

The Intellectual Capital Performance of Banking Sector in Pakistan

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Abstract

Efficiency in using of resources plays an important role in determining the strength of the organization. Efficiency measured purely on financial variables does not give the true picture especially in sectors which are intellectual capital intensive. The present paper is an attempt to measure the performance of banks in Pakistan on a new dimension of intellectual capital. This paper estimates the value added intellectual capital (VAIC) of the banks in Pakistan for a 2 year period. The study concludes that the private sector banks were doing much better than all other banks in Pakistan on intellectual capital efficiency levels. The good performance is attributed to efficient usage and management of human resources.

Keywords: human capital, structural capital, banking sector, Pakistan.

1. Introduction

The role of financial and physical assets owned by a firm is losing its importance in an economy which is dominated by service sector. Intangible assets that create value for the firm are quickly gaining importance. The share of intangibles as a proportion of the total assets also is showing tremendous increase in the recent years. As a result every organization now finds logic in measuring, valuing and reporting its intangibles, as they also have become one of the important performance indicators and a strategy to gain competitive advantage.

The present accounting system does not support the measurement and reporting of intellectual capital in most developing countries. Therefore there is an immediate need to develop a new accounting standard that takes into account the growing importance of Intellectual capital. These changes are more compelling in some sectors with specific reference to service sectors like banks and financial institutions, Hotels, Tourism sector, Information and Technology Industry, Education etc, where the role of Human capital is much more evident among the other components of intellectual capital.

Efficiency in using of resources plays an important role in determining the strength of the organization. An organization may be small or big, what is more important is whether it is using its limited resources in a proper manner so as to increase the long-term sustainability in a competitive market. Increase in the value is the major objective of most commercial firms; banks are no exception to this. Measuring the increase in value also becomes challenging when the value itself is being created by intangibles.

The present paper is an attempt to measure the performance of banks in Pakistan on a fresh parameter of intellectual capital. This paper estimates the value added intellectual capital of the banks in Pakistan for a 2 year period.

2. Meaning and Classification of Intellectual Capital

Intellectual Capital (IC) can be broadly called as any creation of human mind, which derives some value to the organization. Generally intellectual capital is classified into Human capital, structural capital and customer capital (Sveiby, 1989)

Human Capital includes all the aspects related to the employees in the organization, their training, development, their contribution to the organizational development and also value creation, generation and sustenance. Thus, just by having a large work force with good qualification and experience does not amount to being efficient, Value creation Efficiency depends mainly depends on the contribution of these employees towards value creation of the organization(Edvinsson, 1997).

The Structural Capital refers to the organizational structure, its vision, mission, infrastructure, Intellectual property that the firm owns and the like.

Whereas, Customer or Relational Capital is all about the contribution of the clientele towards the organizational growth- the amount of revenue generated through large customers, their commitment levels measured thru repeat business, networking and the like is included in this classification.

Though there are vast differences and varied opinion among researchers and pioneers in the area of intellectual capital about the items that should be included in each and the measurement tools that can be used by the firms to report these, there is a general consensus on the broad classification of Intellectual capital.

3. Literature review: measuring banking sector performance through VAIC

Very few research papers in recent times have aimed at the measurement of IC with specific reference to the Banking sector. A pioneering and exhaustive research by Ante discusses the value creation efficiency analysis of 20 banks in the Croatian economy, for a period of 5 years and comes out with a VAIC ranking of the same. Ante argues that intellectual capital is still not treated as a resource equal to physical and financial capital in many service firms, and there is a strong incompatibility of new measuring models and the existing accounting system (Pulic Ante 2001, 2002).

The efficiency of the banks is measured using the performance of the capital employed and the intellectual capital using VAIC as a tool of measurement. The efficiency of each bank is measured and then compared with the average performance of all the banks. The analysis provides a strong case for reporting of the value creation through intellectual capital in the annual reports. The reporting would be a useful tool for benchmarking the performance of the banks across various countries, besides proving as an absolute measure of performance for each bank within the economy.

