

Applying Financial Efficiency to Mitigate Systemic Risk

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Abstract

The main intent of the study is to ascertain the degree of financial efficiency in the product of Murabaha financing of Islamic banks vis-à-vis interest based short term business loan of conventional banks; so that the tools of Islamic Macro-prudential policy related to risk associated with Murabaha financing may be formulated and implemented along with the tools of Conventional Macro-prudential policy. Survey strategy is used to collect primary data through structured close ended questionnaires from the sample of 422 loan customers and 120 Murabaha customers of both the conventional and Islamic banks operating in Karachi, Pakistan. Similarly, 178 loan officers of conventional banks and 98 Murabaha officers of Islamic banks were also inquired through the same strategy. Quantitative and qualitative techniques were used to analyze the data and the same is tabulated by use of frequency tables. The study finds that the financial efficiency of Murabaha financing is more than that of conventional interest based loan by 28% in the opinion of Murabaha and loan officers and by 6.5% in the perspective of Murabaha and loan customers. The study, therefore, suggests that the tools of both the conventional and Islamic Macro-prudential policies may be similar to certain extent but should not be the same.

Keywords: Murabaha financing, Financial efficiency, Systemic risk, Interest based loan, Islamic Macro-prudential policy.

JEL Classification Numbers: G01, G 21, G 28, G32, H21

1.0 Introduction:

Every country tries to allocate her resources in an effective and efficient manner for accomplishment of macroeconomic objectives i.e. economic growth, unemployment reduction and price stability. Academia, research institutes, and governmental & non-governmental bodies undertake in-depth research to help policy makers initiate structural programs, and to achieve these objectives. Despite all these measures taken by the economic masters, the world was seen stunned in October, 2008 when financial meltdown took the world's biggest economy to a level where a mild push was required to crumble the entire edifice. According to (Chapra; 2008) financial crises seized the money market and created fear regarding the future of the global economy. The world has already experienced almost eighty five episodes of the financial crises³ however, in today's economic circles, the financial meltdown of October 2008 is considered to be the second largest recession after the great depression of 1929. Financial agencies, financial analysts and economic researchers of different schools of thought including Capitalistic, Socialistic and Islamic Schools have once again started to dig out the causes and effects of this severe recession. According to Jickling (2010), central banks' primary focus of policy became the prevention of a prolonged downturn on the order of the Great Depression.

Traditionally, Micro-prudential policies were considered sufficient to overcome the economic and financial shocks by identifying, measuring, mitigating, monitoring, reporting and controlling the credit risk, liquidity risk and market risk in the banking sector. The tools of monetary policy were also considered acceptable to attain price stability and to achieve economic growth. However, after the financial meltdown of October 2008, application of the Micro-prudential policy to resist financial and economic shocks is being criticized on the ground that it addresses the risk of individual bank failure but does not take into account the system failure and Micro-prudential policy adopted by the commercial banks to prevent themselves from the financial shocks have been miserably failed⁴.

Therefore, in order to develop a holistic policy which takes into account not only the systemic risk but also possesses traits of being more resilient to the financial and economic shocks; policymakers are now endeavoring to develop the Macro-prudential policy which will operate in addition to the existing Micro-prudential policy. According to the Bank for International Settlement (BIS); Macro-prudential policy is the use of tools with an objective to promote stability of the financial system as a whole and not only of the individual financial institution within it.

Before analysing the tools of both the Micro and Macro-prudential policies and their impact on the systemic risks, it is important to ponder on the common behaviour of the financial institutions in pre and post crises era.

³ See, Macro-Prudential and Micro-Prudential Regulation, Chapter No: 2, The Warwick Commission.

⁴ See, Flagship Report on Macro-Prudential Policy in the Banking Sector, Page no: 4, European Systemic Risk Board (ESRB),

2.0 Common Behavior of Financial Institutions during the Pre and Post Crises Era

If we analyze the common behavior of the financial institutions during the pre and post crises era⁵, we come to know that one or all of the following common behavior of the financial institutions turned a bad situation into a worse one.

- a) In the periods of boom, banks takes excessive leverage due to endogenous feedback between credit and asset prices that stimulate the banks to relax the lending standards; and capital inflow exaggerates the credit boom which eventually results in the vulnerability of the whole financial system.
- b) In response to the financial shocks; there is a massive cut in the lending of multiple banks and liquidation of fixed asset takes place which not only lessens the asset prices exorbitantly and weakens the balance sheets of banks but also decreases the employment and investment level in the economy.
- c) When credit stimulates and banks rely on short term funding along with financial intermediaries and derivative market starts to play its roles; the system exposes to credit risk due to the interconnectedness and inter linkages of the financial markets both at the national and the global level; failure of commitment by one institution causes the failure of some of its creditors and counterparties' institution due to the domino effect that operates within the financial markets across borders.

2.1 Tools of the Micro & Macro Prudential Policy

In response to the common behavior of the financial institutions and to counter the pro-cyclical approach of banks; both Micro and Macro-prudential policies seek to increase resilience of the financial system to aggregate systemic shocks by applying the following tools.

Table 2.1

Tools	Micro Prudential	Macro Prudential
Minimum Capital Requirement for Individual Institutions	Yes	NO
Capital Risk Weights	Yes	Yes
Pillar 2 Capital Requirements	Yes	Yes
Counter Cyclical Capital Buffer	NO	Yes
Capital Conservation Buffer	Yes	NO
Systemic Capital Surcharge	NO	Yes
Dynamic Provisioning	Yes	Yes
Leverage Ratio	Yes	yes
Large Exposure Limits	Yes	yes
Loan to Value Limits	Yes	yes
Debt to Income Limits	Yes	yes
Foreign Exchange Limits	Yes	yes
Liquidity Requirement	Yes	yes
Risk Management Standards	Yes	NO
Licensing Standards	Yes	NO

Source: This table is constructed after taking into account various research articles, websites, books etc written on the subject of Micro-and Macro-prudential policies.

It is worth mentioning that toolkit of both the Micro and Macro-Prudential policies are not considerably different from each other⁶; however, there is a significant difference in the objectives. As mentioned earlier, Micro-prudential policy seeks to safeguard from the risk of an individual bank failure where as Macro-prudential policy seeks to increase resilience of the whole financial system to aggregate systemic shocks.

