

Working Paper Series**Measuring the Performance of Islamic Banks
by Adapting Conventional Ratios**

by
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Abstract

One consequence of the current financial crisis is that many countries began to reevaluate their financial systems and recognize its flaws and drawbacks. They also began the search for alternative systems for their economies; one of the proposed systems is the current Islamic financial model. This model is still in its infancy and many modifications and additions are required. It also lacks the necessary financial performance measurement tools similar to those used by conventional banks for managers and investors alike. This paper evaluates this lack of performance measures. It then adapts a currently applied ROE Analysis Tool used in conventional banks, to the currently established model of Islamic Banks and tests its applicability and evaluates its usefulness. The findings suggest that such an adapted model would be quite successful for use in Islamic banks and would offer much better analysis and basis of comparison within the Islamic financial system. It also suggests that much of the previously measured performance of Islamic Banks is unsound and should be revised for accuracy and reliability because of the flawed methods used for measurement in the first place.

JEL classification

G21; G29

Keywords

Islamic banks; Performance measurement; Ratio analysis; ROE

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1. Introduction

Due to the recent financial crisis, and with banks being one of its major players, many countries have begun to look for more prudent and transparent banking models in order to overcome the critical flaws of the current conventional banking system which have lately become apparent (Newman, 2009). One of the banking models currently being examined by a number of countries such as the United Kingdom (FSA, 2009) and France (Kamel, 2009) is the Islamic Banking Model which emphasizes transparency and value creating in its dealings and shuns greed and profit-only oriented transactions.

The Islamic Financial Model is considered quite new, having only been introduced in the early 1970's, it still has a long way to go and the system is no where close to perfect, but the potential of the system in avoiding dangerous and unethical financial activities is quite promising. Due to the newness of the system and the absence of universally regulating bodies of financial reporting or supervision; current Islamic Banks are having lots of difficulties in measuring their performance let alone comparing it across the Islamic Banking Sector or across countries.

This paper begins by introducing Islamic Banks and the challenges facing their growth which include the lack of financial performance measures. Then the conventional ROE Analysis tool for measuring bank financial performance is adapted for use by Islamic banks. Finally the adapted model is evaluated and its ability to provide clear and accurate information as well as determining its usefulness to bankers, investors and managers as the original ROE Analysis has been to conventional banks.

2. Islamic Banks

As defined, Islamic Banks aim to provide banking services that are in accordance with Islamic Principles and Shariah within the complete Islamic financial system, which in turn aims to bring the most benefit to society in terms of equity and prosperity, rather than focusing solely on creating maximum returns on capital (Zaher and Hassan, 2001: 158). Islamic banks aim to achieve the socio-economic goals of the Islamic religion which are reaching full-employment, a high rate of economic growth, equitable distribution of wealth and income, socioeconomic justice, smooth

mobilization of investments and savings while ensuring a fair return for all parties and finally emphasizes the stability of money value (Hassan and Mervyn, 2007: 2; Chapra, 1995: 37,38).

A crucial factor inhibiting Islamic banking growth is the lack of financial performance measures that are adapted to Islamic financial institutions and their special practices. This has led to the slow emergence of Islamic banks on the global markets, since they are unable to fairly and clearly represent their financial position. For this reason it becomes important to investigate and identify one of the available performance measurement tools to find a powerful tool for measuring the performance of conventional banks, and then attempt to adapt and modify such a tool to be used for Islamic banks to overcome one of the critical challenges of Islamic banking.

Measuring the performance of Islamic banks is necessary to be able to detect problems and settle concerns about the safety and soundness of investments for depositors, managers, and regulators alike. It is highly important for managers to determine the financial position of their institution compared to their competition or industry benchmarks, as well as evaluating how effective previously taken decisions affected the bank. Islamic bank performance measurements also help Shariah Supervisory Boards and other regulators to understand the performance of banks and to ensure only transparent and clear information is available and used. Finally it helps investors to identify chances and investment opportunity and ensure that the best decision regarding use of funding is being taken (CIBAFI, 2006: 4).

3. Bank Performance Measures

Return On Assets (ROA) is considered one of the most popular ratios used to measure financial performance in the banking industry, it shows the ability of management to acquire deposits at a reasonable cost and invest them in profitable investments. This is reflected in the ROA, since investments and loans are the largest portion of bank's assets, while interest on loans resembles the largest portion of the bank's revenue and returns (Simpson and Kohers, 2002: 103,104,108). Some studies even go as far as to claim that ROA is "the most meaningful financial indicator in the

banking industry” (Reger, Duhaimé and Stimpert, 1992: 195). ROA has the advantage that it can be used for small firms which have a very small equity base, in which case ROE may be a bit misleading compared to ROA (Reger et al., 1992: 195). ROA is considered to be highly correlated with ROE in the banking sector, where both give the same indication of performance in terms of the direction of financial performance movement, but differ in magnitude and interpreted analysis (Simpson and Kohers, 2002: 98, Castelli, Dwyer and Hasan, 2006: 9,10, Karr, 2005: 56-59).

Return On Equity (ROE) is one of the most commonly used bank financial performance measure. It can be found in much of the research surrounding bank performance as well as analyst reports and company financial results (Lindblom and Von Koch, 2002: 52,56). It is also seen as a simple method to calculate and measure past performance while giving a fairly good indicator of future ROE (Wilcox, 1984). Hopkins et al. (1997: 642) states that the ultimate measure of the strength of any financial institution is the ROE. It also helps to compare banks differing in size and structure. Use of ROE as a measure is primarily based on the assumption that “customer value creation is positively correlated to the financial performance [measured as ROE] of the bank” (Lindblom et al., 2002: 48).

