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**Business Fluctuations and Monetary Policy Rules in the Philippines:
with Lessons from the 1984-1985 Contraction**

by

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Business Fluctuations and Monetary Policy Rules in the Philippines: with Lessons from the 1984-1985 Contraction

*By Dante B. Canlas**

Abstract

The paper reviews recent research on macroeconomic theory of business fluctuations and its influence on monetary policy rules. It focuses on triggers to business fluctuations and the mechanisms that propagate the fluctuations once started. The Philippines is used as empirical setting. The theory's predictions are examined using time-series data on aggregate output performance, money growth, and budget deficits of government. The paper casts a spotlight on the output contraction of 1984-1985, the longest downturn in the postwar economic history of the Philippines. The role of monetary policy and fiscal policy shocks in triggering that downturn is studied, followed by the role of subsequent macroeconomic policy adjustments that propagated the downturn. The paper points out that monetary policy rules evolved in the aftermath of the 1984-1985 downturn, culminating in the inflation-targeting rule that the monetary authority currently uses. The adoption of inflation targeting hinged on the introduction of legislation that enabled the creation of a central bank with policy and instrument independence from the fiscal authority.

* Professor, School of Economics, University of the Philippines. This is a revised version of a paper that was delivered as the BSP Sterling Chair Lecture in Monetary and Banking Economics held on May 28, 2012 at the *Bangko Sentral ng Pilipinas*. This revised version drew support from the Philippine Center for Economic Development.

Business Fluctuations and Monetary Policy Rules in the Philippines: with Lessons from the 1984-1985 Contraction

By Dante B. Canlas

1. Introduction

I am pleased and honored to deliver the lecture for the BSP Sterling Chair in Monetary and Banking Economics in May 2012. I welcome this as it gives me the opportunity to revisit and reflect further on my works in open macroeconomics that span more than three decades since the early 1980s. Economic growth and business fluctuations constitute two areas of study that have engaged my academic life over this period.

Economic downturns are generally associated with human suffering—to cite a couple of miserable outcomes, people lose jobs and some fall below poverty income thresholds—which motivate a variety of policy prescriptions that commonly run ahead of sober positive analysis. It was to make sense of the so-called boom-and-bust episodes in the Philippines in a dispassionate manner that prompted me to start work on business fluctuations or cycles. When I started, luckily for me then—a young assistant professor struggling for tenure—macroeconomics had entered an exciting phase in terms of the models that were being proposed to shed light on issues like money neutrality or non-neutrality. And on the policy side, a key issue was whether it was appropriate to use activist monetary policy to try to get an economy out of a recession or a high rate of unemployment; in addition, the query was whether the conduct of such policy should be discretionary or adherent to rules.

In earlier decades, when I started graduate work in economics, macroeconomics was largely perceived as though it was a separate branch of economics. With the new vintage models, however, this was not the case anymore as modeling efforts were geared to building microeconomic foundations for, say, consumption, investment, and savings. In addition, since these aspects of human behavior involve the passage of time, the new models put market agents in a dynamic setting operating under uncertain and risky conditions.

The new models, of course, did not go unchallenged. For many years, macroeconomics in academe had been a battleground between two competing schools of thought: Keynesianism vs. monetarism (or neoclassical). Over the years, however, it has become less so as both schools today have accepted as an organizing framework general competitive equilibrium models that feature market agents operating through time and under uncertainty, and grafting into the framework, if one is a Keynesian, rigid prices and wages; but if of a monetarist or neoclassical persuasion, market-clearing conditions.

In this lecture, I intend to cover some of the important intellectual developments in the theory of business fluctuations and the influence they have had on the conduct of monetary policy. For many of you in this hall, today, my lecture may simply be in the nature of reminding you of things you already know, but may have somehow forgotten. Moreover, you may wonder why I have to go back to the 1984-1985 output contraction for some lessons learned. Why don't we just focus on the more recent episodes of contractions or slowdowns? Let's hold off the skepticism for a while, noting that even the Great Depression of the 1930s in the US continues at this juncture to be investigated and still inspires policy prescriptions from eminent macroeconomists. In addition, many of my papers related to the issues at hand and cited in this lecture have been published in some economic journals or as chapters in books; I'll use this as an excuse to avoid being overly technical today. So let's see how far this investigation can go and shed light on current debates about the conduct of monetary policy and what institutional arrangements are appropriate.

