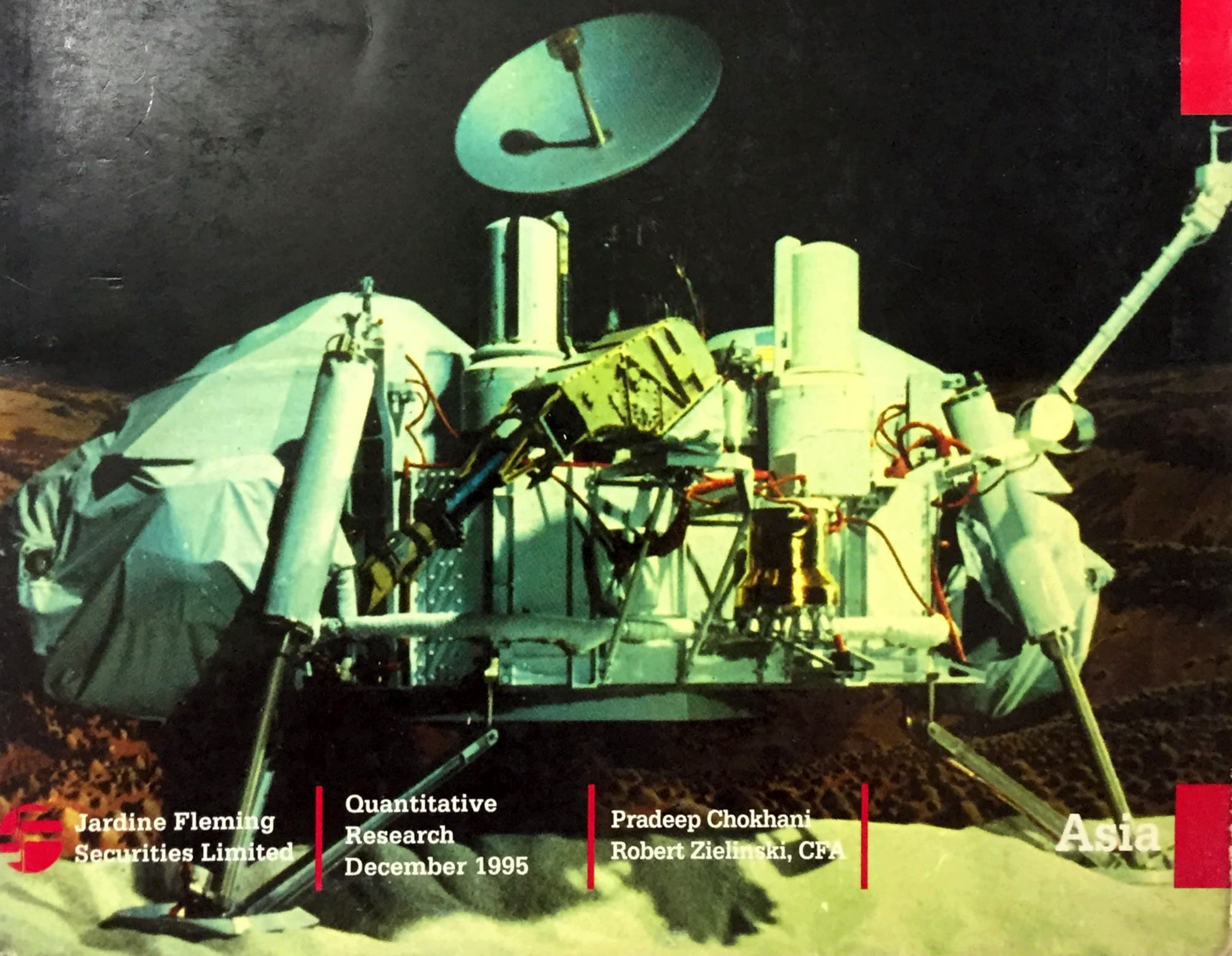
Jardine | Fleming

Asian Banks

Regulations, profitability and valuations



Jardine Fleming Securities Limited

Quantitative Research
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Asia

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Regulations and Asian bank profitability

Banking is a highly regulated industry, with specific rules for reserves, capital adequacy and loan-loss provisioning. Because these regulations vary by country, comparing the profitability of banks operating in different countries is not a straightforward process. For example, should a bank be considered better managed merely because lower tax rates make it more profitable?

In this report, we collected the banking regulations for 11 Asian countries and built theoretical bank profit models based purely on the application of such regulations. The results show that lax regulations should allow banks in Thailand and Hong Kong to be much more profitable than banks in Korea and India.

We developed a measure of the impact of regulations on the profitability of banks and called it the Pradeep Ratio (PR). The PR explains some of the discrepancy in the valuation of bank shares among Asian countries, such as why Malaysian banks earn half as much as Thai banks but are accorded double the PER.

Next, we examined relative valuations among banks to find out if banks from more liberalised markets (i.e. those with fewer rules) were valued more richly than banks that operate in restrictive countries. The answer is generally no.

This outcome makes sense. First, investors generally do not reward companies for having a higher risk profile, which fewer rules would imply. Second, under the assumption that there is a global convergence of banking regulations, one would expect investors to place a higher value on banks in restrictive countries—as the regulations in these countries become more relaxed, the banks' earnings have much more room for growth than banks in already liberalised environments.

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Regulations and bank profitability

Rules distort regional comparisons

Regional comparisons and rankings of Asian banks are becoming increasingly popular, particularly in terms of profitability and valuations. However, we question the validity of these, particularly in terms of assessing the quality of management or the banks' efficiency. This is because there are two sources of bias in the profitability of a bank that are beyond that bank's control.

