The Performance of Thai Banks, 1997-2001

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The Thai banking industry has experienced substantial changes after the 1997 financial crisis. It is evident that commercial banks have been consolidated, restructured and newly formed.[1] In addition, changes in regulation of banking procedures can also have potential impact on how the industry has evolved.

An analysis of a bank's balance sheet and income statement is essential in order to understand the bank's prevailing strengths and weaknesses (Sinkey 1998). A thorough analysis, therefore, of the bank's past and present performances enables the bank manager to chart the course of future events. Additionally, a comparison of the bank's present performance in relation to others in the industry also enables one to set a benchmark for banking performance. A financial statement analysis is also of interest to the bank regulators as it assists them in evaluating the potential impact brought about by changes in regulation and supervision on the bank's current and prospective financial performance and condition.

This study uses the balance sheet and income statement data of 13 Thai banks.[2] Data was obtained from the Thai Securities Exchange Commission website.

PROFITABILITY

The profitability measurement shows how well the bank has performed and whether it has earned acceptable returns. The five indicators of bank profitability that have been examined are: return on assets, interest margin, net margin, yield on earning assets and asset utilization.

The first profitability measurement is the return on assets (ROA). This indicates the capability of the bank management in increasing the earnings from the bank's assets. Table 1 shows a decrease in average ROA during 1997-2001, which is the result of the apparent consequences of the financial crisis. The average figure increased in 2001 in which BBL had the highest ROA of 0.5 percent. The result indicates low but improved ROA.

Table 1 Return on assets (%)

	1997	1998	1999	2000	2001
BBL	0.29	-3.91	-5.08	-1.51	0.52
BAY	0.40	-1.98	-4.70	-1.98	-0.60
BMB	-12.41	-31.51	-3.71	-3.06	n.a.
BOA	0.03	-5.17	-7.39	-2.64	-2.40
BT	-2.49	-24.73	-8.14	-2.05	0.39
KTB	0.03	-5.78	-9.26	7.71	-0.45
SCB	0.45	-1.76	-7.11	0.50	0.06
SCIB	-5.29	-15.22	-2.84	-2.81	n.a.
DTDB	0.02	-6.86	-12.01	-14.43	0.17
TFB	0.10	-5.66	-7.24	0.16	0.13
TMB	0.35	-0.83	-3.47	-7.45	0.18
UOBR	-1.74	-35.15	16.61	-2.37	-1.22
SCNB	-0.23	-5.39	-3.03	-3.26	-1.05
AVERAGE	**-1.58**	**-11.07**	**-4.41**	**-2.55**	**-0.39**

Source: The author's own calculation.

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Table 2 shows the net interest margin. It is the ratio of interest income minus interest expense divided by earning assets, where the earning assets consists of all securities and loans. This ratio measures net interest yield on assets tied to the intermediation process. It appears that average interest margins were relatively small between 1998 and 1999 as a consequence of the 1997 financial crisis. Subsequently, the average ratio of the banks improved in 2001 compared to 2000, the only two exceptions were BAY and KTB. The results suggest an increasing trend of improved bank performances.

Net margin is interest and dividend income minus both interest and non-interest expenses, divided by revenues. Net margin reflects a bank's ability to cover all other costs. Table 3 shows that Thai banks, except for SCB, did not make adequate income to cover their expenses. However the performance of 11 out of 13 banks in 2001 relative to 2000, clearly improved. This was mainly due to measures adopted to reduce costs, which included branch closure and early retirement scheme. SCB was the only bank that had a positive net margin of 0.05 percent in 2001. On average, the result suggests that banks were making progress on achieving profitability.

Table 4 shows the yield on earning assets, which is a measure for gross rate of return on earning assets. It appears that average rate decreased from 12.44 percent in 1997 to 5.68 percent in 2001. The declining trend suggests that banks chose to invest in lower return than before.

