DEVELOPING THE MONEY AND SECURITIES MARKETS IN INDIA+

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Overview

India launched a programme of stabilisation and structural reforms in 1991-92[1]. The main objective is to improve the productivity and efficiency of the entire economic system and impart greater competitive and structural flexibility. Reform of the financial sector (encompassing, *inter alia*, the development of money and securities market) constitutes a critical component of India's program towards economic liberalisation.

2. India has long been characterised by a dense network of financial institutions. Since independence in 1947 an active promotional role has been played by the public sector, led by the Reserve Bank of India (RBI), in setting up financial institutions. Today, in addition to the RBI, the banking network includes commercial and cooperative banks, and national and State level development banks. Non-banking financial institutions include insurance companies, unit trusts and mutual funds, finance companies and stock exchanges.

3. The commercial banking system has been progressively nationalised over the years, starting with the creation of the State Bank of India in 1955, and the subsequent nationalisation of fourteen major domestic private banks in 1969. (A further six banks were nationalised in 1980). Foreign banks, many of whom have operated in India from colonial times, were not nationalised, although there were restrictions on branch growth, and on entry of new foreign banks. These restrictions have been recently eased, and foreign banks today account for approximately 8% of bank deposits. Life insurance was nationalised in 1956 and general insurance in 1972.

4. Particularly since 1969 there has been a massive expansion in the scale and geographic coverage of the banking system. These trends are reflected in various aggregate measures. The finance ratio (measured as the ratio of total financial flows to national income) has risen from 17 per cent of GDP in 1965-66 to 43 per cent in 1991-92. The intermediation ratio (the ratio of secondary issues to primary issues) has risen from 0.46 to 0.75 over the same period. Equally, the M_3 to GDP ratio has increased from 25 per cent In 1970-71 to about 50 per cent in 1992-93.

5. Though extensive, the financial system has functioned in an environment of financial repression, driven primarily by fiscal compulsions. The financial system (especially the banks) were directed to provide significant credit support for government expenditure (both current and capital) as also to such preferred economic sectors as small-scale industry, agriculture and the weaker sections of society. Interest rates, though generally positive in real terms for depositors, were tightly controlled and highly differentiated, incorporating significant elements of cross-subsidy. Concurrently, financial institutions have faced numerous statutory portfolio restrictions. The overall result has been to make the financial intermediaries (particularly those under public ownership) uncompetitive.

6. Monetary and internal debt management policy in India, particularly since the late 1960s, was similarly undermined by excessive monetisation of the Central government's fiscal deficit by the Central Bank. As a result money and government securities markets lost their earlier vibrancy, and ceased to provide the basis for the

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1 The Indian fiscal year runs from April 1 to March 31.

indirect conduct of monetary policy. The Bank rate (the rediscount rate) and open market operations lost their effectiveness as policy tools. Instead, cash reserve requirements, administered interest rates and credit controls became the dominant instruments. There was no level playing field for market agents, the regulatory system enforced the segmentation of markets and a non-transparent system inhibited competitive pricing of assets. Exchange controls ensured considerable segmentation between domestic and foreign asset markets.

7. To make the Indian financial system more efficient and viable is the major focus of India's programme of structural reform in the financial sector, consistent with the thrust of reforms in other areas. The problems now facing us are those of the phasing and sequencing of reform measures. As a relative late-comer, India is able to benefit from the experience of Latin American and Asian economies which had liberalised earlier. Accordingly, I will devote the bulk of my talk to the issues and problems of managing the transition to freer financial markets in India, focusing on the development of money and government securities markets, interest rate deregulation and movement towards indirect tools of monetary policy.

The Pre-reform Context

Fiscal and Monetary Management

8. In the two decades after its founding in 1935, there was no significant increase in the Reserve Bank's holdings of internal government debt. A distinct shift occurred in the late sixties when stronger central control over credit allocation was imposed, seeking to achieve greater congruence between credit flows and the pattern of production in the five-year plans. These trends received further impetus after bank nationalisation in 1969.

