Evaluation of relationship marketing in Islamic banks in the UAE: Empirical evidence based on sensitivity analysis algorithm

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HIGHLIGHTS:
1. Leveraging AHP-based sensitivity analysis to test relationship marketing tactics robustness
2. Performance sensitivity analysis
3. Growing imperatives of relationship marketing in financial and banking sectors
4. Relationship marketing strategy is key for Islamic banks to maintain a long-term relationship
5. Factors accounting for relationship marketing success

ABSTRACT

The recorded success of a number of Islamic banks during the recent global financial crisis has indeed attracted the attention of a number of conventional commercial banks. Because these conventional banks are now operating Islamic windows, Islamic banks must focus their efforts on building relationship marketing that is grounded in the principles of Shariah to retain and attract prospective customers. This paper proposes the analytic hierarchy process (AHP) sensitivity analysis methodology to test the stability or robustness of the priority ranking of relationship marketing tactics. It used AHP-based questionnaire survey to evaluate the relative importance of factors accounting for relationship marketing success of Islamic banks. Relationship managers consider customer loyalty as the most important end-result of relationship marketing, followed by competitive advantage, customer satisfaction, and financial performance. Based on the performance sensitivity analysis, the overall priority of the alternative course actions accounting for relationship marketing success was robust (stable) to the changes in the importance of all the major objectives.

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1.0 Introduction

The increasing success of a number of Islamic banks around the world has attracted a number of conventional commercial banks to adopt Islamic windows. As a result, Islamic banks are not only facing competition from the Islamic windows of conventional commercial banks, but also from other Islamic banks (Hassan et al., 2008). Therefore, the marketing strategy of an Islamic bank must be concerned with its ability to establish and gain competitive advantage (Hassan et al., 2008). However, for the Islamic banks to establish and sustain strong competitive position they must know how to meet customers’ value expectations and manage customer relationships. Per American Marketing Association, "marketing is an organizational function and a set of processes for creating, communicating, and delivering value to customers and for managing customer relationships in ways that benefit the organization and its stakeholders." From the Islamic perspective, Hussnain (2011) considers
Islamic marketing as the process of identifying and implementing value maximization strategies for the welfare of both the stakeholders and the society in accordance with Quran and Sunnah general guidelines. Both definitions underscore the imperative of customer relationship building and the need to create and deliver value that serve the welfare of the society, stakeholders, and the firm.

The growing imperative of relationship marketing in banks, Islamic banks in particular has become prominent since the recent global financial crisis. The need for Islamic banking industry to differentiate itself from the conventional banking industry cannot be overemphasized. One way to achieve such a differentiation is to leverage aggressive implementation of customer relationship marketing tactics grounded in the principles of Islamic Shariah. Indeed, “this essential difference, resulting from the implementation of the Islamic Shari’ah principles, provides the incentive for Islamic bankers to search for different products/services to offer” (Hassan et al., 2008) through leveraging acceptable relationship marketing tactics. This involves the “process of identifying and establishing, maintaining, enhancing, and when necessary terminating relationships with customers and other stakeholders, at a profit, so that the objectives of all parties involved are met, where this is done by a mutual giving and fulfillment of promised” (Gronroos, 1997, p. 407).

This paper proposed the analytic hierarchy (AHP)-based sensitivity analysis (SA) model developed by Saaty (1980) to evaluate relationship marketing of Islamic banks within the UAE. SA checks the responsiveness of model results to possible variations in parameter values, and thus offers valuable and insightful information for evaluating the alternative courses of action. Samson (1988) suggests that SA is an important part of decision-making process thinking in real time and generally entails checking the effects of the model assumptions on the model solution. SA technique helps to examine potential changes and their influence on conclusions drawn from the model (Pannell, 1997). SA can provide decision makers with information regarding the robustness of the ranking of the alternative course of action. Per Fiacco (1983), SA determines the effect of local perturbation over results and stability analysis as the effect of finite perturbation over results behavior. According to Min (1994), “…the sensitivity analyses are necessary because changing the importance of criteria requires different levels of resource commitment …”

The AHP encompasses three basic functions, including structuring complexity, measuring on a ratio scale, and synthesizing. It is useful in structuring complex multi-attribute problems or decisions in many fields such as marketing, project management, operations/supply chain management, and economics. The AHP merits are the reliance on easily derived expert opinion data, ability to reconcile differences (inconsistencies) in expert judgments and perceptions, and the existence of Expert Choice Software to implement the AHP (Calantone et al., 1989).

