Inflation Report

April 2007

The *Inflation Report* is prepared quarterly by staff of the Bank of Thailand with the approval of the Monetary Policy Committee (MPC). It serves two purposes: (1) to provide a clear forward-looking framework for economic and inflation forecasting to assist the MPC in making monetary policy decisions and (2) to give the MPC an opportunity to present the explanation for their decisions on various policy issues to the public.

Although individual MPC members may have differing opinions regarding the assumptions on which the forecasts are based, as a group they are in agreement with the forecasts on the outlook for inflation and output as well as the risk factors involved as illustrated in the fan charts.

The Monetary Policy Committee:

Mrs. Tarisa	Watanagase	Chairman
Mrs. Atchana	Waiquamdee	Vice Chairman
Mr. Bandid	Nijathaworn	Member
Mr. Aran	Thammano	Member
Mr. Chakramon	Phasukavanich	Member
Mr. Ampon	Kittiampon	Member
Mr. Karun	Kittisataporn	Member

Thailand Monetary Policy Strategy

Monetary Policy Formulation

- The Monetary Policy Committee (MPC) sets monetary policy in order to attain price stability conducive to sustainable economic growth. The MPC also monitors factors contributing to external stability and financial imbalances.

The Monetary Policy Instrument

- The MPC utilizes the 1-day repurchase rate as the key policy rate to signal the monetary policy stance.

The Target

- The MPC uses core inflation (excluding raw food and energy) as its policy target with the range of 0-3.5 per cent (quarterly average). In the event that the target is missed, the MPC is required to explain the reasons thereof to the public.

Forecasting Tools

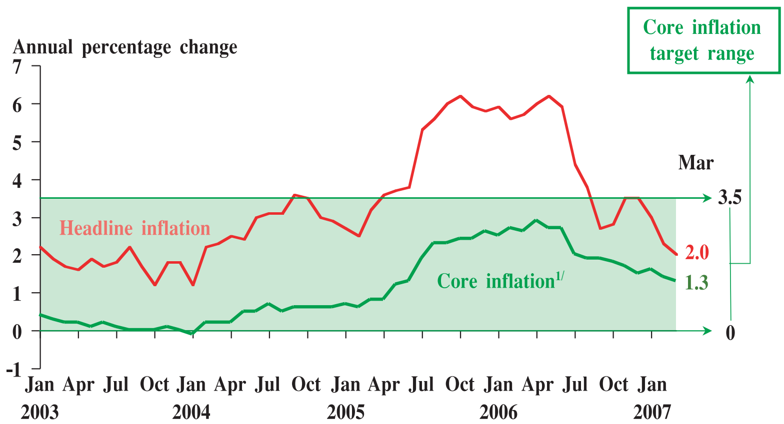
- To assist the MPC in making monetary policy decisions, the Bank of Thailand has developed a macroeconomic model to forecast economic conditions and inflation outlook. The model is also employed to evaluate the impact of various factors on the economy and to offer guidelines for appropriate monetary policy responses.

Contents

1. Overview

The Thai economy in 2006 Q4 and 2007 Q1 softened more than the Monetary Policy Committee (MPC) expected in the January *Inflation Report*. The slowdown resulted from weaker domestic demand, both in the private and public sectors, owing to continued fragile consumer and investor sentiment. The brittle political environment also led to uncertainty with regards to the government's policies. Many consumers and investors thus delayed their durable goods consumption and investment projects. Government spending was also lower than normal, due to delays in the budgetary process affected by the political situation. Fiscal policy thus had only a limited role in supporting economic growth. Only the export sector continued to expand well, providing momentum in support of economic growth. Going forward, risks to the export sector were likely to rise, given the slowdown in the world economy compared to last year, as well as the continued appreciation of the Thai baht.

Chart 1.1 Consumer price index



Remark: [1/]Consumer price index excluding raw food and energy items
Source: Trade and Economic Index Bureau, Ministry of Commerce

Inflation continued to decline as expected by the MPC, given the moderation in cost-push inflationary pressures. This moderation came about particularly as the impact of flooding that occurred at the end of 2006 subsided, and as world crude oil prices fell between August 2006 and January 2007. At the same time, demand-pull inflationary pressures also eased as the world economy showed clear signs of moderation, limiting the second round effects of inflation. Despite the recent rise in world oil prices, along with the lifting of the 8th Statement of the Administrative Reform Council under the Democratic System (ARC) that prohibited price hikes for all goods and services, the chances that inflation would reverse to an upward trend were small in the face of weak domestic demand.

The overall risks to growth rose markedly, while the risks to inflation declined when compared to 2006. The MPC therefore decided that monetary policy could be relaxed further to help support economic growth, without any serious repercussions on inflation. The MPC decided to continue to cut the policy interest rate, with a cumulative reduction of 1 per cent per annum since the MPC meeting in January 2007. Over the past 3 months, the MPC observed the following:

1. Headline inflation, which accelerated to 3.5 per cent per annum in November and December 2006 due to temporary factors such as flooding, began to decelerate in January 2007. Headline inflation registered at 3 per cent per annum in January and continued to decline to 2.3 and 2.0 per cent per annum in February and March, respectively, consistent with the MPC's assessment that inflation would quickly decelerate once the impact of flooding subsided. Also, the slowdown in headline inflation benefited from the trend of declining world oil prices beginning since the end of 2006 into early 2007. Core inflation continued to trend downward despite the temporary acceleration in headline inflation, with March core inflation registering at 1.3 per cent per annum.

2. Latest data from the Office of the National Economic and Social Development Board (NESDB) indicated that the Thai economy in 2006 Q4 expanded at a low rate of 4.2 per cent per annum, compared to the same period in the previous year. Overall growth in 2006 registered at 5.0 per cent per annum, slightly lower than the MPC expected in the previous *Report*. The MPC noted that private sector expenditure - both in consumption and investment - continued to slow down throughout 2006 along with the slowdown in public sector expenditure, particularly in the last quarter of the year, whereby delays in the budgetary process led to a contraction in public expenditure by 1.6 per cent per annum. The export sector continued to grow robustly and was the main

Table 1.1 GDP at 1988 prices						
Unit: %Δyoy	2005	2006	2006			
			Q1	Q2	Q3	Q4
Domestic demand[1/]	7.0	3.4	5.0	3.8	3.1	1.8
Private consumption	4.3	3.1	3.9	3.3	2.8	2.5
Private investment	10.9	3.9	7.0	3.3	2.9	2.3
Public expenditure	12.7	3.8	6.6	6.0	4.1	-1.6
Net exports of goods and services	-16.5	46.7	120.5	147.0	3.1	29.6
Exports of goods and services	4.3	8.5	14.4	9.0	4.7	6.8
Imports of goods and services	9.3	1.6	1.9	-1.7	5.2	1.0
Gross domestic product	4.5	5.0	6.1	5.0	4.7	4.2

Remark: %Δyoy = percentage change from the previous year
[1/]Domestic demand excludes changes in stocks
Source: National Economic and Social Development Board

contributor to GDP growth. In addition, on a quarter-on-quarter basis, GDP in 2006 Q4 grew by only 0.7 per cent (seasonally adjusted), the lowest growth since 2002, with the exception of the first quarter of 2005, which was affected by the tsunami. The low level of growth in 2006 Q4 reflected softness and imbalances in the growth momentum.

3. Preliminary data for 2007 Q1 compiled by the BOT pointed towards a continued slowdown in private sector expenditure, particularly in durable goods consumption and investment, both of which were sensitive to expected future income and confidence. In any case, the acceleration in public sector expenditure in February, coupled with the loosening trend of monetary policy, should help support private sector expenditure and prevent any further substantial weakening in domestic demand. However, the recovery in domestic demand would be subject to a rebound in private sector consumption and investment, which in turn would depend crucially on a return of consumer and investor confidence.

4. Monetary conditions continued to tighten, but at a decelerated pace following the reductions in the policy interest rate, and the slower pace of baht appreciation following the BOT's reserve requirement on short-term capital inflows at the end of 2006. While pressure on the baht to appreciate due to speculative capital inflows dissipated following the BOT's introduction of the reserve requirement, capital inflows arising from the current account surplus continued to pressure the baht to appreciate further, but at a pace more in-line with regional currencies. The loosening monetary policy stance brought about the downward trend in money market interest rates as well as in commercial bank rates.

However, the reduction in banks' lending rates did not lead to credit expansion in the short term, resulting in the continued slowdown in commercial bank credit extension - particularly for credit to businesses - in line with the weak investment climate.

The slowdown in economic growth did not have any significant effect on the balance sheets of the business and household sectors. However, the business sector's performance diminished somewhat, while the signs of loan default in the household sector rose slightly higher in the past period. Financial markets continued to be affected by negative sentiment which dampened investor confidence since the end of last year up until this year, as reflected in the volatility of foreign exchange markets, capital markets, and bond markets. However, there were signs that these markets had begun adjustment towards a state of greater normalcy.

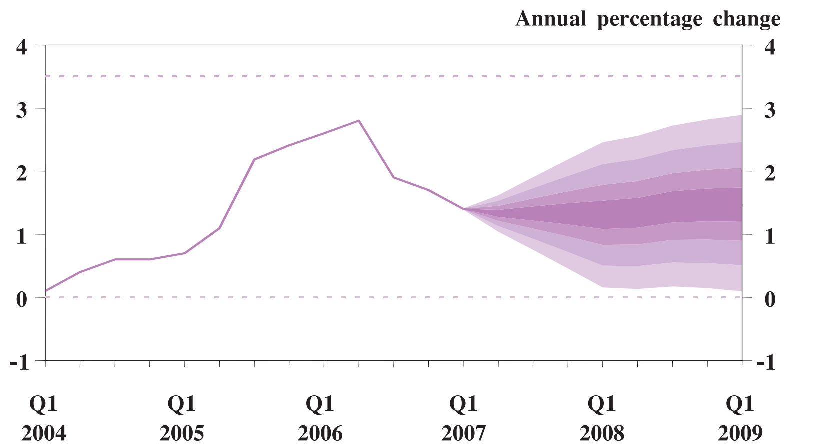
Inflationary outlook and monetary policy

The MPC assessed that in the 3 remaining quarters of 2007, domestic demand should pick up from the government's fiscal stimulus package. In addition, private consumption should accelerate in the run-up to the general elections scheduled for the end of the year. But a broad-based recovery, particularly in private sector investment, could be delayed until early 2008, as investors wait for greater certainty in the political situation. With world growth continuing to support exports, the export sector should continue as one of the main drivers of the economy, in spite of the impact of the baht's appreciation, along with the expected acceleration in government spending in the upcoming period.

The MPC lowered the output growth forecast for 2007 to reflect the softer than expected momentum which was reflected in the actual data for 2006 Q4, as well as preliminary indicators for 2007 Q1. At the same time, however, the MPC deemed that the downside and upside risks were more balanced, compared to the previous period where downside risks outweighed upside risks. For 2008, the economy was expected to return to normal growth rates, led by private investment and consumption, and particularly in consumption of durable goods, which was expected to play an important role in supporting economic growth.

Despite higher oil prices, the decline in demand-pull factors combined with the baht appreciation helped to prevent a rise in import prices. The MPC assessed that inflation in 2007 and 2008 would continue to remain low, similar to the previous *Report*. The MPC therefore maintained its projection for headline inflation at 1.5-2.5 per cent per annum in 2007 and 1-2.5 per cent per annum in 2008. The MPC also maintained its projection for core inflation at 1-2 per cent per annum for 2007 and 2008.

Chart 1.2 Core inflation forecast



Remark: The fan chart covers 90 per cent of the probability distribution

In light of the aforementioned assessment of overall economic conditions and outlook, the MPC decided to lower the policy interest three times by 0.25 per cent, 0.25 per cent, and 0.50 per cent per annum in the meetings on 17 January, 28 February, and 11 April 2007, respectively, in order to support the recovery in economic growth, particularly in domestic demand, while also maintaining economic stability.

2. Recent Developments in Inflation and Economic Conditions

Inflation trends

Inflation continued on a declining trend.

In 2007 Q1, headline inflation decelerated from 3.3 per cent in the previous quarter to 2.4 per cent, as a result of lower energy prices which fell by 1.0 per cent compared to a 2.4 per cent increase in the previous quarter. The deceleration in inflation was in line with lower domestic retail prices of oil and electricity and the deceleration in raw food prices from softening effects of flood. Food prices in this quarter rose by 8.9 per cent which was lower than 10.0 per cent in the previous quarter. Core inflation also decelerated mainly from a slowdown in transportation fare which rose by 1.4 per cent this quarter compared to 1.7 per cent in the previous quarter. Overall, falling inflation was in line with the MPC's expectation as stated in the previous *Report*.

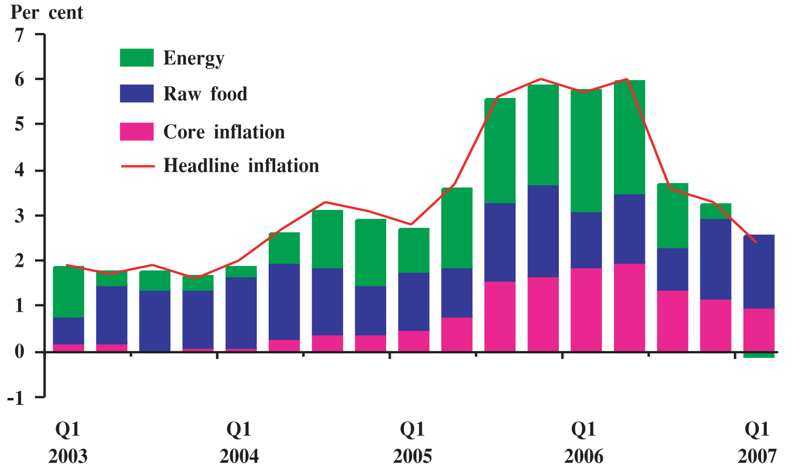
Table 2.1 Quarterly inflation

Unit: Per cent	2006	2006				2007
		Q1	Q2	Q3	Q4	Q1
Percentage change from the previous year (%Δyoy)						
- Headline consumer price index	4.7	5.7	6.0	3.6	3.3	2.4
• Core consumer price index	2.3	2.6	2.8	1.9	1.7	1.4
• Raw food	7.5	6.8	8.6	4.8	10.0	8.9
• Energy	15.0	26.1	23.0	11.4	2.4	-1.0
- Producer price index	7.0	8.7	10.3	6.2	3.4	2.6
Percentage change from the previous quarter (%Δqoq)						
- Headline consumer price index	-	0.4	2.3	0.3	0.1	-0.4
• Core consumer price index	-	0.4	0.9	0.4	0.1	0.1
• Raw food	-	-1.6	5.7	-0.2	5.9	-2.5
• Energy	-	3.3	6.3	0.9	-7.5	-0.2
- Producer price index	-	1.3	5.1	-0.7	-1.4	0.5

Source: Trade and Economic Index Bureau, Ministry of Commerce

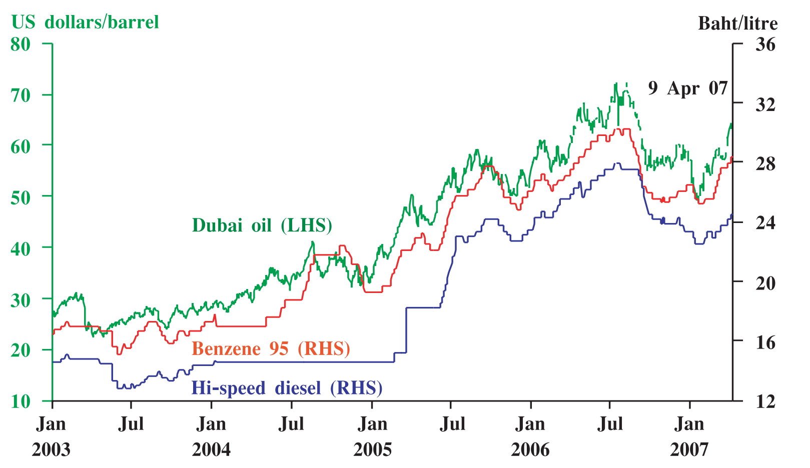
Downward adjustments in domestic energy prices in 2007 Q1 came despite volatile world oil prices that were brought about by heightened geopolitical factors. In addition, the US' raising of strategic oil reserve that coincided with yearly maintenance of major oil refineries nudged the Dubai crude oil price upward after declining since the end of August 2006 to January 2007. In response, domestic energy prices began to pick up. Nevertheless, Dubai crude oil prices for this quarter fell on average to 55.5 US dollars per barrel from 57.3 US dollars per barrel in the previous quarter.

Chart 2.1 Contribution to headline inflation



Source: Trade and Economic Index Bureau, Ministry of Commerce

Chart 2.2 Dubai oil price and domestic retail oil prices



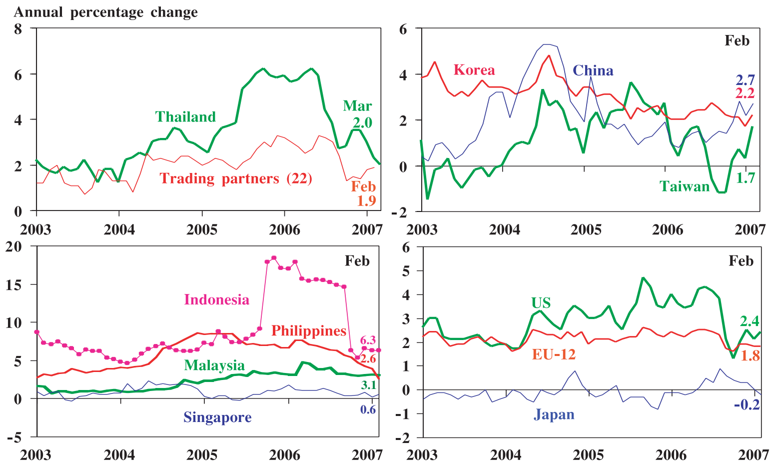
Source: PTT Public Company Limited

The Producer Price Index for 2007 Q1 rose by 2.6 per cent, down from a 3.4 per cent increase in 2004 Q4 mainly as a result of lower prices in manufactured products. In particular, prices in petroleum products and mining products such as natural gas, crude oil and metal ores adjusted downward, in line with a more balanced demand and supply. In addition, appreciation of the baht also helped to reduce import costs.

Inflation in Thailand's major trading partners such as Indonesia, Malaysia, Singapore and the Philippines remained stable or decelerated slightly in 2007 Q1 from lower oil prices. However, inflation in some countries such as China trended upward from higher food prices and consumer goods' prices, while South Korea and Taiwan faced higher prices in housing, transportation and telecommunications.

Price pressures in industrialized countries persistently remained, especially in the US where inflation picked up slightly to 2.4 per cent in February 2007. The euro area's HICP continued stabilizing under the ECB's target of 2 per cent. In Japan, inflation for February turned negative for the first time after 9 consecutive months of positive inflation. This was due to lower oil prices.

Chart 2.3 World inflation



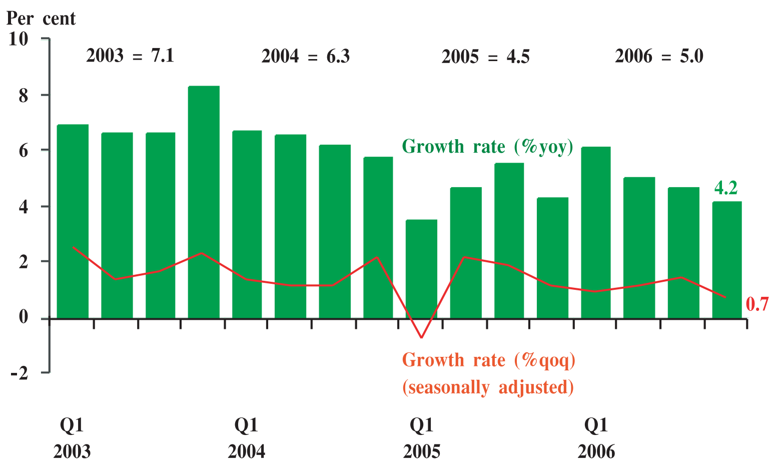
Source: Various official sources and Bloomberg

Aggregate demand in 2006 Q4 [1/]

The economy softened more than anticipated by the MPC.

In 2006 Q4, the Thai economy grew by 4.2 per cent year-on-year, down from the previous quarter growth of 4.7 per cent. The slowdown was more than anticipated by the MPC as domestic demand weakened continuously, both in the private sector and public sector. With external demand continuing to be strong, exports became the main engine of economic growth. The contribution to growth from net exports was 3.9 per cent, while domestic demand contributed only 1.5 per cent and changes in inventory contributed negatively at 1.3 per cent as stock accumulations were lower in this quarter compared to the same period last year.

Chart 2.4 Real GDP growth at 1988 prices



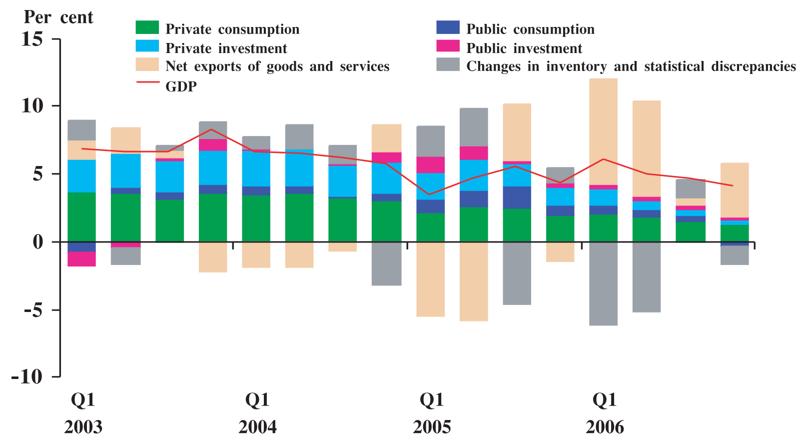
Source: National Economic and Social Development Board

After seasonal adjustments, the economy in 2006 Q4 grew moderately by 0.7 per cent on the quarter-on-quarter basis. This was lower than the 1.4 per cent growth of the previous quarter and would be the lowest rate since 2002 if the period affected by the tsunami was excluded. This indication of weak growth momentum was more than

[1/] The source of data used to analyze aggregate demand in 2006 Q4 originated from the NESDB while most indicators used for analyzing 2006 Q4 and trend in 2007 Q1 came from the BOT, with the exception of the consumer confidence index produced by the University of the Thai Chamber of Commerce, as well as data on government expenditure which originated from the Comptroller General's Department and compiled by the Fiscal Policy Office.

expected by various houses. However, the overall growth for 2006 was 5.0 per cent which was higher than the 4.5 per cent growth in 2005, owing to robust expansion of the export sector.

Chart 2.5 Contribution to GDP growth

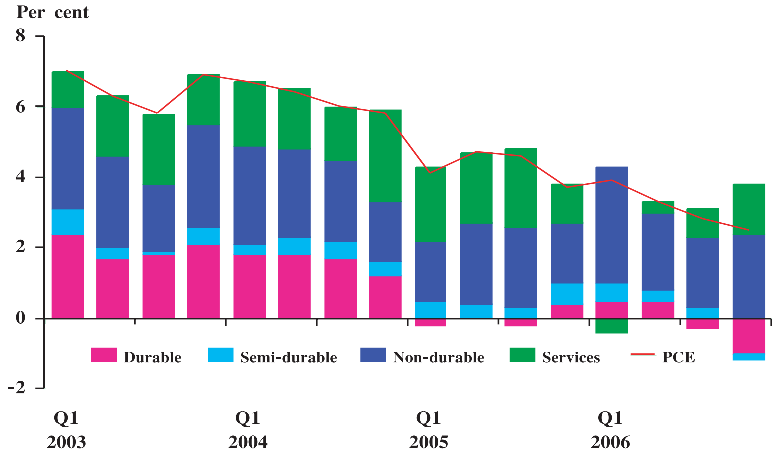


Source: National Economic and Social Development Board

Private consumption and private investment continued to decelerate in 2006 Q4.

