Finance, Accounting and Business Analysis
Volume 4 Issue 2, 2022
http://faba.bg

Applying a Binary Logistic Regression Analysis to Evaluate the Distinction between Conventional and Islamic Banks: A Case Study of Djiboutian Banks

Sadik Aden Dirir

Faculty of Law, Economics, and Management, University of Djibouti, Djibouti

Info Articles

Keywords:
Conventional bank, Islamic bank, Logistic regression, size. Customer trust, interest rate framework, accessibility and Djibouti.

Abstract

The banking sector has developed dramatically during the past decades. Many banks were established and prospered. However, the experience in each banking sector can be non-identical based on many factors. Therefore, it will be ideal to investigate every aspect of conventional and Islamic banks prior to deciding which bank is favorable. The actual paper compares the conventional and Islamic banks in Djibouti to identify which types of banks customers would find advantageous. In that context, variables such as the size of the banks, accessibility, financial instruments, and customer interest rate were explored. Moreover, a binary logistic regression analysis was utilized in order to analyze the responses of 200 individuals who use Djiboutian Islamic and conventional banks. Generally, the findings revealed that individuals have the likelihood to prefer CAC international bank which is a conventional bank over Salam Africa bank. Moreover, the predictors (the bank's size, and accessibility) displayed a none significant p-value that is over 0.05. Whereas customer trust and the interest rate exhibited a significant p-value. The current research is significant to better comprehend the main factors that drive Djiboutian individuals to select a specific bank for their deposits. The findings will also contribute to the wide discipline of literature that always discussed the gap that exists between Islamic and conventional banks.

*Address Correspondence:
E-mail: sadikaden1999@gmail.com

INTRODUCTION

Djibouti is a small country located in the east of Africa. In recent years, it has known an impressive increase in the number of Islamic banks. The financial crisis in 2007 was the main reason for the banking sector to evolve. In the course of that period, Islamic banks were stable, which as result increased their popularity among depositors and financial investors (Imam P, 2010). Since it was a better alternative for the conventional bank's failure. Few analysts even contended that Islamic banks are the most suitable choice to advance economic growth, and overcome full-scall of macro-financial failure over conventional banks.

Nonetheless, will all of these features Islamic banks are still inferior compared to other conventional banks. For the reason that investors and depositors prefer a traditional framework (Dridi, J, & Hasan, M, 2010) Islamic banks are mainly administered by shariah. Also, the guidelines are set up by the domestic countries. Whereas some Islamic banks are converted from conventional banks such as the banks in Iran and Sudan (Sundararajan, 2002).

Religion is a fundamental factor to inspect market behavior, especially in the banking sector. Which is the case with Islamic banks that provides products\services based on Islamic principles (Junaidi, & Anwar, 2022) Consequently, Islamic and conventional banks are widely different in many dimensions. The main differences are that conventional banks use the commodity as money and employ it to lend and use the interest rate differential as compensation. While Islamic banks offer services such as profit & loss sharing and renting assets.

In this paper, two banks from Djibouti were contrasted and evaluated. The first bank is a conventional bank (CAC international bank) a well-known bank among the Djiboutians because it achieved three consecutive years as the best bank according to global finance. The other bank is an Islamic bank (Salam Africa bank). This later offers a service that is in line with Islamic regulations. We highlight that a binary logistic regression analysis will be applied so that the Djiboutian citizen's preferences and Salam Africa and CAC international bank can be assessed and compared. The approach selected for this is important since we will be evaluating dichotomous variables.

In general, this research aims to evaluate the Djiboutian banking sector from both the Islamic and Conventional sides. Additionally, it has a goal to inspect customers' tendency to drift to a specific bank.

The findings revealed that individuals have the likelihood to prefer CAC international bank which is a conventional bank over Salam Africa bank. Moreover, the predictors (bank's size, and accessibility) displayed a none significant p-value that is over 0.05. On the other hand, customer trust and the interest rate exhibited a significant p-value.

The rest of the paper is classified as the following. Section 2 will offer a brief review of the previous articles. It will also present the methodology and the statistical approach that will be employed. Then in section 3 we will observe and interpret the findings. After that section 4 will comprise the discussion and finally, setion5 will provide a general conclusion.

