ISSN:0971-1260
Vol-22- Issue-14-December-2019

An Analysis Of The Awareness, Demand, And Effectiveness Of Reverse Mortgage Loans (RML) In Urban Kerala

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Abstract

Reverse Mortgage Loan, a popular home loan product in the West, was introduced in India as part of the 2007 budget as a financial product meant to provide social security to elderly citizens. RML was expected to be hugely successful among the typical *income-poor, asset-rich* retirees of Indian middle class. However, a number of recent studies have shown that RML hasn't been as popular as expected. Urban middle class of Kerala was expected to be among the most keen buyers of RML at the time of its introduction. This study attempted to find out, to what extend the urban middle class of Kerala is aware of RML as a loan product and to what degree various demographic and socio economic factors decide its popularity. The effectiveness of RML as viewed by its buyers is also measured in the study. Three different samples were used. The first sample of 50 participants was used to test the awareness of RML. Another sample of 30 who had purchased RML was used to measure its effectiveness. A third sample of 30 who decided not to buy RML were used to study factors that led to their decision. Both the second and third samples were used in combination to study the various demographic and socio-economic factors that decided the demand of RML among urban dwellers of Kerala.

Key words: Reverse Mortgage Loan, awareness, effectiveness

ISSN:0971-1260
Vol-22- Issue-14-December-2019

Introduction

A 2017 study by IANS estimates that if the current rate of coverage of pension continues, 61 percent of India's elderly population will be without income security by the year 2050. A number of legislative measures have been enacted by the Government of India in the past, aimed at ensuring the socio-economic welfare of senior citizens. The 'Maintenance and Welfare of Senior Citizens Act' of 2007 was a particularly ambitious bill that introduced a number of quasi-judicial as well as administrative measures that were aimed towards improving their welfare. Most central ministries followed suit, and introduced provisions under their respective purviews, including the ministries of social justice, health and family welfare, rural development, and civil aviation. A notable example among them is the Indira Gandhi National Old Age Pension Scheme (IGNOAPS), introduced by the Ministry of Rural Development, that provides financial assistance to the elderly that live below the poverty line.

However, these publicly funded schemes often fall short of providing any substantive help considering the fact that the benefits that accrue from such scheme are often comically low. For example, in the case of the aforementioned IGNOAPS, the monthly pension can sometimes be as low as 200 rupees. Add to this the unfortunate reality that these schemes are also at risk of being underfunded based on the legislative leanings of the changing governments, one begins to question if there are any alternatives.

The traditional support system that existed within Indian families has also begun to crumble. Numerous studies have found that an increasing number of families are unable to provide sufficient financial assistance to their elderly members (Goyal, 2012).

It is clear that government schemes alone cannot provide a solution to this problem. This has prompted the development of a number of Old Age Social and Income Security (or OASIS) products. These are financial products aimed at providing short term financial gains to elderly citizens. Chief among such OASIS products is the Reverse Mortgage Loan (RML).

A Reverse Mortgage Loan is a lending scheme where a senior citizen can mortgage their equity in an immovable property such as a building or a piece of land to receive periodic payments from the lender (usually a banking institution) until their death or until the mortgagee leaves the property permanently, all the while occupying the property as its owner (Ghosh,2013).

ISSN:0971-1260
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It was introduced in India by the then finance minister P. Chidambaram in the Finance bill of 2007. The biggest advantage of RML is that the borrower does not need to repay the borrowed amount during their lifetime, as the principle and the interest are repaid through the sale of the property at the time of the borrower's death or at the time of them leaving the property permanently. The scheme also allows a legal heir to stop the sale of the property by repaying the amount due to the bank (Kaur Brar, 2011).

A number of guidelines have been issued by regulatory authorities such as the Central Board of Direct Taxes and the National Housing Bank, with regard to RML. The borrower should be at least 60 years of age. This ensures that the scheme produces its intended benefit, which is to provide income security to senior citizens only. The property should be self-acquired and self-occupied. This guideline was introduced to make sure that it is used by those elderly citizens who are really in need of additional income for survival. The property should also have a minimal residual life of 20 years to insure that the lender is able to realize the entirety of the amount loaned, at the time of sale. The amount of loan is determined by the lending institution based on the value of the property. Loan payments could be made in installments or in one or more lump sums. Monthly installments cannot exceed ・ 50,000 and a single lump-sum cannot exceed 50% of the total loan amount (CBDT [APA], n.d.).

Review of Literature

The National Housing Bank reported that only 800 crores worth of RMLs were disbursed within 6 years after its introduction. Subsequently, a number of studies were undertaken in order to investigate why RML as a financial product hasn't reached the expected levels of success in India. A recent study by Vats (2018) that measured the rate of growth of RMLs issued by Punjab National Bank, Union Bank of India, Bank of Baroda, and Industrial Development Bank of India between 2010 and 2014 found that RMLs grew at less than 5% during that period.

