

-RESEARCH ARTICLE-

## ISLAMIC BENCHMARK IN BANKING PRICING TO OVERCOME BUSINESS CYCLE IN NEW NORMAL

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### —Abstract—

This study seeks to determine a business pricing returns benchmark for the Islamic financial system. To data collection and analysis, the study utilizes an analytic network process (ANP) method. Data was collected from the stakeholders and experts in the field, through the in-depth interview and questionnaire. Findings reveal that rate of profit is the most important element as a base pricing and the actual trading index is the benchmark for pricing in Islamic financial system. Researcher recommends that pricing accounting software and big data required for better analysis and that Islamic finances will have their footings in product development by Islamic pricing benchmark Index.

**Keywords:** pricing; interest rates; the actual trading index; ANP

**Jel Classifications:** E02, G13, P43, Z12

### 1. INTRODUCTION

This study seeks to explore the postulate that interest rates do not belong to Sharia bank pricing as use of an interest rate is prohibited in financial activities under Islamic law. In Islam, money is not considered a commodity because its functionality is only as a method of exchange, and because of this, daily financial activities such as use of bonds, deposits and other medium of exchange are not considered real financial activities in Islam. Islamic economics considered real sector not in form of monetary functions e.g., one unit of monetary asset must be equal to one unit of a real asset because of ban on decoupling economy, instead Islam embraces the economic value of time, as opposed to

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the time value of money (Rosly, 2008).

In Islamic practice economic activities based on fundamental assets from trading, rent and profit sharing through partnerships. Therefore, a loan is not seen as a business contract but only a social contract to help each other; under this percept you cannot withdraw profit from loan, and profit can only be extracted through trading and profit sharing. Taking profit from loan activities is called Riba, and Riba is strictly prohibited in Islam and therefore Riba does not legitimize as a fundamental asset in Islamic economic practice. Bank loan is an example of Riba that attracts additional profit through interest rates. Economic crisis at 1998 and 2008 may arguably be construed as good example to help understand the impact of Riba; these crisis potentially proved that Islamic banks' profitability has not been impacted during the 1998 Asian Financial Crisis and 2008 Global Financial Crisis (Abduh et al., 2011; Ahmad et al., 2011).

Economics crisis of 1998, from 1870 to 2008 shows there have been nearly 200 moments of global financial crisis in the world, and the predominant reason is unpaid debt because the accumulated of additional interest is huge. On the other hand, global economic failures are also followed by the phenomenon of high inflation, exchange rate fluctuations and massive layouts. If industrial banks use prices of the profit sharing, such a problem would not occur. Ascarya (2009) reveal that interest rate is the basic cause of financial crises (excess money supply 2.8%, interest rate 45.2%, and exchange rate 18.6%) all these give 66.6% share to financial crises in Indonesia, while if we substitute these three systems according to Islamic perspective (just money supply 0.7%, PLS return 2.5%, and single global currency 0.2%) it will give only 3.4% share to financial crises in case of Indonesia, or a massive reduction of 63.2%.

In addition, in case of the 2008 crisis, literature reveals two central problems: the efficiency of the economic modeling and the failure of the ethical system. Islamic economics develop a new model to formulate alternate approach, considering the criticism of the models. In one past research, this model is used before crisis in the case of Morocco and gives more attention to the Islamic ethical and principles. Results reveal that introduction of these Islamic principles has no negative effects on the macroeconomic and financial conditions of Morocco and that the stability of the economic system is maintained (Dahani et al., 2018). Although the implementation of interest rates is strictly prohibited in Sharia banks but in pricing setting, profit sharing also use interest rate method because there is no consensus between stakeholders regarding Islamic price reference. This is so because interest rate does not represent real economic activities as it is not a result of the demand and supply of fundamental asset based financial activities. Interest rate occurs due to the institutional decision of printing paper money but on the other hand, in Islamic sharia, prices are determined on the basis of the demand and supply of goods.

The COVID-19 pandemic situation has shown to have the potential to trigger an economic crisis. The global pandemic has both positive and negative effects on the economy; where many companies sales are suffering resulting in loss of business, some have experienced increasing debt and defaulted. This points to the reality that global crisis can have diverse, often opposing effects on individual business, where some business benefit from crisis and others are affected negatively. Nevertheless, both successful or failed institutions always have to pay interest rate as a fixed cost of capital to the bank. This is dictated by the business cycle theory according to which an economy goes through the four stages, such as recession, stagnation, expansion and peak (Z. Ahmed et al., 1983; Ali et al., 2014a; G. M. Angeletos et al., 2016; Bartoletto et al., 2019b; Hall et al., 2020; Kurz, 2015; Pawęta, 2018; Rünstler et al., 2018a; Yusof et al., 2016). Previous studies show that from 1870 to 2008, 14 developed countries faced more than 200 recession periods (Jordà et al., 2011a). Therefore, it is imperative to determine whether macroeconomists are tackling the causes of the business cycle at the policy level to provide a viable solution to ending recessions and repeated crises (Amijaya et al., 2020; Camacho et al., 2015; Hindrayani et al., 2018; Houseman, 2006; Kallianiotis, 2020; Saadaoui, 2014; Sakti, 2011; Škare, 2017; Stiglitz, 2014a; Tee et al., 2019; Fandy Tjiptono, 1997).