LITERATURE REVIEW

A systematic review of the performance of Islamic banks and conventional banks

The last subprime emergency uncovered the delicacy of the banking area and the customary financial framework was faulted for being the beginning of this emergency. (Smolo, E, & Mirakhor, A, 2010) allude to the contentions of the delicacy of the financial framework was overwhelmed by the high rate of interest rate obligation contracts. Simultaneously, various academicians and specialists express that Islamic banks did not experience the worldwide monetary crisis as conventional banks did (Yılmaz, 5 October 2009).

This conviction has expanded the consideration of researchers in the examination of the Islamic financial framework in ongoing years. Notwithstanding the rising discussion on this issue furthermore, the fast development of Islamic banks mostly in Muslim nations, there are somewhat scarcely any observational investigations that dissect the exhibition of Islamic banks against conventional banks, particularly during the last worldwide financial emergency. (Ahmad & Luo, R, 2010) examined Islamic banks against Conventional banks including at the time of the financial crisis. At that time, they only examined just 9 Islamic banks and 33 conventional banks. The aftereffects of the review showed that Islamic banks are somewhat much more efficient and productive than conventional yet less allocative proficient, and both financial streams showed a most significant level of proficiency in 2007 and 2008.

Notwithstanding the cross-country examination of productivity in Islamic and conventional banks, there are a few investigations that concentrate on the nature and development of banks. Hence, the authors characterized banks by their size and age in view of the size of resources furthermore, on the idea of new and old banks, separately (Hassan, Mohamad, S & Bade, M, 2009) Their discoveries show that proficiency scores of Islamic and conventional banks are not altogether shifted as well as the size and time of the banks don't altogether impact their effectiveness score. A related examination was observed by (Isik & Hassan, K, 2002).

Islamic banks have gotten significant interest from different financial backers, directors, and depositors, especially after the 2008-2009 GFC. In comparison to our study, previous papers mostly focused on the link between Islamic and conventional stock markets. See (Hussein & M. Omram, 2005) and (Ajmi, Hammoudeh, & Nguyen, 2014). Discovered that as the Islamic nations give better diversification gain contrasted with the East nations, with solid strategy suggestions for the homegrown and worldwide financial backers as far as their portfolio diversification through supporting against unanticipated risks (Saiti, B, Bacha, & M. Masih, 2014). Additionally, Authors such as (Dewandaru, & Masih, R, 2015) track down the distinctions in betas among those Islamic and conventional banks in the vast majority of the time span that are not statistically important. A couple of exemptions reveal an equivalent return with lower risks in the term of Islamic banks.

The role of the bank's size

(Bikker, J. A, & K. Haaf, 2002) Illustrated the connection between rivalry circumstances and the market structure in the financial business. They revealed that rivalry is becoming more vulnerable in local business sectors and more grounded in global business sectors, inferring that the more the size of the bank is bigger the more competitive it will be. Additionally, (Berger, A, & W. S. Frame, 2007) track down that a more prominent market presence of huge banks essentially brings down the advance rate expenses of private venture credits. In any case, loan rate premiums expenses are not impacted by the loaning bank's size when the market presence of huge banks is thought of.

(Hannan, T. H, & R. A. Prager, 2009). they contend that little and single market banks' benefit is profoundly connected with the existence of huge market banks in-country banking sector. They emphasized that an expanded presence of huge market banks adversely influences the benefits of little single market banks. What's more, huge banks' extreme market power is almost certain to prompt their imposing business model of prime credits, as their strength speeds up their pattern to borrowers with prime FICO assessments. Little banks have gigantic motivations to put resources into unsafe sub-or non-prime credits, which can adversely influence their monetary solidness. (Demsetz, & P. E. Strahan, 1997) and (Hughes, 1999) further exhibit that huge banks' monetary dependability has not improved as they have a motivating force to further develop productivity by putting resources into hazardous resources, in spite of the fact that they are preferred to broadened over little banks.

(Kang, 2006) insist that monetary administrative specialists are less inclined to direct an exhaustive examination concerning enormous banks on the grounds that they are more perplexing than little banks and enormous banks can confront moral risk issues due to too big-to-fizzle. Likewise, enormous banks for the most part have higher credit rating scores than little banks and huge banks' financing costs are by and large lower than those of little banks. Accordingly, it might bring down huge banks' motivating forces to plan against pressing financing and to keep up with high fluid resource proportions. Generally, past writing shows that exorbitant banks leveling up unfavorably affects their monetary steadiness.

