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### **Philippines: Selected Issues**

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PHILIPPINES

**Selected Issues**

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Approved by the Asia and Pacific Department

February 6, 1998

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## PREFACE

During the last Article IV consultation, the discussion focused on four main challenges facing the Philippines: raising the low saving and investment rates; reducing external vulnerability; maintaining financial stability by bringing inflation down to lower levels and ensuring that the banking system remains sound; and alleviating poverty. Gerson and Nellor (1997)<sup>1</sup> addressed the issue of fiscal sustainability, identifying the fiscal reform measures needed to secure the government's macroeconomic objectives as well as to reduce the country's dependence on foreign savings. Houben (1997)<sup>2</sup> evaluated the Philippines' experience with different exchange rate regimes and reviewed the merits of three nominal anchor strategies: adhering to a strict money supply rule, adopting an exchange rate peg and switching to direct inflation targeting. On the banking system, technical assistance by the Monetary and Exchange Affairs Department was provided in 1997, with a follow-up mission in February 1998.

In the current set of papers, Debelle and Lim explore an inflation targeting framework as one of the options for the Philippines to achieve a sustained reduction in inflation and to establish its credibility in committing monetary policy to the primary goal of price stability. Gerson examines the impact of fiscal and other economic policies on income distribution in the Philippines, and discusses the factors that have perpetuated the relatively uneven distribution of income in the country and the recent policy initiatives intended to reduce poverty.

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<sup>1</sup>Gerson, P. and D. Nellor, "Philippine Fiscal Policy: Sustainability, Growth and Savings" in *Macroeconomic Issues Facing ASEAN Countries*, Hicklin, Robinson and Singh (eds.), 1997.

<sup>2</sup>Houben, A.C.F.J., "Exchange Rate Policy and Monetary Strategy Options in the Philippines: The Search for Stability and Sustainability", IMF Paper on Policy Analysis and Assessment, PPAA/97/4, 1997.

## 1. PRELIMINARY CONSIDERATIONS OF AN INFLATION TARGETING FRAMEWORK FOR THE PHILIPPINES<sup>3</sup>

### SUMMARY

The Philippines' economic performance in the last four years has been commendable, notwithstanding the difficult conditions in late 1997. Growth, which virtually came to a halt in the early 1990s, picked up in 1993 and accelerated steadily to almost 7 percent by end-1996, fueled by an expansion in exports and investment. At the same time, the fiscal position strengthened, inflation was successfully brought down to single digits, and with large capital inflows, particularly in 1996, gross international reserves rose to record levels. This reversal of economic fortunes has not been easy to accomplish and, in fact, is largely the result of major reforms undertaken in the past decade which liberalized the economy and laid the foundation for investment and export-led growth. Nevertheless, important structural problems remain and as the Philippines prepares for a new era of sustainable growth, it will face many challenges. One of these challenges is to achieve a *lasting* reduction in inflation.

Despite the relatively favorable inflation performance in 1997, it is difficult for the Philippines to achieve and sustain a low inflationary environment with the present monetary framework. Supply shocks, shifts in money demand and the pursuit of multiple objectives within the monetary framework has compromised the inflation objective. In this paper, we explore the option of inflation targeting as a means for the Philippines to achieve a sustained reduction in inflation and to establish its credibility in committing monetary policy to the primary goal of price stability.

Adopting an inflation targeting framework would require a number of changes to the Philippines' monetary policy decision process. Although the central bank has full instrument independence, it would have to demonstrate a willingness to abandon its practice of targeting multiple objectives. It would have to develop the necessary institutional infrastructure, including defining an appropriate price index and inflation target. In addition, given that the inflation target is proactive, rather than reactive, the central bank must focus on the forecast of inflation at the policy horizon. This implies an increased reliance on forward indicators of inflation and on inflation forecasting models, and continual assessment of the relationship between the instruments of monetary policy and the inflation target. Accordingly, the paper provides a first attempt at developing such a body of information, by highlighting a number of variables that might serve as leading indicators of inflation and estimating an inflation forecasting equation.

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<sup>3</sup>Written by Guy Debelle and Cheng Hoon Lim

## I. INTRODUCTION

The Philippines' economic performance in the last four years has been commendable, notwithstanding the difficult conditions in late 1997. Growth, which virtually came to a halt in the early 1990s, picked up in 1993 and accelerated steadily to almost 7 percent by end-1996, fueled by an expansion in exports and investment. At the same time, the fiscal position strengthened, inflation was successfully brought down to single digits, and with large capital inflows, particularly in 1996, gross international reserves rose to record levels. This reversal of economic fortunes has not been easy to accomplish and, in fact, is largely the result of major reforms undertaken in the past decade which liberalized the economy and laid the foundation for investment and export-led growth. Nevertheless, important structural problems remain and as the Philippines prepares for a new era of sustainable growth, it will face many challenges. These include fiscal consolidation to raise public savings over the medium-term and reduce the reliance on foreign savings, addressing banking sector vulnerabilities through strengthened supervision and prudential regulations, maintaining low inflation, reducing poverty and improving income distribution.<sup>4</sup> In this paper, we explore the challenge to achieve a *lasting* reduction in inflation.

Traditionally, inflation in the Philippines has been consistently higher and more variable than those of its ASEAN neighbors, mainly because of sharp policy swings, fluctuations in the exchange rate which feed quickly into domestic prices, and supply shocks (Chart 1). Given that high and variable inflation can lead to inefficient resource allocation and lower long-run growth (Fischer 1993), it is desirable that the Philippines lower its average inflation rate to 4-5 percent in the near term and to 2-3 percent over the longer-term. Indeed, with an average annual inflation rate of 9.4 percent between 1991-97, the Philippines can afford to be more ambitious in its inflation objective.

However, despite the relatively favorable inflation performance in 1997, it may be difficult for the Philippines to achieve and sustain a low inflationary environment with the present monetary framework. In the past, in addition to large and volatile supply shocks, shifts in money demand and the pursuit of multiple objectives within the monetary framework have effectively compromised the inflation objective. In short, the Philippines needs to establish credibility in committing to low inflation over the medium-term. There are a number of ways in which this can be achieved:<sup>5</sup>

- adopting a fixed exchange rate peg. Between end-1995 and July 1997, the central bank effectively kept the exchange rate fixed against the dollar. Although an exchange rate

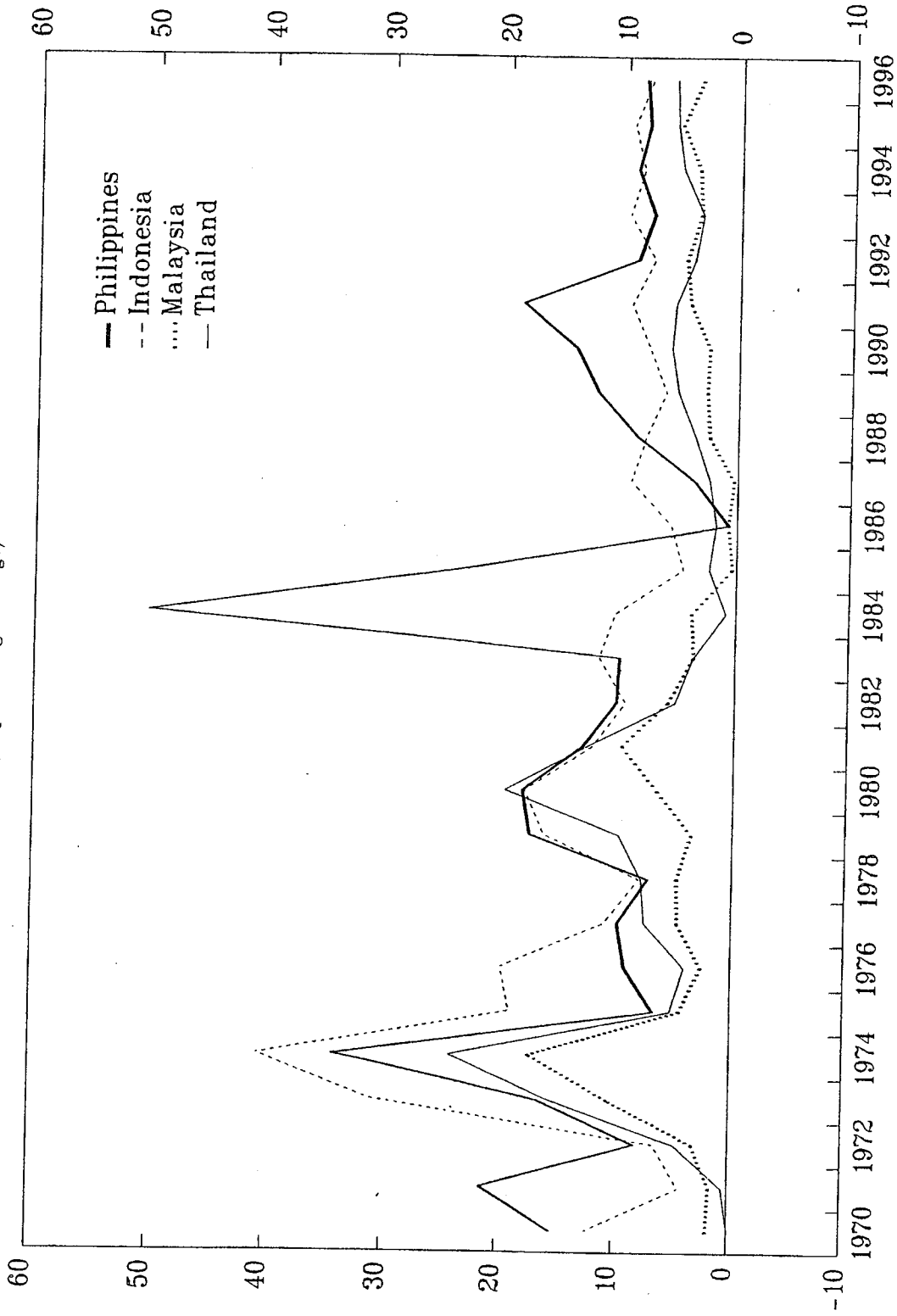
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<sup>4</sup> Gerson (1997) describes trends in income distribution and poverty rates in the Philippines relative to other ASEAN countries.

<sup>5</sup> Houben (1997) reviews in more detail the merits of three monetary strategy options for the Philippines: stricter adherence to a money supply rule, adoption of an exchange rate peg, and a switch to direct inflation targeting.



CHART 1  
PHILIPPINES  
CPI Inflation, 1970-96  
(in percentage change)



Source: IMF: International Financial Statistics.

anchor seems an attractive option given the openness of the Philippine economy, it is vulnerable to speculative attacks as evidenced during the recent regional currency turmoil. This and the relatively low level of reserves in the Philippines (\$7 billion) preclude the use of a tight peg as a viable option at the present time.

- maintaining the current monetary arrangement, which incorporates a feedback rule for inflation. Under this arrangement, base money targets are adjusted upward by the amount that international reserves exceeds programmed levels as long as inflation stays within a targeted range. If year-on-year inflation in the previous month exceeds the targeted rate by 1 percentage point or more, the adjustor will be capped at the previous month's level. This approach, however, is vulnerable to money demand instability, particularly at a time when the Philippine economy is undergoing significant changes in financial intermediation.
- adopting an inflation targeting framework. This approach provides a reference point against which the central bank can enhance its credibility in committing to low inflation. It provides a transparent anchor to wage and price-setting as well as to monetary policy decisions, and it does not need to be adjusted as frequently as a monetary growth target in the presence of shifts in the money demand function.

In this paper, we explore the option of inflation targeting as a means for the Philippines to achieve a sustained reduction in inflation and to establish its credibility in committing monetary policy to the primary goal of price stability. Nevertheless, while an inflation targeting framework may help the central bank overcome the problems of supply shocks and money demand instability, it will not provide an immediate solution to the problem of multiple objectives. Although moves to reform the central bank in the early 1990s have provided it with instrument independence, a crucial requirement is the willingness to abandon its practice of targeting multiple objectives.

The paper is organized as follows. Section II reviews the present monetary policy framework in which base money targets are nominal anchors. It notes the problems encountered in adhering to these targets in the past. Section III discusses the inflation targeting framework, analyzing in some detail its benefits as well as constraints for promoting price stability over other nominal anchors. Section IV outlines the pre-conditions of institutional infrastructure necessary for successful implementation of inflation targeting; in particular, the independence of the central bank and the appropriate definition of the inflation target are discussed. Section V develops a set of leading indicators of inflation using bivariate Granger-causality tests and variance decompositions. The impulse response functions of these indicators are reported, together with an estimated reduced-form inflation forecasting equation. Section VI concludes by drawing some policy implications from the empirical findings.

## II. CURRENT MONETARY FRAMEWORK

Following the debt crisis in late 1983 and the subsequent move to a floating exchange rate regime in October 1984, monetary policy in the Philippines has been anchored, in principle, to base money targets. Base money targeting was introduced in an attempt to bring down inflation, which had soared to over 50 percent in 1984. Inflation was quickly reduced to single digits after monetary policy was tightened. However, monetary policy was later relaxed and base money targets, which were announced ever since, were rarely met until 1996. This was mainly because monetary policy was used to pursue multiple objectives, although shifts in money demand during this period also contributed to missing the monetary targets. In particular, there was a tendency to reduce interest rates both to stimulate growth as well as to maintain a competitive exchange rate even at the risk of compromising the inflation objective. The monetary targets were frequently breached as the central bank intervened to purchase foreign exchange originating from unexpected capital inflows.

From the mid- to late 1980s, the central bank's financial position was severely weakened by significant losses from defending the overvalued peso during the debt crisis and later by large-scale operations to rescue failing domestic banks affected by the sharp downturn in economic performance. This restricted the central bank's ability to conduct effective monetary policy, and in 1993, the central bank was restructured and recapitalized. Under the new Central Bank Charter (RA 7653), renewed focus was given to promoting price stability. Base money targets were kept (in the 1994 EFF program) but an inflation feedback rule was incorporated into the program in order to ensure the inflation objective was met; under this approach, base money targets were adjusted upward by the amount that international reserves exceeded expected levels as long as inflation stayed within a targeted range. However, in mid-1995, interest rates were steadily lowered in reaction to capital inflows, until they, coupled with a drought-induced food price shock, helped push inflation to double digits. Inflation remained at these high levels before tight monetary policy in 1996 and the easing of food prices reduced inflation to single digit levels by end-year; in the first few months of 1997 annual inflation fell to less than 5 percent but picked up in late 1997, given the sharp depreciation of the peso since July.

Despite the recent success in reducing inflation, the Philippines has had a poor track record on inflation. Although part of this problem stemmed from the vulnerability of the inflation rate to supply shocks—food makes up 59 percent of the consumer price index—a significant part was also due to the sharp swings in monetary policy resulting from the pursuit of multiple objectives. Two conclusions can be drawn here. First, careful consideration is required to choose the appropriate price index. Over time, however, this would prove to be less of a problem as the weight of food in the index will gradually decline. In fact, the weight will be revised downward to 49-50 percent in 1998 on the basis of the results of the 1994 Family and Expenditure Household Survey. Second, there has been no transparent anchor of inflation expectations given the difficulty in determining the primary goal of monetary policy. Furthermore, the relationship between the intermediate monetary target and the level of prices and real output has become increasingly obscured as shown by a number of studies on money demand in the Philippines (Stone (1995); Goldsbrough and Zaidi (1989); see also

appendix I). The instability of money demand makes it difficult to establish the level of monetary growth that is consistent with the final inflation objective. Hence frequent adjustments of the intermediate monetary target would be required to ensure the inflation objective was met.

Given the problems inherent in the current arrangement, should an alternative framework, such as a formal exchange rate peg or inflation targeting, be adopted? An exchange rate peg, as noted above, is vulnerable to speculative attacks. Moreover, as long as inflation remains volatile and financial confidence remains sensitive to price developments, it would be important to retain the option of exercising direct control over the money supply which is not possible with a fixed exchange rate. In this context, the inflation targeting framework would be a preferable alternative as it allows a broad set of indicators, including money, to be monitored. Of course, adopting this approach is not without cost as the Philippines would need to establish the appropriate institutions and policy framework before considering a move toward inflation targeting.

