# FACTORS THAT INFLUENCED THE TENDENCY OF DECISION-MAKING IN USING REVERSE MORTGAGE

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# FACTORS THAT INFLUENCED THE TENDENCY OF DECISION-MAKING IN USING REVERSE MORTGAGE

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## ABSTRACT

Research interest in Reverse Mortgage which supported Thai Aged Society. Thailand will become complete Aged Society in 2060, as the researcher work for the Government Housing Bank and related directly to this topic, so the Bank is one of the pilot banks to do this kind of mortgage. The majority of the research was conducted factors that influenced to the tendency of decision-making in using Reverse Mortgage of Thai people. The data was gathered by quantitative method, questionnaire, from 400 respondents who were G H Bank mortgage customers or in the area and 60 years or over within 8 branches by using simple random sampling then translated into the result as factor analysis and the statistical techniques such as descriptive statistic, Multiple Regression Analysis, and Regression Coefficient. The result found that the most influenced factor was Attitude factors; feeling, return factors, and marketing mix. Also, the result showed that most of the respondents have not heard about Reverse Mortgage but they are willing to use as if the interest rate and monthly payment are attractive and interesting.

KEY WORDS: Reverse Mortgage/ Mortgage / Marketing Mix / Attitude Factors / Return Factors

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# CHAPTER I
# INTRODUCTION

Over the past 10-20 years ago, Thai population structure had been changed rapidly in number of seniorities because of fertility rate in the past and reducing the birth of a newborn also less death. Until the present situation, Thai society is about to enter the full society of the elderly soon
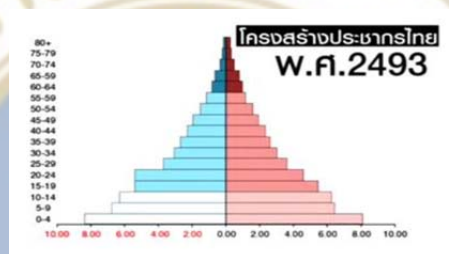


**Figure 1.1   Population structure in 1950**

Source: http://www.naewna.com
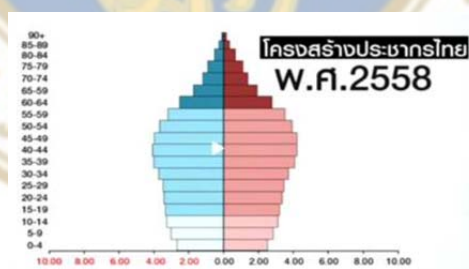


**Figure 1.2  Population structure in 2015**

Source: http://www.naewna.com
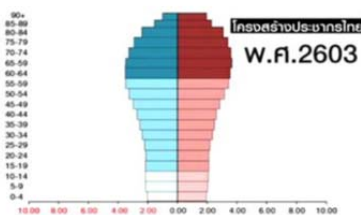
**Figure 1.3  Population structure in 2060**

Source: http://www.naewna.com

From Figure 1.1 - Figure 1.3 shows that the future of Thailand is entering the Aged Society. In the year 2060, Thailand currently has 10 million elderly people or about 15.92 percent of the total population. 16.13 percent were poor elderly, 38.30 percent were working (18.50 percent voluntary working), 35.70 percent were income from savings. Or holding property This is the issue many countries are facing. Thai tend to enter. The Aged Society is faster than other Asian countries, as shown in Figure 1.4.



**Figure 1.4  Show Timeline to the Aged Society of Asian countries**

Source: http://www.tdri.or.th.

Entering the Aged Society in various countries. Adaptation Products and services because the behavior of people each day is different (see Figure 1.5). Thus, when the world enters the elderly society completely. Aged Society Products and Services. So,s when the world enters the Aged Society completely. Products & Services The need to change and the emergence of new products and services for the elderly. Which is considered as the market for business is going on in the world. And there are likely to be more and more needs.
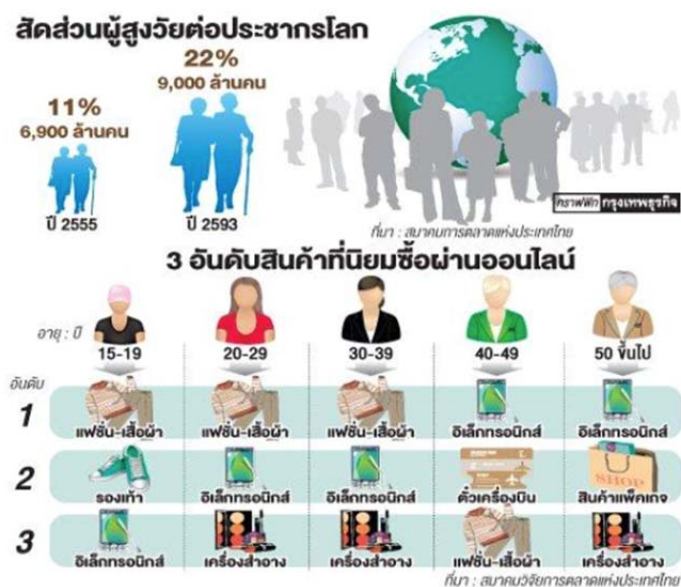
**Figure 1.5** The top 3 most popular online purchases of people in different ages
Source: http://daily.bangkokbiznews.com

## 1.1 Problem Statement

In Thailand, many of the public and private sectors are adjusting to accommodate the aging Aged Society of Thailand, resulting in a large number of specialized products and services for the elderly, and one is Reverse Mortgage. It is a loan for people who have their own residential property and then mortgage their home as collateral against a loan from a financial institution in exchange for the financial institution to pay the loan on monthly basis. Monthly payment is for spending for various purposes. This is a new loan that is going to happen in Thailand by starting to study the pattern of Reverse Mortgage from abroad and the possibility to be launched in Thailand for a while. Many financial institutions are planning to offer Reverse Mortgage services, such as Government Housing Bank, Government Savings Bank, Secondary Mortgage Corporation to accommodate the growing elderly population in the nearly future by the push of the Ministry of Finance together with the Bank of Thailand. The plan was packaged into one of the measures in Phase 3 of the Financial Institutions Development Plan (2016-2020), measure 3.1.2 (1) of the Bank of Thailand. The 3rd Financial System Development Plan (2016-2020) Measures 3.1.2 indicate that it supports financial products and services

for entry into retirement age also to permit pension and provident fund system which to help older people earn enough income for living after their retirement and receive proper financial services that meet the needs of their age, including the pension or the provident fund that covers the entire nation's labor force throughout the country. This may be done by 1. Pushing forward financial institutions to develop and present financial products and services which supported the entry into retirement in saving, long-term investment before retirement and financial services for seniorities such as Money Management and Reverse Mortgage Development. 2. To support to have the mandatory/ supplementary pension fund and the provident fund by permitting the establishment of the fund for workers who do not have pension systems and workers who are wishing to save more for supporting their retirement age, they can join and pay voluntary contributions. As well as encouraging public companies to establish or jointly set up a provident fund and motivate employees to become members; to increase your savings and retirement options which are in a similar way to the neighbor countries, for example, Malaysia has the Employee Provident Fund. The government workers who are not members of the pension system and the private sector can save money through the fund by defining employers and employees to send all contributions or Singapore which has the Central Provident Fund, a compulsory social security system for all private sector employees which would be divided into 3 parts which are 1. Ordinary account: saving retirement and housing 2. Special account: saving for retirement 3. Medicine save account: saving for medical care. In order of that, the government established the National Savings Fund which opened to register in the 3$^{rd}$ quarter of 2015 to be a channel for people, who are self-employed/freelance and not receiving government welfare will get benefit in the form of a pension from the public sector. This plan would help to push forward the Reverse Mortgage service in Thailand soon.

On November 8, 2016, the Cabinet approved measures to support the elderly. According to the finance minister, the resolution was to implement four measures; 1. Employment Measures for the Elderly 2. Senior complex measure 3. Reverse Mortgage measure which assigned to the specific financial institutions to pilot this measure for elderly. This is for seniors who are 60 years or older to bring their own property, free from liabilities, to convert to monthly living income 4. Compulsory savings measure for non-provident fund workers

However, Reverse Mortgage loans are still a problem in the operation which is the risk of financial institutions in terms of liquidity and the finance of the financial institutions which provide Reverse Mortgage services because the financial institutions will recognize the income which is in form of cash just only at the end of Reverse Mortgage service and able to sell an asset into the market. Also, the risk of the customer, If the loan period is over but the customer is still alive, there will be very risky that the financial institutions will seize the collateral and the customer will become homeless in old age. Because of these risks, there is a need for mortgage insurance companies to help manage risk. Mortgage Insurances will help reduce the risks by providing a guarantee to financial institutions in case of the customer are still alive but will get the return until the end of the life. And the financial institutions will get interested compensation during the living of the customer but loan period is already over, as shown in figure 1.6
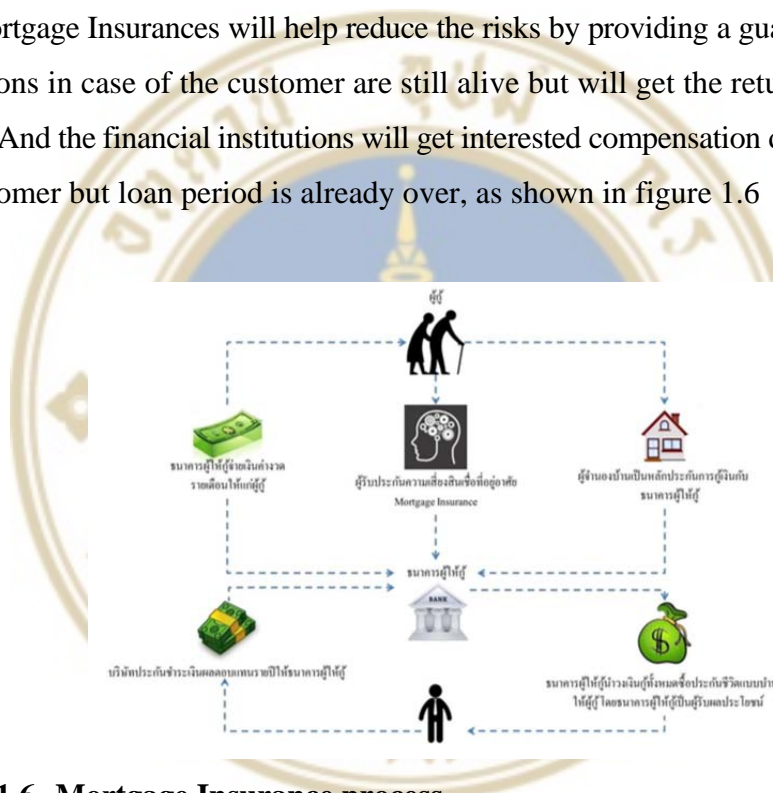