Market-oriented economies generally exhibit growth in real gross domestic product (GDP) over a long period of time. That growth, however, is never smooth; it tends to fluctuate over time. This paper tries to account for such fluctuations in the Philippines by putting to work some recent theories of business fluctuations. The focus is on factors that trigger and propagate output or real GDP fluctuations.

Modern analysis of business fluctuations, both theoretically and empirically, has been evolving since the Seventies. One prominent class of models is described as belonging to the rational expectations school, whereby monetary policy shocks trigger business fluctuations. These monetary business cycle models rely on money-growth shocks or unanticipated monetary changes as triggering output fluctuations (see, e.g., Robert E. Lucas, Jr., 1972, 1973, 1975). These models display the usual features of a business cycle. Under rational expectations, money growth is output neutral in the long run; only unanticipated money growth matters for output in the short run. In these models, the output effects emerge from the inability of spatially separated market agents (e.g., firms and consumers) to distinguish between a relative-price change and a general-price change caused by money growth.

Money shocks, however, often have fiscal origins. If the government has a persistent deficit in its budget that is accommodated by the monetary authority, money growth tends to become excessive. In this context, money shocks stem from fiscal shocks.

Moreover, while money shocks can be trusted to trigger output fluctuations, they cannot, however, account for the propagation of such fluctuations. Many real or non-monetary factors are believed to be responsible for propagating them. Ben Bernanke (1983) for instance, has investigated the role that financial factors played in the Great Depression of the 1930s in the US; he provided evidence showing that bank failures, by disrupting financial intermediation, were responsible for its relatively long duration.

Moreover, it has been pointed out, based on analysis of time-series data on output that the fluctuations tend to be permanent rather than transitory (see, e.g., Charles Nelson and Charles Plosser, 1982). This gave rise to the conjecture that if output fluctuations are permanent, then there must be other sources of shocks than those coming from aggregate demand. This has led to the formulation of alternative theories referred to as real business cycle models; they feature shocks to the production technology that trigger and propagate output fluctuations (see, e.g., Finn Kydland and Edward Prescott, 1982; John Long, Jr. and Charles Plosser, 1983).

In 1984-1985, the Philippines experienced an economic downturn that was the longest in the country's postwar economic history. Over the period 1971-1980, real GDP grew an average of 6.2 percent each year. In 1981, real GDP began to slow down, and in 1983, the government declared a moratorium on foreign-debt servicing. The recession of 1984-1985 followed after that. The economic recovery emerged in 1986. This paper investigates the extent to which monetary policy was responsible for triggering the recession and how non-monetary factors contributed to lengthening the duration of the recession. Fiscal and financial factors associated, for instance, with the macroeconomic policy adjustments appear to have contributed significantly to the propagation of the output contraction.

In the aftermath of the 1984-1985 contraction, efforts have been exerted in finding new rules to govern the conduct of monetary policy in the Philippines. When the search began, there was already wide acceptance of adopting rules, instead of discretion, in the conduct of monetary policy. The works of Lucas (1976), Kydland and Prescott (1977) have been very influential in this regard.

The 1983 debt moratorium that the Philippine government declared, which was accompanied by a sharp peso depreciation and balance-of-payments or BOP crisis had put exchange-rate targeting in disfavor. Meanwhile, monetary-aggregate targeting had been found inadequate, in view of the seeming instability of money demand. That eventually led to the adoption of inflation targeting as a monetary-policy rule. But to make the latter work, endowing the monetary authority with policy and instrument independence, particularly, from the fiscal authority, was deemed critical.

Section 2 reviews some prominent theoretical models of business fluctuations that help shed light on the observed economic outcomes. Focus is on the role of monetary factors in triggering an output downturn, and of fiscal and financial factors in prolonging a downturn. Section 3 reviews the episodes of output growth and fluctuations in the Philippines, using some down-to-earth factors on real GDP growth and decline over the period 1950-1985. Section 4 discusses how the 1984-1985 contraction helped shape the adoption of inflation targeting as the central bank's preferred monetary policy rule. Section 5 makes concluding remarks.

2. Monetary Roots of Business Fluctuations

Business cycle models rooted in the conduct of money growth have general equilibrium features. Preferences, production technology and equilibrium are well described. Market agents, consisting of consumers and firms, are placed in a dynamic and stochastic setting. They are spatially separated, and information about price changes does not arrive uniformly. Agents form expectations rationally, in the sense that they use all information available to them when they form expectations about some unobserved future variables.

