

# **Analysis of Investment Cost: The Case of Islamic Banks in Bangladesh**

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## **Abstract**

*This paper tries to observe the major two cost components of investment in pricing asset side products for Islamic banks operating in Bangladesh. It also considers the risk premium. The primary data has been collected through opinion survey of banks' executives. Secondary data were collected from the audited financial statements of seven Islamic Banks for the year 2006 to 2010. The main objective of the study is to identify the competitive advantages enjoyed by the banks with most cost efficient manner in pricing their asset products. It has been observed that, the average cost of fund for pricing asset by the sample banks is 6.92% of its total cost of earning assets. In addition, with the pace of time the administrative cost for maintaining investment in earning assets is increasing sensing banks' less efficiency in this regard. It has also been revealed from this paper that over the years, the Islamic banking industry in Bangladesh develops a very comfortable image in reducing its total cost successfully for the entire sample period with the exceptional case in 2008.*

**Key words:** *Cost of Fund, Cost of Administration, Risk Premium, Islamic Banks, Cost Efficiency.*

## **1. Background of the Study**

The conventional banking theories assume that banks earn profits by purchasing transactions deposits from the depositors at a low interest rate, then reselling those funds to the borrowers at a higher interest rate based on its competitive advantage at

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gathering information and underwriting risk (Santos, 2000). On the contrary, Islamic banking performs the same intermediary function but does not receive a pre-determined interest from borrowers and does not pay a predetermined interest to the depositors; the amount of profits is based on the profit sharing agreements with the depositors and also with the borrowers. In addition, there are fee-based banking services that are similar to the conventional banks as long as there is no pre-determined interest payment/receipt in the transaction. Thus, Islamic banking considered as a different banking stream as it prohibits interest and replaces with (a) profit share and (b) the profit share depends on the extent of the risk participation of the parties. The absence of pre-determined rewards is based on Quranic commands and as interpreted using Shariah principles (Ariff, 2007). This paper aimed to focus only on the Islamic banks as day by day they continuously increasing their holding beside the conventional banks. They draw attention of the policy makers, regulators, economists and researchers to evaluate their involvement in significant growth of the economic development.

According to Mudawi (1985), profit sharing based transfer of funds from owners to users will require monitoring of the actual use, the account keeping of the project concerned, etc. and the various steps involved in the process of transferring funds from ultimate saver to ultimate user. He also stated that these steps are divided and subdivided into functions, through which specialized functionaries reduce costs, improve services and tailor the 'financial product' to the needs and preferences of both parties: fund owners as well as fund users. Banks may use special ways and means of monitoring with the cooperation of fund users and the authorities supervising and regulating them. Mobilizing funds through investment accounts Islamic banks use these funds to do business, directly or in partnership with their clients. In Islamic banking, the lion portion of earnings comes from the investment income and remaining from other sources like income from investment in shares and securities, commission, exchange and brokerage and other operating income. The major portion of expenses goes for profit paid on deposits. Besides, banks are to incur some other operating expenses. Thus, the banks will be in competitive advantages whose percentage of profit paid on deposits and operating expenses are minimal. The difference between the price charges on investments and cost incurs for deposits and

operating expenses is known as profit. On the other hand, the bank with minimal cost for deposit and operating expense can offer lower price for their products to attract more customer. In practice Islamic banks tend more and more towards involvement in direct business. As they being best equipped to perform this function can not leave it to others. But the banks are to do banking business in cost efficient manner.

All of the Islamic banks are listed on stock market. They have collected fund by issuing shares or bond in the security market. To maintain the share price they are to make sufficient profit to declare dividend. As the market is more competitive, it is not possible to offer higher price. For that reason they should do business cost efficiently. Selected group of banks hold significant market share. As per Bangladesh Bank (2010), Islamic banks hold 15.11% and 13.30% assets and liabilities respectively of all banks. Market share of this group in respect of investments (loans) and deposits are 17.95% and 16.32% respectively. Therefore, competition of banking business is increasing day by day and in line with this the present study focuses on the competitive advantages in cost efficiency of Islamic banks operating in Bangladesh.