9. The period from the early 1970s was also characterised by weakening of fiscal discipline leading to a large expansion in the Central government's domestic and foreign borrowing requirements. The ratio of the gross fiscal deficit to GDP increased from 3.5 per cent in 1970-71 to 8.4 per cent in 1990-91. Through obligatory cash reserve requirements (held at the Central bank) and a statutory liquidity ratio (to be met through holdings of government and other approved securities), the resources of banks came to be incorporated into the fiscal allocation process, with less emphasis on bank profitability. With a view to keeping government borrowing costs down, the yields on both Treasury bills and longer-term paper were kept artificially low. This limited the demand for government paper to the captive market of the banks (and other term financial intermediaries, such as insurance companies and provident funds). Residual financing needs of government thereby devolved upon the RBI.

10. Until the overall reform process was initiated in 1991, the basic goal of monetary policy was to try and neutralise the impact of the fiscal deficits. Simplifying somewhat, with a given fiscal deficit the banking system would absorb a sizeable part of the financing requirement at low interest rates under the statutory liquidity ratio (SLR), while the Reserve Bank picked up any uncovered portion through the mechanism of *ad hoc* Treasury Bills, which were not marketable, and were no more than a book-keeping entry issued on demand instantly to meet the Government's requirements. Monetary management took the form of compensatory increases in the cash reserve ratio (CRR) for banks, controls on growth of commercial credit (mainly to the enterprise sector) and of adjusting administered interest rates.

11. Such a mix of policies had deleterious long-term effects as large fiscal deficits became chronic and continuous escalation of the two ratios became necessary. In the early 1970s the cash reserve ratio for banks was as low as 3 percent and the statutory liquidity ratio was 25 per cent. By 1991-92 the ratios on incremental deposits were 25 per cent for the CRR and 38.5 per cent for the SLR. At the same time the RBI's

holdings of Central government debt (i.e. its monetisation of the government deficit) ballooned. By 1991 it was clear that the trajectory of growth in government debt was becoming unsustainable, and that a significant improvement in the primary deficit was needed.

12. In the presence of *ad hoc* issue of Treasury bills, and in the absence of market-determined interest rates, open market operations were not available as a monetary instrument. The sales and purchases of government securities by Reserve Bank of India were therefore used only for grooming the market and ensuring a successful borrowing programme for the government. Whlie the Reserve Bank did not buy securities for cash, it did however, conduct "switch operations" in Central government securities, with a view to enabling the banks and institutions to switch over from low-yielding to high-yielding securities and to adjust portfolio maturities.

The Money Market

13. The Indian treasury bill market was relatively free upto the early 1960s. Its development thereafter was retarded by the trends in deficit finance described above. The bulk of the treasury bill issue was of *ad hoc* 91-day treasury bills, first instituted in the 1950s[2]. The marketed 91-day bill (which continued to be issued) also suffered a decline. While this had earlier been sold through weekly tenders at market rates, after 1965 this was placed on tap at a low, fixed discount rate, its main selling point being that it was freely rediscountable by the Central bank. Until 1974, the discount was periodically adjusted to changes in the Bank rate, but thereafter this link was severed, and the discount rate remained at a fixed level of 4.6%.

14. Dealings in the money market were confined to a few instruments like overnight call money and notice money (14 days). Rates of interest on such instruments also came to be tightly controlled with ceilings prescribed on all rates. The only money market instrument that operated relatively freely outside the regulatory framework was the inter-corporate deposit, with the administered lending rate of banks providing a market floor to the instrument.

Government Securities Market

15. Apart from treasury bills, Government securities in a broad sense include term securities of different maturities issued by Central and State governments and institutions guaranteed by these entities, primarily in such infrastructure sectors as power and transport. In India, these securities are referred to as 'dated' securities. They have an initial maturity in excess of one year, and interest is usually payable by coupon[3]. The size, maturity and coupon rates of these issues have throughout been managed by the Reserve Bank of India.

16. The Government securities market had a wide base in the pre- independence period, with active secondary trading. With the expansion in the borrowing programme for the five-year plans in the 1950s and 1960s, banks, insurance companies and provident funds were statutorily required to invest in these securities. The average maturity of securities remained fairly long -- above 20 years -- reflecting more the preferences of the issuers than those of the investors. The combination of a tightly-controlled interest rate structure and statutory requirements to hold these securities, robbed the secondary market of any vibrancy.

