Chapter 2

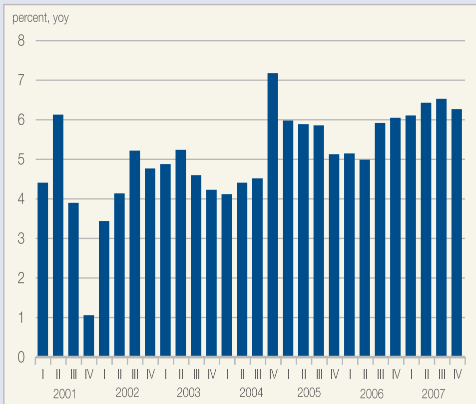
# Macroeconomic Conditions

# Chapter 2: Macroeconomic Conditions

During 2007, the Indonesian economy showed overall improvement. This was reflected in the highest economic growth rate achieved during the post-crisis period, underpinned by increasingly robust, carefully managed macroeconomic stability. On the demand side, accelerated growth was driven by vibrant public consumption and investment in keeping public purchasing power and economic prospects. Despite some slowing, export growth remained strong in the face of the threat of world economic slowdown. Demand-side expansion was also reflected in increased capacity utilisation across almost all economic sectors. Key sectors supporting overall economic growth, such as manufacturing, agriculture, and trade, as well as hotels and restaurants, forged ahead at a faster rate compared to the preceding year. Robust economic growth was also followed by higher employment levels, rising per capita income and reductions in poverty gap index and poverty severity index.

Economic growth in 2007 surpassed that of 2006, reaching its highest level since the outbreak of the economic crisis. Overall, the economy emerged in better condition despite challenges arising from global and domestic issues. Indonesia was able to minimise the impact of soaring oil prices and the subprime mortgage crisis and in so doing maintain the stability of the rupiah and inflation while safeguarding fiscal sustainability. The achievement of macroeconomic stability coupled with stronger public purchasing power paved the way for reinvigorated economic growth in 2007. After slipping to 5.5% (yoy) in 2006, growth mounted significantly in 2007 to 6.3% (yoy) (Chart 2.1).

On the demand side, the impressive gain in economic growth was reflected in surging domestic demand and relatively strong exports. In the first half of 2007, public purchasing power, which had weakened in 2006 after fuel price hikes in 2005, managed a gradual recovery to provide added stimulation for private consumption. Investment began to show significant improvement following a downturn brought on by slackened domestic demand. Exports maintained their rapid expansion at the beginning of the year, buoyed by world demand and high international prices for resource-based commodities. Imports also continued to expand rapidly in keeping with strengthened domestic demand and exports. In the second half, the recovery in public purchasing power helped to stimulate rapid growth in private consumption. Investment growth maintained an upward trend, driven mainly by rising domestic demand. Export growth began to taper off towards the end of the year in response to slowing global demand. However, import growth remained strong at year end due to robust domestic demand.




Source: BPS-Statistics Indonesia

**Chart 2.1**
**GDP Growth**

**Table 2.1**
**GDP Growth and Distribution by Expenditures**

percent

| Items | 2004 | 2005 | 2006* | 2007** | | | | 2007** |
|---|---|---|---|---|---|---|---|---|
| | | | | I | II | III | IV | |
| Total Consumption | 4.9 | 4.3 | 3.9 | 4.6 | 4.6 | 5.3 | 5.1 | 4.9 |
| Private Consumption | 5.0 | 4.0 | 3.2 | 4.7 | 4.7 | 5.1 | 5.6 | 5.0 |
| Government Consumption | 4.0 | 6.6 | 9.6 | 3.7 | 3.8 | 6.5 | 2.0 | 4.0 |
| Investment[1] | 14.2 | 10.8 | 2.9 | 7.0 | 6.9 | 10.4 | 12.1 | 9.1 |
| Domestic Demand | 9.1 | 5.3 | 3.3 | -0.8 | 3.4 | 4.4 | 9.6 | 4.2 |
| Net Export | -23.1 | 13.6 | 15.6 | 6.8 | 25.0 | 6.7 | -14.2 | 6.1 |
| Exports of Goods and Services | 11.1 | 16.4 | 9.2 | 8.1 | 9.8 | 6.9 | 7.3 | 8.0 |
| Imports of Goods and Services | 25.2 | 17.1 | 7.6 | 8.5 | 6.5 | 7.0 | 13.6 | 8.9 |
| GDP | 4.9 | 5.7 | 5.5 | 6.1 | 6.4 | 6.5 | 6.3 | 6.3 |
| Distribution of GDP (%) | | | | | | | | |
| Total Consumption | 68.2 | 67.3 | 66.3 | 64.4 | 65.2 | 63.8 | 68.2 | 65.4 |
| Private Consumption | 60.6 | 59.6 | 58.3 | 57.8 | 57.3 | 56.3 | 58.9 | 57.6 |
| Government Consumption | 7.6 | 7.7 | 8.0 | 6.5 | 7.9 | 7.4 | 9.3 | 7.8 |
| Investment[1] | 21.4 | 22.5 | 21.9 | 21.5 | 22.0 | 22.5 | 23.6 | 22.4 |
| Exports of Goods and Services | 41.1 | 45.2 | 46.8 | 47.0 | 48.0 | 46.9 | 49.1 | 47.8 |
| Imports of Goods and Services | 32.8 | 36.3 | 37.0 | 36.8 | 38.2 | 38.8 | 40.2 | 38.5 |

Sources: BPS-Statistics Indonesia
1 Gross Fixed Capital Formation.

All economic sectors reported higher levels of growth compared to the preceding year. Leading growth sectors were transport and communications, electricity, gas and water supply sector, construction, financial sector and trade, hotels and restaurants sector. As alluded previously, manufacturing, trade and transportation were the main sectors driving the growth of the economy. However, the composition of major economic sectors in the GDP, led by manufacturing, agriculture and trade, as well as hotels and restaurants sectors remained unchanged.

On the policy front, real sector policy was directed at strengthening economic growth. To this end, the Government launched a policy package for revamped growth in the real sector and empowerment of MSMEs. The policy package, which strengthens existing cross-sectoral policies while introducing new policies, is divided into the following key areas: i) improvement of the investment climate; ii) reform of financial system; iii) accelerated construction of infrastructure; and iv) empowerment of MSMEs. As of November 2007, the Government had achieved most of the targets set out in the Presidential Instruction. Policies were also introduced to improve welfare by strengthening poverty alleviation under the Regional Poverty Alleviation Coordinating Teams , continuing the School Operational Assistance programme for aid to underprivileged students and other actions.

Improved economic growth in 2007 was also accompanied by a general reduction in numbers of unemployed and the poor. The economic expansion in 2007 succeeded in absorbing larger numbers of workers than new entrants to the workforce. As a result, open unemployment in 2007 fell to 10.5 million, compared to the 11.1 million recorded in 2006. The reduced unemployment in turn lowered the numbers of people living in poverty from 39.30 million (17.8% of the population) in 2006 to 37.17 million (16.6% of the population) in 2007. This improvement in welfare had a positive impact on some of the targeted indicators in the 2015 Millennium Development Goals, most importantly with reduction in poverty and hunger, lower child mortality rate and more children receiving primary and secondary education.

## Aggregate Demand

On the demand side, improved public purchasing power and robust world demand for Indonesian export products were key factors driving economic growth in 2007. In the first half of 2007, stronger purchasing power fuelled by consumer confidence in rising incomes resulted in significantly increased growth in

**Table 2.2**
**Salary Increase by Management Level**

percent

| Management Level | Average Increase | | |
|---|---|---|---|
| | 2005 | 2006 | 2007* |
| Blue Collars | 9.9 | 12.3 | 12.7 |
| Clerk | 9.8 | 13.1 | 13.8 |
| Junior Management | 9.8 | 13 | 13.7 |
| Middle Management | 9.6 | 12.8 | 13.9 |
| Senior Management | 9.4 | 12.8 | 13.6 |
| All Level | 9.7 | 13 | 13.8 |

Source: SWA, February 2007
* projection

private consumption. Exports, buoyed by strong world demand for agricultural and mining commodities, continued to come to the fore. Investment showed an upward growth trend, consistent with more vigorous private consumption. Imports, comprising mainly consumer goods and raw materials, also grew at a high rate alongside rising domestic demand and exports. During the second half of the year, vigorous expansion in domestic demand continued to provide the main driving force for growth. However, export-driven growth began to taper off as the slowdown took greater hold in the world economy. This period was also marked by surging import growth.

Private consumption expanded at the rate of 5.0% in 2007 on the back of renewed public purchasing power. Public purchasing power mounted a gradual recovery during the year, following a period of weakened purchasing power in 2006 brought on by earlier fuel price hikes. Reflecting this was the sustained upward trend with private consumption growth reaching 5.0% (yoy) in 2007, well ahead of the previous year's growth at 3.2% (yoy). This recovery in purchasing power was experienced at almost all levels of society. Middle and upper income employees in the formal sector saw their salaries rise by an average of 13% (yoy) during 2007 (Table 2.2). At the same time, wages for informal sector workers, representative of purchasing power among lower income groups, improved further albeit on a modest scale (Chart 2.2 and 2.3).

Analyzed by component, growth in both food and non-food consumption mounted higher in comparison to 2006 (Chart 2.4). Non-food consumption climbed 5.8%, well ahead of the 4.1% recorded in 2006. Increased non-food consumption was reflected in the significant rise in sales of durable goods, such as motor vehicles and electronic products. Motor vehicle sales were up 36.3% in 2007, a vast improvement over the negative 40.2% growth in the previous year (Chart 2.5). Alongside this, the previous negative 12.8% growth in motorcycle sales improved to 5.8%. Purchases of electronic items, including televisions and washing machines, advanced by 21.3% and 33.3% in 2007 (Table 2.3). Also reflecting the escalating trend in consumption was the accelerated real growth in M1 during 2007 (Chart 2.6).

