

Consumer Protection in Banking: Investigating the 10 High Level Principles of G20 in Saudi Arabia

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Abstract

Financial Consumer Protection has been in the top agendas of Financial System Regulators to improve consumer protection policies and regulations recently. These efforts were a direct consequent of the aftermath of the 2007-2009 global financial crises where consumer had been among those greatly affected. The adoption of the G20's 10 High Level Principals is a timely effort to increase financial consumer protection.

This paper tries to extract important components in consumer protection from the consumer point of view in order to ensure that the efforts exerted by the regulators will yield effective and capable consumer protection. Principle Component Analysis (PCA) is used in exploratory data analysis to 265 consumer surveys that were obtained from the customers of banks in Saudi Arabia. We found through PCA Varimax rotation that consumer protection can be achieved through banking services and privacy of consumers. Consumer enhancement of protection can be increased by three factors which are training, media and electronic means of communications.

JEL classification numbers: D18, G21

Keywords: Financial Consumer Protection, Financial Inclusion, 10 High Level Principles, Principal Component Analysis

1 Introduction

Consumer protection starts by ensuring that affordable financial products are made available to all sections of the population. This should be followed by ensuring that these products are suitable for each subset of the population [1] The negative impacts of the 2007-2009 financial crises on consumers of financial products illustrated the importance

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of ensuring that adequate consumer protection systems are put in place. Increased government regulations in the financial industry are among those protections and recent financial crisis has shown its importance. [2] These regulations are especially needed for the new, complex and innovative financial products because their development often makes consumer protection more challenging. Improvements in technology have made the world a smaller place meaning that financial products are consumed on a global scale. This has made it necessary for all countries in the world to design and adopt comprehensive consumer protection systems. The G20 Finance Ministers and Central Bank Governors endorsed the final High Level Principles on Financial Consumer Protection on the 14th and 15th of October 2011 in a meeting held in Paris [3]. The 10 principles were developed after realizing that empowering the financial consumer was necessary in the aftermath of the financial crisis. The importance of the ten principles is further highlighted by the fact that the financial landscape has evolved to become broader, riskier, complex, and increasingly innovative [4]. The ten principles also addressed the inefficiencies that already existed in the protection of consumers, the lack of trust in the financial markets, and the costs that were transferred to governments and consumers as a result of fraud [4].

This can be witnessed in Saudi Arabia where the Saudi Arabian Monetary Agency (SAMA) is open to the ten principles of financial consumer protection that were developed by the G20 group of nations [5]. The efforts made by SAMA on consumer protection includes developing the “Banking Consumer Protection Principles”, which is a guiding document designed to ensure that banks meet SAMA’s strategic objectives in promoting transparency, fairness and ease of access to financial products and services for consumers, especially in the resolution of consumer complaints [6]. These principles are given below Table 1 as well each principle is explained in the *Appendix 1*.

Table 1: High Level Principles on Financial Consumer Protection

| | |
|-----------------------------------|-----------------------|
| Equitable and fair treatment | Protection of privacy |
| Disclosure and transparency | Complaints handling |
| Financial education and awareness | Competition |
| Behavior and work ethic | Third parties |
| Protection against fraud | Conflict of interest |

The good practices in banking are linked to the ten principles of financial consumer protection because they are also aimed at empowering consumers and ensuring that banks can be held accountable for any abuse. Several countries have used these principles as a guideline leading to successful implementation of consumer protection measures.

According to KPMG [7] consumer protection is more advanced in the United Kingdom, Europe, and the United States than the rest of the world. However, the rest of the countries in the world are catching up to these leaders in consumer protection at a fast rate. These countries are also the ones with a higher rate of population, changing the population dynamics of the future.

Because of these population dynamics we can say that demographics drive the current and future trends in banking. They forecasted that the global population will reach the 8 billion by 2030 making it necessary for banks to adopt their strategies to meet an increasingly aging and urban population. When it comes to growth, the current emerging markets will become more established allowing global banks to compete in

these markets [8]. When it comes to Saudi Arabia, a survey by BRIC data showed that the consumer finance market has low penetration levels. This means that there are massive opportunities which will be made better by Saudi Arabia's increasing income levels, employment, and job security. There has also been significant growth in personal loans in this market [9]. Low penetration levels can be increased by applying different market tools, by improving regulations and increasing the consumer trust in banking business as the information technology and the complex developments in financial tools and applications created a room for fraud, one of the important dimensions of consumer protection.

According to Kroll's Global Fraud Report for 2012/13 [10], 67 percent of all fraud cases were committed by insiders with information theft being one of the areas of fraud that companies were most vulnerable to. The report also found that many companies were overconfident resulting in increased risks for consumers. When it comes to Saudi Arabia, 44 percent of companies were affected by fraud. However, the report showed that there is a wide gap between understanding the threats and the actual risks of fraud faced by Saudi business [11].

Fraud and security related issues are at the heart of the consumer protection but not limited to only these two items. This study aims to pave the way for a series of researches in the field of Financial Consumer Protection based on the newly introduced 10 Principles of Consumer Protection. Financial Consumer Protection in Saudi Arabia has been the purpose of the study using a survey prepared and distributed to evaluate the important factors in consumer protection regarding the 10 Principles of Consumer Protection.

The survey will identify the most critical principles from the surveyed consumers' perspective and recommend the most effective tools to improve the understanding of the principles, as well as raise the financial consumer protection awareness. The findings of the survey will be used to find the latent variables and the most critical principles in consumer protection. Similarly, the findings will study the relation between the different demographic variables and these 10 principles.

This paper covers literature review on consumer protection from both consumers and regulators perspectives. In fact, there was not much of the literature investigating the perception of financial system consumers toward achieving consumer protection and financial inclusion.