Table 2 Net interest margin (%)

	1997	1998	1999	2000	2001
BBL	4.15	0.91	0.84	2.55	2.59
BAY	3.53	1.20	0.83	1.68	1.38
BMB	0.45	-7.96	-1.65	-0.76	0.57
BOA	2.70	0.18	1.02	2.06	2.80
BT	1.97	-3.14	-1.85	-1.08	-0.45
KTB	4.05	1.42	0.76	3.32	2.69
SCB	4.04	2.20	1.83	2.55	2.94
SCIB	3.09	-2.11	-0.53	-0.35	0.77
DTDB	3.91	1.66	1.04	2.55	2.70
TFB	4.42	2.44	1.84	2.80	3.20
TMB	2.88	0.29	0.67	0.64	1.44
UOBR	1.78	-7.65	-23.98	-1.44	0.89
SCNB	3.02	0.24	0.89	2.11	3.30
AVERAGE	**3.08**	**-0.79**	**-1.41**	**1.28**	**1.91**

Note: the average value in 1999 is 0.47% if UOBR is excluded.

Source: The author's own calculation.

Table 3 Net margin (%)

	1997	1998	1999	2000	2001
BBL	0.144	-0.170	-0.232	-0.026	-0.011
BAY	0.087	-0.157	-0.274	-0.150	-0.201
BMB	-0.126	-1.051	-0.930	-1.066	-0.448
BOA	0.076	-0.208	-0.312	-0.172	-0.119
BT	-0.057	-1.162	-1.229	-0.833	-1.070
KTB	0.163	-0.065	-0.269	-0.143	-0.042
SCB	0.125	-0.141	-0.103	0.019	0.053
SCIB	0.069	-0.609	-0.827	-0.982	-0.507
DTDB	0.119	-0.176	-0.616	-2.072	-0.006
TFB	0.137	-0.156	-0.393	-0.122	-0.104
TMB	0.055	-0.193	-0.229	-0.295	-0.152
UOBR	-0.166	-1.052	-3.209	-0.723	-0.532
SCNB	0.055	-0.194	-0.632	-0.533	-0.255
AVERAGE	**0.052**	**-0.410**	**-0.712**	**-0.546**	**-0.261**

Source: The author's own calculation.

Table 4 Yield on earning assets (%)

	1997	1998	1999	2000	2001
BBL	12.16	11.66	7.25	7.41	6.57
BAY	12.58	14.10	7.35	6.43	5.15
BMB	12.90	12.31	5.00	3.82	4.29
BOA	11.11	12.35	5.75	5.63	5.61
BT	12.97	13.75	4.11	4.21	3.92
KTB	11.55	9.30	6.10	10.20	5.46
SCB	11.44	12.47	7.07	6.15	5.98
SCIB	13.21	10.87	5.28	4.33	4.27
DTDB	13.51	13.85	7.54	7.51	6.20
TFB	12.73	13.83	7.96	7.52	7.11
TMB	12.80	6.09	6.65	4.92	5.07
UOBR	11.95	10.87	21.69	18.53	7.80
SCNB	12.78	14.63	7.10	5.73	6.46
AVERAGE	**12.44**	**12.01**	**7.60**	**7.11**	**5.68**

Source: The author's own calculation.

Table 5 shows similar results to those in Table 4. The average asset utilization ratio, which reflects productivity of assets, reduced from 10.61 percent in 1997 to 4.22 percent in 2001. The result suggests a decline in total revenue produced by assets.

The analysis above indicates that banks did not earn adequate income to cover the costs because the rate of return on earning assets, on average, was decreasing. On the other hand, an increasing trend of interest margin and net margin implies an effort to reduce costs in order to improve their performance.

Risk

In evaluating bank performance, risk measures are related to return on investments, because a bank must earn adequate profit to cover the risk assumed. An appropriate degree of total risks a bank should take is mainly influenced by its past performance, especially in those areas of investments in which adequate returns were obtained. A bank's level of risk should also be compared with similar banks and/or peer groups of banks. Three main categories of risk measurement examined are capital adequacy risk, liquidity risk and credit risk.

A bank's capital adequacy indicates its ability to absorb unanticipated losses associated with various risks of banking (Sinkey 1998). Bank regulators view capital as a cushion for absorbing losses; therefore, capital adequacy standards is regarded as the most important measure of safety and soundness of depository institutions. *Ceteris paribus* the greater the capital, the lower the probability of insolvency. The adequacy of bank capital is gauged here by the ratio of capital to assets, because it is an overall indicator of capital strength.

