Bank of Thailand

Supervision Report

2006
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CHAPTER 1

Economic and Financial Market Developments

1.1 Economic Developments in 2006

In 2006, the Thai economy expanded by 5 percent, accelerating slightly from 4.5 percent in 2005. Strong export growth was the main growth engine of the economy in 2006, while domestic demand decelerated due to several negative factors, including oil price hikes, unrest in the southern region, prolonged and severe floods, and political uncertainty. On external front, the current account balance returned to a surplus, due to improved export performance, the slowdown in imports in line with domestic demand, and considerable expansion in the tourism sector.

Chart 1 : Gross Domestic Product (1998 Prices)

On the supply side, the Manufacturing Production Index (MPI) continued to expand well at 7.4 percent, despite higher production costs and increased competition on both domestic and external fronts, supported particularly by continued growth in the electronics sector. As for the agricultural sector, growth of farm income from major crops rose by 30.3 percent, aided by favorable production conditions and prices. The services sector improved from the previous year and the number of tourists increased by 20 percent, due to the recovery of tourism in the Andaman region from the impacts of the Tsunami in 2004.

Source : NESDB
Chart 2: Manufacturing Production Index Growth*

Source: BOT Survey

*With the coverage of 76 products

Chart 3: Private Consumption Expenditure Growth

Source: NESDB
In 2006, private consumption rose by 3.1 percent, slowing down from 4.3 percent in the previous year, due to more cautious consumer spending in response to higher oil prices, inflation, and interest rates. Private investment expanded by 3.9 percent, down from 10.9 percent in the previous year, due to the deceleration of investment in both machinery and construction as private sector sentiments were negatively affected by floods and political uncertainties.

On the external front, exports rose at an accelerated rate of 17.4 percent while import growth decelerated to 7 percent, resulting in the turnaround in the trade balance to a surplus of 2.2 billion US dollars following a deficit of 8.5 billion US dollars in the previous year. The services, income and transfers account also recorded a surplus of 1 billion US dollars, and the overall current account returned to a surplus of 3.2 billion US dollars (excluding reinvested earnings, the current account would register a surplus of 7.4 billion US dollars), from a deficit of 7.9 billion US dollars in the previous year.
On the policy front, the government pursued a balanced budget in fiscal year 2006, and the government’s cash balance registered a small surplus equivalent to 0.06 percent of GDP, while public sector debt stood at 40.5 percent of GDP. As for monetary policy and monetary conditions, interest rates in the money market as well as the deposit and loan rates of commercial banks rose, following the monetary tightening of the Bank of Thailand (BOT) in the first half of 2006.¹

However, during the second half of the year, the aforementioned interest rates stabilized as the BOT maintained the same policy rate until the end of the year. Commercial banks’ deposit growth for the whole year slowed down from the previous year. Throughout the year, the growth in commercial banks’ claims on the private sector also decelerated, in line with the slowdown in private investment and the decline in private sector confidence.

¹ During the first half of 2006, the Bank of Thailand adjusted the policy rate upward four times, increasing the policy rate from 4.00 percent at the beginning of the year to 5.00 percent in June.

### Table 1: Balance of Payments

<table>
<thead>
<tr>
<th>Billion USD</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2006</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H1</td>
<td>H2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exports (f.o.b.)</td>
<td>94.9</td>
<td>109.2</td>
<td>128.2</td>
<td>59.7</td>
</tr>
<tr>
<td>(% change)</td>
<td>(21.6)</td>
<td>(15.0)</td>
<td>(17.4)</td>
<td>(16.8)</td>
</tr>
<tr>
<td>Imports (c.i.f.)</td>
<td>-93.5</td>
<td>-117.7</td>
<td>-126.0</td>
<td>-61.6</td>
</tr>
<tr>
<td>(% change)</td>
<td>(25.7)</td>
<td>(25.9)</td>
<td>(7.0)</td>
<td>(4.3)</td>
</tr>
<tr>
<td>Trade balance</td>
<td>1.5</td>
<td>-8.5</td>
<td>2.2</td>
<td>-1.9</td>
</tr>
<tr>
<td>Services &amp; transfers</td>
<td>1.3</td>
<td>0.7</td>
<td>1.0</td>
<td>0.3</td>
</tr>
<tr>
<td>Current A/C</td>
<td>2.8</td>
<td>-7.9</td>
<td>3.2</td>
<td>-1.6</td>
</tr>
<tr>
<td>Capital and financial account</td>
<td>3.6</td>
<td>12.6</td>
<td>7.9</td>
<td>5.6</td>
</tr>
<tr>
<td>Monetary authorities</td>
<td>3.1</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Government</td>
<td>-1.5</td>
<td>-1.0</td>
<td>-0.6</td>
<td>-0.2</td>
</tr>
<tr>
<td>Bank</td>
<td>2.0</td>
<td>0.3</td>
<td>-8.6</td>
<td>-4.9</td>
</tr>
<tr>
<td>Others</td>
<td>0.1</td>
<td>13.2</td>
<td>17.1</td>
<td>10.7</td>
</tr>
<tr>
<td>Balance of payments</td>
<td>5.7</td>
<td>5.4</td>
<td>12.7</td>
<td>4.7</td>
</tr>
<tr>
<td>Reserves</td>
<td>49.8</td>
<td>52.1</td>
<td>67.0</td>
<td>58.1</td>
</tr>
</tbody>
</table>

Source: BOT
Overall, economic stability in 2006 was satisfactory. Internal stability remained sound. Core inflation stayed within the policy target range of 0 - 3.5 percent and averaged at 2.3 percent for the whole year. Headline inflation also slowed down after the first half of the year. Unemployment rate was low at 1.5 percent of labor force. External stability was also satisfactory. The current account was in surplus for the year and the ratio of international reserves to short-term debt remained at a high level, despite a slight increase in total external debt from the same period last year.