This paper is comprised of four sections. First section is the introduction while the followings second section gives literature review. Third section gives the details of data and empirical methodology. Section four analyses the data and discusses the findings. After that we conclude by summarizing the main findings and discussing of the possible restriction and generalizations.

2 Literature Review

OECD principles for consumer protection were approved in the last quarter of 2011. Therefore, the literature on the very same topic is limited only to the global agencies who try to increase global level of financial education, financial inclusion and financial consumer protection by providing some working papers, data, and regulatory suggestions. However, there are also some earlier and general literatures regarding consumer protection. Such literature usually limited to specific domains. For instance, Whitford [12] analyzed how to maximize structuring effective consumer protection regulations.

Campbell, Jackson [13] discussed the consumer financial protection by providing some cases and described the rationales for consumer financial regulations. Such background in their paper was for discussing the role of new Consumer Financial Protection Bureau which has been authorized by The Wall Street Reform and Consumer Protection Act of 2010 that was signed into law in July 2010.

Braucher [14] gives a deeper analysis on the application of this Bureau and conclude that this is a turn a way to more substantive consumer protection and provides a model that could be followed. Reiss [15] discussed again the Consumer Financial Protection Bureau and its role in shadow banking environment. This paper reviews the first steps taken by the Bureau after it implements Dodd-Frank's mortgage-related provisions.

Williams [16] analyzed the paradigm change of financial consumer market regulations within the context of High-Level Principles of Financial Consumer Protection. He concludes that some G20 principles has elements of the watchful consumer paradigm which failed to protect consumers during and before the crash, there are still some rules that focus more explicitly on the responsibilities of financial firms. The main challenge Williams [16] indicates that whether policymakers will act as market disciplinarian and confront endemic misconduct of the market.

Inderst [17] made an analysis of regulation and consumer protection post financial crisis. He claimed that consumer protection must be put on a sound economic basis and discussed also competition and innovation in a European context.

Aaltonen, Markowski [18] in their research of customer satisfaction with credit card services in a big US bank found also that security protocols employed is one of the attributes that determines customer satisfaction. By examining credit card security and the monthly statements, the researchers were also examining financial consumer protection satisfaction levels in this study. It is also clear that the consumer satisfaction is tied to consumer protection with a high correlation. The implication of the study is that security protocols and statement accuracy, which are aspects of financial consumer protection, were some of the attributes that determined consumer satisfaction levels as well as makes it possible for consumer financial inclusion to be achieved. Therefore, customer satisfaction is also a layer in consumer empowerment trilogy of Messy [4] in Figure 1.

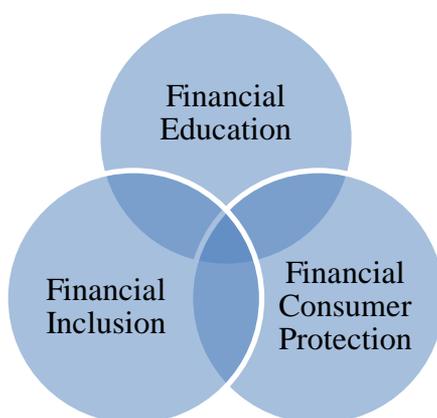


Figure 1: Financial Consumer Empowerment Trilogy

Source: [4]

WorldBank [19] provides good practices for financial consumer protection for banking, securities, insurance and non-bank credit institutions. In this guide, they provide 8 different good practices for financial consumers.

Grady [20] investigated consumer protection in the financial sector with a focus on the recent regulatory developments. The study examined important developments in international and Australian financial consumer protection. Results of this study demonstrated that the new international principles and standards on consumer protection lacked cohesion and left out a number of significant issues that were unanswered. The paper argues that even though significant efforts have been made in bolstering the rules of consumer protection as they relate to the financial products and services, there is still more to be done in order to determine whether these are addressing the right issues in a more effective manner. The authors contend that the G20 Financial Consumer Protection principles need to be examined closely against other consumer protection measures implemented across the globe.

The analysis of the first systematic assessment of financial consumer protection across a large set of countries was presented by Ardic, Ibrahim [21]. The survey of 142 countries covered the following main features of consumer protection framework: (i) existing legal framework and its scope; (ii) supervisor and enforcement powers; (iii) recourse mechanism. It was found that although most of the surveyed countries have some forms of consumer protection legislation, it often does not include provision specific to financial services industries. Also, most of the surveyed countries have been in the development phase to establishing guidelines concerning financial consumer protection. The study suggested that efficient consumer protection systems and financial ability enhancement which will consequently facilitate affordable and accessible financial services. Such accomplishment will be possible if information asymmetries are reduced, competition and innovation are enhanced and consumer participation in the financial system is increased. The survey highlighted that the consumer protection is the most area of reform by financial regulators where it takes great deal of attention in the high-income countries.

WorldBank [22] conducted a survey in 114 countries by sending a questionnaire to central bank supervisors and found that 112 of these economies had a legal framework that addressed financial consumer protection. 74% of these economies had multiple regulators while in the other countries the responsibility for consumer protection was shared between general and financial authorities. In addition, the survey also found that less than half of these countries had provisions that were specific to the financial industry

Rutledge [23] identified key lessons from reviews of consumer protection and financial literacy in nine middle-income countries in Central Asia and Europe using a systematic common approach. The study highlighted a common challenge among the nine countries which is the need of five areas of focus to improve the consumer protection. These categories are related to the Institutional Structure, Consumer Disclosure, Business Practices, Complaints and Dispute Resolutions and Financial Literacy and Education.

There are few papers on specific topics for consumer protection. Kumar and Mohanty [24] analyze Indian banking with a special reference to branchless banking for consumer protection. Bo [25] provided legal suggestions for bank financial products consumer protection. There needs to be a good relationship between the public and commercial banks in order to ensure that a country's banking system can develop. [19]. One of the dimensions of the systemic protection of banking is to protect consumers. But growing complexity in finance and uniqueness of individual consumers made the regulatory process very complicated. [26]

3 Data and Empirical Methodology

The survey has been preliminary tested by preparing a sample and distributing it manually to 10 staff mates to ensure the consistency and legitimacy of the questionnaires approach. The survey results have shown acceptable findings with some feedback from the survey respondents.