### **III. AN INFLATION TARGETING FRAMEWORK<sup>6</sup>**

An inflation targeting framework has been adopted in a number of developed countries in recent years after unsatisfactory experiences with alternative monetary frameworks, including monetary targeting and exchange rate targeting. An inflation target can circumvent some of the problems associated with other intermediate targets by focusing directly on the primary goal for monetary policy, namely price stability. This advantage, however, may be offset by a lack of a stable relationship between the instruments of monetary policy and the inflation target.

#### **A. Advantages of Inflation Targeting**

The countries which have adopted inflation targets had, in the past, been perceived to lack credibility in their desire to achieve low inflation. The inflation target can help address this problem by providing a reference point against which the central bank can enhance its credibility. The inflation target serves to confirm the central bank's commitment to low inflation in the eyes of external observers. This commitment may not be so explicit when the central bank pursues an intermediate target, where the link between the intermediate target and the inflation objective may be imprecise and variable. If the central bank pursues the strategy of examining a wide range of indicators (the "check-list" approach), the inflation target can serve as a focal point for assessing the information provided by the indicators.

In the Philippines, the Central Bank Act (1993) defines price stability as the primary goal for the central bank. An inflation target can translate this goal transparently into the

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<sup>6</sup>There is an extensive literature on inflation targeting and on the experiences of the countries that have adopted the framework. Masson, Savastano and Sharma (1997) studied the possibilities of extending the framework to developing countries.

central bank's day-to-day operations. It would provide a constant focus for monetary policy decisions. In effect, an inflation target specifies the reaction function of monetary policy such that monetary policy reacts to the difference between the inflation target and the forecast of inflation (at the appropriate policy horizon). Policy changes may be more easily conveyed to the public if they are made in relation to an explicit inflation goal, rather than a more nebulous monetary target. This is true in the Philippines where the inflation target range rather than the monetary growth rates are announced to the public.

A credible inflation target also serves as an anchor for wage and price-setters in the economy. Because of the lack of transparency in the implementation of monetary policy in the past, price-setters in the Philippines have not had a reliable mechanism for anchoring their inflation expectations. Initially, there may be some slippage, while the central bank is establishing its commitment to the inflation target, but the target should soon become a reference point for forward-looking expectations. Again, the central bank's emphasis on an explicit inflation target may serve as a better focus for wage and price-setting than an intermediate money or exchange rate target.

An inflation target has an advantage over other potential intermediate targets for monetary policy in that once specified, it should not need to be revised frequently. A monetary growth target on the other hand may need to be revised periodically, as there are shifts in the money demand function that lead to a change in the relationship between monetary growth and the price stability goal. In focusing directly on the final objective, an inflation target sidesteps this problem.

The main advantages of an inflation target, therefore, are that it provides a transparent anchor to both wage and price-setting and to monetary policy decisions, and it does not need to be adjusted frequently.

### **B. The Constraints of Inflation Targeting**

An inflation target needs to be forward-looking, to take account of the potentially long lags between monetary policy changes and their effect on inflation. Thus, in practice, monetary policy should respond to any deviation between the inflation target and the inflation forecast at the policy horizon. Consequently, there needs to be sufficient information to be able to produce a reliable forecast of inflation. Furthermore, the forward-looking nature of an inflation target introduces greater uncertainty into the policy decision, than adherence to a exchange rate rule or a monetary growth rule. Thereby, inflation targeting permits more discretion on the part of the central bank. On the other hand, however, rigid adherence to a particular rule may constrain needed flexibility in responding to changing economic circumstances. The possibility of instrument instability can be addressed by appropriately defining the band-width and central point, and by specifying limited escape clauses for supply shocks.

There must be a reasonably stable relationship between the instruments of monetary control and the inflation target for the inflation targeting framework to be successful.

Knowledge of the relationship between instruments and outcomes is obviously vital for any monetary policy strategy. However, an inflation target requires continual assessment of the relationship whereas alternative strategies such as monetary targeting may only require an infrequent reassessment of the relationship between the monetary target and the policy goal.

The central bank must also have an instrument of monetary policy at its disposal that can be used to pursue the inflation target without any other constraints. In the Philippines, the central bank relies primarily on changes in its overnight and short-term interest rates (reverse repurchase agreements) to adjust the stance of monetary policy. It also has, on occasion, used liquidity reserve requirements to siphon excess liquidity from the system, most recently between August and September 1997.

A significant complication of inflation targeting for the Philippines is its ability to respond to large and potentially volatile capital inflows. Adherence to an inflation target implies that any exchange rate goal is secondary to the achievement of the desired inflation outcome. Whether a conflict arises between an exchange rate goal and the inflation goal would depend on the nature of the capital inflows. If the inflows were temporary, sterilized intervention to maintain exchange rate stability should not compromise the inflation target. However, in the face of more permanent capital inflows, maintenance of a constant nominal exchange rate would either be too costly (if there was sterilized intervention), or would lead to inflation (if there were not).

In the long run, it is likely to be preferable not to resist appreciations in the nominal exchange rate, if capital inflows reflect improved fundamentals.<sup>7</sup> The improved fundamentals suggest the need for a long run real appreciation which would be better achieved by nominal appreciation rather than an increase in domestic inflation. Allowing the nominal appreciation up-front would assist the maintenance of low inflation and obviate the need for a costly disinflation at a later date to sustain the inflation target.

In practice, it may be difficult to distinguish between temporary and permanent capital inflows, and hence between preventing or allowing appreciation. Furthermore, allowing an appreciation up-front could potentially lead to nominal exchange rate overshooting with adverse consequences on the current account. An inflation target, however, simplifies this decision by emphasizing inflation as the primary goal ahead of exchange rate stability.

#### IV. PRE-CONDITIONS FOR AN INFLATION TARGETING FRAMEWORK

There are two main components of an inflation targeting framework which would need to be in place in the Philippines for the framework to operate successfully. They are establishing the necessary institutional infrastructure to underpin the independence of the

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<sup>7</sup>For more details on the appropriate response to capital inflows, see Haque, Mathieson and Sharma (1996).

central bank in its conduct of monetary policy, and defining an appropriate price index and inflation target.

### **A. Instrument Independence**

A fundamental requirement of an inflation targeting framework is that the central bank has the ability to pursue the inflation target without any political interference, that is, that the central bank have “instrument independence”.<sup>8</sup> Such a requirement is necessary in any monetary policy framework but it is particularly essential in an inflation targeting framework, which permits greater discretion in the conduct of monetary policy.

The central bank must be able to set its instruments of monetary policy with a primary focus on the inflation target. For example, the central bank should not be required to finance the budget deficit, nor seek to attain low interest rates on public debt, nor attempt to maintain a particular nominal exchange rate. There should be no political pressure on the central bank to increase the rate of economic growth in a manner inconsistent with the achievement of the inflation target. Once the government has agreed to the inflation target there should be no pressure, for example, on the central bank to accommodate fiscal policy slippages. Measures that have been taken in other countries to safeguard the independence of the central bank include: the appointment of the central bank governor for a term greater than the length of the political cycle; the appointment of a central bank board with overlapping terms of a similarly long length; and the absence from the central bank board of any person holding public office.

To counterbalance this degree of independence of the central bank, there needs to be a sufficient degree of public accountability. In a number of the countries that practice inflation targeting, this accountability has taken the form of the regular publication of the central bank’s assessment of present economic conditions and future prospects for the economy in the central bank’s bulletin, which may include the publication of the central bank’s inflation forecast. Regular testimony by the central bank governor before parliament has also been instituted in a number of countries. A further measure that serves to increase accountability and enhance the credibility of the framework is for the central bank to announce changes in the stance of monetary policy immediately when they occur, and to explain the changes in terms of the expected impact on the inflation target.

The 1993 Central Bank Charter of the Philippines established many of these foundations for an inflation targeting framework. It established an independent central monetary authority with full fiscal and administrative autonomy, allowing the central bank to exercise instrument independence as described above. Furthermore, the Charter specifies the primary objective of the central bank as maintaining price stability conducive to the balanced and sustainable growth of the economy. This is interpreted operationally as pursuing low inflation. In this context, the central bank has consistently issued press statements announcing its inflation target, which is usually defined within a range, for the year.

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<sup>8</sup>Debelle and Fischer (1994).

Nevertheless, a number of institutional arrangements that would support an inflation targeting framework are absent from the Charter. In particular, the Governor, including some members of the Monetary Board, are appointed for a six-year term, exactly the length of the political cycle; of the seven-member Board, one position is designated to a Cabinet member, whose objectivity may be compromised by its public office.

Finally, in nearly all country cases, the inflation targeting framework has been endorsed by the government, rather than been unilaterally imposed by the central bank, and has therefore served to increase the credibility of the framework. Such a government endorsement would also benefit an inflation target in the Philippines.

### **B. Defining the Inflation Target**

The definition of the inflation target needs to address such issues as the appropriate measure of inflation to target, the list of shocks that may permit the temporary suspension of the target, the choice of a target band or a single point, and the level of the target.

The inflation target may be specified in terms of a "headline" or an "underlying" rate. The headline rate is calculated on the basis of the entire consumption basket of the consumer price index. Alternatively, it may be more appropriate to define an underlying rate which excludes components of the headline index that are subject to short run shocks--such as seasonally volatile food prices--that should not precipitate a change in the stance of monetary policy. The Philippines has always used the headline inflation rate in its monetary program and for public announcements. In the estimations below, the headline inflation rate was employed mainly because very disaggregated data needed to calculate an underlying rate was not readily available prior to 1993. Our results suggest that the headline inflation forecast is subject to a relatively wide margin of uncertainty. Nevertheless, as the weight of volatile food components in the CPI basket is reduced over time--the weight will decline to 49-50 percent in 1998--the inflation target can be made with increasing reliability on the basis of the headline inflation rate, which is more popularly known. However, as an operational matter, the central bank may wish to focus on a measure that excludes volatile items. One possibility is to target the median inflation rate or a trimmed mean, which excludes the most volatile price movements<sup>9</sup> in a given period.<sup>10</sup> The central bank has in fact developed these underlying inflation series back to 1993, on a monthly basis.

To preserve the integrity of the inflation target, any components of the CPI which are to be excluded should be specified *ex ante* rather than *ex post*. This could take the form of a list of "caveats" which specify certain shocks which induce an adjustment to the target inflation rate. These shocks might include natural disasters, large changes in the terms of trade

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<sup>9</sup>Say the top and bottom 10 per cent of the distribution of price changes.

<sup>10</sup>Another option is to use the price index for Metro Manila where the weight of food in the consumption basket is lower.



or indirect tax changes. The extent to which the target inflation rate is adjusted in response to these shocks should also be pre-specified in as much detail as possible. For example, one can calculate the impact of a terms of trade shock by examining the import-content of the CPI basket, and the degree and timing of the pass-through from foreign prices to domestic prices.

In the Philippines, the target could either be set to maintain the current rate of inflation, or a timepath for a gradual reduction of the inflation rate could be specified. Empirical research has generally failed to identify any significant economic costs from inflation rates similar to the current rate.<sup>11</sup> However, the possibility of slippage to higher rates of inflation that do have significant economic costs suggest that an inflation target in the short to medium term of around 4-5 percent may be appropriate. In the longer term, this target could be reduced to 2-3 percent.

The inflation target can either be specified in terms of a target band, or a single point. The advantage of specifying the target in terms of a band is that it clearly defines what the central bank is aiming for, and provides a conclusive benchmark against which the performance of the central bank can be assessed. It clearly delineates the central bank's tolerance for variation in the inflation rate.

There are, however, also a number of disadvantages in specifying the target as a band. Firstly, it may not be possible to maintain inflation within a narrow band, even with optimal monetary policy, because of the size of shocks that hit the economy, and because of the lag in the effect of monetary policy in responding to those shocks. To some extent, this threat is reduced by the specification of appropriate "caveats" (described above) or focussing on an underlying rate. Nevertheless, empirical analysis in industrial countries suggests that an appropriate bandwidth may be as much as 5 percentage points.<sup>12</sup> In the Philippines, the historical volatility of the inflation rate suggests that the band would need to be at least this wide. Specifying such a wide bandwidth would likely not serve to increase the credibility of monetary policy.

Secondly, attempting to maintain inflation within too tight a band may induce instability in the instrument of monetary policy. That is, excessively large and frequent changes may be needed as the economic outlook changed. Also, to the extent that changes in the exchange rate impact on the inflation rate with a relatively short lag, large swings in the exchange rate induced by these changes may prove damaging to the traded-goods sectors.

A third disadvantage is that in specifying a band, wage and price setters may focus on the band ceiling, rather than the centrepiece, when forming their inflation expectations. Over

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<sup>11</sup>Sarel (1996) finds little impact on economic growth of inflation rates below 8 percent.

<sup>12</sup>See Haldane and Salmon (1995) for the United Kingdom, Debelle and Stevens (1995) for Australia, and Turner (1996) for New Zealand.

time this problem should diminish as experience with inflation targeting increased, but specifying the target as a single point provides a clear focal point for expectations.

The trade-off involved between defining the target as a band or a point is that between the credibility loss of breaching the target band occasionally (even with ex ante optimal monetary policy), and the potential credibility gain from specifying a tight hard-edged target band. A target point may make it difficult to assess the performance of the central bank in the short run, and hence decrease the credibility bonus of the inflation target.<sup>13</sup>

## V. FORECASTING INFLATION

### A. A Model of Inflation

Unlike a monetary or exchange rate target which only require that the current monetary aggregate or exchange rate is monitored, an inflation target must be forward-looking. This is necessary because of the relatively long lags between changes in the instrument of monetary policy and the effect on inflation. Consequently, a model of the inflation process is required, to provide a forecast of inflation which can be compared to the inflation target at the policy horizon. In this section we develop a simple model of inflation in the Philippines.

We assume that consumer price inflation in the Philippines ( $\pi$ ) is a weighted average of domestic inflation  $\pi^d$  and imported inflation  $\pi^m$ , with  $\alpha$  as the share of imported goods in the consumer price index:

$$\pi_t = (1-\alpha)\pi_t^d + \alpha\pi_t^m \quad (1)$$

The price of imported goods is equal to the exchange rate times the foreign price level, so that imported inflation is equal to the change in the exchange rate plus the foreign inflation rate:

$$\pi_t^m = \Delta e_t + \pi_t^f \quad (2)$$

Domestic inflation is determined by the standard expectations-augmented Phillips curve:

$$\pi_t^d = \pi_t^e + \beta(y_t - y_t^*) + u_t \quad (3)$$

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<sup>13</sup>In the experience to date in the industrial countries that have adopted an inflation targeting framework, the choice of a band or a single point does not seem to have had any significant impact.

where  $y$  is the level of output,  $y^*$  is the level of potential output and  $\pi^e$  are inflation expectations (which may be approximated by lags of the inflation rate). The output gap ( $y-y^*$ ), in turn, is determined by lags of interest rates (the instrument of monetary policy) and real exchange rate changes:

$$y_t - y_t^* = C + A(L)i_t + B(L)(\Delta e_t - \pi_t) + v_t \quad (4)$$

Substituting equations (2) and (3) into equation (1) results in a model where inflation is a function of the output gap, exchange rate changes and foreign inflation. Monetary policy influences inflation through the impact of interest rates on the output gap, and the exchange rate on inflation and the output gap. Solving for  $\pi$  yields:

$$\pi_t = c_0 + c_1(y_t - y_t^*) + a(L)\pi_t + b(L)\pi_t^f + d(L)e_t + \epsilon_t \quad (5)$$

The inflation forecast, however, need not be solely derived from a model; at times, there may need to be a large degree of judgement in forming the inflation forecasts, particularly when full understanding of the structural economic relationships is not known with certainty. In this case, a large number of economic indicators may be monitored to provide additional input to the inflation forecast. This approach is particularly useful when the economy is subject to large structural changes, as in the Philippines. Typically, the multiple-indicator approach depends on the estimation of a series of vector autoregressions (VARs) which identify a set of indicators that has predictive information on inflation on the basis of tests of granger-causality, variance decompositions and impulse responses. The bivariate granger-causality tests provide information on the leading indicator properties of the variables tested; the forecast error variance decompositions measure the proportion of the variance of inflation that is explained by the variance of the indicator variable and the impulse responses assess whether the indicator variables contain information about inflation sufficiently far into the future to be operationally meaningful. The estimated bivariate VAR equations are of the form:

$$\begin{aligned} \Delta X_t &= \alpha(L)\Delta X_{t-1} + \beta(L)\Delta Y_{t-1} + sd1 + sd2 + sd3 + \epsilon_t \\ \Delta Y_t &= \alpha(L)\Delta Y_{t-1} + \beta(L)\Delta X_{t-1} + sd1 + sd2 + sd3 + \eta_t \end{aligned} \quad (6)$$

where  $X$  is the target variable or the price index in this case,  $Y$  the indicator variable and  $sd1$ ,  $sd2$  and  $sd3$  are seasonal dummies included to take account of seasonality effects.