Some studies show that interest based benchmarks do not represent real economic activities (Ghauri, 2015; Hashim et al., 2018a; Kassim et al., 2017; Sakti, 2011; T. Supriyanto, 2016). Currently, Islamic finance has been utilizing conventional finance benchmarks, such as KIBOR, COFI, LIBOR, to determine its cost of funds and returns on business investments (M. Meera et al., 2010). Furthermore, based on monthly data from 2009 to 2013 in the case of Bangladesh, results show no statistically significant difference between the monthly average lending rates of Islamic and conventional banks (S. Ahmed et al., 2014). A. S. M. S. Azad et al. (2018) revealing that arbitrage activities forces Islamic banking rates to converge with the global benchmark.

The single equilibrium interest rate benchmark does not represent the real economy (Z. Ahmed et al., 1983; Askari et al., 2014; Haron et al., 2000; Z. Iqbal, 1999; Uddin et al., 2015a). Based on a global illustration, research carried out in Malaysia shows that the framework of the economy is different from the various sectors irrespective of cointegration. Some of these differences are: first, sharia bank financing has a significant positive effect on the growth of the overall economy and service sector in long and short run and industrial sector is merely affected in the short run, Second, Islamic financing harms the growth of the agriculture sector in the long and short run (Indrawan et al., 2020). Due to these reasons, banks and their customers need to achieve such a benchmark which is beneficial for them such as reasonable cost of funds (E. R. Ahmed et al., 2018; Al Mamun et al., 2021; Bhandari, 1997; Keynes, 2018; Kusuma et al., 2020b; Prasetyowati et al., 2017; Preeg, 2003a; Rachmawaty, 2020) because the impact of applying yields above the real capacity, in the short term, affects the development of this sector, while in the long run, it threatens the viability of Islamic banking, impedes

the economy, and encourages investment activities to exploit resources. [Kassim et al. \(2017\)](#) and [Hutapea et al. \(2010\)](#) make a comparison between Islamic and conventional banks with their studies showing that the non-interest benchmark represents a more stable price movement based on the property's real value. Some studies show that banks need to be associated with the real sector but there is not any proxy which explains the benchmark, although some studies use Tobin's Q, Mudharabah Index, Karachi Inter Bank of Rate, and GDP growth, as proposed in the context of various countries ([E. R. Ahmed et al., 2018](#); [Ali et al., 2014a](#); [Bhattacharya et al., 2016a](#); [Kassim et al., 2017](#); [Mirakhor, 2017](#); [Omar et al., 2010](#); [Setianingrum et al., 2020b](#); [T. Supriyanto, 2016](#); [Yusof et al., 2016](#)).

There is a need for a proxy that measures the pricing benchmark because bank running their business, customer services and investment activities depends upon the pricing benchmark. This is so because economic equilibrium must be achieved in consideration of each sector's actual capacity rather than at a single rate applied in the interest system.

The COVID-19 pandemic presents an actual test to the Islamic bank industry on how they implement the framework of Maqasid al-Shariah in their business to achieve a balanced and win-win situation during a challenging period. Islamic banks are expected to take a more responsible approach in supporting those affected by the pandemic ([Shaharuddin, 2020a, 2020b](#)). According to one line of thought, Islamic banks performed better during the crisis than conventional banks. Islamic banks were more stable during the crisis as their business model helped limit the crisis's adverse effects in 2008, and they were also less exposed to liquidity risk ([Abidi et al., 2020](#); [Al-Wesabi et al., 2020](#); [Alserhan, 2017](#); [Baber, 2018a](#)). Therefore, it is important to empower the Islamic business platforms to overcome the business cycle in a new, non-crisis era. Furthermore, a benchmark that is fair, liquid, easy to calculate and transparent is considered key for the stability of financial markets. The scandal of LIBOR's manipulation by Barclays bank strengthens the importance of a non-manipulative benchmark. In this study, the authors propose an alternative pricing formula to estimate pricing in an interest free economy. The current study developed a suitable formula which serves as a basis for actual price measurement and provides market information for banks and their customers. This study uses the ANP method which prioritizes a pricing model based on expert judgment weighting. Research gap of the present study is the qualitative and quantitative assessment and comparison of various pricing measurement formulas, based on expert opinion, using the Analytic Network Process (ANP) method. The ANP uses expert-based respondents, therefore the proposed model is precise. This study is limited due to the lack of number of respondents.

## 2. LITERATURE REVIEW

An essential element of macro prudential analysis is the study of the relationship between business cycle fluctuations and the profitability of the banking sector and how

this relationship is influenced by institutional and structural characteristics (Albertazzi et al., 2009). It was further reported that there is a significant relationship between the fluctuation of the business cycle and Bank Melli Iran's profitability. Therefore, [Nazarian et al. \(2017\)](#) recommend that apart from downsizing to generate more profit, investments and production quality during the recession era need to be considered, with the state of liquidity for the boom period. A dynamic general equilibrium model is used to assess the quantitative relationship between actual interest rates and output fluctuations in the Brazilian economy from 1980 to 2001. This assessment indicates that output fluctuations are quite sensitive to the persistence of interest rate oscillations and may misguide the Central Bank's policymaking ([Kanczuk, 2004](#)). The previous study also found that the coefficients of government budget deficit, short-term risk-free rate, money supply and business cycle all are inversely affecting the real interest rate ([Ajlouni, 2018](#)). In a similar vein, a sample of emerging economies' business cycles found that actual interest rates are countercyclical and lead the cycle ([Neumeayer et al., 2005](#)).

