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Monetary Policy Committee: What Works and Where

Michael Debabrata Patra and Amaresh Samantaraya*

Since the late 1990s, the monetary policy committee (MPC) is ushering in collective decision making on monetary policy among central banks across the world. In India, a Technical Advisory Committee (TAC) on Monetary Policy has been set up to strengthen the consultative process in conduct of monetary policy. A survey of the literature and the cross-country experience shows that issues relating to the constitution of MPC, its empowerment and functions have to be assessed in the broader context of the evolving social, political and legal/institutional ethos in an economy. An Index of MPC Empowerment, taking into account several characteristics of MPC in terms of its composition, transparency and autonomy, suggests that more empowered MPCs seem to deliver better inflation results but with little improvement in growth outcomes relative to their less empowered counterparts.

JEL Classification : C43, E52, E58

Keywords : Monetary policy committee (MPC), monetary policy, design and characteristics of MPC, MPC empowerment index

Introduction

Since the late 1990s, there has been a growing interest in what has been termed as the ‘quiet revolution’ (Blinder, 2004) in central banking - the monetary policy committee (MPC). The first systematic enquiry undertaken in 2000 showed that no less than 79 out of 94 sampled central banks take monetary policy decisions in a committee, with 43 committees reaching a decision by consensus and 36 by voting (Bank of England, 2000). Their numbers have increased in ensuing years and the phenomenon has been ascribed to the modernisation of central banks (Lybek and Morris, 2004). No instance of backtracking has been reported. Recently, it has been noted that decision making by committee is now the rule rather than exception in central banks

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(Vandenbussche, 2006). This emerging central tendency is reflected in the International Monetary Fund (IMF) recommending the establishment of a committee to set monetary policy to the Bank of Israel (IMF, 2005). Thus, collective decision making is increasingly setting in among central banks across the world. Where formal MPCs have not yet come into being and the Governor is ultimately accountable, advisory boards in a variety of forms are being established to inform the assessment of policy options.

In January 2007, the Reserve Bank of India (RBI) reconstituted its Technical Advisory Committee (TAC) on Monetary Policy (which was first set up in July 2005) with a view to obtaining continued benefit of advice on the stance of monetary policy from external experts in the areas of monetary economics, central banking, financial markets and public finance and their contribution towards enriching the inputs and processes of policy setting. The reconstituted TAC, which has a tenure up to January 31, 2009 has five external members and two members of the Central Board of the Reserve Bank. The Committee is chaired by the Governor, with the Deputy Governor in charge of monetary policy as vice-chairman and other Deputy Governors as members. The direction of institutional change appears to be indicative of a preference for strengthening the consultative process of monetary policy formulation, although the role of the TAC at the current juncture is unambiguously set out in the Governor's Annual Policy Statement for the year 2007-08: "*It may be noted that the TAC is advisory and provides guidance to the making of policy from time to time. As such, the responsibility, accountability and time paths for decision making are not formally constrained by the meetings of the TAC*" (RBI, 2007).

The monetary policy framework is no longer a technical or academic subject. There is an active public and media interest, which is particularly vociferous when the policy framework is seen as not delivering on monetary policy assignments. The proliferation of the MPC across the world could be ushering in another fundamental change in the institutional setting in which monetary policy is formulated. Yet, central banks hate to be pushed as far as the policy framework is concerned – if it isn't broke, don't fix it. For them,

there are broader forces – history and tradition; structural characteristics; political economy – that are wrought into the evolution of the framework than the more transient pressures of domestic or external developments. An eclectic approach is to explore the international environment as to what works and where. This paper examines practical considerations relating to the structure and functioning of MPCs in the varied country experience.

The rest of the paper is organised as follows: The following section sifts through key contributions to the literature on the working of MPCs. Section II presents the results of a survey of country practices in the context of the issues emerging out of the review of the literature. The paper concludes with a few observations that may shed light on which way from here for the RBI's TAC or at least join the swelling debate on the subject.

Section I

Survey of the Literature

Central banks prefer stability – price stability; financial stability; exchange rate stability; stability in operating framework. Threats to credibility in ensuring the first three have usually forced changes in the fourth. In the UK, the advent of inflation targeting grew directly out of the failure of exchange rate targeting in the Exchange Rate Mechanism (ERM) in 1992. In the US, monetary targeting in 1979 was in response to inflation reaching double-digits and the US dollar depreciating sharply. In South East Asia, it was the currency crisis in 1997-98; in Argentina and Brazil, it was the failure to control inflation; in the transition economies of Europe, it was the collapse of the Soviet Union. Thus, the country experience seems to suggest that most changes in the monetary policy framework were in reaction to adverse circumstances when credibility had to be urgently restored. The integration of global capital markets and the mobility of international capital flows is yet another factor forcing change in policy regimes. In addition, the shift towards inflation targeting seems to be driven by elements of best-practice learning. The reasons for changing the monetary policy framework are diverse and frequent

enough in occurrence to make it difficult to distinguish between mature or emerging economies. Generally, however, such changes appear to have been delayed, with monetary authorities preferring to ride out the storm and gamble for heightened credibility. In a few instances, as in Chile, Israel and Poland, the change in policy regime has been relatively smooth and graduated (Mahadeva and Sterne, 2000).

The literature on the MPC is young but already impressive in terms of sheer breadth. What is fascinating is the panoramic span of country responses that it has thrown up, making generalisation virtually impossible. A non-intrusive, classificatory approach would perhaps be best suited to drawing lessons from this rich array. The key issues that have attracted interest in the literature are:

- Is the monetary policy decision-making entity separated out of the central bank's supervisory and executive management structure?
- Is this entity individualistic or collegial?
- What is the design of an entity responsible for monetary policy formulation and implementation?

The ordering of issues sets up a screening procedure that may ultimately yield forms of 'ideal' MPCs. Up till that level of cognition, however, any combination or hue contributes in its own way to collective decision making in monetary policy.

The first set of issues relates to the decision-making structure – clear assignment of decision-making with respect to monetary policy; bringing appropriate knowledge and expertise to bear on policy decisions; promoting efficient and effective policy decisions; and ensuring meaningful accountability for policy decisions. Trade-offs are faced in achieving these objectives and consequently decision-making structures vary widely from one country and culture to another (Vandenbussche, 2006).

There is a view in the literature that central bank boards are vulnerable to pressures of representation, as for instance, from groups such as trade and industry or even regional considerations which could compromise the decision-making structure, especially when the

representation included in the board is from sections of society affected by a monetary policy decision (Mahadeva and Sterne, 2000). In order to minimise partisan pressures as also potential conflict between different functions of management, one approach in the country experience has been to separate the monetary policy making entity from the board of governance of the central bank as in the UK. In this vein, it has been argued that the most transparent approach is to establish a formal, two-tier management structure involving a supervisory board charged with responsibility for monitoring and evaluating the central bank's performance in relation to its assigned objectives, and a separate monetary policy committee (MPC) responsible for the formulation and implementation of monetary policy.

The country experience suggests that many central bank boards are formally executive in character. In such cases, a common practice is for the board to substantially delegate policy formulation and implementation decisions to a largely internal MPC whose recommendations it would routinely approve. The exact manner in which this delegation occurs varies, as does the extent to which the recommendations of the MPC to the board are regarded as decisions or advice. A board acting on the advice of an internal MPC is viewed as less transparent than a more formal separation of supervisory and operational responsibilities. A basic concern is that the degree to which the board actually delegates policy decisions to the MPC may vary over time, at the discretion of the board (Heenan *et al*, 2006).

The second set of issues addressed in the literature relates to the manner in which decision making occurs in a MPC, quite distinct from the vesting of legal power discussed earlier. Traditionally and continuing in a few countries (Canada, Israel, India, New Zealand), policy decisions are made, in principle, by the Governor alone. Having the Governor as the decision-maker promotes clear accountability and avoids dilution of responsibilities; it also risks placing excessive power and dependence – or perception thereof – in the hands of a single individual and limits decisions on the basis of a very narrow outlook (Tuladhar, 2005). In practice, however, even in these countries Governors decide on the advice of committees that

usually exists at an advisory level where information, forecasts and decisions are discussed extensively. Consequently, decision making may be very similar to that in countries with more explicitly committee-based decisions (Heenan *et al*, 2006).

An alternative distinction has been drawn on the basis of whether decisions are based on a consensus-seeking or collegial approach or a more individualistic vote-based approach. Collegial committees strive for consensus and reach decisions that stem from the collective wisdom of their members. There may be a vibrant internal debate before the policy decision is taken which may or may not involve voting. Once policy is set, all members speak in unison in public in order to strengthen the authority of the group. In “individualistic” MPCs by contrast, members develop their own positions, advocate them in internal meetings and vote accordingly when policy decisions are taken. Moreover, they may feel it appropriate to explain the reasons for their votes in public. While members of collegial MPCs strive for consensus, a consensus is not necessarily expected in individualistic committees.

The wide range of country choices as regards the ‘character’ of the MPC has prompted a recognition of the subtle nuancing of shades. It is in this context that a four-way classification of decision making under MPC has been proposed with “individual” and “collegial” being two opposite ends of the spectrum (Blinder and Wyplosz, 2004). At one extreme is the model of the individual central bank Governor such as that of the Reserve Bank of Australia, the Bank of Canada, the Reserve Bank of India, the Bank of Israel and the Reserve Bank of New Zealand. At the other extreme lies the individualistic MPC, such as the Riksbank’s or the Bank of England’s MPC, where each member not only expresses his or her opinion verbally but also acts on it by voting and decisions are made by majority vote. In between these two categories, two types of consensus-based MPCs are distinguished. In the “autocratically-collegial” MPC, the chairperson more or less dictates the group “consensus.” She may begin the meeting with the decision already made and simply inform other members. Or she may listen to the debate and then announce the

group's consensus, expecting everyone else to fall in line (Vandenbussche, 2006). In either case, the group's decision is essentially the chairperson's decision, informed by the views of the other committee members. The Federal Open Market Committee under Chairman Alan Greenspan has often been described as such an MPC. In the "genuinely collegial" MPC, members may argue strenuously for their own points of view behind closed doors but they ultimately compromise on a group decision of which each member then assumes ownership. In any case, there is no (or negligible) public disagreement. The ECB's Governing Council appears to be such an MPC.

The choice between the collegial and individualistic approach appears related to the costs and benefits of publicising differences in views between the members of the MPC. For some central banks, the costs of public disagreement are perceived as high. There is a risk that differences in opinion between MPC members regarding purely technical matters might be misunderstood as reflecting deeper disagreement. This could reduce the credibility and legitimacy of policy, a risk that would be particularly worrisome for central banks that have not yet secured their credibility either because of recent changes in the degree of instrument independence or in the policy framework or because they were recently established. These considerations would be seen to be particularly relevant for central banks in emerging market economies that often conduct policy subject to large shocks and frequently a history of government involvement in monetary affairs. Central banks operating in monetary unions such as the ECB face an inherent risk that policy disagreements will be interpreted by the public from a nationalistic perspective. They may then be particularly concerned about the costs of revealing differences in opinion between committee members.

By contrast, central banks operating in other environments may attach greater weight to the benefits of public disclosure of the views and, if applicable, votes of individual MPC members. It has been argued that greater transparency leads to greater accountability which, in turn, may be conducive to better policy. Furthermore, making

public the full range of views in the MPC, for instance, by publishing a voting record and minutes with dissenting opinions may make it easier for financial markets and the public to predict future policy changes. Indeed, there is evidence that the voting record of the Monetary Policy Committee of the Bank of England is useful in forecasting future policy changes. Releasing the voting record may therefore be helpful in conditioning expectations of future policy. Making dissenting opinions public may also foster public understanding of the difficulties in setting monetary policy.

The third set of issues which has engaged considerable interest in the literature addresses the design of the MPC – the plumbing in the architecture. Such mundane considerations, it has been succinctly noted, can have major repercussions on the ability of an effective policy board. The design details need to be considered at the outset and, if the initial set-up proves too constraining, modified later (Mahadeva and Sterne, 2000). Recent surveys of central bank laws (Lybek and Morris, 2004; Tuladhar, 2005) document many dimensions of heterogeneity of MPC governance structures. Each central bank operates differently, and different traditions may justify different set-ups (Maier, 2007). Size and composition of MPCs, appointment rules, length of terms, distribution of voting rights, publication of votes and minutes are several of the dimensions along which there is substantial cross-country variation.

There is a trade-off involved in ensuring that the committee is sufficiently large to include members with all the relevant experience and expertise, but small enough for individual members to contribute effectively with genuine debate and interchange of views. Most countries with MPCs have between 5 and 10 members on the committee. Just under 10 per cent have more than 10 members (Maier, 2007).

Turning to the composition of the MPC, it is common to have external members. The definition of internal members is constant across countries – they are policymakers in a full-time managerial position under the authority of the Governor of the central bank. While in many committees, internal members are involved in the management of the central bank more broadly, in some central banks

their tasks are more geared towards the monetary policy process (Mexico, US).

The meaning of external members varies significantly from country to country. Their mode of appointment is also usually different from that of internal members. These members may be chosen both to increase the legitimacy of the central bank as an institution and to diversify its range of expertise. External representatives offer new perspectives, may be more prone than internal members to challenge conventional wisdom, help avoid groupthink and can thus promote better policy.

No clear trend emerges with respect to the balance between external and internal membership. The balance between internal *versus* external membership is considered less important when minutes and dissenting votes are publicly disclosed so that members are individually accountable. A committee comprising insiders may be more effective in retaining coherence in decision-making, communication and accountability, particularly during periods of transition and in smaller countries where competent experts may be in short supply (Tuladhar, 2005).

To avoid conflict of interest and retain independence, external members are restricted from certain activities or affiliations outside the central bank. Generally, they include restrictions on involvement in financial institutions, political activity and government service. Some countries, however, only limit affiliations with those financial institutions that are under financial difficulties. Members may not be engaged in outside activities for financial gain. Sometimes, members may not be involved with a financial institution for a certain period after the end of their tenure (Tuladhar, 2005).

As discussed in IMF (1998), Lybek and Morris (2004) and Tuladhar (2005), these considerations generally lead to recommendations that:

- Government officials be either excluded from the MPC altogether or, at least, limited to a nonvoting role;
- Restrictions be placed on other non-central-bank members to exclude persons with conflicts of interest, either owing to their professional or to their financial interests;

- Members should have a high standing in a professional field relevant to monetary policy decision making;
- Membership terms of externally appointed members should be at least as long as the bodies that appointed them;
- Members of the central bank should form a majority on the MPC;
- All members should satisfy high standards of financial disclosure (Heenan *et al*, 2006)

Meetings are typically held on the basis of a prescheduled calendar. The frequency of meetings – usually monthly, sometimes quarterly or bi-weekly – depends upon factors such as frequency of data availability and feasibility of meetings. More frequent meetings risk putting too much attention to noisy data, although members are also more alert to developments. Hence, regardless of meeting frequency, policy decisions are generally made on a quarterly basis. Financial incentives are generally not provided for meeting monetary objectives. Reappointment prospects and publication of voting records are expected to provide sufficient incentives to meet the institutional objectives (Tuladhar, 2005). The frequency of meetings also depends on the monetary policy framework as well as on the number and type of committee members. Exchange-rate targeting may require more frequent meetings – or at least the ability to hold meetings at short notice – simply because information on the target is updated frequently. Money targeting will generally have new information monthly, while updating an entire inflation forecast will rarely be justified by new data in a single month. There are also questions of feasibility. If the committee is large and includes part-time members who have other commitments, it would be quite difficult for the entire committee to meet frequently.

A further distinction concerns whether the MPCs vote or not. While most do, the voting may, in some cases, be intended more to record a consensus already agreed than as a method to take policy decisions. If so, publishing the voting record need not convey much information about the true extent of agreement in the committee.

Interestingly and perhaps for this reason, many committees that vote do not publish the outcomes.

There are concerns that excessive transparency such as publishing of voting records, may infringe upon the central bank's operational independence. Disclosure of the individual judgments behind the policy decision risks create confusion and may subject members to undue pressure, especially if the members are nominated from political parties, or, in a federal system, from different subnational governments. In fact, most countries only release the decision and explanation immediately and do not publish the minutes. The detailed discussions, if released, are done so only with a time lag of 1 ½ to 3 months. Individual positions of members are required by law to be disclosed only by a few countries (Korea, Poland, and the United Kingdom).

The timing of information disclosure is an important consideration and most decisions are released with an appropriate delay. In the UK, the lag period for releasing minutes has been shortened to two weeks which has helped the public to pay more attention to the decisions as well as members' reported policy stance.

An important input in the MPC decision process is the large set of economic indicators as well as short-term and medium-term forecasts provided by central bank staff. In fact, large MPCs often receive advice by experts and central bank staff members in a nonvoting position, including on the days when decisions are made (Vandenbussche, 2006). Improvements in data collection and the growing sophistication and timeliness of economic statistics have reduced the need for large committee structures. Therefore to a large extent, central bank staff acts as the agent of the MPC in a dual role of information provider and advisor. The degree of interaction between staff and the MPC varies from one country to another. While Coletti (2004) describes the Bank of Canada's forecast as a staff projection and Meyer (2005) presents the Federal Reserve's Greenbook as "the staff's independent judgment of economic trends," Sterne (2004) emphasises that the Bank of England's forecast is that

of the MPC and is elaborated with the assistance of staff. The MPC chairman and key internal members are typically involved early in the process. At the Reserve Bank of Australia, draft versions of the briefing paper are discussed with the Governor and deputy Governor – but not the other seven external members – about a week before an MPC meeting and the finalised paper, which may include a recommendation, is sent ahead of the weekend preceding the Tuesday MPC meeting (Stevens, 2004).

Another apparent feature is that few central banks have fixed speaking orders, but at the same time, few central banks have institutional mechanisms to effectively encourage independent thinking. Moreover, most central banks have fairly strict rules on who makes the policy proposal which bears a severe risk of information cascades. Lastly, many central banks are reluctant to disclose whether the Governor has lost a vote during the last five years – among central banks that provide that information it seems that the Governor being on the losing side of a vote is clearly the exception (Maier, 2007).

Section II

Some Stylised Analysis

The survey of the literature presented in the preceding section is in many ways overwhelmed by the sheer variety of the country experience, the history, socio-cultural context and the processes whereby decision making has crystallised into a multiplicity of institutional structures. Accordingly, several interesting facets of the experience with MPCs are thrown up and merit more intensive study, depending on the objectives set up. In this section, at the cost of overly generalising, an attempt is made to evaluate some country practices against the three sets of issues identified in Section II that specifically define the role of the MPC with respect to monetary policy decision making. The choice of countries is determined by the availability of information – surveys conducted in the recent literature (Mahadeva and Sterne, 2000; Tuladhar, 2005; Heenan *et al* , 2006; Maier, 2007) – updated from the websites of central banks wherever relevant information has been posted.

As regards assignment of the responsibility for monetary policy decision making, country positions are evaluated against several characteristics – separation of MPC from governing board; decision making MPC or advisory; legal mandate for setting monetary policy; and accountability (Table 1).

The country experience seems to favour a separation of the MPC from the supervisory/governing body of the central bank. Countries

Table 1: MPC – Administrative Structure and Assignment

Country	Name of the Body/ Committee	Separate Entity	Decision Making/ Advisory	Reports to Government/ Legislature	Legal Mandate
1	2	3	4	5	6
Australia @ \$	Reserve Bank Board	No	D	Yes	Yes
Brazil	MPC (known as COPOM)	No	D	Yes	Yes
Canada \$	Governing Council	No	D	Yes	Yes
China @ \$	MPC	Yes	A	Yes	Yes
Columbia@ \$	Board of Directors	Yes	D	Yes	Yes
ECB	Governing Council	Yes	D	ECB	Yes
India	Technical Advisory Committee	Yes	A	No	No
Israel	Monetary Forum	Yes	A	Yes	—
Japan	Policy Board	No	D	Yes	Yes
Korea	MPC	Yes	D	Yes	Yes
Mexico	Board of Governors	No	D	Yes	Yes
New Zealand \$	MPC	Yes	A	Yes	No
Norway \$	Executive Board	Yes	D	Yes	Yes
Philippines@	Monetary Board	No	D	Yes	Yes
Poland #	Monetary Policy Council	No	D	Yes	Yes
South Africa\$	MPC	Yes	D	Yes	No
Sweden	Executive Board	No	D	Yes	Yes
Thailand #	MPC	Yes	D	No	No
Turkey	MPC	Yes	D	No	Yes
UK # \$	MPC	Yes	D	Yes	Yes
USA	FOMC	Yes	D		Yes

@ : Government participation as a voting member.

: Government membership in non-voting capacity.

\$: Government override capacity on MPC decisions.

D : Decision making. A : Advisory.

Sources : Tuladhar (2005), Heenan et al (2006), Maier (2007) and Central Bank websites.

with a separate MPC include those with target autonomy (ECB, Thailand, the USA), those without target autonomy but with instrument autonomy (Israel, Korea, New Zealand, South Africa, Turkey, and the United Kingdom) as well as those which have neither target nor instrument independence specified in legislation (China, India). In a number of countries with target autonomy (Mexico, Poland), the same board performs both supervisory and monetary policy functions. In a few countries, a separate supervisory board is responsible for general oversight functions, but their tasks exclude supervision of monetary policy performance (Tuladhar, 2005). These supervisory functions include internal audit, budget and internal working rules. In Hungary, monetary policy decisions are not subject to review by the supervisory board. In some cases, the supervisory board members are appointed by the parliament and their tenure coincides with the political election cycle (Iceland, Norway and Sweden). In a few cases, there exists only a single board which functions as the policy board, supervisory board and management (Australia, Brazil, Canada, Czech Republic, Japan, Mexico). Thus, the degree to which monetary policy decision/implementation is separated from the supervision of the central bank seems to be based on practical considerations rather than concerns about clarity of rules and responsibilities. Decision making MPCs, in general, have legal mandates and in most cases, report to the government/legislature. On the other hand, advisory MPCs such as in India and New Zealand do not have legal mandates, while in China, the MPC is constituted under Article 12 of the Law of the People's Republic of China on the People's Bank of China.

MPCs in most central banks are autonomous of government interference. In just four out of the central banks surveyed (Table 1), ministers or representatives of the government are full time members of the MPC. In Columbia, the minister of finance is a member of the MPC in the capacity of bank president. In the People's Bank of China, the MPC includes a Deputy Secretary General of the State Council and two Vice-Ministers. In Poland and the UK, government representatives attend the MPC meetings in a non-voting capacity.

In Canada, Norway, South Africa and the UK, there are explicit restrictions on government representation in monetary policy decision making. It is important to note, however, that there is provision for government override over the central bank's decision on monetary policy in several cases.

Table 2 presents information that would help to evaluate the specific character of the MPC – whether individualistic or collegial. The attributes chosen for this purpose are: voting or consensus

Table 2: MPC – Decision Process and Communication

Country	Decision by Voting/ Consensus	External Member in MPC	Publication of Minutes	Time Lag of Minutes Publication
1	2	3	4	5
Australia	Voting *	Yes	No	—
Brazil	Voting \$	No	Yes	8 days
Canada	Consensus @	No	No	—
China	—	Yes	No	—
Columbia	—	Yes	No	—
ECB	Voting	No	No	—
India	Consensus @	Yes	No	—
Israel	—	No	Yes	—
Japan	Voting #	Yes	Yes	One month
Korea	Voting #	Yes	Yes	Six weeks
Mexico	Voting	No	No	—
New Zealand	Consensus @	Yes	No	—
Norway	Consensus	Yes	No	—
Philippines	Voting	No	Yes	—
Poland	Voting #	Yes	Yes	8 days after the first meeting of the month
South Africa	Voting	No	No	—
Sweden	Voting #	No	Yes	Two weeks
Thailand	Consensus	Yes	No	—
Turkey	Voting	Yes	Yes	—
UK	Voting #	Yes	Yes	Two weeks
USA	Voting #	No	Yes	3-weeks

* : Usually by consensus without need for formal voting.

\$: Goal to reach a consensus decision.

: Publication of individual votes.

@ : Governor solely responsible.

Sources : Tuladhar (2005), Heenan *et al* (2006), Maier (2007) and Central Bank websites.

decisions; presence of external members, public dissemination or not and the time lag involved.

From the country preferences, it appears that country practices are divided over the choice between collegial and individualistic MPCs; however, there seems to be a growing preference for decision making by voting. Majority of the MPCs in the list have external members enhancing the scope of incorporating views beyond conventional thinking and adding elements of diversity in the decision making process.

There is no strongly revealed preference for disseminating decisions as well as explanations. In the sample of countries considered in this paper, central banks which do not publish minutes of MPC top the scale over those that do. In several countries, minutes of the MPC meetings are released to the public, enhancing transparency and openness of policy decisions. Moreover, several countries such as Japan, Korea, Poland, the UK and the US also make public individual votes including dissenting ones, attributing to specific members. The time lag for publishing minutes varies from eight days in case of Brazil to six weeks in case of Korea.

Table 3 presents MPC design of the countries surveyed in terms of the size, composition, frequency of meetings of MPCs as also restrictions on affiliations of the members. The size varies from 5 in Mexico and Turkey to 19 in the ECB. As many as six MPCs have a size of 9 (modal size) and five others have a size of 7. Other than ECB, countries having large MPCs are China, India and the US with a size of 12.

Twelve out of twenty-one countries surveyed have both internal and external members. In Columbia, New Zealand, Turkey and the UK, the number of internal members outweigh the external ones. MPCs differ with respect to the number of meetings held per year. The periodicity of meetings (or scheduled announcement dates) varies between twice a month in case of Japan, Korea, Mexico, Poland and South Korea (every two weeks) to every quarter in the case of China and India. Many committees such as in Brazil, Canada, New Zealand, Sweden and the US meet eight times a year.

Table 3 also enumerates restrictions on the MPC members regarding affiliations with institutions. Common restrictions pertain to political and financial positions.

Table 3: MPC – Design

Country	Size (No. of Members)	Composition (Internal/ External)	Frequency of Meetings	Restrictions on Affiliation with Institutions
1	2	3	4	5
Australia	9	2 / 7	11 times per year	Financial
Brazil	9	9 / 0	8 times per year	Other Positions
Canada	6	6 / 0	8 times per year	Government, political, financial
China	12	3 / 9	Quarterly	No specific restrictions
Columbia	7	6 / 1	—	Government, political, financial
ECB	19	19 / 0	Monthly	No other occupation
<i>India</i>	<i>12</i>	<i>5 / 7</i>	<i>Quarterly</i>	No specific restrictions
Israel	8	8 / 0		
Japan	9	3 / 6	Twice a month	
Korea	7	2 / 5	Twice a month	Government, political, financially gainful activity
Mexico	5	5 / 0	Twice a month	
New Zealand	9	7 / 2	8 times a year	Political, financial
Norway	7	2 / 5	Every 6 weeks	Government, political
Philippines	7	7 / 0	Every 6 weeks	Financial, “public appointment”, Institution subject to BSP supervision, political, labour unions, “gainful or public activity”
Poland	10	1 / 9	Twice a month #	
South Africa	9	9 / 0	At least once every two months	Government, political, financial
Sweden	6	6 / 0	7 to 8 meetings in year	Government, political, financial
Thailand	7	3 / 4	Every 6 weeks	
Turkey	5	4 / 1		
UK	9	5 / 4	Monthly	Government; member of Court of Directors (except Governor and Deputy Governors)
USA	12	12 / 0	8 times a year	

: Second meeting of the month is decision making meeting.

Source : Tuladhar (2005), Maier (2007) and Central Bank websites.

II.1 Profiling Select MPCs

Given the wide spectrum of country experiences, it is difficult to discuss central tendencies. It is useful, therefore, to profile four contrasting MPCs, which are currently at work, drawing from Vandebussche (2006) and central bank websites.

US Federal Reserve's Federal Open Market Committee (FOMC)

The FOMC is composed of the Board of Governors and the presidents of the district Reserve Banks. Board members (the internal members) are appointed by the President and confirmed by the Senate to serve 14-year terms. Terms on the Board are staggered, with one term expiring on January 31 of each even-numbered year. A member may serve only one full term in office; however, an individual originally appointed to fill an unexpired term may be reappointed to serve a full term. The President also designates one member of the Board of Governors to be the Chairman and another member to be the Vice Chairman, each for a four-year term and each subject to Senate confirmation. The presidents of the district Reserve Banks, however, are chosen to serve five-year renewable terms by the Board of Directors of these Banks, subject to approval by the Board of Governors.

The FOMC's decisions are formally made by majority vote among its voting members. Voting members include all seven Governors, the president of the Federal Reserve Bank of New York, and four of the presidents of the remaining 11 district Banks. Voting privileges rotate in a prescribed manner among the district Banks. The four rotation groups are: (i) Boston, Philadelphia, and Richmond; (ii) Cleveland and Chicago; (iii) Atlanta, St Louis, and Dallas; and (iv) Minneapolis, Kansas City, and San Francisco. Within each group, voting privileges rotate annually among the Banks

Governing Council of the European Central Bank (ECB)

The ECB's Governing Council comprises the Executive Board – the president, the vice-president, and four other members (the

internal members) – and the governors of the national central banks of the participating countries – currently thirteen countries. Executive Board members are appointed by common agreement among the heads of state of the eurozone for nonrenewable eight-year terms. No staggering of terms is provided for. Governors of participating central banks are appointed locally for at least five years and their terms can be renewed. Until the total number of Governors exceeds 15, each member of the Governing Council has one vote. As of the date when that number exceeds 15, governors will be allocated to two or three groups, the voting rights of which will sum to 15.

The FOMC and the ECB’s Governing Council are examples of large MPCs. It is likely that both committees were firmly led by its chairman (FOMC) or its Chief Economist (ECB).

Bank of England’s MPC

The nine-member committee comprises the Governor, two deputy Governors, two executive directors of the central bank appointed by the Governor after consultation with the Chancellor (currently the Bank’s Chief Economist, the Executive Director for Markets), and four outside experts (the external members). The Governors are appointed for fixed renewable five-year terms, while the external members are appointed for renewable three-year terms. A representative from the treasury also sits with the MPC at its meetings. The MPC has an explicit mandate; it is made up of diverse membership (academics, business representatives and central bankers) and individual contributions can be identified and evaluated. Instances of the Governor losing vote indicate a more individualistic committee than the FOMC and the ECB’s Governing Council.

People’s Bank of China’s (advisory) MPC

The People’s Bank of China’s MPC comprises ten members and has an advisory role only. It is headed by the Governor and also includes two Deputy Governors, a Deputy Secretary-General of the

State Council, a Vice Minister of the State Development and Reform Commission, a Vice Finance Minister, the Administrator of the State Administration of Foreign Exchange, the Chairman of the China Banking Regulatory Commission, the Chairman of the China Securities Regulatory Commission, the Chairman of the China Insurance Regulatory Commission, the Commissioner of the National Bureau of Statistics, the President of the China Association of Banks and an expert from academia. The committee is appointed by the State Council, with two-year terms for non-government officials.

II.2 Index of MPC Empowerment

Surveys, by their very nature, generate information that is multivariate. The need for simultaneous observation of several key attributes and underlying interrelationships often warrants aggregation of some form to reduce the dimensionality of the information into a summary measure which is usually interpreted ordinally in terms of broad direction rather than absolute magnitude. Steering clear of issues relating to aggregation and seeking to capture the diversity thrown up by the country survey in one composite gauge, an attempt has been made to construct an Index of MPC Empowerment (IMPCE). Ten attributes of functioning MPCs are considered, namely, (i) separate entity, (ii) decision making role, (iii) legal mandate, (iv) absence of government override, (v) presence of external members, (vi) absence of part-time members, (vii) attribution of individual votes to specific members, (viii) absence of government voting members, (ix) decision by voting (as against consensus), and (x) publication of minutes. Each of these attributes is assigned a score of one and its absence gets a score of zero. Equal weights are given to each attribute. The index *i.e.*, IMPCE varies from 0 to 10. A higher IMPCE indicates greater empowerment in monetary policy decision making and *vice versa*. The IMPCE for each country is rated against its macro-economic performance in terms of average inflation and growth for the period 2002 to 2006 along with variability in inflation and growth measured by the coefficient of variation (Table 4).