Customer trust in Islamic and conventional banks

Client trust and loyalty are considered the essence of client relationship management It is a huge component in firm endurance, given its critical relationship with productivity. The literature reports a positive connection between client loyalty and firm productivity. Tasks of Islamic banks depend on client direction to keep up with existing clients and draw in new are the essential client relationship goals that assist with supporting an association as per Shariah targets Seeking devotion of clients in this manner can be viewed as an element of relationship with the management in Islam (Firdaus, & Yusuf, 2014).

(Reuters, 2018), disclose that out of 69 nations in the 2017 Global Islamic Banks' Execution Report 82% announced benefits. Also, Islamic banks depend intensely on client trust to be productive. Development has begun to draw in non-Muslims to Islamic banks equal to Muslims. Non-Muslim clients by and large keep up with the relationship with regular banks that strategically pitch Islamic financial items. Notwithstanding, whether the client is Muslim or Non-Muslim, winning client trust stays the main concern of banks however with various (Kartika, T, Firdaus, & Najib, M, 2019).

Islamic financial clients have exceptional motivation to interface due to their strict convictions. This is rather than customary banks that are just benefit situated. Islamic banking depends on Shariah consistent benefit and misfortune sharing (PLS) is the idea that infers that the client and the bank share benefits utilizing pre-decided proportions (Hati, & Wibowo, 2020). It was described that client commitment results from consumer loyalty to bank administration quality. The higher assistance quality compared with cost influences apparent worth. Consequently, an expansion in the perceived value of Islamic bank administration quality prompts more grounded client commitment (Moliner, 2018).

The interest rate differential between Islamic and conventional banks

Conventional banks gain cash by charging revenue and expenses for administrations, though Islamic banks gain cash by benefit and misfortune sharing, exchanging, renting, charging expenses for administrations delivered, and utilizing other sharia agreements of trade. Several Islamic banks consider utilizing commercial rates of interest as nothing more than Riba and there have been a large number of discussions and endeavors to examine this issue. Some Islamic banks use loan cost as a kind of perspective to highlight and compute the necessary benefit return by giving some administrations as long as the sum is sure, the return is fixed, the task is exchange related and the bank has a veritable stake in the result. Be that as it may, since, Islamic bank exercises must be exchange-based, include real exchange, keep away from disallowed practices, and should be conveyed out with the greatest possible level of uprightness and great confidence as shariah imply it becomes complex. A few other Islamic Banks use Musharakah, to legitimize bank revenue.

It implies that Islamic bank works based on benefit also, misfortune sharing. In the event that the financial specialist has endured misfortunes, the bank will share these misfortunes based on the method of money utilized (Mudarabah, Musharakah). In a conventional financial framework, interest is charged even in the event that the association endures misfortunes by utilizing the bank's assets. Accordingly, it did not depend on benefit and misfortune sharing as the Islamic banks do.

Another distinction we have is the fixed deposit. The people who deposit their money in conventional banks get benefit from their interests as foreordained financing costs are independent of the bank's execution. Contrary to Islamic banking, bank depositors accept their profits, depending exclusively on the bank's achievement. Not at all like regular banks, an Islamic bank goes about as a delegate between the investor and the business visionary. Islamic banking will in general make an interface with the real areas of the financial framework by utilizing exchange-related exercises.