Apart from the counter cyclical buffers and systemic capital surcharge; macro-prudential regulations seem to apply similar tool kit as of the Micro-prudential policy with a bit difference in volume & frequency of all the tools.

3.0 Islamic Macro-prudential Policy

We believe that the objectives of the Islamic Macro-prudential policy should be far wider than the objectives of the conventional Macro-prudential policy which is restricted to encompass only the risk of the financial system failure and not the economic system failure. Islamic Macro-prudential policy should address the risk causing economic imbalances along with the systemic risk in the banking sector as there are close inter-linkages between the financial and economic systems; failure of one causes the failure of the other which is evidenced by the Credit

⁵ Credit Crises of 2007-2008, Capital Management Crisis of 1997-98, Stock Market Crash of 1987 etc

⁶ The tools of the Mirco-prudential policy includes all the tools mentioned above; except Counter Cyclical Capital Buffer and Systemic Capital Surcharge which are newly introduced in the Macro-prudential regulations.

Crises of 2007-2008, Capital Management Crisis of 1997-98, and the Stock Market Crash of 1987 etc.

In this regard, we argue that the unique risk divergent and asset backed characteristics of the products of Islamic banks should make the policy makers realize that the tools of both the conventional and Islamic Macro-prudential policies may be similar to certain extent but should not be the same as the difference in the nature of Islamic modes of finance makes the risks of Islamic banks' assets different from those created by interest-based lending. (See Chapra; 2000). Moreover, tools of the Islamic Macro-prudential policy should follow the product as well as region wide approach⁷ to not only counter the financial system failure but also minimize the risk of economic system failure as the quality of assets created by Murābahah, Salam, Istisnā', Ijārah, etc., need to be recorded one by one and case by case. (See Chapra; 2000)

The basis of our argument lies in the financial efficiency⁸ inherent in the products of Islamic banks the degree of which varies from product to product and region to region. Therefore, policy makers should try to first measure the degree of financial efficiency lies within the different products of Islamic banks in different regions and then try to develop the region wise tools for the Islamic Macro-prudential policy which may be implemented along with the tools of the conventional Macro-prudential policy.

For the purpose of this study, we chose to ascertain the degree of financial efficiency lies in the product of Murabaha financing which is being used as an alternative to the product of Short Term Business Loan⁹ of the conventional banks in Pakistan. The study helps policy makers formulate the tools of Islamic Macro-prudential policy related to Murabaha financing which may be implemented alongside the tools of the conventional Macro-prudential policy in Pakistan.

3.1 Financial Efficiency

Efficiency is the internal process that leads to output and focuses on the means to achieve the desired end (See Sara; 2012). The study considers financial efficiency as the degree to which Murabaha funds of Islamic banks are transformed into its intended purpose as Zala (2011) in his study stated that financial efficiency refers to the efficiency with which resources are correctly allocated among competing uses.

4.0 Literature Review.

Tim Lohrentz (2013) while presenting the net economic impact of payday loans declare that the main purpose of these loans is to help people in meeting their expenses arising in case of emergency or some other special occasions. On the contrary, study shows that borrower utilizes payday loans for recurring expenses like in paying utility and credit card bills and not for the purpose these loans were initially acquired. The author further discusses the net economic impact of payday loans by pointing out the economic activity generated by the payday lending firms by receiving interest payments is less than the lost economic activity by reduction in purchasing power of the payday loans customers. This is quantified in the following table that each dollar that pays in interest adds \$1.70 to the US economy but subtracts \$1.94 an estimated 24 cents is lost to the US economy.

Table 4.0 Economic Impact of \$1.00 and \$40.00 in Payday Interest Paid

Scenario	Total impact from Each Dollar of Interest	Impact from \$40 Payday Interest Payment
Amount of Interest Payment	\$1.00	\$40.00
Scenario1: Payday Lending Industry Economic Impact Multiplier	\$1.70	\$68.00
Scenario2: Private Household Economic Impact Multiplier	(\$1.94)	(\$77.60)
Net Impact from the Two Scenarios	(\$0.24)	(\$9.60)

Source: author, based on IMPLAN, an economic modeling application. See <http://implan.com/V4/Index> MIG, Inc is the sole-source provider of the IMPLAN.

Pervaiz (2011) somewhat supports the viewpoint of the Tim Lohrentz by using the terminology "chief motivation" for profits earned by the conventional banks. He writes that the conventional banks have insufficient checks and balances over the usage of money by the customer that leads to economic crises. **Omara (2007)** in his study on the assessment process and repayment of bank loan in Barclays bank Uganda Ltd finds that 37% of the respondents used the loan proceed other than its intended purpose and 74% of the respondent confirmed that the Barclays bank did not monitor the loan proceed given to us. However, **Griffiths (2013)** disagreed with Tim

⁷ Financial efficiency of the products of Islamic banks differ region wise as one product serves differently in different region. For example, Murabaha financing is being used in Pakistan as an alternative to the Short term business loan product of conventional banks where as it serves as an alternative to the Car financing in some other regions. Therefore, the degree of financial efficiency of Murabaha financing in Pakistan differs from other regions of the world.

⁸ Financial efficiency refers to the degree to which funds are transformed into its intended purpose.

⁹ Running Finance, Working Capital Finance, OD Facility etc

Lohrentz and Pervaiz by stating that banks before lending the money ask the borrower about the usage of the loan amount. He further writes that if the borrower does not use the money for the purpose it was initially acquired, then the lender has all the rights to repudiate the contract of loan and take the money back.

Arif (2012) in his work on the difference between Islamic and conventional banking inscribed that every financing agreement of the Islamic bank is backed by the asset as money is considered medium of exchange and not the commodity according to the Islamic jurisprudence. Contrarily, conventional bank treats the money as tradable entity, meaning thereby that the loan is given on interest without backing of real asset which results in more volatile and vulnerable market prices.

Parashar, S., & Venkatesh, J. (2010) in their study on how did Islamic finance do in Global financial crises finds that the conventional bank lend huge amount of loan without the backing of real asset that causes economic instability and was the main reason for the financial crises of 2007.

Simpson (2014) supports the viewpoint of the Parashar, S., & Venkatesh, J. (2010) and Arif (2012) by inscribing that conventional banks are least interested in knowing as to where the loan amount is going to be utilized. He writes that before the collapse of the housing bubble, home equity financing was the fastest growing arena for the conventional bank in which banks lent to consumers for whatever purpose they wished, with the equity in their home. **Kelly (2012)** while discussing about Georgia Bankruptcy presented his experience in the following words.

