

Zahid Husain Memorial Lecture Series-No.13



**The Changing Role
of Central Banks**

Andrew Crockett

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STATE BANK OF PAKISTAN

THE CHANGING ROLE OF CENTRAL BANKS

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In considering a theme that would both reflect the work and legacy of Zahid Husain, and draw on my own professional experience, I could think of nothing better than "The Changing Role of Central Banks". Central banks are key institutions in society's attempt to make the financial system serve the needs of the wider economy. Their basic objective, to promote monetary and financial stability, has not altered. The environment in which they operate, however, has been changing rapidly. The world economy and financial system has become more integrated. The international spillover effects of developments in one country to its neighbours and partners have thus become more rapid and extensive. The volume and sophistication of financial flows has also expanded enormously. New types of financial institution and new financial instruments (derivatives) have blurred previously familiar boundaries and distinctions.

Throughout these changes, a constant feature has been central banks' search for effective means of implementing policy in an environment where economic agents can use new instruments and markets to

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arbitrage their way around restrictions and controls. The authorities have sought anchors for policy that are compatible with profit-seeking behaviour by private agents in an increasingly competitive market. It is this search that will be the underlying theme of this lecture.

My perspective is that of the mature industrial countries, where changes have gone furthest. But the trends I will be describing have already had profound effects on the emerging market economies, and will undoubtedly spread further in the developing world. I will try to highlight some of the implications for countries like Pakistan as I go along.

I will begin by noting some of the factors behind the changes that have taken place in the financial industry. Then I will review how approaches to monetary policy have evolved over the past 25 years, in respect of both ultimate goals and intermediate targets. After this, I will consider how financial stability has grown as a policy concern, and how the way in which supervision is viewed has evolved.

I. The Changing Financial Environment

The driving forces behind the transformation in the financial environment that has occurred in the past twenty to thirty years have been innovation and liberalisation. Technological advances have dramatically lowered the cost of gathering and processing information, while new financial instruments have increased the range of transactions economic agents can undertake. Liberalisation has paved the way for the expansion and restructuring of the financial industry. It has been driven both by the growing emphasis on market forces to allocate resources and by the difficulty of maintaining controls in the face of innovation.

The combined effects of innovation and liberalisation have been dramatic. Among the major countries, geographical barriers have largely disappeared, leading to the emergence of an increasingly integrated global capital market with a sizable group of multinational financial intermediaries operating in all the major centres. Developing countries have seen the effects of this in greater volatility in capital flows: periods of relatively easy access to foreign savings have given way to capital flight when confidence has waned.

The characteristics of financial intermediaries have changed, too. Distinctions between different classes of intermediary have become blurred, with the relaxation of regulatory restraints, the growth of conglomerate structures, and the increasing ease with which institutions can transform the risk characteristics of their portfolios through the use of derivatives. Other important developments have been the securitisation of assets and the institutionalisation of savings.

The significance for central banks of these developments in the financial environment is that they have greatly increased the ability of market participants to exchange assets and income flows over time, space, and market instrument. Portfolio management is far less constrained than before by lack of access to liabilities or claims with desired pay-off characteristics. Derivative instruments can be constructed with an almost infinite variety of risk/return features.

This has profound effects for central bank activity, both in the formulation and implementation of monetary policy, and in the preservation of financial stability. At the **macro-economic** level, markets can now discipline policies far more quickly and comprehensively than in the past. Bad policies, or indeed any policies that are unsustainable in the face of profit maximising behaviour by private agents, will sooner or later have to be reversed. This means that the authorities always have to consider, in framing economic policies, whether they are credible and how the market will react to them. It is very hard, for example, to spring an inflationary "surprise" that has a positive effect on output; or to set an exchange rate objective that is inconsistent with the underlying stance of macro-economic policies.

Concerning **financial stability**, more complete markets mean that competition squeezes out rents created by restricted franchises. Financial institutions have less of a cushion of protected profits and are therefore more vulnerable to losses caused by mismanagement or misfortune. This has inevitably increased the emphasis given to the role of the authorities as the ultimate guarantor of systemic stability. At the same time, it has reduced the effectiveness of regulation that is not based on market incentives. Financial institutions have a broad menu of techniques that enable them to get around regulations that are intended to increase safety, but are burdensome to the institutions to which they apply.

Let me now consider, in turn, the two key responsibilities of central banks: the implementation of monetary policy, and the preservation of financial stability.