Markets in Transition

Reform Measures 1985-91

17. Even within the framework of administered interest rates, attempts were made during the second half of the 1980s to impart some flexibility to the money and government securities markets. These steps were based on the recommendations of the Committee to Review the Working of the Monetary System (the "Chak-

2 See Rangarajan C (1993). "Autonomy of Central Banks". Reserve Bank of India Bulletin. December 1993.

3 As noted below, a zero-coupon instrument has recently been introduced.

ravarty Committee", 1985) and the Working Group on the Money Market (the "Vaghul Committee", 1987). Several important measures were taken in this period.

(i) With a view to encouraging secondary market activity, the maximum coupon rate which had been as low as 6.5 per cent in 1977-78 was raised in stages to 11.5 per cent in 1985-86. Concurrently, the maximum maturity was reduced from 30 years to 20 years.

(ii) Most of the rates in the money market (those for call money, notice money, inter-bank deposits and bills rediscounting) were freed in 1989.

(iii) Non-bank institutions were permitted to participate in the money market, although only as lenders.

(iv) A number of instruments were developed to provide breadth and depth to the money market. A 182 - day treasury bill placed by auction, not rediscountable with the Central bank, was introduced in 1986. Certificates of Deposit (CDs), Commercial Paper (CPs) and Inter-bank Participations (PCs), all entered the scene at the initiative of the Reserve Bank which framed guidelines for issuance of these instruments, subject to certain portfolio ceilings.

(v) A Discount and Finance House of India (DFHI) was set up in 1988 as a Reserve Bank subsidiary with participation from other money market institutions to facilitate smoothening of short-term liquidity imbalances and to impart greater flexibility to the money market.

(vi) As discussed more fully later, the term structure of interest rates was rationalised, reducing the number of administered rates as also realigning short-term and long-term rates in the system.

Reform Measures: post – 1991

18. In the first half of 1991 the economy suffered an acute balance of payments and inflation crisis. A comprehensive package of stabilisation and structural reform measures was initiated in mid-1991. In the financial sector, the recommendations of the Committee on the Financial System (the "Narasimham Committee", November 1991) provided the basis for certain fresh initiatives.

19. As already noted, part of the stabilisation package involved raising the combined incremental preemption of resources through the SLR and CRR to an unprecedented and unsustainable level of 63.5% of demand and time liabilities. While these measures succeeded in curbing inflation, it was recognised that the time had come to totally reorient the tools of monetary policy, from direct controls to indirect interventions. It was clearly recognised that such a change would be facilitated if government's financing needs were moderated, allowing government to pay market interest rates on its fresh debt. Additionally, greater integration of the various components of the money and capital markets would be needed. A sharp adjustment in the fiscal deficit was made in financial year 1991-92, from 8.4 per cent of GDP to 6.0 per cent. Thereafter the incremental CRR plus SLR was reduced to 45 per cent, and then further to 39 per cent. Concurrent with these moves, major reforms were introduced in the Government securities instruments and markets, discussed below.

Treasury bills

20. A 364-day treasury bill on an auction basis was introduced in April 1992; this replaced the previous 182-day bill, and as with its predecessor, is not purchased or rediscounted by the RBI. This instrument found ready acceptance in the market, and by January 1994 had absorbed Rs. 150 billion (approximately $ 5 billion at current exchange rates). The discount has varied between 10.9 and 11.4 per cent, reflecting liquidity

conditions and market perceptions of yield curve evolution. By way of comparison, the annualised inflation rate during 1993 has ruled at about 8 per cent.

21. A 91-day auction treasury bill was introduced in January 1993 (in addition to the pre-existing tap bill), and has also won acceptance in the market. Around 30 per cent of the aggregate increase in 91-day Treasury bills over the past year has been in the form of the auctioned bills (the remaining 70 per cent being represented by *ad hoc* bills and tap bills eligible for rediscount). The auctioned bills are absorbed almost entirely by the market; the rates emerging through competitive bids have become money market reference rates. Since its introduction, the discount on the auctioned 91-day Treasury Bill has varied in the range of 7.9 per cent to 10.3 per cent. Two financial institutions have recently introduced floating rate contracts linked to Treasury Bill rates.