Table 6 shows that there was a declining trend of average capital adequacy ratio. This was partly due to the bad debt write off that reduced the bank's retained earning; hence the decline in capital. It is noticeable that only SCB steadily increased its capital, this suggests that SCB is relatively less exposed to solvency risks than other banks.

Table 5 Asset utilization (%)

	1997	1998	1999	2000	2001
BBL	9.44	8.92	5.53	5.41	4.83
BAY	10.71	11.22	6.01	5.20	4.33
BMB	11.51	8.98	4.24	3.24	3.17
BOA	10.12	11.37	5.11	4.69	4.49
BT	10.99	10.63	3.10	2.99	2.40
KTB	10.12	7.85	4.89	4.25	4.04
SCB	9.54	10.22	5.99	5.09	4.61
SCIB	11.24	9.12	4.58	3.67	3.71
DTDB	12.23	12.23	6.47	6.10	5.17
TFB	10.08	10.84	6.12	5.31	5.04
TMB	10.31	5.17	5.74	4.42	4.38
UOBR	10.73	7.85	1.89	3.30	3.18
SCNB	10.89	10.92	6.18	4.94	5.57
AVERAGE	**10.61**	**9.64**	**5.07**	**4.51**	**4.22**

Source: The author's own calculation.

Table 6 Capital to assets ratio (%)

	1997	1998	1999	2000	2001
BBL	7.33	7.98	3.80	2.75	3.45
BAY	5.31	5.56	5.47	3.57	3.42
BMB	n.a.	n.a.	n.a.	n.a.	5.20
BOA	6.31	6.50	7.84	7.54	5.43
BT	4.07	n.a.	7.22	4.57	4.24
KTB	5.79	7.84	10.19	6.62	6.50
SCB	5.82	5.39	8.41	8.46	8.57
SCIB	n.a.	3.43	1.28	n.a.	6.25
DTDB	6.99	6.27	3.53	4.30	4.22
TFB	7.14	7.44	3.61	3.33	3.49
TMB	5.72	5.89	2.64	3.87	3.71
UOBR	6.01	n.a.	n.a.	6.24	4.97
SCNB	5.70	1.57	9.61	5.38	4.56
AVERAGE	**6.02**	**5.79**	**5.78**	**5.15**	**4.92**

Source: The author's own calculation.

The three indicators of a bank's exposure to liquidity risk are now examined. These are the ratio of loans to total assets, customer deposits to total assets and loans to customer deposits. A bank's liquidity risk arises from unexpected changes in the sources and uses of bank funds brought about by either (i) internal factors: such as poor liquidity planning and management, or (ii) external factors: such as unexpected demands and/or economic or financial collapse (Sinkey 1998). There is a trade-off between returns and liquidity risk. For example, a shift from short-term securities into long-term securities or loans could raise a bank's return, but increases its liquidity risk. Thus, a higher liquidity ratio for a bank indicates less risk and correspondingly a less profitable bank.

Table 7 shows that there was a downward trend of average loans to assets ratio, it decreased from 81.4 percent in 1997 to 64 percent in 2001. SCNB had the highest ratio of 81.6 percent while UOBR had the lowest of 38.3 percent in 2001. It appears that eight out of 13 banks in 2001 had lower ratio than that of the previous year. The result indicates a decreased liquidity risk and proportionately less bank lending following the 1997 financial crisis.

This section analyzes ratio of customer deposits to assets. The higher this ratio, the better a bank's liquidity position and a lower liquidity risk because customer deposits are generally a more stable source of funding. Table 8 shows an increasing trend of average ratio from about 65 percent in 1997 to 83 percent in 2001. The reduction of average ratio in 2001 from the previous year is partly due to substantial decreased ratio for BT and DTDB. However, the overall result suggests a higher liquidity of the Thai banking system.