Looking at the demand component in 2006 Q4, it was revealed that despite an improvement in the Consumer Confidence Index (CCI) from the third quarter, private consumption continued to slow down. Private consumption expanded year-on-year at 2.5 per cent compared to 3.3 and 2.8 per cent growth in the second and third quarters respectively, making private consumption contribute only 1.3 per cent to GDP growth. This was the lowest contribution for the past 6 years. Weak consumption was signaled by a contraction of consumption of durable goods, which was sensitive to future income and consumers' confidence. High consumption growth in durable goods over the past few years also caused the demand for these goods to become saturated. Consumption in durable goods thus shrank by 8.4 per cent, a contraction for two consecutive quarters, mainly from lower consumption in vehicles and electrical appliances. While consumption in semi-durable goods such as garment, footwear and textiles products contracted by 1.4 per cent, consumption in non-durable goods accelerated, especially in the food category. Consumption in services also expanded well during the tourist season.

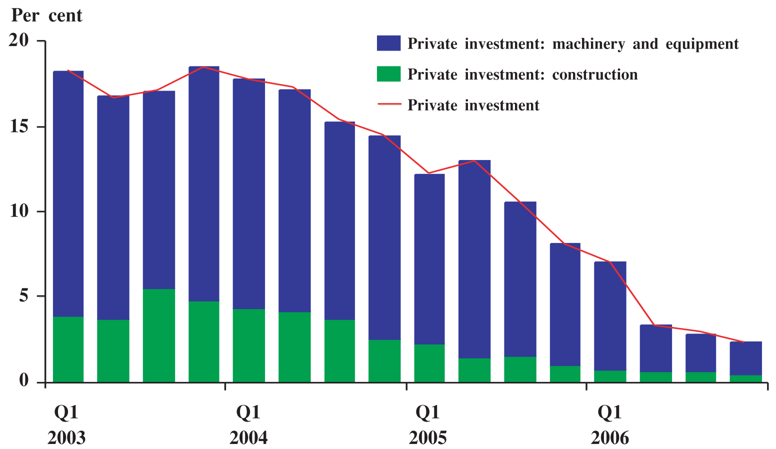
Chart 2.6 Contribution to PCE growth



Source: National Economic and Social Development Board

As for private investment, despite an upturn of the Business Sentiment Index (BSI) to 45.1 in 2006 Q4 from 43.2 in the previous quarter, private investment continued to decelerate. Improvement in the BSI mainly reflected lower production costs owing to cheaper oil prices. However, the unsettled political situation and rapid appreciation of the baht added more uncertainty to the business sector, which further dampened private investment growth. Private investment grew year-on-year by 2.3 per cent, down from the 3.3 and 2.9 per cent growth in the second and third quarters respectively. Investment in construction as well as in machinery and equipment decelerated.

Chart 2.7 Contribution to private investment growth



Source: National Economic and Social Development Board

On the fiscal side, government consumption contracted by 4.2 per cent after expanding continuously over the past three years. This was due to a delay, from political reasons, on drafting and finalizing the fiscal budget for the fiscal year 2007. Government investment also slowed down with an expansion of 2.5 per cent, down from the 3.8 per cent growth in the previous quarter. Investment in machinery and equipment contracted for two consecutive quarters as new government projects were not apparent during the transition. Overall, government spending did not contribute to stimulate GDP growth in 2006 Q4.

Government spending did not expand and thus played no role in stimulating the economy in 2006 Q4.

As for external outlook, net exports of goods and services in 2006 Q4 accounted for 3.9 per cent of GDP growth which was higher than the 0.5 per cent contribution of the previous quarter. While exports expanded buoyantly, imports slowed down in line with weak domestic demand. Exports grew by 6.8 per cent in this quarter, higher than the 4.7 per cent growth in the previous quarter as demand for high-technology products continued growing robustly. In contrast, imports grew only 1.0 per cent compared to the 5.2 per cent growth in the previous quarter.

Net export of goods and services continued to be the main driver of growth.

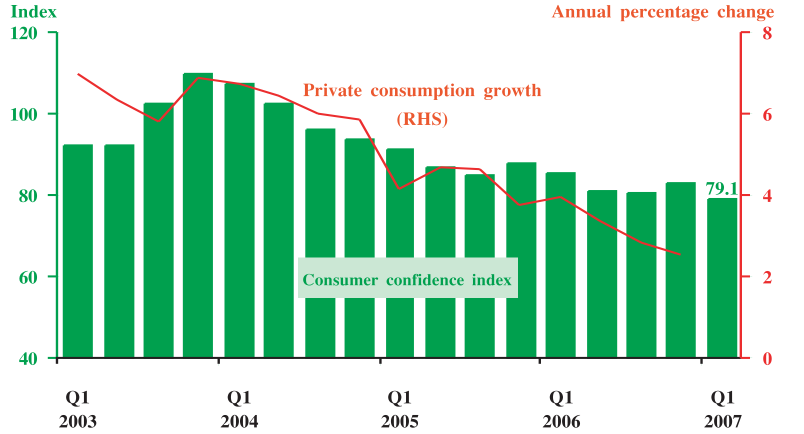
Inventory in 2006 Q4 rose after a continuous stock reduction over the previous 3 quarters. However, seasonal factors accounted for stock accumulation, especially in the agricultural sector, despite some production losses during the floods. Nevertheless, the beverage sector saw their stocks rise to accommodate demand during the New Year holidays. Stock accumulation in the beverage sector did not, however, reflect producers' anticipation of demand recovery, as stock accumulation rose by a mere 0.9 billion baht compared to the 14 billion baht accumulation in 2005 Q4.

Trend of aggregate demand in 2007 Q1

Aggregate demand in 2007 Q1 continued to show a decelerated trend. Exports of goods and services, however, remained to be the main growth engine with solid expansion.

Indicators of private consumption and private investment from the BOT showed an outlook more stagnant than anticipated by the MPC. The Private Consumption Index (PCI) for January and February 2007 contracted on average by 0.6[2/] owing mainly to a slowdown in the durable goods component, such as sales of passenger cars and motorcycles which contracted on average by 14.4 and 16.4 per cent, respectively. Imports of consumer goods also contracted on average, both in durable goods and non-durable goods, in spite of the baht appreciation that should have encouraged imports. These contractions reflected a lack of consumer confidence in line with the CCI[3/]. The CCI fell from 83.0 in 2006 Q4 to 79.1 in 2007 Q1 with main negative factors stemming from political uncertainties and the upswing of oil prices. Considering this information, the MPC viewed that private consumption in 2007 Q1 would decelerate further, with consumption in durable goods likely to shrink, while non-durable goods such as food and services likely to continue to expand well.

Chart 2.8 Consumer confidence index and private consumption growth



Source: The University of the Thai Chamber of Commerce and National Economic and Social Development Board

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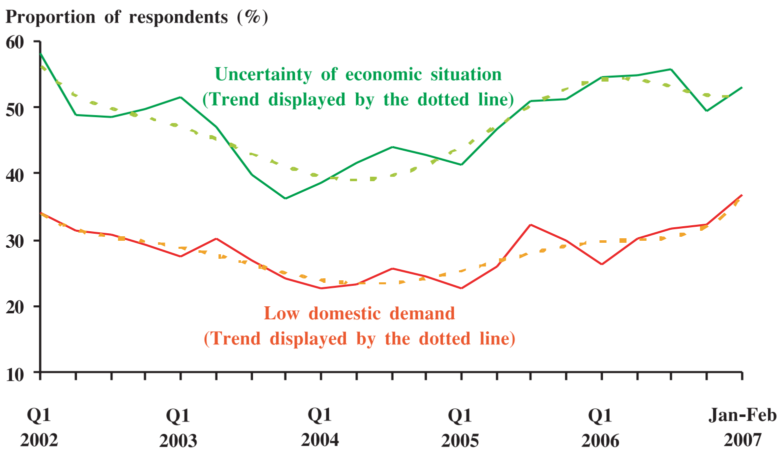
[2/] Preliminary figure as real data in some components were not available.

[3/] Index > 100 reflects an improvement in consumers' confidence
= 100 reflects no change in consumers' confidence
< 100 reflects a worsening in consumers' confidence

The Private Investment Index (PII) for January and February 2007 fell on average by 0.8[4/] per cent following a contraction in commercial car sales and cement sales, while domestic machinery sales continued to grow well. Permitted construction areas in municipal zones grew moderately. Signs of investment recovery were not apparent as the BSI fell from 45.1 in 2006 Q4 to 43.9 and 42.9 in January and February respectively. The survey revealed greater concerns specified by the corporate sector, particularly weak domestic demand as well as uncertainty in the economic situation. These concerns rose after declining slightly in the previous quarter. In February, 35.8 per cent of the corporate sector indicated concerns over weak domestic demand, while 53.1 per cent of the corporate sector expressed concerns over uncertainty pertaining to the economic situation, all pointing towards a lack in business confidence.

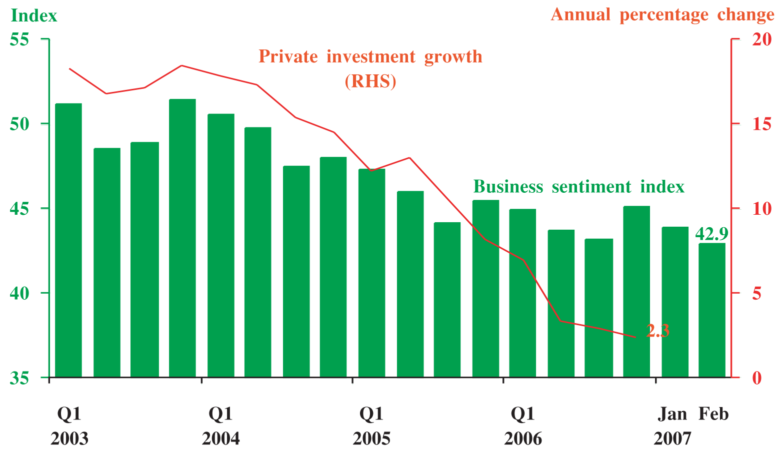
Chart 2.9 Businesses' opinion on their business constraints



Source: Bank of Thailand

[4/] Preliminary figure as real data in some components were not available.

Chart 2.10 Business sentiment index and private investment growth



Source: Bank of Thailand and National Economic and Social Development Board

Government revenue collection showed a dampening trend from weak domestic demand, while accelerated government spending should play a greater role in stimulating the economy.

On the fiscal side, government revenue collection during the second quarter of fiscal year 2007 (calendar year 2007 Q1) displayed a dampening trend. Revenue in January and February 2007 grew on average by 3.9 per cent, down from a 15.0 per cent growth of the previous quarter in both taxes revenue and non-tax revenue. Revenue from corporate taxes shrank partly due to a lower expectation of business performance, while withholding tax collection worsened from the deceleration in economic activity. Revenue from consumption taxes also slowed down in line with private consumption conditions.

Government expenditure for the first 2 months of this quarter rose significantly, growing year-on-year at 29.7 per cent as disbursement of the fiscal budget for 2007 started since January 2007. This hastening of the fiscal effort should help stimulate the economy as well as create a crowding in effect.

As for external outlook[5/], export volume in 2007 Q1 exhibited a softer growth trend with a growth rate of 13.1 per cent in January, compared to the 15.3 per cent in the previous quarter as a whole. Export growth, nonetheless, remained robust as high-technology products

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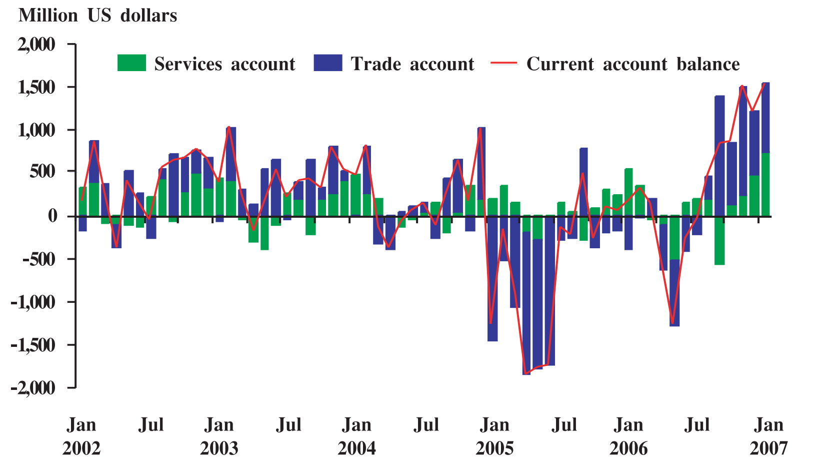
[5/] From January 2007 onward, BOT no longer constructed its import and export prices indices but used the indices disseminated by the Bureau of Trade and Economic Indices. In effect, the volume of export and import would be different from the previous series.

and resource-based products were the main drivers of export growth. The trend in import volume was also likely to slow down in line with domestic demand. Import volume in January 2007 grew by 0.7 per cent compared to the 2.2 per cent growth in the previous quarter as a whole.

A combination of strong export growth and softer import growth constituted a large trade surplus in 2007 Q1. Moreover, a strong trend in tourism income in January and February 2007 created a net surplus of 1,269 million US dollars in services income and transfers. Thus, a large current account trend continued to pressure the baht to appreciate further.

Chart 2.11 Current account balance



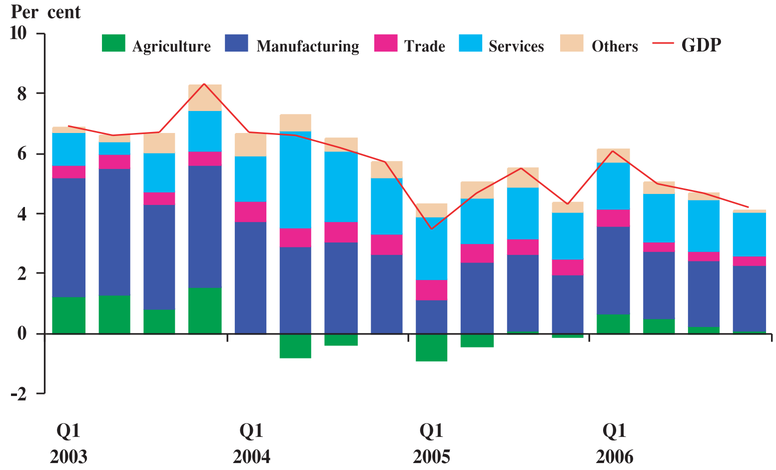
Source: Bank of Thailand

Production and supply in 2006 Q4 [6/]

On the supply side, production in the agricultural sector during 2006 Q4 slowed down as growth in crop production and livestock weakened, in spite of good growth in fishery production. Production in the non-agricultural sector also grew robustly especially in the manufacturing sector.

[6/] The source of data used to analyze production and supply in 2006 Q4 originated from the NESDB while most indicators used for analyzing 2006 Q4 and trend in 2007 Q1 came from the BOT. Data on the number of tourists and occupancy rate were partly compiled by the Tourism Authority of Thailand while data on the labour market came from the NSO.

Chart 2.12 Contribution to GDP growth



Source: National Economic and Social Development Board

Affected by flood, agricultural output in 2006 Q4 slowed down, while manufacturing production accelerated.

Agricultural output grew moderately by 0.9 per cent year-on-year, down from the 4.0 per cent growth in the previous quarter. This was due to floods during August and November 2006 that damaged crop production, especially rice, as well as livestock production such as chicken. However, fishery production continued to expand robustly owing to demand for shrimp exports.

Manufacturing production picked up slightly from the 5.5 per cent growth in the previous quarter to the 5.8 per cent this quarter. Export-oriented industries such as electronics retained its robust growth while industries that relied partly or heavily on domestic markets such as textile products, electrical appliances, food and beverages trended downward in line with a weak domestic demand.

Growth in the service sector softened to 4.7 per cent from the 5.4 per cent growth in the previous quarter, owing largely to the delay in fiscal disbursement. However, other important service sectors such as hotels and restaurants expanded well from the rising number of tourists. In particular, the number of foreign tourists during December rose as high as 20.2 per cent year-on-year.

Despite continuous expansion in various sectors, employment in the fourth quarter expanded by only 0.1 per cent year-on-year. This was partly a reflection of tightness in the labour market as the unemployment rate at the time was very low at 1.3 per cent.

Trend in production and supply in 2007 Q1

In 2007 Q1, crop production accelerated from the previous quarter. For the first two months of 2007 Q1, crop production grew by 6.4 per cent, partly as a result of more desirable weather conditions and a better price incentive for sugarcane production since last year which raised output. However, crop production in certain agricultural areas had yet to fully recover from flood damage. Nevertheless, production hikes as well as the continuous rise in prices caused an acceleration in farm income over the previous quarter.

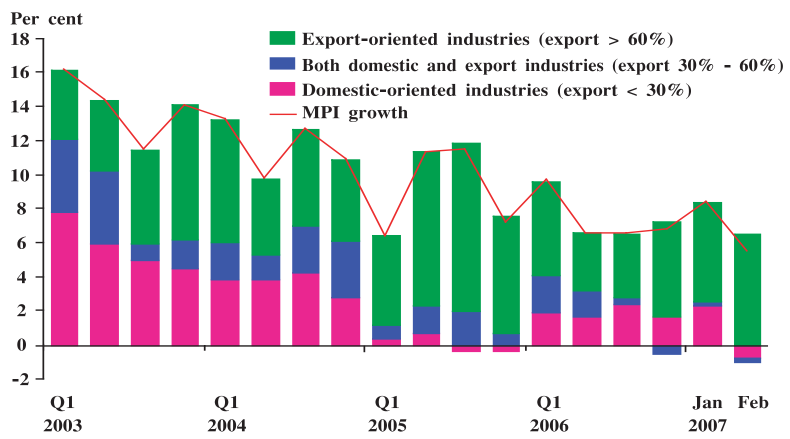
In 2007 Q1, trend in agricultural output showed some improvements compared to 2006 Q4 owing to better weather conditions while manufacturing production growth remained similar to the previous quarter.

Manufacturing production should expand in line with the previous quarter. The MPI for the first two months of 2007 Q1 grew on average by 6.9 per cent, a rate similar to the 6.8 per cent growth in 2006 Q4. Classifying each industry by export proportions revealed a picture similar to the previous quarter; export-oriented industries maintained its robust growth while domestic-oriented industries such as vehicles, construction materials and textile products had yet to recover owing to weak domestic spending, especially in durable goods.

The outlook for tourism in 2007 Q1 appeared to slow down as growth in foreign tourist numbers decelerated from the previous quarters. Moreover, the hotel occupancy rate for the first two months was lower than the same period last year. However, air pollution that plagued the northern region should have little impact on overall tourism

Tourism in 2007 Q1 displayed a decelerating trend but remained satisfactory.

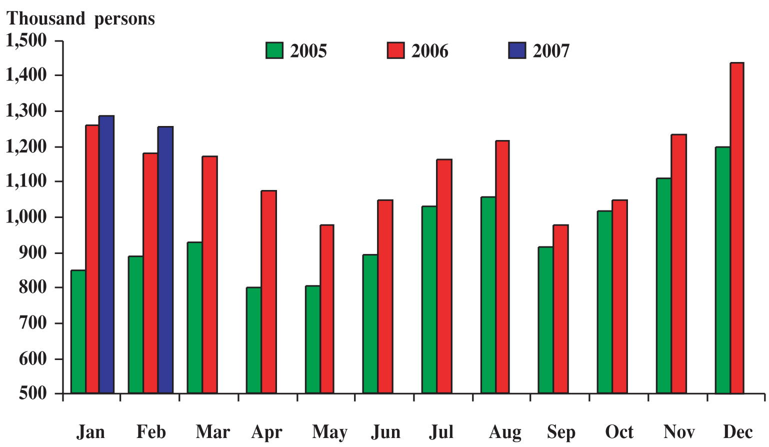
Chart 2.13 Contribution to manufacturing production index (MPI) growth



Source: Bank of Thailand

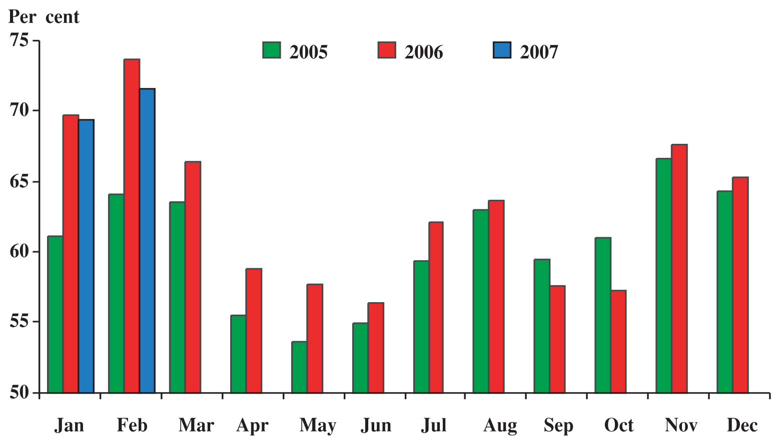
as tourists switched their destinations from the northern region to the Andaman region in the south in response.

Chart 2.14 Number of tourists



Source: Tourism Authority of Thailand and Bank of Thailand

Chart 2.15 Hotel occupancy rate

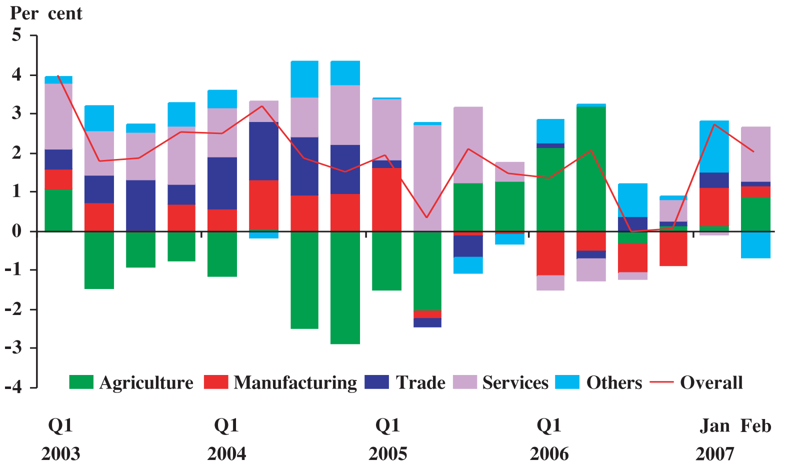


Source: Tourism Authority of Thailand and Bank of Thailand

The unemployment rate continued to be very low, partly due to labour market flexibility.

Employment growth during the first 2 months of 2007 Q1 improved over the previous quarter with a growth rate of 2.0 per cent year-on-year in February, mainly from more employment in the service and agricultural sector. The unemployment rate remained low similar to the same period last year at 1.5 per cent, but a little higher than the previous quarter due to seasonal reasons. Nonetheless, the Thai labour market remained very flexible as shown by the movement of labour between agricultural and non-agricultural sectors. This helped mitigate adverse effects on employment that could arise from supply shocks such as flooding.