Funding

22. Till 1992, accumulated RBI holdings of *ad hoc* treasury bills used to be funded into special securities, without any maturity and market significance. As against this passive operation, funding of 364-day Treasury Bills and 91-day auction Treasury Bills was effected in 1993-94, converting them into dated securities of three and two year maturity respectively, at rates attractive to the market. These funded securities now form the basis of an active secondary market.

Government Dated Securities

23. In the case of government dated securities, coupon rates were raised and maturities shortened to bring these securities closer to market terms. In 1991, the ceiling on interest rate on the Government securities was 11.5 per cent while the minimum lending rate of banks for large advances was as high as 20.0 per cent. There was, thus, a need to bring these rates into better alignment.The coupon rate for a 10-year maturity was raised by as much as 2.75 per cent between 1991 and 1993. The maximum maturity has been reduced from 20 years to 10 years. Today the ceiling on the Government securities interest rate is 13.5 per cent while the minimum lending rate of banks is 15 per cent. Thus has been a major correction of the earlier interest rate disparities.

24. Since April 1992 the entire Central government borrowing programme in dated securities has been conducted through auctions. This has been a major advance and has evoked several favourable market responses:

It has fostered an elastic band of interest responsiveness from investors for a range of maturities up to 10 years. This is an important step in the process of "price discovery".

Second, and related to the first, despite, relaxations in statutory requirements for institutions to hold government securities, the market has absorbed all primary issues, without any significant devolvement on the Central bank.

A new treasury culture has developed among banks and institutions. In an environment where inexperienced investors exist side by side with sophisticated institutions, the auction system within an administered framework has enabled development of bidding skills among all market agents.

The yield curve has become more flexible. A zero-coupon bond of the Central Government, of 5-year maturity issued in January 1994 received an overwhelming response, shifting the yield curve significantly downward.

Non-captive investors like financial institutions and private corporate sector are now showing much greater keenness in acquiring government securities. Indeed, the accusation sometimes now made is that yields on Government securities are too attractive, and are responsible for keeping up the entire level of interest rates. In short, this experience provides an example of how market grooming combined with yield curve flexibility can take place even within an administered structure.

Repurchase Agreements

25. Another precursor to active open market operations has been the development of the instrument of repurchase agreements (repos) between the RBI and the commercial banks. The first auction of such repos took place in December 1992, collateralised by Central government dated securities, rather than Treasury Bills, which are the more usual collateral in more developed markets. This choice of collateral was mainly determined by availability of marketable stock in the inventory of the RBI. The period of the repo has varied between overnight (at the beginning, when the instrument was first introduced) to 14 days currently, which is the length of the reserves make-up period. The objective of the repo is to even out liquidity within the reserves make-up fortnight and to reduce the volatility in the call money market. So far, the RBI has only used repos to drain reserves from the banks, (i.e. to 'sell' from its holdings in exchange for cash) and not to supply reserves. Following the introduction of the repo instrument, the volatility in call money rates has been significantly reduced. The repos have also helped in lowering Reserve Bank credit to Central government and reserve money expansion.

Debt Management

26. With a view to initiating active debt management operations, all functions pertaining to internal debt management by Reserve Bank of India have been entrusted to an inter-disciplinary unit called the Internal Debt Management Cell created in October 1992. The objectives are to evolve appropriate policies relating to internal debt management as a part of the overall monetary policy and, in pursuance of this, to manage internal debt operations such as market borrowing and open market operations and to promote an active and efficient government securities market.

Open Market Operations

27. Since April 1992, a new approach has been followed by Reserve Bank in its sale/purchase operations in government securities. The switch operations were discontinued as they did not have any effect on the monetary aggregates. In setting its price list, the Reserve Bank now responds to market yields more quickly, using bidding patterns at its auctions as a guide. Also, in contrast to past practice, RBI is now prepared to purchase certain securities for cash. Depending upon the term preferences of the market and coupon rates, selective offers are made to the market at competitive prices. This has provided an instrument of yield curve management even in the absence of a primary dealer network.