This paper is bifurcated into the following sections. The second section presents the relevant literature review, including satisfaction, customer loyalty and service quality; relationship marketing; and relationship marketing in the banking sector. Third section discusses the research methodology. Fourth section details the data collection and analysis. Final section discusses the conclusion and managerial implications.

2.0 Literature review

2.01 Relationship marketing

The express motivation for business is to acquire and retain customers. Therefore, relationship marketing is an important marketing strategy firms can use to acquire and retain customers, and sustain loyalty. Although there is no one best definition of relationship marketing, a number of definitions have graced the marketing literature (e.g., Berry, 1983; Gummesson, 1994 & 1997; Sheth, 1994; Morgan and Hunt, 1994; Sheth and Parvatiyar, 1995; Gronroos, 1996; Aijo, 1996; Panda, 2003; Hunt et al., 2006). Sheth and Parvatiyar (2000, p. 9) assert that relationship marketing “is the ongoing process of engaging in cooperative and collaborative activities and programs with immediate and end-user customers to create or enhance mutual economic value at reduced cost.”

Morgan and Hunt (1994, p. 22) contend that relationship marketing is a process where all marketing activities are directed at establishing, developing, and maintaining successful long-term relational exchanges. Finally, it is the process of “attracting, maintaining, and—in multi-service organizations—enhancing customer relationships” (Berry, 1983, p. 25). Relationship marketing is consist of three important elements, namely planning and controlling of customer satisfaction, building and maintaining customer loyalty, and customer value management (Doyle, 2002). Any firm that adopts purposeful relationship marketing tactics will achieve customer satisfaction, customer loyalty, customer retention, and competitive advantage.

Customer satisfaction is one of the important results of purposeful marketing activity (Mick and Fournier, 1999; Spreng et al., 1996; Surprenant and Churchill). Forward thinking firms leverage relationship marketing to develop and cultivate long-term mutual and beneficial customer relationships (Hunt et al. 2006; Garbarino and Johnson, 1999; Barnes, 1997; Morgan and Hunt; 1994 Ganesan, 1994; Dower et al. 1987).
Customer satisfaction encompasses overall consumer fulfillment and experience about a firm’s product or service (Oliver 1997, 1999). It is one of the important determinants of long-term customer relationship (Oliver, 1980; Zeithaml et al., 1996; Athanassopoulos et al., 2001; Fornel, 1992; Levesque and McDougall, 1996). Based on the preceding, Hog and Amin (2010) suggest that enhancing customer satisfaction should be a key relationship marketing strategy for Islamic banks to maintain a long-term relationship with their customers. Customer loyalty entails customer’s commitment to a repeat business that can lead to enhanced competitive advantage and financial performance in the long-term (Chu, 2009; Oliver, 1997; Hayes, 2008).

2.02 Relationship marketing in banking sector

A number of authors (e.g., Aldlaigan and Buttle, 2005; Pont and McQuilken, 2005; Baumann et al., 2005; Carson et al., 2004; Yavas et al, 2004; Farquhar, 2004; O’Loughlin et al., 2004; Lang and Colgate, 2003; Madill, et al., 2002; Jamal and Naser, 2002; Colgate and Hedge, 2001; Ennew and Binks, 1999; Barnes and Howlett, 1998; Paulin et al., 1998; Bloemer et al., 1998; Clark, 1997; Ketner, 1995) have investigated the imperatives of relationship marketing in the financial/banking sector. Relationship marketing is a new paradigm shift in marketing theory and practice (Gronroos, 1994) use in a number of industries such as in services to acquire and retain customers and most importantly to build and maintain customer relationship and loyalty. The banking industry traditionally offers products and services that are simply commodities. Essentially, there are little or no differentiations in products and services banks offer to their customers.

