

ARTICLE

INVESTIGATION OF THE FACTORS AFFECTING THE DEFERRED DEBTS IN COMMERCIAL BANKS AND PRESENTATION OF APPROPRIATE MARKETING STRATEGIES TO REDUCE THEM (CASE STUDY - FACILITY GRANTED BY THE BMI BRANCHES OF GILAN PROVINCE)

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ABSTRACT

Macroeconomic conditions and government interventions in the economy as well as the trade cycles formed in the context of the global economy can stimulate the profitability of the corporations and individual borrowers and affect a total of facility and deferred debts of the banking system. This study examines the effective factors in creating deferred debts at the BMI (Bank Melli Iran/Iran National Bank) branches of Gilan Province from 2010 to 2014. In this paper, we have selected the files, having the largest deferred liabilities to each of the BMI branches, that their resolutions have been issued by the Province Committee and the information needed for investigation and analysis was extracted with reference to them. In this study, all the branches of Gilan province have been divided into five districts of Central, North, West, East, and South. In each district, 131 files of deferred debts have been separately and randomly identified and evaluated during the mentioned period. Chi-square test has been used for analyzing the data and testing the research hypotheses, and Cramer's V coefficient has been applied to determine the most effective factor in each district. All calculations have been done with SPSS statistical Software. Regarding the data analysis, the results revealed that there is a significant relationship between type of economic activity, duration of payment credits, type of credit, type of collaterals received, and type of payment credit with deferred debts in all districts. Then the effect of each factor was separately studied in each of the five districts. And finally, the appropriate marketing strategies were designed and proposed in order to reduce deferred debts.

INTRODUCTION

KEY WORDS

Deferred debts, type of economic activity, credit period, marketing strategies, type of credit.

Different countries' experience has shown that the deterioration in the balance sheets of the banks and the banking system is the starting point for most of the economic crises at the national and international levels. In many countries, increasing the share of loans in proportion to the bank assets is the primary cause for the deterioration in the banks' balance sheets. The importance and sensitivity of the banking system in regulating domestic economic relations and occasions of each country on one hand; and its tremendous impact on the scene of the global economy and the facilitation and promotion of international trade, on the other hand, caused economic experts to consider "banks" as one of the factors for the economic development and the formation of countries' productivity potential. Banks are considered as one of the most important tools for implementing monetary policy under the power of each country's government and economic system, because they collect small savings and the funds caught in the hands of people on one hand, and in line with the implementation of regulated and obligated economic and credit policies, they allocate financial resources to the intended sectors on the other hand, and inevitably confront a series of issues and problems that are essential to be noticed. One of the most fundamental problems that banks are facing today is the problem of deferred debts. [1]

A bank's deferred debt is the outcome of the economic conditions and a high inflation level and also highlights the poor performance of the bank in the management of their resources and expenditures. It is obvious that the increased deferred debts of banks makes banking resources rather less than banking expenditures, causing the reduction of bank facility-granting and wider consequences at the national level including inflation growth and the development of brokerage and underground economy [2]. Competition in the banking sector is typically considered as the stability of financial losses. When banks intensify their competition in depositing, their franchise value disappears; in this case banks have more motivation to perform high-risk activities, leading to the risk of increasing the rate of deferred debts. This debate can be very important and effective in regulating the banking system all around the world [3]. On the other hand, with privatization and public offering in the capital market, stressful factors change the stock price and institutions' profitability is of the highlights in the decision-making of participants to take part in the capital market; therefore the factors affecting profitability are: the amount of capital, the amount of resources, the quality of expenditures, the status of debts and liabilities. [4]

1.2. Problem Statement:

One of the key elements of any economic system is banking system that its correct and principal function may contribute to the growth and prosperity of economic system; otherwise, the sculpture of the economy will be heavily shocked. One of the problems which the banking system of various countries such as Iran

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faces is to increase the amount of expired and deferred debts of the banks showing off like a frozen ocean to the total facilities granted in banking network. This represents a decline in the quality of the banking network's assets and consequently leads to probably financial instabilities. Since the banking system bears all the burden of a country's financial system, the decrease in the amount of these debts indicates the banks' ability to preserve available resources and the high amount of these current facilities indicates a threat to the banking resources and undoubtedly a national concern. The main goal of financial institutions and banks is to attract low-cost resources and effective expenditures (granting facility) and to reduce the claims and ultimately profitability. A bank with less deferred debts can invest its released resources on other new activities or accept further payment obligations that consequently it increases the bank's programming potential in connection with the consumption of resources or acceptance of obligations and acquisition of income. Due to the sensitivity of the subject and according to the basic paper, in this study we attempt to examine the influence of in-house factors on the creation of deferred debts and to propose new solutions from marketing perspective to reduce claims and to answer a fundamental question as follows:

Is there a significant relationship between the deferred debts as a dependent variable and the duration of credit, type of collateral, use cases, economic activity and type of payment credit as the independent variable?