On the outlook for 2007, the economy is expected to decelerate somewhat, growing in a range of 4.3 - 4.8 percent compared to 5 percent in 2006, due to softness in domestic demand, though this should show some pick-up in the latter half of the year aided by decline in inflation and increased public investment. Exports would remain the main growth engine with continued growth of trading partners. Price pressures would remain well contained, with core inflation staying in the range of 0.8 - 1.3 percent. Going forward, the external risks to growth included the lower-than-expected trading partners’ economic growth, the appreciation of the baht, and volatile oil prices. Domestic risks included a decline in consumer and investor confidence due to domestic political uncertainty.
1.2 Developments in Money Market, Foreign Exchange Market, and Capital Market

Money Market

Chart 6: Money Market Conditions

Short-term money market rates rose throughout the first half of 2006, in line with the cumulative policy interest rate hike of 100 basis points, from 4.00 percent per annum as of end-2005 to 5.00 percent per annum by mid-2006. The policy rate increase was a result of the Monetary Policy Committee’s assessment that there were still inflationary pressures in the economy, including the second-round effect from high oil prices. In the latter half of the year, however, the policy interest rate leveled off as inflationary pressures subsided, and so did short-term money market rates. For the entire year, the 14-day repurchase and interbank rates averaged at 5.00 and 4.69 percent per annum, up from the previous year’s averages of 2.63 and 2.64 percent per annum, respectively.
In 2006, overall government bond yields also rose from the previous year but shifted down slightly for the most part of the year. Distinctively, the yield curve for government bonds flattened as short-term yields increased somewhat in tandem with the policy rate while long-term yields moved relatively less, which was consistent with a fairly well anchored inflation expectation over the long horizon. As a result, the spread between long-term and short-term yields narrowed significantly. In the second half of December, however, the yield curve was abruptly tilted upwards by the implementation of the reserve requirement on short-term capital inflows by the Bank of Thailand together with the expectation of a significant increase in the supply of long-term government bonds.
The Thai baht fluctuated within the range of 35.23 - 40.89 baht per US dollar in 2006, averaging at 37.93 baht per US dollar and appreciating from the previous year’s average of 40.29 baht per US dollar by 6.2 percent. Throughout the year, the currency was on an appreciating trend with both internal and external factors contributing to the strength of the baht.

On the external front, the weakening of the US dollar together with robust regional growth which attracted capital inflows, exerted upward pressure on the baht as well as other regional currencies. Moreover, the baht experienced additional pressure from domestic factors, including capital inflows from mergers and acquisitions in the communications sector, capital mobilization overseas by a large beverage firm, and portfolio investment, part of which is associated with currency speculation. The last factor in particular caused the baht to appreciate rapidly in the last quarter of the year, with the currency’s strength going beyond prevailing economic fundamentals and the pace of appreciation of regional currencies. After several attempts to stem the accelerating currency appreciation using various measures, such as imposing a longer bond holding period for non-residents, the BOT implemented the Unremunerated Reserve Requirement (URR) measure on short-term capital inflows on 18 December 2006, to break the momentum of the currency appreciation which was deemed harmful to the adjustment in the real sector.
Capital Market

Chart 9: SET Index and Net-buy of Stocks by Non-residents

- Securities offering in the primary market

Equity issuance amounted to 166.9 billion baht in 2006, rising from 148.2 billion baht in 2005. Meanwhile, the issuance of corporate long-term debt securities dropped from 181.5 billion baht to 156.4 billion baht, but the issuance of short-term debt securities increased noticeably, both for non-financial corporations which used the mobilized funds as working capital and for financial institutions as an alternative source of funds. The sharp acceleration of commercial papers thus reflected funding source diversification as well as financing cost management.

- Movements in the secondary market

At end-2006, the SET index stood at 679.84, down from 713.73 at end-2005 due primarily to selling from foreign investors following the implementation of the URR measure in mid-December. For the entire year, the stock market experienced greater volatility in comparison to 2005, as a result of more volatile international capital flows. In the first quarter, the stock market rallied from capital inflows, before slump ing in the second quarter as international investors’ risk aversion led to global market sell-offs. The market quickly rebounded in the subsequent quarter, and foreign capital continued to flow into the stock market in the last quarter of the year before December 18, in expectation of foreign exchange
gains. The implementation of the URR on December 18 strongly affected foreign investors’ sentiments, however, leading to sharp sell-offs that caused the SET index to plunge by 14 percent before gradually recovering towards the end of the year as the URR measure pertaining to stock trading was soon lifted to shore up investors’ confidence.

In the debt securities market, the average daily trading volume in 2006 was 28.6 billion baht, up significantly from last year’s average of 15.8 billion baht. This was supported by an increase in the issuance of debt securities by both the public and private sectors as well as a clearer political picture in the first half of the year. Nonetheless, volatility of government bond yields heightened from the fluctuation in capital flows, the expectation of changes in policy rate and the URR measures.

1.3 Developments in the Financial Institutions System

The financial landscape continued to evolve in line with efforts in structural reforms set in Financial Sector Master Plan (FSMP) and regulatory reforms to foster risk-based supervision in keeping with international standards. These reforms have enhanced competition in the system as well as fostered resiliency to withstand challenges. In 2006, the banking system faced many challenges, including economic slowdown, the rising interest rate environment, increased volatility in financial market, as well as increased competition from banks, capital market, and non-banks, partly as a consequence of structural change in the financial landscape as a result of globalisation and the FSMP.