A number of studies have attributed the low demand for RML to its poor levels of awareness. However, a 2017 study by Gupta & Kumar (2017) found that there is no significant correlation between awareness of RML and its demand. Therefore, it becomes imperative to answer the question what are the reasons contributing to the lack of popularity of RML in the Indian market, if not poor awareness. Other studies have opined that cultural differences that exist between the elderly population of India and that of Western economies have resulted in the failure of RML. However, most of these studies fail to show a statistical significance to the theory that cultural differences lead to poor performance of RML. Therefore, there exists a clear need for a study that quantitatively analyses that factors that lead to the availing of RMLs.

A study by Rajagopalan (2016) projected that the urban areas of Kerala, Tamil Nadu, Goa, and Chandigarh along with all the metros are likely the ideal markets for RML in India. This opinion is also widely held by the banks of India. Numerous studies have been conducted analyzing the RML markets in metros. However no major studies have been undertaken to examine the demand, awareness, and effectiveness of RMLs in the urban areas of kerala. Therefore such a study is warranted. Additionally, no major researches have been conducted with the customers of RML in kerala as participants. Such a study is needed in order to understand the 'Kerala specific' demographic, cultural, socio-economic, and industry-specific factors that affect the demand of RML in Kerala.

Objectives

In order to address these gaps in knowledge, this study was undertaken. The first objective of this study is to find out the level of awareness of RML among urban dwelling senior citizens of Kerala. The second objective is to identify the factors that led to the decision to either avail or not avail RML by those participants that were aware of the existence of RML. The researcher also sought to find out how has the opinion of those who purchased RML changed after purchasing. Finally, the study wanted to find out to what extend RML was viewed as effective by its urban dwelling customers of Kerala.

Methodology and sample size

In order to measure awareness, a quantitative study was conducted among participants who are eligible to purchase RML, who lived in either Kottayam, Ernakulam or Palai and are most likely to be aware of RML. A demographic profile of somebody most likely to be aware of RML as a financial product was created. This profile was created based on findings from previously undertaken research studies. Based on this profile, 133 potential participants were contacted and a sample of 50 participants was formed. The sample had the following characteristics. Every participant was above the age of 60 and owned a house within one of the metropolitan areas of Kottayam, Palai or Ernakulam. No participant was a recipient of pension. All participants had completed an average of 10 monthly transactions through their bank account during the past 6 months. No participant had made a long-term investment that required a monthly payment exceeding ・ 10,000 in the past 5 years. No participant had sold

ISSN:0971-1260
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an immovable property within the past 5 years other than to meet an immediate high value expenditure (such as a wedding of a family member, or a medical expenditure). No participant owned an immovable property other than the house they lived in. Only those who satisfied these conditions were selected for the study in order to ensure that the sample was representative of the typical 'asset-rich, income-poor' retirees of Indian middle class. Then the central tendency of the data collected was used to measure the awareness of RML among urban dwelling elderly individuals of Kerala.

In order to ascertain the factors that led to the decision to either avail or not avail RML, another sample of 60 participants was formed, all of whom were aware of the financial product called RML but only 30 of whom had purchased it. In order to find the correlation between demographic factors and the decision to avail the loan, the 30 participants who had purchased RML were surveyed on their age, number of children, number of children living with them at the time of the study, and level of income. The researcher also identified 7 factors that were listed as the biggest motivators behind the decision to purchase RML by Makarand (2017). The 30 participants who had purchased RML were then asked to rank these 7 factors based on their applicability to them. The other 30 participants who made the decision to not purchase RML were also asked to rank a different set of 7 factors based on their applicability. These factors were identified based on what previous researchers have theorized to be the major reasons why individuals choose not to purchase RML.

In order to find out whether the customers of RML had changed their opinion after availing the loan, a hypothesis was formulated. The null hypothesis stated that 'there is no significant difference in the opinion of the customers before and after availing the reverse mortgage loan'. Under the null hypothesis, five sub null hypotheses were formed. Each of those five sub hypotheses were then tested using a z-test.

The 30 participants who had purchased RMLs were surveyed on their satisfaction with RML using a 5 point Likert scale containing 6 questions. The questions covered multiple topics including their feeling of sufficiency of the loan amount, their sense of buyer's remorse, and their approval of the terms of the loan. Finally, in order to test if the source of information of RML influenced a potential buyer's decision to buy, both the groups of 30 participants from the second sample were surveyed.

In order to collect data on the awareness of RML a structured questionnaire was used. All questionnaires were delivered to the participants over telephone and completed by the researcher herself. The phone calls lasted under between 2 and 5 minuted in the cases of the

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133 participants that did not qualify for the study. The calls with the 100 participants that made the final sample lasted between 15 and 20 minutes. All the questions in the structured questionnaire were closed-ended.