An evaluation of the efficiency of the physical capital and intellectual potential of the major European banks for the year 1996 was another work that can be noted in this context (Pulic Ante, 1996). The results of the study indicates that intellectual potential is of crucial importance for corporate success and therefore, a obvious conclusion comes up that rising the efficiency of intellectual potential is the simplest, cheapest and most secure

way to ensure sustainable business success. A similar study was conducted focusing on how New Zealand banks incur a cost in acquiring IC (human capital) and their need to recognise the important cost drivers. The study comes out with a model in accounting for IC in New Zealand banks (Sahrawat Kiran, 2001).

An analysis of IC performance of Indian Banks for the period of 5 years (2000-2004) was conducted by Kamath (2007). The study confirms the existence of vast differences in the performance of Indian banks in different segments and there is also an improvement in the overall performance over the study period. There is an evident bias in favour of foreign banks performance as compared to the domestic banks

3.1 Pakistan's banking

This section presents a brief outline of the structure, reforms and growth of banks in Pakistan.

Classification and Structure

Commercial banks operating in Pakistan can be divided into four categories:

- 1) Nationalized Commercial Banks (NCBs)
- 2) Privatized Banks
- 3) Private Banks and
- 4) Foreign Banks

3.2 Brief History, Reforms and Growth

Prior to partition in 1947, banking in Pakistan was dominated by branches of British banks. The State Bank of Pakistan, the central bank, was formed after partition in 1948. It assumed the supervisory and monetary policy powers of the State Bank of India. With the passage of time the number of Pakistani banks which were 4 in 1948 increased to 5 in 1955. The total number of branches of these banks took a quantum jump. The 60s decade is stated as the golden era of Pakistan's economic and financial development. The banking sector also registered noticeable growth during that period and lent a strong helping hand to the government to achieve rapid economic growth of the country.

In 1974, the political regime decided to nationalize all 13 commercial banks. The 13 commercial banks were then merged to become five Nationalized Commercial Banks (NCBs). These NCBs experienced a rapid expansion in staff (by 55 per cent) and number of branches (by 82 per cent) in a few years. High and increasing inflation resulted in reduced deposits (-20 per cent) and in real terms deposits were reduced by about 23 per cent.

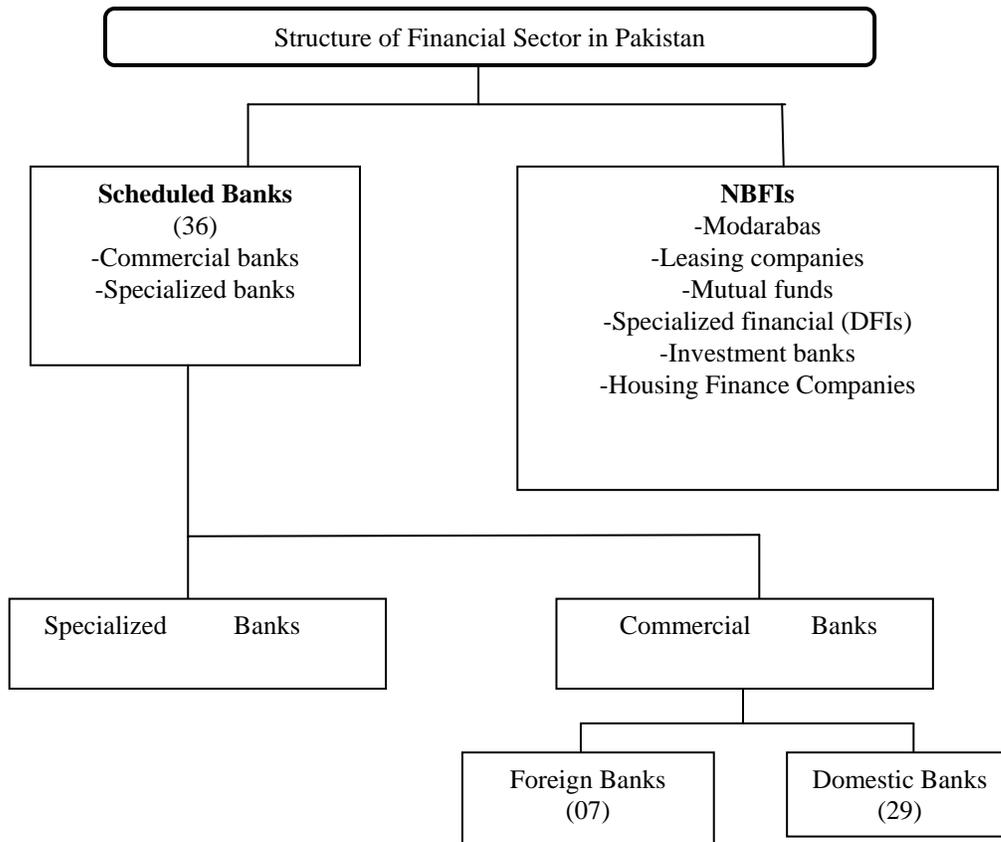
The military regime during the 1980s introduced certain reforms to denationalize commercial banks and to create an environment for the development of a competitive banking system by easing entry barriers for foreign banks. To achieve these goals, the following policies were introduced:

1. The partial deregulation of interest rates
2. The rate of expansion of the NCBs were deliberately reduced, and
3. Foreign Banks were allowed entry

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Downsizing and privatization became the buzzwords of the 1990s to deal with the inefficiencies of the public sector including NCBs. The process of privatization was accelerated during 2000. The pace of privatization of nationalized banks is considered to be the fastest in the developing world. This is evident with the fact that the domination of nationalized commercial banks in the banking sector reduced from almost 100 per cent in 1991 to 20 percent by 2003. At present, there are 17 private commercial banks, 4 privatized commercial banks, 2 nationalized commercial banks, 2 provisional banks, 3 specialized banks, 6 development financial institutions, 4 microfinance banks and 11 foreign banks operating in Pakistan.

Figure 1: Structure of Financial Sector in Pakistan



Given below in Table 1 are some important details of the performance of the scheduled banks in Pakistan, this gives a snapshot of the overall growth and performance of the banks.

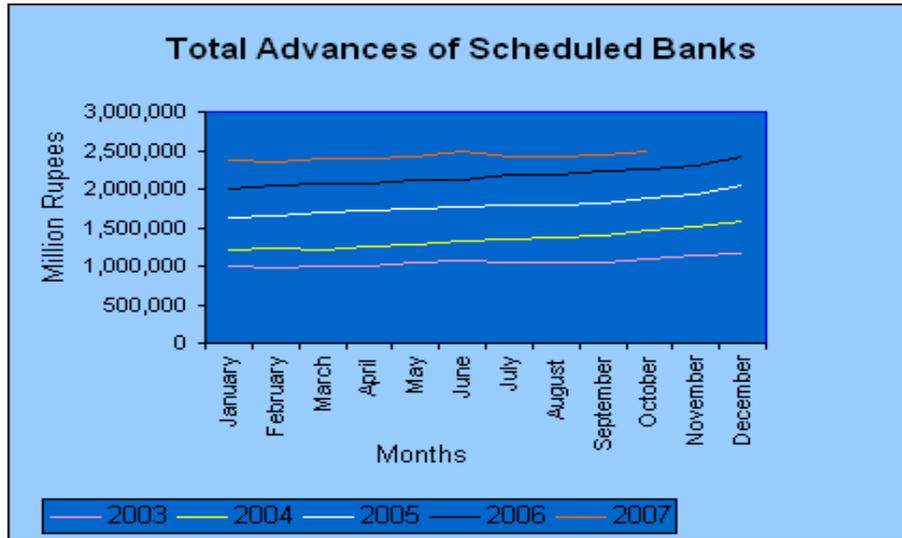
Table 1: Key Statistics of the Scheduled Banks at a Glance (Amount in Billion Rs.)			
Item	31-12-07	30-06-07	31-12-06
Number of All Banks	46	47	45
Public Sector Commercial Banks	4	4	4
Domestic Private Banks	26	26	24
Foreign Banks	12	13	13
Specialized Banks	4	4	4
Number of (Reporting) Branches	8,169	7,755	7,704
Total Liabilities/Assets	9,273	8,744	7,407
Total Deposits (Excluding Inter-bank)	353,405	3,373	2,927
Demand	966	918	788
Savings	1,486	1,457	1,241
Time	1,083	997	898
Number of Accounts of Deposit Holders	24,354,738	25,083,039	26,595,585
Average Deposits per Account (Thousand Rs.)	145	135	110
Total Advances (Excluding Inter Bank)	2,613	2,376	2,301
Number of Accounts of Borrowers	4,919,834	5,167,972	4,938,817
Average advances (Excluding Interbank) (Thousand Rs)	531	460	466
Bills Purchased and Discounted	107	125	124
Investment in Securities & Shares	1,205	1,108	765
Bank Loan (Advances+Bills)	2,721	2,502	2,425
Ratio of Deposits to Total Liabilities	38.11%	38.57%	39.51%
Ratio of Cash to Deposits	11.73%	15.46%	14.38%
Ratio of Advances to Total Assets	28.18%	27.18%	31.06%
Ratio of Term Deposits to Total Deposits	30.65%	29.57%	30.67%
Ratio of Advances to Deposits	73.93%	70.46%	78.61%
Ratio of Investments to Deposits	34.08%	32.85%	26.13%
Ratio of Bank Loan to Deposits	76.97%	74.17%	82.85%
Ratio of (Loan + Investments) to Deposits	111.05%	107.02%	108.99%
Weighted Average:			
i) Interest Bearing Deposits	2.30%	2.22%	2.09%
ii) Profit & Loss Sharing Deposits	3.74%	3.79%	3.56%
Advances	11.56%	11.55%	11.12%