Limitations of ROE are that it may lead to inaccurate results due to size differences between companies with regards to credit risk (Lindblom et al., 2002). Another limitation of using ROE is the fact that minor differences in account types are ignored, such as different types of deposits or loans, or varying profit margins (Avkiran, 1997: 224,225). A further limitation of ROE is that it ignores the cost of equity in its calculation (Fraker, 2006: 2).

Using sets of ratios is highly preferred rather than using individual ratios. Sets of ratios allow managers to gain fruitful insight and information regarding factors affecting bank financial performance. A number of ratio sets, systems and schemes are based on ROE and aim to trace ROE into its component ratios to achieve the benefits of a complete picture of the bank’s performance. Most of these systems are based on the Dupont System of Financial Analysis but with slight modifications or adaptations. One

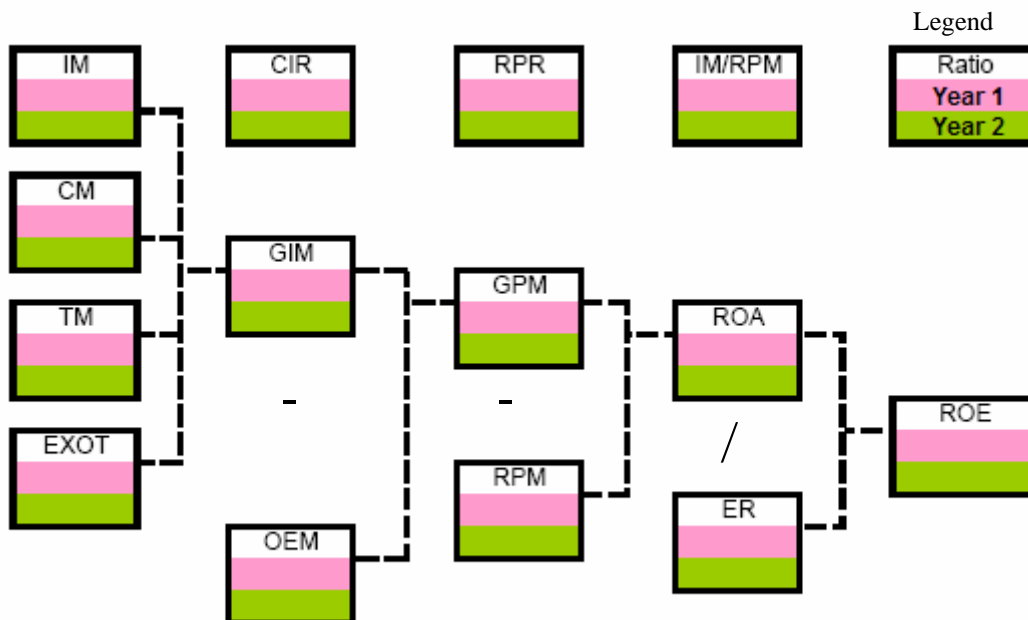
of these systems is Schierenbeck's Basic ROE Scheme (further referred to as the ROE Scheme or ROE Analysis Tool). This model has been chosen for its overall ability to combine a complete image of the bank's performance, as well as the ease of obtaining the information needed to calculate its ratios. It also has the advantage of including the ROA in its Analysis thus combining both previously mentioned measures and their advantages. The Conventional ROE Analysis is presented here as shown in Kalhoefer and Salem (2008).

The ROE Scheme is able to give a complete and comprehensive view of the financial performance of the bank by covering profitability, expenditures, equity and debt measurements as well as risk quantifications. The numerous financial ratios used in the ROE Scheme are shown in the following Table 1 and Diagram 1.

Table 1: Ratios and Abbreviations used in Basic ROE Scheme

Ratio	Abbreviation Used	Gross Profit Margin	GPM
Interest Margin	IM	Risk Provision Margin	RPM
Commission Margin	CM	Return on Assets	ROA
Trading Margin	TM	Equity Ratio	ER
Extraordinary and Other Income Margin	EXOT	Return on Equity (Pre-Tax)	ROE
Gross Income Margin	GIM	Cost Income Ratio	CIR
Operating Expenditure Margin	OEM	Risk Provision Ratio	RPR

Diagram 1: Explaining the Tracing Procedure of the Basic ROE Scheme



The ROE Scheme is based on calculating the ROE as Net Income before tax divided by Total Shareholder Equity; which reflects the percentage return on each dollar of stockholder's equity. Naturally, the higher the return the better, as it reflects the maximizing of shareholder value. ROE is used as the primary indicator of bank profitability in the Scheme. The ROE before tax is usually used to overcome the effect of different tax rates across countries, states, or banks (Ahmad, 1998: 57,58, Greuning and Iqbal, 2008: 7/2). The ROE Scheme analysis begins by decomposing the ROE into its contributing elements, namely ROA and Financial Leverage (or Equity Ratio). ROA, as discussed before, measures the net income per dollar of Total Assets owned during the period. ROA is linked to ROE by the Equity Ratio which is equal to Stockholder's Equity divided by Total Assets and reflects how much Equity is available to the bank as a percentage of Total Assets, and usually reflects the bankruptcy risk of the bank. A bank with a higher Equity Ratio can afford more defaults on loans, but this higher Equity Ratio has an adverse effect on ROE. Sometimes the inverse of the Equity Ratio can be used, also known as the Financial Leverage, which has an advantageous effect for the bank when earnings are positive, but also magnifies losses when earnings are negative (MacDonald and Koch, 2006: 66-70).