**Figure 1.6  Mortgage Insurance process**
Source: http://www.fpo.go.th/FPO/index2.php?mod=Content&file=contentview &content ID=CNT0015674&categoryID=CAT0000075.

Nowadays, in Thailand, there is no insurance company has been set up as Mortgage Insurance yet. But there is a plan to set up by the Ministry of Finance which is in the middle of the feasibility study and finding companies to join the setting up of Mortgage Insurances. And the last issue; major one, that has not been studied or researched yet which is the readiness of the customers whether they are ready or not to use Reverse Mortgage services. Because Reverse Mortgage service is totally new and has never

happened in Thailand. The customers might be very anxious to decide to use this type of mortgage so the researcher decides to bring the factors that might be influenced to the customers' decision-making of using this service which are the marketing mix factors, the rate of return theory and decision theory.

## 1.2 Research Question

- What factors influence the decision-making of using the Reverse Mortgage?
- Which factor is the most influence on the decision making of using the Reverse Mortgage?

## 1.3 Purpose of This Study

The purpose of this study is to:

- To study the influence of marketing mix factors with the tendency of decision making to use the Reverse Mortgage
- To study the influence of attitude factors to Reverse Mortgage with the tendency of decision-making to use the Reverse Mortgage
- To study the influence return factors with the tendency of decision-making to use the Reverse Mortgage
- To study the tendency of decision-making to use the Reverse Mortgage

## 1.4 Research Scope

The researcher uses quantitative research for this study by using the survey method. The questionnaire will be created and the scope of research which will be defined as follows:

- The study population is a group of people who are 60 years old and over living in Bangkok and there is housing ownership. This is in line with the early features of the Reverse Mortgage Loan.

- Example from selected population by using Purposive Sampling method which is to select the population of housing who have the property of their own around 400 people who are the elderly group who are and over the age of 60 and these people either have or do not have to have an experience in using credit services (just interested in and come for asking more information about credit services would be fine) but need to own their houses. This research data will be collected by using Yamane (1967) method. For Thailand, the age of 60 and older is used as an indicator of being the as old person following The Elderly Act 2003.

- Example from selected research areas by using Simple Random Sampling method which focuses on Head office and main 7 Bangkok districts of Government Housing Bank.

- The variables involved in the study consisted of

**1.4.1 Independent Variables**

    1.4.1.1  Marketing mix (4P's)

    1.4.1.2  Attitude toward Reverse Mortgage

    1.4.1.3  Return of an investment

**1.4.2 Dependent variables**

Dependent variables are the tendency of decision-making of using the Reverse Mortgage Services;

    1.4.2.1 The study sites used by the researcher to collect information data will be customers who at the Government Housing Bank, head office and branches, mortgage securities and closing mortgage accounts area. Because the samples in this area must have ownership of their properties and these people either have or do not have to have an experience in using credit services (just interested in and come for asking more information about credit services would be fine) so they the basic understanding of mortgage due to the use of housing loan experiences.

    1.4.2.2  Duration of study is from July 2017 to August 2017

    1.4.2.3  Statistics used in the research are frequency, percentage, mean, and standard deviation

## 1.5 Expected Benefits

The results of the study are useful to the relevant parties as follows:

- To bring research results of the tendency in decision-making of using the Reverse Mortgage to develop the loan market in term of using the marketing mix.

- 1To bring research results of the tendency in decision-making of using the Reverse Mortgage for the benefit of operators who will provide this type of mortgage using as a guideline to adapt to be suitable for Thailand.

- To bring research results of the tendency in decision-making of using the Reverse Mortgage to improve the competitiveness of financial market and banking businesses.

- To bring research results of the tendency in decision-making of using the Reverse Mortgage to develop solutions to solve the elderly problem to support the aging society in Thailand.
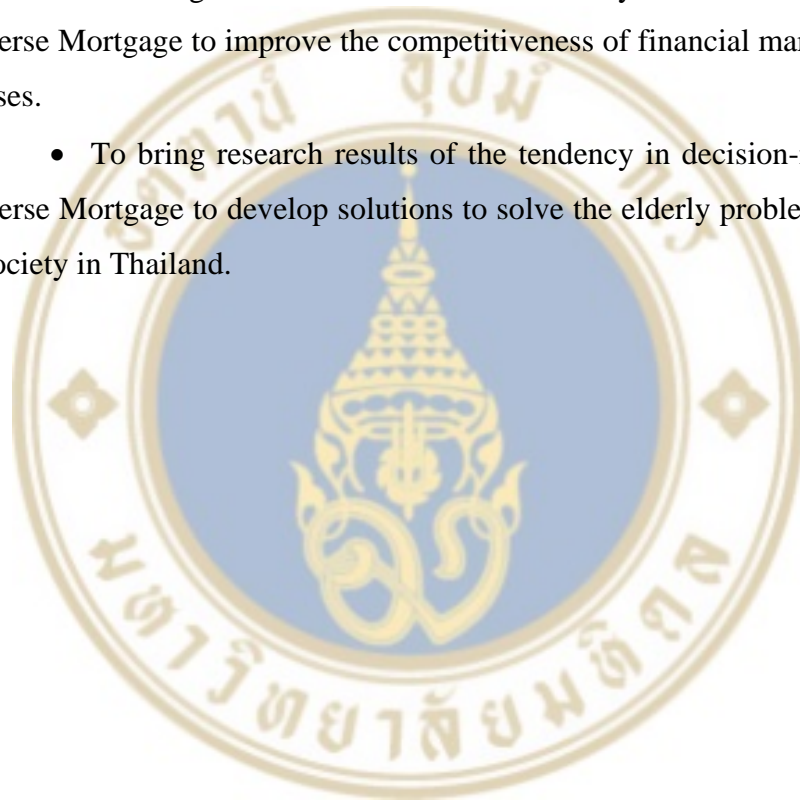
# CHAPTER II
# LITERATURE REVIEW

The researcher has collected information about Reverse Mortgage, Concept, Research and related research or as follows:

2.1  Background of the Reverse Mortgage

2.2  Marketing mix theory

2.3  Attitude theory

2.4  Return theory

2.5  Decision Theory

## 2.1  Background of the Reverse Mortgage

Wilwan Tarahiranchote (2016) indicates that the Reverse Mortgage first occurred in the United States in 1989. The purpose is to help alleviate the problem of the elderly in the country and to provide the elderly with living expenses until death. General mortgage is to bring the asset to be as collateral for loans from financial institutions and get the loan amount of money then the customer pay monthly installment principal with interest for. But the Reverse Mortgage is a reverse mortgage loan whereby the customer still retains the ownership of the asset throughout the loan contract. Financial institutions, which are loan lenders, will gradually pay off their loans on a monthly basis throughout the contract. Reverse Mortgage is a way that borrowers convert their assets into cash and pay them in installments. The loan will have a loan period when the borrower dies or meets the conditions set by the financial institutions. In case that the loan is due before the borrower dies, Mortgage Insurance must be provided for the duration of the recovery period before the borrower dies. The details of the conditions of maturity may vary depending on the country's implementation policies. But there will be a similarity in principle over the loan term which does not apply for a loan until the asset can be sold when a borrower dies or the contract lapsed in case of the borrowers

do not have any mortgage insurance. For the auction, if the heir wants to keep the collateral. Financial institutions will return the heirs at the first loan price and then do the auction at the market price to repay the loan. If the collateral value is so high that there is money left over from the auction, it can be returned to heirs as inheritance. But if the collateral value decreases. When do the auction, the value is not enough for the loan, then follow the policies of each country which are different. Some countries, governments or government agencies will pay back the difference to financial institutions instead of borrowers or some countries may have forced the borrower to do the Mortgage Insurance. The borrower will pay the premium to accommodate the value of the home at the auction and the price is not enough to repay the loan. Or, in the case of age, if the borrower's longevity exceeds the borrowing period.

## 2.2 Marketing Mix Theory

Kotler (2003) defines that Marketing mix is a group of marketing tools that can be controlled. It is a tool for organizations to achieve their marketing objectives. Organizations use marketing mix to meet their needs and satisfy their target customers. From the definition, it is concluded that Marketing mix is a tool, is used to achieve the organization's marketing goals in satisfying and fulfilling customer needs.