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Note: As per table I, the term Scheduled Banks means " All commercial banks and specialized banks (like IDB, PPCB, SME and ZTBL) which are included in the list of sheduled banks maintained under sub section (1) of section 37 of the State Bank of Pakistan Act 1956".

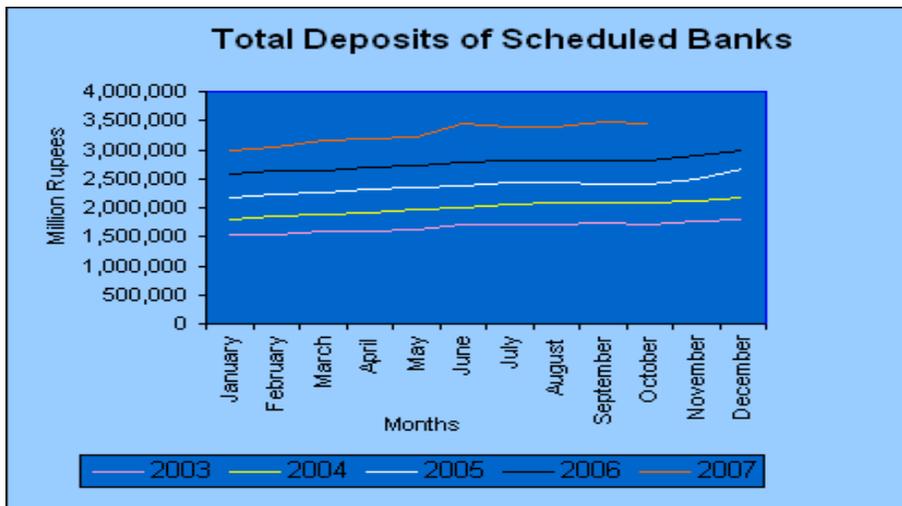
The total advances of the scheduled Bank are presented in Figure 2 given below.

Figure 2: Total Advances of Scheduled Banks



The total deposits of the scheduled bank are presented in Figure 3 given below

Figure 3: Total Deposits of Scheduled Banks



4. Objective of the Study

The major objective of this paper is to estimate and evaluate the VAIC for Pakistan's banks for the period between 2004 and 2006. The evaluation is done on the basis of the ranking obtained by each bank in the VAIC index estimated and then on the basis of the regression analysis conducted in the paper.