However, where there is no differentiation, there is no competition. Panda (2003) asserts that because most of the core products and services banks offer to customers are commodities, it is difficult for them to compete. To differentiate their products and services, build long-term relationships, and gain competitive edge banks must embrace customer relationship marketing strategy. Thus, these needs can lead to growth in the implementation of relationship marketing in banks and in financial services (Heffernan, 2010; Ennew and Bink, 2006; Musa, 2009; 2006; Modigrhomi and Sarshar, 2005; Moriarty, 2003; Juhl, 2002; Abratt and Russel, 2000; Alexander and Colgate, 2000; Hocker and Wilmott, 1999). Sharpe (2007) emphasize that long-term relationship is an important source of marketing strategy firms can deploy to ward of competition and sustain profitability margins in the long run.

The banking sector can also use a relationship banking orientation strategy to create unique differentiation relative to rivals (Boot and Thakor, 2000). Moriarty (2003, p. 4) posits that relationship banking “…includes an acknowledge perception of mutual interdependence between and the customer [where] both parties is often based on mutual trust and openness, shared objectives [or vision], and a commitment to doing business with each other on long-term basis.” Ratnayake (n. d) attests that “when a bank claims to be practicing relationship marketing, it signifies that they have undertaken an organization wide strategy to manage and nurture their interaction with [customers] and sales prospects.”

Dibb and Meadows (2001) assert for a relationship marketing strategy to be successful a number of issues must be tackled, e.g., the role of sales-force and their training in relationship development must be taken into account, align the bank’s organization structure to fit the decentralized structure required in relationship strategy. In today’s hypercompetitive environment decision makers must understand the various aspects of relationship marketing as they are imperative for the effective relationship development between the firm and the customer (Ward and Dagger, 2007) and for implementing effective relationship marketing strategies (El Hinnawi, 2011). Kazi (2011) points out that an increase in a retail bank’s quality service resulted in an increased customer loyalty and retention. Both product and service quality are essential for customer satisfaction and retention. Jamal and Nasser (2002) study of retail banking sector in UAE found that service quality dimensions are important drivers for customer satisfaction, where core and relational dimensions of service quality are causal antecedents of customer satisfaction.

3.0 Research methodology

The proposed AHP allows decision-makers to model a complex problem in a hierarchical structure, showing the relationships of the overall goal, criteria (objectives), and alternatives. Due to its usefulness, the AHP has been widely used in research. Some studies that have used AHP include supply chain management (e.g., Gaudesi and Borghesi, 2006; Enyinda et al., 2010; Enyinda et al., 2013) and marketing (e.g., Dyer and Forman, 1992; Enyinda, et al., 2014).

3.01 Sensitivity analysis

Sensitivity analysis (SA) is a means of investigating the impact of reasonable changes in base-case assumptions (Eschenbach, 1992) or an approach which allows decision makers to explore the impact on the optimal decision(s) of potential changes in any of the problem variables (Trueman, 1974). Some of the uses of SA include determining...
the impact on the ranking of alternatives of changes in various model assumptions, making better decisions, deciding which data estimates should be refined before making a decision, and enabling management to focus attention on the most critical elements during decision implementation (Kirkwood, 1997; Eschenbach, 1992). Because of SA’s importance in decision-making, it has applied in a number of areas including the pharmaceuticals, medicine, civil engineering, political science and computer science (Steenland and Greenland, 2004; Blake et al., 1988; Castillo et al., 2006).

In discussing the imperatives of subjecting models to SA, Arnoff and Netzorg (1965) emphasized “the use of operations research is especially important and advantageous in that ... one can assess the sensitivity (response) of the system to a wide variety of conditions – without requiring either the time, expense, or risks associated with experimenting with system itself. [Thus,] hidden relationship can be brought to light and brought to bear upon decisions and control of activity.”

3.02 Application of AHP to relationship marketing in Islamic banks

The following steps are used. First, define an unstructured problem and determine the overall goal. According to Simon (1960), the methodology of decision-making process encompasses identifying the problem, generating and evaluating alternatives, designing, and obtaining actionable intelligence. Second, build the hierarchy from the top through the intermediate levels (criteria on which subsequent levels depend on) to the lowest level contains the list of alternatives.

The overall goal of the focal firm is in the first level of the hierarchy, shown in Figure 01. We used a multi-criteria analysis by way of a three-level AHP.