## **2. Objective and Methodology of the Study**

The main objective of the study is to identify the competitive advantages, considering cost efficiency of banks operating in Bangladesh under Islamic Shariah. Researchers also calculated the risk premium. Total expenses of a bank may be classified into two broad categories; a) profit paid on deposits and borrowings, and b) operating expenses. These costs should be earned from main source (investment income) and other ancillary activities (fees, commission etc.). There are several methods for pricing of banking loan (investment from Islamic Shariah perspective) products. The cost-plus method is one of them. For calculating the price of the products of banks under this method four components are considered vis-à-vis cost of fund (COF), cost of administration (COA), cost of capital (COC) and risk premium (RP). Among these, COF and COA are actual costs of the investment products and COC and RP remains for the owners. Thus, we consider COF and COA to measure cost efficiency of Islamic banks. The study also computes RP which is an additional charge for investment product for taking additional risks. Risk premium depends on the volume of bad and loss investments.

The cost of fund (COF) is calculated as profit paid on deposits divided by deposits and other accounts and placement from banks and other financial institutions adjusting the reserve requirements. It is mentionable that banks can invest their residual fund available only after fulfilling the Bangladesh Bank's reserve requirement. As per Bangladesh Bank guidelines banks had to maintain 5% cash reserve requirement (CRR) up to May 14, 2010 (Bangladesh Bank 2005). It was 5.5% from May 15, 2010 to December 14, 2010 (Bangladesh Bank 2010b) which became 6% from December 15, 2010 (Bangladesh Bank 2010c). Therefore, the study adjusts CRR as 5.5% for the year 2010 which is 5% for rest of the years. It is noted that the remaining portion of statutory liquidity ratio (SLR) is ignored assuming it will earn minimum without significant risk. In consequence, cost of fund is determined by the following formula:

$$COF = \frac{\textit{Profit paid on deposits and borrowing}}{\textit{Deposits and other A/c + Placement from others}} \times \frac{100}{\textit{Investable Fund}}$$

The cost of administration (COA) is determined as a portion of operating expenses divided by total investments. Through opinion survey of the executives of the concerned banks it has been found that there is no such basis for allocation of the common operating expenses for the banking asset pricing. It is quite difficult to segregate these common expenses which are specially incurred only for banking assets (investments). Hence, the total operating expenses are allocated over the main banking assets (investment) according to the proportion of investment income and others earning. Finally, the cost of administration (COA) is calculated using the following formula:

$$COA = \frac{\textit{Proportionate operating expenses}}{\textit{Total investments}}$$

The risk premium is calculated on the basis of bad and loss investments, i.e., the amount of bad and loss investment divided by total investments. The formula can be expressed as follows:

$$RP = \frac{\textit{Total bad and loss investments}}{\textit{Total investments}}$$

There are seven scheduled banks operating in Bangladesh under Islamic Shariah (Bangladesh Bank 2011). The present study covers all of these banks (Table 1). The researchers collected annual reports of these banks for the years 2006 to 2010 as a source of secondary information. To know the current practice for pricing of investment products of the banks the researchers conducted an opinion survey of the executives of the concern department of the banks. To ensure the authentication of the data we used audited financial statements of the concern banks. For analyzing data the study has used Microsoft Office Excel 2007.

**Table 1:** List of Scheduled Banks in Bangladesh under Islamic Shariah

Sl.	Name of Bank	Year of Incorporation	Year of Listing
1.	Islami Bank Bangladesh Limited (IBBL)	1983	1985
2.	ICB Islamic Bank Limited (ICBIBL)	1987	1990
3.	Al-Arafah Islami Bank Limited (AAIBL)	1995	1998
4.	Social Islami Bank Limited (SIBL)	1995	2000
5.	Export Import Bank of Bangladesh Limited (EXIM)	1999	2004
6.	First Security Islami Bank Ltd. (FSIB)	1999	2008
7.	Shahjalal Islami Bank Limited (SJIBL)	2001	2007

Source: Banglaesh Bank (2011) and Dhaka Stock Exchange (2011)

### 3. Existing Literature

Berger, Hunter, and Timme (1993) noted that if banks are efficient, then we might expect improved profitability, greater amounts of funds intermediated, better prices and service quality for consumers, and greater safety and soundness if some of the efficiency savings are applied towards improving capital buffers that absorb risk. Carvallo and Kasman (2005) noted that the liberalization of financial markets at a global scale, the increasing use of advanced technology, and the information revolution have put competitive pressure on banking firms both domestically and internationally. And this profoundly influence the operating cost of the banks. This competitive pressure is particularly important for banks in the emerging markets as they constitute the main financial intermediaries to channel savings and investment. In this content, the competitive advantage is enhanced if banks can function efficiently.