The feature of accessibility in Islamic and conventional banks

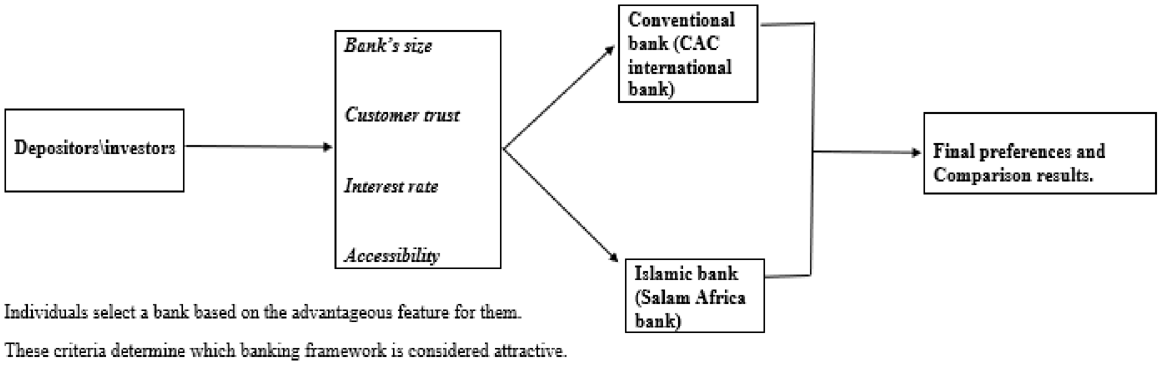
Along with the improvement of methods of reasoning relating loaning exercises to profound standards, Islamic banks started to pervade the market in both the Muslim and non-Muslim nations (Akhtar, 2007). This cycle reflected the developing acknowledgment that Islam's monetary and social messages were firmly adjusted (Hassan, A., Chachi, A, & Latiff, S.A, 2008). According to an essential perspective, the special elements of Islamic money have demonstrated the same time usefulness and uselessness. However, huge in its bid is the value-based exchanges and appropriations of hazards that ought to, in principle, lead to social government assistance gains (Kuran, 2004).

Islamic banking has as a principal goal, the establishment of an adjusted and fair society, empowering the equivalent dissemination of abundance while disallowing exercises that might hurt people (Kamla, 2006). Such aims and obligations expect banks to embrace moral speculations and keep away from syndications while treating their representatives and clients decently. The cultural and societal duty of Islamic monetary frameworks shouldn't be restricted to drawing nearer, teaching, and serving Muslims. All things being equal, the authors contend that everybody ought to reserve the privilege to consume Shariah-agreeable items, to secure business. And hold partakes in the organizations concerned (Badawi, 1996). In terms of loans and financing accessibility, both banks differ. According to (Demirgüç-Kunt, A, 2012) conventional Banks, a wide range of ventures are funded, just organizations considered illicit by the law are not supported. Whereas Islamic Banks don't allow funding to businesses that hurt the general public like liquor and tobacco.

METHODOLOGY

The sample and the data collection

For this study to be conducted a sample size of 200 individuals from Djibouti was collected. The structure involves sending a questionnaire to a different category of people who use Islamic banks (Salam Africa bank) and Conventional banks (CAC international bank). At least 50 participants for every indicator are suggested (Field, 2013) which is why the sample size is over 50 in this study, Moreover, Leblanc and Fitzgerald (2000) recommend at least 30 perceptions for each autonomous variable. After the responses from the survey were gathered a binary logistic regression analysis was applied so that the two dependent variables will be inspected. See the conceptual model below.



Measurement and statistical analysis

To investigate the various independent variables that are influencing the two probable outcomes in a study a logistic regression analysis is utilized so that the model will estimate the logit of the predicting factors on the dependent variables. The most agreed formula is written (Peng, 2002) and (James,2013).

$$log(odds) = logit(P) = \text{In}\left(\frac{P}{1-P}\right) \quad (1)$$

$$logit(P) = \alpha + b_1x_1 + b_2x_2 + b_3x_3 + \cdots \quad (2)$$

$$P = \left(\frac{\exp\,(a + b_1x_1 + b_2x_2 + b_3x_3 + \cdots)}{1 + \exp\,(a + b_1x_1 + b_2x_2 + b_3x_3 + \cdots)}\right) \quad (3)$$

The above formula can be described as the following where:
P stands for the probability of a particular category.
Exp signifies the exponential function.
a is the intercept of the equation used and,
b is considered the sloped of the independent variables.

RESULT

In table 1, we have the processing summary that highlights the total number of participants in the study 200 respondents composed of 68% males and 32% females.

Table 1. Case Processing Summary

	N	Percent
Included in Analysis	200	100%
Males	136	68%
Females	64	32%
Missing Cases	0	0

The coding in terms of the predicted variables consists of 1 for CAC international bank (conventional bank) and 2 for Salam Africa bank (Islamic bank).