The ROA is then further decomposed into Net Profit Margin and Risk Provision Margin. The Risk Provision Margin is calculated as the Loan Loss Provisions charged for the year as a percentage of total assets; it reflects a measure of the bank's credit risk during one year and how the bank is able to manage its risk. The Net Profit Margin is an aggregate figure for the net of gross profit and operating expenses. The Gross Profit Margin can further be decomposed into four different categories of income namely the Interest Margin; and is calculated as interest income as a percentage of total assets, and is considered one of the major sources of revenue for banks in the form of interest on loans and returns on investments in the form of dividends (Yeh, 1996: 984). The Non-Interest Income which is composed of three other categories of income, namely Commissions Margin; which includes all net fees and commissions income earned for brokerage and similar activities, Trading Margin; reflecting net income from sale of investments, and Extraordinary and Other Income Margin which includes exchange income, operating and non-operating incomes and all other revenues earned by the bank

through service to its customers (Mukherjee et al., 2003: 729). The Extraordinary and Other Income Margin also includes all expenses excluded from the three previous ratios except those used in Operating Expenditure Margin.

Some other ratios can also be added to the Scheme as supplementary ratios that can help in the analysis, but are not directly part of the diagram in terms of relations. Examples of these ratios are Cost-Income Ratios and Risk Provision Ratios. These ratios can usually be calculated for a number of years to aid comparison and determine whether changes in strategies and decisions have led to improvements or not, which in turn helps to better evaluate management actions.

4. Need for Adapting Conventional Measures for Islamic Banks

In general, many assumptions are put in place to allow the usage of conventional tools and methods of analysis on Islamic banks. Special consideration for Islamic Banking products and operations that differ entirely from conventional banks must be made since these differences make it unfair and inaccurate to measure Islamic bank performance using the same measures used for conventional banks. Due to the effects of globalization and increased competition and comparison between conventional and Islamic banks; it has become critical to fairly evaluate and assess the performance of Islamic banks to ensure correct decisions are made (Ahmad, 1998: 57,58; Bashir, 2001: 1; IFSB, 2007: 1).

Many authors have criticized that Islamic and conventional bank performance are not comparable since they are completely different in their core functions as well as operational characteristics. The difference in the treatment of interest where it is allowed in one and prohibited in the other presents the core difference. Other variances include the existence of overnight and short-term inter-bank transactions aiding maturity matching in conventional banks but are nonexistent in Islamic banks and therefore other methods must be used, and more effort is needed to match maturities. The amount of risk in products faced by Islamic banks is considerably higher than that faced by conventional banks in their instruments (Chapra, 1995: 124,128,134,135). The

differences in their balance sheet structure itself creates a large distinction between both types of banks; where liabilities, which differ greatly between Islamic and conventional banks, represent the funding structure of the bank and greatly influence the costs of operation, bank leverage, potential profitability as well as level of risk (Greuning and Iqbal, 2008: 7/16).

Each aspect of performance of Islamic banks is measured differently than in conventional banks. For example investigating profitability and bank spreads in conventional banks is measured based on the rates charged on loans in relation to the rates paid on deposits. In Islamic banks, where interest is prohibited in principle, profitability can only be measured based on the rates of returns on non-interest transactions and direct investments (Ahmad, 1998: 58). Also the ability of Islamic banks to attract deposits at lower costs and invest more of the available fund pool gives them an advantage over conventional banks, whether this advantage should be compensated when measuring performance in order to allow fair comparisons of performance is debatable (Ahmad, 1998: 57; Ahmed, 2006: 16,17). Such a difference can create critical discrepancies when comparing Islamic and conventional banks as well as simply evaluating Islamic bank performance since most conventional tools do not take into account such differences.

Another important difference between both types of banks has to do with the risks facing each institution and the correct measures to use for measuring these risks. Some authors have suggested that a good financial performance measure for Islamic banks is RAROC (Risk Adjusted Return on Capital), rather than the suggested ROE and ROA used in this paper. The advantage of using RAROC compared to ROA is that RAROC integrates risk along with returns when measuring bank performance (Ahmed, 2006: 12), but based on the fact that the risks involved in Islamic banks differ from those faced by conventional banks, it was considered an inappropriate tool to use for measuring Islamic bank financial performance until more accurate measurements for Islamic bank risks are established. It would make no sense to adapt the RAROC approach without having its critical underlying variables correctly and accurately measured.

The two institutions also work under different laws, rules and regulations and follow different techniques in operation as well as marketing methods to attract investors and depositors. All these differences constitute that their performance is not comparable using identically same measures; rather it supports the suggestion that only adapted performance measures can be used (Ahmad, 1998: 57; Ahmed, 2006: 5,6).

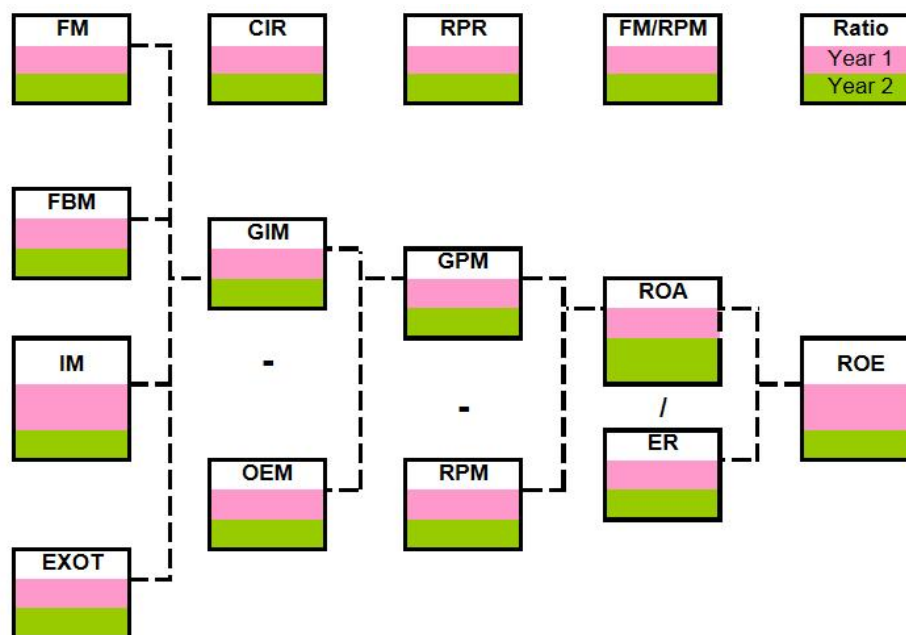
5. Adapting the ROE Scheme to Islamic Banks

Agreeing that financial performance measures of conventional banks cannot be used on Islamic banks without significant adaptations and modifications; it becomes critical to identify how such an adaptation can be made to reflect fairly the same meaning intended but using the appropriate accounts, terms and concepts. Table 2 and Diagram 2 show the Adapted ROE Scheme as suggested to be used for Islamic Banks. The actual adaptation of each component is discussed below.