Similarly, demographic data on the 30 who had purchased RML were also collected via closed-ended questionnaires that were administered over telephone.

The ranking surveys among the 30 participants who purchased RML and the 30 who did not were conducted using rank order scales. Close ended rank order scaling questions were used in both surveys so that the items in the scale were ranked against each other. All of the 100 ranking surveys were administered over telephone.

The data needed to test the null hypothesis was collected using a 5 point likert scale administered twice, both after they had purchased the RML. On the first likert scale the 30 participants were asked to give their response based on their expectation before they had purchased RML. On the second scale, they were asked to respond based on their experience after purchasing the RML. The scale included 5 items that represented the five sub hypotheses of the null hypothesis. Each participant therefore ranked their experience both before and after purchasing the loan based on the factors ‘ease of getting loan’, ‘sufficiency of loan amount’, ‘good value proposition’, ‘enabled independent living’, ‘fair assessment of market value of the property’.

The post purchase satisfaction likert scale had 6 statements. In order to avoid acquiescent bias, 3 statements were favorable and 3 were unfavorable. The responses chosen for the scale were strongly agree, agree, not sure, disagree, and strongly disagree. The scale was administered to all 30 participants over telephone. On 6 occasions the respondents reported difficulty understanding one or more statements. Only on 2 occasions statements were left without response. These were adjusted during the calculation of error rates.

Analysis and Interpretation

The awareness data was analyzed used a simple measure of central tendency. The responses were tabulated to find out what percentage of participants were aware of RML as a financial product. In order to analyze the data from the demographic surveys, the means of each set of responses from both the groups (the group of 30 participants that did purchase RML and the 30 who did not) were calculated along with their standard deviation. Since both the groups had same sample size, equal variance t-tests were conducted on each of those set of means of the two datasets (responses from both the non-buyers and the buyers) to calculate

ISSN:0971-1260
Vol-22- Issue-14-December-2019

their t-values. The comparison of those t-values were then used to judge if any of those demographic factors were deciding factors in availing RML.

The rank frequencies from both the ranking scales were tabulated and their frequencies were noted. Weights were assigned to the ranked responses and the sum of the score weighed by their relative frequencies were calculated. The factors were then ranked using the value of sums.

In order to analyze the data from the first likert scale (that collected data on null hypothesis), the means of the two sets of responses (both before and after purchase of RML) were calculated. Subsequently, the standard deviations of both the sets of data were compared through calculating their z-scores.

The post purchase satisfaction likert scale data was analyzed using a two way ANOVA test since both the sets of data were generated from testing the same sample twice. The study assumed that every dependent variable (i.e. the applicability of every statement in the likert scale to the customers of RML) is normally distributed among the participants. This assumption that each factor that is being measured by each statement in the likert scale is of equal importance to every participant is made because ranking the preferences of factors would have possibly produced 30 different permutations and thus the dataset would have been rendered not usable. After finding the mean of responses before and after purchase, the overall mean was calculated. Then total deviation from of each participant's response from the mean of each group was calculated. After which, the deviation of the mean of pre-purchase response and that of post-purchase response from the overall mean was also calculated. Finally the f-statistic was reached at by calculating the ratio between the deviation of each dataset's mean from the combined mean of the pre and post purchases response to the total deviation of each participant's score from both the pre-purchase and post purchase responses from the overall mean of both datasets.

Findings

86% of the respondents from the first sample that was representative of the senior citizen population of urban kerala said they have never heard of RML.

The demographic analysis found that 54% of those who bought RML were between the ages 66 and 70. 26% were between the ages of 60 and 65 and 16% were between 71 and 75. Only 4% of surveyed buyers of RML were above the age of 75. 42% of those surveyed said they had one child, 36% said they had 2, 10% said they had 3 or more and 12% were childless. 68% of those who bought RML had no children living with them, while 30% had

ISSN:0971-1260
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one child living with them. 82% of those who bought a RML said they had a cumulative household income of less that 3,00,000 per year. The demographic analysis of those who made the decision to not buy RML showed the following results. 46% of them were above the age of 70. Only 2% of them were without any children. 66% of them had one or more children living with them. Comparatively, only 47% of those who chose not to buy RML said they had a cumulative annual household income of less than 3,00,000. Using a degree of freedom at 25 and level of significance at 5% the mean values of every demographic factor for both buyers and non-buyers were calculated. The respective t-values for age, number of children, number of children living with the participant, and income level were 1.1662, 0.4812, 1.9210 and 2.7891.