1.3. The importance of research:

To illustrate the necessity and importance of the topic of the current research, the following cases can be proposed:

1. Ratio of non-current debts to the total debts (NPL) is considered as one of the main criteria for studying a bank's soundness of performance so that with a glance at this indicator in the banking system of developed countries and according to the statistics of the global banks from 2009 to 2013, its value has been announced as 2.3% for America, 3.2% for Japan, 4.3% for France and 1.4% for Australia on average. However, according to the declaration of Valiollah Saif, the governor of the Central Bank of Iran, statistics related to NPL in the country banking system is equal to 6.15%. These figures may be compared with the ratios of the countries such as Pakistan, Bosnia and Herzegovina and Ghana . [5]

2. Due to the article 44 of the constitution and necessity to implement it in the promotion and transparency of the country's economic and fiscal system, banks are considered as the axis of these changes and variations, therefore the existence of expired and deferred debts is considered as an obstacle on the way of privatization.

3. On the other hand, with privatization and public offering in the capital market, stressful factors change the stock price and institutions' profitability is of the highlights in the decision-making of participants to take part in the capital market; therefore the factors affecting profitability are: the amount of capital, the amount of resources, the quality of expenditures, the status of debts and liabilities.[6]

4. The role of the government should also be considered in pricing fairly in the banking sector. The importance of this issue in the banking sector will become more obvious when it has a transparent system of fairly pricing, but if the financial statements of the banks are opaque and non-transparent, they will face the excessive risk, leading to increase banks' deferred debts in long-term period . [7]

Research questions:

Thus, the following questions arise in this research on the basis of a conceptual model:

1. Is there any significant relationship between the independent factors such as type of credit, duration of credits, type of collateral, the use cases and deferred debts as the dependent variable?
2. Which of the independent variables has the greatest effect on deferred debts?
3. What is the appropriate marketing strategy to reduce debts?

Research purposes:

Undoubtedly, one of the most important challenges the banking system has faced over the past few years has been the increasing trend of deferred debts induced from granting unreal, non-expert and improper facilities. It has also affected on money-market networks and banking system performance and increasingly weakened banks' lending potential. Since today all banks, both public and private, as well as financial and credit institutions face a major problem called deferred debts for various reasons such as the economic situation, macroeconomic policies of the central bank, government intervention in the facility-granting process and domestic weaknesses of institutions, and since the title of this research is completely practical and related to the study of the effective factors on creating the deferred debts and the ways to reduce them, this research can be used by these banks and institutions to deal with this phenomenon in banking system. Due to the stated subjects, the following practical purposes can be provided for the research:

- 1- Studying the in-house factors affecting the deferred debts, including systemic ways for granting facilities
- 2- Studying the significance of the relationship between dependent and independent variables
- 3- Identifying the most effective parameter on the deferred debts among the independent variables
- 4- Explaining the concept of marketing at the bank and its relationship with deferred debts
- 5- Considering the deferred debts from a marketing management viewpoint, out of a traditional look and financial management
- 6- Designing marketing strategies using the opinions and guidelines of the group of experts and specialists in marketing and providing proper solutions for planning, implementing and monitoring

1.6. Theoretical framework for the research:

This research has been carried out, using a research model by Dr. Rostomian et al., under the title of the study of the factors affecting the creation of the deferred debts of the industrial and commercial banks (case study, the branches of Mellat Bank of Kish Free Zone) in 2010. Variables used in that study have

been determined with the consultation of a group of experts and specialists in banking. The mentioned research was published at No. 29 of Accounting and Finance Bulletin in the same year. The purpose of using this model is to study the systemic and controllable in-house factors that create deferred debts. Independent variables of this pattern include economic activity, duration of credit, uses of credits, type of payment credit, and type of received collaterals. And dependent variable is the deferred debts.

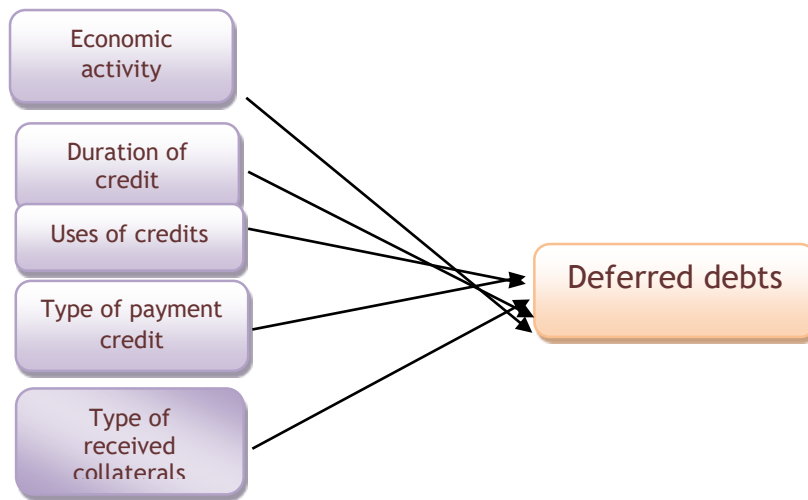


Figure 1.1. Conceptual model of the research [source:7]

In this model, the deferred debts are considered as a dependent variable and the factors such as economic activity, duration of credits, uses of credits, type of credits, type of collaterals and fluctuations in exchange rate are considered as independent variables.

Hypotheses

According to the studies based on the previous researches and the interviews conducted with senior managers of the bank's credit sector and regarding the obtained evidences on this issue, the following hypotheses were formulated.[7]

Hypotheses for the causes of creating the deferred debts:

1. There is a significant relationship between type of economic activity and creation of deferred debts.
2. There is a significant relationship between duration of the offered credits and creation of deferred debts.
3. There is a significant relationship between type of the uses of the offered credits and creation of deferred debts.
4. There is a significant relationship between type of payment credit (contracts/Oqood) and creation of deferred debts.
5. There is a significant relationship between type of received collaterals and creation of deferred debts.