Level 1 contains the ultimate goal the decision maker intends to achieve – determinants of relationship marketing success. Level 2 has the relationship marketing factors (the major decision objectives or criteria) derived from the literature reviewed. They are as follows: 1. Customer loyalty (CL) – the possibility the customer will provide the firm with an advantage or benefits in the exchange process because of their relational bonds. 2) Financial performance (FP) – comes when a firm or a bank leverages purposeful relationship-based strategies. 3) Customer satisfaction (CS) – entails customer’s affective state toward a relationship. 4) Competitive advantage (CA) – competitive position gained due to customer satisfaction and loyalty, relationship commitment and trust, relationship quality, and service quality (the quality of relational bonds that exist between the customer and the bank exchange). 6) Decreased uncertainty (DU) – exists when there is transparency in information sharing between the customer and the bank. 7) Decreased switching - shifting of goodwill to rival banks tends to decline when the customer is happy with the quality of the relationship and service, commitment and trust.

Level 3 represents the factors accounting for relationship marketing success (Hunt et al., 2002), referred to as alternative course of actions or options, including Resource-Based (RESB): any tangible or intangible resources available to the bank that helps it to provide or offer products or services that have value for customers.

Figure 01: The decision hierarchy for relationship marketing
Differences in the performance of banks can be viewed as being determined mainly by differences in the types of resources they own or have access to (e.g., talents, managerial know how, information technology). Relational-Based (RELB): consists of trust, commitment, cooperation, keeping promises, shared values, communication, an effective conflict handling, and experience. Competence-Based (COMB): the ability a bank possesses to sustain the coordinated use of assets in a manner that enables it to achieve its goals. Competences are associated with a bank’s sustainable competitive advantages.

A bank developing a customer-relating competency that makes customer retention a priority and gives employees, as an overall willingness to treat customers differently, wide latitude to satisfy them. It processes for personalizing product or service offerings, and its incentives for building relationships. IT-Based (ITBA): A well integrated information and communication infrastructures as well as CRM programs to manage efficiently and effectively customer relationships. Marketing Offering-Based (MAOB): a bank’s blends of tangible and intangible attributes offered. They may include product or service quality, innovativeness, and customization.

Third, construct a set of pair-wise comparison matrices for each of the lower levels. The pair-wise comparison is made such that the attribute in row \( i \) \((i = 1, 2, 3, 4...n)\) is ranked relative to each of the attributes represented by \( n \) columns. The pair-wise comparisons are done in terms of which element dominates another (i.e. based on the relative importance of each elements). The integer values of 1 to 9 captures the expert’s judgments. Where \( a_{ij} = 1 \) means that \( i \) and \( j \) are equally important; \( a_{ij} = 3 \) signifies that \( i \) is moderately more important than \( j \); \( a_{ij} = 5 \) suggests that \( i \) is strongly more important than \( j \); \( a_{ij} = 7 \) indicates that \( i \) is very strongly more important than \( j \); \( a_{ij} = 9 \) signifies that \( i \) is extremely more important than \( j \).

### 3.02 Establishment of pair-wise comparison matrix A

The pair-wise comparisons are accomplished in terms of which element dominates or influences the order. To quantify the opinions that can be represented in an \( n \)-by-\( n \) matrix as follows:

\[
A = [a_{ij}] = \frac{w_i}{w_j} = \begin{bmatrix}
\frac{w_1}{w_2} & \frac{w_1}{w_3} & \cdots & \frac{w_1}{w_n} \\
\frac{w_2}{w_1} & \frac{w_2}{w_3} & \cdots & \frac{w_2}{w_n} \\
\vdots & \vdots & \ddots & \vdots \\
\frac{w_n}{w_1} & \frac{w_n}{w_2} & \cdots & \frac{w_n}{w_n}
\end{bmatrix}
\]

**Eq. (01)**

### 3.03 Eigenvalue and eigenvector

Saaty (1990) recommended that the maximum eigenvalue, \( \lambda_{\text{max}} \), can be determined as

\[
\lambda_{\text{max}} = \sum_{j=1}^{n} a_{ij} \frac{W_j}{W_i}
\]

**Eq. (02)**

Where \( \lambda_{\text{max}} \) is the principal or maximum eigenvalue of positive real values in judgment matrix, \( W_j \) is the weight of \( j^{th} \) factor, and \( W_i \) is the weight of \( i^{th} \) factor.

