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This paper provides background information to the staff report on the 1997 Article IV consultation discussions with Indonesia, which was circulated as SM/97/158 on June 20, 1997.

Mr. C. Browne (ext. 34108) or Mr. Pradhan (ext. 36349) is available to answer technical or factual questions relating to this paper prior to the Board discussion.

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INDONESIA

Selected Issues

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Approved by the Asia and Pacific Department

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I. EXPORT PERFORMANCE¹

A. Introduction and Summary

1. Exports have played a prominent role in the rapid industrialization and sustained high economic growth of Asian countries over the past several decades. The growth in exports, including the substantial rise in intra-regional trade, has helped to sustain the growth of world trade, which over recent years has been well above the growth of world output. The changing composition of Asia's exports, especially toward manufacturing goods, has been aided by the reduction of distortions in domestic markets and in trade barriers. Within the region, shifts in the pattern of production have reflected differences in the stages of development and industrialization, with labor-intensive and lower value-added industries moving toward the lower wage economies. Capital flows both from outside and within the region have reflected these shifts in the distribution of production.

2. Indonesia has followed broadly the regional pattern, although the share of manufactures in total exports lags behind that of several other ASEAN countries. Export growth and diversification started late mainly because of the inward-looking development strategy until the early 1980s. Foreign investment was closely controlled, limiting access to much needed capital and technology. Rising oil revenues from the two oil shocks of the 1970s allowed this strategy, but, once oil prices started to decline, more export-oriented policies were adopted. A policy of trade deregulation was initiated and there were reduced restrictions on foreign investment. As a result, manufacturing exports increased from 4 percent of GDP in 1980 to 13 percent in 1996, led initially by footwear and garments and subsequently by diversification into electronics and other nontraditional goods.

3. An important objective of this paper is to explain through econometric analysis the contribution of different factors to this growth and assess the prospects for its maintenance in the future. The paper is organized as follows: Section B reviews developments in Indonesian export growth since 1970. Section C develops a model of export demand and export supply, provides empirical estimates from the model and the implications of the results. Section D addresses medium-term prospects for export growth on the basis of the estimated model and the possible impact of exchange rate changes.

4. The main results from the study are as follows:

- Indonesian exports are influenced by world demand for imports, but supply factors are the dominant source of the expansion in manufacturing exports, accounting for 88 percent of the observed rise from 1980 to 1994.

¹The author of this chapter is John McDermott.

- Investment rates in the export sector have increased sharply over the last fifteen years and contributed 45 percent of the sustained expansion of manufactured exports.
- Trade liberalization measures accounted for 40 percent of the expansion of manufactured exports over the same period.
- The rise in export prices relative to domestic prices of 7 percent over the last fifteen years, has induced an increase in the supply of manufactured exports, that accounts for 3 percent of the total expansion during this time.
- The medium-term outlook for manufactured export growth is highly favorable if access to foreign capital and markets is maintained, and trade liberalization policies are continued. Based on medium-term projections for prices, world import demand, and investment from the *World Economic Outlook*, exports can be expected to grow at rates well above 10 percent over the next few years due to abundant supply of labor and natural resources.
- Resisting nominal exchange rate appreciation associated with large capital inflow risks, inducing real exchange rate adjustments through higher domestic inflation, with potentially detrimental effects on exports, investment, and growth.

B. Export Developments, 1970–96

Overall trends

5. In the last quarter of a century, Indonesia's manufactured exports have risen from less than 2 percent of GDP in the early 1970s to 13 percent of GDP in 1996 (Chart 1). By contrast, the share of agricultural and mineral exports fell from nearly 6 percent to 2.5 percent. The share of oil exports in GDP rose dramatically following the two oil shocks of the 1970s; it subsequently fell from a high of 20 percent in 1980 to 6 percent. Part of this decline reflects falling oil prices, but some of the decline is also due to the increased demands for oil from the domestic economy. As a result of these trends, the share of manufactured goods in total exports increased from only 12 percent in 1970 and 14 percent in 1980 to 58 percent in 1996 (Chart 2). While this share is still below the average for the Asian region of about 75 percent, the difference is much less pronounced than in 1970 when the regional share of manufactured exports was 42 percent of total exports.

6. Exports of manufactures were led initially by plywood, garments, and footwear. Competitiveness in these sectors—which make up approximately 50 percent of manufactured exports and almost 30 percent of total exports—is especially sensitive to large increases in minimum wages, competition from other countries in the region, and slow-moving bureaucratic procedures, which have limited the growth of these exports in recent years (Chart 3). On the other hand, dynamism in attracting high rates of foreign investment into other nontraditional types of manufactured exports, such as electrical appliances, has sustained

rapid export growth for manufactured goods over the past decade. Moreover, Indonesia has been relatively less affected by the regional export slowdown than other Asian countries.

Tariffs and regulatory issues

7. In the mid 1980s the Indonesian government began to liberalize its trade and investment policies and this process has been continued through successive deregulation packages. Fane and Condon (1996) estimate that the real effective rates of protection for manufacturing, including oil refining, fell from 27 percent in 1987 to 11 percent in 1995; for manufacturing, excluding oil refining, the fall was from 59 percent to 10 percent; and for agriculture from 9 percent to 4 percent.

8. Land resources for establishing free trade zones and industrial estates have been set aside by the government to attract foreign investors. These zones have relaxed exporting and importing regulations and reduced tariffs. Prior to the deregulation of joint ventures in 1994, it was only within a free trade zone that foreign investors were allowed to make investments without forming a joint venture. These export zones along with other parts of Indonesia have attracted investment and trade from Singapore and Malaysia.

9. However, there remain restrictions, which generate inefficiencies and add to production costs. These include export bans; export taxes, including on forestry products, palm oil, logs, and rattan; and export levies. There are a number of domestic features that restrict competition and inhibit export growth, including cartels in the cement, paper, and fertilizer industries; entry/exit controls in the plywood industry and in retail trade; exclusive licensing on clove marketing and wheat flour milling; and a dominant public sector in steel, fertilizer, and refined oil products.

C. Model of Export Performance

10. In most empirical work on export determination, export volumes are typically related to changes in real activity in foreign markets and to changes in relative prices. While such an approach has proven successful in many empirical studies of other countries or regions, it is not entirely appropriate for modeling export performance in Indonesia. In particular, the rapid increase in the value of exports and the increase in the share of manufactured exports over the last quarter of a century reflect dramatic changes in the underlying structure of production. This suggests that Indonesia's exports have been both demand determined and supply driven.

Demand for exports

11. The theoretical foundation underpinning the approach adopted in this paper is based on the imperfect substitute model discussed in Goldstein and Khan (1985). This model is based on the premise that exported goods are imperfect substitutes for goods produced in the home market of foreign consumers. The demand for exports function can be derived from a

foreign consumer's utility maximization problem.² Using the optimization approach with an infinitely lived representative foreign consumer, it can be shown that foreign demand for exports is completely determined by foreign activity (typically captured by some measure of permanent income) and by relative prices.

12. The empirical specification of the steady state relationship implied by the model of foreign consumer's behavior is given by

$$\ln x_t = \theta_0 + \theta_1 \ln w_t + \theta_2 + \ln(p^*/p)_t + \epsilon_t \quad (1)$$

where x_t is exports of the domestic economy, $(p^*/p)_t$ is the relative price of exports to foreign prices, w_t is a measure of world activity, and ϵ_t is a stochastic error term.

13. The results of estimating (1) for the period 1972–94 are reported in Table 1. They underscore the importance of world import demand for Indonesia's exports of manufactures. The elasticity of manufactured exports with respect to world import demand is slightly in excess of unity. This implies that a 10 percent increase in world import demand will increase the demand for Indonesia's manufactured exports by slightly more than 10 percent. The relatively strong impact of external demand suggests that, in common with many other developing countries, Indonesia's exports of manufactured goods to developed country markets are strongly affected by cyclical fluctuations in the world economy.

14. The impact of changes in relative prices on the demand for manufactured exports is less clear: the coefficient on relative prices, although correctly signed, is insignificant at conventional levels. These results suggest that the rapid growth in Indonesia's manufacturing exports has not been accompanied by a trend decline in their prices vis-à-vis foreign competitors. This is, however, consistent with findings of a number of other studies in this area.³

Supply of exports

15. Given the substantial changes in the structure of Indonesian exports over the last decade it is important to differentiate between the major categories of exports. This study therefore focuses separately on manufactured exports, agricultural and mineral exports, and oil and gas exports. The export supply functions for each of these categories can be

²Reinhart (1995) develops such a model that includes both interregional and inter-temporal issues to study the impact of devaluations on international trade in developing countries.

³Note, however, that formal tests for unit roots provide evidence in favor of a (cointegrating) steady state relationship between manufacturing exports, world income, and relative prices.

considered to be solutions to the underlying profit maximizing behavior of exporting firms. Under a constant returns to scale production technology, output will depend on prices and factor inputs into the production process. In addition to labor and capital inputs, we also allow for trade distortions. By impeding efficiency and raising production costs, these distortions effectively imply lower output.

16. A supply equation for each category of exports is specified in terms of shares of total output, since the relative shares of each sector have changed significantly over the long term. Each export supply equation is specified as a function of relative prices, factor inputs, and trade distortions, as follows:

$$s_{it} = \alpha_i + \sum_{j=1}^3 \beta_{ij} \ln p_{jt} + \gamma_i \ln k_t + \delta_i \ln \tau_t + \epsilon_{it}, \quad i=1, \dots, 3 \quad (2)$$

where s_{it} is the share of the i^{th} sector in GDP ($i=1$ is manufactured exports, $i=2$ is agricultural exports, and $i=3$ is oil exports). The p_{jt} terms represent the respective export prices relative to prices of nontraded goods, k_t is the capital-labor ratio, τ_t is a measure of trade distortions, and ϵ_{it} is stochastic error term for sector i .

17. In this paper, we proxy the extent of trade distortions as the ratio of import tariff revenue to total imports plus the ratio of export tax revenue to total exports. A broader, and more accurate measure of trade distortions would include other impediments to trade, such as nontariff barriers. However, systematic data on nontariff barriers to imports and export bans is not available. A major drawback of measuring trade distortions by tariff and tax revenues is that this variable also depends on cyclical fluctuations. For example, import tariff revenues will rise when imports increase, such as during periods when economic growth is above potential, even though there may have been no change in tariff rates. To account for such distortions, we use a smoothed series for τ_t in the estimation of equation (2).⁴

18. The results of estimating (2) for the period 1970-94 are reported in Table 2.⁵ They demonstrate that the capital-labor ratio plays an important role in the production of

⁴The various components of this measure of trade distortions and the smoothing technique are outlined in the Appendix.

⁵The seemingly unrelated regression (SUR) method was used to estimate the supply share equations. To implement the SUR estimation procedure, a generalized method of moments (GMM) estimator with instrumental variables was used together with the heteroskedasticity and autocorrelation consistent covariance matrix estimator suggested by Andrews (1991). The formulation of the kernel and bandwidth selector is similar to that used to estimate the demand equation (1). After imposing some exclusion restrictions to improve efficiency (determined by insignificant t-statistics) there is one cross equation rejection remaining ($\beta_{13}=\beta_{31}$).

manufactured exports. The coefficient estimate implies that when this ratio rises, prices rise by 10 percent, the share of manufactured exports in GDP increases by 0.3 percentage points. This result reflects the process of industrialization in Indonesia. The adoption of foreign technologies, embodied in imported capital has increased the share of manufacturing in the economy, and thereby the share of manufacturing exports in total exports. Over the last fifteen years the capital-labor ratio has been growing at an average annual rate of nearly 10 percent. As a result, investment increased from 13 percent of GDP in 1970 to 32 percent in 1994. This increase in investment has resulted in a sustained increase in the share of manufacturing exports since 1980 of 4.5 percent of GDP, or nearly half of the increase.

19. Manufactured exports have also been boosted by trade liberalization. The measure of trade distortions used in this paper has fallen dramatically (around 3 fold) since 1970 (Chart 4). This implies that over the sample period the reduction in trade distortions has increased the share of manufacturing exports by 4 percent of GDP, despite the very rapid growth in GDP itself.

20. The supply of manufactured exports is not strongly influenced by the price of manufacturing goods. Over the past fifteen years there has been an increase in relative prices of nearly 7 percent, which has accounted for an increase in the share of manufactured exports of 0.3 percent of GDP.

21. Since 1980, the share of manufactured exports has increased by 10 percent of GDP and supply factors have contributed 88 percent of this increase. The remaining 1.1 percent of the increased share in GDP can be attributed to increased demand from the rest of the world.

Reduced form model

22. The estimates of the demand and supply equations can be combined in a reduced form model to determine aggregate export performance. The advantage of this approach is that it allows us to conduct simulations of the impact of world economic conditions and policy changes on future export performance.

23. The reduced form estimates are derived by obtaining the equilibrium values from the supply and demand equations. For example, inverting the manufacturing supply equation and substituting this in the manufacturing demand equation yields

$$\Delta \ln x_t = \frac{1}{1 - \theta_2/\epsilon_p} \left[\theta_2 \Delta \ln(ep/p^*)_t + \theta_1 \Delta \ln w_t - \frac{\theta_2 \epsilon_k}{\epsilon_p} \Delta \ln k_t - \frac{\theta_2 \epsilon_\tau}{\epsilon_p} \Delta \ln \tau_t \right] \quad (3)$$

where $\Delta \ln x_t$ is the growth of manufactured exports, ep is the domestic price level in US dollar terms, e is the US dollar-rupiah exchange rate, and ϵ_p , ϵ_k , and ϵ_τ are the elasticities

with respect to relative prices, capital and trade distortions respectively.⁶ Substituting the estimated parameters implies:

$$\Delta \ln x_t = -0.28 \Delta \ln(ep/p^*)_t + 0.72 \Delta \ln w_t + 0.15 \Delta \ln k_t - 0.52 \Delta \ln \tau_t \quad (4)$$

24. These (derived) estimates are broadly similar to results obtained by other researchers for countries in the region. Ito *et al* (1996) run similar regressions of export growth as a function of the real effective exchange rate and a real activity variable for the APEC economies. For Indonesia, their estimate of the coefficient on the real effective exchange rate is -0.32 and 1.27 for the coefficient on the real activity variable. The sum of the coefficients of all the activity variables in (4) is 1.39 (assuming a decrease in trade distortions). The impact of the real exchange rate is estimated to be broadly the same in both studies; a 1 percent appreciation in the real exchange rate typically is associated with a 0.32 percent decline in manufactured export growth, compared with the current estimate of 0.28 percent.

D. Simulations and Policy Implications

25. In this section we address some of the policy implications of the empirical results and the medium-term prospects for export performance. In particular, we examine the impact of changes in the real exchange rate on external competitiveness, including through the effect of nominal exchange rate changes on domestic prices. The potentially adverse effects of an increase in the real exchange rate are also compared with gains in competitiveness from trade liberalization (through increases in efficiency and reductions in production costs).

Medium-term outlook

26. Using the reduced form model (4) in combination with *World Economic Outlook* projections for world import demand, foreign prices, and capital stock formation (based on investment projections), we derive medium-term projections for growth of manufactured exports. Supplementing these projections with *World Economic Outlook* projections for nonmanufactured export growth provides the medium-term outlook for total export growth, shown in Table 3. An important feature of the outlook is that manufactured exports are expected to continue to grow faster than total exports. Aggregate growth of exports is expected to remain buoyant, mainly owing to the abundant supply of labor, access to foreign capital, and large natural resources. Continuing increases in the capital-labor ratio are an important ingredient in the model's out-of-sample projections. For example, growth in global

⁶The elasticities in (3) refer to the percentage change in manufactured exports as a result of a change in prices, the capital-labor ratio, or trade distortions, and are defined as $\epsilon_p = \{\beta + s^2 - s\}/s^2$, $\epsilon_k = \gamma/s$, and $\epsilon_\tau = \delta/s$, respectively, where s is the share of manufactured exports in GDP (taken as the average of the last 10 years).

demand for imports of Indonesian goods is expected to be 6.4 percentage points in 1997, leading to a volume growth in manufactured exports of 4.6 percentage points. If the percentage change in the capital-labor ratio is in the order of 10 percent, then a further 1.5 percentage points in manufactured export growth can be expected. There is only a small change in the relative price of exportables in 1997 leading to negligible change in manufactured exports. Assuming no change in the level of trade tariffs, the overall growth of manufactured exports in volume terms is 6.1 percent. An increase in export prices of 4.4 percent implies that export values are likely to grow by 10.8 percent.

Impact of exchange rate changes

27. The impact of exchange rate changes on competitiveness can be examined in two stages. First, the effect of a nominal exchange rate appreciation assuming domestic and foreign prices do not change: the estimates from equation (4) suggest that a 10 percent nominal appreciation would—through its impact on the real exchange rate—lead to a decline in the growth rate of manufactured exports by about 3 percent. This, however, represents only the short-run impact effect. A higher nominal exchange rate would reduce domestic prices (or alternatively, reduce inflationary pressure), and thereby offset some of the real exchange rate rise due to the increase in nominal exchange rates. Thus, the long-run impact of exchange rate changes depends importantly on the extent of exchange rate pass-through on domestic prices.

28. To measure both the speed with which exchange rate changes affect domestic prices, and also the magnitude of exchange rate pass-through to domestic prices, we estimate a relatively simple inflation forecasting equation. This equation (based on an error correction model) yields the following results:

$$\Delta \ln p_t = .014 + .497 \Delta \ln p_{t-4} + .066 \Delta \ln e_{t-3} + .050 \Delta \ln m_{t-4} - .232 z_{t-1} \quad (5)$$

(.001) (.192) (.024) (.026) (0.069)

where

$$z_t = \ln p_t - \left[\frac{.818}{(.197)} + \frac{.009}{(.001)} t + \frac{.027}{(.023)} \ln e_t + \frac{.971}{(.044)} \ln p_t^* \right]$$

and where p is the domestic consumer price index, e is the nominal rupiah-US dollar exchange rate, and p^* is the U.S. consumer price index, and m is the narrow money supply. The augmented Dickey-Fuller test for a unit root in the disequilibrium term z_t was -3.92, compared to a critical value of -3.80 at the 5 percent level, implying cointegration between domestic prices, foreign prices, and exchange rates.

29. The speed of adjustment to any disequilibrium in relative purchasing power is fairly rapid, with approximately 65 percent of any shock to the long run equilibrium dissipated within one year. The main source of the adjustment is not identified because this is a reduced

form model of inflation, as opposed to a structural model. In some periods, it may be the exchange rate that adjusts while at other times it may be domestic inflation. However, the impact of external influences on domestic inflation is strong and fairly rapid.

3. Impact of trade liberalization

30. To reinforce the results of the econometric model a simple counter-factual exercise is conducted. In this exercise we suppose that all the trade tariffs that were in place during the period 1991 to 1994 had been removed. The model's predicted path of the share of manufactured exports in GDP under this zero tariff assumption is then compared with the model's predicted path with the actual trade distortions—import tariffs and export taxes—that existed at the time.⁷ In line with the earlier results, the simulation results indicate that the response with trade distortions removed increases the share of manufactured exports by 3 percent of GDP, relative to the response under the baseline scenario, with a 90 percent confidence band of plus or minus 1 percent of GDP. The implications are that past increases in the openness of the economy have been associated with improved manufacturing export performance, that more trade liberalization would have resulted in even better performance, and that future liberalization will lead to further improvements in export performance.

E. Conclusion

31. Indonesia's past export performance has been very favorable. In principle, exports should continue to grow due to abundant supply of labor, access to foreign capital, and natural resources. However, Indonesia faces a challenge in order to maintain the momentum of non-oil export performance, especially given the diminishing role of oil exports. Policy action should be taken to ensure that higher labor costs are offset by reduced bureaucratic procedures and better quality infrastructure. Further trade liberalization is also necessary, especially owing to increasing competition from lower cost producers. Heavily protected local producers in some sectors are poorly positioned for freer trade and these industries make Indonesia vulnerable to retaliatory action by trading partners and use valuable resources that could be better used elsewhere. Active participation in multilateral trade agreements, including regional initiatives, will assist the trade liberalization process.

⁷The simulation exercise is based on 10,000 bootstrap replications following Freedman and Peters (1984), who applied the bootstrap to a seemingly unrelated regression equation model and found that standard errors are underestimated by about 10 percent if the traditional asymptotic methods are used instead of the bootstrap.

INDONESIA: DATA SOURCES AND DEFINITIONS

The manufacturing export demand equation is estimated using annual data for the period 1970-94. The variable definitions and sources are given below.

- p^* is the price of manufactured exports in U.S. dollar terms (assumed to be equal to the price of manufactured goods) (source: *World Bank, World Tables*). The period average rupiah/dollar exchange rate is used to convert the price index from local currency to U.S. dollars (source: *International Financial Statistics*).
- x is the volume of manufactured exports. It is defined as the share of manufactured exports in total exports (source: *United Nations, Yearbook of International Trade Statistics*) multiplied by the value of total exports (source: *International Financial Statistics*) and deflated by the index of manufactured export prices, p^* .
- w is a measure of world import demand in U.S. dollar terms. It is constructed on the basis of trade-weighted imports of trading partner countries (source: *International Financial Statistics* and *World Economic Outlook*).
- p^* is the price (unit value) of manufactured exports from the rest of the world in U.S. dollar terms (source: *World Economic Outlook*).