Theoretical and operational definitions of variables

The Cabinet approved a regulation on 26 Jan 2007 for the collection of expired, deferred and bad debts of the credit institutions (Rial and Foreign Currency) and notified it to the Central Bank, Ministry of Economic Affairs and Finance, Ministry of Justice, Ministry of Labor and Social Affairs for implementation. According to the article 1 of this regulation, a number of terms and phrases related to the reorganization plan of deferred debts are defined as follows:

Current debts

The debts that their interest and principal repayment is paid in specific maturities or that more than two months have not passed from their maturity date

Expired debts

The debts that more than two months have passed from maturity date of their interest and principal or more than two months have passed from cut-off date of their installment repayment but have not exceeded six months yet

Outstanding debts

The debts that more than 6 months and less than 18 months have passed from the maturity date or installment repayment

Doubtful debts

The debts that more than 18 months have passed from maturity date or cut-off date of their installment payment

Bad debts

That portion of the credit institutions' debts that, regardless of the maturity date, is not collectable for certain reasons such as a debtor's death or bankruptcy or other causes and is considered as bad debts by the approval of the Board of Directors of the credit institutions.[8]

Economic activities:

Standard classification for all economic activities is formed from an integrated structure, relying on a set of concepts, definitions, and classification principles and rules. It also provides a comprehensive framework in which the economic data such as deferred debts can be collected in form of a stereotype designed for the analysis, planning, decision-making and economic policy-making. Classification is practically used to provide a continuous flow of information essential for monitoring, analysis and evaluation of the functioning of an economy over time. [8]

In this paper, the economic activities are classified into the following five groups based on the research model [9] and related to banks:

1. Agriculture: in the form of civil partnership facility of forward sales and installment sales for agricultural implements
2. Commerce and Services: in the form of facility of installment sales for the purchase of goods and the facility of Mudaraba
3. Export: In the form of the documentary credit and the opening of LC
4. House and Building: In the form of the facility of Jualah, hire purchase and civil partnership in building and construction
- 5 - Industries and Mines: in the form of the facility of quick-impact projects and installment sales

Duration of credits

In this study, based on the duration of credits the facilities granted are classified into three groups: (1) less than one year, (2) one to three years and (3) more than three years.

Type of payment credit

Based on the structure of the facilities granted by banks being in accordance with the instructions of the Central Bank, in this research, type of facilities granted to the customers is classified into seven groups as follows:[10]

1. Mudaraba
2. Civil partnership
3. Installment sale
4. Hire purchase
5. Jualah
6. Gharz-ol-Hasanah (beneficence loan)
7. Documentary credit

Type of collateral

The Persian translation of the word "collateral" (Wasiqa) literally means "firm", "what can be trusted" and "some kind of precautionary guaranteed measure" but it technically refers to any movable or immovable property that a borrower gives to a lender in exchange of a loan under one of the legal forms such as mortgage or conditional transactions. If the loan is not timely repaid, the lender can collect the borrower's total or partial claim after selling the pawned collateral. [10]

Based on the instructions issued by the Central Bank, there are two types of collaterals, including movable (portable) and immovable (non-portable). Banks usually receive four groups of the following collaterals belonging to one of those two types:

1. Promissory note (movable)
2. Estate (immovable)
3. Enforceable contract (guarantee of the third parties) (movable)
4. Long-term investment deposits of the customers (movable)

Type of use

In this research, in order to identify and clarify the use of the facilities granted to the customers, type of capital used in the facility has been considered.

In this study, capital is divided into two types: working capital and fixed capital.

Working capital

That portion of the current assets provided from long-term financial sources is called working capital. Gross working capital and net working capital are defined as total current assets and surplus of current assets in proportion to the current liabilities, respectively. The working capital is an indicator to determine liquidity rate of a company, especially when used in comparison with other indicators and financial ratios.

Fixed capital

That portion of the capital manifested in the form of production, tools, and raw materials is called fixed capital. It is referred to as fixed, because it cannot add more than its own value to the product value. Fixed capital is divided into fluid and patient capital. [11]

The definition of bank facilities

According to the central bank's definition, the purpose of facilities both monetary and foreign exchange includes facilities granted to natural and juridical persons, clients' liabilities in temporary debtors' account, loans from foreign-exchange reserves, clients' liabilities in the form of documentary credits and paid letters of guarantees, clients' liabilities on documentary credits and paid term bills of exchange, facilities granted for the prepayment of "the purchase of properties of transactions", "properties purchased for contracts", "commodity of the forward transactions" and "working in Jualah and factoring documents and purchased bills of exchange".[12]

Deferred debts as a supply and demand market

From the marketing perspective, banks consider the "deferred debts" category as a supply and demand market in which there is a certain product, called deferred debts, and a bank's goal is to make a balance between supply and demand.

In this market, banks are the suppliers of the product (deferred debts) and the borrowers, with overdue or deferred installments, are the demanders. With regard to this shape of the market, marketing strategies proportional to this pattern can be discussed and examined. Before proposing the related strategies, marketing concepts in banks are described.