## **B. An Empirical Estimation: Leading Indicator Properties and an Inflation Equation**

A pre-condition of a successful inflation targeting framework, as noted above, is the ability to forecast inflation reasonably well over policy-relevant time horizons. We follow two approaches in forecasting inflation. First, we assess the predictive content of a wide range of financial variables using VAR analysis as shown in equation (6). Second, we estimate an inflation equation along the lines of equation (5).

Since the headline inflation rate is used in the following estimations, pending the construction of a more satisfactory price index, the empirical results reported below are purely of an illustrative nature. The sample period was from 1983q1 to 1996q4 for all equations except those for base money and stock prices which were estimated from 1988q1 to 1996q4. All variables are in logarithm form except for interest rate variables. ADF tests show the CPI and the levels of the indicator variables to be I(1). Hence, inflation and the first differences of the indicator variables are assumed to be stationary.

### **(1) Leading indicators of inflation**

To test the predictive content of various economic variables for inflation, likelihood-ratio tests were carried out for the null hypothesis that the indicator variable does not granger-cause inflation. Table 1 reports p-values for lag lengths 1 to 8. The set of indicator variables ( $Y$  in equation (6)) are the output gap (OUTG), the peso-U.S. dollar exchange rate (FX),<sup>14</sup> broad money plus foreign currency deposits (M4), broad money (M3), base money (BaseM), the U.S. inflation rate (USINF), the 91-day treasury bill rate (91-TBILL), the 364-day treasury bill rate (364-TBILL), the differential between the 91-day treasury bill rate and the 3-month SIBOR (RDIFF) and stock prices (PSEINDEX) (see Appendix II for a detailed description of the variables). Tables 1-2 report the results obtained and Charts 2-3 plot the respective impulse response functions.

The output gap, changes in the exchange rate, base money growth, M4 growth and the U.S. inflation rate have a high degree of predictive content on inflation. The level of interest rates and the differential between the 91-day treasury bill rate and the 3-month SIBOR has

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<sup>14</sup> The output gap measures the deviation of potential output from actual output, where potential output is derived from the Hodrick-Prescott filter. An increase in the exchange rate implies a depreciation of the peso vis-a-vis the U.S. dollar. Hence, the expected signs of OUTG and DFX are positive.

CHART 2

PHILIPPINES

# Orthogonalized Impulse Responses of Inflation to One Standard Deviation Shock

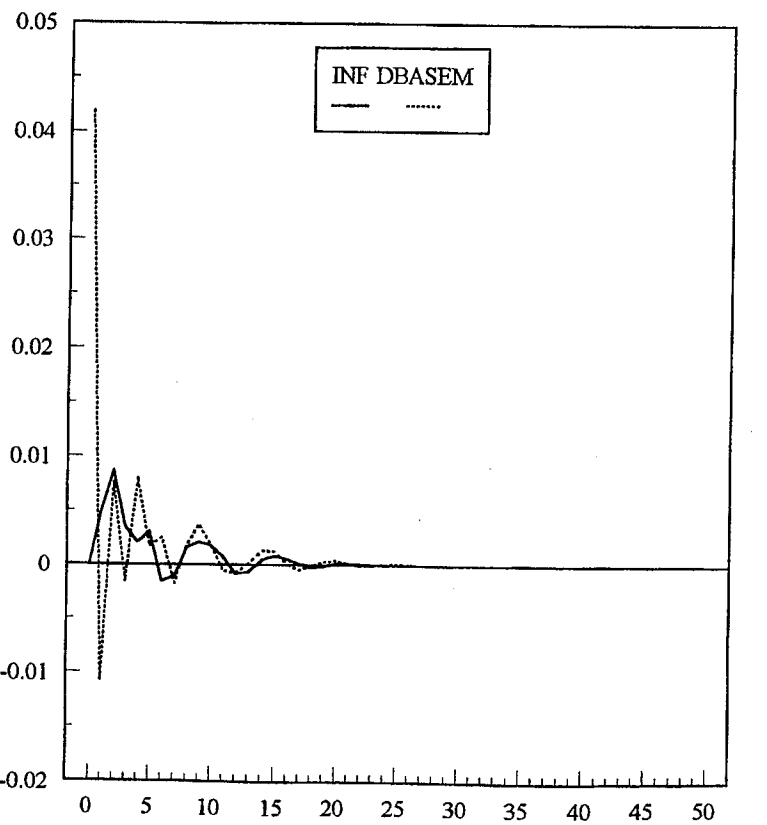
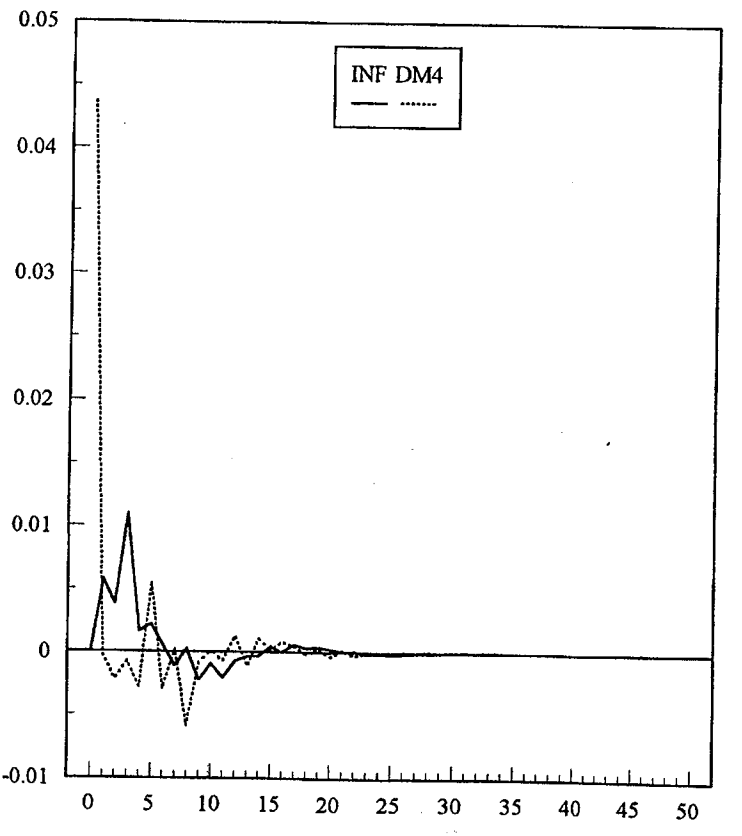
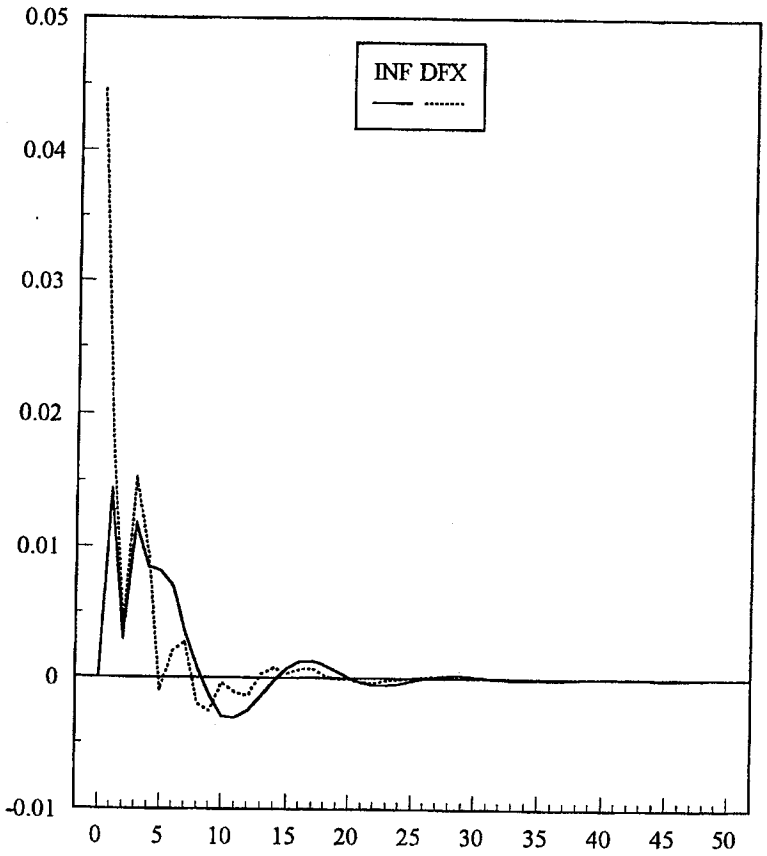
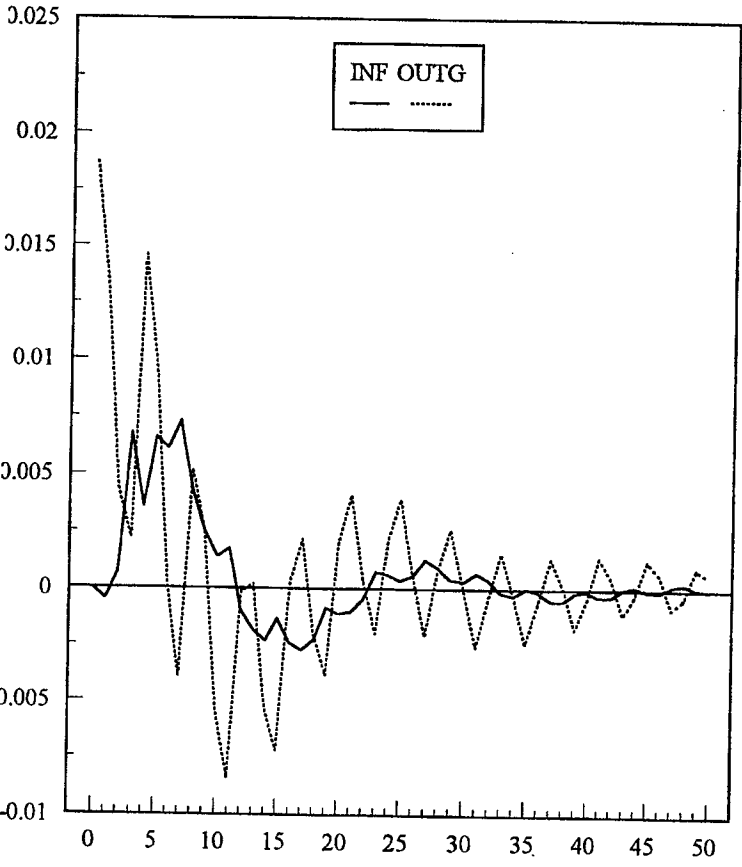
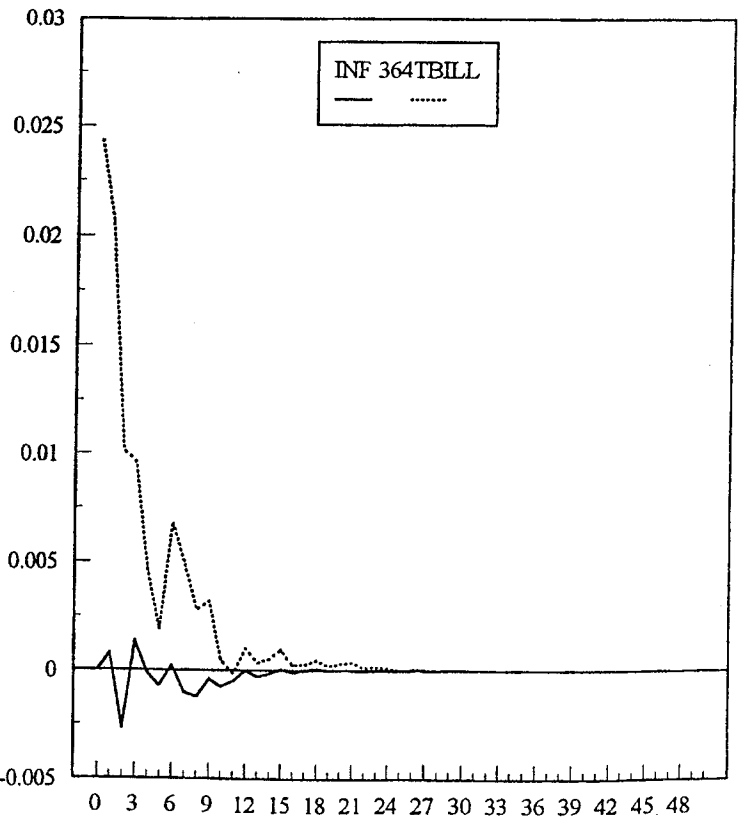
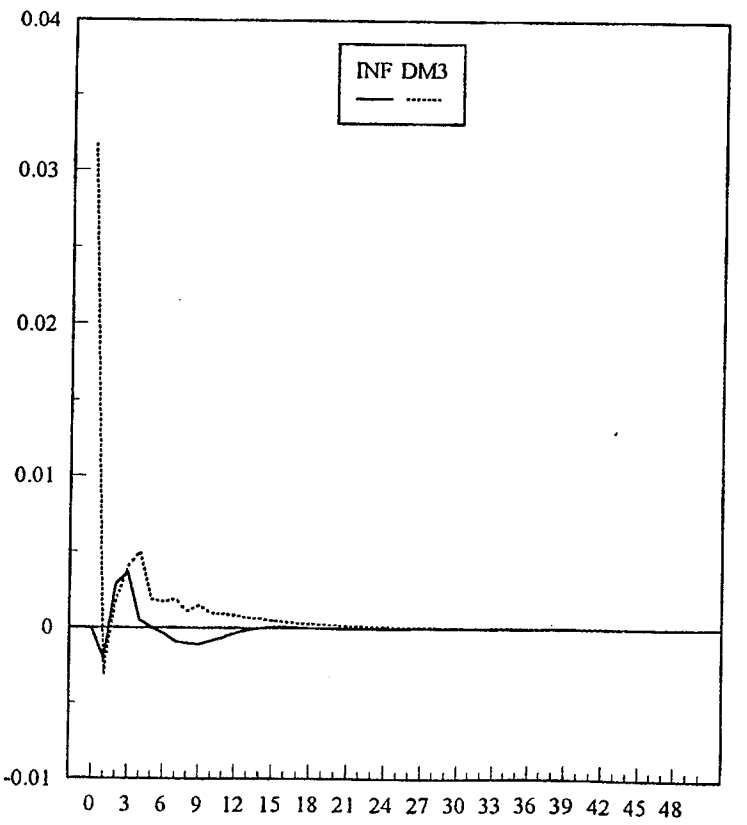
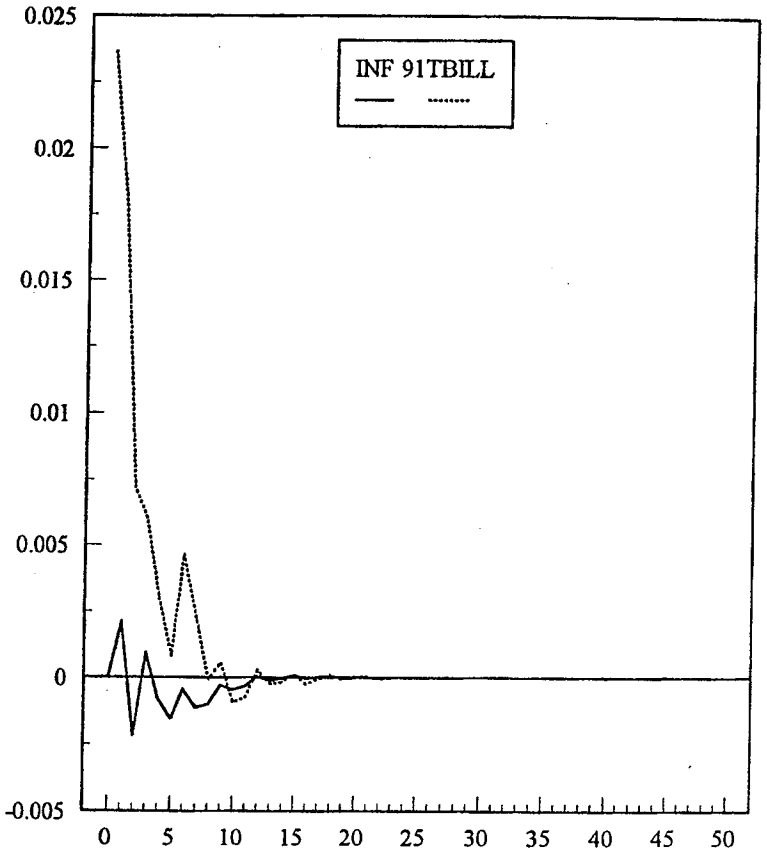
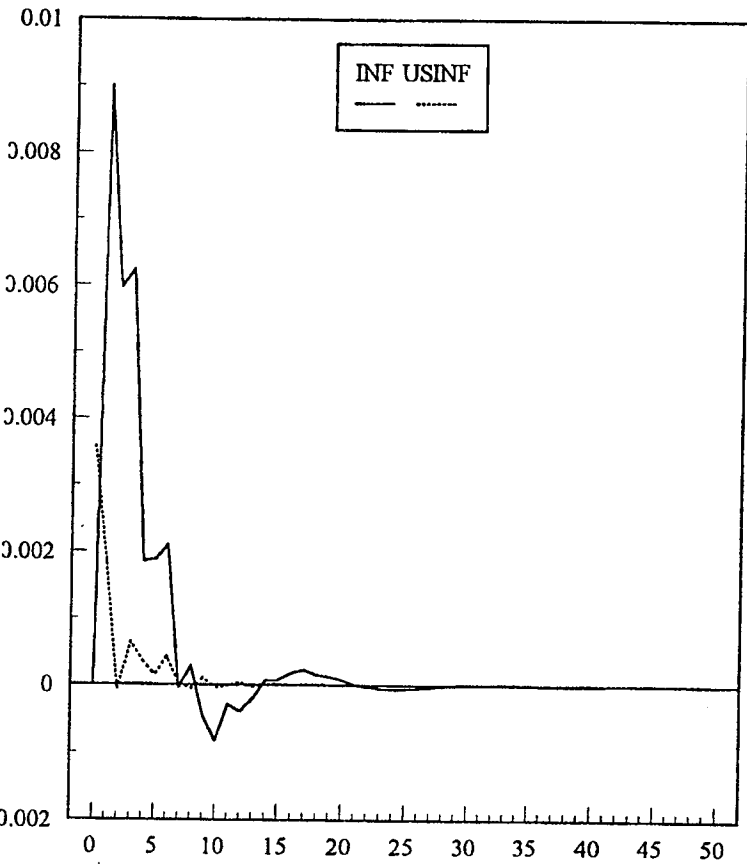