If \( A \) represents consistency matrix, eigenvector \( X \) can be determined as

\[
(A - \lambda_{\text{max}}I)X = 0
\]

**Eq. (03)**

### 3.04 Consistency test

Consistency index (CI) and consistency ratio (CR) are used to check for consistency associated with the comparison matrix. A matrix is assumed to be consistent if and only if \( a_{ij}^* a_{jk} = a_{ik}^* \) (for all \( i, j, \) and \( k \)). When a positive reciprocal matrix of order \( n \) is consistent, the principal eigenvalue possesses the value \( n \). Conversely, when it is inconsistent, the principal eigenvalue is greater than \( n \) and its difference will serve as a measure of CI. Therefore, to ascertain that the priority of elements is consistent, the maximum eigenvector or relative weights/\( \lambda_{\text{max}} \) can be determined. Specifically, CI for each matrix order \( n \) is determined by using Eq. (03):
CI = \(\lambda_{\text{max}} - n\)/n - 1.  \hspace{1cm} \text{Eq. (04)}

Where \(n\) is the matrix size or the number of items to be compared in the matrix. Based on (3), the consistency ratio (CR) can be determined as:

CR = CI/RI = \([\lambda_{\text{max}} - n]/n - 1\)/RI.  \hspace{1cm} \text{Eq. (05)}

Where RI represents average consistency index over a number of random entries of same order reciprocal matrices shown in Table 1. The CR is acceptable, if its value is less than or equal to 0.10. If it is greater than 0.10, the judgment matrix will be considered inconsistent. To rectify a judgment matrix that is inconsistent, decision-makers’ judgments should be reviewed and improved.

### Table 01: Average RI for different numbers of n

<table>
<thead>
<tr>
<th>N</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>RI</td>
<td>0.00</td>
<td>0.58</td>
<td>0.90</td>
<td>1.12</td>
<td>1.24</td>
<td>1.32</td>
<td>1.41</td>
<td>1.45</td>
<td>1.49</td>
</tr>
</tbody>
</table>

#### 3.05 Synthesized matrix

For the priorities of the alternative \(a_i\), the priorities then are aggregated as follows:

\[
P(a_i) = \sum w_k P_k(a_i).
\]

\hspace{1cm} \text{Eq. (06)}

Where \(w_k\) is the local priority of the element \(k\) and \(P_k(a_i)\) is the priority of alternative \(a_i\) with respect to element \(k\) of the upper level.

#### 4.0 The case study and data collection

The Islamic banks within the UAE are the interest of this paper. We used a case study methodology to achieve an in-depth knowledge of the determinants of Bank relationship marketing success in Islamic Banks. Yin (1994) popularized the use of case study methodology. According to Oke and Gopalakrishnan (2009), a case study is also relevant “where existing knowledge is limited because it generates in-depth contextual information which may result in a superior level of understanding.”

The data collection period spanned February 2013 – March 2013. We assembled the data through literature review and validated by interviews with the focal Islamic banks to determine customer relationship marketing tactics. Essentially, we used the questionnaire to collect data in order to evaluate the order of preference associated with determinants of relationship marketing success. Specifically, the developed questionnaire from the hierarchy tree assisted in facilitating pair-wise comparisons between all the major objectives and the alternatives at each level in the hierarchy using Saaty’s 1-9 scale.

### Table 02: Pair-wise comparison matrix for the six relationship marketing objectives

<table>
<thead>
<tr>
<th></th>
<th>CL</th>
<th>FP</th>
<th>CS</th>
<th>CA</th>
<th>DS</th>
<th>DU</th>
<th>Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer loyalty (CL)</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>0.2780</td>
</tr>
<tr>
<td>Financial performance (FP)</td>
<td>1/2</td>
<td>1</td>
<td>1</td>
<td>1/2</td>
<td>2</td>
<td>2</td>
<td>0.1486</td>
</tr>
<tr>
<td>Customer satisfaction (CS)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>0.1875</td>
</tr>
<tr>
<td>Competitive advantage (CA)</td>
<td>1/3</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>0.2097</td>
</tr>
<tr>
<td>switching (DS)</td>
<td>1/2</td>
<td>½</td>
<td>1/2</td>
<td>1/3</td>
<td>1</td>
<td>1</td>
<td>0.0882</td>
</tr>
<tr>
<td>Decreased uncertainty (DU)</td>
<td>1/2</td>
<td>½</td>
<td>1/2</td>
<td>1/3</td>
<td>1</td>
<td>1</td>
<td>0.0882</td>
</tr>
</tbody>
</table>

Finally, banks’ relationship managers of the focal firms responded to several pair-wise comparisons with respect to the goal. We then used the survey questionnaire results as input for the AHP. It took 15 judgments (i.e., \((6(6-1)/2)\)) to complete the pair-wise comparisons associated with the major objectives in Table 02, while it took 10 judgments (i.e., \((5(5-1)/2)\)) to complete the pair-wise comparisons of the alternative course of actions reported in Table 03.