In addition, Rajan (1992) – who argues that by monitoring borrowers, banks gain an information advantage that, allows them to impose higher interest rates – and investigate whether the banks with large losses increased interest rates on their loans to bank dependent borrowers by more than they increased interest rates for borrowers that were not dependent on them. Sometimes banks that lost heavily became riskier. As a result, their cost of funding most likely rose, putting pressure on the corporate borrowers to raise their loan interest rates. According to Boot, Greenbaum, and Thakor (1993), banks that need to rebuild their capital structure are likely to sacrifice reputational capital by renegeing on their implicit commitment to not exploit their monopoly power over borrowers.

Peter and Paul (1989) stated in their study that, there is a temporal relationship between loan pricing and business performance can be plausibly modeled in a framework in which the lender's credit decisions affecting the borrower's future financing terms are based on the borrowing firm's current financial position which in turn is determined by past performance. They again revealed that the periods are linked together by financial transfers from one period to the next which influence the borrower's cost of borrowing that determined by its financial position at the end of the preceding period which itself reflects the cumulative effects of past performance. The paper also focused on the borrower's interest rate on loans which is determined by the credit score and classification procedure. The approach followed here for assigning a specific interest rate to each credit class is to specify a base rate and an interest rate range around the base rate. Moreover, including the lenders' price responses in the analysis provides an internal control mechanism that dampens the growth incentive as credit worthiness diminishes, stimulates growth as credit conditions strengthen, and leads to similar capital structures over time.

Meera, Kameel, Azmi and Azman (2010) stated in their study that, with the current global economic and financial crisis, Islamic financial system has been offered as a solution by its proponents. However Islamic finance has been using conventional finance benchmarks, such as BLR, KLIBOR, COFI, LIBOR, etc, to determine its own cost of funds, and hence its return to financial investments. Accordingly, interest rates are not determined by the real economy, i.e. the productivity or the profitability of the project being financed. This is also obvious when one observes the way interest is charged in the economy.

But a higher interest charge is imposed based on the perceived riskiness of the cash flows. If the project (or investor) is perceived to be risky, then the market would charge a higher rate. The paper also found that, in short in the conventional finance, the interest rate charged is based on a base rate, exogenously determined and a mark-up charged on the perceived riskiness of the funding. Hence the decision to provide funding is determined by both profitability and riskiness of the project or venture. Hence an Islamic benchmark or cost of financing got to be based on these two variables, profitability and riskiness. But profitability and riskiness can vary from industry to industry and from business to business within the industry. Hence the Islamic financing should be able to distinguish the amount of market risk and unique risk in an investment apart from determining the profitability.

#### 4. Findings of the Study

As per Table 2, it has been observed that, on and average, the cost of fund for pricing asset in seven scheduled banks operating in Bangladesh under Islamic Shariah is 6.92% of its total cost of earning assets. It is mentionable that, the year 2010 enjoyed the lowest COF (5.75%) in last four years, which shows the highest cost efficiency of the banks. But the situation is completely reverse in 2006 (8.22%). Over the years the minimum COF is 2.77% (ICBIBL) and that the maximum is 9.24% (FSIB) but coefficient of variation (CV) of ICBIBL is the highest (162.25%). Thus, the most consistent COF lies with IBBL (6.09%) where CV is the lowest (5.17).

**Table 2:** Cost of Fund (COF) of Islamic Banks in Bangladesh (%)

Name of Bank	2006	2007	2008	2009	2010	Average	SD	CV
IBBL	6.37	5.96	6.39	5.63	6.08	6.09	0.31	5.17
ICBIBL	10.72	0.10	0.27	1.17	1.56	2.77	4.49	162.25
AAIBL	5.14	7.05	7.43	6.85	5.65	6.42	0.98	15.19
SIBL	9.37	8.24	8.23	6.30	5.41	7.51	1.61	21.45
EXIM	8.87	8.98	8.71	8.47	6.59	8.33	0.99	11.85
FSIB	8.97	9.54	11.68	8.27	7.75	9.24	1.52	16.48
SJIBL	8.07	8.54	8.01	8.51	7.17	8.06	0.55	6.84
<b>Average</b>	<b>8.22</b>	<b>6.91</b>	<b>7.25</b>	<b>6.46</b>	<b>5.75</b>	<b>6.92</b>		
<b>SD</b>	<b>1.89</b>	<b>3.24</b>	<b>3.48</b>	<b>2.59</b>	<b>2.02</b>			
<b>CV</b>	<b>0.23</b>	<b>0.47</b>	<b>0.48</b>	<b>0.40</b>	<b>0.35</b>			

