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Profitability and Efficiency of Foreign and Domestic Banks: A Case Study of Pakistan

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Abstract
This study examines the profitability and efficiency of domestic and foreign banks of Pakistan during 2006-2010. The type of ownership of banks was divided into domestic and foreign banks. To measure the profitability and efficiency, we used interest spread, net interest margin, return on equity and return on assets and non-interest income to total assets and net interest income to total assets ratios. This study used the secondary data obtained from Financial Statements Analysis of Financial Sectors 2006-2010 published by State Bank of Pakistan. By applying different tests, we have found that although foreign banks are performing very good but the net result show that the profitability of domestic banks was higher and better as compared to foreign banks in Pakistan.
Keywords: Profitability Efficiency, Domestic Banks, Foreign Banks

1. INTRODUCTION

There is no consensus on the impact of foreign bank entry in the developing economies. However, there is some confirmation of increase in the social welfare. According to Clarke, Cull, and Peria (2006), those businesses which are operating in the countries where foreign banks participation is higher rank interest rates and access to long term loans as minor constraints on their operations as compared to enterprises operating in counties with low foreign banks participation. According to Martinez, Soledad and Mody (2004), foreign banks working in Latin America are charging lower interest rates than domestic banks. Similarly foreign banks' entry increases competition which improves the administrative efficiency and decreases the interest spreads. In a study by Denizer (2000), foreign bank entry improved profitability and decreased the overhead expenses of the domestic banks in Turkey.

A similar study was conducted in Philippines by Unite and Sullivan (2003), who found that foreign banks entry reduced the overhead expenses, interest rate spreads and profits but such impact was limited to domestic banks that were tied to business groups. While a study undertaken in Uganda have observed that foreign banks have better internal control mechanism than Ugandan domestic banks.

Havrylchyk (2006) found that the domestic banks are less efficient as compared to foreign banks in Poland. According to him, Greenfield banks have gained more efficiency while those domestic banks which have been acquired by foreign banks have not improved their efficiency. According to Cavalho and Fernando (2002), there is no difference between domestic banks and foreign banks in terms of technical efficiency or credit allocation in Brazil. As a matter of fact, domestic banks introduced and implemented online banking more aggressively as compared for foreign banks. While Claessens, Demirguc-Kunt and Huizinga (2001) found that foreign bank have charged higher interest margins, higher rates of return and have higher overhead expenses.

The basic aim of this research was to compare the profitability and efficiency of domestic and foreign banks which are operating in the Pakistan's banking sector between the years 2006-2010. While reviewing the literature, it was found that no other study exists regarding the comparison of foreign and domestic banks in Pakistan. This study tried to bring out the similarities and differences in the domain of profitability and efficiency of domestic and foreign banks. Therefore, this study tried to fill a gap in the literature and becomes quite important.

1.1 Significance of the Study

- This study would be helpful to the financial managers in identifying the profitability and efficiency of domestic and foreign banks.
- This study will help the policy makers in their endeavor to improve the efficiency of banking sector and identify the need for future reforms in the domestic banks.
- It will assist academics in their search for knowledge and theory. It will serve as a reference point for further future research.
- This study will pinpoint the variables affecting the performance and profitability.
- The study will also help the bank service providers to identify and give due importance to these variables.

- Finally, the study will increase the horizons of the bank manager which will help them in improving the banks' profitability and efficiency.

1.2 Objectives of the study

- To investigate the profitability of domestic and foreign banks operating in Pakistan
- To explore the efficiency of foreign and domestic banks
- To compare profitability and efficiency of foreign and domestic banks in Pakistan
- To evaluate and confirm the supposition about the foreign banks to be more profitable as compared with the local banks.
- To evaluate possible indicators of foreign and domestic banks' efficiency and performance.
- To examine the performance of domestic (local) banks in the presence of foreign banks.

1.3 Problem Statement

This research examines the profitability of domestic and foreign banks in Pakistan for the period 2006-2010. In order to find out this, some questions need to be answered. Did foreign banks performed better than domestic banks in the above mentioned period or not? Did the foreign banks performed better in the realm of SR, NIM, Non-IITA, Net-IITA, ROA and ROE or the otherwise. If there is any difference between these two categories of banks, then what is the reason? Answer to these questions will be beneficial to Pakistani banking management. This research will also be helpful for policy makers to improve the performance of the financial institutions.

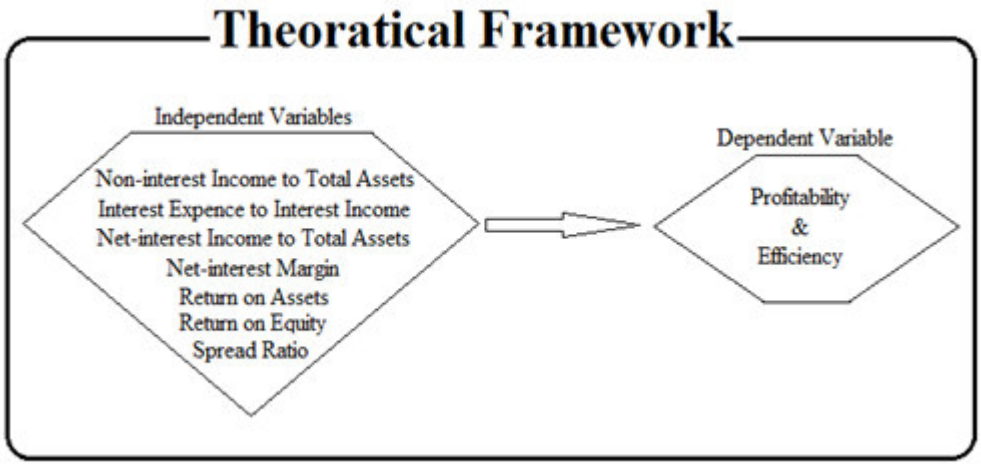
1.4 Research Hypotheses

In the majority of researches, research questions have been used whereas in some studies hypothesis have also been used which is more formal statement than research questions. Hypotheses are basically researchers' guess about the outcome of the results, and they are written in form of an alternative hypotheses which specify the actual expected results (may be higher or lower or more or less of something). Hypotheses can also be stated in the null form, which indicate that there is no relationship or an expected difference between groups shown on a dependent variable in study as stated by (Creswell, 2009). Therefore, the following research hypotheses were developed:

$H_{1:}$ Spread ratio of foreign banks is significantly higher than domestic banks.
$H_{2:}$ NIM of foreign banks is significantly higher than domestic banks.
$H_{3:}$ ROE of foreign banks is significantly higher than domestic banks.
$H_{4:}$ ROA of foreign banks is significantly higher than domestic banks.
$H_{5:}$ Non-IITA of foreign banks is significantly higher than domestic banks.
$H_{6:}$ Net-IITA of foreign banks is significantly higher than domestic banks.

1.5 Conceptual Framework

While going through the literature, it has been learnt that banks profitability is affected by many variables. This study used some determinants to judge the banks' profitability which include spread ratio, net interest margin, non-interest income to total assets and net-interest income to total assets, return on assets and return on equity.
The variables can be grouped into two main categories as follows:
The inter-relationship of Dependent and Independent variables is shown in the diagram below:



1.6 Operationalization of variables

Profitability means the results of operations and policies of a firm in terms of monetary values. The reflection of these results is observed in the SR, ROA, ROE, NIM, Non-IITA and Net-IITA of the firm.

Spread Ration (SR)

It is the amount of total interest earned divided by the total interest paid to depositors.

Return on asset (ROA)

Bank profitability was measured by the ratio of the return on average assets (ROA), calculated as net profit after tax divided by average total assets.

Return on equity (ROE)

ROE is more concerned about how much the bank is earning on their equity investment, the net income per birr of equity capital.

Net Interest Margin (NIM)

How well a bank's assets and liabilities are affected by the spread between the interest earned on the bank's assets and interest costs on its liabilities.

Non-Interest Income to Total Assets

It means how much income is earned other than interest through other functions of the bank by employing total assets.

Net Interest Income to Total Assets

This is basically the ratio between interests earned less provision to total assets.

2. LITERATURE REVIEW

Financial sector in Pakistan is consisting of Commercial Banks, Development Finance Institutions (DFIs), Non-banking Finance Companies (NBFCs) (the leasing companies, Discount Houses, Modarabas, Investment Banks ,Housing Finance Companies, Mutual Funds , Venture Capital Companies), Microfinance Banks (MFBs), Insurance Companies and Stock Exchange. Under the present legislative structure of Pakistan, State Bank of Pakistan is assigned with the supervisory responsibilities of financial institutions like banks, Development Finance Institutions (DFIs) and Microfinance Banks (MFBs) while the remaining financial institutions are examined by seperate controlling authorities such as Controller of Insurance and Securities and Exchange Commission of Pakistan (State Bank of Pakistan, 2013).

2.1 History of Pakistan banking system

Government of Pakistan initiated the reformation of banking sector in 1990s when the government allowed many foreign banks to start their businesses in Pakistan. The banking system in Pakistan saw a major change when the Government of Pakistan privatized and deregulated many banks. Former Prime Minister of Pakistan had nationalized my banks in the 1970s under the banner of Socialism. This process greatly affected the efficiency and profitability of these banks which were overstaffed due to politicization of hiring process and over expansion of branching. Disorder in regulatory policies and political instability resulted into inefficient performance of banking sector. For this reason the Government of Pakistan overwhelmingly decided to take the financial system reforms with the assistance of IMF, the WB and other assistance/donor agencies as the result of structural adjustment programs.

Major reason of reforming the financial system in the decade of 1990s was to acquire an effective market-based monitoring system regarding portfolio management, which creates a complete milieu in the banking sector. Through market-based monitoring system, there can be judgment of demand and supply of services churned out of the banking sector, which is quite difficult in the nationalized banking sector.

2.2 Profitability

Banking sector is regarded as one of the most important sources of financing for most of the businesses, and the evaluation of profitability of foreign and domestic banks is indeed difficult and complicated, because there is no standard method to gauge bank's performance. The general supposition, which sustain to measure profitability of banking sector like calculating operating efficiency, asset management, return on equity, net interest margin, and return on assets. "Profits are usually defined to be the ratio of total revenue to total assets. When we refer to literature search, return on asset (ROA) is normally used in measuring the profitability of banks."

Ali (2005) compared the foreign and domestic banks in Lebanon from 1993 to 2003. He found the

foreign banks to be more profitable than domestic banks although both are operating in the same market. Finally, they found that foreign banks are less affected by the macroeconomic factors of the host country than domestic banks. Similarly Pasiouras & Kosmidou (2007) studied the profitability of foreign and domestic banks operating in 15 EU countries during the period 1995-2001. He found that financial structure of bank has significant impact on profitability."

2.3 Bank Efficiency

In the recent past, comparative study about the efficiency of domestic and foreign banks has gained momentum. Before explaining the difference between foreign and domestic banks, it is necessary to define the term "foreign bank", and why it is necessary to compare its efficiency with domestic banks. Foreign bank is a bank whose 50% or more shares are owned by foreign nationals. It also means that a bank may be domestic in one country, and foreign in other countries. For example, Deutche bank is a domestic bank in Germany while it is foreign in all other countries.

Bank efficiency has been widely studies in the literature and has come out to be a multidimensional concept and a vast literature exists about efficiency of banks across the globe. A vast majority of scholars have used Date Envelopment Analysis (DEA) to study the performance and activities across the world. However, there is a dissimilarity of choosing the variables being used as outputs or inputs. Chen and Yeh (1998) examined the efficiency of banks in Taiwan. They applied DEA approach and used the variables like portfolio investment, loan services, non-interest income and interest income as the outputs of banks while they used the inputs variables like bank assets, staff employed, operating costs, number of bank branches and deposits. Abreu and Mendes (2002) assessed the determinants of profitability and interest margin for some European countries. They found that banks having a good capital face lower expected bankruptcy costs and this interprets into better profitability. Although with a negative mark in all regressions, the unemployment rate is relevant in explanation of bank's profitability. The inflation rate is also related with it.