The first is the bank's operating environment—i.e. the state of the local economy and competition. Since banking is still largely a domestic affair, significant differences in loan growth rates and interest rates and spreads exist between banking markets.

The second is the bank's regulatory environment. Country-specific rules for loan-loss provisions, reserves for deposits and capital adequacy can have a major impact on a bank's profits. Quantifying this impact is the focus of this report.

Regulations have a direct bearing on profits

Although banks have to deal with a large number of regulations, only a few have a direct and easily measureable impact on earnings. These are shown in Figure 1 and described below:

❑ *Cash reserve ratio (CRR):* Banks are required to observe this ratio and keep a certain percentage of their deposits in the form of cash. In many cases, such reserves do not earn any interest and are kept with the Central Bank.

❑ *Liquidity ratio:* To observe this ratio, banks are required to keep a certain percentage of their deposits in the form of government securities. These securities holdings usually earn a lower interest rate than loans.

❑ *Capital adequacy ratio:* This is the ratio of equity capital to risk weighted assets. In general, the risk weightings vary from 0% for cash and government bonds to 50% for housing loans and 100% for ordinary loans.

❑ *General provision requirements:* Banks usually set aside funds to deal with problem loans. The general provision is a fixed percentage of total loans outstanding. Specific provisions are also made for loans which have become non-performing.

❑ *Tax rates:* Tax rates vary from country to country. In some countries, the tax rate can be as low as 15%, while in others it can be as high as 50%. This naturally has a large impact on bank profits.

Fig. 1: The rules affecting Asian banks

%	Cash reserve ratio	Liquidity ratio	Capital adequacy ratio	General provision requirements	Corporate tax rate
India	15	31.5	8	1	46
Malaysia	11.5	17	8	1	30
Pakistan	5	25	13*	2	36
Sri Lanka	15	17	8	1	35
Korea	11.5	30	8	1	30
Singapore	--	19	12	1	27
Thailand	(2)**	7	8	--	30
Indonesia	--	2	8	1	30
Philippines	--	17	10	2	35
Taiwan	--	7	8	1	25
Hong Kong	--	--	12	--	15

**Liabilities cannot exceed 13x equity and reserves*
***2% of the total 7% liquidity ratio is to be kept by way of cash*

Quantifying the rules

To quantify the impact of these five rules on a bank's profitability, we applied them to a generic bank's balance sheet and income statement.

Our starting point was to assume a deposit base of 1,000, comprising current, savings and term deposits. We have assumed that current deposits are 15% of total deposits and earn no interest, savings deposits are 25% of total deposits and earn 5% per annum and term deposits are 60% of total deposits and earn 7% per annum.

On the asset side, we have assumed that fixed assets amount to 2% of total assets. The remaining breakdown of assets is a function of the cash reserve ratio (the percentage of deposits kept as cash) and the liquidity ratio (the percentage of deposits kept as bonds). We have assumed an interest rate of 0% on cash, 8% on securities and 10% on loans.

The amount of equity required to support these assets is based on the capital adequacy ratio. We have assumed a risk weighting of 0% on cash, 0% on securities, and 100% on loans. We have also assumed that all loans are performing.

On the income side, we have assumed that non-interest income is 2% of total assets and operating expenses is 3%. The loan-loss provision is based on the general provision requirement, and we have assumed that the annual increment is based on 25% of the loan portfolio (that is provisions are made for new loans under the assumption of 30% loan growth).

Figure 2 compares the profits for each country, while Figure 3 gives the detailed balance sheet and income statement generated by this procedure.

Fig. 2: Profits according to the rules

	Theoretical net income	Pradeep Ratio x
India	8.7	0.40
Sri Lanka	12.0	0.56
Korea	13.2	0.61
Malaysia	16.2	0.75
Pakistan	17.0	0.79
Philippines	21.9	1.02
Singapore	27.1	1.26
Indonesia	27.3	1.26
Thailand	27.5	1.27
Taiwan	27.6	1.28
Hong Kong	38.7	1.80

Pradeep ratio measures risk

The third column of Figure 2 gives the Pradeep Ratio (PR), which is the ratio of profits generated in a country to the average of profits generated by all countries. The higher the level of the PR, the less restrictive on profits are local banking regulations.

In a sense, the PR is the equivalent of the beta of a stock. If bank regulations are restrictive, limiting banks' ability to take risks, the PR is also low. Conversely, a lack of regulations implies higher profits but also greater risk.

Our analysis shows that the most restrictive banking industries are in India, Sri Lanka, Korea, Malaysia, and Pakistan. The reason for this is the high cash reserve ratio, liquidity ratio, and corporate tax rate. Interestingly enough, the banking industry was nationalised at one point in all of these countries, and the government continues to hold shares in the major banks.

The least restrictive markets are Hong Kong, Thailand, Taiwan, and Indonesia. Fewer regulations allow banks to take greater risks and thereby earn higher returns. Based on the rules alone, Thai banks should be able to earn twice as much as Malaysian banks. And, in fact, they do

'Rule adjusting' financial ratios

One possible application of the Pradeep Ratio would be to calculate 'rule adjusted' financial ratios in the same sense that the beta of a stock is used to risk adjust a fund manager's portfolio. For example, the PER (or ROE or ROA) of a stock could be multiplied by its PR to produce a rule-adjusted PER.

