The Impact of Advertising on the Profitability of Public &Private Sector Commercial Banks

Samina Riaz   Muhammad Furqan   Sohaib Sohail Siddique

Institute of Business Management, Pakistan

Abstract

The purpose of this study is to investigate the impact of advertising on the profitability of commercial banks over the period of 2008- 2012, in the presence of control variables: Credit risk, Operating Efficiency, total advances to total deposits, total loans to total assets and Size(total assets) ratio. Bank's profitability is measured in terms of return on equity (ROE) .The data has been obtained from the publications of State Bank of Pakistan (SBP) and commercial banks. The regression results confirm the positive and significant effects of advertising expenditure on ROE for private sector banks than public sector banks.

Keywords: ROE, ROA, Advertising, Credit Risk, Operating Efficiency, Bank Deposits & Advances

JEL- Classification: G-21

I. Introduction

The financial industry plays an important role in the growth of any developing or developed economy. Recent empirical studies clearly indicate that banks play an important role in the circulation of money.

The history of Pakistan is no different; country has seen massive improvement in the banking infrastructure and is expanding continuously. All banks work under State Bank of Pakistan, whose prime responsibility is to control money supply in the country. Banks in Pakistan offer multi dimensional services ,which includes checking and savings accounts, loan schemes such as home loan, car loan and student loan, phone banking, corporate banking, Islamic banking and many other services.

A lot of changes have occurred in Pakistani banking sector since 1947. State bank of Pakistan Act 1956 encouraged the private sector to establish the financial institutions. In June 1974 all Pakistani banks were nationalized by the government but privatization in 1992 attracted the local and foreign investors to set up banks in Pakistan. Banking sector of Pakistan is the blend of Public, Private, specialized, Islamic and foreign banks. By 2012 there were 38 listed banks in Pakistan, comprises   5 public banks, 22 private banks, 7 foreign banks and 4 specialized banks. Total assets of banking sector at the end of 2012 were Rs 8295 billion. This means 15% growth as compare to 2010. Total liabilities of overall banking industry was at the end of 2011 RS 7486 billion which were Rs 6490 billion in 2010 so it also showed 15% growth. Total deposits increased form Rs 5.5 trillion to Rs 6.3 trillion in 2011 that indicate 14.7% growth rate. Growth rate of total advances was 1% in 2011.At the end of 2011 profit after tax showed a growth of 58.3%.

The history of banking in Pakistan shows that banking sector has introduced various new products to attract masses. Empirical studies show that Advertising activities are carried out in order to change the mindset of the clients and educate them towards a certain brand or service. These measures necessarily look at the short term effects of the advertising thus having the customer memory structure as the focal point rather than sales (Romaniuk and Nicholls, 2005). As Keller pointed out that the effective advertising results in building, changing or strengthening the customer's attitude towards a certain service or brand (Keller, 2003). Advertising would be most effective if it is designed keeping in mind the cultural and individual values of the customers thus would help more in changing the customer's behaviors and induce repurchase intentions through customer satisfaction (Amitava and Sonali, 2007). Hofstede (2001) studied the Asian culture as the collectivist so in such countries advertisements and specially words of mouth advertisements are more significant for the banks. File and Prince (1992) revealed that the satisfied customers share their experiences and promotes the brand by word of mouth. Jaffe (1994) considered the advertising as a mighty effective tool that can affect the frozen image of the customer regarding the product and creates brand awareness.

Recently banks are facing an air of competition in the environment. More and more banks are entering in developing market to increase their customer base. Countries where banks are making profit can successfully manage the financial distress and make a better contribution in the consistency of financial system. Therefore it is useful to investigate the effect of advertising on the profitability of banks. Banks use saving to make them productive by applying investment techniques. If a financial system of any economy is productive then it gives progress to the profit, attract more savings from customer and provide the better quality services to the public.

1. Problem Statement

Banking is a rapidly growing industry. Every bank is trying to enhance overall performance and profits to occupy a better position in financial system. Banks spend very minimum portion of their income on the advertisement so it is important to know the impact of advertisement on the profitability in Pakistan over the period 2008-2012.

II. Literature Review

As individuals are exposed to 3000 advertisements per day, advertising practitioners use various tactics to cut through the cluttered advertising scenario of modern world (Kotler and Keller, 2005). Many reputed academicians and researchers supported this notion and argued that advertising plays and an integral part in capturing viewer's attention and not only that, it also inhibits positive buying behavior and consumer response (Cambell, 1995; Mitchell, 1981). But on the contrary, writers of conflicting school of thought believe that advertising intentionally or unintentionally attacks the consumer's autonomy (Shimp, 2003).

