

An Analytical Study of Determinants of Reverse Mortgage in NCR

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INTRODUCTION

The population of elderly people is increasing fast and developing countries are not untouched from this phenomenon of population aging. The global demographic trend reveals that countries are experiencing aging of population. Globally, the population of the elderly people aged 60 years and above is expected to reach 2 billion by the year 2050 [United Nations Department of Economic and Social Affairs Population Division. World Population Ageing 2013. New York: 2013. doi: ST/ESA/SER.A/348.]. India is also not immune from this demographic change. According to population census 2011 there are nearly 104 million elderly persons above the age of 60 in India. Both the share and size of elderly population is increasing over time. The life expectancy of 60 plus individuals has gone up to 18 years (16.9 for males and 19 for females) Elderly In India –Profiles and programs 2016. Central Statistics Office, Ministry of Statistics and Program Implementation Government of India. Accessed on 8 th June 2017 []. The aging of population has thrown many challenges in social and economic domains. Increasing life expectancy [Elderly In India –Profiles and programs 2016. Central Statistics Office, Ministry of Statistics and Program Implementation Government of India. Accessed on 8th June 2017], low fertility rates, smaller size of family and breakdown of traditional support structure, mobility of younger population for jobs has exposed the elderly to financial uncertainties in the winter of their lives (Celent 2008 and Shah 2008).

Elder population in the societies face a number of issues due to lack of comprehensive old age income and social security system, increased medical expenses, inadequacy of savings upon retirement, lack of health care financing (Ishaq et al., 2017), fewer pensions, and high consumer debts and mortgages (Arora et al.,) long term care. However there is change in attitude towards spending and desire to maintain the same standard of living as they had while they were working. A large percentage of people face the risk of being financially unprepared for retirement [Center for retirement research at Boston College (2009)]

The elderly have very limited sources of income to depend on during their old age. They may depend on their savings, retirement pension, government social security schemes, and their assets. House being one of the primary assets that has usually grown in value and represents significant amount of one's assets. Old people usually have significant equity in homes. The release of housing equity for consumption smoothing can help alleviate some of the problems that aging population imposes.

Existing studies have talked about the nature of housing equity from various angles. Most retirees do not regard housing wealth as fungible asset. They regard their house simply as a place to live in and thus do not make any consumption decisions based on that asset (Walker, 2003). Most elderly have a strong attachment to their home and for them home is an emotional and psychological resource (Gibler and Rabianski, 1993).

In order to help generate regular income in the old age and to provide financial security, the concept of 'Reverse Mortgage' has been introduced. General belief behind Reverse Mortgage is that individuals make their saving choices to spread consumption over their lifetime, during their working period as well as retirement. Housing forms a significant part of their savings and they are generally left in cash crunch during their old age. The use of Reverse Mortgage Loans can help the impaired elderly to continue living in their homes (Stucki, 2005) as well as in their consumption smoothing.

Reverse Mortgage is an innovative financial instrument that allows the homeowner, 60 years or older, to convert a part of their housing equity into cash. Reverse Mortgage is a financial product that enables senior citizens (60 +) who own a house, to mortgage their property with a lender and convert part of the home equity into tax free income (exemption limit) without having to sell the house (Pahuja, 2016). It is similar to home equity loans except that the borrower does not pay back the loan until he/she dies or decides to sell the house (Shan, 2008). Reverse Mortgage has a potential to become a great option of financing the post retirement requirements of 'cash rich - asset poor'. Researchers as well as academicians believe that there is enormous market for Reverse Mortgage loans.

In order to qualify for the Reverse Mortgage Loan or HECM Loan, the person should be 62 years of age or above and who owns a residential property. He should be residing in the property he wishes to lend. If a couple is opting for the loan jointly, one of them should be a senior citizen and the other at least 55 years old. The property should be free from any encumbrances. While calculating the amount, the lender factors in the age of borrower, value of the property, interest rates and specific plan chosen. The residual life of the property should be at least 20 years. The qualifications for Reverse Mortgage Loan may vary from countries to countries.

The lender (usually a bank or housing finance institution) makes monthly payments to the borrower. The borrower may opt for lump sum or quarterly payments as well. The loan need not be serviced as long as borrower is alive or decides to sell the house. Upon the death of borrower, the loan is repaid through sale of the house.

