

Risk Analysis of Customers Churn Rate at the Bandung Mandiri Shari'a Bank

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Abstract

Shari'a banking are expanding and growing rapidly nowadays, as shown by the increasing market shares at several already existing shari'a banks as well as births of new shari'a banks induced by conventional banks. Such growth is also proven at Bank Shari'a Mandiri (BSM), namely the Bandung Mandiri Shari'a Bank, by a significant increase in the number of its financing customers. Indeed, the increase could not be separated from the churn rate, namely customer migration and absorption from conventional banks or the other existing shari'a banks to Bandung BSM. Financing customer migration thus becomes an important matter to be studied, in order to find out about the driving factors for financing customers' preferences to be made an input for Bandung BSM for planning a strategy to cope with the market share increase. This research was aimed at identifying financing customers' preferences toward Bandung BSM by studying the dominant factors influencing the financing customers to choose and migrate to Bandung BSM and using the factor analysis method to observe the churn rate risks. Samples are taken from a number of Bandung BSM customers, selected through questionnaires. There are three factors influencing customer preferences for choosing Bandung BSM, namely: availability of supporting facilities, leadership, and shari'a. Based on impact-probability matrix analyses, it is shown that there are three attributes that have high probability values, that is, profit sharing system, administrative easiness, and leadership factors. Results of this research also showed that the Bandung BSM churn rate risks were of medium to high probability, and this will greatly impact the bank's performance. Therefore, some real effort is necessary to minimize the churn rate risks.

Keywords: customer preference, churn rate risk, factor analysis, risk analysis, risk identification, risk measurement, impact-probability matrix.

Introduction

A great number of people believe that, compared to conventional banks, shari'a banks will be more resilient in facing a crisis. This means that depositing their money in shari'a banks will be safer, and borrowing money from shari'a banks will be fairer. The basic main consideration for such perception is that shari'a banks have less business risks as the other conventional banks. Shari'a banks are believed of being able to evade liquidation risks due to speculation and interest system that usually affect conventional banks, namely because of the profit sharing system used by shari'a banks.

In line with the provision from the monetary authority (Bank Indonesia) pertaining to the obligation of banks to put risk management into practice in all banking activities (Bank Indonesia, 2006). In year 2004 Bank Shari'a Mandiri had actively straightened up and improved all aspects concerned to implementing risk management. Until the end of year 2004 Bank Shari'a Mandiri had carried out the action plan for implementing risk management. The undertaking covers improvement of all instruments of operational policies and regulations towards risk based supervision. In this context, the implementation of risk management at Bank Shari'a Mandiri was also directed towards enhancing the active roles of the Directors and Commissioners as well as the Dewan Pengawas Shari'a (Shari'a Supervisory Board) in implementing risk management (BSM, 2004).

Being the largest shari'a bank, Bank Shari'a Mandiri has been managing the eight different risks as stipulated by Bank Indonesia, namely: Financing Risks (credits), Liquidity Risks, Market Risks, Operational Risks, Legal Risks, Strategic Risks, Compliance Risks, and Reputation Risks (BSM, 2004). Management of all these risks should be implemented in all branches all over Indonesia, without exception, also at Bank Shari'a Mandiri Bandung.

Bank Shari'a Mandiri Bandung provides three categories of products and services, that is, funding, financing, and services. Within the category of financing products, at present BSM Bandung have already 700 customers in Bandung and another 700 customers in other places in West Java, the figures are increasing rapidly year by year (BSM Bandung, 2006). The increasing number was indeed due to the churn rate of customers from conventional banks as well as from other existing shari'a banks to BSM Bandung.

The migration of financing customers became an important matter worth studying, that is, to find out the driving factors the financing customer preferences to be made as inputs for BSM Bandung for the bank's future strategies in enhancing its market shares through provisions of its best banking services (Bendapudi and Berry, 1997).

Studying the migration of financing customers will also become an interesting matter as it is not impossible that existing or candidate customers of BSM Bandung will migrate to other banks because of churn rates as a risk in the banking business (Booz, Allen and Hamilton, 2001).

Therefore, it is of great importance to have a special discussion on preferences of financing customers towards BSM Bandung to look into the risks of churn rates, using the factor analysis method.

Research objectives

The objective of this research was to provide inputs for BSM Bandung, namely an analysis of financing customers' preferences to look into the existing churn rate risks, spelled out as follows:

1. To obtain a picture on financing customers' preferences toward BSM Bandung by looking into the dominant factors influencing choices or migration of financing customers to BSM Bandung
2. To identify the churn rate risks that could influence the migration of financing customers from and to BSM Bandung to be used as inputs for preparing the right strategies for increasing market shares.