CHART 3

PHILLIPINES

Orthogonalized Impulse Responses of Inflation to One Standard Deviation Shock



some predictive content, but mostly in the initial lag lengths. Stock prices and M3 growth appear to have little predictive information. There is some evidence that the interest rate variables contain predictive information on inflation in more recent years; granger-causality tests from 1988 shows a rejection of the null for the levels of interest rates as well as for the interest rate differential.

The variance decomposition results support the granger-causality findings. The variance of changes in base money explains a significant proportion of the variance in inflation, rising quickly from 20 percent in the first quarter to more than 50 percent by the end of one year. Changes in the exchange rate and the output gap are also good predictors, accounting for close to 40 percent and 14 percent of the forecast variance of inflation, respectively. Furthermore, the pass-through effect of changes in the exchange rate on inflation is relatively fast, as shown by the large forecast variance in the first quarter. The U.S. inflation rate is a reasonable predictor explaining 12 percent of the forecast variance of inflation but the interest rate variables, M3 and stock prices are poor predictors.

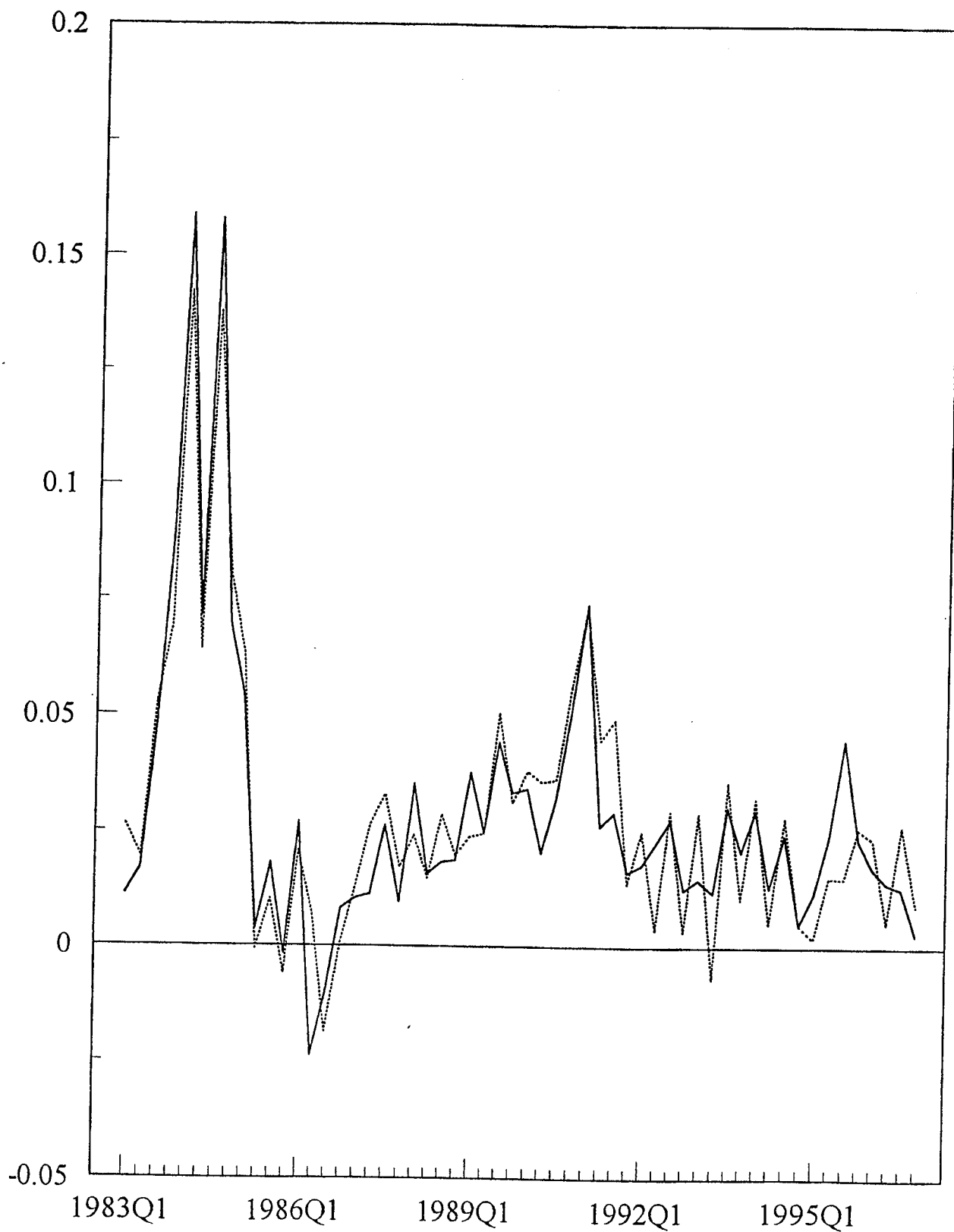
The impulse response functions show that movements in base money, exchange rates, the output gap, the U.S. inflation rate and the interest rate variables contain information on inflation sufficiently far into the future to be operationally useful for a policy maker. In particular, the impulse response function for the 91-day treasury bill rate peaks around the first two quarters, base money around the second to fourth quarters, and the output gap at around the fifth quarter. For the exchange rate, the impulse response shows that it contains predictive information on inflation well into the fifth quarter; this is not so for the U.S. inflation rate which peaks at around the first two quarters.

## **(2) An inflation equation**

The forecasting inflation equation (5) was estimated over the period from 1983q1 to 1996q4 with the output gap, changes in the nominal peso-U.S. dollar exchange rate and the U.S. inflation rate as explanatory variables. Column 1 in Table 3 shows that the estimated inflation equation explained inflation developments reasonably well with an adjusted R-square of 83 percent (Chart 4). The lags of inflation indicate inertia in the inflation process and/or are proxying for inflation expectations. The output gap variable is statistically significant after the third lag, suggesting that deviations of output from potential feed through to inflation relatively slowly. The rate of depreciation of the domestic currency vis-a-vis the U.S. dollar has an important effect on inflation. Although there is some evidence of overshooting, the estimated long-run coefficient amounts to a sizable 0.7 percent. Similarly, the U.S. inflation rate, a proxy for external shocks, is a major determinant of the Philippine inflation process, having a one for one impact on the domestic inflation rate in the short-run.

In columns 2-4, the influence of the output gap and monetary policy on inflation are proxied by lags of the 91-day treasury bill rate, base money and M4. The estimated coefficients of these variables were statistically significant, and the inclusion of these variables did not significantly change the estimated coefficients of the remaining explanatory factors,

CHART 4  
PHILIPPINES  
Plot of Actual and Fitted Values (column 1)





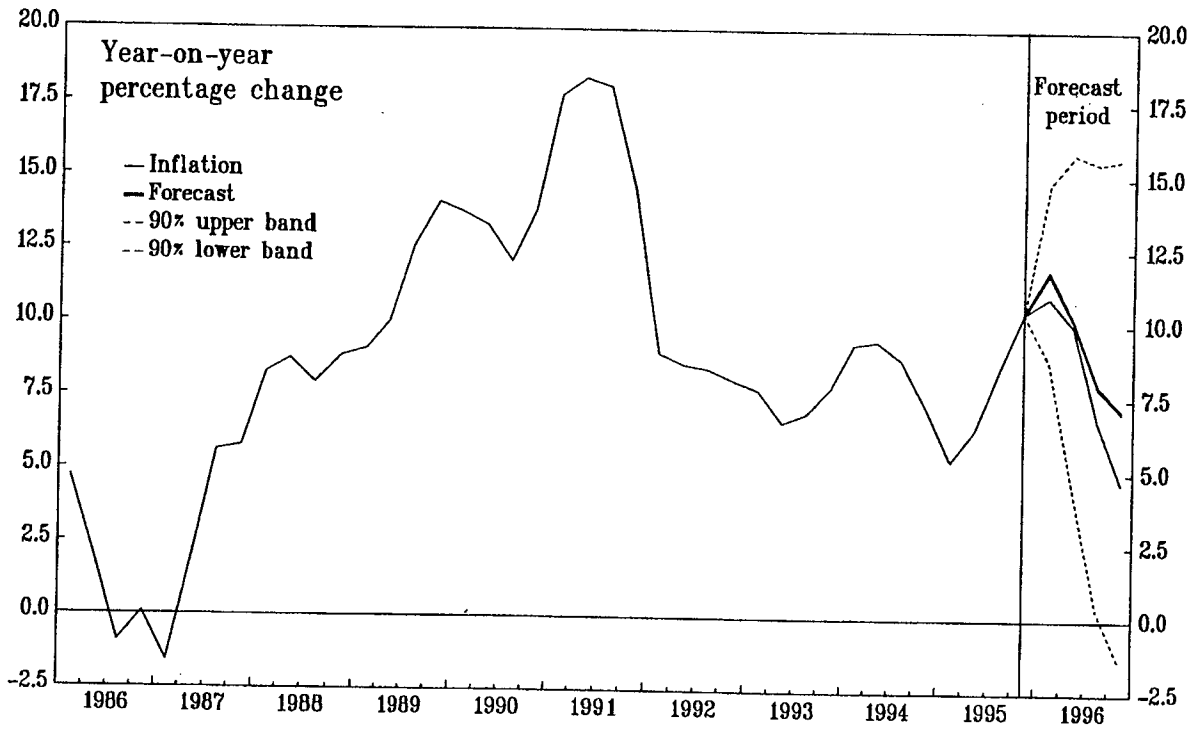
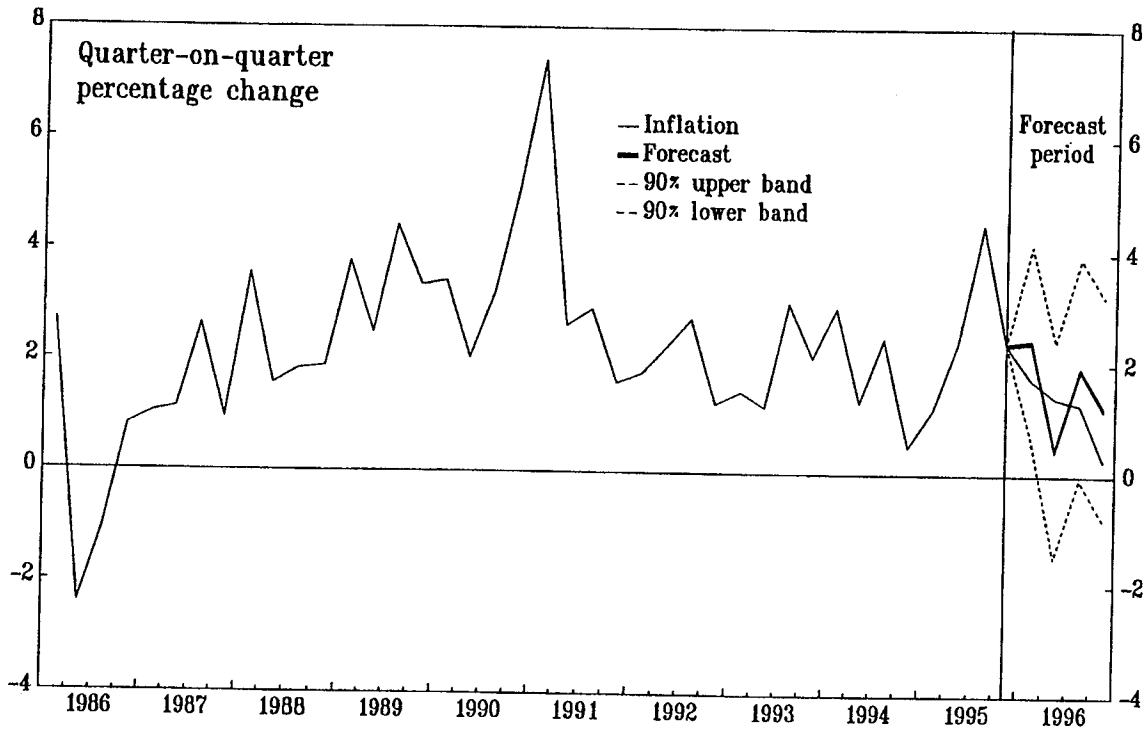
with the exception of USINF whose estimated coefficient increased to 2 in column 2. All diagnostic tests were satisfactory with no evidence of serial correlation or heteroscedasticity.