The data used to estimate the parameters of the supply equations are annual and cover the period 1970-94. In addition to the variables used to estimate the demand equation, we use the following:

- s_i is the share of commodity i in GDP, given by the share of commodity i in total exports (source: *United Nations, Yearbook of International Trade Statistics*) multiplied by the ratio of total exports to GDP (source: *International Financial Statistics*).
- p is the consumer price index (source: *International Financial Statistics*).
- k is the ratio of capital per worker. The capital stock is constructed from investment data, (source: *International Financial Statistics*) assuming a depreciation rate of 5 percent. The number of workers is proxied by the size of the population (source: *International Financial Statistics*).
- τ is a measure of trade distortions. It is defined as the sum of government revenue from import tariffs as a proportion of total imports, and revenue obtained from export taxes as a proportion of total exports (source: *Government Finance Statistics*). This series is then smoothed using the Hodrick-Prescott filter with the smoothing parameter determined by the method of generalized cross-validation described in McDermott (1997).

References

- Andrews, Donald W. K. (1991), "Heteroskedasticity and Autocorrelation Consistent Covariance Matrix Estimation," *Econometrica*, 59, 817-858.
- Diewert, E., (1974), "Applications of Duality Theory " in M. Intriligator and D. Kendrick, eds., *Frontiers of Quantitative Economics*, vol. 2, (Amsterdam: North Holland).
- Diewert, E., and Catherine J. Morrison (1986), "Export Supply and Import Demand Functions: A Production Theory Approach," NBER Working Paper #2011.
- Fane, George and Timothy Condon (1996), "Trade Reform in Indonesia, 1987-95," *Bulletin of Indonesian Economic Studies*, 32, 33-54.
- Freedman, D. A. and S. C. Peters (1984), "Bootstrapping an Econometric Model: Some Empirical Results," *Journal of Business and Economic Statistics*, 2, 150-158.
- Giorgianni, Lorenzo and Gian Maria Milesi-Ferretti (1997), "Determinants of Korean Trade Flows and their Geographical Destination," IMF Working Paper, WP/97/54.
- Goldstein, Morris and Mohsin S. Khan (1976), "The Supply and Demand for Exports: A Simultaneous Approach," *Review of Economics and Statistics*, pp 257-286.
- Goldstein, Morris and Mohsin S. Khan (1985), "Income and Price Effects in Foreign Trade," in R.W. Jones and P.B. Kenen (eds.) *Handbook of International Economics*, vol. II, Elsevier Science, pp 1041-1105.
- Ito, Takatoshi, Peter Isard, Steven Symansky, and Tamim Bayoumi (1996), *Exchange Rate Movements and Their Impact on Trade and Investment in the APEC Region*, IMF Occasional Paper 145, (Washington D.C.).
- McDermott, C. John (1997), "An Automatic Method of Choosing the Smoothing Parameter in the HP Filter," (Unpublished: Washington: International Monetary Fund).
- Park, Joon Y. (1992), "Canonical Cointegrating Regressions," *Econometrica*, 60, 119-143.
- Phillips, Peter C. B. and Sam Ouliaris, (1990), "Asymptotic Properties of Residual Based Tests for Cointegration," *Econometrica*, 58, 165-193.
- Reinhart, Carmen M. (1995), "Devaluation, Relative Prices, and International Trade," IMF *Staff Papers*, 42, pp. 290-312.
- Sarel, Michael (1996), "Growth and Productivity in ASEAN Economies," presented at a Conference on Macroeconomic Issues Facing ASEAN Countries, Jakarta, November 7-8, 1996.

Table I.1. Indonesia: Export Demand Elasticities

Coefficients	Case 1	Case 2
θ_0	-1.66 (1.30)	...
θ_1	1.37 (0.28)	1.02 (0.02)
θ_2	-0.10 (0.28)	-0.39 (0.13)
$Z(t)$	-4.87	-4.59

Note: The coefficients of (1) were estimated over the period 1972–94: Case 1 reports the estimates for a regression with a constant while case 2 reports is the results for the regression including a constant. $Z(t)$ denotes the Phillips and Ouliaris (1990) residual based unit root test for cointegration (the null hypothesis is no cointegration). In case 1, the cointegration test statistic is -4.87 , which is below the five percent critical value (-3.77), implying the regression is cointegrated. The regression in case 2 still forms a cointegrating relationship with a test statistic of -4.59 compared to a critical value of -3.27 . The estimation procedure uses Park's (1992) Canonical Cointegrating Regression method. This procedure requires a long-run covariance estimator that is robust to serial correlation and endogeneity. We use a covariance matrix estimator suggested by Andrews (1991), with an automatic bandwidth selector. Although selection of the kernel required to ensure a positive semi-definite covariance estimator is arbitrary, the specific choice of kernel normally makes little difference in practice. We use the Parzen kernel defined in Andrews (1991, p. 821)

Table I.2. Indonesia: Estimates of Export Supply

Coefficient	Manufactured Exports	Agricultural and Mineral Exports	Oil and Gas Exports
α	0.149 (0.014)	0.030 (0.002)	0.104 (0.004)
ζ	0.058 (0.015)		
β own price	0.044 (0.014)	0.039 (0.033)	0.110 (0.009)
β cross price	-0.095 (0.011)		-0.095 (0.011)
γ	0.032 (0.010)	-0.020 (0.005)	-0.037 (0.005)
δ	-0.088 (0.023)		
R^2	0.86	0.65	0.91
$\sigma \times 10^{-2}$	1.64	0.95	0.961.44
DW	1.60	1.21	1.33

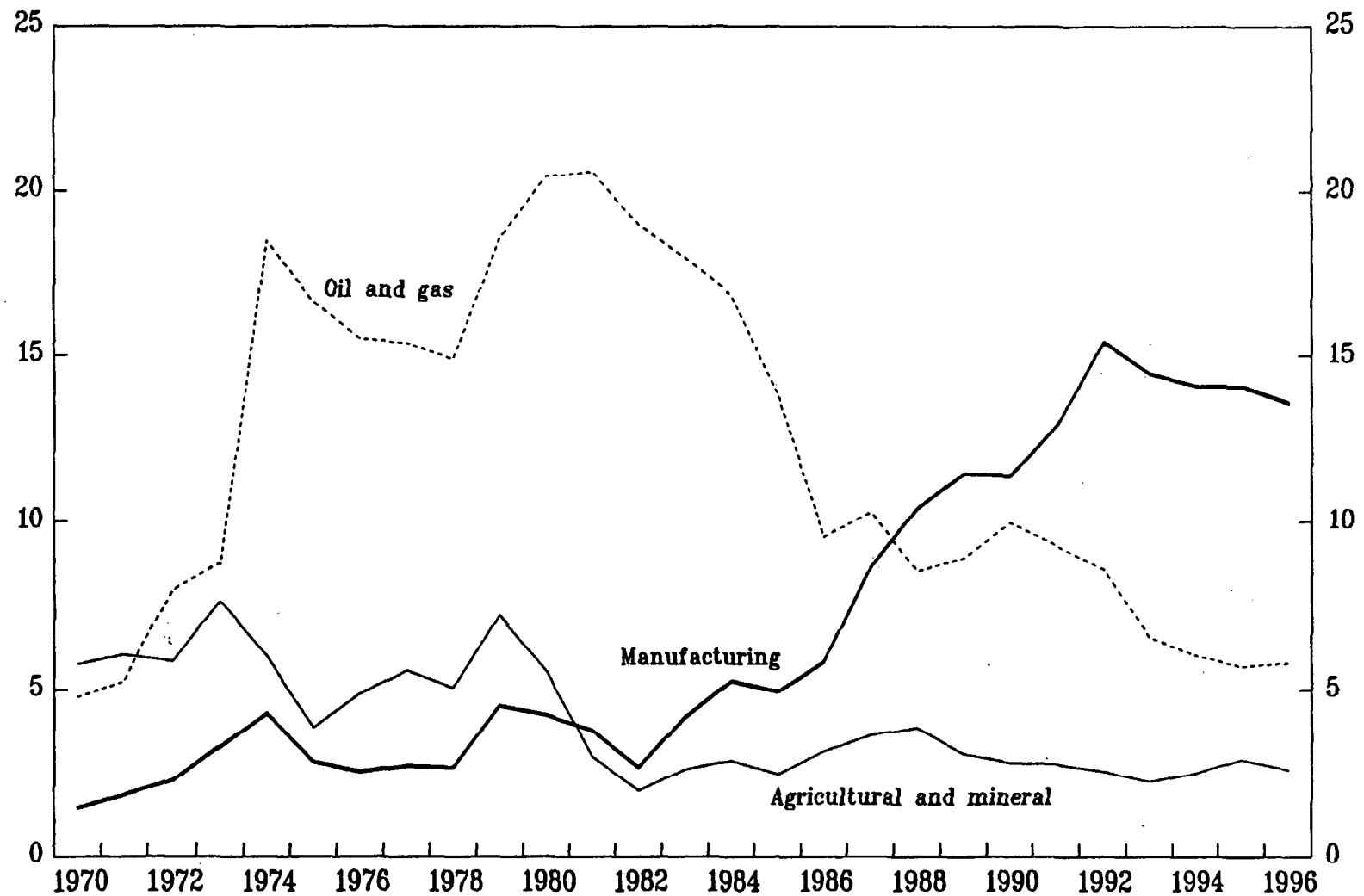
Note: Standard errors are in parentheses. The cross price coefficient provides an estimate of the impact of a change in the price manufactured exports on the supply of oil and gas exports. ζ is the coefficient on a dummy variable which takes the value one in 1973 and zero elsewhere. The Durbin-Watson (DW) test indicates that the equation represent a (cointegrating) steady state relationship of exports shares and the determinants of export supply, such as prices and factor inputs.

Table I.3. Indonesia: Medium-Term Outlook for Exports, 1996–2000

(Annual percentage change)

	1996	1997	1998	1999	2000
Total exports	8.3	7.8	12.7	13.2	13.6
Of which:					
Manufactured export	8.2	10.8	15.7	17.8	17.3

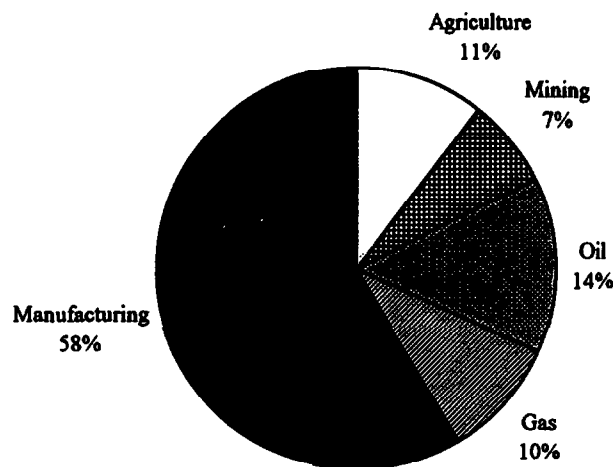
CHART 1.1
INDONESIA
THE CHANGING SHARES OF EXPORTS, 1970-96
(In percent of GDP)



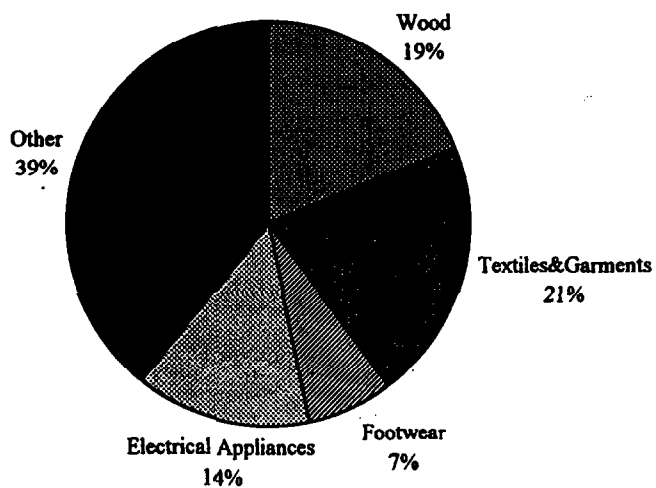
Sources: UN International Trade Statistics and Fund staff estimates.

CHART 1.2
INDONESIA
EXPORT SHARES, 1996

Major Export Categories

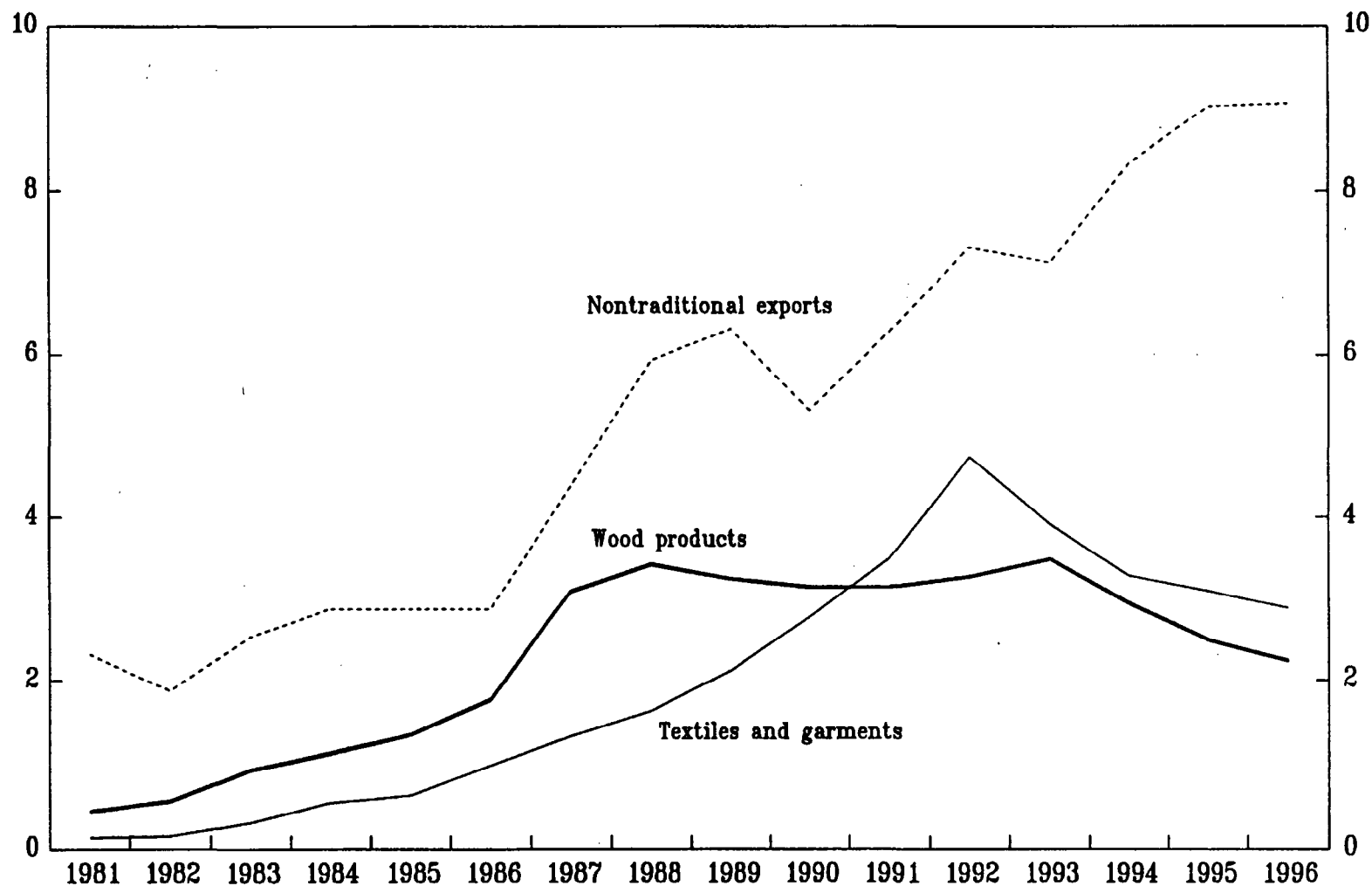


Manufactured Exports



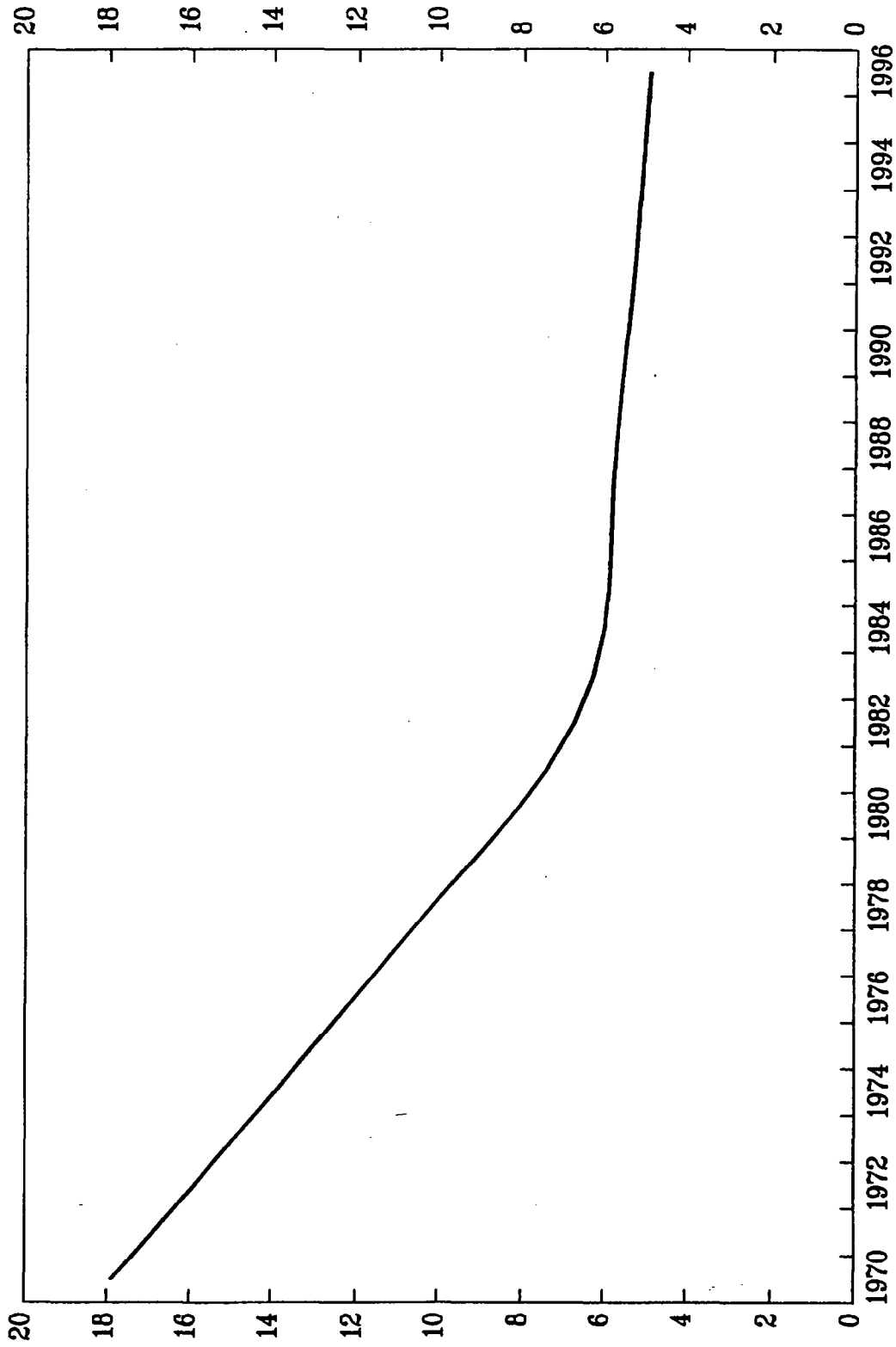
Source: Data provided by the Indonesian authorities.

CHART 1.3
INDONESIA
MANUFACTURING EXPORTS BY MAJOR COMMODITIES, 1981-96
(In percent of GDP)



Sources: Data provided by the Indonesian authorities and Fund staff estimates.

CHART 14
INDONESIA
TRADE DISTORTIONS, 1970-96
(in percent of Total Trade)



Sources: IMF, Government Finance Statistics, International Financial Statistics; and Fund staff estimates.

II. FISCAL MANAGEMENT REGIME¹

A. Introduction

1. Indonesia's medium-term fiscal strategy is established in the five-year development plan and implemented principally through the annual central government budget. However, while a series of safeguards help to preserve financial discipline, the framework for fiscal policy does not easily permit the full achievement of macroeconomic and development objectives. Existing procedures, including the balanced budget rule, limit the role of fiscal policy in demand management. A lack of transparency in budgeting also focuses attention on an incomplete set of central government finances, and allows fiscal intentions to be undermined through off-budget, quasi-fiscal, and public enterprise activities. If these were included, the public sector accounts would likely show an overall deficit.

