Attitudes of Qatari Investors in Selecting a Brokerage Firm in Doha Securities Market

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Abstract

In recent years, major stock market development, a trend in the Arabian Gulf, especially in Qatar is growing rapidly. People are investing more money in the stock market due to the increasing number of listed companies. It is predicted that this trend will accelerate in the future. As a result, stock markets will offer greater growth opportunities for investors. This article investigates factors affecting investors' behaviour in selecting brokerage firms in Doha Securities Market (DSM). The results of this study may have very important implications for developing successful marketing strategies for brokerage firms in order to improve their quality of services and be more competitive in this fast-changing business environment.

Introduction

The issue of stock exchanges and services provided by institutions has become an important subject for the researchers and decision makers in both developed and developing countries. As far as the Gulf Cooperation Council Countries (GCC) in general and Qatar in particular are concerned, a dramatical financial development has taken place in recent years. All the GCC's (with the exception of Saudi Arabia) have established official stock exchanges. The number of companies listed in those markets has increased rapidly, and the volume of trade (in terms of value and volume) has almost doubled during the last two years (DSM, Annual Report, 2003).

DSM was opened in Qatar in 1997. The number of companies listed increased from 19 in 1998 to 29 in 2003. The general index has risen by 37.3% and 69.8% in 2002 and 2003 respectively. In addition market capital has also increased from 13,968 QR millions in 1997 to 38,475 QR millions in 2002 (DSM, Annual Reports, 1998-2003).

Accordingly, financial services provided by brokers and brokerage firms has improved rapidly in both quantitative and qualitative perspectives. Brokers are most likely to appear when there are economies of scale in searching for suitable transactions. Since brokers are frequently in contact with many market participants, on a continuing basis, they are likely to know what contributes a 'fair' price for a transaction. Brokers not only provide such service at a cheaper price than the investor's own cost of search, they

also provide other services which are very important for investors, and help them to make decisions. These services provided by brokerage firms range from: providing information, offering advice, managing portfolios, financial assessments for share holding companies and performing transactions on behalf of the customer. It is the aim of this paper to conduct a field survey, examine these services and assess investors' attitudes in selecting a brokerage firms in (DSM).

Literature on Selecting a Brokerage Firm

Most of the research about investors' behaviour has been conducted in Western countries by financial analyst (Chan et. al., 1991). The main focus was centred on portfolio management, financial market structuring, and the trading of shares and bonds (Bowles et. al., 2001, Gilmore and McManus, 2003). Other studies focused on the psychology of investment in stock exchanges. A study by *Crockett and Friend (1967) examined the relationships between assets holding and household behaviours. Moreover, most of the literatures on the subject was concerned with descriptive analysis and very few have dealt with empirical investigation. This is the case of Bernstein's (1980) study who examined the psychological concept and its implications on investments.*

Other studies by Shiller (1987) and Shiller et. al. (1988) have attempted to investigate the reactions of both American and Japanese investors during the collapse of the international financial markets in 1987. The study's findings revealed that events, which took place in the United States, have affected the Japanese financial market directly and the mechanism in both countries are similar to an extent.

After reviewing the literature on the subject, it was found that few studies were conducted to examine factors affecting investors' behaviour towards brokerage services. In addition, very few studies have assessed the quality of services provided by brokerage firms, with the Chan et. al., (1991) study being considered the pioneer in the field.

Chan et.al. have treated investors as consumers and criteria have been established for their selection of particular brokers or brokerage firms, thereby providing criteria on investors in the stock market which can also be segmented. Initially a sample of 200 investors and 25 brokerage firms were used and interviews and research by questionnaire was undertaken. However, four segments emerged for category of investor, indicating that they seek different benefits according to their demographic and psychographic backgrounds.

To sum up, no previously reported research has investigated the factors which are considered important when selecting a brokerage firm in the stock markets in Arabian Gulf environment. This research intends to investigate the behaviour of Qatar investors towards the services provided by the brokerage firms and to examine the main factors underlying their choices of brokerage firm.