Table 7 The ratio of loans to total assets

	1997	1998	1999	2000	2001
BBL	0.7289	0.6768	0.6398	0.5906	0.5240
BAY	0.8161	0.7576	0.7570	0.7474	0.7613
BMB	0.8754	0.6902	0.7925	0.7626	0.6872
BOA	0.8540	0.8160	0.7174	0.7168	0.6629
BT	0.7829	0.7060	0.6778	0.6415	0.4709
KTB	0.8469	0.8055	0.7564	0.3838	0.6971
SCB	0.7808	0.7483	0.6916	0.6553	0.6035
SCIB	0.8190	0.7462	0.7357	0.7081	0.6984
DTDB	0.8801	0.7618	0.7757	0.7345	0.7384
TFB	0.7425	0.7091	0.6457	0.5971	0.5493
TMB	0.7718	0.8091	0.8088	0.7859	0.7259
UOBR	0.8818	0.6934	0.0558	0.1532	0.3830
SCNB	0.8060	0.6856	0.7828	0.7773	0.8164
Average	**0.8143**	**0.7389**	**0.6798**	**0.6349**	**0.6399**

Source: The author's own calculation.

Table 8 The ratio of customer deposits to total assets

	1997	1998	1999	2000	2001
BBL	0.6720	0.7654	0.8092	0.8360	0.8620
BAY	0.7879	0.8358	0.8064	0.8330	0.8473
BMB	0.4227	0.9408	0.9637	1.0235	0.9128
BOA	0.5117	0.7764	0.7954	0.8628	0.8764
BT	0.6598	0.9182	0.7206	0.7401	0.6210
KTB	0.7332	0.7544	0.8080	0.8529	0.8873
SCB	0.7794	0.8373	0.8214	0.8342	0.8381
SCIB	0.5983	0.7470	0.8004	0.8997	0.8802
DTDB	0.6898	0.8206	0.8288	0.8046	0.7793
TFB	0.7398	0.8226	0.8368	0.8438	0.8579
TMB	0.6629	0.7904	0.7756	0.7978	0.8202
UOBR	0.5208	0.8375	0.6949	0.8957	0.7654
SCNB	0.6340	0.8234	0.7582	0.8120	0.8245
Average	**0.6471**	**0.8208**	**0.8015**	**0.8489**	**0.8286**

Source: The author's own calculation.

Table 9 shows the ratio of loans to customer deposits. The higher this ratio, the greater the proportion of deposits invested in loans. The results are consistent to those in Tables 7 and 8, suggesting a decreased liquidity risk of banks during 1997-2001. DTDB and SCNB had a relatively large ratio of greater than 90 percent, which was higher than the industry average of 77 percent in 2001. In general, the proportion of bank lending decreased.

Table 10 shows the share of bad debt provision or expenses set aside as a proportion of total loans, which is a measure of credit risk. It appears that the average ratio was relatively high in 1998 and 1999 as a result of financial crisis in 1997. Thereafter, the average ratio reduced to 1.2 percent in 2001. The results suggest a decreased credit risk of Thai banks.

Overall analysis of bank risk indicates a substantial fall in the amount of bank capital, except for SCB, during 1997-2001. Additionally, there was a decrease in liquidity risk and credit risk because of reduced bank lending. This led to increased liquidity in the banking system, and as already explained it is due to the relaxation of liquidity requirement ratio during the studied period.

Efficiency

Financial ratio analysis of bank efficiency provides useful supplemental information to return and risk measures (Hempel and Simonson 1999). It reflects the competitive advantage of a bank i.e., it indicates the cost of transforming bank liabilities and assets into earning assets. Efficiency can be measured in several ways. The method employed here are: the ratio of net non-interest expenses to total assets, earning power, cost rate on purchased funds and cost to income.