Table 2. Variable encoding

Original Value	Internal Value
CAC International bank	1
Salam Africa Bank	2

The model summary of table 4 illustrates a pseudo-R square of 65.4% change in the criterion variable that can be computed to the predictor variables in the model.

Table 3. Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	104.200[a]	.434	.654

a. Estimation terminated at iteration number 6 because parameter estimates changed by less than .001.

According to (Lemeshow, S, & Hosmer, 2020) if the significance value is lower than 0,05 it means a poor fit. However, in our model, the significance is above 5% so it adequately fits the data see table 5.

Table 4. Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	4.276	8	.831

With the correspondence of the observed and predicted membership based on the model. We have a total of 153 cases were in the data to have selected CAC international bank as the first choice of preference. And 145 of those 153 were correctly predicted by the model to fully prefer CAC international bank. With an accuracy rate of 94.8% when it comes to predicting those who support conventional banks. On the other hand, 47 individuals expressed their preferences for Salam Africa bank. But, only 35 were correctly predicted by the model. Revealing a correct percentage of 74.5%. In general, the classification table exhibits 90% of our sample correctly being predicted to fall into their respective groups.

Table 5. Classification Table

			Bank type		Percentage Correct
			CAC (Conventional)	Salam (Islamic)	
1	Step	CAC	145	8	94.8
		Salam	12	35	74.5
	Overall Percentage			90.0	
		a. The cut value is 0.500			

First of all, we attributed 1= CAC international bank and 2= Salam Africa bank. The fact that some variables' coefficients (bank size, trust, and accessibility) are below 1 indicates that CAC international bank is considered the most likely to be an advantageous bank for Djiboutian depositors compared to Salam Africa bank. Whereas in terms of interest rate framework Salam Africa bank is considered convenient to Djiboutians because of their Islamic belief. Nevertheless, the differences were not statistically significant in the bank's size and accessibility predictor. While factors such as trust and interest rate framework displayed a significant p-value of 0.037 and 0.048 respectively which means that people select banks based on the trust they attribute to them and the different interest frameworks they offer.

Moreover, since most of the predicting factors are reflecting coefficient values of less than 1, it means we have a decrease in the likelihood of falling into target groups as we increase our predictor variable. Therefore, CAC international bank would predominantly be preferred in terms of bank size (0.220), trust (0.382), and accessibility (0.132) in relevance to Salam Africa bank. And given the values are less than 1 thus, it is going to be compatible with our coefficients.

Additionally, the confidence interval (CI) for the odds ratio reveals that some of the predicting factors of 1 fall between the lower and the upper intervals which imply that there is no relationship between depositors selecting a bank based on (the trust, and interest rate framework).

For instance, the bank's size is equivalent to (0.802<1<1.933). While accessibility is (0.397<1<3.278). Inversely, the customer trust (1<1.023<2.101) and the interest rate framework (1<1.010<9.059) do not fall in the confidence intervals which confirms that the interest rate and customer trust are important predictors factor for people to select a bank.

Table 6. Variables in the Equation

	B	S.E.	Wald	df	Sig	Exp (B)	95% C.I.for EXP(B)	
							Lower	Upper
Size	.220	.224	.957	1	.328	1.245	.802	1.933
Customer trust	.382	.184	4.340	1	.037	1.466	1.023	2.101
Interest rate Framework	1.107	.560	3.909	1	.048	3.024	1.010	9.059
Accessibility	.132	.538	.060	1	.806	1.141	.397	3.278
Constant	-5.794	.774	56.028	1	.000	.003		

a. Variable(s) entered in step 1: size, customer trust, Interest rate framework, Accessibility.

The acceptable level of reliability for Cronbach's alpha is varied between 0.6 and 0.7. And in this study, the results displayed a high inner consistency and good reliability of 0.79.