“A few weeks ago, a potential client informed me that she had received a lump sum of student loan money for her living expenses for the coming year. Instead of using this money for its intended purpose, she used it to pay off her credit card debt. Her reasoning was that the student loan interest rate was extremely low and the credit card interest rate was extremely high.” (Jeff Kelly, Esq. August 17, 2012, Georgia Bankruptcy)

According to Tuoitrenews, The director of the Dak Lak branch of a commercial bank in Veitnam said, *“The coffee manufacturers used the bank loan proceed to purchase VND-billion truck fleet, a VND400-billion warehouse, “The businesses failed to use their loans effectively by investing in non-core sectors that have poor chance of recouping investment,”*

4.1 Conclusion

Literature written on the comparison between Murabaha financing of Islamic banks and loan amount of conventional banks concludes that as long as the borrower pays the principal amount along with interest on its due date, conventional banks are least interested to know whether the loan amount is being utilized by the borrower or not. Moreover, if the amount of loan is utilized by the borrower, conventional banks do not bother as to where the loan amount is being utilized i.e. for productive purposes or for unproductive purposes. Therefore, business loan contract of conventional banks lead to create gap between the level of money supply in the economy and production of goods & services which leads to create economic imbalances that eventually increases systemic risk in the long run.

Contrarily, literature review reveals that in Murabaha financing the customer has no probability to use the Murabaha funds other than its intended purpose because the Murabaha funds are directly credited to the suppliers account and utilized only for the productive purposes. In other words, in Murabaha financing there is no considerable gap exists between the level of money supply in the economy and production of goods & services. Therefore, Murabaha financing helps create price stability in the economy that leads to economic growth which eventually increases resilience against systemic shocks.

5.0 RESEARCH METHODOLOGY

The study under consideration is descriptive as well as exploratory in its nature. The response to the study's research questions describes the behavior of the customers about the usage of funds in a given point in time and then presents the data in the form of tables, graphs and charts, hence, the study is descriptive as **Glass & Hopkins (1984)** writes about the descriptive research that it involves gathering data that describe events and then organizes in the tabular and graphical form.

Moreover, the study's general intent together with research questions had never been inquired before thus, the study is exploratory also. According to **Robson (2011)**, exploratory study provides important grounds to determine what is happening to seek new insights about which considerable study was not done before.

5.1 Research Design

The study employed survey strategy as it requires collection of data from the large sample size which represents the whole population and also entails durability. **Lynn & Eren (2012)** in his work “A Strategy for Survey Methods Research in the UK” inscribed that there are several ways of collecting data but amongst all, data collected through survey strategy is the best representative of the whole population.

5.2 Survey Population

The population of the study is divided into two groups as it compares the utilization of Murabaha funds of Islamic banks with the loan amount of conventional banks in Karachi, Pakistan. As the Karachi being the financial capital of the country hence the results may be generalized to whole of Pakistan.

○ Murabaha Funds of Islamic Banks

In case of murabaha funds, the population includes Murabaha officers of the Islamic banks. Moreover, in order to cross check the results received from the Murabaha officers, survey's populations also includes Murabaha customers of Islamic banks

○ Loan Amount of Conventional Banks

For the loan amount, the population comprises of loan officers of the conventional banks. Moreover, in order to cross check the results obtained from the loan officers, survey's population also includes loan borrowers of conventional banks.

5.3 Sample Size

○ Murabaha Funds of Islamic Banks

The samples of 98 Murabaha officers and 120 Murabaha customers of the 5 Islamic banks including Islamic banking divisions of the 4 conventional banks were taken out of the population.

○ Loan Amount of Conventional Banks

The samples of 178 loan officers and 422 loan borrowers of the 24 conventional banks were taken out of the population to inquire the general intent of the study.¹⁰

5.4 Instrument for Data Collection

○ Murabaha Funds of Islamic Banks

Primary Data¹¹

To find out the usage of murabaha funds by murabaha customers, primary data is collected not only from the Murabaha officers of Islamic banks but also from the Murabaha customers through structured questionnaires which include multiple choice questions and the questions that required ranking to answer.

Questionnaire presented in appendix# 1 is used to inquire Murabaha officers of Islamic banks with an objective to determine the usage of Murabaha funds by murabaha customers. Moreover, appendix# 3 presents the questionnaire which is developed for the murabaha customers of Islamic banks with an objective to find out the usage of Murabaha funds by them.

The study employed average percentages to calculate the financial efficiency of both the Murabaha financing and interest based business loan. Chapter #1 sub-section 1.4 mentions that the study considers financial efficiency as the degree to which murabaha fund vis-à-vis conventional loan is transformed into its intended purpose.

Therefore for the Murabaha financing, financial efficiency is calculated on the basis of opinions of both the murabaha officers and murabaha customers that determines the average percentage of Murabaha transactions in which murabaha funds are completely utilized for its intended purpose to achieve financial efficiency.

Question No 4, 5, 8 & 9 in the questionnaire presented in an appendix#1 were asked to collect data from Murabaha officers about the usage of funds and to calculate the financial efficiency of Murabaha financing. Similarly, Question No 4 & 5 in the questionnaire presented in an appendix # 3 was asked to inquire Murabaha customers about the usage of Murabaha funds to calculate the financial efficiency of Murabaha financing.

○ Loan Amount of Conventional Banks

Primary Data

To determine the utilization of loan amount by the customer of conventional banks, primary data was collected from the loan officers through the technique of structured close ended questionnaires comprises of multiple choice questions. Moreover, loan borrowers were also inquired about the utilization of loan amount through structured questionnaires which includes open ended and multiple choice questions.

Questionnaire presented in appendix# 2 is used to inquire loan officers of conventional banks with an objective to determine the usage of loan amount by loan borrowers. Moreover, appendix# 4 presents the questionnaire which is designed for the loan borrowers of conventional banks with an objective to find out the usage of loan amount by them.

For the loan amount of conventional banks, financial efficiency is calculated on the basis of opinions of

¹⁰ Note:- Sample size for loan contract is more than the sample size of Murabaha financing due to the reason that according to website of the State Bank of Pakistan dated 30th June, 2014, there are only 5 full fledged Islamic banks compare to 39 conventional banks operating in Karachi, Pakistan.