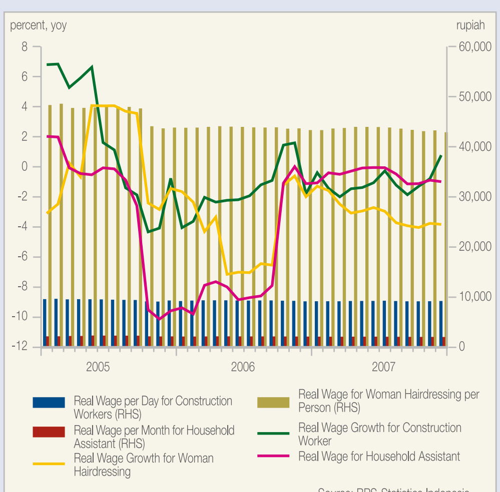



**Chart 2.2**
**Informal Workers' Wages in Cities**

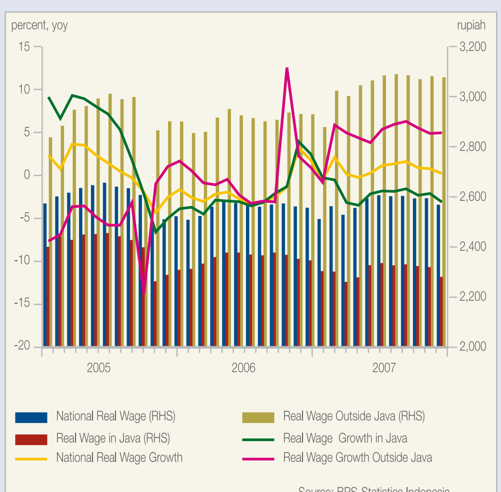



**Chart 2.3**
**Wages of Farm Laborers**

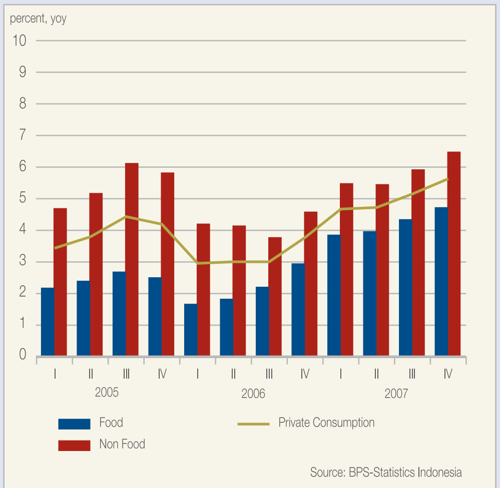



**Chart 2.4**
**Private Consumption Growth and Its Components**

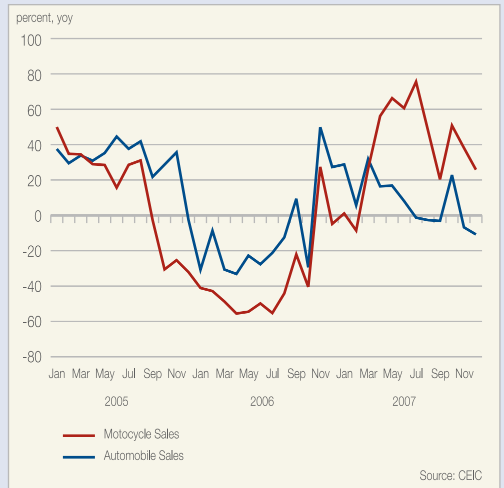



**Chart 2.5**
**Automobile and Motorcycle Sales Growth**

Consumer confidence in the condition of the economy also bolstered private consumption. Consumer confidence indicators showed steady improvement from the beginning of 2007, as borne out in the Bank Indonesia Consumer Survey, which shows an upward trend from early in the year. The consumer confidence index components in the BI Consumer Survey have registered steady gains (Chart 2.7). This improvement is mainly attributable to a number of factors, including current income levels, economic conditions and availability of employment. Income expectations identified in the Consumer Tendency Survey by the Central Statistics Agency (BPS) were also upbeat, due largely to improved forecasts for household incomes (Chart 2.8). In addition, the downward movement in loan interest rates to the middle of the year is also believed to have boosted private consumption.


**Chart 2.6**
**Real M1 Growth**

From the financing side, support for accelerated growth in private consumption came from consumption credit and non-bank financing. Consumption credit and non-bank financing expanded at a faster rate with interest rates in decline. Disbursements of consumption credit mounted 17.5% in 2007, ahead of the previous year's growth of 16.8%. Average growth in consumer financing during 2007 also surpassed the average expansion recorded in preceding years (Chart 2.9 and Chart 2.10).

Unlike private consumption, government consumption manifested a slowing growth trend. Growth in government consumption reached 4.0%, down from

**Table 2.3**
**Electronic Products Sales Growth**

percent

| Product | 2005 | 2006 | 2007 |
|---|---|---|---|
| Television | -4.10 | -3.77 | 21.26 |
| Refrigerator | 21.07 | -11.76 | 23.27 |
| AC | 26.03 | -13.48 | 34.85 |
| Washing Machine | 16.71 | 4.24 | 33.34 |

Source: Electronic Marketing Club.

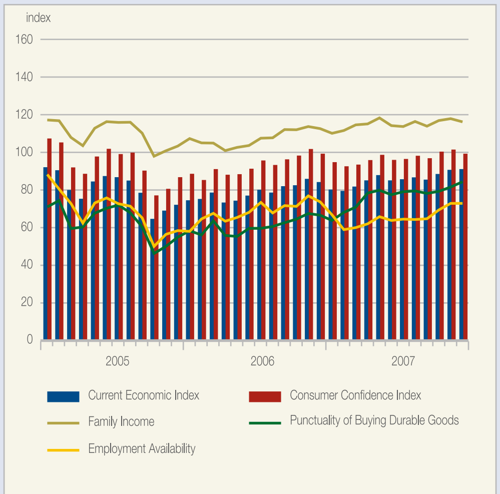



**Chart 2.7**
**Consumer Survey**

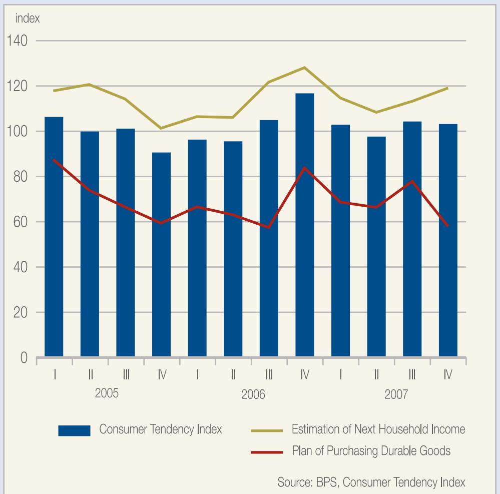



**Chart 2.8**
**Consumer Tendency Index**

the 9.6% recorded in the previous year in keeping with reduced budget expenditure outcomes. Analyzed by component, the slowdown in expenditures took place mainly in personnel expenditures and the General Allocation Funds and Special Allocation Funds for the regions. On the other hand, miscellaneous expenditures and the Profit Sharing Fund recorded negative growth.

Investment responded to rising demand with more robust expansion compared to the preceding year. In 2007, investment expanded by 9.2% (yoy), a considerable improvement over the 2.5% growth in 2006. Driving this performance was escalating domestic and external demand in the first half of 2007 and rapid expansion in private consumption to the end of the year. Investment growth was recorded in both construction and non-construction sectors. Also contributing to investment performance was improved efficiency in use of capital as more investment flowed into technology-intensive sectors. In 2007, the Incremental Capital Output Ratio (ICOR) eased reflecting improvement to 3.8, down when compared to 4.2 in 2006 (Chart 2.11) and the average for the past 4 (four) years[1]. Accordingly, the ratio of investment to real GDP edged slowly upwards to 22.4%, albeit still below the all-time 29% high during the pre-crisis period (Chart 2.12).

1 ICOR is the ratio of the incremental increase in capital to incremental increase in output, or the level of investment required to generate one unit of output.

Disaggregated by component, accelerated investment growth was driven mainly by the 10.1% rise in non-construction investment (Chart 2.13). The surge in non-construction investment was reflected in renewed growth trend in heavy equipment sales in 2007 (Chart 2.17). In contrast, construction investment was stable with growth at 8.6% (yoy). At this level, growth in construction investment was on par with the stable trend in cement sales during 2007 (Chart 2.15).


**Chart 2.9**
**Real Consumer Loans Growth**

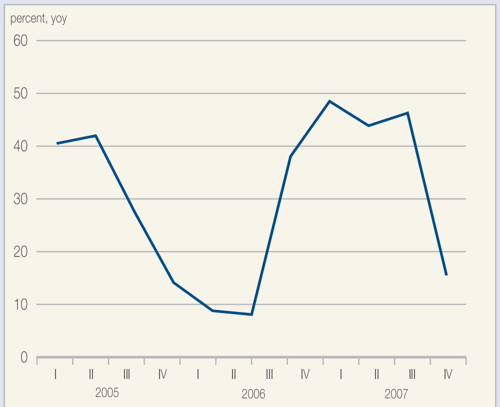



**Chart 2.10**
**Growth in Consumption Other Financing**

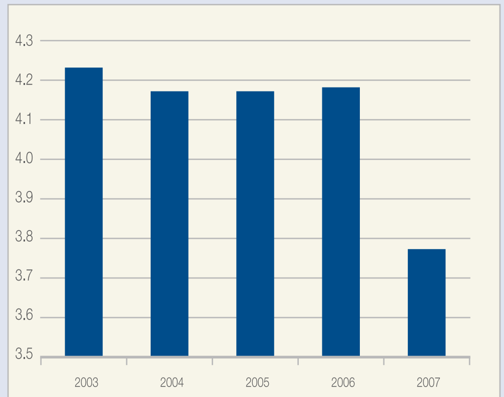
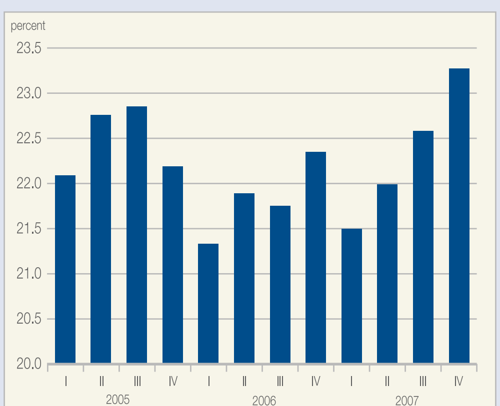



