

# Sharia Banking Sustainability: Instrument Development of Islamic Banking Sustainability

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**Abstract.** Until now, there is no instrument that can be used to measure the sustainability of Islamic banks. In fact, in the midst of very tight competition with conventional banks and financial technology which is developing at a fast pace, a measuring tool is needed to determine how far Islamic banks are able to compete towards sustainability. The purpose of this research is to develop an instrument that can measure the level of sustainability of Islamic banks in terms of business, investment, Human resource management (HRM), and reporting. The method used is the development of an instrument that includes steps for reading theory, developing a grid, content analysis, empirical testing, analysis and drawing conclusions. The instrument was tested on as many as 250 customers of BRI sharia banks, BNI Sharia, and Bank Sharia Mandiri. Data analysis using factor analysis method. The results of the calibration analysis show that the instrument is feasible to be tested on a wider scope, in order to obtain greater consistency.

**Keywords:** Sustainability, Islamic bank, instrument, measurement.

## 1 Introduction

The Islamic banking industry in Indonesia is undergoing fundamental changes due to a number of driving factors such as market liberalization, stakeholder expectations, and environmental risks. This has resulted in the development of the Islamic banking market experiencing an unprecedented pace. Going forward, the Islamic banking industry must continue to look for ways to increase sustainability and profitability while balancing the demands of regulatory changes. This shows the importance of sustainability in ensuring the long-term survival of the bank [1][2].

Banks in realizing sustainable development should not only move on rhetoric, but must really strive to realize sustainable development as a decision-making strategy [3]. Banking in financial reports for the public must include economic, environmental and social information. The report is intended to help audiences make informed decisions. This is motivated by the demands of stakeholders and shareholders including regulators, society, customers, and employees. Disclosure of corporate sustainability is a means of communicating with stakeholders about the company's economic, environmental and social performance. A sustainability report shows the company's responsiveness to social problems and can also serve as a signal that the company wants to position itself in the perspective of a wider community [1].

The banking industry has started to respond to this pressure by adopting the pillars of sustainability and disclosing social and environmental reports. They have a responsibility in

the sustainable development process [4]. Banks play a key role in society and an important one for economic development [5]. Thus, they bear a big responsibility for sustainable development. Some experts argue that the financial or banking sector should play an important role in the transformation of a more sustainable economic system in order to reduce the negative effects from the external side [6].

Currently, the sustainability of the banking industry has a very important meaning. The approach used also covers broader and deeper things. Moreover, currently the sustainability of the bank is gaining new momentum, driven by encouragement from governments around the world, and the growing body of evidence that supports banking finance in a sustainable manner [7].

Data from the Global Sustainable Investment Alliance (WF Banking, 2017) states that sustainable, responsible and impactful investment assets amounted to \$ 22.89 trillion worldwide, in 2016. This is an increase of 25 percent compared to 2014, which previously increased 61 percent from 2012 [7].

However, even though the amount of growth in the banking industry is striking, there is a long way to go. For example, according to research results from the United Nations Environment Program, green bonds accumulated are still less than one percent of total bond issues. Moreover, only 10 percent of bank loans are considered 'green' according to existing national standards [7].

Advanced ways of measuring banking sustainability throughout the financial system will be critical to overall progress on the sustainability agenda. Ultimately, it is highly relevant both from a policy-based perspective in understanding how the sustainable finance agenda is evolving

## **2 Literature Review**

Adams & Narayanan (2007) considers that the issue of sustainability is one of the most important issues for industry around the world. Sustainability consists of two major concepts, namely (1) the concept of needs, in particular the essential needs of the world's poor, which must be given top priority, and (2) the idea of limits imposed by the state of technology and social organization of the ability of the environment to meet present and future needs [8].

Company sustainability shows the inclusion of social and environmental concerns in business operations and interacting with stakeholders (Roca & Searcy, 2012). From an organizational perspective, sustainability is defined as an effort to meet the needs of a company's direct and indirect stakeholders without sacrificing the ability to meet the needs of future stakeholders [9].

Sustainable business efforts are carried out to minimize various obstacles and challenges for the company. Sustainable development is a business model that manages triple bottom online where the company manages five main fulcrums (5Ps), namely finance (profit), planet, prosperity and peace, partnerships and social environmental impacts and social welfare (people) [10] are equally different from conventional ways where companies only think in terms of finances without thinking about the effects on the environment and social life [11]. Several previous studies have linked triple bottom online with corporate sustainability [12] where the method is not only safe for the surrounding environment, but also has good quality to succeed in a competitive international market.