Study Methodology

A survey was conducted to assess factors considered important when choosing a brokerage firm and to gather opinions of investors' attitudes towards services provided by those brokerage firms. Investors have a free choice to deal with any of the brokerage firms in the Doha Securities Market. 780 questionnaires were hand-delivered by the author to the Central Registration Department in DSM. DSM were then asked to distribute the questionnaires randomly to investors who had invested in DSM for the past year. 550 questionnaires were returned resulting in a reasonable response rate of 70.5% (for more detail of a personal delivery and collection of a questionnaire, see Al-Sulaiti, 2002 and Lovelock et. al., 1976. It is worth mentioning that the questionnaire used in this study was mainly adapted from the study of Chan et. al., (1991).

On the other hand, all nine active brokerage firms in DSM were included in this study. The nine brokerage firms were:

1. Qatar National Bank
2. Doha Bank
3. Doha Commercial Bank
4. Group Securities
5. Gulf Investment Group
6. Qatar Securities Co.
7. International Financial Securities Co.
8. Al-Ahli Bank of Qatar
9. Islamic Financial Securities Co.

For the purpose of this study the nine brokerage firms were divided into three groups, these groups are: 1. Commercial Bank Firms, 2. Non-Bank Firms, 3. Islamic Firms.

The next step was to identify the factors affecting investors' behaviour in selecting a brokerage firm in DSM. Previous research helped to determine those factors on which investors differentiated brokerage firms (Chan et. al., 1991). 25 factors were elicited from the literature and they were also consistent with those suggested by Chan et. al., (1991).

Investors were then asked to indicate the importance of 25 factors using a five point scale ranging from 1= not important at all to 5= extremely important.

Data Analyses

The Characteristics of the Sample

Table 1 explains the main characteristics of the investors. A descriptive analysis of the data showed that the median age category (20-39 years group) were more than 93.5% of the respondents. As far as educational level of the respondents is concerned, it was noticed that more than 98% of the respondents have received at least a B.Sc. degree. Results also revealed that 81% of the respondents had an average monthly income of 10,000-20,000 QR. ($1=3.65QR.). The table also showed that the number of males is much higher than that of females.

Table 1: Summary of the Characteristics of the Sample

Characteristics	No.	%
Age:		
1. 20-29 yrs.	221	40.2
2. 30-39 yrs.	293	53.3
3. 40-49 yrs.	33	6.0
4. 50 yrs and above.	3	.5
Education:		
1. Below B.Sc.	56	10.2
2. B.Sc. degree	470	85.5
3. More than B.Sc. degree	24	4.4
Income:		
1. Less than 10000 QR.	88	16.0
2. 10000-15000 QR.	300	54.5
3. 15001-20000 QR.	146	26.5
4. Over 20000 QR.	16	2.9
Sex:		
1. Male	391	71.1
2. Female	159	28.9
Type of Brokerage firm used:		
1. Commercial Bank Firms	296	53.8
2. Non-Bank Firms	130	23.6
3. Islamic Firms	124	22.5

Results of Factor Analysis

Investors were asked to indicates the level of importance of the 25 factors that related to their behaviour when dealing with a certain type of brokerage firm, using 5-point scales ranging from 5=extremely important to 1=not important at all. Table 2 shows the mean and the standard deviations of scores of the 25 factors related to the investors' preferences. The data in table 2 show that VAR11, VAR16, and VAR2 score higher than the rest of the variables. On the other hand, the scores of VAR10, VAR19, and VAR25 are the lowest among the variables.