2. Modification of budgetary procedures and more comprehensive fiscal reporting, including the development of consolidated public sector accounts, would improve the effectiveness of fiscal policy. Moreover, the preparation of accounts on an accrual basis and evaluation of the government's net worth would be helpful.

3. This paper is organized as follows. Section B examines the main elements of Indonesia's budgetary institutions, including the rules and regulations under which budgets are drafted, approved and implemented. It suggests ways that procedures, including the balanced budget rule, could be modified to enhance the role of fiscal policy. Section C reviews the transparency and comprehensiveness of budgeting and devises broader reporting measures, in order to identify areas where reforms could support better policy.

B. Strengthening Budget Procedures

Budget strategy

4. Indonesia's five-year development plans provide an important mechanism for the medium-term social and economic strategy and, while not binding, influence the formulation of annual budgets. This framework is the basis for preliminary budgetary discussions between the government and parliament, and helps to steer expenditure toward overall macroeconomic objectives. It also strengthens the hand of the Minister of Finance in negotiations with spending ministers and can help shape public expectations and build support for policy initiatives. The allocation of responsibility for medium-term planning to the Minister of Planning helps to harmonize the budget with social and economic development objectives.

5. The Minister of Finance, who is responsible for presentation of the budget to parliament, formally and in practice has greater authority than spending ministers for budget

¹The author of this chapter is Geoffrey Bascand.

decisions. The minister's ability to overturn new spending proposals is helped by the existence of the medium-term program. In addition, the senior post of Coordinating Minister for Economy, Finance and Development provides a coordinated voice on macroeconomic policy and ensures that the planning ministry takes account of these as well as social policy objectives. The central bank is obliged to comment on public borrowing, which provides scope for it to seek less expansionary fiscal policy if it is concerned about inflation or balance of payments risks.

6. However, while medium-term objectives are established in the plan for major fiscal aggregates, the budget has a singularly annual focus, particularly because of the balanced budget rule, and no projections are provided in the budget for years beyond the budget year. This disguises the longer-term problem of diminishing oil revenue, makes the task of boosting non-oil tax revenue more difficult, and risks the adoption of programs whose costs could escalate in future. It would be helpful for policy formulation if the medium-term budget focus could be strengthened, possibly by making available five year-ahead projections for revenue, expenditure, the fiscal balance and debt.

Balanced budget rule

7. The balanced budget rule, which is contained in the Guidelines for State Policy, was adopted initially in 1968. It requires that every year total budgetary expenditure should be equal to budgeted revenue, defined to include all foreign grants and loans. The rule also requires that domestic revenue be sufficient to cover current expenditure, including the amortization of government debt, and a portion of development expenditure. This principle by and large prevents domestic private bank and nonbank financing of the central government. To the extent that development expenditure exceeds public saving, the gap can normally be filled only by external borrowing.

8. While this approach contributes to expenditure restraint, the balanced budget rule may exaggerate the strength of the central government financial position for two main reasons, making it politically more difficult to tighten policy. First, budget balance is achieved by including external financing as revenue. Excluding this item, in accordance with Fund practice, the budget has often been in deficit over the past twenty-five years, although deficits have normally been small. Second, the rule is confined to official budgetary accounts and some government transactions, mainly for investment and net lending purposes, are conducted through extra-budgetary accounts.

9. Surpluses are only permitted in special circumstances, mainly to build up reserves in periods of unusually high revenue and to permit the prepayment of external debt. Reserves were accumulated in special accounts for use in future years after the first and second oil shocks. More recently, efforts have been made to prepay external obligations so as to improve debt indicators. However, the rule makes it difficult to accomplish sizeable surpluses and sustain them for a number of years. Additional revenue accruing from policy measures,

automatically provides scope for new spending initiatives. This discourages adjustments to non-oil revenues, which have leveled off at about 11–12 percent of GDP.

10. The Nontax Revenue Law of April 1997 is a useful step toward broadening the balanced budget rule's coverage by bringing on-budget various nontax revenue items that were previously excluded. When fully operational in five years time, the Nontax Revenue Law will require all nontax revenues—covering royalties, levies, fees, compulsory contributions, and investment returns of state funds—to be reported to the Ministry of Finance for inclusion in the state budget. Although the new law will require all government institutions to transfer their revenues to the state budget, departments will be allowed to pre-commit the use of some funds for certain purposes, including environmental conservation, education and training, technology and research, and law enforcement.

11. More fundamentally, the rule could be modified to require the achievement of balance as a minimum, allowing surpluses to be built up on a consistent basis. This would not only help to promote economic stability in the face of sustained private capital inflows but would also facilitate the implementation of policies to strengthen government net worth. As argued by Bascand and Razin (1996), lower public debt would be desirable to reduce the economy's vulnerability that derives from growing unfunded government pension liabilities, and the continuing depletion of oil resources.

Expenditure control and priorities

12. An important element in Indonesia's budget formulation is close control of new policy proposals. Departments are required to identify new policy initiatives in their budget submissions and provide justification for them, although developing better indicators of output and performance expectations is an important avenue for future development. The Finance Ministry conducts bilateral negotiations with the spending ministries, under guidelines from the minister, who has final authority. These processes have worked reasonably well in terms of aggregate expenditure control, but allocation processes may have been less successful.

13. The civil service wage bill is determined in a separate process, potentially weakening overall expenditure control and efficiency incentives. The cabinet sets a global ceiling on staff numbers, while the Ministry of Manpower sets department-specific staff ceilings. The overall ceiling has been unchanged (i.e., zero growth) for a number of years, with some ministries facing declining numbers to support expansion in areas such as education and health. Staff limits have supported a shift to paying higher wages for existing employees, in order to restore the relativity of civil service and market wages and decrease incentives for corruption. However, the Cabinet also sets civil service wage increases, which in recent years have considerably exceeded general wage movements. Moreover, greater efforts to vary remuneration by skill level and responsibility would be helpful. It would be helpful if wage decisions were reached in the context of overall budgetary policy formulation.

14. Marked changes in the composition of expenditure are difficult to achieve. In particular, high priority has been attached to raising education and health standards for many years, but spending in these categories remains below the regional norm. Moreover, while primary education and health center expenditures are widely regarded as effective and equity-promoting programs, a substantial proportion of expenditure has benefitted middle- and upper-income earners more than lower-income households. Public expenditure has remained stubbornly high in a number of infrastructure categories—including power, telecommunications, and transportation—where private involvement could be expanded. Possible developments would be to mandate automatic expiry of each expenditure program, after a specified period, unless a concrete decision is taken to continue; devise better indicators of performance in relation to program objectives; and develop output budgets which integrate current and development expenditures.

Budget approval

15. Indonesia's draft budget for the fiscal year beginning in April must be presented to the legislature by the end of February. If this deadline is not met or the draft budget is rejected, the previous year's budget is enacted without change, although this situation has not arisen in the period since 1970. Furthermore, parliament can only propose amendments that, in order to conform with the balanced budget principle, do not increase the deficit, and these must be approved by the government. In fact, there has been no such initiative since 1970.

16. The government can propose amendments to the budget once it has been adopted, provided they are consistent with the balanced-budget principle and gain legislative approval. In principle, spending can be reduced below budget levels only if revenue is less than expected, but lower foreign borrowing provides some scope to cut expenditure during the year. Expenditure may be shifted between items without legislative approval, expanding the budgetary flexibility needed to orient resources toward emerging priorities.

17. These approval procedures have generally worked satisfactorily, but a major loophole is the exclusion of extra-budgetary accounts and various quasi-fiscal activities. As a result, potentially large elements of state spending, including projects related to the strategic industries and bank restructuring, are subject to little scrutiny. The new nontax revenue law will enhance financial control, which could be further strengthened by restricting central bank lending and equity investments, replacing them with explicit budgetary expenditures and subsidies, which would be subject to parliamentary examination.

Budget implementation and review

18. District treasury offices report receipt and payment transactions to the Ministry of Finance on a weekly basis. Spending agencies are required to file monthly and quarterly reports to the ministry on their programs. The ministry receives monthly reports on the financial performance of state enterprises and the Commercial Offshore Loan Team (COLT) monitors and controls their external borrowing. On the basis of this information, the Ministry

reports the fiscal position to cabinet monthly. However, monitoring appears to be limited to budgetary accounts, as little information is available on extra-budgetary accounts.

19. A mid-year budget review, associated with the reporting of the first semester accounts to parliament, is the most important fiscal stock-take during the year. It precedes the formal commencement of the following year's budget process, and helps establish expectations, while providing the opportunity for adjustments to expenditure or the introduction of new revenue measures to boost the fiscal position through the current year.

20. The end-of-year fiscal review is limited. The next year's draft budget documentation includes little ex-post review of the prior year's projections and outturns. Since the draft budget is presented 1–3 months before the end of the fiscal year, the estimated outturn is highly provisional. Little public debate about the outturn or review of policy occurs at this point because the focus is the budget for the following year.

21. Final annual figures are not available to units of the Ministry of Finance other than the Directorate-General of Budget until approximately 5–6 months after the end of the fiscal year. They are not reported publicly until audited accounts are presented to parliament, generally about 15 months after the end of the financial year. While the parliamentary debate on the final fiscal outturn is then reasonably extensive, it clearly has no direct impact on the budget.

22. One useful reform of Indonesia's fiscal reporting system would be the provision of more timely data, including information on the estimated outcome for the current year when the following year's budget is presented. The budget-related documents—the President's speech in presenting the draft budget, with supporting tables—presently compare the budget for the year ahead only with the current year's budget.

23. Greater use of transparent summary indicators would also assist fiscal policy, including simple measures such as the overall fiscal balance and the availability of government savings for funding investment. These could be complemented by long-term forecasts. The indicators should be supported by documentation of key economic and accounting assumptions and sensitivity analysis to varying policy assumptions. This information would be particularly useful when the budget is presented, in order to facilitate its evaluation.

C. Strengthening Fiscal Reporting

More comprehensive government accounts

24. The inclusion of extra-budgetary transactions in the government accounts would help in analyzing the underlying fiscal position. Quasi-fiscal activities—including operations carried out by the central bank with an effect that could be duplicated by budgetary measures in the form of a tax, subsidy, or expenditure—should also be brought on-budget, perhaps as memoranda items. In due course, the central government accounts could be extended to include social security receipts and outlays.

Extra-budgetary transactions

25. Extra-budgetary transactions are principally conducted through the investment fund, which is mainly used for the onlending to public enterprises of proceeds from foreign borrowing, and the reforestation fund to which mandatory levies on logging concessions have been channeled since the early 1980s. In addition, ministries undertake some revenue and expenditure transactions through off-budget accounts.

Quasi-fiscal activities

26. Quasi-fiscal activities mainly consist of Bank Indonesia lending on favorable terms to support agricultural marketing schemes and the banking system. Subsidized credit is made available to the public agency responsible for the importation and distribution of rice and other commodities. Support is given to banks by Bank Indonesia through purchase of equity shares and in the form of subsidized lending, later converted into subordinated loans. Further financial assistance is likely to be required in the coming years to facilitate the restructuring of problem banks, especially state banks. Capital injections by the central bank are equivalent to budgetary transfers, while concessional loans should be shown as subsidies. In addition, sterilization of capital inflows by Bank Indonesia to lower the rupiah reduce central bank profits and potential transfers to the budget. Staff estimates place the annual cost of these quasi-fiscal expenditures at over 1 percent of GDP in 1995/96 and 1996/97, approximately offsetting the fiscal surpluses recorded in those years.

Social security funds

27. The three social security schemes are presently regarded as outside the central government accounts, even though they are funded by compulsory levies imposed by the government for the purpose of providing social security benefits. Available information on their receipts, payments, and financing is incomplete. Social security accounts supplemented with information on an accrual basis—including the unfunded liabilities, which represent large future cash expenditure obligations—would be valuable for analytical purposes. However, a misleading picture of the consolidated central government position could be given by including simple cash reporting of social security receipts and payments, especially since the population is still relatively young.

Consolidated public sector accounts

28. Consolidated public sector accounts are not prepared officially and published information does not enable them to be constructed. While provincial and local government transactions appear to be in approximate balance, the inclusion of quasi-fiscal activities and the operations of public enterprises would probably indicate an overall fiscal deficit.

Provincial and local governments

29. Most of the spending by the 27 provinces is financed by transfers from central government. Information on local government accounts is very limited. Provincial and local governments cannot borrow autonomously and, like the central government, must adhere to the balanced budget rule. Available evidence suggests that their transactions would not substantially affect the overall public sector balance. However, consolidated accounts would help to indicate more accurately the size of the general government sector. Tentative estimates suggest consolidated general government revenues and expenditures are about 1–2 percent of GDP higher than estimates for the central government alone.

Public enterprises

30. The performance of Indonesia's 170 public financial and nonfinancial enterprises is important for sustaining sound fiscal policy. Cash transfers from the central government are modest and greater private financing in recent years, through partial privatizations and bond issues, has reduced the government's immediate financing requirements. However, there are risks in terms of potential financial support and the assumption of contingent liabilities.

31. Selected financial data for the financial and nonfinancial public enterprise sectors are available. The aggregate cash profit transfer recorded in central government non-tax revenue is incorporated in the budget. However, no attempt is made to consolidate public enterprise data with government accounts into a set of public sector accounts. Complicating the assessment, public enterprise figures are presented on a calendar year basis, in contrast to the remainder of fiscal reporting which relates to the year ended March.

Accrual accounts

32. Over the longer term, the development of public sector accounts on an accrual basis would also be helpful in assessing the sustainability of fiscal policy. This would be particularly beneficial because public investment is a high proportion of government expenditure and depreciation of the capital stock is substantial; contingent liabilities and commitments as a result of quasi-fiscal activities are potentially large; and unfunded pension liabilities represent large future cash expenditure obligations. Moreover, public debt is almost entirely denominated in foreign currencies and accrual accounting would recognize the important changes in the domestic value and servicing costs of this debt that may occur through currency and interest rate movements. Finally, changes in the value of oil and gas resources through depletion or new discoveries would convey important information about the required adjustments in non-oil revenues to maintain fiscal balance.

References

- Asher, Mukul G., 1989, "A Comparative Overview of ASEAN Fiscal Systems and Practices," in *Fiscal Systems and Practices in ASEAN: Trends, Impact and Evaluation*, ed. by Asher, ASEAN Economic Research Unit, Institute of Southeast Asian Studies, Singapore.
- Bascand, Geoffrey M., and Assaf Razin, 1996, "Indonesia's Fiscal Position: Sustainability Issues," paper presented at the conference on Macroeconomic Issues Facing ASEAN Countries, Jakarta (November).
- Kopits, George, Robert Hagemann, Lazaros Molho, and Olav Bjerkholt, 1993, "Fiscal Rules in Indonesia: Analysis and Reform Proposal," *Technical Assistance Report*, IMF Fiscal Affairs Department (March).
- Mackenzie, George A., and Peter Stella, 1996, "Quasi-Fiscal Operations of Public Financial Institutions," IMF Occasional Paper No. 142 (October).
- Montanjees, Marie, 1996, "Report on Government Finance Statistics in Indonesia," *Technical Assistance Report*, IMF Statistics Department (July).
- Nasution, Anwar, 1989, "Fiscal Systems and Practices in Indonesia," in *Fiscal Systems and Practices in ASEAN*, ed. by Asher, ASEAN Economic Research Unit, Institute of Southeast Asian Studies, Singapore.
- Von Hagen, Jurgen, and Ian Harden, 1996, "Budget Process and Commitment to Fiscal Discipline," IMF Working Paper WP/96/78 (July).
- World Bank, 1993, *Indonesia: Public Expenditures, Prices and the Poor*, Report No. 11293-IND, Washington.

III. IMPLICATIONS FOR MONETARY POLICY OF LARGE CAPITAL FLOWS¹

A. Introduction and Summary

1. Macroeconomic policy management in Indonesia has been complicated in recent years by large capital inflows. The authorities have faced a dilemma between maintaining monetary stability to contain inflation and limiting exchange rate appreciation to maintain external competitiveness. In practice, monetary policy has leaned more toward resisting an exchange rate appreciation and, as a result, money growth has tended to exceed the pre-announced target ranges. Relatively high domestic interest rates have compounded the policy dilemma by further increasing capital flows. With the prospect of sustained capital inflows over the medium term, reflecting the strength of fundamentals, the authorities will find it difficult to exercise effective monetary control while limiting real exchange rate appreciation.
2. This paper provides a preliminary assessment of medium-term options for monetary policy in the context of sustained large capital flows. The empirical relation between monetary policy instruments, monetary aggregates, financial market indicators and inflation suggests that monetary aggregates alone do not provide adequate indications of inflation pressures. The analysis in this paper suggests that—over the medium term—a monetary policy framework based on a wider set of financial and real sector variables and permitting greater exchange rate flexibility would constitute a more viable disinflation strategy. The paper also presents a preliminary analysis of the feasibility of moving to an inflation targeting approach. The explicit target range for inflation would need to be relatively wide because of the volatility of consumer prices, especially food prices.
3. As background, the paper examines the external and domestic factors that may have contributed to capital flows. The large share of foreign direct investment suggests that capital flows have been driven largely by the strength of domestic fundamentals and are likely to be sustained at relatively high levels (Section B). While the macroeconomic effects of capital flows have been similar in many emerging market countries (Section C), a review of experience in Indonesia suggests that, while the policy mix has helped to maintain stability, there has been excessive reliance on monetary policy, which in turn has been constrained by exchange rate objectives (Section D). The final part of the paper evaluates the medium-term options for monetary policy, including the monitoring of a wider set of real and financial indicators, and the feasibility of an inflation targeting approach (Section E).

B. External and Domestic Factors Influencing Capital Flows

4. The surge in private capital inflows during the 1990s contrasts sharply with the experience of previous decades, when official flows—particularly to the government sector—accounted for a much larger proportion of aggregate capital inflows. Moreover, the

¹The author of this chapter is Mahmood Pradhan.

bulk of private capital flows in earlier periods comprised bank lending, often to public entities, whereas recent flows have been dominated by foreign direct investment. Portfolio investment flows, which were very modest until recently, have also increased. By contrast, net long-term borrowing by government and public enterprises has declined markedly in recent years, reflecting in part, the repayment of debt accumulated earlier.

External factors

5. External developments, particularly the cyclical downturn in economic activity and the associated decline in interest rates in the large industrial countries during the early 1990s, played an important role in the initial surge in capital flows to many emerging market countries. Indonesia was not at first a major recipient of these flows. In fact, there appears to have been no inverse relation between U.S. interest rates and equity prices on the Jakarta Stock Exchange, at that time, equity prices in Indonesia fell in line with the decline in U.S. interest rates (Chart 1). Over the more recent period, however, stock price movements in Indonesia have been more closely related to changes in industrial country interest rates and developments in other emerging markets.

6. A number of empirical studies that have attempted to distinguish between domestic and external influences suggest that external factors have played a greater role in Latin America than in Asia (see Calvo, Leiderman, and Reinhart (1993), Chohan et al (1993), and Fernandez-Arias (1993)). These studies suggest that for some countries in Latin America, external factors typically explained about 50 percent of the variation in capital flows, while amongst Asian emerging market countries, including Indonesia, external factors accounted for about 30 percent. To some extent these differences reflect the greater share of foreign direct investment in aggregate net capital flows in Asia, typically attracted by longer-term considerations. In the aftermath of the Mexican financial crisis, contagion effects among Asian countries were relatively shortlived and quickly contained. Indeed, net private capital flows to Asia in 1995 were higher than in 1994.

7. The recent pattern of capital flows seems to reflect a longer-term trend toward globalization and international diversification of industrial country investments. Current trends in the world economy suggest that developing countries, and especially the rapidly growing emerging market countries in Asia, will account for an increasing proportion of world output. Many of these countries, such as China, India, and Indonesia, represent some of the largest markets in the developing world. This should provide strong incentives to investors in industrial countries to diversify their portfolios, which at present are underweighted in developing country investments relative to the size of the emerging stock markets.² These markets, although more volatile, have yielded relatively high returns and because of their low

²For a detailed analysis of the extent of international diversification of institutional investment portfolios, especially the limited holdings of emerging market securities, see the background papers in the IMF's *International Capital Markets Report*, 1995.

correlation with financial markets in industrial countries, provide scope for portfolio diversification.³

Domestic factors

8. In common with many other countries in the region, the strength of the domestic fundamentals in Indonesia, have been instrumental in attracting capital flows. Prudent fiscal policy has enabled Indonesia to maintain macroeconomic stability over long periods which, in turn, has helped to sustain external confidence. Structural reforms, especially trade and financial liberalization, including fewer restrictions on acquisition of assets by foreign residents, has paved the way for an expansion of domestic equity markets. The promotion of private sector activity—as in many other countries in the region—has resulted in a strong expansion of exports and intra-regional trade and sustained rapid output growth.

9. During 1990–96, foreign direct investment flows accounted for about one-third of net private capital flows, and over the last two years this proportion has risen to about one half (Chart 2). Although the relatively low share of portfolio investment flows may partly be due to the comparatively small size of the Indonesian stock market and the absence of a well-developed bond market, the share of foreign direct investment flows is similar to that in many Asian emerging market countries. Other investment flows, including bank lending to private and official entities generally have declined in importance but have been subject to larger fluctuations. Some of these flows, particularly to the banking sector, are also primarily attracted by high short-term interest rates, including on central bank securities used to conduct open market operations.