Table 9 The ratio of loans to customer deposits

	1997	1998	1999	2000	2001
BBL	1.0847	0.8841	0.7906	0.7065	0.6079
BAY	1.0358	0.9064	0.9388	0.8973	0.8985
BMB	2.0710	0.7336	0.8224	0.7451	0.7529
BOA	1.6688	1.0510	0.9020	0.8308	0.7564
BT	1.1866	0.7689	0.9406	0.8668	0.7584
KTB	1.1550	1.0678	0.9362	0.4500	0.7857
SCB	1.0018	0.8936	0.8420	0.7855	0.7202
SCIB	1.3689	0.9990	0.9192	0.7871	0.7935
DTDB	1.2758	0.9284	0.9359	0.9129	0.9474
TFB	1.0037	0.8620	0.7717	0.7076	0.6402
TMB	1.1642	1.0237	1.0427	0.9850	0.8850
UOBR	1.6931	0.8280	0.0804	0.1710	0.5004
SCNB	1.2714	0.8326	1.0324	0.9572	0.9901
Average	**1.3062**	**0.9061**	**0.8427**	**0.7541**	**0.7721**

Source: The author's own calculation.

Table 10 Past due loans to total loans (%)

	1997	1998	1999	2000	2001
BBL	2.76	5.60	8.94	4.79	0.78
BAY	1.76	1.26	4.68	2.05	0.39
BMB	n.a.	n.a.	n.a.	n.a.	1.98
BOA	1.20	4.59	9.36	4.22	4.10
BT	3.63	17.95	6.93	n.a.	n.a.
KTB	2.83	7.57	11.24	7.32	1.43
SCB	2.07	2.14	10.87	1.34	n.a.
SCIB	8.16	13.22	0.02	0.05	1.37
DTDB	1.95	6.93	11.31	2.04	0.62
TFB	2.85	7.73	8.24	n.a.	0.51
TMB	1.17	0.26	3.36	8.78	0.07
UOBR	0.24	38.97	n.a.	2.04	0.82
SCNB	1.77	8.25	n.a.	1.30	1.13
Average	**2.53**	**9.54**	**7.49**	**3.39**	**1.20**

Source: The author's own calculation.

Net-non-interest expenses to assets ratio measures efficient use of overhead accounting for expenditures to create non-interest income. The lower the ratio, the more efficient is the bank. Table 11 shows a declining trend of average ratio after a sharp increase in 1998. In 2001, SCB had the lowest ratio of 0.87 percent followed by BBL (0.98) and TMB (1.0). There were eight out of 13 banks whose ratio in 2001 was less than that in 2000. The result suggests a more efficient use of overhead expenses of Thai banks.

Earning power indicates how fully a bank invests in interest yielding assets (Hempel and Simonson 1999). It is calculated by the ratio of earnings assets to total assets. *Ceteris Paribus* the higher the ratio the more efficient the bank's investment. Table 12 shows a downward movement of average earning power. This was partly due to the decrease in bank lending (see also Tables 6 and 8). In 2001, there were six out of 13 banks whose ratio was below the industry average. The result suggests less efficient earnings of the bank's investment.

Table 13 shows the cost rate on purchased funds, where purchased funds consist of customer deposits, interbank borrowings and other borrowings. It appears that the gross interest cost of banks declined over time. This was mainly due to a reduction in interest rates over the past three years. In 2001, KTB had the lowest cost rate of 2.22 percent, followed by BOA (2.43) and SCB (2.63). The results suggest that banks have had advantages of relatively low funding costs.

Table 11 Net non-interest expenses to total assets (%)

	1997	1998	1999	2000	2001
BBL	0.61	0.82	0.00	0.54	0.98
BAY	1.02	1.93	1.84	1.80	1.45
BMB	n.a.	3.45	2.16	2.48	1.34
BOA	1.32	1.59	1.57	1.30	1.75
BT	1.31	9.63	2.05	1.28	1.91
KTB	1.11	1.12	1.37	1.50	1.44
SCB	1.02	1.96	1.14	0.73	0.87
SCIB	1.17	3.62	2.37	2.47	2.11
DTDB	1.77	3.04	4.12	15.00	1.62
TFB	1.25	2.35	2.98	1.71	1.77
TMB	0.91	0.86	1.32	1.12	1.00
UOBR	3.13	2.60	3.46	1.80	1.27
SCNB	1.38	1.60	4.09	4.07	2.97
Average	**1.33**	**2.66**	**2.19**	**2.75**	**1.58**

Note: the average value in 2000 is 1.73% if DTDB is excluded.

Source: The author's own calculation.