In managing these challenges, the banking system has adjusted flexibly and shown resiliency, with continued profitability, improved efficiency, strengthened financial conditions, and improved risk management. In line with the Bank of Thailand’s emphasis on strengthening risk-based supervision in line with international standards, the banking system continued to make progress in key areas including the strengthened provisioning requirement and is on track for adoption of Basel II by the end of 2008.
Structural Reform and Developments

The development of the financial landscape has been fostered by the implementation of the medium-term FSMP since the latter part of 2004. The FSMP sets out three main visions for the Thai financial sector development. First Vision: To provide financial services to all potential, economically viable, users. Second Vision: To develop competitive, efficient, stable, and balanced financial system. Third Vision: To ensure fairness and protection for customers whereby financial institutions must abide by good corporate governance standard.

The measures carried out in the FSMP includes: for the First Vision, measures to encourage the development of new commercially-viable microfinance business model in commercial banks, with the granting of retail banking license. Key measures for the Second Vision are aimed at promoting competitive, efficient, stable, and balanced financial system—through licensing reform, implementation of the “One-presence” policy, removal of regulatory arbitrage caused by International Banking Facilities, and the relaxation of rules for outsourcing namely, non-core functions, and distribution channels. These policy sets, together, have removed pre-existing regulatory arbitrage from overlapping scope of business, resulting in significant consolidation and reduction in the number of financial institutions under the supervision of the Bank of Thailand. The number of financial institutions fell from 83, as of December 2003, to 44 at end-2006.

Furthermore, on reforming the regulatory framework, the BOT has proposed amendments to the Bank of Thailand Act to further its operational independence, and the draft Financial Institutions Businesses Act (FiBA) to improve efficiency of financial institutions supervision, especially with respect to consolidated supervision. In addition, the proposed draft Deposit Insurance Agency Act (DIA) which is to replace the blanket deposit guarantee will encourage commercial banks to strengthen their financial status and credibility, as well as raise risk awareness of depositors.

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2 Types of licensing for domestic deposit taking financial institutions have now been reduced from six types - commercial bank, foreign bank branch, International Banking Facilities, restricted bank, finance company, and credit foncier company - to four types - commercial bank, retail bank, foreign bank branch, and subsidiary of a foreign bank.

3 “One-presence” policy principle required that individual financial conglomerates are allowed to have only one deposit-taking financial institution within their group.
Key Developments and Performance of the Banking System

Profitability of the banking system continued to improve in 2006, as marked by the increased operating profit despite the slowdown in loan growth, particularly corporate loan, in line with weak investment demand. Consumer loan growth, though moderated, remained relatively buoyant and continued to reap a growing share in overall loan portfolio. The flexible asset-liability management, particularly management of deposit structure, and improved risk management which strengthened asset quality, contributing to favorable net interest margin (NIM) that supported the improved operating profit.

In light of the tightening of monetary policy in the beginning of the year, the banking system locked-in long-term liability rate by inducing depositors to shift to longer term deposits through increasing the long-term deposit rates. The share of savings and 3-month time deposit fell, while the share of 6-month to 1-year time deposit rose. Overall, liquidity remained ample in the banking system throughout 2006, with a loan-to-deposit ratio of 89.2 percent.

As for non-interest income, this component also continued to expand, supported by expanded business scope, though growth rate moderated in line with overall moderation in related underlying activities such as credit and credit card growth. Overall, operating profit remained satisfactory, although the net return-on-assets (ROA) declined as a result of the strengthened provisioning requirement in accordance with the adoption of International Accounting Standard (IAS) No.39 for fair-valuation of non-performing loans (NPLs).

The banking system continues to strengthen risk management system, and increasingly adopt tools such as the internal rating system, credit scoring models, and stress testing. Thus, significant progress has been made in the areas of information system and risk management framework, as they remain set on track to adopt Basel II in 2008.
CHAPTER 2

Developments in the Banking System

The overall profitability and efficiency of the banking system improved in 2006. Commercial banks recorded higher operating profits, although net profits moderated due to the strengthened provisioning requirement in line with the adoption of International Accounting Standard (IAS) No. 39 for NPL valuation. Growth of both corporate and consumer loans moderated against the backdrop of the rising interest rate, economic slowdown, and political uncertainty. Competition intensified, especially in consumer loan due mainly to the relatively high margin and low pro-cyclicality compared to that of corporate loan. Deposit growth moderated slightly, while the term structure shifted towards longer-end as banks responded to the tightening monetary policy in the first half of the year. Overall, liquidity remained ample in the banking system throughout the year.

On asset quality, NPLs as of the end of 2006 declined from the previous year as a result of loan repayment, NPL sales and transfers, and debt write-off, partly accelerated by the adoption of IAS 39 for NPL valuation. The capital base of the banking system strengthened further due to improved profitability and capital increase.