10. The liberalization of trade and investment regimes improved the climate for foreign direct investment. Foreign investment approvals (in terms of value) have increased rapidly since 1989 (Table 1). Recent investment projects are widespread across sectors, but the largest increases in terms of value are concentrated in resource based manufacturing (chemicals, basic metallic industries and paper products), services (hotels, power supply), and infrastructure (including privatization in the electricity and gas sector). While Asian countries still represent the largest group of foreign direct investment to Indonesia—primarily reflecting inflows from Japan—there have been large increases from Australia, Germany, the United Kingdom, and the United States.

³Recent estimates indicate that the correlation between the return on the Standard and Poor's index of the top 500 companies listed in the New York Stock Exchange and the return on the IFC composite index for emerging market countries has been less than 0.4 over the period 1990–95. See International Finance Corporation, *Emerging Stock Markets Factbook*, 1996 (Washington, D.C., May 1996). Over the longer term, however, as stock markets deepen in the emerging market countries and become more closely integrated with those in industrial countries, short-term volatility in industrial country markets is likely to be transmitted faster to the emerging stock markets.

C. Macroeconomic Effects of Capital Inflows

11. It is useful to compare macroeconomic developments in Indonesia with those in other emerging market countries that have also experienced sustained inflows during the 1990s, when examining the impact of large-scale capital inflows and evaluating the policy response (Table 2). In most cases, inflows have tended to reduce domestic interest rates, raise aggregate expenditures, increase inflationary pressures, and widen current account deficits in the recipient countries. These consequences are attributable in part to exchange market policies that have attempted—with varying degrees of success—to limit the nominal appreciation of domestic currencies because of concern about the adverse effects of real exchange rate appreciation on competitiveness.

12. Despite facing similar policy dilemmas, there have been marked differences in macroeconomic performance across the emerging market countries, especially between the major recipient countries in Asia and Latin America. While increased private capital flows have often been associated with widening current account deficits—in Indonesia the current account deficit has also increased—the domestic counterpart is of larger current account deficits have developed differently. In Indonesia, as in other Asian emerging market countries, the ratio of private consumption expenditure to GDP declined by about 3 percentage points between the second-half of the 1980s and the first-half of the 1990s, while the ratio of private investment expenditure to GDP increased by just under 3 percentage points. In most Latin American countries, by contrast, the share of consumption expenditure has increased, while private investment expenditure remained broadly constant.

13. These differences in the division between consumption and investment expenditure mirror markedly different national saving patterns. Countries characterized by relatively high public sector saving have managed to sustain high private saving rates, whereas private saving rates have remained relatively low in countries with weak fiscal positions. Even if public sector dissaving has a positive effect on private saving—for example, through Ricardian effects, whereby the private sector anticipates future tax liabilities—the offset is likely to be partial. Bascand and Razin (1997) find evidence that fiscal consolidation from the mid-1980s in Indonesia did lead to some increase in national saving: the decline in private saving did not fully offset the higher public saving. Moreover, as they emphasize, when fiscal consolidation is undertaken in periods when debt levels are high—as in recent years—an increase in public saving should lead to a broadly equivalent increase in national saving.

14. An important concern for policymakers is whether capital flows complement domestic saving and enhance longer-term growth prospects. In countries where capital flows primarily finance consumption and substitute for domestic saving, policymakers need to be particularly vigilant about the sustainability of capital flows and current deficits. Moreover, while foreign resources can improve growth prospects, all countries need to ensure that financial stability is preserved in order to reduce the risk of disruptive changes in financial market sentiment that would necessitate severe macroeconomic policy adjustment.

D. Macroeconomic Policy Responses to Capital Flows

15. The appropriate policy response to large-scale capital inflows depends on a number of factors, particularly as to whether they are largely driven by external factors or by domestic fundamentals. The appropriate policy response may also depend on the composition of the inflows—whether they comprise largely direct investment or other flows that are more volatile or debt creating—and on the capacity of the domestic banking system to intermediate large foreign inflows.⁴ Improvements in the fiscal position, including when central government budgets are in broad balance and where initial current account deficits emanate from the private sector, would help to reduce demand pressures and the risk of sudden reversals of capital flows.⁵ If capital inflows are associated with an autonomous increase in the demand for money (perhaps owing to rapid financial market development), the expansion of the domestic money supply will not be inflationary; in such cases the inflows should be accommodated.

16. The potential inflationary impact of capital inflows will be influenced importantly by the exchange rate regime and the extent to which the monetary authorities sterilize their effect on the domestic money supply. Under a flexible exchange rate regime, inflows are likely to lead to an appreciation of the real exchange rate and should not give rise to sustained inflationary pressure. Under a fixed exchange rate regime, inflows will tend to increase the money supply and domestic demand, and raise domestic prices, thereby also leading to a real exchange rate appreciation. Thus, resisting nominal exchange rate appreciations in the face of sustained capital inflows may not ultimately help to limit real exchange rate appreciation.

Fiscal policy

17. The dilemma for fiscal policy in Indonesia has been that, despite the long track record of prudent fiscal management, capital flows have periodically resulted in overheating. The overall fiscal position—which improved markedly following the consolidation measures in the 1980s—has been maintained in broad balance since the early 1990s. Nevertheless, the current account deficit has widened to almost 4 percent of GDP over the last two years.

18. Fiscal policy has been used only moderately for countercyclical purposes, in part because available instruments are not sufficiently flexible for short-run macroeconomic management. However, monetary tightening—the main macroeconomic response to demand pressures stemming from capital flows—has not reduced domestic absorption sufficiently to prevent the recent widening of the current account. This suggests that further fiscal tightening would be a more appropriate policy response. It would act to contain the current account

⁴For a schematic assessment of how to identify causes of capital inflows and the appropriate macroeconomic policy responses, see Haque, Mathieson, and Sharma (1996).

⁵Heller (1997) provides a detailed discussion of the rationale for a more conservative fiscal stance in countries faced with large and volatile capital flows.

deficit and help to bring down interest rates nearer to those in international capital markets and in other countries in the region. Lower interest rates would also help to limit short-term capital flows and thereby reduce risks for the banking system.

Exchange rate policy

19. During the period of large capital flows, the authorities have generally managed to target the real exchange rate within a relatively narrow range by depreciating the nominal exchange rate vis-à-vis the U.S. dollar (and thereby the nominal effective exchange rate) to broadly offset inflation differentials between the two countries (Chart 3). The nominal rupiah/U.S. dollar exchange rate depreciated by an average of about 0.35 percent per month between 1989 and 1995 while, over the same period, the ratio of the consumer price index in Indonesia to the U.S. index increased by a similar amount. During 1996, the real effective exchange rate appreciated, in part reflecting the widening of the exchange intervention band, but also owing to the increase in the U.S. dollar/Japanese yen exchange rate.

20. The resistance to nominal exchange rate appreciation has limited progress on reducing inflation. During much of the 1990s, inflation in Indonesia—averaging about 8 percent—has been higher than in other ASEAN countries. There is widespread consensus, both in the theoretical literature and from experience in other emerging market countries, that attempts to target real exchange rates in the face of sustained increases in capital flows lead to higher inflation (see, for example, Calvo, Reinhart, and Vegh (1995)). For Indonesia, Siregar (1996) finds strong evidence that a stable real exchange rate has been the main objective of monetary and exchange rate policy and that the depreciation of the nominal exchange rate has resulted in higher inflation.

21. Resisting upward pressures on the nominal exchange rate will probably not help to limit real exchange rate appreciation over the medium term. In fact, exchange market pressures have strengthened further since mid-1995 as a result of sustained capital inflows. Allowing the real exchange rate to appreciate via nominal exchange rate appreciation (rather than through an increase in domestic prices) has a number of advantages. First, it helps to contain inflation by limiting exchange rate pass-through to domestic prices and avoids the potentially high output costs of disinflation policies in future. Second, it insulates the money supply, domestic credit, and more generally, the banking system from capital inflow. Finally, allowing the nominal exchange to fluctuate in a wider range introduces uncertainty and increases perceived exchange risk which would help to deter speculative flows.⁶

⁶This argument has less force if more flexibility of the nominal rate leads to greater volatility of the real exchange rate, which could have adverse effects on the traded goods sector, especially in the absence of adequate financial instruments to hedge against such uncertainty. Real exchange rate volatility, however, is determined mainly by the macroeconomic environment, particularly the stability of macroeconomic policies.

22. Despite the drawbacks of nominal exchange rate depreciation and real exchange targeting, an important question for policymakers in Indonesia is whether a real exchange rate appreciation is warranted. Evaluating the appropriate level of the real exchange rate is notoriously difficult, and calculations of equilibrium exchange rates are typically subject to wide margins of uncertainty. Thus, it is often difficult to make judgments about exchange rate policy on the basis of estimates from macroeconomic models, particularly when the degree of deviation from the "equilibrium" exchange rate is relatively small.⁷ There are, however, other considerations that can help in this assessment.

23. In countries where capital flows are attracted primarily by the high returns associated with rapid industrialization and sustained productivity gains, a tendency for the real exchange rate to appreciate is more likely to be an equilibrating response to improvements in profitability. In some cases, exchange market pressures reflect expectations that the real exchange rate will appreciate in the medium to longer run, in line with higher profitability in the traded goods sector. Performance of export sectors can therefore be an important guide to the underlying reasons for the inflows and their sustainability. Profitability would improve if relative unit labor costs—often a good measure of competitiveness of traded goods—rise less than the general price level in the economy.

24. The assessment of Indonesia's export performance over the long term outlined in Chapter I suggests that export growth has been determined mainly by structural reform measures, particularly the rising capital-labor ratio associated with higher investment, including foreign investment and trade liberalization that have boosted supply. The world demand for Indonesia's manufactured goods does not appear to be strongly affected by changes in relative prices. These results suggest that further real exchange rate appreciation would not hold back export growth.

Monetary policy

25. The monetary policy response to capital flows has been determined largely by Indonesia's exchange rate policy. While the authorities have periodically engaged in sterilized intervention, monetary tightening has been effected mainly through increases in interest rates. This approach has not yielded monetary stability. Over the last three years, money growth has consistently exceeded pre-announced targets. Interest rate increases have recently been supplemented by strengthened direct measures, including reserve requirements and moral suasion to limit money and credit growth (Table 3).

26. Sterilization of foreign inflows can help to contain domestic credit expansion, but financial markets in most emerging market countries are not large enough to sterilize sustained capital flows. Sterilization can be helpful as an initial response, in part because it can be implemented relatively quickly and allows policymakers time to assess whether the inflows are

⁷See Montiel (1996) for an analysis of equilibrium exchange rates for ASEAN countries.

likely to be transitory or not. Even in the short term, sterilization can entail significant costs for the monetary authorities, especially if it takes the form of open market operations—as in Indonesia—that lead to an increase in domestic interest rates. The approximate cost of sterilization will be determined by the difference between interest rates paid on domestic securities issued by the central bank and interest income earned on foreign exchange reserves.

27. Use of direct controls to restrict bank lending has been motivated largely by the desire to limit interest rate increases and thereby deter short-term capital flows. Experience in recent years suggests that this policy has had only limited success. Moreover, such policies may create incentives for banks to by-pass controls and engage in off-balance sheet lending. The recent expansion in the commercial paper market appears to be partly due to increased pressure on banks by Bank Indonesia to restrict lending. To circumvent these directives, banks purchase commercial paper for sale to depositors and this form of intermediation of funds between depositor and borrower does not show up in bank balance sheets.

E. Medium-Term Monetary Policy Options

28. Empirical evidence on the relation between money growth, economic activity, and inflation in Indonesia raises the question whether the authorities should focus exclusively on monetary aggregates to guide monetary policy actions. An important prerequisite for operating such a policy framework is a stable and predictable demand for money because only then can the monetary authorities have a reasonable degree of confidence that, if actual money growth is above target, there is likely to be upward pressure on prices and the need for policy actions to tighten monetary conditions. If money demand behavior is not predictable, the authorities will face the difficulty of not knowing whether money growth reflects an underlying shift in the private sector's desire to hold money balances or whether money holding is only temporarily above longer-term needs.

29. Empirical estimates of money demand equations in Indonesia do not provide strong evidence of stable relationships over the long term. Recent estimates by Dekle and Pradhan (1997) for the major ASEAN countries suggest that narrow or broad money growth in Indonesia cannot be explained by changes in real income and interest rates. These findings are attributed to the rapid changes in financial markets that have substantially increased the extent of financial deepening (as measured by the ratio of M2 to GDP or by the ratio of private sector credit to GDP). These results imply that money growth rates will typically be poor predictors of future inflation and output trends.

Monitoring a broader set of indicators

30. In the context of substantial changes in financial markets and large capital flows, the dilemma for policymakers is to decide on the extent that actions should be constrained by pre-announced targets. If money growth rates cannot be relied on exclusively to gauge inflationary pressures, it would be preferable to downgrade the emphasis on monetary targets and base

policy actions on a wider set of indicators. This approach was adopted in a number of industrial countries, such as Canada, the United Kingdom, and the United States following financial deregulation and advances in transaction technologies. Reducing the emphasis on monetary targets in Indonesia may also be appropriate for maintaining credibility. If money targets are announced but policy actions are not seen to be based on money growth because specific episodes of rapid money growth are judged not to indicate inflation pressures, there is a risk that credibility of policies could be undermined.

31. Whether monetary policy in Indonesia would be better guided by a broader set of indicators depends on identifying variables that could be used as leading indicators of inflation. A preliminary assessment is that, while broad money does provide information on future inflation, a number of other variables also contain leading indicator properties for inflation. Indeed, the rate of depreciation of the nominal exchange rate vis-à-vis the U.S. dollar and the nominal effective exchange rate, and the nominal interest rate differential relative to the United States have stronger predictive power for inflation in Indonesia. Among real sector variables, the output gap (the difference between actual and trend output)—which essentially acts as a proxy for demand conditions relative to capacity output—has less predictive power than monetary and financial variables, although it is still useful in assessing inflationary pressures (Table 4).⁸ These results, however, suggest only that the indicator variables contain information about movements in future inflation beyond that already contained in current and past values of inflation itself.

32. Although this analysis supports moving away from a monetary target framework, the authorities will also need to ensure that, in the absence of an explicit intermediate target, credibility of the central bank's resolve to maintain low inflation is sustained. When the assessment of monetary conditions is based on a range of indicators, there is always a risk that policy inaction could be seen as a weakening in the anti-inflation stance. To minimize these risks, the monetary policy process needs to be more transparent so that market participants are fully informed about the rationale for policy decisions.

Feasibility of an inflation targeting framework

33. When monetary policy assessments are based on a range of indicators, or when policy is framed around intermediate targets, there may be a tendency for the policy framework to lack an explicit forward-looking element. In a number of countries, the formulation of an explicit medium-term objective centered on inflation targets has helped to fill an important gap following the abandonment of strict monetary targets and, in some cases exchange rate

⁸The estimation procedure and details of the extent to which movements in the indicator variable help to explain the variance of inflation are outlined in the Appendix.

targets.⁹ A key advantage of the inflation targeting approach is that it forces the authorities to base policy actions on their forward-looking assessment of inflation, thereby helping private agents to gauge the policy stance.¹⁰

34. The adoption of inflation targets is not, however, costless because forward-looking assessments are typically subject to wide uncertainty. Forecasting errors in inflation can be relatively large, giving rise to a trade-off between flexibility and credibility of policies. To ensure that targets are met, central banks may set a relatively wide target range, but this may not enhance credibility. In Indonesia, a prerequisite for moving to an inflation targeting framework is to model the inflation process and to examine the magnitude and source of forecast errors. If, for example, the economy is subject to frequent supply shocks, or major components of the consumer price index are volatile, actual inflation may deviate widely from the target range. In such circumstances, it may be appropriate for monetary authorities not to tighten monetary conditions, but this could result in loss of credibility.

35. A preliminary assessment indicates that, although quarterly inflation rates can be forecast reasonably well, there is a wide margin of uncertainty. As a first step, the variables that contain good leading indicator properties (identified above) are used to estimate quarterly inflation. This exercise—which is reported in the companion paper on export performance—confirms that many of the indicator variables are useful to forecast inflation. The inflation forecasting equation—based on money, exchange rates, and past inflation—tracks actual inflation quite closely when it is used to forecast inflation from late 1993 onward (Chart 4). However, confidence intervals around one year ahead of inflation projections are rather large.

36. In some countries that have adopted inflation targets, forecast uncertainty has been reduced by omitting volatile components from the price index. Such an option does not appear to be feasible in Indonesia. A decomposition of the variance of the CPI in Indonesia indicates that the volatility of inflation is mainly due to the volatility of food prices (Chart 5). Although in a statistical sense volatility would be lower if food was excluded from the index, an inflation measure would be of limited economic interest because of the relatively large weight of food in the consumer price index. A more disaggregated decomposition of the CPI would help to identify specific food items that account for the high volatility of food prices and help determine whether it would be possible to reduce aggregate volatility of the CPI by excluding individual food items.

⁹There may be a strong case for exchange rate targets in countries that lack credibility and have a history of relatively high inflation, although this has to be weighed against the greater difficulties of managing capital inflows and other real shocks. In any case, the high inflation argument does not apply to Indonesia.

¹⁰For an extensive analysis of inflation targeting experience in a number of industrial countries and a review of the key issues, see Haldane (1995).

Policy requirements for inflation targeting

37. Monetary policy can be based on an inflation targeting framework if the authorities accelerate real sector reforms, particularly structural and trade liberalization reforms. The volatility of food prices reflects in part the variability of supply conditions, but much of it can be alleviated by increasing the role of the private sector in the production, distribution, and marketing of agricultural commodities. Although public sector involvement in the agricultural sector is based on the objective of stabilizing prices to offset variations in supply conditions, state intervention goes beyond genuine areas of market failure. It has also not been effective in reducing the volatility of food prices. With the development of forward markets in a number of commodities and the greater capacity of the private sector to bear the inherent risks, private provision in the agricultural sector could shield consumers from the underlying volatility in production levels and thereby reduce volatility of prices.

38. Further, the impact of variations in domestic supply conditions on prices could also be reduced by liberalizing imports of major agricultural commodities, such as rice and soyabeans. In periods when domestic supplies are adversely affected by unfavorable weather conditions, imports of agricultural commodities could make up for the shortfall and limit price fluctuations. Moreover, trade liberalization in these areas would enhance efficiency by increasing competition. This would provide incentives for domestic producers to manage inventories more efficiently and avoid the need for large changes in prices.

39. Although the evidence presented in this paper does not support moving—in the short term—to an inflation targeting framework of the type adopted in a number of industrial countries, policy effectiveness would be enhanced by following a number of key ingredients of the targeting approach. Indeed, much of the success of inflation targeting in other countries stems from the greater consistency and transparency that has been associated with the forward-looking approach. In Indonesia as well, the authorities have framed the broad policy objectives around the medium-term development plan in which lower inflation is a key target. Nevertheless, it is important to emphasize that market participants may not always assign sufficient credibility to this goal, especially when monetary targets continue to be announced but policy actions appear to be guided by exchange rate concerns. The authorities could base monetary policy decisions more exclusively around a medium-term inflation target, which would provide the system with a strong nominal anchor and, over time as distortions in the real sector are reduced through structural and trade reforms, move to a narrower target.

INDONESIA: LEADING INDICATORS OF INFLATION

1. Unit root tests to determine the time series properties of the data

Results of the Augmented Dickey-Fuller tests on the levels of all series indicate that most of the series are I(1), although it is unclear whether CPI is I(2). The Augmented Dickey-Fuller test on the first difference of the series, however, suggests that the rate of inflation is stationary.

2. Granger Causality tests

A variable is defined to contain leading indicator properties for inflation, if it adds information about future movements in inflation beyond that which is already contained in past inflation. Formally, Granger Causality tests for the hypothesis that $\beta_1 = \dots = \beta_p = 0$ in the following regression:

$$x_t = \sum_{i=1}^p \alpha_i x_{t-i} + \sum_{i=1}^p \beta_i y_{t-i}$$

where x is the final target variable and y is the indicator variable.

The set of target variables are

- CPI inflation (denoted INFL in the tables)
- WPI inflation (denoted WPIG in the tables)
- WPI (excluding oil) inflation (denoted WPIXOILG in the tables)

The set of indicator variables examined are:

- the rate of depreciation of the nominal exchange rate against the US dollar
- M0 growth
- M1 growth
- M2 growth
- the rate of depreciation of the nominal effective exchange rate (NEER)
- the output gap (deviation of actual output from trend output)
- oil price inflation
- commodity price inflation
- Indonesia/U.S. nominal interest rate differential

The marginal significance levels (p-values) for the bivariate Granger Causality tests for lags 1 to 8 indicate that the rate of depreciation of the nominal exchange rate (against the U.S. dollar, and against a basket of currencies—the nominal effective rate) has strong predictive power for future CPI inflation and moderate power for predicting WPI and

WPIXOLIG inflation. Interest rate differentials have strong predictive power for inflation at short lags, particularly for oil price inflation.