Thongchai Santiwong (1997) has given the meaning that Marketing mix is the mixing well until the unification of price factors, products or services offered for sale and promotion. Promotions and channel distribution systems are designed to be used by prospective target customers.

Siriwan Sareerat, Ongart Panthanich, Supar Srisayarat and Prinya Laksanont (2003) have described the marketing mix as " Marketing mix is a controllable factor and can be changed or adjusted to suit the environment to make the business survive or maybe the marketing mix is the marketing tool used to satisfy needs of target customers. Marketing Mix is a marketing variable that can be controlled by the organization to be used as a tool for the organization's strategy for the product or service to meet the needs and satisfaction of the target market with the following tools:

- Product: What the company offers to market to meet the needs or needs of customers to demand attention and to achieve satisfaction. It can be touch and touchable,

such as packaging, flavor, color, quality, brand, service and brand image of the seller. This can meet the needs of the market.

- Price: The amount or other things that are needed to pay for a product. The pricing must be appropriate for the product or service that best suits the target audience of the product or service. For example, imported goods produced domestically might be the same type but pricing will be different.

- Place/Distribution: The structure of the channel or process of delivering goods or services to consumers. It consists of institutions and activities used to move products and services from the organization to the consumer market. It is the channel that makes it possible to deliver goods or services to consumers as the business needs.

- Promotion: Tools for communication to bring goods or services to the target consumer groups, including advertising. public relations to make the target audience satisfied, understand and recognize the brand or service. Used to persuade the demand for buying or in a product or service. It is expected to influence feelings, beliefs, and buying behavior.

## 2.3 Attitude theory

Roger (1978) mentioned that an attitude as an indicator of how the people think and feel about things, environment, circumstance and people around them. The attitude is based on beliefs that can affect the future. Attitude is only the readiness to respond to stimuli and is a dimension of evaluation to show that you like or dislike something, which is considered to be an interpersonal communication that impacts of the exposure which will be effect the next behavior.

Newcomb (1854) defined that the attitude exists only in that particular person depending on that environment which mays express in behavior. This is possible in 2 ways which are preferable or satisfied. This makes people love or wants to get close to that person. Or another form of expression is dissatisfaction which is hate or avoid to get close.

Sakd Sunthasanee (1988) mentioned that the attitude links to a person's behavior which means 1) Complexity of feelings or prejudice in order to be ready to do one thing according to the experience of that person. 2) The inclination to react to

something in a good way or against the environment to arrive in any way. 3) In form of behavior refers to the preparation or readiness to respond.

Schiffman & Kanuk (1994, p. 657) mentioned that the attitude refers to the tendency that comes from learning and expressing images in the mind. Feeling about something to express the behavior reflecting the inner feelings which are like and dislike by creating the attitude models, to study the concepts of attitudes, one of the key concepts used in this study is "Tricomponent Attitude Model" which composes of Conation component, Affect component, and Cognition component.

- Conation component-This section reflects the tendency of behavior or possibility to express the behavior of consumer or individual in any direction through various ways of expression

- Affect component-The composition that indicates the emotion or feeling of a person, a product or service, or something else. Emotion helps to accumulate the experiences both good and bad side of that person and experience. That is, one's feelings toward one's mind are a psychic stimulus in evaluating to cause the attitude, in the same way as the feelings toward those things.

- Cognition component- This part indicates of knowledge, perception, and beliefs that one person has for one thing which reflects a person's insight and it is derived from a combination of direct experience, related to that thing, or relevant information. This part of understanding will be the base to evaluate the value on one thing which means understanding something will motivate the person to have attitude in the same way as understanding.

Attitude of information perception will be blended with one's past experiences and come out as feeling for one thing which will affect the behavioral expression and decisions in various matters. Thus, attitudes have a great influence on the direction of a person's behavioral expression.

## 2.4 Return Theory

Keynes (1936) presented the concept of the demand for money in The General Theory of Employment, published in 1936 describes that humans have the desire to hold money for three purposes:

- Transaction Demand for Money: refers to The fact that a person, whether a consumer or a business unit, is necessary to hold a certain amount of money for daily spending. The key factor to meet this demand is revenue and expenses. If a person or business earn income and has expenses on the same day, the requirements of this section may not be demanded.

- Precautionary Demand for Money: The need arises from the fact that individuals or businesses see the future uncertainty of receipts and expenditures as a need to hold money for emergency use. If a person or business can know the factors that will happen in the future. There is no need to hold money for emergencies. Because individuals or businesses are planning financially for future spending, most of the factors that often affect them include: future revenue may change, expected future expenses, various crisis and interest rate changes in the future.

- Speculative Demand for Money: The concept of speculative money demand comes from the fact that the person or business is conjectured. Uncertain future interest rates in various directions. If it is assumed that future interest rates are higher than individuals or businesses, they will need to hold cash in order to generate future interest rates. If interest rates in the future are known, the speculative demand for money will not materialize.

Ratchanee Wongchan (2010) states that saving money for future spending, if you want to make fast savings, you have to put your savings on high returns to maximize your profits and increase your wealth. Individuals or businesses will spend money on high-yielding transactions and avoid more risky transactions, but will not yield higher returns than lower-risk transactions: individuals or businesses are more likely to choose risky transactions when they see a return that is high enough to compensate for increased risk. But individuals or business do not dare to choose low-risk transactions even with lower returns.

Investment Return: A person or business, when invest, will look forward to a rewarding, rewarding and rewarding return on investment and risk in order to receive principal and return on purchases, emergency reservations or invest more.

Jirat Sangkaew (2001) described the return on investment as the main aim of the investment is the maximum yield. This may be classified as:

- Investments or principal cannot be lost.

- Investments or principal should be worth more than inflation.

- Investments should have liquidity or market needs (Marketability).

- The investment should be able to convert to cash quickly without loss (Liquidity).

Return on all types of investment has two components: Yield is the income or returns that an investor receives during the investment, which may be paid in the form of dividend or interest received.

## 2.5  Decision Theory

Farley (1989) studies and develops decision theory based on the analysis of research by using Meta-Analyzes method. Using a consumer decision model called the CDM or Consumer Decision Model, explained that whether a person decides to use a service or buys an item depends on six components which are clearly related.

- Direct experience refers to the person or business experiencing or experiencing or Use products or services first and then recognize that the product or service meets their needs or not, resulting in perceived satisfaction or dissatisfaction, which leads to a decision to purchase a product or service.

- Indirect experience refers to the person or business has not touched or used the product or service beforehand, but heard the news, advertised, brand reputation, and perceived that meets their own needs or not. The information from the various media channels acts as a stimulus that makes people feel like or dislike and lead to a buying decision of product or service.

- Thoughts and attitudes towards the trademark refer to the way people feel in any direction, they both like and dislike Southern products and services. Such feelings and attitudes will have a great influence on the decision to purchase product and service.

- Confidence in products and services refers the confidence comes from the fact that people receive information about a product or service. This will cause the brand and product faith to affect the decision to buy or use the service.

- Commitment to using refers to the person or business intends and plans. Will use that product or service in the future already.

- Buying a product or service refers The fact that a person or a business has decided to buy a product or service is the last step of gathering information and evaluating the satisfaction of the product or service and the ability to meet the needs and suitability for themselves and leads to decision-making.

Adulat Jatupakkul (2000) is mentioned in the book of consumer behavior in decision-making. The consumer's decision-making process consists of several factors and steps that lead to a decision to purchase a product or service. Which is all The 5 steps are:

- Need Recognition: Consumers will find themselves desperate for something that they lack, such as if they feel thirsty, consumers will decide to buy the water right away. Because consumers are aware of themselves. This is the result of impulses and impulses and stimuli from within the consumer itself and from the outside.

- Information Search: Whenever consumers have a great demand for a product or service. Consumers will research information from both direct and indirect sources to obtain information on products or services of interest for decision-making.

- Evaluation of Alternative:  The process by which consumers bring their own products or services is comparable to their counterproductive or alternate products or services, such as price, location, quality, before making a purchase or service.

- Purchase Decision: It is a step where consumers will prefer their product or service and make the decision to choose the product or service they like best such as the quality of the goods or services compared to the price of the goods or services and price of goods or services compared to satisfaction.

- Post – Purchase Behavior:  The behavior of the consumer using the product or service then assesses the quality and value of the goods or services to the visiting experience and information in the decision to purchase a product or service again or not.

It can be concluded that the decision-making process is based on factors such as internal factors such as attitude, experience, needs, and external factors such as information received directly and indirectly. The person will use the factors that come into the analysis process of value for money compared to other products, including quality, price, satisfaction. Before making a decision to purchase a product or service. However, this research is about the tendency of decision-making of using the Reverse Mortgage which has not actually happened so the Post-Purchase Behavior cannot be applied.

# CHAPTER III
# RESEARCH METHODOLOGY

A study of factors influencing the tendency of decision-making of using Reverse Mortgage as quantitative research by using survey research through questionnaire tools to obtain the right information. Set up detailed research guidelines on population demarcation, sampling, data collection, statistics preparation, and analysis.

## 3.1 Demographics and Sampling

### 3.1.1 Demographics

The population used in this study was a group of people living in Bangkok and have the ownership of their houses,these people either have or do not have to have an experience in using credit services (just interested in and come for asking more information about credit services would be fine), which corresponds to the initial property of using the Reverse Mortgage services.