2.1 Performance of the Banking System

2.1.1 Growth and Profitability

The total assets of the banking system grew at a moderated rate due to the slowdown in credit growth to 5.9 percent, as corporate loan expanded by only 2.8 percent. On the funding side, deposits grew by 6 percent, moderating slightly from the previous year. Despite the slowdown in loan growth, operating profit rose to 156.3 billion baht, increasing by 8.6 percent. The net profit, however, moderated to 64.9 billion baht owing to the increased provisioning, resulting in moderation of Return-on-Asset (ROA) to 0.8 percent.
The continued profitability is attributable mainly to growth in interest income as net interest margin (NIM) rose to 3.1 percent as, in response to monetary tightening, lending rates, including mortgage rates which were mainly floating rates, adjusted upward at a faster pace than deposit rates where overall term structure has also lengthened. The improved asset quality and asset earning also contributed to the improved NIM.
Non-interest income however declined due to a fall in “other income” category, mainly from decline in derivatives transaction of foreign bank branches and loss from investment in subsidiaries of Thai banks. Fee-based income however continued to expand well, especially those from credit card (21.3 percent), ATM (14.7 percent), and wire transfer (5.7 percent). Therefore, the share of non-interest income in total income further declined to 28.5 percent.
On operating efficiency, productivity of employee in the banking system continued to improve, with operating profit per head of those of the 4 major Thai banks and 2 hybrid banks outperforming that of the average of the banking system.

Chart 12: Employees’ Efficiency of Banking System

Table 2: Employees’ Efficiency by Type of Commercial Banks in 2006

<table>
<thead>
<tr>
<th>Banking System</th>
<th>Net Interest income</th>
<th>Net Interest Income &amp; Non-interest income</th>
<th>Operating expense</th>
<th>Operating profit</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 major Thai banks</td>
<td>2.6</td>
<td>3.6</td>
<td>1.8</td>
<td>1.8</td>
</tr>
<tr>
<td>2 Hybrid banks</td>
<td>2.5</td>
<td>3.6</td>
<td>2.0</td>
<td>1.6</td>
</tr>
<tr>
<td>Total Banking System</td>
<td>2.5</td>
<td>3.4</td>
<td>2.0</td>
<td>1.5</td>
</tr>
</tbody>
</table>

Source: BOT
2.1.2 Structure and Quality of Loan Portfolio

Chart 13: Structure and Growth of Loan Portfolio

Share of Total Loans as of December 2006

- Consumer Loans: 21.1%
- Corporate Loans: 78.9%

Loan Growth

<table>
<thead>
<tr>
<th>Year</th>
<th>% yoy</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>18.1%</td>
</tr>
<tr>
<td>2003</td>
<td>17.6%</td>
</tr>
<tr>
<td>2004</td>
<td>15.3%</td>
</tr>
<tr>
<td>2005</td>
<td>7.6%</td>
</tr>
<tr>
<td>2006</td>
<td>7.2%</td>
</tr>
</tbody>
</table>

Corporate Loans by Sector as of December 2006

- Services: 34.3%
- Commerce: 21.2%
- Financial Business: 11.8%
- Construction: 8.0%
- Real Estate: 7.2%
- Public Utilities: 7.2%
- Other: 6.1%

Total Loans Growth by Sector

<table>
<thead>
<tr>
<th>Sector</th>
<th>% yoy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing</td>
<td>26.3%</td>
</tr>
<tr>
<td>Commerce</td>
<td>20.0%</td>
</tr>
<tr>
<td>Services</td>
<td>15.3%</td>
</tr>
<tr>
<td>Real Estate</td>
<td>7.6%</td>
</tr>
<tr>
<td>Public Utilities</td>
<td>7.2%</td>
</tr>
<tr>
<td>Financial Business</td>
<td>5.9%</td>
</tr>
<tr>
<td>Construction</td>
<td>5.9%</td>
</tr>
<tr>
<td>Other</td>
<td>3.7%</td>
</tr>
</tbody>
</table>

Structure of Consumer Loans as of December 2006

- Housing Loan: 56%
- Personal Loan: 11%
- Credit Card Loan: 8%
- Other Personal Loan: 25%
- Other: 8%

Consumer Loan Growth by Sector

<table>
<thead>
<tr>
<th>Sector</th>
<th>% yoy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Housing</td>
<td>66.0%</td>
</tr>
<tr>
<td>Credit Card</td>
<td>30.2%</td>
</tr>
<tr>
<td>Personal</td>
<td>20.1%</td>
</tr>
<tr>
<td>Other Personal</td>
<td>14.7%</td>
</tr>
<tr>
<td>Other</td>
<td>12.5%</td>
</tr>
</tbody>
</table>

Source: BOT
2.1.2.1 Corporate Loans

Corporate loan portfolio of the banking system is diversified across economic sectors, which coupled with continued strengthened risk management and caution on the part of banks and borrowers, have contributed to the resiliency of the performance of the banking system against the backdrop of challenging operating environment. Loan growth moderated to 5.9 percent in 2006 due to economic and investment slowdown, political uncertainty, the rise in interest rate which contributed to caution on the part of lending banks and borrowers. Moreover, bank loans also faced increased competition from capital market financing as large corporations increasingly resort to bond issuance. As a consequence, corporate loans, which accounted for 79 percent of total loans, expanded by only 2.8 percent due to slowdown of loans for manufacturing, commerce, and real estate sectors. Manufacturing loan growth moderated due to lending caution as well as soft demand, particularly with slowdown in production in food and vehicle sectors. In addition, there was also debt repayment of major borrower in beverage sector who switched to capital market funding from offshore. Loan growth of commerce sector slowed down, in line with slowdown in import of raw materials and equipments. Loans to services sector contracted due to debt repayment of major debtors in health and hotel sectors. The real estate loan growth, similarly, slowed to 5.9 percent due to the shift to lower price smaller-scale housing projects, especially small condominiums near the city center, to accommodate the growing demand for housing near central business districts and lower purchasing power. Loans to construction business, on the other hand, expanded due to the government housing project. Likewise, loans for financial businesses sector rose as some banks expanded credit to their affiliates in their financial groups.
With the exception of public utilities and financial businesses sector, overall NPL ratio by sector of corporate loans continued to decline from previous years as a consequence of NPL sales and transfers and write-off as well as caution on the part of banks in loan origination and monitoring of loan portfolio.