Advertising specialists use a range of publicity instruments in order to get into the mind set of target audience. The use of advertising as an attention seeking tactic is not new but scientists have argued that due to the advanced technology the use of advertising by financial institutions is increasing day by day (Callcott and Lee, 1994). Even then the concept of bank advertising seems to ignite primitive hostility in certain ranks. Despite of its immense popularity among marketers and advertisers empirical studies provide some mixed results in support of practical usage. Critics of the usage of advertising by banking institutions argued that evaluation of the advertising effectiveness is limited to the general usage and no proper methodological instruments have been used to analyze the effectiveness of bank's advertising and its impact on Bank's profitability (Dennis and Anna, 2012).

This dichotomy between methodological orientations and pragmatic usage makes advertising a very complex topic to deal with. To cater these complexities scientists have now begun to focus on tools that would clarify the content and nature of bank tools for evaluation of advertising effectiveness and its relationship with Bank's profitability (Drossos et al, 2010) . In correspondence to that recently scientists have also started building theories to illustrate that how different elements of advertising affect the consumer's likelihood of choosing a certain bank which is advertising instead of the bank which is more conservative in approach towards advertising.

In their 2010 study, Hong and John looked at a range of banks in Japan with varying ownership structures in order to study the factors affecting profitability between 2000 and 2007 and determined that capital adequacy ratio does relate positively to profitability. Conversely, they found that the capital adequacy ratio has a negative correlation with the Net interest margin (NIM). In a similar study examining the effects of specific factors related to Tunisian commercial banks Samy and Mahammad (2008) also studied the macroeconomic indicators for profitability and the impact of the financial structure on the profitability of the banking sector in Tunisia between 1980 and 2000. Their findings confirm that the capital adequacy ratio is a positive indicator of profitability and that size has a negative impact on profitability. They find that macroeconomic indicators have no effect on Tunisian banks' profitability. The Chinese banks' internal structures and macroeconomic indicators were studied by Fadzlan and Muzaffar (2009) to discover their influence on profitability during the period 2000-2005. This study involved joint stock commercial banks, state-owned banks, as well as city commercial banks and concluded that in state-owned banks, there is a positive correlation between liquidity and profitability and capitalization and credit risk also have a positive impact on profitability. The findings also reveal that there is a negative effect of cost on profitability in commercial banks of joint stock. However, Fadzlan and Muzaffar studied that there is a negative impact of both size and costs in commercial city banks. The effect of diversification on profitability was found positive. Moreover, in China the impact of economic growth is positive and there is a negative correlation between the growth of money supply and profitability of both state-owned and city commercial banks. Deger and Adem's (2011) studied the impact of bank specific and macroeconomic indicators on profitability of ten commercial banks, listed in the Istanbul stock exchange Turkey between 2002 and 2010. The findings revealed that the size of assets has a positive effect on non-interest income. However, the size and the credit portfolio has a negative impact on profitability and the real interest rate was shown to have a positive effect on the profitability of Turkish banks. Donald et al. (2010) examined the impact of advertising and promotion on firms' profits and market share using profit function. Authors reported significant evidence of increasing returns on sale due to higher marketing expenditure. Researchers have argued that advertising strategies for increasing profits are effective and less risky when demand is growing (Hall, 2012). Other studies have maintained that consumers become more price conscious when the demand for a product or service is growing and advertising strategies become less viable (Doyle, 1968).

Some marketing pundits define advertising by banks as a tool to reduce the perceived risks and not only that they argued that advertising helps financial institutions especially banks to build a rapport with the clients and enhance bank's image (Rust et al, 1996; Fugate, 1998). Research done in the field mentioned the fact that retail banking can be a two edge sword, if not carefully handled can damaged bank's image and in turn bank's profitability. To support the point scientists argued that bank's image and its profitability goes hand by hand. Although the clarify the notions that advertising should not be considered as the sole image enhancing tool by the banks but it is one of the most potent armor in any bank's arsenal (Worcestor, 1997; Yen and Su, 2004). Hence it is quite imperative for academics to compare various financial institutions and efforts should be made to figure out the differences in performances of those banks (Dennis and Anna, 2012).

In their 2011 study, Dennis and Taisier investigated 10 Middle Eastern and North African countries between 2000 and 2008 and made a comparison between accounting profitability measures and economic determinants. The former represents return on assets and return on equity, whereas the latter are related to the

efficiency of cost and profit. They found that the size of the bank has a positive effect on its profitability accounting measures. There was a high profitability in those MENA banks studied and little negative correlation between the cost and profit efficiency, despite being smaller. The larger the bank is, the greater the increase in efficiency of cost and profit. Furthermore, cost efficiency was found to have a negative effect on profitability. This is peculiar to those Middle Eastern and North African banks, which are not found to be as efficient as their European counterparts in cost efficiency terms, although they are similar to those in developing countries.