The Reverse Mortgage was introduced in USA in 70s and 80s and was introduced in India as recently (in year 2007). However, liquidating housing liquidity to finance post retirement living is not a recent phenomenon. There is a long history associated with use of methods of releasing home equity to finance retirement (Huan et al., 2002). The concept of Reverse Mortgage originated in England during 1930s with the name "Home Equity Reversion Program". European investors used to buy the homes of elderly, full or a part thereof, and paid them cash, lump sum or as regular income and allowed them to stay back in home rent free for rest of their lives (Huan and Mahoney, 2002). The home equity liquidation continued throughout Europe in some form or another and finally gave way to loan model equity scheme which was closer to Reverse Mortgage loan in features.

It became very popular in the US in late 70s and 80s. At present Home Equity Conversion Model is the most popular in the US. The Reverse Mortgage loans are at present available in host of the countries including US, Great Britain, France, Australia, Canada, Japan, India, Malaysia etc.

The fundamental theory behind the Reverse Mortgage was developed during 1950s. According to life-cycle model, developed by Modigliani and Brumberg (1954), Friedman (1957) and Ando and Modigliani (1963) individuals make their saving choices to smooth consumption over their lifetime. Usually people start saving during their young age and use these savings to finance their post retirement consumption. The residential property usually forms an essential part of their lifelong savings. If the homeowners wish to maintain their consumption pattern post retirement, they may have to part with some of their housing wealth by selling it or renting it out. At the end of the life the person does not only need home but in the last leg may require a lot of financial backing. With high transaction cost involved in buying and selling combined with tax consequences of selling the house, notwithstanding the emotional attachment with one's house, selling the house is generally not a favoured option. In fact, most of the research does not support the hypothesis that elderly are likely to release their housing equity in the old age. Hurd (1990) also points out that even those elderly, who spend their non-housing financial assets during retirement, apparently choose to maintain their housing equity. Most elderly have a strong attachment to their home and for them home is an emotional and psychological resource (Gibler and Rabianski, 1993). Hence the concept of using the housing equity through Reverse Mortgage has been a topic for researchers for more than six decades. The results of most research studies have shown that liquidating housing wealth through a Reverse Mortgage can significantly reduce the number of elders in poverty (Mayer and Simons, 1994; Merrill et al., 1994; Morgan et al., 1996; Rasmussen et al., 1996; Kutty, 1998 and Fratantoni, 1999).

Mayer and Simons (1994) studied the 1990 Survey of Income and Program Participation (SIPP) data and Census data to show that more than six million elderly homeowners could increase their monthly incomes by using Reverse Mortgages. In the empirical study Kutty (1998) states that the use of home equity conversion mortgage products could possibly raise about 29% of the poor elderly homeowners in the US above the poverty line.

As per the present state of affairs in India, there is a need to exploit the potential of Reverse Mortgage Loans to provide elderly the financial support they require in the winters of their lives. Although, the concept of Reverse Mortgage Loans had been introduced in India, it is yet to gain momentum. Despite growth in this market and the expected popularity of the concept, the results are not satisfactory in India. As per the Senior Bank Manager SBI (Janakpuri, New Delhi), there is very poor response for Reverse Mortgage Loans in India. As per his records, less than 1% of the loans applied are for Reverse Mortgage. However, the research points at a great potential for Reverse Mortgage in India. In India, number of articles and studies based on demographic projections and surveys have indicated a great potential for Reverse Mortgage (Bardhan and Barua, 2003; Rajagopalan, 2006; Vaidyanathan and Venkataraman, 2006; Celent, 2008; Iyer and Tripathi, 2009).

Bardhan and Barua (2003) observed in their study that as per census data, between 1991 and 2001, the number of households who own their dwellings rose to 166 million from about 130 million.

The government policies have been favouring a growth in house ownership in India. The government has been giving significant tax concessions for building houses, not only on interest payment but also on

Principal repayment. The interest rates on housing loans have been declining. The earnings from other financial assets have been declining since 2001. All this has ensured that a large percentage of the savings of the household sector is being invested in the housing sector. The government of India has announced “Housing for All” by 2022. The increasing life expectancy and decreasing family size is taking our country to a situation where there are a large number of aged people who are house rich but cash poor (Bardhan and Barua, 2003). The poverty of the continuously rising aged population is the next important issue for our government (Shah, 2003).

Rajagopalan (2006) explored the prospects for Reverse Mortgage products in India. Developed countries are facing budgetary pressure due to old age social and Income security programmes. Soon the developing countries like India will face the same pressure. As bulk of the savings of aged people on retirement is typically locked in their residential house property, Reverse Mortgage could become an important option to increase the incomes of the elderly.