Table 2: Ratios and Abbreviations used in the Adapted ROE Scheme

Ratio	Abbreviation Used	Gross Profit Margin	GPM
Financing Margin	FM	Risk Provision Margin	RPM
Fee-Based Margin	FBM	Return on Assets	ROA
Investment Margin	IM	Equity Ratio	ER
Extraordinary and Other Income Margin	EXOT	Return on Equity (Pre-Tax)	ROE
Gross Income Margin	GIM	Cost-Income Ratio	CIR
Operating Expenditure Margin	OEM	Risk Provision Ratio	RPR

Diagram 2: Explaining the Tracing Procedure of the Adapted ROE Scheme



The same concept used in the conventional ROE Scheme of dividing all components by the Total Assets of the bank to create Margin Ratios is used in the Adapted ROE Scheme. Creating margin ratios helps in comparing them to industry benchmarks or other banks as well as across years (Greuning and Iqbal, 2008: 7/16).

The components of the Islamic Bank Adapted ROE Scheme initially include Financing Income which is generated from the bank's core role as intermediary in the economy. This is composed of income generated from Sales-Based and Equity-Based products. In general it should include all financing income generated from shareholders' funds, Investment deposits and Savings Accounts net of any financing expenses such as profit returns shared among shareholders and depositors. This is equivalent in function to conventional banks' Interest Income net of any Interest Expense; represented in Islamic banks as distributed profits among investment account holders and shareholders, as well as Profit on Rent from Leasing.

The next component of Income is Fee-Based Income which is derived from clients for conducted transactions, intermediary, brokerage or fund management services whether generated from shareholders' funds, Profit-and-Loss Investment Accounts or other deposits (Greuning and Iqbal, 2008: 7/4,5). In general it includes all income from fee-generating activities and is similar to conventional banks' Fees and Commissions Income (IFSB, 2007: 67). Investment Income is composed of returns whether realized or unrealized from the difference between purchases and sales prices when trading financial instruments and securities. These include trade in Sukuk and shares as well as any profit not included in financing income which represent profits on non-financing investments generated from shareholders' or depositors' funds. It includes investments held for trading or for investment and excludes sale of equity in associates. This component is similar to conventional banks' Gains on Financial Instruments or Trading Income while taking into consideration that all instruments are Shariah Compliant.

The final component of Income is the Extraordinary and Other Income which includes all other net income not included in the previous three elements. This is more or less general and does not have a specific alternative in conventional banks except generally Other Income. As for the Operating Expenses, they include all personnel, administrative and other overhead expenses directly related to operating the bank. Any non-operating and other expenses are included in the Extraordinary and Other Income as expenses. Provisions for Loan Losses in conventional banks are substituted by Provisions for Doubtful Financing and Impairment since no Loans exist in Islamic Banks (IFSB, 2007: 67,68). These are provisions against the default of payments from Islamic bank clients for products involving PLS which usually represent a large portion of Islamic bank activity and therefore are suggested to similarly reflect and represent the credit risk component for Islamic banks.

Thus it is possible to categorize the different income and expense components of Islamic banks based on more or less the same conditions of conventional bank while taking into consideration their significant differences in types of instruments, deposits and accounts. Other differences that must be taken into consideration are those related to Balance Sheet figures such as Loans and Deposits, which are represented in Islamic banks by Financing Assets (whether Sales Financing, Lease Financing or Equity Financing Assets) and Shariah Compliant Deposits (which include all Investment Accounts whether Profit-and-Loss Sharing or not, and Restricted or Unrestricted Deposits) respectively.

By taking these changes into consideration it becomes possible to use the Adapted ROE Scheme to measure performance of Islamic banks fairly and accurately without any loss of information, discrepancies in intended meaning or incorrect categorization of funds, deposits or income. This is considered a much more efficient tool to use rather than adapting the financial statements as was done in much research. The Adapted ROE Scheme can be used on most if not all Islamic banks and allows the comparison and evaluation of management decisions.

As can be seen there is much variation in naming used, a non-exhaustive list has been compiled as a guideline for the naming and can be found in the appendix. It provides significant guidance to the user of the Adapted ROE Scheme to ensure that correct items are included in each category. Such a problem would not exist if stricter Accounting and Disclosure rules were applied to ensure clear and identical representations are used by all Islamic banks. Until such Accounting rules are applied, the Adapted ROE Scheme can be used within these guidelines as well as the user's discretion and knowledge of Islamic banking for items not included in this guideline to ensure they are correctly categorized and calculated to provide the intended benefits of the Adapted ROE Scheme for fair and accurate presentation of Islamic Banks' Financial Position.