The profitability of Thai banks between 1999 and 2005 (post-financial Asian crisis) was studied by Fadzlan (2010), who examined the effects on profitability of both the internal factors as well as the macroeconomic indicators. Having conducted a regression analysis, Fadzlan found that there was a positive correlation between both size and capitalization and profitability; however, overhead costs, non-interest income and credit risk were all found to have a negative impact on profitability. Although credit risk was found to have a negative effect on return on assets, it conversely showed a positive effect on return on equity. Inflation in Thai banks is positively affected by greater economic growth; nevertheless, profitability is negatively affected by GDP.

III. Model Specification and Methodology
1 Data
At present, there are 34 commercial banks operating in Pakistan excluding microfinance and specialized banks and DFIs. However, the sample of this study consists of 21 banks which are operating for over 10 years, representing private, public, foreign and Islamic banks. The data which are analyzed in this study were obtained from the various publications of State Bank of Paksitan www.sbp.gov.pk . The data set includes yearly data of 5 years (from 2008 to 2012) for 21 banks on return on equity, credit risk, operational efficiency, TA/TD ,TL/ TA, TA and advertising expenditure

2. Hypotheses
The study proposes the under mentioned hypothesis:
H1: There is a significant impact of Advertising on ROE.
H2:   There is a significant impact of Advertising on ROE of Private sector banks than Public sector banks.

3 Explanation of the Variables
For the empirical analysis the following variables have been included. Dependent variable i..e bank's profitability was measured in terms of return on equity (ROE) .Advertising expenditure served as an independent variable along with five control variables including; operating efficiency, credit risk, total advances to total deposits,total loans to total assets and total assets ratio. (Panayiotis , Sophocles & Matthaios, 2008; Fadzlan & Habibullah,2009; Timothy & Robin,2009; Deger & Adem ,2011;Andreas & Gabrielle ,2011) used ROE as dependent variable in their study.

4. Dependent Variables
Return on equity (ROE): ROE is calculated as net profit divided by stockholders' equity. It displays the rate of return which bank management gets by investing the money of stockholder in productive projects. This ratio also shows the risk of banks for capitalizing its assets how much relying on the funds of shareholders.

5. Independent variables
Advertising (ADV): It is calculated as advertising expense to earnings before taxes. These pre-tax earnings are a useful indicator for analysts, enabling them to evaluate the operating performance of a business without having to calculate the ramifications of any taxes.

6. Control Variable
Credit Risk (CR): CR is calculated as total loss provision divided by total loans. Theory suggests that increase in credit risk is associated with the decrease in profitability.

Total advances to total deposits (TA/TD) : Inward flow of money i.e. deposits are vital source for banks funding. Increase in the deposits transformation into loans also increases the interest margin and profit.

Operating efficiency (OE): It is calculated as total operating expenses divided by net interest income.

Total loan to total assets (TL/TA)
It measures the source of income for banks.

Size (Asset size TA)
Log of Total assets of the banks are used to represent the bank size.

7. Empirical Model
This study used the fixed effect and random effect model. The following models have been constructed:

$$ROE_{it}=\beta_{1ADVit}+\beta_2CR_{it}+\beta_3OE_{it}+\beta_4TA/TD_{it}+\beta_{5TL/TAit} + \beta6TA_{it} +\alpha i +\varepsilon_{it}$$

Where,
ROE represent the Return on Equity
ADV represents the advertising exp to earnings before taxes ratio
CR represents the Capital Ratio
OE: Operating efficiency (total operating expenses to net interest income

TA/TD represents the Advances to Deposit Ratio
TL/TA: represents total loans to total assets)
TA: represents total assets
ε_{it} represent the error term
α : is the unobserved time-invariant individual effect
β represents the intercept
i= a specific bank
t= 1, 2, 3 …5 (years)

IV.   Empirical Analysis

There are a large number of empirical studies that have attempted to estimate the duration and cost of advertising on sales and/or profitability, with a wide range of differing results depending on the data sets and the econometric models used. Most of these studies analyze advertising effects on the sales of consumer non-durables, rather than consumer durables or business products (Donald et al. 2010; Hall, 2012; Preston, 2013). Preston (2013) examined the relationship between profitability and advertising in the United States' clothing retail industry and reported positive results. Another consumer durable industry that has been the focus of advertising duration research is the automobile industry. In a study of the automobile industry, Lambin (1976) finds advertising has long lived effects for a number of consumer non-durable products, although these results vary substantially by product category. Lambin also finds that other marketing and promotional activities in addition to advertising have a significant and long-lasting impact on sales.