**Chart 2.11**
**Incremental Capital Output Ratio (ICOR)**

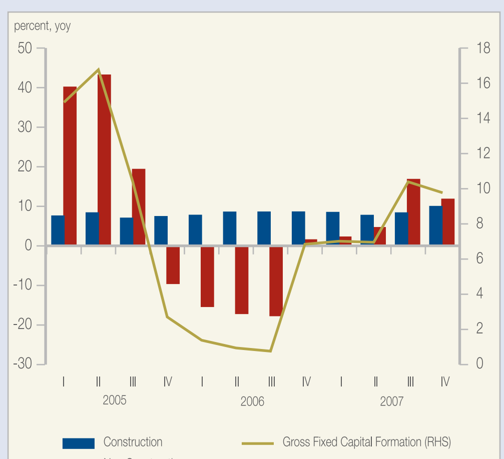
Rising investment bolstered expansion in economic capacity, as reflected in the upward trend in capital accumulation. Progress was achieved in the resolution of various infrastructure-related problems affecting production in keeping with the gradual improving trend in capital accumulation (Chart 2.16). Stronger investment growth is also expected to boost economic capacity and thus minimise inflationary pressure from the output gap.

Also fuelling renewed investment growth was an upbeat trend in business sentiment over the condition of the economy. The BPS survey points to improvement in business sentiment over future economic conditions, especially in relation to domestic demand and demand for input goods (Chart 2.17). Consistent with the BPS survey, the BI Business Survey, which is related to realized investment levels, indicated a gain in realized investment value in the second half of 2007 compared to the first half (Chart 2.18).




Source: BPS-Statistics Indonesia

**Chart 2.12**
**Investment/GDP Ratio**




Source: BPS-Statistics Indonesia

**Chart 2.13**
**Growth in the Investment Components**


**Chart 2.14**
**Growth in Sales of Heavy Equipment**


**Chart 2.15**
**Growth in Cement Consumption**

The upward investment trend was reflected in the savings-investment gap. With investment growing at a faster rate, the savings-investment gap narrowed from 2.7% in 2006 to 2.5% in 2007. However, the reduced surplus in the savings-investment gap was attributable more to the widening of the fiscal deficit from -0.9% to -1.2%. At the same time, the private sector surplus climbed from 3.6% to 3.8% despite more robust expansion in private investment.

Despite this, investment activity was still hampered by an inadequately conducive investment climate compared to competing countries. This is explained by several reasons, among others lack of infrastructure and problems with investment-related regulations. In the Doing Business 2008 survey by the International Finance Corporation, Indonesia's competitiveness rating improved from the 133rd to the 123rd spot in 2007 (Table 2.5), while still lagged behind neighboring countries such as Thailand, Malaysia and even Vietnam. Aside from this survey, Indonesia's rating by the World


**Chart 2.16**
**Capital Accumulation**

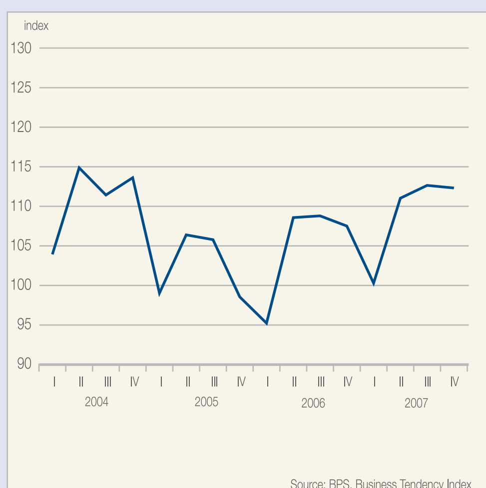



**Chart 2.17**
**Business Tendency Index**


**Chart 2.18**
**Investment (Business Survey)**

**Table 2.4**
**Saving – Investment Gap**

| | 2005 | 2006 | 2007 |
|---|---|---|---|
| | Ratio to GDP (%) | | |
| **Government** | | | |
| Saving | 2.4 | 2.2 | 2.2 |
| Investment | 2.9 | 3.1 | 3.4 |
| Deficit/Surplus | -0.5 | -0.9 | -1.3 |
| **Private** | | | |
| Saving | 21.3 | 24.6 | 25.2 |
| Investment | 20.7 | 21.0 | 21.5 |
| Deficit/Surplus | 0.6 | 3.6 | 3.8 |
| **Total** | | | |
| Saving | 23.7 | 26.8 | 27.4 |
| Investment | 23.6 | 24.1 | 24.9 |
| Deficit/Surplus | 0.1 | 2.9 | 2.5 |
| Note: | | | |
| GDP (Trillion Rp), base year 2000 | 2,774.3 | 3,339.5 | 3,957.4 |
| Current Account (Millions of $) | 278 | 10,836 | 11,009 |
| Average Exchange Rate (Rp/$) | 9,713 | 9,167 | 9,140 |

Source: BPS-Statistics Indonesia, Ministry of Finance

Economic Forum was also unchanged. Compared to neighboring countries, Indonesia's competitiveness ranked ahead only of that of Vietnam and the Philippines (Table 2.6).

Exports of goods and services forged ahead, driven by high world demand. Export registered strong 8.0% growth (yoy) in 2007, despite some slowing compared to the preceding year. The major factor fuelling export growth was robust world demand in the first half of 2007 (Chart 2.19). Towards the end of 2007, external conditions began to deteriorate global demand from the effects of the ongoing US subprime mortgage crisis. However, at this point, the crisis had brought no significantly impact on export growth.

The buoyant export growth was driven by exports of mining extraction commodities such as coal and nickel (Chart 2.20) and agricultural commodities, notably palm oil and rubber (Chart 2.21). At the same time, the leading manufactured exports were chemicals and rubber products (Chart 2.22). World demand for coal and palm oil mounted sharply in 2007 due to the effect of energy diversification spurred by soaring oil prices.

With economic activity gathering pace, imports of goods and services also grew more vigorously than in 2006. The 8.9% (yoy) growth in these imports was attributable largely to robust expansion in imports of consumer goods and raw materials (Chart 2.23). The

**Table 2.5**
**Indonesia's Rating - Investment Climate Survey**

| Countries | Ease of Doing Business | | Starting a Business | | Dealing with Licenses | | Employing Workers | | Registering Property | | Enforcing Contract | | Closing a Business | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2006 | 2007 | 2006 | 2007 | 2006 | 2007 | 2006 | 2007 | 2006 | 2007 | 2006 | 2007 | 2006 | 2007 |
| Indonesia | 133 | 123 | 163 | 168 | 117 | 99 | 154 | 153 | 49 | 51 | 142 | 141 | 137 | 136 |
| Malaysia | 21 | 24 | 74 | 74 | 102 | 105 | 43 | 43 | 4 | 4 | 14 | 63 | 53 | 54 |
| Vietnam | 94 | 91 | 90 | 97 | 62 | 63 | 82 | 84 | 175 | 165 | 41 | 40 | 119 | 121 |
| Thailand | 17 | 15 | 27 | 36 | 11 | 12 | 49 | 49 | 32 | 33 | 26 | 26 | 41 | 44 |
| China | 92 | 83 | 128 | 135 | 175 | 175 | 86 | 86 | 81 | 83 | 20 | 20 | 76 | 57 |
| Philippines | 130 | 133 | 135 | 144 | 75 | 77 | 122 | 122 | 141 | 141 | 113 | 113 | 147 | 147 |
| Singapore | 1 | 1 | 11 | 9 | 5 | 5 | 1 | 1 | 2 | 2 | 5 | 4 | 0.8 | 2 |

Source: International Finance Cooperation

**Table 2.6**
**Rank of Competitiveness**

| Countries | 2007-2008 (131 countries) | 2006-2007 (122 countries) |
|---|---|---|
| Indonesia | 54 | 54 |
| Malaysia | 21 | 19 |
| Vietnam | 68 | 64 |
| Thailand | 28 | 28 |
| China | 34 | 35 |
| Philippines | 71 | 75 |
| Singapore | 7 | 8 |

Source: WEF

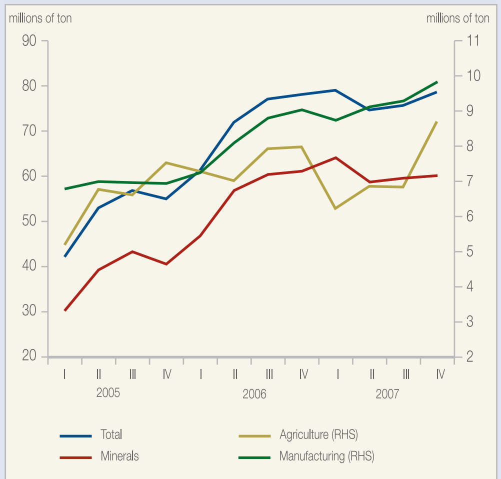



**Chart 2.19**
**Volume of Non Oil & Gas Exports Based on Type of Good**

upsurge in consumer goods imports came in response to invigorated private consumption fuelled by rising purchasing power. Imports of raw materials and capital goods also mounted higher in support of rising levels of production and investment (Chart 2.24). Import growth was especially strong during the second half of 2007, in line with the upward trend in domestic demand.