3. RESEARCH METHODOLOGY

In this chapter, research methodology used in this thesis has been described in detail, specifically sampling, methods of data collection, data analysis and theoretical framework.

3.1 Population and Sampling

Presently there are 6 DFIs, 41 scheduled banks and 2 MFBs working in Pakistan. Their activities are monitored and supervised through State Bank of Pakistan. The commercial banks consist of 3 privatized banks, 3 nationalized banks, 15 private sector banks, 2 provincial scheduled banks, 14 foreign banks and 4 specialized banks (SBP, 2013)."

The population of this included all the foreign and domestic banks operating in Pakistan i.e. 14 foreign commercial banks and 27 domestic banks. Data was collected from Financial Statement Analysis issued by State Bank of Pakistan for the year 2006-2010 (FSA, 2009). The aggregate data of the population of both foreign and domestic banks was used in this research and no sampling was carried out.

3.2 Extracted Variables

From the analysis of the literature, the following variables have been extracted from the literature – Profitability, Efficiency, Spread Ratio, Net interest margin, Non-interest income to total assets, Net Interest income to total assets, Interest Expense to Interest Income, Return on Assets and Return on equity.

3.3 Methods of Data Collection:

Information is to be collected through proper sources in case of carrying out any research activity. This study employed only a secondary data. The secondary data was collected from the website of State Bank of Pakistan about the financial statements, annual reports and other published and unpublished documents of domestic and foreign bank. This study used bank level panel data on financial statements both balance sheets of domestic and foreign banks and Income statements covering 5 years from 2006 to 2010.

3.4 Data Analysis

All the collected data was analyzed by using descriptive statistics, t-test, Levene's test and correlation. The Study used Ratio analysis to evaluate profitability and Efficiency of foreign and private banks on the basis of Spread Ratio, Net interest margin, Non-interest income to total assets, Net Interest income to total assets, Return on Assets and Return on Equity.

The student's t test was conducted to compare Foreign and Domestic Banks under study sample in terms of ROA and ROE for statistical significance. For statistical tests, computerized statistical package of IBM SPSS Statistics 22 and Microsoft Excel 2007 were used for the analysis of secondary data.

3.4.1 Tools for Data Analysis:
To discover the impact of bank ownership on the banks profitability and efficiency in terms of Spread Ratio, Net interest margin, Non-interest income to total assets, Net Interest income to total assets, Return on Assets and Return on Equity, the researcher used the panel data set comprising of the balance sheet information. Ownership variable has been divided in two categories i.e. domestic and foreign."
Panel data is such a data which diverges on two or more dimensions. It has some benefits and also certain limitations as well. It also gives more control for individual heterogeneity in econometric research studies. It has more information, less co-linearity, more variability, more efficiency and more degrees of freedom.
Panel data can be divided into balanced and unbalanced data sets. We have unbalanced panel data set for this typical course of study because some observations are missing. In this panel data set we have collected the data from 2006-2010 from different domestic and foreign banks.

3.4.2 Descriptive Statistics
Standard deviation, mean and standard error was used to know the general trends of the data from 2006-2010 for the variables which were used this study.

3.4.3 Description and Measurements of Variables
All the variables that have been used in the quantitative research need to be specified to make it clear to the readers what groups are getting the experimental treatment and what outcomes are measured (Creswell, 2009). The profitability of bank is measured usually through return on average assets, return on equity and net interest margin which are described as a function of both internal and external determinants. The internal determinants consist of bank related variables. The external variables express other variables like environmental variables which are expected to affect banks' profitability. In this paper only internal variables have been used to investigate the determinants of both domestic and foreign commercial banks profitability."
This ratio expresses the capacity of earning profit by a bank on its total assets employed in the business. It is calculated as percentage of net profit after tax to total assets. It is useful for whole financial sector" (SBP, 2013). ROA can be calculated as:"

$$\text{ROA}= \frac{\text{Net Profit after Tax}}{\text{Total Assets}} * 100$$

"This is perhaps the most important ratio in comparing the operating performance and efficiency of banks as it showed the returns generated from the assets that bank owns."

Return on Equity (ROE)

$$\text{ROE} = \frac{\text{Net Profit after Tax}}{\text{Total Shareholders' Equity}} 100$$

"Total Shareholders' Equity (Pakistani Banks) = Share capital + Reserves + Un-appropriated Profit (Loss)
Total Shareholders' Equity (Foreign Banks) = H.O Capital Account + Reserves + Unremitted Profit.
This ratio expresses the return on shareholders' equity. ROE is a direct measure of returns to the shareholders. It is calculated as a percentage of the net profit after tax to total shareholders' equity. It is also useful for whole financial sector" (SBP, 2013).
Bank owners are more worried about "how much the bank is earning on their equity investment, an amount that is measured by the return on equity (ROE), the net income per birr of equity capital". This ratio has been used by researchers such as Andreas and Gabrielle (2009), Indranarain (2009), Bourke (1989), Belayneh (2011), Molyneux and Thornton (1992), Guru et al. (1999) and Athanasoglou et al. (2008).