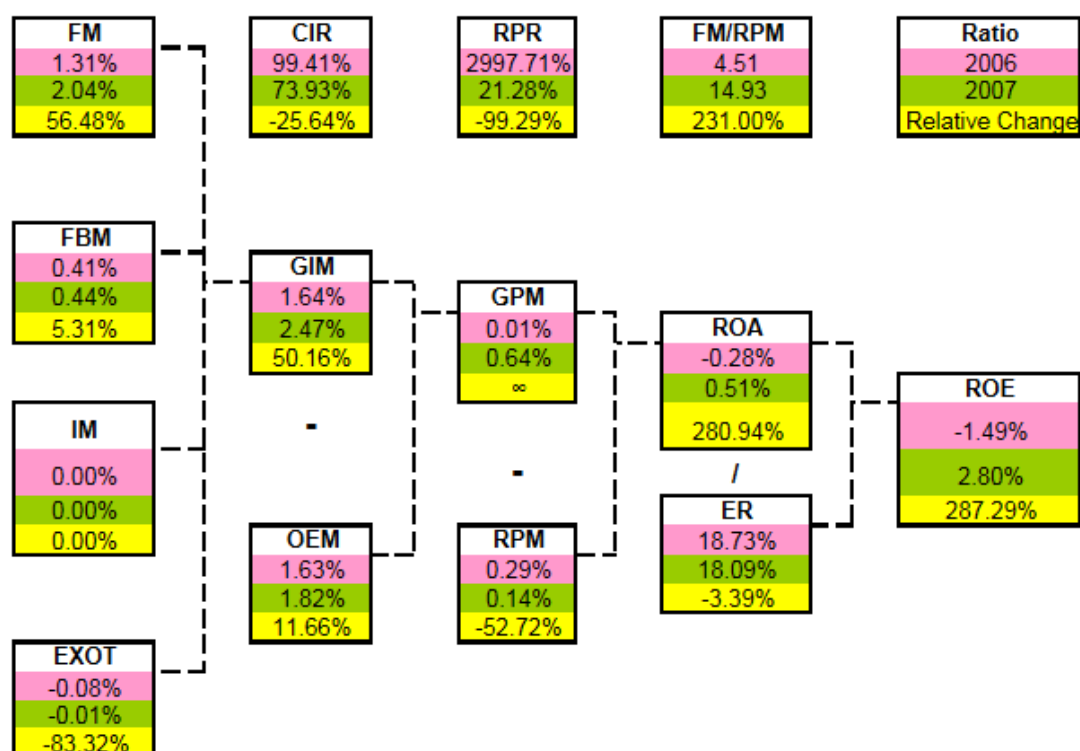
5.1. Example Application of Islamic ROE Scheme

For demonstration purposes, the Adapted ROE Scheme was applied to a selected Islamic Bank with actual data obtained from the Annual Reports of the bank (Baraka Bank Annual Reports 2006 and 2007). Data elements were categorized as explained in the adaptation and the guidelines presented in the appendix were taken into consideration. The following results were obtained.

Table 3: Baraka Bank Adapted ROE Scheme Ratios

Baraka Bank	2006	2007	Relative Change
Pre-Tax ROE	-1.49%	2.80%	+287.29%
ROA	-0.28%	0.51%	+280.94%
Equity Ratio	18.73%	18.09%	-3.39%
Financing Margin	1.31%	2.04%	+56.48%
Fee Based Margin	0.41%	0.44%	+5.31%
Investment Margin	0.00%	0.00%	+0.00%
EXOT Margin	-0.08%	-0.01%	-83.32%
Operating Expenditure Margin	1.63%	1.82%	+11.66%
Risk Provision Margin	0.29%	0.14%	-52.72%
Gross Income Margin	1.64%	2.47%	+50.16%
Gross Profit Margin	0.01%	0.64%	∞
Deposits	737,199,320	798,697,832	+8.34%
Financing	807,299,158	844,503,648	+4.61%
Cost/Income	99.41%	73.93%	-25.64%
RPR (RPM/GPM)	2997.71%	21.28%	-99.29%
FM/RPM	4.51	14.93	+231.00%

Diagram 3: Baraka Bank Adapted ROE Scheme Diagram 2006/2007



5.2. Analysis and Assessment

Table 3 and Diagram 3 show the calculated ratios for Baraka Islamic Bank based on information available in their annual reports. It is considered an example of a moderate sized Islamic bank which is relatively new in the Islamic banking sector but has had enough time to generate considerable profits and create a significant customer base. Baraka Bank presents a good example for applying the Adapted ROE Scheme. The ratios that were calculated are shown in Table 5 and arranged for tracing in Diagram 4. These were used to analyze the bank's performance in 2007 relative to the previous year.

As can be seen in Baraka Bank's Adapted ROE Scheme Ratios, Pre-Tax ROE increased greatly from -1.49% to 2.80%, a relative increase of 287.29%. This figure in itself is a useful indicator about how well Baraka is managing its equity and its ability to generate profits as a percentage of this equity. This figure is quite useful for stockholders and investors to compare ROE across organizations to get an idea which

would be more profitable. It shows that Baraka Bank was able to improve performance significantly and begin earning positive returns on equity rather than negative returns in 2006. Yet for managers, this only gives a narrow view on how well Baraka Bank performed or how it actually managed to achieve this improvement in ROE. In order to get more information, the Adapted ROE Scheme must be traced backwards to identify which changes occurred to the components of the ROE in order to achieve this result. Tracing backward is used to obtain an understanding of the reasons for an achieved result, while tracing forward can be used to help decision making, plan future improvements and decide on estimated goals and objectives.

The ROE increase can be traced back to a slight decrease in Equity Ratio of approximately 3.4% relative to the previous year. Since the ROE components are ROA divided by Equity Ratio, this decrease in Equity Ratio has a positive impact on the ROE figure, and it reflects that Baraka Bank began using less Equity as a percentage of Total Assets, and may therefore be dividing its returns over less equity, leading to an increase in ROE. Thus the bank is turning to other forms of financing other than equity, which is considered risky but more profitable as leverage increases. In the banking sector in general, a low Equity Ratio usually reflects an increased bankruptcy risk as less equity is available to cover demand for funds and deposit withdrawals, yet it also reflects an increase in Financial Leverage and a possible gain in the Profitability Leverage Effect and consequently more opportunities for profitable gains.