Fig. 3: Comparison of income (rules applied to asset allocation, standardised interest rates)

	India	Pakistan	Korea	Sri Lanka	M'sia	Philippines	T'wan	S'pore	Ind'sia	HK	Thailand
Cash	150	50	115	150	115	0	0	0	0	0	0
Securities	315	250	300	170	170	170	70	190	20	0	70
Loans	560	757	614	717	765	900	989	898	1,040	1,114	989
Fixed assets	20	20	20	20	11	20	20	20	23	20	20
Total assets	1,045	1,077	1,049	1,057	1,061	1,090	1,079	1,108	1,083	1,134	1,079
Deposits											
Current	150	150	150	150	150	150	150	150	150	150	150
Savings	250	250	250	250	250	250	250	250	250	250	250
Term	600	600	600	600	600	600	600	600	600	600	600
SH Equity	45	77	49	57	61	90	79	108	83	134	79
Interest income	81	96	85	85	90	104	105	105	106	111	105
Interest expense	53	55	55	55	55	55	55	55	55	55	55
Net int. income (pre-provision)	28	41	31	31	36	49	50	50	51	57	50
Spread (%)	3	4	3	3	3	5	5	5	5	5	5
Provisions	1	4	2	2	2	5	2	2	1	0	0
Net int. income (post provision)	27	37	29	29	34	45	48	48	50	57	50
Net fee income	21	22	21	21	21	22	22	22	22	23	22
Operating expenses	31	32	31	32	32	33	32	33	32	34	32
Pre tax profits	16	27	19	18	23	34	37	37	39	46	39
Taxes	7	10	6	6	7	12	9	10	12	7	12
Net income	9	17	13	12	16	22	28	27	27	39	27
ROE (%)	19	22	27	21	26	24	35	25	33	29	35
ROA (%)	1	2	1	1	2	2	3	2	3	3	3
BIS equity ratio (%)	8	10	8	8	8	10	8	12	8	12	8

The convergence of regulations and valuations

Having established that regulations have a major impact on the earnings of banks in individual countries, we next argue that there will be a convergence of banking regulations in Asia. This implies that the trend of liberalisation will continue in the most restricted countries (e.g. India and Malaysia), but that rules will probably increase in the least regulated markets (e.g. Hong Kong and Thailand).

Regulations peaked in the 1960s

In the history of banking in Asia, the most regulated era was the 1960s, when many governments nationalised their banking systems. As Figure 4 shows, banks were nationalised in five countries during the 1960s, while in four countries, state banks coexisted with private banks.

Governments usually nationalised banks in order to force them to follow industrial and social policies, such as where to lend and where to open branches. Nationalisation generally also involved the rigid setting of deposit and interest rates.

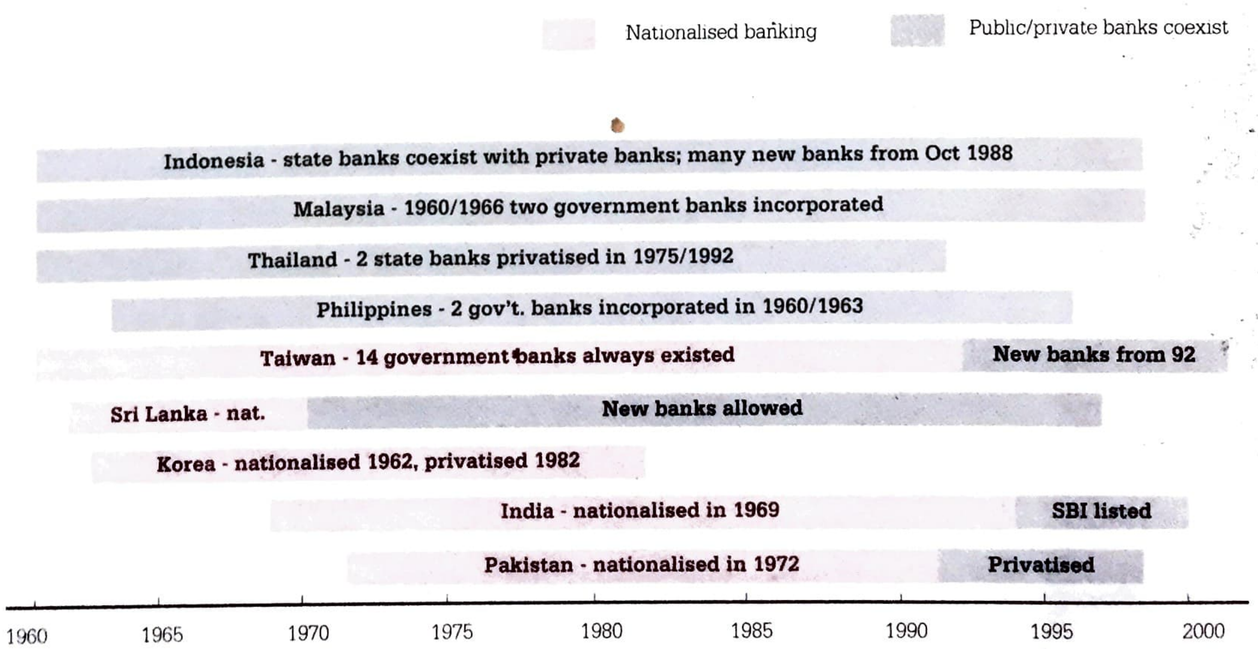
Generally speaking, nationalisation proved to be a financial disaster, and was partially responsible for the economic stagnation suffered by these countries in the late 1970s and early 1980s. It made banks inefficient and unprofitable, and provided few incentives to improve.

Deregulation is the new buzzword

Since the early 1980s, governments throughout Asia have been gradually deregulating their banking structures in order to improve efficiency and stimulate economic growth. While forcing banks to adhere to much stricter provisioning and capital adequacy requirements, governments privatised banks, allowed new banks to be established, deregulated interest rates and permitted banks to engage in new businesses.