Sustainability human resources management (HRM) is a design option for working relationships and as a contribution to the development of a sustainable company. The company believes that sustainability is more than just economical and environmentally

friendly. But also about other aspects such as employee development, work ability, employee health and welfare, employee participation, and fairness. There are four dimensions of sustainable HRM, namely justice and welfare, transparent HR practices, profitability, and employee welfare. Four broader areas of responsibility were also identified, namely legal and ethical, managerial, social and economic [13].

Financial sustainability studies the contract design problems faced by organizations or companies in the scope of financial lending by taking into account the outreach, sustainability, and impact of loans on lending targets. Sustainable finance aims to encourage financial service institutions to implement more environmentally friendly financial practices by 'greening' their customer base and prioritizing financial transactions for environmentally friendly business projects.

Altuntas and Turker (2012) analyze how sustainable supply chains are strategically conceptualized and practiced [14]. Value-based bankers are increasingly aware of the importance of the real economy, social cohesion and the natural human ecosystem. These three things are at the core of the sustainable banking business model. The focus on investment sustainability moves to regulation in the banking sector. Customers can also find out the sustainability of their investment, through internet technology. Banks must be able to provide infestation grow application services, as robots that are able to monitor financial benefits and wider social effects [7].

The dimension of sustainability includes the nature of bank services which are highly dependent on the production and processing of information and social networks. Corporate social responsibility, increased interconnectivity, increased homogeneity, decreased diversity, human culture, institutions, practices and technology [15].

Sustainability report is a form of corporate responsibility to the public, so that the public will also provide an assessment of the company's performance. Continuous reporting as a type of non-financial report is a practice of measuring, disclosing and being accountable to stakeholders for organizational performance [16]. Sustainable reporting shows a movement towards increasing transparency and business in relation to accountability to a higher level [17].

Wass et.al. (2014) suggest the use of three indicators when measuring banking sustainability, namely: interpretation, information structuring, and influence. Other experts see that the sustainability of banking can be seen from: 1) equality (justice), 2) dynamics (changes due to the changing environment and society, to trigger uncertainty and the need for prudence, 3) integration (combining finance and the environment), 4) normativity (sustainable development as a social construction as a form of normative choice) [3].

### **3 Methods**

The method used in the development of Islamic banking sustainability instruments is to use standardized instruments by calibrating the instruments that have been developed, based on empirical trial data in order to obtain measuring instruments that have high validity and have a high level of reliability. The results of the development of this measuring instrument can be re-measured by other researchers in other places at different times. This measuring tool can be used by all researchers, because it has a high level of validity and reliability.

The population in this study are customers of the 3 largest Islamic banks in Indonesia which are registered at BI. In conducting this research, data collection was carried out through the distribution of survey instruments using goggle form to obtain the latest information

availability. This research is based on construct, content, and empirical analysis to measure the quality of sustainability disclosure.

Construct and content analysis refers to existing theories, as well as dimensions and indicators that have been proposed by experts. Empirical analysis was performed using factor analysis.

For this purpose, the information provided by the customer when filling out the instrument is the customer's perception of the sustainability of the Islamic bank in the future, based on the quality of services provided. Through a survey it was possible for researchers to take 3 commercial Islamic banks in operation. The three selected banks, namely BRI Sharia, BNI Sharia, and Bank Sharia Mandiri, all of which inform their stakeholders about sustainable performance. They finance environmental protection and operate on a social responsibility basis. Finally, we obtained a dataset consisting of balanced instrument calibration survey data from customers of 3 commercial Islamic banks.

Indicators in the preparation of bank sustainability instruments are divided into three groups of indicators, namely disclosure of financial sustainability, disclosure of consumption and energy savings, and disclosure of product responsibility.

**Table 1.** Sharia Banking Institution Sustainability Indicators

<b>Dimension</b>	<b>Indicators</b>	<b>Sub-indicators</b>	<b>Item Number</b>
Sharia business sustainability	Radical resource productivity	Reducing or abandoning the use of natural resources in the production process;	1
		Eliminates dependence on energy or non-renewable resources	2
	Investment in Natural capital	Running energy or resources while maintaining the environment in sharia	3
		Using resources in sharia	4
	Ecological redesign	Using a closed-loop production system	5
		Doing recycling	6
	Service and flow economy	Sharia product leasing	7
		Reducing Waste in sharia	8
	Responsible consumption	Sharia product promotion	9
		Sharia Consumer Education	10
Sharia HRM Sustainability	Justice	Sustainable justice according to sharia	11
		Opportunities for employees to participate in a sustainable manner according to sharia	12
	Transparent HR practices	Increase work capacity in a transparent manner according to sharia	13
		transparent employee development	14
	Profitability	The role of HR in generating profits according to sharia	15
		Sustainable HR competencies according to sharia	16
Employee welfare	sustainable employee welfare according to sharia	17	