Table 7. Reliability Statistics

Cronbach's Alpha	N of Items
0.796	6

DISCUSSION

Recently, the financial framework of the banking sector became complicated due to subprime crises, globalization, and the never-ending depositors' and investors' needs. In Djibouti, there are four Islamic banks and the people are drifting toward the services offered by those banks because it is convenient for their religious beliefs. However, with the increasing number of Islamic banks, Djiboutian depositors and investors still prefer a conventional framework as a means of financing. For instance, the findings demonstrated that the conventional banking framework (CAC international bank) is more advantageous to Djiboutian depositors and investors. Nearly 94,8% of the study participants displayed the likelihood to prefer it over Salam Africa bank. Furthermore, table 5 uncovered those factors such as (customer trust, and interest rate framework) unveiled a significant value of 0.037 and 0.048 sequentially when it comes to selection between conventional and Islamic bank. This indicates that interest rate is an indisputable tool to affect when choosing a conventional or Islamic financing service. Whereas (bank size, and accessibility) displayed insignificant value which implies that depositors and investors do not select a bank based on these previous factors. Additionally, the odds of individuals choosing Salam Africa bank offering an Islamic interest rate framework is 3,024 times higher than conventional banks with 95% of CI of 0.267 to 0.842. Conversely, people selecting a conventional bank over an Islamic bank based on trust, size, and accessibility are 1.245, 1.466, and 1.141 higher.

CONCLUSION AND IMPLICATION

This paper evaluates the financial framework differences between two banks in Djibouti. Salam Africa bank, which is an Islamic bank, and CAC international bank a conventional bank. In order to conduct the analysis, a binary logistic regression analysis was applied. Additionally, to carry on with comparison several factors such as the bank's size, customer trust, interest rate, and accessibility were investigated. The results presented that the conventional financial framework is preferred over the Islamic system among Djiboutian citizens. Moreover, the variables (bank size, and accessibility) revealed no significant value. Thus, rejecting these factors as essential factors to determine the reason why individuals select a specific bank. However, the interest rate and customer trust generated a significant value which implies depositors and investors choose a bank based on these variables as mean financing. The paper contributes to the wide literature that always contrasted the financial system of Islamic and Conventional banks. It also contributes to comprehending the behavior of individuals when choosing a specific bank. Additionally, to the theoretical contribution, the actual paper offers information about two banks located in Djibouti and the way their activities differ. For that reason, the availability of these data will provide Djiboutian banks, analysts, and the government to understand of the depositor's and investors' behavior. Even though this research compares two different financial frameworks in terms of (size, loyalty, interest rate, and accessibility) many other factors are still not investigated and the Djiboutian market is not fully assessed and analyzed in terms of the banking sector. Therefore, future studies need to be conducted to uncover all the discrepancies in the Djiboutian banking framework. For instance, inspecting the Djiboutian government's role in promoting the Islamic and conventional banks.

REFERENCES

Ahmad, W., & Luo, R. (2010). Comparison of banking efficiency in Europe: Islamic versus conventional banks. *International Finance Review*, 11, 361–89.

Ajmi, A., Hammoudeh, S., & Nguyen, D. K. (2014). How Strong are the Causal Relationships between Islamic Stock Markets and Conventional Financia Systems? Evidence from Linear and Nonlinear Tests. *Journal of International Financial Markets, Institutions & Money*, 28: 213–227.

Akhtar, S. (2007). Pakistan Islamic banking – past, present and future outlook. *Governor of the State Bank of Pakistan, at Dawn Asia FinanceGovernor of the State Bank of Pakistan, at Dawn Asia Finance Conference.* Karachi.

Badawi, M. A. (1996). Mapping the Way to Consensus. *Islamic Banker*, Vol. 12, pp. 20.

Berger, A, & W. S. Frame. (2007). Small business credit scoring and credit availability. *Journal of Small Business Management*, 45 (1): 5–22.

Bikker, J. A, & K. Haaf. (2002). Competition, concentration and their relationship: An empirical analysis of the banking industry. *Journal of Banking & Finance*, 26 (11): 2191–214.

Demirgüç-Kunt, A. (2012). Islamic vs. conventional banking: Business model, efficiency and stability. *Journal of Banking & Finance*, Vol. 37, pp. 433-447.

Demsetz, & P. E. Strahan. (1997). Diversification, size, and risk at bank holding companies. *Journal of Money, Credit, and banking*, 29: 300–13.

Dewandaru, G. O., & Masih, R. (2015). Risk-Return Characteristics of Islamic Equity Indices: MultiTimescales Analysis. *Journal of Multinational Financial Management*, 29: 115–138.