5. Data Sources

The data is primarily collected from the audited annual reports of the respective banks. These annual reports are available at the website of the apex bank of Pakistan. The period of study is the financial year of 2004-05 and 2005-06. These are the latest year when the annual report is available with the National Bank of Pakistan's official website. Beside this the Bankers Association of Pakistan also provides with the detailed information about the various financial parameters of the banking sector in Pakistan. There is a comprehensive and extensive literature survey that was done to come out with a methodology for the study. Several international publications on the area were reviewed for this purpose.

6. Methodology

The data collected from the secondary sources is treated to derive the VAIC for all banks average and then for each bank separately. Besides this a regression is run to find the coefficients and also to find the linear best fit.

6.1 Phase I

Deriving VAIC- Steps Involved:

OUTPUT (OUT): It is the total of all income/revenue generated during the fiscal by an organization by selling its goods or services.

INPUT (IN): All the costs that is incurred by the organization towards purchase of inputs for operating and continuing the business. Here, the employees' compensation and other costs incurred on them for training and development would be deducted from total expenses for the simple reason that they would be treated as investment and not expenditure.

VALUE ADDED (VA): The Difference between the OUTPUT and INPUT is the value created by the organization during the particular financial year.

$$VA = OUT - IN$$

HUMAN CAPITAL (HC): All the Expenses on Compensation and development of employees.

CAPITAL EMPLOYED (CE): All the physical and material assets of the organization.

CEE: CAPITAL EMPLOYED EFFICIENCY, it is a ratio of VA to CE; this ratio gives the contribution made by every unit of capital employed to the value added in the organization. It can also be termed as VACE

$$CEE=VA/CE$$

HCE: HUMAN CAPITAL EFFICIENCY, it is a ratio of VA to HC, this ratio gives the contribution made by every unit of money invested in Human Capital to the value added in the organization. It can also be called VAHC.

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$$HCE=VA/HC$$

VAIC: VALUE ADDED INTELLECTUAL COEFFICIENT, it indicates the intellectual ability of the organization, it is the sum of the HCE and the CEE, and this also measures the intellectual capability of the organization. It can also be denoted as BPI or the Business Performance Indicator

$$VAIC (BPI) = HCE + CEE$$

6.2 Phase II

Since the value added in any organization would be a function of the capital employed and also the intellectual capital invested two regressions are run using the VA as dependent variable in both and CE as independent variable in one and HC as independent variable in the other.

$$VA=f(CE) \text{ ----- i}$$

$$VA=f(HC) \text{ -----ii}$$

7. Analysis of Results

In this section the analysis of the results is done. The mean of HC, CE, VA, VACE, VAHC, and VAIC is shown in Table 2 given below. As can be seen in the table, the mean income of all banks has shown tremendous increase, the expenses also have shown an increase, but not as much as the income.

The human capital also has grown from Rs. 1211891.4 thousand in the year 2005 to Rs. 1467244.4 thousand in the year 2006. The capital employed in the form of assets was Rs. 100377503.9 thousand in 2005 and Rs. 116438688 thousand in 2006. The value added for the period has increased from Rs. 3751122.3 thousand to Rs. 4899009.8 thousands which is quite substantial.

However, looking at the efficiency levels, i.e. the value the capital has created per unit of rupee spent has come down from 0.030 to 0.027. The value added by the human capital also has shown a decrease from 3.09 to 2.66. The overall mean of the valued added intellectual capital was 3.12 in the year 2005 and came down to 2.66 in the year 2006.

Table 2: Mean of HC, CE, VA, VACE, VAHC, VAIC
(000 Rs.)

	2005	2006
Income	5029825.906	5901461.44
Expenses	2340199.5	2671550.5
HC	1211891.4	1467244.4
CE	100377503.9	116438688
VA	3751122.367	4899009.82
VACE	0.030	0.027
VAHC	3.091	2.663
VAIC	3.121	2.690

The ranking of the banks on the basis of CEE, VAHC and VAIC for the year 2006 is given in Table 3, 4 and 5 respectively.