Another study by [Idris Parakkasi \(2017\)](#) explores the impact of interest rates on the growth of the real sector and investment sector in case of Makassar. The results show that the interest rate has a significant negative effect on the development of the actual industry, trading and other investment and that interest rates also contributed to the inflation rate as well as conventional bank deposits. [Effiong \(2020\)](#) claim that interest rate was observed to exert a negative and significant impact on real sector growth in case of Nigeria for the period of 1985 to 2019.

[Meslier et al. \(2017\)](#) conduct a study to compare the pricing behaviours of Islamic banking system with conventional banking with the data sample of 20 countries from the era 2000-2014. The study findings conclude that there is a significant difference between both banking systems; conventional bank have great market power as compared to Islamic banks and therefore, conventional banks use a lower rate of deposit. On the other side, Islamic banks have competitive advantage in Muslim countries because of higher deposit rate of conventional bank in lower market influence countries such as Muslim countries. For this reason, the researcher concludes that Islamic bank is influenced in predominant Muslim countries. Similarly, another study shows this relationship as [S. P. Lee et al. \(2017\)](#) explore how margins for conventional banks are influenced by operating and funding costs, efficiency, credit risk, degree of risk aversion, market share, size of the operation, and implicit interest payments. This means that conventional banks' margins are highly influential compared to the Islamic ones. [Bidabad \(2019\)](#) explain that traditional banking structure creates fluctuations in the money sector and interest rate which affect the real sector through saving and investment and undulate the economy as well. Mathematical derivations show that banking structure is one of the main factors of economic cycles, so the elimination of interest rate (usury/riba) is proposed as the solution to directly relate investment to saving via The Profit and Loss Sharing Banking. This concept is against the conventional banking system in which if

the borrower obtains profit or loss, he has to pay interest (profit) to the depositor (Bidabad, 2019).

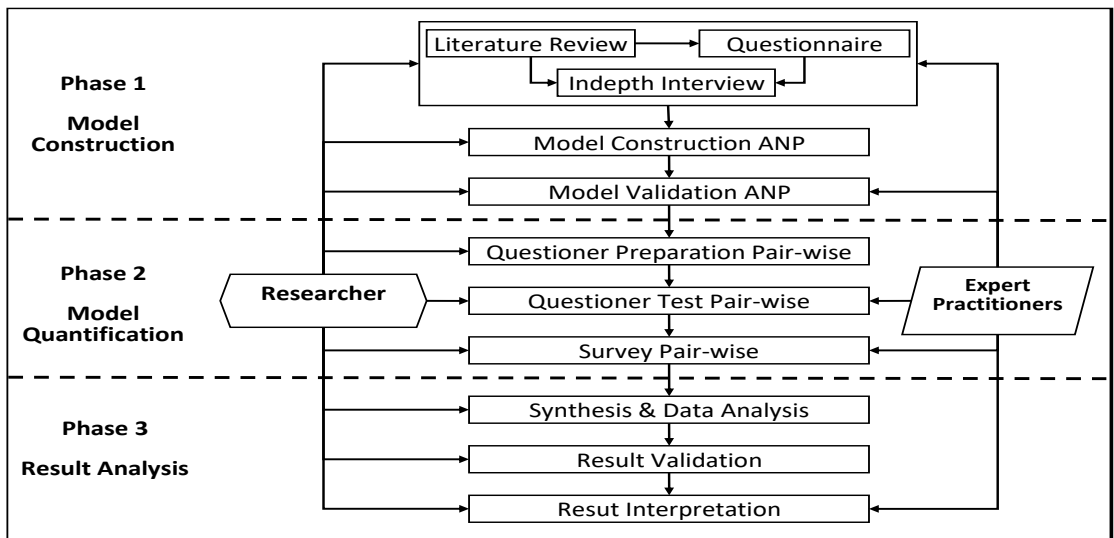
Cost of Capital and Investment in a Non-Interest Economy, (1996) shows what happened when capital cost is measured as compared to interest rate. Tobin's equation results conclude that capital cost is the best benchmark tool of investment return both in public and private institutes. On the other side, some studies show that nominal gross domestic product (NGDP) is the more suitable benchmark of investment returns as Islamic finance represents the real sector however Gharbi (2016) show there are no statistical differences between the NGDP growth rate and nominal interest rate in most countries. According to (Ghauri, 2015; King et al., 1996), interest-based benchmarks do not represent real economic activity or originality or value. Uddin et al. (2015a) explore how GDP growth rate is adjusted to be set as a benchmark for money market and a reference for financial and capital markets because GDP growth rate reflects the actual balanced growth potential of an economy as it correlates with national income, savings, inflation, exchange rate and investment compared to real interest rate, which is fixed in the money market and does not belong to the real sector. A. K. M. Meera et al. (2015) explain some points about interest rate benchmark such as: First, the source of interest is controlled by the quantity of money in circulation. Secondly, interest rate is moving towards zero or negative-sum game because of repayable debt. Third, interest is generated by exogenous factors. Moreover, interest also promotes competition among people and leads to exploitation and lastly, interest is arbitrarily determined, without a uniformly fixed theory, and generates additional socioeconomic, political, and environmental problems.