Methodology

This research is carried out by means of collecting primary data from questionnaires, distributed to BSM Bandung financing customers as samples. The important factor in designing the questionnaires is deciding on the variables to be used. Therefore, the variables should first be defined as concepts that are operationally measurable and could represent the expected objectives.

The questionnaire is divided into three parts:

1. Part I: expressing the variables of respondents' identity concerning characteristics of respondents
2. Part II: expressing the variables of customers' preferences, being derived from marketing mix of services, namely the 7 P
3. Part III: expressing the variables of attributes for assessment of customers' expectations and present condition of performance at BSM Bandung.

The identified variables of customers' preferences are derived from the marketing mix factors of Zeithaml and Bitner (1996) in service marketing, namely: product, price, place, promotion, people, physical evidence, and process. These factors will shape the customers' preferences toward Bank Shari'a Mandiri Bandung, as follows.

Marketing Mix Factors	Elements of Marketing Mix	Definition	Statement	Variables
Product	-Service features -Financing platform	Features and instruments of BSM Bandung in providing services for the customers	-Available and wide-spread ATM facilities to facilitate customers' transactions	P1
			-Already use on-line system for depositing and withdrawing money	P2
			-Financing platform negotiable between the bank and customers	P3
			-BSM gives clear information on different financing products the bank provides, thus making it easy for customers to choose the financing products that they want	P4

Price	-Profit-sharing system - Administration fee	The profit-sharing system applied by BSM Bandung is related to the Islam shari'a held firmly as the base and that there are some administration fees for the customers to pay	-Using the Islam shari'a system for implementing a clear profit-sharing system in accordance to MUI and BI stipulations	Pr1
			-Clear, measurable, and transparent calculation of the profit-sharing system between the bank and its customers	Pr2
			-Negotiable (flexible) profit-sharing system benefiting both parties	Pr3
			-Credit loads borne to the customers will not be too heavy due to the profit-sharing system	Pr4
			-The Bank provides high financing platform for customers (in accordance to prevailing regulations)	Pr5
			-BSM Bandung shall not impose high administration fees	Pr6
			-There will be no extra fees or other costs for customers to pay	Pr7
			-The profit-sharing system applied by BSM Bandung already in compliance with the Islam shari'a	Pr8
Place	-Accessible location	Location of the BSM Bandung office	-Easily reached strategic location	P11
			-BSM located near the place of activity, thus, making it easier for customers in transacting	P12
Promotion	-Promotional media	Related to promotional activities	-Promoting in good manners	Pm1
People	-Leadership factor -Staff services	Responsiveness and proficiency of BSM Bandung staff in providing good services, administrative or operational, so that customers feel safe and comfortable	-The management provides assistance in the administrative process of customers	Po1
			-Putting forward deliberations and relationships in problem solving	Po2
			-Availability of management policies to facilitate customers	Po3
			-Friendly leaders/managers	Po4
			-Good-looking leaders/managers	Po5
			-Professionalism of management in making decisions and policies	Po6
			-Attention and responsiveness of staff	Po7
			-Good and friendly services	Po8
			Security of customers' privacy and confidentiality	Po9

Table 1 Research variables

Physical evidence	BSM physical appearance	Real proofs of service-producing objects, i.e. appearances of building, interior, and other physical supporting things	-Satisfactory conditions of building and offices, giving the impression of comfort and safety (parking areas, WC, praying facilities, etc.)	Pe1
			-Occupying a clean and comfortable building with nice interior	Pe2
Process	-Quick service -Simple administration	Series of activities conducted by BSM Bandung staff to provide services to customers	-The length of time of BSM establishment	Pe3
			-Time needed in the procedure for accepting candidates of financing customers	Ps1
			-Time needed and speedy administration process	Ps2
			-Quick, right, and accurate services	Ps3
			-Not too long a queue for obtaining services	Ps4
			-BSM Bandung has good image and reputation in the eyes of customers	Ps5
			-BSM Bandung provides facilities in the administration process	Ps6
			-BSM Bandung is flexible on matters related to administrative requirements for obtaining financing products	Ps7
			-Clear, measurable, and transparent credit agreements and provisions from BSM Bandung	Ps8
			-Easy and clear procedures for obtaining financing (each company/individual will have easy access to financing from BSM Bandung)	Ps9
			-Obtaining recommendations from relatives	Ps10
			-Although using the profit-sharing system, it should already been standardized in compliance with BI provisions	Ps11
-BSM Bandung facilitates the customers in making transactions (both withdrawal and deposit)	Ps12			