Table 4: Index of MPC Empowerment

Country	Index	Average Inflation (CPI) 2002-2006 (Per cent)	CV of Inflation (CPI) 2002-2006	Average Growth 2002-2006 (Per cent)	CV of Growth 2002-2006
1	2	3	4	5	6
Australia	5	2.86	0.15	3.28	0.18
Brazil	7	8.18	0.49	3.22	0.52
Canada	4	2.20	0.15	2.72	0.21
China	3	1.52	1.10	10.06	0.06
Columbia	5	5.72	0.19	4.56	0.40
ECB	7	2.17	0.03	2.12	0.36
India *	4	5.00	0.23	7.60	0.30
Israel	5	1.88	1.24	3.14	0.87
Japan	9	-0.30	-1.49	1.70	0.54
Korea	10	2.98	0.19	4.80	0.30
Mexico	6	4.36	0.13	2.80	0.62
New Zealand	4	2.60	0.25	3.16	0.43
Norway	6	1.62	0.52	2.40	0.48
Philippines	6	5.24	0.38	5.18	0.13
Poland	9	1.86	0.58	3.96	0.44
South Africa	5	4.90	0.59	4.34	0.21
Sweden	8	1.50	0.41	3.02	0.40
Thailand	6	2.86	0.60	5.64	0.19
Turkey	8	18.60	0.85	7.10	0.20
UK	9	1.66	0.28	2.54	0.22
USA	9	2.64	0.27	2.90	0.30

* : Inflation based on WPI.
 CV : Coefficient of Variation.
Note : Inflation and Growth Rates in percentage.

The entire set of countries under consideration can be loosely divided into two groups on the basis of IMPCE scores. Purely for analytical purposes, IMPCE scores from 0 to 5 are indicative of MPCs with relatively lower empowerment, while the group of countries with IMPCE scores from 6 to 10 have MPCs with a higher degree of empowerment than the first group. This analysis throws up somewhat surprising results. It turns out that less empowered MPCs are associated with lower inflation and higher growth as compared with more empowered MPCs, but at the cost of higher inflation volatility (Table 5).

Table 5: MPC Empowerment and Macroeconomic Performance

IMPCE	No. of Countries	Average Inflation (CPI) 2002-2006 (Per cent)	CV of Inflation (CPI) 2002-2006	Average Growth 2002-2006 (Per cent)	CV of Growth 2002-2006
1	2	3	4	5	6
0 to 5	8	3.34	0.49	4.86	0.33
6 to 10	13	4.11	0.25	3.64	0.36
0 to 5 excluding China & India	6	3.36	0.43	3.53	0.38
6 to 10 excluding Brazil & Turkey	11	2.42	0.17	3.37	0.36

CV : Coefficient of Variation.

Both groups consist of countries with growth and inflation records which are significantly different from the rest of the group. It is, therefore, plausible to expect that inclusion of these 'outliers' is affecting the group average. For instance, countries such as Brazil and Turkey have relatively more empowered MPCs but also a history of high inflation. On the other side, China and India have less empowered MPCs but have been experiencing high growth rates in the period of study. Excluding China and India does not produce any material difference in inflation performance but MPC empowerment becomes associated with a better growth performance, both in terms of (higher) level and (lower) volatility. On the other hand, by excluding Brazil and Turkey (but retaining China and India), more empowered MPCs are associated with lower inflation (level as well as variability) but also with lower growth. Excluding all potential outliers, *i.e.*, Brazil, China, India and Turkey yields a similar result. In sum, therefore, more empowered MPCs seem to deliver better inflation results but with no improvement in growth outcomes.

Section III Concluding Observations

Recent financial developments have provoked a reassessment of the appropriate role, responsibilities and objectives of central banks for conduct of monetary policy. It has been pointed out that the focus

of central banks appears to be narrowing relative to their complex responsibilities and that it is increasingly evident that central banks do have a role beyond inflation targeting and that growth and financial stability matter (Mohan, 2007). The role and functioning of the MPC in various countries may have to be reviewed in the context of these fundamental changes.

The institution of the MPC is rapidly gaining ground across central banks, reflecting a growing preference for not only collectivity in decision making but also for bringing to the table diverse perspectives, new and independent thinking, technical expertise and experience, information efficiency and pooling of analysis. On these grounds, a sufficiently empowered MPC with a clearly defined target and freedom to adjust its instruments in order to achieve that goal can offer the classic benefit of diversification: a higher mean with a lower variance. In the surveyed literature and country practice, however, there is no clear cut case for decisions by committee being better than more autocratic processes. It is argued that while the MPC may promote discussion and information sharing, it also risks free-riding. Majority voting may weaken accountability and may also reduce the informational efficiency of decision making.

In India, the approach to reform has been gradualistic including in the context of the monetary policy framework. The institution of the TAC reflects this choice of pace and sequencing. Notably, the TAC was not a response to shocks or loss of credibility but an evolutionary part of the interactive, more open approach to monetary policy making that started in the late 1990s and intensified from mid-2003. The formal setting up of the TAC is in itself noteworthy as it occurred in an institutional setting in which the RBI is invested with a multiple mandate but with centralised responsibility for decision making (Governor); with overarching government override including in the appointment and removal of the Governor and Deputy Governors, but with no representation of the Government in the TAC (in a non-voting capacity only in the Central Board); with the RBI as manager of public debt but with primary monetisation of the fiscal deficit eliminated through agreements with the government and

mandated under fiscal responsibilities legislation. The reconstitution of the TAC, whereby external members currently outnumber internal members, is indicative of the qualitative enrichment that it has brought to the decision-making process. All this has come about without changing the legal/institutional framework.

The specific characteristics of the Indian economy, including the '*realpolitik*', perhaps, render unified and centralised decision making responsibility and authority for monetary policy necessary. There are notable differences between central banks and corporate entities. Central banks are public policy institutions invested with socio-economic mandates which require governance arrangements that balance autonomy and accountability. This is particularly relevant in an emerging economy setting, as borne out by the country experience, where the Governor chairing the Board has made a substantial difference to the atmosphere of discussion and has not constrained disagreement on substantive matters. As regards the UK's individualistic MPC, it has been argued, for instance, that the Governor voting with the minority shows sign of a lack of strong leadership which, in an emerging economy context, could be damaging to the entrenchment of credibility so critical for conducting monetary policy and communicating it. Even in relatively mundane aspects of meeting procedures, the Governor adds value to the MPC by initiating/enabling the institution of the MPC itself; setting the timing and agenda; approving circulated material; seating/speaking/voting arrangements; shaping of policy proposal put to the MPC; influencing the direction, pace and conclusion of discussions. It is relevant to note that even in the Bank of England's MPC, the Governor is the last one to speak. This is also true of the FOMC.

For India, at the current juncture, the choice is a separate TAC; advisory; collegial; large by international standards; more external members than internal; restrictions on public issuances by members around policy review announcements; quarterly meetings; voting without publication; continuity with change. The way forward will be assessed in the context of the more complex and varied role required of the central bank currently and as it evolves.

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Commodity Derivatives and Price Risk Management: An Empirical Anecdote from India

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Commodity derivatives trading in India notwithstanding its long and tumultuous history, with globalisation and recent measures of liberalisation, has witnessed a massive resurgence turning it one of the most rapidly growing areas in the financial sector today. This paper endeavours to test the efficacy and performance of commodity derivatives in steering the price risk management. The critical analytics of performance divulges that these markets although are yet to achieve minimum critical liquidity, almost all the commodities throw an evidence of co-integration in both spot and future prices, presaging that these markets are marching in the right direction of achieving improved operational efficiency, *albeit*, at a slower pace. In the case of some commodities, however, the volatility in the future price has been substantially lower than the spot price indicating an inefficient utilisation of information. Several commodities also appear to attract wide speculative trading. Hedging proves to be an effective proposition in respect of some commodities, while others entail moderate or considerably higher risk. As the markets develop, it remains to be seen whether the information content of future prices could be factored in the course of future monetary policy setting.

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Introduction

In the wake of globalisation and surge in the global uncertainties, financial organisations around the world are devising methods and instruments to contain the price risk that these uncertainties bring. Commodity derivatives are such instruments that have been devised to achieve price risk management by basing the value of a security

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on the value of an underlying commodity. Commodity derivatives trading although has witnessed a long and chequered history, with the recent measures of liberalisation, the sector has witnessed a massive boom in the country.

Planned and sustained growth of any sector coupled with a prudent demand and supply management calls for a system, which can not only yield adequate returns to its producers but also ensure timely supply at desired prices to the consumers. Commodity derivatives or futures markets hold a key in insulating the producers and the trade functionaries from the seasonal and cyclical oscillations in the prices of commodities, which are aggravated by the high income and low price elasticities of demand and the shifts in such elasticities overtime. Derivatives markets hold an immense potential for the economy as they stabilise the amplitude of price variations, facilitate lengthy, complex production decisions, bring a balance between demand and supply, act as a price barometer to the farmers and the traders besides encouraging competition. These markets while enabling price discovery and better price risk management engender inter-temporal price equilibrium and horizontal and vertical price integration. While ensuring price risk mitigation and remunerative returns, these markets also contribute in scaling down the downside risks associated with agricultural lending and thereby facilitate the flow of credit to agriculture. Besides, these markets through the use of warehouse receipts obviate the need for collaterals, the lack of which has currently impeded the flow of agricultural credit. They also hold a key role not only in reinvigorating the spot markets but also triggering the diversified growth of Indian agriculture in line with the consumption pattern. A strong, healthy, vibrant and well developed commodity exchanges can play a pivotal role in the globalisation of international trade by imparting a competitive pricing efficiency to exports. The promotion of derivatives trading has become imperative particularly, in the aftermath of WTO regime to face the challenges in terms of exposure to the vicissitudes of world commodity prices and heightened competition.

In the Indian context, there are very few studies on the performance of the derivatives trading in select agricultural commodities. However, there is no firm study on the overall performance of derivatives trading covering wide range of commodities as trading in most of them has commenced/picked up only in the recent time. In an endeavour to fill this gap, the present study seeks to address the questions as to currently (i) how vibrant the market has been in terms depth/breadth and liquidity ?, (ii) how effective the market has been in terms of price risk management and price discovery functions ?, (iii) is the market stable or volatile ?, and (iv) what are the constraints and required policy response in the future ?

The depth/extent of liquidity in Indian commodity derivatives markets is sought to be examined by analysing the trends in the proportion of value of commodities traded in relation to Gross Domestic Product (GDP) and volumes traded in relation to the production. The efficacy of these markets in India has been evaluated by testing their forward pricing ability through tests of co-integration between spot and future prices. An attempt has also been made to assess the performance of these markets by analysing the risk involved in the spot, derivatives and basis of commodities. In this endeavour, Section I traces briefly the evolution of these markets in India and outlines the contours of international experience. Section II captures some of the empirical underpinnings from the extant literature. The performance, efficacy and effectiveness of these markets are tested and elucidated in Section III. Section IV and V identify some of the constraints and required policy response in the future. Section VI draws some of the implications of commodity futures prices for the future monetary policy. The study concludes with the last Section VII.

Section I

Evolution and Contours of International Experience

Evolution

The origin of commodity derivatives markets dates as far as back to the 17th century, when they were informally established in Amsterdam and centered on the trade in Tulips. The modern form,

however, came into existence in the 19th century, *inter alia*, in London, Chicago and New York. Notwithstanding the fact that India is considered a pioneer in some forms of derivatives in commodities, commodity derivatives market in India has had a turbulent history. The first ever organised derivatives market evolved with the setting up of Bombay Cotton Trade Association Ltd., in 1875. With the enactment of Defence of India Act- 1935, however, the market was subjected to restriction/ prohibition from time to time, owing to the apprehensions of speculation in times of scarcity. After independence, the market received a fillip with the enactment of Forward Contracts Regulation Act (FCRA) in December 1952. The derivatives markets, which were once vibrant and attracted huge trading volumes in commodities, particularly, cotton, oilseeds, bullion and jute were either suspended or prohibited during 1960s and 1970s. Concomitantly, the revival of this industry in India had a slow and shaky start. It began with the setting up of the Dantwala Committee (1966) and subsequently, the Khusro Committee (June 1980). In the post-reforms era, accepting partially the recommendations of Kabra Committee (1993), the Government of India permitted derivatives trading in large number of commodities. A number of initiatives were also undertaken subsequently to decontrol and develop the forward markets in commodities. There are presently 21 regional exchanges in the country.

Contours of International Experience

Price volatility is perhaps the most pressing issue facing the producers of primary commodities. While these producers are not exclusively in less developing countries (LDCs) (Sapsford and Morgan, 1994), the impact of volatility on producers is much greater in LDCs than it is for those in developed market economies. Given the demand for many of the primary commodities is price inelastic and also given the large potential for shocks in supply, there is clearly a significant price and quantity risk for producer nations. Trying to deal with this volatility has been at the centre stage of commodity policy since the 1930s where the main emphasis was on supply control and thus, reducing price instability. Policies designed to counter the effects of the inherent instability of commodity markets have taken

various forms since the 1930s but in general, they all shared the common feature of being based on intervention.

Agricultural producers are prone to several risks such as price, crop and weather/climatic variations and a plethora of other natural disasters, which could be devastating to their anticipated income and could have negative effects on the standard of living, ability to build capital and ability to access credit and repay debts¹. To deal with the risks, several countries have attempted to guarantee commodity prices and provide crop insurance. There are yet no examples of successful crop insurance programmes without heavy reliance on Government subsidies (Skees, Hazel and Marinda, 1999) or the problems of moral hazard, adverse selection and high administrative costs².

However, at present, policies based on market solutions to the problem solely of price instability are being sought as the general macroeconomic stance shifts away from intervention and more specifically that of supply control (Morgan, 2000). “.....Market based risk management instruments, despite several limitations, offer a promising alternative to traditional stabilisation schemes” (World Bank, 1994). Moreover, in view of the fiscal pressure and obligation under WTO to reduce direct support to agriculture, there has been a policy shift towards market oriented approach. Hence, the case for the development of commodity derivatives market world over was advanced more forcefully since the demise of aggregate intervention policies such as International Commodity Agreements (Gilbert, 1996) and the failure of large-scale international financing schemes such as the IMF’s Compensatory Finance Fund, *etc.*, (Herrmann *et al*, 1993). There is now considerable consensus that the derivatives markets play a significant role in shaping the investment decisions of the market intermediaries and in smoothening price volatility.

In the international domain, in US and other Western countries, derivatives trading is allowed in a range of commodities including live cattle, feeder cattle, hogs, pork bellies, fluid milk, rubber, tea, wool and industrial metals and even in a number of non-commodities such as weather index and pollution permits. In advanced countries, there are several innovations in packaging natural-disaster/weather

risk into various forms of tradable financial assets-catastrophic bonds; insurance contracts; weather derivative contracts; exotic options, *etc.*, providing the holder with large amounts of capital contingent upon the occurrence of some risky event.

The application of weather-based index insurance in the case of energy sector and cat bonds in the case of earthquake is quite advanced, nevertheless, applications in the agriculture sector are still limited. Weather-related financial instruments are now spreading to potential clients in low income groups in developing countries (Fernando.N.A, 2004).

Furthermore, in some of the major derivative exchanges in the world such as Chicago Board of Trade (CBOT), London International Futures and Options Exchange (LIFEE), *etc.*, there is convergence between the commodities and securities derivatives markets. With the globalisation of financial markets, significant developments are taking place in the international arena in terms of electronic trading, internet based commodity exchanges and electronic communication networks (ECNs) using multiple products and combination of networks as competitors to exchanges. There are increasing alliances, often international, to compete effectively with exchanges and ECNs. An overview of futures trading and the volumes traded around the world divulges massive divergence across the different exchanges (Chart 1).



Section II

Extant Literature: Some Empirical Underpinnings

In the literature, several studies attempted to compare the impact of derivatives markets in comparison to buffer stock schemes that had been favoured since 1930s and highlighted that derivatives markets offered a more effective and welfare raising method of dealing with price volatility (Gilbert, 1985). By taking a position in the derivatives market, the producer can potentially offset losses in the spot market. However, with regard to the stabilisation effect of futures trading on the spot prices, the evidence is mixed. Newbery (1990) observes that since forward markets reduce risk, they encourage fringe firms to supply more output and thus, reduce the spot price. Furthermore, forward markets concentrate trading in one location and reduce information and other transaction costs, which can also lower prices. Similarly, Netz (1995) and Morgan (1999) concluded that the level of inventories held in the spot market will be determined by the *basis*³ and will ensure a more efficient process of private storage, which in turn, ensures a smoother pattern of prices in the spot market. According to Turnovsky and Campbell (1985), since forward markets reduce the price risk of holding inventories, larger inventories are held and prices tend to stabilise as a consequence. Conversely, Kawai (1983) shows that when the storage is subject to shocks, increased storage can destabilise prices. It is also revealed that risk reduction encourages producers to undertake more risky investment projects, and risky investment destabilise spot prices (Newbery, 1987).

Similarly, Cox (1976) finds that in many markets, forward trading is stabilising whereas Figlewski (1981) and Simpson and Ireland (1985) conclude that opposite is true. Varangis and Larson (1996) cited several examples in the case of cotton and oil in Mexico and Algeria, where group of producers is represented by an agent who trades on their behalf. In doing so, minimum prices for output could be guaranteed and thus, risk is reduced for an individual trader for the cost of a small premium. Other such examples are provided by Claessens and Duncan (1993) and World Bank (1999).

With regard to the causal relationship between future and spot prices, *viz.*, whether future price leads the spot prices or *vice-versa*, the evidence is mixed and inconclusive (Box).

Box: Spot and Future Prices Causation

While numerous studies have examined the relationship between spot and future prices for various types of commodities as also for financial assets, empirical evidence in this regard is mixed. In the literature, there are two strands on the price formation process of commodity future prices. One in which, the inter-temporal relationship between cash and future prices are explained by the cost of carry of the commodity, *i.e.*, future prices should never be less than the spot price *plus* storage and interest cost (Brennan, 1958 and Telser, 1958). In the case of second, future prices are split into an expected risk premium and a forecast of a future spot price (Breedon, 1980 and Hazuka, 1984). In this case, basis is expressed as a sum of an expected premium and an expected change in the spot price.

For the future price to be an unbiased predictor of subsequent spot price, *i.e.*, $E_t(P(t,T))$ equals zero, the future price should lead the spot price (Garbade and Silber, 1983). There are also arguments in favour of opposite hypothesis, that spot price leads future prices (Silvapulle and Moosa, 1999, Quan, 1992, Moosa, 1996). The spot prices can be price leading if the convenience yield is high enough. According to Pindyck (2001), the spread between the future prices and spot price gives a direct measure of the marginal value of the storage for a commodity termed alternatively, as marginal convenience yield (MCY). Future price could be greater or less than the spot price depending on the magnitude of the net (of storage costs) MCY.

For the future price to be an unbiased predictor of the spot price, the future and spot prices must be proportional that is the basis should be constant and the market is said to be efficient. For instance, Asche and Guttormsen, (2002) found that the future and spot prices in the case of gas oil formed a stable long-run relationship and the prices were proportional (basis being constant) indicating that future price leads the spot price. If $a_1=0$, a change in the basis will be atleast partly corrected by a change in the spot price, in that case spot price will lead the future prices⁴. If $a_2=0$, a change in the basis will be atleast partly corrected by a change in the future price, in which case, future price will lead the spot prices.

In other words, the argument of risk reduction through hedging rests on the premise that the spot and future markets move together so that losses in one market can be made good through gains in other market. Risk reduction or price discovery function is conditioned by the fact that futures markets must be able to predict the subsequent cash price at maturity. At maturity, the future prices become equivalent to cash prices except for some transaction costs and quality premium. If the future prices are a reflection of future demand and supply conditions of the market, then they are considered to exert influence on the inventory holding. If future prices are falling, it indicates that either future demand would fall or future supply would ease. This would induce traders to reduce inventory stock, which eventually results in fall in spot prices (Singh, 2004).

A key aspect of derivatives market performance is the degree of liquidity in the market (Cuny, 1993). A derivatives market is considered liquid, if traders and participants can buy and sell derivatives contracts quickly with little price effect resulting from their transactions. However, in thin markets, the transactions of individual hedgers may have significant price effects and result in substantial 'transaction costs' (Thompson, *et al*, 1996). This phenomenon of lack of market depth is particularly important for relatively small commodity derivatives markets and might be especially true for new derivatives markets (Pennings and Leuthold, 1999). The problems associated with credit constraints, issues relating to basis risk such as quality differentials and transport costs make the process of trading more risky for LDC producers (Morgan 1999). Lack of understanding of the market and lack of close link to those doing the day-to-day trading have also hindered the growth of these markets.

According to Pennings and Leuthold (1994) hedging effectiveness is related to trading volume and this relationship is more prominent when the hedging effectiveness takes market depth risk into account. Having evaluated the hedging effectiveness by taking into account basis risk and market depth risk and analysing the overall risk reduction capacity of the derivatives contract, they concluded that hedging effectiveness is an important determinant in explaining the derivatives contract volume. Hedging effectiveness is related to the service design—the core business of derivatives exchange. According to them, the factors, which influence the use of derivatives are perceived performance, risk attitude, perceived risk exposure, market orientation, *etc*. In the finance literature, several factors such as firm's risk exposure, its growth opportunity, the level of wealth, managerial risk aversion, financial distress costs and the accessibility to financing influence the adoption of commodity derivatives (Visvanathan, 1998 and Koski and Pontiff, 1999). Several authors identify experience, education, enterprise size, expected income change from hedging as factors influencing the use of derivatives contracts (Patrick, *et al*, 1998).

In India, derivatives trading was strangulated owing to ban/prohibition from time to time. The trading has picked up only in recent

time, particularly after 2002. For some primary commodities fortnightly prices data are available since 1996-97, whereas for some commodities such as cotton, sugar, rubber, metals, *etc*, they are available for latest years (2003 and 2004) on a daily basis. With the limited data in hand, this study attempts to assess the performance of commodity derivatives markets in India.

Section III

Performance of Commodity Derivatives Market in India

1. Few Stylised Facts

A decadal overview of growth pattern reveals that the commodities such as turmeric, pepper and castorseed witnessed a significant turnaround in their volumes as measured by their compound growth rates since the late 1990s compared to the first half of the decade, while the commodities such as gur and cotton displayed downtrend during the same period. In terms of the value of trading, while commodities such as castorseed, and pepper witnessed a sharp rebound, others such as cotton, gur and turmeric revealed a negative growth (Table 1).

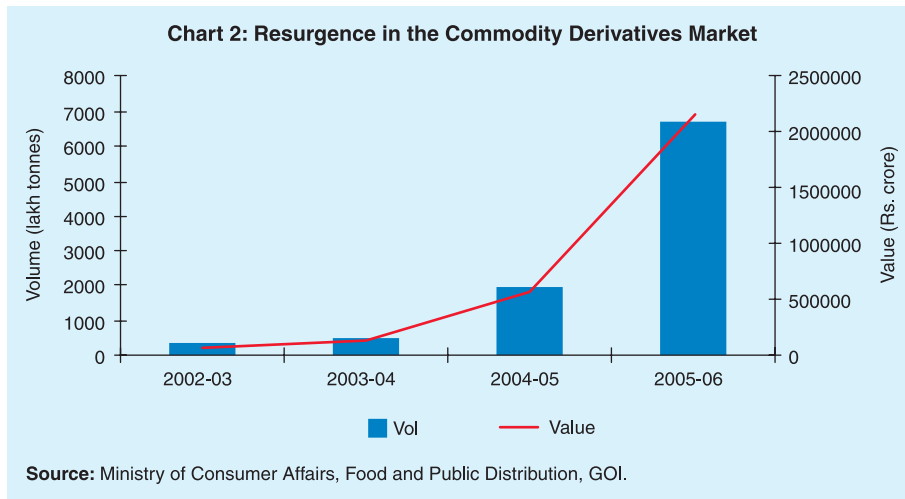
There has, however, been a massive spurt in the business of commodity derivatives trading in the recent past. The size of volumes and value of commodities traded tripled during 2004-05. During

Table 1: Compound Growth Rates

Volume of Trade					
Period	Gur	Castorseed	Turmeric	Pepper	Cotton
1	2	3	4	5	6
1990-1997	6.8	12.1	-5.7	-1.9	1.7
1998-2005	-7.6	5.3	15.0	19.4	-1.5
Value of Trade					
1990-1997	16.8	20.3	2.3	21.4	3.6
1998-2005	-2.2	7.8	-1.0	3.1	-28.4

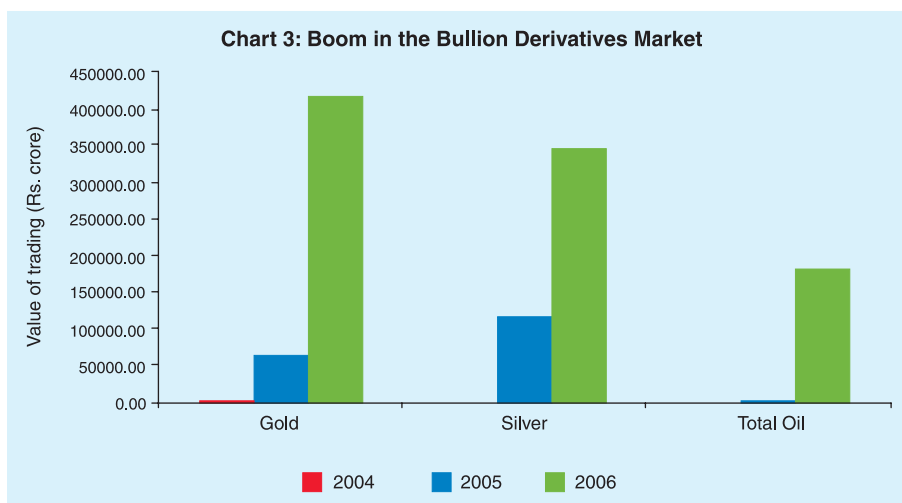
Note : The data since 1990s is available only for select primary commodities.

Source : Computed on the basis of data from Annual Report, various issues, Forward Markets Commission, GOI.



2005-06, the volume of trading recorded at 6,685 lakh tonnes valued at over Rs. 21 crore was more than 2 times the level of preceding year (Chart 2).

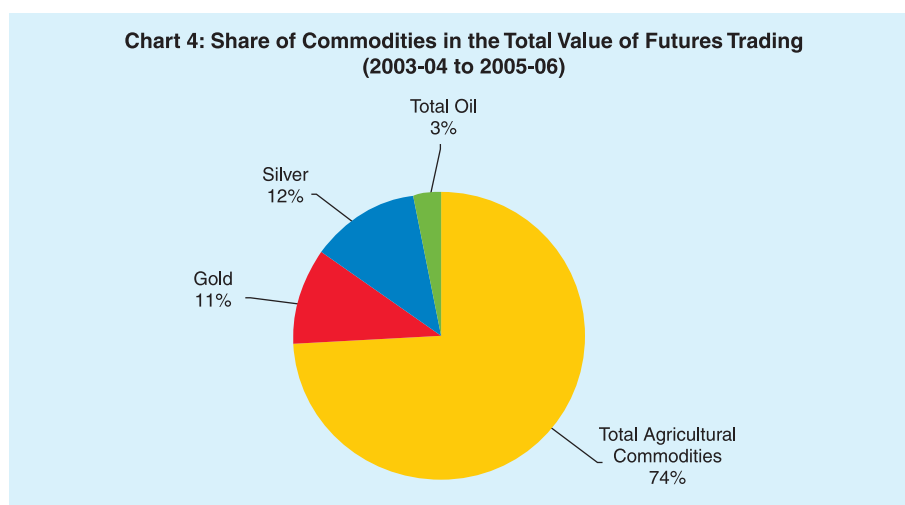
In India, the primary commodities account for bulk of the value of trading on the existing commodities derivatives market. In the last three years, they accounted for 74 per cent of total value of derivatives trading. Although trading in other commodities such as gold silver, metals and oil recorded only in the recent period, there has been a boom, particularly in the bullion market (Chart 3).



In terms of the average share in the value of derivatives trading among non-primary commodities, silver accounted for the largest amount (12 per cent) followed by gold (11 per cent) and oil (3 per cent) during the last three years ending 2005-06 (Chart 4). However, the share of other commodities like metals, particularly bullion in the basket of commodities traded in India has a potential to grow rapidly in the near future.

2. Liquidity in the Commodity Derivatives Market

Liquidity forms a key aspect of performance of commodity derivatives market. In order to capture the extent of penetration or depth of the market, the values of trading in the commodity derivatives market have been juxtaposed with the Gross Domestic Product (GDP) and volumes of trading with production of those commodities. Accordingly, the total value of commodity derivatives traded at present accounts for about 2/3rd of overall GDP, ramifying the extent of penetration that this market has gained in the Indian economy. The total value of commodities traded as a proportion of GDP shows a sharp turnaround in 2005-06 to around 67 per cent from over 20 per cent a year ago. Similarly, the value of trading of agricultural commodities as a proportion GDP emanating from agriculture witnessed a three-fold increase in 2004-05, recording a ratio over 70 per cent. However, the value of trading of agricultural commodities



as a proportion overall GDP stood at around 37 per cent, followed by bullion (around 24 per cent), oils (6 per cent) and other metals (0.6 per cent) during 2005-06 (Table 2).

The liquidity in the commodity derivatives markets could be examined by analysing the proportion of total volume of trading of a commodity to its total production in the country. Accordingly, among the primary commodities, liquidity is found to be high only in respect of two such as castorseed and soyabean oil (Table 3). The volume of transaction in the castorseed derivatives was as high as twenty times the production in 2002-03 and was above 4.6 times of its production in any given year after 1999-00. The derivatives trading in the case of soyabean oil reached to a peak (3.7 times of its production) in 2002-03, though it declined in the next year, but remained considerably higher than its production in the subsequent years. However, trading in the case of groundnut was found to be very thin. Conversely, trading in respect of sesamum reached to almost half of its production in 2003-04 but recorded a substantial decline thereafter. Incidentally, liquidity in respect of sunflower soared almost to six times of its production. Similarly, the volume of transaction of cotton recouped gradually and exceeded its production in 2004-05 by almost

Table 2: Value of Trading as a Proportion of GDP

Year	Agricultural Commodities		Bullion (Gold/Silver)	Other metals	Oils	Total Commodities
	As a % of Agri. GDP	As a % of Overall GDP				
1	2	3	4	5	6	7
1999-00	4.34	1.10	–	–	–	1.29
2000-01	5.31	1.26	–	–	–	1.42
2001-02	6.87	1.60	–	–	–	1.64
2002-03	20.86	4.33	–	–	–	4.51
2003-04	23.18	4.87	0.13	0.08	–	5.09
2004-05	70.16	13.72	6.30	0.02	0.07	20.10
2005-06	–	36.51	23.70	0.58	5.67	66.51

Source : Computed on the basis of data from *Futures Trading and Forward Markets Commission*, August 2003 and December 2005, Ministry of Consumer Affairs, Food and Public Distribution, GOI and the National Accounts Statistics, CSO.

1.3 times. On the contrary, the volume of trading in the case of gur witnessed stagnation, while in the case of sacking, the liquidity was relatively higher but has declined since 2003-04. The commodities such as sugar and pepper were thinly traded.

Thus, barring castorseed, soyabean oil and to some extent cotton, volume of trading in the case of select commodities is found to be considerably low compared to their production levels and hence, derivatives market in respect of these commodities is yet to achieve minimum critical liquidity so as to ensure minimum transaction costs and attract larger participation. One of the reasons for low volumes could be attributed to some of the measures that FMC undertook in the recent period such as daily mark to market margining, time stamping of trades, novation of contracts, demutualisation for the new exchanges, *etc.*, with a view to promote market integrity and transparency. The exchanges have attributed subsequent fall in the volume of trade to introduction of these measures. The exchanges like Bombay Commodity Exchange and Kanpur Commodity Exchange, which implemented most of these reforms, were literally deserted by all the traditional players (Kolamkar, 2003).