¹¹ All the questionnaires which are used to collect primary data in this study are designed after taking into account experts' opinion.

both the loan officers and loan borrowers that determine the average percentage of loan transactions in which loan amount is completely utilized for its intended purpose to achieve financial efficiency.

Question No: 7 in the questionnaire presented in an appendix# 2 was asked to collect data from loan officers about the usage of funds and to calculate the financial efficiency of loan amount. Similarly, question No: 9 in the questionnaire presented in an appendix # 4 was asked to inquire loan borrowers about the usage of loanable funds to calculate the financial efficiency of loan amount.

Note: Question no: 7 (appendix 2) along with its percentages framed for loan officers to calculate the financial efficiency of loan transactions are taken different from question no : 5 (appendix 1) and its percentages which was asked from the Murabaha officers to calculate the financial efficiency of Murabaha financing. This is so because there is a difference in the processes and procedures of the two alternative ways of financing and the two questions and their percentages in both the questionnaires cannot be the same.

6.0 DATA ANALYSIS AND PRESENTATION OF RESULTS

This section calculates the financial efficiency of both the Murabaha financing and loan amount based on the opinions of customers and officers of Islamic and conventional banks. As there is a difference between the processes and procedures of both the methods of financing that's why the researcher after taking into account the expert's opinion, feels it pertinent to design questions and set percentages different for Murabaha financing with its conventional counterpart interest based loan.

6.1 Murabaha Officers' Perspective

To find out whether the Murabaha funds of Islamic banks are utilized for its intended purpose and to attain financial efficiency, it was inevitable to determine the percentage of Murabaha funds directly paid to suppliers vis-à-vis to customers of Islamic Banks. For this reason, following questions were asked from the officials of Islamic banks who directly or indirectly indulge in Murabaha financing.

1- Does your bank directly make payment to supplier for Murabaha goods?¹²

This question was asked due to the fact that Murabaha funds are completely utilized for its intended purpose only in those Murabaha transactions in which the bank makes direct payment to supplier for Murabaha goods hence, there is no probability for the customer to utilize murabaha funds other than its intended purpose as funds are not credited to his account. Therefore, it was worthwhile to determine the exact percentage of Murabaha transactions in which direct payment to supplier was made.

Moreover, this question was significant to determine the percentage of Murabaha transactions in which funds are not directly paid to supplier but credited to the customers' account for which there is every probability that the customer utilized Murabaha funds other than its intended purpose. Table 6.1 unveils the response.

Murabaha Funds Credited to Suppliers' Account

Table 6.1

Is the payment made directly to the supplier?	No. of Respondents	Percentage of Respondents
Yes	83	85%
No	15	15%
Total	98	100%

Figure 6.1



The result shows that 83 out of 98 i.e. almost 85% of the respondents were at the opinion that the Islamic banks make direct payment to supplier in Murabaha transactions. In other words, 15 out of 98 i.e. almost 15% of the respondents opined that Murabaha funds are credited to the customers' account.

¹² Q no:4 in the questionnaire, Appendix 1

2- Up to what percentage of Murabaha transactions, payment is directly made to the supplier?¹

This question was asked to those 83 i.e. 85% of the Murabaha officers who responded “Yes” in question no: 1 i.e. they were at the opinion that in Murabaha transactions, funds are directly paid to supplier.

The main purpose to ask this question is to determine the exact degree of Murabaha transactions in which payment is made directly to supplier.

Response of Murabaha Officers

Table 6.2

Response of the 83 Murabaha officers regarding the percentage of Murabaha transactions in which Islamic banks make direct payment to supplier.					
Degree of Murabaha transactions in which funds are directly paid to supplier	63% ²	83% ³	95% ⁴	100%	Total
No. of Murabaha officers	26	20	11	26	83

Note:- Question No: 5 does not consider the category of 50% or less because of the fact that the theory and/or practice tells us that this percentage always exceeds from 50%.

Table 6.2 presents the response showing 26 out of 83 i.e. 31% of the Murabaha officers were at the opinion that Islamic banks make direct payment to supplier in 63% of the Murabaha transactions on average basis.

Moreover, 20 out 83 i.e. 24% of the Murabaha officers opined that, payment is directly made to supplier in 83% of the Murabaha transactions on average.

Similarly, 11 out of 83 i.e. 13% of the Murabaha officers responded that the Murabaha funds are directly paid to the supplier in 95% of the Murabaha transactions and 26 out of 83 i.e. 31 % of the Murabaha officers opined that the funds are directly paid to supplier in 100% of the Murabaha transactions.

With the help of Table 6.2, the table 6.3 is developed which calculates the total average of the Murabaha transactions in which Islamic banks makes direct payment to supplier.

Total Average of Murabaha Transactions in which Funds are Transferred into Suppliers’ Account

Table 6.3

Weighted Average of the Murabaha Transactions in which payment is made directly to supplier						
% of Murabaha transactions in which payment is made directly to supplier		63%	83%	95%	100%	
Number of respondents who opined that Islamic banks make direct payment to supplier in Murabaha transaction to the extent of the percentage mentioned above.	Qty	26	20	11	26	83
% of respondents		31%	24%	13%	31%	100%
Weighted Average Percentage of Murabaha Transactions		0.20 ⁵	0.20 ⁶	0.13 ⁷	0.31 ⁸	84% ⁹

The results suggest that according to the 83 respondents, Islamic banks make direct payment to supplier in 84% of the Murabaha transactions on average basis.

It should be noted here that the Murabaha transactions in which Islamic banks make direct payment to supplier have 100% financial efficiency as the Murabaha funds are completely utilized for its intended purpose due to the fact that the prospective customers do not have access to those funds.

Table 6.4 calculates the financial efficiency in response to the opinion of the 83 Murabaha officers.

¹ Q no: 5 in the questionnaire – Appendix 1

² (51%+75%)/2=63% See Qno:5 in the questionnaire – Appendix 1

³ (76%+90%)/2=83% See Qno:5 in the questionnaire – Appendix 1

⁴ (91%+99%)/2=95% See Qno:5 in the questionnaire – Appendix 1

⁵ 0.31*0.63=0.20

⁶ 0.24*0.83=0.20

⁷ 0.13*0.95=0.13

⁸ 0.21*1=0.31

⁹ 0.20+0.20+0.13+0.31=0.84=84%

Financial Efficiency of Murabaha Financing when Funds are credited to the Suppliers' Account

Table 6.4

S.No	No. of Murabaha Officers	Percentage of Murabaha Officers	Percentage of Murabaha transactions in which the Islamic banks makes direct payment to supplier	Financial Efficiency (%)
1	83 ¹	85%	0.84 ²	0.71
2	15 ³	15%	N/A	N/A
Total	98	100%	N/A	N/A
Financial Efficiency				71%⁴

From the table 6.4, the results suggest that according to the 83 Murabaha officers, the financial efficiency of the Murabaha transaction is about 71%.