The analysis proceeds using an aggregate demand-aggregate supply framework (see Lucas 1972, 1973, 1975). Aggregate demand is premised on a clearing of both the product and money markets and is consistent with the traditional IS-LM formulation. The components of aggregate demand are consumption, investment, government spending, and in an open economy, net exports. Meanwhile, aggregate supply consists of a normal output and a cyclical component (or a deviation from that normal output). It is a variant of the Phillips curve in which output effects of money emanate from the confusion about whether the price change stemming from a nominal or money-supply change is a general or relative-price change.

The aggregate-supply function of Lucas does not rely on a Phillips-curve relationship. The latter posits a stable relationship between the rate of change of money wages (or inflation) and unemployment (see A.W. Phillips, 1958). The latter was grafted in Keynesian models with rigid prices and was regarded as providing the link between a nominal and a real variable. For a long period of time, the Phillips curve was used as the basis for stabilization. In the late 1960s, however, that approach to stabilization failed. Active monetary policy proved ineffective in getting the US economy out a recession; it, instead, yielded output stagnation with inflation. That so-called stagflation set the stage for Milton Friedman (1968) to launch an assault at the Phillips curve.

The aggregate-supply function differs from potential or capacity output and in the short- to medium-run period may shift or pivot depending on how people interpret a price change triggered by an unanticipated money growth. It is upward sloping and approaches potential output in the limit.

In Lucas's aggregate-supply model, all markets clear. In equilibrium only unanticipated money growth yields output effects, not anticipated money. Since it is not immediately clear to market agents whether the price changes from unanticipated money are general or relative, output effects may be generated in the short run. If firms, for instance, view the price change as a relative-price change, they expand output in the belief that there has been an increase in the demand for their product. They hire additional workers to be able to expand production. However, since workers are already working elsewhere, they have to be offered higher wages to be induced to transfer, which raises production costs. Meanwhile,

input suppliers also ask for higher prices for their products. Eventually, seeing that all wages and prices are rising, market agents begin to realize that the price change is a general-price change, and production is thus adjusted to their former levels. Hence, unanticipated money change triggers a positive relationship between money and output in the short run, which cannot, however, be maintained in the long run.

If money growth is fully anticipated, which the monetary authority can accomplish through an announced money-growth rule, the general-price change is likewise anticipated. Market agents, shorn of money illusion, are not induced to make production changes, resulting in money neutrality. Monetary business cycle models, at the descriptive level, are shown to deliver the basic features of a business cycle, that is, a positive relationship between money and output (i.e., non-neutrality) in the short run, that is consistent with optimizing behavior of market agents who form rational expectations amid risk and uncertainty. In this dynamic stochastic setting, agents are seen as engaged in inter-temporal substitution in their consumption and labor-supply decisions.

From a prescriptive standpoint, monetary business cycle models support the use of rules, while shunning discretion, in the conduct of monetary policy. Unanticipated money or money surprises are not to be used counter-cyclically, that is, to try to get an economy out of a depression or high rate of unemployment. It is emphasized that the output or employment gains from such an approach are temporary, but the inflation effects are permanent. In line with this prescription, the choice of monetary policy rules have been evolving and undergoing refinements over time in many market-oriented economies.

Some empirics on money shocks and real quantities

Support for the real effects of money shocks on real quantities may be seen in the empirical works of, for example, Robert Barro (1977, 1978). Unanticipated money is measured as the residual from a money-growth equation. The residual is added as a regressor in an output-growth equation or an unemployment equation. In these empirical studies, there is support for the hypothesis that in the short run only money shocks exert real effects on unemployment and on output.

Dante Canlas (1986a, 1996) did essentially the same tests using Philippine time-series data and found essentially the same results. Unanticipated money has positive effects on output, but anticipated money, which is the prediction from a money growth equation, is neutral. Likewise, only a money surprise, not an anticipated one, reduces the unemployment rate.

Money shocks in an open economy

In a small open economy that trades with the rest of the world not only in commodities, but also in securities and national monies, the choice of an exchange-rate system can trigger undesirable business fluctuations if money growth is not

consistent with the existing exchange-rate system. For instance, under a fixed exchange rate system, the home country that pegs the exchange value of its currency to a foreign country's currency cannot inflate at a faster rate than the foreign country; otherwise, the fixed exchange rate collapses and the home country may run out of official foreign reserve assets, a veritable balance-of-payments crisis.