As for the second component of ROE; the ROA showed a very large improvement with a relative increase of 280.94% rising up to a modest ROA of 0.51% which is not considered high on conventional banking standards but is definitely an improvement compared to the previous year's negative ROA. This increase in ROA leads to an increase in ROE, especially when supported by a decrease in Equity Ratio. Thus these two changes had a complementary positive effect on ROE which led to the significant increase in ROE discussed above. A possible reason for the improvement in ROA is the improved leverage from the decreased Equity Ratio, but since this decrease in Equity Ratio is quite small, it is more likely that the improvement in ROA has more to do with changes in the components of the ROA itself.

The increase in ROA can hence be analyzed to identify the factors leading to the witnessed increase, whether it is related to improved credit risk management, or increased profitability of the bank through service providing and other daily operations. It can be seen from the tracing figure that the components of ROA are the Risk Provision Margin and the Gross Profit Margin. The Risk Provision Margin witnessed a significant decrease which reflects an improving credit situation with a decrease in provisions for impairment. This surely has a positive impact on the ROA figure and reflects a significant improvement in the bank's ability to manage its financing assets and avoid risky investments. This supports the suggestion that Islamic Banks have begun to focus on the less-risky short-term contracts such as Murabahah and Ijarah rather than the more risky long-term society-beneficial investments and contracts such as Mudarabah and Musharakah.

The Gross Profit Margin figure shows a relatively large change from the previous year which contributed to the increase in ROA supported by the decrease in Risk Provision Margin. This significant change in Gross Profit Margin can further be explained by analyzing its primary components of Operating Expenditure Margin and Gross Income Margin; these two components represent the explanation for the change in Gross Profit Margin to accurately attribute the improvement, either to increased efficiency and cutting costs, or increases in customer activity and consequently an increase in income and revenues.

Upon analysis, it was seen that Baraka Bank had an increase in Operating Expenditure as a percentage of Total Assets of 11.66% relative to 2006 which reflects an increase in costs for 2007. This should have an adverse affect on Gross Profit Margin because of increased costs. The reason for the increase in costs can further be investigated through internal management information and analysis and is beyond the analysis of the Adapted ROE Scheme. As for Gross Income as a percentage of Total Assets, it was found to have increased by 50.16% relative to the previous year.

A useful indicator at this point is the Cost-Income Ratio which compares the changes in Gross Income Margin and Operating Expenditure Margin. It gives a clear indicator that Baraka Bank is paying high costs to earn revenues, which is clear with its current figure of 73.93% which is quite high in comparison to theoretical benchmarks in the conventional banking sector. Although Cost-Income Ratio Benchmarks for the Islamic Banking Sector are not common and therefore it is not very fair to compare it to conventional bank benchmarks, nevertheless it can be seen that Baraka Bank is improving its Cost-Income Ratio through increasing their revenues rather than decreasing their costs.

The Gross Income Margin increase can be specifically attributed to a significant relative increase in Financing Income Margin and Fee-Based Income Margin. It has been positively supported by an improvement in Extraordinary and Other Income Margin of 83.32% relative to the previous year. This Gross Income Margin Analysis allows managers to pinpoint which revenue generating activities are performing well, and where others need improvement and further investigation. It is clear that Baraka Bank does not use Investment Income, possibly for a number of internal management reasons, although it would be recommended to investigate this point in order to ensure all sources of revenue are being efficiently considered and used while taking into account associated costs.

More information can be obtained about Baraka's performance in 2007 relative to 2006 by calculating some supplementary ratios based on the same information available and used to conduct the Adapted ROE Analysis. The Risk Provision Ratio can be used to evaluate how well Baraka Bank has been able to decrease its risk of financing impairment if at all. It was found that Baraka Bank was able to considerably reduce its risk provision as a percentage of Gross Profit relative to the previous year. The significant decrease witnessed in 2007 is a very good indicator of improved credit risk management and complements the findings based on the Risk Provision Margin previously found.

Finally Baraka Bank's Financing Margin to Risk Provision Margin shows how much Income generated from Financing Operations is available to cover Asset and Investment Impairments. This ratio has climbed to 14.93 from 4.51, a relative change of 231%. This ratio increase reflects that more Financing Income is available to cover Impairments, which may be attributed to the decrease in Provisions for Impairment therefore dividing the available returns among fewer provisions. Another reason for the increase in the ratio is the witnessed improvement in the Financing Income Margin. This signals a safer position with regards to credit risk compared to the previous year and supports the previous findings regarding risk position.

This was an example of how the Adapted ROE Scheme can be used to analyze and interpret information about Islamic bank financial performance based on publicly available information. It gives a large picture of the overall performance of the bank and the components influencing this performance with adaptations and considerations given to the special nature of Islamic banks and their products. Such a specialized tool should be available for Islamic banks to apply comparisons across banks as well as to aid managers and stakeholders when making decisions and evaluating bank performance. It should also decrease reliance on less-specialized conventional performance measurement tools which are used for conventional banks and do not take into consideration much of the differences between both types of banks. The Adapted ROE Analysis provides much more information for its users since its explanatory and analytical power take into consideration using the appropriate naming, meaning, method and terminology of the Islamic banking system. A number of benefits realized by applying the Adapted ROE Analysis are discussed in the next section.

5.3. Discussion of the Adapted ROE Scheme

The Adapted ROE Analysis was found to successfully represent shareholder value (through ROE) and give an indicator regarding the efficient operations of Islamic banks (through ROA). ROE was used as the primary indicator of bank profitability in the Analysis and was used to trace back for further analysis and detailed explanations of the information available from the bank's publicly available financial statements. Also

in the Adapted ROE Analysis, the ROE before tax was used to overcome the effect of different tax rates across years, banks or countries.