Table 12 Earnings power (%)

	1997	1998	1999	2000	2001
BBL	77.63	76.46	76.23	73.10	73.56
BAY	85.15	79.56	81.77	80.77	83.99
BMB	89.24	72.94	84.87	84.70	73.80
BOA	91.04	92.06	88.85	83.39	80.02
BT	84.69	77.31	75.36	71.12	61.14
KTB	87.64	84.37	80.24	41.70	74.06
SCB	83.38	81.98	84.66	82.71	77.02
SCIB	85.08	83.94	86.66	84.55	86.97
DTDB	90.54	88.32	85.87	81.25	83.42
TFB	79.19	78.40	76.97	70.63	70.82
TMB	80.49	84.89	86.31	89.89	86.36
UOBR	89.75	72.26	8.72	17.80	40.78
SCNB	85.17	74.64	86.95	86.33	86.30
AVERAGE	**85.31**	**80.55**	**77.19**	**72.92**	**75.25**

Source: The author's own calculation.

Table 13 Cost rate on purchased funds (%)

	1997	1998	1999	2000	2001
BBL	7.05	9.17	5.19	3.74	3.10
BAY	8.52	11.13	5.76	4.06	3.35
BMB	10.96	15.24	5.70	3.75	2.96
BOA	8.77	12.32	4.75	3.29	2.43
BT	10.41	13.22	5.09	4.04	3.44
KTB	7.28	7.39	4.86	3.15	2.22
SCB	6.85	9.22	5.00	3.33	2.63
SCIB	8.99	11.51	5.61	4.04	3.31
DTDB	9.56	11.78	5.92	4.31	3.13
TFB	7.35	9.89	4.98	3.55	2.95
TMB	8.79	5.40	5.49	4.08	3.33
UOBR	10.29	15.68	5.49	3.83	3.05
SCNB	9.16	11.12	6.14	3.60	2.98
AVERAGE	**8.77**	**11.00**	**5.38**	**3.75**	**2.99**

Source: The author's own calculation.

Table 14 shows a basic measure of bank operating efficiency, which indicates how well a bank is using its resources. The lower the cost to income ratio, the higher the bank's operating efficiency. Total cost here is expressed as interest plus non-interest expenses and loan loss reserves, while income comprises interest and dividend income and non-interest income. It appears that the average ratio heightened substantially in 1998 and 1999 compared to an average in 1997. Thereafter, there was a declining trend in the average cost to income ratio. In 2001, SCB had the highest operating efficiency since it reported the lowest cost to income ratio at 75 percent. Meanwhile, BT and SCIB were relatively inefficient.

On average, cost to income ratio of Thai banks was relatively high. The results are supported by the recent estimates carried out by Solomon Smith Barney, (*Asian Banker Journal* 2002) that banks in other countries in Asia Pacific region were relatively more efficient than Thai banks except for the Philippines. The finding indicates a pressing need for Thai banks to improve their operating performances.

The overall results suggest a relatively low but improved efficiency of Thai banks during 1997-2001. Also, there is still a need to increase income by making efficient investment and further reduce their operation costs.

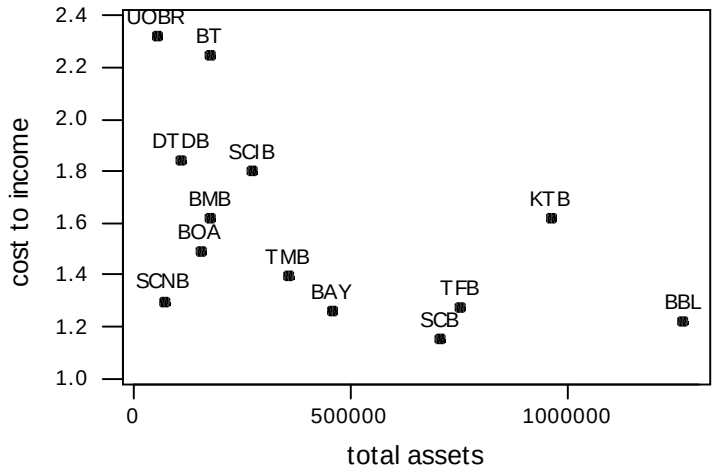
It is possible to examine further if there is a relationship between bank size and operating efficiency. Figure 1 shows the plots between the average bank size (as measured by total assets) and cost to income ratio during 1997 to 2001. The plots suggest a negative relationship, implying that bigger banks are relatively more efficient.