## Aggregate Supply

On the supply side, almost all sectors reported improved growth over 2006. Supporting this were indicators of increased capacity utilisation in nearly all sectors (Chart 2.25). The leading growth sectors in 2007 were all non-tradable, i.e. transport and communications, the electricity, gas and water supply sector, construction and the trade, hotels and restaurants sector. At the same time, manufacturing and agriculture, the major pillars of the economy, reported improved growth compared to 2006.

Rising domestic demand and strong exports stimulated renewed growth in manufacturing. Manufacturing growth in 2007 reached 4.7% (yoy), slightly ahead of the 4.6% growth (yoy) recorded in 2006. Key to this growth was performance in the transportation equipment, machinery and tools subsector and the food, beverages and tobacco subsector. Stronger manufacturing growth was reflected in the upward

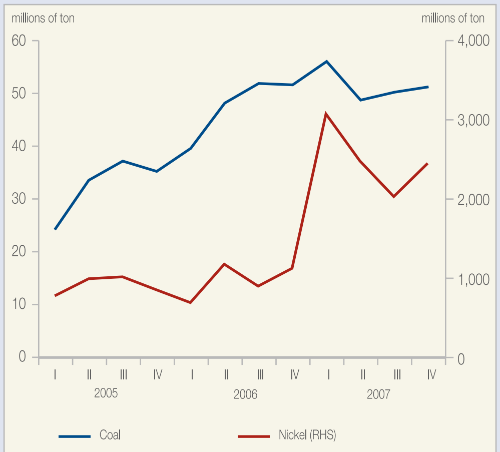



**Chart 2.20**
**Volume of Main Non Oil & Gas Mining Exports Products**

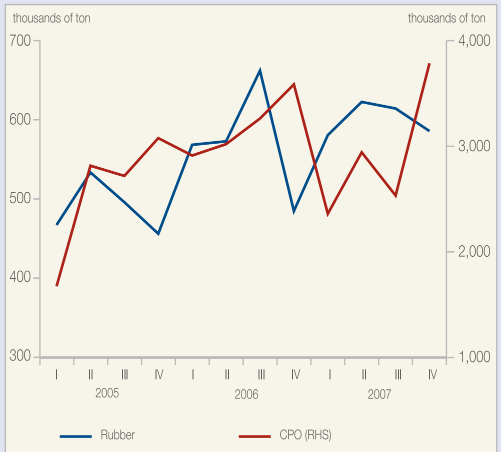



**Chart 2.21**
**Volume of Main Farming Exports Products**

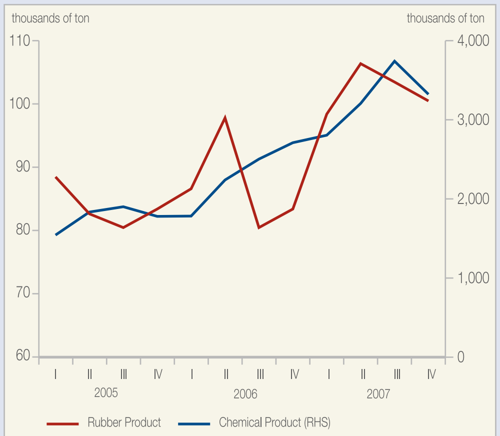



**Chart 2.22**
**Volume of Main Manufacturing Products Exports**

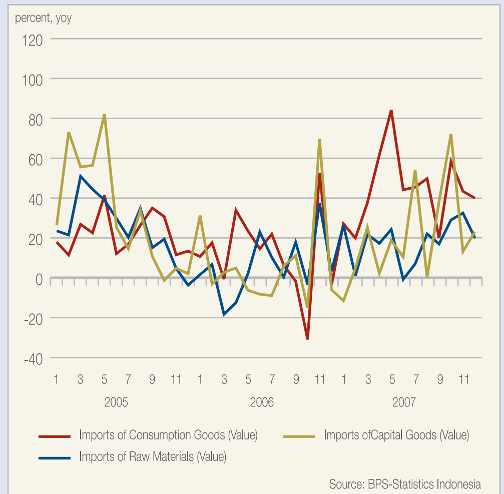



**Chart 2.23**
**Growth in the Value of Imports According to Type of Good**

movement in the annual manufacturing production indices released by Bank Indonesia and BPS, which gathered pace since the beginning of the year (Chart 2.26 and 2.27). Nevertheless, it is important to note the slowing trend in quarterly manufacturing growth near the end of the year, with flagging growth reported in some subsectors.

Manufacturing sector growth was strengthened by continued high growth in the heavy equipment, machinery and machine tools manufacturing subsector.

In 2007, the heavy equipment, machinery and machine tools manufacturing subsector grew 9.7%, outstripping the 7.6% growth of 2006. This performance was driven primarily by rising domestic demand from private consumption and growing investment as demonstrated by the rise in motor vehicle and electronics production during 2007 (Chart 2.28 and 2.29). Car production reached 411.6 thousand units in 2007, an increase of 98.4% (yoy) over only 207.5 thousand units in the previous year. At the same time, total electronics sales (televisions, refrigerators, AC units and washing

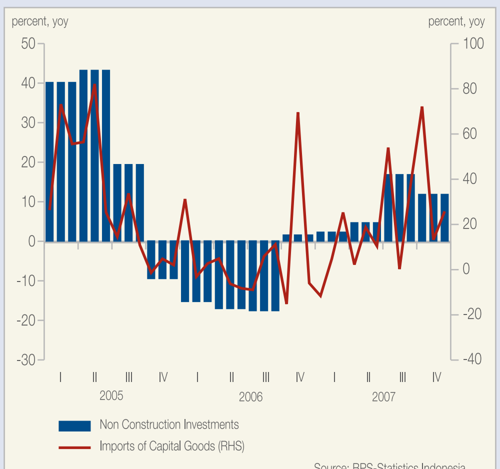



**Chart 2.24**
**Growth in the Value of Capital Goods Imports and Non-Construction Investment**

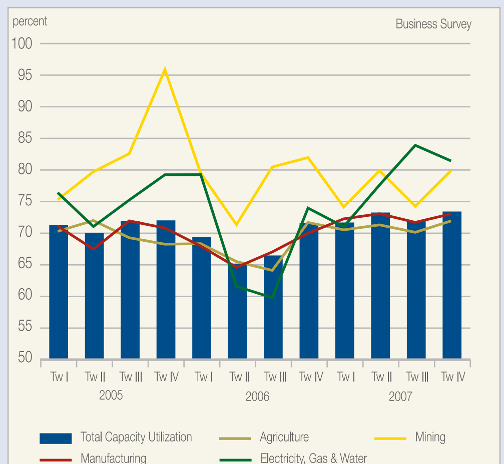



**Chart 2.25**
**Capacity Utilization**

**Table 2.7**
**GDP Growth and Distribution by Sector**

percent

| Items | 2004 | 2005 | 2006* | 2007** | | | | 2007** |
|---|---|---|---|---|---|---|---|---|
| | | | | I | II | III | IV | |
| **Growth (%)** | | | | | | | | |
| Agriculture | 2.8 | 2.7 | 3.4 | -1.7 | 4.7 | 7.6 | 3.1 | 3.5 |
| Mining and Quarrying | -4.5 | 3.2 | 1.7 | 6.2 | 3.2 | 1.0 | -2.1 | 2.0 |
| Manufacturing | 6.4 | 4.6 | 4.6 | 5.2 | 5.1 | 4.5 | 3.8 | 4.7 |
| Electricity. Gas and Water Supply | 5.3 | 6.3 | 5.8 | 8.2 | 10.2 | 11.3 | 11.8 | 10.4 |
| Construction | 7.5 | 7.5 | 8.3 | 8.4 | 7.7 | 8.3 | 9.9 | 8.6 |
| Trade. Hotels and Restaurants | 5.7 | 8.3 | 6.4 | 9.2 | 7.6 | 7.9 | 9.1 | 8.5 |
| Transportation and Communication | 13.4 | 12.8 | 14.4 | 13.0 | 12.7 | 14.1 | 17.4 | 14.4 |
| Finance. Rental and Business Service | 7.7 | 6.7 | 5.5 | 8.1 | 7.6 | 7.6 | 8.7 | 8.0 |
| Services | 5.4 | 5.2 | 6.2 | 7.0 | 7.0 | 5.2 | 7.2 | 6.6 |
| **GDP** | **5.0** | **5.7** | **5.5** | **6.1** | **6.4** | **6.5** | **6.3** | **6.3** |
| **Distribution of GDP (%)** | | | | | | | | |
| Agriculture | 14.9 | 14.5 | 14.2 | 13.8 | 14.4 | 15.1 | 11.9 | 13.8 |
| Mining and Quarrying | 9.7 | 9.4 | 9.1 | 9.1 | 8.8 | 8.4 | 8.6 | 8.7 |
| Manufacturing | 28.4 | 28.1 | 27.8 | 27.5 | 27.3 | 27.1 | 27.6 | 27.4 |
| Electricity. Gas and Water Supply | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 |
| Construction | 5.8 | 5.9 | 6.1 | 6.1 | 6.1 | 6.1 | 6.5 | 6.2 |
| Trade, Hotels and Restaurants | 16.4 | 16.8 | 16.9 | 17.1 | 17.1 | 17.2 | 17.7 | 17.3 |
| Transportation and Communication | 5.8 | 6.2 | 6.8 | 6.9 | 7.1 | 7.2 | 7.9 | 7.3 |
| Finance. Rental and Business Service | 9.1 | 9.2 | 9.2 | 9.4 | 9.3 | 9.1 | 9.6 | 9.4 |
| Services | 9.2 | 9.2 | 9.2 | 9.3 | 9.3 | 9.0 | 9.5 | 9.3 |

Source: BPS-Statistics Indonesia

machines) reached 7.9 million units, up 24.8% over the same period in 2006.