Effect of Advertising expenditure on banks' profitability has received little attention. The ability to earn higher returns on deposits encourages increased advertising efforts to attract deposits. This study includes credit risk, operating efficiency (OE), total advances to total deposit (TA/TD), total ,loans to total assets and total assets as control variables which are included in the equation along with advertising expenditure. The expected sign of the advertising expenditure is not clearcut. There are a large number of empirical studies that have attempted to estimate the effect of advertising on sales and or/profitability, with a wide range of differing results depending on the data sets and the econometric models used. In this study it is hypothesized that advertising expenditure will exert positive impact on return on equity and assets.

Public & Private Sector Banks.

In panel data analysis, the role of the omitted variables can be treated either as a fixed constant over time for each bank or an individual specific effect like a random variable (Menard, 2007). However it is not easy to decide what would be the most appropriate treatment of error terms necessary to explain the differences in behavior of banks (Menard, 2007). In this study, researcher estimated models to assess individual effects both as fixed and random to banks.

The analyses of parametric differences are carried out by testing for random and fixed effects. Both Models are used to study the effect of advertising expenditure on profitability. In the fixed effect or least square dummy variable model, individual effect is considered as a fixed but unknown constant differing among banks. In an alternative specification known as the random effects, individual effect is drawn from normal distribution and is not correlated both with the error term and with the explanatory variables.

Hausman specification test was performed to determine the presence of parametric differences (Menard, 2007). Furthermore, the model was corrected for heteroskedasticity and serial correlation by using the robust standard error estimates and ROE random effect linear panel model were estimated.

The Hausman's chi-squared statistics for ROE models (chi2(6)= 17.04, which is significant at 1% significance level, shows the presence of random effects as oppose to fixed . To remove and correct for serial correlation and heteroskedasticity, the robust standard error estimates for the model were estimated.

The coefficient reported in the table indicates that advertising expense (b =.373, se=0.181) is significantly and positively associated with return on equity after controlling other effects. The size of coefficient suggests that unit increase in advertising expenditure is associated with a 0.373 unit increase in return on equity(see appendix table 1).

Private Sector

The Hausman's chi-squared statistics for ROE models (chi2(6)= -93.35, which is negative, shows the presence of fixed effect. To remove and correct for serial correlation and heteroskedasticity, the robust standard error estimates for the model were estimated.

The coefficient reported in the table indicate that advertising expense (b =.708, se=0.352) is significantly and positively associated with return on equity after controlling for other effects. The size of coefficient suggests that unit increase in advertising expenditure is associated with a 0.70 unit increase in return on equity see appendix table 2.

Public Sector

The Hausman's chi-squared statistics for ROE models (chi2(6)= 0.9983 is insignificant as illustrated by its p-value

i.e. 0.9983 >0.05. These results suggest the presence of fixed effect as oppose to random. The robust standard error estimates for the model were estimated to remove any serial correlation and heteroskedasticity present in the model.

The coefficient reported in the table and the overall F-statistics indicate that there is no significant effect of advertising expense on return on equity for Public Sector Banks see appendix table 3. Although these results suggest no relationship between advertising and ROE for public sector banks but the sample used was too small to explore such relationship. There are only 6 banks listed in the Public sector. Therefore small sample size might have hindered the desired outcome for this study.

V. Conclusion & Recommendation

This study tested the effect of advertising on banks profitability, controlling for the effects of operational efficiency, credit risk, total assets to total deposits, total loans to total assets and total assets. The results were consistent with previous studies. Furthermore advertising has also positive and significant impact on the profitability of private sector banks but it has no significant effect on ROE of public sector banks it might be due to small sample of public sector banks. This paper further suggests that bank managers may apply latest techniques of brand image, brand awareness and advertisements to gain competitive edge and satisfy their customers. Undoubtedly, role of marketing is viewed as extremely vital to be successful in the financial services industry, especially the banking industry where a number of similar options of products and services are available to the customers and they make the final decision based on primarily intangibles. Keller (2003) studied the brand as an essential feature that can make it feasible for the consumers to pick and choose any given financial institution's products or services and may easily be able to distinguish them from those presented by the competitors. In order to reveal more useful information, recommendations for further study include increasing the time-frame for the research and incorporating a wider range of economic factors. The inclusion of a greater number of banks or a greater geographical spread of banks around the world would also extend the findings of this study. A wider range of economic factors – for example, taxation, exchange rates – could be included in future studies. It would also be interesting to make a comparison between Islamic banking and western banking conventions. Future research could also be done on the determinants of the Pakistani foreign and domestic banking systems.