If the home country expands its money supply at a faster rate, the domestic inflation rate increases at a rate greater than that of the foreign country. The demand for imported goods rises, resulting in an increased demand for foreign currency. Under a fixed exchange rate, the monetary authority of the home country commits to buy and sell foreign exchange at the fixed rate. And so the official foreign reserve assets of the monetary authority declines. If the latter continues to expand money supply, then its foreign reserve assets may eventually be depleted, forcing an abandonment of the fixed exchange rate. Oftentimes, speculative attacks against the currency accelerate the depletion of official foreign reserve assets, the case of a self-fulfilling balance-of-payments crisis.

Several writers have investigated the problems associated with monetary policy that is inconsistent with an exchange-rate system in place. Paul Krugman (1979) showed formally that a fixed exchange rate collapses in finite time under a positive money growth. With Krugman's ideas in mind, Peter Garber and Robert Flood (1982) used a linear example to track how positive money growth with a fixed exchange rate first disturbs equilibrium in the money market. Excess local currency is dumped in favor of foreign money, resulting in an excess demand for foreign exchange that if accommodated by the monetary authority erodes official foreign reserve assets. If this process continues, the monetary authority cannot sustain a fixed exchange rate, and has to abandon it eventually. The timing of the collapse of a fixed exchange rate oftentimes occurs faster than expected in the presence of agents who launch a speculative attack against the local currency (see, e.g., Maurice Obstfeld, 1984).

Faced with a liquidity crisis, the home country is unable to carry out transactions in goods, securities, and currencies with the rest of the world. Exporting, importing, and debt servicing are impeded, resulting in a decline in the national output, which is an unwanted business fluctuation. With servicing of foreign debt disrupted amid a liquidity crisis, the home country, lacking access to the international financial market, can only resume its trade with the rest of the world if it can arrange a standby credit arrangement with the International Monetary Fund (IMF) to be able to access special drawing rights (SDRs), a basket of the world's hardest currencies.

A client-country of the IMF must contend with conditionality practices of the IMF before it can tap a standby credit. The country commits to a letter of intent (LOI), which spells out the policy adjustments that have to be undertaken over a specified period of time, with performance indicators that have to be monitored.

Drawdowns from the standby credit are phased, conditional on meeting performance indicators.

A BOP crisis means that the country's aggregate spending exceeds its aggregate income receipts. In this context, the policy advice of the IMF to a client country is based on aggregate demand management. To begin with, monetary and fiscal policies have to be tightened. The financial programming technique is based on a market-clearing model of the money market, that is, the growth of the money base and rate of net domestic credit creation by the monetary authority must be consistent with non-erosion of available net foreign reserve assets. And so money growth slows down in line with a lower output growth rate and a lower inflation rate than before the crisis. In order not to compromise the more modest money-supply target, net credit to the government is also decreased, which means the budget deficit of the government must be reduced. Monetary and fiscal policies are thus tightened, twin moves that can cause the initial economic downturn to persist.

Following the collapse of a fixed exchange rate, the monetary authority may allow for some flexibility in the exchange rate. The devaluation or depreciation, however, may have some financial repercussions. Some firms that have incurred loans denominated in foreign currencies struggle to service their debts and may end up bankrupt. The banks that are loaned out in foreign currencies experience undue stress and see a rise in their non-performing loans. Some of the banks may become insolvent and fail. Meanwhile, loan-loss reserves are increased, an act that hampers financial intermediation. Even borrowers with good projects may find it hard to raise bank loan financing, thereby propagating further the business downturn (see, e.g., Stephen Williamson, 1987; Canlas, 1999).

To sum up: money growth that is inconsistent with a fixed exchange rate can lead to a collapsing exchange rate and a BOP crisis. Subsequent monetary and fiscal adjustments, plus the adverse effects on financial intermediation of the currency devaluation and bank failures, go distance in propagating an economic contraction.

Fiscal roots of money shocks

It has been said that central banks do not deliberately create money in excess. Consider that once inflation breaks out, the blame generally falls on the central bank. So why do some countries, such as, some Latin American countries in the 1970s, go through some episodes of high inflation?

Quite often the central bank has no control over actions of the fiscal authority, which is responsible for the size of the budget deficit of the national government. If the fiscal authority decides on a spending program that exceeds government revenues, the outcome is a budget deficit. Any deficit must be financed. The fiscal authority may decide to resort to borrowing by issuing Treasury bills and bonds. But this may raise the interest rate, with crowding-out effects on consumption and investment, which reduces output. This may force the monetary authority to intervene, particularly, if the interest rate continues to rise; it may

accommodate and monetize the budget deficit in the belief that interest rates would decline.