### 3.1.2 Sample size

This study used sample size sampling from the Yamane formula (1967). The reliability or significance level is 95% and the tolerable error is 0.05 and the population in Bangkok is 5,686,252 (National Statistics Office, 2015). The example was as follows:

$$n = N/1+N(e)2$$

e  =  sampling rate of sampling

N  =  population size

n  =  sample size

$$n = 5,686,252 / 1+ 5,686,252 (0.05) 2$$
$$= 399.99 \approx 400$$

Therefore, the population of the sample of about 400 people according to the above formula.

### 3.1.3 Sampling

The sampling used in this study was

- The scope selection would be used the Purposive Sampling as following the Purposeful Selection which was the area surrounding a main branch of the Government Housing Bank, the specialized financial institution.

- The selection of areas around the main  H Bank branches in Bangkok would be used the Simple random sampling to select the area around 7 branches of the Government Housing Bank in Bangkok (50 people per area) which were *Donmueng branch, Rama6 branch, Ladprao branch, Sukhumvit branch, Ratchadumnuen branch, Si Yak Baan Kak branch and Sukhapiban3 branch* also one must branch which was *Rama9 branch (Head Office).*

## 3.2  Tools used to collect data

Tools used to collect quantitative data, the questionnaire was divided into 5 parts:

- General questionnaire of the respondents

- Marketing factors affecting decision to use Reverse Mortgage

- Questionnaire on attitude factors affecting decision of using Reverse Mortgage

- The Return factor affects decision making of using Reverse Mortgage

- The tendency of decision making to use Reverse Mortgage detail of each part as follow:

Part 1: Personal information questionnaire which had 11 questions. There were selective choices to assist in the discussion of the results; gender, age, status, income,

education, occupation, Gender, Age, Status, Income, Education, Occupation, ownership of housing, credit service experience, familiarity with Reverse Mortgage, interestedness in Reverse Mortgage and the major factor in using Reverse Mortgage.

Part 2: A marketing factor questionnaire which had 12 questions. There were used to determine the decision making of using Reverse Mortgage. It was the selection of 5-level valuation; 5 = the most and 1 = the least. These were to assist in discussing the results of product pricing, sales channels and promotions.

Part 3: The attitude factors affecting the decision to use Reverse Mortgage which had 10 questions. It was the selection of 5-level valuation; 5 = the most and 1 = the least. These were to assist in discussing the results of understanding, feeling and behavioral aspects.

Part 4: Factors of Return Factors affecting the decision to use Reverse Mortgage services which had 9 questions. It was the selection of 5-level valuation; 5 = the most and 1 = the least. These were to assist in discussion the result of monetary returns and non-monetary returns.

Part 5: The tendency of decision making to use Reverse Mortgage which has 9 questions. It was the selection of 5-level valuation; 5 = the most and 1 = the least. These were to assist in discussion the result of awareness, want, information searching, alternative assessment and buying decisions.

Interpretation of data would be done based on the scores of 1, 2, 3, 4 and 5 then interpret the criteria according to the criteria which could be interpreted in accordance with Likert Scale evaluation model (Likert, 1961).

Width of Class Interval =   Highest Scores - Lowest Scores Score Scores

=  (5-1)/5

=  0.80

Evaluation criteria       =   Score level + 0.80

Level 5: average 4.21-5.00 = Very high

Level 4: average 3.41-4.20 = High

Level 3: average 2.61-3.40 = Average

Level 2: average 1.81-2.60 = Low

Level 1: average 1.00-1.80 = Very Low

## 3.3  Tool testing

The reliability of the tools used to collect data for this study was tested for validity and reliability.

### 3.3.1  Validity

All questionnaire questions were obtained from the review of the relevant literature and research then brought to the advisor to consider and check the content validity and appropriateness of the language and the consistency of the variables in the research before the inquiry into the actual data.

### 3.3.2  Reliability

The collected questionnaire were used to test the reliability by the using statistical program. 95 percent was set as the confidence level and reliability of this research using Cronbach's Reliability Coefficient Alpha by finding Alpha Coefficient which had a confidence coefficient of 0.70 as follow:

- The marketing mix had a confidence coefficient of 0.87
- Attitude factors had a confidence coefficient of 0.89
- The return factor had a confidence coefficient of 0.93
- The tendency of decision-making factors had a confidence coefficient of 0.94

By this questionnaire, there was a Confidence Coefficient between 0.86 – 0.94, the Alpha Coefficient was greater than 0.7 so this questionnaire was rated at the acceptable level of reliability.

## 3.4  Time to collect data

The duration of this study was June 5$^{th}$, 2017 – August 5$^{th}$, 2017 and started collecting data from July 3$^{rd}$, 2017 – July 29$^{th}$, 2017

## 3.5 Data Collection Method

This research was used quantitative research by using survey questionnaires as the tool to study marketing mix factors, attitude factors and the return factors that affected the decision to use a Reverse Mortgage. The procedures were as followed:

- Determined the group of respondents in this research by selecting the sample following the main purposes of the study to obtain a qualified sample within the framework of the study.

- Defined the scope of the questionnaire data needed to cover the research framework.

- Studied methods and related research to create questionnaire questions.

- Brought the questionnaire questions and submitted to the advisor for consideration and correction.

- Sent out 400 of the questionnaire questions to chosen branches to survey customers who were at credit areas of those branches (50/a branch).

- Gathered completed questionnaire questions which were sent out by letting the Head Office messengers pick those questionnaires.

## 3.6 Statistics used in data analysis

Statistics used in data analysis in this research are divided into types of information obtained from the questionnaire, which consist of

- Questionnaire Part 1: Personal information questionnaire, the questionnaire was analyzed by percentage and standard deviation then described following the table.

- Questionnaire Part 2-5: Analyze data on marketing mix, attitude factors, and return factors affecting the tendency of decision-making in using Reverse Mortgage by computing Arithmetic Mean and Standard Deviation of overall factors and each factor. Once the calculation had been determined, would be compared with analysis criteria and evaluation which broke down as

Level 5: averages 4.21 - 5.00 = Very high

Level 4: average of 3.41 – 4.20 = High

Level 3: average of 2.61 - 3.40 = Average

Level 2: average of 1.81 - 2.60 = Low

Level 1: average of 1.00 - 1.80 = Very low

- Multiple Regression: Analyze to find the influence of marketing mix factors, attitude factor and return factors which affecting the tendency of decision-making in using Reverse Mortgage.

# CHAPTER IV

# DATA ANALYSIS

This chapter presents an analysis of information on the influence of marketing mix factors and return factors which influence the tendency of decision making to use Reverse Mortgage Service. This is qualitative research and the data were collected by questionnaires from the samples who were the elderly groups aged 60 and above and owned their residence in Bangkok. There were 400 questionnaires (50questionnaires/a branch) that had been already checked the quality of questions in the questionnaire then analyzed by statistical methods for the purpose of the research by using SPSS program. The results are presented in 6 parts which are

## 4.1 Part 1: General information of the respondents

Personal data of respondents classified by gender, age, marital status, income per month, education, occupation, home ownership, credit experience with financial institutions, knowledge on Reverse Mortgage, and preferred loan scheme. Presented by descriptive statistics which are the frequency distributions and percentages, to describe the general characteristics of respondents' general information as shown in Table 4.1.

**Table 4.1  Percentage of sample classified by personal information**

(N=400)

| Sample Characters | Number of sample | Percentage |
|---|---|---|
| 1. Gender | | |
| Male | 205 | 51.2 |
| Female | 195 | 48.8 |
| **Total** | **400** | **100** |

**Table 4.1  Percentage of sample classified by personal information (cont.)**

| Sample Characters | Number of sample | Percentage |
|---|---|---|
| 2. Age | | |
| 60-65 years old | 200 | 50 |
| 66-70 years old | 173 | 43.25 |
| Over 70 years old | 27 | 6.75 |
| **Total** | **400** | **100** |
| 3.  Marital Status | | |
| Single | 144 | 36 |
| Married | 211 | 52.8 |
| Widow/Divorce | 45 | 11.2 |
| **Total** | **400** | **100** |
| 4. Income per month (Baht) | | |
| No income | 24 | 6 |
| Not over 15,000 | 12 | 3 |
| 15,001-25,000 | 46 | 11.5 |
| 25,001-35,000 | 123 | 30.75 |
| 35,001-50,000 | 118 | 29.5 |
| Over 50,000 | 77 | 19.25 |
| **Total** | **400** | **100** |
| 5. Education | | |
| Lower than Junior High School | 5 | 1.25 |
| High School/Vocational | 15 | 3.75 |
| Diploma/High Vocational Certificate | 88 | 22 |
| Bachelor's degree/Equivalent | 243 | 60.75 |
| Higher than bachelor's degree | 49 | 12.25 |
| **Total** | **400** | **100** |

**Table 4.1  Percentage of sample classified by personal information (cont.)**

| Sample Characters | Number of sample | Percentage |
|---|---|---|
| 6. Occupation | | |
| Unemployed | 42 | 10.5 |
| Government officials/State Enterprises | 39 | 9.75 |
| Private employess/Employees | 176 | 44 |
| Proprietors/Business owner | 87 | 21.75 |
| Retired and not working | 56 | 14 |
| **Total** | **400** | **100** |
| 7. Home ownership at the present | | |
| Yes | 400 | 100 |
| No | 0 | 0 |
| **Total** | **400** | **100** |
| 8. Ever used credit services from financial institutions | | |
| Yes | 236 | 59 |
| No, but interested in or ask for information | 164 | 4 |
| **Total** | **400** | **100** |
| 9. Ever heard about Reverse Mortgage | | |
| Yes | 97 | 24.25 |
| No | 303 | 75.75 |
| **Total** | **400** | **100** |
| 10. If you have the opportunity to use a Reverse Mortgage, what receiving  form of payment will be chosen | | |
| Get the same amount of payment every months | 184 | 46 |
| Get high amount of payment at the beginning and then gradually decreased | 90 | 22.5 |
| Get low amount of payment at the beginning and then gradually increased | 89 | 22.25 |
| Get amount of payment periodically | 37 | 9.25 |
| **Total** | **400** | **100** |

**Table 4.1  Percentage of sample classified by personal information (cont.)**

| Sample Characters | Number of sample | Percentage |
|---|---|---|
| 11. An attractive factor that should get most value on for Reverse Mortgage | | |
| Interest rate | 185 | 46.25 |
| Amount of loan received monthly | 136 | 34 |
| Collateral assessment price | 69 | 17.25 |
| Service of financial institutions | 10 | 2.5 |
| **Total** | **400** | **100** |

From Table 4.1, personal analysis result of 400 respondents was classified by variables as follows:

*Gender-* It was found that 205 respondents were male, as 51.2% and 195 were female, as 48.8% so there was more male than female.