II. MONETARY POLICY

(a) Objectives

In the 1960s and early 1970s, monetary policy was often framed in the belief that there was a sustainable trade-off between growth and inflation (the so-called Phillips curve). In practice, attempts to exploit this trade-off were almost wholly unsuccessful. According to IMF statistics world inflation went from an average of just under 6% per annum in the five years to 1972, to 15% a decade later. Meanwhile, world GDP growth slipped from an annual average of 4.5% to 2.6%. A similar pattern emerges when just the developing countries are considered. Taking the same period averages, inflation in developing countries accelerated from about 8% to 26%, while GDP growth fell from 4.7% to 3.7%.

Such simple comparisons are suggestive, rather than conclusive. But more sophisticated econometric studies bear out the impression they convey. The rational expectations literature, and the lessons of experience, suggest that there is no exploitable trade-off between output and inflation in anything other than the very short run. Moreover, inflation leads to distortions and uncertainties that impair economic performance. Worse, the short-run relationship between inflation and output growth seems to be asymmetric: the output sacrifice needed to get inflation down may be greater than the output gain when inflation is allowed to rise. Taken together, these considerations mean that the best service monetary policy can render for the real economy is to keep inflation credibly at low levels.

In fact, policy has been remarkably successful in recent years in bringing inflation down in virtually all industrial countries. So much so, that a number of issues are now coming to the fore that were previously considered as of second-order importance. These questions include: how to avoid bias in the measurement of inflation; whether inflation should be zero or some low positive number; and how quickly one should return to the stated objective after a disturbance.

Let me briefly summarise the consensus that seems to be emerging on the answers to these questions in industrial countries, then consider their relevance for the developing economies.

Firstly, there does seem to be a small upward bias in the measurement of inflation, that is probably somewhere between 1/2% and 1%. This is due to imperfect correction for quality improvements, and lags in the incorporation of new products into the relevant consumer price indices. **Secondly**, the optimum rate of inflation is probably not zero, but somewhere in the range 1-3%. This is partly because of upward bias in the measurement of inflation, and partly because of downward rigidities in nominal wages and prices. **Thirdly**, the policy horizon should be 1-2 years, since that is the lag with which monetary policy has its main effects. In other words, central banks should aim to restore the desired degree of price stability within about 1-2 years after an initial disturbance.

Do these conclusions hold for countries outside the advanced industrial group? I believe the answer is broadly yes, though with some modifications. As far as measurement bias is concerned, my suspicion is that it could be slightly larger in emerging economies than in the industrial world, though evidence is sparse. Since economic structures are generally changing more rapidly in the developing countries, it would not be surprising if shifting consumption patterns and changes in quality were even more significant in the mature industrial economies. However, it is hard to believe that the upward bias from these factors is greater than, say, 1-2%.

The process of rapid structural change may argue for developing countries being willing to accept a slightly higher inflation rate than is being targeted in Europe and the United States. But I believe one should not go too far in this direction. Inflation rates above about 5% do not confer many advantages in increased flexibility, and can be serious impediments to maintenance of macro-economic stability and to the efficient allocation of resources. Pakistan is to be commended for its recent progress in containing inflation. I believe it will be a service to long-term development aspirations to extend and consolidate this progress.

It needs to be recognised, of course, that emerging market economies are more vulnerable than industrial ones to inflationary shocks. When such shocks are severe, it may take somewhat longer than 1-2 years to restore the desired degree of price stability. But there are strong disadvantages in allowing an initial inflationary disturbance to become embedded in economic agents' expectations. Therefore policy must be aimed at restoring stable prices as quickly as possible.

(b) Anchors

Just as difficult as setting the objective of monetary policy has been settling on the means for achieving it. A variety of approaches have been in vogue at various times in the past twenty or thirty years.

Pure discretion in the implementation of monetary policy has acquired a bad name because, at least in countries with non-independent central banks, it is seen as a cloak for politically-motivated decisions. Such decisions have sometimes been a crude attempt to buy short-term popularity, since the benefits of monetary relaxation come relatively quickly and the costs of higher inflation emerge only later. More frequently, however, they have involved an attempt to use a presumed output/inflation trade-off to strengthen employment prospects; or an unwillingness to act pre-emptively when inflationary pressures were building up. Whatever the motivation, a fully discretionary policy has often lacked the strategic coherence to prevent inflation accelerating.