Contrasting this was loss of momentum in the subcategories of food, beverages and tobacco and textile, leather goods and footwear manufacturing

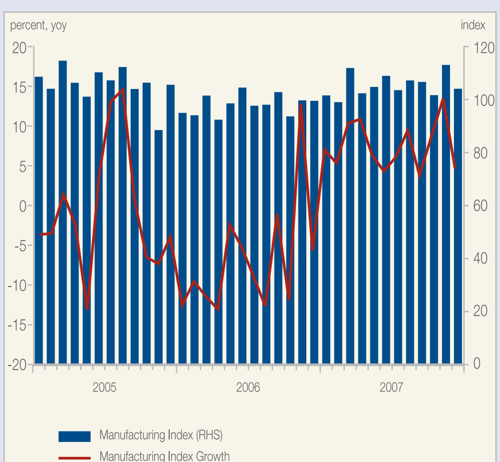



**Chart 2.26**
**Manufacturing Production Index-Production Survey**

compared to 2006. The food, beverages and tobacco category charted 5.1% growth, down from 7.2% in the previous year. Analysed by quarterly performance, growth in the food, beverages and tobacco industry slowed towards year-end following a brief surge at the beginning of the year. Performance was even more disappointing in the textile, leather goods and footwear subcategory, which recorded -3.7% (yoy) growth in contrast to positive 1.2% (yoy) one year before. Factors contributing to flagging performance in the textile industry included market penetration by low-priced imports, especially from China, and slow progress in the textile industry machinery restructuring programme supported by subsidized bank credit[2].

The trade, hotels and restaurants sector grew at a brisk rate on the strength of rising public consumption. Growth in this sector reached 8.5% in 2007, up from the 2006 level of 6.4%. The higher growth is explained mainly by mounting performance in the trade subsector, with growth up from 6.6% in 2006 to 8.9% in 2007. One indicator of strengthening public consumption was

2 The textile industry availed only 60.2% of the total Rp255 billion interest subsidy.


Source: BPS-Statistics Indonesia

**Chart 2.27**
**Growth of the Manufacturing Production Index**

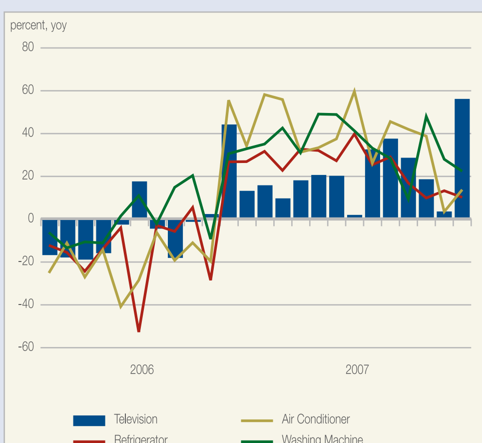

Source: CEIC

**Chart 2.28**
**Growth of Car Production**

the upswing in trading activity reported in the Bank Indonesia retail survey (Chart 2.30). Added to this, loading and unloading data for the four major ports (Belawan, Tanjung Priok, Tanjung Perak and Makassar) pointed to increased activity (Chart 2.31). The hotels and restaurants subsector also forged ahead with growth reflected in higher hotel occupancy rates and foreign tourist arrivals (Chart 2.32 and 2.33).

Increased production and rising export demand provided added momentum for the agricultural sector.

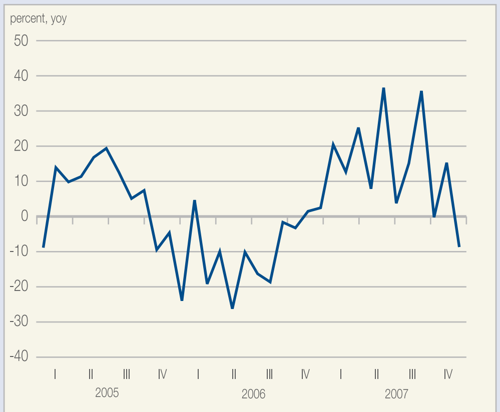
In 2007, agricultural sector growth reached 3.5%, up slightly from the 2006 growth of 3.4%. This upturn came largely from stronger performance in the food crops subsector, and especially the paddy crop, a major factor in agricultural sector growth (Table 2.8). Paddy production was up in response to improved productivity in Java and expansion of agricultural land outside Java. Increased rubber and oil palm production, on the other hand, came in response to robust export demand during 2007 (Chart 2.34).




Source: Electronic Marketing Club

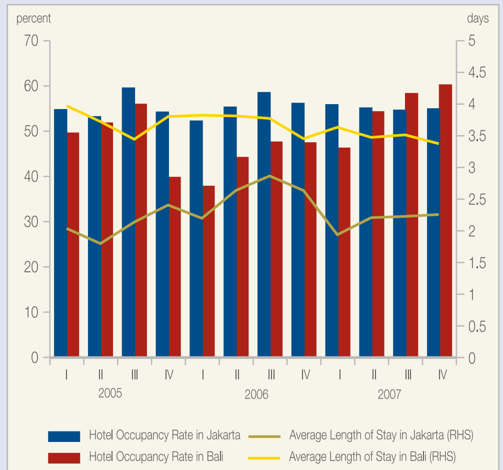
**Chart 2.29**
**Growth of Sales of Electronic Goods**


**Chart 2.30**
**Retail Sales Index - Retail Sales Survey**




Source: CEIC

Chart 2.31
Growth in Unloading/Loading of Goods
at 4 Main Domestic Ports




Source: CEIC, until November 2007

Chart 2.32
Hotel Occupancy Rate and Length of Stay

The mining and quarrying sector registered increased growth at 2.0% in 2007, mainly on the strength of the non-oil and gas sector. The major growth commodities in this subsector were coal and nickel ore (Chart 2.35). In the oil and gas subsector, growth was negative due to low levels of investment, falling productivity and closure of some oil wells.

The transport and communications sector grew by a robust 14.4%, as in the preceding year. Growth in the communications subsector was again strong, providing the main driving force as competition mounted among telephone operators. This has led to more aggressive innovation and business expansion that has in turn fuelled growth in numbers of telephone subscribers, with cellular telephones in the lead. At end-2007, the number of cellular telephone subscribers in Indonesia reached 80 million (Chart 2.36). The transportation subsector, however, underwent more subdued growth because of the spate of accidents involving various modes of transportation at the beginning of the year (Chart 2.37).

**Table 2.8**
**Paddy Harvested Area and Production**

| | Harvested Area (Ha) | Harvest/Ha (Ku/Ha) | Product (ton) |
|---|---|---|---|
| 2005 | 11,839,060 | 45,74 | 54,151,097 |
| 2006 | 11,786,430 | 46,20 | 54,454,937 |
| 2007* | 12,124,827 | 47,05 | 57,051,679 |

Source: BPS-Statistics Indonesia
* Provisional figures

Growth was also up in the construction sector. With construction investment on the rise, the construction sector take the lead at 8.6% (yoy), up from 8.3% (yoy) in 2006. Key to the resurgent construction was investor confidence in rising public purchasing power and the various measures taken by the Government for implementation of infrastructure projects. Renewed expansion in the construction sector was reflected in high growth in commercial properties, including shopping centres, apartments and condominiums (Table 2.9).

## Labor

The upswing in economic growth during 2007 was accompanied by increased absorption of labor that produced some reduction in unemployment. In the latest BPS data, Indonesia's workforce in August 2007 stood at 109.9 million, up 3.6 million compared to August 2006 (Chart 2.38). This expansion in the workforce was accompanied by higher numbers of workers in employment. In August 2007, the total employed population mounted by 4.5 million compared to August 2006. Of this working population, 69.1% were employed in the informal sector and the remainder in the formal sector (Chart 2.39). The steeper increase in numbers of employed compared to the workforce contributed to a downward trend in the percentage of open unemployment to 9.1% in August 2007 compared to 10.3% in August 2006.

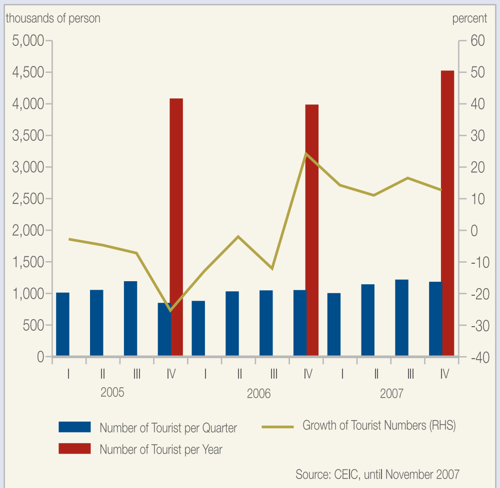



**Chart 2.33**
**Foreign Tourist Arrivals through 13 Main Entry Points**

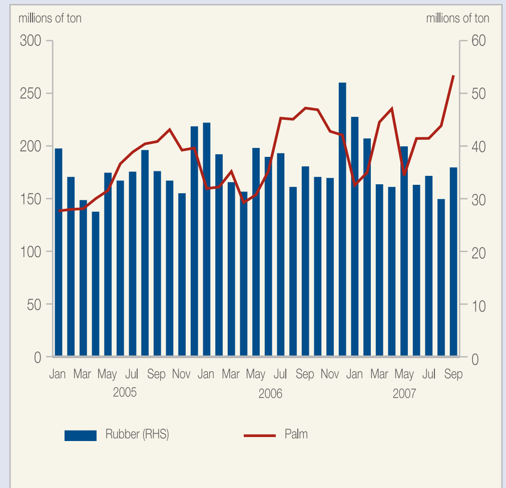



**Chart 2.34**
**Production of Dry Rubber and Palm Fruit**

The composition of the Indonesian workforce remained unchanged, with agriculture providing the largest source of employment. During 2007, the labour-intensive sectors of agriculture, trade and industry were able to absorb new workers at the rate of 2.7%, 7.0% and 4.0%. At the same time, higher employment levels in high-growth sectors, such as transport and communications, financial and business services and the construction sector were insufficient to bring about a change in the composition of the workforce in Indonesia. The largest numbers of workers, like before, are employed in agriculture, trade and industry at 41.0%, 20.6% and 12.4% respectively (Table 2.10).