Other Measures

28. A number of other measures have been taken since 1991 to impart greater flexibility to money and government securities markets. Banks, bank subsidiaries and financial institutions have been allowed to set up money market mutual funds, though the response so far is lukewarm in the absence of an active secondary market for money market instruments. As a measure of deregulation, selected financial institutions, previously permitted only to lend to the call money market, have now been permitted to borrow from the short-term inter-bank money market for maturities between three and six months. Restrictions on issue of commercial paper (by blue chip corporations) and certificates of deposit (by banks) have been significantly relaxed. Serious irregularities in government securities transactions had cropped up in early 1992, following which several regulatory guidelines were issued streamlining secondary market transactions in government securities. All these steps have been designed to accustom market agents to greater choice and risk in the management of their portfolios, and to provide clear signals as to the future evolution of the system.

Future Evolution

29. Our medium-term goals are clear: market-determined, interest rates with some concessional rates, greater integration of the Indian financial system with international flows and reliance on indirect methods of monetary control (i.e. policy induced adjustments in the Central bank balance sheet) as the main mechanism of monetary policy. While the steps taken so far have succeeded in restoring some vibrancy to the money and Government securities markets, there are several important measures to be undertaken before the markets can be considered free.

30. The experience of Latin American and Asian economies provides some guidance on the appropriate preconditions and sequencing for successful financial reforms. The most important of these are sound public finances, a well-capitalised banking system, and effective prudential regulations and monitoring. All three areas are being addressed as part of our reform programme.

Fiscal Adjustment

31. Sustained fiscal adjustment must underpin further reforms. In the absence of credible fiscal control and price stability, there is some risk that interest rate deregulation could result in overshooting and disrupt the reform process. The Government of India has committed itself to continued reduction in gross fiscal deficit from the level of 5.7% reached in 1992-93. Trends during the financial year 1993-94 have been somewhat worrying, with the (seasonally unadjusted) deficit in the first half of the year running at an annual rate roughly triple the targeted year-end level. This reflects revenue shortfalls partly related to sluggish industrial activity, and delay in sale of equity in public enterprises. There has been agreement between the Reserve Bank and government that this incremental deficit should not be monetised. Accordingly, government has resorted to additional borrowing through treasury bills and zero-coupon bonds at market- related rates. Fortunately this unplanned increase in the borrowing requirement has occurred at a time when the domestic market is flush with funds, but this is a short-term phenomenon that cannot be relied on. Nonetheless, the use of these market instruments has meant that the monetised deficit can be kept under control.

Strengthening the Banking System

32. Interest rate deregulation is also risky if the balance- sheets of financial intermediaries, particularly commercial banks are weak, for the well-known reasons of adverse selection, high intermediation costs and illiquidity. A clean-up of balance sheets and restoration of profitability of the public-sector banks has been at the core of our financial sector reform programme. The process started with the introduction of new norms for asset classification and income recognition to be applied by the banks to their balance sheets for 1992-93, and the concurrent introduction of a phased programme for reaching minimum standards of capital adequacy. The application of more rigorous accounting standards has revealed a high level of non-performing assets and low levels of capital. Banks are currently engaged in increasing provisions, improving recovery where this is possible, and raising additional capital. This process of clean-up is likely to take three or four years. Concurrently, we are revamping the bank supervision machinery, with the establishment of an autonomous Board for Financial Supervision under the umbrella of the Reserve Bank.

Towards Interest Rate Liberalisation

33. To avoid destabilising shifts in portfolios, there needs to be parallel deregulation of interest rates in the banking system and in the government securities markets. With regard to banking system interest rates, there has been a steady process of liberalisation, consistent with the needs of monetary policy and the condition of the banks. From a situation where varying interest rates were specified for a variety of end-users, currently only two lending rates are specified by the RBI for specific credit limits and

a minimum lending rate is established for all borrowers with credit limits above Rs. 2 lakhs (approximately $ 6,500). On the deposits side, while there is an administered savings deposit rate, only a ceiling term deposit rate has been fixed. Banks are required to offer differentiated term deposit rates for three different maturities.