Research results

1. Analysis of financing customers' preferences toward BSM Bandung

Further analysis is made on the processed data regarding the BSM Bandung financing customers' preferences towards the prevailing facilities, leadership, and shari'a system.

a. Factors of BSM Bandung facilities

Most of the financing customers want to have facilities that could support and facilitate transaction processes, such as ATM facilities, on-line systems, strategic location, as well as supportive building and interiors, all that makes the customers feel comfortable and safe in doing transactions (see Gokey, 2001). Interviewing the respondents revealed that the present physical evidences of BSM Bandung, such as cleanliness, parking areas, comfort, services, and easiness in transacting, should be improved.

Considering the location, building, and interior, all are quite supportive. Nevertheless, they should be well maintained. BSM Bandung has not yet had the necessary facilities for transacting, such as an on-line system. The bank only has a limited number of ATM facilities, and phone banking facilities are not yet supportive, whereas these facilities are really the ones greatly needed by the financing customers (see Crouhy et al., 2006).

b. Factors of leadership

BSM Bandung is operating for areas in the city of Bandung and the province of West Java. Bank Shari'a Mandiri Bandung was established in year 2004, and thus, the bank is still relatively new compared to the other branch offices of long established conventional banks, such as BCA, NISP, BII, Bank Mega, Bank Mandiri, etc. Although in Bandung there was already a shari'a bank, namely Bank Muamalat, most people in the city of Bandung and West Java are yet not familiar with the financing model using the shari'a system. Therefore, special approaches to the communities are necessary to educate and capture new customers as many as possible.

Results of the analyses indicated that the factor of leadership is most influential in approaches of relationships and deliberation nature to arrive at the necessary agreements in administration processes. The leadership characteristics that made up the personal branding of BSM Bandung management staff are:

1) *emotional branding*

The BSM Bandung managers/leaders become the important icon in marketing. The emotional nearness between the bank leaders and customers became an attractive power so that transaction processes can run easily, quickly, and appropriately.

2) *personality*

The BSM Bandung managers/leaders should be honest, trustworthy, and should also have the other good characters.

3) *trust*

Trust will grow along with reputation and this will take time. BSM Bandung had, until year 2006, shown satisfactory performances, as indicated by the increased profit and procured assets. The increased profits and procured assets are due to the increasing number of customers (market share) from year to year.

From interviews with the respondents, it was revealed that the present condition of leadership is quite supportive, but their performance should still be improved. The management staff members or bank leaders are expected to have a better understanding of the customers' needs and wants, and to be more responsive to problems facing the customers.

c. Factors of shari'a

The financing customers' preferences for choosing BSM Bandung to obtain financing facilities are due to the profit-sharing system that could reduce the burden of interests, with the understanding that when the business is not in a favorable condition, the profit sharing amount the customer has to pay will be less (and the other way around) and also because the profit sharing system is *halal* (legitimate) according to the Islam shari'a (see Karim, 2004).

At present, the profit sharing system applied at BSM Bandung, when converted against interests at conventional banks, the percentage is still higher. Therefore, it is relatively difficult for BSM Bandung to compete with conventional banks. Nevertheless, the implementation is already in accordance with provisions of the Islam shari'a, namely on matters of transaction agreements.

2. Churn rate risk analyses on financing customers of BSM Bandung

Based on analyses of factors of BSM Bandung financing customers' preferences, the following is a study on churn rate risks of financing customers of BSM Bandung.

2.1 Identification of risks

Risk identification is the beginning and most important part of the whole risk management process. From the existing Bank Shari'a Mandiri classification of risks, strategic risk is the risk related to the discussed issue, namely the issue focusing on churn rate risks (see Evans and Olson, 2002). It is of great importance to investigate in detail the churn rate risks as they concern with the increase and decrease of market shares of BSM Bandung, which will have impacts upon the overall stability of the Bank Shari'a Mandiri business.

Churn rate risk is the risk due to migration of customers from a certain bank to another bank. From the existing definition of risks in the classification of risks usually available in banks, the churn rate risk is a derivation of strategic risk (Dowd, 2005).

Risk identification is conducted based on the classification of risks available at Bank Shari'a Mandiri, as shown in Table 2.