Table 3: Volume of Trading as a Proportion of Production

Commodity	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06
1	2	3	4	5	6	7	8
<i>Groundnut</i>	–	–	2.38	2.31	0.84	0.01	0.03
<i>Castorseed</i>	611.95	497.39	775.04	2064.02	869.37	1036.70	460.50
<i>Sesamum</i>	–	–	–	18.14	45.65	5.64	3.62
<i>Rapeseed & Mustard</i>	–	0.31	0.18	36.16	65.08	36.07	2.92
<i>Safflower</i>	–	–	–	–	24.02	600.74	–
<i>Sunflower</i>	–	–	0.05	598.86	106.99	–	–
<i>Soyabean oil</i>	1.53	61.02	83.62	370.55	154.32	362.92	239.83
<i>Cotton seed/ kapas</i>	0.30	0.22	0.05	0.34	73.92	125.44	50.02
<i>Sugar</i>	–	–	–	0.00	0.01	1.73	1.65
<i>Gur</i>	3.52	3.14	3.60	3.92	3.13	2.87	2.69
<i>Sacking</i>	5.88	8.37	9.46	8.42	4.11	0.49	0.15
<i>Pepper</i>	–	–	–	–	–	0.02	0.01

Source : Computed on the basis of data from *Futures Trading and Forward Markets Commission* August 2003 and December 2005 and the Ministry of Agriculture, GOI.

3. *Efficacy of Markets: Tests of Co-integration*

By taking a position in the derivatives market, a producer can potentially offset losses in the spot market. However, as revealed by Telser (1981), complete price insurance is possible only if spot and future prices move exactly together, if not then perfect insurance is not feasible. In other words, if the markets are efficient, there has to be a co-movement between both the spot and future prices. In the literature, a pre-condition for market efficiency is the convergence of both future and spot prices across the market spectrum. The argument of risk reduction through hedging rests on the premise that the spot and future markets move together so that losses in one market can be made good through gains in other market. For the future price to be an unbiased predictor of the spot price, the future and spot prices must be proportional that is the basis should be constant and the market is said to be efficient. The studies exploring the price discovery role and the lead lag relationship between futures and spot prices have followed a procedure that is based on price series being nonstationary (Asche and Guttormsen, 2002), *i.e.*, to test the existence of a long-run relationship between the spot and future prices by investigating whether the data series are co-integrated.

In the Indian commodity derivatives markets, most of the price series are found to be non-stationary with no tendency to revert back to an underlying trend value as they typically exhibit 'random walk' properties, *i.e.*, today's prices cannot be used to predict future prices (Table 8 to 11). However, differencing the data runs the disadvantage of losing information about underlying long run relationships between prices. Thus, the relationship and co-movement between the prices is examined in a co-integration framework in which linear combinations of non-stationary variables could be identified. Conducting the estimation of both future and spot prices under the Johansen-Juselius (JJ) procedure yields the following results.

In respect of pepper barring September, the contracts of all the months yield at least one co-integrating relationship, while the contracts of particularly, April, July, August and November display two such co-integrating relationships, reflecting thereby enhanced operational efficiency and improved transmission of information in both spot and derivatives markets (Table 4).

Table 4: Johansen Trace Statistics

Commodity/ Contract Month	Eigen Value	Trace Statistic	0.05 % critical value	Hypothesised No.of CE(s)
1	2	3	4	5
Pepper				
January	0.296117 0.041093	24.37 2.60	15.49 3.84	None * At most 1
February	0.292425 0.046725	25.20 3.06	15.49 3.84	None * At most 1
March	0.294872 0.051450	27.75 3.64	15.49 3.84	None * At most 1
April	0.264682 0.076101	24.74 5.07	15.49 3.84	None * At most 1 *
May	0.288498 0.037257	27.99 2.81	15.49 3.84	None * At most 1
June	0.278234 0.033672	22.70 2.16	15.49 3.84	None * At most 1
July	0.251319 0.073303	23.40 4.87	15.49 3.84	None * At most 1 *
August	0.237713 0.065878	23.43 4.70	15.49 3.84	None * At most 1 *
September	0.186826 0.028516	12.73 1.56	15.49 3.84	None At most 1
October	0.346511 0.037695	30.15 2.50	15.49 3.84	None * At most 1
November	0.310646 0.103567	23.59 5.36	15.49 3.84	None * At most 1 *
December	0.289843 0.023320	24.51 1.58	15.49 3.84	None * At most 1
Sacking				
February	0.129518 0.039444	5.55 1.25	15.49 3.84	None At most 1
May	0.385548 0.103209	19.67 3.59	15.49 3.84	None * At most 1
August	0.392138 0.088200	21.84 3.42	15.49 3.84	None * At most 1
November	0.153656 0.031245	7.94 1.27	15.49 3.84	None At most 1

* : Denotes rejection of the hypothesis at the 0.05 level.

** : MacKinnon-Haug-Michelis (1999) p-values.

Conversely, the contracts of May and August of sacking indicate one co-integrating relationship, while the contracts of February and November do not reveal any evidence of co-integration. In the case of potato, the October contract reveals a strong evidence of co-integration, while the same is not true for the months of March and July. In the case of castorseed, only two (June and February) out of

six months indicate co-movement. There exists a strong evidence of co-integration in the case of Mustard (January and May) and gur (May, July and December) (Table 5).

In the case of other commodities, long period data is not available, as their trading has commenced/picked up only in the recent period. However, the evidence for the recent years using daily data, indicates that there exist two co-integrating relationships in the case

Table 5: Johansen Trace Statistics

Commodity/ Contract Month	Eigen Value	Trace Statistic	0.05 % critical value	Hypothesised No.of CE(s)
1	2	3	4	5
Potato				
March	0.146020	8.03	15.49	None
	0.063048	2.34	3.84	At most 1
July	0.178343	13.40	15.49	None
	0.096410	4.56	3.84	At most 1 *
October	0.388858	28.72	15.49	None *
	0.123639	6.07	3.84	At most 1 *
Castorseed				
February	0.665754	20.23	15.49	None *
	0.089985	1.60	3.84	At most 1
March	0.487649	7.92	15.49	None
	0.050301	0.57	3.84	At most 1
April	0.232007	5.17	15.49	None
	0.057213	0.94	3.84	At most 1
June	0.268917	16.40	15.49	None *
	0.092321	3.87	3.84	At most 1 *
September	0.277908	14.95	15.49	None
	0.085875	3.23	3.84	At most 1
December	0.251352	14.77	15.49	None
	0.135006	4.93	3.84	At most 1 *
Mustard				
January	0.407921	22.66	15.49	None *
	0.132714	4.84	3.84	At most 1 *
May	0.500030	23.14	15.49	None *
	0.151118	4.42	3.84	At most 1 *
Gur				
May	0.259154	15.98	15.49	None *
	0.180768	6.38	3.84	At most 1 *
July	0.333212	20.97	15.49	None *
	0.162452	6.38	3.84	At most 1 *
December	0.225255	24.34	15.49	None *
	0.075259	5.71	3.84	At most 1 *

* : Denotes rejection of the hypothesis at the 0.05 level.

** : MacKinnon-Haug-Michelis (1999) p-values.

of rice, wheat, sugar (grade-S), cotton, sesame seed among the primary commodities; gold, copper, lead and tin among the metals; and bent crude oil among the oils. The estimation in the case of rubber, sesame oil, aluminium, zinc, silver, and furnace oil yields one such relationship. Only sugar (grade-M) and nickel do not show any co-movement (Table 6 and 7). This however, is an indicative evidence of the state of efficiency of markets.

4. Price Volatility:

In the markets which are efficient, the extent of fluctuations in both spot and derivatives markets are supposed to be same for storable commodities. If the spot market is efficient, the relative magnitude of variation in prices helps us to see whether future market is able to

Table 6: Johansen Trace Statistics

Commodity	Eigen Value	Trace Statistic	0.05 % critical value	Hypothesised No.of CE(s)
1	2	3	4	5
Rice [^]	0.777055	45.44	15.49	None *
	0.431321	12.42	3.84	At most 1 *
Wheat [^]	0.441468	21.79	15.499	None *
	0.305728	8.399	3.849	At most 1 *
Sugar (M)	0.020589	12.48	15.49	None
	0.001314	0.74	3.84	At most 1
Sugar (S)	0.132327	64.10	15.49	None *
	0.010255	4.34	3.84	At most 1 *
Rubber	0.078561	37.63	15.49	None *
	0.001801	0.81	3.84	At most 1
Sesame oil [^]	0.534638	22.62	15.49	None *
	0.015050	0.44	3.84	At most 1
Sesame seed [^]	0.304802	44.54	15.49	None *
	0.143044	13.28	3.84	At most 1 *
Cotton (J-34) [^]	0.481645	20.46	15.49	None *
	0.306504	7.32	3.84	At most 1 *
Cotton (S-06) [^]	0.537798	23.78	15.49	None *
	0.341109	8.34	3.84	At most 1 *
Bent Crude Oil	0.141113	45.88	15.49	None *
	0.015804	4.35	3.84	At most 1 *
Furnace Oil	0.160861	36.57	15.49	None *
	0.008371	1.67	3.84	At most 1

* : Denotes rejection of the hypothesis at the 0.05 level.

** : MacKinnon-Haug-Michelis (1999) p-values.

[^] : Pertain to data at fortnightly intervals.

Table 7: Johansen Trace Statistics

Commodity	Eigen Value	Trace Statistic	0.05 % critical value	Hypothesised No.of CE(s)
1	2	3	4	5
Aluminium	0.072304	16.51	15.49	None *
	0.003953	0.83	3.84	At most 1
Nickel [^]	0.343624	14.49	15.49	None
	0.045200	1.43	3.84	At most 1
Lead	0.221481	20.74	15.49	None *
	0.061865	4.21	3.84	At most 1 *
Zinc	0.169979	20.59	15.49	None *
	0.013490	1.40	3.84	At most 1
Copper	0.059051	31.40	15.49	None *
	0.008566	3.89	3.84	At most 1 *
Gold [^]	0.425488	27.77	15.49	None *
	0.212822	8.38	3.84	At most 1 *
Tin	0.083852	32.28	15.49	None *
	0.016073	5.04	3.84	At most 1 *
Silver	0.107610	42.13	15.49	None *
	0.002857	1.03	3.84	At most 1

* : Denotes rejection of the hypothesis at the 0.05 level.

** : MacKinnon-Haug-Michelis (1999) p-values.

[^] : Pertain to data at fortnightly intervals.

incorporate the information efficiently. In the efficient markets, daily variations in spot and derivatives emanate purely from the new information that is arriving in the market.

The ratio of standard deviations of month-wise future and spot prices throws light on the extent of volatility in the derivatives markets. Assuming that the carrying costs in the month are negligible, a ratio of standard deviation of future and spot prices that is closer to one indicates that derivatives market is efficient, *viz.*, markets are incorporating the information efficiently. A ratio greater than one close to the maturity period indicates speculative activities. Conversely, a ratio less than one shows that markets are not being able to incorporate the information fully and efficiently.

For the sake of analysis, a cut-off has been assumed at 0.8 and 1.2 as the lower and upper levels to provide an indication of extent of variability in the spot and derivatives markets. This assumption is

Table 8: Stationarity (ADF) Test Statistics

Commodity	Contract Month	Price	Level	1 st Difference
1	2	3	4	5
Pepper	January	<i>Future</i>	-1.54	-10.02*
		<i>Spot</i>	-6.34*	-9.34*
	February	<i>Future</i>	-1.61	-7.61*
		<i>Spot</i>	-6.83*	-9.42*
	March	<i>Future</i>	-1.68	-7.89*
		<i>Spot</i>	-6.95*	-9.79*
	April	<i>Future</i>	-2.12	-10.78*
		<i>Spot</i>	-6.77*	-9.53*
	May	<i>Future</i>	-1.73	-8.92*
		<i>Spot</i>	-7.30*	-10.29*
	June	<i>Future</i>	-0.91	-6.94*
		<i>Spot</i>	-6.79*	-9.68*
	July	<i>Future</i>	-1.18	-8.18*
		<i>Spot</i>	-1.04	-7.71*
	August	<i>Future</i>	-1.2	-8.81*
		<i>Spot</i>	-0.96	-7.03*
	September	<i>Future</i>	-1.28	-6.26*
		<i>Spot</i>	-1.25	7.07
	October	<i>Future</i>	-0.56	-8.02*
		<i>Spot</i>	-0.61	-8.26*
	November	<i>Future</i>	-2.70\$	-6.25*
		<i>Spot</i>	-2.24	-8.02*
	December	<i>Future</i>	-1.13	-7.27*
		<i>Spot</i>	-6.48	-9.77*
Sacking	February	<i>Future</i>	-0.94	-4.31
		<i>Spot</i>	-1.97	-5.68*
	May	<i>Future</i>	-1.81	-6.37*
		<i>Spot</i>	-6.05*	-9.53*
	August	<i>Future</i>	-1.93	-4.04*
		<i>Spot</i>	-1.33	-10.19*
	November	<i>Future</i>	-0.89	-4.33*
		<i>Spot</i>	-2.06	-7.21*

Note : * : Significant at 1 % level.

@ : Significant at 5 % level.

\$: Significant at 10 % level.

^ : Data at fortnightly intervals.

on the same lines as adopted in the previous study (Naik and Jain, 2002) (Annex Table I).

- In the case of pepper, in most of the cases ratio has hovered around one, indicating that there is an efficient utilisation of information and to that extent, market is efficient in respect of pepper. Among

all the months, however, contracts between June to October as also December appear to attract some speculative trading.

- In the case of gur and potato, in almost all the cases, the ratio has been less than 0.8 suggesting that volatility in the future price is substantially lower than the spot price. This pattern is an indication of inefficient utilisation of information in the market.
- Similarly, in respect of castorseed in more than 50 per cent cases, the ratio turns out be less than 0.8, reflecting that future price has been unable to incorporate the information fully. Furthermore, the contracts pertaining to February, April, June and December show some speculative trading.
- In the case of sacking, while in some cases the ratio turns out closer to one, while in several cases, it stands at less than 0.8. The contract of November has relatively more speculative trading.
- Sugar shows no discernible pattern as in one year the ratio is around one but in the subsequent year, it is less than 0.8 in most cases, while the contract of November revealed some speculative activities.
- In respect of cotton in most cases, the ratio hovers around one, while in 40 per cent of the cases, ratio exceeds the upper ceiling (1.2), indicating to that extent higher volatility in the future price than in the spot price. Besides, the contracts of most of the months have also witnessed speculative trading.
- In the case of mustard, future price variability is higher for August contract than for May and November, indicating thereby an excessive speculative activity in respect of August contract.
- Future price volatility as compared to the spot price is found to be high in respect of wheat and low in the case of rice.
- The variability in future price turns out to be high in respect of contracts of rubber maturing in January, February, March and December, reflecting excessive speculation in them.
- In respect of metals, barring aluminium and to some extent nickel, others such as lead, copper and tin, future price shows considerable variability compared to that of spot price.

Table 9: Stationarity (ADF) Test Statistics

Commodity	Contract Month	Price	Level	1 st Difference
1	2	3	4	5
Potato	July	<i>Future</i>	-1.52	-6.01 *
		<i>Spot</i>	-2.26	-7.19 *
	March	<i>Future</i>	-1.40	-5.95 *
		<i>Spot</i>	-2.25	-7.73 *
	October	<i>Future</i>	-1.82	-6.14 *
		<i>Spot</i>	-2.07	6.79
Castorseed	June	<i>Future</i>	-1.59	-5.44 *
		<i>Spot</i>	-1.72	-5.98 *
	September	<i>Future</i>	-1.64	5.06
		<i>Spot</i>	-1.72	5.35
	December	<i>Future</i>	-1.32	-4.18 *
		<i>Spot</i>	-2.93	-3.03 @
Mustard	January	<i>Future</i>	-1.95	-17.7 *
		<i>Spot</i>	-4.64 *	4.98
	May	<i>Future</i>	-1.93	4.90
		<i>Spot</i>	-2.65 \$	-5.42 *
Gur	May	<i>Future</i>	-2.48	-4.60 *
		<i>Spot</i>	-2.90 \$	-6.08 *
	July	<i>Future</i>	-2.27	-5.69 *
		<i>Spot</i>	-2.75 \$	-5.91 *
	December	<i>Future</i>	-2.21	-8.67 *
		<i>Spot</i>	-3.42 @	7.59

Note : Same as Table 8.

Similarly, the gold contract of August and silver contract of April and May display higher volatility in future price compared to the spot price. Thus, by and large, metals appear to attract wide speculative trading.

5. Marginal Convenience Yield- Basis Risk

If the spot price is less than the future price of the underlying asset, the market is said to be in contango. Conversely, if the spot price is more than the future price, the market is said to be in backwardation. When the future contracts expire, the spot and future price converge with each other. According to Pindyck (2001), the spread between the future price and spot price gives a direct measure of the marginal value of the storage for a commodity termed alternatively, as marginal convenience yield (MCY). Future price

could be greater or less than the spot price depending on the magnitude of the net (of storage costs) MCY. If MCY is large, the spot price will exceed the future prices. As observed in the earlier Section, derivatives markets besides providing flexibility in pricing, facilitate inventory management. The level of inventories held in the spot market will be determined by the *basis* and will ensure a more efficient process of private storage, which in turn, ensures a smoother pattern of prices in the spot market and hence, potentially reduce price volatility (Netz, 1995 and Morgan, 1999). Hence, producers taking position in the commodity derivatives markets are beset with basis risk. Lower the basis risk, more effective is the derivatives market in terms of its function of price risk management. In the efficient markets, future price converges to the spot price and thus, the basis risk becomes zero in the maturity month. In such markets, producer who hedges his price risk can contain his business risk by holding on to the contract until the maturity of the contract. Thus, if the basis is low, hedging becomes an effective instrument of price risk management. The effectiveness of commodity derivatives markets in terms of the price risk management could be examined by analysing the ratio of standard deviation of basis to the spot price in the maturity month of the contract. A ratio of standard deviation of basis to the spot price of any contract that is less than 0.5 (a benchmark) could be considered to be effective in price risk management and hence, would attract more participants to the derivatives market (Naik and Jain, 2002).

- During 1997-2004, in the case of pepper trading, the ratio was less than one in 70 per cent of the cases, while it was less than 0.5 in about 50 per cent of the cases except for one or two years. Furthermore, the contracts maturing in July and August witnessed the ratio being less than the benchmark in 50 per cent of the cases. However, the contracts of January, May, June and September display considerable volatility in their basis compared to the spot prices, as their ratio below the benchmark could be observed only in 30 per cent of the cases (Annex Table II).
- Prior to 2001, the basis in respect of gur revealed considerable variability compared to the spot prices, although it was moderated in the recent years. However, in none of the years, ratio was

Table 10: Stationarity (ADF) Test Statistics

Commodity	Price	Level	1 st Difference
1	2	3	4
Rice [^]	<i>Future</i>	-4.00 *	5.47
	<i>Spot</i>	-6.29 *	-5.56 *
Wheat [^]	<i>Future</i>	3.39	-5.89 *
	<i>Spot</i>	-3.23 @	-6.03
Sugar (M)	<i>Future</i>	-1.36	-22.51 *
	<i>Spot</i>	-0.68	-18.79 *
Sugar (S)	<i>Future</i>	-3.05 @	-15.74 *
	<i>Spot</i>	-2.14	-21.90 *
Rubber	<i>Future</i>	-0.88	-20.98 *
	<i>Spot</i>	-0.87	-11.42 *
S.Seed [^]	<i>Future</i>	-4.30 *	12.27
	<i>Spot</i>	-4.03 *	-7.80 *
Cotton (J-34) [^]	<i>Future</i>	-3.47 @	-4.92 *
	<i>Spot</i>	-3.12 @	-5.70 *
Cotton (06) [^]	<i>Future</i>	-4.41 *	-7.20 *
	<i>Spot</i>	-4.23 *	-1.71
Bent Crude Oil	<i>Future</i>	-2.51	-18.54 *
	<i>Spot</i>	-2.37	-18.57 *
Furnace Oil	<i>Future</i>	-1.34	-13.19 *
	<i>Spot</i>	-2.06	-13.04 *

[^] : Data at fortnightly intervals.

Note : Same as Table 8.

around the benchmark. Even in terms of the maturity months of March, July and December, the ratio was less than one only in 50 per cent of the cases.

- In respect of castorseed, the ratio turned out to be less than the benchmark in 50 to 70 per cent of the cases, implying thereby less risk involved in its trading. While the contracts of April, June and September proved effective in scaling down the price risk as they show lower basis risk in almost 70 per cent of the cases.
- The basis risk of potato trading displayed relatively moderate variation as the ratio was less than one in almost 70 per cent of the cases, barring one year. However, the ratio was never below the benchmark in four out of five years under the review. Among the contracts months of March, July and October, none of them showed basis being closer to the spot price except in 20 per cent of the cases in respect of October.

- The ratio in respect of sacking ruled below one in around 70 per cent and above cases, however, the ratio was below the benchmark in around 30 per cent of the cases only in two out of five years and thus, indicating that basis risk in this case was neither too low nor high but at best moderate. Among the four months, only in the case of August contract, the ratio was below the benchmark in 40 per cent of the cases.
- Basis risk varies even between different varieties of the same commodity as they are traded in different markets. In respect of sugar (grade-M), the ratio was below the benchmark in 60 per cent of the cases in 2003 and 33 per cent of the cases in 2004, while it was never below the benchmark in the case of sugar (grade-S). The contracts of March and April witnessed ratio being less than the benchmark in around 70 per cent of the cases.
- In the case of rubber, the ratio was below the benchmark in 70 per cent of the cases in 2003 while in the case of contracts of January, February, March, April and May, the basis displayed considerable variability compared to the spot price and the ratio exceeded one in respect of all.
- Among the metals, the basis risk turned out to be substantially high in the case of lead, copper and tin, while the ratio was below the benchmark in around 30 per cent of the cases in respect of aluminium and zinc.
- The basis risk of gold was moderate as the ratio was less than one in 70 per cent of the cases. Silver revealed the same position, however, its ratio was below the benchmark in 40 per cent of the cases, implying thereby that trading in silver was relatively less riskier than in the gold.
- Overall among the metals, the contracts of February and March revealed relatively lower basis risk, as the ratio hovered below the benchmark in one-half of the cases.
- The basis risk in respect safflower oil trading was substantially high, while it was moderate in the case of sesame oil and sesame

seed. It is only the June contract, which showed low basis risk as the ratio fell below the benchmark in 70 per cent of the cases.

- In respect of cotton, one grade, J-34 showed relatively moderate basis risk, while the other grade-S-06, revealed high basis risk and among the months, March contract was relatively better.
- The trading in mustard indicates considerable volatility in its basis compared to the spot price, with only the contract of May being less riskier. However, overall the trading in mustard showed high basis risk.
- In respect of grain contracts, rice showed a moderate basis risk, while it was quite high in respect of wheat and among the four contract months none of them showed ratio being less than the benchmark in any of the cases.

Table 11: Stationarity (ADF) Test Statistics

Commodity	Price	Level	1 st Difference
1	2	3	4
Aluminium	<i>Future</i>	-1.45	-15.77 *
	<i>Spot</i>	-0.86	-14.78 *
Copper	<i>Future</i>	-1.90	-23.14 *
	<i>Spot</i>	-1.91	-25.11 *
Gold [^]	<i>Future</i>	3.86	-2.85 \$
	<i>Spot</i>	-4.46*	-2.96 \$
Lead	<i>Future</i>	-1.27	-8.91 *
	<i>Spot</i>	-1.08	-8.34 *
Nickel [^]	<i>Future</i>	0.06	-6.51 *
	<i>Spot</i>	0.21	-7.12 *
Silver	<i>Future</i>	-1.23	-1.19 *
	<i>Spot</i>	-1.17	-22.19 *
Tin	<i>Future</i>	-2.80\$	-20.88 *
	<i>Spot</i>	-2.39	-18.83
Zinc	<i>Future</i>	-1.38	-9.78 *
	<i>Spot</i>	-0.90	-10.23 *

Note : Same as Table 8.

Section IV

Constraints and Challenges

The misconceived apprehensions that the derivatives trade leads to speculative and inflationary tendencies were largely responsible for strangulation of this industry in the past. Some of the constraints in the development of commodity derivatives market in India could be identified below.

- The long period of prohibition has resulted in driving a part of the trade underground, with a large number of participants shifting to other professions, including securities market. These markets in India remained isolated from rapid advances in the systems of brokerages, market designs, trading, clearing, settlement, and governance of exchanges since 1970s, when derivatives were introduced in Western markets.
- The hawala markets, which are operating since decades, are often localised, operating with low transaction costs and hence attract many speculators and small hedgers. Indian commodity derivatives markets are still in a developing stage as they are dispersed and fragmented, with small turnovers among separate trading communities in different regions.
- In India, trading in these markets is yet to achieve the minimum critical liquidity. In thin markets, the transactions of individual hedgers have significant price effects and result in substantial 'transaction costs' (Kyle, 1985 and Thompson, Garcia and Dallafior,1996).
- The major stumbling block for the development of derivatives market is the fragmented physical/spot markets. The national level derivative exchanges cannot be founded on fragmented localised cash markets.
- In India, fragmented land holdings, dependence on monsoon, low level of input usage, poor agronomic practices, lack of rural infrastructure (warehousing, grading/sorting facilities, access roads to markets), poor flow of price and market information all combine to translate to unsteady output, sub-standard quality and fluctuating farmgate prices.

- The agenda of liberalisation and reforms in legal, policy and regulatory levels for the development of these markets is still unfinished. The proposal to allow options in commodities and provide registration to brokers by amending Forward Contracts Act is still pending.
- The issue of differential tax structure both stamp duty and octroi is yet to be resolved. It is felt in several corners that in case non-delivery transactions, high stamp duties imposed by the State Governments have made the market unattractive leading to illegal hawala markets.
- The freedom to diversify does not exist in the regional exchanges as they have to seek fresh recognition every time they intend to add another commodity to their portfolio.
- Several restrictions such as stock limits, levy system, *etc.*, have hindered the process of integration of markets throughout the country. The system of administered price mechanism has not only distorted the cropping pattern but has also restricted the scope for adequate development of commodity derivatives markets.
- The progress in terms of infrastructure development in terms of efficient clearing settlement and guarantee systems, system of well organised and capitalised brokerage houses, real time price and trade information dissemination, *etc.*, has been slow.
- Apart from physical/infrastructural limitations such as limited online trading, online surveillance and monitoring, the non-availability of full proof legal system of contracts, particularly relating to the warehouse receipt system, *etc.*, are seriously constraining the derivatives market.
- Further, limited and closed nature of membership, particularly in the regional exchanges absence of many hedgers has scuttled the spread of derivatives trading. Due to the small size of commodity exchanges in terms of their turnover, large corporate houses are looking forward to offshore commodity exchanges.
- Lack of awareness about the role and technique of derivatives trading among the potential beneficiaries is hindering the growth

of the market. Small size of the farmers and inadequate access to credit has also dampened the development of this market in India.

- Forward Markets Commission exercises delegated powers and has no autonomy to garner resources- human, financial, infrastructural to discharge the responsibility in a changed environment.
- The other common issues include lack of efficient mechanism for collection of spot prices, existence of different regulators for spot and futures markets, lack of de-mutualisation in regional exchanges, taxation issues such as setting up off speculative transactions for calculation of IT, capital gains on transactions in the forward market, service tax, *etc.*

Section V

Required Policy Response

In view of the promising prospects that these markets hold, following issues need to be addressed.

- Concerted efforts have to be made to bring the traditional players to the formal market in order to achieve minimum critical liquidity, sufficient breadth and depth, and provide relatively less expensive exit route.
- There is a need to strengthen the input delivery system, expansion of irrigation facilities, ensure timely and adequate credit delivery, educate farmers about agronomy and enable them to follow pre and post harvest scientific practices. Besides, putting in place adequate rural infrastructure for warehousing and dissemination of price and market information to farmers warrants renewed thrust.
- One way to shorten the existing long supply chain and ensure disintermediation (intermediaries that add to the cost but not to the value) is for corporates to get into contract farming.
- There is need to strengthen the spot or physical market by pumping adequate investment and changing the archaic laws relating to produce marketing. Development of modern markets needs to be encouraged by amending the respective Agricultural Produce Marketing Committee (APMC) Acts and notifying the rules thereunder by all the States.

- Derivatives market cannot exist without an underlying spot market. First, there is a need to have sound and vibrant physical market so as to ensure a vibrant and transparent derivatives market.
- The Government should continue its efforts to strengthen the commodity exchanges and instill confidence and awareness among the market players for increasing participation in derivatives markets.
- The reform initiatives suggested by the Government and FMC to commodity exchanges such as daily mark to market margining to improve financial integrity of the markets, simultaneous reporting, trading ring discipline, representation of diverse interests (growers/processors/exporters/importers), full professionalisation of Boards of exchanges, *etc.*, need to be pursued vigorously to make the derivatives market deliver effectively.
- Furthermore, efficient clearing, settlement and guarantee systems, system of well organised and capitalised brokerage houses, real time price and trade information dissemination, ensuring transparency, *etc.*, should be made conditional on the exchanges. To instill the confidence in investors, increasing volumes and thereby reaping the full potential of derivatives trading, exchanges have to mature by adopting to the best international practices.
- The success of commodities derivatives trading assumes a multi variant dimension with several stakeholders involved. The effective co-ordination and interface between the exchanges, banks and the warehousing agencies is crucial in evolving a necessary framework in developing a mature warehousing system.
- As recommended by the Working Group on Warehouse Receipts and Commodity Futures (2005) set up by the Reserve Bank, a system needs to be evolved by which warehouse receipts become freely transferable between holders as it would reduce transaction costs and increase the usage.
- The system of warehouse receipts needs to be universalised in derivatives trading to enable enhanced volumes and in

minimising transaction costs. Warehouse receipts should act as good evidence of the receipt for goods and the terms of the contract and storage, proof for their quality and conditions.

- For evolving a mature warehouse receipt system, legal framework needs to be strengthened. In addition to these steps, warehouses need to be upgraded and properly regulated, which should enable them to certify the quality of the products and the standard parameters for the same can also be set.
- There is a need to introduce options trading and pending amendment to this effect should be expedited. In case of non-delivery transactions, there is a need to minimise the stamp duties imposed by the State Governments to attract the customers from illegal hawala markets.
- Another issue that merits attention is the integration of markets throughout the country, which is not possible unless all the existing restrictions such as stock limits, levy system, *etc.*, are done away with.
- It has also been suggested that there is a need to grant industry status to commodity derivatives sector so that the players, like their counterparts in securities industry, can have access to the institutional funds for their working capital.
- It has been deliberated in several quarters that participation in commodity derivatives market needs to be enlarged by including mutual funds, financial institutions and foreign institutional investors, which would enable them to reallocate assets, maximise returns and diversify risks. A view needs to be taken on the issue of allowing these entities for participating in the commodity derivatives market.
- With the deepening and widening of derivatives markets, the regulatory system should also achieve dynamism, being autonomous with adequate powers and professionalism to monitor and ensure surveillance in a liberalised market system. In this context, establishment of an independent regulator as in the case of securities market needs to be considered.

Section VI

Commodity Future Prices and their Implications for Monetary Policy

Future prices usually contain useful information about the emerging demand and supply conditions, particularly as markets develop, mature and achieve higher efficiency. Recent studies have revealed that despite the relative noise in the commodity futures markets, they remain an important source of information about the likely conditions of future developments in inflation and monetary conditions. An earlier study provides indirect observations on the short-end of the term structure by using a measure of the real interest rate extracted from commodity futures prices (Cornell and French, 1986). They found that it was expected inflation in commodity prices and not the real returns that increased when there was an unexpected increase in the money supply. Others have found that the long-term expected inflation rate falls when there is a surprise increase in the federal funds rate (Gurkaynak, *et al*, 2003). Conversely, the short-term response is different (Armesto and Gavin, 2005), *i.e.*, expected inflation, at least as observed in the commodity markets, moves in the same direction over the ensuing 3 to 9 months as a surprise in the federal funds rate target.

In this regard, studies derive measures of the interest rate and expected inflation from commodity futures prices and use these measures to examine how interest rates and expected inflation respond to monetary policy shocks (Armesto and Gavin, 2005). Although the commodity futures data contain a substantial amount of idiosyncratic noise, they remain an important source of information about how markets respond to the evolving stance of monetary policy. These results show that the commodity expected inflation rate does respond significantly to surprises in the federal funds rate. The expected inflation rate in commodities is calculated from the relative basis in commodity markets and the basis is defined as the difference between the spot and the future price of a commodity.