A total of 272 respondents represented the data sample by the end of the survey duration. However, the analysis has been conducted based on 265 complete responses as some of the respondents did not go through the whole survey. The survey was open to everyone who had an active Bank Account in Saudi Arabia where the survey was about the services of respondents' primary bank.

The survey has been administered primarily using an online website and has been distributed using emails and messages through social media apps. Mass communication has been deployed targeting company workers, university students, and professional and social network users.

The survey questionnaire was mainly designed to investigate the level of consumer's awareness about the 10 High Level Principles of Consumer Protection. The answers of the offered statements have been graded on a 5 Level Likert scale.

Both descriptive and inferential statistical methods were used to analyze the results. As our two sections in the survey include suitable scale for an explanatory data analysis we used Principal Component Analysis (PCA) for the selection of factors that are important in consumer protection. Therefore, we confirm the face validity of our research by specialist views and obtain structural validity by PCA on OECD High Level Principles.

As Dunteman [27] clarifies, PCA decompose the data into a set of linear variates and is different than Factor Analysis (FA). Solutions of FA and PCA differ little from each other.[28] unless variables are less than 20 and communalities are smaller than <0.4 . [29] PCA is an essential step in data analysis and is used to understand the underlying dimensions or relationships in the research. At the cornerstone of factor extraction is the postulate that there exist internal but unobservable attributes. [30] EFA transforms the correlations among observed variables into a smaller number of latent factors that carry all the required information about the linear interrelationships among the original variables. Habing [31] explains that if we have p number of observed variables (the X_i) that have been measured for each of the n subjects, it can be standardized as

$$X_1 = a_{11}F_1 + \dots + a_{1m}F_m + e_1 \text{ to } X_p = a_{p1}F_1 + \dots + a_{pm}F_m + e_p$$

We can show the same as a matrix

$$X_{p \times 1} = A_{p \times m} F_{m \times 1} + e_{p \times 1}$$

Above matrix is equal to

$$\Sigma = AA^T + \text{cov}(e)$$

It is assumed that errors are independent and $\text{cov}(e)$ should be a $p \times p$ diagonal matrix. $\Sigma_{p \times p}$ is the correlation matrix of $X_{p \times 1}$. Therefore,

$$\text{Var}(X_i) = \sum_{j=1}^m a_{2ij} + \text{Var}(e_i)$$

squared factor loadings (ΣX_i) is called as communality. Communality is a measure of the proportion of variance explained by the extracted factors and shows the common variance it has with the other variables.

In order to continue our analysis it is essential to diagnose the assumptions or requirements of the chosen model. Statistical inference improves if the variables are multivariate normal. We tested our variables for normality and found by Kolmogorov-Smirnov and Shapiro-Wilk test that our data is not normally distributed. Although normality is not a requirement of PCA and FA, it is important for the supplementary controlling tests to decide whether we will apply parametric or non-parametric methods for the controlling variables. Since our data is not normally distributed, we will only use non-parametric tests in this paper.

For Homogeneity of Variances we applied One Way Anova and found that some of our variables are homogenous while some are not. As the first assumption of normality is rejected. Then, to be on the safer side, we applied non parametric tests for our analysis.

We run Tukey’s Test of Additivity if our questions can create a scale altogether. As this test is significant $>.000$ then there is multiplicative interaction. In order to test the means of our questions if they are equal or not we also used Hotelling’s T Squared Test and found that our questions have different means. Therefore, we reject the null hypothesis and conclude that there is a significant difference between the mean scores in the sample.

In order to check the internal consistency, we used Cronbach’s alpha. Cronbach [32] is the most common measure of scale reliability and considered better than split-half reliability. This alpha is the number of items squared is multiplied by the average covariance between items. Then this value is divided to the sum of all the item variances and item covariances. Cronbach’s alpha ranges between 0.00 and 1.00. Although higher values of Alpha are desirable, there is no agreement on critical threshold value. When a set of items has an alpha level of .70 or higher, it is considered acceptably reliable [33] as a common rule of thumb and above 0.85 as quite good. [34] In the research, Cronbach’s alpha is calculated for high level principles of financial consumer protection and for understanding enhancement. As can be seen in Table 2, scales reliability for high level principles is 0.864, which is highly acceptable. Understanding enhancement is .604 which is enough to continue on our research.

Table 2: Reliability Statistics

| Scale | Number of Questions | Cronbach’s Alpha |
|---------------------------|---------------------|------------------|
| High Level Principles | 10 | .864 |
| Understanding Enhancement | 6 | .604 |

In addition to that, if deleting any item increase alpha level or not have been considered by analyzing item total statistics. Therefore we exclude one question from the first scale and if it was kept the reliability would decrease to .774 instead of .864.