Figure 5 shows the history of deregulation of interest rates by country. Two noticeable features are: (1) interest rates have been at least partially deregulated in most markets; and (2) considerable differences still exist in each countries state of deregulation. For example, interest rates were deregulated in Singapore in 1975, but in India only in 1992.

Fig. 4: The trend in Asian banking is toward privatisation



Regulations will converge eventually

Regardless of the current stage of deregulation, we believe that convergence will occur among Asian countries. Just as the BIS capital adequacy standard was introduced for all banks operating globally, we would expect to see a standard for minimum reserve requirements and provisioning requirements be introduced.

Regulation convergence and valuations

The issue of deregulation and the convergence of regulations is an important one. If all banks eventually operate on a level playing field, then banks in highly regulated markets will see their profits rise, while those in excessively liberal markets will suffer.

Thus, investors should value banks that operate in a restrictive environment more highly than those that operate in a liberal environment. This would explain why Thai and Hong Kong banks receive such low valuations, and why Malaysian banks receive such high ones.

Testing the hypothesis

Because regulations and non-performing loans have a major impact on interest rates, profits, and PERs, we decided to test our valuation hypothesis by using the actual prevailing interest rate, non-performing loan ratio, operating expense to assets ratio, fixed assets to total assets ratio and effective tax rate. We calculated a theoretical profit for the banks in each country, assuming that they follow all of the local regulations and maximise the amount of funds in high-yielding loans.

The results are shown in Figure 6. We calculated the Pradeep Ratio based on these figures, and then multiplied it by the PER of each country. This yielded a 'rules-adjusted' PER. The variation in PER among countries declines with the application of the PR. In fact, the standard deviation falls from 4.7x to 4.4x. More significantly, application of the PR reduces the PER of Malaysian banks from 17.2x to 14x while it raises the PER of Hong Kong banks from 9.5x to 14x. In other words, on a 'rules-adjusted' basis, the PERs of Malaysia and Hong Kong are the same.

Fig. 5: The trend in Asian banking is toward deregulation of interest rates

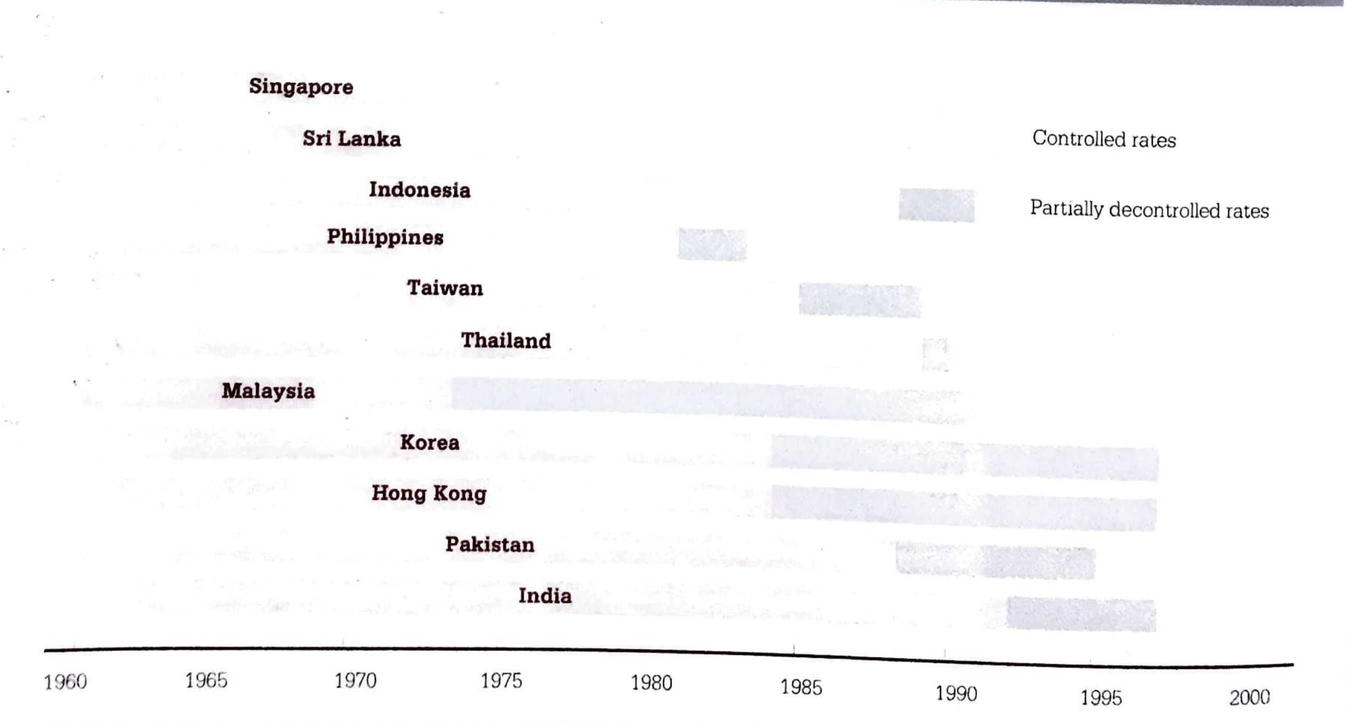


Fig. 6: Regulations, profits and valuations

	Theoretical net income	Pradeep Ratio	1994 PER	Adj. PER
		x	x	x
India	17.0	0.73	16.3	12
Malaysia	19.5	0.83	17.2	14
Pakistan	28.3	1.21	9.7	12
Sri Lanka	19.1	0.82	10.2	8
Korea	16.6	0.71	12.4	9
Singapore	23.1	0.99	18.3	18
Thailand	29.2	1.25	9.7	12
Indonesia	23.0	0.98	8.9	9
Philippines	24.8	1.06	13.4	14
Taiwan	23.2	0.99	23.5	23
Hong Kong	33.4	1.43	9.5	14
Standard Dev.	23		4.7	4.4

Potential for improvement

A second use for this analysis is to highlight which banking industries have the greatest potential to improve. We have calculated the theoretical ROE, ROA and spread for each banking industry based on the rules and the local prevailing interest rates. One key difference is that loan-loss provisions are based on the general provisions, not actual. The other source of variation is in asset allocation.