However, whether these findings have important implications for monetary policy depends on how closely the measures derived

from commodity markets are connected to the inflation rates and real interest rates that matter for long-term consumption and investment decisions. Nevertheless, as the commodity futures market develop in India, it remains a subject of study to explore how these markets respond to monetary policy shocks and whether commodity future prices can be factored in for arriving at expected future inflation and interest rates by the market participants. On the other hand, the evolving pattern of commodity futures prices would reveal significant information to the monetary authorities on real economic factors, which have a bearing on policy formation. The development of a vibrant commodity futures market would facilitate the signaling mechanism of monetary policy both for the central bank to the market participants and *vice-versa*.

Section VII

Concluding Observations

Commodity derivatives trading in India after a phase of long and turbulent historical sojourn, witnessed a massive spurt in the recent period. The total value of commodity derivatives trading accounts for about 2/3rd of overall GDP, reflecting the extent of depth that this market has gained in the economy. In India, however, it is largely the agricultural commodities, which are traded on the existing exchanges. The value of agricultural commodities traded as a proportion of overall GDP amounts to around 37 per cent (70 per cent of the agricultural GDP) in the country while the share of bullion, oil and other metals is relatively low. An analytical overview of these markets, however, reveals that liquidity in respect of primary commodities was found to be high only in few commodities such as castorseed, soyabean oil, and to some extent cotton, while in the case of others, it was quite thin. These markets in India are thus, yet to achieve minimum critical liquidity that can generate greater economies of scale, minimum transaction costs and wider participation.

While standing the tests of efficacy, contracts of most of the months in respect of pepper, mustard and gur throw a strong evidence of co-integration between the spot and future prices, while in the

case of several others such as sacking, potato and castorseed, only contracts of few months revealed such co-movement. Even evidence in respect of other commodities, where the trading has been a recent phenomenon, such as rice, wheat, sugar (S), cotton, sesame seed, gold, copper, lead, tin and bent crude oil, rubber, sesame oil, aluminium, zinc, silver and furnace oil does not elude the above trend. Only sugar (M) and nickel did not throw any evidence of co-integration. Thus, by and large, trading in the commodity derivatives is moving in the desired direction of achieving improved operational efficiency, *albeit*, at a slower pace.

In terms of volatility, barring pepper and to some extent cotton, in the case of others such as gur, castorseed, potato, rice, sacking and sugar, variability in future price was substantially lower than the spot price, reflecting thereby an inefficient utilisation of information in the market. While the contracts of few months in respect of pepper, castorseed, sugar and sacking revealed moderate speculation, others such as cotton, rubber, wheat and most of the metals; lead, copper, tin, gold and silver to some extent displayed wide speculative trading.

An analytics of effectiveness of these markets in terms of their function of price risk management divulges that basis (MCY) risk in respect of pepper, castorseed, rubber and to some extent silver was low and hence, hedging in their case proved to be an effective proposition. However, in the case of several others such as potato, sacking, sugar (M), sesame oil, sesame seed, rice, cotton (J-34), aluminium, zinc and gold, the risk was moderate. Conversely, the basis risk was considerably high in respect of gur, mustard, wheat, sugar (S), cotton (S-06), safflower oil, lead, copper and tin, indicating that hedging in their case was less effective. The contracts of some months particularly in respect of pepper, gur, potato and rubber did reveal some basis risk, while the contracts of some months in the case of castorseed (April, June September), sugar (March and April), cotton (March), metlas (February and March) proved effective in containing the price risk.

This, however, is an indicative evidence of the developing state of the market. Notwithstanding several policy initiatives undertaken

recently, some of the older exchanges have not been able to generate resources and therefore not demonstrated the seriousness and flexibility to introduce the reforms. Several measures in the institutional, infrastructural and legal spheres are warranted for the rapid development of these markets in the country. Furthermore, as the markets develop, it needs to be explored whether future prices, which contain useful information about the future demand and supply conditions, could be used as an input for arriving at expected inflation and interest rates by the market participants and whether the information content of futures prices could be factored in the future monetary policy formulation.

Notes

- ¹ In order to mitigate price and yield risks at the farm level, low-risk and low-yield crop and production patterns are adopted to ensure a minimum income, which are at the expense of high risk, high yield production that could create income growth and the build up of capital (Bryla E., Dana J., Hess, U Varangis U.P., 2003).
- ² Weather risks are covariant and typically shock entire regions at once, which makes it difficult to set up local insurance schemes that have sufficient diversity in their portfolio to deal with the covariant risks (Skees *et. al.*, 2002). With regards to price risk, attempts to stabilise prices using stabilisation funds and bufferstocks have defied market forces and resulted in unsustainable programmes and substantial losses to treasuries (World Bank, 2001).
- ³ The difference between future prices and spot prices is commonly known as the *basis* and could be measured at any point during the lifetime of the derivatives contract. In essence, the basis is a measure of storage and interest costs that have to be borne by a spot market trader in holding stocks for sale at some point of time in the future. Higher the basis higher is an incentive to store more.
- ⁴ 'a' Measures the impact of changes in basis on the spot and future prices, respectively.

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**Annex Table I: Ratio of Standard Deviation of
Future Price to that of Spot Price**

I.1: Pepper*														
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Per cent of Times the Ratio was	
													< 0.8	>1.2
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1997	-	1.2	1.6	-	0.8	-	1.0	0.8	-	0.6	-	0.9	14.0	14.0
1998	1.2	0.9	0.9	1.1	1.1	1.3	1.8	1.9	1.7	2.2	-	1.2	0.0	36.0
1999	0.5	0.2	0.7	0.8	0.6	1.5	1.2	1.1	1	0.8	1.1	1.4	33.0	17.0
2000	1.2	1.0	0.9	0.8	1.0	1.1	1.3	1.4	1.2	1.4	1	0.8	0.0	25.0
2001	0.8	0.6	0.5	0.4	0.4	0.4	0.5	0.4	0.5	0.6	0.5	1	83.0	0.0
2002	0.9	0.4	0.5	1.2	1.2	1.2	1.1	1.1	0.9	0.9	1	0.1	17.0	0.0
2003	0.1	0.1	0.1	0.1	0.05	0.4	2.1	2.0	1.9	1.9	2	2.1	17.0	33.0
2004	1.8	0.3	1.1	0.9	1.0	1.0	0.7	1.1	-	-	-	-	25.0	13.0
< 0.8 (%)	29.0	63.0	50.0	29.0	38.0	29.0	25.0	13.0	17.0	29.0	20.0	14.0		
>1.2 (%)	14.0	0.0	13.0	0.0	0.0	29.0	38.0	25.0	33.0	43.0	20.0	29.0		

* : Traded at Kochi Market.

I.2: Gur*						
Year	Mar	May	Jul	Dec	Per cent of Times the Ratio was	
					< 0.8	>1.2
1	2	3	4	5	6	7
1997	0.4	0.3	1.0	0.7	75.0	0.0
1998	-	0.8	0.3	0.1	67.0	0.0
1999	0.3	0.4	0.6	0.1	100.0	0.0
2000	-	0.5	0.6	0.2	100.0	0.0
2001	0.6	0.5	0.2	0.1	100.0	0.0
2002	1.1	0.3	-	-	50.0	0.0
2003	-	-	0.3	0.3	100.0	0.0
2004	0.2	0.3	-	-	100.0	0.0
< 0.8 (%)	80.0	86.0	83.0	100.0		
>1.2 (%)	0.0	0.0	0.0	0.0		

* : Traded at Mujaffarnagar Market.

I.3: Castorseed*

Year	Mar	Jun	Sept	Dec	Feb	Apr	Per cent of Times the Ratio was	
							< 0.8	>1.2
1	2	3	4	5	6	7	8	9
1997	1	5.3	0.3	0.6	–	–	50.0	25.0
1998	0.9	0.4	0.3	0.4	–	–	75.0	0.0
1999	0.3	0.6	0.7	1	–	–	75.0	0.0
2000	1	0.5	0.7	0.4	–	–	75.0	0.0
2001	–	1.1	0.7	1.4	1.1	1.4	20.0	20.0
2002	–	0.9	0.8	0.5	1.5	–	25.0	25.0
2003	–	1.3	–	1.3	1	0.7	25.0	50.0
2004	–	0.3	–	–	1.4	0.2	67.0	33.0
< 0.8 (%)	25.0	50.0	83.0	57.0	0.0	67.0		
>1.2 (%)	0.0	25.0	0.0	29.0	50.0	33.0		

* : Traded at Mumbai Market.

I.4: Potato*

Year	Mar	Jul	Oct	Per cent of Times the Ratio was	
				< 0.8	>1.2
1	2	3	4	5	6
1997	0.5	0.7	0.6	100.0	0.0
1998	0.2	0.4	0.4	100.0	0.0
1999	0.7	0.8	1.2	33.0	0.0
2000	0.3	0.8	0.7	67.0	0.0
2001	0.4	0.3	0.8	67.0	0.0
2002	0.2	–	–	–	–
2003	–	–	–	–	–
2004	–	–	–	–	–
< 0.8 (%)	100.0	60.0	60.0		
>1.2 (%)	0.0	0.0	0.0		

* : Traded at Hapur Market.

I.5: Sacking*

Year	Feb	May	Aug	Nov	Per cent of Times the Ratio was	
					< 0.8	>1.2
1	2	3	4	5	6	7
1997	–	–	–	1	0.0	0.0
1998	0.4	3	0.7	–	100.0	0.0
1999	–	–	–	–	0.0	0.0
2000	–	0.6	0.4	0.5	100.0	0.0
2001	0.7	1.1	1.1	1.3	25.0	25.0
2002	1.3	0.3	0.6	1.4	75.0	25.0
2003	0.5	–	0.03	0.5	100.0	0.0
2004	0.5	–	–	–	0.0	0.0
< 0.8 (%)	80.0	50.0	80.0	40.0		
>1.2 (%)	20.0	25.0	0.0	40.0		

* : Traded at Kolakata Market.

I.6: Sugar

Year	Jan	Feb	Mar	Apr	May	Jun	Nov	Dec	Per cent of Times the Ratio was	
									< 0.8	>1.2
1	2	3	4	5	6	7	8	9	10	11
2003										
<i>M' grade*</i>	–	–	0.8	0.8	1.2	–	1.6	0.4	20.0	20.0
<i>S' grade**</i>	–	–	–	–	–	–	1.1	1.2	0.0	0.0
2004										
<i>M' grade</i>	0.2	0.5	0.8	0.7	0.6	0.1	–	–	67.0	0.0
<i>S' grade</i>	0.6	0.3	0.8	0.9	0.6	0.3	–	–	67.0	0.0
< 0.8 (%)	100.0	100.0	0.0	33.0	67.0	100.0	0.0	50.0		
>1.2 (%)	0.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0		

* : Traded at *E-sugarindia Ltd.* Market Mumbai.

** : Traded at NMCEIL, Ahmedabad.

I.7: Cotton*

Year	Jan	Feb	Mar	Apr	May	Per cent of Times the Ratio was	
						< 0.8	>1.2
1	2	3	4	5	6	7	8
2004							
Grade: J-34	0.5	1.3	0.8	1.4	2.0	20.0	40.0
Grade: S-06	0.6	1.2	1.3	1.4	1.0	20.0	40.0
< 0.8 (%)	100.0	0.0	0.0	0.0	0.0		
>1.2 (%)	0.0	50.0	50.0	100.0	50.0		

* : Traded at NCDEX Market Mumbai.

I.8: Mustard*

Year	May	Aug	Nov	Per cent of Times the Ratio was	
				< 0.8	>1.2
1	2	3	4	5	6
2003	0.9	2.1	0.3	33.0	33.0
2004	0.9	2.1	1.6	0.0	67.0
< 0.8 (%)	0.0	0.0	50.0		
>1.2 (%)	0.0	100.0	50.0		

* : Traded at Hapur Market.

I.9: Rubber*

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Per cent of Times the Ratio was	
													< 0.8	>1.2
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
2003	-	-	-	0.5	1.3	1.4	1.4	1.2	0.8	1.0	1.3	1.6	11.0	56.0
2004	2	3.2	1.7	1.4	0.8	-	-	-	-	-	-	-	0.0	80.0
< 0.8 (%)	0.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
>1.2 (%)	100.0	100.0	100.0	50.0	50.0	50.0	50.0	0.0	0.0	0.0	0.0	0.0		

* : Traded at NMCEIL, Ahmedabad.

I.10: Rice and Wheat

Year	Mar	Apr	May	Jun	Per cent of Times the Ratio was	
					< 0.8	>1.2
1	2	3	4	5	6	7
2004						
<i>Rice</i>	0.8	0.9	1.0	1.2	0.0	0.0
<i>Wheat</i>	1.4	1.6	2.0	1.4	0.0	100.0
< 0.8 (%)	0.0	0.0	0.0	0.0		
>1.2 (%)	50.0	50.0	50.0	50.0		

I.11: Metals

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Nov	Per cent of Times the Ratio was	
											< 0.8	>1.2
1	2	3	4	5	6	7	8	9	10	11	12	13
2003												
<i>Aluminium*</i>	–	–	1.0	1.0	1.0	0.9	1.1	–	0.7	0.8	14.0	0.0
<i>Nickel*</i>	–	–	–	2.6	–	0.9	0.9	–	1.0	1.0	0.0	20.0
<i>Lead</i>	–	–	–	–	–	2.7	2.2	–	2.6	0.2	25.0	75.0
<i>Zinc</i>	–	–	–	–	1.1	1.1	–	–	5.2	0.2	25.0	25.0
<i>Copper</i>	–	–	–	–	–	2.9	2	–	8.9	0.9	0.0	75.0
<i>Tin</i>	–	–	–	–	–	2.2	2.5	–	6.6	0.5	25.0	75.0
2004												
<i>Gold</i>	–	1.3	–	1.3	–	1.2	–	1.5	–	–	0.0	75.0
<i>Silver@</i>	0.9	0.9	0.9	1.7	1.9	–	–	–	–	–	0.0	40.0
< 0.8 (%)	0.0	0.0	0.0	0.0	0.0	43.0	0.0	0.0	17.0	50.0		
>1.2 (%)	0.0	50.0	0.0	75.0	33.0	0.0	60.0	100.0	57.0	0.0		

* : Traded at NMCEIL, Ahmedabad.

@ : Traded at NCDEX Mumbai.

**Annex Table II: Ratio of Standard Deviation of
Basis to that of Spot Price**

II.1: Pepper															
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Per cent of Times the Ratio was		
													>1.0	0.5-1.0	< 0.5
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1997	–	0.4	1.1	–	0.5	–	0.3	0.4	–	0.5	–	1.6	29.0	29.0	43.0
1998	0.6	0.2	0.2	0.3	0.3	0.3	1.1	1.8	0.8	2.1	–	1.1	36.0	18.0	45.0
1999	0.5	1.1	1.3	1.5	1.3	1.1	0.3	0.2	0.4	0.3	0.5	0.4	42.0	17.0	42.0
2000	0.3	0.1	0.1	0.2	0.6	0.5	0.6	0.8	0.6	0.5	0.2	0.3	0.0	50.0	50.0
2001	0.3	0.5	0.5	0.7	0.7	0.7	0.7	0.6	1.2	0.4	0.5	0.9	8.0	75.0	17.0
2002	0.9	1.0	1.1	1.1	0.7	0.5	0.2	0.3	0.3	0.3	0.2	0.3	17.0	33.0	50.0
2003	1.0	1.0	0.7	0.7	1.0	1.5	1.3	1.1	1.0	1.1	1.1	1.2	50.0	50.0	0.0
2004	1.0	0.7	0.4	0.2	0.2	0.2	0.4	0.1	–	–	–	–	0.0	25.0	75.0
>1.0	0.0	13.0	38.0	29.0	13.0	29.0	25.0	25.0	17.0	29.0	20.0	43.0			
0.5-1.0	71.0	50.0	25.0	29.0	63.0	43.0	25.0	25.0	50.0	29.0	40.0	14.0			
< 0.5	29.0	38.0	38.0	43.0	25.0	29.0	50.0	50.0	33.0	43.0	40.0	43.0			

II.2: Gur							
Year	Mar	May	Jul	Dec	Per cent of Times the Ratio was		
					>1.0	0.5-1.0	< 0.5
1	2	3	4	5	6	7	8
1997	0.5	0.7	1.7	1.3	50.0	50.0	0.0
1998	–	1.7	1.2	1.0	67.0	33.0	0.0
1999	6.7	0.7	1.5	1.0	50.0	50.0	0.0
2000	–	1.5	1.5	1.1	100.0	0.0	0.0
2001	0.6	0.6	0.8	1.1	25.0	75.0	0.0
2002	1.5	0.7	–	–	33.0	67.0	0.0
2003	–	2.4	0.8	1.0	50.0	50.0	0.0
2004	0.8	1.3	–	–			
>1.0	40.0	50.0	67.0	50.0			
0.5-1.0	60.0	50.0	33.0	50.0			
< 0.5	0.0	0.0	0.0	0.0			

II.3: Castorseed

Year	Mar	Jun	Sept	Dec	Feb	Apr	Per cent of Times the Ratio was		
							>1.0 (%)	0.5-1.0 (%)	< 0.5 (%)
1	2	3	4	5	6	7	8	9	10
1997	1.1	5.6	0.8	0.6	–	–	50.0	50.0	0.0
1998	1.8	0.3	0.3	0.5	–	–	25.0	25.0	50.0
1999	0.9	0.2	0.4	0.2	–	–	0.0	25.0	75.0
2000	0.3	0.3	0.2	0.7	–	–	0.0	25.0	75.0
2001	–	0.1	0.6	0.4	0.4	0.6	0.0	40.0	60.0
2002	–	0.9	0.4	0.6	1.2	0.4	20.0	40.0	40.0
2003	–	0.4	–	0.4	0.1	1.0	0.0	25.0	75.0
2004	–	1.0	–	–	0.6	–			
>1.0 (%)	50.0	13.0	0.0	0.0	25.0	0.0			
0.5-1.0 (%)	25.0	25.0	33.0	57.0	25.0	33.0			
< 0.5 (%)	25.0	63.0	67.0	43.0	50.0	67.0			

II.4: Potato

Year	Mar	Jul	Oct	Per cent of Times the Ratio was		
				>1.0	0.5-1.0	< 0.5
1	2	3	4	5	6	7
1997	0.8	0.9	1.3	33.0	67.0	0.0
1998	0.9	0.7	1.1	33.0	67.0	0.0
1999	1.0	2.8	2.1	67.0	33.0	0.0
2000	1.0	1.5	0.3	33.0	33.0	33
2001	0.6	0.7	1.3	33.0	67.0	0.0
2002	1.0	–	–			
2003	–	–	–			
2004	–	–	–			
>1.0	0.0	40.0	80.0			
0.5-1.0	100	60.0	0.0			
< 0.5	0.0	0.0	20.0			

II.5: Sacking							
Year	Feb	May	Aug	Nov	Per cent of Times the Ratio was		
					>1.0	0.5-1.0	< 0.5
1	2	3	4	5	6	7	8
1997	–	–	–	–			
1998	–	0.7	0.4	0.6	0.0	67.0	33.0
1999	0.7	–	–	–			
2000	–	0.4	0.8	0.6	0.0	67.0	33.0
2001	0.5	1.0	1.4	0.5	25.0	75.0	0.0
2002	0.5	0.7	0.8	0.8	0.0	100	0.0
2003	0.7	–	0.1	0.7	0.0	100	0.0
2004	1.1	–	–	–			
>1.0	20.0	0.0	20.0	0.0			
0.5-1.0	80.0	100	40.0	100			
< 0.5	0.0	0.0	40.0	0.0			

II.6: Sugar											
Year	Jan	Feb	Mar	Apr	May	Jun	Nov	Dec	Per cent of Times the Ratio was		
									>1.0	0.5-1.0	< 0.5
1	2	3	4	5	6	7	8	9	10	11	12
2003											
<i>M' grade</i>	–	–	0.2	0.2	0.4	–	2.1	1	20.0	20.0	60
<i>S' grade</i>	–	–	–	–	–	–	0.8	0.7	0.0	100	0.0
2004											
<i>M' grade</i>	0.9	0.7	0.3	0.4	0.5	0.7	–	–	0.0	67.0	33.0
<i>S' grade</i>	0.7	0.7	1	0.7	0.6	0.5	–	–	0.0	100	0.0
>1.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0			
0.5-1.0	100	100	33.0	33.0	67.0	100	50.0	100			
< 0.5	0.0	0.0	67.0	67.0	33.0	0.0	0.0	0.0			

II.7: Rubber

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Per cent of Times the Ratio was		
													>1.0	0.5-1.0	< 0.5
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
2003	-	-	-	0.5	14.6	1	0.5	0.4	0.4	0.2	0.5	0.8	22.0	44.0	33.0
2004	1.4	2.2	1.5	1.6	1.1	-	-	-	-	-	-	-	100	0.0	0.0
>1.0	100	100	100	100	100										
0.5-1.0	0.0	0.0	0.0	0.0	0.0										
< 0.5	0.0	0.0	0.0	0.0	0.0										

II.8: Metals

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Nov	Per cent of Times the Ratio was			
											>1.0	0.5-1.0	< 0.5	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	
2003														
<i>Aluminium</i>	-	-	0.1	0.2	0.6	1	0.8	-	1.5	1.1	29.0	43.0	29.0	
<i>Nickel</i>	-	-	-	-	3.2	0.1	0.7	-	1.3	0.4	4.0	60.0	0.0	
<i>Lead</i>	-	-	-	-	-	3.6	2.9	-	3.4	1	75.0	25.0	0.0	
<i>Zinc</i>	-	-	-	-	-	0.2	0.8	-	4.7	0.5	25.0	50.0	25.0	
<i>Copper</i>	-	-	-	-	-	3.8	2.7	-	8.9	1.1	100	0.0	0.0	
<i>Tin</i>	-	-	-	-	-	1.4	1.6	-	5.9	0.6	75.0	25.0	0.0	
2004														
<i>Gold</i>	-	0.7	-	0.8	-	1	-	1.2	-	-	25.0	75.0	0.0	
<i>Silver</i>	0.1	0.1	0.6	0.8	0.9	-	-	-	-	-	0.0	60.0	40	
>1.0	0.0	0.0	0.0	0.0	33.0	43.0	50.0	100	100	33.0				
0.5-1.0	0.0	50.0	50.0	67.0	67.0	29.0	50.0	0.0	0.0	50.0				
< 0.5	100	50.0	50.0	33.0	0.0	29.0	0.0	0.0	0.0	17.0				

II.9: Sesame

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Per cent of Times the Ratio was		
													>1.0	0.5-1.0	< 0.5
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
2003															
<i>Sesame Oil</i>	–	–	1	–	2	0.9	–	0.9	–	1	–	0.5	17.0	83.0	0.0
<i>Sesame Seed</i>	–	0.2	1.8	0.2	0.7	0.4	0.5	–	0.5	0.8	0.9	4.1	20.0	50.0	30.0
<i>Safflower Oil</i>	–	–	8.3	–	–	0.2	–	2.4	–	2	–	0.4	60.0	40.0	0.0
>1.0			67.0		50.0	0.0		50.0		67.0		33.0			
0.5-1.0			33.0		50.0	33.0		50.0		33.0		33.0			
< 0.5			0.0		0.0	67.0		0.0		0.0		33.0			

II.10: Cotton

Year	Jan	Feb	Mar	Apr	May	Per cent of Times the Ratio was		
						>1.0	0.5-1.0	< 0.5
1	2	3	4	5	6	7	8	9
2004								
<i>Grade: J-34</i>	0.8	1.0	0.3	1.0	2.2	20.0	60.0	20.0
<i>Grade: S-06</i>	0.6	2.0	1.4	1.0	2.2	60.0	40.0	0.0
>1.0	0.0	50.0	50.0	0.0	100			
0.5-1.0	100	50.0	0.0	100	0.0			
< 0.5	0.0	0.0	50.0	0.0	0.0			

II.11: Mustard

Year	May	Aug	Nov	Per cent of Times the Ratio was		
				>1.0	0.5-1.0	< 0.5
1	2	3	4	5	6	7
2003	0.3	1.2	1.1	67.0	0.0	33
2004	1.3	1.2	0.7	67.0	33.0	0
>1.0	50.0	100	50.0			
0.5-1.0	0.0	0.0	50.0			
< 0.5	50.0	0.0	0.0			

II.12: Rice and Wheat

Year	Mar	Apr	May	Jun	Per cent of Times the Ratio was		
					>1.0	0.5-1.0	< 0.5
1	2	3	4	5	6	7	8
2004							
<i>Rice</i>	0.6	0.9	0.9	0.8	0.0	100	0
<i>Wheat</i>	2.1	0.7	1.1	0.9	50.0	50.0	0
>1.0	50.0	0.0	50.0	0.0			
0.5-1.0	50.0	100	50.0	100			
< 0.5	0.0	0.0	0.0	0.0			

Regional Cooperation in Asia: Status and Issues

Rajiv Ranjan, Rajeev Jain, Atri Mukherjee*

The paper attempts to review the growing economic dynamism of the Asian region reflected in its expanding role in the world economic affairs and growing cooperation at regional/sub-regional level. Before the ensuing discussion on assessment of existing arrangements for economic cooperation in the region and India's participation in the process, the paper briefly provides a macroeconomic review of the Asian region. Lastly, the paper identifies the major issues and challenges which need to be addressed for furthering a successful move towards greater regional economic and monetary cooperation. The upshot is that the process of economic integration in the Asian region is not without ifs and buts.

JEL Classification : R1, R11

Keywords : Regional Economics, Regional Economic Activity

Introduction

Regional cooperation arrangements have emerged as an important aspect of the present day world economic set up. Attempts at various forms of regional cooperation have been noted at almost all the parts of the world. European Community (EC), European Union (EU), North American Free Trade Agreement (NAFTA), Mercado Comúndel Cono Sur (MERCOSUR) are examples of some of the major regional economic arrangements in Western Europe, North America and South America, respectively. The growing trend towards forming of regional economic arrangements is reflected in terms of a sharp increase in the number of bilateral and multilateral trade and investment treaties signed by countries all over the world during the last decade.

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The Association of South East Asian Nations (ASEAN) formed in 1967 was the first major regional block arrangement signed in Asia. The regional integration in Asia, however, has reached new dimensions during the last two decades due to changing dynamics of the Asian economy. East Asia for the past couple of decades has seen significant increases in intra-regional cross-border trade, investment and financial flows, thereby emerging as an independent economic zone. Multinational corporations (MNCs) have created a production network in the region by placing various sub-processes of production in different countries according to comparative advantage, relative factor proportions and technological capabilities. As a result, intra-regional, intra-industry trade in manufactured product, parts, components, semi-finished and finished products has soared. The deepening interdependency, coupled with concern about a recurrence of the Asian financial crisis that hit in the late 1990s, prompted the Asian economies to undertake various initiatives for regional monetary and financial cooperation.

Strong macroeconomic performance, along with growing number of regional cooperation arrangements have helped Asia to emerge as an independent economic zone. The region as a whole has gained sufficient power to influence the global economic order. It would, therefore, be interesting as also necessary to take a stock of the current status of various regional economic arrangements in Asia and identify the major challenges. Based on the above objectives, the paper has been arranged as follows: The role of regional integration in the process of globalization has been analysed in Section I. A recent macroeconomic review of the Asian economies is provided in Section II. The position of emerging Asia in the world economy is assessed in Section III. Section IV describes in detail, various existing regional cooperation arrangements in Asia. India's role in the regional integration process in Asia has been reviewed in Section V. Some of the emerging issues, including some major challenges in this regard are identified in Section VI. Conclusions are drawn in Section VII.

Section I

Globalisation and Role of Regional Integration

Regional integration arrangements have become a part and parcel of the present global economic order and are likely to have sharp implications for the prospects of global economy. Regional integration has been defined as “an association of states based upon location in a given geographical area, for the safeguarding or promotion of the participants,” an association whose terms are “fixed by a treaty or other arrangements.” Philippe De Lombaerde and Luk Van Langenhove (2005) defined regional integration as “a worldwide phenomenon of territorial systems that increase the interactions between their components and create new forms of organisation, co-existing with traditional forms of state-led organisation at the national level.”

In this context, the issue - whether the process of globalization and the growing regionalism complement each other or the growing regionalism is detrimental to globalization, has become a subject of intense discussion for policy makers and economists. Some perceive that globalization is nothing but a greater integration of economies nationally, regionally and worldwide. For others, since the regional integration process remains concentrated exclusively to certain countries, doubts arise whether such exclusivity throws up building blocks or stumbling blocks on the road to global economic integration.

Since mid-1980s, regionalization process has accelerated worldwide with varying features and scale in different regions. According to World Trade Organisation, as of September 2006, there were 211 regional trade arrangements as compared with only two dozen agreements in 1986 and 66 agreements in 1996. According to World Investment Report 2006 by the United Nations Conference on Trade and Development (UNCTAD), international investment agreements (IIAs) have increased substantially. At global level, the total number of IIAs was close to 5,500 at the end of 2005, comprising 2,495 bilateral investment treaties (BITs), 2,758 double taxation treaties (DTTs) and 232 other international agreements that contain investment provisions. The total number of BITs among developing

countries has increased sharply from 42 in 1990 to 644 by the end of 2005 while the number of DTTs rose from 105 to 399, and the number of other IIAs from 17 to 86 during the same period. Asian countries are particularly engaged as parties to approximately 40 per cent of all BITs, 35 per cent of DTTs and 39 per cent of other IIAs.

The economic aspect of regionalization may be described as efforts to form free-trade zones through the creation of common markets, the coordination of economic policies and the implementation of joint economic policies. Apart from economic benefits, the growing regionalism perhaps also has significant implications to strengthen the bargaining power of the regional grouping *vis-à-vis* the global system and enlarge the space for policy autonomy within the region. Several such instances can be observed, *albeit* with varying degrees of integration across different regions of the world. For instance in Western Europe, regional block is represented by the EC and the EU, in North America by the NAFTA, and in South America by the MERCOSUR. Within Asia, different sub-regions are at different stages of regional integration. East Asia has been pursuing different regional block arrangement for the longest period of time and has thus made the most progress, especially the ASEAN+3 countries. Together, these countries are now working on initiatives to deepen integration not only in trade and investment, but they have also started the process for monetary and financial cooperation.

Section II

Macroeconomic Review of Asian Economies

Emerging and developing economies of Asia grew at its fastest pace in 11 years in 2006 since the Asian financial crisis of 1997–98. Growth in emerging Asia has persistently increased from 5.0 per cent in 2001 to 9.3 per cent in 2006. This growth has been led most visibly by China and, increasingly, India, but several other Asian countries play a vibrant role as well. Growth in emerging Asia is likely to remain significant in the near future as per the IMF projections (Table 1).

Being the fastest growing economies of the world, over the past two years, China and India contributed 73 per cent to the Asian growth and 38 per cent to the world GDP growth. Asian region, as a whole, with

Table 1 : GDP Growth in the Asian and the Pacific Region

(Per cent)

	2000	2001	2002	2003	2004	2005	2006	2007P
1	2	3	4	5	6	7	8	9
East Asia	8.0	4.7	7.5	7.3	8.4	8.3	9.0	8.9
South East Asia	6.7	1.8	4.8	5.3	6.5	5.6	6.0	6.1
South Asia	4.5	5.2	3.7	7.8	7.4	8.7	8.8	8.1
Central Asia	8.4	10.8	8.7	9.4	9.7	11.2	12.4	10.3
The Pacific	-0.2	2.4	0.4	1.8	3.6	2.5	2.6	3.5
Asia	7.1	4.4	6.4	7.1	7.9	7.9	8.5	8.3
<i>Memo items:</i>								
China	8.4	8.3	9.1	10.0	10.1	10.4	11.1	11.5
India	5.4	3.9	4.5	6.9	7.9	9.0	9.7	8.9
Newly Industrialized Asian Economies (NIAEs)	7.9	1.2	5.4	3.2	5.8	4.7	5.3	4.9
ASEAN (4 countries)	5.8	2.5	4.7	5.5	5.9	5.1	5.4	5.6
Emerging Asia	6.9	5.0	6.4	7.5	8.5	8.7	9.3	9.2

P : Projection.

Note : ASEAN (4) includes only Indonesia, Thailand, Philippines and Malaysia.