In contrast, P. K. Syariah et al. (2014) suggest that the profit loss sharing is used as benchmark for business, Profits derived from fund management through investment according to the sharia in the market framework. Profit loss sharing emphasizes on contract. Implementing the profit loss sharing system also needs adherence to the values of justice and benefit (P. K. Syariah et al., 2014). Furthermore, an Islamic financial system is stable because the economy evolves from short to long term equilibrium (Askari et al., 2014). There is a need for an benchmark that is transparent, liquid, easy to calculate and non-manipulative, and is considered critical for the efficiency of financial markets Ali et al. (2014a), and that expected cash flow or investment decisions need to be based on earnings, while performance evaluation depends on cash flow (Ijiri, 1980). Furthermore, these banks need a price benchmark based on primary data and each business sector's actual capabilities in accordance with Islamic investment principles. The present research tried to find a benchmark formula for pricing model.

### 3. RESEARCH METHOD

The present study used the primary data for analysis that is collected through an in-depth interview and questionnaire-based techniques from individual respondents such as regulators, academics and practitioners that understand the issues discussed. The set of

respondents (Experts) consist of Islamic bank stakeholders in the National Islamic Board-Indonesian Scholars Board (DSN-MUI), Regulator (R), academics and the individuals responsible for carrying out this research, namely Master1 (a member of DSN-MUI and senior researcher of R), Master2 (senior researcher of R), Master3 (senior researcher of R), Master4 (academics), Master5 (academics), Master6 (academics), Master7 (senior banker). Data was analyzed using the ANP method and was processed using "Super Decision" developed by William J. Adams of Embry Riddle Aeronautical University, Florida, in collaboration with (Saaty et al., 2008; Thomas L. Saaty et al., 2013) software in MS Excel. The ANP method is used to obtain the most prioritized pricing model based on expert judgment weighting and the construction of the ANP model is based on theoretical and empirical literature reviews. ANP has four axioms that form the basis of the theory, which are: **Reciprocal** this axiom assumes that PC (EA, EB) is the pairing value of elements A and B, as evident in the parent element C, which shows the number of times element A is greater than element B, then PC (EB, EA) = 1 / Pc (EA, EB). However, assuming A is 5 times bigger than B, then B is 1/5 of A, **Homogeneity** states that the compared elements in the structure of the ANP framework need not have enormous differences, resulting in greater errors while determining the supporting elements that influence the decision, **Priority** absolute weighting uses the interval scale [0.1] as a measure of relative dominance, **Dependence** condition assumes that the arrangement is composed of components that form part of a cluster. All stages in the ANP method are shown in Figure 1 below.



**Figure 1.** The Stage of Research

**Source:** (E. W. L. Cheng et al., 2004; Gencer et al., 2007; Saaty et al., 2008; Thomas L. Saaty et al., 2013; Tashcali et al., 2006; Yüksel & Dagdeviren, 2007)

### 3.1 Quantification of the Model

In this stage, the researchers develop a questionnaire with individual items developed based on cluster comparison with a view to determine which of the 2 has greater influence (more dominant) as well as the extent of the difference based on the numerical scale 1-9 (see Table 1). The structure of ANP method consists of elements and sub-elements (or Criteria and sub-criteria) which are used as measuring tools to assess the ideal alternative. In the concept of ANP, the criteria can be grouped as a cluster while the sub-criteria are elements. The ANP model is designed with the form of a network that forms interactions and dependencies between elements and clusters. The assessment of criteria and sub-criteria is carried out based on the preferences of respondents who are considered to have the competence (expert) in the field of Islamic banking. The ANP solution algorithm consists of (a) making all the weights of relative importance resulting from pairwise comparisons (a supermatrix); (b) adjusting the values (weighted super matrix), and (c) ensuring its continuation until the numbers in each column in a row are the same. Then normalized to get the final value of the compared criteria. After that, respondents provide feedback input in super decision software for super matrix results and extract results of each respondent in separate ANP network for analysis. The ANP method is used to obtain the most prioritized pricing model based on expert judgment weighting.