Net Interest Margin (NIM)
This ratio indicates the earning capacity through core banking business by utilizing all assets. Banks normally borrow from savers and lend to investors. It is the ratio between the difference of interest income and interest expense to total assets. It is also useful for banks and DFIs" (SBP, 2013).

$$\text{NIM} = \frac{\text{Total Interest Income} - \text{Total Interest Expense}}{\text{Total Assets}} * 100$$

Spread Ratio
Spread is the gap between interest rate a bank charges on loans and rate pays on deposits. The amount of total

interest earned divided by the total interest paid to depositors as mentioned in the income statement. This ratio is useful for Banks and DFIs" (SBP, 2013).

$$SR = \frac{\text{Interest Earned}}{\text{Interest Expense}} * 100$$

Non-Interest Income to Total Assets

Ratio on incomes earned other than mark-up e.g. capital gains, commission, fee to total assets etc. This ratio expresses how much income is earned other than mark-up through other functions of the bank by employing total assets. It is useful for banks and DFIs (SBP, 2013)

$$\text{Non} - \text{IITA} = \frac{\text{Total Non} - \text{Interest Income}}{\text{Total Assets}} * 100$$

Net Interest Income to Total Assets:

"This is the ratio between interests earned less provision to total assets. It is useful for banks and DFIs" (SBP, 2013)

$$\text{Net} - \text{IITA} = \frac{\text{Net Interest Income after Provision}}{\text{Total Assets}} * 100$$

Dependent variables

Profitability

Bank's profitability is a function of both external and internal factors. Internal factors are bank-specific; whereas external factors are both industry-specific and macroeconomic factors. As per literature we have used six key profitability ratios to measure the banks' profitability.

4. FINDINGS AND DISCUSSION:

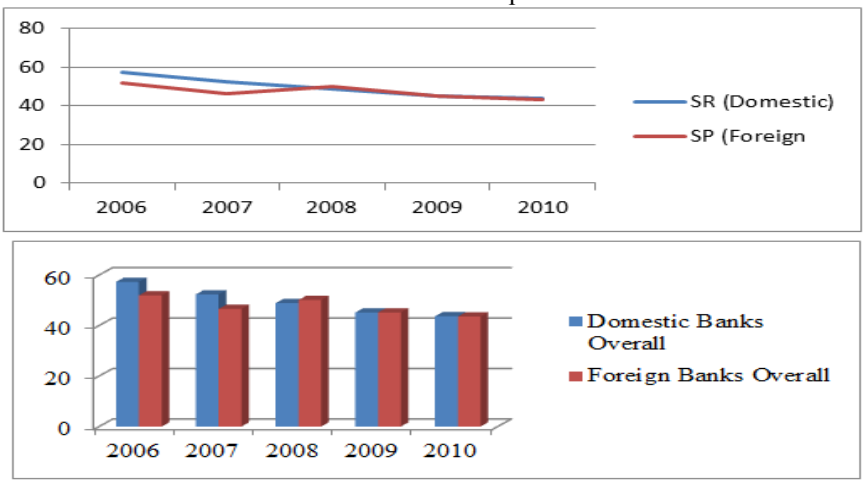
Profitability and efficiency of overall foreign and domestic Banks

4.1 Spread Ratio: (Domestic versus Foreign)

Table 4.2 Actual Ratios of Spread Ratio

	Spread Ratio	
Year	Domestic Banks Overall	Foreign Banks Overall
2006	57.31	51.94
2007	52.34	46.58
2008	48.86	50.10
2009	45.14	45.21
2010	43.66	43.54
Average	49.46	47.47

Chart 1. Trend Line for Spread Ratio



High spread ratio indicates that bank is efficient. It measures the efficiency of banks. Where it is high, banks are said to be efficient and vice-versa. This ratio indicates how much of interest income was earned through markup

transactions.

The table 4.1 shows the spread ratios of domestic and foreign banks operating in Pakistan for a period from 2006 to 2010. The ratio was high in domestic banks compared to foreign banks except in year 2008. The declining trend was observed in the spread ratio of domestic and foreign banks with an average spread ratio of 49.462 and 47.47. It can be concluded that although declining trend was seen in both groups but on the average domestic banks were more efficient and profitable as compared to foreign banks.

Table 4.2 Group statistics for Spread Ratio of Foreign and Domestic Banks

Group Statistics

	BankType	N	Mean	Std. Deviation	Std. Error Mean
Spread Ratio	Domestic	5	49.4620	5.53578	2.47567
	Foreign	5	47.4740	3.47283	1.55310

Table 4.3 Independent Samples t-Test for Spread Ratio

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Spread Ratio	Equal variances assumed	1.096	.326	.680	8	.516	1.98800	2.92251	-4.75133	8.72733
	Equal variances not assumed			.680	6.726	.519	1.98800	2.92251	-4.98008	8.95608

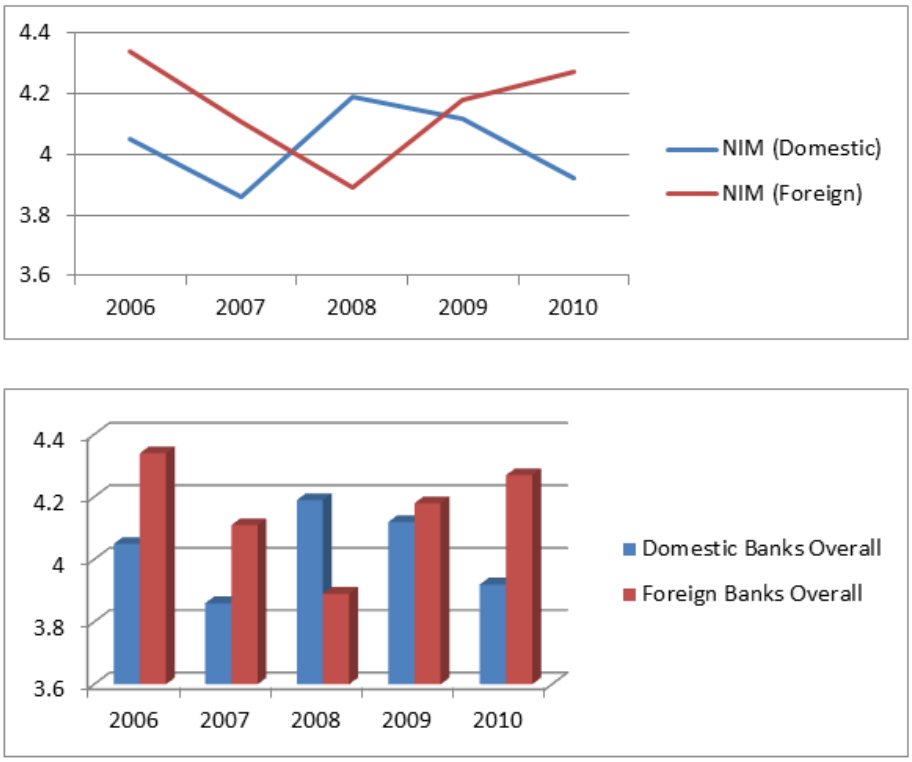
Table 4.2 shows that spread ratio was higher for domestic banks while table 4.3 calculates the Levene's Test for equality of variances and t-test for equality of means. F-test shows that there is no significant difference in the variances of both categories of banks while t-test shows that there is no significant difference in the means of both these banks. However domestic banks were more profitable than foreign banks. Hence hypothesis 1 is rejected.