3. Variance decompositions

Forecast error variance decompositions—calculated using the Choleski decomposition—for bivariate vector autoregressions defined on the target variable and the indicator variable are consistent with the conclusions of the Granger Causality tests: the rate of depreciation of the exchange rate has the strongest predictive power for inflation. The NEER accounts for about 12 percent of the error variance in CPI inflation after a lag of 2 years. The maximum impact of the exchange rate seems to be around 6 to 8 quarters. The interest rate differential also contains some predictive power, accounting for nearly 10 percent of the error variance in inflation after 24 quarters.

4. Variability of inflation

An autoregressive conditional heteroskedasticity (ARCH) model is used to estimate the time varying volatility of CPI inflation and of the major components of the CPI, food, housing, clothing, and all other items. The volatility in inflation is highest in 1993. The source of the volatility during this period was the volatility in food price inflation reflecting shortages due to the low agricultural production caused by floods. In fact, food prices are the major source of volatility in most periods. Over the full sample, volatility of food price inflation accounted for 40 percent of the volatility in overall inflation, followed by clothing, which accounted for 27 percent of the total volatility.

References

- Bascand, Geoffrey and Assaf Razin (1997), "A Framework for Fiscal Sustainability, with Application to Indonesia," paper prepared for Jakarta Conference, November 1996, forthcoming IMF working paper.
- Calvo, Guillermo A., Leonardo Heiderman, and Carmen Reinhart (1993), "Capital Inflows and Real Exchange Rate Appreciation in Latin America: The Role of External Factors," *IMF Staff Papers*, Vol. 40 (March), pp. 108-51.
- Calvo, Guillermo A., Carmea Reinhart, and Carlos Vegh (1995), "Targeting the Real Exchange Rate: Theory and Evidence," *Journal of Development Economics*, Vol 47, pp. 97-133.
- Chuhan, Punam, Stijn Claessens, and Nlandu Mamingi (1993), "Equity and Bond Flows to Latin America and Asia: The Role of External and Domestic Factors," unpublished (Washington, D.C., World Bank, May).
- Dekle, Robert and Mahmood Pradhan (1997), "Financial Liberalization and Money Demand in ASEAN Countries: Implications for Monetary Policy," IMF Working Paper WP/97/36, March.
- Fernandez-Arias, Eduardo (1993), "The New Wave of Private Capital Inflows: Push or Pull?" unpublished (Washington, D.C., World Bank, November).
- Haldane, Andrew G. (ed.) (1995), *Targeting Inflation*, a conference of central banks on the use of inflation targets organized by the Bank of England, March 9-10, 1995.
- Haque, Nadeem Ul, Donald Mathieson, and Sunil Sharma (1996), "Capital inflows to Developing and Transition Countries--Identifying causes and Formulating Appropriate Policy Responses," Annex IV in *World Economic Outlook* October 1996, pp. 148-153.
- Heller, Peter (1997), "Fiscal Policy Management in an Open Capital Reginie," IMF Working Paper WP/97/20, January.
- International Monetary Fund (1995), *International Capital Markets Report: Developments, Prospects, and Policy Issues* (August).
- International Finance Corporation (1996), *Emerging Stock Markets Factbook* (Washington, D.C., May).

Montiel Peter J. (1996), "Exchange Rate Policy and Macroeconomic Management in ASEAN Countries," paper prepared for Jakarta Conference, November 1996, forthcoming IMF working paper.

Siregar, Reza Yamora (1996), "Real Exchange Rate Targeting and Inflation in Indonesia: Theory and Empirical Evidence," Pacific Basin Working Paper Series, No. PB96-07, December 1996, Center for Pacific Basin Monetary and Economic Studies, Economic Research Department, Federal Reserve Bank of San Francisco.

Table III.1. Indonesia: Foreign Direct Investment Approvals by Sector, 1991-96 1/

(In billions of U.S. dollars)

	1991	1992	1993	1994	1995	1996
Agriculture	0.1	0.2	0.2	0.7	1.4	1.5
Mining and quarrying	0.0	2.3	0.0	0.0	0.0	1.7
Manufacturing	3.9	5.7	3.4	18.7	16.9	16.0
Construction	0.1	0.1	0.1	0.1	0.2	0.3
Services	4.7	2.0	4.5	4.2	11.4	10.3
Total	8.8	10.3	8.1	23.7	39.9	29.9

Source: Data provided by the Indonesian authorities.

1/ Includes new projects and extensions of existing projects, but excludes investment in petroleum, banking, insurance, and leasing sectors. Components may not add to totals owing to rounding.

Table III.2. Selected Emerging Market Countries: Macroeconomic Indicators 1/

(Annual averages, in percent of GDP unless otherwise noted)

	1986-90	1991-96
Selected Asian emerging market countries		
Net private capital flows	1.5	3.5
Current account balance	-0.8	-2.6
Central government fiscal balance	-5.1	-2.9
Private consumption	61.5	59.7
Private saving 2/	21.9	21.4
Private investment	17.6	21.2
Total saving	24.8	26.3
Total investment	25.5	29.0
Real GDP 2/	7.3	5.9
Consumer prices (median) 3/	6.0	8.6
Real effective exchange rate 3/	-5.7	-1.0
Selected Latin American emerging market countries		
Net private capital flows	0.3	3.3
Current account balance	-0.6	-2.3
Central government fiscal balance	-4.1	-0.5
Private consumption	65.1	67.6
Private saving	16.9	14.3
Private investment	16.4	16.2
Total saving	20.7	18.3
Total investment	21.1	20.5
Real GDP 3/	2.2	2.9
Consumer prices (median) 3/	80.6	23.3
Real effective exchange rate 3/	2.6	2.4
Indonesia		
Net private capital flows	2.1	4.5
Current account balance	-3.0	-2.6
Central government fiscal balance	-1.1	-0.1
Private consumption	60.0	57.0
Private saving 2/	23.2	23.5
Private investment	24.6	26.0
Total saving	25.7	30.3
Total investment	29.4	33.0
Real GDP 3/	6.9	7.8
Consumer prices (median) 3/	7.5	8.7
Real effective exchange rate 3/	-10.8	0.4

Source: IMF World Economic Outlook database.

1/ Comprises Argentina, Brazil, Chile, Colombia, Hong Kong, India, Israel, Korea, Malaysia, Mexico, Pakistan, Peru, the Philippines, South Africa, Thailand, Turkey, and Venezuela. China, Singapore, and Taiwan Province of China are excluded because of their large current account surpluses in the 1991-95 period.

2/ For Indonesia, the data reported are for 1987-90.

3/ Annual percent change.

Table III.3. Indonesia: Monetary and Credit Growth, 1994/95-1996/97

(Annual percent change)

	Broad Money (M2)		Private Sector Credit	
	Actual	Target	Actual	Target
1994/95	22.1	19.0	23.8	18.0
1995/96	28.0	20.0	21.5	19.0
1996/97	26.7	17.0	23.8	16.0

Source: Data provided by the Indonesian authorities.

Table III.4. Indonesia: Qualitative Results of Financial and Real Variables for Inflation 1/

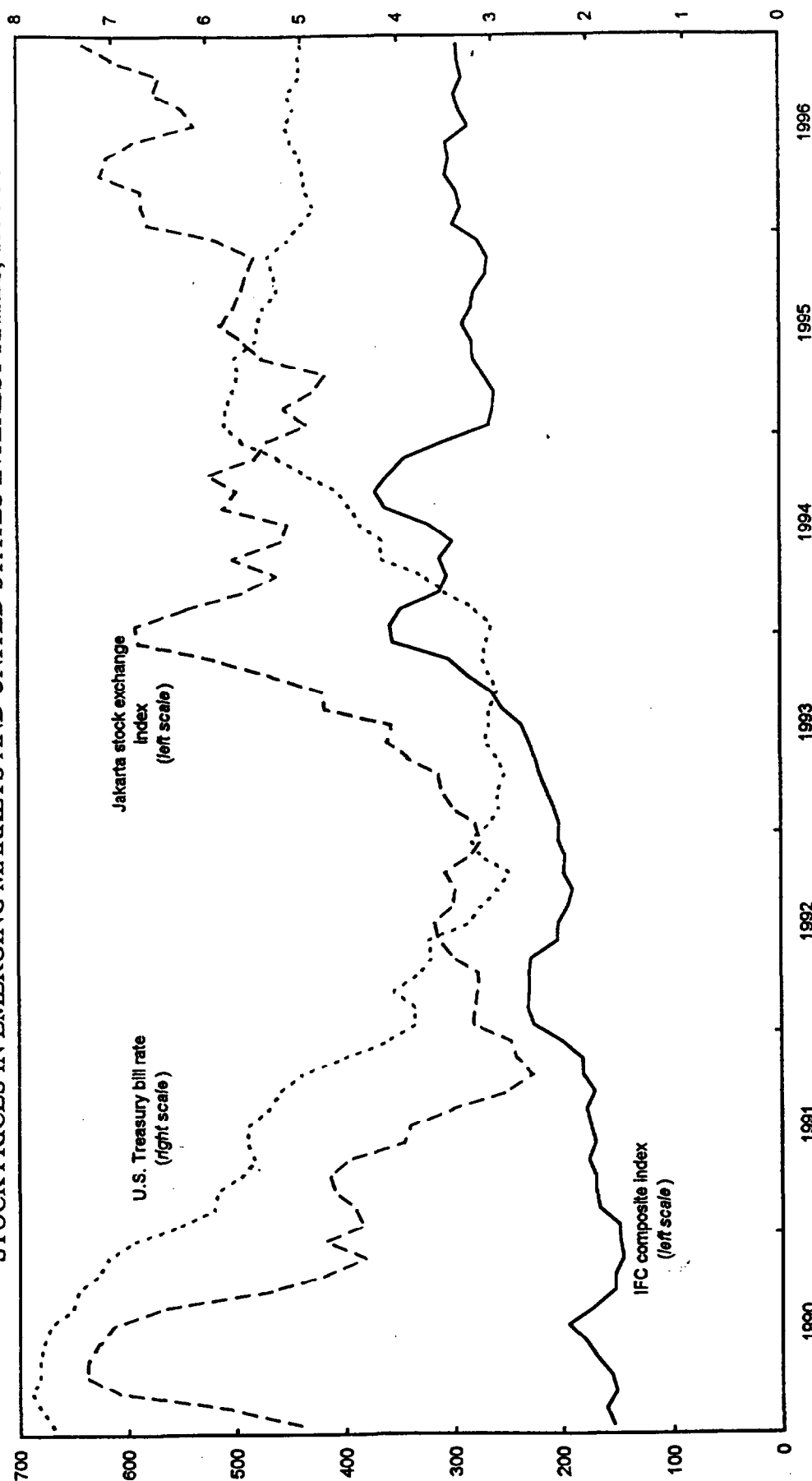
Variable	Leading Indicator Properties	Explaining Forecast Error
	(Bivariate Granger Causality)	Variance of Inflation (Bivariate Variance Decomposition)
Monetary base	Medium	Medium
Narrow money (M1)	Medium	Medium
Broad money (M2)	Medium	Medium
Indonesia/U.S. interest differential	Strong	Strong
Rupiah/US\$ exchange rate	Medium	Strong
Nominal effective exchange rate	Strong	Strong
Output gap	Weak	Medium
Oil price inflation	Weak	Weak
Commodity price inflation	Weak	Weak

Source: Staff calculations.

1/ These qualitative indications are based on the significance levels of each variable in the Granger Causality tests. "Strong" indicates that the variable is significant at the 95 percent significance level, "medium" denotes the variable was significant at the 90 percent level, and "weak" indicates significance level of less than 90 percent.

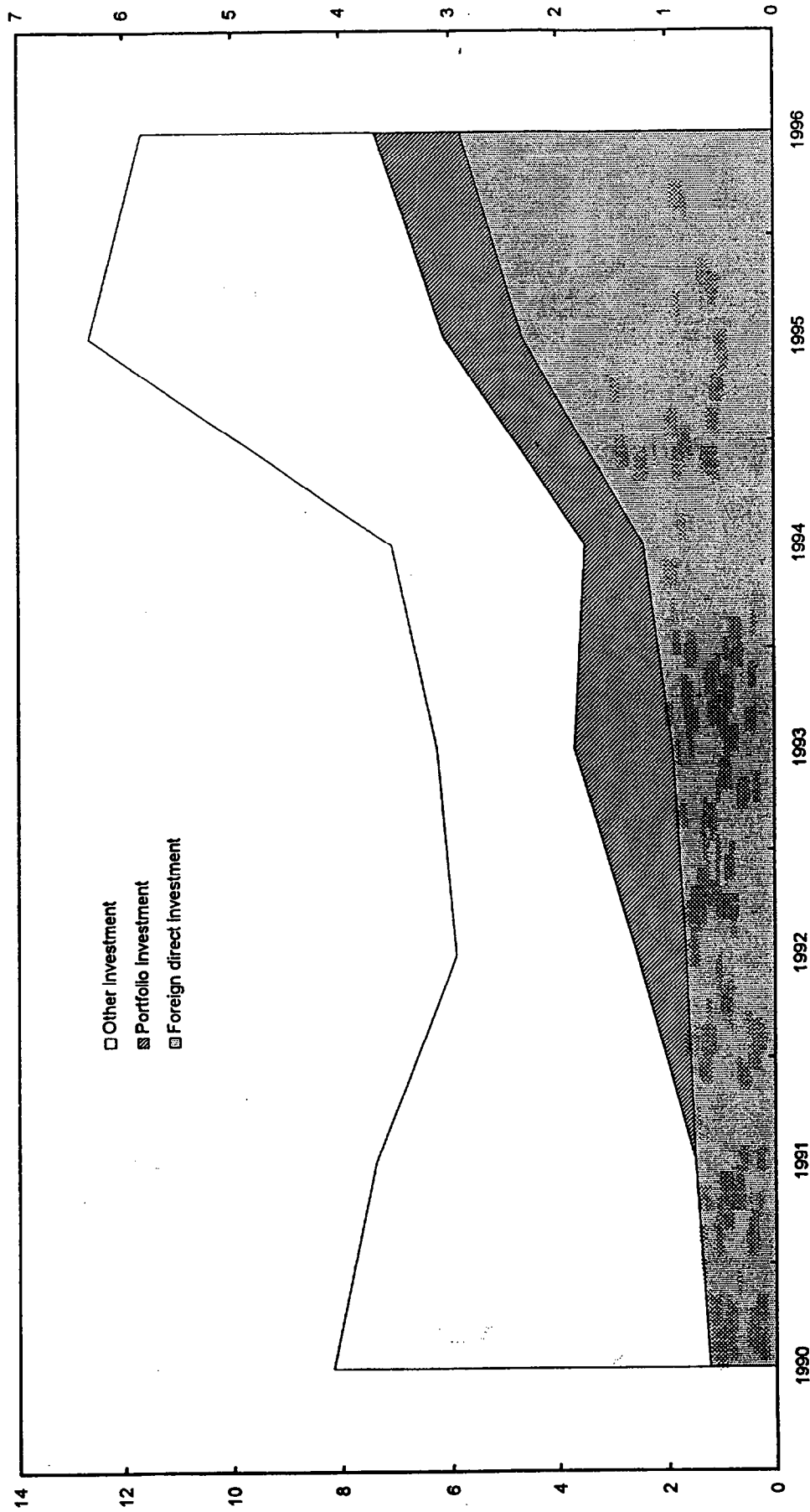
CHART III.1 INDONESIA

STOCK PRICES IN EMERGING MARKETS AND UNITED STATES INTEREST RATES, 1990-96



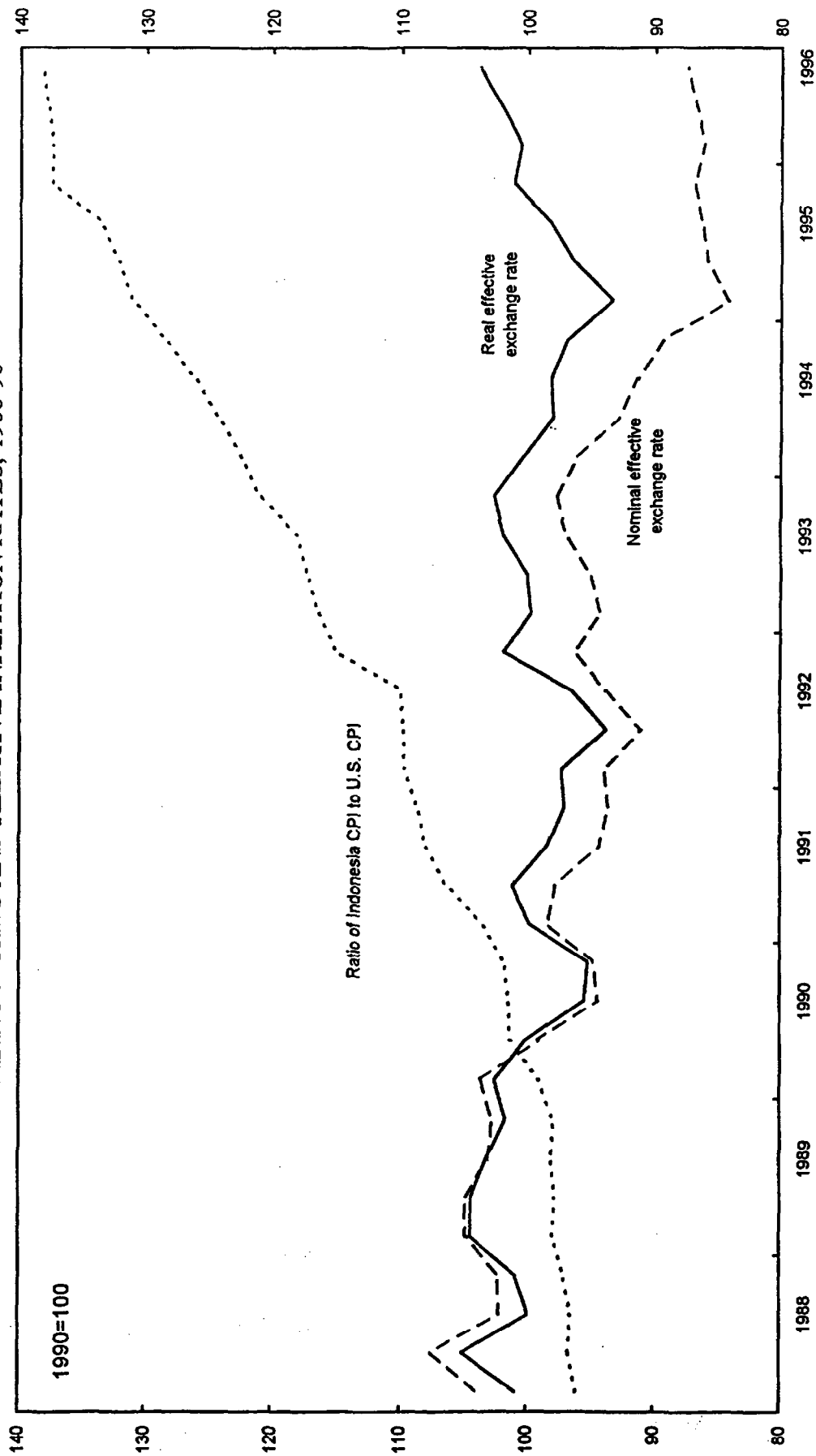
Sources: IFC, Emerging Markets database; and IMF, International Financial Statistics.