**Table 1: The Definition of Rating and Numerical Scales**

Definition	Intensity of Importance
Equal Importance	1
Weak	2
Moderate importance	3
Moderate plus	4
Strong importance	5
Strong Plus	6
Very strong or demonstrated importance	7
Very, very strong	8
Extreme importance	9

Source: [Thomas L. Saaty et al. \(2013\)](#)

Conversely, it is assumed that  $A_1, A_2, A_3, \dots, A_n$  is a part of the matrix hierarchy. Comparing a pair of factors  $(A_i, A_j)$  was reflected by  $A = (a_{ij})$ , matrix  $n \times n$ , which  $i, j = 1, 2, 3, \dots, n$ . Determining the package of numerical weights  $w_1, w_2, w_3, \dots, w_n$  reflects the comparison obtained, thereby causing the formula to become

$$\begin{matrix}
 A_1 & A_2 & A_n \\
 \\
 A = & \begin{matrix}
 A_1 \\
 A_2 \\
 \cdot \\
 \cdot \\
 A_n
 \end{matrix} \begin{bmatrix}
 w_1 / w_1 & w_1 / w_2 & \dots & \dots & w_1 / w_n \\
 w_2 / w_1 & w_2 / w_2 & \dots & \dots & w_2 / w_n \\
 \dots & \dots & \dots & \dots & \dots \\
 \dots & \dots & \dots & \dots & \dots \\
 w_n / w_1 & \dots & \dots & \dots & w_n / w_n
 \end{bmatrix}
 \end{matrix}$$

This is because every line is fixed and multiplied by the first row, therefore A means unit rank is generated. A is multiplied by the weight vector w,

$$Aw = nw \dots \dots \dots (3.1)$$

To obtain the scale of the matrix ratios, the system in equation 3.2 needs to be solved

$$(A-nI)w = 0 \dots \dots \dots (3.2)$$

In practice, the use of ANP methods vary in different studies, carried out by (Hashemi et al., 2015; Kubler et al., 2018; J. Lee et al., 2017a; Lin et al., 2015; Ocampo et al., 2016; Sadeghi, 2012; Setianingrum et al., 2019).

ANP questionnaire format ensures that the research process is effective for maintaining the method developed by Thomas L. Saaty et al. (2013). An example of the questionnaire format is shown in Table 2.

**Table 2. ANP Questionnaire Framework**

**Formula Calculation of the Real Sector Indeks at the Micro Level**

	Calculation construction based on	1	2	3	4	5	6	7	8	9
1	The Actual Trading Index is the amount of cash generated (the ratio of cash generated for a period to the gross investment that circulates within that period)									
2	ROA									
3	Tobin's Q (a physical asset's market value divided by its book value)									
4	Interest Rate									
5	Others mention									

Source: (E. W. L. Cheng et al., 2004; Gencer et al., 2007; Saaty et al., 2008; Thomas L. Saaty et al., 2013; Tashlıcalı et al., 2006; Yüksel & Dagdeviren, 2007).

## 4. RESULT AND DISCUSSION

### 4.1 In-depth Interview of Anp Method

Shown below are the in-depth interview results as part of ANP's method, which was conducted from October 2018 to February 2019. Researchers obtain the respondents response through interviews and questionnaires and make a subsequently develop summary of the overall results in a tabulated form for analysis of the Islamic bank benchmark criteria in [Table 3](#).

**Table 3: Tabulation of Expert Analysis on Islamic Benchmark**

#### Master 1

No	Analysis of Master 1
1	The data sources are financial statement listed IDX or GDP of halal commodities
2	The index = Real return + risk factors + operating cost
3	User are financial institutions, business sectors, services & regulators

#### Master 2

No	Analysis of Master 2
1	Using the return on investment
2	Cash basis not accrual
3	Based on ability business sectors or customer
4	Not refer to loan interest rate
5	Based on the customer's financial statements listed on IDX
6	The obstacles are providing data
7	Supply and facilitating data become responsibility bank, customer, regulator, industry

#### Master 3

No	Analysis of Master 3
1	Each commodity has a different pricing rationality
2	It is time to publicize the real sector index transparently
3	Using an index is not mandatory
4	The index is as a price reference for public, real sectors and financial
5	Based on websites and their digital calculation applications

[Table 3](#) shows some expert's opinion that business returns are measured based on the financial statements of listed companies on Indonesian stock exchange. The concept of Cash Recovery Rate (CRR), Tobin's Q, ROA and cost components are alternative formulas proposed to obtain the actual returns index, two experts explained that real

trading index users are banking institutions, regulators, customers, and the industrial world.

#### **Master 4**

<b>No</b>	<b>Analysis of Master 4</b>
1	Require an appropriate business database to measure the real sector index
2	free from the potential interest rates.
3	Data from the financial statement listed at IDX
4	Using CRR concept
5	To create room for negotiations
6	Islamic banks have to act as investment institutions
7	The unpreparedness of Islamic banks and consumers need not prevent the regulator from announcing the real sector's index as market information

#### **Master 5**

<b>No</b>	<b>Analysis of Master5</b>
1	Resolves the Gharar problem and effectiveness in the policy of subsidies
2	Need micro metadata of the customer's financial condition.
3	The point or essence is the availability of data
4	Don't use macro data as inflation and interest rate to asses micro's problem
5	The dual banking system does not offer the freedom to apply the basic principles and philosophies of sharia
6	The agricultures returns are relatively 6% & 11% for the trade industry.
7	The state has made certain economic destruction in a structured manner

#### **Master 6**

<b>No</b>	<b>The Analysis of Master 6</b>
1	No consensus regarding the measures
2	The proposed measures are Tobin's Q, Mudharabah Index, Karachi Inter Bank of Rate, and GDP growth.