Chart 2.16 Employment growth and sectoral contributions



Source: National Statistical Office

3. Monetary Conditions in the Last 3 Months

Following the release of the previous *Inflation Report*, the MPC assessed in the meetings on 28 February and 11 April 2007 that the Thai economy in 2006 Q4 and economic indicators in January and February 2006 pointed towards a slowdown in domestic demand by more than the MPC had expected, particularly in private consumption, investment, and the fiscal momentum. Moreover, the risks to economic growth this year rose due to the slowdown in the global economy, which would dampen demand for exports. However, the risks to inflation remained low, even though crude oil prices were expected to be higher than at the beginning of the year. Monetary policy could therefore be eased in support of a further expansion of the economy, especially domestic demand. The MPC thus decided to lower the 1-day repurchase rate from 4.75 per cent per annum to 4.50 per cent per annum on 28 February 2007, and by a further 0.50 per cent to 4.00 per cent per annum on 11 April 2007.

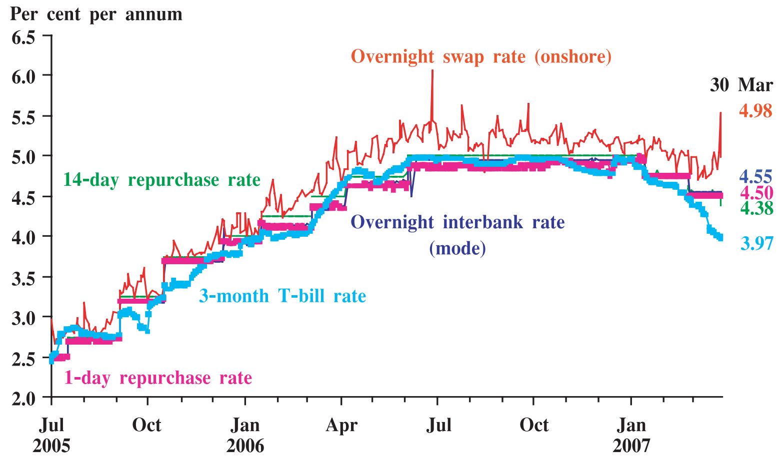
The policy rate was continuously lowered from the beginning of the year up until the MPC meeting on 11 April 2007, a total reduction of 1.00 per cent per annum, reflecting the easing stance of monetary policy. Most commercial banks thus decreased their reference deposit and lending rates following the policy rate reductions.

Money market conditions

Short-term money market rates adjusted downwards, in line with the policy rate.

In 2007 Q1, short-term money market rates adjusted downwards from the end of 2006, in line with the policy rate which was reduced twice in January and February 2007, totalling 0.50 per cent per annum. The 1-day repurchase and overnight interbank rates for the quarter averaged at 4.79 and 4.84 per cent per annum, down from 4.89 and 4.95 per cent per annum in the previous quarter, respectively.

Chart 3.1 Money market interest rates

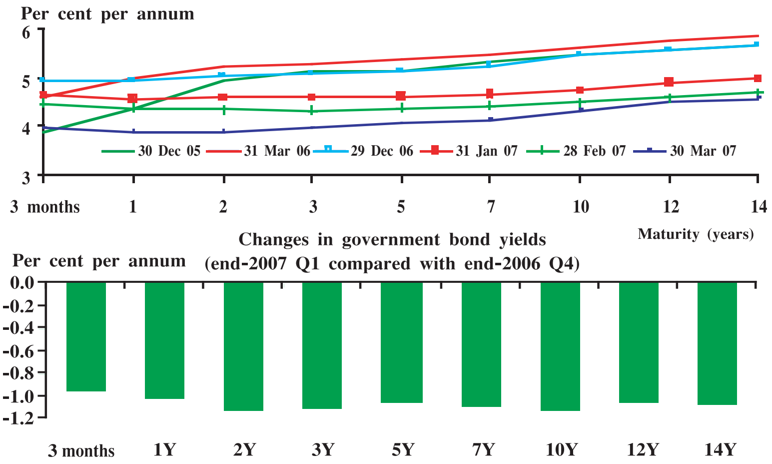


Source: Bank of Thailand

The government bond yield curve continued to adjust downwards in the first quarter of 2007.

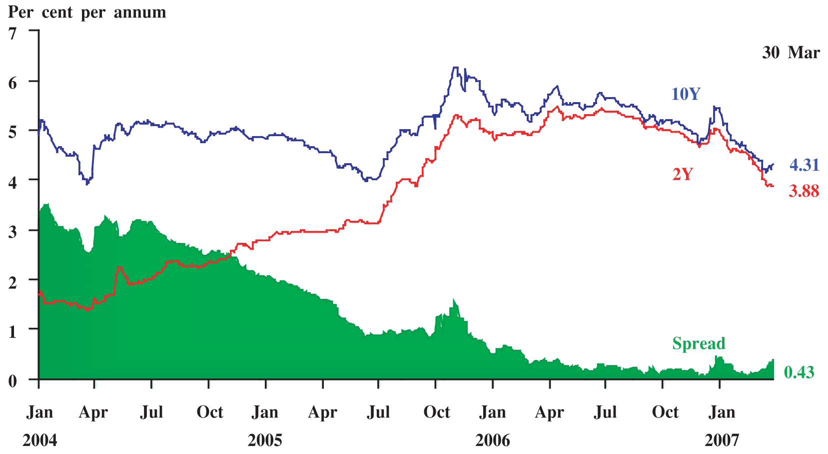
Yields on treasury bills and government bonds continued to adjust downwards in 2007 Q1. In particular, the interest rate of 3-month treasury bills fell by more than the policy rate and shorter-term interest rates in the money market, reflecting the expectation that the policy rate would be reduced continuously over the upcoming 3 months. Moreover, the downward shift in the yield curve, both for short-term and long-term government bonds, also reflected expectations of a continued reduction in the policy rate. However, the downward shift of the government bond yield curve meant that the spread of long-term

Chart 3.2 Government bond yields



Source: Bank of Thailand

Chart 3.3 Government bond yield spread between 10-year and 2-year



Source: Bank of Thailand

over medium-term government bond yields remained similar to the previous quarter, with the spread between 10-year and 2-year bonds registering at 0.43 per cent at the end of the 2007 Q1, compared to 0.42 per cent at the end of 2006 Q4.

Monetary base and money supply

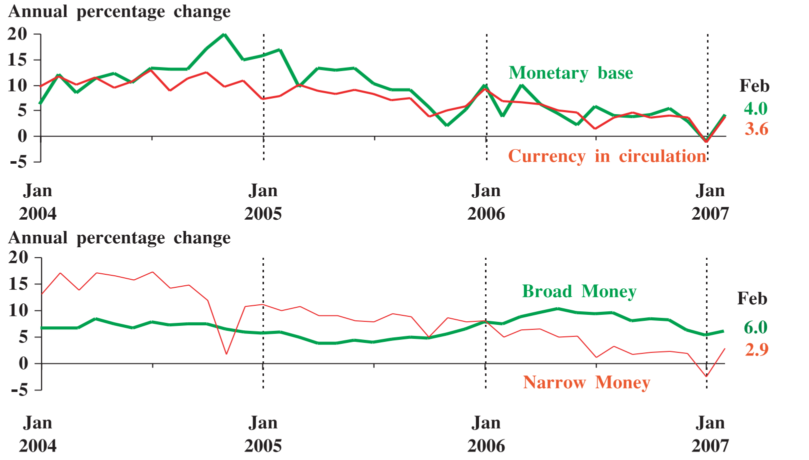
During the January-February period, the monetary base expanded on average by 1.4 per cent year-on-year, down from 2.6 per cent in 2006 Q4, in tandem with the deceleration of currency in circulation in the hands of the private sector. This reflected the slower pace of private consumption growth, as well as the higher opportunity cost of holding cash arising from higher interest rates, compared to the beginning of last year.

The growth rate of currency in circulation in the hands of the private sector decelerated, reflecting slower private consumption growth and a higher opportunity cost of holding cash.

Growth of money aggregates decelerated from 2006 Q4. In the January-February period, Broad Money[1/] grew at an average rate of 5.6

[1/] Broad Money refers to the monetary aggregate which has a broader coverage than M3 in that it also includes deposits or deposit substitutes of other depository corporations (ODCs) apart from commercial banks, finance companies and specialised financial institutions (SFIs). The Bank of Thailand compiles Broad Money in accordance with the Monetary and Financial Statistics Manual (MFSM 2000) of the International Monetary Fund. From 2007 onward, only Broad Money (and not other monetary aggregate series) will be published. For further information, please visit http://www.bot.or.th

Chart 3.4 Growth rate of money supply

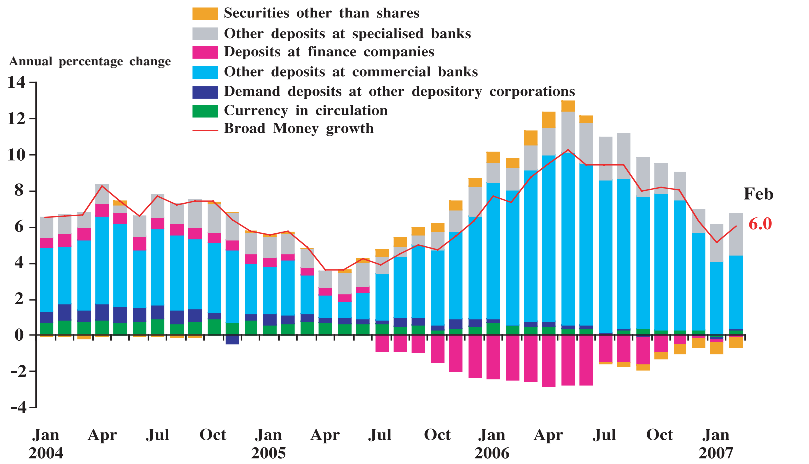


Source: Bank of Thailand

Growth of money aggregates followed the slowdown in deposits in the banking system, as banks refrained from raising deposit rates to compete for deposits, as was done in the first half of 2006.

per cent year-on-year, down from the previous quarter. The slowdown was mainly a result of the deceleration in deposits in the banking system from the second half of 2006, as commercial banks refrained from raising deposit rates to compete for deposits, as was done in the first half of the year. Furthermore, the deceleration in growth of Broad Money was in line with the slowdown in domestic demand.

Chart 3.5 Contribution to Broad Money growth



Source: Bank of Thailand

Adjustments of the banking system

Commercial banks rapidly adjusted reference interest rates downwards, both in terms of deposit and lending rates, following the reductions in the policy rate.

Following the MPC's decisions to lower the policy rate since the meeting in January 2007, most commercial banks adjusted their reference interest rates downwards, both in terms of deposit and lending rates.

Deposit rates adjusted downwards rapidly, particularly long-term interest rates which were adjusted downwards by more than short-term interest rates, reflecting the expectation of commercial banks that interest rates would continue to be reduced in line with expectations in the money market. At the end of 2007 Q1, average 3-month, 6-month and 12-month time deposit rates of the four largest Thai commercial banks decreased to 3.25 per cent per annum.

Table 3.1 The policy rate and banks' reference retail rates*

Unit: Per cent	2005	2006	2007		
	Dec	Dec	Jan	Feb	Mar
Policy rate	4.00	5.00	4.75	4.50	4.50
Average reference retail rates of the 4 largest banks					
Savings	0.75	0.75	0.75	0.75	0.75
3-month	2.00	3.44	3.44	3.31	3.25
6-month	2.25	3.69	3.69	3.56	3.25
12-month	2.50	4.00	3.81	3.56	3.25
24-month	3.75	4.69	4.44	3.88	3.69
MLR	6.50	7.69	7.69	7.69	7.50

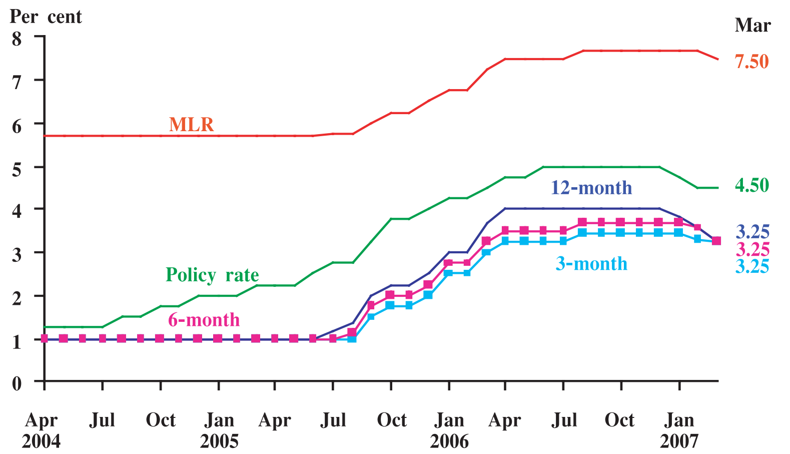
Note: *Rates at end-period
Source: Bank of Thailand

Moreover, the downward adjustment of lending rates was slower than that of deposit rates, given that commercial banks needed time to adjust the interest rate on their longer-term deposits, in order to maintain their profit margins. On the other hand, interest income declined in tandem with the reduction in lending rates. Most commercial banks therefore lowered their reference deposit and lending rates, following the policy rate reduction after the MPC meeting in February 2007. As of end-2007 Q1, the average MLR of the four largest Thai commercial banks decreased to 7.50 per cent per annum. The reduction in lending rates should help stimulate domestic demand, which had been on a downward trend.

Commercial bank reference rates were rapidly adjusted downwards, reflecting a faster rate of monetary policy transmission to commercial bank interest rates in the down-cycle of policy rates compared to the up-cycle.

Commercial bank reference rates rapidly adjusted downwards, reflecting faster monetary policy transmission to commercial bank interest rates in the policy rate down-cycle than in the up-cycle. During the up-cycle when the policy rate was progressively hiked from August 2004 onwards, monetary policy actions took time to transmit fully to commercial bank rates. One of the main factors that led commercial banks to rapidly adjust their reference rates downwards in line with policy rates was due to the fact that commercial banks invested their excess liquidity in the money market during the policy rate up-cycle. If commercial banks did not adjust their reference rates downwards, their costs from paying interest on deposits would exceed the returns on their investments in the money market, which declined rapidly.

Chart 3.6 Policy rate and commercial banks' reference retail rates*

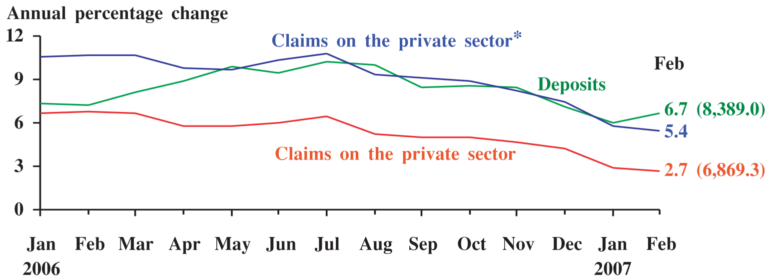


Remark: *Average rate of the 4 largest commercial banks at end-period
Source: Bank of Thailand

Depositors migrated their deposits from time deposits with maturities between 7-12 months to others, particularly with maturities over 1 year.

The reduction in commercial bank deposit rates - particularly in long-term deposits - caused migration of deposits from time deposits with maturities between 7-12 months, including special deposit accounts with maturities between 8-10 months, to other time deposits. As a result, the proportion of deposits in time deposit accounts with maturities between 7-12 months fell from 17.2 per cent at end-December 2006 to 15.4 per cent at end-February 2007. Some deposits were shifted to short-term time deposit accounts that paid higher returns when compared to long-term time deposits, over the same amount of time. Others deposits shifted to time deposit accounts with maturities over 1 year in order to lock in long-term returns, as deposit rates were expected to be on a downward trend.

Chart 3.7 Other depository corporations' deposits and claims on the private sector



Change from end of previous period (Billion baht)	2006	2006					2007	
		Q1	Q2	Q3	Q4	Dec	Jan	Feb
Deposits	545.0	327.1	81.1	144.5	-7.8	-130.3	157.9	107.0
Claims on the private sector	279.1	107.0	6.2	95.9	70.1	3.7	-47.6	35.3

Remark: *Excluding the effects of loan write-offs and transfers to AMCs
Source: Bank of Thailand

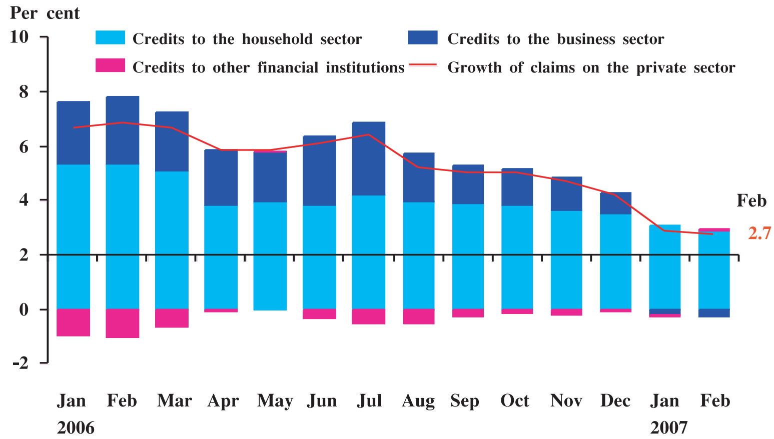
Expansion of Other Depository Corporations'[2/] deposits moderated as banks stopped competing for deposits since mid-2006. However, in February 2007, deposits of Other Depository Corporations accelerated slightly from January. This was partly a result of increased deposits from local governments that received transfers from the fiscal budget, but were yet to be disbursed. The acceleration also resulted from households which increased deposits in order to lock-in long-term returns with current interest rates. Overall, in February 2007, deposits of other depository corporations grew by 6.7 per cent year-on-year, down from the growth rate of 7.2 per cent in 2006 Q4.

Commercial banks' claims on the private sector continued to grow at a decelerating rate due mainly to slower growth of credit to the business sector.

Other Depository Corporations' claims on the private sector also continued to decelerate, following the slowdown in domestic demand, owing mainly to slower growth of credits to the business sector. As of end-February 2007, claims on the private sector rose by 2.7 per cent

[2/] Other Depository Corporations comprise domestically registered commercial banks, branches of foreign banks, international banking facilities, finance companies, Specialised Financial Institutions (including Government Savings Bank, Government Housing Banks, Bank for Agriculture and Agricultural Cooperatives, Export-Import Bank of Thailand, Small and Medium Enterprise Development Bank of Thailand, Islamic Bank of Thailand), saving cooperatives, and money market mutual funds.

Chart 3.8 Contribution to growth of claims on the private sector of other depository corporations



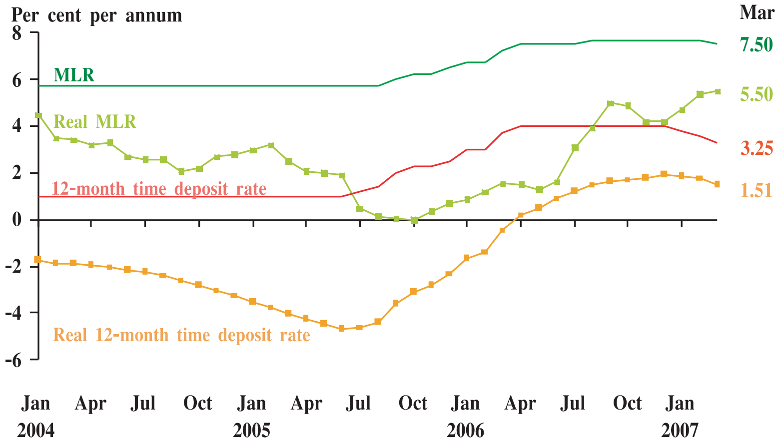
Source: Bank of Thailand

year-on-year, a moderation from the growth rate of 4.2 per cent in 2006 Q4. Excluding the effect of loan write-offs and transfers to AMCs, claims on the private sector expanded by 5.4 per cent, decelerating from 7.5 per cent in the previous quarter.

Real deposit rates adjusted downwards following the reduction in commercial banks' deposit rates.

As commercial banks lowered their reference rates in 2007 Q1, deposit rates adjusted downwards at a faster pace than expected inflation 12 months ahead, causing the real 12-month deposit rate to decline.

Chart 3.9 Commercial banks' interest rates*



Remark: * Average rate of the 4 largest commercial banks

Source: Bank of Thailand

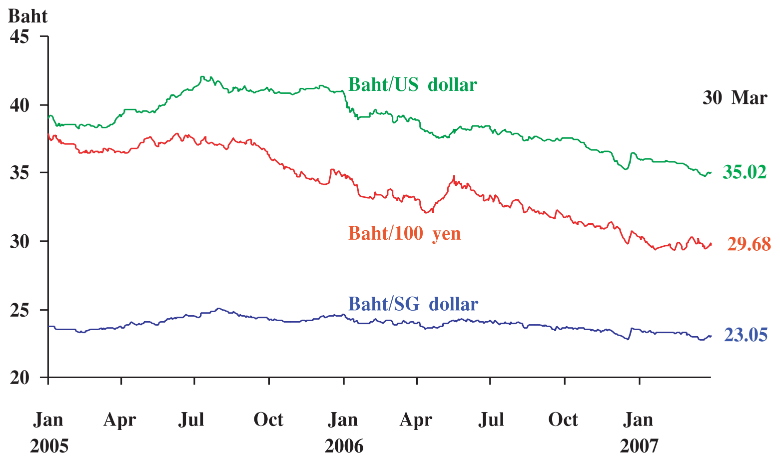
As of end-March 2007, the real 12-month deposit rate[3/] stood at 1.51 per cent per annum. However, the real MLR[4/] increased slightly to 5.50 per cent per annum, resulting from headline inflation that slowed down at a faster pace than the decline in the MLR over the past few months.

Exchange rates and capital flows

In 2007 Q1, the baht continued to appreciate from the end of 2006 but at a decelerated trend.

Following the implementation of the reserve requirement on short-term capital inflows on 18 December 2006 aimed at discouraging short-term capital inflows and limiting Thai baht speculation, the baht averaged at 35.59 baht per US dollar in 2007 Q1. This reflected a continued appreciation of 2.84 per cent from its 2007 Q4 average, albeit at a decelerated trend, in line with the appreciation of regional currencies.

Chart 3.10 Exchange rate



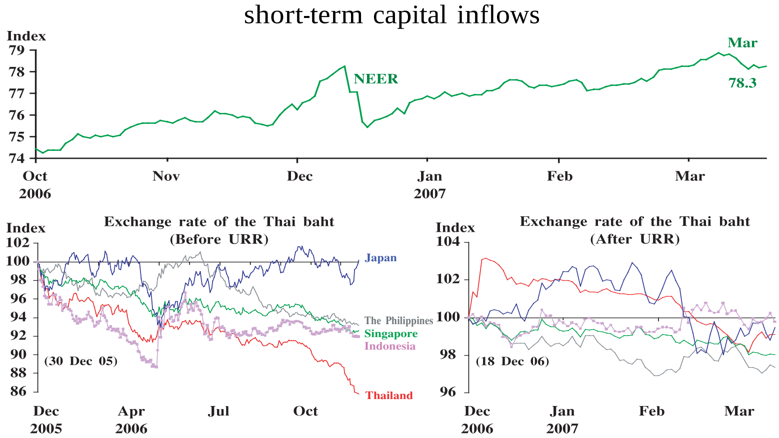
Source: Bank of Thailand

The baht continued to appreciate since the end of 2006 as a result of both external and internal factors. Main external factors included the depreciation of the US dollar as a result of the very large US current

[3/] Real deposit rate = 12-month deposit rate-average inflation forecast 12 months forward
[4/] Real lending rate = MLR-contemporaneous headline inflation

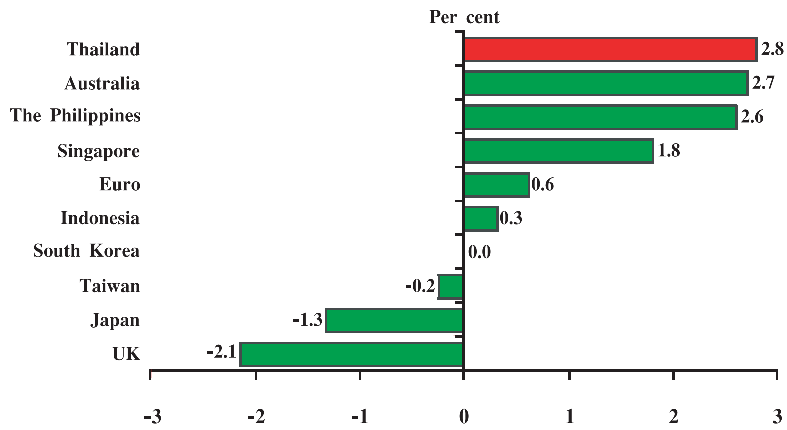
account deficit and the growing fiscal deficit - the so-called “twin deficits” problem, the slowdown in the US housing market and news about higher delinquency rates in the US sub-prime mortgage market. Internal factors included the continued surplus in the current account, as well as the sale of US dollars by domestic exporters stemming from expectations that the BOT would lift the reserve requirement on short-term capital inflows.