Table 3: Item-Total Statistics for High Level Principles

| | Scale Variance if Item Deleted | Corrected Item- Total Correlation | Squared Multiple Correlation | Cronbach's Alpha if Item Deleted |
|-----------------------------------|--------------------------------------|--|------------------------------------|--|
| Equitable and fair treatment | 35.336 | .589 | .403 | .850 |
| Disclosure and transparency | 34.335 | .671 | .476 | .842 |
| Financial education and awareness | 35.408 | .634 | .436 | .846 |
| Behavior and work ethic | 33.643 | .678 | .496 | .842 |
| Protection against fraud | 37.869 | .501 | .361 | .857 |
| Protection of privacy | 39.232 | .423 | .278 | .862 |
| Complaints handling | 35.437 | .615 | .414 | .847 |
| Competition | 36.598 | .586 | .446 | .850 |
| Third parties | 37.257 | .588 | .396 | .850 |
| Conflict of interest | 38.697 | .453 | .214 | .860 |

N= 265 (α) = 0,864 N = 10

* item deleted

Table 4: Item-Total Statistics for Understanding Enhancement

| | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Squared Multiple Correlation | Cronbach's Alpha if Item Deleted |
|---|-----------------------------------|--|------------------------------------|--|
| Conduct regular training courses. | 3.899 | .274 | .112 | .585 |
| Utilize social media such as Twitter, Facebook. | 3.788 | .407 | .268 | .533 |
| Use Mass Media such as TVs, Newspapers or Outdoor signs. | 3.727 | .349 | .258 | .554 |
| Sponsor Academic Projects or Research Chairs. | 3.775 | .288 | .134 | .582 |
| Incorporate customized messages when accessing consumer on-line account or telephone banking. | 3.665 | .429 | .284 | .522 |
| Use emails and text messages. | 3.960 | .293 | .217 | .576 |

N= 265 (α) = 0,604 N = 6

* item deleted

In order to understand if our survey is suitable for factor analysis or not we run The Kaiser-Meyer-Olkin Measure of Sampling Adequacy. It is a statistic that indicates the proportion of variance in our variables that might be caused by underlying factors. High

values (close to 1.0) generally indicate that a factor analysis may be useful with the data. If the value is less than 0.50, the results of the factor analysis probably won't be very useful. Large KMO values indicate correlations between pairs of variables means that these variables can be explained by the other variables.

The Kaiser-Meyer-Olkin (KMO) test value for our “high level principles “and “understanding enhancement” are calculated as 0,864 and 0,604 respectively. A value higher than 0,50 shows that the data is suitable for factor analysis. The values closer to 1 indicate that the data set is good for the analysis.

Table 5: KMO and Bartlett's Test

| | | |
|---------------------------|--|---------|
| High Level Principles | Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | .889 |
| | Approx. Chi-Square | 897.668 |
| | Bartlett's Test of Sphericitydf | 45 |
| | Sig. | .000 |
| Understanding Enhancement | Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | .605 |
| | Approx. Chi-Square | 203.137 |
| | Bartlett's Test of Sphericitydf | 15 |
| | Sig. | .000 |

KMO can be calculated for multiple and individual variables. Anti-Image Matrice in *Appendix 2* indicates the KMO for individual variables on the diagonal of the anti-image correlation matrix. The value here should be above 0.5. Looking at our data, we see that all KMO values are well above 0.5. The off-diagonal elements in the anti-image correlation matrix reflect a partial correlation between variables and they should be small which are in our matrices.

Bartlett's test of sphericity tests the hypothesis that our correlation matrix is an identity matrix, which would indicate that our variables are unrelated and therefore unsuitable for structure detection. Barlett test of sphericity compares our correlation matrix to an identity matrix where on the principal diagonal we have 1.0 and zeroes in all other correlations meaning that all variables are perfectly independent from one another.[35]. If the value of Bartlett is significant that means EFA is appropriate.

Small values (less than 0.05) of the significance level indicate that a PCA may be useful with our data. The Bartlett’s test of sphericity where sig value (($p = 0,000 / \chi^2=45$ and $\chi^2=203.137$; $p<0,01$) indicates that the correlation between the variables are significant therefore they are the part of the same factor. As our data is suitable for factor extraction now we can pursue with our analysis.

4 Analysis of Data and Empirical Results

4.1 Descriptive Statistics

The survey male participants represent 85% of the population while 15% is female. In the survey 73% of the respondents are between 26 to 45 years old. Moreover, respondents with higher Education (B.S Degree or above) represent 77.7%. This reflect some bias for

more educated group. 65% of the participants have an income range between 7,500 to 25,000 Saudi Riyals.

Somehow we have limited expat penetration for our survey. Only 4 percent who filled the survey was expat while Saudi participants has reached 96%. Such a low number eliminates to provide any analysis to see the differences between expats and Saudi nationals.

The occupational status are that many respondents works mainly at government and private institutions. Students, retired and not working group all together are around 10 percent of our survey population. As we indicated 60 percent use Islamic banks while 40 percent use conventional banks.

Table 6: Descriptive Statistics

| | Frequency | % |
|----------------------------------|------------------|----------|
| Gender | | |
| Female | 40 | 15.1 |
| Male | 225 | 84.9 |
| Age | | |
| <25Years | 18 | 6.8 |
| 26-35 Years | 99 | 37.4 |
| 36-45 Years | 90 | 34.0 |
| 46-55 Years | 46 | 17.4 |
| <56Years | 12 | 4.5 |
| Education | | |
| High School or Below High School | 23 | 8.7 |
| Apprenticeship or Vocational | 36 | 13.6 |
| BS Degree or Higher | 206 | 77.7 |
| Monthly Income | | |
| SR 7500 or less | 24 | 9.1 |
| SR 7500-15000 | 84 | 31.7 |
| SR 15000-25000 | 81 | 30.6 |
| SR 25000-35000 | 39 | 14.7 |
| SR 35000 or more | 37 | 14.0 |
| Nationality | | |
| Saudi | 255 | 96.2 |
| Expatriate | 10 | 3.8 |
| Occupation | | |
| Government | 113 | 42.6 |
| Private | 125 | 48.3 |
| Not Working | 5 | 1.9 |
| Retired | 8 | 3.0 |
| Student | 11 | 4.2 |
| Bank Type | | |
| Islamic | 159 | 60 |
| Conventional | 106 | 40 |

4.2 General Understanding about Consumer Protection

In the first part of the survey, 77 % of the respondents indicated that they are not aware of the Consumer Protection in Banks of Saudi Arabia. It was also noted that 78.9% of the respondents do not know who represents the Consumer Protection Regulations regarding the services offered by banks in Saudi Arabia which is SAMA. Consequently, in such a low level of awareness the respondents who are not aware of the services provided by SAMA have reached 89.1% of the total sample. Only 10.9% of the respondents know their rights and understand consumer protection. As the regulations are new in the market and it is expected that in the future the increasing level of financial education and financial literacy will help to achieve a higher level of consumer protection. Meanwhile, this study provides at least a benchmark for the market understanding of the consumer protection.