Source: Researchers' own analysis

Table 3 reveals the cost of administration (COA) scenario for the sample banks. Though the average COA in the industry is 1.72%, the most efficient bank is SJIBL (1.35%), but the ICBIBL shows itself as the least (2.26%) efficient in terms of reducing their administrative costs. On an average, this COA is lowest (1.59%) in 2006, but it is highest (1.91%) in the most current year, 2010. One more observable thing is that the COA is continuously getting the increasing trend over the years except in 2008. The pace of time COA for maintaining investment is increasing that showing banks' less efficiency on COA perspective.

According to Table 4, the average risk premium (RP) for the Islamic banking industry in Bangladesh is 10.46%. It is highest in 2008 (12.65%) showing the lowest efficiency of the industry to make good investment. But in reducing the bad and loss investment in the industry, the Table exhibits its highest (7.60%) efficiency in 2010 in terms of raising fund by offering lowest RP. The lowest (0.54%) and the highest (59.13) RP are with SJIBL and ICBIBL respectively. This indicates that the ICBIBL has failed to make good investments in the industry compare to other banks.

**Table 3:** Cost of Administration (COA) of Islamic Banks in Bangladesh (%)

Name of Bank	2006	2007	2008	2009	2010	Average	SD	CV
IBBL	1.89	1.78	1.84	1.58	1.91	1.80	0.13	7.41
ICBIBL	1.53	1.58	1.74	2.81	3.66	2.26	0.94	41.39
AAIBL	1.72	1.89	1.72	1.90	1.37	1.72	0.22	12.56
SIBL	1.87	2.06	2.05	2.00	2.08	2.01	0.09	4.24
EXIM	1.49	1.75	1.51	1.46	1.36	1.51	0.14	9.55
FSIB	1.37	1.32	1.37	1.39	1.51	1.39	0.07	5.19
SJIBL	1.23	1.26	1.25	1.55	1.45	1.35	0.14	10.70
<b>Average</b>	<b>1.59</b>	<b>1.66</b>	<b>1.64</b>	<b>1.81</b>	<b>1.91</b>	<b>1.72</b>		
<b>SD</b>	<b>0.25</b>	<b>0.29</b>	<b>0.28</b>	<b>0.49</b>	<b>0.82</b>			
<b>CV</b>	<b>0.16</b>	<b>0.18</b>	<b>0.17</b>	<b>0.27</b>	<b>0.43</b>			

Source: Researchers' own analysis



**Table 4:** Risk Premium (RP) of Islamic Banks in Bangladesh (%)

<b>Name of Bank</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>Average</b>	<b>SD</b>	<b>CV</b>
IBBL	2.19	1.83	1.56	1.13	1.24	1.59	0.43	27.24
ICBIBL	51.53	68.27	75.29	57.84	42.71	59.13	12.98	21.95
AAIBL	3.05	2.81	2.48	1.52	0.94	2.16	0.89	41.41
SIBL	4.57	4.47	3.72	3.00	4.03	3.96	0.64	16.13
EXIM	0.47	1.15	0.89	1.24	1.40	1.03	0.36	35.14
FSIB	9.63	6.50	4.19	2.13	1.67	4.82	3.30	68.39
SJIBL	0.20	0.13	0.41	0.77	1.21	0.54	0.45	82.40
<b>Average</b>	<b>10.23</b>	<b>12.17</b>	<b>12.65</b>	<b>9.66</b>	<b>7.60</b>	<b>10.46</b>		
<b>SD</b>	<b>18.48</b>	<b>24.83</b>	<b>27.66</b>	<b>21.26</b>	<b>15.52</b>			
<b>CV</b>	<b>1.81</b>	<b>2.04</b>	<b>2.19</b>	<b>2.20</b>	<b>2.04</b>			