One may ask what induces the fiscal authority to engage in deficit spending? There is a long tradition, popularly referred to as Keynesian that subscribes to the capacity of government spending to get the economy out of a recession. It is also believed that government debt that accumulates from government budget deficits constitutes net wealth, with positive effects on consumption. That thinking has not gone unchallenged. Barro (1974), for instance, has argued that the stream of future taxes negate earnings from government bond holdings, and hence, have no effects on private consumption or on aggregate demand. Meanwhile, there exist some empirical tests showing that some government spending and debt crowds out private spending (see, e.g., Roger Kormendi, 1983).

Using the Philippines as empirical setting Canlas (1986b) tested the crowding-out hypothesis of government spending, and debt financing of the government deficit. Using a short-run consumption function, the tests show a one-for-one crowding out of consumption by government spending. However, the stock of public debt has mixed effects on consumption. External debt exerts a positive effect while internal debt has a negative effect on consumption. One possible explanation is that the Philippines is a large borrower locally; when it issues domestic debt, interest rates are likely to rise, crowding out consumption and investment, hence, the negative effect. Meanwhile, the Philippines is a small borrower abroad; its external borrowing, which is mostly to finance large capital projects, has no impact on interest rates, abroad or locally. Once the foreign funds reach households and firms in the form of payments for services rendered, incomes rise, inducing higher consumption.

3. Output Growth and Fluctuations in the Philippines

This section reviews the experience of the Philippines with growth and fluctuations in output, and the role of money growth therein. Business fluctuations or cycles involve co-movements in several aggregate measures of economic performance. The focus here is on the money-output relationship. Since the 1950s, the first and longest contraction in real GDP occurred in 1984-1985.

Real GDP growth and fluctuations

Over the period 1951-1990, real GDP grew at an average of 4.7 percent each year (see Table 1). Entering the 1980s, real GDP growth slowed down from an average of 5.9 percent each year in 1971-1980 to 3.4 percent in 1981. Real GDP growth rate barely increased in 1982 to 3.6 percent, and slowed down to 1.9 percent in 1983, when the government defaulted on foreign-debt servicing. In 1984, real GDP declined 7.3 percent, and by 7.3 percent again in 1985. The economy bottomed out and recovered in 1986 with a real GDP growth of 3.4 percent. The recovery gathered strength and peaked at 6.8 percent in 1988.

Table 1: Growth Rate of Real GDP, 1951-1990

Year	Ave. annual growth rate (in %)
1951-1960	6.4
1961-1970	4.9
1971-1980	5.9
1981	3.4
1982	3.6
1983	1.9
1984	(7.3)
1985	(7.3)
1986	3.4
1987	4.3
1988	6.8
1989	6.2
1990	3.0
1951-1990	4.7

Source: National Statistical Coordination Board (NSCB), *National Income Accounts*

Money growth and peso depreciation

It is widely agreed that money growth played a big role in ushering in the contraction of 1984-1985. Excessive growth of money under a fixed exchange rate or a managed-float system that tries to keep the nominal exchange rate within a narrow band often leads to a devaluation of a fixed exchange rate or a sharp depreciation under a managed float.

Table 2 shows the growth rate of the money base over the period 1980-1986. In 1983, the money base grew 44 percent, a significant increase over the average 10 percent growth each year in 1980-1982. In 1982, the money base was 1.26 times the available gross foreign reserves. That multiple ballooned to 2.4 times in 1983 and that year, the peso lost 52.7 percent of its nominal value against the US dollar. Table 3 shows episodes of sharp depreciations in 1983 and 1984. The last major devaluation had occurred in February 1970. Following the declaration of a moratorium on foreign-debt servicing, the government arranged a standby agreement with the IMF, and had to comply with conditionality practices of the Fund based, among other macroeconomic adjustments, on tight money. In 1984, the growth rate of money moderated to 18 percent and declined sharply to 4 percent in 1985.