Chart 5 plots the dynamic forecasts for 1996 of the estimated inflation equation from column 1. Although the equation predicts inflation developments in 1996 reasonably well, there is considerable uncertainty attached to the forecasts; in particular, the 90 percent confidence interval around the inflation forecast is large at some 7-8 percentage points on either side. This is not surprising given the historical volatility of the Philippine inflation rate. The inflation targeting framework, by committing monetary policy solely to lowering inflation, should reduce future forecast errors. Using the underlying rate of inflation instead of the headline inflation rate as the dependent variable could also reduce the standard error band. Food prices has been the single most volatile item in the basket (Chart 6).

CHART 5

PHILIPPINES

Out of Sample Forecast of Inflation, 1986-96



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

Chart 6  
Philippines  
Variability of Inflation by Component  
(In percent)

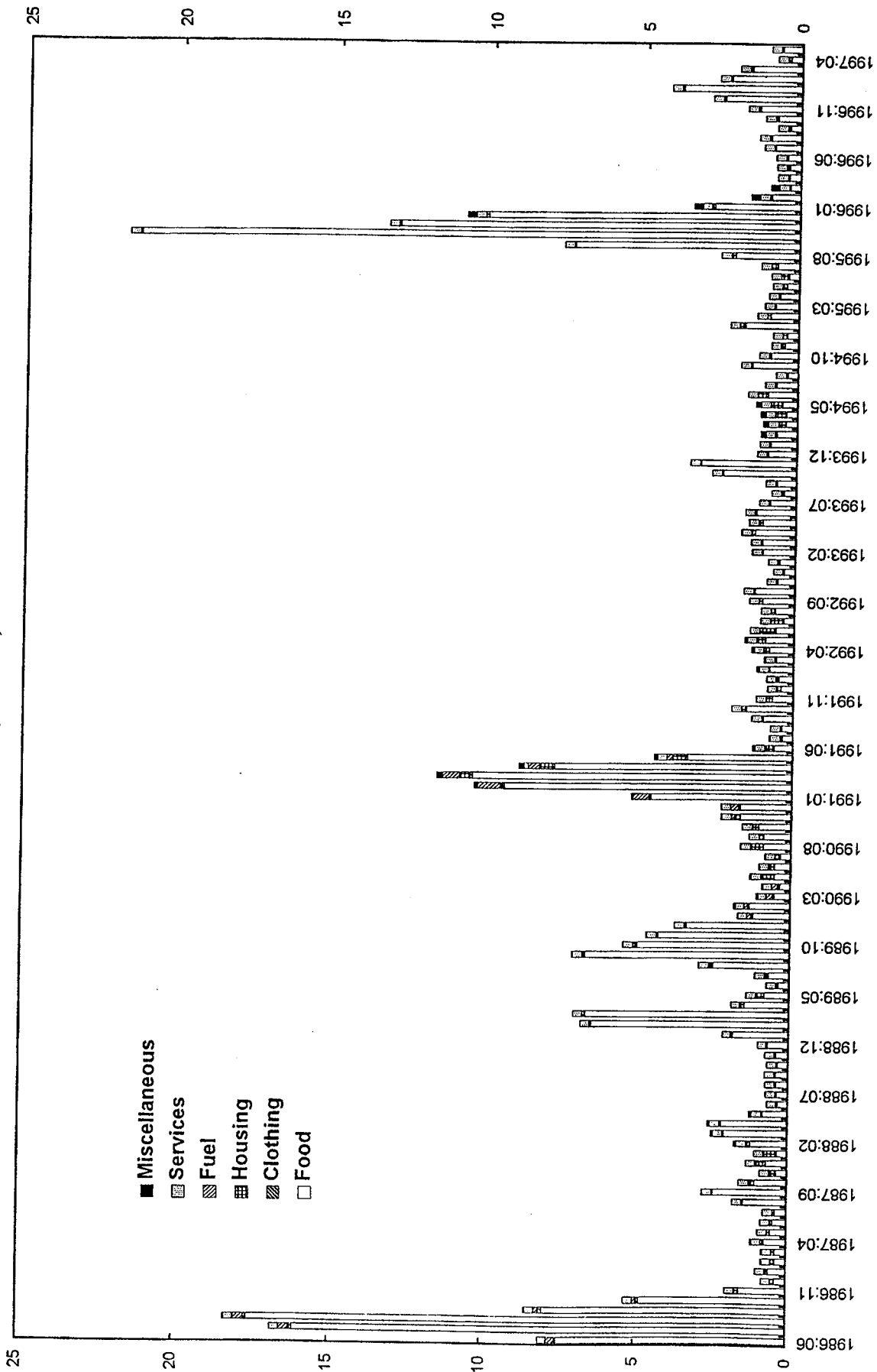


Table 1. Leading Indicators of Inflation: Bivariate Granger Causality Tests

Indicator variables	Lags of VAR							
	1	2	3	4	5	6	7	8
OUTG	0.005	0.000	0.001	0.002	0.001	0.001	0.003	0.003
DFX	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
DM3	0.561	0.254	0.238	0.366	0.386	0.532	0.536	0.354
DM4	0.038	0.033	0.000	0.001	0.003	0.003	0.002	0.001
DbaseM	0.263	0.010	0.026	0.014	0.000	0.001	0.001	0.001
DPC	0.089	0.137	0.320	0.555	0.348	0.444	0.246	0.263
USINF	0.021	0.050	0.089	0.047	0.034	0.014	0.033	0.050
RDIFF	0.026	0.006	0.071	0.287	0.205	0.114	0.134	0.092
91TBILL	0.152	0.055	0.395	0.670	0.616	0.502	0.596	0.553
364TBILL	0.114	0.044	0.344	0.470	0.527	0.558	0.763	0.730
PSEINDX	0.495	0.061	0.157	0.248	0.256	0.307	0.334	0.366

P-values shown for the likelihood ratio tests of the null hypothesis that the indicator does not Granger-cause inflation. All equations were estimated from 1983q1-1996q4 except those with base money and the stock index, which were estimated from 1988q1-1996q4.

Table 2. Forecast Error Variance of Inflation Explained by the Indicator Variable (In percent)

Indicator variables	Horizon (in quarters)							
	1	2	3	4	6	8	12	20
OUTG	0.4	1.5	11.6	14.0	23.8	26.8	26.5	28.9
DFX	28.8	25.9	33.6	38.0	43.2	42.7	42.9	42.8
DM3	0.6	1.3	2.1	2.1	2.1	2.2	2.3	2.3
DM4	7.1	7.3	4.1	16.0	16.4	16.1	15.9	16.0
DbaseM	20.3	50.0	52.1	52.7	52.3	52.2	52.9	53.3
DPC	2.8	5.9	7.7	10.1	10.1	10.4	10.4	10.5
USINF	12.0	11.7	12.0	12.0	12.6	12.6	12.5	12.7
RDIFF	0.4	2.5	2.3	2.9	2.9	4.3	4.8	5.2
91TBILL	1.4	1.3	1.4	1.4	1.5	2.1	2.8	3.0
364TBILL	0.3	1.2	1.2	1.2	1.2	1.9	2.4	2.5
PSEINDX	2.6	10.6	12.1	12.1	12.3	12.8	13.1	13.2

Equations estimated as VARs with six lags. The orthogonalization method is the Choleski decomposition.

Table 3. Inflation Forecasting Equation

	(1)	(2)	(3)	(4)
Explanatory variables	Coefficients 1983Q1 - 1996Q4	Coefficients 1983Q1 - 1996Q4	Coefficients 1983Q1 - 1996Q4	Coefficients 1986Q4 - 1996Q4
Intercept	0.011 (2.04)	0.017 (2.55)	- 0.011 (2.12)	0.004 (0.95)
$\Delta P(-1)$	0.422 (3.05)	0.298 (2.52)	0.261 (2.17)	0.26 (2.62)
$\Delta P(-2)$	0.049 (0.35)	0.299 (2.51)		
$\Delta P(-3)$	-0.116 (1.00)			
$\Delta P(-4)$	-0.272 (2.49)			
OUTG(-3)	0.109 (3.33)			
OUTG(-4)	0.036 (1.07)			
OUTG(-5)	0.080 (2.29)			
DFX(-1)	0.286 (6.24)	0.385 (8.78)	0.324 (5.77)	0.208 (2.80)
DFX(-2)	-0.223 (3.57)	-0.160 (2.45)	-0.126 (1.65)	
DFX(-3)	0.248 (3.84)	0.217 (3.39)	0.218 (3.95)	
DFX(-4)	-0.093 (1.45)	-0.098 (1.63)	-0.126 (2.14)	
DFX(-5)	0.167 (2.89)	0.114 (2.15)	0.075 (1.61)	
USINF(-1)	0.943 (1.77)	2.03 (3.81)	1.387 (2.46)	1.02 (2.34)
DbaseM(-1)				0.039 (2.34)
DbaseM(-2)				-0.010 (0.56)
DbaseM(-3)				0.039 (3.83)
DM4(-1)			0.111 (3.45)	
DM4(-2)			0.069 (1.77)	
DM4(-3)			0.105 (2.80)	
91TBILL(-1)		-0.186 (4.55)		
Adjusted R <sup>2</sup>	0.831	0.816	0.801	0.653
S.E. of regression	0.013	0.014	0.014	0.008
LM(4)	2.322	3.813	1.229	1.358

The dependent variable is the quarterly change in the logarithm of the CPI index,  $\Delta P$ . T-statistics in parentheses.

## VI. CONCLUDING REMARKS

The breakdown in the money demand relationship and the floating of the peso in July 1997 have resulted in a need to reassess the appropriate framework for monetary policy in the Philippines. This paper has considered the option of an inflation target as the centerpiece of a new monetary framework. In addition to providing an effective framework for monetary policy, an inflation target has the benefit of serving as an obvious anchor for wage and price setters in the economy. It circumvents the uncertainties that arise in the monetary targeting framework by focussing directly on the final goal of inflation. However, unless the groundwork and the necessary conditions for adopting an inflation targeting framework are in place, it would be risky for the Philippine authorities to abandon the present base money anchor.

The adoption of an inflation target would require a number of changes to the monetary policy decision process in the Philippines. In particular, the inflation target must take precedence over other policy considerations, including the exchange rate. From the perspective of monetary policy, the exchange rate should be seen as an important part of the transmission mechanism, rather than a final goal. In short, the central bank must demonstrate its willingness to commit to the single objective of promoting a low inflation environment. The inflation target should be endorsed by both the government and the central bank. Other steps might include publication by the central bank of regular assessments of the outlook for inflation, testimony before congress, and immediate announcements of policy changes. Improvements in this regard would be desirable, however, regardless of the framework adopted.

Since the inflation target must be proactive, rather than reactive, the central bank must focus on the forecast of inflation at the policy horizon. This implies an increased reliance on forward indicators of inflation, and on inflation forecasting models. Section V provides a first attempt at developing such a body of information, and highlights a number of variables that could be of use in this regard. Furthermore, to improve the forecasting ability of the models, the authorities could include other policy instruments in the equation and substitute the headline inflation rate with the core inflation series that they have recently developed.

Finally, adoption of an inflation targeting framework does not of itself guarantee an immediate improvement in credibility. Rather, the inflation target can provide a benchmark against which the central bank can build a record of low inflation credentials over a period of time.

### COINTEGRATION ANALYSIS OF MONEY DEMAND IN THE PHILIPPINES

To determine if there was a stable relationship of money demand in the Philippines, cointegration analysis—using a residual-based approach as well as the Johansen maximum likelihood approach—was applied to a standard money demand equation involving broad money (M3), real income (GNP) and interest rates (91-day treasury bill rate). The estimation was performed for two periods, from 1981 to 1996 and from 1984 to 1996. The first estimation period was defined by the simple fact that quarterly data for GNP began in 1981. The second estimation period was chosen to exclude the external shock from the debt crisis in 1983 which could potentially bias the results toward a rejection of the null. All variables, except for the interest rate variable, were in logarithm, with broad money deflated by the CPI index. The estimated results show that the null of non-cointegration cannot be rejected at the 5 percent level for both test periods (Tables 4 and 5). Substituting M3 for M4 and base money yielded similar results. Hence, it can be concluded that the money demand relationship in the Philippines has been unstable.

Table 4. Cointegration Using a Residuals-Based Approach

(i) Sample period: 1981Q1 to 1996Q4

Unit root tests for residuals of OLS regression:

$$\ln RM3 = -18.86 + 1.63 \ln RGNP - 0.006 \text{ 91TBILL} + 0.05 \text{ SR1} - 0.008 \text{ SR2} + 0.05 \text{ SR3}$$

	Test statistic	AIC	SBC
DF	-3.4295	75.7688	74.7651
ADF(1)	-2.9271	74.8373	72.8299
ADF(2)	-1.9308	76.9741	73.9631
ADF(3)	<b>-1.0941</b>	82.2140	<b>78.1993</b>
ADF(4)	<b>-1.3185</b>	<b>82.2325</b>	77.2142
ADF(5)	-1.5021	81.9687	75.9467
ADF(6)	-1.7984	81.9706	74.9449
ADF(7)	-1.9313	81.2933	73.2640
ADF(8)	-2.2790	81.4498	72.4168

95% critical value for the DF statistic = -5.0198

AIC = Akaike Information Criterion; SBC = Schwarz Bayesian Criterion.

(ii) Sample period: 1984Q1 to 1996Q4

Unit root tests for residuals of OLS regression:

$$\ln RM3 = -20.63 + 1.78 \ln RGNP - 0.003 \text{ 91TBILL} + 0.07 \text{ SR1} - 0.003 \text{ SR2} + 0.05 \text{ SR3}$$

	Test statistic	AIC	SBC
DF	-2.9149	66.3583	65.4777
ADF(1)	-2.4464	65.4131	63.6519
ADF(2)	-1.9117	64.9219	62.2801
ADF(3)	<b>-0.7287</b>	69.9938	<b>66.4714</b>
ADF(4)	-0.8793	69.2682	64.8652
ADF(5)	-1.1913	69.4279	64.1443
ADF(6)	<b>-1.7312</b>	<b>70.1459</b>	63.9817
ADF(7)	-1.6660	69.1997	62.1549
ADF(8)	-1.9341	68.8650	60.9396

95% critical value for the DF statistic = -5.1090

AIC = Akaike Information Criterion; SBC = Schwarz Bayesian Criterion.

The unit root tests suggest non-stationarity of the residuals of the cointegrating equation. Based on the AIC and SBC criterion, the optimal lag lengths were 4 and 3, respectively for the period 1981-96 and 6 and 3, respectively for the 1984-96 period. In all these cases, the test statistic does not reject the null of unit roots in the residuals.



Table 5. Johansen Maximum Likelihood Approach

(I) Sample period: 1981Q1 to 1996Q4

Cointegration with unrestricted intercepts and no trends in the VAR, order of VAR=3.

Cointegrating vector: (lnRM3, lnGNP, 91TBILL, SR1,SR2,SR3).

Cointegration LR test based on maximal eigenvalue of the stochastic matrix

Null	Alternative	Test statistic	95% Critical value
r = 0	r = 1	13.6740	21.1200
r ≤ 1	r = 2	6.9960	14.8800

Cointegration LR test based on trace of the stochastic matrix

Null	Alternative	Test statistic	95% Critical value
r = 0	r ≥ 1	20.9012	31.5400
r ≤ 1	r ≥ 2	7.2272	17.8600

(I) Sample period: 1984Q1 to 1996Q4

Cointegration with unrestricted intercepts and no trends in the VAR, order of VAR=3.

Cointegrating vector: (lnRM3, lnGNP, 91TBILL, SR1,SR2,SR3).