### 2.1.2.2 Consumer Loans

Overall consumer loans grew by 19.5 percent, moderating due to the slowdown in housing loans, while growths of personal loan, especially car loans, and credit card loans remain high. As a consequence, the market share of housing loans declined from 61 percent in 2005 to 56 percent in 2006.

The continued overall rapid growth also reflected increased competition in consumer loan market which saw banks competing on new products, pricing, and access, as the consumer sector NPL ratios and resiliency of demand against economic slowdown remain relatively favorable compared to corporate loans, while margins remain relatively high. The BOT closely monitored developments as part of the overall economic and financial stability surveillance framework to ensure prudence on the part of the bank, as well as guard against emergence of financial vulnerability of the household sector, the built up of asset prices, as well as to oversee fair consumer treatment particularly with
regard to transparency of loan pricing and conditions. In addition to risk-based supervision, a few macro-prudential measures including those on credit card loans imposed on bank and non-bank credit card companies, maximum loan-to-value for luxury housing, and measures on personal loans have been in place since the past three years, as detailed in previous Supervision Reports. These measures and continued vigilance of risk managements of banks will be important to oversee the asset quality in the consumer loan market into the future, particularly as NPL ratios have begun to rise in personal loan and credit card sectors, though housing loan NPL ratio continued to decline noticeably.

Chart 15: Consumer Loans

Source: BOT
The housing loan growth moderated to 9.8 percent due to lower consumer confidence and purchasing power driven by the rise in interest rate and political uncertainty which delayed purchase. Moreover, the slower growth of loan volume also reflected moderation in house prices, for example single-detached house price grew at a slower pace of 3.7 percent in 2006 due to softer demand despite higher construction cost.

As for credit card loans, these continued to expand rapidly, especially those of commercial banks which accelerated to a growth of 20.1 percent, while those non-banks slowed to 16.1 percent. Commercial banks stepped up competition by increasing credit limit for customers and introducing new products such as insurance coverage. Similarly, personal loans continued to grow rapidly, attributable to growth of both the personal loans under supervision, mainly those which are uncollateralised, and “other personal loan” which are mainly collateralised by cars. Personal loans under supervision, extended by banks and non-banks continued to exhibit high growth rates of 24.8 and 13.6 percent, respectively. Although having moderated from the previous year, credit card and personal loan growths remain high as relatively favorable margin and recovery rates attract competing suppliers, many of whom are sophisticated global players with competitive business, risk management, and pricing models.

NPL of personal loans under supervision and credit card loans increased slightly on account of higher interest rate and higher cost of living which reduced the debt repayment ability. Thus, although their shares in consumer loan portfolio remain relatively low, the continued rapid growth may pose implication for overall stability and consumer protection issues, and thus warrant close monitoring.
2.1.3 Liquidity and Funding

Chart 16: NPL Ratio by Sector for Consumer Loans

Chart 17: Growth of Deposits and Loans of Banking System (Excluding Interbank)

Chart 18: Loan-to-Deposit Ratio
In 2006, loan growth slowed to below deposit growth, resulting in further decline in loan-to-deposit ratio to 89.2 percent, while the ratio of liquid asset (comprising cash, deposits, and government securities) to total asset of the banking system edged up to 18.4 percent from 16.4 percent in 2005.

Banks responded to the upward trend in interest rates through to the first half of the year by raising long-term deposit rates more than short-term, inducing the term structure of deposits to shift towards longer end as shares of savings deposits and 3-month fixed deposits declined while shares of 6-month to 1-year fixed deposits rose sharply.
2.1.4 Non-Performing Loans (NPLs)

Chart 21: Loan Quality

NPLs at the end of 2006 declined to 440 billion baht as a result of loan repayment, transfers and sales of NPLs, and debt write-off, partly accelerated by strengthened NPL provisioning in line with IAS 39. As a result, ratio of gross NPLs to total loans fell to 7.5 percent, while ratio of net NPL (NPLs net of provisioning) to total loans also declined to 4.1 percent.
Although the reduction in doubtful and doubtful of loss NPL signaled an overall improvement in the NPL situation, special mention loan increased slightly, indicating a possible rise in NPL provided that the economic slowdown persists.

2.1.5 Capital Adequacy

Table 3 : Capital Adequacy of Banking System

<table>
<thead>
<tr>
<th>Commercial Banks</th>
<th>Capital fund (Billion Baht)</th>
<th>CAR (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Tier-1</td>
<td>Tier-2</td>
</tr>
<tr>
<td>Thai banks</td>
<td>567.4</td>
<td>153.0</td>
</tr>
<tr>
<td>Foreign branches</td>
<td>140.1</td>
<td>0.0</td>
</tr>
<tr>
<td>Total commercial banks</td>
<td>707.5</td>
<td>153.0</td>
</tr>
</tbody>
</table>

Source : BOT

Chart 22 : Capital Adequacy Ratio

The capital adequacy ratio (CAR) of the banking system strengthened to 14.1 percent from 13.9 percent at the end of 2005. The increased capital base, despite higher provisioning in line with strengthened requirement in line with IAS 39, was the result of increased profitability and capital increase.
2.2 Key Structural Developments

2.2.1 Consolidation in the Banking System

The implementation of Financial Sector Master Plan (FSMP) and forces of competition continued to propel further market-driven consolidation in the financial institutions system. In 2006, three finance companies, namely: National Finance Public Company, Citicorp Finance Company, and Ayudhaya Investment and Trust Public Company, ceased their operations, in line with the “One Presence Policy” of the FSMP. One foreign bank branch, UFJ Bank, merged with Bank of Tokyo-Mitsubishi. Three retail banking licenses were granted in 2006, one to GE Money retail bank, one to a finance company which became AIG Retail Bank, and one to credit foncier which became The Thai Credit Retail Bank.