34. In mid-1991, the most pressing need was stabilisation, which required the administered minimum lending rate of banks to be raised to 20 per cent. As inflationary and balance of payments pressures eased, the minimum lending rate has been brought down to 15 per cent in stages. Each downward adjustment in lending rate has been accompanied by almost equal adjustments in deposit rates to protect bank profitability.

35. This steady process of deregulation has helped banks to accustom to better pricing of assets and liabilities and to the need to manage interest rate risk across their balance sheets. As banking system balance sheets and managements strengthen and as international influences on domestic markets strengthen, these remaining administered stipulations can be removed.

36. On the general question of the structure of interest rates, the objective of monetary policy will be to reduce the number of interest rates that are prescribed by the central monetary authority, taking into account the need for certain concessional rates. Eventually, we are expected to move towards a situation in which one of the rates of the Reserve Bank would emerge as a 'Reference Rate' in relation to which other rates in the market may be determined. Interest rate is a variable which is significantly influenced by Central bank actions. As part of monetary policy, the monetary authority will have to decide from time to time what the behaviour of interest rate should be and accordingly use the instruments at its disposal.

37. Moving towards fully market-determined interest rates on government securities requires policy evolution and market evolution in both the primary and secondary markets for government debt. The RBI should eventually withdraw from its role as an underwriter for government securities and limit its operations to purchase and sale in the secondary market. For this to happen, there needs to be development of an appropriate system of primary dealers in government debt; this is discussed below.

38. Just as important is that the system of *ad hoc* Treasury bills should end, so that all primary government funding requirements are met from the market, leaving the RBI to operate exclusively in the secondary market, in discharge of its monetary policy responsibilities. With the increase in market absorption of various auctioned treasury bills and dated securities of Central government, I have proposed that the automatic accommodation by the Reserve Bank of Central government's cash deficit through the mechanism of *ad hoc* treasury bills should be phased out by 1996-97. Thereafter, the entire Central government borrowing requirement should be met by market instruments at market terms. If, for short-term budgetary management, RBI's accommodation is still needed, this should be through ways and means advances for short periods as in the case of State governments.

39. A related issue in moving to freer rates is that the current practice of a 'cap rate' setting the maximum yield to be offered on government securities would need to go. This cap currently is applicable to borrowing by State governments and government- guaranteed institutions insofar as their debt is 'placed' at a fixed price, rather than being auctioned. There is no set view as yet on how best to make the borrowings of the State governments (and that of other institutional borrowers) market-determined, as there is a serious concern for borrowing rates not to be excessively differentiated between financially stronger and weaker States.

Stimulating Primary and Secondary Market Development

40. There are intimate links between the development of the primary and the secondary

markets. Trading in liquid secondary markets helps to establish a market yield curve and to support a network of specialist traders in government paper, who can be used in the distribution of fresh issues. Deregulation of interest rates should both promote and be facilitated by an active secondary market in government securities.

41. In well-developed securities markets, securities dealers and brokers offer depth and liquidity. A system of primary dealers also helps the borrowing operations of the Government through market making and dealing functions. Development of such an institutional structure in India will require addressing several problems. Though Government securities are listed on the major stock exchanges of the country, little trade is done on these exchanges. Instead, the secondary market in Government securities remains an 'over the counter' or 'telephone market'. There is also inadequate differentiation between the broking and dealing functions. This was partly responsible for irregularities in securities transactions in 1992. As a follow-up, several measures have been introduced, redefining the role of brokers in Government securities transactions and also improving settlement systems. Capital adequacy and other prudential norms for brokers are being developed and put in place by the Securities and Exchange Board of India.

42. As far as dealing is concerned, the major traders in securities are primarily banks, insurance corporations and Provident Funds. They also happen to be the final investors in Government securities. Furthermore, statutory requirements though reduced, still exist, forcing these institutions to hold government securities. In this environment, it becomes an extremely difficult task to designate a sub-set of the group of investors as primary dealers. As the ownership of government securities gets more broad – based and when interest rates get fully deregulated, a system of primary dealers could be expected to emerge.