LITERATURE REVIEW

In this section a detailed theoretical and empirical studies related to Reverse Mortgage and its determinants are reviewed. Firstly, the study focuses on identifying existing literature related to the construct namely Reverse Mortgage followed by a detailed review on various determinants that either act as a facilitators or inhibitors related to both lender perspective and borrower perspective. Chatterjee (2016) has defined Reverse Mortgage (RM) loans as hybrid financial products that allow elderly homeowners to borrow against the collateral of their housing wealth wherein the homeowner is not required to pay off the debt or make interest payments on the loan as long as he / she is alive or chooses to stay in the house.

According to Foote, in the CRS report for Congress (2007) [4], Reverse Mortgages are the opposite of traditional mortgages in the sense that the borrower receives payments from the lender instead of making such payments to the lender. Reverse Mortgages are designed to enable elderly homeowners to remain in their homes while using the equity in their homes as a form of income.

Tribunella (2014) views Reverse Mortgage as important financial tool gaining popularity among retired individual with limited savings and possessing assets. Delgadillo et al., (2015) have opined that longer life spans, fewer pensions, and high consumer debts and mortgages suggest that more seniors will need to tap their home equity in retirement.

Mohammed and Sulaiman (2017) have stated that the elderly population faces lack of sufficient finances to fund increased medical needs and associated cost. He also stresses on inadequacy of social security systems such as pension schemes and other welfare schemes that are meant to support the elderly after their active working age.

Rajagopalan (2007), one of the pioneers in research on Reverse Mortgage in India, suggested that Reverse Mortgage is an attractive option to the elderly to finance their consumption needs on their own, without the necessity of moving out of their homes or worrying about loan repayment.

Caplin (2000) talks about the Reverse Mortgage Market, its problem and prospects and further he observed that for households who intend to stay in their current home for life and do not have a strong bequest motive are likely to favour Reverse Mortgage as a potentially important option.

Mitchell and John (2004) professed that Reverse Mortgage could alleviate some of financial strain that population aging imposes on Japanese economy of the future. Japan's high aging rate, decline in fertility leading to small size of family, combined with high life expectancy have made it imperative that the aging populations considers Reverse Mortgage to supplement their income post retirement.

A report of National Housing Bank (2006) commissioned a research before launching this product

and found that there were 3.87 million house-owning individuals above 65 years in India in March 2006. It estimated the market size for the scheme in India to be Rs 5,000 crore. Vaidyanathan and Venkataraman (2006) have made a strong case for Reverse Mortgage in India. They have described the importance of investing in housing assets as opposed to any other financial asset. As per them, the tax concessions on housing loan interest payment as well as loan repayments make it more attractive to invest in residential property. The ownership of the home acts as a hedge against house rent appreciation. Post retirement, the Reverse Mortgage is a good option of providing old age support.

Kumar et al., (2008) have studied the lender's risks involved in Reverse Mortgage. They identified a few potential target segments as potential takers of the Reverse Mortgage products in India .They also suggested that a survey should be carried out to assess the demand potential of Reverse Mortgage in different parts of the country, in Metros, Urban and Semi-urban areas. This would help design new Reverse Mortgage products to suit the needs of market.

Various research studies have been carried out to determine the factors facilitating Reverse Mortgage highlighting the motives and environment conducive for the same. Rasmussen et al., (1996) analyzed various motives for Reverse Mortgage. As per their opinion there are two motives for obtaining a Reverse Mortgage. Firstly, to draw down wealth as one ages (life-cycle motive) and Secondly, to diversify Illiquid housing wealth (asset management motive).

The annuity value may not be large, but the addition to liquid wealth is substantial. Similarly, Rasmussen et al., (1997) have also explored the importance of investment motives for obtaining a Reverse Mortgage. They have observed that post retirement certain expenditures like long-term care insurance, mid-career human capital investments, and children's college costs, can be financed with Reverse Mortgage. In the lines of Eschtruth, (2006) how much a homeowner can borrow through Reverse Mortgage depends on interest rates .They directly affect the percentage of the value of property that can be borrowed. As per their study, an average American could receive only half the value of their home through Reverse Mortgage at the prevailing interest rates.

Mitchell and Piggott (2004) studied the importance of policies in providing an environment conducive to the development, implementation and encouragement of Reverse Mortgage. The policies could include exempting Reverse Mortgage from capital gain tax and transaction tax, also making a mechanism to ensure that annuity income flows are non taxable, along with tax are accruals for Reverse Mortgaging. They further stated that the demand for RMs will suffer due to declining residential housing values, low interest rates and high life expectancy of elderly.