The figure shows that the countries with the greatest capacities to improve ROE are Korea, India, Pakistan and Sri Lanka. On the other hand, Hong Kong banks are operating closest to their maximum ROE.

In terms of ROA, Pakistan, Korea, Taiwan and Hong Kong have the greatest potential to show an improvement. In the case of Pakistan, it is primarily non-performing loans that is suppressing profits in what would otherwise be a very profitable business. Banks in Taiwan are hampered by excess regulation, while those in Korea suffer from a combination of low-margin US$ lending and non-performing loans.

Fig. 7: Highly regulated banking markets show most scope for improvement

%	Theoretical ROE	Actual ROE	Potential improvement	Theoretical ROA	Actual ROA	Potential improvement	Theoretical Spreads	Actual Spreads	Potential improvement
	%	%	%	%	%	%	%	%	%
India	37.3	14.5	156.9	1.62	0.64	155.0	4.69	3.38	38.7
Malaysia	31.8	19.0	67.1	1.83	1.15	59.1	3.04	2.55	18.9
Pakistan	36.8	16.5	123.2	2.63	0.74	255.1	6.07	3.76	61.5
Sri Lanka	33.9	16.3	107.3	1.81	1.51	20.1	4.82	3.48	38.6
Korea	34.6	8.2	320.3	1.59	0.50	215.4	2.29	1.49	53.3
Singapore	21.6	12.3	75.4	2.08	1.32	58.0	3.12	1.70	83.5
Thailand	37.2	22.8	63.3	2.71	1.77	53.3	4.68	4.12	13.7
Indonesia	27.6	17.0	62.2	2.12	1.36	55.9	4.45	3.44	29.6
Philippines	28.6	17.9	60.1	2.28	1.99	14.5	5.75	5.69	1.0
Taiwan	29.6	15.9	86.6	2.15	0.64	236.8	3.82	1.73	121.1
Hong Kong	25.0	19.1	30.9	2.95	1.01	191.3	3.88	2.80	38.5

Fig. 8: Comparison of income (rules applied to asset allocation, actual interest rates in each country)

	India	Pakistan	Korea	Sri Lanka	M'sia	Philippines	T'wan	S'pore	Ind'sia	HK	Thailand
Cash	150	50	115	150	115	0	0	0	0	0	0
Securities	315	250	300	170	170	170	70	190	20	0	70
Loans	570	769	602	706	765	866	981	891	1,040	1,114	981
Fixed assets	11	8	31	30	11	50	28	26	23	20	27
Total assets	1,046	1,077	1,048	1,056	1,061	1,087	1,078	1,107	1,083	1,134	1,079
Deposits											
Current	160	250	320	220	250	100	350	170	150	120	30
Savings	240	420	680	780	140	560	200	640	200	320	250
Term	600	330			610	340	450	190	650	560	720
SH Equity	46	77	48	56	61	87	78	107	83	134	79
Interest income	119	160	88	151	75	160	80	60	178	81	136
Interest expense	71	95	65	101	43	101	40	26	131	38	86
Net int. income (pre-provision)	49	65	23	50	32	60	40	34	47	43	49
Spread (%)	5	6	2	5	3	6	4	3	4	4	5
Provisions	2	5	2	2	2	5	3	3	2	0	0
Net int. income (post provision)	47	60	21	47	30	54	37	31	46	43	49
Net fee income	13	19	17	25	15	24	7	13	15	19	12
Operating expenses	28	35	14	43	17	40	13	12	28	23	20
Pre tax profits	31	44	24	29	28	38	31	32	33	39	42
Taxes	14	16	7	10	8	13	8	9	10	6	13
Net income	17	28	17	19	19	25	23	23	23	33	29
ROE (%)	37	37	35	34	32	29	30	22	28	25	37
ROA (%)	2	3	2	2	2	2	2	2	2	3	3
BIS equity ratio (%)	8	10	8	8	8	10	8	12	8	12	8

The regulations

Capital requirements

Hong Kong

Minimum paid-up capital

Local banks: HK$150m

Restricted-licence banks: HK$100m

Deposit-taking companies: HK$25m

Capital adequacy ratio

4% of risk-weighted assets for Tier I capital

8% of risk-weighted assets for Tier I & II

India

Minimum paid-up capital

State banks

with branches in 1 state: Rs500,000

with branches in many states: Rs1m

New private banks: Rs1bn

Capital adequacy ratio

All banks: 8% of risk-weighted assets

Indonesia

Minimum paid-up capital

New private banks: Rph50bn

New joint venture banks: Rph100bn

Capital adequacy ratio

8% of risk-weighted assets by Dec 1993

Korea

Minimum paid-up capital

Nationwide commercial banks: won 25bn

Local banks: won 3bn

Capital must at least be 5% of its outstanding liabilities arising from guarantees or other contingent liabilities.