43. To provide immediate liquidity to government paper and to stimulate market-making activity by other interested parties, the Reserve Bank has proposed to establish a Securities Trading Corporation in India. This institution would endeavor to play a role of market maker by providing two-way quotes for government securities and public sector bonds. It would actively buy and sell securities at market prices providing liquidity and facilitating turnover for various maturities. At the same time a National Stock Exchange of India Ltd. (NSE) promoted by a group of public sector financial institutions, is also being set up to trade in both debt instruments and equities in a fully automated system. The exchange is expected to become operational by mid- 1994.

44. At present, Non-Resident Indian (NRIs-individuals, firms with predominant ownership by NRIs etc.) are permitted to invest in government securities without restriction. However no move has been made to encourage ownership or trading of government securities by foreign investors and dealers, even though interest has been evinced by these bodies.

45. When coupon interest payments are made to owners of securities, tax is deducted at source and a tax deduction certificate is given. As tax treatment of different institutions differs and some institutions are completely exempt from tax, this practice has encouraged what is called 'voucher trading' around interest payment dates. I have proposed that this practice should be discontinued for development of genuine secondary market in government securities.

46. While we have been successful in implementing an auction system through the use of tenders, there is a time gap between announcement, acceptance of bids, payments and settlement. Technological improvements should make this more time efficient. A lot of educational and training effort is also needed before putting in place sophisticated system of auction. Overall, the system should become more transparent, giving feedback to the market for competitive price formation. The quantum of securities issued in auctions should be pre-an-

nounced and the auction should clear the market through competitive bidding.

47. The Reserve Bank of India has also taken a series of steps to bring about an efficient Electronic Clearing Settlement and Depository System in respect of Government securities. A system of delivery versus payment is being developed to reduce the counter-party risk and risk of diversion of funds through securities transactions. Communication links between different Public Debt Offices in the country are also being strengthened.

Moving to Indirect Monetary Instruments

48. An active secondary market in Government securities and the deregulation of interest rates will make possible the strengthening of indirect tools of monetary control. Most central banks conduct open market operations on the basis of a framework linking an operating target like bank reserves, monetary base or primary money with the overall liquidity in the system captured through a monetary indicator. In India, for purposes of monetary control, the broad money measure M_3 has remained the target variable and the source of reserve money creation (usually the RBI's credit to government) was the operating variable. However, control was also exercised through bank credit as an intermediate target. Thus, cash reserve ratio and refinance policies were combined with selective credit control, credit targets and administered interest rates, to achieve the monetary goals.

49. With the phased implementation of reduction in statutory liquidity ratio to 25 per cent and the cash reserve ratio to 10 per cent within a period of about 3 years, Reserve Bank has to develop other methods for regulating overall liquidity in the system. Open market operations will emerge as a major tool of monetary control. What will follow is the management of the Central bank balance sheet in terms of domestic and foreign assets. This broader approach to monetary management may give more manoeuvrability and also establish a linkage between interest rate management and exchange rate management. For example, larger inflows of foreign exchange and the Central bank's intervention to buy up such inflows with a view to stabilising the domestic currency rates might result in inflationary pressures unless they are sterilized through open market operations. Thus, the management of domestic assets and foreign exchange assets has to be viewed together.

50. With the emergence of several money market instruments which are close substitutes for bank deposits, a set of parameters like liquidity, total credit, public borrowing requirements, etc. along with one or two broad money indicators like M_3 will need to be watched continually.

51. For the purpose of conducting open market operations, the Reserve Bank has to strengthen its own capacity to estimate and project the period to period growth in operating targets and use its balance sheet management to regulate the trajectory of the operating target. Side by side, the impact of Central bank's intervention on overall liquidity has to be adequately captured so that the efficacy of different instruments could be studied before a definite operating framework gets validated.

52. The transition from a controlled to a market-driven financial system is complicated, delicate and risky. It involves simultaneous and coordinated action on a number of fronts. Our somewhat deliberate pace on these issues has occasionally evoked impatience from commentators. I believe that we have made good progress in nurturing a securities market. I have no doubt that, as reform in the fiscal and financial areas proceeds, we will succeed in establishing a firm foundation for an efficient debt market and in evolving appropriate tools of monetary management to subserve the overall objectives of monetary policy.