No.	Risk type	Scored by position		Definition
		Risk level	Risk trend	
1	Credit	Moderate	Down	Emerging exposures due to failures of counterparties to fulfill their obligations.
2	Market	Low	Stable/ Unchanged	Emerging exposures due to movements of market variables (interest rate and exchange rates) from the bank's portfolio, adverse movement from expectations could bring disadvantages to the bank.

3	Liquidity	Moderate	Down	Emerging exposures among others because the bank could not fulfill its obligations at maturity date (financing crisis)
4	Operational	Low	Stable/ Unchanged	Arising exposures among others, due to inadequacy or the not functioning of internal processes (process factor). Also due to system failure (system factor) in recording, booking, and reporting all transactions appropriately, comprehensively, and timely.
5	Legal	Low	Stable/ Unchanged	Arising exposures due to weaknesses in judicial aspects, among others due to prosecutions, absence of supporting laws and regulations.
6	Reputation	Low	Stable/ Unchanged	Exposures caused by negative publications on matters related to the bank's business activities or negative perceptions towards the bank.
7	Strategic	Low	Stable/ Unchanged	Exposures due to the promulgation and implementation of inappropriate bank strategies, inaccurate business decisions or lack of the bank's responsiveness towards external changes.
8	Compliance	Low	Stable/ Unchanged	Exposures due to the bank not complying or not implementing the prevailing laws and regulations.

Table 2. Risk identification at Bank Shari'a Mandiri
Source: BSM Annual Report (2004) and Chapman (2006)

Based on results of risk profile analyses during the fourth quarter of year 2004 conducted on all activities and products prevailing at BSM, in the overall, the predicate of risks at BSM is low with a stable trend category. Mitigating efforts should be exerted to suppress credit and liquidity risks from moderate category to low category (BSM Annual Report, 2004).

Churn rate risk is a part of strategic risks caused by the lack of bank responsiveness towards external changes. External changes are related to customers' preferences for and expectations from the bank. The prevailing condition is that conventional banks are competing with each other to open shari'a branches, and the conventional banks that have not yet opened their branches are now improving the quality of their services through providing additional features that make it easier for the customers to transact. The phenomena could indeed affect the migration of customers from BSM to other banks.

2.2 Measurements of risks

After the identification of risks that might arise at Bank Shari'a Mandiri Bandung, the next step is to conduct assessments or measurements on the respective risks. Measuring the probability of these risks to materialize and the extent of impacts that will affect Bank Shari'a Mandiri Bandung is one of the methods used for measuring risks. Risk measurement itself could be divided into two kinds, namely qualitative measurement and quantitative measurement.

The measurement of risks in this research is only conducted qualitatively by plotting the impact-probability matrix on data of churn rate risks obtained through interviewing (part III of the questionnaire) the financing customers at top management positions on their opinions about certain attributes. Results of the interviews were then processed to obtain the interpretations of BSM Bandung financing customers concerning the prevailing condition and their expectations (Mun, 2006; Kotler, 2000).

No.	Attributes	Rating Categories		Definitions
		Expectations	Present condition	
1	Quick service	To be improved	Quite satisfactory	Related with speed, accuracy, proficiency of staff and the time needed for obtaining financing at BSM Bandung
2	Simple administration	Administration to be made easier by providing knowledge and counseling to customers so that the process could run speedily, accurately, appropriately, transparent, and easy.	Quite satisfactory, providing facilities	Availability of certain dispensation or leeway and easiness in the administration process for obtaining financing facilities at BSM Bandung, and availability of supporting facilities, such as ATM, on-line system
3	Profit-sharing system	Providing mutually benefiting and negotiable values of profit-sharing	Quite satisfactory, already in accordance to shari'a Islam, however, profit-sharing rate is still high compared to conventional banks	High or low rate of profit-sharing put into effect at BSM Bandung
4	Leadership factor	Cooperation and team work should be improved	Good	Responsiveness and proficiency of BSM Bandung leaders in handling problems of financing customers
5	Platform	To be improved	Quite satisfactory	Flexibility in the amount of credits to be given to customers

6	Building appearance / Physical evidence	To be improved	Quite satisfactory	Physical evidence of service providing objects, such as building, interior, and other supportive physical instruments
7	Image of BSM	To be improved	Good	Reputation of BSM Bandung in the eyes of the customers

Table 3. Financing customers' interpretations towards BSM Bandung

Results of the interviews indicated that certain attributes should have to be improved as an effort to enhance service quality at BSM Bandung. The results were then interpreted by assigning a probability score on each of the assessed attributes to find out the extent of churn rate risks on financing customers at BSM Bandung by drawing a matrix between of impacts and probabilities qualitatively (see Mun, 2004).