As in the past, the prevailing low educational levels in the workforce affected productivity. Over 35% of Indonesian workers have only primary school education, followed by workers with junior high school, senior high school and no school education at all (Chart 2.40). As a result, unemployment fell among the lesser educated, in contrast to the upward unemployment trend among more highly educated

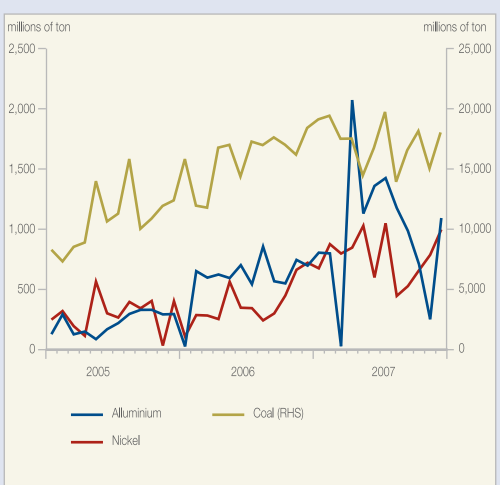



**Chart 2.35**
**Growth in Aluminum and Coal Exports**


**Chart 2.36**
**Cellular Subscriber**

Table 2.9
Growth of Commercial Property

| Property Types | Cumulative by Quarter II-2005 | Cumulative by Quarter II-2006 | Cumulative by Quarter II-2007 | Yearly Growth on Quarter II-2006 (%) | Yearly Growth on Quarter II-2007 (%) |
|---|---|---|---|---|---|
| Office (million m2) | 5.15 | 5.19 | 5.41 | 0.78 | 4.24 |
| Shopping Center (million m2) | 2.00 | 2.43 | 2.56 | 21.50 | 5.35 |
| Apartment (unit) | 16,304 | 19,601 | 28,371 | 20.22 | 44.74 |
| Condominium (unit) | 36,694 | 44,204 | 54,284 | 20.47 | 22.80 |
| Industry (ha) | 7,166 | 7,246 | 7,304 | 1.12 | 0.80 |

Source: Procon Indah Research, Q2-2007.

members of the workforce (Table 2.11). The relatively unchanged proportion of workers by educational background has affected worker productivity, which has shown no significant improvement since 2000. Measured by GDP output (millions of rupiahs) per worker, labour productivity has changed little, edging up by a thin margin from Rp19.4 million per worker in 2006 to Rp19.6 million in 2007 (Chart 2.41).

### Welfare

The number of Indonesians living in poverty fell in 2007 as unemployment eased. Measured annually, the total population living below the poverty line fell to 37.2 million (16.6%) from 39.3 million (17.8%) in 2006, representing an improvement of 2.1 million (Table 2.12). The reduction in poverty was more pronounced in rural areas at 1.2 million, while numbers of urban poor fell by 0.9 million. This improvement is closely linked to the robust growth in the agricultural sector during the year under review, which generated increased employment for rural workers and thus contributed to poverty reduction in rural communities. Despite this, the ratio of rural poor to total impoverished citizens in Indonesia remained high at 63.4%. In percentage terms, the proportion of urban poor and rural poor eased to 12.5% and 20.4% from 13.4% and 21.9% in the preceding year.

The poverty gap index[3] and poverty severity[4] index eased in 2007 despite a surge in 2006 due to the effect of the fuel price hike in October 2005. The poverty gap index showed an improving trend over the 1999-2005 period with a narrowing in the average gap between spending by impoverished citizens and the poverty line. Alongside this, the poverty severity index, which mounted in 2006, pointed to a prevailing increase in expenditure disparities among the poor. The year 2007 saw a lessening in both the poverty gap index and poverty severity index, with the poverty gap index falling to 3.0 and poverty severity index to 0.8 (Table 2.13 and Table 2.14).

Analyzed by distribution, the poverty gap and poverty severity indices were more pronounced in rural rather than urban areas. On a more detailed level, the magnitude of poverty gap in rural areas was more pronounced than in urban areas, a condition that saw little change from 1999 to 2007. This indicates that average spending by the rural poor is still markedly below the rural poverty line. A similar condition was also evident in the higher poverty severity index for rural areas compared to urban centres. This indicates that spending disparities among the rural poor are far more severe than for the urban poor.

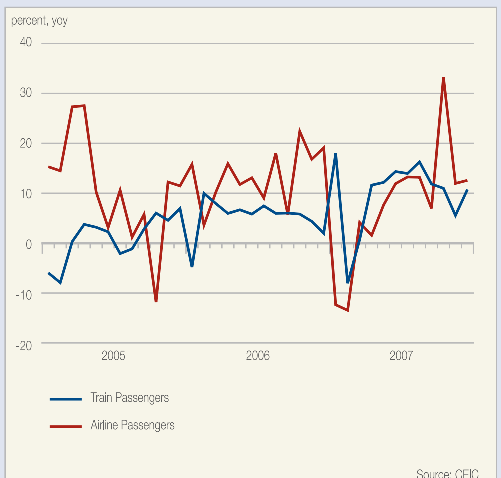



Chart 2.37
Growth in Train and Airline Passengers

3 This is a measure of the average gap in spending by the poor compared to the poverty line.
4 The higher the poverty index, the greater the spending disparities among the poor.

**Table 2.10**
**Growth of Labor Force and Labor Force by Sector**

| Sector | 2005 | | 2006 | | 2007 | | Growth of Labor Force | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | 2005-2006 | | 2006-2007 | |
| | February | November | February | August | February | August | Nominal | (%) | Nominal | (%) |
| Agriculture | 41,814.2 | 41,309.8 | 42,323.2 | 40,136.2 | 42,608.8 | 41,206.5 | -1,173.6 | -2.84 | 1,070.2 | 2.67 |
| Mining | 808.8 | 904.2 | 947.1 | 923.6 | 1,020.8 | 994.6 | 19.4 | 2.14 | 71.0 | 7.69 |
| Manufacturing | 11,652.4 | 11,953.0 | 11,578.1 | 11,890.2 | 12,094.1 | 12,368.7 | -62.8 | -0.53 | 478.6 | 4.02 |
| Electricity, Gas and Water Supply | 186.8 | 194.6 | 207.1 | 228.0 | 247.1 | 174.9 | 33.4 | 17.17 | -53.1 | -23.30 |
| Construction | 4,417.1 | 4,565.5 | 4,374.0 | 4,697.4 | 4,397.1 | 5,252.6 | 131.9 | 2.89 | 555.2 | 11.82 |
| Trade | 18,896.9 | 17,909.1 | 18,555.1 | 19,215.7 | 19,425.3 | 20,554.7 | 1,306.6 | 7.30 | 1,339.0 | 6.97 |
| Transportation | 5,552.5 | 5,652.8 | 5,467.3 | 5,664.0 | 5,575.5 | 5,958.8 | 11.2 | 0.20 | 294.9 | 5.21 |
| Finance | 1,042.8 | 1,141.9 | 1,153.3 | 1,346.0 | 1,252.2 | 1,399.5 | 204.1 | 17.88 | 53.4 | 3.97 |
| Services | 10,576.6 | 10,327.5 | 10,572.0 | 11,355.9 | 10,962.4 | 12,020.0 | 1,028.4 | 9.96 | 664.1 | 5.85 |
| **Total** | **94,948.1** | **93,958.4** | **95,177.1** | **95,456.9** | **97,583.1** | **99,930.2** | **1,498.5** | **1.59** | **4,473.3** | **4.69** |

Source: BPS-Statistics Indonesia

Per capita income mounted in 2007, consistent with the improvement in welfare indicators. During the year, per capita income reached US$1,947.1, a rise of 15% over 2006 (Table 2.15). The stronger per capita income was closely tied to rapid economic growth in nominal terms during 2007 alongside moderate population growth. Despite this, income distribution showed little improvement. Based on BPS calculations, the Gini coefficient in 2007, which measures income disparities, mounted slightly compared to 2006 (Table 2.16). This is indicative of a worsening trend in income disparities, marked by rising incomes in high income brackets in contrast to a deteriorating trend for middle and low income earners.

The improved welfare in 2007 contributed significantly to the progress achieved towards the Millennium Development Goals (MDGs) for 2015. The World Bank in its MDGs report for 2007/2008 lists Indonesia as having reached most of the targets set out in the 8 MDGs. In the area of poverty and hunger, the proportion of population living on US$1 per day has been reduced to 7.5%, below the targeted 10%. Despite this, the World Bank noted lack of significant improvement in other poverty indicators, such as poverty depth and the proportion of consumption by the poor. Other indicators of progress are the drop

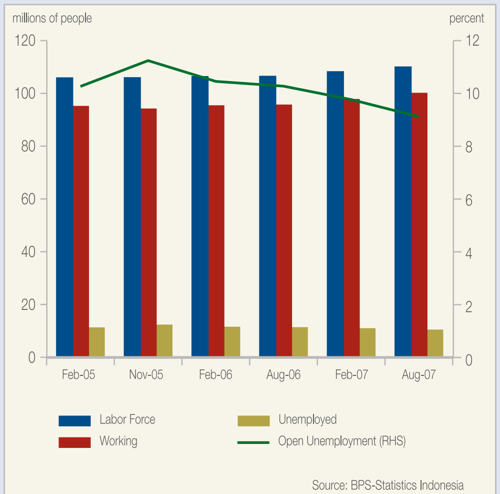



**Chart 2.38**
**Labor Force, Working, and Unemployed**

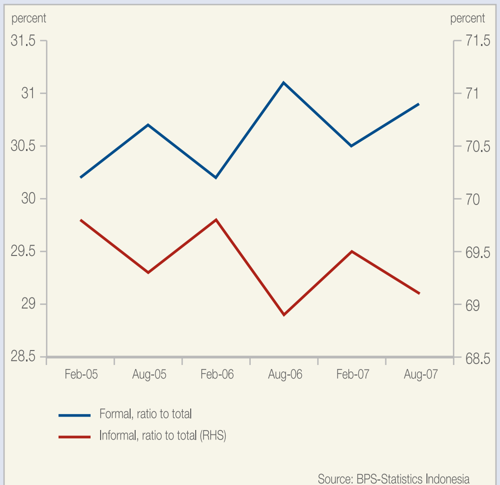



**Chart 2.39**
**Working Formal and Informal**

Table 2.11
Unemployment by Education

(percentage of total unemployment)

| Education | August 2006 | August 2007 |
|---|---|---|
| Not Attending Formal Education | 1.6 | 0.9 |
| Not Finished Elementary School | 5.6 | 4.4 |
| Elementary | 23.7 | 21.8 |
| Junior High School | 25.0 | 22.6 |
| High School | 38.0 | 40.7 |
| Diploma | 2.5 | 4.0 |
| University | 3.6 | 5.7 |
| **Total** | **100** | **100** |