Table 2: Money Base and Annual Growth Rate

Year	Money base (in millions)	Growth rate (in %)
1980	21,352	14
1981	23,889	12
1982	24,896	4
1983	34,957	44
1984	41,232	18
1985	43,039	4
1986	54,827	27

Source: Central Bank, *Annual Report*, various issues

**Table 3: Episodes of Devaluation/Depreciation
(1970, 1983, 1984)**

Time period	Nominal exchange rate (P/\$)
February 1970	3.95
June 1983	6.45
October 1983	14.00
June 1984	18.00
October 1984	20.00

Source: IMF, *International Financial Statistics*, various issues

The 1983 BOP crisis also generated some financial difficulties that resulted in some bank failures. Once speculative attacks were launched against the peso, people rushed to withdraw their peso deposits from their banks and convert them into US dollars. Bank runs were triggered, resulting in failures for some. The BOP crisis thus spawned a financial crisis that resulted in further adverse effects on output.

The fiscal roots of the high growth rate of the money base in 1983 may be gleaned from the net domestic asset (NDA) components of the money base. NDA consists of net domestic credits to the public sector, deposit money banks, and other financial entities. Recurrent deficits in the budgets of the national government and government-owned corporations had been a long-standing concern in the Philippines (see Canlas 1986b, 1998). Table 4 shows for 1983 those NDA components and growth rates from the previous year. The highest growth rate of 54.8 percent was net credit to the public sector accounted for by the national government with a growth rate of 18.3 percent and other government agencies with a growth rate of 126.3 percent. Net credit to deposit money banks declined 44.8 percent while net credit to other financial entities grew 35.9 percent.

Table 4: Net Domestic Asset Component of the Money Base

NDA component	1982 (in millions)	1983 (in millions)	Growth rate (%)
Net credit to the public sector	7,505	11,621	54.8
Net credit to deposit money banks	9,043	4,988	(44.8)
Net credit to other financial entities	7,288	9,907	35.9

Source: Central Bank, *Annual Report*, various issues

The government may borrow to finance its budget deficit. When it borrows from the private sector consisting of households and firms, it absorbs resources that the private sector may otherwise use for consumption and investment. When it borrows from the central bank, such an action is equivalent to money creation. The central bank writes a check payable to the national government whose spending units are the various agencies of government. Once the agencies spend, the money supply increases. Table 5 shows the budget deficit of the national government and the consolidated public sector (CPS) deficit from 1981 to 1983, much of which was financed by borrowing from the central bank, which also lent to government-owned corporations and deposit-taking financial institutions.

**Table 5: Budget Deficit
(% of GDP)**

Year	NG Deficit	CPS
1981	(4.0)	(4.8)
1982	(4.2)	(5.3)
1983	(1.9)	(3.3)

Source: Department of Budget and Management, *Fiscal Statistics*

Notes: NG, National Government; CPS, Consolidated Public Sector Account

It seems clear from the above statistics that excessive money creation, indicated by the growth rate of the money base contributed to the collapse of the peso-dollar exchange rate in 1983. The money creation had fiscal origins: the central bank accommodated a good portion of the budget deficits of the government, both national and local, as well as government corporations and financial institutions. At that time, the central bank lacked independence from the fiscal authority. Cabinet ministers sitting in an ex-officio capacity dominated the monetary board of the central bank, the highest policymaking body.

Following the BOP of 1983, the government had to tighten fiscal and monetary policies. Since a BOP deficit means that the economy spends more than it

earns in the aggregate, a major first step in addressing the crisis is through a tightening of aggregate demand. The economy did not react neutrally to such tightening. Real GDP contracted in 1984 and 1985. Furthermore, financial difficulties faced by deposit-taking banks caused financial disintermediation, thereby contributing to the persistence of the economic contraction.

That crisis meant considerable loss of human welfare. Unemployment increased. Real earnings stagnated, if not declined. The adverse consequences on living standards largely motivated the introduction of monetary policy rules and attendant institutional reforms. I now turn to these reforms.

4. Monetary Policy Rules

At this juncture, there is no longer any doubt that monetary policy must be based on rules rather than on discretion. The intellectual influences behind this policy development include Lucas (1976) with his critique of early macroeconomic models that viewed decision-making by market agents as invariant amid actual choice of fiscal and monetary policy. In addition, Kydland and Prescott (1977) pointed out the time inconsistency of optimal plans, a case wherein agents who optimize at each point in time are induced to deviate from previously set plans.