Moreover, it can be inferred from the table 6.4 that according to the opinion of 83 respondents, the Murabaha funds are credited to the customers' account in the 16% (100-84) of the Murabaha transactions. In addition to it, from the table 6.1 it is inferred that according to the opinion of the 15 Murabaha officers the Islamic banks credit the Murabaha funds into the customers' account in the 100% of the Murabaha transactions as shown in the Table 6.5

Funds Credited to Customers' Account

Table 6.5

No. of Respondents	Percentage of Respondents	Percentage of Murabaha transactions in which Islamic banks credit the Murabaha funds into customer's account
83	85%	16%
15	15%	100%

It is note worthy that the Murabaha transactions in which the funds are credited to the customers' account have every probability to be utilized other than its intended purpose by the customer.

Therefore, question no:3 was asked from the 83 Murabaha officers who were at the opinion that the Islamic banks credit the Murabaha funds into the customer's account in 16% of the Murabaha transaction.

Similarly, question no:3 was also asked to those 15 Murabaha officers who opined that the Islamic banks credit the Murabaha funds into the customer's account in 100% of the Murabaha transactions. Table 6.6 presents the response of the Murabaha officers.

3- Do you think that the customer uses murabaha funds for the asset purchase/intended purpose?⁵

**Usage of Murabaha Funds
(Murabaha Officers' Perspective)**

Table 6.6

Is the Customer Uses Murabaha Funds for its Intended Purpose?		
Response	Qty	%age of Respondents
Yes	88	90%
No	10	10%
Total	98	100%

¹ See Table 4.1

² See Table 4.3

³ See Table 4.1

⁴ $0.85 \times 0.84 = 0.71 = 71\%$

⁵ Q No: 8 in the questionnaire., Appendix 1

Figure 6.6

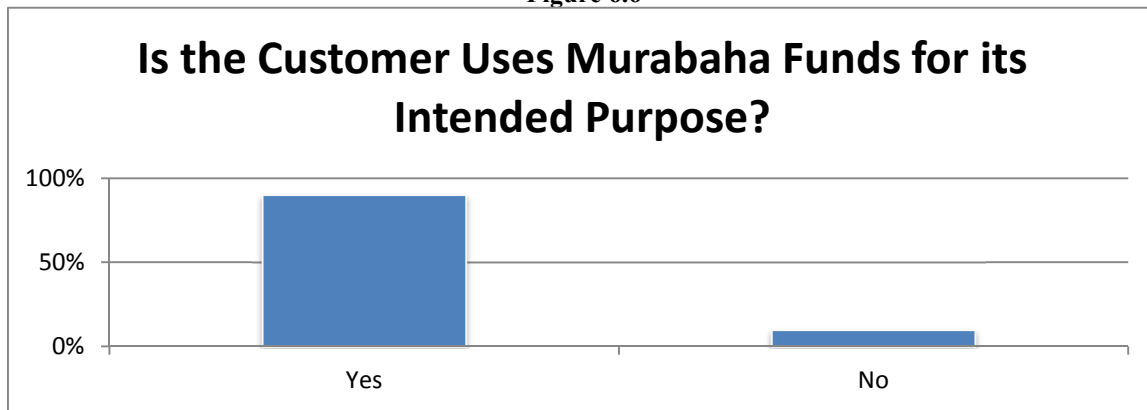


Table 6.6 reveals that 88 out of 98 i.e. 90% of the Murabaha officers responded that the prospective customers use the Murabaha funds for its intended purpose in 90% of the Murabaha transactions. In other words, 10 out of 98 Murabaha officers opined that the prospective customers use the Murabaha funds other than its intended purpose in 10% of the Murabaha transactions.

With the help of table 6.6, the table 6.7 is developed which calculates the average of the Murabaha transactions in which the customer uses Murabaha funds for its intended purpose.

It is noted here that it is the response of those 83 and 15 respondents who were at the opinion that the Murabaha funds are credited to the customers' account to extent of 16% and 100% respectively.

Financial Efficiency of Murabaha Financing when Funds are Credited to Customers' Account

Table 6.7

S.No	No. of Respondents	Percentage of Respondents	Percentage of Murabaha transactions in which Islamic banks credit the Murabaha funds into customer's account	Percentage of Respondents who opined that the customer uses Murabaha funds for its intended purpose	Financial Efficiency (%)
1	83 ¹	85%	16% ²	90% ³	12% ⁴
2	15 ⁵	15%	100% ⁶	90% ⁷	14% ⁸
Total	88	100%	N/A	N/A	26%⁹

Table 6.7 shows that the Murabaha transactions in which customers use Murabaha funds for its intended purpose is 26%.

In other words, according to the 83 and 15 respondents who were at the opinion that the Murabaha funds are credited to the customers' account to extent of 16% and 100% respectively, the customer uses Murabaha funds for its intended purpose in 26% of the Murabaha transactions on average basis.

Finally, with the help of the Table 6.4 and Table 6.7, the following table calculates the total of the financial efficiency of Murabaha transactions

¹ See Table 4.5
² See Table 4.5
³ See Table 4.6
⁴ $0.85 \times 0.16 \times 0.90 = 0.12 = 12\%$
⁵ See Table 4.5
⁶ See Table 4.5
⁷ See Table 4.6
⁸ $0.15 \times 1 \times 0.90 = 0.14 = 14\%$
⁹ $12\% + 14\% = 26\%$

Total Financial Efficiency of Murabaha Financing
 (Murabaha Officers' Perspective)

Table 6.8

	Financial Efficiency
Table 17.4	71%
Table 17.7	26%
Total	97%

Table 6.8 shows that the financial efficiency of the Murabaha transactions is about 97% i.e. according to the opinion of the 98 respondents, the customers use the funds for its intended purpose in 97% of the Murabaha transactions on average basis.