Such an adapted model will aid managers in determining the financial position of their institution compared to their competition or to industry benchmarks, as well as evaluating the effectiveness of previously taken decisions. This tool will also help Shariah Supervisory Boards and other regulators to evaluate, analyze, investigate and understand the performance of Islamic banks to ensure only transparent and clear information is available and used. Finally it can help investors to identify chances and investment opportunity and ensure that only the best decisions regarding the use of funding are being taken.

An advantage of the Adapted ROE Analysis is that it produces a reliable and accurate ROE figure for Islamic banks which is highly correlated with ROA. ROA is known to reflect the ability of management to attract investment deposits from customers and profitably invest them. Due to this high correlation between the two ratios within the banking sector, many of the tools of analysis based on ROA can be similarly used by taking advantage of the adaptations applied in the Adapted ROE Analysis.

5.4. Limitations of the Adapted ROE Analysis

In general, such an Adapted ROE Analysis model exposes Islamic banks to the limitations associated with using ROE as a performance measurement tool for banks. These include that ROE may lead to inaccurate estimations of a bank's risk position due to size differences between banks. It is also limited in the sense that ROE does not incorporate risk in its measurement. Also a limitation exists regarding the nature of the financial ratios used in the Adapted ROE Analysis with regards to being based on historical data, which implies that they are of limited usefulness for future planning and strategic decision making when used for banks.

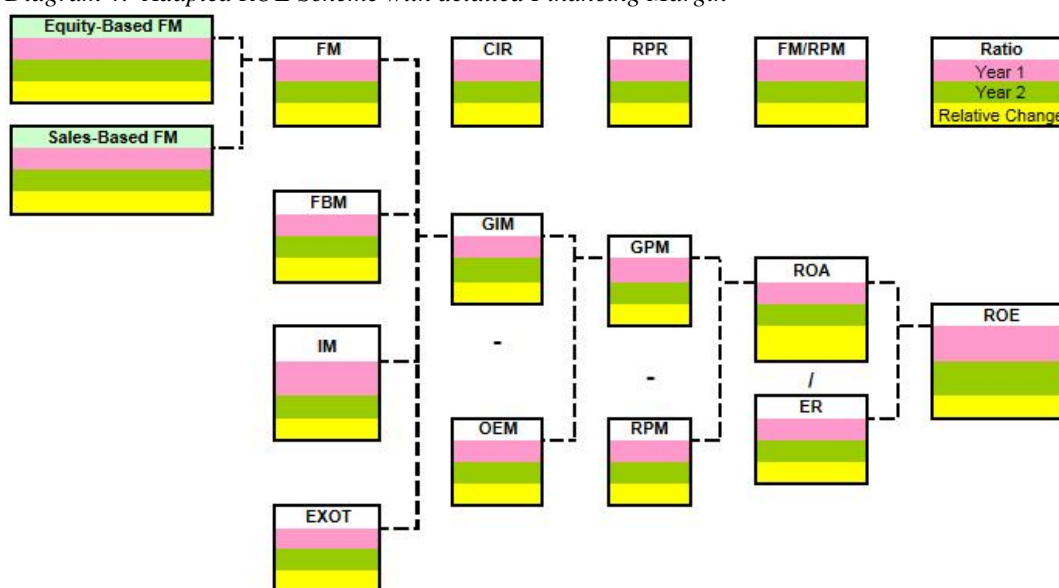
Limitations with regards to the use of financial statements of Islamic banks are present since Islamic banks do not yet apply a unified accounting and disclosure code and therefore may vary greatly in their presentations and intended meanings. They also include different instruments under similar naming which may create discrepancies when comparing performance of Islamic banks to one another, unless these differences are taken into consideration.

A possible criticism of such an adapted performance measure is that it will limit the ability of comparing Islamic and conventional banks and make them further apart. Rather this research suggests that Islamic and conventional banks are far apart to begin with and it is mistaken to compare both institutions to one another since they operate within totally different systems, and apply their own special methods and techniques. Perhaps the only method of comparison between both institutions can be conducted after using such adapted measures. In this case it might be fairer to compare the final ROE figures of both types of institutions, now that it is ensured that the ROE figure calculated using the adapted measure is reflecting the accurate ROE of the Islamic Bank.

5.5. Recommendations and Further Research

After presenting and discussing the Adapted ROE Scheme for Islamic Banks as well as demonstrating its use on Baraka Bank, it becomes important to highlight some recommended uses and improvements possible. One recommendation for deeper analysis and more detailed information can be obtained by further categorizing the sources of Financing Income into Equity-Based Income (such as Mudarabah and Musharakah contracts) and Sales-Based Income (which include Murabahah, Salam and Istisna among other instruments) to obtain the Equity-Based Financing Margin (Equity-Based FM) and Sales-Based Financing Margin (Sales-Based FM) (See Diagram 4).

Diagram 4: Adapted ROE Scheme with detailed Financing Margin



These modifications are useful in identifying which instruments contribute more to the Financing Margin as well as determining the degree of usage of these instruments by calculating their percentage of total assets. This can be used by managers to understand where their advantage lies and where more focus is needed. They also aid in explaining changes in Risk Provision Margin where increased reliance on Sales-Based Financing is expected to be accompanied by a lower Risk Provision Margin since these instruments are usually associated with a much lower credit risk than their Equity-Based counterpart instruments.

It must be noted that these modifications were not included in the previously suggested Adapted ROE Scheme since it was inapplicable due to the lack of needed information from the bank's financial statements regarding the types of instruments used to generate the Financing Income. This is one of the great limitations caused by non-uniformity of accounting disclosure methods in Islamic banks. These changes are recommended to be used in cases where more information is available to give further insight and analysis power for decision making and performance measurement. Such information is likely to become available upon the implementation of uniform accounting standards and disclosure methods by Islamic banks.