4.2 Net interest margin

Table 4.4 Actual Ratios of Net Interest Margin

Year	Domestic Banks Overall	Foreign Banks Overall
2006	4.05	4.34
2007	3.86	4.11
2008	4.19	3.89
2009	4.12	4.18
2010	3.92	4.27
Average	4.028	4.158

Chart 2. Trend Line for Net Interest Margin



This ratio specifies the earning capability through core banking business by making use of all assets. Banks usually borrow from depositor and lend to investors. It is also helpful in measuring efficiency of Banks.
The table 4.4 presents the Net markup or interest margin of domestic and foreign banks in Pakistan. The net interest margin of domestic banks was lower than foreign banks in 2006, 2007 2009 and 2010 while higher in year 2008. Foreign banks, on average, were marginally more efficient and profitable than private banks for the period under study.

Table 4.5 Group statistics for Net Interest Margin of Foreign and Domestic Banks

Group Statistics

	BankType	N	Mean	Std. Deviation	Std. Error Mean
Net Interest Margin	Domestic	5	4.0280	.13700	.06127
	Foreign	5	4.1580	.17341	.07755

Table 4.6 Independent Samples t-Test for Net Interest Margin

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Net Interest Margin	Equal variances assumed	.094	.767	-1.315	8	.225	-.13000	.09883	-.35791	.09791
	Equal variances not assumed			-1.315	7.594	.227	-.13000	.09883	-.36005	.10005

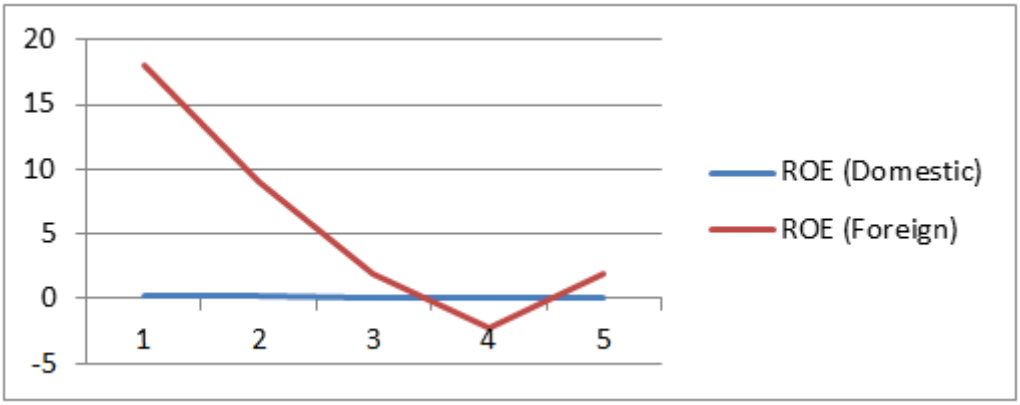
Table 4.5 shows that mean values of NIM. Foreign banks have higher NIM than domestic banks. Table 4.6 shows the Levene's test for homogeneity of variances and t-test for equality of means. It shows that there is no significant difference in the variances of both kinds of banks. Similarly it also shows that there is no significant difference in the means. However mean values of foreign banks are higher than domestic banks which points to

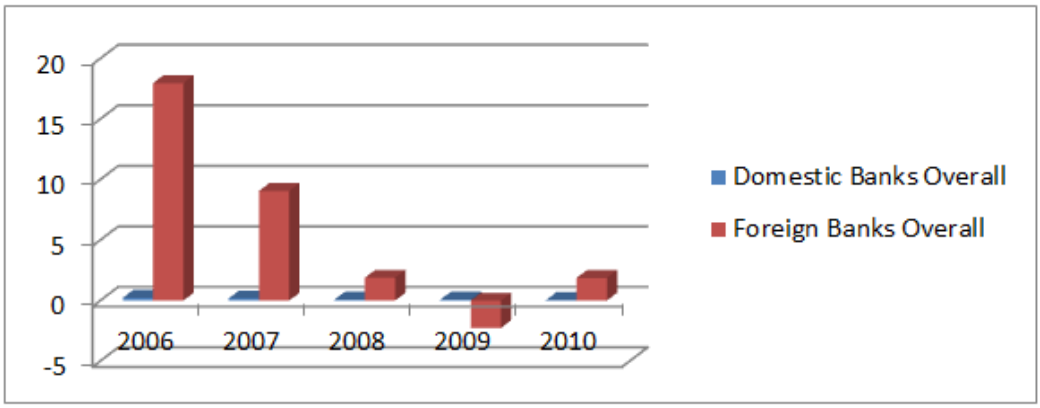
the fact that foreign banks are comparatively profitable than domestic banks in the NIM, hence hypothesis 2 is accepted.

4.3 Return on equity (ROE)

Table 4.7 Actual Ratios of Return on Equity (ROE)

Year	Domestic Banks Overall	Foreign Banks Overall
2006	0.24	17.98
2007	0.18	9.06
2008	0.09	1.89
2009	0.09	-2.26
2010	0.06	1.88
Average	0.132	5.71





This ratio illustrates the ability and efficiency of the banks to produce income per unit investment in equity. ROE is a direct measure of returns to the shareholders. It is calculated as a percentage of the net profit after tax to total Shareholders' equity. The ratio is also useful for whole financial sector.