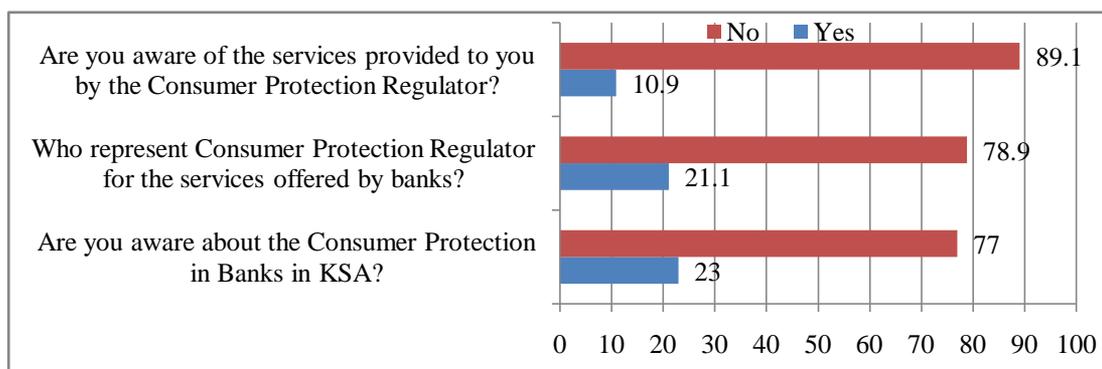


Figure 2: General Understanding about Consumer Protection (%)

4.2.1 Most critical principles

By analyzing each principle depending on their frequencies we found that the ranking of most important high level principles from consumers' perspective is as in Table 7.

Table 7: The most Important High Level Principles from Consumer's Perspective

| The principle | Percentage |
|-----------------------------------|------------|
| Equitable and fair treatment | 69.4* |
| Disclosure and transparency | 66.4* |
| Financial education and awareness | 42.6 |
| Behavior and work ethic | 55.8 |
| Protection against fraud | 66.8* |
| Protection of privacy | 61.1* |
| Complaints handling | 63.8* |
| Competition | 37.0 |
| Third parties | 19.6 |
| Conflict of interest | 17.4 |

The percentages with stars shows the highest frequencies where equitable and fair treatment, disclosure and transparency, protection against fraud and protection of privacy and complaints handlings are the most important principles.

4.2.2 Additional non parametric tests

We run several non parametric tests to understand the consumer protection. Mann-Whitney test (for two group comparisons) and Kruskal-Wallis tests (for more than two group comparisons) results shows that general understanding of consumer protection level does not differentiate by gender, age, education level, monthly income, occupational status or whether they use Islamic or conventional bank services or not.

4.3 Components of Financial Consumer Protection and Understanding Enhancement

PCA is a data reduction technique and not designed to test hypotheses or to tell whether one group is significantly different from another. By applying factor analysis a large set of variables are reduced to a set of factors or components. [36] There are steps of the factor analysis before proceeding to factor extractions. These steps are for the reliability and consistency and mainly about the model fit. Such controls have been handled in the earlier section of this paper.

Before discussing the findings we also checked the correlation matrix (inter-item correlations) and found several correlations bigger than $>.3$. Correlation matrix includes Pearson correlation coefficient between all pairs of questions. Factorability assumption requires that some correlations and degree of collinearity among the variables should be available. If a variable does not correlate with others then it should be ignored. We checked the correlation matrix for the pattern of relationship and we found correlations greater than $.3$ for many of them and we could not find any greater than $.9$ which signals for multicollinearity in data. The determinant of the correlation matrix is Determinant of both PCAs are $.032$ and $.459$ are greater than the necessary value of 0.00001 . Then, multicollinearity is not a problem for our data. All questions correlate reasonably well with each other and none of the correlation coefficients are excessively large.

Anti-image correlation matrix diagonals are important and they should be above 0.5 . We checked anti-image correlation matrix and found them all above the required level.

We used Varimax rotation method for the PCA. Eigen values of the factors that are higher than 1 and factor loads are above $0,40$ are chosen.

4.3.1 High level principles

For high level principles the scale before loading has 10 components and by removing 8 of them the scale decreased to 2 factors. These 2 components explain $\%55.83$ of the total variance. Meaning that although SAMA high level principles are 10 different items, these items can be summed as 2 important categories that customers demand more and care more to receive from their banks.

Table 8: Total Variance Explained High Level Principles

| Comp. | Initial Eigenvalues | | | Extraction Sums of Squared Loadings | | | Rotation Sums of Squared Loadings | | |
|-------|---------------------|---------------|--------------|-------------------------------------|---------------|--------------|-----------------------------------|---------------|--------------|
| | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1 | 4.508 | 45.076 | 45.076 | 4.508 | 45.076 | 45.076 | 3.736 | 37.364 | 37.364 |
| 2 | 1.076 | 10.757 | 55.833 | 1.076 | 10.757 | 55.833 | 1.847 | 18.469 | 55.833 |
| 3 | .765 | 7.647 | 63.481 | | | | | | |
| 4 | .717 | 7.173 | 70.654 | | | | | | |
| 5 | .645 | 6.449 | 77.103 | | | | | | |
| 6 | .550 | 5.500 | 82.602 | | | | | | |
| 7 | .532 | 5.316 | 87.918 | | | | | | |
| 8 | .486 | 4.857 | 92.775 | | | | | | |
| 9 | .389 | 3.892 | 96.667 | | | | | | |
| 10 | .333 | 3.333 | 100.000 | | | | | | |

Extraction Method: Principal Component Analysis.