*Age-* It was found that most of all respondents were aged 60-65 years old which were 200 persons or 50%, 43.25% or 173 of all respondents were 66-70 years old, and 6.75% or only 27 persons were over 70 years old.

*Marital status-* It found that most of all respondents were married which were 211 or 52.8%, 144 respondents or 36% were single, and 11.2% or 45 persons were widow or divorce.

*Income-* It found that most of all respondents 123 persons or 30.75% earned between 25,001 - 35,000 Baht, there were 118 persons or 29.5% earned 35,001 - 50,000 Baht, 77 persons or 19.25% earned more than 50,000 Baht, 46 persons or 11.5% earned 15,001 -25,000 Baht, 24 persons or 6% did not earn any monthly income, and 12 persons or 3% earned not more than 15,000 Baht.

*Education-* It was found that most of all respondents, 243 persons or 60.75% graduated with bachelor's degree/equivalent, there were 88 persons or 22% graduated with diploma/high vocational certificate level, 49 persons or 12.25% graduated with any degree higher than bachelor's degree, 15 persons or 3.75% graduated with highs school/vocational level, and only 5 persons or 1.25% graduated with level lower than Junior high school.

*Occupation-* It was found that most of all respondents, 176 persons or 44% were private employees/employees, 87 persons or 21.75% were proprietors/business owners, 56 persons or 14% were retired and not working, 42 persons or 10.5% were unemployed, and 39 persons or 9.75% were government officials/state enterprises.

*Home ownership at the present-* It was found that every respondent, 400 persons or 100%, owned their residences.

*Ever used credit services from financial institutions-* It was found that 236 respondents or 59% used credit services before and the rests, 164 persons or 41%, have never used credit services before but interested in or wanted to ask for more information about credit services.

*Heard of Reverse Mortgage-* It was found that most of all respondents, 303 persons or 75.75% have never heard about it but 97 persons or 24.25% have heard about it.

*If have an opportunity to use Reverse Mortgage, receiving form will be chosen-* It was found that most of all respondents, 184 persons or 46%, chose to get the same amount of the payment monthly, 90 persons or 22.5% chose to get high amount of payment and then gradually decreased, 89 persons or 22.5% chose to get low amount of payment and then gradually increased, and 37 persons or 9.25% chose to get the payment periodically.

*An attractive factor that gets most value on for using Reverse Mortgage-* It was found that most of all respondents, 185 persons or 46.25%, gave most value on interest rate, 136 persons or 34% gave on amount of payment received monthly, 69 persons or 17.25% gave on collateral assessment price, and only 10 persons or 2.5% gave on service of financial institutions.

## 4.2 Part 2: Factor Analysis

**Table 4.2 Show Total Variance Explained**

| Component | Initial Eigenvalues | | | Rotation Sums of Squared Loadings | | |
|---|---|---|---|---|---|---|
| | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1 | 19.45 | 48.62 | 48.62 | 7.71 | 19.27 | 19.27 |
| 2 | 3.64 | 9.10 | 57.72 | 6.64 | 16.61 | 35.88 |
| 3 | 2.11 | 5.28 | 63.00 | 4.11 | 10.27 | 46.15 |
| 4 | 1.52 | 3.80 | 66.86 | 4.04 | 10.11 | 56.26 |
| 5 | 1.41 | 3.52 | 70.32 | 3.50 | 8.75 | 65.00 |
| 6 | 1.06 | 2.60 | 72.96 | 3.18 | 7.96 | 72.96 |
| 7 | 0.82 | 2.06 | 75.02 | | | |
| 8 | 0.78 | 1.96 | 76.98 | | | |
| 9 | 0.67 | 1.68 | 78.66 | | | |
| 10 | 0.62 | 1.55 | 80.21 | | | |
| 11 | 0.56 | 1.41 | 81.61 | | | |
| 12 | 0.53 | 1.31 | 82.93 | | | |
| 13 | 0.51 | 1.28 | 84.21 | | | |
| 14 | 0.48 | 1.19 | 85.40 | | | |
| 15 | 0.46 | 1.14 | 86.54 | | | |
| 16 | 0.45 | 1.12 | 87.65 | | | |
| 17 | 0.40 | 0.99 | 88.64 | | | |
| 18 | 0.36 | 0.89 | 89.54 | | | |
| 19 | 0.35 | 0.87 | 90.41 | | | |
| 20 | 0.31 | 0.78 | 91.19 | | | |
| 21 | 0.3 | 0.76 | 91.94 | | | |
| 22 | 0.27 | 0.67 | 92.61 | | | |
| 23 | 0.26 | 0.65 | 93.27 | | | |
| 24 | 0.25 | 0.63 | 93.90 | | | |
| 25 | 0.23 | 0.58 | 94.48 | | | |
| 26 | 0.22 | 0.56 | 95.03 | | | |
| 27 | 0.22 | 0.55 | 95.58 | | | |
| 28 | 0.21 | 0.52 | 96.09 | | | |
| 29 | 0.19 | 0.48 | 96.57 | | | |
| 30 | 0.18 | 0.44 | 97.01 | | | |
| 31 | 0.16 | 0.40 | 97.42 | | | |

**Table 4.2  Show Total Variance Explained (cont.)**

| Component | Initial Eigenvalues | | | Rotation Sums of Squared Loadings | | |
|---|---|---|---|---|---|---|
| | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 32 | 0.15 | 0.38 | 97.80 | | | |
| 33 | 0.15 | 0.38 | 98.18 | | | |
| 34 | 0.14 | 0.34 | 98.52 | | | |
| 35 | 0.12 | 0.31 | 98.82 | | | |
| 36 | 0.11 | 0.28 | 99.10 | | | |
| 37 | 0.10 | 0.25 | 99.35 | | | |
| 38 | 0.10 | 0.24 | 99.59 | | | |
| 39 | 0.09 | 0.21 | 99.80 | | | |
| 40 | 0.08 | 0.20 | 100.00 | | | |
| Extraction Method: **Principal Component Analysis** | | | | | | |

**Table 4.3  Show Rotate Component Matrix[a]**

| | Component | | | | | |
|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 |
| Want to use because of the return | 0.84 | | | | | |
| Want to use because of success in aboard | 0.82 | | | | | |
| Good choice | 0.82 | | | | | |
| Would recommend to acquaintances | 0.81 | | | | | |
| Studied and willing to use | 0.80 | | | | | |
| Geto old enough to use | 0.80 | | | | | |
| Want RM to occur | 0.78 | | | | | |
| Have a plan to use | 0.60 | | | | | |
| Cheap interest rate | | 0.76 | | | | |
| Received payment for living expenses | | 0.72 | | | | |
| Covert asset to cash | | 0.72 | | | | |
| Have money for future investment | | 0.71 | | | | |
| Worth with risks | | 0.69 | | | | |
| Increase liquidity | | 0.69 | | | | |
| Worth comparing with collateral assessment price | | 0.68 | | | | |

**Table 4.3  Show Rotate Component Matrix[a] (cont.)**

| | Component | | | | | |
|---|---|---|---|---|---|---|
| | **1** | **2** | **3** | **4** | **5** | **6** |
| Have an emergency money | | 0.60 | | | | |
| Received money while having resident to live | 0.40 | 0.58 | | | | |
| Suitable interest rate | | | 0.79 | | | |
| Loan payment format | | | 0.78 | | | |
| Loan amount | | | 0.74 | | | |
| Preferred format | | | 0.67 | 0.48 | | |
| Collaterat assessment price | | | 0.62 | | | |
| Financial Institutions reliability | | | 0.54 | | | |
| Aware of pros. And cons | | | | 0.67 | | |
| Financial Institutions location | | | | 0.63 | | |
| Understood conditions | | | | 0.62 | | 0.41 |
| Variety of received payment | | | | 0.55 | 0.41 | |
| Definitely use RM | | | | 0.54 | | |
| Would recommend others to use RM | | 0.48 | | 0.53 | | |
| Agreed to take place in Thailand | | 0.47 | | 0.51 | | |
| Advertising and Commercial | | | | | 0.85 | |
| Variety of distributions | | | | | 0.81 | |
| Clear RM information | | | | | 0.79 | |
| Promotion | | | | 0.44 | 0.53 | |
| Help elderly people | | | | | | 0.71 |
| Interesting | | | | | | 0.68 |
| Solve Aged Society | | | | 0.43 | | 0.58 |
| Response after-retirement life | | 0.45 | | | | 0.55 |
| Known and used world wide | | 0.41 | | | | 0.53 |
| Extraction Method: Principal Component Analysis | | | | | | |
| Rotation Method: Varimax with Kaiser Normalization | | | | | | |
| a. Rotation converged in 10 iterations | | | | | | |