Table 14 Cost to income ratio

	1997	1998	1999	2000	2001
BBL	0.943	1.373	1.653	1.219	0.911
BAY	0.953	1.159	1.719	1.359	1.120
BMB	0.954	2.132	1.660	1.765	1.595
BOA	0.990	1.415	2.211	1.431	1.399
BT	1.207	3.215	3.420	1.570	1.800
KTB	0.996	1.713	2.668	1.610	1.094
SCB	0.931	1.151	2.010	0.921	0.756
SCIB	1.438	2.680	1.550	1.695	1.643
DTDB	0.996	1.536	2.623	3.081	0.970
TFB	0.988	1.483	1.979	0.957	0.964
TMB	0.955	1.147	1.541	2.388	0.964
UOBR	1.159	5.242	n.a.	1.626	1.261
SCNB	1.020	1.606	1.109	1.612	1.147
Average	**1.041**	**1.989**	**2.012**	**1.633**	**1.202**

Source: The author's own calculation.

Figure 1: Bank size and cost to income ratio



Discussion and Conclusion

This study examined the performance of Thai banks during 1997-2001. The results show that in certain areas the Thai banks' performance did improve. First, there was an increasing trend of profitability measures, which correspond with decline in both liquidity risk and credit risk. Second, there was a reduction of overhead costs and cost of funding. At the same time, though, Thai banks did not increase their yield on earning assets and their earning power clearly declined. There is evidence to suggest that the relaxation of liquidity assets did not promote bank lending as expected. Although, banks have now shifted their attention from firms to consumer, there is still a problem of credit information. As noted in *The Economist* (2002) pages 67-68, many banks in Asia are still in the dark about people walking into their branches because there is no credit bureau where banks can share information about their customers. At present, it is possible that fierce competition in the industry would force banks to lend blindly and recklessly to consumer. Thus, there is a need for banks, on average, to set aside more capital than they do now to cover their potential losses.

The analysis presented in this study contributes to a greater understanding of the performance of the Thai banks. However, a more in-depth analysis in other area such as changes in efficiency and productivity of banks are warranted before coming to a policy conclusion. Overall, the immediate pressing challenge is that of improving bank's own internal efficiencies and increasing priority of cost reduction and risk management. Consolidation to build scale in order to capture opportunities in the market will be a strategic driver for some banks in the near future. In general, banks are subject to the pressures of deregulation (liberalization) and re-regulation (of prudential and supervisory rules), which may restrict bank price competitiveness. Under these conditions, quality service, customer focus, market positioning, product diversification and innovation appear to become relatively more important bank strategies. Thai banks will have to deal with these issues if they want to be competitive in attracting capital.

ENDNOTES

[1] Most of these changes occurred in 1998. For instance, the Bangkok Bank of Commerce (BBC) was ordered to write down its capital and recapitalize then transfer good assets to the Krung Thai Bank and transform itself into an asset management company. The Bank of Asia sold 75 percent of its shares to the ABN Amro Bank while the Thai Danu Bank sold 50.27 percent of its shares to the Development Bank of Singapore. The First Bangkok City Bank was ordered to write down its capital and recapitalize and later acquired by the Krung Thai Bank. The Union Bank of Bangkok was ordered to write down its capital and recapitalize, then merge with 13 finance companies to form a new bank called the Bank Thai.

[2] These are Bangkok Bank (BBL), Bank of Ayudhaya (BAY), Bangkok Metropolitan Bank (BMB), Bank of Asia (BOA), Bank Thai (BT), Krung Thai Bank (KTB), Siam Commercial Bank (SCB), Siam City Bank (SCIB), DBS Thai Danu Bank (DTDB), Thai Farmer Bank (TFB), Thai Military Bank (TMB), UOB Radanasin Bank (UOBR) and Standard Chartered Nakornthon Bank (SCNB).

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