Marketing plans to reduce debts

a) Conversion Marketing

The category of deferred debts is considered as a supply and demand market in which the debts are supplied as a product and also the debtors actually pay their liabilities to the bank by purchasing this product. It is clearly evident that the demand in this market is negative and the debtors have no propensity to pay their debts for various reasons such as poor economic conditions, lack of timely payment of installments, being time-consuming of payment of installments and the other factors.[13] In a market where demand is negative, a conversion marketing strategy should be used. Here the marketing's function is to analyze and explore the ways to attract the customers and collect the debts and whether it is possible to turn the market demand from negative into positive, using a compiled marketing program and a revision to the method of collecting debts and lower selling prices (lower percentage of delay penalties) and better promotional advertisements. Promotional advertising for sales can be used to increase sales in the short term, access the market share in the long term, retain previous customers and/or hunt the new ones.

b) Direct marketing

Direct marketing is a form of marketing in which a suspicious customer is directly communicated with. In this way, the people who are marketed are directly chosen from the target market that is the same market of deferred debts. The advantage of direct marketing is that it can be measured and sued, in order that marketing success rate can be determined; this feature helps greatly in measuring the amount of the debt collection. It means that the percentage of marketing success can be determined by dividing the number of people encouraged in different ways to pay their debts in the market by the number of people who have referred. This type of marketing utilizes a variety of communication tools such as post, e-mail, SMS and fax. In some cases, the direct marketing can be done by the use of cookies stored in the web browser. In this case, debt collection agents can act as direct marketers in advertising campaigns formed by banks and in addition to phone calls and face-to-face references that are usually unpleasant and annoying for the customers, they can also experience other communication ways with the mentioned communication tools.[14]

c) Relationship Marketing

The other strategy that can be used in the market of deferred debts is the relationship marketing. This type of marketing is today's art of business. The creation of proper relationship is absolutely essential in order to retain available key customers and attract new ones as debtors to the bank [15]. Today every customer either as a depositor or as a debtor has its own special value. The main goal of relationship marketing is to create a stable and secure relationship with a customer of any kind. Creation of such a relationship with the customers who are the subjects of this study and have deferred installments is also very complex and has its own psychological subtlety. Technical and moral compliance with these subtleties in the bargaining process to collect installments is completely necessary.

d) Creativity and innovation in debts market

Modernity, rarity, and how to utilize are three main characteristics of innovative methods that can be used in marketing. Similarly, an important prerequisite for being successful and receiving payments in debts market is to use innovative methods different from the other competitors and banks which have all the above-mentioned features.

Materials AND Methods

According to the specialists, research methodology is a set of rules, tools, valid methods and systematic ways to examine realities, to discover unknowns and to access the solutions. Since the aim of the current study is to investigate the factors affecting the creation of deferred debts and to provide solutions to prevent creating new debts in order for the optimal consumption of facility in different economic sectors, methodologically the current paper is a kind of survey, description and correlation research.

Statistical population and sample

In this study, the statistical population contains total facilities granted to customers in the BMI branches of Gilan province, with more than three deferred installments. A list of facilities for each separate district was provided based on the spatial domain of the research for each district with reference to the Facility Section of Gilan Branches Affairs Office and Statistics, Informatics and Comprehensive Management System Department recently designed and used in banks. In this statistical population, sampling was taken from the people who had the most deferred debts in each branch of BMI.

421 files in the central district (the largest number), 392 files in the North, 364 files in the West, 359 files in the East and 340 files in the south were identified as deferred debts.

Since each district should be investigated and analyzed separately and in order to facilitate and accelerate in the process of data analysis and statistical tests, the average of 375 files as the statistical population of each district was calculated and after being replaced by Cochran's finite population formula 131 files were determined as a statistical sample size. Referred to the Comprehensive Management System, 131 files were randomly selected in each district and then by reviewing the facility files available at the branches, the necessary information for analyzing the data was extracted.

A sample is a set of signs, selected from a part of a group or a larger population, describing the qualities and characteristics of that part of a group or population. Sampling is a process of selecting a sufficient number of statistical population members. By studying the sample group and finding its properties, the observed characteristics can be generalized to the statistical population members. Random sampling is a method of selecting a part of the population in which the probability of selection is the same for all samples.

Sampling method and sample size

The sample size should be so chosen that it can be generalized to the entire population. For this reason, in order to determine the minimum required sample size, due to limitation of the statistical population study, the following formula (the finite population) is used to calculate the sample size formula

$$n = \frac{N \left(Z_{\frac{\alpha}{2}}^2 \right) pq}{(N - 1)d^2 + \left(Z_{\frac{\alpha}{2}}^2 \right) pq}$$

Where,

$n=131$, the sample size

$N=375$, the statistical Population size

P : is a proportion for the presence of the attribute in the statistical population. Here variance is considered as a maximum level, and then $P=0.5$

P or $1-p$: is a proportion of the absence of the attribute in the statistical population. Here, since $p=0.5$, then the result of $q=1-p$ is equal to 0.5.

Z : in this study, with regard to the significance level of 0.95, Z value is equal to 80.31.

d : is the desired probability precision (error level) which is here considered as 0.1.

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Having replaced the number 375 (of the facility files) into Cochran's sample size formula, the final sample of 131 files was obtained. Then the necessary information for analyzing the data was extracted, referring to the customers' files randomly selected.