As of December 2006, there were 44 financial institutions under the supervision of the BOT, consisting of 14 Thai commercial banks, 2 retail banks, 17 foreign bank branches, 1 subsidiary, 6 finance companies and 4 credit foncier companies. Number of financial institutions in the sector declined from 48 in December 2005 to 44 in December 2006, mainly as a result of One Presence Policy and market consolidations.

The BOT is currently in the process of formulating Phase II of the Financial Sector Master Plan (FSMP-II). The overarching objectives of FSMP-II are to improve efficiency, competitiveness, financial access, and resiliency of the financial sector, via increasing competition through deregulation and liberalization and enhancing financial infrastructure. The draft policy paper is expected to be completed in 2008.

2.2.2 Improvement in Risk Management and Basel II Readiness

Risk management in the banking system and risk-based supervision of the BOT have strengthened progressively, and are the major factors contributing to the resiliency of the banking system in face of the challenges in 2006. The continued progress is supported by a close working relationship between the BOT and the banking system, facilitated by dialogue and consultative paper
process, which enabled substantial capacity-building that allowed the banking system to remain on track to meet target date of adoption of Basel II. Following the issuance of four consultative papers on capital charge calculation under Basel II in the previous year, the BOT issued three final draft of guidelines in 2006 (Pillar 1, Pillar 2, and Pillar 3) which will be used by financial institutions in 2008. The major milestones achieved and set for this process is presented below.

### Table 4: Basel II Implementation Timeframe

<table>
<thead>
<tr>
<th>Year</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>March 2006</td>
<td>Issued Pillar 1 Policy Guideline (Final Draft)</td>
</tr>
<tr>
<td>June 2006</td>
<td>Banks submitted preliminary Basel II implementation plan.</td>
</tr>
<tr>
<td>November 2006</td>
<td>Issued Pillar 3 Policy Guideline (Final Draft)</td>
</tr>
<tr>
<td>December 2006</td>
<td>1. Issued Pillar 2 Policy Guideline (Final Draft)</td>
</tr>
<tr>
<td></td>
<td>2. Banks submitted the quantitative impact study of implementation of these approaches on their capital (QIS)</td>
</tr>
</tbody>
</table>

**Future Phases in the Pipeline**

<table>
<thead>
<tr>
<th>Year</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>April 2007</td>
<td>Issued Policy on Recognition of ECAIs &amp; Mapping Process under SA</td>
</tr>
<tr>
<td>June 2007</td>
<td>Finalize QIS results</td>
</tr>
<tr>
<td>July 2007</td>
<td>Finalize Pillar 1 Return Form</td>
</tr>
<tr>
<td>September 2007</td>
<td>1. Finalize Recognition of ECAIs and Mapping Process under SA</td>
</tr>
<tr>
<td></td>
<td>2. Issue Consultative Paper on Securitisation under SA</td>
</tr>
<tr>
<td></td>
<td>3. Banks to submit final applications</td>
</tr>
<tr>
<td>December 2007</td>
<td>Begin parallel calculation of Basel I &amp; Basel II</td>
</tr>
<tr>
<td></td>
<td>(one year for simple approaches and two years for advanced approaches)</td>
</tr>
<tr>
<td>Year end 2008</td>
<td>Begin new Basel II capital charge (SA, FIRB) and continue parallel calculation (AIRB)</td>
</tr>
<tr>
<td>Year end 2009</td>
<td>Begin new Basel II capital charge (AIRB)</td>
</tr>
</tbody>
</table>
In order to ensure the readiness of banks in successively implementing Basel II, the BOT conducted an ad hoc on-site examination, beginning at the end of June 2006. The focused issues were management awareness, gap identification between Basel I and chosen capital calculation methods and measures to fulfill gaps, Basel II road map, and the monitoring process.

Based on intensive dialogues with banks’ management and working groups, the awareness of banks’ management has improved as some banks have set up dedicated committees and working groups to handle Basel II project, while smaller banks with limited human resources may assign dedicated staff reporting directly to top management. Secondly, most of larger banks which had enough capacity would perform gap analyses internally, while some hired vendors to do so. According to gap analyses, plans and measures to fill those gaps were set up and progress of the plans were monitored by the management level. Finally, training considered as key success factor for Basel II implementation were also set. Many banks submitted training requests to BOT. In 2007, on-site examination will focus on Basel II readiness of banks with full scope of inspection in order to ensure that banks will be ready before the go-live date in 2008.

Progress of Basel II Preparation

Preparation within the BOT

Internally, the BOT is preparing the necessary technical groundwork such as supervisory review procedures, database for risk-based supervision, and a framework for cross-border cooperation with foreign supervisors. Other preparations include the capacity-building of supervisors for Basel II such as training programs to facilitate quantitative validation techniques. Various internal working groups have also been established such as the Internal Ratings-Based Approach (IRB) validation and approval, External Credit Assessment Institutions (ECAs) recognition, Pillar 1 reporting and Pillar 3.
**Issuance of Consultative Papers and Guidelines**

The BOT issued the final draft of Pillar 1, 2 and 3 Policy Guidelines in March, December and November 2006, respectively. In addition, the BOT has already issued the policy on Recognition of ECAIs in April 2007. This policy, which is in line with Basel guideline, addressed three elements of the ECAI recognition which are 1) recognition criteria (namely, Objectivity, Independence, International access/Transparency, Disclosure, Resources, and Credibility) 2) mapping the rating of recognized local ECAI into the risk weight under the Standardized Approach (SA), and 3) recognition process (e.g. application process, indirect recognition, on-going recognition). Therefore, the key Policy Guidelines are in place.