Table 2: Means & Standard Deviations for Dealing with a Certain Type of Brokerage Firms

	Mean	Std. Deviation	Variables
VAR1	3.9800	.77856	Commissions are not suitable
VAR2	4.0745	.76815	Sufficiency of brokers' number in the firm
VAR3	3.8527	.88611	Offer important advice to investors
VAR4	4.0055	.79041	Considered as important source of information
VAR5	3.8091	.83954	Provide prompt and efficient services
VAR6	3.8145	.79052	Deals are adequately done in the dealing room
VAR7	3.7527	.80568	Having recognized experience in foreign investments
VAR8	3.9182	.87395	Well informed about world market conditions
VAR9	3.8200	.73326	Able to manage portfolios
VAR10	2.8000	1.10965	Having sufficient practical experience in local market
VAR11	4.2945	.55693	Offer secondary services to investors such as "checks delivery"
VAR12	4.0145	.82965	Have the ability to perform financial assessment for share holding companies
VAR13	3.7545	.93880	Offer financial facilities for the investor
VAR14	3.7691	.79120	Offer returned commission services
VAR15	3.6745	.86497	Perform fast check return services
VAR16	4.0782	.78654	Deals are performed confidentially
VAR17	4.0473	.77150	Can be contacted through internet-network
VAR18	3.9636	.77680	Offer discount on commissions
VAR19	3.5018	1.00952	Have excellent reputation in society
VAR20	3.8291	.79838	Brokers are highly qualified
VAR21	3.6527	.85002	Brokerage companies act honestly and legally
VAR22	3.5073	.76996	Provide insider information
VAR23	3.6945	.87952	Initiate investment proposals
VAR24	3.6109	1.18486	Understand my investment philosophy
VAR25	3.4927	1.04496	Good relationship with clients

Factor analysis was used on the explanatory accepted data-reduction. An investigation of the correlations reported a high association among certain variables. This assures that the factor analysis is appropriate. Bartlett's test of Sphericity was used to examine the null hypothesis that the 25 variables are

uncorrelated in the population. The result of the examination gave a value of 6178.2 with a significance level of .0000 suggesting a strong rejection of the null hypothesis (Hair et. al., 1998). Kaiser-Meyer-Olkin (KMO) an adequacy test of sampling was applied. Results of the test revealed a value of .9177 which supports the appropriateness of using principal component analysis to explore the existence of an underlying structure in the data (Hair et al., 1998; Baker, 1991; Bartholomew, 2002).

Table 3 reports the final statistics and provides related information once the desired number of factors have been extracted. Results of the analysis suggested that the 25 factors should be reduced to five factors, those factors accounted for more than 59% of the total variance. Results of the reproduced correlation matrix indicated that 95 (31%) residuals (above diagonal) with absolute value > 0.05 suggesting an appropriate model fit (Johnson and Wichern, 2002; Tabachnick and Fidell, 2002).

Table 3: Results of Factor Analysis

Final Statistics						
Variable	Communality	*	Factor	Eigenvalue	% of Variance	Cumulative %
VAR1	.618	*	1	8.825	35.298	35.298
VAR2	.630	*	2	2.106	8.423	43.721
VAR3	.622	*	3	1.617	6.467	50.188
VAR4	.639	*	4	1.181	4.724	54.912
VAR5	.597	*	5	1.080	4.321	59.233
VAR6	.580	*				
VAR7	.420	*				
VAR8	.608	*				
VAR9	.552	*				
VAR10	.526	*				
VAR11	.626	*				
VAR12	.620	*				
VAR13	.558	*				
VAR14	.552	*				
VAR15	.635	*				
VAR16	.668	*				
VAR17	.633	*				
VAR18	.554	*				
VAR19	.550	*				
VAR20	.556	*				
VAR21	.495	*				
VAR22	.597	*				
VAR23	.334	*				
VAR24	.824	*				
VAR25	.814	*				

Table 4 reports the results of the rotated factor matrix obtained by varimax method.

Factor 1 has high coefficients on variables which suggests commissions are not suitable (VAR1), sufficiency of broker numbers in the firm (VAR2), offers advice to investors (VAR3), important sources of information (VAR4), provides prompt and efficient services (VAR5), deals are adequately performed in the dealing room (VAR6), ability of managing portfolios (VAR9), availability of internet services (VAR17), and providing discount on commissions (VAR18). Therefore, this factor may be labeled 'reliability'.