Capital adequacy ratio

All banks: 8% of risk-weighted assets

Malaysia

Minimum paid-up capital

Commercial banks: M$20m

Capital adequacy ratio

Domestic banks: 8% of risk-weighted assets

Pakistan

Minimum paid-up capital

All banks: Rs500m

Capital adequacy ratio

Liabilities cannot exceed 13x capital plus reserves

Contingent liabilities cannot exceed 10x capital plus reserves

Philippines

Minimum paid-up capital

Universal commercial banks: Php1.5bn

Regular commercial banks: Php750m

Capital adequacy ratio

Universal banks: 10% of risk-weighted assets

Regular banks: 8% of risk-weighted assets

Singapore

Minimum paid-up capital

Local banks: S$800m

Foreign banks: S$200m

Capital adequacy ratio

Local banks: 12% of risk-weighted assets*

*Weights are higher than in Basle accord

Sri Lanka

Minimum paid-up capital

All banks: Rs100m

Capital adequacy ratio

1994 & 1995: 6% of risk-weighted assets

1996 onwards: 8% of risk-weighted assets

Taiwan

Minimum paid-up capital

Commercial banks: NT$10bn, 20% owned by the general public

Foreign banks: NT$150m plus NT$120m per branch

Capital adequacy ratio

All banks: 8% of risk-weighted assets

Thailand

Minimum paid-up capital

Capital must be 20% contingent liabilities

Foreign banks: Bt125m per branch

Capital adequacy ratio

Domestic banks: 8% of risk-weighted assets (5.5% Tier I capital and 2.5% Tier II capital)

Foreign bank: 6.75% of risk-weighted assets

Ownership restrictions

Hong Kong

Anyone who acquires at least a 10% stake in a bank shall apply to the Commissioner for Banking for permission to exercise her voting rights.

India

Ownership above 1% of total capital must be approved by Reserve Bank of India

Indonesia

Corporation: may own shares up to its own net worth

Foreign ownership: not more than 49%

Foreign banks: maximum equity participation of 85% of capital

Korea

Individuals: 4% of voting stock of nationwide commercial banks, 15% of local commercial banks

Malaysia

Individuals (or companies 75%-owned by one family): 10% of shares

Corporations (except bank holding companies): 20% of shares

*Pre-'86 ownership interests may be higher

Pakistan

Bank sponsors must own at least 25% of shares at all times

Philippines

Individuals (or companies majority-owned by one family): 20% of equity

Corporations: 30% of equity

Group of companies majority-owned by same people: 20% of equity

Foreign equity participation: 30% of voting stock, plus 10% of non-voting stock (rules do not apply to pre-89 ownership structure)

Singapore

Individuals: 20% of shares (unless approved by MAS)

Foreign ownership: maximum of 40% of shares

Sri Lanka

Individuals/groups: 10% of paid-up capital

Foreign ownership: 49% of paid-up capital 1996 onwards: 8% of risk-weighted assets

Taiwan

Individuals: 5% of equity

Individuals and related persons: 15% of equity

Thailand

Individuals: must number at least 250 and own at least 50% of shares, limited to 0.5% each

Individuals and related persons or business partners: 5% of shares

Foreign ownership: 25% of shares

Lending regulations

Hong Kong

Property: 40% of total loans (guideline only)

Loan/value ratio: 70% maximum for residential mortgages

No restrictions on who or which sectors should receive loans

India

Priority sectors of the economy: minimum 40% total loans (at least 18% to agriculture and 10% to small businesses)

Exports: 10% of total loans

Indonesia

Small businesses: 20% of total loans must be made to small businesses; foreign banks, however can choose to make their 20% allocation to export businesses.

Loan/deposit ratio: must be less than 110%

Korea

Loans to small and mid-sized businesses:

- nationwide banks: 45% of new loans
- regional banks: 70% of new loans
- foreign banks: 35% of new loans

Loan/deposit ratio: 100% maximum

Foreign currency loans: Only for importing capital equipment and high technology

Malaysia

Bumiputra community: lending must be at least 20% of end-1992 loans outstanding; M$40m of loans under principal guarantee scheme

Property: 75,000 units with an aggregate value of M$4.5bn, at max. 1.75% above base lending rate or 9%, whichever lower

Single borrower: The amount of a loan cannot exceed 30% of a bank's capital funds.

Large loans: Any loan that exceeds 15% of a bank's capital is considered a large loan. Total large loans must not exceed 50% of a bank's total credit facilities.

Pakistan

Statutory loan/deposit ratio: no longer applies

Philippines

Regional: at least 75% of a regions total deposits (or 60% of deposits can be made to agriculture and export industries)

Agriculture: 25% of new loanable funds (10% for agrarian reform, 15% for other)

Small businesses: 10% total loans

Loan/value ratio: 70% for property loans, or other secured loans

Sri Lanka

Priority sectors: Agriculture, industry, export and tourism have been identified as priority lending areas

Taiwan

Loan/deposit ratio: total medium term loans cannot exceed total time deposits.

Small and medium-sized businesses: 70% of loans by medium business banks

Building and construction loans: up to 20% of deposits and maximum 30-year maturity

Singapore

Property: loans secured by immovable property cannot in aggregate exceed 30% of its deposits in Singapore (including deposits and borrowings from other banks)

Thailand

Agriculture/rural areas: at least 20% of loans

Region: 60% of deposits raised in a region must be lent out in that region

Priority sectors of the economy: commercial banks and central bank each to commit 50% of credit requested, with the central bank providing the remaining 50%.