Chart 3.11 NEER and exchange rate of the Thai baht and regional currencies before and after the unremunerated reserve requirement on short-term capital inflows



Source: Bank of Thailand

Chart 3.12 Change in the values of foreign currencies against the US dollar (average in 2007 Q1 compared with 2006 Q4)



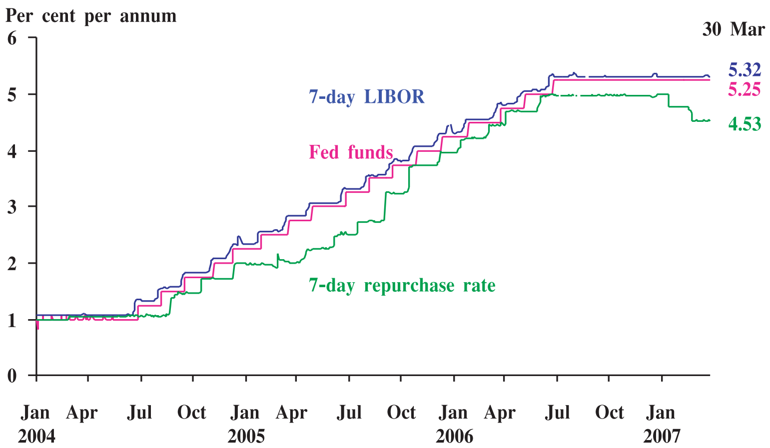
Source: Bank of Thailand

The nominal effective exchange rate (NEER), calculated as a weighted average of bilateral exchange rates between the baht and major trading partners' currencies, appreciated on average by about 2.3 per cent between 2006 Q4 and 2007 Q1. The baht continued to strengthen against major currencies such as the US dollar, euro, yen, as well as most of the regional currencies. Meanwhile, the real effective exchange rate (REER), which was deflated by inflation to reflect Thailand's price competitiveness, continued to appreciate, with the average of the first 2 months of 2007 Q1 rising by 1.1 per cent, compared to the average in 2006 Q4. The appreciation was due mainly to appreciation in the NEER at a higher rate than the deceleration in inflation, compared to trading partners.

At end-2007 Q1, the interest rate differential between the Thai and US policy rates was 0.75 per cent, up from 0.25 per cent at end-2006 Q4. The wider differential came about as the FOMC maintained its policy rate throughout the quarter, while the MPC lowered the policy rate 2 times, totaling 0.50 per cent. However, the baht continued to appreciate, reflecting the fact that the impact of interest rate differentials

Although the interest rate differential between Thai and US policy rates increased from the previous quarter, it had no significant impact on the value of the baht in recent periods.

Chart 3.13 LIBOR, fed funds rate and Thai repurchase rate



Source: Bank of Thailand

on the value of the baht in recent periods has been muted (see Box for further details).

The balance of payments continued to stay in surplus in line with the current account surplus and non-bank capital inflows, leading to continued baht appreciation.

The baht continued to appreciate, given pressure from the current account in January 2007, which registered a continued surplus from 2006 Q4. The current account surplus resulted from a marked expansion in exports (see further details in Chapter 2), as well as capital inflows in the non-bank sector from foreign direct investment and investment in the stock market. In addition, the balance of payments registered a surplus of 981 million US dollars during the first 2 months of 2007 Q1.

Table 3.2 Balance of payments

Unit: Billion US dollars	2005	2006	2006			2007P	
			H1	Q3	Q4	Jan	Feb
Current account balance*	-7.9	3.2	-1.6	1.2	3.6	1.5	n.a.
Net capital flows*	12.6	8.9	5.9	2.6	0.3	-2.4	n.a.
Bank of Thailand	0.0	0.0	0.0	0.0	0.0	0.0	n.a.
Public	-1.0	-0.6	-0.2	-0.2	-0.2	-0.3	n.a.
Bank	0.3	-8.6	-4.9	-0.8	-2.9	-3.3	n.a.
Others	13.2	18.0	11.0	3.7	3.4	1.2	n.a.
Balance of payments	5.4	12.7	4.7	3.5	4.6	0.1	0.8

Remark: * Reinvested earnings are recorded as part of direct investment in the financial account, and its contra entry recorded as 'investment income' in the current account

P = Preliminary

Source: Bank of Thailand

In 2007 Q1, international reserves continued to increase.

The sustained surplus in the balance of payments led to a continued accumulation of international reserves. As of end-2007 Q1, international reserves stood at 70.9 billion US dollars, up from 67.0 billion US dollars at end-2006 Q4. When combined with the BOT's net forward position, free reserves increased to 79.3 billion US dollars. External liquidity indicators remained favourable, with the ratio of international reserves to short-term external debt registering at 3.6 as of end-January 2007.

The impact of interest rates on exchange rates

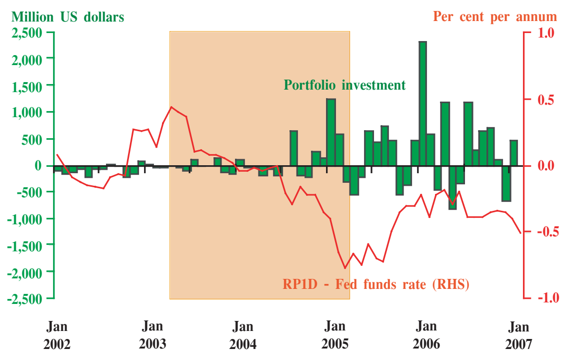
The continued rapid appreciation of the baht over the past year raised concerns over its adverse effect on the competitiveness of Thai exports, which was the main driver of economic growth. Such concerns led to the implementation of numerous measures to slow down the appreciation of the currency. There was, however, also a widespread belief that a reduction in the policy rate could be used as another tool to moderate the strengthening of the baht. Following this line of thought, if the policy rate was lowered, capital would flow out of Thailand to reap better returns elsewhere, given a reduction in the interest rate differential between domestic and foreign assets. Such outflows would therefore impose downward pressure on the baht.

Nonetheless, changes in interest rates would have had an impact on the exchange rate only if two important conditions were met, namely: (1) that interest differentials had an effect on capital flows and (2) that capital flows were an important factor in determining exchange rate movements.

Interest differentials and capital flows

Theoretically, capital would flow to where it would receive the highest return. In the recent past, however, interest differentials only had a partial impact on capital flows. As seen in Chart 1, between 2003 and 2005, average interest differentials declined from 0.20 per cent to -0.56 per cent owing to differing interest rate cycles, which caused the Fed funds rate to rise above the BOT's 1-day repurchase rate on average. Such a decline in interest differentials, however, did not lead to an outflow of capital, but on the contrary, raised capital inflows, as reflected in the shift from net capital outflows[1/] of USD 0.2 billion in 2003 to net capital inflows totaling USD 2.6 billion in 2005. This indicated that interest differentials were not the only factor investors took into account in making their investment decisions.

Chart 1 Interest differentials and portfolio investment



Source: Bank of Thailand

Factors that also determined capital flows included confidence and risk. A good example was the situation whereby foreign investors reallocated their portfolio away from assets in emerging markets to the major markets, despite insignificant changes in interest differentials between the two - the so called 'Emerging Market Risk Aversion'[2/] - which took place in mid-2006 and the beginning of 2007.

Another important factor was expectations on exchange rate movements. Aside from interest rates, changes in the exchange rate also determined returns on investment. If investors expected a currency to appreciate substantially, whether due to sound fundamentals or speculative pressures, even if the interest rate on that currency-denominated asset was low but that currency appreciated or was expected to appreciate significantly, investments in that currency-denominated asset could be more attractive than investment in other currencies. In the case of the baht, there clearly was room for profit making. For example, in January 2006, short-term Thai and US bond yields were 3.93 and 4.34 per cent per annum respectively. An investment of USD 1 million in Thailand at the January 2006 exchange rate of 39.58 baht per USD after 1 year would yield (1.0393 x 39.58) = 41.14 million baht in January 2007. Over the same period, the baht appreciated to 35.93 baht per USD, increasing the yield on that investment to USD 1.14 million.

[1/] This case refers specifically to portfolio investment, which should be more sensitive to interest differentials than other types of capital flows.
[2/] *Inflation Report* October 2006

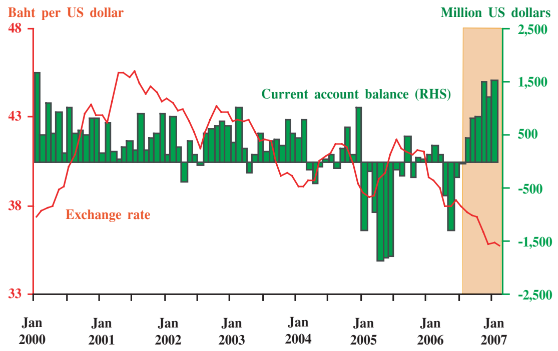
After deducting the principal of USD 1 million and interest on borrowed principal of USD 0.0434 million, the investment would have yielded a net profit of USD 0.10 million.[3/]

Determinants of exchange rate

Movements of the exchange rate also depended on various factors. In the recent past, capital flows were only one of many determinants of the exchange rate. Other important determining factors included the continued appreciation of regional currencies vis-à-vis the US dollar, due primarily to lower confidence on the US economy, and the Thai current account which registered a persistent surplus from August 2006 onwards.

Notably, in 2006 there were substantial capital inflows[4/], particularly in the first 11 months, totaling USD 5.5 billion. After the implementation of the BOT's reserve requirement on short-term capital inflows on 18 December 2006, the BOT observed capital outflows of USD 0.2 billion in total between December 2006 and January 2007. However, the exchange rate of the baht in bilateral terms vis-à-vis the USD, as well as in effective terms, appreciated by 0.6 and 1.8 per cent respectively between the end of November 2006 and January 2007. The appreciation was attributable to the current account that registered a surplus of USD 2.8 billion between December 2006 and January 2007, and exerted continued upward pressure on the baht despite the capital outflows.

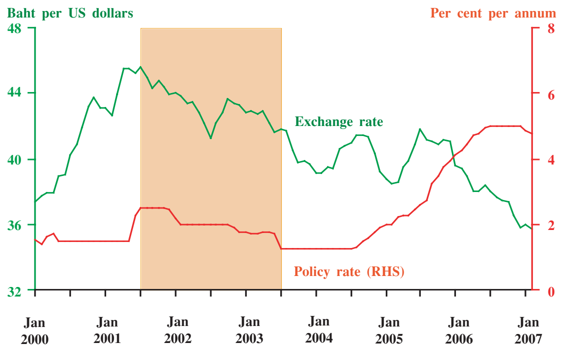
Chart 2 Exchange rate and current account balance



Source: Bank of Thailand

The relationship between interest rates and exchange rates

Chart 3 Policy rate and exchange rate



Source: Bank of Thailand

Given that capital flows were determined by several factors aside from interest rates, combined with the fact that various determinants affected the exchange rate aside from capital flows, the effect of interest rates on the exchange rate in practice may not be as significant as suggested by theory. Over the past 5 years, interest differentials did not have a statistically significant impact on the exchange rate.[5/] Even when interest rates were on a downward trend, for example, when the policy rate was lowered from 2.50 to 1.25 per cent per annum between July 2001 and July 2003, the baht continuously strengthened from 45.62 to 41.78 baht per USD. Thus, a reduction in the policy rate to lower the upward pressure on the exchange rate might not have been as effective as expected.

[3/] Net profit = {profits from currency appreciation on both principal and interests} + profits from interest differentials
10.15% = {10.16% x (1+ 3.93%)} + (3.93% - 4.34 %)

[4/] Portfolio investment only

[5/] $\Delta \ln(THB/USD)_t = \underset{(-1.145)}{-0.002} - \underset{(-1.040)}{0.471}\,(RP1D - \text{Fed funds})_t - \underset{(-2.817)}{0.009}\,(\text{Portfolio Investment in bn USD})_t - \underset{(-2.157)}{0.005}\,(\text{Current Account in bn USD})_t$

Data period: January 2003 - January 2007, t-statistics in brackets

4. Financial Stability Conditions and Outlook

Although the economic softening in 2006 Q4 did not show signs that the financial health of corporate and household sectors was seriously affected, the corporate sector's profitability dropped slightly while household's delinquency rate slightly rose. Financial markets in 2007 Q1 continued to be affected by negative factors that dampened investors' confidence since late last year. Foreign exchange, equity, and bond markets were thus rather volatile. Nevertheless, the latest data indicated a return to normalcy.

Non-financial corporate sector

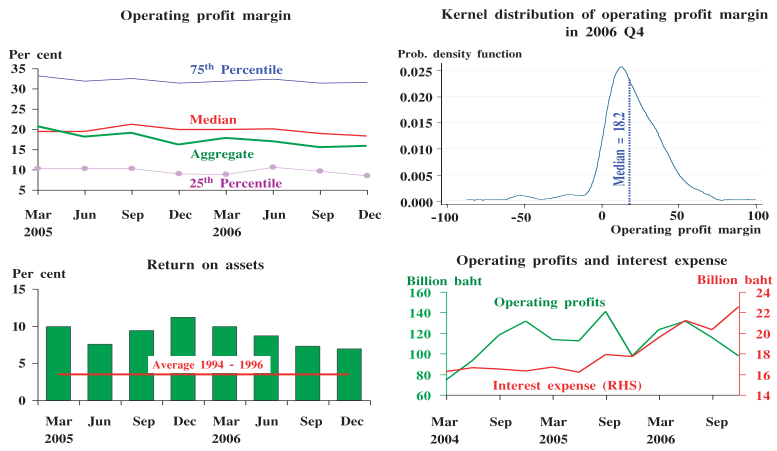
Profitability of most listed companies declined in 2006 Q4, especially in the case of those that had already been underperforming.

Profitability of the non-financial corporate sector, proxied by the listed companies on the Stock Exchange of Thailand (SET) in 2006 Q4, continued to soften from the previous quarter. Despite improvements in the overall operating profit margin, the distribution of individual firm performance showed a decline in operating profit margin of the median firm. In particular, the operating profit margin of firms under the lowest 25th percentile plunged far below the overall average. The distribution suggested a more severe impact from the economic softening on the underperforming firms relative to the market average.

In addition, return on assets (ROA) continued to decline owing to a fall in operating profits together with rising interest expenses.

To date, the decline in business performance and the rise in interest payments of the corporate sector resulted in dampened debt-service ability of the corporate sector in 2006 Q4, as reflected by the decline in interest coverage ratio (ICR) to 5.0 times from 6.8 times in the previous quarter. ICR, however, still stood noticeably higher than the pre-crisis average.

Chart 4.1 Profitability indicators

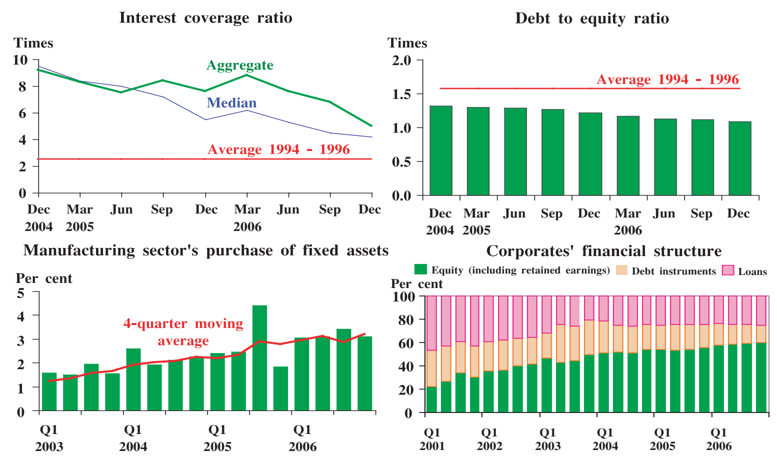


Source: The Stock Exchange of Thailand, calculations by the Bank of Thailand

Solid financial status reflected corporate sector's resiliency.

Overall, the corporate sector's purchase of fixed assets slightly declined, reflecting the feeble investment atmosphere and subdued private investment. Nevertheless, softened investment was expected to gradually rebound for the rest of the year, with support from several positive factors including a clearer government spending policy and the easing of monetary policy. Private investment should then continue to recover throughout the following year. Furthermore, sound financial status of the corporate sector, as evidenced by its lower debt to equity ratio and ample liquidity, would enhance resiliency of the corporate

Chart 4.2 Debt service indicators and corporates' financial structure



Source: The Stock Exchange of Thailand, calculations by the Bank of Thailand sector and suggested the sector's readiness to invest when the investment atmosphere improved.

Household sector

In 2006 Q4, overall consumer loans expanded well.

In 2006 Q4, consumer loans grew similarly to the previous quarter. Loans from Financial Institutions (FIs) and Specialised Financial Institutions (SFIs) to households, which accounted for 57 and 36 per cent of the total consumer loans, accelerated slightly. The growth rate of loans from non-banks (under supervision), which accounted for 7 per cent of the total loans, was higher than growth rates of loans from FIs and SFIs. The growth rate of consumer loans from non-banks, however, revealed a declining trend.

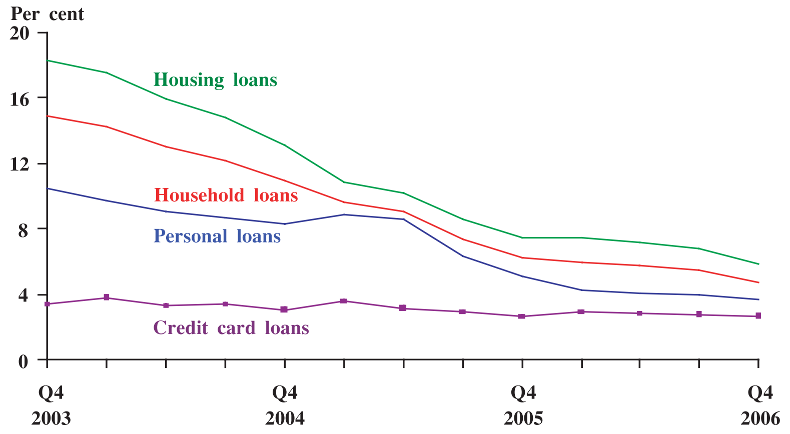
Table 4.1 Loan to household

Billion baht	2005	2006			
		Q1	Q2	Q3	Q4
1. Total loan (2+3+4)	2,007	2,029	2,047	2,129	2,204
% Annual percentage change	n.a.	n.a.	11.0	9.8	9.8
2. Financial institutions[1/]	1,137	1,144	1,133	1,189	1,234
% Annual percentage change	13.3	13.2	8.6	8.2	8.5
Of which commercial banks	998	1,020	1,077	1,136	1,191
% Annual percentage change	22.3	26.3	29.1	22.1	19.3
3. Specialised Financial Institutions (SFIs)	727	739	761	780	802
% Annual percentage change	16.0	14.7	12.7	10.3	10.4
4. Non-bank financial institutions[2/]	143	146	153	160	168
% Annual percentage change	n.a.	n.a.	22.6	20.6	17.5

Remark: [1/]Financial institutions are commercial banks, finance companies and credit foncier companies, excluding credit card loans extended by Krungthai Card PCL. and Krungsriayudhya Card Co.,Ltd.
[2/]Only under BOT's supervision (excluding automobile leasing)
Source: Bank of Thailand

Despite the economic softening, the ratio of non-performing loans (NPLs) of commercial banks to households remained modest and continued to decline. Overall, the ratio suggested no excessive vulnerability in the household sector that could threaten the stability of financial institutions.

Chart 4.3 Ratio of households' non-performing loans to total loans of commercial banks*, classified by purpose

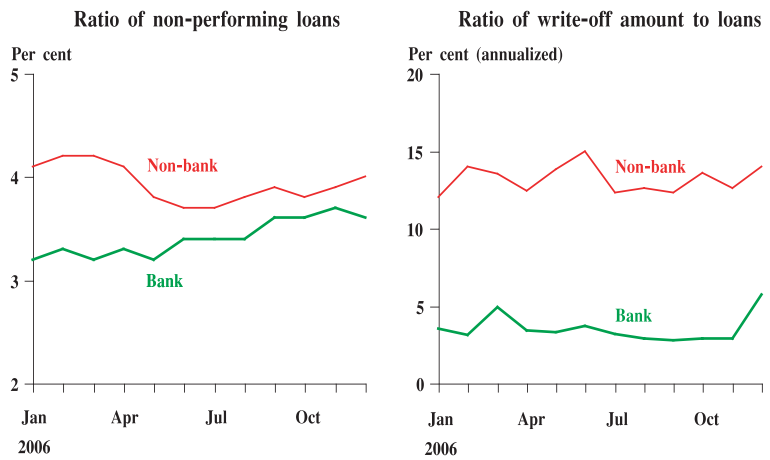


Remark: *Commercial banks are Thai commercial banks and foreign bank branches, excluding the Krungthai Card PCL. and Krungsriayudhaya Card Co.,Ltd., which are included as non-banks.
Source : Bank of Thailand

Quality of consumer loans showed signs of slight worsening in the latter half of 2006.

For personal loans under supervision (banks and non-banks) the upward trend of NPLs to total loans since 2006 Q2 suggested declining ability of households to service debts, although the ratio remained low. The higher ratio of non-bank's write-offs relative to that of banks reflected both cautiousness on the part of non-banks in their risk management as well as the diminished debt-servicing ability of households borrowing from non-banks compared to those borrowing from banks.

Chart 4.4 Personal loans under supervision of the BOT

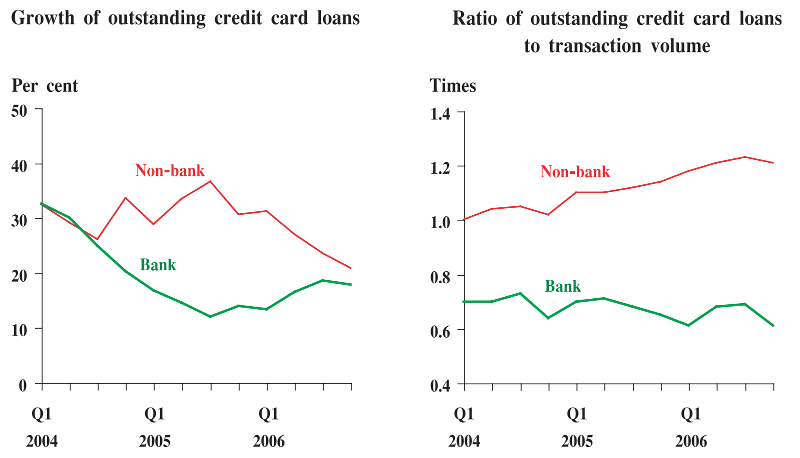


Source: Bank of Thailand

For credit card loans, although the loan growth from banks and non-banks remained high, the growth rate declined continuously. In addition, the ratio of loan outstanding to transaction volume, an indicator of debt-financed spending by households, dropped. The fall in the ratio suggested more cautiousness on the part of households in their consumption and borrowing behaviour, which was a positive signal for economic stability. Nevertheless, the fall in the ratio also signaled a further slowdown in private consumption.