Cointegration LR test based on maximal eigenvalue of the stochastic matrix

Null	Alternative	Test statistic	95% Critical value
r = 0	r = 1	13.6740	21.1200
r ≤ 1	r = 2	6.9960	14.8800

Cointegration LR test based on trace of the stochastic matrix

Null	Alternative	Test statistic	95% Critical value
r = 0	r ≥ 1	20.9012	31.5400
r ≤ 1	r ≥ 2	7.2272	17.8600

**VARIABLE DEFINITIONS AND SOURCES**

1. GDP (y); quarterly from 1981. Source: National Statistical Coordination Board, Philippines.
2. Peso/U.S. dollar exchange rate (e) , quarterly. Source: International Finance Statistics, IMF.
3. M3, broad money excluding foreign currency deposits (M3), quarterly. Source: Bangko Sentral ng Pilipinas.
4. M4, broad money including foreign currency deposits (M4), quarterly. Source: International Finance Statistics, IMF.
5. Base money (BaseM), quarterly. Source: Bangko Sentral ng Pilipinas.
6. Private credit (PC), quarterly. Source: International Finance Statistics, IMF.
7. U.S. CPI (1990=100), quarterly. Source: International Finance Statistics, IMF.
8. Philippine CPI (1990=100), quarterly. Source: National Statistical Coordination Board, Philippines.
9. 91-day treasury bill rate (91TBILL), quarterly. Source: Bangko Sentral ng Pilipinas.
10. 364-day treasury bill rate (364TBILL), quarterly, for some years proxied by 182-day treasury bill rate. Source: Bangko Sentral ng Pilipinas.
11. Stock market composite index (PSEINDX), quarterly. Source: IFC Emerging Market Database.

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## 2. POVERTY, INCOME DISTRIBUTION AND ECONOMIC POLICY IN THE PHILIPPINES<sup>15</sup>

### SUMMARY

This paper examines the impact of fiscal and other macroeconomic policies on income distribution and poverty in the Philippines. Poverty is more widespread in the Philippines than in its ASEAN neighbors. Income distribution (as measured by the Gini ratio) has been remarkably stable in the Philippines and its neighbors for decades. Thus, it appears that poverty has proven more persistent in the Philippines than in some other Asian countries, not because these other countries have succeeded in altering relative shares of national income, but rather because their average incomes have grown more rapidly than in the Philippines.

Much of the blame for this growth performance can be traced to economic policy. For many years, the Philippines pursued an import-substitution industrialization policy and maintained an overvalued exchange rate. These policies combined to distort the flow of investment away from agriculture toward manufacturing, to discourage agricultural exports, and to encourage the substitution of capital for labor. Heavy regulation of the agricultural sector also stifled growth. Underfunding of health and education (relative to other ASEAN countries) has also discouraged human capital development among the poor.

In recent years, many of the growth-retarding economic policies have been abandoned, and the authorities have made poverty reduction and income redistribution a crucial element of their economic policy. For example, recent tax reforms have sought in part to increase the contribution of the tax system to achieve equity. The achievement of these reforms has often been compromised by the fact that the unequal distribution of income, along with past heavy regulation of the economy, created powerful elites that have tended to oppose perceived threats to their dominant position in the Philippine economy. Despite these reforms, it will likely take some time before a full liberalization of the economy will erase the effects of past policies.

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<sup>15</sup>Written by Phil Gerson

## I. INTRODUCTION

This paper examines the impact of fiscal and other economic policies on income distribution in the Philippines. Section II of the paper provides some details on the evolution of the distribution of income over time, and reviews some demographic information about families and individuals in the lower third of the distribution. Section III discusses some of the ways that past fiscal and macroeconomic policies have affected the distribution of income over time, as well as other characteristics of the economy that have tended to perpetuate the relatively uneven distribution of income in the Philippines. It, then, discusses some recent policy initiatives intended in part to improve the distribution of income. Section IV looks at how the distribution of income may have affected the formation of economic policy, paying particular attention to the role of oligarchies. Section V concludes.

Poverty is generally more widespread in the Philippines than in its ASEAN neighbors. The distribution of income (as measured by the Gini ratio) has been remarkably stable over time, and the country has experienced a much slower reduction in poverty than have some other Asian countries. Some of the blame for the slow progress in enhancing equity can be apportioned to economic policies that have either discriminated against agriculture—where most of the poor earn their incomes—retarded growth, or led to underinvestment in the most abundant resource of the poor, their potential for human capital development. In turn, these policies have sustained powerful interest groups which in the past have blocked or delayed economic reform. Recent political and economic policy reforms, including widespread deregulation of the economy, should improve the prospects for progress in poverty alleviation and increase equity. However, it will likely take some time before the poorest elements of Philippine society experience the benefits of recent rapid economic growth.

## II. INCOME DISTRIBUTION IN THE PHILIPPINES

Among its ASEAN neighbors, the Philippines is notable both for its very high poverty incidence, especially when measured relative to total basic expenditure rather than just expenditure on food, and for its very slow progress in reducing the rate of poverty. As indicated in Table 1 below, although the poverty incidence in the Philippines was in the middle of a representative sample of Asian countries in the early 1970s, very slow progress in reducing the rate of poverty over the following two decades meant that by the early 1990s, the poverty rate in the Philippines was dramatically higher than in the other members of the group. In 1994, some 4.5 million families lived below the poverty line, about 300,000 *fewer* than in 1991, but about 300,000 *more* than in 1988.<sup>17</sup>

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<sup>17</sup>National Statistical Coordination Board (December 1996).

Table 1. Poverty Incidence in Selected Asian Countries<sup>18</sup>

(In percent)

	Years	Annual Reduction	First Year	Last Year
Philippines	1971-94	0.7	52	36
Indonesia	1970-90	2.0	58	19
Korea	1970-90	0.9	23	5
Malaysia	1973-87	1.6	37	14
Thailand	1962-88	1.4	59	22

Sources: World Bank (1996); National Statistical Coordination Board (December 1996).

Income distribution in the Philippines is significantly unequal. In 1994, the richest 20 percent of the population received 52 percent of the country's total income, nearly 11 times the share received by the poorest 20 percent. The figures for the Philippines were little changed over the decade to 1994, and even worsened marginally: in 1985, the richest 20 percent of the population received about 52 percent of national income and had an average income that was approximately 10 times that of the poorest 20 percent.<sup>19</sup> Moreover, *since 1957 the Gini ratio has barely changed, varying only between 0.45 and 0.51 over a period of nearly 40 years.*<sup>20</sup> Between 1985 and 1994, the Gini ratio was virtually constant, despite the economic recovery that began during those years (see Table 2) and a small improvement observed between 1991 and 1994.<sup>21</sup>

<sup>18</sup>Defined as percent of families living below the poverty line.

<sup>19</sup>Data for the Philippines come from the Family Income and Expenditure Surveys for 1985 and 1994. In 1985, the richest 10 percent of Filipinos earned 18 times as much as the poorest 10 percent.

<sup>20</sup>However, because of changes in coverage and methodology of surveys, especially for the earlier years, caution should be exercised in comparing results from year to year.

<sup>21</sup>Family Income and Expenditure Survey, 1994.

Table 2. Philippines: Income Distribution, 1957-94

	1957	1961	1965	1971	1985	1988	1991	1994
Gini Coefficient	.461	.497	.513	.494	.447	.445	.468	.451
Pct Income, Top 20 pct	48.6	56.5	56.0	54.0	52.1	51.8	53.9	51.9
Pct Income, Bottom 20pct	6.5	4.2	3.5	3.6	5.2	5.2	4.7	4.9
Ratio, Top/Bottom	7.5	13.5	16.0	15.0	10.0	10.0	11.5	10.6

Sources: 1957-71, Deininger and Squire (1996); 1985-94, Family Income and Expenditure Surveys, various years.

It is interesting to note, however, that the disappointing experience of the Philippines in improving the distribution of income is not unique in Asia. In fact, none of the countries in the above sample have experienced large declines in Gini ratios in recent decades, and in the case of Thailand income distribution appears to have worsened (Table 3).<sup>22</sup> Instead, it would appear that the other countries in the sample have reduced their rates of poverty by increasing income levels across the entire distribution of income. This suggests that decades of very slow growth, rather than inequality per se, may have been the most important factor in the persistence of poverty in the Philippines. Indeed, between 1970 and 1995 real GDP in the Philippines grew at about half the rate of these other countries and barely exceeded population growth (Table 4). To put the growth figures in some perspective, if two countries had identical GDP in 1970, but one consistently grew at a real rate 2.8 percent higher than the other, by 1995 real GDP in the faster-growing country would be double that in the slower-growing one.

Table 3. Gini Coefficients in Selected Asian Countries

	Years	First Year	Last Year
Philippines	1957-94	.461	.451
Indonesia	1964-93	.333	.317
Korea	1953-88	.340	.336
Malaysia	1970-89	.500	.484
Thailand	1962-92	.413	.515

Source: Deininger and Squire (1996), except 1994 Philippines from Family Income and Expenditure Survey.

<sup>22</sup>Because of differences in methodology and coverage, it is difficult to make comparisons of Gini ratios across countries. For example, data for Indonesia are based on expenditure rather than income.

Table 4. Population and Real GDP Growth Rates in Selected Asian Countries, 1970-95

(In percent)

	Population	Real GDP
Indonesia	2.0	6.8
Korea	1.3	8.5
Malaysia	2.8	7.3
Philippines	2.6	3.5
Thailand	2.0	7.5

Source: IMF (1997).

In line with observations in other countries, the distribution of expenditure in the Philippines is somewhat less inequitable than that of income.<sup>23</sup> Nevertheless, in 1994 the top 20 percent of the distribution accounted for nearly 48 percent of annual expenditure, almost eight times the share of the poorest 20 percent. In 1985, the richest 20 percent of the population accounted for 47 percent of expenditure, a little more than seven times the share of the poorest 20 percent.<sup>24</sup> By comparison, in Indonesia, which had a roughly comparable per capita income, the richest 20 percent of the population accounted for 40.7 percent of expenditure in 1993, only 4.7 times the expenditure of the poorest 20 percent of the population.<sup>25</sup>

Looking beyond peso income and expenditure, the performance of the Philippines in improving human development indicators has also been slow relative to other Asian countries (Table 5). While other countries have made dramatic strides in limiting infant mortality rates, improving adult literacy, and increasing life expectancy, progress in the Philippines, while not negligible, has been slower. As a result, while social indicators in the Philippines were once

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<sup>23</sup>This is generally thought to be because expenditure does not fluctuate with changes in transitory income, and because the marginal propensity to consume tends to decline with income.

<sup>24</sup>Family Income and Expenditure Surveys, 1994 and 1985.

<sup>25</sup>Deininger and Squire (1996).



quite good relative to other east Asian and lower-middle-income countries, by the early 1990s they were at best average and in some cases—such as childhood malnutrition—much worse.<sup>26</sup>

Table 5. Social Indicators in ASEAN Countries

	1970-75	1980-85	1990-95
<b>Population Growth Rate (in percent annual average)</b>			
Indonesia	2.4	1.9	1.5
Malaysia	2.4	2.7	2.4
Philippines	2.6	2.5	2.3
Thailand	2.8	1.5	0.9
East Asia	...	...	1.1
Lower-Middle-Income	...	...	1.3
<b>Child Malnutrition (percent under five years)</b>			
Malaysia	...	27	23
Philippines	...	33	30
Thailand	...	36	13
East Asia	...	...	19
<b>Infant Mortality (per 1,000 live births)</b>			
Indonesia	114	80	51
Malaysia	42	28	12
Philippines	64	51	39
Thailand	65	44	35
East Asia	...	...	40
Lower-middle-income	...	...	41
<b>Life Expectancy at Birth (years)</b>			
Indonesia	49	56	64
Malaysia	63	68	71
Philippines	58	62	66
Thailand	60	65	69
East Asia	...	...	68
Lower-middle-income	...	...	67

Source: World Bank (February 1997). Data are for latest available year in each period.

<sup>26</sup>World Bank (February 1997).

In the Philippines, as in many other countries, poverty levels are calculated both including and excluding nonfood necessities. Of course, the poverty threshold including only foodstuffs—often referred to as subsistence poverty—will always be lower than one based on total basic expenditures. Thus, poverty incidence measured on a subsistence basis is only about half that when nonfood expenditures are included, with a poverty incidence of about 18 percent of families in 1994 (Table 6). However, improvement in this indicator has also been slow, declining only by about 6 percent of the population between 1985 and 1994. In 1994 some 2.3 million families were below the subsistence level of income, about 140,000 fewer than in 1991, but about 165,000 more than in 1988.<sup>27</sup>

Table 6. Philippines: Poverty Rates, 1985-94

(In percent of families below poverty line)

	1985	1988	1991	1994
Subsistence	24.4	20.3	20.4	18.1
Total Basic Expenditure	44.2	40.2	39.9	35.5

Source: National Statistical Coordination Board (December 1996).

At the same time, it is important to bear in mind that the relatively high level of poverty in the Philippines, compared to other ASEAN countries, is due in part to differences in the way the subsistence threshold is calculated among countries. Even if two countries define subsistence identically in terms of caloric consumption, there may still be differences in the composition of the baskets of goods used to translate calories into incomes. In the Philippines, nongrain items—which in the Philippines are seven times as expensive per calorie as grains—constitute an average of 34 percent of the calories, compared to 10 percent in China, 19 percent in Indonesia, and 27 percent in Thailand. As a result, subsistence *income* in the Philippines is higher than it would be using the consumption baskets of other countries. Reducing the share of nongrain items to 10 percent of the consumption basket, as in China, would reduce subsistence poverty by almost two-thirds.<sup>28</sup> This exercise illustrates the difficulty of making cross-country comparisons of poverty rates.

An analysis of the regional pattern of poverty and income distribution reveals significant and persistent differences among regions. The National Capital Region had the lowest incidence of poverty (measured relative to total basic needs) in 1994 (8 percent of families), while Bicol had the highest rate (55 percent in 1994). While the poverty incidence

<sup>27</sup> National Statistical Coordination Board (December 1996).

<sup>28</sup> The World Bank (March 1996).

has declined sharply in some regions in recent years, falling from 23 percent of families to 8 percent in Metro Manila between 1985 and 1994, and from about 60 percent to between 43 and 33 percent in the three Visayas regions over the same period, in others it has remained stable or even increased. In addition, the gap between the poorest and richest regions is largely unchanged: in 1985 the difference between the poverty incidence in Metro Manila and the (unweighted) average for the three poorest regions (Bicol, Western Visayas, and Eastern Visayas) was 36.8 percent, while in 1994 the gap between Metro Manila and these same three regions was 37.4 percent. The gap between Metro Manila and the three poorest regions in 1994 (Bicol, Central Mindanao, and the Autonomous Region of Muslim Mindanao) had grown to 48.6 percent.<sup>29</sup> At least as far as the poor are concerned, the benefits of the economic recovery since the late 1980s appear to have been concentrated in specific regions. Moreover, the persistent and large disparity in poverty incidence among regions suggests the presence of structural impediments in the labor market that may exacerbate income inequalities. Of course, the high poverty rates in Mindanao also reflect the dire consequences of years of civil war. Of the 4.5 million families living below the poverty line in 1994, about 1.4 million (30 percent) lived on Mindanao, with an additional 1.1 million (23 percent) living in the Visayas. Only about 142,000 (3 percent) of poor families were located in the National Capital Region.<sup>30</sup>

Gini ratios for most regions improved between 1985 and 1994, although most gains were small and in some regions equality worsened. Even in Metro Manila, where the poverty incidence declined by nearly two-thirds, the Gini ratio improved only from .415 to .397. Although regions with the greatest reductions in poverty tended to have the sharpest improvements in their Gini ratios, this was not universally the case: for example, the Gini ratio in Eastern Visayas actually worsened, from .390 to .420 between 1985 and 1994, even as the poverty ratio declined from 59.0 percent to 37.9 percent over the same period. The improvements in income distribution have been concentrated in the last few years, as Gini ratios in almost all regions deteriorated between 1985 and 1991.<sup>31</sup>

#### A. Characteristics of the Poor

Drawing on the results of the 1991 *Family Income and Expenditure Survey*, Intal (1994) identified a number of important characteristics of the poor:

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<sup>29</sup>Data in this section come from National Statistical Coordination Board (December 1996). Subsistence poverty is virtually nonexistent in Metro Manila (0.7 percent of families in 1994), but about one-third of all families are below the subsistence level in Bicol and Central Mindanao.