Exposure limits

Hong Kong

Single borrower
- 25% of capital

Investments
- not more than 25% of capital and reserves to be invested in land (except land held for conducting bank business or acquired under a mortgage disposed of within 18 months)

India

Single borrower
- individuals: 25% of net worth
- groups: 50% of net worth

Indonesia

Single borrower
- individuals: 20% of capital
- related groups: 35% of capital ; 12.5% of regulatory capital

Borrowers associated with bank
- related parties: 10% of capital (as of March 1997)
- directors, commissioners, their families, employees, companies they own: 10%
- shareholders, families or companies they own: 20% of capital if stake is less than 10%; 10% capital if stake is more than 10%

Foreign exchange
- state banks: ceiling on foreign liabilities
- private banks: no ceiling, but amount must be reported

Investments
- permitted to invest in banks or other financial institutions

Korea

Single borrower
- 20% of capital (unless approved by superintendent of banks)
- 40% of capital for loan guarantees

Other lending limits
- no loans (except petty loans) to officers and employees
- no loans for securities or commodities speculation
- no loans for purchase of bank's stock
- loans to subsidiaries: 20% of capital

Foreign exchange
- short spot position up to higher of 1% of capital or US$2m

Investments
- no shares in any other bank
- no more than 10% equity in any other corporation
- no more than 100% of capital in shares and bonds (> 3-yr)
- no ownership of property (except property necessary for operations; limited to 100% of capital)

Malaysia

Single borrower
- 30% of bank's capital

Other lending limits
- no loans to directors, officers, employees, their families, companies in which any of these own more than 5% (except for housing loans to family members)

Investments
- no shares of other banks or financial institutions
- shares of other corporations listed on KLSE's main board permitted, up to 5% of bank's capital and reserves
- exceptions to above permitted only in settlement of debts or through debt/equity swaps and must be disposed of within 12 months
- no ownership of land (other than land needed for operations)

Pakistan

Single borrower
- individuals: 30% of capital (no more than 20% in form of fund-based lending)

Other lending limits
- no loans to directors or their families
- no loans to any entity owning more than 5% of bank's capital

Exposure limits

Philippines

Single borrower limits exist for
- individuals
- related groups

Borrowers associated with bank
- loans to directors, officers or shareholders not to exceed amount of their deposits and book value of their contribution to capital
- aggregate of loans to directors, officers or shareholders not to exceed 15% of bank's loan portfolio or 100% of capital

Foreign exchange
- long foreign exchange position. 20% of capital
- short foreign exchange position. 10% of capital

Singapore

Single borrower
- 25% of capital

Other lending limits
- large loans (more than 15% of bank's capital to a single borrower) not to exceed 50% of bank's total loans
- no loans against security of bank's own shares
- no unsecured loans over S$5,000 to directors
- no unsecured loans above 1-year's salary to officers or employees

Thailand

Single borrower
- 25% capital

Other lending limits
- no loans to directors, their families or businesses in which they hold a 39% interest

Foreign exchange
- net foreign asset position not to exceed 25% of capital
- net foreign liability position not to exceed 20% of capital

Investments
- shares or debentures of incorporated companies not to exceed 20% of capital or 10% of equity without central bank approval
- no shares of another bank (except those acquired in settlement of debts, must be disposed of within 6 months)
- cannot accept own or other bank's shares as security for a loan
- no ownership of property, except as necessary for operations or acquired in settlement of debts (must be disposed of in 5 years)

Taiwan

Single borrower limits exist

Foreign exchange
- Central Bank sets ceilings on banks' foreign liabilities

Investments
- no ownership of property, except property necessary for operations, unless certified by central authorities as being in accordance with government's economic development plan

Reserve requirements

Hong Kong

No reserve requirements

India

Cash reserve ratio: 3% of daily average demand and time deposits (banks are to build up these reserves by transferring not less than 20% of net profits to Reserve Bank of India) up to a maximum of 15%

Statutory liquidity ratio: 25%-40% of deposits in the form of gold or unencumbered securities.

Indonesia

Cash reserve ratio: 2% of deposits as cash on hand or deposits with Bank Indonesia

Korea

Cash reserve ratio: 11.5% of won-denominated deposits, 1% of non-residents' foreign currency deposits

Liquidity reserve ratio: 30% of deposits must additionally be held as liquid assets

Malaysia

Statutory reserve requirement: 11.5% of eligible liabilities* as cash

Liquidity reserve ratio: 17% of eligible liabilities* as liquid assets

*Deposits, NCDs, net interbank transactions and net repurchase agreements

Pakistan

Cash reserve ratio: 5% of deposits with the Central Bank

Liquidity reserve ratio: 25% of deposits invested in government securities

Philippines

Cash reserve ratio: 17% of deposits (special time deposits are exempt)

Liquidity reserve ratio: Government owned or controlled banks must keep 50% of their government deposits in liquid assets.