**Results of Preliminary Banks’ Approach Applications and Impact of Basel II**

Banks have submitted their preliminary choice for credit and operational risk capital calculation approaches along with completed self-assessment questionnaire on their readiness for Basel II implementation in June 2006, and their quantitative impact study in December 2006. Based on this preliminary application, most Thai banks are likely to adopt the SA at the inception date. Foreign banks will adopt both the SA and IRB. Although most Thai banks will start with the SA at the inception date, they plan to adopt the IRB by the year 2014. For the operational risk minimum capital calculation, most Thai banks chose to adopt the SA while most foreign bank branches choose to adopt the Basic Indicator Approach.

In the early part of 2007, the BOT conducted an industry-wide capital adequacy assessment from banks’ Quantitative Impact Studies results, submitted in December 2006. The preliminary analysis indicated that the industry-wide BIS Ratio would decrease only slightly.
## Table 5: Chosen Capital Calculation Methods for Credit and Operational Risks of Banks

<table>
<thead>
<tr>
<th></th>
<th>Credit risk</th>
<th>Operational risk</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SSA</td>
<td>SA</td>
</tr>
<tr>
<td>Thai commercial banks</td>
<td>14</td>
<td>-</td>
</tr>
<tr>
<td>Foreign bank branches</td>
<td>17</td>
<td>-</td>
</tr>
<tr>
<td>Retail banks</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Subsidiary bank</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>35</td>
<td>1</td>
</tr>
</tbody>
</table>


### Contribution of Risk-based Supervision and Basel II Adoption Process to Risk Management

The progress and strive to strengthen risk-based supervision and meet international standards by adopting Basel II has significantly enhanced risk management capacity and awareness of the banking system and supervision framework, allowing Thailand to be ready to participate in Financial Sector Assessment Program (FSAP) conducted by the International Monetary Fund and the World Bank in 2007.

The BOT has continuously conducted risk based examination and supervision focusing on 5-key areas of banking risks: strategic risk, credit risk, market risk, liquidity risk, and operational risk. From this process, it is found that risk management has improved over the years, with one of the most important improvement being the enhanced risk awareness of banks’ board of directors and senior management. Banks have also undertaken organizational restructuring to enhance effective risk management, internal control, and corporate governance, as well as improving risk management tools which are placed in core operation in line with the used-test, including risk-rating model.
On the supervisory side, the BOT has introduced Prompt Preventive Action (PPA) into the off-site monitoring and analysis process in 2006. Under the PPA, the Early Warning System (EWS) is used to monitor and aid early identification of key risk areas to help focus examiners attention. In addition, the BOT has worked closely with the banking system to conduct stress-test to identify key areas of vulnerability of individual bank and the overall banking system in extreme but plausible risk scenario. Stress-test is also a key requirement of the Basel II Pillar 2 as well as FSAP assessment.

2.2.3 Progress on Debt Restructuring by Agencies other than Banks

The key government agencies responsible for expediting the process of debt restructuring are the Corporate Debt Restructuring Advisory Committee (CDRAC) and the Thai Asset Management Corporation (TAMC).

The CDRAC has facilitated and expedited the debt restructuring process for a period of 8 years and 3 months, from 25 June 1998 to 30 September 2006. The approved target debtors, both large debtor and small debtor cases, comprised debtors in the court process, legal execution process, as well as debtors entering the debt restructuring process directly through the CDRAC and via other organizations. Since its establishment, 17,964 cases have been identified as target debtors, with a credit outstanding of 2,881,914 million baht, out of which 14,650 cases with 1,926,665 million baht credit outstanding have entered the debt restructuring process. A total of 11,655 cases, with a credit outstanding of 1,501,269 million baht, or 80 percent of resolved cases, have been successfully restructured. Following important contribution to debt restructuring burden arising from the crisis of 1997, CDRAC officially ceased operation on 1 October 2006.
Since TAMC’s inception in 2001, 15,265 cases of impaired assets with a book value of 775,778 million baht were acquired from financial institutions and asset management companies, of which 15,263 cases worth 771,857 million baht were successfully resolved. As of 31 December 2006, TAMC received, in total, 150,123 million baht, of which 97,086 million baht was in cash and the remaining was through the transfer of assets for payment of debt. Furthermore, TAMC has been able to redirect some debtors back to financial institutions, with approximately 1,637 cases with book value of 51,726 million baht having been able to secure funding from other sources to service their debts and close their accounts with TAMC.

After the Bangkok Asset Management (BAM) merged with the Asset Management Corporation (AMC) on 30 December 2005 under the encouragement of the Ministry of Finance and the BOT in order to facilitate the disposition of NPLs and non-performing assets (NPAs) by banks, Thai banks have signed the memorandum of understanding to sell their NPAs on 9 October 2006. As of 14 April 2007, BAM has acquired NPAs from 6 banks, at book values of 2,492 million baht.