In further research, the adapted ROE scheme can be applied to different Islamic banks to ensure its reliability and usability. It might be found that more guidelines should be added or special cases and exceptions could be found. Also more additions and in-depth analysis methods could be used to aid decision making and performance measurement. It could also be interesting to apply the above mentioned guidelines to adapt different measurement tools for financial or non-financial performance in order to use them for Islamic banks. Adapting conventional tools is sure to bring their benefits to the Islamic banking industry while ensuring accurate and intended meanings are fairly presented.

One specific objective could be to accurately measure risk in Islamic banks in order to open the way for more advanced RAROC measures to be used and adapted for Islamic banks. The critical limitation making such measurements incorrect at the present time is the inaccuracy in the method of measuring the risk component in Islamic banks, which is a crucial element in RAROC measurement. Finally it could be very useful to re-evaluate previously conducted research findings and expectations that have been based on conventional performance measures, and conduct them using the Adapted ROE Analysis which could yield totally different results, or give more insight to why these results were obtained and how they are significant to the Islamic banking sector as a whole.

6. Conclusion

This paper first introduced the Islamic financial system along with the challenges for growth. One of these challenges was found to be the lack of proper financial performance measures for specialized Islamic banks. Conventional bank performance measures were not found to be suitable for measuring financial performance of Islamic banks, and the commonly applied method of adapting financial statements rather than performance tools was found to be flawed for a number of reasons. The suggested solution was to adapt conventional performance measurement tools themselves, to the special nature of Islamic banks while taking into consideration their principles, products and system of operations.

The ROE Analysis tool was evaluated and selected for the adaptation process; it was then modified, adapted and applied within certain guidelines for demonstration purposes to a selected Islamic Bank. The produced results are suggested to be more reliable, accurate and fairly representing the financial position and performance of the bank, and should function similarly for Islamic banks in general. By adapting such a tool for use in Islamic banks, it will ensure that the intended meanings are clearly presented and interpretations are more accurate than before.

Furthermore, it was concluded that previously the wrong tools were used to measure Islamic bank performance, for it is not scientific to measure the performance of one specialized institution with tools of measuring a completely different institution. Therefore it is suggested that much of the previously conducted research regarding the performance of Islamic banks might have been greatly misleading and inaccurate, along with its associated conclusions. It is suggested that re-evaluating the performance of Islamic banking and revising the previously reached conclusions is a very important task at the time to avoid the further build-up of information and knowledge on inaccurate basis. This re-evaluation must be done using Adapted Measures that are specialized for Islamic banking to ensure reaching clear, fair and accurate results that can then be used to reach conclusions. This will have many benefits on the Islamic Financial industry as a whole; namely for individual banks and their managers as well as investors, clients, regulatory authorities and rating agencies.

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Appendix

Guidelines for the Adapted ROE Scheme

Upon actually applying the Adapted ROE Scheme to a number of Islamic banks, it was found that the diverse instruments, accounts, naming system and terminologies used by each bank in different countries present a difficulty to the practical application of the Adapted ROE Scheme. Although all components were, in theory, easily defined and obvious in the previous section; actually applying and categorizing these components on actual Islamic bank financial statements presents a degree of difficulty. Therefore it was seen as important to provide a non-exhaustive guiding list with the components to be used depending on their different naming when applying the Adapted ROE Scheme to Islamic Banks.

The following items are used by Islamic banks to represent different forms of income and expenses. Each item was obtained by practice and application of the Adapted ROE Analysis on a number of Islamic Banks. The data was obtained from Islamic bank financial statements and were analyzed and categorized based on the definitions of each component. These guidelines are made to ensure ease of applying the Adapted ROE Scheme.

As a guideline when allocating and categorizing different components for use in the Adapted ROE Analysis, it should be clear which elements to include under each component to obtain fair, accurate and uniformly comparable results. For Financing Assets, it was found to include Musharakah, Mudarabah, Ijara Muntahia Bittamleek (Leasing then Purchase), Ijarah Income Receivables, Sales Receivables, Investments, Mutajarah, Installment Sales, Istisna, Non-Trading Investments, Investments in Associates, Investments held for Sale and Other Investments. Deposits included Current Accounts, Unrestricted Investment Accounts, Restricted Investment Accounts, Murabahah from Non-Banks, Syndicated Murabahah financing from banks and Customer Accounts.

Financing Income was found to include items such as Income from Jointly Financed Sales, Income from Jointly financed other financings and investments, returns on Unrestricted Investment Accounts (Financing Expense), Bank's Mudarib Share in Unrestricted Investment Profit, Bank's Income from Self-Financed Sales, Bank's Income from Self-Financed Other financings and investments, Bank's Mudarib Share in Restricted Investment Profit, Income from Murabahah and Mudarabah, Profit Paid on Murabahah from Banks and Non-Banks (Financing Expense), Mutajrah, Installment Sale, Istisna, Income paid to customers on time investments, and income from financing.

Fee-Based Income included revenue from banking services, fees and commissions income, Mudarabah fees, structuring and arrangement fees and fees and commissions on letters of credit and guarantees. Investment Income included gain on investments designated as Held-for-Sale, Unrealized Gains on investments designated as Fair Value PLS, Income from investments and income from investment in properties

Extraordinary and Other income included Other Revenues, Other Income, Financial Charges (Expense), Provision for Impairment (Expense), Provision for Doubtful Financing (Expense), Provision Charged During the Year on Sales Receivables, Musharakah Financing, Murabahah and Ijarah, Foreign Exchange Gains, Share of Loss on Associate, Other Operating Income, Other Operating Expense, Other General and Administrative Expenses, Board of Directors' Remuneration and Provisions. Operating Expenditure included Operating Charges, Depreciation, Rent and Premises Related Expenses, Staff Costs, Premises and Equipment Costs, Depreciation on Ijarah, and Administrative and General Expenses.