The objective priorities in the last columns of Tables 02-03 can be determined either automatically (i.e., using the AHP Expert Choice Software 11.5) or manually using the following steps. 1) Add the elements in each column and divide each element of the matrix by its column total. 2) Synthesize the pair-wise comparison matrix in Table 02. 3) Determine the priority vector for each relationship marketing factors. 4) Determine the consistency ratio. 5) Determine \(\lambda_{\text{max}}\) 6) Determine the consistency index (CI). 7) Choose an appropriate value of the random consistency ratio in Table 01. 7) Check the consistency of the pair-wise comparison matrix to check whether the decision makers’ comparisons are consistent or not.
### Table 03: Pair-wise comparison matrix for the five alternative course of actions

<table>
<thead>
<tr>
<th></th>
<th>RESB</th>
<th>RELB</th>
<th>COMB</th>
<th>ITBA</th>
<th>MAOB</th>
<th>Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resource-based (RESB)</td>
<td>1</td>
<td>1/5</td>
<td>1</td>
<td>1</td>
<td>1/2</td>
<td>0.1176</td>
</tr>
<tr>
<td>Relational-based (RELB)</td>
<td>5</td>
<td>1</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>0.4476</td>
</tr>
<tr>
<td>Competence-based (COMB)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1/2</td>
<td>0.1123</td>
</tr>
<tr>
<td>IT-based (ITBA)</td>
<td>1</td>
<td>1/5</td>
<td>1</td>
<td>1</td>
<td>1/2</td>
<td>0.0986</td>
</tr>
<tr>
<td>Marketing offering-based (MAOB)</td>
<td>2</td>
<td>1/5</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>0.2239</td>
</tr>
</tbody>
</table>

### 5.0 Empirical results and discussion

The data were analyzed utilizing Expert Choice Software, an application that implements the AHP-based SA algorithms. Table 04 depicts the priority scores associated with the respect to the relationship marketing objectives. Relationship managers consider customer loyalty (0.2780) as the most important, followed by competitive advantage (0.2097), customer satisfaction (0.1875), and financial performance (0.1486), respectively.

Table 04 also reports the overall priority scores of the alternative course of actions that drive relationship marketing success.

With respect to the overall priority scores of the alternatives, relational-based is the most preferred option, followed by marketing offering-based, resource-based, and competence-based, respectively. That is relational-based (1) > marketing offering-based (2) > resource-based (3) > competence-based (4) > information technology-based. Thus, relational-based alternative is judge as the overall best strategic course of action that drives relationship marketing success.

### Table 04: Overall priority scores

<table>
<thead>
<tr>
<th></th>
<th>CL</th>
<th>FP</th>
<th>CS</th>
<th>CA</th>
<th>DS</th>
<th>DU</th>
<th>Priority</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>RESB</td>
<td>0.2780</td>
<td>0.1486</td>
<td>0.1875</td>
<td>0.2097</td>
<td>0.0882</td>
<td>0.0882</td>
<td>0.2730</td>
<td>0.1176</td>
</tr>
<tr>
<td>RELB</td>
<td>0.0940</td>
<td>0.0996</td>
<td>0.0864</td>
<td>0.1068</td>
<td>0.1096</td>
<td>0.2730</td>
<td>0.1176</td>
<td>3</td>
</tr>
<tr>
<td>COMB</td>
<td>0.5520</td>
<td>0.3674</td>
<td>0.5493</td>
<td>0.4142</td>
<td>0.3734</td>
<td>0.3678</td>
<td>0.4476</td>
<td>1</td>
</tr>
<tr>
<td>ITBA</td>
<td>0.1040</td>
<td>0.1194</td>
<td>0.0922</td>
<td>0.1400</td>
<td>0.1383</td>
<td>0.1000</td>
<td>0.6665</td>
<td>5</td>
</tr>
<tr>
<td>MAOB</td>
<td>0.1661</td>
<td>0.3043</td>
<td>0.1799</td>
<td>0.2343</td>
<td>0.2820</td>
<td>0.1927</td>
<td>0.2239</td>
<td>2</td>
</tr>
<tr>
<td>C.I</td>
<td>0.01</td>
<td>0.01</td>
<td>0.02</td>
<td>0.04</td>
<td>0.02</td>
<td>0.04</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 5.01 AHP-based sensitivity analysis