### Table 6: Outcome of the CDRAC’s Debt Restructuring Process

(December 1998 - June 2006)

<table>
<thead>
<tr>
<th>Number of Cases</th>
<th>Credit Outstanding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cases</td>
<td>%</td>
</tr>
<tr>
<td>1. Debtors in the CDRAC’s debt restructuring process</td>
<td></td>
</tr>
<tr>
<td>1.1 Successfully restructured cases</td>
<td>11,655</td>
</tr>
<tr>
<td>1.2 Unsuccessfully restructured cases</td>
<td>2,995</td>
</tr>
<tr>
<td>2. Others, e.g., bankruptcy cases, transfers to the TAMC</td>
<td>3,314</td>
</tr>
<tr>
<td>Total</td>
<td>17,964</td>
</tr>
</tbody>
</table>

Source: BOT
CHAPTER 3

Major Developments in Supervisory Framework

The key responsibility of the Bank of Thailand (BOT) is to ensure a stable and efficient banking system to serve economic development. In 2006, the BOT further enhanced risk-based supervisory framework to foster improved risk management of the banking system, particularly with respect to: enabling the banking system to be well prepared for the Financial Sector Assessment Program (FSAP) of the International Monetary Fund and the World Bank in 2007, the adoption of International Accounting Standard No. 39 (IAS 39) for NPL valuation and provisioning, and keeping the overall system on track for adoption of Basel II in 2008.

The close dialogue with the banking system and improved risk management of the banking system over the years have helped to ensure smooth implementation of these major policies in spite of challenging economic environment, allowing the banking system to continue recording profit while financial strength was enhanced with increased capital and reserve provisioning.

3.1 Key Measures to Strengthen Risk Management

3.1.1 Implementation of Consolidated Supervision

The formation of financial group in Thailand calls for consolidated supervision framework conforming with international standards and consistent with the complex financial and risk structures of the financial groups. The BOT introduced consolidated supervision policy for commercial banks in September 2006, with guidelines covering: scope of business, capital requirements, credit extension, investment and contingent liabilities, risk management, internal control, and information disclosure. Further improvements to the consolidated supervision policy are being developed to address the possible risks that may arise from financial groups such as market risk, liquidity risk, operational risk, and capital adequacy requirements under Basel II, whereby such rules would conform with supervisory guidelines used on a solo basis.
3.1.2 Preparation for International Accounting Standard No. 39

The BOT anticipates that the planned adoption of the International Accounting Standard No. 39 (IAS 39) in Thailand by the Federation of Accounting Professions (FAP) may have important implications for the banking system as IAS 39 is related to financial instruments in a number of areas as follows: classification and measurement of financial instruments, impairment of financial assets, recognition and derecognition of financial assets and liabilities, derivatives accounting, and hedge accounting. As these principles are related to a broad array of the transactions of financial institutions, the BOT has helped make preparatory plans for financial institutions to comply with IAS 39 to facilitate smooth adjustment.

As a part of the IAS 39 readiness plan, the BOT has started to apply principles on the impairment of financial assets to provisioning rules for non-performing loans (NPLs) of financial institutions since late 2006. To help facilitate a smooth adjustment, the BOT permitted phasing-in until the end of 2007 for increased provisioning under strengthened rules of IAS 39. Upon meeting the IAS 39 loan loss provisioning rule, financial institutions may choose to write off the impaired amount, or record the gross amount and the provision made, as well as reporting NPLs on the net of provisioning basis.

3.2 Measures to Enhance Efficiency

Development of the Derivatives Market

As derivatives transactions contribute towards the development of the financial market, the BOT fostered their developments by providing enabling risk-based supervisory framework, with the following key components to ensure adequate risk management capacity:

1. **Permission requirements**: Permissions to conduct derivatives transactions are sequenced to prevent market players from accumulating excessive risk, and to familiarize and increase their knowledge and understanding of such transactions and their related risks. The initial permission to provide plain vanilla derivatives transactions was followed by structured derivatives permits, while commercial
banks are able to submit their requests to offer derivatives transactions beyond the above scope to the BOT for consideration on a case-by-case basis.

2. Risk management system and relevant personnel: Guidelines are issued which stated required risk management standard to foster commercial banks to develop appropriate risk management systems and relevant personnel that oversee derivatives transactions.

3. Knowledge and understanding of market participants and stakeholders: Guidelines are issued to ensure that, in respect of derivatives transactions, commercial banks duly assess customer profiles and provide adequate information necessary for informed decision of customers, as well as provide transparent disclosure of information on the nature of derivatives transactions and their related risks for their stakeholders.

3.3 Measures to Strengthen Supervisory Framework

3.3.1 Financial Sector Assessment Program

Financial Sector Assessment Program (FSAP) is a joint program initiated by the International Monetary Fund (IMF) and the World Bank aimed at a comprehensive assessment of the stability of the financial system, its interlinkage with economic stability and strength of related policy and supervisory frameworks.

Thailand embarked on the FSAP program in July 2006 (Pre-FSAP Mission), with the mission taking place in the first half of 2007. The key areas of critical importance to stability assessed are: strength and integrity of the overall financial system, the financial sector infrastructure including the legal framework and level of development of the financial markets, and importantly the assessment of financial sector supervisory framework benchmarked against international best practices. Preliminary findings with respect to the assessment of banking supervisory framework indicate a high degree of compliance.
3.3.2 Permission to Raise Capital through Hybrid Tier 1

To increase alternative channels in raising capital in accordance with international standards, the BOT has permitted commercial banks to raise capital via issuance of debt capital instruments known as “Hybrid Tier 1”. Hybrid Tier 1 is eligible to be counted as tier 1 capital if: fully paid up, non-cumulative, able to absorb losses of commercial banks on a going-concern basis, and total Hybrid Tier 1 capital not exceeding 15 percent of the total tier 1 capital. Commercial banks without profit and seeking interest payments for Hybrid Tier 1 need to consider, for example, their financial position, profit-generating ability, and stability, and are required to seek prior permission from the BOT.