Table 3: Ranking of all Private Sector Banks

S.No	Name of the Bank	CEE	
		2005	2006
1	MCB BANK	0.059	0.068
2	SME BANK LTD.	0.088	0.059
3	ABN AMRO BANK N.V.	0.05	0.058
4	HABIB BANK LIMITED	0.046	0.056
5	NATIONAL BANK LTD.	0.044	0.054
6	UNITED BANK LIMITED	NA	0.046
7	FIRST WOMEN BANK LTD.	0.034	0.046
8	DEUTSCHE BANK LTD.	0.001	0.046
9	ALHABIB BANK LTD	0.041	0.045
10	FAYSAL BANK LTD.	0.042	0.041
11	CITIBANK	0.045	0.04
12	STANDARD CHARTERED BANK	0.058	0.038
13	THE BANK OF PUNJAB	0.035	0.035
14	MY BANK LTD.	0.025	0.033
15	ZARAI TARAQIATI BANK LIMITED	0.024	0.033
16	PUNJAB PROVINCIAL COOPERATIVE BANK LTD.	0.035	0.031
17	ASKARI BANK LTD.	0.03	0.027
18	MEEZAN BANK	0.031	0.026
19	THE BANK OF TOKYO	0.039	0.025
20	SONERI BANK LIMITED	0.026	0.025
21	HABIB METROPOLITAN BANK LTD.	0.03	0.024
22	PICIC COMMERCIAL BANK LTD.	0.035	0.024
23	HONGKONG & SHANGHAI CORPORATION	0.027	0.02
24	ALFALAH BANK LTD.	0.017	0.018
25	KASB BANK	-0.013	0.016
26	ALBARAKA BANK	0.032	0.015
27	THE BANK OF KHYBER	0.016	0.014
28	ARIFHABIB BANK LTD.	NA	0.013
29	BANKISLAMI	NA	0.004
30	ALLIED BANK LIMITED	0.001	0
31	OMAN INTERNATIONAL BANK	0	-0.005
32	ATLAS BANK LTD.	0.012	-0.006
33	DUBAI ISLAMIC BANK LTD.	NA	-0.032
34	CRESENT COMMERCIAL BANK LTD.	-0.011	-0.034

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Table 4: Ranking of all Private Sector Banks (HCE)

Rank	Name of the Bank	2005	2006
1	HABIB METROPOLITAN BANK LTD.	8.135	8.005
2	THE BANK OF TOKYO	5.237	5.689
3	SONERI BANK LIMITED	6.641	5.664
4	THE BANK OF PUNJAB	5.418	5.659
5	FAYSAL BANK LTD.	6.819	5.427
6	MCB BANK	3.822	4.986
7	NATIONAL BANK LTD.	3.902	4.185
8	STANDARD CHARTERED BANK	6.191	4.154
9	ASKARI BANK LTD.	2.987	4.03
10	PICIC COMMERCIAL BANK LTD.	5.918	3.907
11	ABN AMRO BANK N.V.	3.871	3.717
12	UNITED BANK LIMITED	NA	3.593
13	CITIBANK	4.172	3.473
14	MY BANK LTD.	1.946	3.405
15	HABIB BANK LIMITED	2.775	3.403
16	ARIFHABIB BANK LTD.	NA	3.168
17	MEEZAN BANK	3.047	2.805
18	FIRST WOMEN BANK LTD.	2.593	2.609
19	ALBARAKA BANK	5.436	2.603
20	THE BANK OF KHYBER	2.196	2.207
21	ALFALAH BANK LTD.	2.666	2.132
22	ALHABIB BANK LTD	2.17	2.106
23	HONGKONG & SHANGHAI CORPORATION	2.657	2.087
24	SME BANK LTD.	2.139	1.693
25	DEUTSCHE BANK LTD.	0.057	1.681
26	PUNJAB PROVINCIAL COOPERATIVE BANK	1.394	1.318
27	ZARAI TARAQIATI BANK LIMITED	0.956	1.305
28	KASB BANK	-0.966	1.142
29	BANKISLAMI	NA	0.341
30	ALLIED BANK LIMITED	0.06	0.009
31	DUBAI ISLAMIC BANK LTD.	NA	-0.752
32	CRESENT COMMERCIAL BANK LTD.	-0.559	-0.841
33	OMAN INTERNATIONAL BANK	-0.061	-1.121
34	ATLAS BANK LTD.	1.109	-3.242