For credit card loans, the decline in the ratio of loan outstanding to transaction volume suggested that consumers became more cautious in their debt-financed spending behaviour.

Chart 4.5 Credit card activities



Remark: Credits extended by the Krungthai Card PCL. and Krungsriayudhaya Card Co.,Ltd. are included as non-banks.
Source: Bank of Thailand

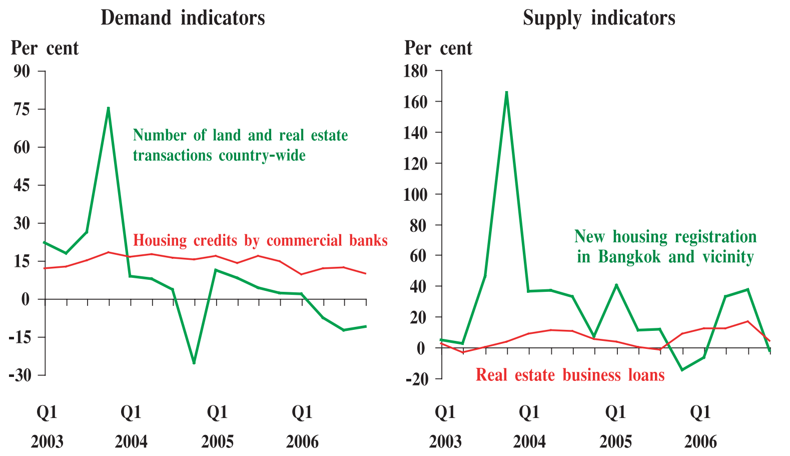
Real estate sector

Preliminary data showed that from 2006 Q4 to 2007 Q1, the real estate sector continued to slow down from dampened domestic demand and political uncertainty. On the demand side, the slowdown was reflected by softened mortgage credits. Although the overall supply of real estate decelerated following dampened demand, supply of selected housing categories such as condominiums in the central business district, those near the mass transit system, as well as condominiums with prices below 3 million baht accelerated.

Real estate sector and housing prices continued to slowdown in 2006 Q4.

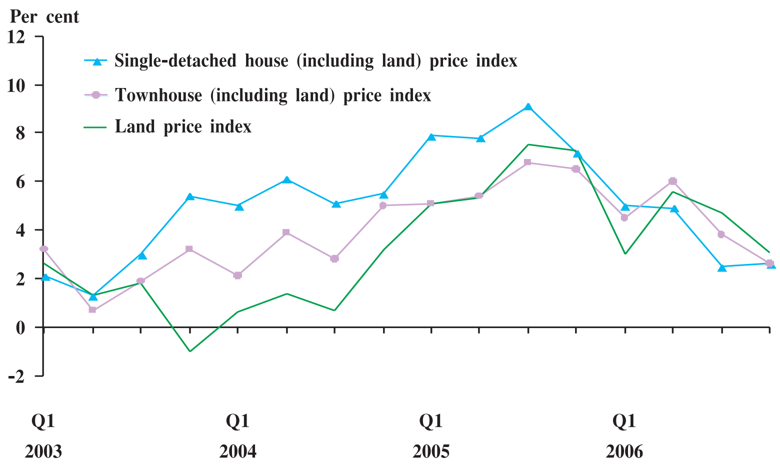
The slowdown in the real estate sector, as a result, caused the housing price in 2006 Q4 to decelerate. Although, the risk of a real estate bubble remained low, the MPC viewed that the risk of a bubble could rise with the declining interest rate trend along with economic recovery. Real estate prices thus needed to be monitored closely to prevent possible effects on economic stability going forward.

Chart 4.6 Real estate indicators



Source: Bank of Thailand and Department of Lands

Chart 4.7 Housing price index



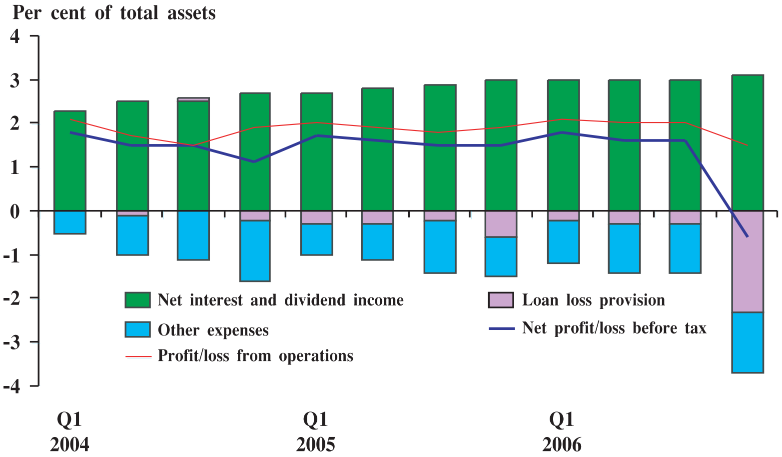
Source: Bank of Thailand, computed using the Government Housing Bank appraisal database.

Financial institutions

In 2006 Q4, financial institutions business performance dropped from the previous quarter, owing largely, however, to loan loss provision under International Accounting Standard (IAS39).

In 2006 Q4, although the amount of loan loss provision from International Accounting Standard (IAS 39) resulted in the net loss (before tax) of financial institutions, their operating profits remained satisfactory despite a slight slowdown due to higher operating expenses that came with transfers of assets by certain commercial banks to asset management companies. In addition, net interest income and dividends continued to grow and gained a greater share on total assets, reflecting satisfactory performance of the financial institutions.

Chart 4.8 Performance of financial institutions*



Remark: *Financial institutions include Thai commercial banks, foreign bank branches, finance companies, and credit foncier companies.
Source: Bank of Thailand

However, financial institutions would continue to incur expenses on loan loss provision from IAS39 until the end of 2007, by which time the requirement needed to be satisfied. Nonetheless, the implementation of the new accounting standard would strengthen financial institutions over the longer horizon.

Financial markets

In 2007 Q1, volatility in the Thai financial markets remained substantial in response to various factors such as high volatility in international financial markets, alterations in authorities' measures, lingering political uncertainty and rumours as well as expectations on the direction of monetary policy. The risks stemming from high volatility in the financial markets thus needed to be closely monitored.

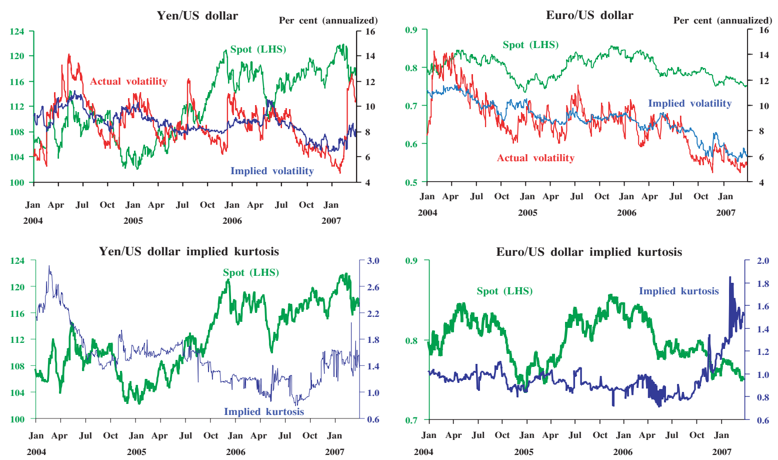
Foreign exchange market

US dollar weakened but the volatility of major currencies did not rise significantly.

The US dollar continued to depreciate vis-a-vis major as well as Asian currencies. In particular, during the last week of February 2007, the US dollar depreciated sharply against the Japanese yen as the Bank of Japan raised interest rate for the second time this decade. With a reduction in yen carry trade, the actual volatility of the yen slightly rose in the short run. However, the 1-year-ahead option-implied volatility, which indicated volatility expectations, remained stable. For the euro, both actual and option-implied volatilities remained low.

The probabilities of drastic movements in exchange rates of the major currencies as indicated by implied kurtosis, stayed high particularly in case of the euro, suggesting that the euro could further appreciate against the US dollar, going forward. The high probabilities were attributable to the expectation of an interest rate hike in the Euro area and the greater role of the euro in the international reserve holdings of various countries.

Chart 4.9 Volatility of major currencies



Source: Bloomberg

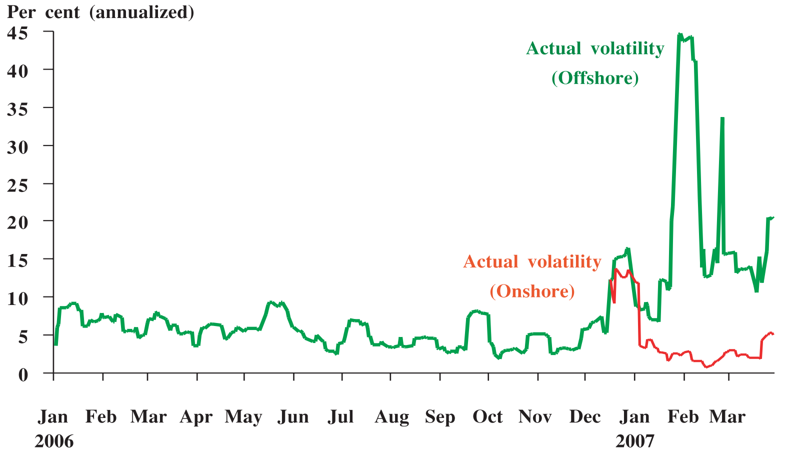
Movements of the baht in the offshore market were markedly volatile owing to limited liquidity, while movements of the baht in the onshore market were rather stable.

For the Thai foreign exchange market, the introduction of the reserve requirement on short-term capital inflows on 18 December 2006 created a distinction between the onshore and offshore markets. The volatility of Thai baht in the offshore market was relatively high due to the limited baht liquidity. Baht movements in the onshore market, however, were rather stable, as reflected by actual volatility.

The one-year-ahead Thai baht option-implied volatility in the offshore market remained high, due partly to the anticipation that the BOT would abolish the reserve requirement on short-term capital inflows in the near future.

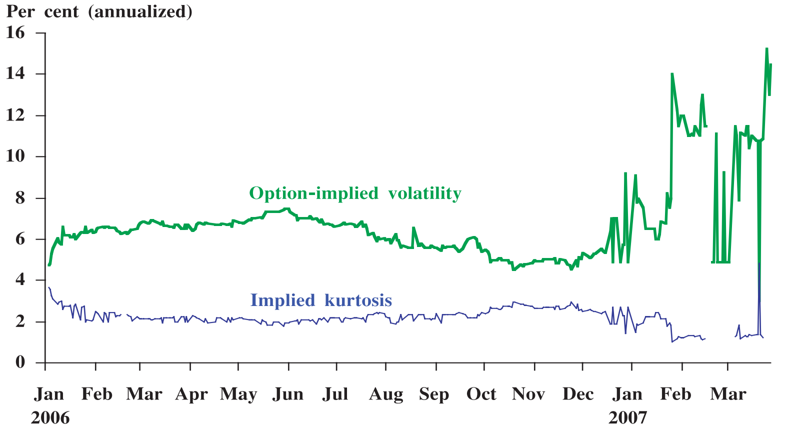
The probability of a drastic movement of baht, as reflected by implied kurtosis, remained at a normal level.

Chart 4.10 Baht option-implied volatility



Source: Bloomberg

Chart 4.11 Implied volatility and kurtosis of baht in the offshore market



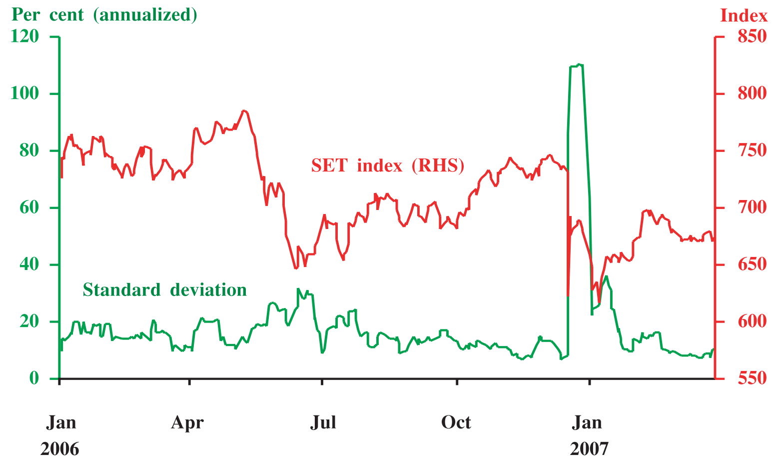
Source: Bloomberg

Thai equity market

SET index was still volatile and sensitive to various negative factors.

In 2007 Q1, the SET index fluctuated fairly widely in response to the high market sensitivity to negative factors that eroded investor confidence, such as the explosions during the New Year festival, the revision of the Foreign Business Act, and political uncertainty. In addition, in late February 2007 there was a worldwide stock market sell-off, resulting from a sequence of rapid strengthening of the Japanese yen together with the massive unwinding of yen carry trades (a strategy of borrowing low-yielding currency to buy higher-yielding assets abroad), together with the decline in investors' risk appetite amidst worries on the overheating Chinese economy, as well as the more-than-expected US economic slowdown.

Chart 4.12 Volatility in the Thai stock market



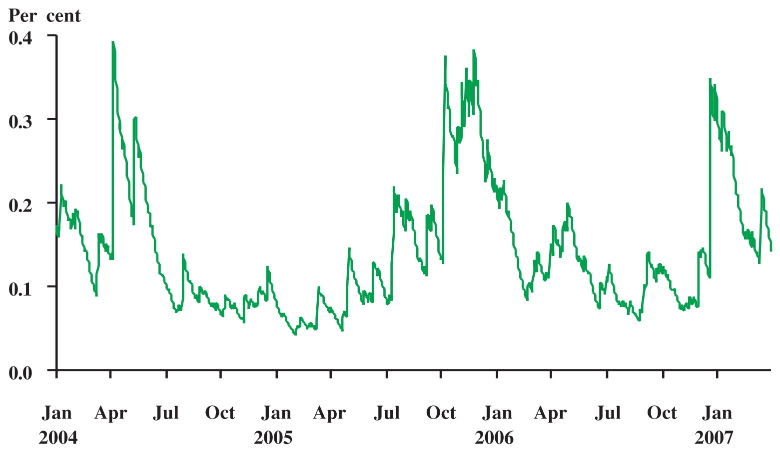
Source: The Stock Exchange of Thailand, calculations by the Bank of Thailand

Thai government bond market

Volatility in the government bond market remained high due partly to the anticipation of change in the direction of the policy rate.

The Thai government bond market in 2007 Q1 remained highly volatile owing to the anticipation of imminent changes in the policy interest rate, political uncertainty and equity market volatility during February 2007.

Chart 4.13 Volatility in the Thai government bond market



Source: The Thai Bond Market Association, calculations by the Bank of Thailand

Although a softening in the economy weakened the corporate sector's profitability and restricted the household sector's consumption, sound macroeconomic fundamentals still helped to promote resiliency, as reflected by the favorable financial health of the corporate and household sectors. Nevertheless, volatility in global financial markets and changes in authorities' measures thus far undermined investor confidence and induced greater volatility in foreign exchange, equity and bond markets. Though such volatility dampened, close monitoring of financial market conditions remained necessary, in the face of global financial market uncertainty, to preempt potential risks that could undermine financial stability and economic growth.

5. *Inflation Outlook*

The more-than-expected slowdown in domestic demand in 2006 Q4, coupled with preliminary economic indicators for 2007 Q1 that continued to reflect weakness in the economy led the MPC to revise output growth projections from the previous *Inflation Report* (January 2007). It was viewed that recovery of domestic demand, particularly private spending that was previously expected to rebound in the second half of this year, would be delayed until the end of the year or the beginning of next year, at the latest. The delay was due to the aforementioned softer-than-expected economic data, coupled with investor confidence that remained fragile as a result of ongoing political uncertainties, particularly in the continuity of government policies. As a result, businesses postponed their investment decisions until after the general elections, which was expected to take place at the end of the year.

Moreover, exports of goods and services were expected to grow at a slower rate compared with the previous forecast. Although trading partners' economies growth was expected to hasten, the baht was expected to appreciate in line with regional currencies and a persistent current account surplus. Export prices were also expected to increase owing to higher world farm and non-fuel commodity prices. Nevertheless, export values should improve from the previous forecast as a result of higher export prices.

Inflation that remained low would help raise purchasing power and support domestic demand, especially once confidence was restored. Moreover, the role of public spending in stimulating economic activities should become greater in line with the government's policy. Nevertheless, output growth in the next 8 quarters was expected to be lower than that projected in the previous *Report*.

Price pressure continued to ease in 2007 Q1 owing to declining oil and raw food prices. As a result, headline inflation decelerated markedly from the previous quarters, while core inflation gradually declined in line with expectations. Moreover, weaker domestic demand and a stronger baht would help cushion against the rise in import prices, e.g. higher world oil prices would not feed through fully into baht terms. Thus, price pressures should remain low, going forward, in line with the forecasts in the previous *Report*.

In the economic and inflation projections for the upcoming periods, the MPC exercised caution in considering the assumptions used, especially those concerning political uncertainty and crude oil prices. The projections below are presented as fan charts, which are obtained from the macroeconometric model with the incorporation of the MPC's judgments. The fan charts reflect uncertainties surrounding a range of events and are under the assumption that the policy interest rate stays at the current level of 4.00 per cent per annum from 2007 Q2 to 2009 Q1, lower than the level assumed in the previous *Report*. The assumption is consistent with the decisions in the MPC meetings on 28 February and 11 April 2007 to lower the policy rate by 0.25 per cent and 0.50 per cent per annum, respectively.

Forecast assumptions

In forming economic and inflation forecasts for the next 8 quarters, the MPC needed to make the most plausible baseline assumptions on various factors including international economic and financial conditions, world commodity prices, and fiscal conditions. These assumptions are summarised below.

International economic and financial conditions

The global economy expanded satisfactorily throughout 2006, even though the US economy started to slow down owing to the downturn in the US housing market. The decline in oil prices during the latter half of the year, the recovery of the Euro area economy, and the continued expansion of the Asian economy all helped support the world economic growth momentum in 2006. In 2007, the global economy should continue to grow robustly, fostered by the economic expansion in China, India and the Euro area economy.

The US economy started to slow down mainly due to weakening housing market conditions and concerns about the rise in delinquency rates in the sub-prime mortgage market.

The US economy grew by 3.1 per cent year-on-year in 2006 Q4, decelerating from the first half of 2006 due mainly to the slowdown in the housing market. The continued decline in house prices led to an increase in the delinquency rates in the US sub-prime mortgage market. Even though price pressures continued to ease due to declining oil prices and lower demand pressure, inflation still declined at a slower pace than expected by the market, reflecting persisting inflationary pressures. The MPC thus viewed that the FOMC was unlikely to cut the

Fed funds rate to stimulate the economy until 2007 Q3. This view differed from the previous assumption in which the Fed funds rate was expected to be cut by 0.25 per cent in 2007 Q2 to 5.0 per cent per annum.

Given the lower-than-potential growth rate, together with the continued downturn in the housing market, the MPC revised the assumption for US growth for 2007 slightly downwards. However, the MPC still assessed that the US economy would regain its growth momentum in 2008 on account of sound economic fundamentals and the easing stance of monetary policy, going forward.

The Euro area economy continued to expand vigorously and by more than was previously anticipated.

The Euro area economy continued to expand vigorously at a higher-than-expected growth rate of 3.3 per cent year-on-year in 2006 Q4, due primarily to favourable exports and investment conditions. Looking further ahead, improved labour market conditions would facilitate the continued expansion of domestic demand. In addition, robust growth of exports would help maintain the economic growth momentum of the Euro area in 2007. The MPC thus assumed a higher growth rate for the Euro area than in the previous *Report*, particularly for 2007.

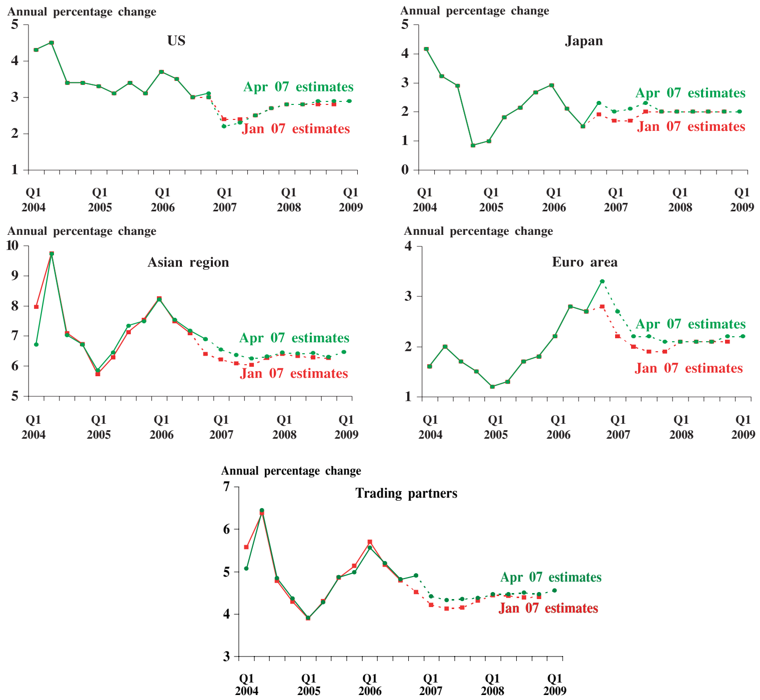
The MPC revised up the assumption on Japan's economic growth rate in 2007, due to the improvement in household spending.

The Japanese economy grew by 2.3 per cent year-on-year in 2006 Q4, accelerating from 1.5 per cent in the previous quarter, mainly due to the expansion in investment and exports. Going forward, while Japanese exports were likely to be affected by the economic slowdown in the US, the recovery in household consumption would still support the economic expansion. The MPC thus viewed that, for 2007, the Japanese economy would grow at a higher rate than that in the previous *Report* before reverting to the same trend in 2008.

The Asian economies should expand at a higher rate than anticipated previously.

In 2006 Q4, the Asian economies, particularly in the export sector, grew more robustly than previously expected. Despite the slowdown of the US economy - the major trading partner of the Asian economies - the strong growth of China would continue to support robust expansion of Asian exports. The MPC thus assessed that the Asian economies would continue to expand at a higher growth rate in 2007 than previously anticipated, before reverting to the same trend in 2008.

Chart 5.1 Assumptions on trading partners' growth



Source: Bank of Thailand estimates

Overall, the MPC viewed that in 2007 and 2008, the growth rate of Thailand's trading partners would continue to expand robustly, but at a slower pace than in 2006. This was due to the solid growth in the Asian economies and economic recovery in the Euro area, which together should compensate for the effects of the deeper-than-anticipated economic slowdown in the US.

The regional currencies strengthened against the US dollar by more than previously anticipated.