Emerging Asia comprises China, India, Pakistan, Bangladesh, ASEAN (4), and NIAEs (Korea, Taiwan, Hong Kong and Singapore).

Source : Asian Development Outlook, 2007 and World Economic Outlook, IMF October 2007.

growing economic dynamism, is contributing close to 50 per cent of world growth (IMF, 2006). With the setting in of recovery in Japan, it is expected to be another engine of growth for the Asian as well as the global economy. Thus, four poles of growth - Japan, East Asia, China and India – forming a sort of quadrangle – have been emerging in Asia, which could sustain the global growth engine (Reddy, 2007). It is interesting to note that out of the top four economies in terms of GDP based on purchasing power parity, three Asian economies, viz., Japan, China and India are ranked at second, third and fourth place, respectively. In the context of growing Asia and its contribution, Rodrigo De Rato, the IMF Managing Director in a recent speech commented,

“Asia has already reaped many benefits from globalization, and it now plays a major role in the global economy.Asia’s increased weight in the global economy must now be matched with increased rights and responsibilities in the conduct of international economic policy. The international community can learn from Asia’s successes. So it is important that Asia’s voice be heard.”

In 2006, steady global expansion of output and trade, moderate inflation with low real interest rates, as well as the impact of earlier reforms on productivity, were all conducive to growth in the Asian region. In many countries, circumstances proved unusually benign, and risks failed to materialize. Despite exceptionally fast growth and rising oil prices, consumer price inflation did not, in general, accelerate in 2006. In some countries, inflationary pressures rose as the year progressed.

External environment, in general has remained favourable in recent years for the Asian region. In fact, developing Asia's trade surplus widened in 2006. In some countries, export growth was extraordinary. Broadly, current account payments positions moved in step with trade balances. For developing Asia, the current account surplus was 5.8 per cent of GDP in 2006, the largest on record (Table 2). In this context, it is argued that the surplus Asian economies are playing an essential role in expansion of global imbalances by financing the US current account deficit.

Large current account surpluses made a significant contribution to reserve accumulation (Table 3). Although the region attracted gross capital inflows in 2006, it also invested significantly overseas, which helped to stem the buildup of reserves. Of the increase in total reserves, just less than 80 per cent was attributable to current account transactions (ADB, 2007). The international reserves, including Japan, for the region as a whole are now estimated to have reached about US\$ 3.9 trillion.

Table 2: Inflation and Current Account Balance (CAB)

Sub-regions	Consumer Prices (Per cent change)				CAB as % of GDP			
	2003	2004	2005	2006	2003	2004	2005	2006
1	2	3	4	5	6	7	8	9
East Asia	1.3	3.4	2.0	1.6	3.9	4.3	6.0	7.4
South East Asia	3.4	4.2	6.3	7.1	6.7	5.1	4.9	7.8
South Asia	5.0	6.3	5.3	5.9	2.4	-0.1	-1.2	-1.4
Central Asia	6.6	5.8	7.7	7.9	-2.4	-1.7	1.2	4.7
The Pacific	8	3.2	2.4	3.3	-1.2	-1.7	6.2	4.9
Developing Asia	2.3	4.0	3.4	3.3	4.0	3.5	4.5	5.8

Source : ADB Database, 2007.

Table 3: Gross International Reserves

(US \$ billion)

Region	2002	2003	2004	2005	2006
1	2	3	4	5	6
Central Asia	9.0	11.9	16.5	15.8	32.7
East Asia	686.3	888.7	1,179.0	1,409.7	1,707.4
South Asia	85.6	129.8	160.3	170.5	215.7
Southeast Asia	208.4	243.2	289.5	302.7	364.4
The Pacific	1.4	1.6	2.2	2.1	2.2

Source : Asian Development Outlook, 2007.

The Asian region witnessed an IT induced slowdown during 2001. However, a sharp recovery in subsequent years led to rapid surge in the net capital inflows in the region since 2003. While improving fundamentals have been a major driving factor behind increased inflows into Asia, large-scale global liquidity, relatively benign interest rates in industrial countries and a seemingly low-risk aversion have also caused a shift of capital from industrial countries to emerging economies in general. According to IMF, emerging Asia is likely to receive about 32 per cent of total net private capital flows to all emerging market and developing economies during 2007 (Table 4). China dominates as a FDI destination and received US\$ 69 billion in 2006. Emerging Asian economies, particularly, China and India are also becoming increasingly

Table 4: Trend in Private Capital Flows (Net) in EMEs

(US \$ billions)

	2000	2001	2002	2003	2004	2005	2006	2007
1	2	3	4	5	6	7	8	9
Emerging market and developing countries								
Private Capital Flows	72.1	80.6	90.1	168.3	239.4	271.1	220.9	495.4
Direct Investment	170	185.9	154.7	164.4	191.5	262.7	258.3	302.2
Private Portfolio Flows	12.5	-79.8	-91.3	-11.7	21.1	23.3	-111.9	20.6
Other Private Capital Flows	-110.6	-25.8	26	14.5	25.1	-17	73.6	171
Emerging Asia								
Private Capital Flows	5.9	23.3	24.4	65.3	146.8	83.3	40.5	157.2
Direct Investment	60.8	53.1	53.4	70.2	66.9	107	102	97.7
Private Portfolio Flows	19.7	-50.1	-60	7.9	11.8	-13.5	-120.8	-26.7
Other Private Capital Flows	-74.6	20.3	31.1	-12.9	68.1	-10.2	59.3	86.2

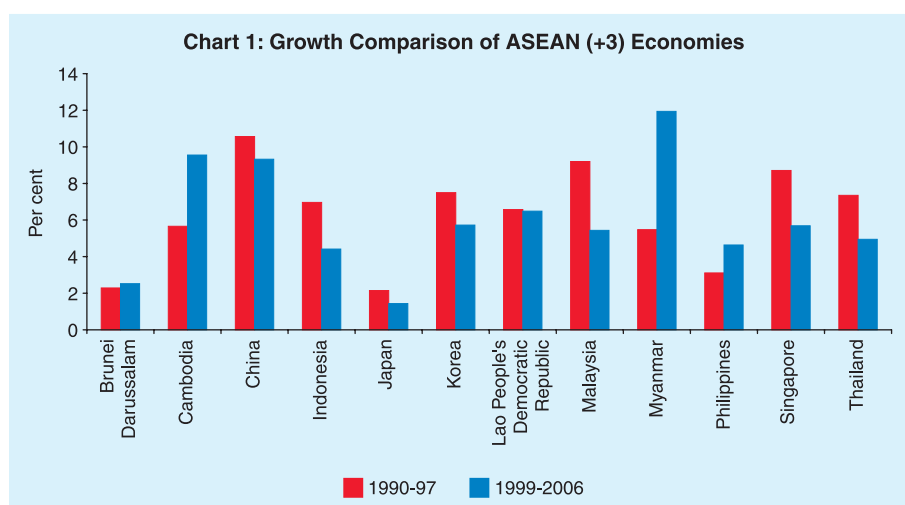
Source : World Economic Outlook, October 2007.

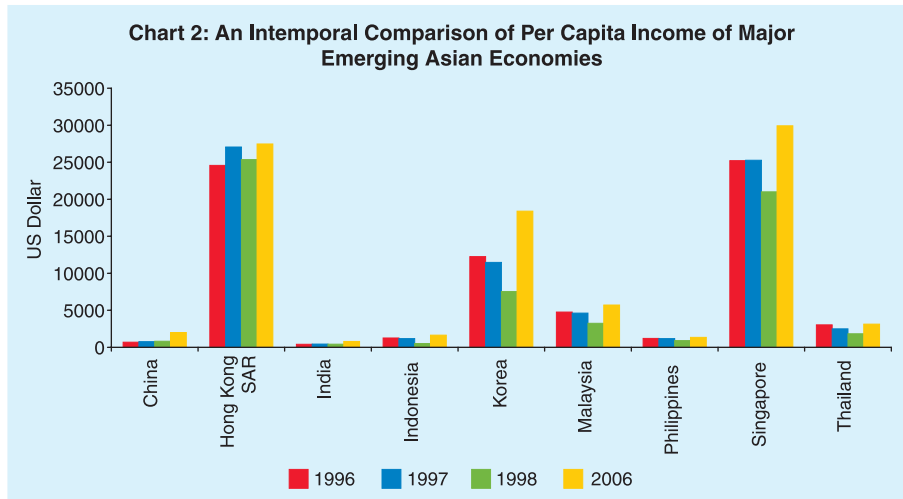
important as a provider of direct investment to industrial countries as well as other emerging markets. China and India have become the world's most favored destination for foreign direct investment, surpassing the United States.

The growing strength of the Asian economies is also significant because at one point in time during the Asian crisis of the second half of 1990s, these economies had suffered a major setback. These economies have successfully and rapidly recovered from the financial crises and almost ten years later, with persistent policy efforts, they have today the foreign exchange and financial markets which are much more stable. However, it seems that growth in crisis hit economies of Indonesia, Korea, Malaysia and Thailand has settled on a lower trajectory (Chart 1).

In addition, per capita incomes in the crisis economies now surpass their pre-crisis peaks despite a brief dip during the crisis years (Chart 2). Social indicators are improving, and the region is again enjoying growth that is one of the fastest among the emerging economies from other regions.

As a whole, under the present circumstances, many conditions are favorable for most of the Asian economies. First, they currently enjoy strong global demand for their exports, favourable terms of trade





and easy access to external financing. Second, large foreign currency reserves along with reduced external debt as percentage of GDP are cushion factors against any sudden withdrawal by investors in the financial markets. Third, though public debt in several Asian economies still remains at elevated levels, many of them are of longer maturity and considerably higher proportions are in local currency denomination. Fourth, the banking system has been strengthened through restructuring. Fifth, the resilience to external shocks is reinforced by combination of less balance sheet exposure to exchange rate changes, less refinancing risks in debt structures, strong fiscal and financial cushions and above all an observed tendency for more flexibility in policies.

Although the Asian region as a whole has exhibited robust growth performance and resilience to external shocks, many of the smaller economies, particularly those of Central Asia continue to remain vulnerable to various economic crises. In this context, the Asian emerging economies need to take a constant review of the implications of the on-going global developments. For instance, the rapid accumulation of reserves may prove to be increasingly costly, especially as some regional central banks are facing challenges to effectively sterilise their monetary effects leading to adverse inflationary consequences in some countries. One important policy step in this context would be that surplus economies of the region particularly in

Southeast Asian region must develop more effective and efficient financial intermediation domestically or on regional basis so as to use domestic savings for domestic and regional development.

Section III

Emerging Asia in the World Economy

The rapid growth of emerging market economies in Asia has been a notable feature of the global economy in recent years. In fact, Asia's rise on the world stage started with the so-called "Asian miracle" - the economic success of Japan and then the small "dragons" and "tigers", viz., South Korea, Hong Kong, Singapore and Thailand. The burst of the economic bubble in Japan and the 1997-98 Asian financial crisis cast a shadow over Asia's success story for a short period, but most East Asian economies quickly assumed their growth path again. Further more, China's rapid emergence as an economic power on the world stage adds much to Asia's attractiveness. Now India, after decades of slow growth, is also catching up. The emerging markets of Asia, with their dynamic and increasingly skilled work force, are well-placed to take advantage of new technologies and seize opportunities in the international market place to become a major engine of growth in the global economy. At present, Asia accounts for more than 30 per cent of world GDP and contributes half of global growth. This impressive performance has been associated with the region's firm integration into the global economy, as well as its emergence as a leading producer of the goods that the world demands.

Since the beginning of the new millennium, the performance of the world economy has been shaped by the increasingly important role of China and India along with several other Asian countries as well. The strong performance of these economies, combined with the continued dynamism of the US has helped sustain the current worldwide expansion in recent years, offsetting sluggishness in Europe and also in Japan (Burton, 2005). Being the fastest growing economies of the world, China and India contribute around 73 per cent to the Asian growth and 38 per cent to the world GDP growth (IMF, 2005). Asia's merchandise trade growth was sustained by strong US import demand, and intra-Asian trade,

stoked by a recovery in electronics trade. In 2004, China became the largest merchandise trader in Asia, and the third largest exporter and importer in world merchandise trade. Sustained rapid growth in recent years and rising living standards have been accompanied by a dramatic increase in Asia's shares in world exports and raw material consumption (Table 5). The deepening of Asia's economic relations with the rest of world is also evident from the fact that total Asian trade increased from 38 per cent of GDP in 1996 to 61 per cent of GDP in 2006. Such a high degree of openness also means that growth in emerging Asia, in general, is less domestically driven and thus is exposed to unfavorable external developments. The region, however, has demonstrated time and again its capacity to rebound from adverse shocks within a short period. Indeed, after the 1997 crisis, most affected economies were able to restore stability and resume growth after just one year (Aziz, 2007).

Propelled by high savings levels, many Asian countries are dedicated to improving education, modernizing infrastructure and raising production capacities. With their rapid per capita income growth and expanding consumer base, these markets offer some of the best investment and business opportunities and therefore emerging and

Table 5: Growth in Exports and Imports in Asian Sub-Regions

(Per cent)

	2002	2003	2004	2005	2006	2007 P	2008 P
1	2	3	4	5	6	7	8
Merchandise Exports							
Central Asia	8.9	26.0	41.1	41.1	32.8	16.9	14.4
East Asia	12.2	22.6	28.0	19.0	19.0	13.6	14.0
South Asia	13.6	20.9	24.0	20.8	18.8	14.9	14.8
Southeast Asia	5.1	12.9	20.4	15.1	17.9	10.0	10.7
The Pacific	-5.4	33.9	11.1	21.6	27.4	-4.0	-12.0
Average	9.9	19.5	25.7	18.4	19.0	12.7	13.1
Merchandise Imports							
Central Asia	0.9	20.4	34.5	26.4	22.2	14.5	11.3
East Asia	10.5	23.9	28.7	14.4	17.5	13.5	14.1
South Asia	8.8	22.2	39.3	30.0	24.9	17.8	17.7
Southeast Asia	5.3	9.9	24.6	18.1	15.6	10.8	12.5
The Pacific	3.9	13.6	19.1	7.7	19.0	11.0	-1.8
Average	8.6	19.6	28.5	16.9	17.8	13.2	14.0

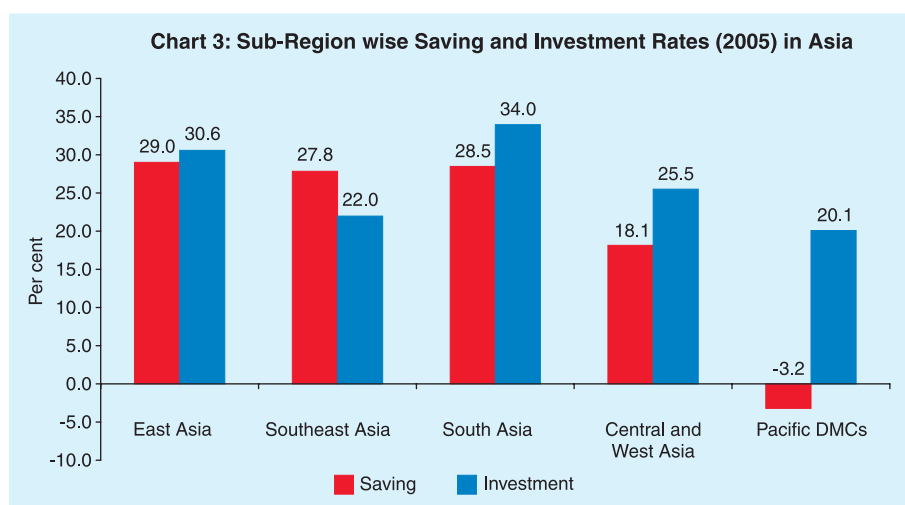
P : Projected.

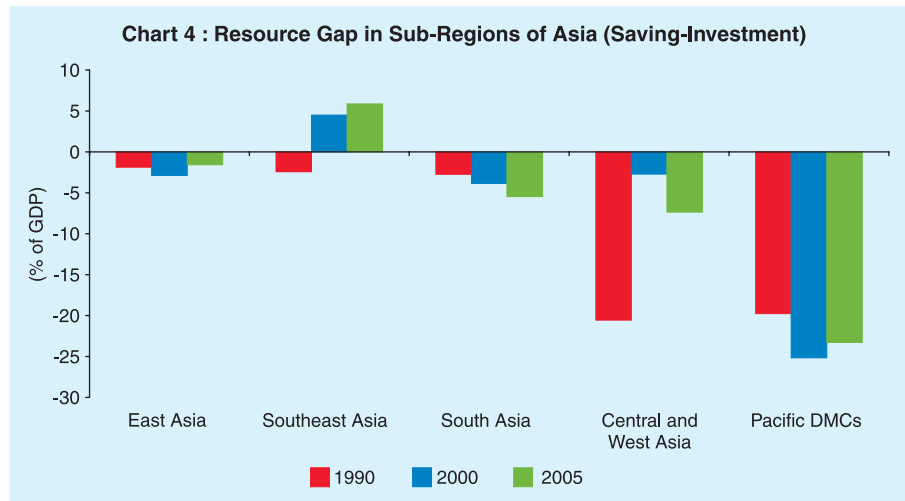
Source: Asian Development Outlook, 2007.

developing Asia has remained a favoured destination for foreign direct investment. However, it has been noted that investment rates in emerging Southeast Asian countries is not as high as savings rates (Chart 3 and 4).

Given this economic dynamism, the economic and political relations between Asia and the rest of the world especially the US have become deeper and assumed new dimensions. This, in turn, enabled many Asian countries particularly emerging Asian economies to connect to new opportunities, and contribute to the ongoing process of globalisation. As a result, the Asian region has increasingly become a major centre of world trade, global capital flows and other macroeconomic parameters. According to IMF, the developing Asian economies on average accounted for 35.5 per cent of total net capital flows in all emerging market and developing countries during 2001-2006.

The upbeat performance of emerging Asian economies in recent period has spurred new confidence about the future prospects of the Asian region. Asia's growing role in the global economy has also naturally increased the region's desire to assume a higher profile in the international financial community. In fact, one can expect that in the years ahead, economic policy decisions in Asia will have profound effects on the global economy. Therefore, issues pertaining to the region assume greater importance at the present juncture.





Section IV

Regional Cooperation within Asia

Regionalism is gradually deepening its roots in certain parts of Asia. There has been a growing awareness of regional identity in Asia since the end of the Cold War. Sub-regional and functional institutions are playing an important role in economic, political and security cooperation. Big economies of Asia are taking a great deal of interest in enhancing economic cooperation at regional level leading to growing regionalism in the Asian region. For instance, China is stressing the prime importance of neighboring areas in its foreign relations while Japan is reviewing the implications of neglecting Asia. India is pursuing a “Look East” policy. The small and medium sized countries are also contributing to forming up a regionalism so as to benefit from this development. Regional economies, especially from the East/South-East Asia have achieved strong economic interdependence, particularly through external liberalization, domestic structural reforms and market-driven integration with the global and regional economies. Expansion of foreign trade, direct investment and financial flows has created a “naturally” integrated economic zone in East Asia (Kawai, 2005).

There is an ongoing transformation in the composition of production and trade as the comparative advantage of many Asian

economies continues to change. In particular, economies with relatively high wage costs are shifting towards higher value-added products, including services. This is evident from the shift of labor-intensive manufacturing out of Hong Kong into mainland China and the associated boost to Hong Kong's economy from the growth of trade and financial services. Financial flows within the region have become more significant. Although the developing countries of Asia still rely on London and New York to intermediate foreign savings to the region, but Japan continues to remain the world's largest exporter of capital. Moreover, Hong Kong and Singapore, with their well-capitalized banks, efficient clearing and settlement systems, and expanding range of financial products, have also emerged as major financial centres. Increasingly, these centres are intermediating savings within Asia, as well as channeling saving to Asia from other parts of the world. In particular, Hong Kong seems to have become the main channel for investment in China which also arranges a significant proportion of Asia's syndicated borrowing. Singapore has also evolved into the main banking centres for Southeast Asia. Therefore, increasing trade and financial sector integration in the global economy and in the region offers enormous potential benefits (Camdessus, 1997).

With countries becoming more closely integrated, each country has an increasing stake in the sound policies of the others. Accordingly, this facilitates a greater and constructive role for countries of the region in encouraging each other to maintain sound policies. The swap arrangements among a number of Asian central banks are a good example of constructive cooperation to maintain regional stability. It would be worthwhile exploring how such initiatives can be further developed. The growing share of intra-regional trade, particularly in east Asian countries, substantiates the growing interdependence in the region, *albeit*, limited largely to the East/Southeast Asian nations. Furthermore, the intra-regional trade intensity index for ASEAN countries is higher than the North American Free Trade Agreement (NAFTA) and European Union nations confirming the higher degree of regional integration.

An important dimension to the growing economic cooperation in the Asian region, particularly the East/Southeast Asian region has been its defence against the proliferation of regional trade agreements elsewhere perhaps NAFTA and in Europe. Furthermore, the economies of the region realized the importance of scale economies for productivity and international competitiveness and thus reflecting their efforts towards trade and investment integration. More recently, the East-Asian crises also made them realize that deeper integration and institution building at the regional level is essential to become resilient to the external shocks. The regional nature of spillovers (contagion) during the crises period might have reinforced the need for regional arrangements, *i.e.*, market driven regionalism. The increasing trend towards regionalism in Asia also reflects the hidden intent of the region to have an effective 'Asian' voice in global affairs when the progress in multilateralism is felt to be slow. Another argument often forwarded in the context of regional integration has been that it could serve as a powerful tool in helping all countries sustain the high levels of economic and employment growth needed to reduce poverty, and in spreading the benefits of growth more equitably within and across countries (Kuroda, 2005). In this context, it would be pertinent to discuss the existing formal and informal arrangements that facilitate better cooperation among the member nations in one or the other way.

Existing Cooperative Arrangements in Asia

Even though the Association of South East Asian Nations (ASEAN) has been existing in Asia since 1967, the efforts towards regional economic cooperation got intensified since the financial crises of 1997-98. Since then the East Asian economies have embarked on various initiatives for regional monetary and financial cooperation. Subsequently, the major initiatives for regional cooperation in Asia include ASEAN+3, Chang Mai Initiative, Executives' Meetings of East Asia- Pacific Central Banks (EMEAP), Asian Bond Market Initiative and Asian Bond Fund. These initiatives have largely remained limited to the East/Southeast Asian economies.

Recognising the importance of regional integration, the southern Asian region also constituted the South Asian Association for Regional Cooperation (SAARC) in 1985 which included Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka. The following discussion gives a brief account of activities done under the various regional cooperative arrangements.

(i) *ASEAN /ASEAN+3*

The genesis of the present ASEAN+3 dates back to the Association of Southeast Asian Nations or ASEAN which was established in August 1967 at Bangkok by the five original member countries, *viz.*, Indonesia, Malaysia, Philippines, Singapore, and Thailand while Brunei Darussalam (1984), Vietnam (1995), Laos and Myanmar (1997), and Cambodia (1999) joined later. The decision to realise an ASEAN Economic Community (AEC) gained momentum in the aftermath of the East Asian crisis. East Asian countries felt that they would have to establish their own self-help mechanisms for financial cooperation and to deal with financial crises. In November 1997, ASEAN officials met in Manila and formulated the Manila Framework, which was later adopted by APEC. The core principle of the framework was to establish a regional surveillance mechanism. In February 1998, ASEAN finance ministers agreed to set up a peer surveillance system, which is a collective monitoring and early warning system, based on a G7 model, to supervise macroeconomic policies, financial regulation, and transparency of member countries.

In the meantime, the ASEAN also embarked on a process to expand economic cooperation with its neighbours in the north, namely China, Japan and South Korea (now termed as ASEAN+3). In a way, this process can be seen as a kind of widening of economic integration. In 1997, a joint statement between ASEAN and each of 'plus three' countries was signed providing for a framework for cooperation towards the 21st century. The ASEAN + 3 aims at further strengthening and deepening East Asia cooperation at various levels and in various areas, particularly in economic, social, political and

other fields. In fact, to assist Asian countries in overcoming their economic difficulties and to contribute to the stability of international financial markets, an initiative known as “the Miyazawa Initiative” was undertaken by Japan, under which a commitment to provide a package of support measures totaling US\$30 billion was made for the crises hit Southeast Asian economies. The ASEAN+3 process now involves summits amongst heads of states, meetings of foreign ministers, economic ministers and finance ministers, and meetings of senior officials. In terms of promoting an East Asia region-wide cooperation agenda and a regional arrangement, the ASEAN+3 processes witnessed significant progress since 1998. In 2001 the ASEAN+3 leaders endorsed the idea of an East Asian Economic Community.

It is, however, often argued that ASEAN’s agenda would be diluted by a wider East Asian regional arrangement, because China and Japan are much bigger economies than ASEAN as a whole. It is argued that combined size of the economies of ASEAN, China, Japan, Korea, and India (though not part of ASEAN+3) is larger than that of the European Union in terms of income, and bigger than the NAFTA in terms of trade (Executive Intelligence Review, February 18, 2005)¹.

Economic Relations within ASEAN

Since the inception of ASEAN in 1997, the Association has successfully forged close political cooperation among its members and created an environment of peace and stability in the region which facilitated its member countries to concentrate on nation building and economic development. As a result, countries such as Malaysia, Thailand, Singapore, and Indonesia could achieve impressive economic growth, increased prosperity, and improved living standards in the 1980s and 1990s. The international community lauded these dynamic ASEAN countries as the “East Asian Miracle” because their economies seemed to have the winning formula for sustainable economic growth (Hew and Anthony, 2000). ASEAN’s efforts at maintaining regional peace through closer political and security

cooperation and its accompanying economic success earned the recognition of ASEAN as one of the world's most successful regional organizations. However, economic gains achieved by ASEAN countries over the past decade were essentially wiped out as the Asian financial crisis posed the greatest challenge to regional cooperation because many observers argued that ASEAN's cohesiveness during this period was undermined by the financial turmoil. Hence, there were doubts on ASEAN as a viable regional institution.

When ASEAN was established, trade among the member countries was insignificant. The share of intra-ASEAN trade in the total trade of the ASEAN members was estimated to range between 12 and 15 per cent in early 1970s. Some of the earliest economic cooperation schemes of ASEAN were aimed at addressing this area. One of these was the Preferential Trading Arrangement (PTA) of 1977, which accorded tariff preferences for trade among ASEAN economies. Ten years later, an Enhanced PTA Programme was adopted at the Third ASEAN Summit in Manila further increasing intra-ASEAN trade. Subsequently, the Framework Agreement on Enhancing Economic Cooperation was adopted at the Fourth ASEAN Summit in Singapore in 1992, which included the launching of a scheme toward an ASEAN Free Trade Area (AFTA). The strategic objective of AFTA was to increase the ASEAN region's competitive advantage as a single production unit. The purpose of elimination of tariff and non-tariff barriers among the member countries was to promote greater economic efficiency, productivity, and competitiveness. In 1997, the ASEAN leaders adopted the ASEAN Vision 2020, focusing on ASEAN Partnership aiming at forging closer economic integration within the region. The vision statement also resolved to create a stable, prosperous and highly competitive ASEAN Economic Region, in which there is a free flow of goods, services, investments, capital, and equitable economic development and reduced poverty and socio-economic disparities. The Agreement was further clarified in the Hanoi Plan of Action, adopted in 1998, which emphasized on the strengthening of the ASEAN Surveillance process, development of the ASEAN Bond Market and studying the feasibility of establishing

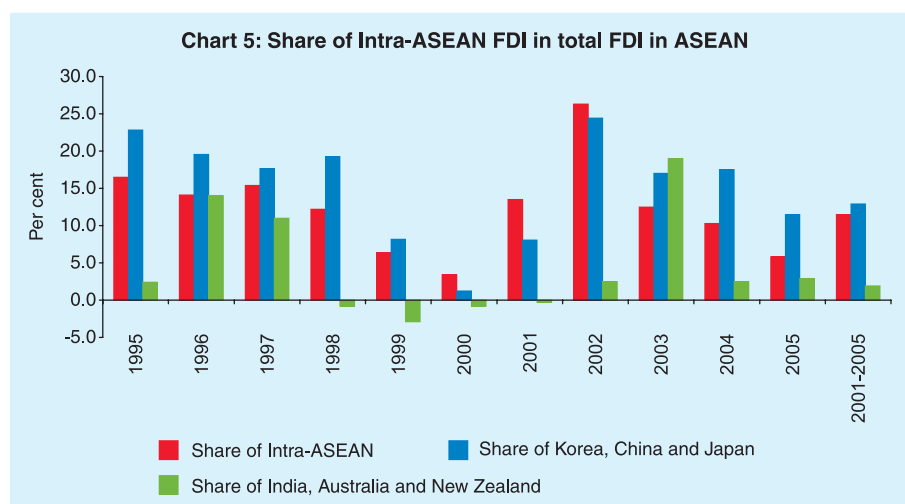
an ASEAN currency and exchange rate system. At present financial cooperation in ASEAN focuses on the implementation of the Roadmap for monetary and financial integration, covering mainly the areas of capital market development, financial services liberalization and capital account liberalization.

ASEAN cooperation has resulted in greater regional integration. Since the launch of AFTA (1992), exports among ASEAN countries grew from US\$ 43.26 billion in 1993 to almost US\$ 164 billion in 2005, an average yearly growth rate of 5.3 per cent and the share of intra-regional trade in ASEAN's total trade rose modestly from 20 percent to almost 25 percent. In contrast, intra-ASEAN net FDI inflows are still insignificant with a share of 11.5 per cent in total net FDI inflows in ASEAN region (Chart 5). However, intra-ASEAN tourist flow has increased substantially. During 2001-2006, about 44 per cent of total tourist flow emanated from within ASEAN itself.

From strategic perspective, ASEAN has been engaged in a number of wider regional or inter-regional cooperation arrangements on the basis of a concentric circles approach. The logic of this approach is straightforward. By strengthening cooperation within ASEAN, the group can engage more effectively in the wider regional grouping; in turn, the wider regional grouping can further promote ASEAN's interests and strengthen its participation at the global, multilateral level. This approach provided the justification for ASEAN to take an active part in the development of the Asia-Pacific Economic Cooperation (APEC) group. One of the rationales for an East Asian regional arrangement was that there should be an effective 'Asian' voice in global affairs and East Asia should be placed on a more equal footing with the US so as to effectively manage trans-Pacific relations in a way similar to that of Europe and the United States in the trans-Atlantic relationship (Soesastro, 2003).

(ii) Chiang Mai Initiative of ASEAN+3

The Chiang Mai Initiative (CMI) aims to create a network of bilateral swap arrangements (BSAs) among ASEAN+3 countries to



address short-term liquidity difficulties in the region and to supplement the existing international financial arrangements. The CMI was announced by the Finance Ministers of ASEAN+3 in May 2000 with the intention to cooperate in four major areas, *viz.*, monitoring capital flows, regional surveillance, swap networks and training personnel. The Initiative represents a significant step in reserve sharing among the ASEAN+3 countries in the post-crisis years. The total resources available under CMI's network of 16 BSAs are currently estimated to be around US\$ 83 billion (up from less than US \$ 40 billion in May 2005), reflecting the renegotiation of most BSAs. BSAs have been concluded among eight countries: China, Indonesia, Japan, the Republic of Korea, Malaysia, the Philippines, Singapore, and Thailand. More recently, at the 10th ASEAN+3 Finance Ministers' Meeting on May 5, 2007 (Kyoto, Japan), finance ministers unanimously agreed in principle that a self-managed reserve pooling arrangement governed by a single contractual agreement is an appropriate form of CMI multilateralisation, proceeding with a step-by-step approach. Finance ministers instructed the Deputies to carry out further in-depth studies on the key elements of the multilateralisation of the CMI including surveillance, reserve eligibility, size of commitment, borrowing quota and activation mechanism, while reiterating their commitment to maintain the two core objectives of the CMI.

