value of the property goes down.

8.1.6. Inheritance Issues
In India, residential property is always inherited to the next generation and has emotional value. Senior citizens opting for RML may face social issues like children not looking after parents who have taken RML; as it could be seen as burden on next generation.

9. Risks for Lenders
9.1. Longevity Risk
This is a major risk to a lender if the borrower lives longer than expected. The lender has to provide the payment upfront either as lump sum or installments. But the lender will receive the loan amount along with accrued interest only when the borrower dies or moves out of the residence. As the life expectancy in India is increasing, the risk of late recovery of RML is a big risk for lenders.

9.2. Crossover Risk
Risk of loan value exceeding the house value is called as crossover risk. This is a function of occupancy risk, mobility risk, mortality risk, interest rate risk, and home appreciation risk. The lender can claim back loan only from the property on which the loan has been granted. Lender does not have recourse to any other assets of the borrower. To recover entire amount of loan. If the sale proceeds of the home are not sufficient to cover loan along with accrued interest, the lender cannot claim the balance from legal heirs of the borrower. This will result into losses for the lender.

9.3. Interest Rate Risk
The payments to the borrower in case of RML are fixed, either for a given term or lifetime. But cash flows to the lender are dependent on interest rate in the market. Thus the lender runs the risk that the interest rates may move in the opposite direction of that the lender anticipated which will result in lower recovery and loss to the lender.

9.4. Early Repayment Risk
Borrower has an option to repay the loan along with accrued interest, at any point of time. This leads to a risk of early repayment and this repayment is done by borrower when it is more beneficial for him. This early repayment, in most of the cases, does not coincide with the interests of the lender.

9.5. Moral Hazard Risk
This is a risk of borrower's negligence or improper maintenance of property. This may also arise due to borrower not taking home insurance or not renewing home insurance in time or not paying property taxes. This may lead to depreciation of value of the property.

9.6. Litigations
This is a risk of litigations with legal heirs during loan repayment or in handling over the property to the lender. Thus lender is at risk of losing time in recovery of loan amount, due to litigations. This risk can be considered as reputation risk for the lender and may impact future business.

10 Conclusion
Despite of inherent risk Reverse mortgage can take a front seat in India as there is intrinsic need for the product like it. Changes in socio-economic scenario, demographics, and pension system; indicates need for the product. Awareness level among potential borrowers must be increased along with new product development for further penetration of this product. Many financial planners have already started suggesting RML as part of retirement plan, for their clients.
Reverse mortgage loans is the need of the country as there is lack of formal social security system for senior citizens. This product will be definitely take important position in the financial plans of many individuals and this will happen with time.

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