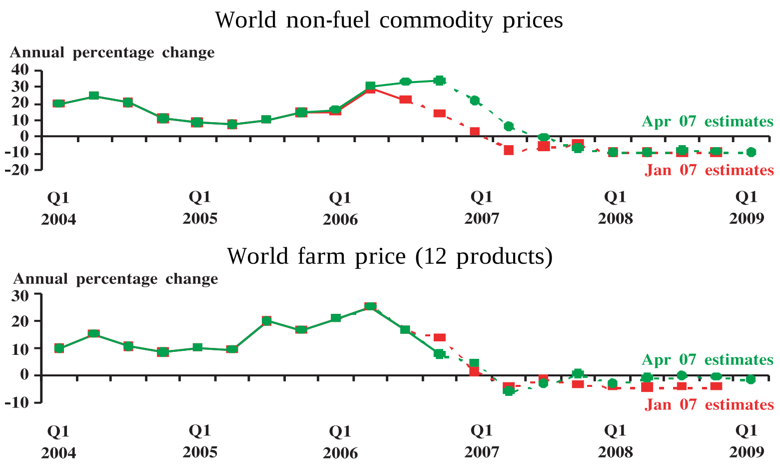
Most of the regional currencies appreciated against the US dollar as a result of high trade surpluses and continued capital inflows into regional stock markets, coupled with the depreciation of the US dollar owing to the US economic slowdown and prolonged trade deficit problem. The MPC thus assumed that the regional currencies would be stronger than previously anticipated, throughout the projection period.

World commodity prices

The MPC revised the assumptions on the World non-fuel commodity price index upwards from the previous Report.

The prices of world non-fuel commodities rose significantly on account of the higher prices of base metals and agricultural commodities. Going forward, world non-fuel commodity prices were expected to weaken, as the price of base metals declined due to an expansion in production capacity. Agricultural commodity prices were expected to remain high and close to their 2006 levels, due mainly to the rise in demand for production inputs for biofuels. Overall, the MPC assessed that the World non-fuel commodity price index would be higher than previously anticipated at the beginning of 2007, before reverting to the original trend in 2008.

Chart 5.2 Assumptions on world commodity prices



Source: Bank of Thailand estimates

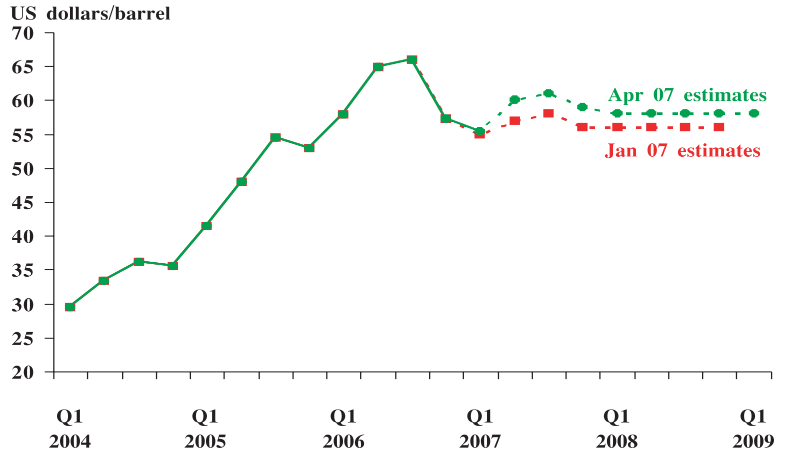
The World Farm Prices Index, consisting of 12 Thai major products, was expected to increase more slowly than in the previous assumption.

Given higher demand for biofuel inputs, the MPC assessed that the World Farm Prices Index - which consisted of 12 Thai major products, such as maize, palm oil, and cassava - would be higher than in the previous assumption. The MPC thus revised the assumption on the World Farm Prices Index upwards throughout the projection period, albeit at a decelerating trend from 2006.

The MPC assessed that the assumptions on world crude oil prices and domestic retail prices would be higher than in previous assumptions.

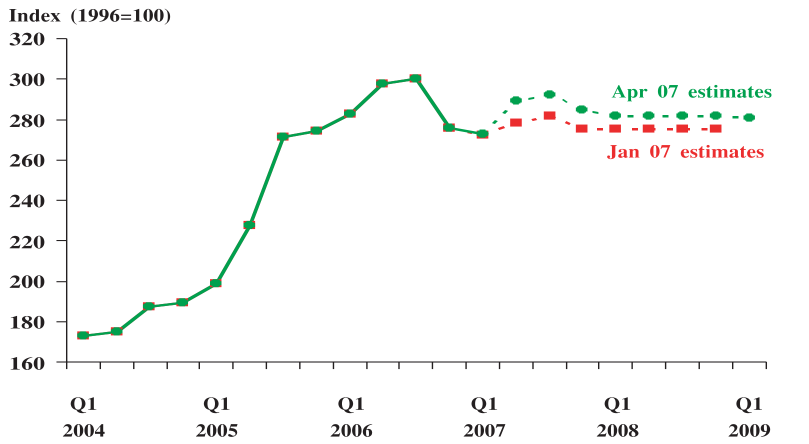
Even though world crude oil prices declined continuously since August 2006 due to the slowdown in the world demand for oil and higher production capacity, oil prices recently rebounded. The MPC assessed that world crude oil prices would be higher than in the previous assumption as a result of geopolitical risks owing to the Iranian situation, and the lower-than-expected decline in oil demand. The MPC thus revised up the retail price assumptions for benzene 95 and diesel oil, in line with the increase in world crude oil prices.

Chart 5.3 Assumptions on Dubai oil price



Source: Bank of Thailand estimates

Chart 5.4 Assumptions on the domestic retail petroleum price index[1/]



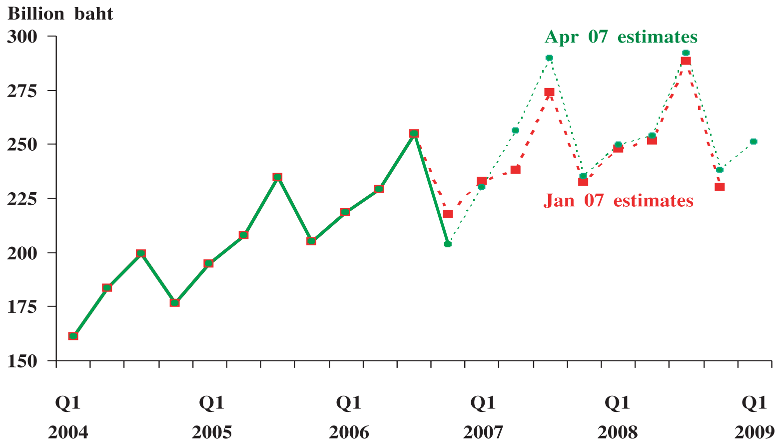
Remark: [1/]The Retail Petroleum Price Index is calculated from the weighted average of benzene, diesel, LPG fuel, oil and kerosene prices. The weights used are 18, 43, 8, 24 and 0.2 per cent, respectively.
Source: Bank of Thailand estimates

Fiscal conditions

The MPC assessed that in the 2007 and 2008 fiscal years, general government consumption would reach 979.8 and 1,031.2 billion baht, respectively, slightly higher than previously assumed, as a result of a revision of local government expenditure assumptions to better reflect actual data. Nevertheless, the new assumptions were still consistent with the government's plan to increase budget allocation to local governments, in line with projected revenues.

The MPC assumed general government consumption for fiscal years 2007 and 2008 to be 978.8 and 1,031.2 billion baht, respectively.

Chart 5.5 Assumptions on general government consumption



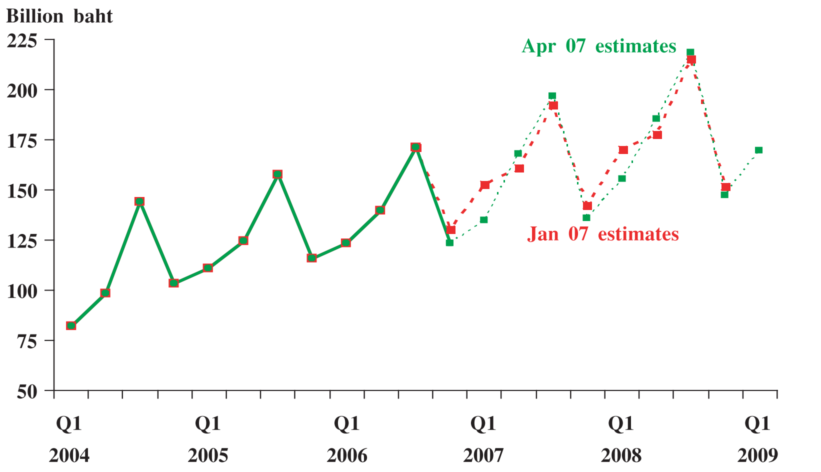
Source: Bank of Thailand estimates

With regards to public investment, consisting of investments by the general government and state-owned enterprises, the MPC revised the assumptions on general government investment slightly downwards to 343.0 and 387.3 billion baht for fiscal years 2007 and 2008, respectively. The revision was due to lower-than-expected actual disbursement in the first quarter of fiscal year 2007 by local governments, and to better reflect capacity for actual disbursement. As a result, the overall disbursement rate assumed for fiscal years 2007 and 2008 was lower than the previous *Report*.

The MPC expected public investment for fiscal years 2007 and 2008 to be 623.0 and 695.3 billion baht, respectively.

As for investment by state-owned enterprises, the MPC maintained the previous assumptions of 280.0 and 308.0 billion baht for fiscal years 2007 and 2008, respectively. When added to general government investment above, overall public investment for fiscal year 2007 stood at 623.0 billion baht, compared with the previous assumption of 635.8 billion baht. Public investment for fiscal year 2008 stood at 695.3 billion baht, compared with the previous assumption of 705.4 billion baht.

Chart 5.6 Assumptions on public investment



Source: Bank of Thailand estimates

Assumptions on minimum wages

The MPC used an assumption on minimum wages that was consistent with the actual adjustment on 1 January 2007 for the entirety of the year. For 2008, a further increase of 2.1 per cent was assumed.

Assumptions on minimum wages were unchanged. The MPC assumed that from 2007 Q2 onwards, the minimum wage for Bangkok and its surrounding provinces would be 191 baht, consistent with the recent increase in minimum wages following the decision of the Central Wage Committee. As for 2008, the MPC assumed that the growth rate of minimum wages would be 2.1 per cent, in line with the previous *Report's* headline inflation forecast for 2007.

Assumptions on inventory accumlation

The MPC assumed that inventory accumulation during the first 3 quarters of 2007 would be consistent with a run-down in stock. Despite the possibility of an accumulation of agricultural outputs during the first quarter of this year owing to recent harvests, businesses would remain reluctant to accumulate stocks of manufactured goods, given the continued softening in domestic demand. However, from 2007 Q4 to the end of the forecast period, the MPC assumed that inventory accumulation would begin to reflect an economic recovery, resulting in a resumption of the pattern of inventory accumulation that occurred during 2000-2002, whereby stocks would increase in some quarters in line with the recovery in domestic demand.

Output and inflation projections

Output projection

Latest data from the NESDB showed that the Thai economy in 2006 Q4 grew by 4.2 per cent year-on-year. As a result, the Thai economy grew by 5.0 per cent in 2006, slightly less than the rate projected in the previous *Report* due to a deeper-than-expected slowdown in private consumption and investment.

Preliminary economic indicators for 2007 Q1 continued to show a trend of weak domestic demand. Purchases that were delayed as a result of the floods that occurred at the end of 2006, as well as expenses on housing repairs that were expected to help shore up domestic demand were insufficient to generate a turn around in private spending. Moreover, factors that would negatively affect investor confidence remained, including lingering political uncertainties, which extended to continuity of government policies, the ongoing unrest in the southern provinces, and the slowdown in domestic demand. These factors, coupled with the fact that the economy was recently affected by a prolonged period of high oil prices, caused confidence to remain fragile. Thus, some large investment projects were postponed and could be delayed until after the general elections scheduled for the end of the year, when political uncertainties should be resolved and the environment becomes more conducive for investment. Nevertheless, public spending that was expected to accelerate, coupled with a more accommodative monetary policy stance would help support growth in the short-term, together with the momentum from the satisfactory expansion in exports.

In the previous *Report*, the MPC assessed that the Thai economy would begin to recover during the second half of 2007. However, after a review of the latest economic data for 2006 Q4 and preliminary indicators for 2007 Q1, which reflected a deeper-than-expected slowdown, the MPC deemed that the recovery - particularly in domestic demand - would be delayed until the end of the year or the beginning of 2008 with the following details.

A recovery in private consumption would be slower than previously projected.

Private consumption in the first half of 2007 was expected to recover later than previously expected. Although inflation significantly declined and consumers' purchasing power improved, lingering concerns over various uncertainties resulted in greater caution in consumers' spending behaviour, particularly on purchases of durable and semi-durable goods. Moreover, high spending on durable goods in the recent past meant that consumption of these goods began to reach saturation. As for the second half of this year, greater private spending was projected, as preparations for the general election were expected to take place while a more accommodative monetary policy would held to decrease financing costs of durable goods. Overall, consumption of semi-durable goods, such as clothing, shoes and apparel should improve before that of durable goods. However, once consumption of durable goods such as cars and motorcycles rebounded, consumption would grow rapidly as purchases of these goods were delayed in previous periods.

Private investment was expected to be lower than the previous projection given that businesses were still waiting for a clearer policy direction from the government.

Private investment was also expected to be below the level previously projected, as latest economic data reflected fragile investor confidence, leading most businesses to wait for a clearer policy direction from the government. Given that the schedule for the general elections was postponed from the third quarter of this year to the end of the year, businesses' investment decisions were also delayed. Nevertheless, public spending which was expected to accelerate in the beginning of this year should help boost private spending to some extent. For example, the budget allocated to resolve the pollution problem in Mabtapud industrial estate would help kick start private investment in the area. As for 2008, given greater political clarity after the general elections, private investment should accelerate following long delays.

Exports of goods and services were expected to be slightly below the previous projection.

Exports of goods and services were projected to expand well, but at a slower pace compared with 2006 and in line with trading partners' economic growth, in particular that of the US. Although the growth rates of the Euro area and Japan were revised upward and would to some extent compensate for the slowdown in the US economy in terms of export demand, higher export prices resulting from the upward revision in world farm and non-fuel commodity prices coupled with a continued appreciation of the baht would affect Thailand's export competitiveness. As a result, exports of goods would be slightly lower than previously projected. Meanwhile, exports of services should expand satisfactorily as foreign tourists' concerns over the explosions in Bangkok at the end of last year diminished, and the air pollution problem in the north was abated. Overall, the MPC assessed that exports in 2007 would slow down by more than previously projected but would resume its original trend in 2008. Nevertheless, higher export prices would cause export value to improve from the previous projection.

Imports of goods and services were expected to decline from previously projections but would pick up in line with domestic demand and exports.

Imports of goods and services were expected to grow at a slower pace than previously projected during the first half of 2007 due to softer-than-expected domestic demand. Nevertheless, the acceleration in public spending in the previous year, coupled with lower import prices due to the expected appreciation of the baht in line with regional currencies, would help stimulate imports to some extent. Going forward, a significant recovery in domestic demand in 2008, together with exports which would expand in line with the recovery in the US economy, would lead to an acceleration of imports of consumer products, capital goods, and raw materials for domestic investment and exports production.

The current account balance in 2007 was expected to register a high surplus which would begin to decline in 2008 owing to an acceleration in imports in line with domestic demand, particularly private investment.

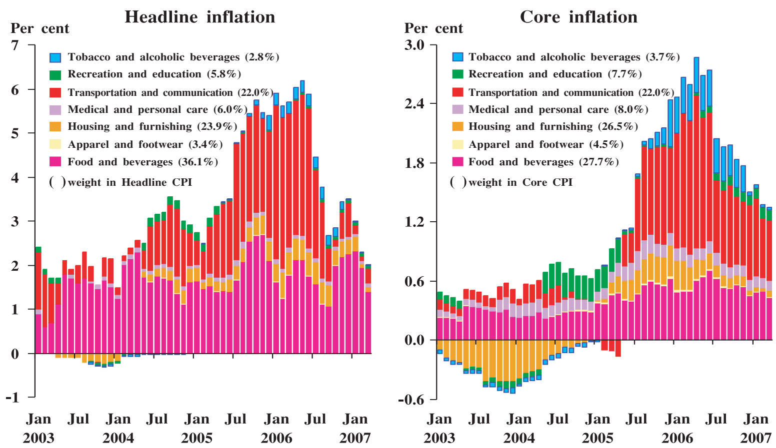
Given that imports were expected to slow down by more than exports, the MPC assessed that the current account balance (less reinvested earnings) in 2007 would register a higher surplus than previously projected. However, the aforementioned surplus would decline in 2008 due to an acceleration in domestic demand.

Inflation projection

Headline and core inflation in 2007 Q1 stood at 2.4 and 1.4 per cent, respectively, slowing down in line with the MPC's expectation as a result of oil prices which declined to a low level compared with the previous year. Moreover, raw food prices which increased towards the end of 2006 also began to decline after the impact of flooding dissipated.

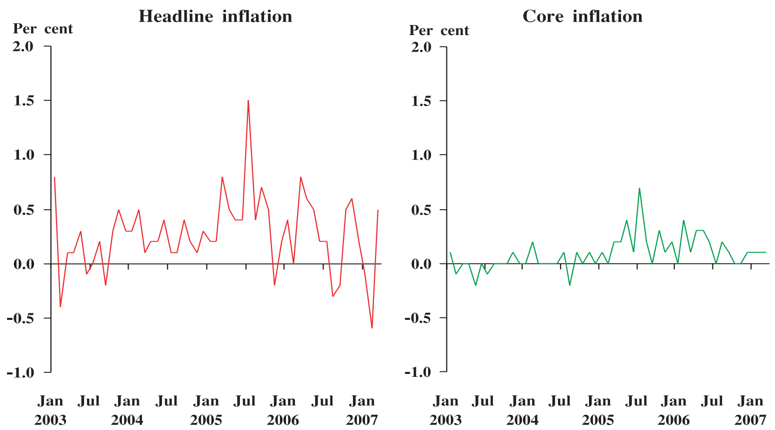
However, domestic retail oil prices accelerated again in March 2007 in line with world crude oil prices, resulting in a slight increase in supply-side pressures on headline inflation. This pressure was reflected in the seasonally adjusted month-on-month increase in headline inflation which recorded a continuous slowdown over the previous 4 months - the period where the impact of the floods subsided and oil prices remained low. Meanwhile, month-on-month seasonally adjusted core inflation remained stable and close to zero, mostly as a result of weak domestic demand, which made price adjustments difficult and limited the second round effect of inflation.

Chart 5.7 Contribution to headline and core inflation



Source: Trade and Economic Index Bureau, Ministry of Commerce, calculations by the Bank of Thailand

Chart 5.8 Month-on-month seasonally adjusted headline and core inflation



Source: Calculations by the Bank of Thailand

Headline inflation was expected to continue to slowdown but at a slower pace compared with the previous projection.

Going forward, headline inflation should continue to moderate, but at a slower pace than previously projected as a result of slightly higher assumptions for domestic retail oil prices, farm prices, and non-fuel commodity prices compared with the previous *Report.* However, the MPC deemed that the acceleration of world commodity prices, particularly oil prices, should not significantly affect headline inflation as was the case in the previous 1-2 years. Moreover, the baht which was expected to continue to strengthen should help ease pressure on import prices.

Core inflation was expected to stand at a similar level to the previous projection.

Core inflation in 2007 and 2008 was expected to remain low in line with the projection in the previous *Report*. Given less-than-previously-anticipated pressure from the demand-side, and in spite of higher pressure from the supply-side, an environment of soft domestic demand implied that the scope for price adjustments was limited. With regards to the 8th statement of the Administrative Reform Council under the Democratic System (ARC) that prohibited increases in prices of all goods and services which was lifted on 6 April 2007, a gradual increase in prices could be expected to begin in the second quarter of this year, especially prices of goods under the administration of the Ministry of Commerce which had been suppressed since last year. Such price increases were already incorporated into the latest inflation forecasts but under the current domestic demand environment, adjustments should be minimal and were not expected to generate a significant impact on inflation.

Assessment of risks

The output and inflation projections given above were based on assumptions that the MPC considered most plausible. However, these assumptions were subject to domestic and external uncertainties. In the assessment of economic outlook for the next 8 quarters, the MPC gave consideration to risk factors that could affect the projections under various scenarios.

Risk factors in the output projection

The MPC deemed it possible that uncertainty with regards to world oil prices could still lead to a different picture of economic growth than in the baseline projection. Although assumptions for Dubai oil prices at 58.8 and 58.0 US dollars per barrel in 2007 and 2008 respectively were deemed most probable, oil prices could rise beyond these levels as a result of various factors. Higher prices could result from a heightening of the ongoing political tensions, the long-term plan of the US to increase their Strategic Petroleum Reserves (SPR), closure of refinery plants in the US and Asia for annual maintenance which would cause the US stock of crude oil to tighten, and a downward revision in the production capacity of non-OPEC oil producing countries, all of which would put upward pressure on prices. Thus, the MPC revised its assumption on the Dubai oil price upwards by 1 standard deviation from the baseline assumption as the worse case scenario to an average of 68.0 and 76.0 US dollars per barrel, respectively in 2007 and 2008.

Nevertheless, the slowdown in the US economy could also make it possible for oil usage to be lower than expected, causing oil prices to be lower than the baseline projection. Thus, in the better case scenario, the MPC used the assumption that the Dubai oil price would average at 53.9 and 49.5 US dollars per barrel in 2007 and 2008, respectively, a decline from the baseline scenario by 0.5 standard deviation compared with the 1 standard deviation increase used in the worse case scenario, given that the OPEC members were unlikely to allow prices to fall by too much. Overall, the MPC assessed that the downside risk from the worse case scenario would be more likely than the upside risk.

Another important risk factor considered was the possibility that the baht could appreciate faster than the baseline scenario, which assumed an appreciation in line with regional currencies. In this scenario, the baht would be slightly stronger than regional currencies - a trend consistent with actual adjustments in the previous 2 years. As a result, exports would be lower than the baseline projection due to a deterioration of Thailand's export price competitiveness, thus presenting a downside risk to growth.

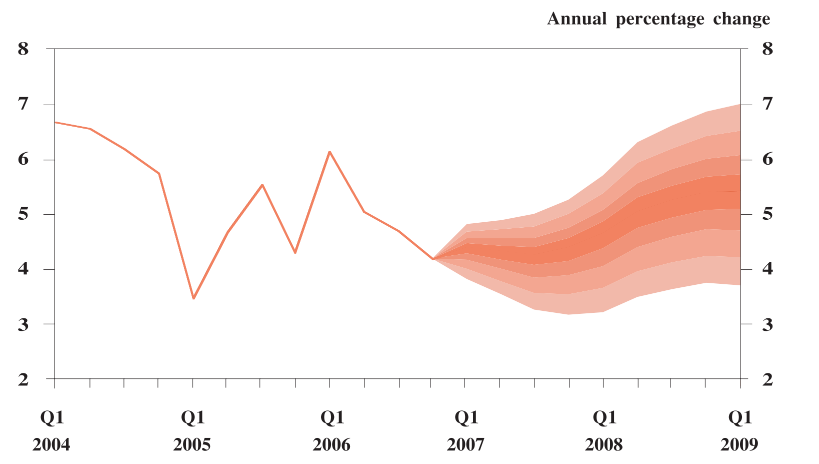
Moreover, consumer and investor confidence that remained fragile as a result of various factors, namely political uncertainties, including clarity of policies as well as the ongoing unrest in the southern provinces, were already incorporated into the baseline projections. As such, the MPC viewed that the possibility that confidence could deteriorate further and create a downside risk to growth were slim. On the other hand, a faster-than-expected recovery in confidence was considered more plausible if authorities were successful in restoring confidence through the implementation of growth-stimulating measures, which include a more accommodative monetary policy, amongst others. Such a view on the upside impact of confidence on growth was different from that reflected in the previous *Report* where confidence was perceived as a downside risk to growth.

The MPC also deemed it possible that the fiscal stimulus could be stronger than expected if the budget could be disbursed at the target rate, which was higher than the rate assumed in the baseline projection. Such a boost from the fiscal side would help cushion the slowdown in domestic demand or support a faster-than-expected rebound.