Field of study

This study examines the factors affecting deferred debts of the banks and presents the appropriate marketing strategies to decrease them, conducted at the BMI branches of Gilan province. In order to facilitate the collection, analysis and classification of data, BMI branches of the province have been divided into five districts of Central, North, South, East, and West. In time terms, facilities granted to customers in a five-year span from 1388 to 1392 Solar Hijri (2009-2013) in the form of Islamic contracts (Oghud) at the BMI branches of Gilan province were examined and analyzed. The current research variables include deferred debts, type of collateral, type of use, type of activity, type of payment credits and the credit period which are studied in the fields of financial management and marketing management, providing the appropriate solutions.

Statistical data analysis

The analysis was done by means of inferential statistics and SPSS statistical software version 19. To analyze the data, Chi-square test and Cramer's V coefficient were used in order to determine the most effective factor. According to the studies based on the previous researches and the interviews conducted with senior managers of the bank's credit sector and evidences obtained for this issue, the research hypotheses were formulated.

In this study, in order to investigate the factors affecting the creation of debts and determine the intensity of effect of each factor, on the basis of information obtained from deferred facility files based on the statistical sample, the following analyses were conducted by chi-square test and Cramer's V coefficient. These analyses were conducted separately in five districts of Gilan province.

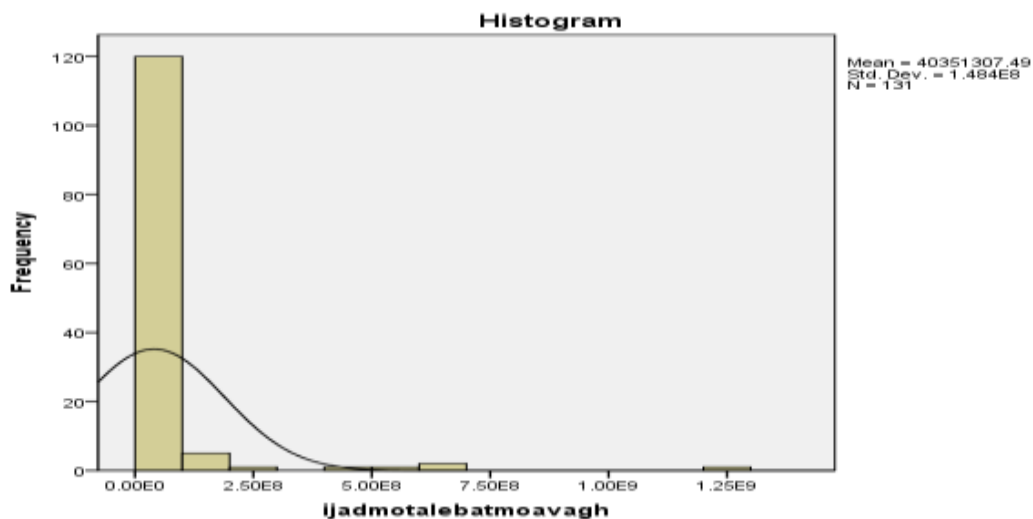
Statistical test of the research hypotheses in the central district

The following data and statistical indicators were calculated by means of SPSS software for data analysis:

Table 4.1. Statistical indicators of deferred debts (variable) for the sample in the central district

	Number error	131 2
Mean		40351307.4885
Median		900000.0000
Mode		41000.00 ^a
Std. Deviation		1.48389E8
Variance		2.202E16
Skewness		5.985
STD. Error of Skewness		.212
Kurtosis		41.665
STD. Error of Kurtosis		.420
Minimum		990.00
Maximum		1.28E9
Sum		5.29E9

Figure 4.1. A frequency distribution histogram of deferred debts in the central area



Hypothesis 1: There is a significant relationship between type of economic activities and the creation of deferred debts.

According to the studies conducted, most of the deferred debts are related to the commerce and service sector and the results indicated further effect of this sector on deferred debts. Similarly, by more examinations and accurate tests it was clearly specified that the commerce and service sector, having higher amount of deferred debts, had a greater effect on the BMI deferred debts. For this reason, new standard procedures need to be applied to grant facility in the commerce and service sector; so as to control more at the facility-granting stages and to prevent the creation of more deferred debts in this sector.

As shown in Table 1, the critical statistic for the chi-square test at the 95% confidence level and with 4 degrees of freedom equals to 9.488 and at the 99% confidence level is equal to 13.277. According to the calculations conducted, the value of 201.405 for chi-square statistic has been observed. Since the calculated chi-square statistic is greater than the critical values of 9.488 and 13.277 with 4 degrees of freedom, sample test function is located at both 95% and 99% confidence levels in the critical area, and this statement can also be observed in the SPSS output with Sig smaller than the error level of the test 0.05 and 0.01, so the null hypothesis is rejected and the opposite hypothesis as the accurate hypothesis is accepted. Similarly, Cramer's V coefficient is equal to 0.899.

Table 4.2. Chi-square test results for the hypothesis 1

Indices of chi-square test		Difference	expected numbers	Observed numbers	Type of activity
201.405	X ² statistic	-24.2	26.2	2	Farming
4	degrees of freedom	-5.2	26.2	21	Industry and mining
0.00	Margin of error	63.8	26.2	90	Commerce and services
0.889	Cramer's V coefficient				
critical statistic at two levels		-16.2	26.2	10	House and building
9.488	X ² _{95%:4}	-18.2	26.2	8	Exports
13.277	X ² _{99%:4}			131	Total
The null hypothesis has been rejected at both confidence levels, thus the research hypothesis is accepted.					Test result

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13.277	X ² _{99%:4}			131	Total
The null hypothesis has been rejected at both confidence levels, thus the research hypothesis is accepted.					Test result

Hypothesis 2: There is a significant relationship between duration of the offered credits and the creation of deferred debts.