Table 5: Ranking of all Private Sector Banks (VAIC)

S.No	Name of the Bank	2005	2006
1	HABIB METROPOLITAN BANK LTD.	8.165	8.029
2	THE BANK OF TOKYO	5.276	5.714
3	THE BANK OF PUNJAB	5.453	5.694
4	SONERI BANK LIMITED	6.667	5.689
5	FAYSAL BANK LTD.	6.861	5.468
6	MCB BANK	3.881	5.053
7	NATIONAL BANK LTD.	3.946	4.239
8	STANDARD CHARTERED BANK	6.249	4.192
9	ASKARI BANK LTD.	3.017	4.056
10	PICIC COMMERCIAL BANK LTD.	5.954	3.932
11	ABN AMRO BANK N.V.	3.921	3.775
12	UNITED BANK LIMITED	NA	3.640
13	CITIBANK	4.216	3.513
14	HABIB BANK LIMITED	2.821	3.459
15	MY BANK LTD.	1.971	3.438
16	ARIFHABIB BANK LTD.	NA	3.181
17	MEEZAN BANK	3.077	2.831
18	FIRST WOMEN BANK LTD.	2.627	2.655
19	ALBARAKA BANK	5.468	2.618
20	THE BANK OF KHYBER	2.211	2.221
21	ALHABIB BANK LTD	2.211	2.150
22	ALFALAH BANK LTD.	2.683	2.149
23	HONGKONG & SHANGHAI CORPORATION	2.685	2.107
24	SME BANK LTD.	2.227	1.752
25	DEUTSCHE BANK LTD.	0.059	1.726
26	PUNJAB PROVINCIAL COOPERATIVE	1.429	1.349
27	ZARAI TARAQIATI BANK LIMITED	0.980	1.337
28	KASB BANK	-0.979	1.158
29	BANKISLAMI	NA	0.346
30	ALLIED BANK LIMITED	0.061	0.009
31	DUBAI ISLAMIC BANK LTD.	NA	-0.784
32	CRESENT COMMERCIAL BANK LTD.	-0.570	-0.875

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34	ATLAS BANK LTD.	1.121	-3.248
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Each bank results sorted on the basis of VAIC performance classified into top performers VAIC Score above 5, good performers VAIC Score between 4 and 5, common performers VAIC Score between 2.5 and 4, and bad performers VAIC Score below 2.5.

As can be seen there are 10 banks which can be considered as top performers and good performers based on the VAIC. Of all the top banks, we can see that the private banks have been performing much better than public sector, Islamic or foreign banks. Most of the banks listed in the top 10 are private sector banks, 1 of them is a foreign bank and the other 2 are public sector banks. We also observe that there are 14 banks which are bad performers. The poor performers cannot be specifically indicated towards a specific group, it's a mixed bag.

7.1 Top 5 performers on VAIC scale

1. Habib Metropolitan Bank Ltd.
2. The Bank Of Tokyo
3. The Bank Of Punjab
4. Soneri Bank Limited
5. Faysal Bank Ltd.

7.2 Poor 5 performers on VAIC scale

1. Allied Bank Limited.
2. Dubai Islamic Bank Ltd.
3. Crescent Commercial Bank Ltd.
4. Oman International Bank
5. Atlas Bank Ltd.

It is very much important to know whether the variables used in the survey is reliable for inferences or not, therefore, the regression results are also required to be analyzed. The variables studied are Value Added (VA), Capital Employed (CE) and Human Capital (HC)

The regression results are presented in the Table 6 given below. As can be observed from the table, the coefficient of determination (R^2) is seen to be very strong in case of both human capital and capital expended. Thus, it can be said that the fit is seen to be good for all the years of analysis.