Table 4: Rotated Factor Matrix:

	Fac1	Fac2	Fac3	Fac4	Fac5
VAR1	.67809	.38493	.00521	.06085	.07658
VAR2	.66698	.38897	-.06269	-.17098	.03425
VAR3	.76788	.13808	.05760	-.04249	.09229
VAR4	.70927	.29960	.20072	-.00285	.07650
VAR5	.71367	.01047	.28709	-.01286	.06769
VAR6	.61051	.13395	.33483	.11319	.25422
VAR7	.41444	.35711	.54994	-.07069	.22986
VAR8	.25529	.71893	.09515	.08288	.10190
VAR9	.50384	.31326	.43171	.08907	.07583
VAR10	-.14194	.15899	.34483	.01288	.60147
VAR11	.23267	.05890	-.06378	-.02406	.75061
VAR12	.37101	.66066	.18537	-.09112	-.05612
VAR13	.21277	.61489	.07202	-.02979	.35895
VAR14	.34934	.45081	.57188	-.03292	.05538
VAR15	.19039	.17199	.75315	.03107	-.02482
VAR16	.29277	.70207	.26342	-.05764	-.12758
VAR17	.66683	.31814	.24807	.03137	-.15601
VAR18	.52109	.24552	.45377	.03950	-.12245
VAR19	-.00293	.40178	.51426	-.04165	.17858
VAR20	.15392	.66272	.26351	-.00770	.15242
VAR21	.31144	.11999	.55355	.06441	.27108
VAR22	.33434	.39918	-.01306	.56870	.04919
VAR23	.34832	.32576	.52300	-.01861	.04735
VAR24	.08042	.08904	.01549	.89960	-.02006
VAR25	.04696	-.01639	.03618	.89959	.02762

Factor 2 has high coefficients on the following variables: being well informed about world market situation (VAR8), performing financial assessment for share

holding companies (VAR12), offering financial facilities to investors (VAR13), dealing with confidentiality (VAR16), and brokers are highly qualified (VAR20). Therefore, this factor may labelled 'qualifications of brokers'.

Factor 3 has high coefficients on having experience in foreign investments (VAR7), offering returned commission services (VAR14), performing fast check return services (VAR15), having excellent reputation (VAR19), acting honestly and legally (VAR21), and initiating investment proposals (VAR23). Thus this factor may be labeled 'special services'.

Factor 4 is highly correlated with providing insider information (VAR22), understanding investors' investment philosophy (VAR24), and having good relations with clients (VAR25). Therefore, this factor may be labeled 'understanding investors'.

Factor 5 has high coefficients on having practical experience in the local market (VAR10), and providing secondary services to investors such as cheque delivery (VAR11). Hence, this factor may be labeled 'secondary services'.

Multiple Discriminant Analysis of Factor Scores

The scores of the five factors were introduced in multiple discriminant analysis as explanatory variables. The type of brokerage firms, where brokerage firms were divided into three groups, represents the dependent variable. Those groups are named as Commercial bank firms (Group 1), Non-bank firms (Group 2), and Islamic firms (Group 3).

Since we have three groups of brokerage firms and five factors, two discriminant functions can be evaluated (Klecka, 1980). The following table reports the results of the evaluation of the three-group discriminant analysis.

The results of group means reported that Factor 3 and to lesser extent Factor 1 separate the groups more widely than Factors 2,4, and 5. It is also noticed that the pooled within groups correlation matrix that is computed by averaging the separate covariance matrices for the 3 groups revealed low correlation coefficient between predictors. Therefore, it can be concluded that there is no real problem of multi-collinearity.

Univariate 'F' ratio test reported that when the predictors were considered individually, all predictors were significant, discriminating between the three groups except for factor five (secondary services) where the P-Value was >.05. Results also showed that the eigenvalue for function 1 was 3.021, whereas, for function 2 it was .044. Function 1 has the largest between-groups variability with 98.6% of the total variance, while function 2 accounted for only 1.4% of the between variability.