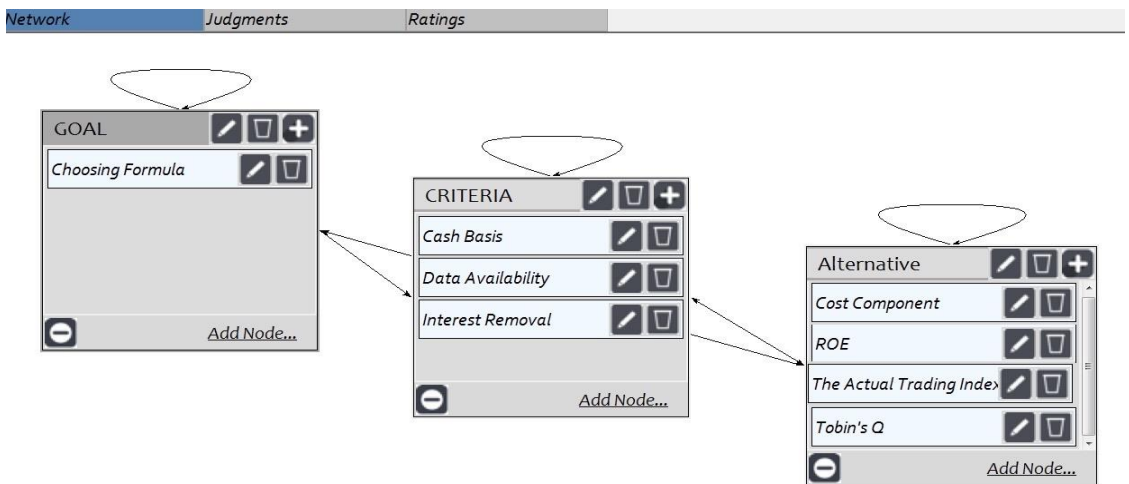
#### **Master 7**

<b>No</b>	<b>Analysis of Master7</b>
1	The unknown rate of return for real sectors
2	Prevent dispute in pricing
3	Enforcement transparency
4	Boost trust and confidence toward Islamic financial
5	Plus dynamic inflation variables
6	Upgraded any time

Moreover, they state that the customer's business returns financed by Islamic banks are the basis for price formation. In addition, actual returns are also due to inflation, risk factors, and cost components. Some experts discuss the barriers to real sector business returns including, the availability of standardized financial data, which is still difficult for customers to access, and therefore the solution is to use the company's financial statements, already listed on the stock exchange or GDP, and initially removed by non halal commodities or the production index per sector. The macro data source serves as an initial guideline for setting prices in similar business sectors. The second obstacle is that it still acts as a commercial rather than investment bank; therefore, the regulations do not support equity contracts. The third obstacle is the bank's unpreparedness due to factual market information, which will overhaul the pricing system and its consequences. The difference is encountered in the number of profit margins received by banks. The real sector index has various functions, and the main one is market information.

## 4.2 Priority Elements based on ANP Supermatrik

The structure of ANP method consists of elements and sub elements. ANP model is also used as a reference in the preparation of the questionnaire, and [Figure 2](#) shows the structure of the ANP model.



**Figure 2.** Structure of ANP Model

**Source:** Research Findings

Figure 2 shows that ANP network selects the formula for business return of the Islamic benchmark, and the sub elements help choose most prioritized pricing such as data availability, cash basis, and usury/interest removal. Based on these criteria, it is hoped that the Islamic benchmark will be more comprehensive in its Shariah compliance and bring more credibility to the Islamic financial system. The price and the quantity of the

products offered in the Islamic market should also be free to respond to the market forces operating within it and in doing so, reflect the aggregate influence of buyers and sellers (E. R. Ahmed et al., 2018; Alserhan, 2017; Ismail et al., 2010; Mirakhor, 2017).

The first stage of ANP generates the formula based on the Actual Trading Index, Tobin's Q, ROA, and Interest Rate as an alternative to the pricing model. The formula of the actual trading index is the ratio of cash recovered to outstanding investments within a particular period. The Tobin's Q ratio expresses the relationship between the intrinsic value of a physical asset and its market valuation (Mirakhor, 2017). Based on the super matrix calculations, the following results were obtained from the respondent's assessment.

**Table 4. The Result Criteria and Alternative**

<b>The Result Criteria: Inconsistency 0.00000</b>		
Name	Normalized	Idealized
Cash Basis	0.33333333333333331	1.0
Data Availability	0.33333333333333331	1.0
Interest Removal	0.33333333333333331	1.0
<b>The Result Alternative: Inconsistency 0.00000</b>		
Cost Component	0.090909090909090912	0.125
ROE	0.090909090909090912	0.125
The Actual Trading Indeks	0.72727272727272729	1.0
Tobin's Q	0.090909090909090912	0.125

Based on above results in ANP, logical consistency is a measure of whether it is a consistent assessment or not. The consistency ratio is calculated by the formula  $CR = CI / RI$ . Consistency Index (CI) obtained from  $CI = (\lambda_{max} - n) / (n - 1)$ , where  $\lambda_{max}$  = the largest eigenvector value of the comparison matrix in pairs, and  $n$  = the size of the matrix. The CR value must be less than 10%, because if it is more than the rating pair-wise comparisons should be repeated (Thomas L. Saaty et al., 2013). In this study, all of the results of inconsistency are 0. In other words, all measures are consistent or fit for consideration as they are less than 10%. For more details of the super matrix, the Consistency Ratio value and priority weight of each cluster can be seen in Tables 4 to 7. Based on the ANP score shown in Table 6 and Table 7, if all clusters are ranked, then the first most crucial priority is the Actual Trading Index. The second entails three elements at once, namely eliminating usury, cash-based, and data availability, and the last priority is given to the formula selection.