If the decision makers such as the customer relationship managers believe that a criterion might be more or less important than originally indicated, that criterion’s bar can be dragged to the right (increase) or left (decrease) to observe the impact on the ranking of the alternatives.

Therefore, the objective of SA in this paper is to determine how small changes (perturbation) in input parameters, such as the four most important relationship marketing tactics (i.e., customer loyalty, competitive advantage, customer satisfaction, and financial performance) will influence the ranking of the alternative course of actions (i.e., resource, relational, competence, information technology, and marketing offering-based factors).

Figure 2 shows the performance SA of the alternative priorities with respect to the four most important criteria. The left vertical axis indicates the major objective’s priorities with respect to goal, while the right vertical axis shows the priorities of the relationship marketing alternatives.

A series of SA was performed using AHP-based Expert Choice Software to investigate the impact of changing the priority of the major objectives on the ranking of the alternative course of actions (factors) accounting for relationship marketing success. Chang et al (2007) posit “… sensitivity analysis can be performed based on scenarios that reflect alternative future developments or different views on the relative importance of the criteria.”
Figure 02 reports the original performance sensitivity analysis. It shows the major relationship marketing objectives and the associated ranking of the alternatives course of actions (relational-based > marketing offering-based > resource-based > competence-based> information technology-based).
Figures 03-06 show the customer loyalty (27.8%), competitive advantage (21%), customer satisfaction (18.7%), and financial performance (14.9) SA, respectively. For example, increasing the customer loyalty priority by 10% from 27.8% to 36% in Figure 03 did not change the ranking of the alternative course of actions. Thus, the original ranking after the small changes remained stable or robust. Similarly, increasing the competitive advantage (Figure 04), customer satisfaction (Figure 05), and financial performance (Figure 06) by 10%, respectively did not change the original ranking of the alternatives. Essentially, each scenario is stable or robust.

Based on the entire performance SA, the overall priority of the factors (alternative course of actions) accounting for relationship marketing success is robust or stable to changes in the importance of all the attributes. However, if the ranking becomes highly sensitive to small perturbation in the priorities of the objectives, a review of the priorities will be recommended.
6.0 Conclusion and policy implications

Given that today's conventional banks are opening up Islamic windows, Islamic banks must focus significant attention on relationship marketing in order to retain and attract prospective customers. Hence, Islamic banks that ignore customer relationship marketing implementation do so at their peril. Islamic banks must become more consumer-centric if they have to survive and prosper. Retaining existing customers is imperative because to acquire new customers is costly and inefficient. Arguably, a purposeful marketing activity that results in customer satisfaction will in turn enhance a bank's competitive advantage and financial performance in an already crowded industry. To thrive and prosper, Islamic banks must focus their efforts in attracting and maintaining loyal customer base through the purposeful use of customer relationship marketing strategies. Furthermore, to gain competitive advantage and enhance financial performance in today's competitive banking environment, it is more than ever vital for Islamic banks to offer products and services that can meet and exceed customer value expectations and in turn lead to customer satisfaction and loyalty.

The use of AHP methodology supported the performance sensitivity analysis of the banks' major objectives. For Islamic banks to prosper, they must focus on customer-centric strategy, relationship building in particular. Relationship building is an important strategy that can lead to achieving customer loyalty, customer satisfaction, competitive advantage, and financial performance. Based on the performance SA for customer loyalty, customer satisfaction, competitive advantage, and financial performance respectively, the overall priority of the factors (alternative course of actions) accounting for relationship marketing success is robust or stable to changes in the importance of all the attributes. That is, relational-based > marketing offering-based > resource-based > competence-based > information technology-based. The robustness of relational-based and marketing offering-based are particularly important factors for attaining relationship marketing success. However, if the ranking becomes highly sensitive to small perturbation in the priorities of the objectives, a review of the priorities will become necessary.

References