Table 5: Results of Discriminant Analysis

Number of cases by group

Type of Firm	Unweighted	Weighted	Label
1	296	296.0	Commercial Bank Firms
2	130	130.0	Non-Bank firms
3	124	124.0	Islamic Firms
Total	550	550.0	

Group Means

Type of Firm	Fac1	Fac2	Fac3	Fac4	Fac5
1	3.8221	3.7387	3.6745	3.6537	3.5220
2	4.2017	4.1833	2.1590	3.8385	3.6115
3	3.9014	3.7634	4.4597	3.5040	3.5403
Total	3.9297	3.8494	3.4933	3.6636	3.5473

Group Std. Deviation

Type of Firm	Fac1	Fac2	Fac3	Fac4	Fac5
1	.58398	.64108	.69185	.70291	.64600
2	.50451	.55446	.48084	.71857	.65375
3	.57869	.60825	.34686	.68520	.70016
Total	.58483	.64081	.99435	.71067	.66017

Pooled within-groups correlation matrix

	Fac1	Fac2	Fac3	Fac4	Fac5
Fac1	1.00000				
Fac2	-.05210	1.00000			
Fac3	-.00398	-.00410	1.00000		
Fac4	.27357	.26992	.12645	1.00000	
Fac5	-.00789	-.00774	.00434	.02291	1.00000

Wilks' Lambda (U-statistic) and univariate F-ratio

Variable	Wilks' Lambda	F	Significance
FAC1	.94973	14.4752	.0000
FAC2	.95122	14.0260	.0000
FAC3	.97132	8.0769	.0003
FAC4	.35748	491.5861	.0000
FAC5	.99800	.5493	.5777

Canonical Discriminant Functions

Fun	Eigenvalue	% of Variance	Cum %	Canonical Correlation	Wilks' Lambda	Chi-Square	df	Sig.
1	3.021	98.6	98.6	.867	.238	781.833	10	.0000
2	.044	1.4	100.0	.205	.958	23.429	4	.0000

Standardized Canonical Discriminant Functions Coefficients

Factors	Function 1	Function 2
FAC1	-.294	.830
FAC2	-.334	.423
FAC3	1.118	.127
FAC4	-.189	-.875
FAC5	.025	.073

Structure Matrix

Factors	Function 1	Function 2
FAC3	.796*	.323
FAC1	-.134	.691*
FAC2	-.161	.568
FAC4	-.092	-.154*
FAC5	-.027	.139*

Table 5 continued

Un-standardised Canonical Discriminant Functions Coefficients		
Factors	Function 1	Function 2
FAC1	-.521	1.468
FAC2	-.544	.688
FAC3	1.917	.217
FAC4	-.269	-1.246
FAC5	.039	.111
(Constant)	-1.706	-5.010

Function at Group Centroids		
Group	Function 1	Function 2
Commercial Bank Firms	.465	-.185
Non-Bank Firms	-2.927	.129
Islamic Firms	1.957	.307

Test of Equality of Group Covariance Matrices Using Box's M			
Group	Label	Rank	Log Determinant
1	Bank Firms	5	-6.396
2	Non-Bank Firms	5	-6.870
3	Islamic Firms	5	-6.193
Pooled within-group		5	-5.992

Box's M	257.313
Approx. F	8.444
Df1	30
Df2	438126.7
Significance	.0000

Classification Results					
		Predicted Group Membership			
Count	Brokerage Firms	Bank	Non-Bank	Islamic	Total
	Bank	225	9	62	296
	Non-Bank	12	118	0	130
	Islamic	18	0	106	124
%	Bank	76.0	3.0	20.9	100.00
	Non-Bank	9.2	90.8	.0	100
	Islamic	14.5	.0	85.5	100
	81.6% of original grouped cases correctly classified				

The Wilks' Lambda to function 1 was .238 which transformed to a chi-square value of 781.833 with a significance level of .0000. The Wilks' Lambda of function 2 after function 1 has been removed was .958. The level of significance associated with the function 2 was also .0000. The results leads significantly to group differences with a simultaneous Wilks' Lambda = .228.

On the other hand, results in table 5 showed that the values of chi-square of both functions was statistically significant (P<.05), we reject the null hypothesis that the means of both functions are equal. Therefore, both functions reported a group separation. Moreover, the canonical correlation for function 1 was .867, while for function 2 the correlation was .205. Therefore, the proportion of total variability explained by differences between groups was 75.2% for function 1 and 4.20% for function 2.