In addition, the MPC considered that there was a possibility that external demand could be lower than the level assumed in the baseline projection should trading partners' economies slow down by more than expected, especially the US economy, given the continued fragility in the US housing market. Subsequently, exports would be lower than the baseline projection, exerting a downside risk to economic growth. However, it was also deemed possible that growth in the Euro area, Japan and the Asian economies could be higher than expected and subsequently play a role in boosting exports. Overall, the MPC still deemed the downside risk from trading partners' economic growth slightly more plausible than the upside risk.

Overall, the MPC still gave more weight to the downside risk than the upside risk, especially in the short-term. As a result, the fan chart for output growth is skewed downwards throughout the entire forecast period with the degree of skewness declining in 2008, compared with 2007.

Chart 5.9 GDP growth forecast



Remark: The fan chart covers 90 per cent of the probability distribution

The fan chart for GDP growth is skewed downwards throughout the forecast period.

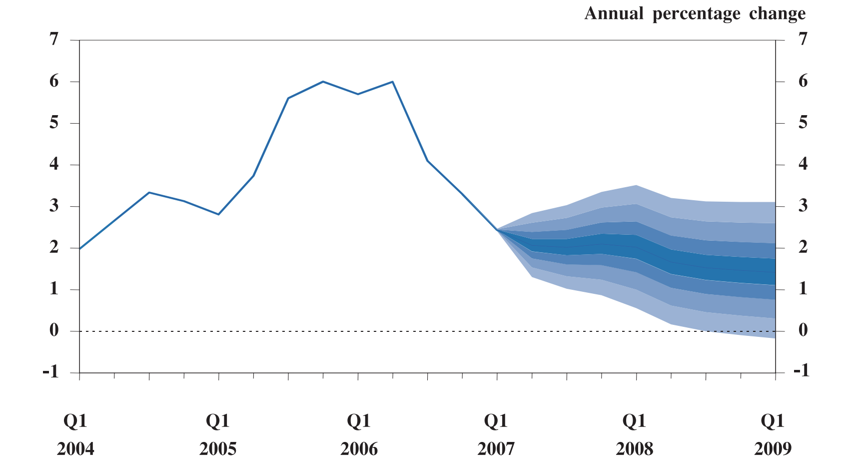
Risk factors in the inflation projection

The MPC considered that upside risks that would cause inflation to be higher than the baseline projection could result mainly from higher-than-expected oil prices. In the event that oil prices accelerated markedly, such as in the worse case scenario, inflationary pressure would increase through higher costs of production and higher inflation expectations. Meanwhile, price adjustments of administered items by the Ministry of Commerce following the aforementioned lifting of the ARC's 8th statement were not expected to produce a large impact on inflation, given their small combined weight in the CPI basket. Moreover, the current weakness in domestic demand would limit producers' ability to raise prices. Nevertheless, should oil prices return to an accelerating trend similar to the pace of the previous 1-2 years, producers would have a more valid excuse to pass on these higher costs to consumers. In addition, there was also a possibility that farm prices would be higher than expected in the case of severe drought, which would result in a supply shortage and exert an upside risk to inflation.

Meanwhile, a downside risk that could lead to tamer than expected price pressure included softer-than-expected domestic demand and a stronger-than-expected baht, which would result in lower import prices, exerting pressure on domestic producers to keep prices low to maintain competitiveness. Moreover, it was also deemed possible that oil prices could be lower than assumed in the baseline projection, in line with the aforementioned better case scenario. As a result, both the direct pressure on headline inflation and the indirect pressure on core inflation through production cost adjustments would decline.

Overall, the MPC deemed that the upside risk to headline inflation was more likely than the downside risk, mainly as a result of oil prices. Thus, the fan chart for headline inflation is skewed slightly upward throughout the forecast period. Meanwhile, the upside and downside risks to core inflation were deemed to be equal in the short-term. Thus, the fan chart for core inflation is balance in the beginning of the forecast period and is skewed slightly upwards towards the end of the forecast period, as a result of the increasing second round effect.

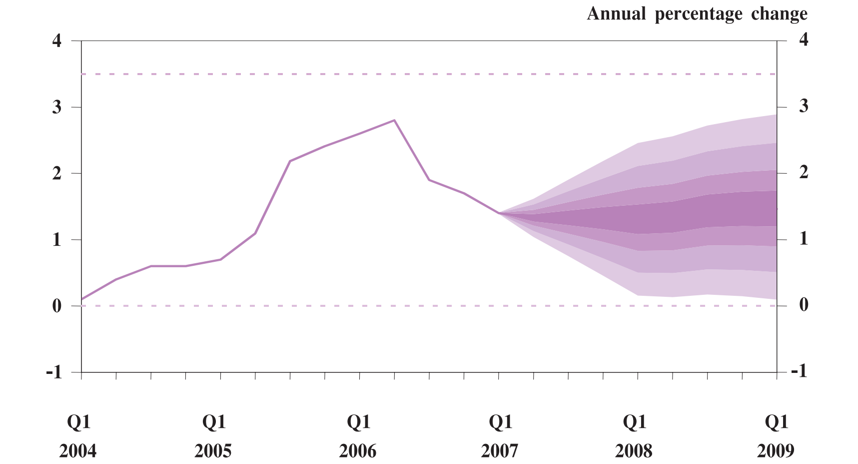
Chart 5.10 Headline inflation forecast



Remark: The fan chart covers 90 per cent of the probability distribution

The fan chart for headline inflation is skewed upwards throughout the forecast period. Meanwhile, the fan chart for core inflation is balanced in the beginning of the forecast period but is skewed slightly upwards towards the end of the forecast period.

Chart 5.11 Core inflation forecast



Remark: The fan chart covers 90 per cent of the probability distribution

With regards to the forecast probability distribution, the output growth forecast for 2007 and 2008, obtained from averaging the darkest forecast range of each quarter, was projected to be in the ranges between 3.8 - 4.8 and 4.3 - 5.8 per cent, respectively, with a probability of approximately 94.3 and 90.8 per cent, respectively.

Output growth for 2007 and 2008 was projected to lie in the ranges of 3.8-4.8 and 4.3-5.8 per cent, respectively.

Table 5.1 Probability distribution of GDP growth forecast									
Unit: %	2007				2008				2009
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
< 2	0	0	0	0	0	0	0	0	0
2.0 - 2.5	0	0	0	1	1	0	0	0	0
2.5 - 3.0	0	0	2	3	3	1	1	1	1
3.0 - 3.5	1	5	10	10	8	4	3	2	2
3.5 - 4.0	15	24	26	21	15	9	7	6	6
4.0 - 4.5	55	44	35	29	23	16	13	11	11
4.5 - 5.0	29	24	21	24	25	22	19	17	16
5.0 - 5.5	1	3	4	10	17	22	22	20	19
5.5 - 6.0	0	0	0	2	7	15	18	19	19
6.0 - 6.5	0	0	0	0	1	7	11	13	14
6.5 - 7.0	0	0	0	0	0	2	5	7	8
> 7	0	0	0	0	0	1	2	4	5

Headline inflation for 2007 and 2008 was projected to lie in the ranges of 1.5-2.5 and 1-2.5 per cent, respectively.

Headline inflation in 2007 was projected to average between 1.5 - 2.5 per cent with a probability of approximately 87.4 per cent. As for 2008, the MPC deemed it more appropriate to use a larger range for headline inflation forecast of 1 - 2.5 per cent with a probability of approximately 89.3 per cent to reflect the volatility of headline inflation, particularly from oil prices.

Table 5.2 Probability distribution of headline inflation forecast								
Unit: %	2007			2008				2009
	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
< 0	0	0	0	1	3	5	6	7
0.0 - 0.5	0	1	1	3	7	8	9	10
0.5 - 1.0	1	4	5	8	13	15	15	16
1.0 - 1.5	10	15	14	15	19	20	20	19
1.5 - 2.0	33	29	23	21	21	20	19	19
2.0 - 2.5	38	30	25	21	18	16	15	14
2.5 - 3.0	16	16	18	16	11	10	9	9
3.0 - 3.5	2	5	9	9	5	4	4	4
3.5 - 4.0	0	1	3	4	2	2	2	2
> 4	0	0	1	1	1	0	0	0

Meanwhile, the MPC projected core inflation in 2007 and 2008 to both average in the range of 1 - 2 per cent, with a probability of approximately 98.4 and 80.8 per cent, respectively.

Core inflation for 2007 and 2008 was projected to be in the range of 1-2 per cent in both years.

Table 5.3 Probability distribution of core inflation forecast

Unit: %	2007			2008				2009
	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
< 0	0	0	1	3	3	3	3	4
0.0 - 0.5	0	1	5	9	9	8	8	8
0.5 - 1.0	3	16	21	21	19	17	16	16
1.0 - 1.5	80	51	36	28	26	25	23	22
1.5 - 2.0	17	29	27	23	23	23	23	22
2.0 - 2.5	0	3	9	12	13	15	16	16
2.5 - 3.0	0	0	1	4	5	6	7	8
3.0 - 3.5	0	0	0	1	1	2	2	3
> 3.5	0	0	0	0	0	0	1	1

Forecasts by research houses

Output growth projections for 2007 and 2008 from various research houses polled by Reuters (Thailand) averaged at 4.1 and 5.0 per cent, respectively. Most research houses revised their 2007 projections downwards as a result of slower-than-expected recovery in private investment. As for 2008, research houses were in agreement that the Thai economy would clearly expand from the previous year in line with the unwinding of uncertainties and improving confidence.

Meanwhile, headline inflation forecasts for 2007 and 2008 averaged at 2.7 and 3.1 per cent, respectively.

Table 5.4 GDP growth forecasts by various research houses				
	11 Jan 07		15 Mar 07	
	2007	2008	2007	2008
DBS Bank	4.9	5.1	4.6	5.1
Stanchart	4.8	4.4	4.4	5.4
TISCO Securities	5.0	4.2	4.2	4.8
Capital Nomura	4.7	4.8	4.2	4.5
Kasikorn Research	5.0	4.5	4.0	5.5
Goldman Sachs	n.a.	n.a.	4.0	4.5
Phatra Securities	5.0	4.4	3.7	4.6
Lehman Brothers	5.1	5.0	3.5	5.5
ABN Amro	4.9	4.3	n.a.	n.a.
JP Morgan	5.1	5.1	n.a.	n.a.
Average	4.9	4.6	4.1	5.0
NESDB	4.0 - 5.0[1/]	n.a.	4.0 - 5.0[2/]	n.a.

[1/] Estimated on 4 December 2006 when preliminary GDP figures for 2006 Q3 were released
[2/] Estimated on 6 March 2007 when preliminary GDP figures for 2006 Q4 were released
Source: Reuters and NESDB

Table 5.5 Headline inflation forecasts by various research houses				
	11 Jan 07		15 Mar 07	
	2007	2008	2007	2008
ABN Amro	2.8	2.5	n.a.	n.a.
Stanchart	3.8	n.a.	3.8	3.9
ING	n.a.	n.a.	3.0	2.5
Goldman Sachs	n.a.	n.a.	2.9	3.9
Lehman Brothers	2.8	3.5	2.8	3.5
Phatra Securities	2.9	n.a.	2.6	2.5
TISCO Securities	3.3	n.a.	2.5	n.a.
Capital Nomura	2.3	n.a.	2.4	1.9
Kasikorn Research	3.0	3.3	2.0	2.5
DBS Bank	2.5	n.a.	1.9	3.9
Average	2.9	3.1	2.7	3.1
NESDB	3.0 - 3.5[1/]	n.a.	2.5 - 3.0[2/]	n.a.

[1/] Estimated on 4 December 2006 when preliminary GDP figures for 2006 Q3 were released
[2/] Estimated on 6 March 2007 when preliminary GDP figures for 2006 Q4 were released
Source: Reuters and NESDB

6. Conclusion

The continued weakening of domestic demand in the previous period, particularly in private sector expenditure as well as public sector expenditure towards the end of 2006, led the MPC to assess that the growth momentum was softer than expected in the previous *Inflation Report*. In addition, while more fiscal stimulus was expected in the upcoming period, risks to growth still remained, both from the lack of confidence which would continue to dampen private sector expenditure, as well as the slowdown in the global economy which could weaken the demand for exports. The MPC therefore revised the forecast range for economic growth in 2007 downwards to 3.8-4.8 per cent, but revised the forecast range for growth in 2008 upwards to 4.3-5.8 per cent, due to the effect of a lower base in the previous year.

Inflationary pressures moderated at a pace consistent with the MPC's expectations. Despite the recent rise in world oil prices, the MPC assessed that price pressures would remain minimal going forward, given the environment of weak domestic demand. Core inflation was expected to remain within the target range, and was expected to average between 1-2 per cent for both 2007 and 2008, as projected in the previous *Report.*

Given that the risks to inflation have decreased while the risks to growth have risen, the MPC deemed that monetary policy could be eased further to support economic growth, without creating risks to inflation. Therefore, at its meetings on 28 February and 11 April 2007, the MPC decided to lower the 1-day repurchase rate by 0.25 per cent and 0.50 per cent per annum, respectively, bringing the 1-day repurchase rate down to 4.00 per cent per annum, or by 1.00 per cent since the beginning of 2007.

Report: "Economic/Business Information Exchange Programme between the Bank of Thailand and the Business Sector"

As of 31 March 2007

From the Economic/Business Information Exchange Programme between the Bank of Thailand and 170 business firms throughout the country during January-March 2007, most businesses viewed that the Thai economy in the 2007 Q1 moderated from the previous quarter. The slowdown was in line with the continued decline in both consumer and investor confidence, which was driven mainly by political uncertainty, while exports continued to expand well. Overall, commercial bank loans grew modestly, while loans extended to business sectors grew only marginally. Growth in 2007 was expected to be lower than in 2006, due to both domestic and external risks, with the main risks arising from domestic political uncertainty, particularly in terms of continuity and clarity of government policies.

- Private consumption. Private consumption moderated from 2006 Q4 as most consumers remained cautious about their spending, particularly on durable goods and luxury items, due to concerns about economic prospects and political uncertainty. In addition, consumer's purchasing power had yet to improve, and consumer goods markets in general remained subdued. Department store sales went flat, while sales of electrical appliances slowed down, and sales of automobiles and motorcycles contracted. In 2007, private consumption was expected to slow down from the previous year, due mainly to the weakness in consumer confidence.

- Private investment. Private investment continued to slow down from the previous quarter from concerns about political uncertainty and dampened domestic and global demand. Most businesses consequently decided to postpone their investment plans until a clearer political direction and greater certainty in government policies emerged. Nevertheless, some large business firms continued with their planned investments, and most businesses viewed that Thailand's investment climate in the longer-term was still attractive and believed that the investment momentum would start to pick up after the general elections scheduled for the end of 2007.

- Exports. Exports continued to expand well, despite a moderation from the previous period. Exports of electronic goods, vehicles and parts, frozen seafood, as well as agricultural and processed products continued to expand robustly, in line with demand from the world market. However, intensified competition posed an increasing strain on firms' business performance. For 2007, exports were expected to moderate from 2006, as a result of the expected slowdown in the global economy.

- Manufacturing sector. Most industries expanded at a decelerating rate in line with the slowdown in the domestic economy, as well as intensified competition both in the domestic and overseas markets. The electronics and ceramic industries lost their market share to Chinese products with lower prices. However, several export-oriented industries continued to expand well, following continued demand from global markets. Meanwhile, the construction sector remained subdued in line with sluggish domestic real estate conditions.

- Prices of goods and services. With the room to raise prices constrained by the slowdown in domestic demand, competition among producers intensified markedly. As a result, profit margins declined in almost all industries, pressing producers on the need to reduce costs and improve production efficiency.

- Labour market and employment. Most businesses viewed that the labour market was still tight, especially for skilled labour, resulting in an increase in wages and other forms of compensation for this group of employees. There was no significant concern regarding wage pressures, however, in the unskilled labour market. However, some businesses were concerned about the potential consequences of a slowdown in the business sector and its effect on employment and wages, going forward.

- Financial sector, commercial banks, and Specific Financial Institutions. Commercial banks' credits expanded modestly, with the majority of loans being used for working capital. Meanwhile, long-term loans for new investments and real estate loans expanded only marginally, in line with business and investment conditions. On the other hand, household credits grew at a slow pace relative to the previous quarter, due partly to a more prudent credit approval policy of financial institutions that placed greater emphases on credit quality.

- Business limitations and risk factors. In 2007 Q1, most businesses viewed that political uncertainty, as well as the discontinuity and inconsistency of government policies, were important limitations affecting both domestic and foreign consumer and business confidence. Furthermore, the direction of the baht, the potential slowdown of the global economy, and the rising trend of oil prices were risk factors that needed to be monitored closely, going forward.

Appendix: Macroeconometric model[1]

The Bank of Thailand's macroeconometric model (BOTMM) is an economic forecasting tool, consisting of 24 behavioural equations and 43 identities. The BOTMM presents to the Monetary Policy Committee (MPC) an important tool for economic forecasting. The model is used to analyze the response of the economy to various exogenous shocks and policy changes. It also assists the MPC in formulating the optimal policy to achieve the goals of price stability and sustainable economic growth in the long run.

Improving the model

In this *Report*, the BOTMM was revised by incorporating the most recent published data, particularly the quarterly GDP figures of 2006 Q4 released by the NESDB on 6 March 2007. Other notable changes made to the model since the January 2007 *Report* are as follows.

1. The exchange rate equation (equation 3.6) was revised such that the exchange rate of Japanese yen per US dollar was removed from REGIONFX due to its inconsistent movement with other currencies in the region as well as the Thai baht. Such inconsistency was due to the recent depreciation of the Japanese yen as a result of low domestic interest rates, leading to capital outflows.

2. The equation for net flows of the private financial account (equation 3.7) was adjusted to incorporate the 1-day repurchase rate (RP1D) instead of the minimum lending rate (MLR) in the calculation of the interest rate differential between domestic and the FEDFUND, which is a financial market interest rate. Moreover, FX88 which was formerly intended to capture the impact of economic fundamentals and financial returns on flow of funds, was removed from the equation since the effect of economic fundamentals was already reflected in the current account balance and that of financial returns was also captured by the interest rate differential.

[1] The Bank of Thailand's macroeconometric model was first published in the July 2000 *Report*. Revisions to the model were noted in subsequent *Reports*.

3. Two equations for commercial bank interest rates were revised. Firstly, a term representing an acceleration of the 1-day repurchase rate (ΔΔRP1D) was added to the three-month deposit rate equation (equation 4.1) to reflect the speed of increase or decrease of the policy interest rate, which also affected the adjustments of commercial bank interest rates, on top of the direction of the policy rate. Secondly, the minimum lending rate equation (equation 4.2) was revised such that the change in the minimum lending rate is explained by the change in the three-month deposit rate and the one-quarter lag of the change in the minimum lending rate. The new equation differs from the previous one where levels of interest rates were used.

Effect of variations in the exchange rate and crude oil price on the Thai economy

The model in this *Report* was used to analyze the effect of variations in the exchange rate and the crude oil price on the Thai economy. Table A.1 shows that a one-percentage depreciation in the exchange rate (baht per US dollar) would increase core inflation, headline inflation, and economic growth by 0.03, 0.03, and 0.29 per cent, respectively.

Moreover, a one-percentage increase in the Dubai crude oil price (US dollars per barrel of Dubai crude oil) would affect core inflation, headline inflation, and economic growth by 0.01, 0.04, and -0.03 per cent respectively.

Table A.1 Summary of the effect of variations in the exchange rate and crude oil price

%

	Effect on the Thai economy in the 4th quarter ahead	
	A 1% depreciation in the exchange rate	A 1% increase in crude oil price
Core inflation	0.03	0.01
Headline inflation	0.03	0.04
Economic growth	0.29	-0.03

Source: Macroeconometric model, Bank of Thailand

Corporate and household sector models

The corporate and household sector models are tools developed by the BOT to help assess the financial conditions of the Thai corporate and household sectors. The assessment is part of the effort to ensure financial stability, which itself, in turn, is closely intertwined with monetary stability and long-term economic growth, the main objectives of monetary policy under inflation targeting. In this *Report*, the BOT has revised the corporate and household sector models using the latest released data, especially those pertaining to listed companies, household credits, and GDP.

Bank of Thailand's Macroeconometric Model (Core Model)[2/]

1. Real sector

1.1 Private durable goods consumption at 1988 constant prices

$$\Delta\ln(CPR1sa) = -0.013*\Delta(MLR-CINFEX) + 0.777*\Delta\ln(GDPRsa(-1)*(1-RH(-1))) + 0.122*\Delta\ln(WEALTHsa*100/COREsa)$$

(-2.36) (5.03) (1.73)

$$+\,0.213*\Delta\ln(PLANDTHsa) - 0.206*ecmCPR1(-1)$$

(2.78) (-3.19)

Adjusted R-Squared = 0.55 S.E. of regression = 0.0225 LM(2) : 0.71 (0.50)

$$ecmCPR1 = \ln(CPR1sa) - (0.345*\ln(GDPRsa*(1-RH)) - 0.016*(MLR(-1)-CINFEX(-1)) + 0.304*\ln(WEALTHsa*100/COREsa))$$

1.2 Private non-durable goods consumption at 1988 constant prices

$$\Delta\ln(CPR2sa) = 0.009 + 0.426*\Delta\ln(GDPRsa*(1-RH)) - 0.004*\Delta(RD3M-CINFEX) - 0.518*\Delta\ln(CPIsa) - 0.439*ecmCPR2(-1)$$

(3.82) (6.45) (-1.76) (-2.68) (-5.49)

Adjusted R-Squared = 0.68 S.E. of regression = 0.0095 LM(2) : 2.17 (0.13)

$$ecmCPR2 = \ln(CPR2sa) - (0.864*\ln(GDPRsa*(1-RH)) - 0.006*(RD3M-CINFEX))$$

1.3 Total private consumption at 1988 constant prices

$$CPR = CPR1 + CPR2$$

1.4 Asset value

$$WEALTH = M2A + BMCAP$$

1.5 Private investment at 1988 constant prices

$$\Delta\ln(IPRsa) = 2.183*\Delta\ln(GDPRsa/GDPR\_HSM) + 1.326*\Delta\ln(GDPRsa(-1)) - 0.331*\Delta\ln(FX88) - 0.044*ecmIPR(-1)$$

(4.60) (3.37) (-2.63) (-1.68)

Adjusted R-Squared = 0.63 S.E. of regression = 0.0498 LM(2) : 0.02 (0.98)

$$ecmIPR = \ln(IPRsa) - (5.151 - 0.037*(MLR(-1)-CINFEX(-1)) + 8.689*\Delta\ln(PCREDITsa/CPIsa))$$

1.6 Government consumption at 1988 constant prices

$$CGOVR = CGOVN/PGCON$$

1.7 Public investment at 1988 constant prices

$$IPUB = IPUBN/PIFX$$

1.8 Exports of goods and services at 1988 constant prices

$$\Delta\ln(XRsa) = 2.583*\Delta\ln(TPGDPsa) - 0.655*\Delta\ln(REER) - 0.695*ecmXR(-1)$$

(7.27) (-3.74) (-4.72)

Adjusted R-Squared = 0.60 S.E. of regression = 0.0224 LM(2) : 1.25 (0.30)

$$ecmXR = \ln(XRsa) - (-2.127 + 2.198*\ln(TPGDPsa) - 0.273*\ln(PX\$sa) - 0.109*\ln(REER))$$

1.8.1 Exports of goods at 1988 constant prices

$$XGR = RXGR*XR$$

[2/] ln = natural logarithms
sa = seasonally adjusted
ecm = error correction term
The numbers in parentheses below coefficients are the t-statistics.
LM(2) is the test for second-order serial correlation in the residuals (with *p*-value in parentheses).