Monetary targeting became popular in a number of countries in the 1970s, on the back of Milton Friedman's dictum that "inflation is always and everywhere a monetary phenomenon". The powerful intuitive appeal of the money-inflation link was undoubtedly helpful in mobilising support for a rigorous anti-inflation policy in the United States, United Kingdom and elsewhere in the early 1980s. Nevertheless, one of the key requirements for such a policy, namely a stable demand for money, has not been adequately fulfilled in recent years (at least in most countries). One by one, central banks that had adopted monetary targets in the 1970s, dropped or downgraded them in the 1980s and 1990s. Nowadays only Germany and Switzerland place strong reliance on monetary aggregate targeting, and even they apply such policies with a significant measure of judgment.

Exchange rate targeting has a long history. The gold standard involved stabilising the domestic price level in terms of gold, and the Bretton Woods system linked national currencies to the dollar. More recently exchange rate anchors have been used effectively by a wide range of countries. Their value in restoring discipline and credibility in the early stages of the stabilisation effort is hard to doubt. But they have two major disadvantages that have become evident in recent years. Firstly, when capital markets are integrated, any country adopting a strict exchange rate peg subordinates its monetary policy to that of the anchor country. This works well when monetary policy requirements are in harmony; less well when there are divergences, as the United Kingdom discovered in 1992. Secondly, if a country adopting a currency peg fails to master domestic inflationary pressures, it may find that its balance of trade deteriorates and eventually reaches a point of unsustainability a partial explanation of the financial turmoil affecting so many countries in recent months. The decision to adjust or abandon an unrealistic peg has proved to be one of the most difficult of economic policy decisions – in part because so much has typically gone into seeking credibility through adherence to the peg.

In response to the perceived shortcomings of monetary and exchange rate targets, and of unconstrained discretion, attention has been given in recent years to **inflation targeting and central bank autonomy** as means of strengthening the likelihood that price stability objectives will be met.

At first sight it might seem tautological to use an inflation target to achieve an inflation objective. In fact, there is rather more to it. The idea is that a public commitment to an inflation target, coupled with the maximum of transparency in describing the authorities' forecasts and decision-making process, enables a discretionary approach to be applied with less risk that monetary policy decisions will be biased toward leniency. If, in addition, the central bank is made fully independent to pursue a clearly-defined goal, political interference will be minimised. In this regard, a major milestone in this country was the passage last May of legislation giving the State Bank autonomy and charging it with limiting the expansion of credit to the Government.

A growing list of industrial countries have adopted the inflation targeting approach in recent years, including Canada, New Zealand, Australia, the United Kingdom, Sweden and Finland. The practical implementation of the approach has varied in a number of respects including who sets the target (government or central bank); whether it is expressed as a range or a fixed point; the price index employed; the use of adjustment or “override” mechanisms, and so on. These differences, however, are less significant than the common principle on which targets are based. So far, targets have been rather successful, though the approach has yet to be tested under adverse conditions.

(c) Inflation Control and Capital Flows

In recent years, the growing mobility of international capital has complicated the task of central banks in achieving reasonable stability in the internal and external value of their currency. The implementation of strong stabilisation and structural reform policies typically leads to growing capital inflows. Such inflows tend to push up the real exchange rate, with direct implications for competitiveness and the balance of payments.

Up to a point, this can be a good thing. A current-account deficit is the way in which real resources are made available to an economy whose investment opportunities exceed its domestic savings. Capital inflows enable higher levels of investment to be achieved. Direct investment from abroad is a vehicle for the transfer of technology, and portfolio investment can contribute to improved corporate governance.

But there are potential disadvantages as well. Countries can become unduly dependent on capital inflows, so that when they dry up, difficult adjustment measures have to be taken. Moreover, if foreign savings are used to finance consumption or unproductive investment, the associated debt service will become a burden on future development potential.

What should be the response of a developing country faced with this feast-famine cycle? Firstly, it is understandable that the authorities should wish to avoid excessive appreciation of their exchange rate. The only way to prevent increased investment from putting upward pressure

on interest rates is to increase national saving rates. Here there is much to do in Pakistan, where the national saving rate (less than 14% of GDP) is one of the lowest in the world. A strong fiscal position is a help in this regard. In addition, however, exchange market intervention may be required, accompanied by sterilisation of the resultant foreign exchange accumulation. In addition, it may be desirable to be cautious in dismantling capital controls, especially those that are related to prudent liquidity management by domestic financial institutions.

Next, countries need to avoid getting locked into an exchange rate peg when sentiment reverses. One of the lessons of the South-East Asian currency crisis is that the countries concerned held on to their exchange rate pegs for too long; as a result, adjustment, when it came, was sharper and more painful than it needed to be.