Source: Researchers' own analysis

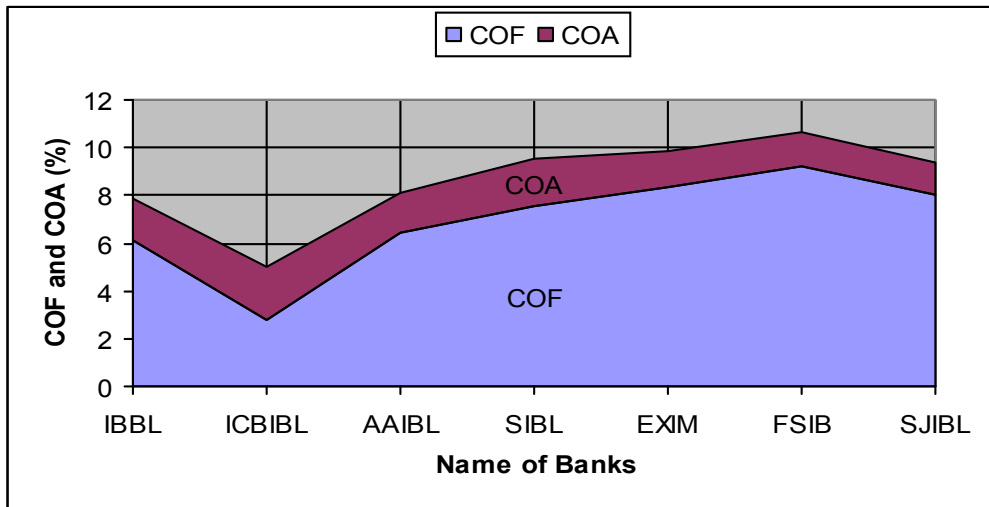
The study presents the overall condition of COF, COA and RP in Table 5 for the Islamic Shariah based banks practicing in Bangladesh. The average total cost of investment, including both COF and COA, takes its peak (10.63%) for FSIB meaning this bank has to incur comparatively highest cost for raising fund as well as operating investment in the industry, though ICBIBL enjoys the highest (5.03%) advantageous holding in this regard (Graph 1). ICBIBL has to charge the highest (59.13%) rate of RP though enjoying the lowest total cost (Graph 2).

**Table 5:** Summary of Average COF, COA and RP (%)

Bank	COF	COA	Total Cost	RP
IBBL	6.09	1.8	7.89	1.59
ICBIBL	2.77	2.26	5.03	59.13
AAIBL	6.42	1.72	8.14	2.16
SIBL	7.51	2.01	9.52	3.96
EXIM	8.33	1.51	9.84	1.03
FSIB	9.24	1.39	10.63	4.82
SJIBL	8.06	1.35	9.41	0.54
<b>Average</b>	<b>6.92</b>	<b>1.72</b>	<b>8.64</b>	<b>10.46</b>