We analyzed the communalities, the proportion of variance accounted for by the common factors of a variable. Communalities range from 0 to 1. Zero means that the common factors don't explain any variance; one means that the common factors explain all the variance. Therefore, we have to look at the high numbers in communalities. Although the higher is the better, less than .3 is considered as a problem. In our high level principles communalities only one variable is .301 but still included in our analysis. We also looked at the scree plot showing eigenvalues above 1 is only two items.

Table 9: Rotated Component Matrix for High Level Principles Component

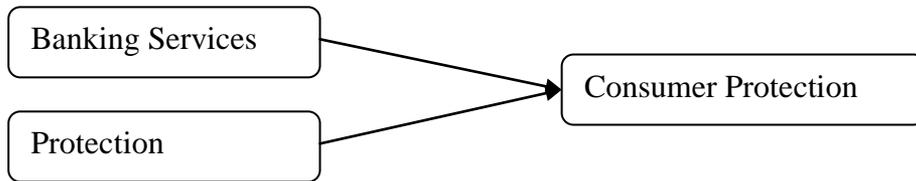
| | Component 1 | Component 2 |
|-----------------------------------|-------------|-------------|
| Competition | .781 | |
| Complaints handling | .735 | |
| Disclosure and transparency | .715 | |
| Financial education and awareness | .713 | |
| Behavior and work ethic | .682 | .342 |
| Equitable and fair treatment | .675 | |
| Third parties | .570 | .384 |
| Conflict of interest | .496 | |
| Protection of privacy | | .846 |
| Protection against fraud | | .801 |

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 3 iterations.

The results show us that the factors that are important in participation selection are i) Banking Services related consumer protection, and ii) Security related consumer protection.



There are two cross loadings but the difference between these two is more than .2 and can be considered acceptable. This cross loading also makes sense as work ethics and third parties have cross loadings on security meaning that the customers consider these two bank services related with their own security and protection.

4.3.2 Understanding enhancement

The part of the survey is about enhancing the understanding of the consumer protection rights. By applying the same EFA for understanding enhancement scale, we found 3 factors with eigenvalues higher than 1 and explaining 71 percent of the variance in total. In order to increase understanding of financial consumer protection we created 6 questions and our EFA showed us that actually these questions are concentrated as 3 important factors.

Table 10: Total Variance Explained for understanding enhancement

| Comp | Initial Eigenvalues | | | Extraction Sums of Squared Loadings | | | Rotation Sums of Squared Loadings | | |
|------|---------------------|---------------|--------------|-------------------------------------|---------------|--------------|-----------------------------------|---------------|--------------|
| | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1 | 2.052 | 34.206 | 34.206 | 2.052 | 34.206 | 34.206 | 1.485 | 24.751 | 24.751 |
| 2 | 1.141 | 19.013 | 53.219 | 1.141 | 19.013 | 53.219 | 1.469 | 24.476 | 49.226 |
| 3 | 1.075 | 17.920 | 71.140 | 1.075 | 17.920 | 71.140 | 1.315 | 21.913 | 71.140 |
| 4 | .731 | 12.187 | 83.327 | | | | | | |
| 5 | .525 | 8.753 | 92.080 | | | | | | |
| 6 | .475 | 7.920 | 100.000 | | | | | | |

Extraction Method: Principal Component Analysis.

We have higher communalities for understanding enhancement that all extracted values range around .631 to .768. These are good values for our EFA analysis for factor extraction. We have again 3 eigenvalues higher than 1.

Table 11: Pattern Matrix for Understanding Enhancement

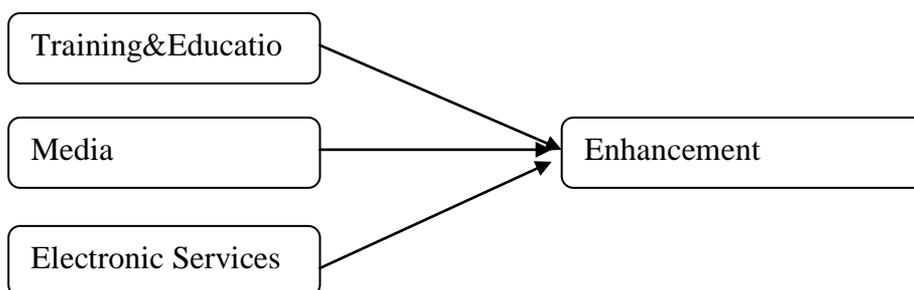
| | Component | | |
|---|-----------|------|------|
| | 1 | 2 | 3 |
| Use Mass Media such as TVs, Newspapers or Outdoor signs. | .861 | | |
| Utilize social media such as Twitter, Facebook. | .831 | | |
| Use emails and text messages. | | .866 | |
| Incorporate customized messages when accessing consumer on-line account or telephone banking. | | .816 | |
| Sponsor Academic Projects or Research Chairs. | | | .795 |
| Conduct regular training courses. | | | .782 |

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 4 iterations.

The pattern matrix of the understanding enhancement has also 3 components and when we look at it we see that enhancement will come from i) Training and education ii) Media and iii) Electronic Services.



We can conclude that Saudi Arabian bank customer require training, media and electronic services for enhancement. There are customers who care for different channels of enhancement.

5 Conclusion

Financial Consumer Protection has gained importance and such trend will continue as there is a global regulatory consensus on improving such protection. However, the most important factors for consumer protection is not only a regulatory issue but also a practical demand of financial consumers. Without understanding of what they understand from financial consumer protection the efforts made cannot be very fruitful. What makes customers informed, satisfied or secured should be studied through the eyes of the consumers. As Pappalardo [37] puts “a reasonably informed consumer is not necessarily a perfectly informed consumer.”