Sum of the weighed ranking responses among the first ranking scale administered to the group of 30 participants who had bought RML produced the following results. 'Insufficient income' was the highest scoring motivational factor at 325, followed by 'not wanting to be a burden to other family members' at 287, followed by 'desire to live with pride after retirement' at 240, followed by 'need to fund an immediate medical expenditure' at 212, followed by 'absence of a supporting family member' at 137, followed by 'having no legal heirs to pass on the property to' at 136, and 'no source of income' at 83. On the other hand, the sum of the weighed ranking responses among from the group of 30 participants who had bought RML produced the following results. 'Lack of clarity on the terms of the scheme' was the highest scoring reason why the respondents chose to not avail the loan, at 224, followed by 'fear of losing the house to the bank' at 208, followed by 'opposition from children and other family members' at 187, followed by 'no need to fund an immediate expenditure' at 161, followed by 'poor terms of the loan' at 107, followed by 'having other substantive sources of monthly income' at 93, followed by 'potential embarrassment from relations' at 88 and 'long processing time' at 71.

The z-values of each of the sub-hypothesis tested were as follows. 'Ease of getting the loan' produced a z-value of 0.44, 'sufficiency of loan amount' produced -2.55, 'sufficient value received from the loan' produced 3.13, 'facilitated independent living' produced 4.22, and 'satisfaction with the assessed market value of the property' produced 6.41.

The f-statistic from the ANOVA test conducted on the likert scale data from post-purchase satisfaction survey was 3.501 and the f-critical value was 3.42. The result showed a p-value of 0.59.

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Suggestions & conclusion

The findings of this study suggest that the odds of urban dwelling senior citizens of kerala being aware of RML as a financial product is very low. The results of the demographic survey that was undertaken as part of this research gives a clear demographic profile of who is most likely to buy an RML. They are likely to buy between 60 and 70 year of age, with annual household income of less than 3,00,000. It also appears from the results that unlike age and level of income, number of children and whether or not any children live with them are not good predictors of if someone is more likely to buy an RML. Similarly, the demographics of participants show that people with no children are slightly more likely to avail RML. However, the correlation is not significant enough for it to be considered a predictor. The results of ranking survey tells us that insufficient is clearly the top motivator behind the decision to purchase an RML. Notably, all the motivators except one are related to financial insecurity. On the other hand, the results from the ranking survey of the reasons why people chose not to get an RML tells a more interesting story. Surprisingly, the leading reason why people decided not to get an RML was lack of clarity in the terms. Cultural inhibitions as a reason was ranked second to last. This goes against previous studies that have theorized that cultural differences are a major reason why not as many people aren't availing RMLs as they are in western economies. This finding gives the eye opening insight to the banking industry that the vast majority of reasons why RMLs aren't selling are fiscal and not cultural. This suggests that creating more awareness regarding the financial benefits of RML could potentially attract more clients, instead of focussing on fighting cultural oppositions to the scheme. Apparently, both the value of the property being reverse mortgaged and the loan amount are also important factors that affect the decision making. Therefore banks will need to cut them a better deal if they want more customers for RML.

The study accepts the hypothesis that that there is no significant change in the opinion of customers regarding the ease of getting RML before and after availing the RML. The study rejects the hypotheses that that there is significant change in the opinion of customers regarding the sufficiency of loan amount, that there is significant change in the opinion of customers regarding RML as a sufficient source of value, that there is significant change in the opinion of customers regarding RML that it enables them live independently, and that there is significant change in the opinion of customers regarding their satisfaction with the assessed market value of the property. These also point to the earlier mentioned suggestion

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that bank will need to offer customers more attractive terms with regard to the valuation of the property and the value of the loan.

Limitations of the study

Due to limited availability of data the sample size of this study had to be limited to 50, 30, and 30. Due to the near non-existence of secondary data in the field of RML in Kerala, certain assumptions had to be made regarding the characteristics of the population of the study. The universality of the findings in that regard could be limited because all participants were urban residents. This study only collected quantitative data due to limitations in time. An unexplored area of research such as RML could definitely use a study that qualitatively analyzes the awareness, demand, and effectiveness.

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Appendix

Table 1

Z values of each sub-hypothesis tested

	z value
Ease of getting the loan	0.44
sufficiency of loan amount	-2.55
sufficient value received from the loan	3.13
facilitated independent living	4.22
satisfaction with the assessed market value of the property	6.41

Table 2

Results from the ANOVA test conducted on the likert scale data from post-purchase satisfaction survey

	Sum of squares	df	Mean Square	F	Sig
Between groups	867.137	2	433.568	3.501	0.038
Within groups	5821.901	47	123.870		
Total	6689.038	49			

Table 3

Calculation of t-values of variables (demographic factors)

Variable	Mean	Standard deviation	t-value
Age	3.87	0.69	1.1662
Number of children	4.15	0.79	0.4812
Number of children living with the participant	3.12	0.66	1.921
Income level	3.99	0.71	2.7891