Results also revealed that the standardized canonical discriminant function coefficients were large for Factor 3 (special services) and Factor 2 (qualification of brokers) on function 1, while function 2 had large coefficients for Factor 4 (understanding investors) and Factor 1 (reliability). Almost the same conclusion is found when the structure matrix was examined (Metwally, 1999). When viewing the un-standardized canonical discriminant function coefficients, two discriminant functions were reported.

Those functions are:

$$Z1 = -1.706 - .521F1 - .544F2 + 1.917F3 - .269F4 + .039F5$$

$$Z2 = -5.010 + 1.468F1 + .688F2 + .217F3 - 1.246F4 + .111F5$$

For more explanation, the group means (group centroid) was evaluated. They suggested that group 1 'Commercial Bank firms' had a large positive value on function 1 (.465). Since 'special services' had a large positive coefficient on function 1, it can be said that investors who chose Commercial bank firms when trading in DSM do so mainly because of the special services they are getting from those firms. They paid more attentions to this factor than anything else when choosing a brokerage firm. Group 2 (non-bank firms) had a large negative coefficient on function 1. Since factor 2 (qualifications of brokers) and factor 1 (reliability) had large negative signs on function 1, it showed that investors who chose other groups do so because of both the reliability and the high qualification of the brokers those groups have. Group 3 (Islamic brokerage firms) had a large positive value on function 1. Since 'special services' had a large positive sign on this function, it was suggested that investors who chose Islamic brokerage firms do so again because of the special services provided to them. These services are: offering returned commission services, performing check return services, and initiating investment proposals.

Results also showed that the level of significance of Box's M suggested that we should not reject the null hypothesis that the covariance matrices are equal (Metwally, 1999). Finally, table 5 provided the classification results based on the analysis sample. Results suggested a hit ratio equal to 81.6%. This shows that 81.6% of the cases were correctly classified. Since there are three groups of equal size, a chance hit ratio would be 1/3 = 33.3%. According to Bartholomew et. al., (2002) if the improvement over chance is more than 25%, the validity is satisfactory. The Press's Q statistic is provided by:

Press's Q = {550-(3) (451)} ^ 2 / {550(2)} = 586.19

The above result indicated that the value exceeded by far the critical value at a significance level of .01 which is 6.63, showing that the predications were significantly better than chance.

Summary and Implications

Investors were examined in order to understand how they evaluated and choose a brokerage firm in Doha Securities Market. Findings showed that more than half of the respondents dealt with Commercial bank brokerage firms, as compared with 23.6% for Non-bank brokerage firms and 22.5% for Islamic firms. Using factor analysis, the 25 brokerage attributes were condensed to 5 meaningful factors. Results of Bartlett's test of Sphericity and Kaiser-Meyer-Olkin measure of sampling showed that factor analysis was appropriate in determining the main reasons for selecting one type of brokerage firm over another. The factor scores of the five extracted factors were then used as predictors in multiple discriminant analysis where results of the analysis suggested two discriminant functions each had a significant chi-square.

The canonical discriminant functions were evaluated at group mean, with the structure matrix of the two discriminant functions, which suggested that, investors who use Commercial Bank brokerage firms and Islamic firms do so mainly for special services which both firms provide. Clearly, non-bank brokerage firms' users correspond very strongly to reliability factors.

Perhaps, from the above results, some policy implications for brokerage firms in DSM can be derived. These policy implications are as follows:

1. Transaction commissions are perceived to be high by investors and could be lowered when compared with other GCC stock exchanges, taking into consideration that a large number of brokerage firms covering a relatively small market such as DSM.

2. Non-bank brokerage firms should pay more attention to special services provided to customers in order to reach the level of special services provided by the other two groups.

3. Brokerage firms in general need to raise the level of practical experience of their staff (this was evidenced by a low mean, 2.8).

4. E-commerce and internet-transactions could be developed and widely applied in DSM.

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