Finally, and most importantly, the banking system must be adequately robust to withstand the shifts in monetary policy that will occasionally be required to help stabilise the exchange rate. If banking systems have loan portfolios that are highly vulnerable to a rise in domestic interest rates, speculators will realise the policy constraint faced by the authorities and will be all the more tempted to attack the currency. It is noteworthy that both the Mexican crisis of 1994-95, and the current crisis in South-East Asia featured weak banking systems.

III. Financial System Stability

This brings me naturally to the other major focus of central bank activity—the preservation of stability in the financial system. Central banks have always had an important role in maintaining systemic stability, but it is only comparatively recently that economists generally have become aware of the analytic issues involved.

Since the financial crisis of the 1930s, there has been widespread acceptance that the stability of the financial system should be based on two pillars: firstly, explicit or implicit support to protect depositors at banking institutions; and secondly, a structure of regulation that would reduce the risk of banks getting into trouble in the first place.

For the first twenty-five years or so of the post-war period, banking system stability attracted relatively little attention. Economic conditions were favourable, which limited the scope for troublesome bad lending decisions. Just as important, restrictions on entry to the financial industry worked to increase the value of banking franchises and provided protection against losses.

Several factors came to the fore in the 1970s and subsequently that made this regulatory approach unsustainable. One was the increased volatility in the global financial environment, with greater amplitude in the business cycle and, especially, in the price of financial assets. Another was the growing influence of the free market philosophy, and the accompanying dismantling of administrative controls on financial activity. This latter factor affected the **willingness** of public authorities to limit competition in the name of stability. Lastly, came the development of new financial instruments that enabled market participants to replicate virtually any kind of contract, regardless of regulatory restraints. This affected the **ability** of policy makers to influence financial activity through regulatory controls. Interest ceilings on demand deposits were circumvented; exchange controls spawned the development of Euro-currency accounts; and the growth of derivatives markets provided transactors with a multiplicity of ways of creating contracts with equivalent pay-off characteristics.

The vulnerability of banking systems in industrial countries was revealed by the 1980s debt crisis and led to a renewed focus on **risk-based capital adequacy** as a means of strengthening systemic resilience. Inadequate levels of capital can lead to the phenomenon of “gambling for resurrection”—banks pursuing risky strategies in the knowledge that shareholders will get the benefit of good outcomes, while bad outcomes will impose losses on third parties.

The Basle Committee on Banking Supervision had been created in 1974 with the initial task of identifying which country’s supervisors should be responsible for the activities and soundness of internationally active banks. In the mid-1980s the Committee turned its attention to the development of capital standards for such banks. When finally promulgated in 1988, these standards divided banks’ assets into five risk

categories, running from sovereign securities of industrial countries (with a zero risk weight) to ordinary commercial credits (with a 100% risk weight). Supervisors from G-10 countries agreed to see that internationally active banks under their jurisdiction hold capital at least equivalent to 8% of risk-weighted assets.

The Basle Capital Accord was a major step forward in regulatory practice. It contributed to a significant strengthening in systemic stability. Nevertheless, it still left significant gaps, which became apparent with the passage of time. Perhaps the most important, from the perspective of supervisors in less advanced financial systems, is that the capital accord dealt with only a subset of problems that regulators in these countries typically face.

It was for this reason that the Basle Committee began work last year on a set of "Core Principles" for banking supervision, that would be applicable in all countries and to all aspects of the licensing, supervision and closure of banking institutions. These principles were drawn up with the active participation of 27 supervisory authorities, and promulgated at the Annual Meetings of the World Bank and the IMF in Hong Kong in September. Although they have no binding legal force, it is expected that they will be widely endorsed and adopted in almost all countries.

The "Core Principles" provide an agreed checklist of best supervisory practice. As such, they are an indispensable element in strengthening the stability of the financial system at both the national and international level. However, two caveats are in order. Firstly, more work is needed for the principles to be effectively implemented. Supervisors need to be trained, and their independence and legal mandate needs to be assured. Much more needs to be done to guarantee that accounting practices allow financial fragility to be identified in a timely way. And regulators must have the mandate to close troubled institutions before they infect public confidence in the financial system more generally. In this connection, let me simply underline that the 8% capital adequacy ratio is intended as a **minimum** not a **standard**.

The second caveat reflects the rapidly evolving nature of financial intermediation. The Basle Capital Adequacy Standard (the famous

“Cooke ratio”) is a deliberately crude instrument for measuring risk. With the growing sophistication of risk measurement and control, supervisors must be willing to adapt their techniques so as to reward (with lower capital requirements) techniques that reduce riskiness, and penalise those practices which increase vulnerability. This is a challenge that is already occupying regulators in the main financial centres, and will spread to their counterparts in emerging markets in the coming years.