The assigning of rating level on results of interviews, as shown in Table 2, was based on judgments of experts during a panel discussion, carried out qualitatively using the Analytical Hierarchy Process (AHP), for later use in drawing the impact-probability matrix. The assessments for the category of 'opinions on attributes for the present condition' are interpreted by assigning a rating level for use in the impact-probability matrix.

2.3 Analyses of risks

As Lewis (2004) and Olsson (2002) indicate that to facilitate the plotting of the impact-probability matrix on the Cartesian coordinates, results of the qualitative assessments are then quantified through weighting using scores, as shown in Table 4.

Rating category on the attribute of present condition	Rating level for the impact-probability matrix	Quantity weighting scores
Not good	Low	0 – 3
Quite satisfactory	Medium	> 3 – 6
Good	High	> 6 - 9

Table 4. Scoring of the rating categories
Note: Scoring is based on judgments of experts through a Forum Discussion Group

The following table elucidates the conversion of qualitative to quantitative assessments. For example, the attribute of quick service in the category of evaluation of the present condition, the performance of BSM Bandung is considered quite satisfactory. The assessments are then converted on the probability score for the probability of improved service speed at BSM Bandung is medium, however, when it is happening, it will give high impacts on performance of BSM Bandung, and thus, given the scores of 4; 5; and 6, and so on. The complete evaluation results are as follows:

No.	Attributes	Rating category	Probability Score		Score	
		Present condition	Probability for happening	Impact on performance	Probability for happening	Impact on performance
1	Quick service	Quite good	Medium	High	4.5	6
2	Simple administration	Quite good	Medium	High	5.5	8
3	Profit-sharing system	Quite good	Medium	High	5	9
4	Leadership factor	Good	High	High	8	7.5
5	Platform	Quite good	Medium	Medium	6	5
6	Physical evidence	Quite good	Medium	Medium	6.5	6
7	Image of BSM	Good	High	High	9	7

Table 5. Rating results of attributes for churn rate risks

The impact-probability matrix is plotted on a Cartesian coordinate, where the vertical line denotes the level of probability of happening of enhancement or improvement of each attribute at BSM Bandung. The horizontal line represents the level of impact on performance that might happen when improvement is made on the respective attribute.

Conclusions can be drawn from the matrix, namely that the attributes for churn rate risks are having medium to high probability level and will bring high impacts on improved performance at BSM Bandung.

The probability for happening to the profit-sharing system applied at BSM Bandung is at the medium level, lower compared to interest rates of conventional banks. However, it will induce high impacts on enhanced performance at BSM Bandung. The probability for an increased profit-sharing is due to provisions related to other risks, such as market risks, country risks, BI policies, and others, which are difficult to handle internally.

With regards to the factor of leadership, the probability for happening when all elements of the leadership factor are enhanced will be high, and this will have highly significant impacts on performance at BSM Bandung, as at branch offices, the leadership factor is dominant.

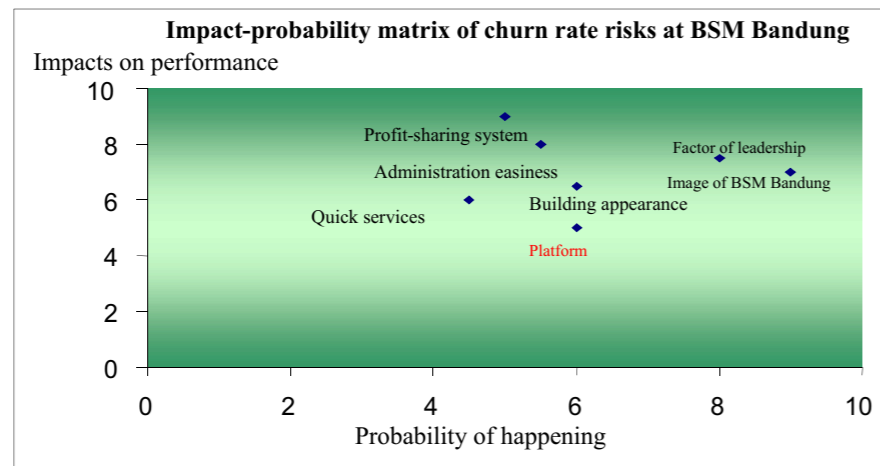


Figure 1 Impact-probability matrix of churn rate risks at BSM Bandung

The probability for improvement of administration easiness is medium however, when it is happening, it will have high impacts on improved performance at BSM Bandung. Low probability is due to the factor of human resources and the principle of prudence exercised by the bank in providing financing products to customers. Results of comparative studies on several sources indicated that the Shari'a Bank has only a few qualified human resources and thus, further trainings are necessary.