<sup>30</sup>National Statistical Coordination Board (December 1996).

<sup>31</sup>Data in this section come from the Family Income and Expenditure Survey (1994).

- More than one-half of all households whose head has an elementary school education or less are poor. In fact, these households account for about three-quarters of all subsistence-poor households.
- Larger households have a higher incidence of poverty than do smaller ones. Thus, the incidence of poverty among the population is greater than that among families. This finding needs to be interpreted carefully, however, since it is not clear whether the causality runs from large households to poverty or vice versa.<sup>32</sup>
- Female-headed households have a much *lower* incidence of poverty than do male-headed households. Higher educational attainment and smaller family size probably account for this finding (see below).
- The poor are disproportionately employed in agriculture, fishing, and forestry. Altogether, farmers, farm workers, fishermen, and forester households account for 62 percent of all poor households and 71 percent of the subsistence poor. Among the poorest three income deciles, about 74 percent of men and 56 percent of women over the age of 15 are employed in agriculture, forestry, logging, fishing or hunting.<sup>33</sup> By contrast, in 1996 the agriculture, fishery, and forestry sector accounted for only about 43 percent of the employed labor force.<sup>34</sup>
- In Metro Manila, the poorest income deciles tend to receive a large percentage of income from wages and salaries (excluding agriculture) than do the wealthier deciles. In other words, the relative importance of wages and salaries tends to decline with income. However, in the rest of the country the opposite is true, with nonagricultural wages and salaries constituting an increasing share of total income as incomes rise. Agricultural wages and salaries are not a significant source of income for any decile in Metro Manila, but outside of the capital they account for a much larger share of income for the lowest income deciles than for the highest ones.
- Remittances from abroad tend to constitute a larger share of income in more developed regions of the country than in less developed ones, and tend to account for a larger share of income in wealthier deciles than in poorer ones. Presumably, this reflects the fact that opportunities for overseas employment are more readily available for those with higher levels of human capital. In a partial equilibrium sense, this may suggest that widespread emigration—a defining characteristic of the Philippine labor

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<sup>32</sup>For example, it could be the case that when families are poor, children are less likely to move out or grandparents and other relatives are more likely to move in with their children and grandchildren.

<sup>33</sup>Virtucio (1994).

<sup>34</sup>National Statistics Office, Household Surveys Section, Current Labor Statistics, Department of Labor and Employment.

market—has tended to exacerbate rather than reduce income inequalities. However, these transfers may have led to increased national savings and higher domestic investment, creating employment opportunities and raising the marginal product of labor for nonemigrants. Of course, emigration also reduces oversupply in domestic labor markets directly. Accordingly, emigration has almost certainly had a beneficial impact on poverty and may even have a net positive impact on equality.

Data suggest that the poor are disproportionately located in rural areas, with 60 percent of the poor (and more than 70 percent of the population in the three lowest income deciles) living in rural areas in 1991 compared to 51 percent of the total population. Since 1960, the percentage of the population that is classified as urban has increased from about 30 percent to nearly half, while the share of the poor population that is urban has grown from 30 percent only to about 40 percent. These figures could be interpreted as suggesting that rural to urban migration has led to a reduction in poverty among migrants. However, Balisacan (1995) indicates that these figures are in part a statistical artifact. Over the last 30 years, a large number of areas have been reclassified from rural to urban. Almost by definition, reclassified areas have experienced faster economic growth than have average rural areas, and it is, therefore, not surprising that the poverty incidence in these areas has declined. In 1990, about 36 percent of the population lived in areas that had been considered urban in 1970. In other words, the share of the population living in historically urban areas increased only slightly (about 4 percent) in the period 1970-90. Thus, it is not migration but rather reclassification of rural areas to urban status that has led to the large increase in the share of the population that is urban. Moreover, using the urban and rural classifications that applied in 1961, he finds that while poverty incidence declined only slightly in urban areas between 1961 and 1991 (from about 57 percent to about 51 percent), poverty declined markedly in rural areas over the same period (from 60 percent to 41 percent). In other words, while poverty has actually declined faster in areas that were rural in the early 1960s than in historically urban areas, the fact that fast-growing areas will tend to be reclassified as urban creates the opposite impression.

Balisacan (1995) conducted an econometric exercise to account for earnings differences among the urban population, drawing on the urban panel of the 1988 *Family Income and Expenditure Survey*. Dividing his sample between the self-employed and wage and salary workers, he found that for both modes of employment, earnings of workers who attended or completed high school were not significantly different from those with only a primary education, after controlling for age, sex of household head, access to electricity and roads, family size, and household assets.<sup>35</sup> Among the self-employed, earnings of those who had some college education were significantly higher than those who did not, while earnings of those who graduated from college were significantly higher than those who had enrolled, but not graduated. Among wage and salary workers, only those who had graduated from

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<sup>35</sup>This finding may be due to the fact that household assets were included in the regression. If assets and education levels correlate positively, omitting assets from the regression might have led to a finding that education has a significant, positive impact on earnings.

college earned significantly more than those with lower levels of education. The rates of return on education were generally higher at all levels of education for wage and salary workers than for the self-employed, however.

Despite the finding of a higher poverty incidence for male-headed households, Balisacan found that for both self-employed and wage and salary workers, earnings are higher for urban males than for urban females. Presumably, the higher poverty incidence for male-headed households reflects differences in education and family size. In fact, the discrepancy between earnings for males and females in his sample is dramatic, with self-employed men earning 65 percent more than their female counterparts and wage and salary employed men earning 189 percent more than their female counterparts, after controlling for education, age and other variables. Access to infrastructure—captured in two variables, the road density in a participant's region of residence and the percentage of municipalities with electricity in his region of residence—has a positive and significant impact on the incomes of wage and salary workers, but not on the self-employed. Overall, Balisacan's results suggest that improved access to physical infrastructure and increased educational achievement rates can substantially reduce urban poverty and improve the distribution of income.

Otsuka and others (1992) examine various factors affecting the income of land owning and landless households in rice growing villages in Central Luzon and Panay. As for the urban poor, education has a significant, positive impact on family income.

### III. ECONOMIC POLICY AND INCOME DISTRIBUTION

As noted in the previous section, income distribution in the Philippines is highly uneven, and poverty rates are higher than in other Asian countries. In addition, while the poverty rate has declined over time, the rate of decline has been lower than in other Asian countries and income inequality, as measured by the Gini ratio, has been persistent. To some extent, the lack of progress in improving poverty indicators in the Philippines relative to its ASEAN neighbors can be attributed to the country's relatively poor growth performance: during the 1980s, when most ASEAN countries enjoyed dramatic growth, GDP growth in the Philippines averaged only about 1 percent per year. The persistence of inequality and poverty in the Philippines can, therefore, be traced to economic policies that have hampered growth, many of which have been abandoned recently, as well as to policies that have more directly perpetuated income inequality. This section looks at how trade and exchange rate policies, the tax system, the pattern of government expenditure, and monetary policy have influenced poverty and inequality in recent years.

Blejer and Guerrero (1990) undertake a macroeconomic analysis of the impact of various macroeconomic variables in the Philippines. Focusing on the period 1980-86, they examine the impact of labor productivity, underemployment, the real exchange rate, real government consumption expenditure, the real interest rate, and inflation on income equality, with the last variable measured as income accruing to the poorest 30 percent of the population divided by income accruing to the wealthiest 10 percent of the population. Thus, they study

the way various macroeconomic variables affect the *relative*, not absolute, incomes of the poor. For example, even if a cut in government expenditure lowers the absolute income of the poor, it could still have a positive coefficient if it reduces the income of the wealthy relatively more than that of the poor.

Blejer and Guerrero find that all of the variables included in their regression have a significant impact on income distribution, with high levels of labor productivity, depreciated real exchange rates and high real interest rates tending to improve income equality, and high levels of underemployment, inflation, and government expenditure tending to worsen income equality. The results for productivity and underemployment are not surprising, and the negative impact of inflation on income equality almost certainly reflects the fact that the poor have fewer real assets with which to insulate themselves from the effect of price increases.

The results for the real exchange rate, government expenditure, and the real interest rate are perhaps more interesting. Most likely, the beneficial (from a distributional perspective) impact of real devaluations reflects the fact that the poor are disproportionately involved in agricultural export activities, which would benefit from a devaluation. The beneficial impact of cuts in government expenditure could have occurred because government expenditure primarily benefitted the wealthy or because higher levels of expenditure tended to be linked to higher levels of regressive taxation. For example, if the wealthy have relatively better access to public education, cuts in spending on schools could conceivably improve the distribution of income. Finally, Blejer and Guerrero speculate that the positive impact of higher real interest rates could be due to the fact that the poor have less access to credit, and therefore are less affected by high interest rates, or to the fact that the informal sector is less likely than the formal sector to experience a slowdown in activity when interest rates rise. However, the impact of higher interest rates on the distribution of income is complicated, and it will be argued below that high domestic interest rates may have a regressive impact. The following sections explore the possible impact of exchange rate, fiscal, and monetary policies in more detail.

#### A. Exchange and Trade Policies

For many years, the Philippines pursued an industrial policy based on the idea of fostering import substitution, with little effort to encourage exports. Until the tariff reforms of 1991, trade policies heavily penalized the primary and agricultural sectors—where the poor are predominantly employed—and benefitted the manufacturing sector. Throughout the 1960s, 1970s and 1980s, the manufacturing sector enjoyed an effective rate of protection (ERP) much greater than that of the agricultural sector: in 1965 the average ERP for manufacturing was 29 percent higher than that of agriculture, and by 1985 the gap had widened to 43 percent. However, following the tariff reform of 1991 the difference in relative protection fell to just 17 percent.<sup>36</sup> In addition, the overvalued exchange rate of the 1950s

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<sup>36</sup>Balisacan (1995).

through 1980s depressed the prices of export products in peso terms and shifted resources towards import-substituting manufacturing and away from agriculture.<sup>37</sup>

Moreover, the overvalued exchange rate coupled with fiscal and other incentives such as tax exemptions for imported capital equipment reduced the cost of capital and encouraged the substitution of capital for labor. By one estimate, these incentives reduced the cost of capital by as much as 70 percent in the 1970s and 80 percent in the early 1980s.<sup>38</sup> As a result, the share of the industrial sector in total employment has grown only from about 13 percent in 1960 to 16 percent in 1996. Between 1990 and 1996 nearly 80 percent of the five million person increase in total employment can be accounted for by agriculture and services. Manufacturing employment increased by only about 500,000 over the period, or only about 10 percent of the total increase in employment. In addition, total employment growth was slower than labor force growth, so that the unemployment rate in 1996 (at 8.6 percent) was slightly higher than in 1990 (8.3 percent).<sup>39</sup>

These developments are reflected in the declining real wages in the manufacturing sector. In the first three quarters of 1996, average real compensation in the manufacturing sector stood at only 75 percent of its 1978 level. After peaking in 1988 real compensation in the manufacturing sector has declined in each subsequent year, to the point where it now stands at less than 60 percent of its 1988 level.<sup>40</sup>

Agricultural incomes—and therefore the incomes of the poor—were also depressed by the heavy regulation of the agricultural sector. Beginning in the 1970s, price controls on rice and other products were imposed, and the importation of wheat and soybeans was monopolized. Controls on the production, marketing and processing of coconuts were put in place, and a price stabilization fund was created. In addition, fertilizer and pesticide imports were controlled through licensing requirements. Under the Aquino administration many of these restrictions were relaxed or eliminated, which Balisacan (1991) finds has led to a reduction in poverty. However, reforms in this area have not yet been completed, and

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<sup>37</sup>Bautista (1987) provides evidence on the effect of exchange rate overvaluation on agricultural incentives.

<sup>38</sup>Manasan (1986).

<sup>39</sup>Data are from the 1994 *Yearbook of Labor Statistics*, Current Labor Statistics (BLES-DOLE), and the National Statistics Office.

<sup>40</sup>Data come from the Philippine authorities, and are drawn from the Labor Force Survey of the National Statistical Office, the Quarterly Survey of Establishments (NSO), the Annual Survey of Establishments (NSO) and the National Statistics and Coordination Board.



important regulations remain in effect that restrict the ability of farmers to increase their earnings or acquire inputs at the lowest possible prices.<sup>41</sup>

The bias against agricultural investment introduced by the overvalued exchange rate and the heavy regulation of agriculture have had disastrous effects on productivity in the sector. For example, in the period 1982-85, productivity in the coconut sector—long the county's most important agricultural industry in terms of export earnings and employment—averaged 1.0 metric ton per hectare, exactly the same as in the period 1962-66.<sup>42</sup> The stagnation of agricultural productivity is borne witness by the startling fact that between 1860 and 1996, productivity in the sugar industry (which employs 600,000 people) has increased by less than 20 percent (from 50 tons per hectare to 59 tons per hectare).<sup>43</sup>

On several occasions, beginning in very limited ways in the 1950s and 1960s, the government has undertaken land reform programs intended to break up large landholdings and improve the distribution of rural incomes by encouraging a more equal distribution of farmland. In 1972 a land reform program was instituted that allowed tenants to purchase land via 15 annual payments equal to 25 percent of the yield for three normal crop years.<sup>44</sup> However, coverage was restricted to rice and corn fields, which allowed landholders to exempt themselves simply by shifting production out of these crops. Perversely, the reform covered only tenant farms, giving landowners an incentive to evict tenants and hire landless workers, thereby actually reducing access to land. In addition, substantial bottlenecks in the process meant that very little of the land that was covered by the program was actually redistributed.

In 1987 the Aquino administration introduced a Comprehensive Agrarian Reform Program (CARP) that was intended to redistribute about three-quarters of all agricultural land to landless farmers and farm workers. However, CARP has also been plagued by bottlenecks, owing to a lack of financing for the enormous costs of the program as well as cumbersome administrative requirements, and at end-1994 only about 30 percent of the 10.3 million hectares scheduled for redistribution over the period 1987-98 had actually been redistributed.

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<sup>41</sup>According to the World Bank (1996), among the most important of these are limits on the area farmers can plant with bananas, import bans on seeds, restrictions on importing cattle feeder stock, export bans on buntal and ramie planting materials, a ban on the slaughter of carabaos, and export restrictions on unendangered animals and their products.

<sup>42</sup>Boyce (1992).

<sup>43</sup>In Indonesia, the yield is 77 tons per hectare.

<sup>44</sup>Otsuka et al. (1992).

Strikingly, the Gini coefficient for landholding actually worsened between 1960 and 1990, going from 0.53 to 0.57, despite these land reform efforts.<sup>45</sup>

Despite its ambitious goals, land reform has thus far done little to alter the distribution of land in the Philippines, or to improve rural incomes. Achievement of the goals of land reform would require a tremendous commitment of resources (on the order of about P120 billion) that would likely stifle infrastructure investment and social spending in rural areas. Given that land distribution in the Philippines is not notably more unequal than in some other ASEAN countries with more equal income distributions of rural income (such as Malaysia and Indonesia) it is at best an open question whether successful implementation of the CARP would ultimately improve or worsen the distribution of rural incomes. On the other hand, there can be little doubt that increased expenditure on education, health, and infrastructure in rural areas would reduce poverty and improve the distribution of income.

### **B. Federal Government Expenditure**

Because the poor are relatively better endowed with labor than with physical capital, public expenditure on education and on health can exert an important influence on poverty and income distribution.<sup>46</sup> While virtually all primary education in the Philippines is financed by the public sector, about one-third of secondary school students are enrolled in private schools. At the university level, nearly 90 percent of students are enrolled in private schools. Although enrollment rates are very high for all income groups at early ages, rates begin to drop for lower income groups by age 13 in urban areas and by age 11 in rural areas. By age 15, the enrollment rate for the highest income decile in urban areas remains at 0.97, while for the poorest income decile it has fallen to 0.63. In addition, for every income decile, enrollment rates are lower in rural than in urban areas. Scores on elementary school achievement tests, and figures on the average number of textbooks per elementary school pupil, both reveal a significant bias not only toward the upper income deciles, but also toward urban students versus rural ones.<sup>47</sup>

Overall, public education in the Philippines is underfunded relative to other ASEAN countries (Table 7), with the exception of Indonesia, relative both to GDP and to total government expenditure.<sup>48</sup> Moreover, the distribution of education spending among levels is suboptimal. In 1987, the government nationalized village high schools, and in 1989 began

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<sup>45</sup>World Bank (1996).