6.9 Loan Officers' Perspective

To find out whether the borrowers of the conventional banks utilized the loan amount for its intended purpose or not, following question was asked from the 178 loan officers the response of which is presented in the table 6.9

4- In your opinion, how much of the borrowed funds utilized for its intended purpose¹?

Average of Loan Transactions

Table 6.9

Average of Business Loan Amount Utilized for Intended Purpose by Customers of Conventional Banks. (Applicable to 100% of the Business Loan Amount)						
% of loan amount utilizes for intended purpose by customer		25%	50%	75%	100%	
Loan officers' response about utilization of loan amount for its intended purpose by customer	Qty	13	51	82	32	178
% of respondents		7%	29%	46%	18%	100%
Average % of Loan amount utilized for its intended purpose by customers		0.0175 ²	0.145 ³	0.345 ⁴	0.18 ⁵	69%⁶

The results indicate that 7% of the loan officers were at the opinion that the loan borrowers utilize the loan amount for its intended purpose in 25% of the loan transactions. Moreover, 29% of the loan officers opined that the conventional banks' loan amount is utilized by the borrowers for its intended purpose in the 50% of the loan transactions.

The results also suggest that according to 46% and 18% of the loan officers, the customers utilize the loan amount for its intended purpose in 75% and 100% of the loan transactions respectively.

Moreover, Table 6.9 shows that according to the opinion of the 178 loan officers, the average of the loan transactions used for its intended purpose is about 69%. In other words, the financial efficiency of the loan transactions is about 69% as shown in the table 6.10

Financial Efficiency of Loan Transactions
 (Loan Officers' Perspective)

Table 6.10

	Financial Efficiency
Loan Transactions	69%

Table 6.10 summarizes the finding by comparing the response of 98 Murabaha officers of the Islamic banks and 178 loan officers of the conventional banks which shows that financial efficiency of Murabaha financing is more than that of conventional interest based business loan by 28% (approximately) as Murabaha funds of Islamic banks are utilized for its intended purpose to the extent of 97% on average basis, compared to 69% of business loan offered by conventional banks.

¹ Q No: 7 in the questionnaire., Appendix 2

² $0.07 \times 0.25 = 0.0175$

³ $0.29 \times 0.5 = 0.145$

⁴ $0.46 \times 0.75 = 0.345$

⁵ $0.18 \times 1 = 0.18$

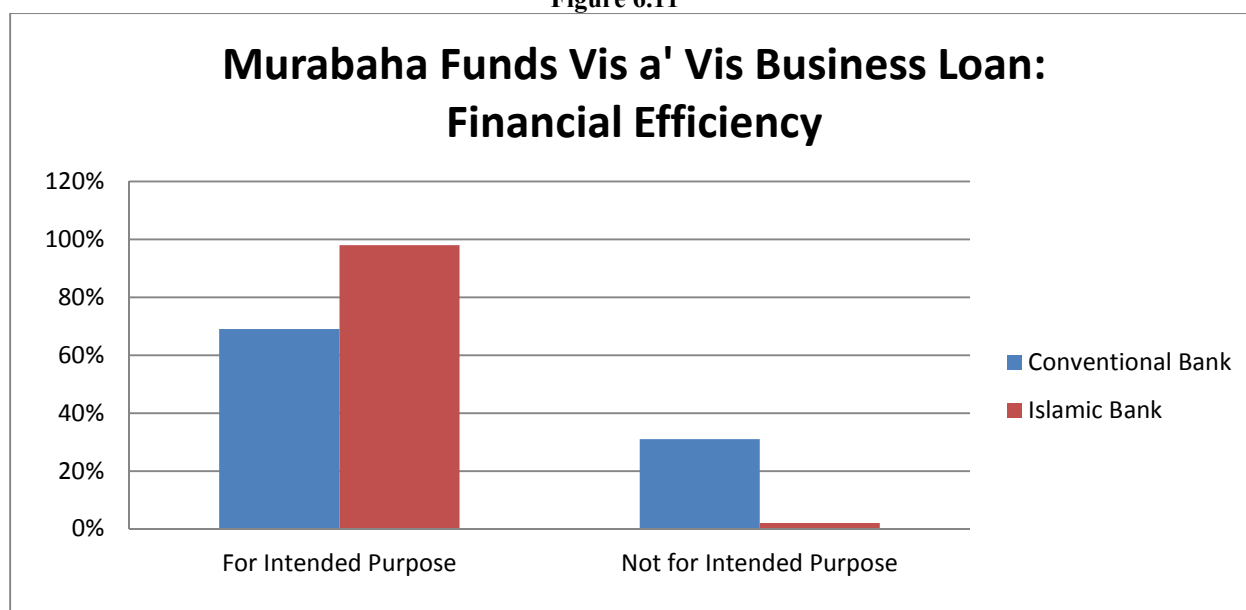
⁶ $0.0175 + 0.145 + 0.345 + 0.18 = 0.69 = 69\%$

**Comparison of the Financial Efficiency
 (Murabaha and Loan Officers' Perspective)**

Table 6.11

	Murabaha Funds of the Islamic Banks		Business Loan Amount of the Conventional Banks	
	Utilized for its intended purpose		Utilized for its intended purpose	
	Yes	No	Yes	No
	97%	3%	69%	31%
Financial Efficiency	97%¹	0%	69%²	0%

Figure 6.11



6.12 Murabaha Customers' Perspective

In order to reinforce and to check the findings obtained from the Murabaha and conventional loan officers, another set of structured questionnaires was designed for the Murabaha customers and the conventional loan borrowers. Following question was asked from 78 customers of Murabaha financing to determine the degree to which funds are utilized for its intended purpose.

1- What % of Murabaha funds were utilized for its intended purpose³?

The following table summarizes the findings.

**Usage of Murabaha Funds
 (Murabaha Customers' Perspective)**

Table 6.12

Murabaha funds utilized for its intended purpose						
Percentage	100%	75%	50%	25%	Others	Total
Frequency	65	5	4	2	2	78

The results reveal that 65 murabaha customers utilized 100% funds for its intended purpose whereas 5 respondents utilized it to the extent of 75%. Moreover, only 4 and 2 customers utilized the funds for its intended purpose to the extent of 50% and 25% respectively.

Table 6.13 calculates the average of Murabaha funds utilized for its intended purpose.