In this study we found through PCA that providing high quality banking is also a way for consumer protection. The second dimension is privacy of consumers. Such latent variables were the result of the analysis applied on High Level Principals of G20. We added another set of survey and tried to find what the required means of improving

enhancement of protection are. Again PCA results show that training, media and electronic means of communication can increase the consumer protection. We believe that there should be more quantitative analysis on the consumer protection and consumers to understand the most required items of protection. Such understanding will improve the regulatory outcome and it will have also policy impact on bank management. Our results show no differentiation between gender, age, education level, monthly income or occupational status of the consumers. There is also no significant differentiation whether they have an account with an Islamic bank or conventional bank.

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References

- [1] Lumpkin, S., *Consumer Protection and Financial Innovation: A Few Basic Propositions*. OECD Journal: Financial market trends, 2010. **2010**(1).
- [2] Akinbami, F., *Financial services and consumer protection after the crisis*. International Journal of Bank Marketing, 2011. **29**(2): p. 134-147.
- [3] OECD, *G20 High-Level Principles on Financial Consumer Protection*, 2011, Organisation for Economic Co-operation and Development: Paris. p. 7.
- [4] Messy, F.-A., *The latest development of globally recognized instruments on financial education and consumer protection*, in *12th Tokyo Roundtable on Capital Market Reform in Asia 2012*: Tokyo, Japan. p. 12.
- [5] SAMA. *Consumer Protection*. 2014 [cited 2014 20 February 2014]; Available from: <http://www.sama.gov.sa/sites/samaen/ConsumerProtection/Pages/Home.aspx>.
- [6] SAMA. *Banking Consumer Protection Principles*. 2014 [cited 2014 20 February 2014]; Available from: <http://www.sama.gov.sa/sites/SAMAEN/ConsumerProtection/Documents/Consumer%20Protection%20Code%20-%20Banking%20v%2014.doc>.
- [7] KPMG, *New Light on Old Truths Consumer protection and good business sense*, 2012, KPMG International. p. 16.
- [8] Ernst&Young, *Building the bank of 2030 and beyond The themes that will shape it*, 2013, EYGM Limited. p. 44.
- [9] BRICdata. *Emerging Opportunities in Saudi Arabia's Consumer Finance Industry - Market Size, Strategies, Products, and Competitive Landscape: Market Profile*. 2012 [cited 2014 21 February 2014]; Available from: <https://bricdata.com/research/report/IS2019MR/>.
- [10] EIU, E.I.U., *Global Fraud Report, 2011–2012*, 2012, London: Kroll.
- [11] Dajani, Y., *Kingdom of Saudi Arabia: Time to bridge the perception gap*, in *Kroll Global Fraud Report 2012*.
- [12] Whitford, W.C., *Structuring Consumer Protection Legislation to Maximize Effectiveness*. Wis. L. Rev., 1981: p. 1018.
- [13] Campbell, J.Y., et al., *Consumer financial protection*. The Journal of Economic Perspectives, 2011: p. 91-113.
- [14] Braucher, J., *Form and Substance in Consumer Financial Protection*. Brook. J. Corp. Fin. & Com. L., 2012. **7**: p. 107.

- [15] Reiss, D.J., *Consumer Protection Out of the Shadows of Shadow Banking: The Role of the Consumer Financial Protection Bureau*. Brooklyn Journal of Corporate, Financial & Commercial Law, 2012. **6**(1).
- [16] Williams, T., *Who Wants to Watch? A Comment on the New International Paradigm of Financial Consumer Market Regulation*. Seattle University Law Review, 2013. **36**(2): p. 1217.
- [17] Inderst, R., *Retail finance: Thoughts on reshaping regulation and consumer protection after the financial crisis*. European Business Organization Law Review, 2009. **10**(3): p. 455.
- [18] Aaltonen, P.G., E.P. Markowski, and T.A. Kirchner, *Ingredients of financial services customer satisfaction: the case of credit card services*. Journal of Academy of Business and Economics 2010. **10**(3).
- [19] WorldBank, T., *Good Practices for Financial Consumer Protection* 2012, Washington DC: International Bank for Reconstruction and Development / The World Bank.
- [20] Grady, R., *Consumer Protection in the financial sector: Recent regulatory developments*. JASSA, 2012(4): p. 36.
- [21] Ardic, O.P., J.A. Ibrahim, and N. Mylenko, *Consumer protection laws and regulations in deposit and loan services: A cross-country analysis with a new data set*. Worldbank Policy Research Working Papers, 2011.
- [22] WorldBank, T., *Global Survey on Consumer Protection and Financial Literacy: Results Brief Regulatory Practices in 114 Economies* 2013, Washington DC: International Bank for Reconstruction and Development / The World Bank.
- [23] Rutledge, S.L., *Consumer protection and financial literacy: lessons from nine country studies*, 2010, The World Bank. p. 53.
- [24] Kumar, B. and B. Mohanty, *Consumer Protection in Indian Banking with Special Reference to Branchless Banking*. Vilakshan: The XIMB Journal of Management, 2012. **9**(1).
- [25] Bo, F., *Bank Financial Products Consumers Protection and Legal Suggestions*. Canadian Social Science, 2013. **9**(1).
- [26] Spong, K., *Banking Regulation: Its Purposes Implementation, and Effects, Fifth Edition, Federal Reserve Bank of Kansas City* 2000, Kansas, Missouri: Federal Reserve Bank of Kansas City.
- [27] Dunteman, G.H., *Principal components analysis* 1989: Sage.
- [28] Guadagnoli, E. and W.F. Velicer, *Relation to sample size to the stability of component patterns*. Psychological bulletin, 1988. **103**(2): p. 265.
- [29] Stevens, J.P., *Applied multivariate statistics for the social sciences* 2009: Taylor & Francis.
- [30] Tucker, L.R. and R.C. MacCallum, *Exploratory factor analysis*. Unpublished manuscript, Ohio State University, Columbus, 1997.
- [31] Habing, B., *Exploratory factor analysis*. Website: <http://www.stat.sc.edu/Habing/courses>, 2003: p. 20-30.
- [32] Cronbach, L.J., *Coefficient alpha and the internal structure of tests*. Psychometrika, 1951. **16**(3): p. 297-334.
- [33] Urdan, T.C., *Statistics in Plain English* 2010, New York: Routledge. 224.
- [34] Cortina, J.M., *What is coefficient alpha? An examination of theory and applications*. Journal of applied psychology, 1993. **78**(1): p. 98.
- [35] Field, A., *Discovering statistics using SPSS* 2009: Sage publications.