The table 4.7 demonstrates ROE of private and foreign banks. It is apparent from the table that Foreign banks' ROE were much higher than private banks in all years of the study period except in year 2009 where ROE of foreign banks declined to a negative value of -2.26 indicating loss on unit investment in assets. The mean values of Foreign and domestic banks stood at 5.71 and 0.132 respectively.

Table 4.8 Group statistics for Return on Equity of Foreign and Domestic Banks

Group Statistics

	BankType	N	Mean	Std. Deviation	Std. Error Mean
Return on Equity	Domestic	5	.1320	.07530	.03367
	Foreign	5	5.7100	7.97743	3.56762

Table 4.9 Independent Samples t-Test for Return on Equity

Independent Samples Test

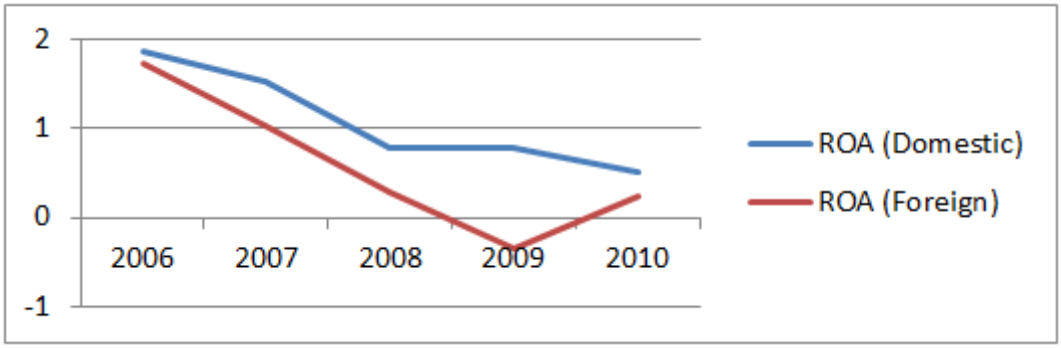
		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Return on Equity	Equal variances assumed	12.889	.007	-1.563	8	.157	-5.57800	3.56777	-13.80530	2.64930
	Equal variances not assumed			-1.563	4.001	.193	-5.57800	3.56777	-15.48303	4.32703

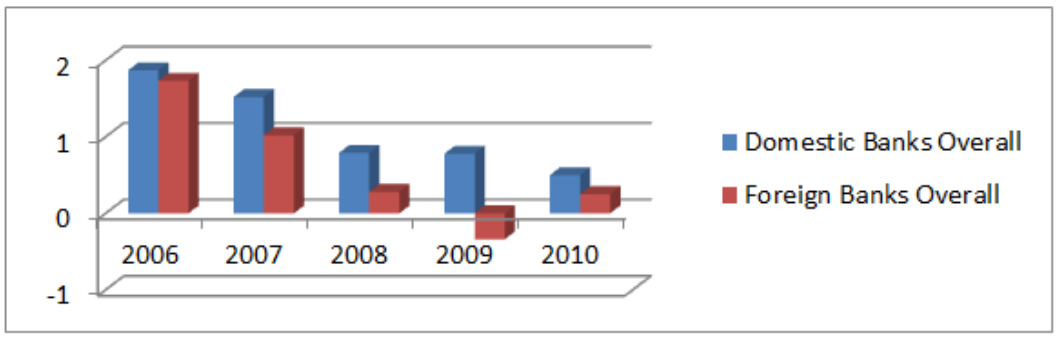
Table 4.8 shows that mean values of ROE. Foreign banks have higher ROE than domestic banks. Table 4.9 shows the Levene's test for homogeneity of variances and t-test for equality of means. It shows that there is significant difference in the variances of both kinds of banks. Similarly it also shows that there is no significant difference in the means. However, mean values of foreign banks are higher than domestic banks which points to the fact that foreign banks are comparatively profitable than domestic banks in the ROE. Hence hypothesis 3 is accepted.

4.4 Return on Assets:

Table 4.10 Actual Ratios of Return on Assets (ROA)

Year	Domestic Banks Overall	Foreign Banks Overall
2006	1.87	1.73
2007	1.52	1.02
2008	0.79	0.28
2009	0.78	-0.34
2010	0.50	0.25
Average	1.092	0.588





This ratio elucidates the ability and efficiency of banks to generate income per unit investment in Assets. The table 4.10 shows ROA of private and foreign banks. It is evident from the table that foreign banks' ROA were lower than private banks in all years of the study period with an average of 0.588 and 1.092 respectively of foreign and private banks.

Table 4.11 Group statistics for Return on Assets of Foreign and Domestic Banks

Group Statistics

	BankType	N	Mean	Std. Deviation	Std. Error Mean
Return on Assets	Domestic	5	1.0920	.57608	.25763
	Foreign	5	.5880	.80017	.35785

Table 4.12 Independent Samples t-Test for Return on Assets

Independent Samples Test

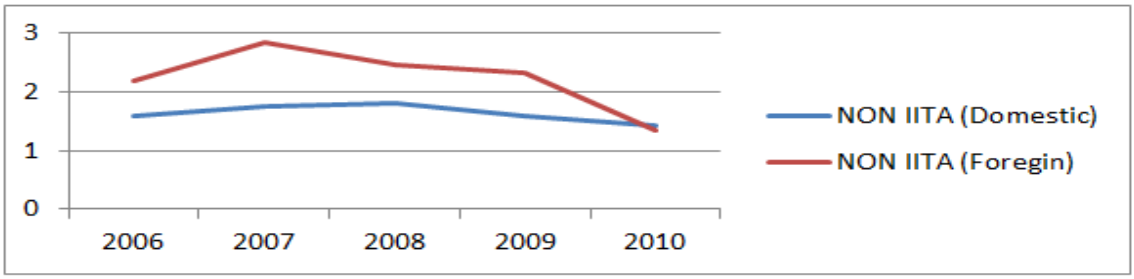
		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Return on Assets	Equal variances assumed	.583	.467	1.143	8	.286	.50400	.44094	-.51281	1.52081
	Equal variances not assumed			1.143	7.268	.289	.50400	.44094	-.53090	1.53890