Rising life expectancy in elderly, small size of family, change in traditional support systems, declining fertility, fewer children, desire of elderly to continue living in their homes, financial unpreparedness at the time of retirement, desire to maintain pre-retirement standard of living, geographical mobility of young generation, lack of comprehensive old age income and social security systems (Mitchell and Piggott 2004; Stucki, 2005; Chia and Tsui, 2009; Bardhan and Barua, 2003; Shah, 2005; Celent, 2008) are some of the determinants extensively studied by various researchers. Despite expected potential and demand, there are various inhibitors that have restricted the popularity and growth of RMs to a large extent. Caplin (2000) in his quest to study the Problems and Prospects of Reverse Mortgage has identified some factors that may be responsible for avoidance of the Reverse Mortgage is the desire to move in the near future from the current home, and a strong bequest motive.

Chia and Tsui (2005) have also confirmed that social dimensions like bequest motive and psychological dimensions like reluctance to mortgage the home are significant obstacles to the success of Reverse Mortgage.

RESEARCH GAP

It was noted from the existing literatures that certain factors (antecedents) that act as a barrier or facilitators for reverse Mortgage. But there is a dearth in studies that could classify these factors from lender perspective and borrower perspective and further within each perspective there could be a sub classification as internal/external factors (environmental factors). Thus, this study makes an attempt to answer the following research questions

- What are the factors that could act as barrier/facilitators for providing and accepting Reverse Mortgage?
- Which factor plays a major role in determining the acceptance of Reverse Mortgage?
- Which factor discriminated the customer from not accepting to acceptance of reverse Mortgage plan?

OBJECTIVES OF THE STUDY

Based on the above research questions, the following objectives have being identified,

- To compare the existing Reverse Mortgage plan in India and the USA.
- To identify the facilitators and barriers for Reverse Mortgage from borrowers perspective;
- To identify the facilitators and barriers for Reverse Mortgage from lenders perspective;
- To classify the identified barriers and facilitators as internal and external factors;
- To perform dimension reduction of the identified factors under a common dimensions;
- To estimate the effect of each factor on the latent constructs (Reverse Mortgage);
- To determine the factor that discriminates the borrowers in choosing and non-choosing the plan;

- To test the effect of Socio-Cultural variables on Reverse Mortgage.

PROPOSITIONS AND HYPOTHESIS FORMULATION

The above mentioned objectives of this study leads to the following propositions that needed to be answered,

Proposition 1: There are factors that affect Reverse Mortgage from borrowers' perspective;

Proposition 2: There are factors that affect Reverse Mortgage from lenders' perspective;

Proposition 3: There are factors that facilitate the reverse Mortgage from borrowers' perspective;

Proposition 4: There are factors that facilitate the reverse Mortgage from lenders' perspective;

Proposition 5: The factors can be classified as internal and external factors;

Hypothesis 1: Internal factors (barriers/facilitators) have an effect on reverse Mortgage from borrowers' perspective;

Hypothesis 2: External factors (barriers/facilitators) have an effect on reverse Mortgage from borrowers' perspective;

Hypothesis 3: Internal factors (barriers/facilitators) have an effect on reverse Mortgage from lender's perspective;

Hypothesis 4: External factors (barriers/facilitators) have an effect on reverse Mortgage from lenders' perspective;

Hypothesis 5: Factors discriminate the borrowers in choosing and not choosing the reverse Mortgage plan;

Hypothesis 6: There is an effect of socio-cultural variables on Reverse Mortgage.

TABLE 1 : The table explains research question, objectives and respective proposition and hypotheses

| Research Question | Objective | Proposition/Hypotheses |
|--|--|---|
| 1. What are the factors that could act as barrier/facilitators for providing and accepting Reverse Mortgage? | <ul style="list-style-type: none"> •To identify the facilitators for Reverse Mortgage from borrowers perspective •To identify the barriers for Reverse Mortgage from borrowers perspective •To identify the facilitators for Reverse Mortgage from lenders perspective •To identify the barriers for Reverse Mortgage from lenders perspective •To classify the identified barriers and facilitators as internal and external factors | <p>Proposition 1: There are factors that affect reverse Mortgage from borrower's perspective</p> <p>Proposition 2: there are factors that affect Reverse Mortgage from lender's perspective</p> <p>Proposition 3: There are factors that facilitates the reverse Mortgage from borrower's perspective</p> <p>Proposition 4: There are factors that facilitates the reverse Mortgage from lender's perspective</p> <p>Proposition 5: The Factors can be classified as internal and external factors</p> |
| 2. Which factor plays a major role in determining the acceptance of Reverse Mortgage? | <ul style="list-style-type: none"> •To perform dimension reduction of the identified factors under a common dimensions •To estimate the effect of each factor on the latent construct (Reverse Mortgage) | <p>Hypothesis 1: Internal factors (barriers/facilitators) has an effect on reverse Mortgage from borrower's perspective</p> <p>Hypothesis 2: External factors (barriers/facilitators) has an effect on reverse Mortgage from borrower's perspective</p> <p>Hypothesis 3: Internal factors (barriers/facilitators) has an effect on reverse Mortgage from lender's perspective</p> <p>Hypothesis 4: External factors (barriers/facilitators) has an effect on reverse Mortgage from lender's perspective</p> |
| 3. Which factor discriminated the customer from not accepting to acceptance of reverse mortgaging plan? | <ul style="list-style-type: none"> •To determine the factor that discriminates the borrowers in choosing and non-choosing the plan •To test the effect of Socio-Cultural variables on Reverse Mortgage | <p>Hypothesis 5: Factors discriminate the borrowers in choosing and not choosing the reverse Mortgage plan</p> <p>Hypothesis 6: There is an effect of socio-cultural variables on Reverse Mortgage.</p> |