<b>Dimension</b>	<b>Indicators</b>	<b>Sub-indicators</b>	<b>Item Number</b>	
		Sustainable employee health according to sharia	18	
Sharia Financial Sustainability	Roadmap of financial sustainability	Current position	19	
		The position to be aimed at in sharia	20	
		Strategy towards sharia economy	21	
	Operational Sustainability	Sharia economic general policies	22	
Sharia investment sustainability	Financial sustainability	Funds for social: the poor, the disabled, the elderly, the children in the children's house, charity activities, own foundation according to sharia	23	
		The amount of funds allocated in sharia	24	
		Sharia Donation Value	25	
	Consumption and energy savings	Sharia environmental credit risk assessment procedures	26	
		Initiatives to provide sustainability products and services according to sharia	27	
		support for businesses that adopt environmentally friendly practices according to sharia	28	
		Energy Consumption and Disclosure of Savings Environmental strategies for Islamic banks	29	
	Product responsibility	Raw materials for halal products	30	
		The production process becomes finished goods pages	31	
		Product recycling in maintaining environmental sustainability according to sharia	32	
Sharia Reporting Sustainability	Economic Indicators	Direct economic value according to sharia	33	
		Economic value is distributed according to sharia	34	
		Islamic market development	35	
		Muslim community investment	36	
	Environment Indicators	Halal material	37	
		Energy kosher	38	
		Water	39	
		Emission	40	
		Recycle on page basis	41	
			Indirect Impact	42
		Social indicators	Muslim employment	43

Dimension	Indicators	Sub-indicators	Item Number
		Islamic economics education and training	44

Source: Theory Reading Results

In analysing the data that has been collected, factor analysis is used.

## 4 Results

The determinant of correlation matrix  $2.685E-14$ , the determinant number of the matrix is close to zero, meaning that there is sufficient correlation between variables. The determinant value of the correlation matrix whose elements resemble the identity matrix will have a determinant value of one.

**Table 2.** KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.731
Approx. Chi-Square	7296.561
Bartlett's Test of Sphericity	Degree of freedom. 946
Sig.	.000
Correlation Matrix	
<b>a. Determinant = 2.685E-014</b>	

Source: 2020 data analysis results

The KMO value is an identity of the comparison of the distance between the correlation coefficient and the partial correlation coefficient. If the sum of the squares of the partial correlation coefficient between all pairs of variables is small compared to the sum of squares of the correlation coefficient, the value of KMO will be close to one.

A small KMO value indicates that the factor analysis is not appropriate, based on the output above the KMO value = 0.731. Bartlett's test shows the number 422.301 with a significance of  $0.000 < \alpha (0.05)$ , this shows that the correlation matrix being tested is not an identity matrix.

In the anti-image matrices table above, especially in the anti-image correlation section, you can see a number of numbers that form a diagonal (marked 'a' and have been given a circle) which indicates the magnitude of the MSA value of a variable. The MSA value is the value of the comparison of the distance between the correlation coefficient and the partial correlation coefficient. To be able to do factor analysis, the MSA value must be greater than 0.5. Based on the anti-image matrices output above all MSA values are  $> 0.5$  so we can continue the discussion. If the MSA value  $< 0.5$  means enough discussion here.

In the Communalities table, the Initial value is the variable variant before extracting. All initials have a value of 1, this means that prior to extraction, the variable 100% forms this factor, because the factor before extraction is the same as the variable. Thus there are still 44 items.

**Table 3.** Total Variance Explained

Component	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	6.110	13.887	13.887	6.110	13.887	13.887	4.294	9.759	9.759
2	4.799	10.907	24.794	4.799	10.907	24.794	3.346	7.604	17.364
3	4.099	9.315	34.109	4.099	9.315	34.109	3.078	6.994	24.358
4	3.365	7.648	41.756	3.365	7.648	41.756	2.893	6.574	30.932
5	2.811	6.388	48.145	2.811	6.388	48.145	2.844	6.463	37.395
6	2.255	5.124	53.268	2.255	5.124	53.268	2.768	6.292	43.687
7	2.049	4.657	57.926	2.049	4.657	57.926	2.601	5.912	49.599
8	1.850	4.205	62.131	1.850	4.205	62.131	2.532	5.756	55.354
9	1.730	3.932	66.063	1.730	3.932	66.063	2.248	5.110	60.464
10	1.469	3.338	69.402	1.469	3.338	69.402	2.074	4.715	65.178
11	1.243	2.826	72.228	1.243	2.826	72.228	1.978	4.497	69.675
12	1.134	2.578	74.806	1.134	2.578	74.806	1.951	4.435	74.110
13	1.059	2.406	77.212	1.059	2.406	77.212	1.365	3.102	77.212
14	.796	1.808	79.020						

Source: 2020 data analysis results

Based on the Total Variance Explained output, information can be obtained that the number of factors formed is 13 factors, namely the first factor has an eigenvalue = 9,759, the second factor has an eigenvalue = 7,604, and the third factor has an eigenvalue = 6,994. The total sum of all eigenvalues = 77,212 or equal to the sum of the total variants.