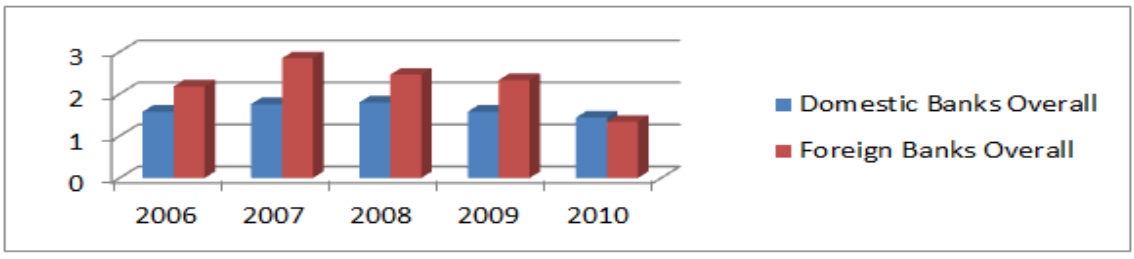
Table 4.11 shows the mean values for ROA. Foreign banks have lower ROA than domestic banks. Table 4.12 shows the Levene's test for homogeneity of variances and t-test for equality of means. It shows that there is no significant difference in the variances of both kinds of banks. Similarly it also shows that there is no significant difference in the means. However, mean values of domestic banks are higher than foreign banks which points to the fact that domestic banks are comparatively profitable than domestic banks in the ROA. Hence hypothesis 4 is rejected.

4.5 Non Interest Income to Total Assets (Non IITA):

Table 4.13 Actual Ratios of Non-Interest Income to Total Assets

Year	Domestic Banks Overall	Foreign Banks Overall
2006	1.58	2.18
2007	1.76	2.85
2008	1.80	2.46
2009	1.58	2.33
2010	1.44	1.34
Average	1.632	2.232





Non-Interest Income is the ratio of total non-interest income to total assets. It measures the ability of a business

to generate income per a Rupee investment in total assets and shows how much income was earned apart from Interest through other operations by employing total assets. The ratio of non-interest income to total assets of foreign banks was higher in all years (Table 4.13) under study except in 2010 where it was same for both types of banks. The average ratio for the study period was 2.232 and 1.632 for foreign and domestic banks respectively.

Table 4.14 Group statistics for Non-IITA of Foreign and Domestic Banks

Group Statistics

	BankType	N	Mean	Std. Deviation	Std. Error Mean
Non Interest Income on Total Assets	Domestic	5	1.6320	.14738	.06591
	Foreign	5	2.2320	.55720	.24919

Table 4.15 Independent Samples t-Test for Non-IITA

Independent Samples Test

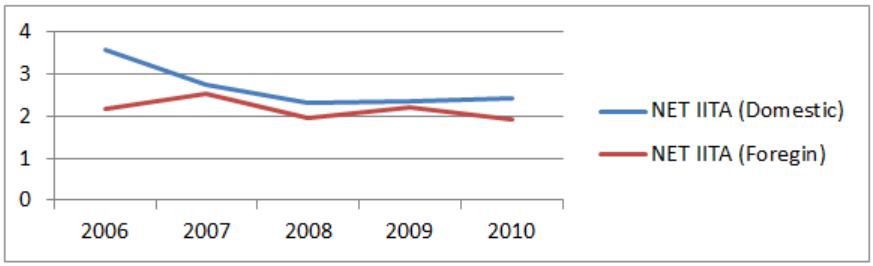
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Non Interest Income on Total Assets	Equal variances assumed	2.462	.155	-2.328	8	.048	-.60000	.25776	-1.19439	-.00561
	Equal variances not assumed			-2.328	4.557	.072	-.60000	.25776	-1.28244	.08244

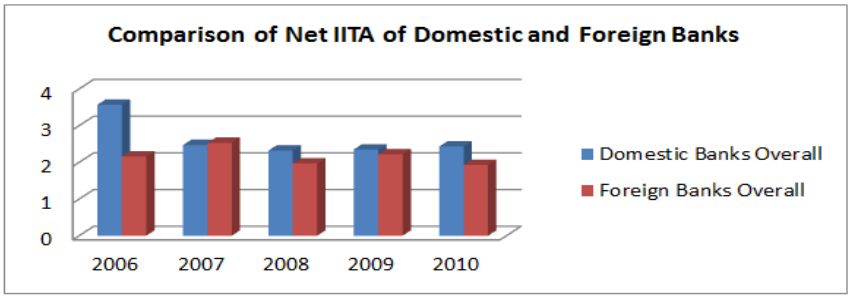
Table 4.14 shows the mean values for Non-IITA. Foreign banks have higher Non-IITA than domestic banks. Table 4.15 shows the Levene's test for homogeneity of variances and t-test for equality of means. It shows that there is no significant difference in the variances of both kinds of banks. Similarly it also shows that there is significant difference in the means which points to the fact that foreign banks are comparatively profitable than domestic banks in the Non-IITA. Hence hypothesis 5 is rejected.