Source: BPS-Statistics Indonesia

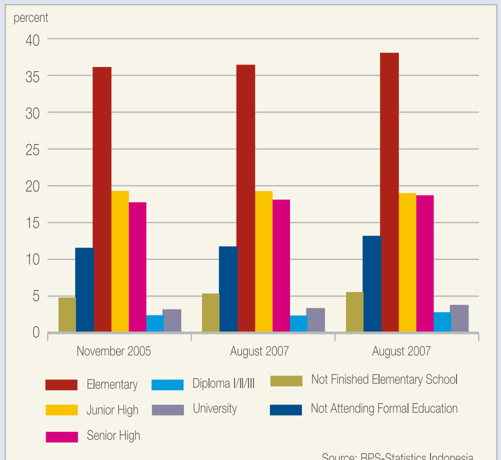



Chart 2.40
Workers Population Aged 15 and Above
Based on Education Level

in the child mortality rate and the increased numbers of children enrolled in primary and junior high school education.

## Pro-Growth Policies

In 2007, real sector policy implemented through an integrated combination of policies was focused on accelerating economic growth in pursuit of the 6% average economic growth target envisaged in the 2004-2009 Medium Term Development Plan (RPJMN). The importance of achieving higher, sustainable economic growth has prompted the Government to redouble its commitment and effort in the planning and implementation of each policy. In 2007, the Government launched Presidential Instruction (Inpres) No. 6 of 2007, a policy package for accelerated real sector expansion and empowerment of MSMEs. This package builds on previous intersectoral policies by accelerating the implementation of past policies[5] and introducing some new measures. The policy package consists of 141 individual policies grouped by: i) improvement of the investment climate; ii) financial system reform; iii) accelerated construction of infrastructure; and iv) empowerment of MSMEs. As of November 2007, the Government achieved most of the targets laid down in the Inpres while work on 47 further policy actions was ongoing (Table 2.17).

The Government has launched a range of initiatives to promote more vigorous investment growth. To address the combination of a lack of comprehensive resolution of domestic problems and mounting competition with neighboring countries, improvements to the investment climate became one of the main priorities in policy implementation throughout 2007. Government actions for improvement of the investment climate covered 3 main areas: institutional provisions, expeditious movement of goods and customs processing and tax administration reform. From the institutional side, one effort to promote investment involved the promulgation of Act No. 25 of 2007 concerning Investment. Important breakthroughs in the law aimed at promoting investment include expansion in the scope of investment categories, investor criteria, lines of business and licensing. Concerning the expeditious movement of goods and customs processing, the

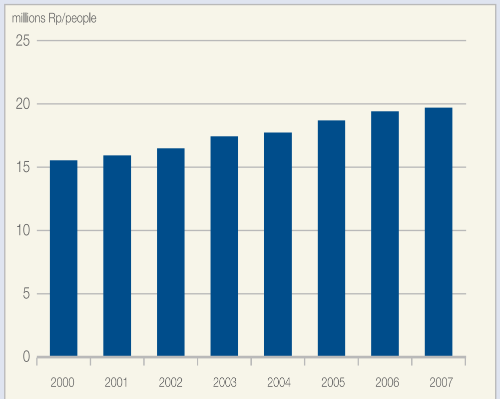



Chart 2.41
Labor Productivity

5 Mainly Inpres No. 3 of 3006 concerning Improvement of the Investment Climate.

**Table 2.12**
**Poverty Line and Number of People Living in Poverty**

| Area/Year | Poverty Line (Rp/capita/month) | | | People Living in Poverty (millions of people) | Percentage |
|---|---|---|---|---|---|
| | Food | Non-Food | Total | | |
| **Town** | | | | | |
| 2005 | 103,992 | 46,807 | 150,799 | 12.40 | 11.37 |
| 2006 | 126,527 | 48,797 | 175,324 | 14.29 | 13.36 |
| 2007 | 132,258 | 55,683 | 187,942 | 13.56 | 12.52 |
| **Village** | | | | | |
| 2005 | 84,014 | 33,245 | 117,259 | 22.70 | 19.51 |
| 2006 | 103,180 | 28,076 | 131,256 | 24.76 | 21.9 |
| 2007 | 116,265 | 30,572 | 146,837 | 23.61 | 20.37 |
| **Town + Village** | | | | | |
| 2005 | 91,072 | 38,036 | 129,108 | 35.10 | 15.97 |
| 2006 | 114,619 | 38,228 | 152,847 | 39.05 | 17.75 |
| 2007 | 123,992 | 42,704 | 166,697 | 37.17 | 16.58 |

Source: BPS-Statistics Indonesia, Susenas Panel Data on February 2005, March 2006 and 2007.

Government issued several regulations that essentially slashed import tariffs on several commodities used in investment and development of productive sectors. In addition, the Government has streamlined customs clearance procedures, reducing average processing time to 30 minutes in the green channel and 3 days for the red channel. In the area of tax reform, new regulations provide income tax and VAT relief for investment-related activities.

In 2007, the Government also emphasized financial sector reform with the strengthening of financial system stability covering the full range of banks, non-bank financial institutions and the capital market. Policy actions included strengthening of the coordinating mechanism for financial institution authorities and preparation of the financial system safety net. Added to this, the Government successfully accomplished the resolution of bad debt at some state banks, a move expected to boost public confidence in banking institutions and in so doing bolster overall financial system stability.

Empowerment of MSMEs is another measure designed to promote higher economic growth and reinforce the structure of the economy. During 2007, empowerment of MSMEs included actions for improved MSME access to financing, entrepreneurship and human resources development, market expansion for MSME products and regulatory reform. To ensure greater access to financing, the Government issued 13,000 land titles in various regions for use as collateral in MSME loans. The Government also completed the initial stage of recapitalizing the MSME loan guarantee institution and issuing regulations on the operation of the warehouse receipt system as an instrument for MSME financing.

**Table 2.13**
**Poverty Depth Index**

| Year | Town | Village | Town + Village |
|---|---|---|---|
| 1999 | 3.52 | 4.84 | 4.33 |
| 2000 | 1.89 | 4.68 | 3.51 |
| 2001 | 1.74 | 4.68 | 3.42 |
| 2002 | 2.59 | 3.34 | 3.01 |
| 2003 | 2.55 | 3.53 | 3.13 |
| 2004 | 2.18 | 3.43 | 2.89 |
| 2005 | 2.05 | 3.34 | 2.78 |
| 2006 | 2.61 | 4.22 | 3.43 |
| 2007 | 2.15 | 3.78 | 2.99 |

Source: BPS-Statistics Indonesia, February 2007

**Table 2.14**
**Poverty Severity Index**

| Year | Town | Village | Town + Village |
|---|---|---|---|
| 1999 | 0.98 | 1.39 | 1.23 |
| 2000 | 0.51 | 1.39 | 1.02 |
| 2001 | 0.45 | 1.36 | 0.97 |
| 2002 | 0.71 | 0.85 | 0.79 |
| 2003 | 0.74 | 0.93 | 0.85 |
| 2004 | 0.58 | 0.9 | 0.78 |
| 2005 | 0.6 | 0.89 | 0.76 |
| 2006 | 0.77 | 1.22 | 1 |
| 2007 | 0.57 | 1.09 | 0.84 |

Source: BPS-Statistics Indonesia, February 2007

**Table 2.15**
**Income per Capita**

| | GDP Nominal (billions of $) | GDP per Capita ($/person) |
|---|---|---|
| 2000 | 165.6 | 807.2 |
| 2001 | 164.5 | 791.2 |
| 2002 | 198.9 | 944.0 |
| 2003 | 237.3 | 1115.7 |
| 2004 | 256.7 | 1116.6 |
| 2005 | 288.4 | 1256.6 |
| 2006 | 369.4 | 1662.6 |
| 2007 | 438.1 | 1947.1 |

Source: BPS-Statistics Indonesia

A conducive investment climate also depends on adequate quality and quantity of infrastructure, and for this reason, the Government pursued a series of actions in 2007 to accelerate the construction of infrastructure. To this end, new policies were issued to improve regulatory framework, reinforce institutional structures and strengthen management. Among the obstacles hampering construction of infrastructure are difficulties with land expropriation. To resolve this, the Government has issued a regulation providing clarity on land expropriation in the public interest. A related action for institutional strengthening was the establishment of a Rp2 trillion guarantee fund in the 2007 budget dedicated for land expropriation and infrastructure project loan guarantees. At the same time, ten pilot projects commenced in 2006 were approaching the stage for actual construction.

The policy for accelerated economic growth is also supported by measures to strengthen public purchasing power, particularly among low-income groups. In 2007, the Government continued the provision of direct and indirect subsidies and transfers to low-income groups. Although no longer providing direct cash transfers, the Government operates other aid schemes such as school operational assistance, educational bursaries and food subsidies for poor families.