Singapore

Reserve fund: banks to build up reserves by transferring funds from net profits as follows:

- 50% of net profits, if reserve fund is less than 50% of paid-up capital
- 25% of net profits, if reserve fund is 50%-100% of paid-up capital
- 5% of net profits, if reserve fund is at least 100% of paid-up capital

Cash reserves: cash balances of up to 30% of deposits may be required by authorities

Sri Lanka

Cash reserve ratio: 15% of deposits

Reserve fund: banks to build up reserves by transferring funds from net profits as follows:

- 20% of net profits, until reserve fund equals 50% of paid-up capital
- 10% of net profits, until reserve fund equals 100% of paid-up capital

Taiwan

Liquidity reserve ratio: 7% of total liabilities

Reserve account with central bank:

Checking accounts: 15-40%
Demand deposits: 10-35%
Savings deposits: 5-20%
Time deposits: 7-25%
Time-savings deposits: 5-20%

Thailand

Cash reserve ratio: no more than 2.5% of total deposits

Liquidity reserve ratio: 7% of total deposits (2% in interest-free deposits at the Bank of Thailand, up to 2.5% in cash, remainder in government securities)

Accounting for asset quality

Hong Kong

Loan classification

- Performing: borrower meeting commitments
- Special mention: borrower experiencing difficulties
- Substandard: borrower's ability to repay in jeopardy
- Doubtful: borrower unlikely to repay; loss likely
- Loss: loan uncollectible after institution of legal proceedings

Loan-loss provisions

- Performing: no general provision
- Special mention: certain general provisions may be required
- Substandard: some specific provisions may be set aside
- Doubtful: specific provisions should be made; accrual of interest should cease or be taken into the suspense account.
- Loss: all principal and interest not covered by collateral must be written off

India

Loan classification

- Non-performing loans: 180 days overdue
- Bad and doubtful: NPL over 2 years

Loan-loss provisions

- Substandard: NPL less than 2 years: 10% of loan value
- Basic provisioning: 100% loan less collateral
- Doubtful to 1 year: 20% collateral
- Doubtful 1 to 3 years: 30% collateral
- Doubtful over 3 years: 50% collateral
- Loss assets: 100% collateral

General provisions

- Loans under Rs25,000: 7.5% in FY95, 10% in FY 96

Indonesia

Loan classification

- Current: no arrears in principal over 1-6 months*
- Substandard: in arrears for 6-9 months*
- Doubtful: loan is collectible with 75% collateral, or uncollectible with 100% collateral
- Loss: no remedial action within 21 months of doubtful classification

Loan-loss provisions

- Current: 0.5%
- Substandard: 3% (after deducting collateral), 10% from 1996
- Doubtful: 75% after deducting collateral
- Loss: 100% after deducting collateral

General provisions

- 0.5%

*Depends on type of loan

Korea

Loan classification

- Normal: no payment arrears over 3 months
- Cautious: payments in arrears for 3-6 months
- Substandard: payments in arrears for more than 6 months but covered by collateral
- Loss: payments in arrears for more than 6 months and not covered by collateral; collection of payments not expected

Loan-loss provisions

- Cautious: 1%
- Substandard: 20%
- Loss: 100%

Malaysia

Loan classification

- Substandard: payments in arrears for 6-12 months
- Doubtful: payments in arrears for 12-24 months
- Bad: payments in arrears for more than 24 months

Loan-loss provisions

- Substandard: 0%
- Doubtful: 50%
- Bad: 100%

General provisions

- 1% of loans less interest-in-suspense less specific provisions

Pakistan

Loan classification

- Special mention: in arrears for more than 90-180* days
- Substandard: in arrears for more than 180-360* days
- Doubtful: in arrears for more than 360-720* days
- Loss: in arrears for more than 2-3* years

Loan-loss provisions

- Special mention: 2% loans less liquid assets
- Substandard: 25%
- Doubtful: 50%
- Loss: 100%

**Depends whether loan is short-term or long-term*

Accounting for asset quality

Philippines

Loan classification
- Special mention. Potential payment problems
- Substandard: payments in arrears for 6 months but in process of collection; unsecured loans in arrears for 90 days
- Doubtful: substandard loans without 20% principal repayment in past 12 months or secured by collateral of declining value
- Loss. uncollectable with worthless capital

Loan-loss provisions
- Special mention: 0%
- Substandard: 25% of unsecured portion
- Doubtful: 50% of loan
- Loss: 100% of loan

General provisions
- 2%

Singapore

Loan classification

A loan is non-performing once it is 180 days overdue
- Substandard
- Doubtful
- Loss

Loan-loss provisions
- Substandard: none
- Doubtful: 50% (on loan less collateral)
- Loss: 100% (on loan less collateral)

General provisions
- 1%

Sri Lanka

Loan classification
- Past due: payments in arrears for 3-6 months

Loan-loss provisions
- Overdue 6-12 months: provisioning is 20% of loan less collateral
- Overdue 12-18 months: provisioning is 50%
- Overdue 18 months or more: provisioning is 100%
- Bad: 100%

General provisions
- 3%

Taiwan

Loan classification
- Overdue: interest payments in arrears for more than 6 months, principal payments in arrears for more than 3 months
- Called: interest payments in arrears for 6 months (or less than 6 months but collateral called by other creditors)
- Bad: payments in arrears for over 2 years

General provisions
- 1%

Thailand

Loan classification
- Non-performing loans. 180 days overdue (no collateral)
  360 days overdue (with collateral)
- Substandard
- Doubtful
- Bad

Loan-loss provisions
- Substandard: loan less collateral
- Doubtful: 5-year average of written off bad debts/total loans
- Bad: 100%

Recoveries
- Treated as an increase in provisions

Deposit insurance

	Deposit insurance
Hong Kong	None
India	Every depositor of an insured bank that goes into liquidation is entitled to receive up to Rs100,000
Indonesia	None
Korea	Scheduled to be introduced by 1997. Insurance rate will be 0.02% of total deposits.
Malaysia	None
Pakistan	None
Philippines	Philippine deposit insurance corporation membership is compulsory for commercial banks The maximum coverage is Php100,000 per depositor
Singapore	None
Sri Lanka	None
Taiwan	Participation in the central deposit insurance corporation is voluntary; most private and public banks are not members. In June 1992, 39% of deposits were insured.
Thailand	None