¹ See Table 4.8

² See Table 4.9

³ Q No: 5 in the questionnaire., Appendix 3

Weighted Average of Murabaha Transactions

Table 6.13

Average of Murabaha funds utilized for its intended purpose					
Percentage of funds utilized for its intended purpose	100%	75%	50%	25%	Total
Frequency	65	5	4	2	76
%age	0.86	0.07	0.05	0.03	1
Average of funds utilized for its intended purpose	94.5%¹				

Table 6.13 reveals that according to 78 Murabaha customers, the funds of Murabaha financing were utilized for its intended purpose to the extent of 94.5% of the Murabaha transactions on average basis. In other word, the level of financial efficiency in the opinion of the Murabaha customers is about 94.5% as shown in the table 6.14

Financial Efficiency of Murabaha Transactions (Murabaha Customers' Perspective)

Table 6.14

	Financial Efficiency
Murabaha Transactions	94.5%

6.15 Loan Borrowers' Perspective

Similarly, to find out whether the loan amount of conventional banks is utilized for its intended purpose, 422 loan borrowers of conventional banks were inquired through the following question.

2- What % of loan amount was utilized for its intended purpose?²

Table 6.15 summarizes the findings.

Loan Amount Utilized For Intended Purpose

Table 6.15

Percentage of loan amount used for its intended purpose					
Percentage	100%	75%	50%	25%	Total
Frequency	282	90	40	10	422

The results shows that 282 borrowers utilized 100% of the loan amount for its intended purpose whereas 90 of them utilized it to the extent of 75%. Moreover, 40 and 10 borrowers utilized the loan amount for its intended purpose to the extent of 50% and 25% respectively. Table 6.16 calculates the average of the loan amount used for its intended purpose.

Average of the Loan Transactions

Table 6.16

Average of the Loan Amount Used For its Intended Purpose					
Percentage of loan amount	100%	75%	50%	25%	Total
Frequency	282	90	40	10	422
% age	0.6682	0.2133	0.0948	0.0237	1.000
Average % of loan amount utilized for its intended purpose	88%				

Table 6.16 shows that according to the opinion of the 178 loan borrowers of the conventional banks, loan amount was used for its intended purpose to the extent of 88% of the loan transactions on average basis. In other words, the level of financial efficiency in the opinion of the 178 loan borrowers is about 88% as shown in the following table.

Financial Efficiency of Loan Transactions (Loan Borrowers' Perspective)

Table 6.17

	Financial Efficiency
Loan Transactions	88%

¹ $(0.86*1)+(0.07*0.75)+(0.05*0.50)+(0.03*0.25)=94.5\%$

² Q No: 9 in the questionnaire., Appendix 4

**Comparison of the Financial Efficiency
 (Murabaha Customers and Loan Borrowers' Perspective)**

Table 6.18

Murabaha Funds Vis a' Vis Business Loan Amount Utilized for Intended Purpose			
Islamic Bank		Conventional Bank	
Murabaha Funds Utilized for Intended Purpose		Business Loan Utilized for Intended Purpose	
For Intended Purpose	Not for Intended Purpose	For Intended Purpose	Not for Intended Purpose
94.5%	5.5%	88%	12%

Abovementioned table summarizes the results obtained from the Murabaha customers of Islamic banks vis-à-vis loan borrowers of conventional banks according to which 94.5% of the Murabaha funds were utilized for its intended purpose whereas as loan amount of conventional banks were utilized for its intended purpose to the extent of 88%.

7.0 Conclusion

On the basis of the research findings, it is concluded that the financial efficiency of Murabaha financing is 97% in the opinion of Murabaha officers and 94.5% in the perspective of Murabaha customers. Similarly, financial efficiency of the loan amount of conventional banks is about 69% in the opinion of loan officers and 88% in the opinion of loan borrowers.

In other words, findings of the study reveals that in the opinion of the Murabaha customers; the conversion of the Murabaha funds into asset is less than 100% i.e. 94.5% which shows that if money supply in the economy is increased by 100% then the level of asset in the economy is increased by 94.5%. Similarly, in the perspective of Murabaha officers, the findings reveals that the conversion of Murabaha funds into asset is 97% which shows that if money supply in the economy is increased by 100% then the level of asset in the economy is increased by 97%.

Similarly, findings of the study also shows that in the opinion of the loan borrowers; the conversion of the loanable funds into asset is less than 100% i.e. 88% which shows that if money supply in the economy is increased by 100% then the level of asset in the economy is increased by 88%. Similarly, in the perspective of loan officers, the findings reveals that the conversion of loanable funds into asset is 69% which shows that if money supply in the economy is increased by 100% then the level of asset in the economy is increased by only 69%.

7.1 Recommendations

- a As there is a difference between the degree of financial efficiency of both the Murabaha financing and interest based business loan; therefore, we recommend that the tools of the Islamic Macro-prudential policy may be similar with the tools of conventional Macro-prudential policy to certain extent; but should be the same.
- b It is recommended that the policy makers calculate the degree of financial efficiency for every product of Islamic banks and takes it into account while framing the Islamic Macro-economic and Macro-prudential policy.
- c Islamic Macro-Prudential Policy should ensure that each and every product of Islamic bank operates on 100% financial efficiency.
- d Ceteris paribus, higher the financial efficiency; the lesser the risk of default; therefore, policymakers are recommended to allocate high risk weight against those products/financing/exposures which have low financial efficiency.
- e As the degree of financial efficiency in the products of Islamic banks varies from region to region both within and across different products; therefore, it is suggested that the regulatory and supervisory framework in different countries may be similar to certain extent but should not be the same.
- f As the risk appetite of the depositor of Profit Sharing Investment Accounts (PSIA's) of Islamic banks is more than that of the depositor of the conventional banks; therefore, for the purpose of capital determination, low percentage of risk should be allocated to those assets which are financed by the investment depositors.
- g As the capital amount is guaranteed of the Current account holders of Islamic banks, therefore; for the purpose of capital determination, high percentage of risk should be allocated to those assets which are financed by the current account holders.
- h In order to reduce liquidity risks, investment depositors should be given special attention and education through qualitative measure; so that they would not withdraw the deposits in case of loss occurs.