CHART III.2
INDONESIA
COMPOSITION OF CAPITAL FLOWS, 1990-96
(In billions of U.S. dollars)



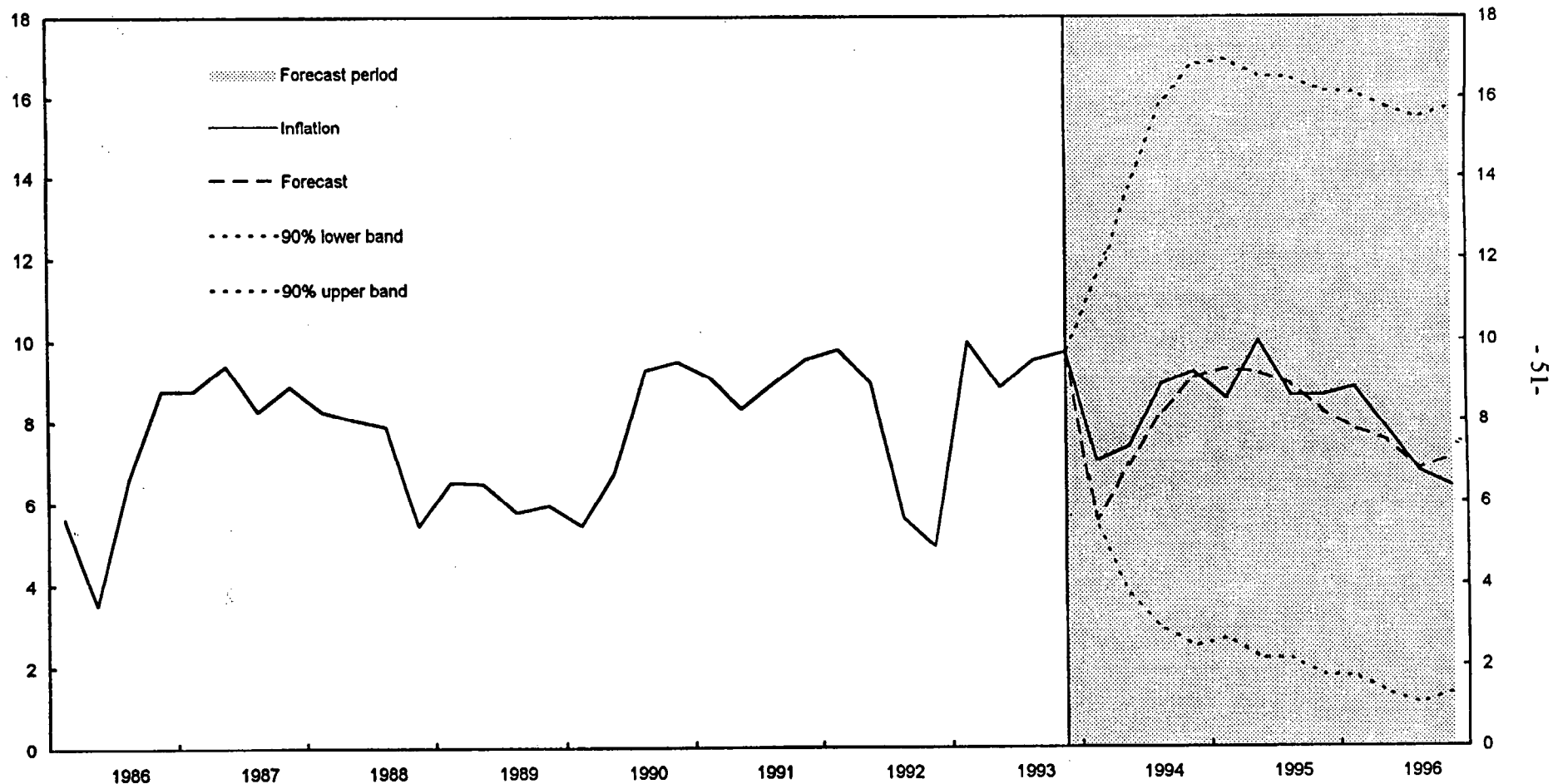
Source: IMF, World Economic Outlook database.

CHART III.3
INDONESIA
EXCHANGE RATES AND RELATIVE INFLATION RATES, 1988-96



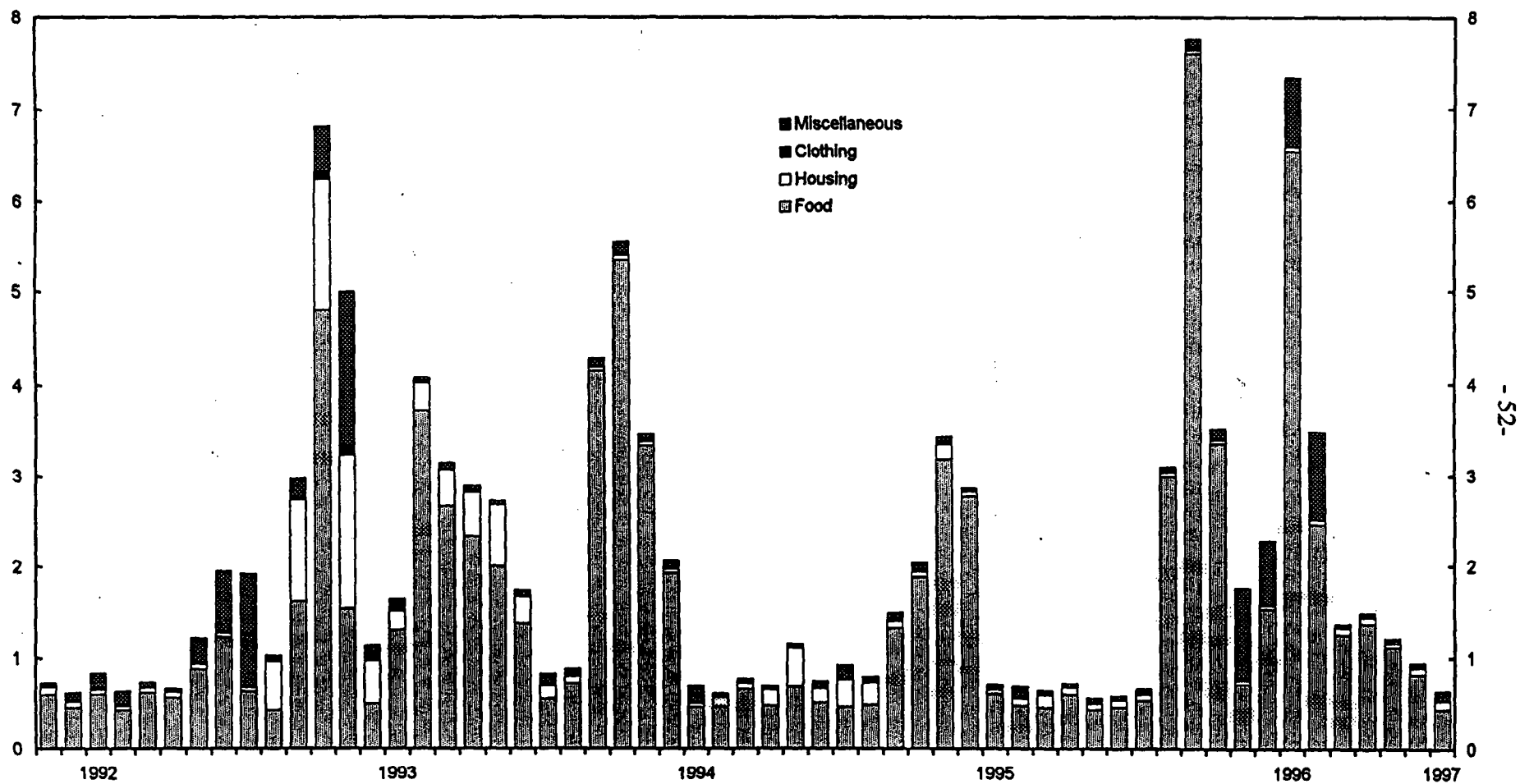
Sources: IMF, International Financial Statistics and Information Notice System.

CHART III.4
INDONESIA
FORECAST OF INFLATION, 1986-96
(In percent)



Sources: Data provided by the Indonesian authorities; and Fund staff estimates.

CHART III.5
INDONESIA
VARIABILITY OF INFLATION, 1992-97
(In percent)



Sources: Data provided by the Indonesian authorities; and Fund staff estimates.

IV. BANKING SECTOR CHALLENGES¹

A. Introduction and Summary

1. This paper examines issues related to the soundness and stability of Indonesia's banking sector. Recent banking and financial sector crises in a number of countries have served as a reminder of the close links between macroeconomic stability and the health and efficiency of the financial sector. In the aftermath of these crises, it has also become clear that financial sector risks are often not visible at the outset, leading to a deepening of the problems as a result of delayed policy response. Such risks can more easily be detected if the standard monetary and credit growth indicators are complemented by regular monitoring of prudential ratios, along with a strengthening of the supervisory framework.

2. Key findings and recommendations of the paper include:

- The banking sector, while improving overall, continues to show signs of weakness. Symptoms include a high share of nonperforming loans, foreign exchange risk, concentrated bank ownership and connected lending, and large exposure of banks to the property sector.
- The authorities' response to earlier banking problems has addressed key prudential areas, although implementation of the new rules has sometimes been uneven.
- It would be desirable to improve compliance with prudential rules and eliminate unsound banks from the system. Strengthening the banking system along with greater transparency would enable the authorities to reduce reliance on direct measures of credit growth.

3. The plan of the paper is as follows. Section B outlines the present characteristics of the Indonesian banking sector. Section C provides an historical overview of the liberalization process since 1983; and reviews the causes of banking sector problems in recent years, the initial policy responses, and indicators of the current health of the sector. Section D outlines the agenda for the completion of banking sector reform, detailing regulatory, prudential, and jurisdictional actions to build upon earlier efforts.

B. Overview of the Banking Sector

4. Rapid economic growth, a liberal capital account regime and regulatory changes over the past decade have all contributed to fast changes in Indonesia's banking sector. The main developments in the system and its current state can be summarized as follows:

¹The author of this chapter is Anne-Marie Gulde.

- ***Size and concentration:*** After liberalizing entry, the number of banks increased rapidly from 111 in 1988 to 240 in 1994.² Since then, the increase of minimum capital requirements from Rp 10 billion to Rp 50 billion has reduced the number of potential entrants, leaving the number of institutions almost constant over the past four years. The seven state banks still dominate the sector, with their combined assets accounting for about 45 percent of the entire system, although their share of total bank lending has declined markedly in recent years (Table 1).³
- ***Ownership and entry:*** Liberalization increased the attraction of the financial sector to many commercial and industrial concerns and many of Indonesia's large business conglomerates now own at least one bank. State-owned enterprises and pension funds have also established banks of their own, thus increasing the potential for connected lending. The ten foreign banks which operate in Indonesia obtained licenses in the late 1960s. Since then, the entry of foreign banks has been limited through the requirement to form either joint ventures (with a maximum of 85 percent foreign ownership) or buy shares of domestic banks on the stock exchange, where the maximum foreign holding is set at 49 percent.
- ***Areas of business activities:*** Domestic banks are required to direct 20 percent of credit to small-scale business projects and foreign banks are required to lend 50 percent to export-oriented businesses, although these requirements are often not met. While overall loans have been growing fast in the past four years, sectoral loan distribution remains difficult to examine. Data published by Bank Indonesia show an apparent shift from lending to the manufacturing sector to service industries (Table 2). They fail, however, to clearly identify the increase in real estate lending that has proven to be an area of special concern in a number of countries. From 1988, Bank Indonesia limited banks' direct involvement in leasing, venture capital, securities trading and investment management. Banks are, however, permitted to pursue such activities through the formation of subsidiaries operating as nonbank financial institutions, and they have made frequent use of this option.
- ***Capital inflows and exposure to foreign currency risk:*** Foreign currency borrowings show substantial growth between 1988 and 1996. In addition, foreign currency deposits have also grown rapidly, but banks' foreign currency liabilities are generally higher than their foreign currency assets. Although Bank Indonesia imposes limits on net open foreign exchange positions equivalent to 25 percent of bank capital, a small number of banks do not always comply with this rule.

²This discussion excludes the 9,300 rural banks which are limited in the geographical area of operations and may only issue time and savings deposits and extend loans. Minimum capital for rural banks is Rp 50 million.

³Five state banks are included in a World Bank rehabilitation project, which imposes limits on their asset growth.

- **Profitability:** Return on assets in 1996 averaged 1.2 percent and return on equity around 16.5 percent, which exceeds those in a number of other countries. However, these mask a wide dispersion, with several loss-making banks remaining in the system. In addition, bank profitability is, in some cases, adversely affected by credit guidelines and other measures used to control liquidity.

C. Progress in Banking Sector Liberalization and Outstanding Issues

Evolution of the banking environment

5. Over the past 15 years, the Indonesian banking environment has undergone fundamental changes (Table 3). Following the liberalization of most interest rates in 1983, a second round of reforms started in 1988. The role of private banks relative to state banks was greatly enhanced and the scope and coverage of directed credit schemes was drastically reduced. At the same time, some limits were put on banks' other financial business activities, and—in part to compensate for the decline in directed credit—lending requirements to small businesses (domestic banks) and the export sector (foreign and joint venture banks) were introduced. The reforms were codified in the banking law of 1992, which unified and replaced the 1967–68 banking acts; previously there had been a separate law for each state bank and the central bank. In addition to describing the more liberal framework, the new banking law officially removed the traditional functional specialization between various types of banks and the major areas of specialization for state-owned banks.

6. The relatively fast pace of banking sector liberalization was not matched initially by increased prudential oversight, contributing to several episodes of distress in the banking system.⁴ As liberalization progressed, the problems became deeper, because of the growing number of banks and the increased complexity and depth of their business activities. In response, Bank Indonesia formulated stronger prudential regulations, spearheaded by the introduction of minimum capital requirements in 1988 and net open position limits in 1989. With input from the IMF, the prudential framework was strengthened substantially in the first-half of the 1990s. A loan to deposit ratio (1991) and legal lending limits (1993) were added, and capital adequacy ratios phased in over a period of two years. Mandatory accounting standards were formulated (1993), followed by standards for internal auditing and information technology (1995). Bank Indonesia designed a program to tighten requirements for bank owners and managers, and required banks to submit annual business plans for approval (1995). In addition, Bank Indonesia limited banks' permitted access to derivatives business and started to closely monitor problem loans, even in banks that were fully provisioned and did not have other sizable problems. Banks with nonperforming loans above a certain threshold (7.5 percent of total loans) were required to present a credit recovery plan.

⁴The most visible example was the collapse and closure of Bank Summa in 1992.

7. In contrast to the redesign of the prudential framework, attempts to deal with the identified problem banks have been slower. Violations of prudential regulations have sometimes been met with regulatory forbearance and few banks have been closed or merged. However, measures taken do include an attempt at restructuring state banks, assisted through support from the World Bank; one of the major banks was 25 percent privatized in late 1996. For private banks, Bank Indonesia has relied on a strategy that emphasizes negotiated solutions between banks' largest borrowers and owners, and financial incentives to assist mergers and sales of problem banks. A welcome additional step was the issuance of a directive in December 1996 to provide a firmer basis for Bank Indonesia to close insolvent banks. Bank Indonesia intends to further strengthen the prudential and regulatory framework by a phased increase of capital asset requirements from 8 to 12 percent, to be achieved by 2001.

8. Regarding the overall environment in which banks operate, there have also been concerns about the security and efficiency of clearing and settlement arrangements. A substantial share of payments take place across commercial banks' correspondent accounts, which may involve large interbank exposures and could cause systemic risk. In its discussions on payments issues, the IMF has stressed the need for Indonesia to stay abreast of the growing sophistication of the operational and risk management frameworks which support payments systems in other countries in the region.

Current situation

Problem loans

9. Data on classified loans based on bank reports indicate that loan quality has improved over the last three years (Table 4). Nevertheless, the overall level of classified loans—around 10 percent—remains high and approaches levels witnessed in other countries before and during banking crises. A matter of concern is also the worse outlook for state-owned banks, and the notable deterioration of the portfolio of private foreign exchange banks, albeit from a much sounder base. The high level of problem loans may increase cash flow problems if asset growth slows; in addition, there is the possibility that the actual situation is worse than indicated by these data.

10. Quantification of the extent of problem loans remains complicated, given the large number of banks and the complex pattern of cross holdings of equity and loans which tends to impair transparency of reports. Even where problem loans are clearly identified, there is a concern that loan classification standards in Indonesia are inadequate, especially because of the granting of liberal options for loan restructuring as a way to reduce the size of portfolio problems. Moreover, a classified loan reverts to performing status as soon as one payment is made, irrespective of the anticipated future payments stream on the loan. Banking supervisors, while recognizing the drawbacks of these practices, have not focused thoroughly on the extent of loan restructuring as an additional indicator of banking sector soundness. On-site inspections apparently yield limited additional insight into the actual number of problem loans, in contrast with experience in other countries where on-site inspections usually find a higher number of nonperforming loans than reported by banks.

Insolvent banks

11. Data on nonperforming loans can be complemented by analysis of banking sector capitalization. According to a recent MAE study, the overall negative net worth of insolvent banks remains relatively small at the equivalent of about 0.5 percent of GDP. However, several banks with negative capital continue to operate, a situation that could create moral hazard and add to the overall problems of the banking sector.

Regulatory noncompliance

12. Over the past five years, Indonesia has introduced an arsenal of prudential rules. Given banking sector problems at the time of the introduction of these rules, it was expected that these could only be applied over time, but compliance levels are still relatively low (Table 5). Another concern is that some banks, especially privately owned foreign exchange banks, show increasing violations of loan-to-deposit-ratio requirements and legal lending limits. Compliance with small scale business credit and export credit requirements, while not exclusively a prudential matter, is low.

Property loans

13. Lending to the property sector accounted for 20 percent of total outstanding loans in February 1997, compared with 12 percent in December 1993 (Table 6). One concern with this level of exposure is that declines in property values can have a substantial negative income effect on banking system profitability if borrowers are unable to repay debt. In addition, there may be a wealth effect because of a shortfall between the collateral value and the market price obtained when selling the property. Finally, legal difficulties and the high costs associated with seizing and selling collateral could heighten the dangers.

D. Agenda for Further Strengthening the Banking Sector

14. On the basis of the above review, the main problems of the Indonesian banking sector manifest themselves in the continuing high share of nonperforming loans, incomplete compliance with prudential requirements by some banks, a large exposure of banks to property loans, concentrated bank ownership and connected lending, and the continued operation of problem banks. These issues would be best resolved through a systematic and comprehensive resolution effort in several areas:

Measures to restore banking sector soundness

15. The presence of undercapitalized and possibly insolvent banks can reduce the overall efficiency of the system, distort incentives, and create the potential for systemic instability. Specific policy actions in the area could include:

- ***Memoranda of understanding with undercapitalized banks:*** All banks below 8 percent capital adequacy—with capital measured after provisioning—should be subject to heightened supervision by Bank Indonesia, including the development of an action plan to increase capital to the required level.⁵ Bank Indonesia could require that, in the case of private banks, capital increases include injections from owners. Violations should trigger supervisory action, including license suspension.
- ***Amending bank closure regulations :*** From an operational point of view, the December 1996 regulations are a welcome step, although they fall short in a few areas. First, shareholders and managers continue to be allowed a role in the closure process, even in assigning the liquidator, which may make it difficult to effectively close a bank. In addition, the time frame foreseen of five years is too long for effective asset disposal.⁶ To be effective, the regulations might be amended by assigning all decision rights in bank liquidations to the central bank, stating clearly the loss of all shareholder rights and limiting the liquidation process to two years.
- ***Preparing an operational plan for bank closures:*** Bank Indonesia should be prepared to implement bank closures quickly without notification, if necessary. This requires a smooth technical closure process, as well as steps to minimize the effects of closures on the rest of the banking system. Given that both Bank Indonesia (through its supervisory role) and the Ministry of Finance (through its power to issue and withdraw licenses) are involved in the closure process, coordination is essential. More specifically, to avoid a situation where implementation issues become a bottleneck, a blueprint detailing all relevant technical, logistical, and legal questions would be useful. The most pertinent issues for consideration in this regard include setting up a coordinating team between Bank Indonesia and the Ministry of Finance to design the framework and decide on the relative responsibilities; forming a subcommittee of a wider group of concerned agencies to work out the logistics of bank closures; and, within Bank Indonesia, clarifying necessary operational measures in the payments and clearing system associated with closures.

Measures to improve design and enforcement of prudential and regulatory standards

16. Over the past five years, Indonesia has made substantial progress in adapting its prudential framework to international standards. In some areas, such as capital adequacy, Bank Indonesia rightly aims at surpassing international standards to take account of higher

⁵For state banks, such agreements have been drawn up in connection with the World Bank's bank restructuring loan. The plans for private banks, especially for banks that are judged not to pose systemic risks, should be less accommodating.

⁶Maximizing the value of assets for the satisfaction of banks' creditors is best achieved when speed is decisive in the choice of the resolution strategy. Experience in other countries shows that banks under liquidation are often subject to asset stripping.

risks faced in an emerging market framework. To strengthen the banking sector and to ensure that it operates fully within an appropriately designed framework, the challenges now include:

- ***Reduce regulatory forbearance:*** To date, the violation of prudential rules has not been strictly sanctioned. Bank Indonesia should apply the full range of permissible sanctions to increase compliance. However, care should be taken that sanctions are applied in an even-handed and transparent manner.
- ***Improve the design of the regulatory framework:*** Potential vulnerability of the banking system could be reduced through the adoption of smaller limits on net open foreign exchange positions, a reduction in connected lending, and lower exposure to the property sector. Bank Indonesia could also consider the introduction of wider indicators of foreign exchange risk, including the share of foreign exchange loans to domestic sectors; improved supervision of conglomerates by cooperation of all supervisory agencies involved and the appointment of a lead supervisor; and the systematic collection of more detailed information on the property sector.
- ***Improve the focus and training of bank supervisors:*** The restructuring of Bank Indonesia's supervision department has helped considerably to improve its effectiveness. The remaining challenges require continued training with regard to all forms of foreign exchange exposure and the risks stemming from new financial instruments. In strengthening its authority, it is important to maintain a clear separation of supervision activities and monetary policy management.

Measures to improve transparency and efficiency

17. A range of the problems found in the banking sector stem from insufficient transparency in the application of rules and the legal framework and the need for greater vigor in privatizing state banks. The incentive framework could be strengthened through the following actions:

- ***Increase transparency of bank ownership and management:*** Many banks are part of complex ownership structures, rendering supervision of connected lending and its associated risks difficult. In addition, Bank Indonesia itself holds capital in a number of troubled commercial banks. Remedial action might include limiting cross ownership between banks and companies; limiting the number of nonbank financial institutions owned by banks; and the divestiture of Bank Indonesia from commercial banks.
- ***Increase transparency of the regulatory framework:*** Improvements in this area would include the introduction of a clear distinction between regulatory and prudential rules and the conduct of monetary policy based on market principles. The avoidance of discrimination in setting and applying regulatory rules, and a reduction in the level of lending directives would reduce distortions and improve efficiency.