A facility is divided into three groups in terms of the period of time: (1) less than one year (2) one to three years and (3) more than three years. The number of deferred debts created in a facility of the second group type (1-3 years) has been reported more than that of the groups 1 and 3. According to the investigations conducted and the interview arranged with senior managers of the bank, it probably seems that most of the facilities were offered in the commerce and service sector and in the form of Mudaraba contracts and documentary credits, and facility receivers must have settled their debts after selling the goods subject to each of the above contracts; whereas, due to the remaining time until the credit maturity, they adopted to reinvest the above-mentioned capital into the other fields such as housing, leading to a delay in repayment of the received facilities because of the necessity to stop the house construction at least for one year.

As a result, continuous monitoring at the time of spending credits and receiving stronger collaterals can be a temporary solution. As you can see in Table 3, the critical statistic for the chi-square test at the 95% confidence level and with 2 degrees of freedom shows the value 5.991 and the 99% confidence level equals to 9.210. According to the calculations carried out, the value of 63.496 for chi-square test statistic has been observed. Since the chi-square (X^2) statistic is greater than the critical value at both levels, sample test function is located at both 95% and 99% confidence levels in the critical area, and this statement can also be observed in the SPSS output with Sig smaller than the error level of the test 0.05 and 0.01, so the null hypothesis is rejected and the opposite hypothesis as the accurate hypothesis is accepted. The results of chi-square test are presented in Table 3. Similarly, Cramer's V coefficient equals to 0.751. The critical statistic values at two 95% and 99% levels are extracted from Table 1, chi-square distribution probability values.

Table 4.3. Chi-square test results for the hypothesis 2

Indices of chi-square test		Difference	expected numbers	Observed numbers	duration of credits
63.496	X ² statistic	-14.6	43.6	29	Less than 1 year
2	Degree of freedom	42.4	43.6	86	Between 1 to 3 years
0.000	margins of error	-27.6	43.6	16	more than 3 years
0.751	Cramer's V coefficient				
Test result: the null hypothesis has been rejected at both confidence levels, thus the research hypothesis is accepted.				131	Total
			X ² _{99%,2}	X ² _{95%,2}	critical statistic at two levels
			9.210	5.991	

Source:

Collegian Findings

Hypothesis 3: There is a significant relationship between the use cases of the offered credits and the creation of deferred debts.

Investigating the statistical population of this research revealed that deferred debts related to the working capital have been remarkably greater than the facilities for purchasing fixed assets. In this case, banks identify the most important procedures by which individuals and companies plan how to use their money in the working capital sector, and consider more control by specifying these factors and providing advice and practical solutions concurrent with lending facilities to these sectors. The chi-square (X²) test result is presented in Table 4.

As you can see in Table 4, the critical statistic for chi-square test at the 95% confidence level and with 2 degrees of freedom equals to 3.841 and at the 99% confidence level equals to 6.635. According to the calculations made, the value of 7.336 for chi-square test statistic has been observed. Since the calculated chi-square statistic is greater than the critical value at both levels, sample test function is located in the critical area at both 95% and 99% confidence levels, and this statement can be also observed in the SPSS output with Sig smaller than the error level of the test 0.05 and 0.01. As a result, the null hypothesis is rejected and the opposite hypothesis is accepted as the accurate hypothesis. The Cramer's V coefficient is also equal to 0.864.

Table 4.4. Chi-square test results for the hypothesis 3

Indices of chi-square test		Difference	expected numbers	Observed numbers	type of use
7.336	X ² statistic	15.5	65.5	81	working capital
1	Degree of freedom	15.5-	65.5	50	fixed capital
0.000	margins of error			131	Total
0.864	Cramer's V coefficient				
Test result: the null hypothesis has been rejected at both confidence levels, thus the research hypothesis is accepted.			² .X ² _{99%}	² .X ² _{95%}	critical statistic at two levels
			6.635	3.841	

Source: Collegian Findings

Hypothesis 4: There is a significant relationship between type of the payment credits (contracts/Oqood) and the creation of deferred debts.

As you can see in Table 4, the critical statistic for chi-square test at the 95% confidence level and with 6 degrees of freedom equals to 12.592 and at the 99% confidence level equals to 16.812. According to the calculations made, the value of 58.214 for chi-square test statistic has been observed. Since the

calculated chi-square statistic is greater than the critical value at both levels, sample test function is located in the critical area at both 95% and 99% confidence levels, and this statement can be also observed in the SPSS output with Sig smaller than the error level of the test 0.05 and 0.01. As a result, the null hypothesis is rejected and the opposite hypothesis is accepted as the accurate hypothesis.

Table 4.5 Chi-square test results for the hypothesis 4

Indices of chi-square test		Difference	expected numbers	Observed numbers	type of credit
58.214	X ² statistic	21.3	18.7	40	Mudaraba
6	Degree of freedom	-12.7	18.7	6	Civil partnership
0.000	margins of error	9.3	18.7	28	installment sale
0.968	Cramer's V coefficient				
critical statistic at two levels		-18.7	18.7	5	Hire purchase
12.592	X ² _{95%-6}	8.3	18.7	2	Jualah
16.812	X ² _{99%-6}	5.3	18.7	24	Gharz-ol-Hasanah (beneficence loan)
the null hypothesis has been rejected at both confidence levels, thus the research hypothesis is accepted.		-12.7	18.7	6	Documentary credit
				131	Total

Source: Collegian Findings

Hypothesis 5: There is a significant relationship between type of the received collaterals and the creation of the creation of deferred debts.