(iii) Asia-Pacific Economic Cooperation

Since its inception in 1989, the Asia-Pacific Economic Cooperation (APEC) has become a premier forum for facilitating economic growth, cooperation, trade and investment in the Asia-Pacific region. APEC is the only inter governmental grouping (with 21 members from Asia, Latin America and North America) in the world operating on the basis of non-binding commitments, open dialogue and equal respect for the views of all participants². Unlike the WTO or other multilateral trade bodies, APEC has no treaty obligations required of its participants. Decisions made within APEC are reached by consensus and commitments are undertaken on a voluntary basis. APEC member economies take individual and collective actions to open their markets and promote economic growth. The APEC has been focusing on three key areas, *viz.*, (i) trade and investment liberalization, (ii) business facilitation and (iii) economic and technical cooperation

During first decade of its inception, APEC Member Economies generated nearly 70 per cent of global economic growth and the APEC region consistently outperformed the rest of the world, even during the Asian financial crisis. APEC member economies take individual and collective actions to open their markets and promote economic growth by showing commitment to open trade, investment and economic reform. By progressively reducing tariffs and other barriers to trade, APEC member economies, in general, have become more efficient and exports have expanded dramatically.

(iv) SEANZA and SEACEN

South East Asia, New Zealand and Australia (SEANZA) is one of the oldest regional central bank groups which was formed in 1957 outside of East Asia with original members of Australia, India, New Zealand, Pakistan and Sri Lanka. Later on, many East-Asian nations were included in SEANZA and currently, the total number of members of SEANZA is 20³. Under SEANZA, central bank governors meet annually. SEANZA also promotes cooperation among central banks by conducting intensive training courses for higher central banking

executive positions with the objective to build up knowledge of central banking and foster technical cooperation among central banks in SEANZA region.

Similarly, South East Asian Central Banks (SEACEN) was organised in 1966 in order to provide a forum for SEACEN central bank governors to be familiar with each other and to gain deeper understanding of the economic conditions of the individual SEACEN countries. Since its establishment, the members of the SEACEN Centre have grown. There are currently fourteen member central banks and monetary authorities. In addition to the original eight members, it is joined by the Bank of Korea (January 1990), The Central Bank of China, Taipei (1992), The Bank of Mongolia (May 1999), the Ministry of Finance, Brunei Darussalam on (April 2003), the Reserve Bank of Fiji (April 2004), and the Bank of Papua New Guinea (June 2005). Reserve Bank of India is one of the twelve invitees for SEACEN trainings at the SEACEN Centre.

(v) Executives' Meeting of East Asia Pacific Central Banks

Set up in 1991, the Executives' Meeting of East Asia Pacific Central Banks (EMEAP) is a cooperative organization of central banks and monetary authorities in the East Asia and Pacific region. The prime objective of EMEAP is to strengthen the cooperative relationship among its members. It comprises the central banks of eleven economies⁴.

The financial crisis in Asia affirmed the importance of EMEAP activities, which have nurtured the regional network of information exchange and mutual trust. Despite the recent proliferation of international meetings and institutions, EMEAP has succeeded in maintaining its uniqueness as a meeting for central banks in the region. The ongoing work of EMEAP seeks to further strengthen policy analysis and advice within the region and encourage co-operation with respect to operational and institutional central banking issues. In one of the recent Board Meetings, the following four areas have been identified for further strengthening of EMEAP:

- Communication and collaboration with other international entities,
- Greater publicity of outputs from EMEAP activities,
- Extending the scope and depth of discussions at the technical level, and
- Enhanced technical cooperation among member central banks.

The Asian Bond Fund (ABF) initiative of the EMEAP Group aimed at broadening and deepening the domestic and regional bond markets in Asia. In June 2003, EMEAP launched the first stage of ABF (ABF1), which invests in a basket of US dollar denominated bonds issued by Asian sovereign and quasi-sovereign issuers in EMEAP economies (excluding Australia, Japan and New Zealand). The Fund is passively managed by the BIS. After the success of ABF1, the EMEAP Group has extended the ABF concept to bonds denominated in local currencies and launched the second stage of ABF (ABF2) of US\$ 2 billion in December 2004. The key objective of ABF2 is to provide investors a convenient and low cost instrument to invest in Asian local currency bonds and, at the same time, to identify and remove impediments to the process of bond market developments. The ABF2 comprises a Pan-Asian Bond Index Fund (which is now named as ABF Pan-Asian Bond Index Fund (PAIF)) and eight Single-market Funds which invests in sovereign and quasi-sovereign local currency-denominated bonds issued in the eight EMEAP markets and represent a new asset class in Asia⁵. In the near term, the ABF2 Initiative is expected to help raise investor awareness and interest in Asian bonds by providing innovative, low-cost and efficient products in the form of passively managed bond funds. Further ahead, it is believed that it serves to further broaden and deepen the domestic and regional bond markets and hence contribute to more efficient financial intermediation in Asia, by promoting new products, improving market infrastructure and accelerating developments in relevant EMEAP markets. EMEAP claims that the ABF2 Initiative has helped accelerate tax and regulatory reform at both regional and domestic levels to facilitate cross-border investments. For instance, the PAIF is the first foreign institutional investor that has been granted access to China's inter-bank bond

market. Malaysia has, with effect from 1 April 2005, liberalised its foreign exchange administration rules. EMEAP's investments in ABF2 are held through the Bank for International Settlements investment vehicle, the US Dollar denominated BIS Investment Pool (BISIP). Up to April 2006, six ABF2 funds were successfully offered to the public, raising a total of about US\$ 400 million from non-EMEAP investors. ABF2 seems to have paved way for broader investor participation in the Asian bond markets. The asset size of the listed Single-market Funds have recorded a growth in the range of 24-50 per cent (up to end-April 2006) despite rising interest rates in the US during that period. The performance of PAIF has also been reasonably good with a growth of 19 per cent and is being increasingly accepted as an asset class by the Japanese institutional investors.

(vi) Asian Clearing Union

Another important arrangement of central banking cooperation in the South Asian region has been the Asian Clearing Union (ACU)⁶ headquartered at Tehran, Iran. The agreement on the ACU originated after a considerable period of efforts and discussions sponsored by the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP). The agreement was signed by the central banks and monetary authorities in December 1974. The Union is an arrangement for multilateral settlement of payments for promoting trade expansion and monetary co-operation among the member countries. Economizing on the use of foreign exchange reserves by utilization of national currencies, shifting of banking services from non-domestic to domestic one, providing short term credits facilities for two months for member countries are the core objectives of the union. Since 1989, the ACU has also included a currency swap arrangement among its operational objectives in order to facilitate easy access by participants to international reserves of other participants at a time when foreign exchange support is needed. The success of ACU is evident from the fact that over the past quarter of a century, it has not experienced a default, while many of the other developed country payment unions have been faced with the arrears problem.

(vii) *SAARC /SAARCFINANCE*

Under the aegis of SAARC⁷, South Asian Preferential Trade Agreement (SAPTA) was the first step towards the transition to a South Asian Free Trade Area (SAFTA) leading subsequently towards a Customs Union, Common Market and Economic Union. The Agreement on South Asian Free Trade Area (SAFTA) came into force in 2006. Under the Trade Liberalisation Programme scheduled for completion in ten years by 2016, the customs duties on products from the region will be progressively reduced. However, under an early harvest programme for the least developed member States, India, Pakistan and Sri Lanka are to bring down their customs duties to 0 - 5 per cent by January 2009 for the products from such member countries. The least developed member countries (Bangladesh, Bhutan, Maldives and Nepal) are expected to benefit from additional measures under the special and differential treatment accorded to them under the Agreement.

Under the SAARC forum, the SAARCFINANCE was established in September 1998 as a regional network of the SAARC Central Bank Governors and Finance Secretaries after recognizing the need to strengthen the SAARC with specific emphasis on international finance and monetary issues. The Chairperson of SAARCFINANCE is invited to the sessions of the SAARC Council of Ministers to make a presentation on SAARCFINANCE activities. The members of the network meet at least twice a year at the time of the annual meetings of the IMF and the World Bank. The SAARCFINANCE cells exchange publications and information on subjects relevant to financial sector in the member countries. Cooperation among central banks and finance ministries in SAARC member countries is promoted through staff visits and regular exchange of information.

(viii) *BIMSTEC*

In 1997, a sub-regional grouping, *i.e.*, the Bay of Bengal Initiative for Multi-sectoral Technical and Economic Cooperation (BIMSTEC) was formed in Bangkok. BIMSTEC provides a unique link between South Asia and Southeast Asia exploring a considerable amount of

complementarities between the two regions. A study shows the potential of US\$ 43 to 59 billion trade creation under BIMSTEC FTA. The BIMSTEC aims to achieve its own free trade area by 2017. The priority sectors of BIMSTEC include trade & investment, technology, energy, transport & communication, tourism, fisheries, agriculture, cultural co-operation, environment and disaster management, public health, people-to-people contact, poverty alleviation and counter-terrorism and transnational crimes.

(xi) Central Asia Regional Economic Cooperation

The Central Asia Regional Economic Cooperation (CAREC) Program is an ADB-supported initiative to encourage economic cooperation in Central Asia. CAREC's objective is to promote economic growth and raise living standards in participating countries by encouraging regional economic cooperation. The Program has concentrated on financing infrastructure projects and improving the region's policy environment in the priority areas like transport, energy, trade policy and facilitation.

CAREC is also an alliance of multilateral institutions comprising the Asian Development Bank, the European Bank for Reconstruction and Development, the International Monetary Fund, the Islamic Development Bank, the United Nations Development Programme and the World Bank. CAREC operates in partnership with other key regional cooperation programs and institutions, including the Shanghai Cooperation Organization and the Eurasian Economic Community. Up to end April 2007, ADB has approved and financed 16 loans totaling US\$ 499.8 million for different CAREC-related projects.

Section V

India and Regional Cooperation in Asia

India has a long history of foreign trade and cultural relations with the emerging Asian economies as is recorded in ancient and medieval history. India's growing trade and financial integration with the Asian region has worked as a driving force towards its renewed interest in

regional co-operation within Asia, under the “Look East Policy”. There has been a significant shift in destination and sources of India’s merchandise trade across developing and advanced economies. Developing countries or the South has emerged as the major destination for India’s exports, accounting for about 60 per cent of India’s total merchandise exports as compared with 40 per cent about a decade ago. Emerging Asia including China and other East Asian countries accounted for about a fifth of India’s total exports during 2006-07 (doubled from early 1990s), similar to the share of European Union in India’s total exports. China has emerged as the major trading partner for India, next only to the US. Similarly, over the years, Japan, South Korea, Hong Kong and Singapore have emerged as major investors in India.

In this context, India recognizes the fact that in a globalised world, collective regional endeavour may be viewed as an expression of enlightened self-interest, especially amongst the developing countries (Sinha, 2004). Accordingly, India has entered into various regional economic cooperation, free/preferential trade agreements and bilateral investment treaties with its Asian neighbours. India’s position and stance in relation to various regional cooperation (*viz.*, SAARC, BIMSTEC, ASEAN) and free/preferential trade agreements are discussed in brief in the following discussion.

(i) India and the SAARC

The SAARC was formed on the ideas of sovereign equality, territorial integrity, political independence, non-interference and mutual benefit. South Asian Free Trade Agreement (SAFTA) has been ratified by all SAARC members to enhance trade flows within the region⁸. India has taken a leadership role in the development of SAARC. Being the largest and economically strongest country in the region, India opened up its markets for neighbouring countries to create a truly vibrant and globally competitive South Asian economic community.

There are causes of concern as at times India is criticized for having a big brotherly attitude by other members. However, economic cooperation is directly linked with security in the region. The SAARC will find it challenging to accelerate pace of cooperation until India’s

relations with Pakistan and Bangladesh are normal. However, the SAARC members countries are becoming conscious of the fact that there is a huge potential for permitting trade within the region and enhancing economic interaction to their mutual advantage.

(ii) India and BIMSTEC

India and six other BIMSTEC countries (Bangladesh, Bhutan, Myanmar, Nepal, Sri Lanka and Thailand) have decided to enhance their cooperation and strategic capabilities in dealing with terrorism and transnational crime and preventing counterfeiting of currencies and forgery. The Government of India has formulated a five-point agenda for strengthening economic cooperation amongst member nations of BIMSTEC (Bangladesh, India, Myanmar, Sri Lanka and Thailand). Through its participation in BIMSTEC, India seeks to strengthen its bilateral trade, investment and technology links with member countries.

(iii) India and ASEAN

Through its “Look East” policy, India has been actively forging cooperation agreements with its eastern neighbors. In the context of Asian Bond Fund, an informal meeting was organized by Asia Cooperation Dialogue (ACD) on May 1, 2004 in Bangkok, which was attended by participants from 18 countries including India, to discuss promotion of supply of Asian Bonds with a view to facilitating setting up of ABF. In the recent period, RBI has been open to the idea of participation in Asian Bond Fund (ABF).

India has set its economic and strategic stakes in Southeast Asia as it was among the 16 nations participating in the landmark East Asia Summit held at Kuala Lumpur on December 2005. Besides the 10 members of the Association of Southeast Asian Nations (ASEAN), and the “Plus-Three” group comprising China, Japan and South Korea, three other nations, *viz.*, India, Australia and New Zealand were invited to the summit. The summit was very significant as it was expected to develop the future regional architecture in East Asia—an economically vibrant and strategically significant region. India

mooted free trade pact between ASEAN and six countries including Japan, China, Korea, Australia, New Zealand and India., *i.e.*, ASEAN+3+3. However, a cost-benefit analysis is must before moving towards such arrangements.

(iv) India's Free Trade Agreements (FTAs)

India has been actively engaged in the regional cooperation arrangements at different forums. Recognizing the importance of regionalism, India has entered into various regional trading arrangements (RTAs) with the objective of expanding export market. Apart from these, a few important framework Agreement on Comprehensive Economic Cooperation (CECAs) have also been entered into with regions/countries like ASEAN and Singapore. India has signed a number of free trade agreements with various countries including its neighbouring Asian nations. Some of the existing trade agreements of India with other regions/countries include the Bangkok Agreement, Global System of Trade Preferences (GSTP), SAARC Preferential Trading Agreement (SAPTA), India Sri-Lanka FTA, India-Thailand FTA, India-Singapore Comprehensive Economic Cooperation (CECA), Indo-Nepal Trade Treaty, India-Mauritius PTA and India Chile PTA. Some of the ongoing framework agreements of India include Indo-ASEAN CECA, South Asian Free Trade Agreement (SAFTA), Framework Agreement on BIMSTEC, FTA, India-MERCOSUR PTA. India has also set up a number of joint task forces to study the feasibility and benefits that may derive from the possible China-India RTA, India-Korea free trade agreement and India-Gulf Cooperation Council FTA.

In order to facilitate the free flow of goods and services, India also focuses on integration of rail and road linkages in its extended neighbourhood. The India-Myanmar-Thailand trilateral highway and Delhi-Hanoi railway is being planned. India has started building a transport corridor through Iran to Afghanistan. India has liberalized air services with SAARC countries and the ASEAN.

Apart from these, in order to boost foreign capital flows, particularly foreign investment (both direct and portfolio) India has

entered into bilateral investment treaties and double taxation avoidance agreements with various countries including its neighbours.

(v) India-China-Japan Regional Cooperation

Many economists believe that the US economy could face long term decline due to growing structural imbalances. One obvious alternative strategy being discussed in international forum these days is to create more intra-regional trade and capital flows within the larger Asian regions so as to evolve an alternative hub besides the US that will drive the global growth. It is believed that a strong alternative to the US market can only emerge if a larger open trade block emerges in the Asian region centred around China, India, Japan and ASEAN. There is a huge potential to create a regional market supported largely by China and India. It has been suggested that the larger regionalized Asian market must create sufficient conditions-regulatory and corporate governance institutions to attract investments from Japan, China and India, which have accumulated large stock of foreign exchange reserves, currently invested mainly in US treasuries. Confidence on this score could be enhanced through ASEAN-China and ASEAN-India free trade agreements, which create a regional framework for freer flow of trade, investment and skilled labour. There could be an extensive intra-regional production network, based on exchange of parts, components, intermediate products, with China and India at its core, as these would be the biggest consuming baskets in the near future.

Some signs of these are visible with the first ever joint acquisition of a Syrian oil asset by India and China as also the historical resumption of India-China border trade through the strategic Nathu La pass. Indo-Japanese relations can also be judged from the fact that India has been the first country to which Japan extended the first Yen Loan and India has been one of the largest recipients of Japan's overseas development assistance. Agreement on Commerce between Japan and India in 1958 was one of the remarkable treaties signed by the two nations to strengthen their trade relations. The Indo-Japanese trade talks on overall bilateral

trade and investment began in 1978 and since then have expanded to new economic dimensions. Besides, private sector forum such as 'Joint Meetings of the Japan-India Business Cooperation Committee', which holds annual joint meetings, promotes private-sector bilateral cooperation in various economic fields as well as mutual understanding. At present, almost 500 Japanese companies are operating in India. The Japan External Trade Organization (JETRO) has also set up an incubation facility for Japanese investments into India and has established a dedicated India desk at its Tokyo Office. Thus, business to business engagement will be the determining factor for the success of Indo-Japanese economic relationship.

Section VI

Issues in the Area of Regional Cooperation in Asia

Although the experience and lessons of other regional blocks might provide useful insights for enhancing regional cooperation in Asia, but one has to take cognizance of certain issues for successful functioning of cooperative arrangements particularly monetary union type of arrangement being envisaged in Asia. In this context, Langhammer (2007) argues,

“Trying to influence East Asian integration by pointing to EU experiences would probably not be very fruitful given the fact that East Asia, if it continues to follow the ASEAN+3 concept, will become as inward-oriented as the EU with its widening and deepening process. Yet, even under such disperse styles of integration in Europe and East Asia, globalization and the ever-rising importance of cross-border externalities like environment, management of common resources, terrorism, and military threats will induce East Asia to consider using most European ways of making integration and cooperation effective, such as by defining the rationales, setting targets, monitoring implementation, multilateralizing bilateral arrangements, and, finally, involving the private sector. And it is this last way that is most likely to convince East Asia to take the lessons provided by EU integration seriously”.

It has been argued that Asia is currently at a stage in which the discussion focuses on regimes to stabilise intra-regional currency fluctuations (Münchau, 2007). The Europeans were at the same stage in the 1970s, when they set up the European Monetary System after a series of failed attempts to stabilise exchange rate movements. Therefore, the European Monetary System (EMS), not the euro, is most relevant for the Asian region today. If one compares the Asian efforts towards monetary integration with those of Europe, it is found that in case of Europe, the participation at the political level in the process towards greater monetary integration started soon after the fall of Bretton Woods system. In Asia, however, the discussion has remained limited to central bankers, academicians and other experts. Even the efforts have accelerated in real sector integration through better trade relations but these are not much organised and concerted. For instance, there are overlapping trade agreements in the Asian region which are not desirable for an arrangement akin to the Europe's single market. Another contrast in European monetary integration and the Asian Monetary Integration is lack of indicative targets. From the very beginning of its history, the EU had set priorities and milestones in implementing program in order to remain credible and recognizing the so-called "costs of non-Europe,". However, in the case of Asia such concrete indicative framework has not been put in place so far.

However, the Asian Development Bank has now formally adopted a Regional Cooperation and Integration Strategy. This is designed to support economic integration in four key areas: (i) cross-border infrastructure and related services; (ii) cooperation in trade and investment; (iii) monetary and financial cooperation and integration; and (iv) cooperation in the provision of regional public goods. The ADB is also developing a framework for mobilizing the resources required to implement the Strategy - the Regional Cooperation and Integration Financing Partnership Facility. Furthermore, the Report of the Eminent Persons Group to the President of the Asian Development Bank (2007) identified that the objectives of ADB's work in regional cooperation and integration should be building and expanding regional

collective actions and helping the region engage effectively at the global level. Regional cooperation comprises five major areas, *viz.*, physical connectivity, global commons, trade in goods and services, financial integration, and monetary and exchange rate coordination. It also emphasized that free trade in goods, services, labor, and capital is a primary benefit of regional cooperation and integration. Short of a global open market, a single regional market for goods, services, labor, and capital should be the goal of regional economic cooperation on trade in Asia. Asia should aim at ultimately creating a single market encompassing the major Asian economies, including the four largest countries that account for 83 per cent of Asian GDP, *viz.*, Japan, China, India, and Republic of Korea, while following “open regionalism.” The Report also suggested that the ADB should help the region pursue a bottom-up, market-driven approach to financial integration rather than a top-down “region-wide broad vision”.

Despite these efforts, the progress relating to these issues suggests that monetary integration in Asia has a long way to go and full-fledged monetary integration on Euro lines would be a challenging task to achieve in short-term horizon. However, there has been a considerable progress in efforts towards trade and investment integration within the region which eventually are likely to facilitate the process of monetary integration in the long run. Despite the fact, the region has been far more active in negotiating real sector accords but these are viewed as economically and politically sub-optimal. Although the region has taken due cognizance of significant complementarities that exist in trade structure but there is still a vast scope for further bilateral trade which testifies to the gains that can accrue from free trade zones and the eventual use of a common currency. A number of studies have shown a strong and positive impact of trade of China, India, Japan and Korea on growth in ASEAN region which suggests a strong case for further monetary integration. Plummer and Wignaraja (May 2007) attempted a number of simulations on the correlation of business cycles and economic effects of potential trade groupings and finally suggests that the economic potential for monetary integration in Asia is strong, even

though the political underpinnings of such an accord are not yet in place. It is also argued that integration in the real sectors is taking place through a number of FTAs at various levels which have an important political effect on cementing a regional identity. These efforts, according to many, are likely to reinforce the case for monetary union in Asia. However, there are still some issues which need to be addressed to move further.

The concept of an Asian Monetary Fund was suggested by Japanese Ministry of Finance officials following the Asian financial crisis and the sluggish response of the IMF to it. Most bail-out packages in Asia of late have been regional as bilateral components were larger than the direct IMF contribution. The AMF was envisioned as a US\$ 100 billion fund. It was opposed by the US and the IMF itself, on the basis of weak arguments, such as that an Asian Monetary Fund could not be expected to be as credible as IMF in surveillance of Asian countries. Indeed, doubts were raised that an Asian Monetary Fund would be more relaxed in reviewing and criticising fiscal and monetary policies of its members. Despite the fact that proposal of an Asian Monetary Fund initially received a cool response from the IMF and the G7, their position has softened thereafter as they wanted AMF to be a complementary to the IMF. The success and failure of Asian Monetary Fund would depend upon its governance, economics, protocol of supervision and surveillance. It needs to be noted that issues have also been raised regarding the composition of AMF, i.e., AMF of Asia or it can be expanded to Asia and Pacific Monetary Fund. Further more, an institutional backing, which the Asian Monetary Fund can provide, would be critical for launching an Asian currency unit or an Asian Monetary Union. As far as the present status of the proposal is concerned, it seems that during the 10th round ASEAN+3 financial ministers' talks at Kyoto in May 2007. South Korea, China, Japan and ASEAN member states agreed to create the US\$80 billion Asian Monetary Fund (AMF) for common responses to crises taking place in the region. It indicates that further Asian financial integration may be the best antidote for Asian future financial challenges.

Mr. Haruhiko Kuroda, the current President of the Asian Development Bank, proposed for setting up of arrangements to create an Asian Currency Unit, on the lines of the European Currency Unit that preceded the creation of European Monetary Union and the euro. The idea was not a totally new concept, having been previously suggested by former Prime Minister Mahathir Mohamad at the 1997 ASEAN summit, by Nobel economics laureate Robert Mundell at a lecture in Bangkok in 2001, and by Philippines' President Gloria Arroyo at the 9th annual Future of Asia Conference hosted by Nihon Keizai Shimbun in 2003. This idea has been mooted on the basis of the concept that it will avoid the volatility of intra-Asian currency markets and create a currency, which can well be one of the principal currencies of the world. The idea got a further boost at the meeting of the Asian Development Bank held recently at Istanbul. However, adoption of single currency in the region could be a long-term agenda point for regional cooperation in Asia as one can see from the experience of the European union. The rationale for an Asian Currency Unit at the micro-level is to afford regional economic agents the opportunity to invoice regional financial and trade transactions in the Asian Currency Unit, hence reducing the region's dependence on the US dollar and other external currencies. If Asian Currency Unit is successful, intra-regional intermediation of savings may be promoted, in the process possibly reducing the region's exposure to external shocks (Rajan, 2006). Although the Asian currency unit can help Asian economies to keep the relative price of regional currencies stable, the cost of joining a formal regional monetary cooperation is the relinquishment of the autonomy of their domestic policies. Asian monetary cooperation needs to provide more potential benefits if it is to attract Asian economies (Bin and Fan, 2007).

Despite such anticipated benefits, technical and political obstacles remain in respect of Asian currency unit. Thus, the ADB project has not moved much forward. No consensus has been reached on which standard the common currency unit would be calculated whether it should be the participating countries' gross domestic product or their external trade. Likewise, the issue has

certain political dimensions as well. It is still to be decided whether the Hong Kong dollar and the Taiwan dollar would be included in the scheme. In short, the launch of Asian Currency Unit seems to be a distant possibility and needs much more discussion on a number of issues.

Apart from the issues of lack of political participation and convergence of exchange rate policies at the present stage of on-going process, there are other important issues as well which could pose challenges for the process of Asian monetary integration. So far, most of the efforts towards greater monetary integration have remained limited either to East Asian countries, *i.e.*, ASEAN or ASEAN+3. These countries are mostly heterogeneous both economically and politically. Although peace prevails within the ten-country ASEAN group, yet they have different political systems. A number of ASEAN/ ASEAN+3 members including China, Myanmar, Cambodia, Laos, and Vietnam fall far short of being democracies. Apart from these, there are certain issues pertaining to social and institutional development which could emerge as formidable challenge as process of monetary integration gathers pace.

(i) Exchange Rate Coordination

There is no *a priori* scenario for currency cooperation within the ASEAN+3. There exists a wide spectrum of exchange rate arrangements between hard pegging and pure floating. This situation points to a need for further research concerning what constitutes the optimal exchange rate regime, and for closer international cooperation on exchange rate policy. Therefore, the important issue is whether the intra-regional stabilisation should occur by means of a fixed or semi-fixed exchange rate against a basket of international currencies, or whether it should be based on a free-floating regional monetary unit, an Asian Currency Unit, to which each member currency would be tied. In short, there is a coordination failure in exchange rate policies in Asia. Therefore, any sharp movement in the US dollar exchange rate could have severe implications for intra-regional Asian exchange rate stability.

It is important to note that a number of EMEs in East Asia face a trade-off between the virtue of exchange rate stability to promote trade, investment, and growth and the need for flexibility, particularly during a time of crisis, to maintain international price-competitiveness and facilitate adjustment. Economies in the region are still prone to exchange rate volatility in the absence of sound financial systems and flexible real sector. For small but open economies of the region, exchange rate volatility can be disruptive to the growth and development. It is to be noted that Asian economies grew rapidly during periods of exchange rate stability. For intra-regional exchange rate stability, greater coordination on the currency basket policy would be desirable, and this needs to be supported by regional policy dialogue and financing mechanisms. At the present point of time, the economic and political conditions today even in East Asia are not conducive to a regional monetary union or a move toward exchange rate coordination in the near future. However, views in this regard are mixed as Watanabe and Ogura (2006) argued that the optimal currency area conditions seem to be met by subsets of Asian countries although the ultimate success of an Asian currency union hinges crucially on factors including historical and political backgrounds, robustness of institutional set-ups, degree of regional convergence in developmental stages, and track record of sound macroeconomic policy in constituent countries.

Issues regarding the anchor currency are yet to be settled in respect of greater monetary integration in Asia. In this context, Wolfgang (2007) raises the following issues. First, whether the yen could form an anchor for the system, in the way the Deutsche-Mark was the anchor currency of the EMS? Second, would that be acceptable to others, such as China and Korea? Third, would there have to be entry criteria similar to the EU's Maastricht criteria? Fourth, does one need any arrangements for fiscal policy as well?

(ii) Heterogeneity within the Region

There is an extreme heterogeneity in almost each and every aspect (size, income level, economic structure, tariff levels) among the various countries of Asia. The unsettled political disputes on past

and present issues could be a major stumbling block for regional integration in Asia on EU style which was a constructivist stages approach based on the rule of law. Therefore, in the Asian context, the transition to monetary union, including the crucial decisions about eligibility for membership, seems to be a more complicated process.

(iii) Lack of Maastricht Treaty Type Indicative Framework

If consensus or near-consensus on all of the major issues is reached, the region would have to draft a treaty analogous to the Maastricht Treaty, defining the path to full-fledged monetary union, the institutional design of the union itself, and the task of the various bodies that would be needed to take on related tasks, including the setting of common standards for prudential supervision, the setting and implementation of exchange-rate policy for the new currency, and, most importantly, the setting and subsequent application of the criteria for admission to the monetary union.

(iv) Development of Asian Debt Market

The development of Asian debt market is needed for enhance mobilization of regional savings for long term investments within the region. The Asian financial crisis was the culmination of twin crises, a currency crisis due to volatile capital flows, and at the same time a banking sector crisis. The crisis of 1997-98 underscored the limitations of even reasonably regulated, supervised, capitalised and managed banking systems and the importance of debt market. Against this backdrop and based on experience, it has been argued that bond financing reduces macroeconomic vulnerability to shocks and systemic risk through diversification of credit and investment risk. From the perspective of developing countries, a liquid corporate bond market can play a critical role in supporting economic development.

Although the East-Asian bond markets have come a long way since the Asian financial crisis, it is still dominated by the government bond markets except for Hong Kong, Korea and Malaysia (Table 6). Local currency government bond market growth remained strong in 2006. Although Central Government deficit financing declined in

most East Asian countries, Government agencies and several local governments issued new bonds. The outstanding amount of local currency bonds in Asia excluding Japan has increased by around 600 per cent during 1997-2006 period (from US\$ 405 billion in 1997 to US\$ 2,840 billion in 2006), and the amount as a percentage of GDP has increased from 17.3 per cent in 1997 to 61.5 per cent in 2006. Nevertheless, the size of these markets has yet to be comparable to that of the more developed markets such as the US and EU countries. Asian bond markets are still perceived to be relatively illiquid. Annual turnover of bonds is quite low in most of the east-Asian countries barring Hong Kong, Singapore and Korea, which have turnover ratios that are closer to those in mature economies. The reasons are quite obvious. As the emerging economies become more mature, the role of bond financing is likely to rise in this region as well. Bond markets require an extensive infrastructure, including well-developed accounting, legal and regulatory systems, payments and settlements systems, ratings agencies, networks of brokers to sell bonds and so on. In addition, corporate bond financing has greater role to play in the financial operations of well-established companies with certain credit rating assigned by designated agencies. In emerging markets, where the corporate sector is developing rapidly and small and medium enterprises dominate, it is understandable that banks have a comparative advantage in the provision of financing, as they have better mechanism to know the borrower's business and hence can appropriately assess the credit risk.

Promoting the bond market is high on the agenda of a number of regional fora. Governments in emerging East Asia have shown increasing confidence in the pace of reform, expanding their focus from market deepening to broadening supply and attracting increased investor demand. Many constructive initiatives have been taken forward and substantial progress has been made. The APEC initiative to promote the development of securitization and credit guarantees has successfully raised the awareness and understanding of many Asian economies of the benefits of securitization and credit enhancements, and also helped to identify the market impediments specific to individual economies.

However, use of securitization is far modest in Asian region than in Europe and North America. A report by ADB (2007) emphasizes that national and regional policies should complement commercial trends by supporting institutional improvements; promoting common standards and applying structured finance techniques. In addition to institutional improvement, the promotion of common standards can both support securitization and provide incentives for improved intermediary practice, especially in data collection, documentation and credit risk appraisal. Furthermore, there is a need to create incentives for both investors and issuers to establish national and regional market infrastructure for secondary market of Asian currency denominated bonds and to balance the risk of capital account liberalisation.

(v) Financial Inclusion in Developing Countries of Asia

Financial inclusion is still a problem in most of the developing countries of Asia, which leaves ample scope for further expansion of banking in the region. Unless there is even development of banking sector across the countries extending banking products at an affordable cost to the vast sections of disadvantaged and low income groups, resource mobilization of savings in the region would not get much boost which in turn affect the financial sector development in the region. Therefore, an important step towards monetary and financial cooperation in the region is required in the form of coordinated policy approach emphasizing on enhanced financial inclusion in the countries of the region.