Thus far, I have discussed financial stability in terms of the health of the institutions that go to make up the banking system. But there is another dimension that has received increasing attention from central bankers over the past 10-15 years. It concerns the market **infrastructure** that underpins financial transactions, and in particular the payment and settlement system. While this might seem an unexciting subject to economists, it is in fact of great practical importance. At a conservative estimate, more than \$5 trillion per day passes through the settlement system, most of it representing large-value financial transactions cleared by a relative handful of major clearing banks. If one of these institutions became unable to meet its obligations in the clearing, the consequences could be dramatic.

Because this is the case, it is worth taking a moment to understand the issues that arise. Broadly speaking, there are two sets of problems. Easiest to understand are the problems facing **users** of payment and settlement systems—that is, those who trade in financial markets and then have to use the systems to settle their deals. Almost every deal has two sides—one party pays, the other party delivers whatever is being bought. For these users, the difficulty arises where there is no mechanism to co-ordinate the two sides. The party paying is thus exposed to the risk that the counterparty fails to deliver, and vice versa.

The second set of problems concerns one particular category of system users—namely banks, who also typically **provide** the payment and settlement services. Until quite recently, the standard form of settlement was end-of-day net settlement. That is to say, all the payments and receipts between banks were allowed to accumulate during the day, to be settled by a transfer of the smaller, net amount at the end of the day. Banks liked this arrangement because it meant they could hold smaller

balances on their accounts at the central bank. But its systemic weakness was that it usually required participants in the clearing to grant unsecured, uncontrolled and unlimited credit to other participants during the period until final settlement occurred. It was quite common for the credit thereby extended to a single counterparty to exceed a bank's entire capital. Implicitly, the participants in the clearing were assuming that the central bank would be forced to come to the rescue if problems arose.

Over the past few years, considerable effort has been devoted to alleviating these sources of systemic risk, and solutions are now being implemented. Solutions to protect users of the systems include introducing improved delivery versus payment mechanisms for securities markets and the possible introduction of some new form of multi-currency settlement arrangement for foreign exchange markets. Solutions to protect system providers include the introduction of tighter internal controls within traditional end-of-day settlement systems or, in an increasing number of cases, the replacement of such traditional systems by so-called RTGS arrangements. In these real-time gross settlement systems, individual transactions are settled one-by-one throughout the day rather than being allowed to accumulate, thereby attempting to get to the heart of the problem by removing the exposures between banks. As a result of these major efforts, payment and settlement arrangements all over the world are—gradually—becoming safer.

IV. Concluding Comments

What of the future? Where are the trends that have been described in this paper likely to lead? And how can public policy best equip itself to provide the stable financial environment that is most conducive to the development of the real economy?

Predictions are always hazardous, but certain propositions can be made with reasonable confidence. **Firstly**, financial innovation will continue at a rapid pace, and global financial markets will become even more integrated, efficient and complete. The capacity of governments to resist market trends or pursue unsustainable policies will shrink further. **Secondly**, as a consequences, there will be a premium in firm, transparent and credible anchors for policy. Achieving price stability will be easier

(though not easy) if market participants know what the authorities are trying to achieve and how they are going about it (and if there is an effective market discipline on the authorities to prevent backsliding).

A **third** proposition which it seems safe to advance is that there will be an intensified search for ways to ensure systemic stability while fostering a competitive and efficient banking system. The plethora of financial system crises in recent years has amply illustrated the costs of lax practices in the financial sector. At the same time, there is a recognition that any indiscriminate expansion of safety net arrangements creates moral hazard problems, while excessive regulation leads to inefficiencies. My expectation is that regulatory economics will become a fruitful area of research for central bankers and financial supervisors. The goal will be to develop a regulatory structure that has as its anchor the replication of market disciplines, while at the same time providing protection against the systemic transmission of instability. Transparency and disclosure have an obvious role to play here.

Fourthly, what of the emerging and developing economies? They will not be able to resist the pull of global capital markets, nor would it be wise for them to try. The global financial system provides a source of additional savings, and exercises a discipline to employ such savings efficiently. But this will further increase the premium on sound macro-economic and structural policies. The only truly effective way to deal with severe financial difficulties is not to allow them to arise in the first place.

Taken together, this presents a full agenda for central bank policymakers. The last Annual Report of the BIS noted, with characteristic understatement, that "the last twenty-five years have been an eventful time for central banking". The years ahead promise to be no less eventful.