**Table 4.4  Show Descriptive Statistics**

| Descriptive Statistics | | | |
|---|---|---|---|
| | Mean | Std. Deviation | Analysis N |
| Suitable interest rate | 3.73 | 0.85 | 400 |
| Loan payment format | 3.69 | 0.79 | 400 |
| Loan amount | 3.78 | 0.88 | 400 |
| Collateral assessment price | 3.85 | 0.95 | 400 |
| Preferred format | 3.72 | 0.82 | 400 |
| Variety of received payment | 3.72 | 0.89 | 400 |
| Financial Institutions reliability | 3.79 | 0.93 | 400 |
| Financial Institutions location | 3.67 | 0.93 | 400 |
| Promotion | 3.68 | 0.91 | 400 |
| Clear RM information | 3.68 | 1.15 | 400 |
| Variety of distributions | 3.48 | 1.11 | 400 |
| Advertising and commercial | 3.47 | 1.12357 | 400 |
| Interesting | 3.59 | 0.94 | 400 |
| Know and used world wide | 3.69 | 0.82 | 400 |
| Help elderly people | 3.88 | 0.95 | 400 |
| Response to after-retirement life | 3.93 | 0.97 | 400 |
| Solve Aged Society | 3.92 | 0.96 | 400 |
| Understood conditions | 3.80 | 0.98 | 400 |
| Aware of pros. and cons | 3.76 | 0.98 | 400 |
| Agreed to take place in Thailand | 3.78 | 0.96 | 400 |
| Definitely use RM | 3.77 | 1.03 | 400 |
| Would recommend others to use RM | 3.86 | 0.88 | 400 |
| Convert asset to cash | 3.74 | 0.87 | 400 |
| Received payment for living expenses | 3.80 | 0.92 | 400 |
| Increase liquidity | 3.70 | 0.96 | 400 |
| Worth comparing with collateral assesment price | 3.74 | 0.92 | 400 |
| Cheap interest rate | 3.77 | 1.06 | 400 |
| Worth with risks | 3.83 | 0.95 | 400 |
| Have an emergency money | 3.73 | 0.98 | 400 |

**Table 4.4  Show Descriptive Statistics (cont.)**

| Descriptive Statistics | | | |
|---|---|---|---|
| | **Mean** | **Std. Deviation** | **Analysis N** |
| Have money for future investment | 3.73 | 0.89 | 400 |
| Received money while having resident to live | 3.82 | 0.95 | 400 |
| Want RM to occur | 3.60 | 1.06 | 400 |
| Studied and willing to use RM | 3.60 | 1.09 | 400 |
| Good choice | 3.69 | 1.11 | 400 |
| Get old enough and will use | 3.67 | 1.17 | 400 |
| Suitable formayt for elderly people | 3.78 | 1.14 | 400 |
| Want to use because of the return | 3.88 | 1.08 | 400 |
| Want to use because of success in aboard | 3.69 | 1.14 | 400 |
| Would recommend to acquaintances | 3.85 | 1.13 | 400 |

## 4.3  Part3: Results of marketing mix analysis

Market mix analysis of respondents who had influenced on the tendency of decision-making to use Reverse Mortgage which consisted of Price, Place, Product, and Promotion by enumerating mean, standard deviation, and data interpretation as shown in Table 4.5.

**Table 4.5  Shows the mean and standard deviation of the marketing mix**

| Marketing Mix factors | Mean | SD | Level |
|---|---|---|---|
| **Price** | **3.79** | **0.76** | **High** |
| 1. Proper Reverse Mortgage interest rate | 3.73 | 0.85 | High |
| 2. Proper Reverse Mortgage monthly payment amount | 3.78 | 0.88 | High |
| 3. Proper collateral assessment price | 3.85 | 0.95 | High |
| **Product** | **3.71** | **0.70** | **High** |
| 1. Reverse Mortgage formats meet the needs | 3.69 | 0.79 | High |
| 2. Reverse Mortgage offers a variety of payment forms | 3.72 | 0.89 | High |
| 3. Reverse Mortage monthly payment formats e.g same amount every month, etc. | 3.69 | 0.79 | High |

**Table 4.5  Shows the mean and standard deviation of the marketing mix (cont.)**

| Marketing Mix factors | Mean | SD | Level |
|---|---|---|---|
| **Place** | **3.65** | **0.78** | **High** |
| 1. Reliability of Rever Mortgage Service providers e.g financial institutions | 3.79 | 0.93 | High |
| 2. Location of Rever Mortgage Service providers e.g delivery service | 3.67 | 0.93 | High |
| 3. Variety of transaction channels | 3.48 | 1.11 | High |
| **Promotion** | **3.61** | **0.91** | **High** |
| 1. Provide promotion | 3.68 | 0.91 | High |
| 2. Provide clear Reverse Mortgage information | 3.68 | 1.14 | High |
| 3. Provide wide advertisings | 3.47 | 1.12 | High |
| **Marketing Mix Factors** | **3.69** | **0.70** | **High** |

From Table 4.5, the analysis of marketing mix which influenced the tendency of decision-making in using Reverse Mortgage, was found that the respondents rated the overall marketing mix at the average of 3.69 which was at high level and each of the marketing mix was rated at the high level also, the 1st place is Price, Product, Place, and Promotion and the scores were 3.79, 3.71, 3.65 and 3.61 respectively.

## 4.4  Part 4: Results of the attitude factors toward Reverse Mortgage analysis

The analysis of respondents' attitudes which influenced the tendency of decision-making in using Reverse Mortgage which consisted of feelings and behavior by enumerating mean, standard deviation, and data interpretation as shown in Table 4.6.

**Table 4.6  Shows mean and standard deviation for attitude factors**

| Attitude factors | Mean | SD | Level |
|---|---|---|---|
| **Understanding** | **3.76** | **0.80** | **High** |
| 1. Reverse Mortgage is internationally widely known | 3.69 | 0.82 | High |
| 2. Understand the conditions of Reverse Mortgage | 3.80 | 0.98 | High |
| 3. Understand pros and cons of Reverse Mortgage | 3.78 | 0.98 | High |
| **Feeling** | **3.83** | **0.83** | **High** |
| 1. Reverse Mortgage is interesting | 3.59 | 0.94 | High |
| 2. Reverse Mortgage can help elderly people well | 3.88 | 0.95 | High |
| 3. Reverse Mortgage can response elderly people's live terminal | 3.92 | 0.97 | High |
| 4. Reverse Mortgage can solve the problem of elderly people | 3.92 | 0.96 | High |
| **Behavior** | **3.80** | **0.85** | **High** |
| 1. Reverse Mortgage should be taken place in Thailand | 3.78 | 0.96 | High |
| 2. Will use this service | 3.77 | 1.03 | High |
| 3. Will recommend this service to old acquaintances | 3.96 | 0.88 | High |
| **Attitude factors** | **3.80** | **0.76** | **High** |

From Table 4.6, the analysis of the attitude factors influencing the tendency in using Reverse mortgage, was found that the mean of overall was 3.80 at the high level, the feeling attitude's mean was the highest; 3.83 at the high level, the behavior attitude's mean was 3.80 at the high level, and the understanding attitude's mean was the lowest; 3.76 but still at high level.

## 4.5  Part 5: Result of return factors analysis

Analysis of Return Factors from the respondents who Influenced the tendency of decision-making in using Reverse Mortgage which composed of monetary returns and non-monetary returns by enumerating mean, standard deviation, and data interpretation as shown in Table 4.7.

**Table 4.7 Shows mean and standard deviation for return factors**

| Return Factors | Mean | SD | Level |
|---|---|---|---|
| **Monetary Returns** | **3.77** | **0.82** | **High** |
| 1. Be able to convert assets to be cash for monthly expense | 3.74 | 0.88 | High |
| 2. Receive adequate monthly payment for living | 3.80 | 0.92 | High |
| 3. Receive worthy payment comparing with the price of collateral assessment | 3.74 | 0.92 | High |
| 4. Get low-interest rate | 3.77 | 1.06 | High |
| 5. Receive worthy payment comparing with risks | 3.83 | 0.95 | High |
| **Non-monetary Returns** | **3.72** | **0.83** | **High** |
| 1. Be able to increase more financial liquidity | 3.69 | 0.96 | High |
| 2. Be able to save more money for emergency use | 3.73 | 0.98 | High |
| 3. Be able to save more money for investment | 3.73 | 0.89 | High |
| 4. Receive more monthly payment and be able to live in the collateral until death | 3.82 | 0.95 | High |
| **Return Factors** | **3.76** | **0.8** | **High** |

From Table 4.7, the analysis of return factors which influenced the tendency of decision-making in using Reverse mortgage, was found that the average of overall factors was 3.76 which was at a high level. The mean of monetary returns was 3.77 which was at the high level and the mean of non-monetary returns were 3.72 which was also at the high level.

## 4.6 Part 6: Result of the tendency in decision-making analysis on using Reverse Mortgage Services

Analysis of the tendency of decision-making in using Reverse Mortgage from the respondents by enumerating mean, standard deviation, and data interpretation as shown in Table 4.6.