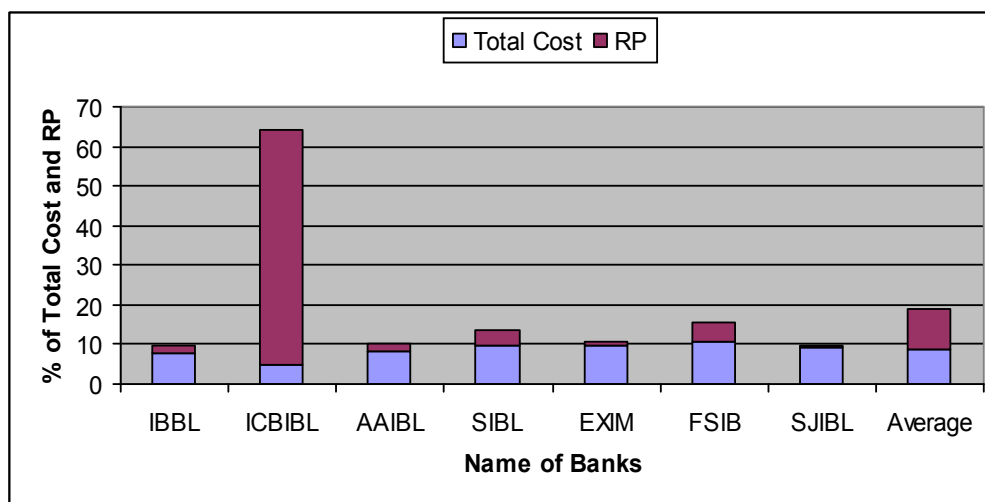
Source: Researchers' own analysis

**Graph 1:** Average COF, COA of Islamic Banks (%)



Source: Researchers' own analysis

**Graph 2:** Average Total Cost and RP of Islamic Banks (%)



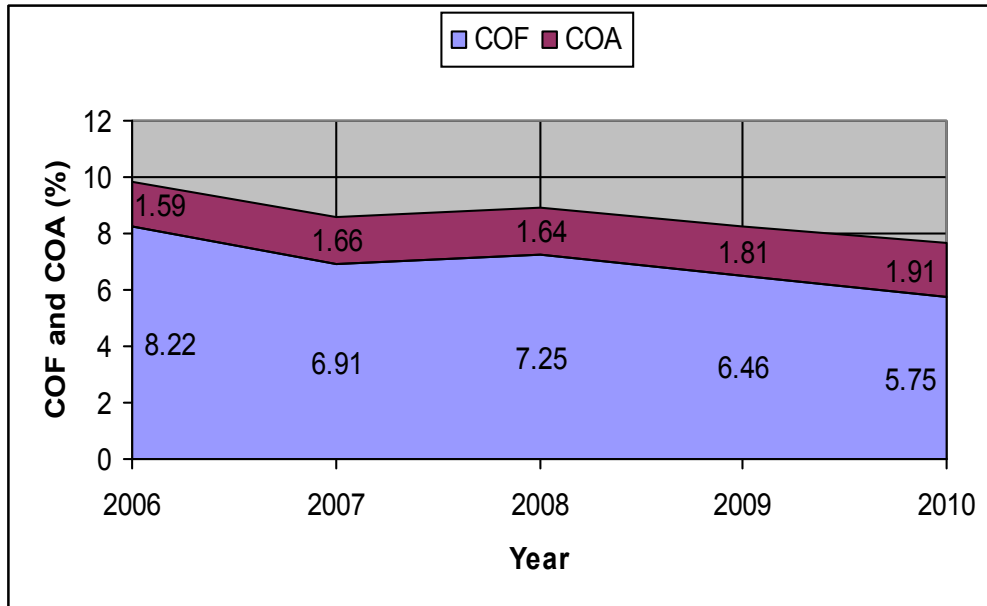
Source: Researchers' own analysis

Table 6 states the summary of industry average of COF, COA and RP of the sample banks over the years. It generates a very comfortable picture that the industry is successfully reducing its total cost over the periods with the exceptional case in 2008 (Graph 3). The reason can take two dimensions; competitive market pressure and/or banks cost efficiency. The risk premium in 2010 is also very low gives the impression of a confidence in the overall performance and reducing risk exposure. In the year 2007, this RP takes highest rate (12.65%) but situation becomes more rational at its significantly reduced rate (7.60%) in 2010. The average RP prevailing in the industry is 10.46% which is expected to keep as low as possible to ensure competitive asset pricing.

**Table 6:** Summary of Industry Average COF, COA and RP (%)

Year	COF	COA	Total Cost	RP
2006	8.22	1.59	9.81	10.23
2007	6.91	1.66	8.57	12.17
2008	7.25	1.64	8.89	12.65
2009	6.46	1.81	8.27	9.66
2010	5.75	1.91	7.66	7.6
<b>Average</b>	<b>6.92</b>	<b>1.72</b>	<b>8.64</b>	<b>10.46</b>

Source: Researchers' own analysis

**Graph 3:** Industry Average COF and COA (%)

Source: Researchers' own analysis

## 5. Conclusion

One of the key functions of banking industry is to pricing its asset in a very competitive and profitable manner. Islamic banks practicing in Bangladesh also are not exceptions of this common focus. In pricing asset, four important components are cost of fund, cost of administration, cost of capital and finally risk premium. But this study has focused only on cost of fund, cost of administration and risk premium. It has been observed that, the average cost of fund for pricing asset in seven scheduled banks operating in Bangladesh under Islamic Shariah is 6.92% which will be considered as a major part of the cost of earning assets. In addition, with the pace of time the administrative cost for maintaining investment in earning assets is increasing sensing banks' less efficiency in this regard. The study reveals that the average risk premium for the Islamic banking industry in Bangladesh is 10.46%. The significant finding from the study is that the industry generates a very comfortable picture in successfully reducing its total cost over the period besides holding a good position in

minimizing their risk exposure than earlier. The reason can be the competitive market pressure and/or banks cost efficiency, which may demand further extensive research in future.

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