**Table 5. The Result: Unweighted Super Matrix**

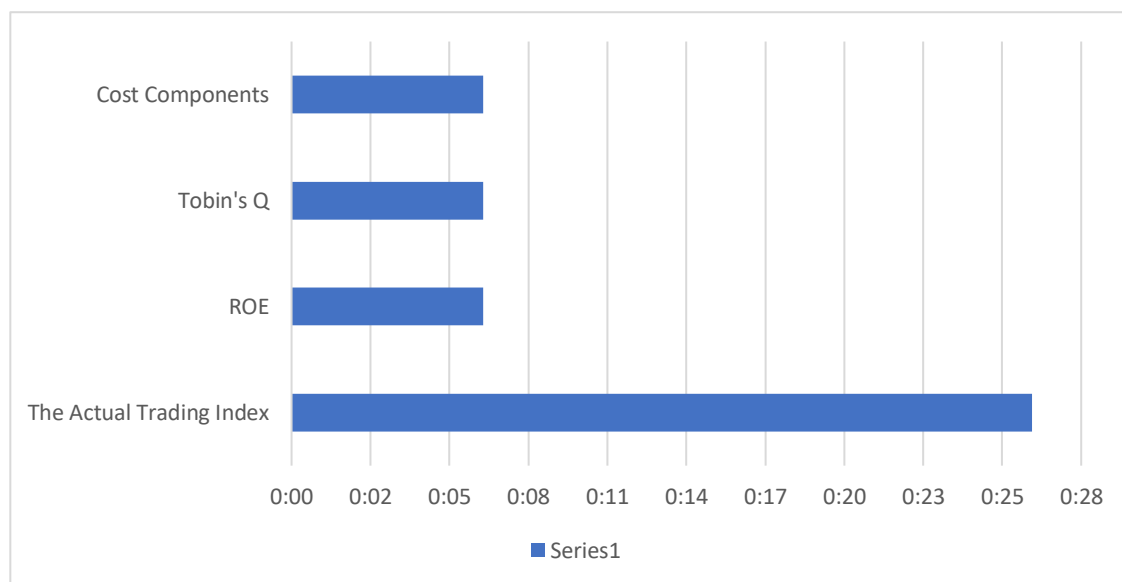
<b>The Result: Unweighted Super Matrix</b>								
<b>Variables</b>	<b>Cost Co</b>	<b>ROE</b>	<b>The Act</b>	<b>Tobin's</b>	<b>Cash Ba</b>	<b>Data Av</b>	<b>Interes</b>	<b>Choosin</b>
<b>Cost Co</b>	0.09091	0.09091	0.09091	0.09091	0.25000	0.25000	0.09091	0.09091
<b>ROE</b>	0.09091	0.09091	0.09091	0.09091	0.25000	0.25000	0.09091	0.09091
<b>The Act</b>	0.72727	0.72727	0.72727	0.72727	0.25000	0.25000	0.72727	0.72727
<b>Tobin's</b>	0.09091	0.09091	0.09091	0.09091	0.25000	0.25000	0.09091	0.09091
<b>Cash Ba</b>	0.33333	0.33333	0.33333	0.33333	0.33333	0.33333	0.33333	0.33333
<b>Data Av</b>	0.33333	0.33333	0.33333	0.33333	0.33333	0.33333	0.33333	0.33333
<b>Interes</b>	0.33333	0.33333	0.33333	0.33333	0.33333	0.33333	0.33333	0.33333
<b>Choosin</b>	1.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	1.00000
<b>The Result: Weighted Super Matrix</b>								
<b>Variables</b>	<b>Cost Co</b>	<b>ROE</b>	<b>The Act</b>	<b>Tobin's</b>	<b>Cash Ba</b>	<b>Data Av</b>	<b>Interes</b>	<b>Choosin</b>
<b>Cost Co</b>	0.03030	0.04546	0.04546	0.16000	0.12500	0.12500	0.04546	0.03030
<b>ROE</b>	0.03030	0.04546	0.04546	0.16000	0.12500	0.12500	0.04546	0.03030
<b>The Act</b>	0.24242	0.36364	0.36364	0.02000	0.12500	0.12500	0.36364	0.24242
<b>Tobin's</b>	0.03030	0.04546	0.04546	0.16000	0.12500	0.12500	0.04546	0.03030
<b>Cash Ba</b>	0.11111	0.16667	0.16667	0.16667	0.16667	0.16667	0.16667	0.11111
<b>Data Av</b>	0.11111	0.16667	0.16667	0.16667	0.16667	0.16667	0.16667	0.11111
<b>Interes</b>	0.11111	0.16667	0.16667	0.16667	0.16667	0.16667	0.16667	0.11111
<b>Choosin</b>	0.33333	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.33333
<b>The Result: Limit Matrik</b>								
<b>Variables</b>	<b>Cost Co</b>	<b>ROE</b>	<b>The Act</b>	<b>Tobin's</b>	<b>Cash Ba</b>	<b>Data Av</b>	<b>Interes</b>	<b>Choosin</b>
<b>Cost Co</b>	0.07811	0.07811	0.07811	0.07811	0.07811	0.07811	0.07811	0.07811
<b>ROE</b>	0.07811	0.07811	0.07811	0.07811	0.07811	0.07811	0.07811	0.07811
<b>The Act</b>	0.24616	0.24616	0.24616	0.24616	0.24616	0.24616	0.24616	0.24616
<b>Tobin's</b>	0.07811	0.07811	0.07811	0.07811	0.07811	0.07811	0.07811	0.07811
<b>Cash Ba</b>	0.16016	0.16016	0.16016	0.16016	0.16016	0.16016	0.16016	0.16016
<b>Data Av</b>	0.16016	0.16016	0.16016	0.16016	0.16016	0.16016	0.16016	0.16016
<b>Interes</b>	0.16016	0.16016	0.16016	0.16016	0.16016	0.16016	0.16016	0.16016
<b>Choosin</b>	0.03905	0.03905	0.03905	0.03905	0.03905	0.03905	0.03905	0.03905