X² test results in Table 5 show that the critical statistic for chi-square test at the 95% confidence level and with 7 degrees of freedom equals to 14.067 and at the 99% confidence level equals to 18.475. According to the calculations made, the value of 25.000 for chi-square test statistic has been observed. Since the calculated chi-square statistic is greater than the critical value with 4 degrees of freedom, sample test function is located in the critical area at both 95% and 99% confidence levels, and this statement can be also observed in the SPSS output with Sig smaller than the error level of the test 0.05 and 0.01, accordingly the null hypothesis is rejected and the opposite hypothesis is accepted as the accurate hypothesis.

Table 4.5 Chi-square test results for the hypothesis 5

Indices of chi-square test		Difference	expected numbers	Observed numbers	received collaterals
25.000	X ² statistic	-6.75	32.75	26	Estate
7	Degree of freedom	-12.75	32.75	20	Promissory note
0.000	margins of error	24.25	32.75	57	enforceable contract
0.749	Cramer's V coefficient				
critical statistic at two levels		-4.75	32.75	28	deposits
14.067	X ² _{95%:7}	The null hypothesis has been rejected at both confidence levels, thus the research hypothesis is accepted.			
18.475	X ² _{99%:7}				
				131	Total

Source: Collegian Finding

Similarly, the statistical hypothesis testing was conducted for four districts including North, East, West, and South, just as it was done for the central district and the significance of the relationship between research hypotheses and deferred debts was determined and proved separately in each district by means of chi-square test, listed a summary of its results in the table below due to the limitation of this paper size.

5.. Test results of the research hypotheses and comparing with previous researches

Test result	Comparison of ratios		Research hypotheses
	Research hypothesis $p_o \square p_e$	Null hypothesis $p_o \square p_e$	
Approved	✓	x	There is a relationship between type of economic activity and creation of deferred debts.
Approved	✓	x	There is a relationship between duration of the offered credits and the creation of deferred debts.
Approved	✓	x	There is a relationship between the type use of the offered credits and the creation of deferred debts.
Approved	✓	x	There is a relationship between type of payment credit and creation of deferred debts.
Approved	✓	x	There is a relationship between type of receivable collaterals and creation of deferred debts.

RESULTS

The central district of Rasht

According to Cramer's V coefficient obtained (0.968), type of payment credit exercised the greatest influence on the deferred debts in the west district. Therefore, hypothesis 4 had the most effect in the central district. [hypothesis 4: there is a significant relationship between type of the payment credits (contracts/Oqood) and creation of deferred debts].

Proposal: types of the credits paid to the clients include Mudaraba, Civil partnership, installment sale, hire purchase, Jualah, Qard-ol-Hasanah (beneficence loan), and documentary credit. It is recommended that bank managers should apply more controlling procedures in this sector and thereby identify the customers' uses and provide consulting services for other borrowers so as to prevent creating the deferred debts.

The role of marketing programs in choosing the right types of contracts (Oqood) payable to the customers is also noteworthy. Resource allocation, facility granting, interest earning, and charges arising from loans are considered as the most important ways to receive income for Iranian banks. As a result, banks are able to apply marketing techniques for choosing a customer and type of payment facility to sell their goods (facilities). Today there are customers who, due to the amount of their requirements, demand for a specific type of facilities by referring to the banks, while banks have to minimize the credit risk using direct marketing technique and validation of the customers who refer to the banks to receive some facility. In direct marketing, banks communicate with a customer without any intermediary and proceed to offer facilities by a mutual agreement after receiving the necessary information from the customer as well as validating and acquainting her/him with all kinds of payable contracts. Adopting such a procedure can help greatly in preventing and reducing the debts.

The north district

According to Cramer's V coefficient obtained (0.975), type of economic activity exercised the greatest influence on the deferred debts in the north district. Therefore, hypothesis 1 had the most effect in the north district. [hypothesis 1: there is a significant relationship between type of economic activity and creation of deferred debts].

Proposal: According to the studies conducted, most files of the deferred debts have been reported in the commerce and service sector that, on the basis of the results, indicated further impact of this sector on the deferred debts. Similarly, more accurate tests and examinations clearly specified that commerce and service sector with higher deferred debts had a greater effect on the BMI deferred debts. For this reason, new standard procedures need to be applied to grant facilities to the commerce and service sector; so as to control more at the facility-granting stages and to prevent the creation of more deferred debts in this sector.

Absence of marketing strategies for the facility granting in commerce and service sector is quite evident. In this sector, facilities are paid to customers mostly in the form of Mudaraba and documentary credit, being a kind of short-term loans, creating more relationship with the customer. To maintain and strengthen the relationship with merchants and service companies in today's competitive market, in addition to the above-mentioned direct marketing, is also possible by using relationship marketing strategy. The existence of such a relationship has an important role in the prevention of the deferred debts. Today every customer either as a depositor or as a debtor has her/his own special value. The main goal of relationship marketing is to create a stable and secure relationship with a customer of any kind. Creation of such a relationship with the customers who are the subjects of this study and have deferred installments is also very complex and has its own psychological subtlety. Technical and moral compliance with these subtleties in the bargaining process to collect installments is completely necessary.