- ***Increase the transparency of banking data.*** Indonesian accounting standards tend to underestimate the degree of problem loans. This results mainly from the ability of banks to register former problem loans as performing, following restructuring agreements with creditors—where these agreements do not necessarily have to take into account the ability of the borrower to follow the new payments plan. This technique also leads to a reduction in the required amount of provisioning. More problems could arise from an outdated and relatively broad sectoral breakdown of loans, which does not allow for a systematic focus on problem areas, such as property loans or loans in foreign exchange. Therefore, it would be desirable for Bank Indonesia to introduce stricter conditions for loan restructuring and redesign its sectoral loan breakdown to better reflect the needs for optimal risk management.
- ***Promote payments system reform:*** Preferably including the introduction of a real-time gross settlement system to reduce interbank settlement risk.
- ***Adapt the legal framework:*** Legal problems impede the authorities' ability to fully privatize state banks, enforce loan contracts, and sell loans. A review of the legal framework could include the banking law itself, with a view to allowing full privatization of state banks; the collateral law, with a view to allowing banks faster access to collateral and the automatic right of liquidation; measures to speed up legal disputes between borrowers and creditor, possibly through the formation of special banking courts; and creating the option for banks (and bank liquidators) to sell loans in the secondary market.
- ***Examine the possibilities to introduce limited deposit insurance:*** While the authorities have rightly refrained from introducing deposit insurance during a period of banking sector weakness, the situation should be reviewed once the remaining problem banks have been resolved. Limited deposit insurance could then help to increase confidence in the system, while allowing a faster resolution of any future problems.

References

- Bank Indonesia: Banking Sector Statistics, Monthly (various issues).
- Garcia, Gillian, "Deposit Insurance: Obtaining the Benefits and Avoiding the Pitfalls," IMF Working Paper 96/83 (Washington: International Monetary Fund).
- Downes, Patrick, Nicholas Roberts, and Veerathai Santiprabhob, "Indonesia: Issues in the Implementation of Payments System Reform," MAE Technical Assistance Report, December 1996.
- International Monetary Fund, "Systemic Bank Restructuring and Macroeconomic Policy," SM/97/1, January 3, 1997.
- International Monetary Fund, "Toward a Framework for Sound Banking," EBS/97/38 and Supplement 1, March 10, 1997.
- Mehran, Hassanali et al, "Indonesia: Options in Dealing with Problem Banks," MAE Technical Assistance Report, March 1994.
- Mehran, Hassanali et al, "Indonesia: Bank Liquidation and Resolution," MAE Technical Assistance Report, August 1994.
- Montgomery, John, "The Indonesian Financial System, its Contribution to Economic Performance and Key Policy Issues," IMF Working Paper 97/45 (Washington: International Monetary Fund).
- Nasution, Anwar, "The Banking System and Monetary Aggregates Following Financial Sector Reforms: Lessons from Indonesia," UNU/WIDER Research Paper, July 1996.
- Sheng, Andrew (ed.), "Bank Restructuring, Lessons from the 1980s," World Bank, 1996.
- Vaez-Zadeh, Reza, Olivier Frecaut, Matthew Saal and Jorma Aaranko: "Indonesia: Supervision of the Financial Sector," MAE Technical Assistance Report, August 1996.
- World Bank, "Bank Recapitalization: If and When," DEC Policy Review Note No. 2, April 1995.

Table IV.1. Indonesia: Banking Sector Statistics, 1993-96

	Commercial Banks	State Banks	Private Foreign Exchange Banks	Private non-Foreign Exchange Banks	Regional Development Banks	Joint Venture Banks	Foreign Banks
Number of banks							
December 1993	234	7	50	111	27	29	10
December 1994	240	7	60	106	27	30	10
December 1995	240	7	75	90	27	31	10
August 1996	239	7	77	87	27	31	10
Number of offices							
December 1993	2,327	979	881	174	269	14	10
December 1994	2,384	981	925	180	270	18	10
December 1995	2,521	984	1,083	153	273	18	10
August 1996	2,614	990	1,158	161	277	18	10
Assets (in billions of rupiah)							
December 1993	291.2	152.3	934	14.6	6.9	13.9	10.1
December 1994	333.6	160.3	118.6	18.1	8.7	17	10.9
December 1995	413.8	187.1	157.7	21.8	11.2	21.6	14.4
July 1996	451.8	194.4	181.8	24.5	11.8	23.1	16.2
Capital to asset ratio (in percent)							
December 1993	9.7	9.0	9.2	15.1	10.1	16.5	6.9
December 1994	6.0	4.6	5.7	12.7	9.2	12.9	3.7
December 1995	6.9	5.2	7.7	10.1	8.0	12.0	6.9
July 1996	7.4	6.1	7.9	9.0	8.5	12.6	7.4
Return on assets (in percent)							
December 1993	1.0	1.0	1.2	0.2	1.9	2.0	1.0
December 1994	0.6	-0.3	1.5	0.8	1.6	1.5	3.2
December 1995	1.8	1.3	1.7	0.1	3.2	3.9	6.5
July 1996	1.2	0.8	1.3	0.2	2.1	2.6	4.3
Loan to deposit ratio (in percent)							
December 1993	108.6	122.8	86.7	101.0	79.2	381.8	96.9
December 1994	115.7	135.7	94.9	105.3	71.0	320.6	98.7
December 1995	113.8	127.4	96.7	110.4	71.8	334.9	107.5
July 1996	113.4	130.5	95.0	109.5	84.4	341.3	103.6

Sources: Bank Indonesia; and Fund staff estimates.

Table IV.2. Indonesia: Composition of Bank Lending, 1993-96

	In Billions of Rupiah			Jul. 1996	Percent Change Over Period	In Percent of Total Loans			Jul. 1996
	1993	Dec. 1994	1995			1993	Dec. 1994	1995	
Total loans	177,469	217,020	267,804	299,938	69.0	100.0	100.0	100.0	100.0
Current	152,320	190,854	239,917	268,617	76.4	85.8	87.9	89.6	89.6
Substandard	7,544	7,301	7,363	9,066	20.2	4.3	3.4	2.7	3.0
Doubtful	11,685	10,201	11,726	12,345	5.6	6.6	4.7	4.4	4.1
Loss	5,920	8,664	8,798	9,910	67.4	3.3	4.0	3.3	3.3
Agriculture	13,562	15,091	17,887	19,235	41.8	7.6	7.0	6.7	6.4
Current	11,233	12,259	15,362	15,763	40.3	6.3	5.6	5.7	5.3
Substandard	349	1,099	712	1,354	288.0	0.2	0.5	0.3	0.5
Doubtful	1,583	1,074	1,225	1,426	-9.9	0.9	0.5	0.5	0.5
Loss	397	659	588	692	74.3	0.2	0.3	0.2	0.2
Mining	1,231	1,185	1,318	1,788	45.2	0.7	0.5	0.5	0.6
Current	1,164	1,083	1,196	1,614	38.7	0.7	0.5	0.4	0.5
Substandard	12	23	33	46	283.3	0.0	0.0	0.0	0.0
Doubtful	33	32	49	59	78.8	0.0	0.0	0.0	0.0
Loss	22	47	40	69	213.6	0.0	0.0	0.0	0.0
Manufacturing	63,024	71,628	81,635	84,907	34.7	35.5	33.0	30.5	28.3
Current	52,038	60,126	68,563	72,194	38.7	29.3	27.7	25.6	24.1
Substandard	4,370	3,299	2,716	3,307	-24.3	2.5	1.5	1.0	1.1
Doubtful	4,728	4,708	5,669	4,445	-6.0	2.7	2.2	2.1	1.5
Loss	1,888	3,495	4,687	4,961	162.8	1.1	1.6	1.8	1.7
Electricity and gas	5,726	7,420	8,853	9,976	74.2	3.2	3.4	3.3	3.3
Current	5,662	7,337	8,775	9,906	75.0	3.2	3.4	3.3	3.3
Substandard	8	15	26	20	150.0	0.0	0.0	0.0	0.0
Doubtful	53	43	19	19	-64.2	0.0	0.0	0.0	0.0
Loss	3	25	33	31	933.3	0.0	0.0	0.0	0.0
Construction	14,120	17,140	20,196	24,189	71.3	8.0	7.9	7.5	8.1
Current	12,619	15,193	18,064	21,236	68.3	7.1	7.0	6.7	7.1
Substandard	411	734	647	1,064	158.9	0.2	0.3	0.2	0.4
Doubtful	718	720	847	1,078	50.1	0.4	0.3	0.3	0.4
Loss	372	493	638	811	118.0	0.2	0.2	0.2	0.3
Trade	39,226	45,656	56,375	64,924	65.5	22.1	21.0	21.1	21.6
Current	32,479	39,618	50,450	58,412	79.8	18.3	18.3	18.8	19.5
Substandard	1,476	1,216	1,537	1,928	30.6	0.8	0.6	0.6	0.6
Doubtful	2,852	1,964	2,464	2,557	-10.3	1.6	0.9	0.9	0.9
Loss	2,419	2,858	1,924	2,027	-16.2	1.4	1.3	0.7	0.7
Transportation and communication	5,449	6,205	7,769	8,930	63.9	3.1	2.9	2.9	3.0
Current	4,844	5,505	7,060	8,229	69.9	2.7	2.5	2.6	2.7
Substandard	153	140	121	157	2.6	0.1	0.1	0.0	0.1
Doubtful	300	339	331	278	-7.3	0.2	0.2	0.1	0.1
Loss	152	221	257	266	75.0	0.1	0.1	0.1	0.1
Service industry	20,736	30,141	44,253	52,037	151.0	11.7	13.9	16.5	17.3
Current	18,986	28,005	42,093	48,480	155.3	10.7	12.9	15.7	16.2
Substandard	534	509	1,008	802	50.2	0.3	0.2	0.4	0.3
Doubtful	802	1,018	737	2,001	149.5	0.5	0.5	0.3	0.7
Loss	414	609	415	754	82.1	0.2	0.3	0.2	0.3
Public service	2,132	3,589	4,197	5,098	139.1	1.2	1.7	1.6	1.7
Current	1,868	3,323	3,734	4,789	156.4	1.1	1.5	1.4	1.6
Substandard	50	95	275	75	50.0	0.0	0.0	0.1	0.0
Doubtful	135	82	94	104	-23.0	0.1	0.0	0.0	0.0
Loss	79	89	94	130	64.6	0.0	0.0	0.0	0.0
Others	12,263	18,965	25,321	28,854	135.3	6.9	8.7	9.5	9.6
Current	11,427	18,405	24,620	27,994	145.0	6.4	8.5	9.2	9.3
Substandard	181	171	288	313	72.9	0.1	0.1	0.1	0.1
Doubtful	481	221	291	378	-21.4	0.3	0.1	0.1	0.1
Loss	174	168	122	169	-2.9	0.1	0.1	0.0	0.1

Sources: Bank Indonesia; and Fund staff estimates.

Table IV.3. Indonesia: Evolution of the Regulatory Framework

Policy Measures	Pre-Reform	Post-Reform	Reform Date
1. New entry			
a. Private banks	Moratorium since 1970	Permitted	Oct. 1988
b. Foreign banks	Moratorium since 1970	Permitted as joint venture	Oct. 1988
2. Branching power			
a. Private banks	Restricted	Permitted for sound banks	Oct. 1988
b. Foreign banks	Restricted to Jakarta	Permitted to seven cities	Oct. 1988
3. Forex license	Restricted	Sound banks are eligible	Oct. 1988
4. Types of loans			
a. State banks	Mainly extended subsidized credit programs, as set and refinanced by Bank Indonesia	Scope and coverage of subsidized credit was reduced	Jun. 1983 and Jan. 1990
b. Private banks	Free to set	20 percent of credit must be extended to small businesses	Oct. 1988
c. Foreign banks	Free to set	50 percent of total credit must be extended to export related activities	Oct. 1988
5. Public sector deposits	Restricted to state banks	Restricted to state banks	Oct. 1988
6. Deposits of state enterprises	Restricted to state banks	Up to 50 percent with private banks	Oct. 1988
7. Deposit rates			
a. State banks	Controlled	Free to set	
b. Private banks	Free to set	Free to set	Jun. 1983
c. Foreign banks	Free to set	Free to set	

Table IV.3. Indonesia: Evolution of the Regulatory Framework (continued)

Policy Measures	Pre-Reform	Post-Reform	Reform Date
8. Loan rates			
a. State banks	Controlled	Free to set	Jun. 1983
b. Private banks	Free to set	Free to set	Jun. 1983
c. Foreign banks	Free to set	Free to set	Jun. 1983
9. Credit ceilings	Set for all types of banks	Eliminated	Jun. 1983
10. Foreign exchange businesses (limited to specially licensed banks)	Subject to ceilings	Control over net open positions	Nov. 1989
11. Reserve requirements	15 percent of deposits (differentiated between banks)	2 percent of deposits	Oct. 1988
12. Entry into new activities			Dec. 1988
a. Leasing	Not regulated	Subsidiary	
b. Venture capital	Not regulated	Subsidiary	
c. Securities trading	Not regulated	Not for own account, nor as broker/dealer	
d. Factoring	Not regulated	Directly	
e. Consumer finance	Not regulated	Directly	
f. Credit cards	Not regulated	Directly	
g. Underwriting shares	Not regulated	Prohibited	
h. Custodian	Not regulated	Approval required for capital market	
i. Trustee and guarantor	Not regulated	Approval required for capital market	
j. Securities Administrative Agency	Not regulated	Prohibited	
k. Investment manager	Not regulated	Subsidiaries	

Table IV.3. Indonesia: Evolution of the Regulatory Framework (concluded)

Policy Measures	Pre-Reform	Post-Reform	Reform Date
13. Capital requirement			
a. Private banks	None	Rp. 10 billion Rp. 50 billion Rp. 175 billion	Oct. 1988 Oct. 1992 Sept. 1997
b. Joint venture banks	None	Rp. 50 billion Rp. 100 billion	Oct. 1988 Oct. 1992
14. Legal lending limits (percent of bank capital)	None	Existing credit: Individual borrower 20 percent Group 50 percent New credit: Affiliated borrower 10 percent Individual 20 percent Group 20 percent	May 1993 May 1993
15. Loan-to-deposit ratio	None	110 percent	Feb. 1991
16. Capital adequacy ratio	None	Percent of risk-weighted assets 5 percent by Mar. 1992 7 percent by Mar. 1993 8 percent by Dec. 1993 9 percent by Sept. 1997 10 percent by Sept. 1999 12 percent by Sept. 2001	Feb. 1991
17. Net open position	None	25 percent of capital	Mar. 1989
18. Accounting standards	None	Standardized: accounting standards for Indonesian banks	Jan. 1993

Source: Bank Indonesia.

Table IV.4. Indonesia: Classified Loans of Commercial Banks, 1993-96

(In percent of total loans)

	1993	Dec. 1994	1995	Oct. 1996
All commercial banks	14.2	12.1	10.4	10.0
State banks	19.8	18.6	16.6	15.4
Private foreign exchange banks	5.2	3.7	3.7	4.8
Private nonforeign exchange banks	22.3	16.0	13.8	13.0
Regional development banks	20.6	19.9	16.2	14.9
Joint venture banks	6.8	8.1	7.1	7.0
Foreign banks	2.8	2.5	2.0	2.6
Memorandum item:				
Problem loans in percent of GDP	7.3	7.3	6.2	5.4

Sources: Bank Indonesia; and Fund staff estimates.

Table IV.5. Indonesia: Noncompliance with Prudential Regulations and Lending Directives, 1993-96

(In percent of all banks)

	Commercial Banks	State Banks	Private Foreign Exchange Banks	Private NonForeign Exchange Banks	Regional Development Banks	Joint Venture Banks	Foreign Banks
Capital adequacy ratio							
December 1993	12.4	14.3	20.0	13.5	11.1	0.0	0.0
December 1994	9.2	14.3	10.0	11.3	7.4	3.3	0.0
December 1995	8.8	0.0	8.0	14.4	3.7	0.0	10.0
June 1996	7.5	0.0	5.2	12.6	3.7	3.2	10.0
November 1996	6.3	...	...	...	...	...	...
Loan to deposit ratio							
December 1993	6.4	14.3	2.0	5.4	7.4	10.3	20.0
December 1994	7.1	0.0	0.0	8.5	0.0	20.0	20.0
December 1995	7.5	14.3	1.3	8.9	0.0	19.4	20.0
June 1996	8.4	14.3	3.9	11.5	0.0	12.9	20.0
December 1996	5.0	...	...	...	...	...	...
Legal lending limit							
December 1993	24.8	42.9	32.0	26.1	11.1	20.7	10.0
December 1994	19.2	42.9	26.7	20.8	0.0	13.3	10.0
December 1995	13.8	28.6	10.7	16.7	14.8	9.7	10.0
June 1996	18.8	28.6	19.5	21.8	18.5	12.9	0.0
December 1996	18.4	...	...	...	...	...	...
Net open position limit							
December 1993	3.8	28.6	10.0	0.0	0.0	3.4	10.0
December 1994	7.9	28.6	20.0	0.0	0.0	10.0	20.0
December 1995	3.8	28.6	6.7	0.0	0.0	3.2	10.0
June 1996	2.1	0.0	3.9	0.0	0.0	0.0	20.0
December 1996	7.7	...	...	...	...	...	...
Small business credit							
December 1993	24.4	71.4	32.0	32.4	0.0	0.0	0.0
December 1994	37.5	28.6	46.7	54.7	7.4	0.0	0.0
December 1995	34.6	14.3	49.3	50.0	0.0	0.0	0.0
June 1996	38.1	28.6	57.1	51.7	0.0	0.0	0.0
Export credit							
December 1993	3.4	0.0	0.0	0.0	0.0	13.8	40.0
December 1994	7.1	0.0	0.0	0.0	0.0	36.7	60.0
December 1995	7.5	0.0	0.0	0.0	0.0	35.5	70.0
June 1996	8.4	0.0	0.0	0.0	0.0	45.2	60.0

Sources: Bank Indonesia; and Fund staff estimates.

Table IV.6. Indonesia: Trends in Property Lending, 1993-97

	Total Property Lending (in trillions of rupiah)			Property Loans in Percent of Total Loans			Market Share in Property Loans	
	End 1993	Jan. 1996	Feb. 1997	End 1993	Jan. 1996	Feb. 1997	1993	1996
All commercial banks	21.7	43.1	62.4	12.2	16.0	20.3	100.0	100.0
State banks	8.7	15.5	n.a.	9.2	12.8	n.a.	40.0	36.0
Private banks	11.4	24.8	n.a.	17.5	21.1	n.a.	52.4	57.6
Development banks	0.8	1.4	n.a.	23.9	24.1	n.a.	3.9	3.2
Joint venture and foreign banks	0.8	1.4	n.a.	5.5	5.6	n.a.	3.7	3.2

Sources: Bank Indonesia; and Fund staff estimates.

V. POVERTY ALLEVIATION, INCOME DISTRIBUTION AND IMPLICATIONS FOR ECONOMIC POLICY¹

A. Introduction

1. Rapid and sustained economic growth in Indonesia over the past three decades—based on stable macroeconomic policies, high investment and saving rates, and structural reforms to liberalize markets—has been associated with substantial reductions in poverty. The authorities have also addressed poverty and income distribution objectives through specific measures, within this overall policy framework. Sustained growth and greater focus on programs targeted to the poor is expected to further reduce poverty and income inequalities over the medium term.

2. The paper is organized as follows: Section B reports on the progress achieved in poverty alleviation and improving social indicators and the resulting income distribution. Section C outlines the longer-term objectives of the government in these areas and reviews policy options that might be implemented to reach the targets. Proposed measures include higher spending on human resource development, a well-targeted social safety net, continued structural reforms and improved governance.

B. Progress in Poverty Alleviation and Reducing Income Inequality

3. The proportion of the population living below the officially defined poverty line declined from about 60 percent in 1970 to about 11 percent in 1996. This achievement is particularly impressive when judged against the increase in the population from 117 million to 200 million over this period. In absolute numbers, the incidence of poverty declined from 70 million people in 1970 to 22.5 million in 1996.

4. Indonesia's strong record in reducing poverty can be attributed importantly to high aggregate growth, which averaged over 7 percent per year during this period and 8 percent during the 1990s. With annual population growth of about 2 percent, per capita GDP has risen by almost 5 percent per year and is now over \$1,100. Although this is still well below income levels in several ASEAN countries, few other countries have achieved similar rates of increase during the last twenty-five years.

5. High investment rates and market-oriented policies have enhanced efficiency and contributed to rapid development. High national savings have enabled growth to be sustained without excessive recourse to foreign saving, thereby avoiding the need to periodically implement adjustment policies to address external imbalances. Prudent budgetary management has helped to avoid fiscal imbalances.

¹The author of this chapter is Manfred Koch.