**Table 4.8 Mean and standard deviation for the tendency of decision-making in using Reverse Mortgage**

| Tendency of decision-making in using Reverse Mortgage | Mean | SD | Level |
|---|---|---|---|
| **Tendency of using the service** | **3.64** | **0.96** | **High** |
| 1. Have a plan to use the service in the future | 2.98 | 1.18 | High |
| 2. Want to have this kind of mortgage to be created in the future | 3.59 | 1.06 | High |
| 3. Decide to use this service after doing the research or receiving clear information | 3.69 | 1.09 | High |
| 4. Compare with other kinds of mortgages, this service is the best for elder people | 3.69 | 1.10 | High |
| 5. When in old age, prepare to use this service | 3.67 | 1.17 | High |
| 6. This service formats meet the elderly's needs so want to use this service | 3.78 | 1.14 | High |
| 7. The returns make the want in using this service | 3.88 | 1.08 | High |
| 8. The success of this service in other countries makes the want in using this service if provided in Thailand | 3.69 | 1.13 | High |
| 9. Would recommend this service to elderly acquaintances | 3.85 | 1.13 | High |
| **Tendency of using the service** | **3.64** | **0.96** | **High** |

From Table 4.8, the respondents were more likely to use the Reverse Mortgage service, the mean was 3.64, which was considered to be at high level.

## 4.7 Part 7: Result of MultipleRegression Analysis

### 4.7.1 Model Summary

**Table 4.9 Coefficient of Determinant – R Square**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | 0.74 | 0.55 | 0.54 | 0.65 |

The results of coefficient factors by Enter Multiple Regression method, it was found that the 3 variables were correlated with the tendency of decision-making in using RM at R= 0.74. To explain the variability of the decision-making tendency level in using RM, the Coefficient of Determinant – R Square was 0.55, by R Squarews the independent variables; marketing mix factors which are 4Ps, attitude factors in understanding, feeling and behavior, and return factors which are monetary and non-monetary returns. This can predict the dependent variable that the tendency of decision-making in using RM was at 54.8% which means the variable variation of variable values around the mean was moderate because this researched from humans who had much different in thinking, hard to predict and difficult to go on to the same direction. Moreover, Reverse Mortgage has not occurred in Thailand yet so this does not have clear detail and information then it was not si surprise the sample group did not really understand what it is.

### 4.7.2 Coefficient

**Table 4.10 Regression Coefficient**

| | Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | Collinearity Statistics | |
|---|---|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | | Tolerance | VIF |
| 1 | Constant | 0.28 | 0.20 | | 1.40 | 0.16 | | |
| | (Marketing Mix) **Price** | -0.08 | -0.07 | -0.06 | -1.09 | -0.28 | 0.36 | 2.79 |
| | (Marketing Mix) **Product** | -0.11 | 0.09 | -0.08 | -1.17 | 0.24 | 0.27 | 3.72 |
| | (Marketing Mix) **Place** | 0.34 | 0.10 | 0.29 | 0.35 | 0.73 | 0.17 | 5.79 |
| | (Marketing Mix) **Promotion** | 0.10 | 0.67 | 0.10 | 1.56 | 0.12 | 0.30 | 3.35 |
| 2 | (Attitude) **-Understanding** | 0.20 | 0.08 | 0.17 | 2.52 | 0.01 | 0.26 | 3.83 |
| | (Attitude) **-Feeling** | 0.17 | 0.07 | 0.15 | 2.40 | 0.02 | 0.31 | 3.21 |
| | (Attitude) **-Behavior** | 0.17 | 0.08 | 0.15 | 2.06 | 0.04 | 0.23 | 4.32 |
| 3 | (Return factor) Monetary | -0.08 | 0.09 | 0.07 | 0.89 | 0.38 | 0.20 | 4.92 |
| | (Return factor) Non--Monetary | -0.49 | 0.10 | 0.42 | 5.13 | 0.00 | 0.17 | 5.75 |

# CHAPTER V
# RECOMMENDATION AND CONCLUSION

The purpose of this research is to study the market mix and return factors which influence the tendency of decision-making in using Reverse Mortgage as well as the suggestions and comments. The tool used in the research was the survey questionnaire which consisted of choice-based questions and Likert Scale. The questionnaire was divided into 5 parts which were

Part 1: Personal information of the respondents.

Part 2: Marketing Mix factors

Part 3: Attitude factors influenced the decision-making

Part 4: Return Factors

Part 5: The tendency of decision-making in using Reverse Mortgage

This research collects information from books, journals, printed materials, related documents about Reverse Mortgage, independent and dependent variables, and also includes the result from 400 respondents to use in this research. Data analysis was performed by using SPSS program to analyze the percentage of data, mean, and standard deviation.

## 5.1 Summary of this research

The research was conducted on independent variables which were Marketing Mix, Attitude factors, and Return factors that influenced the tendency of decision-making in using Reverse Mortgage of people who were and over the age of 60 and these people either had have or did not have an experience in using credit services (just interested in and come for asking more information about credit services would be fine) but needed to own their houses, by using Purposive Sampling method to choose 400 persons in mortgage securities and closing mortgage accounts areas of Government Housing Head Office and main branches which were selected by Simple random sampling. It was found that.

### 5.1.1  Personal Information of the respondents

All of the respondents (400 persons/100%) were homeownership. Most of the respondents were male (205 persons/51.2%), 60-65 years old (200 persons/50%), married (211 persons/52.8%), and graduated with bachelor's degree or equivalent (243 persons/ 60.75%) and worked as private employees/employees (176 persons/ 44%). They had monthly income around 25,001-35,000 baht (123 persons/ 30.75%), used to use credit services from financial institutions (236 persons/59%) but most of the respondents have never heard about Reverse Mortgage (303 persons/ 75.75%). If had an opportunity to use, they would choose to get the same amount of monthly payment though (184 persons/ 46%). They thought the interest rate would be the factor that can attract people to use Reverse Mortgage (185 persons/46.25%).

### 5.1.2  Marketing Mix factors

The most influenced factor is Price which the score was 3.79 and at the high level.

### 5.1.3  Attitude factors

The most influenced factor is Feeling which the score was 3.83 and at the high level.

### 5.1.4  Return factors

The most influenced factor is Monetary Returns which the score was 3.77 and at the high level.

### 5.1.5  Tendency of decision-making

The most influenced factor is more likely to use Reverse Mortgage, the score was 3.64 and at the high level

### 5.1.6  Most influenced factor from all variables towards the decision-making in using Reverse Mortgage

The first factor that influenced the decision-making was attitude factors, which had the overall score as 3.80 at the high level. The second was the return factors which

had the overall score as 3.76 at very high level. The last place belongs to the marketing mix factors which had the overall score as 3.69 at the high level.

## 5.2 Recommendations

From the above results show that the attitude factors, which consist of understanding, feelings, and behavior, influence the most to the decision-making tendency of using Reverse Mortgage. This information can lead to create the plans or issues on Reverse Mortgage products and adapt to adjust the action plans or policies to support the access of Thai Aged Society also adjust to be suitable for Thai culture. So, the recommendations would be

### 5.2.1 Recommendations for financial institutions that provide services

• The study found that most of the respondents had never heard about Reverse Mortgage but before the researcher decided to do this research, on behalf of the Bank, the researcher and most of G H Bank officers thought that most of Thai people might be familiar with Reverse Mortgage but the result showed that they were not. So the financial institutions should focus on the way to release and publicize of product information and product formats which include the straightforward information of advantages and disadvantages of Reverse Mortgage. Also cooperate with government organizations and private companies to educate closely to the elderly employees or groups which to create a serious positive attitude to consumers.

• The study found that most respondents preferred to get the same amount of monthly payment so the financial institutions should focus on creating products to meet the needs of the sample group. To provide the service, the financial institutions should consider of returns and consumers' alternatives also should inform the consequences clearly before the consumers make the decision to use the service.

• The study found that most respondents rated the most attractive factor on the interest rate so the financial institutions should plan to the interest rates which appropriate to the group of customers and response directly to the demand. They should emphasize on creating an image in helping the elderly which to build a good attitude of Reverse Mortgage with the customers.

• The financial institutions should advise on Reverse Mortgage services together with counseling services for pre-retirement planning and post-retirement lives including giving an option to do Reverse Mortgage Insurance to insure the risks of using Reverse Mortgage services.

• The financial institutions should provide information on returns and risks of using Reverse Mortgage services to consumers so they can make the right decision and provide other alternative products for the consumers who cannot receive any risk from Reverse mortgage services.

### 5.2.2 Recommendations for the future research

• This research studied the marketing mix, attitude factors, and return factors which influenced to the decision-making in using Reverse Mortgage. So for the further research, should study on other factors.

• The researcher did this research whenthe Reverse Mortgage has not taken place in Thailand yet. So for the further research, should wait until it has already taken place in Thailand first then do the research again.

• This research chose the sample group, who were 60 years old and over with house ownership, within Bangkok only. So for further research, should foucus on other cities.

• This research studied on marketing mix, attitude factors and return factors which influenced to the decision-making in using Reverse Mortgage. So for further research, should study on any factors that related to the elderly's life stability.

# REFERENCES

เจิมศักดิ์ ปิ่นทอง. (2558). *ขอคิดด้วยคน. แนวหน้า.* สืบค้นจาก http://www.naewna.com.

ธงชัย สันติวงษ์. (2540). *พฤติกรรมผู้บริโภคทางการตลาด.* กรุงเทพฯ: ไทยวัฒนาพานิช.

ธนาคารแห่งประเทศไทย. (2559). *ข้อมูลแผนพัฒนาระบบสถาบันการเงิน.* สืบค้นจาก http://www. bot.or.th.