(vi) Disparity in Demographic Features

Trends in demographic changes in various countries pose challenges for economic policy. Countries, facing the aging problem, will be affected by ageing-related budgetary pressures in the coming decades. There is a need for fiscal consolidation and further structural reforms in such countries. For better regional cooperation, countries that will encounter ageing problems first need to integrate a larger part of their working-age population into the labour force. Countries that will experience a rise in the working age population before the problematic impact of ageing

Table 6: Size and Composition of Emerging East Asian Local Currency Board Markets

	1997		2004		2005		2006		Growth Rate(%)	
	Amount (US\$ billion)	% of Share	Amount (US\$ billion)	% of Share	Amount (US\$ billion)	% of Share	Amount (US\$ billion)	% of Share	Amount (US\$ billion)	% of Share
1	2	3	4	5	6	7	8	9	10	11
China, People's Rep.of										
Total	116.4	100.0	623.8	100.0	895.5	100.0	1,350.6	100.0	43.6	50.8
Government	67.4	57.9	433.6	69.5	610.7	68.2	877.9	65.0	40.8	43.8
Corporate	49.0	42.1	190.2	30.5	284.9	31.8	472.7	35.0	49.8	65.9
Hong Kong, China										
Total	45.8	100.0	78.2	100.0	85.6	100.0	96.2	100.0	9.4	12.4
Government	13.1	28.7	15.8	20.2	16.3	19.1	16.9	17.6	3.6	3.7
Corporate	32.7	71.3	62.4	79.8	69.3	80.9	79.3	82.4	10.9	14.4
Indonesia										
Total	4.6	100.0	49.4	100.0	46.6	100.0	53.4	100.0	-5.8	14.7
Government	0.9	19.6	43.1	87.2	40.7	87.4	46.6	87.2	-5.6	14.5
Corporate	3.7	80.4	6.3	12.8	5.9	12.6	6.8	12.8	-7.4	16.4
Korea, Rep.of										
Total	130.4	100.0	708.6	100.0	804.6	100.0	959.0	100.0	13.6	19.2
Government	21.6	16.6	337.2	47.6	404.1	50.2	469.1	48.9	19.9	16.1
Corporate	108.8	83.4	371.4	52.4	400.5	49.8	489.8	51.1	7.8	22.3
Malaysia										
Total	57.0	100.0	96.8	100.0	106.7	100.0	121.3	100.0	10.3	13.7
Government	19.4	34.0	48.1	49.7	52.3	49.0	60.9	50.2	8.6	16.5
Corporate	37.6	66.0	48.7	50.3	54.5	51.0	60.4	49.8	11.9	10.9
Philippines										
Total	16.9	100.0	35.3	100.0	40.5	100.0	43.9	100.0	14.7	8.3
Government	16.6	98.1	35.1	99.2	40.2	99.2	43.5	99.1	14.7	8.2
Corporate	0.3	1.9	0.3	0.8	0.3	0.8	0.4	0.9	17.6	17.7
Singapore										
Total	23.8	100.0	80.0	100.0	83.1	100.0	99.2	100.0	3.9	19.4
Government	13.1	54.9	44.3	55.3	46.9	56.4	55.9	56.4	6.0	19.2
Corporate	10.7	45.1	35.7	44.7	36.2	43.6	43.3	43.6	1.3	19.5
Thailand										
Total	10.5	100.0	66.7	100.0	78.8	100.0	112.0	100.0	18.3	42.1
Government	0.3	2.9	44.4	66.6	54.3	68.9	74.6	66.6	22.4	37.4
Corporate	10.2	97.1	22.3	33.5	24.6	31.1	37.4	33.4	10.1	52.5
Vietnam										
Total	-	-	3.8	100.0	4.3	100.0	4.9	100.0	13.5	14.6
Government	-	-	3.8	99.5	4.2	97.5	4.5	91.3	11.2	7.2
Corporate	-	-	0.0	0.5	0.1	2.5	0.4	8.7	461.5	302.7
Total Emerging East Asia										
Total	405.3	100.0	1,742.5	100.0	2,145.8	100.0	2,840.4	100.0	23.1	32.4
Government	152.4	37.6	1,005.1	57.7	1,269.7	59.2	1,649.9	58.1	26.3	30.0
Corporate	253.0	62.4	737.4	42.3	876.1	40.8	1,190.5	41.9	18.8	35.9
Japan										
Total	4,607.9	100.0	7,447.4	100.0	7,046.4	100.0	7,096.1	100.0	-5.4	0.7
Government	2,382.7	51.7	6,556.3	88.0	6,302.5	89.4	6,389.2	90.0	-3.9	1.4
Corporate	2,225.2	48.3	891.1	12.0	743.9	10.6	706.9	10.0	-16.5	-5.0

Source : Asian Bond Monitor, April 2007, Asian Development Bank.

becomes apparent should increase investment in human capital and infrastructure while pursuing prudent fiscal policies. This will facilitate greater labour mobility among the countries with different phases of demography. The importance of a stable and efficient international financial system that allows smooth flows of capital between regions at different demographic stages also needs to be realised.

(vii) Macroeconomic Interdependence

As mentioned above, the synchronization of business cycles is important for better regional integration. In other words, macroeconomic interdependence facilitates the process of economic integration within the region. There are evidences for a positive co-movement of real economic activity of Japan and Korea with each other and with emerging Asia. In contrast, ASEAN countries have no positive co-movements among themselves and even China has no positive correlation with East Asia. Similarly, the co-movement of India, Australia and New Zealand with ASEAN countries needs to be studied.

(viii) Financing Gap in the Asian Countries

The need for cooperation in the areas of infrastructure creation, maintenance and utilization is well recognized. On the financing side, it was estimated that the region needs to find at least US\$ 248 billion per year to pay for the infrastructure between 2005 and 2010. To bridge the gap, Asian and Pacific countries need to find innovative ways to mobilize finances for infrastructure investment and regional cooperation could be a vehicle for identifying and operationalizing the appropriate instruments and institutions. The size of the financing gap, however, also requires a collaborative effort to mobilize new sources of capital. Alternative sources of funding include the region's surplus savings, averaging around US\$ 200 billion per year (2000-2003), which are mostly invested outside the region, and possibly the region's US\$ 2.5 trillion in foreign exchange reserves. Asian and Pacific countries need to cooperate, however, in developing mechanisms for accessing these funds through cross-border financial intermediation (UNESCAP, 2005).

(ix) Transfer of Fiscal Resources

At present Asia does not have any arrangement of transfer of fiscal resources from one country to another along the lines of EU but the issue may come at the forefront later as the negotiations for monetary cooperation move on.

Section VII Conclusions

Regional integration in Asia gained momentum during the last couple of decades, which witnessed significant increases in intra-regional cross-border trade, investment and financial flows. Regional economic cooperation in Asia mainly took the form of monetary and financial cooperation (ASEAN, ASEAN+3, CMI, EMEAP, ACU) as well as bilateral and multilateral trade and investment treaties. Given the fact that almost all East Asian economies are pursuing FTAs, Kawai and Wignaraja (2007) rightly suggest that a realistic approach would be to design FTAs in a way to maximise benefits and minimise potential costs. This requires FTAs that induce domestic structural reforms and are in consistence with WTO rules. A review of various arrangements reveals that at the present juncture, monetary cooperation in Asia can at best be interpreted as an early stage event. How far these efforts would cope at the time of financial distress and turbulence is still to be seen. While, there is further scope for economic cooperation at certain areas, at the same time there are various challenges to be addressed in the context of policy convergence. For faster progress and greater success, these processes require an effective regional surveillance mechanism and also a tremendous amount of political will and economic readiness.

Note

- ¹ China and India Aim to Extend Cooperation, Executive Intelligence Review, February 18, 2005.
- ² APEC members are Australia, Brunei Darussalam, Canada, Chile, People's Republic of China, Hong Kong, Indonesia, Japan, Republic of Korea, Malaysia, Mexico, New Zealand, Papua New Guinea, Peru, Philippines, Russia, Singapore, Chinese Taipei, Thailand, United States and Vietnam.

- ³ The additions were Bangladesh; People's Republic of China; Hong Kong, China; Indonesia; Iran; Japan; Republic of Korea; Malaysia; Macao, China; Mongolia; Nepal; Papua New Guinea; Philippines; Singapore; and Thailand.
- ⁴ The EMEAP member central banks are Reserve Bank of Australia, People's Bank of China, Hong Kong Monetary Authority, Bank Indonesia, Bank of Japan, The Bank of Korea, Bank Negara Malaysia, Reserve Bank of New Zealand, Bangko Sentral ng Pilipinas, Monetary Authority of Singapore and Bank of Thailand.
- ⁵ These eight markets are China, Korea, Indonesia, Malaysia, Philippines, Hong Kong, Singapore and Thailand.
- ⁶ At present, its membership includes eight members including India, Islamic Republic of Iran, Nepal, Pakistan and Sri Lanka being the founder members Myanmar, Bangladesh and Bhutan joined later.
- ⁷ SAARC members are India, Pakistan, Sri Lanka, Bangladesh, Bhutan, Maldives and Nepal. In April 2007, at the 14th SAARC Summit, Afghanistan became eighth member of SAARC.
- ⁸ Pakistan has ratified the South Asia Free Trade Agreement (SAFTA), but trade between India and Pakistan will not be initiated under this agreement, instead it will continue under the existing import regime.

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Revisiting bank-linked Self Help Groups (SHGs) - A study of Rajasthan State

Navin Bhatia*

The mechanism of lending through Self Help Groups (SHGs) has gained wide popularity during the last few years and has been adopted as an important strategy by banks for lending to the poor. Despite tremendous growth in the number of SHGs linked to banks, their sustainability has not been subjected to detailed analysis. This paper is based on a State-level study conducted during 2005-06 to review the present status of SHGs, which were linked to banks till March 1998 under the SHG bank linkage programme. The paper introduces the concept of SHGs and portrays their status on various parameters such as continued existence, membership, meetings held, leadership, savings made and loans obtained, loan utilisation and repayment record.

JEL Classification : G 21, G 29

Keywords : Microfinance, SHG and Others.

Introduction

Provision of credit to the poor has remained a formidable challenge for the banking system in India. Various measures such as nationalisation of major banks, massive branch expansion, formation of Regional Rural Banks (RRBs), introduction of directed lending under the priority sector concept and specialised anti-poverty programmes have been taken in this direction during the past. The latest innovation in delivery of credit to the poor has been through the mechanism of Self Help Groups (SHGs).

This paper provides a very brief theoretical concept of SHGs in Section I. While Section II gives the rationale of the study, Section III is devoted to the major findings. At the end, Section IV lists the issues that have emerged from the study and makes certain suggestions.

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Section I

Concept of SHGs

An SHG is a small group of about 20 persons from a homogeneous class, who come together voluntarily to attain certain collective goals, social or economic. The group is democratically formed and elects its own leaders. The essential features of SHGs include members belonging to the same social strata and sharing a common ideology. Their aims should include economic welfare of all members. The concept of SHGs is predominantly used in the case of economically poor people, generally women, who come together to pool their small savings and then use it among themselves.

It has been the experience that the SHGs are generally formed through the intervention of a facilitating agency. The non-Governmental Organisations (NGOs) have traditionally had a history of promoting SHGs. However, over time, SHGs have come to be promoted by Government agencies, banks and also by federations of SHGs themselves.

The SHG members meet at fixed intervals, generally weekly, fortnightly or monthly and collect their savings of a predetermined amount at these meetings. The pooled savings are then used to make small interest bearing loans among themselves. The members who borrow the money have to return the same in weekly, fortnightly or monthly instalments at predetermined rates of interest. The group is solely responsible for determining its periodical saving rate, internal lending policy as well as interest rates.

This process helps group members imbibe the essentials of financial intermediation such as prioritising the needs, fixing terms and conditions, and maintaining accounts. They also learn to appreciate that resources are limited and have a cost. Over a period of time, the groups learn to handle larger sums of money. During this period, the group is also encouraged by the facilitator to open a savings bank account with a bank. If the group transactions go on smoothly for a period of six months or more, it is a signal that the group has matured. If after that stage the group is in need of amounts of money larger than it can generate through its internal funds, the external facilitator

encourages the group to seek loan from a bank. The bank sees the group and on being satisfied with its credentials, grants loan to it.

The process of linkage of the SHG with a bank begins when the bank opens its savings bank account. After watching the operations in the account for some time and being satisfied with the credentials of the group, the bank considers the group for lending purposes at the request of the group. The group is eligible for borrowing from the bank in a multiple of its savings. The bank lends to the SHG, which, in turn, gives loans to its members in accordance with the group's policy. At this stage the group is said to be credit linked to the bank. In common parlance, the SHG is stated to be linked to the bank when it avails credit facilities from the bank. The loan is granted in the name of the SHG and all members of the group are collectively responsible for the repayments to the bank. These loans have no collateral security as group cohesion and peer pressure act as security for the bank loan.

SHG bank linkage programme

The concept of linking SHGs to banks was launched as a pilot project by National Bank for Agriculture and Rural Development (NABARD) in 1992. The pilot envisaged linking of just 500 SHGs to banks. By the end of March 1994, 620 SHGs had been linked to banks. The success of the pilot led to its transformation into the SHG bank linkage programme with an ever-increasing number of banks and NGOs participating therein. From modest beginnings in 1992, the SHG bank linkage programme spread rapidly and in just over a decade had emerged as the single largest microfinance programme in the world.

At the end of March 2006, its coverage extended to 583 districts located in 31 States and Union territories. Over 22.38 lakh SHGs had been linked to banks and cumulative loans of Rs 11,397.54 crore disbursed under the programme¹. Besides the participation of 4,896 NGOs and other agencies, a total of 44,362 branches of 547 banks were involved in lending under the programme. Women's groups formed over 90 per cent of the SHGs.

Over a period of time, three different models of lending have emerged under the programme. In Model 1, the bank takes the

initiative in forming the groups, nurturing them, opening their savings accounts and then finally providing credit to them. In Model 2, while facilitating agencies like NGOs, government agencies or community based organisations take the lead in forming groups and nurturing them, they are provided savings and credit facilities by the banks. In Model 3, the NGOs, which have promoted and nurtured the groups also act as financial intermediaries. Under this model, the banks lend to these intermediaries for onward financing to the groups or their members. In some cases, the promoting NGOs organise the SHGs into federations, which then take on the role of financial intermediaries. Data published by NABARD reveals that Model 2 has proved to be the most popular. At the end of March 2006, 74 percent of the SHGs linked were under this model; Model 1 and Model 3 accounted for 20 per cent and 6 per cent of the SHGs respectively.

Despite the phenomenal growth under the programme, certain areas of concern continue to persist. First, the focus on achievement in terms of numbers has resulted in the qualitative aspects of the SHGs not getting the deserved attention. Second, there remains a strong regional bias towards the southern States. As at the end of March 2006, while Andhra Pradesh, the State with the largest share among the southern States, accounted for 26.2 per cent of the total SHGs and 38.1 per cent of the total loans disbursed, Rajasthan, the State with the largest share of SHGs in the northern region, accounted for only 4.4 per cent of the SHGs and just 2.1 per cent of the total loans disbursed. Third, the quantum of loan granted per SHG continues to be very low. In March 2006, the amount was Rs 37,582 for new loans and Rs 62,949 for repeat loans to existing SHGs. Considering that on an average an SHG has 14 members, the per capita loan amount in March 2006 was Rs 2,684 for new loans and Rs 4,496 for repeat loans. Fourth, the issue of sustainability of SHGs has also not been highlighted. Only since 2001, NABARD has been publishing data regarding the number of SHGs provided with repeat bank credit. These data reveal that the percentage of SHGs getting repeat bank credit has remained quite low, indicating that most SHGs have had access to bank credit on only one occasion.

Section II

The Study

A review of existing literature revealed that little is known about the sustainability of SHGs, how long they last, and how they and the scale of their transactions change over time. The study was planned by the investigator in the light of the concerns highlighted in Section I and in order to address the gap indicated above. In the present study, the investigator attempted revisiting the SHGs that had been linked several years ago and portraying their present status. The SHGs, which were linked to banks till March 1998, were taken up for the study. In view of the limitations of time and resources, it was decided to restrict the study to only one State. Since the southern states have the maximum number of SHGs, most studies on SHGs have been carried out in those States. It was, therefore, decided to leave them out. The State of Rajasthan was purposively selected for the study as it is the largest State of the country and has the maximum number of SHGs among all the States of the northern region.

Data obtained from NABARD revealed that 245 SHGs were linked to banks in Rajasthan at the end of March 1998. These SHGs were spread over 12 districts of the State. However, 96 per cent of these SHGs (235) were from seven districts, *viz.*, Hanumangarh (95), Udaipur (74), Alwar (30), Ajmer (10), Sawai Madhopur (10), Jodhpur (8) and Chittorgarh (8). The remaining five districts accounted for only 10 SHGs amongst them.² Therefore, it was decided to cover 235 SHGs in the above seven districts for the study.

The study was based on both primary and secondary data. While secondary data were obtained from NABARD and controlling offices of banks, primary data were collected from 44 SHGs, 12 bank branches, 65 SHG members and 5 NGOs.³ Data collection was carried out between December 2005 and April 2006 through pre-designed schedules and personal interviews with bankers, SHG members and chief functionaries of NGOs. The following paragraphs present the findings of the study and make certain suggestions on the issues emerging therefrom.

Section III

Major Findings

(a) Status of linkage

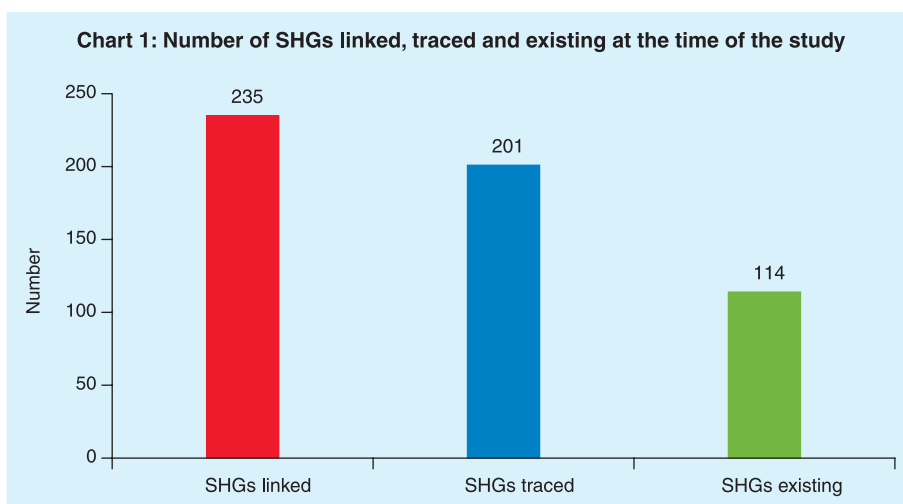
Women's groups formed less than half (46 per cent) of the SHGs linked to banks by the end of March 1998, as compared to a share of 78 per cent at the national level. A majority of the SHGs (58 per cent) were formed by NGOs and linked to banks under the more popular Model 2 of linkage. The remaining SHGs had been formed by a bank and linked to its branch under Model 1 of linkage. As against a national share of only 18 per cent of the total SHGs linked, Model 1 of linkage occupied a share of 42 per cent in the State.

The spread of SHGs as well as existence of NGOs varied greatly among the districts. While there was an established NGO and a formal SHG federation in existence in Alwar district, in Ajmer district, there were no NGOs worth their name. In Hanumangarh district, all the SHGs had been promoted and financed by a single bank under the Model 1 of linkage while Model 2, where groups were promoted by NGOs, was adopted for linkage by banks in all the remaining districts. In Hanumangarh district, there was a preponderance of male groups while female groups dominated in all other districts. The nature and linkage of groups in this district was also different from other SHGs: each group was composed of five members, there was no internal lending, loans were granted in the names of individuals and members were not required to visit the bank branch.

(b) Number of SHGs traced and existing

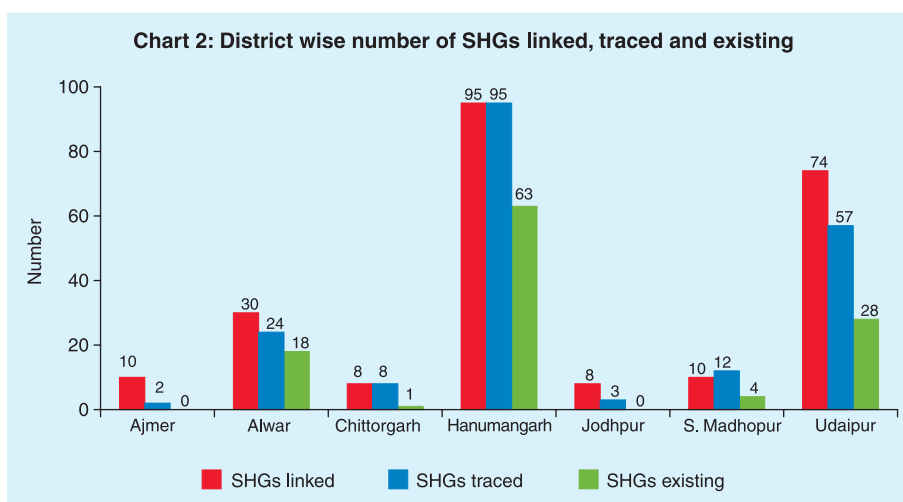
Out of the 235 SHGs linked to banks, the records of only 201 SHGs (85.5 per cent) could be traced out. Despite all efforts made, details of the remaining SHGs were not available, either with NABARD or banks. There is a strong possibility that these SHGs have ceased to exist. In any case, they have, for all practical purposes, been forgotten and written off from the banking system. Further, out of the total SHGs linked to banks, 114 (48.5 per cent) were still in existence at the time of the study. The position is depicted graphically in Chart 1.

It may be seen that at the State level, just less than half of the SHGs that were linked up to March 1998 continued to exist. However,



significant differences were noticed at the district level, both in terms of SHGs traced and SHGs existing. While in Hanumangarh and Sawai Madhopur districts, all the linked SHGs could be traced, on the other hand, in Ajmer district, only 20 per cent of the SHGs could be traced. Similarly, in Hanumangarh and Alwar districts, while 66 and 60 per cent of the SHGs were found to be still in existence, no SHG of the period selected for the study was found existing in Ajmer and Jodhpur districts.

The district-wise position of SHGs linked, traced and in existence is graphically depicted in Chart 2.



The principal reason for the high rate of existence of SHGs in Hanumangarh and Alwar districts was the presence of a strong support system by the promoting organisations. Oriental Bank of Commerce (OBC), the bank that had promoted the SHGs in Hanumangarh district was itself the financing institution and was able to keep a constant watch on them due to its system of weekly meetings firmly in place. In Alwar district, while the NGO that had promoted the SHGs (PRADAN) had largely withdrawn from the area, an SHG federation called Sakhi Samiti had taken over its functions. The regular meetings of Sakhi Samiti went a long way in providing guidance and continuity to the SHGs.

The main reasons for disintegration of groups could be classified under two categories, *viz.*, those pertaining to group dynamics and those external to the group. The reasons relating to group dynamics were:

- (a) internal conflict and rivalry among the group members;
- (b) leadership issues within the group;
- (c) inability to conform to group discipline;
- (d) members in a hurry to obtain loans; and
- (e) more loans taken by members as compared to their repaying capacity.

The principal reasons external to the groups were:

- (a) continuing drought conditions in the villages leading to migration of some group members;
- (b) inadequate support and guidance provided by the promoting NGO; and
- (c) winding up of the promoting NGO itself.

It was evident that the role and responsibility of the promoting organisation was very crucial to the sustainability of the SHGs. It was observed that where the promoting NGO was sincere and committed in its endeavours, the groups had a greater tendency to sustain and mature. However, where the NGO itself lacked the vision and long-term relationship with the SHGs, the groups disintegrated.

(c) Sex-wise composition of SHGs traced and existing

The sex-wise analysis of data pertaining to SHGs traced and existing, given in Table 1 and Chart 3, reveals that there was

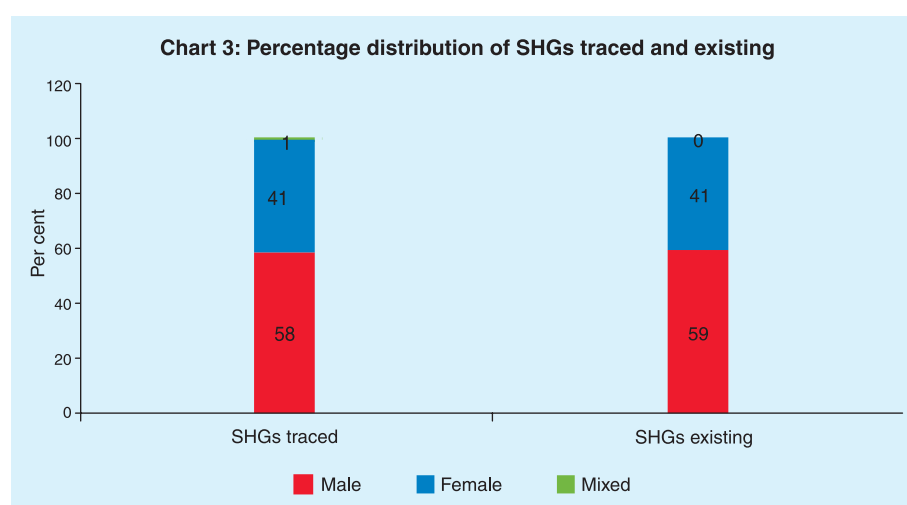
Table 1: Sex-wise composition of SHGs traced and existing at the time of the study

Name of district	Number of SHGs traced				Number of SHGs existing			
	Male	Female	Mixed	Total	Male	Female	Mixed	Total
1	2	3	4	5	6	7	8	9
Ajmer	–	2	–	2	–	–	–	–
Alwar	–	24	–	24	–	18	–	18
Chittorgarh	1	7	–	8	–	1	–	1
Hanumangarh	91	4	–	95	61	2	–	63
Jodhpur	–	3	–	3	–	–	–	–
S. Madhopur	3	9	–	12	2	2	–	4
Udaipur	21	34	2	57	4	24	–	28
Total	116 (58)	83 (41)	2 (1)	201 (100)	67 (59)	47 (41)	–	114 (100)

Note : Figures in parenthesis show percentage to total number of SHGs.

practically no difference between the sex-wise distribution of SHGs traced and existing.

In both the cases, female groups formed 41 per cent of the total SHGs. Data further reveals that out of 116 male groups traced, 67 (58 per cent) were in existence while out of 83 female groups traced, 47 (57 per cent) were in existence. Thus, at the State level there was almost no difference between the sex-wise existence of SHGs as a

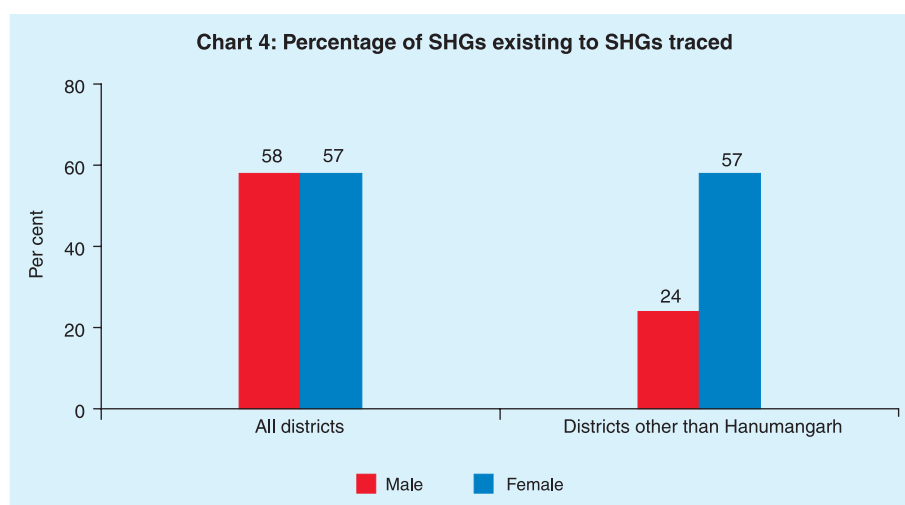


percentage of SHGs traced. This may lead to the inference that there was no difference on account of sex in the existence of groups over a period of time. However, the same was not borne by closer analysis of data and field interactions during the study.

It may be noticed that the presence of Hanumangarh district, with its almost all male groups, has led to distortion of the picture somewhat. If SHGs other than those belonging to Hanumangarh district are taken into account, it was found that only 24 per cent of the traced male groups continued to exist. The corresponding figure for female groups was 57 per cent. Thus, by excluding Hanumangarh district, while there was no change in the percentage for female groups, the percentage for male groups showed a significant decline (Chart 4).

These figures reveal that, barring SHGs in Hanumangarh district, male SHGs had a greater mortality rate than female SHGs. This feature was highlighted most significantly in Udaipur district where male, female and mixed groups were all in existence. In that district, the mortality rate was cent per cent in case of mixed groups, 81 per cent in the case of male groups and only 29 per cent in the case of female groups.

Hanumangarh district proved an exception as all the SHGs linked were under Model 1 of linkage where the bank promotes the groups



and also links them. Since this district also accounted for the largest number of SHGs at that time, it resulted in a masking effect on the figures presented above.

It was clearly evident that male SHGs required a greater degree of supervision than female SHGs. Since that level of supervision was in-built in the Hanumangarh model of OBC, the male SHGs promoted in that district sustained to a greater extent over a period of time. In the case of other SHGs, which had been promoted by NGOs, the same level of supervision and monitoring provided to all SHGs resulted in a greater survival rate of female SHGs. The functionaries of NGOs confirmed the above perception in field interactions. It was also revealed that NGOs were in the process of gradually moving away from male SHGs and devoting increasing attention to female SHGs. Even OBC, which had pioneered male groups in the early 1990s in Hanumangarh district, had moved towards forming an increasing number of female groups in the subsequent years.

Field interactions with functionaries of NGOs revealed that better survival rate of female groups was primarily due to the feminine psyche, which placed an increased importance towards repayment ethics and loan utilisation in the overall interest of the family rather than their personal interests. Furthermore, fewer conflicts over leadership issues were stated to be observed in female groups.

(d) Membership of SHGs

Under the SHG bank linkage programme, the number of members in a group is usually kept between 15-20 members. This number is considered ideal for group cohesion and stability and for exerting peer pressure on the members. However, under the Grameen model of lending, which was adopted by OBC, the number of members is pegged at five. Both models were in existence in the State. The study revealed a decline in the membership of SHGs over a period of time. It was found during the study that in Hanumangarh district, only 48 per cent of the groups had the same number of members as at the time of their formation. The average membership of the 63 SHGs functional at the time of the study had come down from 5.0 to 4.1.

Interestingly, the decline in membership resulted in two 'SHGs' being left with a lone member each while four others were left with only two members each. Thus, these entities, although appearing as SHGs in bank records, were no longer groups in the true sense.

Data obtained from selected SHGs of Alwar, Sawai Madhopur and Udaipur districts also reveals decline in membership (Table 2). Data reveal that while there was a decline of 18 per cent in the membership of SHGs in Hanumangarh district, the decline was 21 per cent in the membership in the three other districts. Thus, over a period of time, the membership of SHGs had come down by about a fifth of their original numbers.

While a decline in the number of members of a group may not by itself be seen as a negative feature, it definitely reveals chinks in the solidarity of the group. This reflects on the quality of the group, which is again dependent on the credentials of the promoting organisation. The lesser decline in the number of members in case of SHGs in Hanumangarh district could be attributed to the fact that the bank had promoted these groups while the SHGs in other districts were promoted by various NGOs. The closer monitoring in case of Hanumangarh district, largely due to the weekly meeting system, could be responsible for the lesser decline in membership. It was also observed that there was a practice of replacement of members of SHGs in all the districts. New members were often included as group members in place of members who had dropped out. However, this practice could also not curb the decline in membership over a period of time.