Dridi, J, & Hasan, M. (2010). Have Islamic Banks Been Impacted Differently than Conventional Banks During the Recent Global Crisis? *Washington:International Monetary Fund).*, No. WP/10/201.

Firdaus, & Yusuf. (2014). The Role of Islamic Finance in Socio- Economic Development Ideals and Realities. *4th ISRA International Colloquium for Islamic Finance (IICIF2014)* (pp. pp. 3–4). Malaysia: ISRA-Bank Negara.

Hannan, T. H, & R. A. Prager. (2009). The profitability of small single-market banks in an era of multi-market banking. *Journal of Banking & Finance*, 33 (2): 263–71.

Hassan, A., Chachi, A, & Latiff, S.A. (2008). Islamic marketing ethics and its impact on customer satisfaction in the Islamic banking industry. *Islamic Economics Journal*, Vol. 21,No. 1, p. 23-40.

Hassan, T., Mohamad, S, & Bader, M. (2009). Efficiency of conventional versus Islamic banks: evidence from the middle east. *International Journal of Islamic and Middle Eastern Finance and Management*, 2, 46–65.

Hati, & Wibowo. (2020). The antecedents of Muslim customers' intention to invest in an Islamic bank's term deposits: Evidence from a Muslim majority country. *Journal of Islamic Marketing*, (ahead–of–print.

Hughes. (1999). The dollars and sense of bank consolidation. . *Journal of Banking & Finance*, 23 (2–4): 291–324.

Hussein, K., & M. Omran. (2005). Ethical Investment Revisited: Evidence from Dow Jones Islamic Indexes. *Journal of Investing*, 14: 105–126.

Imam, P. (2010). Islamic Banking: How Has It Diffused? *IMF Working Paper, Washington: International Monetary Fund*, No WP/10/195.

Isik, I., & Hassan, K. (2002). Cost and profit efficiency of the Turkish banking industry. *The Financial Review*, 37, 257–80.

James, G. (2013). *An Introduction to statistical learning with applications in R: Springer.*

Junaidi, & Anwar. (2022). Determinants to adopt conventional and Islamic banking: evidence from Indonesia Ready Wicaksono Adopt conventional and Islamic banking. *Journal of Islamic Marketing*.

Kamla, R. (2006). Islam, nature, and accounting: Islamic principles and the notion of accounting for the environment. *Accounting Forum*, Vol. 30, No. 3, pp. 246-265.

Kang. (2006). *The impact of changing financial environment on financial stability.* Seoul: The Bank of Korea.

Kartika, T, Firdaus, & Najib, M. (2019). Contrasting the drivers of customer loyalty; financing and depositor customer, single and dual customer, in Indonesian Islamic bank. *Journal of Islamic Marketing*, 11(4) 933–959.

Kuran, T. (2004). Islam and Mammon: The Economic Predicaments of Islamism. *Princeton University Press.* Princeton, NJ.

Lemeshow, S., & Hosmer. (2020). Assessing the goodness of fit of logistic regression model samples.

A modification of the Hosmer-Lemeshow test, together with four discussion papers. *Journal of the international biometric society*, 76(2):549-560.

Moliner, M. Á. (2018). Consequences of customer engagement and customer self-brand connection. *journal of Services Marketing*, 32(4), 387–399.
Peng, C. (2002). An Introduction to logistic regression analysis and reporting. *The Journal of Educational Research*, 96: 3-15.
Reuters, T. (2018). Islamic Finance Development Report. *Building Momentum*.
Saiti, B, O.-I. Bacha, & M. Masih. (2014). The Diversification Benefits from Islamic Investment during the Financial Turmoil: The Case for the US-Based Equity Investors. *Borsa Istanbul Review*, 14: 196–211.
Smolo, E, & Mirakhor, A. (2010). The global financial crisis and its implications for the Islamic financial industry. *International Journal of Islamic and Middle Eastern*, 3, 372–85.
Sundararajan, V. (2002). Islamic financial institutions and products in the global financial system: key issues in risk management and challenges ahead. *IMF working paper*, Vol 2004.
Yılmaz, D. (5 October 2009). Governor of the Central Bank of the Republic of Turkey.
speech at the conference on 'Islamic finance – during and after the global financial crisis. *IMF–World Bank, Annual Meetings 2009.* Istanbul.