4.6 Net Interest income (after prov.) to total assets (Net-IITA)

Table 4.16 Actual Ratios of Net-Interest Income after provisions to Total Assets

Year	Domestic Banks Overall	Foreign Banks Overall
2006	3.57	2.16
2007	2.47	2.53
2008	2.32	1.97
2009	2.35	2.22
2010	2.43	1.93
Average	2.92	2.16





This ratio measures the efficiency of a business to earn net interest income after provision through investment/ use of total assets. The table 4.16 above indicates that on average the domestic banks were more efficient and profitable than foreign banks in utilizing assets to generate more revenue/ Income net of all expenses and allocations or provisions. A Variable trend was also seen in both groups of banks over the years under study.
The net interest income (NII) (difference between interest incomes and interest expenses) as a ratio to total assets is observed to be higher for domestic banks than the foreign bank groups, though the interest income as a per cent of total income was witnessing a declining trend in case of them. The higher Net-IITA for domestic banks indicated that either they were able to access sufficiently low cost funds or were able to deploy funds with higher returns or both.

Table 4.17 Group statistics for Net-IITA of Foreign and Domestic Banks

Group Statistics

	BankType	N	Mean	Std. Deviation	Std. Error Mean
Net Interest Income on Total Assets	Domestic	5	2.6820	.52361	.23417
	Foreign	5	2.1620	.23952	.10712

Table 4.18 Independent Samples t-Test for Net-IITA

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Net Interest Income on Total Assets	Equal variances assumed	1.861	.210	2.019	8	.078	.52000	.25750	-.07380	1.11380
	Equal variances not assumed			2.019	5.604	.093	.52000	.25750	-.12105	1.16105

Table 4.17 shows the mean values for Net-IITA. Domestic banks have higher Net-IITA than foreign banks. Table 4.18 shows the Levene's test for homogeneity of variances and t-test for equality of means. It shows that there is no significant difference in the variances of both kinds of banks. Similarly it also shows that there is no significant difference in the means. However, mean values of domestic banks are higher than foreign banks which points to the fact that domestic banks are comparatively profitable than foreign banks in the Net-IITA. Hence hypothesis 6 is rejected.

5. DISCUSSION AND CONCLUSION

It is an acknowledged fact that banks are becoming global increasingly due to economic integration and financial liberalization. This phenomenon has engaged the researchers worldwide to measure the efficiency and profitability of domestic and foreign banks in recent years. It is usually supposed in Pakistan that foreign banks are performing better than local banks. So a need arose to compare the profitability and efficiency of domestic and foreign banks operating in Pakistan. For this research we have used some factors which are considered useful for the profitability of banks i.e. spread ration, net interest margin, return on equity, return on assets, Non-interest income to total assets and net interest income to total assets."

5.1 Spread Ratio

This research has compared the spread ratio of foreign and domestic banks and found the average spread ratio of domestic banks to be higher than foreign banks for the period from 2006-2010. So we can easily conclude that domestic banks are more profitable and efficient than foreign banks in this category. However, the trend for both the banks ending 2010 is downward which means that both types of banks are doing poor in this area. We also conducted t-test for equality of means and found that although the average spread ratio of domestic banks is higher but found no significant difference between these two banks.

In view of the complexity of estimation due to multiplicity of interest rates of both what banks charge on advances and pay on deposits, spread is defined here simply as the difference between the ratio of interest earned to total assets and the ratio of interest expended to total assets. This, in fact, is the formula used by the State Bank of Pakistan (SBP) in estimating a bank's spread ratio. By definition, higher the spread the greater is the bank's efficiency and vice versa.

An FSA (2009) of scheduled commercial banks, both domestic and foreign, finds that their average spread ratio has declined from 57.31% in 2006 to 43.66% for domestic banks and from 51.94% in 2006 to

43.54% in 2010 during the five years.
The fall in interest rate affected both interest earnings and interest expenditure of the banks, but its impact was higher on the earning side. The domestic banks have done better. Admitted, their average spread too has declined during the period, but still they are more efficient and profitable in interest rate spread."

5.2 Net Interest Margin
The net Interest margin can be expressed as a performance metric that examines the success of a firm's investment decisions as contrasted to its debt situations. A negative Net Interest Margin indicates that the firm was unable to make an optimal decision, as interest expenses were higher than the amount of returns produced by investments. Thus, in calculating the Net Interest Margin, financial stability is a constant concern."
The use of net interest margin is helpful in tracking the profitability of a bank's investing and lending activities over a specific course of time. Besides, a period end balance sheet, average balance sheet published by the banks indicating the breakdown of bank's loans, deposits, investments, and borrowed funds, and their related interest rates provides more insight to investors seeking for more info on the fluctuation of Net Interest Margin."

5.3 Return on Equity
Return on equity is an important measure of the profitability of a company. Higher values are generally favorable meaning that the company is efficient in generating income on new investment. Investors should compare the ROE of different companies and also check the trend in ROE over time. However, relying solely on ROE for investment decisions is not safe. It can be artificially influenced by the management, for example, when debt financing is used to reduce share capital there will be an increase in ROE even if income remains constant. Return on equity helps gauge how efficient a company is at generating profits. Banks with consistently high returns on equity typically have some type of competitive advantage."

5.4 Return on Assets
It has been discovered that domestic banks have higher return on assets than foreign banks which shows that domestic banks are more profitable than foreign banks in this domain. The findings of this research are different from Dogan (2013), who found foreign banks to be performing well with regard to "Return on Assets". Similarly levene's test for homogeneity of variance shows that there is no significant difference in the variances. Both have similar variances. While t-test for equality of means shows that there was no significant difference between the means of these two categories of banks.

5.5 Non Interest Income to Total Assets (Non IITA)
This research has also found that Non-IITA was higher in the case of foreign banks which show that foreign banks are more profitable. T-test was also performed to test for the equality of means. We have also found that there is slightly significant difference in both these banks in respect of Non-IITA. It has also confirmed that foreign banks are more profitable than domestic banks.

The interpretation of this ratio is subject to some controversy. Some analysts view a high number as well, since it shows that the bank is not dependent on its lending activities to generate a profit. However others take the opposite view and view a high number as indicating that the bank is dependent on unstable revenues that are not predictable for its profitability. Increases in non-interest income generate growth in both the ROA and its variability, indicating that the increased profitability is also associated with increased riskiness. As a consequence, continued increases in non-interest income generation should be associated with continued close monitoring of risk indicators.

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