Table 6: Regression Results- Overall Banking Sector

CE and VA		
	2005	2006
Slope	.044	.051
Intercept	-635359.963	-1.296E6
Adjusted R ²	.884	.876
Significance (at 95%)	.000	.000
HC and VA		
Slope	3.113	3.696
Intercept	-21877.736	-523688.369
Adjusted R ²	.868	.899
Significance (at 95%)	.000	.000

7.3 Some Observations and Analysis

The major contribution to the VAIC ranking always has come from Human capital efficiency rather than capital expended efficiency. The main reason behind this is that many banks are operating with minimal staff and relying on technology, this reduces their expenses on human assets and increases the returns on each rupee invested. They also have few branches and believe in delivering specialized services.

The public sector banks face the problem of high administrative cost, overstaffing and increasing non-performing assets. The unplanned growth is also one of the reasons for the poor performance.

The banks have been going through a process of restructuring as per the guidelines given by SBP; the reform in the banking has proved fruitful in improving performance. Many banks have adjusted quickly to the changed environment. This is a positive outlook and may take the banking system of Pakistan a long way.

7.4 Limitations of the Study

The main limitation of this paper is that the cultural and legal environment of every economy is different and the paper is not set in that environmental context. The study uses only one prominent method to evaluate the intellectual capital performance of the banks. The study is conducted for only 2 financial years due to non-availability of consistent data. Generalization on the conclusions should be done with caution.

However, it should be noted that the performance of the banks in Pakistan have been analyzed and evaluated from a new perspective altogether, therefore this paper becomes a significant contribution in the literature. The paper serves as a useful guide to the banks in monitoring their performance which the stakeholders value and also make better allocation of resources for improving efficiency in the coming years.

8. Discussion and conclusion

The banks in Pakistan are divided into, Islamic banks, public sector banks, private banks and foreign banks. The State Bank of Pakistan is the central bank which carries on the regulation and reformative activities.

The paper uses VAIC as a tool to measure the IC performance of banks of Pakistan for a period of two years. Besides ranking the variables, a regression was run to see the goodness of fit of the variables.

The study concluded that the private sector banks were doing much better than all other banks in Pakistan on efficiency related to intellectual capital. These banks are ranked high on human capital efficiency and therefore it has made a substantial effect on their performance as seen from the IC dimension. However, it was also noted that poor performance could not be traced specifically to any one group of bank. This paper attempts to evaluate and analyze the performance of the banks from a fresh perspective. This paper can be used as a basic reference to guide the policy and decision makers to look at the banks efficiency levels and take requisite action.

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- www.pakistaneconomist.com
- www.scribd.com/doc/3083828/COMMERCIAL-BANKS-IN-PAKISTAN

Appendix I: Classification of Banks in Pakistan

PUBLIC SECTOR BANKS
<ol style="list-style-type: none">1. First Women Bank Limited2. The Bank Of Khyber3. National Bank Of Pakistan4. The Bank Of Punjab
ISLAMIC BANKS
<ol style="list-style-type: none">1. Bankislami Pakistan Limited2. Emirates Global Islamic Bank3. Dawood Islamic Bank Limited4. Meezan Bank Limited5. Dubai Islamic Bank Pakistan Limited
PRIVATE BANKS
<ol style="list-style-type: none">1. The Royal Bank Of Scotland Limited2. JS Bank Limited3. Allied Bank Limited4. Kasb Bank Limited5. Arif Habib Bank Limited6. MCB Bank Limited7. Askari Bank Limited8. My bank Limited9. Atlas Bank Limited10. NIB Bank Limited11. Bank Alfalah Limited12. Saudi Pak Commercial Bank Limited13. Bank Al Habib Limited14. Soneri Bank Limited15. Crescent Commercial Bank Limited16. Standard Chartered Bank (Pakistan) Limited17. Faysal Bank Limited18. United Bank Limited19. Habib Bank Limited20. Habib Metropolitan Bank Limited

FOREIGN BANKS

1. Albaraka Islamic Bank B.S.C. (E.C.),
2. The Bank Of Tokyo-Mitsubishi UFJ Limited - Pakistan Operations
3. Citibank N.A. - Pakistan Operations
4. HSBC Bank Middle East Limited – Pakistan
5. Deutsche Bank AG - Pakistan Operations
6. Barclays Bank PLC
7. Oman International Bank S.A.O.G – Pakistan Operations

Autobiographical Notes:

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