- [36] Pallant, J., *SPSS survival manual: A step by step guide to data analysis using SPSS2010*: McGraw-Hill International.
- [37] Pappalardo, J.K., *Product Literacy and the Economics of Consumer Protection Policy**. *Journal of Consumer Affairs*, 2012. **46**(2): p. 319-332.

Appendix

Appendix 1: General Principles for Financial Consumer Protection

| | |
|--|---|
| Equitable and fair treatment | Banks should deal fairly and honestly with consumers at all stages of their relationship, so that it is an integral part of the culture of a bank. Care should also be made and special attention given to the needs of vulnerable persons and groups. |
| Disclosure and transparency | Banks should provide up to date information about products and services to consumers. This information should be easily accessible, clear, simple to understand, accurate, not misleading and include any potential risks for the consumer. It should include the rights and responsibilities of each party, including the mechanism for either party to end the banking relationship, as well as details of fees, pricing and any potential penalties that the consumer may incur. |
| Financial education and awareness | Banks should develop programmes and appropriate mechanisms to help existing and future consumers develop the knowledge, skills and confidence to appropriately understand risks, including financial risks and opportunities, make informed choices, know where to go for assistance when they need it. |
| Behaviour and work ethic | Banks should work in a professional manner for the benefit of clients during their relationship, where a bank is primarily responsible for the protection of the financial interests of the client. |
| Protection against fraud | Banks should protect and monitor consumer deposits and savings and other similar financial assets through the development of control systems with a high level of efficiency and effectiveness to reduce fraud, embezzlement or misuse. |
| Protection of privacy | Consumers’ financial and personal information should be protected through appropriate control and protection mechanisms. These mechanisms should define the purposes for which the data may be collected, processed, held, used and disclosed (especially to third parties). |
| Complaints handling | Consumers should have access to adequate complaints handling mechanisms that are accessible, affordable, independent, fair, accountable, timely and efficient and based on SAMA rules. |
| Competition | Consumers should be able to search, compare and where appropriate, switch between products, services and providers easily and clearly at a reasonable cost. |
| Third parties | Banks and their authorised agents should have as an objective, to work in the best interest of their consumers and be responsible for upholding financial consumer protection. Banks should also be responsible and accountable for the actions of their authorised agents. |
| 10. Conflict of interest | Banks should have a written policy on conflict of interest, and ensure that this policy will help to detect potential conflicts of interest. When the possibility of a conflict of interest arises between the bank and the third party, this should be disclosed to the consumer. |

Appendix 2.1: Anti Image Correlation of High Level Principles

| | Equitable and fair treatment | Disclosure and transparency | Financial education and awareness | Behavior and work ethic | Protection against fraud | Protection of privacy | Complaints handling | Competition | Third parties | Conflict of interest |
|-----------------------------------|------------------------------|-----------------------------|-----------------------------------|-------------------------|--------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| Equitable and fair treatment | .892^a | | | | | | | | | |
| Disclosure and transparency | -.232 | .906^a | | | | | | | | |
| Financial education and awareness | .041 | -.173 | .914^a | | | | | | | |
| Behavior and work ethic | -.275 | -.138 | -.197 | .889^a | | | | | | |
| Protection against fraud | .050 | -.031 | -.103 | -.207 | .836^a | | | | | |
| Protection of privacy | -.056 | -.016 | .005 | -.073 | -.329 | .850^a | | | | |
| Complaints handling | -.181 | -.155 | -.176 | -.005 | -.078 | -.023 | .912^a | | | |
| Competition | -.029 | .032 | -.187 | -.211 | .137 | .061 | -.237 | .849^a | | |
| Third parties | -.067 | -.190 | -.034 | .043 | -.154 | -.158 | -.001 | -.309 | .884^a | |
| Conflict of interest | -.029 | -.149 | -.081 | -.030 | -.080 | -.032 | -.029 | -.087 | -.036 | .949^a |

Appendix 2.2: Anti Image Correlation of Understanding Enhancement

| | Conduct regular training courses. | Utilize social media such as Twitter, Facebook. | Use Mass Media such as TVs, Newspapers or Outdoor signs. | Sponsor Academic Projects or Research Chairs. | Incorporate customized messages when accessing consumer on-line account or telephone banking. | Use emails and text messages. |
|---|-----------------------------------|---|--|---|---|-------------------------------|
| Conduct regular training courses. | .662^a | | | | | |
| Utilize social media such as Twitter, Facebook. | -.144 | .609^a | | | | |
| Use Mass Media such as TVs, Newspapers or Outdoor signs. | -.011 | -.445 | .597^a | | | |
| Sponsor Academic Projects or Research Chairs. | -.246 | -.112 | .047 | .619^a | | |
| Incorporate customized messages when accessing consumer on-line account or telephone banking. | .003 | -.039 | -.165 | -.195 | .601^a | |
| Use emails and text messages. | -.054 | -.009 | -.023 | .038 | -.437 | .576^a |