The west district

According to Cramer's V coefficient obtained (0.955), type of credit use exercised the greatest influence on the deferred debts in the west district. Therefore, hypothesis 3 had the most effect in the west district. [hypothesis 3: there is a significant relationship between uses of the offered credit and creation of deferred debts].

Proposal: A survey on the statistical population of this research revealed that the deferred debts related to the working capital have been remarkably greater than the facilities for purchasing fixed assets. In this case, banks identify the most important procedures by which individuals and companies decide and plan for their own money in the working capital sector and consider more control over these sectors by specifying the related factors and providing advice and practical solutions concurrent with lending facilities. Direct marketing should be applied for identifying and specifying these factors so as to form a stronger control system by creating a more complete database from the use of the capital to prevent and reduce the deferred debts.

The east district

According to Cramer's V coefficient obtained (0.896), duration of use exercised the greatest influence on the deferred debts in the east district. Therefore, hypothesis 2 had the most effect in the east district. [hypothesis 2: there is a significant relationship between duration of the offered credits and creation of deferred debts].

Proposal: the duration of the deferred debts, related to the facilities, with 1 to 2 years is longer than that of the deferred debts with a period less than 1 year and also with a period more than 3 years. According to the investigation conducted and the interview arranged with senior managers of the bank, it probably seems that most of the facilities were offered in the commerce and service sector and in the form of Mudaraba contracts and documentary credits, and facility receivers needed to settle their debts after selling the goods subject to each of the above contracts, and due to the remaining time until the maturity, they adopted to reinvest the above-mentioned capital into the other fields such as housing, leading to a delay in repayment of the received facility because of the necessity to stop the house construction at least for one year. In order to avoid this problem banks need to have more control and supervision on how to use the facility and timely payment of debts on behalf of their customers. The existence of such a monitoring depends on having a sustainable and effective relationship at the period of repayment, in which relationship marketing and type of behavior with a customer play a key role.

The southern district

According to Cramer's V coefficient obtained (0.975), type of the received collaterals exercised the greatest influence on the deferred debts in the southern district. Therefore, hypothesis 5 had the most effect on the deferred debts. [hypothesis 5: there is a significant relationship between type of the received collaterals and creation of deferred debts].

Proposal: The results showed that most of the collaterals received have been in relation to the enforceable contracts for the guarantee of the third parties. Then the deposits received are reported as the most number of collaterals. In order to reduce the debts, bank managers should use other collaterals, having greater capability for liquidity, and thereby proceed to cash the collaterals at the time of creating debts to collect part of them.

CONCLUSION

the results revealed that there is a significant relationship between type of economic activity, duration of payment credits, type of credit, type of collaterals received, and type of payment credit with deferred debts in all districts. Then the effect of each factor was separately studied in each of the five districts. And finally, the appropriate marketing strategies were designed and proposed in order to reduce deferred debts.

The following general proposals can also be submitted to solve the problem of deferred debts:

1. One of the most important points that banks need to consider in applying the marketing strategies in all districts to reduce debts is to use the conversion marketing and to change the negative demand into positive one. Banks can increase the tendency to the purchase of goods from the debt market, using creativity and innovation in the ways of lending facilities, collecting installments and presenting promotional advertisements such as remission of delay penalties, making installments of debts, indulgence (Imhaal), converting deferred facilities into current liabilities and so on.
2. Banks should completely describe marketing concept and its relationship with deferred debts in the banking system and also plan and arrange the proper marketing strategies and then implement them, monitoring the applied strategies and evaluating rate of their success in reducing debts with several methods such as direct marketing.
3. It is recommended for the statistical population organizations to employ the educated forces that are familiar with financial affairs to prepare reports on credit information in Credit Information office and Credit Department of the districts and avoid lending facilities to ineligible individuals by reviewing and amending of the existing directives and instructions. An instructions needs to be prepared and regulated to establish a responsibility for the appraisers of credit customers' estates, to receive vendible collaterals, to have a precise control, supervision and tracking of overdue accounts, to negotiate with debtors before the transfer of liabilities to the heading of the deferred debts, to control maturities and status of customer accounts in terms of liquidity, and to immediately investigate the installments deferred by a branch manager.
4. Banks also should set up educational courses to familiarize their employees and train them how to act in accordance with new methods of collecting installments and deferred debts, leading to a customer's convenience and saving his/her time.
5. Banks should train their personnel to identify unclaimed properties of debtors, to timely inform the guarantors in connection with the deferral of the facilities guaranteed, to choose the best legal system for collecting the debts and to avoid doing the parallel actions.
6. In addition, banks should not ignore the main role of employees' motivation in preventing and collecting the deferred debts. Finally, according to the results of this research and since the legal and financial methods employed by banks so far have little effect in reducing debts, that are still growing as the central bank declared, it is recommended that banks should not observe the deferred debts phenomenon only from financial management perspective. Nowadays, with the great advances occurred in the field of strategic and marketing management we can design, plan and implement the proper marketing strategies

for reducing banks' deferred debts, with a broader and more innovative consideration and concurrently with today's technology.

CONFLICT OF INTEREST

There is no conflict of interest.

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