<sup>46</sup>For a discussion of the role of fiscal policy in promoting economic growth, see Mackenzie and others (1997).

<sup>47</sup>Faculty of the Department of Economics, UPLB (1994).

<sup>48</sup>International Monetary Fund (1996). To some extent, the low share of education relative to total expenditure reflects the very high level of interest expenditure in the Philippines.

providing vouchers for students to attend private high schools. These measures were introduced in order to improve access of the poor to secondary education. However, as a result of them, the share of secondary education in total education spending rose from 10 percent in 1987 to 17 percent in 1994, while the share of primary education dropped from 60 percent to 56 percent.<sup>49</sup> More strikingly, the government now subsidizes a greater share of educational expenses at the tertiary level than at the primary level (Table 8). Altogether, Yoingco and others (1994) estimate that about 52 percent of the budget on public education went to programs participated in predominantly by middle class families, with less than 6 percent of the budget flowing to households in the lowest two income deciles in 1990.

Table 7. Education and Health Expenditure in Selected ASEAN Countries, 1994

(In percent of total central government expenditure and of GDP)

	Education		Health	
	Govt. Exp.	GDP	Govt. Exp.	GDP
Indonesia	9.8	1.6	3.3	0.5
Malaysia	22.1	5.4	5.5	1.4
Philippines	13.0	2.7	2.3	0.5
Thailand	21.4	3.5	7.7	1.3

Source: IMF (1996).

<sup>49</sup>World Bank (1996).

Table 8. Cost Sharing in Philippine Public Education, 1986 and 1994

(In percent)

Financing sources	1986	1994
In Elementary Education		
government	88	69
household	12	31
In Secondary Education		
government	66	57
household	34	43
In Tertiary Education		
government	74	78
household	26	22

Source: World Bank (1996).

Unfortunately, the Philippines is not alone in this regard. Psacharopoulos (1994) reviews empirical studies from many countries that suggest that secondary and especially tertiary education are oversubsidized, and primary education undersubsidized. In addition, participation rates are probably lower for low-income students than for wealthy ones in almost all countries, because of the high opportunity cost of education. Moreover, it is conceivable that the shift in the allocation of the educational budget that occurred in the late 1980s and early 1990s could have been justified by the very high coverage already enjoyed by primary education. However, a reallocation of spending toward primary education could contribute to a significant improvement in the *quality* of primary schooling and in retention rates for lower-income students, especially in rural areas, and in the process help reduce poverty levels.

As with education, spending on health and nutrition is relatively low by ASEAN standards (Table 7), and the composition of expenditure is biased away from lower income consumers. Only 25 percent of barangays (the smallest administrative unit in the country) had health stations in 1990, and each health station served 14,200 people in the National Capital Region, but between 21,000 and 44,000 people in other regions.<sup>50</sup> This bias is reflected in the fact that per capita government health expenditures in 1986 were three times as high in Metro

<sup>50</sup>World Bank (1996).

Manila as the national average, and more than five times as high as in Central Mindanao.<sup>51</sup> In addition, expenditure has increasingly concentrated on expensive, tertiary level care that lower income families cannot afford, with the share of expenditure on preventative care falling from 35 percent in 1981 to 14 percent in 1990, while the share of curative care rose from 55 percent to 65 percent during the same period. These developments are reflected in the fact that the infant mortality rate in Metro Manila in 1989 was lower than in any other region and only about one-third the rates in Central and Western Mindanao. Similarly, life expectancy at birth in Metro Manila and Central Visayas was about a decade greater than in Mindanao.<sup>52</sup> Housing programs and infrastructure investment also reflect a pro-urban (especially Manila) bias that aggravates existing income discrepancies between urban and rural areas and worsens problems of income inequality.<sup>53</sup>

### C. Tax Policy

Beginning in 1994, the government embarked on a Comprehensive Tax Reform Program (CTRP), and undertook a major expansion of the coverage of the VAT, motivated in large part by a desire to increase the contribution of the tax system to equity. The CTRP has effected major changes to the tax code since 1996, and is now nearly complete. The first component of the tax reform, modifying the taxation of oil products, was introduced in 1996. The second, which increased excise taxes on cigarettes and alcohol, went into effect on January 1, 1997. The remaining components, which will affect personal and corporate income taxes as well as tax administration more generally, were signed into law in December 1997. Changes to the VAT through the enactment of the VAT Reconstruction Act in 1994 greatly expanded the previously limited base of the VAT, extending it to many services consumed largely by upper income groups in the population.

An analysis of the incidence of the Philippine tax system (Yoingco and others (1994)) found that the overall tax system, as structured prior to that time, was regressive at the very bottom of the income scale, but progressive thereafter. Although the results (like those of all incidence studies) depend on assumptions about how various taxes—such as the corporate income tax—are distributed among consumers, shareholders and employees, in general that study indicated that the overall tax burden on the poorest income group was greater than that on those in the second to fifth income groups. Most direct taxes, including the individual income tax, were progressive. Indirect taxes were found to be regressive at the bottom of the income distribution. Because the poor consume a relatively larger percentage of their incomes than do the wealthy, consumption-based taxes will nearly always be found in the first instance

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<sup>51</sup>Faculty of the Department of Economics, UPLB (1994).

<sup>52</sup>Balisacan (1995).

<sup>53</sup>Alonzo (1994).

to be somewhat regressive in their impact, even when exemptions are granted to food.<sup>54</sup> For example, the study found that alcohol taxation was regressive, reflecting the fact that the poorest income groups spent a relatively higher fraction of their incomes on alcohol products than did the wealthy.

The impact of any particular tax, and indeed of the tax system as a whole, on the economic equity of a society must, of course, be viewed in the context both of the alternatives for raising revenues, and of the progressivity of the expenditure side of the overall government budget—that is, what persons benefit from the taxes raised. While the structure of the Philippine individual income tax is quite progressive, the opportunities for tax avoidance and reduction by the relatively wealthy, as in all countries, are much greater than they are for the less well-off. For example, wage earners' incomes are effectively taxed through withholding, but the earnings of businessmen are far harder for the tax administration to effectively measure. Similarly, the wealthy have more opportunity to engage in perfectly legal, but effective tax planning, for example, by the use of tax-free investments and deposits. In such a case, in countries in which the administration of taxes on the wealthy is difficult and where there are many tax incentives and preferences that benefit the wealthy, shifting the tax burden toward consumption and away from income may actually result in the wealthy paying a higher proportion of tax revenues, and of their incomes in tax, than where reliance is placed upon income taxes which they can evade or avoid.

It is very difficult to effect a major redistribution of income through the tax system in any country, in large part because many of the very poorest citizens are outside the tax net. For this reason, redistribution to the poor is more effectively undertaken through targeted expenditure programs, using revenues raised in as economically efficient manner as possible. In keeping with this problem, it appears that the tax system in the Philippines, at least prior to 1994, did not directly contribute to an improvement of the income distribution for the poorest groups. In fact, the tax system tended to redistribute income away from the lowest income groups and toward the middle class. Partially to improve overall progressivity, the government undertook the reforms described.

Determining the effects of the tax system on income distribution is always difficult. However, it would seem likely that the CTRP's increase in excise taxes on cigarettes and alcohol will have a regressive component, since the poor tend to spend a larger portion of their income on these products than do the wealthy. However, because the tax collected on premium brands is greater than that on inferior brands, the regressive nature of the system may be ameliorated somewhat. In addition, the aim of the reform of the direct taxes is in part to increase the overall progressivity of the income tax system, through changes both to the tax structure for individuals and to the corporate tax system.

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<sup>54</sup>In term of regional comparisons, it should be noted that as of 1993, the VAT in the Philippines actually contributed a substantially lower proportion of total tax revenues than that in Indonesia, and an equivalent proportion to that of the Thai VAT.

The existing personal income tax is already somewhat progressive. The reform of the personal income tax is intended to result in a decrease in income taxes for all current taxpayers.<sup>55</sup> Because the very lowest income earners are already exempt from the income tax, reforms cannot have a direct impact on their welfare. However, there are households below the poverty line that do have income tax liabilities under the existing system. The reform is intended to ensure that no family living below the poverty line would have any income tax liability. More generally, the income tax reform seeks to bring into the tax net many individuals who were previously outside the net. To the extent that these individuals tend to have relatively higher incomes, the reform would also likely improve the distribution of income.

The impact of the corporate tax reform on income distribution ultimately depends on assumptions about who bears the burden of the tax. However, certain features of the reform, such as the introduction of a tax on employee fringe benefits, would likely improve the progressivity of the overall tax system. In addition, the government's proposals to eliminate many corporate tax breaks and investment incentives, which were originally included in the CTRP but excluded from the final version, would help eliminate distortions in the economy and ensure that resources flow into their most productive uses, which would ultimately increase growth and benefit the poor.

Finally, it is important to remember that to the extent that the tax reform increases revenues, this will create additional room for government expenditures that could raise incomes of the poor. Ultimately, it is very much a question not just of where the revenue comes from, but also where it goes that determines the progressivity of fiscal policy.

#### **D. Monetary Policy**

In recent years, the Philippine authorities have pursued a monetary policy that has resulted in relatively high real domestic interest rates. As noted above, Blejer and Guerrero (1990) found that higher real interest rates led to an improvement in income distribution in the period 1980-86, in part because the poor had limited access to credit. However, there is some reason to expect that this may no longer be the case. In recent years, the country's open capital account, and the relatively few restrictions placed on banking transactions conducted in foreign currency, have led to a rapid rise in the volume of dollar lending in the economy.

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<sup>55</sup>In fact, the tax reform could lead to higher total tax payments from some individuals for a variety of reasons. First, if the wage elasticity of labor supply is high, workers could increase their labor supply sufficiently to raise their total tax obligations even at the lower tax rate. Second, the lower marginal tax rate reduces the incentive to engage in tax avoidance strategies, which could offset a substantial portion of the revenue theoretically lost from the cut in marginal tax rates. Finally, at lower tax rates workers may choose to take more of their income in the form of taxable wages rather than tax-free benefits or deferred compensation. The proposed introduction of a fringe benefits tax would also have this effect on income tax revenues.

Dollar loans generally have much lower interest rates than peso loans.<sup>56</sup> If dollar loans are only available to members of the upper-income classes, then an unintended consequence of the tight monetary policy and open capital account would be to raise borrowing costs for the middle classes while keeping relatively cheap credit available for the wealthy. Although poor farmers have difficulty gaining access to formal sources of credit in many countries, this appears not to be the case in the Philippines, where in recent years many farmers have increasingly been able to receive credit from cooperatives, rural banks, and suppliers and marketers. The relatively high real costs of credit are thus felt throughout the lower portions of the income distribution.

#### IV. INCOME DISTRIBUTION AND GOVERNMENT POLICIES

While the previous section looked at how economic policy has affected income distribution, it is clear that the present unequal distribution of income in the Philippines has also constrained the ability of the authorities to enact reforms that would increase equity. As Boyce (1992) puts it, "unchecked by a more equitable distribution of wealth and power, the ruling elite was free to pursue its self-interest even at the expense of the public interest (p.19)."

There is a widespread public perception in the Philippines that to a greater extent than in many other countries, the political process has been captured by elites. To some extent, this is an inevitable outgrowth of an unequal distribution of income: the financing of political activity is expensive, and the greater is the concentration of income, the smaller will be the group of individuals exerting political influence. Hand in hand with this, the highly-regulated, import-substituting based industrial strategy pursued by the country created many opportunities for rent-seeking behavior, which also contributed to a concentration of power in the hands of an elite.

Karnow (1989) documents the important role that clans and oligarchies played for decades in Philippine politics and economics. At the turn of the 20th century, Philippine towns were controlled by small groups of leading citizens with the ability to manage many aspects of public life. Although elections were introduced, and the electorate gradually broadened, during the early years of the century, Karnow argues that the political parties

... were identical ideologically. They fought partly for prestige—but, more often, for the power to sequester land, steal tax receipts, demand kickbacks for licenses or hand out profitable and frequently fake public works contracts for their relatives. Officials grew rich in subsequent years by pocketing funds allocated by the Manila government to develop municipalities. (pp. 228-29)

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<sup>56</sup>Although the recent depreciation of the peso certainly increased the real cost of some dollar loans in peso terms, in fact in some cases borrowers were reportedly required to enter into forward contracts for their dollars at the time the loans were granted, shifting the currency risk back to the lenders.



Although traditional power structures and family ties have weakened in urban areas, in many rural parts of the country traditional elites continue to dominate.

While government officials doled out economic favors to supporters and family members for much of the century, the process reached its most notorious stage during the martial law regime. Karnow provides numerous examples of tax breaks, low-cost loans, debt bail-outs, monopoly rights, and other benefits provided by presidential decree in order to enrich President Marcos's supporters at the cost of taxpayers, workers, or small farmers.

Boyce (1992) discusses the effect of the concentration of wealth and power on the distribution of income in the coconut industry, traditionally the largest employer and largest producer of agricultural export earnings in the economy. Beginning in the early 1970s, a series of presidential decrees created a single institution with control of all stages of coconut production from the purchase of coconuts from farmers to the sale of processed oil on the domestic and international markets. Although these measures were purportedly motivated by a desire to improve conditions for coconut growers, in fact the main beneficiaries seem to have been a very small number of close associates of Marcos. Aided both by a substantial levy on coconut producers and by its monopsony power (which enabled it to increase profit margins on its production from a normal 50 centavos per kilo of copra to P2-3 per kilo) the United Coconut Oil Mills/United Coconut Planters' Bank complex amassed vast sums of money (much of it alleged to have been appropriated by Marcos cronies).<sup>57</sup> Summarizing the changes in coconut marketing in the 1970s and early 1980s, Boyce states

The primary motive for this transformation, and its major effect, was redistribution of the income generated by the country's leading agricultural export. The beneficiaries were a handful of politically powerful individuals. The losers included millers and traders driven out of the industry, and above all the coconut growers, who experienced an intensification of the monopsonistic environment in which they sold their product (pp. 17-18).

Although the coconut monopoly was dismantled by the Aquino administration, support for reform and progress in changing the status quo remains lacking in agriculture. As discussed above, land reform efforts have met with very little success in the Philippines, in large part because of the power of landed elites. Similarly, while tariffs have been lowered dramatically in almost all sectors of the Philippine economy, agricultural tariffs remain at the maximum level permitted by WTO agreements, with potentially disastrous effects on productivity.

## V. CONCLUSIONS

Income distribution in the Philippines is highly unequal, and poverty rates are higher than in other ASEAN countries. In addition, while the poverty rate has declined over time, the

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<sup>57</sup>Boyce (1992).

rate of decline has been lower than in other ASEAN countries and income inequality, as measured by the Gini ratio, has been stagnant. To some extent, the lack of progress in improving poverty indicators in the Philippines relative to its ASEAN neighbors can be attributed to the country's relatively poor growth performance: during the 1980s, when most ASEAN countries enjoyed dramatic growth, GDP growth in the Philippines averaged only about 1 percent per year. However, the persistence of inequality and poverty in the Philippines can also be traced to economic policies that have favored capital over labor, and import-substituting industries over agriculture, and that have led to underinvestment in the human capital of the poor. The effects of these policies on the agriculture sector in particular have been devastating, and the low productivity of the agricultural sector (where most of the poor earn their incomes) remains a drag on the country's growth performance. The persistence of these policies owes much to the important role of elites in Philippine politics and society. Although a number of reforms have been undertaken in recent years, it will likely take some time before a full liberalization of the economy will erase the effects of past policies.

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