1.8.2 Exports of services at 1988 constant prices

XSR = RXSR*XR

1.9 Imports of goods and services at 1988 constant prices

Δln(MRsa) = 1.112*Δln(DDsa) + 0.613*Δln(XRsa) - 0.237*Δln((PM$sa*FX88)/CPIsa) - 0.270*ecmMR(-1)
(10.92) (6.53) (-3.30) (-2.98)

Adjusted R-Squared = 0.79 S.E. of regression = 0.0267 LM(2) : 0.90 (0.41)

ecmMR = ln(MRsa) - (-3.690 + 1.000*ln(DDsa) + 0.504*ln(XRsa) - 0.227*ln((PM$sa*FX88)/CPIsa))

1.9.1 Imports of goods at 1988 constant prices

MGR = RMGR*MR

1.9.2 Imports of services at 1988 constant prices

MSR = RMSR*MR

1.10 Gross domestic product at 1988 constant prices

GDPR = CPR + CGOVR + IPR + IPUB + (XR - MR) + OTHGDP

1.11 Gross domestic product at current market prices

GDPN = ((CPR*CPI) + (CGOVR*PGCON) + (IPR*PIP) + (IPUB*PIFX) + ((XR*PX$*FX88/100)
- (MR*PM$*FX88/100)) + (OTHGDP*POTHGDP))/100

1.12 Domestic demand

DD = GDPR - XR + MR

2. Government sector

2.1 Government revenue

GREV = TAXREV + OTHREV

2.2 Tax revenue

TAXREV = TD + TIND

2.3 Direct tax

TD = TH + TC
TH = RH*GDPN
TC = RC*GDPN

2.4 Indirect tax

TIND = TVAT + TEXC + OTHTIND
TVAT = RVAT*(CPR*CPI/100)
TEXC = REXC*(CPR*CPI/100)
OTHTIND = ROTHTIND*(CPR*CPI/100)

2.5 Government cash balance

GCB = GREV - (GCURRENT + GCAPITAL) + NONBUDGET

3. External sector

3.1 Current account

CURRENT$ = (((XGR*PXG$) - (MGR*PMG$)) + ((XSR*PXS$) - (MSR*PMS$)))/(25.29[3/]*100)
CURRENTB = CURRENT$*FX

[3/] The Baht/USD exchange rate in 1988 is 25.29.

3.2 Capital and financial account

CAPITAL$ = CAPITAL$PRI + OTHCAP$

CAPITALB = CAPITAL$*FX

3.3 Balance of payments

BPB = CAPITAL$*FX + CURRENT$*FX + OTHBP

BP$ = BPB/FX

3.4 International reserves

RESERVE = BP$ + RESERVE(-1)

3.5 Net foreign assets

NFA = NFA(-1) + BPB + OTHNFA

3.6 Exchange rate

ln(FX88) = ln(FX88(-1)) + (ln(1+FEDFUND/400) - ln(1+RP14D/400)) + Δln(CPIsa/CPIUSsa) + RISK

RISK = 1.531*Δln(REGIONFX) - 0.336*Δ(BPB(-1)/GDPN(-1))

FX = (FX88*25.29[3/])/100

NEER = TPFX*/FX94

REER = NEER/(TPCPI/CPI*100/73.43)

3.7 Net flows of private financial account

CAPITAL$PRI = 0.386*Δ(RP1D-FEDFUND) - 0.568*CURRENT$ + 55.481*Δln(GDPRsa)

(2.31) (-5.11) (3.51)

Adjusted R-Squared = 0.49 S.E. of regression = 1.7369 LM(2) : 2.15 (0.13)

4. Monetary sector

4.1 Three-month deposit rate

ΔRD3M = 0.252*ΔRP1D - 0.042ΔΔRP1D(-1) - 0.100*ecmRD3M(-1)

(7.57) (1.537) (-3.438)

Adjusted R-Squared = 0.57 S.E. of regression = 0.4941 LM(2) : 1.16 (0.32)

ecmRD3M = RD3M - 0.807*RP1D

4.2 Minimum lending rate

ΔMLR = 0.588*ΔRD3M + 0.419*ΔMLR(-1)

(12.09) (7.38)

Adjusted R-Squared = 0.90 S.E. of regression = 0.1955 LM(2) : 1.01 (0.38)

4.3 Private credit

Δln(PCREDITsa) = - 0.014*ΔMLR + 0.669*Δln(GDPNsa) - 0.002*ln(NPL(-2)) + 0.384*Δln(PCREDITsa(-1)) + 0.0001*(CAPITAL$PRI(-1)*FX(-1))

(-1.95) (2.78) (-2.00) (2.64) (2.29)

Adjusted R-Squared = 0.46 S.E. of regression = 0.0147 LM(2) : 0.30 (0.74)

4.4 Net claims on government

ΔCLAIMG = - 0.419*(GCB-FINB)

(-5.85)

Adjusted R-Squared = 0.40 S.E. of regression = 40.57 LM(2) : 0.69 (0.51)

[3/] The Baht/USD exchange rate in 1988 is 25.29.

4.5 Money supply

$M2A^S$ = NFA + CLAIMG + PCREDIT+ OTHM2A

$\Delta ln(M2A^D sa*100/CPIsa)$ = 0.238*Δln(GDPRsa) - 0.007*ΔRD3M + 0.002*CINFEX - 0.231*ecmM2A^D(-1)

(2.64) (-2.24) (3.49) (-4.41)

Adjusted R-Squared = 0.43 S.E. of regression = 0.0119 LM(2) : 0.05 (0.96)

ecmM2A^D = ln(M2A^{D}sa*100/CPIsa) - (4.349 + 0.549*ln(GDPRsa) - 0.004*RD3M)

4.6 Securities value

Δln(BMCAP) = 0.004*Δ(CAPITAL$*FX) + 2.230*Δln(GDPRsa) - 0.110*Δ(MLR) - 0.490*ecmBMCAP(-1)

(2.20) (2.16) (-2.64) (-3.11)

Adjusted R-Squared = 0.34 S.E. of regression = 0.0812 LM(2) : 0.69 (0.51)

ecmBMCAP = ln(BMCAP) - (-14.695 + 0.0004*(CAPITAL$*FX) + 3.470*ln(GDPRsa) - 0.015*MLR)

5. Price index

5.1 Core consumer price index

Δln(COREsa) = 0.002*(GDPRsa/GDPR_HSM) + 0.512*Δln(COREsa(-1)) - 0.131*ecmCORE(-1)

(2.95) (4.64) (-3.76)

Adjusted R-Squared = 0.72 S.E. of regression = 0.0033 LM(2) : 1.00 (0.38)

ecmCORE = ln(COREsa) - (3.984 + 0.046*ln(PM$sa*FX88) + 0.036*ln(AVGEARNsa) + 0.119*ln(CPIENsa(-1)))

5.2 Average earnings

Δln(AVGEARNsa)= 0.296*Δln(MINWAGE) + 0.857*Δln(CPIsa) - 0.194*ecmAVGEARN(-1)

(2.96) (5.39) (-2.29)

Adjusted R-Squared = 0.32 S.E. of regression = 0.0122 LM(2) : 0.42 (0.66)

ecmAVGEARN = ln(AVGEARNsa) - (2.465 + 0.763*ln(MINWAGE(-1)) + 0.532*ln(CPIsa))

5.3 Energy price index

Δln(CPIENsa) = 0.566*Δln(RPPIsa) - 0.211*ecmCPIEN(-1)

(14.55) (-3.13)

Adjusted R-Squared = 0.74 S.E. of regression = 0.0177 LM(2) : 0.57 (0.57)

ecmCPIEN = ln(CPIENsa) - (1.120 + 0.786*ln(RPPIsa))

5.4 Retail petroleum price index

Δln(RPPIsa) = 0.367*Δln(DUBAIsa) + 0.467*Δln(FX88) + 0.200*Δln(RPPIsa(-2)) - 0.364*ecmRPPI(-1)

(10.01) (7.05) (3.22) (-5.25)

Adjusted R-Squared = 0.75 S.E. of regression = 0.0281 LM(2) : 0.11 (0.89)

ecmRPPI = ln(RPPIsa) - (-0.371 + 0.569*ln(DUBAIsa) + 0.719*ln(FX88))

5.5 Raw food price index

Δln(CPIRFOODsa) = 0.008 + 0.333*Δln(FARMPRICEsa) - 0.068*ecmCPIRFOOD(-1)

(3.47) (5.86) (-1.78)

Adjusted R-Squared = 0.34 S.E. of regression = 0.0176 LM(2) : 0.71 (0.49)

ecmCPIRFOOD = ln(CPIRFOODsa) - (0.686 + 0.893*ln(FARMPRICEsa(-2)))

5.6 Farm price index (12 main products)

Δln(FARMPRICE_12sa) = 1.005*Δln(WFP_12sa) + 0.616*Δln(FX88) - 0.358*ecmFARMPRICE_12(-1)

(9.12) (8.41) (-4.03)

Adjusted R-Squared = 0.70 S.E. of regression = 0.0306 LM(2) : 0.82 (0.45)

ecmFARMPRICE_12 = ln(FARMPRICE_12sa) - (-5.264 + 1.125*ln(WFP_12sa) + 1.030*ln(FX88))

5.7 Farm price index

FARMPRICE = (WFARMPRICE_12*FARMPRICE_12) + (WFARMPRICE_OTH*FARMPRICE_OTH)

5.8 Headline consumer price index

CPI = ((1-WEN-WRFOOD)*CORE) + (WEN*CPIEN) + (WRFOOD*CPIRFOOD)

5.9 Private investment deflator

Δln(PIPsa) = 1.640*Δln(CPIsa) + 0.113*Δln(FX88(-2)) - 0.260*ecmPIP(-1)

(5.24) (2.13) (-2.51)

Adjusted R-Squared = 0.45 S.E. of regression = 0.0210 LM(2) : 0.18 (0.84)

ecmPIP = ln(PIPsa) - (-3.842 + 1.690*ln(CPIsa) + 0.067*ln(FX88(-1)))

5.10 Public investment deflator

Δln(PIFXsa) = 1.192*Δln(CPIsa) - 0.129*ecmPIFX(-1)

(8.05) (-2.20)

Adjusted R-Squared = 0.32 S.E. of regression = 0.0130 LM(2) : 1.23 (0.30)

ecmPIFX = ln(PIFXsa) - (-1.463 + 1.267*ln(CPIsa) + 0.030*ln(FX88(-1)))

5.11 Government consumption deflator

Δln(PGCONsa) = 0.790*Δln(CPIsa) + 0.034*ΔSALARY - 0.157*ecmPGCON(-1)

(4.23) (4.27) (-2.17)

Adjusted R-Squared = 0.24 S.E. of regression = 0.0158 LM(2) : 0.14 (0.87)

ecmPGCON = ln(PGCONsa) - (0.317 + 0.974*ln(CPIsa) + 0.065*SALARY)

5.12 Export price deflator

Δln(PX$sa) = 0.205*Δln(PM$sa(-1)) + 0.629*Δln(TPGDPsa) - 0.206*Δln(FX88) - 0.370*ecmPX$(-1)

(3.26) (3.01) (-5.09) (-4.67)

Adjusted R-Squared = 0.71 S.E. of regression = 0.0158 LM(2) : 1.15 (0.33)

ecmPX$ = ln(PX$sa) - (2.284 + 0.364*ln(PW_NONFsa(-1)) + 0.364*ln(MUVsa(-1)) - 0.177*ln(FX88))

5.12.1 Export price deflator for services

PXS$sa = PXS$sa(-4)*((CPIsa/FX88)/(CPIsa(-4)/FX88(-4)))

5.12.2 Export price deflator for goods

PXG$sa = (PX$sa - WXRS*PXS$sa)/WXRG

5.13 Import price deflator

Δln(PM$sa) = 0.364*Δln(PW_NONFsa) - 0.376*ecmPM$(-1)

(3.36) (-3.41)

Adjusted R-Squared = 0.27 S.E. of regression = 0.0312 LM(2) : 2.68 (0.08)

ecmPM$ = ln(PM$sa) - (2.2396 + 0.505*ln(PW_NONFsa) + 0.061*ln(DUBAIsa))

5.13.1 Import price deflator for services

PMS$sa = PMS$sa(-4)*((TPCPIsa/TPFX)/(TPCPIsa(-4)/TPFX(-4))

5.13.2 Import price deflator for goods

PMG$sa = PM$sa - WMRS*PMS$sa)/WMRG

5.14 GDP deflator

PGDP = GDPN / GDPR*100

5.15 Inflation expectations

CINFEX = 0.25*CINFLAT(-1) + 0.25*CINFLAT + 0.50*CINFLAT(4)

5.16 Housing Price Index

ln(PLANDTHsa) = 2.96 - 0.025*(MLR(-1) - CINFEX(-1)) + 0.426*ln(PLANDTHsa(-1))
(3.85) (-3.41) (2.82)

Adjusted R-Squared = 0.63 S.E. of regression = 0.0425 LM(2) : 9.81 (0.00)

6. Corporate Sector Model

6.1 Sales, cost of goods sold, profits

6.1.1 Sales

ln(SALESsa) = -2.567 + 0.622*ln(GDPNsa) - 0.021*(MLR - CINFEX) + 0.718*ln(SALESsa(-1))
(-2.40) (2.79) (-4.26) (8.03)

Adjusted R-Squared = 0.99 S.E. of regression = 0.0433 LM(2) : 0.18 (0.84)

6.1.2 Cost of goods sold

ln(COGSsa) = -1.712 + 0.940*ln(SALESsa) + 0.392*ln(PPIsa)
(-3.48) (25.24) (2.58)

Adjusted R-Squared = 0.99 S.E. of regression = 0.0344 LM(2) : 0.58 (0.57)

6.1.3 Operating profits

EBIT = SALES - COGS - OTHER

6.1.4 Net profits

NI = EBIT - INT - TAX - EXTRA

6.2 Assets, equity, liabilities

6.2.1 Assets

ln(ASSETsa) = 0.225*ln(GDPNsa) + 0.847*ln(ASSETsa(-1)) - 0.074*ln(FX88(-1))
(6.44) (25.91) (-3.15)

Adjusted R-Squared = 0.99 S.E. of regression = 0.0286 LM(2) : 0.67 (0.51)

6.2.2 Equity

Δln(EQUITYsa) = 0.718*Δln(GDPNsa(-2)) - 0.615*Δln(FX88) + 0.001*Δ(NI) + 0.038*DUM01Q4 - 0.170*ecmEQUITY(-1)
(2.08) (-4.56) (7.30) (2.74) (-2.50)

Adjusted R-Squared = 0.63 S.E. of regression = 0.0532 LM(2) : 1.07 (0.35)

ecmEQUITY = ln(EQUITYsa) - (1.658*ln(GDPNsa) + 0.403*DUM01Q4 + 0.015*(MLR(-1) - FEDFUND(-1)) - 1.073*ln(FX88))

6.2.3 Liabilities

DEBT = ASSET - EQUITY

6.3 Debt burden and debt-service ability

6.3.1 Debt to equity ratio

DE = DEBT / EQUITY

6.3.2 Interest expenses

ln(INTsa)= - 7.479 + 1.390*ln(DEBTsa(-1)) + 0.030*MLR(-2) - 0.472*DUM01Q4

6.3.3 Interest coverage ratio

ICR = EBIT / INT

7. Household Model

7.1 Liabilities

7.1.1 Banks' lending to household

$$\Delta \ln(LOANHHTsa) = -0.008*\Delta MLR(-1) + 0.337*\Delta \ln(CPRsa(-4)) + 0.806*\Delta \ln(LOANHHTsa(-1))$$

(-1.93) (2.47) (11.07)

Adjusted R-Squared = 0.68 S.E. of regression = 0.0174 LM(2) : 1.74 (0.19)

7.2 Debt Repayment Capacity

7.2.1 Household Interest Payments

$$INTHH = (MLR / 100)*LOANHHT$$

7.2.2 Ratio of Interest Payments to Income after Tax

$$IGEARHH = INTHH / (GDPRsa*(1-RH))*100$$

List of variables

Dependent variables

AVGEARN	Average earnings (baht/month)
BMCAP	Securities value (billion baht)
BPB, BP$	Balance of payments (billion baht, billion US dollars)
CAPITALB, CAPITAL$	Capital and financial account (billion baht, billion US dollars)
CAPITAL$PRI	Net flows of private financial account (billion US dollars)
CGOVR	Government consumption at 1988 constant prices (billion baht)
CINFEX	Inflation expectations
CLAIMG	Net claims on government (billion baht)
CORE, CINFLAT	Core consumer price index (CPI excluding raw food and energy prices) (2002 = 100), Core inflation (per cent)
CPI	Headline consumer price index (2002 = 100)
CPIEN	Energy price index (2002 = 100)
CPIRFOOD	Raw food price index (2002 = 100)
CPR	Total private consumption at 1988 constant prices (billion baht)
CPR1	Private durable goods consumption at 1988 constant prices (including transport equipment, electrical machinery, machinery and equipment, furniture, rubber products, and glass and plastic products) (billion baht)
CPR2	Private non-durable goods consumption at 1988 constant prices (including food products, beverages, energy, and services) (billion baht)
CURRENTB, CURRENT$	Current account balance (billion baht, billion US dollars)
DD	Domestic demand at 1988 constant prices (billion baht)
FARMPRICE	Farm price index (1995 = 100)
FARMPRICE_12	Farm price index (12 main products of Thailand) (1995 = 100)
FX	Exchange rate (baht/US dollar)
FX88	Exchange rate index (1988 = 100)
FX94	Exchange rate index (1994 = 100)
GCB	Government cash balance (billion baht)
GDPN	Gross domestic product at current market prices (billion baht)
GDPR	Gross domestic product at 1988 constant prices (billion baht)
GDPR_HSM	Gross domestic product trend at 1988 constant prices, estimated from Hodrick-Prescott and exponential smoothing methods (billion baht)
GREV	Government revenue (billion baht)
IPR	Private investment at 1988 constant prices (billion baht)
IPUB	Public investment at 1988 constant prices (billion baht)
$M2A^D$, $M2A^S$	Money supply (M2 + finance companies' promissory notes) (billion baht)
MGR	Imports of goods at 1988 constant prices (billion baht)
MLR	Minimum lending rate (per cent per annum)
MR	Imports of goods and services at 1988 constant prices (billion baht)
MSR	Imports of services at 1988 constant prices (billion baht)
NEER	Nominal effective exchange rate (1994 = 100)
NFA	Net foreign assets (billion baht)
OTHTIND	Other indirect taxes (billion baht)
PCREDIT	Claims on private sector (including securities holdings by the private sector) (billion baht)
PGCON	Government consumption deflator (1988 = 100)
PGDP	GDP deflator (1988 = 100)
PIFX	Public investment deflator (1988 = 100)

PIP	Private investment deflator (1988 = 100)
PLANDTH	Townhouse (including land) price index (1991 = 100)
PM$	Goods and services import price index (US dollars, 1988 = 100)
PMG$	Goods import price index (US dollars, 1988 = 100)
PX$	Goods and services export price index (US dollars, 1988 = 100)
PXS$	Services export price index (US dollars, 1988 = 100)
RD3M	Three-month deposit rate (per cent per annum)
REER	Real effective exchange rate (1994 = 100)
RESERVE	International reserves (billion US dollars)
RISK	Exchange rate risk
RPPI	Retail petroleum price index (1996 = 100)
TAXREV	Tax revenue (billion baht)
TC	Corporate income tax (billion baht)
TD	Direct tax (billion baht)
TEXC	Excise tax (billion baht)
TH	Personal income tax (billion baht)
TIND	Indirect tax (billion baht)
TVAT	Value added tax (billion baht)
WEALTH	Asset value (M2A and securities value) (billion baht)
XGR	Exports of goods at 1988 constant prices (billion baht)
XR	Exports of goods and services at 1988 constant prices (billion baht)
XSR	Exports of services at 1988 constant prices (billion baht)

Independent variables

CPIUS	Consumer price index of the United States (1990 = 100)
CGOVN	Government consumption at current prices (billion baht)
DUBAI	Dubai crude oil price (US dollars/barrel)
FARMPRICE_OTH	Other items of farm price index (1995 = 100)
FEDFUND	Federal funds rate (per cent per annum)
FINB	Government bond issuance for financial sector restructuring (billion baht)
GCAPITAL	Government capital expenditure (billion baht)
GCURRENT	Government current expenditure (billion baht)
IPUBN	Government investment at current prices (billion baht)
MINWAGE	Minimum wage (baht/day)
MUV	Manufacturing unit value index (2000 = 100)
NONBUDGET	Government non-budgetary balance (billion baht)
NPL	Non performing loans (billion baht)
OTHBP	Other items of balance of payments (billion baht)
OTHCAP$	Other items of capital and financial account (billion US dollars)
OTHGDP	Other items of gross domestic product at 1988 constant prices (billion baht)
OTHM2A	Other items of M2A (billion baht)
OTHNFA	Other items of net foreign assets (billion baht)
OTHREV	Non-tax revenue (billion baht)
PW_NONF	World non-fuel commodity price index (1995 = 100)
POTHGDP	Other items of gross domestic product deflator (1988 = 100)
RC	Corporate income tax rate (per cent)
REGIONFX	Regional exchange rate index (China, Singapore, Indonesia, Korea, the Philippines) (1994 = 100)
REXC	Excise tax rate (per cent)
RH	Personal income tax rate (per cent)

RMGR	Imports of goods to imports of goods and services ratio
RMSR	Imports of services to imports of goods and services ratio
ROTHTIND	Other indirect tax rate (per cent)
RP1D	1-day repurchase rate (per cent per annum)
RVAT	Value added tax rate (per cent)
RXGR	Exports of goods to exports of goods and services ratio
RXSR	Exports of services to exports of goods and services ratio
TPCPI	Trading partners consumer price index (Asian region economies, United States, Japan, euro area economies, and United Kingdom) (1994 = 100)
TPGDP	Trading partners gross domestic product index (Asian region economies, United States, Japan, euro area economies and United Kingdom) (2002 = 100)
TPFX	Trading partners exchange rate per us dollar (Asian region economies, United States, Japan, euro area economies, and United Kingdom) (1994 = 100)
WEN	Energy weight in CPI basket (proportion)
WFARMPRICE_12	Weight of 12 main products in farm price index basket (proportion)
WFARMPRICE_OTH	Weight of other items in farm price index basket (proportion)
WFP_12	World farm price index (12 main products of Thailand) (1995 = 100)
WRFOOD	Raw food weight in CPI basket (proportion)
WMRG	Weight of imports of goods to total imports
WMRS	Weight of imports of services to total imports
WXRG	Weight of exports of goods to total exports
WXRS	Weight of exports of services to total exports

Dummy variables

SALARY	represents periods where there were changes in the civil servants' salary structure, where 1994:Q4 and 2004:Q2 = 1, other = 0

Corporate variables

ASSET	Assets (billion baht)
COGS	Cost of goods sold (billion baht)
DE	Debt to equity ratio (times)
DEBT	Liabilities (billion baht)
DUM01Q4	Represents debt restructuring period, where 2001 Q4 to present = 1, other = 0
EBIT	Profit (Loss) before interest and income tax expenses (billion baht)
EQUITY	Shareholders' equity (billion baht)
EXTRA	Other expenses (billion baht)
ICR	Interest coverage ratio (times)
INT	Interest expenses (billion baht)
NI	Net profit (loss) (billion baht)
OTHER	Other expenses (billion baht)
PPI	Producer price index (2000 = 100)
SALES	Revenue from sale of goods (billion baht)
TAX	Corporate income tax (unit: billion baht)

Household Model

LOANHHT	Banks' lending to households (billion baht)
INTHH	Interest payments (billion baht)
IGEARHH	Ratio of interest payments to income after tax (per cent)