The percentage of variance by factor 1 is  $13,887 (6.110 / 44) \times 100\% = 13,887\%$ . The percentage of variance by factor 2 is  $24,794 (4,799 / 44) \times 100\% = 24,794\%$ . The percentage of variance by factor 3 is  $34,109 (4,099 / 44) \times 100\% = 34,109\%$  and so on.

Based on the output, it is obtained thirteen factors, each of which has a percentage of variance of 13,887; 10,907; 9,315 and so on, so that the total percentage of variance of the three factors is 77,212%. Thus 77,212% of all variables can be explained by the thirteen formed factors. This instrument is able to raise 77.22% of its hidden dimensions. The remaining 32.78% cannot be manifested through this instrument.

The Component Matrix diagram shows the distribution of the variables that have been extracted into factors that are formed based on their loading factors.

Variables are included in the factors that have the largest loading factor. The loading factor shows the closeness of a variable to the formed factors. The greater the loading factor value, the more significantly the variable can be included in one of the factors that are formed, and vice versa.

In some cases, it can be found that a variable has the same relative closeness with several factors, so it needs to be rotated. The Rotated Component Matrix table shows the distribution of the variables that have been extracted into the factors that have been formed based on the loading factor after the rotation process is carried out. The loading factor value may change after rotation.

Variables that have a loading factor value  $<0.400$  are considered to have a weak contribution to the formed factors, so they must be reduced from the factors that are formed.

Based on the output of the Component Matrix above, it can be seen that: instrument items that enter factor 1, namely items number 6, 7, 5, and 8. Instrument items that enter factor 2, namely item items number 19, 18, 20, and 17. Instrument items that fall into factor 3, namely items number 11, 10, 12, and 9. Instrument items included in factor 4, namely items number 23, 22, 24, and 21. Instrument items that are included in factor 5, namely items number 14, 15, 13, and 16. Instrument items included in factor 6, namely items number 42, 43, 44, and 38. Instrument items included in factor 7, namely items number 27, 26, 28, and 25.

Instrument items included in factor 8, namely items number 1, 2, and 3. Instrument items included in factor 9, namely items no. 40, 39, and 41. Instrument items included in factor 10, namely items number 32, 31, and 33. Instrument items that were included in the 11th factor were items number 36, 35, and 37. Instrument items that are included in factor 12, namely items number 30 and 29. Instrument items that are included in factor 13, namely item number 34.

**Table 4.** Formed factors

<b>Factor</b>	<b>Eigenvalue</b>	<b>Item number</b>	<b>Loading factor</b>
1	9,759	Item_6	0,906
		Item_7	0,885
		Item_5	0,874
		Item_8	0,784
		Item_4	0,769
2	7.604	Item_19	0,898
		Item_18	0,858
		Item_20	0,760
		Item_17	0,751
3	6,994	Item_11	0,890
		Item_10	0,841
		Item_12	0,765
		Item_9	0,620
4	6,574	Item_23	0,820
		Item_22	0,786
		Item_24	0,772
		Item_21	0,740
5	6.463	Item_14	0,831
		Item_15	0,802
		Item_13	0,735
		Item_16	0,610
6	6.292	Item_42	0,858
		Item_43	0,857
		Item_44	0,820
		Item_38	0,462
7	5,912	Item_27	0,870
		Item_26	0,840
		Item_28	0,722
		Item_25	0,558
8	5,756	Item_1	0,884
		Item_2	0,834
		Item_3	0,728
9	5.110	Item_40	0,808
		Item_39	0,804
		Item_41	0,490
10	4,715	Item_32	0,808
		Item_32	0,804
		Item_33	0,490
11	4,497	Item_36	0,854



Factor	Eigenvalue	Item number	Loading factor
		Item_35	0,809
		Item_37	0,470
12	4,435	Item_30	0,847
		Item_29	0,821
13	3.102	Item_34	0,807

Source: 2020 data analysis results

## 5 Conclusions

Based on the results of the analysis, there are thirteen factors that can be used to measure the sustainability of Islamic banking. The most dominant factor is the factor that has the greatest eigenvalue value.