When the physical appearance of the building is improved, the probability will be very high but not significant towards the impacts on performance at BSM Bandung. The reason is that nice building appearance will not affect performance when there are no other supporting facilities to enhance services and easiness of administration.

Results of the study reveal that the impact of churn rate risks is immense and therefore, it is of great importance the improvement efforts jack up performance of Bank Shari'a Mandiri in particular.

3. Interpretation of research results

From the results of the above factor analyses of customers' preferences and impact-probability matrix, the following table is produced:

No.	Results of factor analyses	Results of impact-probability matrix
	There are three main factors influencing financing customers' preferences for choosing the financing facilities available at BSM Bandung, among others:	There are three attributes with a high probability value on the impact-probability matrix, as follows:
1.	Factor of facilities	Profit-sharing system
2.	Factor of leadership	Simple administration
3.	Factor of shari'a	Factor of leadership

Table 6. Comparison of results of factor analyses and of impact-probability matrix

A conclusion can be drawn from the above table, namely that the three factors are indeed the factors influencing financing customers' preferences for choosing Bank Shari'a Mandiri Bandung. The available supporting facilities cover easiness or simple administration, the factor of shari'a that uses the profit-sharing system and not the interest system, and the factor of leadership with personal branding, thus, making it reliable. The BSM Bandung management should indeed give extra attention to the three factors (see Parasuraman et al., 1988).

An earlier research conducted by the Research Center of Institut Pertanian Bogor (Lembaga Penelitian IPB, 2000) on shari'a banks in West Java ('Bank Shari'a, Potensi Preferensi & Perilaku Masyarakat di Wilayah Jawa Barat') revealed the motivations of respondents for choosing the services offered by Bank Shari'a in year 2000, as follows.

No.	Motivation for using lending services	Bank Shari'a customers	
		Total number	Percentage (%)
1.	Profit-sharing system	21	6.5
2.	Quick service	75	23.1
3.	Low transaction fee	16	4.9
4.	Variety of deposit products	2	0.6
5.	Not using the interest system	39	12
6.	Conducting the religious shari'a	19	5.9

Table 7. Respondents' motivation for choosing or using deposit, lending, or other services offered by Bank Shari'a in year 2000 Source:IPB Research Team (2000)

Comparing the results of this research with those from the IPB research team in year 2000, there are some shifts of customers' preferences for choosing Bank Shari'a.

In the study conducted by the IPB research team, the largest percentage of respondents want quick service (23.1%) and because the bank is not using the interest rate system (12%). This is because people are comparing them with main advantages of conventional banks that already have a long record of professionalism in providing services as they have great accessibility and supporting facilities (IPB Research Team, 2000).

Results of this survey however, indicated that financing customers' preferences for choosing Bank Shari'a Mandiri Bandung are due to the service supporting facilities such as on-line system, availability of ATMs, easy access in transacting and simple administration. Apart from that, there is also the factor of shari'a, namely of using the profit-sharing system in compliance to the shari'a of Islam. Meanwhile, quick service no longer become the main factor, as services at BSM Bandung have been standardized by the available system, whereas improvement efforts have been exerted for the supporting facilities. The factor of leadership is of great support, as for each bank at certain areas or branches, the leader figure becomes an important icon for customers or applying customers.

Conclusions

Churn rate risk is part of the strategic risks caused by the promulgation and implementation of inappropriate banking strategies, inappropriate business decision making or lack of bank responsiveness to external changes.

Based on analyses of customers' preferences towards BSM Bandung in general, there are three factors influencing financing customers' preferences for choosing the Bank Shari'a Mandiri Bandung, namely: supporting facilities, leadership, and shari'a.

The result from the impact-probability matrix analyses, there are three attributes with high probability values, namely: profit-sharing system, administration easiness or simplicity, and leadership.

Risk analyses from the customers of BSM Bandung indicate that the churn rate risks have medium to high probability, which will have great impacts on performance of BSM Bandung and therefore, substantial efforts should be carried out to minimize the risks.

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