- i It is recommended that consistency in the Sharia' principles should be seen region wise¹ to reduce systemic risk.
- j As Islamic banks have limited Sharia' compliant high quality liquid asset (SCHQLA) to meet the capital adequacy requirement of Basel III accord; therefore, it is suggested that the domestic regulators should accept high rated Sukuk eligible for TIER 1 and TIER II capital requirement.
- k Since financial efficiency of any banking system is an important determinant to frame Monetary and Fiscal policies and to accomplish macroeconomic objectives i.e. economic growth, unemployment reduction and price stability. Therefore, the Government and policy makers are advised to devote resources towards achieving 100% financial efficiency within the products of Islamic banks.
- l Decision making authorities of the State Bank of Pakistan pertains to the issuance of licenses to commercial banks are suggested to give an edge to the Islamic banking sector compare to its conventional counterparts as the products of Islamic banks have high financial efficiency compare to the products of conventional banks.

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¹ This is so, because the level of Sharia compliance varies region to region. For example, Sharia' scholars in Pakistan do not permit "Sale of debt" whereas sale of debt is practiced in Malaysia and other regions of the world. Hence, harmonization within the Sharia' principles across the regions may enhance systemic risk rather than reducing it.

Appendix #1

Questionnaire (For Murabaha Officers)

Information given in this questionnaire shall be used solely for research purpose and will not be disclosed to any third party for any reason whatsoever.

1. How long have you been working with the Islamic Bank?

- A- Less than 2 years B- 2 years to 5 years
C- 5 years to 10 Years D- More than 10 Years

2. How long have you been associated directly or indirectly with Murabaha Financing?

- A- Less than 2 years B- 2 years to 5 years
C- 5 years to 10 Years D- More than 10 Years

3. Which of the following factors does your bank consider important while undertaking Murabaha transaction?

Rank 1 to 6 from most important to least important.

- A- Loan repayment capacity of the customer
B- Security/Collateral
C- Credit History
D- Utilization/Use of murabaha funds
E- Customer's Business Cycle
F- Others(*pls specify*)

4. Does your bank directly make payment to supplier for the Murabaha goods?

- A- Yes B- No

5. Up to what percentage of Murabaha transactions, payment is directly made to the supplier?

- A- 51% to 75% B- 76% to 90%
C- 91% to 99% D- 100%

Note:- From QNo:6 onwards, relates to the situation in which bank does not make payment directly to the supplier, rather, Murabaha funds are disbursed in the customer's account.

6. Do you think that the bank has control on the customer about the utilization of murabaha funds?

- A- Yes B- No

7. What percentage of control does your bank has on the customer about the utilization of murabaha funds?

- A- 0% to 50%
B- 51% to 75%
C- 76% to 90%
D- 91% to 99%
E- 100%

8. Do you think that the customer uses murabaha funds for asset purchase/intended purpose?

- A. Yes
B. No

Note: - If your answer to question no: 5 is yes, then, proceed further.

9. What percentage of Murabaha funds are utilized by the customer for asset purchase?

- A- 100%
- B- 90% to 99%
- C- 80% to 89%
- D- 0% to 79%

Your Name: - _____
Bank: - _____
Branch: - _____
Cell no: -(Optional) _____
Office Tel:- _____

Appendix #2

Questionnaire (For Loan Officers)

1. **Gender**

Male

Female

2. **Age Group**

20-30 Yrs

31-40 yrs

41-50 yrs

51-60yrs

61 and above

3. **Educational Background**

University degree & above

Diploma

Certificate

Secondary

Others (Specify)

4. **How long have you been associated with the credit department?**

Less than 2yrs

2-5yrs

5-8yrs

More than 8 yrs

5. **For which of the following is the bank more concerned about?**

Loan repayment capacity of the borrower

Security /Collateral

Credit history of the borrower

Loan utilization of the borrower

6. **Has the bank control over the customer about the utilization of the borrowed funds?**

Yes

NO

To certain extent

Do not Know

7. **In your opinion, how much of the borrowed funds utilized for its intended purpose?**

100% 75%

50%

25%

Others

Appendix #3

Questionnaire (For Murabaha Customers)

1. **Have you ever acquired Murabaha Financing from Islamic Bank?**

Yes

No

2. **Which Bank did you acquire Murabaha Financing from?**

Meezan Bank

Bank Islami

Bank Albaraka

Burj Bank

Dubai Islamic Bank

Others
(Pls specify)

3. **What purpose did you acquire Murabaha financing for?**

a) _____

b) _____

c) _____

d) _____

4. **Did you utilize Murabaha funds for its intended purpose?**

Yes

No

5. **What % of Murabaha funds was utilized for its intended purpose?**

100%

50%

Others:-

75%

25%

Name:- _____

Designation:- _____

Organization:- _____

Contact No:- _____

Appendix #4

Questionnaire (For Loan Borrowers)

1. **Do you have a bank account?**

Yes

No

2. **If your answer to question No:1 is Yes, then in which of the following banks you have an account?**

HBL

MCB

Soneri Bank

NBP

Meezan Bank

Others

Note:- If your answer to question No:2 is the conventional bank then, answer question no:3

3. **In which division of the following division you have an account?**

Islamic Division

Conventional Division

Note:- If your answer to question No:3 is the conventional division then, answer question no:4

4. **Which one of the following accounts you have in the conventional division?**

Saving Account

Time Deposit

Current Account

Others

5. Have you ever taken a loan from the bank?

Yes No

6. Which of the following banks did you get the loan from?

HBL MCB Soneri Bank

NBP Meezan Bank Others

7. How much was the loan amount?

Below 5 laks 5 laks to 10 laks 10 laks to 20 laks

8. What purpose did you get the loan for?

Business personal Car Mortgages

Others

9. What percentage of the borrowed money is utilized for its intended purpose?

100% 75% 50%

25% Others

Appendix #5

➤ **Conventional banks**

- 1) Bank of Khyber
- 2) First Women Bank
- 3) Sindh Bank
- 4) Askari Bank
- 5) Bank AL Habib
- 6) Bank Alfalah Limited
- 7) Khushhali Bank of Pakistan
- 8) NIB Bank
- 9) Tameer MicroFinance Bank Limited
- 10) Silkbank Limited
- 11) Bank AL Habib
- 12) Bank Alfalah
- 13) Askari Bank
- 14) Habib Metropolitan Bank
- 15) KASB Bank Ltd
- 16) Samba Bank Limited

➤ **Islamic Banking Divisions of Conventional Banks**

- 1) UBL Ameen
- 2) Bank Alfala Islamic Division
- 3) Standard Chartered Saadiq
- 4) MCB Islamic Division