In the Philippines, the conduct of monetary policy has been evolving and undergoing some refinements through time. When the Central Bank of the Philippines (CBP) opened for business in 1949, exchange rate targeting was the dominant approach to monetary policy. Initially, this was done through a fixed exchange rate; later on, the CBP adopted a managed float in which the exchange rate was allowed to move within a narrow band. That was inspired by the central bank's original charter which aimed to "maintain monetary stability and to preserve the international value of the peso. In addition, the CBP, as articulated in its charter, also aimed "to promote a rising level of production, employment, and real income in the Philippines." Fixed exchange rates were adopted but those fixed rates were generally unsustainable. Following the collapse of the Bretton Woods agreement in 1971 when the US abandoned the fixed value of gold in US dollars, the CBP announced in 1973 that it was allowing the peso to float against the US dollar. It was, however, a tightly managed float and that did not prevent the occurrence of a sharp peso depreciation, such as the ones that occurred in 1983.

When a BOP crisis emerged and the government had to run to the IMF to overcome its liquidity crisis—having run out of foreign reserves—the CBP had to accede to the financial programming technique of the IMF applied to its client countries. That technique involved monetary-aggregate targeting. Based on a market-clearing model of the money market, overall liquidity had to be made consistent with a modest real GDP growth and very moderate inflation rate. This is based on a liquidity-preference function of the Baumol-Tobin variety. The

limitations of monetary-aggregate targeting were later exposed when money demand tended to be unstable.

Meanwhile, more recent developments in economic theory and policy have made it clear that the central bank has limited tools and may not be in a position to achieve an elaborate set of targets. Those tools, it was pointed out, were better put to achieving price stability, instead of pursuing development goals like sustained growth of output and employment. In this setting, inflation-targeting rule becomes the preferred monetary-policy rule (see, e.g. Lars Svensson, 1999a and 1999b).

Inflation targeting

Under inflation targeting, the central bank announces to the public a numerical inflation target, normally a low and positive rate. Deflation is out of the question since deflation can ruin the balance sheets of banks and other financial intermediaries whose assets, including loan collaterals, are denominated in nominal money terms. If there is deflation, the value of their assets decline, impairing their ability to raise capital and write loan contracts in the future.

When actual inflation is running ahead of target, the central bank can raise interest rates to tighten money and signal to the public that it will not tolerate inflation. Conversely it will reduce interest rates when inflation is benign. The central bank can use its discount rate, for instance, to influence the rate at which banks lend to each other.

Under inflation targeting, the central bank needs to communicate constantly with the public its intentions. In this regard, the inflation rate is easier to communicate than a monetary aggregate like the money base or a measure of liquidity like M1, M2, or M3. And since inflation rate is not difficult to monitor, the public is better positioned to extract accountability from the central bank.

To make inflation targeting feasible, it is important for the central bank to have independence, which has at least two dimensions: policy independence and instrument independence. With policy independence, the central bank is free to set its target independent of the fiscal authority. If the fiscal authority dominates the monetary authority, there may be ready accommodation of any deficit in the government budget, with inflationary consequences. Without policy independence, it will be hard for the central bank to develop the reputation of a credible inflation fighter. Credibility is vital to clipping inflationary expectations under inflation targeting.

In addition to policy independence, the central bank must have instrument independence. That is, it must be equipped with a set of policy instruments that are effective in achieving the announced inflation target. In this context, current efforts of the Bangko Sentral ng Pilipinas (BSP) to have the power to issue its own securities are in line with achieving instrument independence.

A prior issue is this: is inflation a monetary phenomenon Friedman had said, “inflation is always and everywhere a monetary phenomenon.” With a quantity theory of money in mind, if the central bank increases the money supply from a position of balance, then the real money stock exceeds the demand for it. To restore balance, the general price level must rise, which means inflation rate, defined as the percentage change in the general price level, must rise.

Canlas (1992) tested a quantity theoretic model of inflation in the Philippines. The theoretical model implies a one-for one impact of money growth on the inflation rate. Some econometric techniques, including, first-order differencing for stationarity, finding the optimal lag length, and Granger causality tests were put to work. Time-series data were used. For the period 1973-1990, the regression results showed that money growth had a contemporaneous positive effect on the inflation rate but less than one-for-one. The optimal lag length of the effect of money growth on inflation using Hsiao’s (1981) test was one year; in subsequent regression, however, the effect of money growth lagged one -year was insignificant. Overall, there is empirical support for an inflation model based on the quantity theory of money.