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Appendix

Table 1

Robust Fixed Effect Linear Model

. . xtreg   ROE CR OE TATD TLTA ADV TA, fe robust

Fixed-effects (within) regression	Number of obs =	105
Group variable: panel	Number of groups =	21
R-sq: within = 0.7032	Obs per group: min =	5
between = 0.3894	avg =	5.0
overall = 0.4770	max =	5
	F(6,20) =	100.31
corr(u_i, Xb) = -0.5903	Prob > F =	0.0000

(Std. Err. adjusted for 21 clusters in panel)

ROE	Robust		t	P>|t|	[95% Conf. Interval]	
	Coef.	Std Err				
CR(Credit Risk)	-1.740273	.7993383	-2.18	0.042	-3.407663	-.0728825
OE(Operating Efficiency)	-.0157725	.0022215	-7.10	0.000	-.0204064	-.0111386
TATD (Advance to Deposit Ratio)	.8470669	.486373	1.74	.097	-.1674894	1.861623
TLTA(Total Loans to Total Assets)	.943215	.9914004	.95	0.353	-1.12481	3.01124
Adv(Advertising to Earning before taxes)	.3733976	.1815421	2.06	0.053	-.0052926	.7520878
TA(Total Assets)	.1902525	.124564	1.53	0.142	-.0695835	.4500884
_cons	-4.831124	2.417319	-2.00	0.059	-9.873564	.2113158

Sigma_u   .35555323

Sigma_e   .21606579

rho   .73030766(fraction of variance due to u_i)

Table 2
Private Sector:
Robust Fixed Effect Linear Model

. xtreg ROE CR OE TATD TLTA ADV TA , fe robust
Fixed-effects (within) regression   Number of obs   =   85
Group variable: panel   Number of groups =   17
R-sq: within = 0.6960   Obs per group: min =   5
    between = 0.4874   avg =   5.0
    overall = 0.6031   max =   5
                              F(6,16)   = 18962.84
corr(u_i, Xb) = -0.0554   Prob > F   =   0.0000
                    (Std. Err. adjusted for 17 clusters in panel)

ROE	Coef.	Std Err	t	P>|t|	[95% Conf. Interval]	
CR(Credit Risk)	-.9828496	.7019703	-1.49	0.181	-2.47096	.505261
OE(Operating Efficiency)	-.0177242	.0031022	-5.71	0.000	-.0243004	-.0111479
TATD (Advance to Deposit Ratio)	1.140017	.4413581	2.58	.0020	.2043794	2.075654
TLTA(Total Loans to Total Assets)	-1.092078	.3406274	-3.21	0.006	-1.814176	-.3699799
Adv(Advertising to Earning before taxes)	.7080788	.352257	2.01	0.062	-.0386727	1.45483
TA(Total Assets)	.0188272	.0558578	0.34	0.740	-.0995859	.1372404
_cons	-.183418	1.099123	-0.17	0.870	-2.513456	2.14662

Sigma_u.17065557
Sigma_e.16773751
rho   .50862265(fraction of variance due to u_i)

Table 3
Public Sector:
Robust Fixed Effect Linear Model

Fixed-effects (within) regression   Number of obs   =   20
Group variable: panel   Number of groups =   4
R-sq: within = 0.9602   Obs per group: min =   5
   between = 0.9735   avg =   5.0
   overall = 0.9648   max =   5
                      F(3,3)   =   .
corr(u_i, Xb) = 0.2569   Prob > F   =   .
(Std. Err. adjusted for 4 clusters in panel)

ROE	Coef.	Std Err	t	P>|t|	[95% Conf. Interval]	
CR(Credit Risk)	-.6909143	1.998025	-0.35	0.752	-7.049521	5.667693
OE(Operating Efficiency)	-.9868419	.6752876	-1.46	0.240	-3.135909	1.162225
TATD (Advance to Deposit Ratio)	.7531324	1.41768	0.53	.632	-3.758559	5.264824
TLTA(Total Loans to Total Assets)	.2194181	.5636914	0.39	0.723	-1.5745	2.013336
Adv(Advertising to Earning before taxes)	10.79601	32.0068	0.34	0.758	-91.06392	112.6559
TA(Total Assets)	-.0451675	.165508	-0.27	0.803	-.5718879	.4815529
_cons	.7572146	4.930151	0.15	0.888	-14.93273	16.44716

Sigma_u .10499486
Sigma_e .16127204
rho   .29768161 (fraction of variance due to u_i)