ธนาคารอาคารสงเคราะห์ ฝ่ายวิชาการแบะเผยแพร่. (2559). *เอกสารแปลระเบียบสินเชื่อผู้สูงอายุจาก ประเทศสหรัฐอเมริกา แคนาดา ออสเตรเลีย นิวซีแลนด์ ฮ่องกงและสาธารณรัฐ ประชาชนจีน.* ม.ป.ท.

ธนาคารอาคารสงเคราะห์. (2549). *Basel Ii and Mortgage Insurance: CMHC International.* สืบค้น จาก https://www.bot.or.th/Thai/FIPCS/Documents/FPG/2549/ThaiPDF/25490035.pdf.

ปิยพร อามสุทธิ์. (2557). *การตัดสินใจออมเงินผ่านการลงทุนกองทุนรวมหุ้นระยะยาวของพนักงาน เงินเดือนประจำในกรุงเทพมหานคร.* การค้นคว้าอิสระปริญญามหาบัณฑิต, มหาวิทยาลัย กรุงเทพ.

ภัคจิรา นิลเกษม. (2558). *ปัจจัยที่ส่งผลต่อการใช้บริการธนาคารบนอินเตอร์เน็ตของลูกค้าธนาคาร กรุงเทพจำกัด (มหาชน) ในเขตอำเภอเมือง จังหวัดปทุมธานี.* การค้นคว้าอิสระปริญญา มหาบัณฑิต, มหาวิทยาลัยกรุงเทพ.

มรกต ฉายทองคำ. (2558). *ปัจจัยที่มีอิทธิพลต่อการตัดสินใจออมเงินของกลุ่มคนวัยทำงานในเขต กรุงเทพมหานคร.* การค้นคว้าอิสระปริญญามหาบัณฑิต, มหาวิทยาลัยกรุงเทพ.

รัชนีกร วงศ์จันทร์. (2553). *การบริหารการเงินส่วนบุคคล.* กรุงเทพฯ: ตลาดหลักทรัพย์แห่งประเท ไทย.

รัตน์ สังข์แก้ว. (2544). *การลงทุน* (พิมพ์ครั้งที่ 4). กรุงเทพฯ: มหาวิทยาลัยธรรมศาสตร์.

วิวรรณ ธาราหิรัญโชติ. (2559). *การจำนองแบบย้อนกลับ (Reverse Mortgage).* สืบค้นจาก http://www. thaivi.org.

ศักดิ์ สุนทรเสณี. (2531). *เจตคติ.* กรุงเทพฯ: รุ่งวัฒนา.

ศิริวรรณ เสรีรัตน์, องอาจ ปทะวานิช, ศุภร เสรีย์รัตน์ และปริญ ลักษิตานนท์. (2546). *การบริหาร การตลาดยุคใหม่.* กรุงเทพฯ: บริษัท ธีระฟิลม์ และไซเท็กซ์ จำกัด.

สถาบันวิจัยเพื่อพัฒนาประเทศไทย. (2558). *ข้อมูลสังคมผู้สูงอายุ.* สืบค้นจาก http://www.tdri.or.th

สำนักงานเศรษฐกิจการคลัง. (2559). *เอกสารการประชุมสินเชื่อที่อยู่อาศัยสำหรับผู้สูงอายุ.*

สำนักงานสถิติแห่งชาติ. (2558). สืบค้นจากhttp://www.nso.go.th/

Economicsonline Money and monetary theory. (2016). Retrieved from http://www.econo
    micsonline.co.uk/.

Farley, J. (1989). *The relationship between recruiting source, applicant quality, and
    hire performance: An analysis by sex, ethnicity and age.*

Kotler, P. (1967). *Philip Kotler's classic marketing text celebrates 40 years.* Retrieved
    from https://www.kellogg.northwestern.edu.

Kotler, P. (1997). Le Marketing Direct Interactif: Marketing Du 21 eme Siecle. *Revue
    Francaise de Marketing*, 164, 43-58.

Kotler, P. (2003). *Marketing management* (11th ed.). New Jersey: Prentice Hall Inc.

Likert, R. (1961). *New pattern of management.* New York: McGraw – Hill

Newcomb. (1854). *Attude.* Retrieved from http://www.novabizz.Ace/Attitude.htm.

Norman, L.M. (1971). *Introduction to psychology.* Boston: Houghton Mifflin Company.

Schiffman, L.G., & Kanuk, L.L. (2004). *Consumer behavior* (8th ed.). Englewood
    Cliffs, NJ: Prentice-Hall.

The Marketing Mix 4P's and 7P's Explained. (2016). Retrieved from http://marketing
    mix.co.uk/.

**APPENDICES**

## Appendix A: Questionnaire

The researcher would like to ask for your help in completing this questionnaire, your answers will be kept confidential and only for educational purposes.

**Please mark √ in the (    ) that closest to your opinion and please write the answer in the space.**

1. Gender

   (    ) Male                    (    ) Female

2. Age

   (    ) 60-65 years old         (    ) 66-70 years old        (    ) Over 70 years old

3. Martial Status

   (    ) Single                  (    ) Married                (    ) Widow/Divorce

4. Monthly Income

   (    ) No income               (    ) Less than 15,000 Baht

   (    ) 15,001-25,000 Baht      (    ) 25,001-35,000 Baht

   (    ) 35,001-50,000 Baht      (    ) Over 50,000 Baht

5. Education

   (    ) Lower than Junior high school

   (    ) High School/Vocational

   (    ) Diploma/High Vocational Certificate

   (    ) Bachelor's degree/Equivalent

   (    ) Higher than bachelor's degree

6. Occupation

   (   ) Unemployed

   (   ) Government officials/State Enterprises

   (   ) Private employees/Employees

   (   ) Proprietors/Business owner

   (   ) Retired and not working

7. Home ownership at the present

   (   ) Yes                (   ) No

8. Ever used credit services from financial institutions

   (   ) Yes                (   ) No

9. Ever heard about Reverse Mortgage

   (   ) Yes                (   ) No

10. If you have the opportunity to use a Reverse Mortgage, what receiving form of payment will be chosen

   (   ) Get the same amount of payment every months

   (   ) Get high amount of payment at the beginning and then gradually decreased

   (   ) Get low amount of payment at the beginning and then gradually increased

   (   ) Get amount of payment periodically

11. An attractive factor that should get most value on for Reverse Mortgage

   (   ) Interest rate

   (   ) Amount of loan received monthly

   (   ) Collateral assessment price

   (   ) Service of financial institutions

**Please mark √ in the space that matches your opinion the most (5 = Very height, 4 = High, 3 = Average, 2 = Low, and 1 = Very low)**

| Marketing Mix factors | Level of the opinion | | | | |
|---|---|---|---|---|---|
| | 5 | 4 | 3 | 2 | 1 |
| 12. Proper Reverse Mortgage interest rate | | | | | |
| 13. Proper Reverse Mortgage monthly payment amount | | | | | |
| 14. Proper collateral assessment price | | | | | |
| 15. Reverse Mortgage formats meet the needs | | | | | |
| 16. Reverse Mortgage offers a variety of payment forms | | | | | |
| 17. Reverse Mortgage monthly payment formats e.g same amount every month, etc. | | | | | |
| 18. Reliability of Reverse Mortgage Service providers e.g financial institutions | | | | | |
| 19. Location of Reverse Mortgage Service providers e.g delivery service | | | | | |
| 20. Variety of transaction channels | | | | | |
| 21. Provide promotion | | | | | |
| 22. Provide clear Reverse Mortgage information | | | | | |
| 23. Provide wide advertisings | | | | | |
| 24. Reverse Mortgage is internationally widely known | | | | | |
| 25. Understand the conditions of Reverse Mortgage | | | | | |
| 26. Understand pros and cons of Reverse Mortgage | | | | | |
| 27. Reverse Mortgage is interesting | | | | | |
| 28. Reverse Mortgage can help elderly people well | | | | | |
| 29. Reverse Mortgage can response elderly people's live terminal | | | | | |
| 30. Reverse Mortgage can solve the problem of elderly people | | | | | |
| 31. Reverse Mortgage should be taken place in Thailand | | | | | |
| 32. Will use this service | | | | | |
| 33. Will recommend this service to old acquaintances | | | | | |

| Marketing Mix factors | Level of the opinion | | | | |
|---|---|---|---|---|---|
| | 5 | 4 | 3 | 2 | 1 |
| 34. Be able to convert assets to be cash for monthly expense | | | | | |
| 35. Receive adequate monthly payment for living | | | | | |
| 36. Receive worthy payment comparing with the price of collateral assessment | | | | | |
| 37. Get low-interest rate | | | | | |
| 38. Receive worthy payment comparing with risks | | | | | |
| 39. Be able to increase more financial liquidity | | | | | |
| 40. Be able to save more money for emergency use | | | | | |
| 41. Be able to save more money for investment | | | | | |
| 42. Receive more monthly payment and be able to live in the collateral until death | | | | | |
| 43. Have a plan to use the service in the future | | | | | |
| 44. Want to have this kind of mortgage to be created in the future | | | | | |
| 45. Decide to use this service after doing the research or receiving clear information | | | | | |
| 46. Compare with other kinds of mortgages, this service is the best for elder people | | | | | |
| 47. When in old age, prepare to use this service | | | | | |
| 48. This service formats meet the elderly's needs so want to use this service | | | | | |
| 49. The returns make the want in using this service | | | | | |
| 50. The success of this service in other countries makes the want in using this service if provided in Thailand | | | | | |
| 51. Would recommend this service to elderly acquaintances | | | | | |

**Suggestions and Comments**

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*** **Thank all of you very much for taking the time to answer** ***