While the item items that are able to predict or describe the problem, there are 44 item items from 44 item items made by the researcher. Thus, there are no items that are reduced (excluded) because none of them have a factor loading value smaller than 0.4. The results of the calibration analysis show that the instrument is feasible to be tested on a wider scope, in order to obtain greater consistency

The basic thing that needs to be understood is that the factors which are stated as dominant factors do not mean that these factors have the greatest influence on the sustainability of Islamic banking. To analyse the dimensions that have the most influence on banking sustainability, it is necessary to carry out further analysis which is a causal analysis such as path analysis or structural equation models.

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## References

- [1] N. A. Harun, A. A. Rashid, and B. Alrazi, *Handbook on the Economic, Finance and Management Outlooks*. Malaysia: PAK Publishing Group, 2013.
- [2] P. Utami, "Digital Banking Reflection and Zakat Accountability Sharia Banking in Indonesia," *East. J. Econ. Financ.*, vol. 4, no. 1, pp. 31–40, 2019.
- [3] T. Waas, J. Hugé, A. Verbruggen, and T. Wright, "Sustainable development: A bird's eye view," *Sustainability*, vol. 3, no. 10, pp. 1637–1661, 2011.
- [4] F. Özçelik and B. A. Öztürk, "Türkiye'de Bankaların Sürdürülebilirlik Performanslarının Gri İlişkisel Analiz Yöntemiyle Değerlendirilmesi," *Muhasebe ve Finans. Derg.*, no. 63, pp. 189–210, 2014.
- [5] B. Scholtens and S. van't Klooster, "Sustainability and bank risk," *Palgrave Commun.*, vol. 5, no. 1, pp. 1–8, 2019.
- [6] E. Kemp-Benedict, "Investing in a Green Transition," *Ecol. Econ.*, vol. 153, no. September 2017, pp. 218–236, 2018.
- [7] World Financial Banking, "Sustainable banks: Growing Strong," *worldfinance.com*,

- 2017.
- [8] C. A. Adams and N. Kuasirikun, "A comparative analysis of corporate reporting on ethical issues by UK and German chemical and pharmaceutical companies," *Eur. Account. Rev.*, vol. 9, no. 1, pp. 53–79, 2000.
  - [9] F. K. Turan, N. M. Scala, M. Besterfield-Sacre, and K. L. Needy, "An Analytic Network Process (ANP) Approach to the Project Portfolio Management for Organizational Sustainability," *IIE Annu. Conf. Proc.*, pp. 308–313, 2009.
  - [10] J. Elkington, *Cannibals with forks: the triple bottom line of twenty-first century business*. Capstone, 1997.
  - [11] Y. Wibisono, *Membedah Konsep & Aplikasi CSR (Corporate Social Responsibility)*. Jakarta: Gramedia, 2007.
  - [12] D. K. Nayyira, "Apa yang dimaksud dengan Bisnis Berkelanjutan atau Sustainable Business. dictio.id. URL: <https://www.dictio.id/t/apa-yang-dimaksud-dengan-bisnis-berkelanjutan-atau-sustainable-business/15047>," *www.dictio.id*, 2018. [Online]. Available: <https://www.dictio.id/t/apa-yang-dimaksud-dengan-bisnis-berkelanjutan-atau-sustainable-business/15047>.
  - [13] C. Voegtlin and M. Greenwood, "Corporate social responsibility and human resource management: A systematic review and conceptual analysis," *Hum. Resour. Manag. Rev.*, vol. 26, no. 3, pp. 181–197, 2016.
  - [14] C. Altuntaş and D. Türker, "Sürdürülebilir tedarik zincirleri: sürdürülebilirlik raporlarının içerik analizi," *Dokuz Eylül Üniversitesi Sos. Bilim. Enstitüsü Derg.*, vol. 14, no. 3, pp. 39–64, 2012.
  - [15] T. Homer-Dixon *et al.*, "Synchronous failure: The emerging causal architecture of global crisis," *Ecol. Soc.*, vol. 20, no. 3, 2015.
  - [16] H. Fauzi, G. Svensson, and A. A. Rahman, "'Triple bottom line' as 'sustainable corporate performance': A proposition for the future," *Sustainability*, vol. 2, no. 5, pp. 1345–1360, 2010.
  - [17] A. Jackson, K. Boswell, and D. Davis, "Sustainability and Triple Bottom Line Reporting – What is it all about?," *Int. J. Business, Humanit. Technol.*, vol. 1, no. 3, pp. 55–59, 2011.