5. Concluding Remarks

This paper has reviewed some models of business fluctuations that may be used to account for an episode of long and sharp contraction in the national output in the Philippines, specifically, the 1984-1985 contraction. Money growth that is inconsistent with a fixed exchange rate or a tightly managed float tends to be unsustainable. A fixed exchange rate collapses in finite time, particularly if money growth, rooted in persistent deficit financing of the government budget, is excessive. Likewise, a managed float based on interventions in the foreign exchange market designed to keep the exchange rate within a narrow band is vulnerable to speculative attacks, resulting in a sharp currency depreciation.

The debt default in 1983 and the subsequent tightening of fiscal and monetary policies triggered and propagated the contraction in 1984-1985. The adoption of monetary policy rules thus evolved from exchange rate targeting to monetary-aggregate targeting, and now to inflation targeting. The latter necessitated policy and instrument independence, which occurred in 1993 with the enactment of a law that established an independent monetary authority, the Bangko Sentral ng Pilipinas (BSP). That newly found independence enabled the BSP to usher in inflation targeting, which it formally adopted in 2002.

One episode of a contraction in the aftermath of having an independent monetary authority occurred in 1998. That contraction was a fallout from the Asian financial crisis of 1997 that was triggered by the devaluation of the Thai baht. The output decline was not as deep as the one in 1984-1985, though. Real GDP declined by a mere 0.5 percent that year. The government had by that time ushered in a new

economic policy environment, including the adoption of a flexible exchange rate and allowing capital mobility. It would be useful to find out how monetary policy in such a setting had helped the Philippine economy avoid a sharp decline in output in 1998.

Meanwhile, the first episode of a major economic slowdown after the BSP adopted inflation targeting happened in 2009, an offshoot of the 2008 global financial crisis that originated in the US with the collapse of sub-prime housing loan market therein. The shocks spilt over globally and caused many economies all over the world to recede. The Philippines dodged a recession but output growth slowed down considerably: real GDP grew only 1.1 percent in 2009.

Recent economic performance of the Philippines suggests that inflation targeting as a monetary policy is quite promising. Nonetheless, many challenges still remain, including ensuring policy independence from the fiscal authority. But there is also the need to coordinate fiscal and monetary policy. The importance of such coordination is evident from the current debt problems of Eurozone countries like Greece, Italy, Portugal, and Spain. At this stage, coordination is achieved in the Philippines by appointing the Secretary of Finance a member of the Monetary Board. The question is whether this arrangement can be improved upon. Lastly, there is also the need for instrument independence. Allowing the BSP to issue its own securities is a step in this direction. The challenge to BSP is to overcome the public's apprehension about a possible recurrence of the high interest-rate regime engineered through the issuance of special CB bills, with adverse output effects, at the height of the 1983 BOP crisis. Another issue is whether the instruments available to the BSP at this point to pursue inflation targeting successfully are still inadequate.

After the 1984-1985 contraction, two financial crises emerged, with differing impacts on output performance in the Philippines. These are the 1997 Asian financial crisis and the 2008 global financial crisis. Both crises are associated with asset price bubbles in the countries where they originated, particularly in the property market. Some analysts contend that asset price bubbles are largely traceable to monetary policy geared to maintaining near-zero interest rates. A low interest-rate policy, it has been pointed out by some observers, encouraged many investors and households to hold housing and real estate as an asset to hold. Banks in both Thailand and in the US lent excessively to the property sector the asset prices of which sharply dropped eventually, causing many big banks that lent heavily to the sector to fail.

The real GDP growth performances in the Philippines in the aftermath of both the 1997 and 2008 financial crises were not as bad as the contraction of 1984-1985. Real GDP declined by only 0.5 percent in 1998, and managed to grow 1.1 percent in 2009. In both instances, the economy recovered the following year. Nonetheless, these two episodes of poor aggregate economic performance represent two natural experiments that invite further studies on the role of monetary policy and rules in the Philippines. In particular, it will be insightful to find out whether

inflation targeting helped the Philippine economy avoid a recession in 2009, and in general, whether inflation targeting is an effective response to an incipient asset-price bubble.

From a theoretical standpoint, it seems proper to have a single organizing framework for thinking about economic growth punctuated by business fluctuations. In this regard, using a sequence economy as proposed earlier by Kenneth Arrow (1964) may be appropriate. A simple formulation of a sequence economy involves two time periods. In day 1, optimizing agents in an uncertain environment trade in money, securities and other assets. In day 2, trading in commodities takes place as a matter of course. This approach affords an integration of monetary and finance theory with consequences for the real economy.

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