**Table 2.16**
**Gini Ratio**

| Category of Citizen | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
|---|---|---|---|---|---|---|
| 40% lowest | 20.92 | 20.57 | 20.80 | 18.81 | 19.75 | 19.10 |
| 40% middle | 38.89 | 37.10 | 37.13 | 36.40 | 38.10 | 36.11 |
| 20% highest | 42.19 | 42.33 | 42.07 | 44.78 | 42.15 | 44.79 |
| Gini ratio | 0.33 | 0.32 | 0.32 | 0.36 | 0.33 | 0.37 |

Source: BPS-Statistics Indonesia

**Table 2.17**
**Inpres No. 6/2007 Target Achievement**

| Program | Planning | Realization |
|---|---|---|
| Investment Climate Repair | 49 | 40 |
| Financial Sector Reformation | 36 | 28 |
| Infrastructure Development Acceleration | 40 | 13 |
| MSMEs Empowerment | 34 | 28 |

Source: Office of Coordinating Minister for the Economy

# In Search of a Pro-Poor Monetary Policy

Contrary to the prevailing opinion that a loose, expansive monetary policy is the right choice for promoting economic growth and rescuing the poor, research[1] indicates that a prudent monetary policy targeting low inflation and stable macroeconomic conditions in fact will bring down poverty levels in the long run. Using a regional database covering 26 provinces in Indonesia for the 1984-2005 period, this study offers empirical proof that prudent monetary policy is pro-poor.

In theoretical terms, a relaxed monetary policy will reduce unemployment and boost output and inflation in the short-term. However, the benefits of such a policy are short-lived because of the existence of business cycle and the aversion to high inflation, and therefore a loose monetary policy cannot produce a permanent boom. On the contrary, a prudent, consistent and credible monetary policy is able to maintain low inflation over the long-term and stabilize fluctuations in aggregate demand. Low inflation in the long run and macroeconomic stability both represent positive conditions that encourage investment, and can therefore be relied on to generate higher levels of economic growth. Higher economic growth can in turn bring permanent improvement in the welfare of the poor. A study by Easterly and Fischer (2001) demonstrates a correlation between poverty reduction and lower inflation. Subsequently, Romer and Romer (2002) successfully disaggregated the short run and long run effects of inflation on poverty. In the short run, there is no guarantee that high inflation will have a positive effect poverty reduction, but in the long run, this inflation will inevitably have a negative bearing on poverty. In regard to macroeconomic stability, Agenor (2004) demonstrates that policy-driven improvement in macroeconomic stability tends to increase savings and investment and is therefore conducive to economic growth and poverty reduction.

1 Munandar, Kurniawan, and Santoso (2007), Working Paper "In Search of a Pro-Poor Monetary Policy: Study Using Regional Data from Indonesia".

### Short Run Analysis

The research draws on annual national and regional data for Indonesia over the past two decades (1984-2005). Monetary policy performance is measured by the unemployment rate and short-term inflation (measured with the annual GDP deflator). The short-term regression specifications are built on the belief that the annual change in poverty levels is correlated to the dynamics of unemployment or the level of inflation during that year. In more formal terms, the specifications of the short-term regression model are as follows:

$$\Delta y_t = \alpha_1 + \beta_1 \Delta x_{1t} + \sum \delta_j d_j + \varepsilon_{1t}$$

$$\Delta y_t = \alpha_2 + \beta_2 \Delta x_{2t} + \sum \delta_j d_j + \varepsilon_{2t}$$

$$\Delta y_t = \alpha_3 + \beta_3 \Delta x_{1t} + \beta_4 \Delta x_{2t} + \sum \delta_j d_j + \varepsilon_{3t}$$

in which:

| | | |
|---|---|---|
| $\Delta y_t = y_t - y_{t-1}$ | : | change in poverty level during year t, |
| $\Delta x_{1t} = x_{1t} - x_{1,t-1}$ | : | dynamics of unemployment levels in year t, |
| $\Delta x_{2t} = x_{2t} - x_{2,t-1}$ | : | Inflation during year t, |
| $d_j$ | : | dummy variable for sub-sample j. |

The estimates show that in the short run (1 year), change in the unemployment rate is significantly correlated (0.992) with change in the poverty level (Table 1). At the same time, a negative correlation was observed between inflation and the poverty level (-0.130). Rising inflation brought about by a loose monetary policy will stimulate aggregate demand and in turn have a positive effect in reducing poverty. The second finding above confirms the widely accepted theory in which an expansive (contractive) monetary policy will stimulate (depress) economic activity.

**Table 1**
**Short Term Regression**

| Changes of Poverty Rate and Macroeconomics | Model 1 | Model 2 | Model 3 |
|---|---|---|---|
| C | -0.922 | -0.551 | -0.808 |
| | -3.024 | -1.896 | -2.494 |
| | 0.009 | 0.077 | 0.026 |
| Changes of Poverty Rate | 0.992** | | 0.744 |
| | 2.378 | | 1.545 |
| | 0.031 | | 0.145 |
| “Changes of Inflation” | | -0.130* | -0.074 |
| | | -1.99 | -1.021 |
| | | 0.065 | 0.325 |
| 1997 | 5.117** | 4.815** | 5.235** |
| | 4.144 | 3.813 | 4.227 |
| | 0.001 | 0.002 | 0.001 |
| 1998 | 2.602* | 12.803** | 7.918 |
| | 1.954 | 2.818 | 1.474 |
| | 0.07 | 0.013 | 0.163 |
| 1999 | -0.036 | -10.302* | -5.759 |
| | -0.031 | -2.005 | -1.005 |
| | 0.976 | 0.063 | 0.332 |
| $R^2$ | 0.666 | 0.636 | 0.689 |
| S.E.E | 1.141 | 1.191 | 1.139 |

Note: ** Significant at level 5%
* Significant at level10%
Dependent variable is poverty rate.
Three numbers on each variables is estimated coefficient, absolute value of t-statistic and p-value.

## Long Run Analysis

The long run analysis uses cross-sectional data from provinces in 2005 in conjunction with panel data for all provinces for the 1984-2004 period. Long-term inflation is calculated using average annual inflation (GDP deflator) over that period. Macroeconomic instability is determined in using a standard deviation from nominal GDP growth during 1984-2004. The poverty level is determined by the proportion of a specified population (national or regional) living in poverty[2]. Monetary policy performance uses an approach involving long-term inflation and macroeconomic instability. The model used is as described below, in which the independent variables refer to a specific reference year (2005), while explanatory variables are formed from long-term data (20 years) over the preceding period (1984-2004):

$$y_1=\rho_1+\gamma_1x_{1i}+\sum\phi_jd_j+\xi_{1i}$$

$$y_2=\rho_2+\gamma_2x_{2i}+\sum\phi_jd_j+\xi_{2i}$$

$$y_1=\rho_3+\gamma_3x_{1i}+\gamma_4x_{2t}+\sum\phi_jd_j+\xi_{3i}$$

in which: $y_1$ – poverty level in province i during 2005.

2 Data obtained from the Central Statistics Agency (BPS).

**Table 2**
**Long Term Regression**

| Poverty Rate and Macroeconomics | Model 1 | Model 2 | Model 3 |
|---|---|---|---|
| C | -0.205 | 0.009 | -0.174 |
| | -1.166 | 0.213 | -1.239 |
| | 0.258 | 0.833 | 0.231 |
| Long Term Inflation | 3.132** | | 1.691 |
| | 2.139 | | 1.36 |
| | 0.046 | | 0.191 |
| Macroeconomics Instability | 1.295** | 1.141** | |
| | | 4.039 | 3.426 |
| | | 0.001 | 0.003 |
| NAD | 0.153** | 0.136** | 0.155** |
| | 2.177 | 2.441 | 2.75 |
| | 0.042 | 0.025 | 0.013 |
| Maluku | 0.200** | 0.190** | 0.209** |
| | 2.823 | 3.386 | 3.689 |
| | 0.011 | 0.003 | 0.002 |
| DKI Jakarta | -0.180** | -0.120* | -0.153** |
| | -2.442 | -2.163 | -2.573 |
| | 0.025 | 0.044 | 0.019 |
| East Kalimantan | -0.071 | -0.116** | -0.122** |
| | -1.029 | -1.985 | -2.127 |
| | 0.317 | 0.062 | 0.048 |
| NTT | 0.198** | 0.226** | 0.253** |
| | 2.602 | 3.705 | 4.023 |
| | 0.018 | 0.002 | 0.001 |
| $R^2$ | 0.511 | 0.674 | 0.704 |
| Adj. $R^2$ | 0.357 | 0.57 | 0.589 |
| S.E.E. | 0.066 | 0.054 | 0.053 |

$x_{1i}$ – long-term inflation rate in province i (calculated from average inflation in 1984-2004)

$x_{2i}$ – macroeconomic instability in province i (standard deviation in nominal GDP growth, 1984-2004).

The regression (Table 2) indicates that long-term high inflation and unstable macroeconomic conditions are positively correlated with poverty (with coefficients of 3.132 and 1.295 respectively). The two correlations are statistically significant, except when both variables are included together. Alongside this, dummy variables are used for provinces with different characteristics (outliers). These provinces are Aceh and Maluku, both regions of past or present conflict. Added to these are the provinces of Jakarta, East Kalimantan and East Nusa Tenggara, which are differentiated from other regions by endowment. Jakarta and East Kalimantan are blessed with an abundance of natural resources, while resources in East Nusa Tenggara are scarce. The coefficient estimates of dummy variables confirm the view that conflict zones and poorly endowed regions tend to have higher levels of poverty than regions with more robust economic capacity.

The conclusion from these findings is that in the long run, monetary policy that safeguards macroeconomic stability and consistently maintains low inflation over the long-term will have significant impact in reducing poverty levels.

**Policy Implications**

An expansive monetary policy may achieve poverty reduction in the short run. However, business cycle fluctuations and aversion to high inflation mean that any positive effect is only temporary. In the long run, low inflation and macroeconomic stability are significantly correlated with lower poverty levels. A prudent monetary policy (maintaining stable prices and macroeconomic conditions) has a permanent positive effect in reducing poverty. The findings in this research support the conclusion that a prudent monetary policy is a pro-poor monetary policy.