RESEARCH METHODOLOGY

RESEARCH DESIGN

This study basically adopts mixed methods approaches (integrated research design). That is, exploratory research design to identify and classify the factors and descriptive research design to estimate the effect of each factor on reverse Mortgage construct.

Existing literatures to identify the underlying factors used qualitative techniques like literature review, focus group discussion, in-depth interviews and expert opinion survey Cadogan et al (1999). Authors like Netemeyer et al (1996), Bahia and Nantel (2000) noted that compared to any other qualitative technique focus group discussion and in-depth interview can help in identifying and determining factors of a latent construct in both depth and in-breadth (Eysenbach and Köhler 2002; Chan 2001; Parasuraman et al 2005) and thus, this study attempts to use qualitative techniques such as (a) literature review, (b) focus group interviews (from lenders perspective), (c) in-depth interviews (from borrowers perspective) and (d) expert opinion survey (for refining the factors) to identify the factors of reverse Mortgage.

In order to find the effect of each factor on the underlying construct, this study adopts the descriptive research design. The descriptive research design helps to determine how, what, when and why certain conditions happen. Since this study attempts to test what is effect of each factor in determining the latent construct, descriptive research design would be the appropriate approach to be adopted. The measurement items would be developed for each factor and would be tested for reliability and validity, once the items satisfies both the test it would be subjected to estimate the effect on the underlying construct using multivariate techniques.

SAMPLING DESIGN

QUALITATIVE STUDY

Sampling technique: Non- probability Convenience sampling for Focus group discussion, In-depth interviews and Expert opinion survey.

Sampling Frame: Mortgage lenders (In-depth interviews) and borrowers (focus group discussions); Practitioners more than 10 years of experience (expert opinion survey).

Sample Unit: Individual who are willing to participate?

Sample Area: NCR region along with northern part of India

Sample Size: Till the saturation point is attained.

Sampling Error: Try to overcome Systematic and Random error - Triangulation Process.

QUANTITATIVE STUDY

Sampling technique: Non-Probability, convenience sampling.

Sampling Frame: Borrowers of Reverse Mortgage.

Sample Unit: Ready to respond for the questionnaire.

Sample Size: Based on Item-Subject Ratio and minimum threshold limit for SEM (Structural Equation Modelling)

Sampling Error: Response error would be taken into consideration while writing the items under each factor

INSTRUMENT DESIGN

Qualitative study: Semi-structured questionnaire for focus group and in-depth interview.

Quantitative Study: Structured questionnaire containing items for factors and other socio-demographic variables

SOURCE OF DATA COLLECTION

Secondary source: Literature review

Primary source: Interview schedule

Context: Lenders of Top banks and firms which carry over reverse Mortgage in India and their clients

ANALYSIS TOOLS USED

This study attempts to use Text analysis for classification of the factors, SPSS software tool for data cleaning, identifying the outliers, for factor analysis (Principal Axis Factor) and discriminate analysis and Variance based SEM (PLS-SEM) for testing the effect of each factor on the latent construct.

Ethical Consideration: Each participants of the study would be given the assurance of taking their opinion and using them only for the research purpose and not be used for any other commercial purposes.

EXPECTED CONTRIBUTION OF THE STUDY

Reverse mortgages are expected to address the issues of longer life with high cost of medical care. The dignity in the old age perhaps has not reached masses for reasons requiring investigation.

The researcher has made an attempt to classify the reasons (factors) which have contributed or negated the acceptance of reverse mortgage in the societies like India where the family values have a lot of variance from their western counterparts.

Researcher feels that this study is pertinent in today's changing society and will invite attention of other researchers to study and further investigate this all important issue.

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