6. Economic growth has been broad based and labor intensive. During the 1970s and the early 1980s growth in the agricultural sector averaged over 4 percent per year, mainly as a result of rapid improvements in irrigation and rural infrastructure. The output of rice—a staple food item in large parts of the country—grew even faster. Since at the beginning of this period over half of the population and over 80 percent of the poor depended on agriculture, this laid the foundation for sustained poverty alleviation. From the mid-1980s, the expansion of labor-intensive manufactures has been the main source of economic growth and poverty reduction. The liberalization of foreign trade and the associated increase in foreign direct investment led to rapid growth in their share of total exports. This generated substantial employment in urban areas, thereby absorbing workers that migrated from the rural sector without impeding progress in poverty reduction.

Poverty alleviation

7. Gains in poverty reduction have been broadly equivalent across urban and rural areas, although the decline in the number of people living below the poverty line in urban areas appears less marked because of the substantial increase in urbanization. Between 1976 and 1996, the proportion of the poor fell by almost 30 percentage points in both urban and rural areas, but in absolute numbers, poverty in urban areas declined by only 3 million whereas in rural areas it declined by almost 29 million (Table 1). However, poverty in rural areas is still proportionately higher than in urban conurbations and is concentrated in the agricultural sector. Mason and Baptist (1996) find that average per capita expenditure is lowest and the incidence of poverty is highest among farmers in rural areas. These aggregate figures also mask variations both across and within regions. In parts of east Indonesia the incidence of poverty is still above 40 percent. In Java and Bali, which account for two-thirds of the total population, poverty levels range from 1.3 percent in the urban conurbation surrounding Jakarta to 25 percent in parts of central Java (Hill, 1996).

8. Although it is difficult to make cross-country comparisons, Indonesia's experience in poverty reduction appears to compare well with Malaysia, the Philippines, and Thailand (Table 2). This comparison also shows that, with the exception of Thailand, reductions in poverty are closely related to per capita GDP growth. Nevertheless, this may overstate the extent of progress in Indonesia, in part because a large number of people live only marginally above the official poverty line.² Booth (1993) found that the purchasing power parity-adjusted poverty line was lower than in other ASEAN countries for the 1970s and early 1980s. Some recent estimates (Cohen, 1996) suggest that an increase in the poverty line by 10 percent would lead to an increase in the number of the poor by 30 percent.

²In Indonesia, persons with calorie intake below 2,100 per day are considered to be living below the poverty line. The Central Bureau of Statistics calculates the cost of calorie consumption on the basis of its household survey, in which respondents are asked about their consumption of 52 food items.

Social indicators

9. Poverty alleviation has been associated with improvements in human resource development. Universal primary school education was achieved in the early 1980s. Secondary school enrollment rates have increased almost threefold since 1970, although they are still only about 50 percent. School enrollment rates have risen in all provinces, although there are still wide disparities between regions. Basic social indicators have also improved (Table 3). In 1970, the infant mortality rate of 119 per thousand live births was almost twice that in the Philippines, whereas by the mid-1990s it declined to just over 50 per thousand live births, and is now only about 25 percent higher than in the Philippines. Further, life expectancy at birth is now broadly comparable to that in the other ASEAN countries, a substantial improvement relative to the early 1970s when Indonesia lagged considerably behind. The reduction in adult illiteracy stands out as another achievement.

10. Despite these gains, expenditure on human resource development remains relatively modest in comparison with other ASEAN countries (Table 4). Public expenditure on education of 2.3 percent of GDP is substantially lower than in Malaysia and Thailand, but it is broadly comparable to the Philippines. Public expenditure on health amounts to 0.6 percent of GDP, approximately one-third of the levels in Malaysia and Thailand.

11. In addition, the broader measures maintained by the UNDP suggest that the benefits of economic growth may have been spread unevenly across the community. The Human Development Index is a composite measure based on life expectancy at birth; adult literacy and primary and secondary school enrollment rates; and real per capita income. According to this measure, health and education indicators have improved at a slower pace than would be warranted by Indonesia's sustained per capita income growth. In a sample of 174 countries, Indonesia ranks at 88 in living standards but only at 102 in terms of the index (Table 5). The Capability Poverty Measure evaluates access to basic necessities measured by the percentages of children under five years of age who are fully nourished; births attended by trained health personnel; and women aged 15 years and above who are literate. This index is designed to overcome difficulties in comparing income levels across countries, as well as to measure shortfalls in the provision of basic services. In a sample of 101 countries, Indonesia ranks 62, below a number of Asian countries that have lower per capita incomes (Table 6).

Income distribution

12. The extent of inequality in income distribution in Indonesia appears to be lower than in other ASEAN countries (Deininger and Squire, 1996). In Indonesia, the Gini coefficient has remained broadly constant at about 0.34 since 1970. In Malaysia and the Philippines inequality declined through the 1980s, but the Gini coefficients based on the most recent data available were still higher at 0.48 in Malaysia for 1989 and 0.41 in the Philippines for 1991. In Thailand, where inequality has increased since the early 1980s, the Gini coefficient in 1992 was 0.49. However, inequality levels are not strictly comparable, in part because inequality measures in

Indonesia are based on consumption expenditure rather than household incomes as in many countries.³

13. Income inequality in urban areas has remained remarkably stable over the past three decades with the Gini coefficient averaging about 0.34, whereas in rural areas the Gini coefficient fell from 0.35 in the mid-1960s to 0.26 in 1993 (Table 7). This decline of measured inequality in rural areas is partly attributable to migration from rural to urban areas but also indicates the success of development programs that have been directed at raising living standards in the poorest rural areas. It is also notable that inequality in urban areas has not widened despite the substantial increase in urbanization.

14. A comparison of consumption patterns across quintiles of the population confirms the improvement in income distribution in rural areas. The share of consumption expenditure of the bottom 40 percent—the lowest two quintiles—in rural areas has risen consistently over the last two decades. The ratio of this group's consumption expenditure to the consumption expenditure of the top quintile increased from about 50 percent in the mid-1970s to over 60 percent in the mid-1990s (Table 8). The corresponding share of the lowest two quintiles in urban areas has remained broadly unchanged over the same period.

15. The aggregate share of consumption expenditure of the lowest two quintiles in Indonesia has increased only marginally since the mid-1970s—from 19.6 percent to 20.3 percent—but it is higher than the respective shares of lower quintiles in the other major ASEAN countries. The consumption share of the lowest quintile in Indonesia of over 9 percent is well above the corresponding shares in Malaysia of 5 percent in 1989, the Philippines of 6.5 percent in 1991, and Thailand of 5.6 percent in 1990. The share of the top quintile is over 50 percent in all of these countries, whereas it is less than 45 percent in Indonesia (World Bank, 1996).

C. Long-Term Objectives and Policy Challenges

16. Poverty and income distribution concerns are now being given more focus in development planning. This is partly in response to rising aspirations which, in the context of a rapidly growing economy have, to some extent, outweighed the impact of actual progress in reducing poverty. The recent upsurge in social tensions may also be related to heightened awareness of differences in the concentration of wealth among different regions and ethnic groups. The next five-year development plan beginning in 1999 aims to eliminate poverty

³The Indonesian authorities consider that consumption expenditure surveys provide a better guide to living standards because surveys of household income typically understate income levels: consumption levels are found to be higher than would be consistent with reported income levels. This is because respondents do not report incomes from all sources.

entirely by the year 2004.⁴ The authorities have indicated that the share of budgetary resources allocated to education and health will rise steadily during the plan period and that objectives will be specified in the form of explicit quantified targets.

Human resource development

17. Targets for education indicators have been outlined in conjunction with the second Twenty-Five Year Long-Term Development Plan. Over the next ten to fifteen years, the authorities aim to provide nine years of free schooling for all children with greater emphasis on targeting primary education resources to the poor. At the same time, they plan to substantially increase secondary and tertiary school enrollment rates to those prevailing in other advanced Asian countries, and to improve the quality of higher education. Further expansion of the private sector in secondary and tertiary education is expected to allow for larger public sector funding for primary education. The authorities are also intensifying their efforts to reduce the relatively high drop-out rate from primary schools—over 20 percent during the 1990s—and increase the number of primary school graduates who continue on to secondary education. Given the widespread empirical evidence on the positive association between completed education and household income (for Indonesia, see Tambunan, 1995), such a reorientation of expenditure would advance progress on poverty reduction and promote greater equity.

18. Specific targets for health indicators over the next five years include raising life expectancy to 65 years, reducing the infant mortality rate to 50 per thousand live births, and halving the maternal mortality rate. The quality of health care is to be improved by devoting greater resources to the provision of basic preventative services, especially in rural areas. Public funding of hospitals, which are located mainly in urban areas, absorbs a large proportion of the health budget. Moreover, because many nonessential hospital services are heavily subsidized and the average rate of cost recovery in public hospitals is only about 20 percent, public sector health expenditure does not benefit the poor proportionately. Deolalikar (1995) and Van de Walle (1995) find that almost 40 percent of health subsidies benefit the wealthiest 30 percent of households. These imbalances could be reduced by allowing fewer exemptions from hospital charges and introducing differential pricing for the poor.

Targeted poverty programs

19. While economic growth and human resource development will continue to be the most important determinants of poverty incidence, well-targeted assistance programs are also needed. Remaining poverty in Indonesia is increasingly localized by geographical location, particularly in rural areas, age, and gender, and the authorities are accordingly directing effective assistance to the underprivileged groups.

⁴Detailed macroeconomic and social policy targets are to be announced in mid-1998.

20. A major initiative was launched in 1994 to accelerate poverty reduction in the least developed villages.⁵ Assistance is given in the form of grants, to increase productive capacity and employment opportunities, to 20,000 selected villages (out of a total of 68,000 villages), identified on the basis of a survey of social and poverty indicators undertaken by the Bureau of Statistics. The total funds are distributed equally, rather than on the basis of per capita income, with each village receiving the equivalent of about \$10,000.

21. The program is coordinated mainly by the ministries for development planning and home affairs. Use of the funds in each village is decided by community groups, normally comprising up to 30 households, which appraise competing projects and, with the approval of the head of the village, decide on those to receive funding. The groups have the responsibility for implementing projects which, in practice, have ranged from small-scale infrastructure projects to the establishment of small business enterprises and credit schemes operated by village residents. Although the initiative is only one of a large number of public sector programs to help the poor, it is unique in targeting assistance directly at the village level and entrusting local communities to determine priorities and the use of funds.

22. The program appears to be effective in terms of its modest budgetary costs, although a number of aspects are being reviewed to ensure that it provides assistance to genuinely poor villages and the most needy. A selection of villages based on other social indicators undertaken by the World Bank in 1994 did not overlap closely with the villages selected for the program. In addition, the allocation of an equal amount of funds to every eligible village implies that per capita assistance varies markedly between villages. In Java, many villages have populations in excess of 10,000, whereas in low population density provinces, they may comprise only 100 people and grants may in some cases be too small to make a material difference to poverty.

23. A new initiative to directly benefit the poor is contained in the presidential decree of August 1996, which requires relatively wealthy taxpayers—those with post-tax incomes in excess of Rp 100 million—to donate 2 percent of their after-tax income to finance a savings and loan program for poor households to start small business enterprises. The proceeds from this levy are paid into an account with a state-owned bank, which is subject to an independent audit, although the scheme will remain outside the central government budget.

Minimum wage policy

24. It is essential that minimum wage legislation does not inhibit the growth of labor-intensive industries and adversely affect competitiveness, in order to sustain employment growth, which in the past has been the main channel to reduce poverty. During most of the 1970s and 1980s, minimum wages in Indonesia were maintained at relatively low levels. Between 1990 and 1995, average minimum wages across the country increased about

⁵The program is named *INPRES Desa Tertinggal* (IDT).

threefold in nominal terms and more than doubled in real terms. The motivation underlying this policy reflected the authorities' concern that economic growth had failed to sufficiently benefit the poor.

25. In 1996, the government raised the monthly average minimum wage by a further 10 percent and mandated that daily wages would be paid for 30 days per month, rather than 25 days as previously. The recent increase will also raise employment costs because of wider coverage of the minimum wage legislation and efforts to secure greater compliance. In addition, increases in minimum wages may affect average wage levels throughout the economy as workers earning more than the minimum wage seek to maintain wage differentials. Rama (1996) finds strong evidence that increases in average wages in the 1990s have been positively affected by the level of minimum wages.

26. With the most recent increases, effective minimum wages are about 90 percent of officially estimated basic needs. It is therefore expected that increases in minimum wages will be more modest in future. Continued rapid rises—particularly in excess of productivity increases—could inhibit the economy from fully exploiting its comparative advantage. Low value-added industries, such as textiles and footwear, increasingly face competition from other Asian countries where wage levels are substantially lower.

Structural policies and governance issues

27. The growth of labor-intensive manufacturing and service industries in urban areas—both major sources of new jobs—has been spurred by deregulation of domestic product and financial markets, and reductions in trade barriers. A fast pace of structural reforms needs to be maintained to accommodate the large expected increase in labor supply due to population growth and demographic changes. The external environment facing Indonesia is likely to offer increased trade opportunities because of the trend toward globalization, but there is growing competition for export markets and foreign investment as more countries implement market-oriented economic policies.

28. Further deregulation would help to raise the living standards of low-income groups and improve equity. External agricultural trade is still largely prohibited and, consequently, prices of commodities—such as rice, soyabean, sugar, and wheat—are higher than would prevail under free trade. Protection of domestic industries by tariffs and quantitative import restrictions creates opportunities to earn economic rents, which impedes a fairer distribution of income. Application of the tax system in a more even-handed and transparent manner, by reducing exemptions and improving compliance, would help to reduce income disparities.

D. Conclusions

29. Indonesia's strong economic performance over the last 25 years has resulted in rapid growth of per capita incomes, a substantial reduction in poverty, and a marked improvement in many health and social indicators. Indonesia's progress in these areas has been faster than in

other ASEAN countries. Unlike many developing countries, industrialization has been associated with rapid increases in productivity and growth in agriculture, which has released resources for manufacturing industries and the services sector.

30. The main challenge for policymakers is to sustain the successes of recent years, especially in the context of a rapidly changing global environment. Further reductions in poverty and improvements in income distribution may be more difficult to achieve than in the past. They will require not only a fast pace of structural reforms but also strong efforts to improve efficiency by minimizing policy-induced distortions.

31. The authorities will need to ensure that the benefits of growth are widely shared and some sections of the community are not permanently left behind. An expansion of well-targeted poverty relief programs, such as the special assistance to poor villages, can be financed by limiting the activities of the public sector in areas where private markets could operate efficiently. There is also greater scope for higher tax revenue to meet the increasing demands for education and health services.

References

- Booth, A., 1993, "Counting the Poor in Indonesia," *Bulletin of Indonesian Economic Studies*, Vol. 29, No. 1 (April), pp. 53-83.
- Cohen, M., 1996, "Indonesia: Twisting Arms for Alms," *Far Eastern Economic Review*, (May), pp. 25-27.
- Deininger, K., and L. Squire, 1996, "Measuring Income Inequality: A New Data Base," Development Discussion Paper No. 537 (Cambridge, Massachusetts: Harvard Institute for International Development).
- Deolalikar, A.B., 1995, "Government Health Spending in Indonesia: Impacts on Children in Different Economic Groups," in *Public Spending and the Poor. Theory and Evidence*, ed. by van de Walle and Nead (Baltimore and London: The John Hopkins University Press), pp. 259-89.
- Hill, H., 1996, *The Indonesian Economy Since 1966. Southeast Asia's Emerging Giant* (Cambridge, Massachusetts: Cambridge University Press).
- Mason, A.D., and J. Baptist, 1996, "How Important are Labor Markets to the Welfare of the Poor in Indonesia?" Policy Research Working Paper No. 1665 (Washington: World Bank).
- Rama, M., 1996, "The Consequences of Doubling the Minimum Wage: The Case of Indonesia," Policy Research Working Paper No. 1643 (Washington: World Bank).
- Tambunan, T., 1995, "Poverty and Human Resource Development in Indonesia: A Brief Survey," *The Indonesian Quarterly*, Vol. XXIII, No. 2 (Second Quarter), pp. 159-74.
- UNDP, 1996, *Human Development Report 1996* (New York: Oxford University Press).
- Van de Walle, D., 1995, "The Distribution of Subsidies Through Public Health Services in Indonesia, 1978-87," in *Public Spending and the Poor. Theory and Evidence*, ed. by van de Walle and Nead (Baltimore and London: The Johns Hopkins University Press), pp. 226-58.
- World Bank, 1996, *Indonesia: Dimensions of Growth* (Washington).

Table V.1. Indonesia: Trends in Poverty Incidence, 1976-96

	Numbers in Millions			Percent of Population		
	Urban	Rural	Total	Urban	Rural	Total
1976	10.0	44.2	54.2	38.8	40.4	40.1
1978	8.3	38.9	47.2	30.8	33.4	33.3
1980	9.5	32.8	42.3	29.0	28.4	28.6
1981	9.3	31.3	40.6	28.1	26.5	26.9
1984	9.3	25.7	35.0	23.1	21.2	21.6
1987	9.7	20.3	30.0	20.1	16.4	17.4
1990	9.4	17.8	27.2	16.8	14.3	15.1
1993	8.7	17.2	25.9	13.5	13.8	13.7
1996	7.2	15.3	22.5	9.7	12.3	11.3

Source: Data provided by the Indonesian authorities.

Table V.2. Selected ASEAN Countries: Poverty Reduction

(Annual percent change)

	Period	Decline in Poverty	Per Capita GDP
Indonesia	1970-90	2.0	5.2
Malaysia	1973-87	1.6	3.6
Thailand	1962-88	1.4	4.3
Philippines	1971-91	0.7	1.0

Source: Data provided by the World Bank.

Table V.3. Selected ASEAN Countries: Social Indicators, 1970-94

	1970	1980	1994
<hr/>			
Infant mortality rate (per thousand births)			
Indonesia	119	90	53
Malaysia	46	30	12
Thailand	75	48	35
Philippines	67	52	40
<hr/>			
Life expectancy at birth (in years)			
Indonesia	48	56	64
Malaysia	61	68	71
Thailand	60	65	69
Philippines	57	62	65
<hr/>			
Adult illiteracy rates (percent of population and 15 years and above)			
Indonesia	43	33	16
Malaysia	42	26	17
Thailand	21	12	6
Philippines	17	17	5

Source: World Bank, *Social Indicators of Development*.

Table V.4. Selected ASEAN Countries: Education and Health Expenditure, 1994

(Percent of GDP)

	Education	Health
<hr/>		
Indonesia	2.3	0.6
Malaysia	5.5	1.7
Philippines	2.7	0.5
Thailand	3.5	1.5

Source: IMF, *Government Finance Statistics*.

Table V.5. Selected Asian Countries: Human Development Index (HDI) and Real GDP Per Capita, 1993

(Rank out of 174 countries)

	HDI (1)	Real GDP Per Capita (2)	(2) - (1)
Hong Kong	22	6	-16
Korea, Republic of	29	39	10
Singapore	34	13	-21
Thailand	52	50	-3
Malaysia	53	45	-9
Philippines	95	102	8
Indonesia	102	88	-13
China	108	110	3
Vietnam	121	147	27
Pakistan	134	118	-15
India	135	141	7
Lao People's Democratic Republic	138	135	-2
Bangladesh	143	139	-3

Source: UNDP, *Human Development Report*.

Table V.6. Selected Asian Countries: Capability Poverty Measure (CPM), 1993

(Rank out of 101 countries)

	CPM
Hong Kong	8
Singapore	9
Korea, Republic of	11
China	24
Vietnam	27
Malaysia	29
Thailand	30
Philippines	42
Indonesia	62
Lao People's Democratic Republic	80
Pakistan	87
India	89
Bangladesh	100

Source: UNDP, *Human Development Report*.

Table V.7. Indonesia: Trends in Gini Coefficient, 1970-96 1/

Year	Urban	Rural	Total
1970	0.33	0.34	0.34
1976	0.35	0.31	0.34
1978	0.38	0.34	0.38
1980	0.36	0.31	0.34
1981	0.33	0.29	0.33
1984	0.32	0.28	0.33
1987	0.32	0.26	0.32
1990	0.34	0.25	0.32
1993	0.33	0.26	0.34
1996	...	...	0.36

Source: Data provided by the Indonesian authorities.

1/ Based on consumption.

Table V.8. Indonesia: Trends in Income Distribution, 1976-96 1/

	Urban		Rural		Total	
	Bottom 40 percent (1)	Top 20 Percent (2)	Bottom 40 percent (3)	Top 20 Percent (4)	Bottom 40 percent (5)	Top 20 Percent (6)
1976	19.6	43.0	21.2	40.0	19.6	42.5
1978	17.4	46.2	19.9	41.9	18.1	45.3
1980	18.7	43.5	21.2	39.8	19.6	42.3
1984	20.6	41.1	22.4	37.8	20.8	42.0
1987	21.5	40.5	24.3	36.5	20.9	41.7
1990	19.7	42.7	24.4	36.4	21.3	41.9
1993	20.5	42.2	25.1	36.5	20.3	42.8
1996	19.0	44.0	23.2	37.8	20.3	44.7

Source: Data provided by the Indonesian authorities.

1/ Based on consumption.