**Table 6. The Result: Priorities**

Name	Normalized By Cluster	Limiting	Rank
Cost Component	0.14394	0.069470	3
ROE	0.14394	0.069470	3
The Actual Trading Index	0.56818	0.274223	1
Tobin's Q	0.14394	0.069470	3
Cash Basis	0.31095	0.160878	2
Data Availability	0.31095	0.160878	2
Interest Removal	0.31095	0.160878	2
Choosing Formula	0.06714	0.034735	4

**Table 7. Normal Result: Synthesized**

Name	Ideals	Normals	Raw	Rank
Cost Component	0.253333	0.143939	0.069470	2
ROE	0.253333	0.143939	0.069470	2
The Actual Trading Index	1.000000	0.274223	0.274223	1
Tobin's Q	0.253333	0.143939	0.069470	2



**Figure 3. The Result of Research-Based on ANP Calculation**

Source: Research Findings

In the cluster of alternatives, as depicted in [Figure 3](#), it is shown that Actual trading index (ATI) is the most prioritized alternative in an Islamic pricing benchmark rather than Tobin's Q, ROA and interest rate and transforms the cash generated concept which focuses only on the cash cycle ([Setianingrum et al., 2020b](#)). Further, ATI is used to measure a company's performance considering depreciation and the ratio of cash recovered to outstanding investments within a particular period. The findings conclude that actual trading index, is in line with ([E. R. Ahmed et al., 2018](#); [Ghauri, 2015](#)) who suggest that Islamic pricing of capital depends on the estimated rate of return for each project and Islamic finances need to have their own footing in product development. The other benchmark is not chosen because a company's ROA is influenced by a wide range of additional factors, from market conditions and demand to the fluctuating cost of assets that a company needs to acquire. Tobin's Q ratio fails to accurately measure or predict the outcomes of investments for given periods, as it fails to predict whether a market or company is being overvalued or undervalued.

According to the study responses, business returns consist of actual returns, inflation factors, risk factors and operating costs. An Islamic financial system is stable because the economy evolves from short to long term equilibrium ([Askari et al., 2014](#)), on the other side, interest based benchmarks do not represent real economic activities. ATI is suggested because it is consistent with cash basis accounting rather than the accrual to recognize profit and loss in Islamic entities. A benchmark that is transparent, liquid, easy to calculate and non-manipulative is considered critical for ensuring the efficiency of financial markets ([Ali et al., 2014a](#)).

The proposed benchmark is better because the current benchmark, interest rate, do not find the link between actual business and interest rate. And interest rate discourages investment in the real sector. The proposed benchmark is proven to meet better the criteria and sub-criteria of the Islamic pricing principle.

## 5. CONCLUSION

This study seeks to find out the benchmark of Islamic finance for business returns. Following data analysis, study findings are achieved which conclude that actual trading index (ATI) is a more suitable alternative compared to ROA, Tobin's Q and interest rate with the index components consisting of actual returns, inflation factors, risk factors, and operating costs. ATI boosts the society's level of trust and confidence in the Islamic financial system ([Kassim et al., 2017](#)).

The actual trading index refers to the business's ability to generate cash from funds invested within a certain period, where the calculated cost and profit components are agreed upon in advance by both parties, that is, the banks and financing customers. This study is significant because the pricing concept based on the cash flow tends to be friendly to the business cycle, especially after the recession in the wake of the Covid-19

pandemic. The closely integrating world economy needs to be managed more efficiently and desirably to avoid poverty and crisis in the future.

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