Table 2: Average membership of SHGs, initially and during the study

Name of district	Number of SHGs	Average initial membership	Average membership during the study
1	2	3	4
Alwar	5	15.0	11.8
Sawai Madhopur	3	18.0	16.1
Udaipur	7	17.7	13.4
Total	15	16.9	13.4

(e) Meetings held and attendance

The position of meetings held and attendance therein was collected for the 44 SHGs, which were still in existence during the study by interacting with some of their members. In 40 of the 44 SHGs (91 per cent), it was reported that the meetings were being held regularly without fail. The remaining SHGs reported that sometimes a few meetings were being skipped or two or three meetings combined into one. The meetings were being held at a fixed place and time. The venue was generally the house of one of the members of the SHG, generally among the office bearers, or at a public place like a school compound. In Hanumangarh district, the meetings were taking place on weekly basis as per the provisions under the Grameen Project. Similarly, weekly meetings were taking place in Alwar district as required under the Sakhi Samiti rules. In other districts, fortnightly or monthly meetings were being held.

As regards attendance at meetings, it was reported that the same varied over time. While most members attended the important meetings, at certain times (such as marriage season, harvest time, *etc.*) the attendance was lower. The position of average attendance at the SHG meetings held over the last one year is presented in Table 3.

It may be seen that in over three-fourths of the SHGs, the average attendance at meetings was over 75 per cent. It was observed that a practice of proxy attendance was in vogue in several SHGs. A member who was unable to attend a meeting would send his saving amount and loan instalment through another member. Such a member would be treated as present for the meeting.

Table 3: Average attendance during the last one year at meetings of SHGs

(N = 44)

Attendance at meetings	Number of SHGs	Percentage
1	2	3
Over 90 per cent	5	11
Over 75 and upto 90 per cent	30	68
Over 60 and upto 75 per cent	7	16
Upto 60 per cent	2	5

In 35 of the SHGs (80 per cent), there were provisions for levying penalties for not attending the meetings. The amount of penalty was generally Rs 5 to Rs 10 per person for not attending a meeting. While the fines were imposed in most SHGs, only 9 per cent of the SHGs reported that the fines were not being collected.

The reasons given by members for not attending the meetings were being out of the village for work or business, being busy with household activities, religious or other functions in the family, and nothing much being done at the meetings. It was observed that the office bearers of the SHGs were most particular in attending the meetings. Members who had to take loans also made it a point to attend the meetings where their loan proposals were to be discussed.

(f) Leadership

Conceptually, the SHGs should provide for grooming for leadership skills among the members. In Hanumangarh district, where the SHGs comprised only five members, the issue of leadership was not found to be of much relevance. It was learnt that at the time of formation of groups, the leadership issue was important as the group leader was to get the last priority in obtaining loan from the bank. With the passage of time and after several loan cycles, the issue was not of concern to the members. Moreover, in a system where loans were granted to individuals, the role of the leader was reduced to a great extent.

In the remaining districts, it was observed that there had been only marginal and cosmetic changes among leaders of SHGs. In most of the SHGs, the leaders at the time of the study were the same as at the time of formation of groups. Even where there was a change in the leader, the same was largely cosmetic such as the secretary becoming the president or the treasurer assuming designation of secretary. In general, the group leadership had remained vested in the same two or three persons among the group during this time span. Perhaps the time span of seven to ten years was not enough for new leadership to emerge.

When asked about this aspect, the members stated that their leaders were generally performing well and they felt no need to change

them. Although anecdotal evidence referred to misuse of position by leaders in several groups leading to collapse of groups, the existing group members seemed relatively complacent in this regard. Perhaps the implicit faith in leadership by the group members was one of the factors responsible for sustaining the groups. Furthermore, among the reasons mentioned for disintegration of groups, leadership issues figured prominently. Hence, SHGs with leadership disputes would have either ceased to exist or the dissatisfied members would have broken away to form new groups. Consequently, the leadership issues in existing SHGs were minimal and not very significant.

It was observed that group leaders generally had a higher status in the groups and often belonged to relatively well-off families as compared to other members. Group leaders generally were also more articulate, possessed higher education level and had more exposure to the outside world than the other group members. A few group leaders had participated in fairs, workshops or exposure visits conducted by their respective NGOs or NABARD.

(g) Group savings

Regular saving by group members is among the core principles of SHGs. The study observed that group members were generally adhering to the saving principle in all the SHGs. In 38 of the 44 SHGs (86 per cent) regular savings were being made at the periodicity prescribed. In the remaining SHGs, savings were being made but not at the prescribed periodicity. In these SHGs, there were occasional cases of several members depositing savings in lump sum.

In two districts, *viz.*, Alwar and Hanumangarh, the prescribed periodicity of savings was on weekly basis. In the remaining districts, the group members were making their savings on monthly basis. At the time of formation of groups, the individual savings varied from Rs 5 to Rs 10 per week in Alwar and Hanumangarh districts and from Rs 10 to Rs 50 per month in the remaining districts. The present rate of savings by members had gone up from those amounts. They now varied between Rs 10 to Rs 50 per week and from Rs 50 to Rs 200 per month in the respective districts.

Provision for fines in case of non-payment of prescribed savings existed in 35 SHGs (80 per cent). The range of fine for default varied from Rs 5 to Rs 10. In most SHGs, the fines were being collected religiously. In only two SHGs (5 per cent) it was reported that fines existed only on paper and were not being levied. It was observed that the fine amounts were rather low and not a deterrent for not depositing the savings in time. However, the provision of fines for not depositing the savings in time acted as a sort of reminder to the members. There was also a degree of social stigma attached to not depositing the saving regularly; hence about 90 per cent of the members generally made their savings in time. Only in a miniscule number of cases, it was reported that the members were so poor that they could not deposit even the minimum savings amount regularly. In very few cases, the savings were made with arrears on account of the members being away from the village in connection with their work.

In the SHG concept, the savings of members are supposed to be deployed towards internal lending amongst the group members. However, under the Grameen model being followed in Hanumangarh district, the savings of members are deposited in the bank and members are not supposed to withdraw the amount. As a result, group members had built up respectable savings over a period of time. As soon as the group savings reach Rs 5,000, the bank makes fixed deposits of Rs 1,000 each in the names of the individual members (assuming that all members have saved equally). In the process, the total savings of the 63 SHGs existing at the time of the study with the bank had accumulated to Rs 22.21 lakh. The average deposit per member worked out to Rs 8,609.

In other districts, where the group savings were being utilised towards internal lending among group members, some SHGs had built up savings bank deposits in the range of Rs 20,000 to Rs 40,000. Some SHGs were withdrawing the entire amount at periodical intervals and distributing the same in proportion to the savings made by the members. Since the amounts were being withdrawn whenever required, it was not possible to get figures for aggregate savings made by SHGs. However, interactions with field functionaries of NGOs

revealed that the total savings of the SHGs that had been in existence for several years were substantial. As a very rough estimate, a member saving Rs 50 per month for eight years would have saved Rs 4,800. A group having 15 such members would have had a total saving of Rs 72,000 during this period.

It was observed that the group savings acted as a source of strength and confidence for the members. Several members, during their interactions with the investigator, expressed pride and happiness at the savings habit that they developed as a result of their becoming members of SHGs. The accumulated savings possessed by the SHG in their accounts were in many cases of an amount that they had never imagined would be possible in their lifetime.

(h) Repeat finance to SHGs

One of the critical issues in sustainability of SHGs is their access to repeated doses of finance. It is generally supposed that over a period of time, the SHGs would access and absorb larger doses of credit. This aspect was examined during the study.

In Hanumangarh district, where all the SHGs were covered under the OBC's Grameen Project, individual group members were the recipients of the loans directly from the bank. Therefore, the position regarding the number of times loans were availed was obtained in respect of selected individual members in that district. In all the other districts, banks disbursed the loans in the names of SHGs; hence the position of repeat finance was considered for the SHGs.

The position regarding number of times individual SHG group members obtained loans from banks in Hanumangarh district is shown in Table 4. It may be seen that over 70 per cent of the members had taken loans on three or more occasions from the bank. As all SHGs covered in the study had been in existence for nearly a decade, the coverage of loans could be considered adequate. It was also observed that over half of the members who reported having taken loan once or twice were those who had joined the SHGs at a later date.

Table 4: Number of times SHG members in Hanumangarh district availed loans from banks

(N=28)

Number of times loan availed	Number of persons	Percentage to total
1	2	3
Once	3	11
Twice	5	18
Thrice	14	50
More than thrice	6	21

The position regarding the number of times SHGs in the remaining six districts obtained loans from banks is indicated in Table 5. It may be seen that the largest number of SHGs (39 per cent) had taken only a single loan from the banks while nearly a third of the SHGs (32 per cent) had taken loans on three or more occasions.

It may be noted that the figures in Table 5 are not strictly comparable to those in Table 4 because data in respect of Hanumangarh district pertains to individual members of SHGs and not SHGs themselves. Secondly, the members selected from SHGs in Hanumangarh district all belonged to SHGs that were in existence at the time of the study whereas the SHGs in other districts for whom data have been presented were those which had been traced during

Table 5: Number of times SHGs availed loans from banks

Name of district	Number of SHGs	Number of times loans availed			
		Once	Twice	Thrice	More than thrice
1	2	3	4	5	6
Ajmer	2	1	1	–	–
Alwar	24	5	13	5	1
Chittorgarh	8	7	1	–	–
Jodhpur	3	3	–	–	–
Sawai Madhopur	12	5	1	4	2
Udaipur	57	20	15	9	13
Total	106	41	31	18	16
	(100)	(39)	(29)	(17)	(15)

Note : Figures in parenthesis indicate percentage to total number of SHGs.

Table 6: Number of times loans availed by SHGs that have ceased to exist

Name of district	Number of SHGs	Number of times loans availed			
		Once	Twice	Thrice	More than thrice
1	2	3	4	5	6
Ajmer	2	1	1	–	–
Alwar	6	2	3	1	–
Chittorgarh	7	7	–	–	–
Jodhpur	3	3	–	–	–
Sawai Madhopur	8	5	1	2	–
Udaipur	29	18	8	3	–
Total	55 (100)	36 (65)	13 (24)	6 (11)	–

Note : Figures in parenthesis indicate percentage to total number of SHGs.

the study. It is but natural that those SHGs that had continued to exist would have obtained loans on more occasions than SHGs that ceased to exist.

The data presented in Table 5 has been disaggregated in Tables 6 and 7 according to whether the SHGs had ceased to exist or whether they continued to exist respectively.

Table 7: Number of times loans availed by SHGs that continued to exist

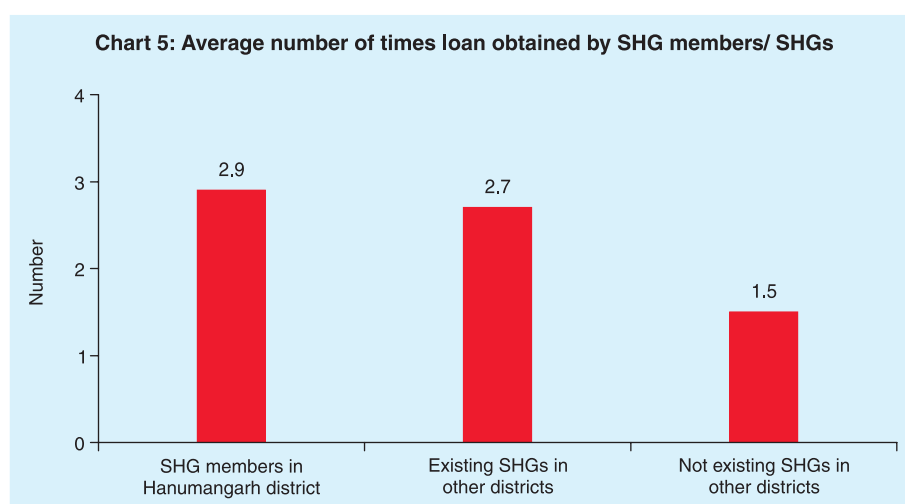
Name of district	Number of SHGs	Number of times loans availed			
		Once	Twice	Thrice	More than thrice
1	2	3	4	5	6
Ajmer	–	–	–	–	–
Alwar	18	3	10	4	1
Chittorgarh	1	–	1	–	–
Jodhpur	–	–	–	–	–
Sawai Madhopur	4	–	–	2	2
Udaipur	28	2	7	6	13
Total	51 (100)	5 (10)	18 (35)	12 (24)	16 (31)

Note : Figures in parenthesis indicate percentage to total number of SHGs.

It may be seen that out of the SHGs that ceased to exist, nearly two-third (65 per cent) had taken only one loan from the banking system. On the other hand, out of SHGs that continued to exist, more than half (55 per cent) had obtained loans on three or more occasions while just one-tenth had obtained a single loan from the banks.

Further data analysis revealed that, on an average, in Hanumangarh district, a member had taken loan 2.9 times. In other districts the average number of times an SHG that had ceased to exist took loan from a bank worked out to 1.5 while the average number of times an existing SHG availed loan from the bank worked out to 2.7 (Chart 5).

Field interactions indicated that there was a greater tendency on the part of the SHGs to crumble during the first two years of their existence. The first loan from the bank was a milestone in the life of an SHG. While in some SHGs the bank loan acted as a binding agent, spurring the members towards greater cohesion and solidarity, in other SHGs, it worked as an instrument of discord resulting in infighting among the members. If the SHG could resolve the issues, which arose subsequent to the first loan from the bank, it would have taken a big stride towards stability.



(i) Quantum of loan taken

One major concern in the context of financing to SHGs has been that the quantum of loan availed has remained rather low. This aspect was examined during the present study.

In Hanumangarh district, loans were taken by individual members as per the provisions of Grameen Project, which stipulates a maximum limit on the loan amount. The amount of first loan was Rs 5,000 while subsequent loans were generally for higher amounts. Since almost all members had taken repeat loans, their present loans were in the range of Rs 8,000 to Rs 25,000. Under the Project, the present ceiling for loan was Rs 25,000. The study showed that while over half the members (58 per cent) had present loans between Rs 20,000 to Rs 25,000, another 21 per cent had present loans between Rs 15,000 to Rs 20,000. The average present loan amount came to Rs 19,600 while the average total loan amount came to Rs 31,500.

In other districts, the amount of first loan availed by an SHG generally ranged from Rs 5,000 to Rs 40,000, save a solitary instance where a loan of Rs 89,700 was granted to an SHG in 1995.

In all districts, repeat loans were generally of higher amounts than first loans. The district-wise distribution of SHGs according to the total loans availed by them till the date of the study is shown in Table 8. It may be seen that over a half of the SHGs had availed of

Table 8: Distribution of SHGs according to the amount of loan received

Name of district	Number of SHGs	Amount of loan availed (Rs lakh)				
		Up to 0.50	0.50-1.00	1.00-2.50	2.50-5.00	Over 5.00
1	2	3	4	5	6	7
Ajmer	2	2	–	–	–	–
Alwar	24	9	8	7	–	–
Chittorgarh	8	8	–	–	–	–
Jodhpur	3	3	–	–	–	–
Sawai Madhopur	12	6	1	4	1	–
Udaipur	57	28	10	9	6	4
Total	106	56 (53)	19 (18)	20 (19)	7 (6)	4 (4)

Note : Figures in parenthesis indicate percentage to total number of SHGs.

Table 9: Distribution of SHGs that ceased to exist according to the amount of loan received

Name of district	Number of SHGs	Amount of loan availed (Rs lakh)				
		Up to 0.50	0.50-1.00	1.00-2.50	2.50-5.00	Over 5.00
1	2	3	4	5	6	7
Ajmer	2	2	–	–	–	–
Alwar	6	3	3	–	–	–
Chittorgarh	7	7	–	–	–	–
Jodhpur	3	3	–	–	–	–
Sawai Madhopur	8	6	–	2	–	–
Udaipur	29	24	5	–	–	–
Total	55 (100)	45 (82)	8 (14)	2 (4)	–	–

Note : Figures in parenthesis indicate percentage to total number of SHGs.

loans of up to Rs 50,000. There were only four SHGs that had so far taken loans of over Rs 5 lakh. The maximum total loan availed by an SHG during its existence was Rs 8.84 lakh, availed by an SHG in Udaipur district.

However, if the figures of SHGs that had ceased to exist and SHGs that continue to exist are studied separately, they throw up different results. These are shown in Tables 9 and 10, respectively.

Table 10: Distribution of SHGs that continued to exist according to the amount of loan received

Name of district	Number of SHGs	Amount of loan availed (Rs lakh)				
		Up to 0.50	0.50-1.00	1.00-2.50	2.50-5.00	Over 5.00
1	2	3	4	5	6	7
Ajmer	–	–	–	–	–	–
Alwar	18	6	5	7	–	–
Chittorgarh	1	1	–	–	–	–
Jodhpur	–	–	–	–	–	–
Sawai Madhopur	4	–	1	2	1	–
Udaipur	28	4	5	9	6	4
Total	51 (100)	11 (21.5)	11 (21.5)	18 (35)	7 (14)	4 (8)

Note : Figures in parenthesis indicate percentage to total number of SHGs.

The figures show that over four-fifth of the SHGs that ceased to exist (82 per cent) had received loans of up to Rs 50,000. On the other hand, only about a fifth of the SHGs (21.5 per cent) that were in existence had availed of loans of that amount. Over half of the SHGs in existence (57 per cent) had received loan amounts of over Rs 1 lakh. It is clear that the SHGs that continued to exist received higher amounts of loans than those that ceased to exist.

The average loan amount received per SHG in all the three categories revealed wide variations in different districts. District-wise figures in this regard are shown in Table 11. It may be observed that the average loan amount availed by an SHG worked out to Rs 62,136. Furthermore, the average loan for an SHG that continued to exist was nearly three times higher at Rs 173,813. The total average loan amount of existing SHGs as compared with the savings made by these SHGs, indicated that the quantum of loan was roughly 2.4 times of their cumulative savings.

Out of the 65 members contacted during the study, as many as 63 (97 per cent) reported getting of loan from the bank. The average loan availed by members who had obtained bank loans in different districts is given in Table 12. It may be seen that the average loan amount was highest in Hanumangarh district and least in Chittorgarh district. The average loan availed per person from the banks at Rs 15,630 was quite low considering that they had been members of the SHG for

Table 11: Average loan amount received per SHG in different districts

Name of district	Average loan amount received per SHG (Rs)		
	All SHGs	SHGs ceased to exist	SHGs existing
1	2	3	4
Ajmer	20,000	20,000	–
Alwar	86,625	42,500	101,333
Chittorgarh	9,375	9,375	–
Jodhpur	25,000	25,000	–
Sawai Madhopur	94,167	51,876	178,750
Udaipur	137,649	37,517	241,357
Total	62,136	31,045	173,813

**Table 12: Average loan amount received per member
in different districts**

Name of district	Number of members	Average loan amount (Rs.)
1	2	3
Alwar	13	14,300
Chittorgarh	3	3,750
Hanumangarh	28	31,500
Sawai Madhopur	6	12,900
Udaipur	13	15,700
Total	63	15,630

around a decade. However, members in districts other than Hanumangarh had also borrowed from the internal savings of the groups on several occasions.

(j) Utilisation of loan

Members reported multiple areas for utilisation of the loan amounts. Table 13 shows the district-wise position in this regard.

It may be seen that an overwhelming majority (91 per cent) of members reported loan utilisation for productive purposes. Among the production purposes, dairy activity was the most preferred activity and purchase of buffaloes and goats was most common. This was followed by availing finance for various types of shops, among them *kirana* shops and cycle repair shops being most common. Nearly half (47 per

**Table 13: Purpose-wise utilisation of loans by SHG members
in various districts**

Name of district	Number of members	Purpose of loan utilisation			
		Production	House/ shop	Consumption	Debt
1	2	3	4	5	6
Alwar	13	10	7	8	2
Chittorgarh	3	–	1	1	1
Hanumangarh	28	28	15	9	4
Sawai Madhopur	6	6	2	4	1
Udaipur	13	13	3	8	3
Total	63	57	28	30	11
	(100)	(91)	(44)	(48)	(17)

Note : Figures in parenthesis indicate percentage to total number of members.

cent) the members reported utilising loan amounts for consumption purposes. Among consumption needs, members had utilised the loans on medical needs, wedding of family members, utensils and jewellery.

A very large number of members (44 per cent) utilised loan amounts towards construction or repair of house or shop. Although construction or repair of shop would qualify for production purposes, it was shown clubbed with construction or repair of house as the nature of utilisation of loan was basically different. Furthermore, some members were running their shop or business from the same location as their residence; hence construction or repair of one of those could not be treated separately. Over one-tenth (17 per cent) of the members reported using the amounts towards repaying earlier debts.

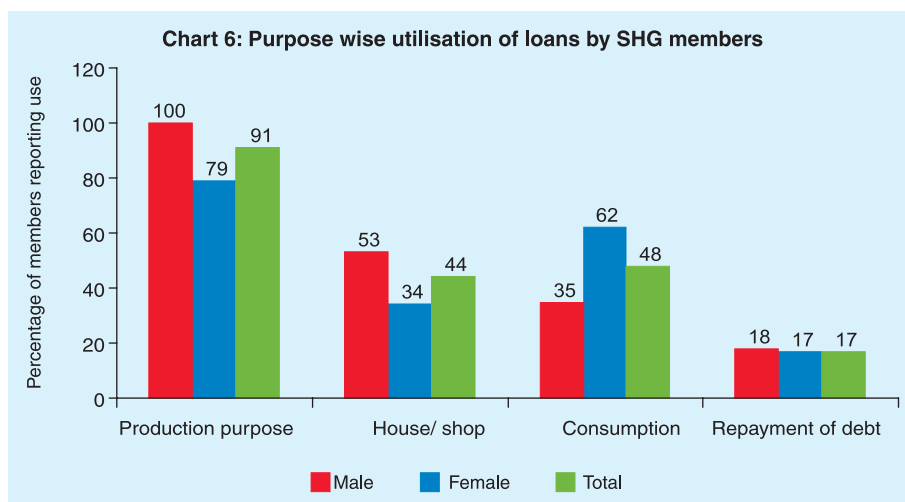
An analysis of the data on utilisation of loans, classified on the basis of sex, shows that while all the male members (100 per cent) reported utilising the loans for productive purposes, just over three-fourths (79 per cent) of the female members did so (Table 14). Furthermore, while only a third of the men (34 per cent) reported utilising loans for consumption purposes, as many as 62 per cent of the women reported so. The position regarding utilisation of loans by SHG members, overall and sex-wise, is depicted in Chart 6.

Field interactions with women SHG members brought out the fact that many women indulged in purchase of jewellery items for their own use or for their children. They looked upon jewellery not only as a cosmetic embellishment but as an avenue for investment or security, to be drawn upon in times of need and crisis.

Table 14: Purpose-wise utilisation of loans by SHG members classified on the basis of sex

Sex	Number of members	Purpose of loan utilisation			
		Production	House/shop	Consumption	Debt
1	2	3	4	5	6
Male	34	34 (100)	18 (53)	12 (35)	6 (18)
Female	29	23 (79)	10 (34)	18 (62)	5 (17)

Note : Figures in parenthesis indicate percentage to total number of members of the respective sex.



(k) Repayment of loans

Prompt and timely repayment of loans has for long been considered the hallmark of lending to SHGs. Several studies have highlighted that repayment in loans granted to SHGs has exceeded 90 to 95 per cent. This aspect was also examined during the course of the study.

In Hanumangarh district, where the loans were granted not in the name of the SHG but in the names of individual members, the repayment record was observed to be good. There was no default in the current loan accounts of all the 28 members contacted during the study. However, a perusal of the current records of the bank revealed that in about 5 per cent of the cases, repayments were not forthcoming as per schedule and the accounts were overdue. It was observed that groups where the membership had reduced to three or less members were more vulnerable to default.

In Alwar district, out of the seven SHG loan accounts still continuing with the original branches, four accounts (57 per cent) were overdue and NPA. In Udaipur district, out of the 21 SHGs continuing to have loan accounts with banks, nine accounts (43 per cent) were irregular and overdue. Out of these, in two accounts the SHGs had ceased to exist and their loan amounts were yet to be repaid.

Furthermore, out of 36 SHG accounts, which were closed at the time of the study, recovery had been irregular and delayed in eight accounts (22 per cent). Even the repayments in some of these accounts had to be re-phased during the period of loan. In Sawai Madhopur district, out of the 12 SHGs that has been credit linked, the accounts of four SHGs (33 per cent) had become NPA. Only two of these SHGs were still in existence. In Chittorgarh district, out of eight SHGs linked, one account (12 per cent) was NPA; the concerned SHG had ceased to exist. In Jodhpur district, out of the three SHG accounts that could be traced, in two of them (66 per cent) the accounts had become NPA before they were settled and closed. In Ajmer district, the repayments in both the SHGs that could be traced had been regular before the accounts were closed.

Thus, the consolidated position in respect of 89 SHGs spread over six districts indicated that in 28 of the SHGs (31 per cent), there were problems relating to repayment of loans. If only the existing SHG accounts are taken into account, the position still worsens with 15 out of 33 accounts (45 per cent) having problems in repayment.

The study thus revealed that the picture of repayment in respect of SHGs linked to banks up to March 1998 was not a rosy one as would have been expected. At the branch level, bankers conceded that several SHG accounts showed signs of irregular repayments. However, where there were sincere NGOs involved, the bankers took recourse to them for pursuing with the SHGs to make repayments regularly. It was observed that the bankers did not make any worthwhile efforts for effecting recovery from recalcitrant SHGs, presumably because of the small sums involved.

Significantly, the repayment record where the bank had itself promoted the SHGs (in Hanumangarh district) was much better than where the SHGs had been promoted by NGOs. In the former case, the bank was directly in touch with the individual SHG members on a weekly basis; hence it resulted in a closer and intimate monitoring of the accounts. In other districts, the bankers relied very heavily on the promoting NGOs for monitoring the accounts

of SHGs. In one of the districts, the banker was ignorant about the location of the SHG and conceded that he had never visited the group. In other districts too, the bankers seldom paid a visit to the SHG after the loan was sanctioned though visits prior to sanction had been made.

Section IV

Emerging Issues

The issues that have emerged from the study relate to sustainability of SHGs, loan frequency and size, membership, leadership, repayment of loans, model of linkage, maintaining of database and the life cycle of SHGs. These issues are summarised below, together with certain suggestions.

- The large-scale disintegration of SHGs as brought out by the study portends a potential threat to the SHGs bank linkage programme. In order to ensure sustainability of SHGs, the quality of groups formed is of prime importance. Group formation needs to be handled in a professional manner by trained personnel. At the apex level, NABARD should focus on paying increased attention to the promoters of SHGs. In recent years, when Government agencies have ventured into group formation in big way, it is very important that their functionaries are also sensitised about the importance of group quality and sustainability. The banks should undertake due diligence of the promoting organisations before releasing the funds. An initial guideline enunciated by NABARD at the time of launching the Pilot Project stated that the group members should have a feeling of mutual help and should not have come together only for the sake of getting bank finance. This is still relevant and should not be lost sight of in the race to achieve the ever-increasing targets for forming SHGs.
- The amount and frequency of loans availed by SHG members may appear to be low but in relation to their savings, it varies between two to three times of the total savings. For the poor

persons who have been exposed to bank finance for the first time in their lives, this amount could be considered adequate. However, for SHGs that continue to sustain beyond a certain time period, say five years, the amount of loan should increase considerably to enable members to graduate to the economic activity stage. The time has come for NABARD to formulate a suitable policy for matured SHGs. Both banks and the promoting organisations have to be sensitised about the financial requirements of SHG members after the SHGs reach a degree of maturity. Such members of mature SHGs who desire to graduate to higher levels should have access to guidance and finance to enable them to increase the scale of their operation, either at the individual level or in the group. Smaller groups of up to five persons, out of the original SHG could be considered separately for financing within the scope of SHG lending.

- The decline in membership of SHGs over a period of time by about one-fifth should cause some rethinking on this aspect. In Hanumangarh district, where the original groups comprised only five members, the reduced membership had in certain cases reduced the 'group' to a single or two members adversely affecting its performance. While the general practice in the context of the SHG bank linkage programme has been to promote groups comprising 15 to 20 members, the desirability of having smaller groups comprising about 10 to 12 members needs to be examined. In the light of performance of five member groups as promoted by OBC under the Grameen Model, there seems to be a case for having smaller groups than the ones presently propagated. Perhaps such smaller groups would result in greater group cohesiveness and solidarity than is in evidence at present.
- While leadership issues were among the major cause for disintegration of SHGs, they were not of much consequence once the group had stabilised. Generally, the better educated and socially and economically more advanced among the group members tended to assume the leadership roles in SHGs. The same set of two or three persons continued with the leadership

roles within the SHGs. This arrangement had been accepted by the other group members. The time period of less than a decade was perhaps too short for alternative leadership to emerge within the groups.

- Problems in repayment of loans by SHGs were quite widespread. Since the amounts involved in these loans at the individual level were not of much significance to the banks, there was a tendency not to take a serious note of irregularities in the repayment schedules of SHGs. However, as the loans to SHGs also had a tendency to slip into the irregular mode more often than not, bankers need to exercise care and caution while dealing with SHGs as they would in case of other borrowers. Besides conducting personal visit to the SHG and due diligence of the promoting NGO before sanctioning loans to the SHGs, the post sanction supervision and monitoring also requires to be carried out seriously. These tasks can be entrusted to the NGOs/ SHGs under the business facilitator and correspondent models in terms of guidelines issued by Reserve Bank of India (RBI) in January 2006⁴.
- The better performance of groups in Hanumangarh district on several parameters than the SHGs in other districts may lead to the impression that Model 1 scores over the Model 2 of linkage. However, that interpretation could be flawed. The groups in Hanumangarh district performed better compared to other SHGs due to better and more intensive monitoring through weekly meetings in the presence of the banker and continuous contact through dedicated bank personnel. If the same features could be adopted in Model 2 of linkage by the promoting organisation, the performance could show an improvement. For such an effort, the promoting organisations/ banks would have to redouble their efforts for group monitoring and support. This would no doubt require increase in their costs. Perhaps the banks or NABARD could be persuaded to share a part of this cost of the promoting institutions. The RBI guidelines on business correspondent and business facilitator models could be used to strengthen the NGO mechanism.

- There exists an imperative need to set up and maintain a systematic life cycle data-base of all SHGs covered under the SHG bank linkage programme. Although NABARD does maintain figures relating to SHGs promoted and financed under the programme, there is a case for individual SHG level data being available at NABARD at its district level offices. Since the SHG bank linkage is a flagship programme of NABARD, it must possess micro level information relating to the SHGs covered under the programme.
- The life cycle of an SHG needs to be studied and understood in detail. The granting of first loan to the SHG should not be viewed as the culmination of the process of linkage (as happens in many cases) but as the first step in the progressive maturing of the group. Unfortunately, the reporting system and the target oriented approach place undue importance to this aspect resulting in complacency on the part of the promoting agencies as well as the banker. This often results in the first signs of problems within the group getting ignored. In order to monitor the progress of the health of SHGs that have been linked to the banking system, all SHGs may be covered by a rating system based on parameters already identified by NABARD. Only those SHGs that secure top ratings may be considered for subsequent doses of funds. A similar rating system may also be made applicable to the promoting organisations.

Notes

- ¹ As per provisional figures for 2006-07, 29.24 lakh SHGs had been linked to banks and cumulative loans of Rs. 18,041 crore disbursed under the programme (Report on Trend and Progress of Banking in India, 2006-07).
- ² These districts, with the number of SHGs in brackets, were Kota (4), Bharatpur (3), Dausa, Banswara and Jhunjhunu (1 each.)
- ³ The district-wise break-ups were as follows:
SHGs: Alwar (5), Chittorgarh (1), Hanumangarh (28), Sawai Madhopur (3) and Udaipur (7); Bank branches: Alwar and Udaipur (3 each), Sawai Madhopur (2), Chittorgarh, Hanumangarh, Ajmer and Jodhpur (1 each);

SHG members: Alwar (15), Chittorgarh (3), Hanumangarh (28), Sawai Madhopur (6) and Udaipur (13); NGOs: Udaipur (2), Alwar, Chittorgarh and Sawai Madhopur (1 each).

- ⁴ Circular DBOD.No. BL.BC. 58/22.01.001/2005-06 dated January 25, 2006 (available on website *www.rbi.org.in*).

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“Globalization, Poverty and Inequality: between a rock and a hard place”, by Raphael Kaplinsky, 2005, Polity Press, Cambridge, UK, pages 280, price £16.99

Globalization and its implication for development is a well discussed issue among academicians, policy makers, non-government organizations and the general public. However, most often the discussions revolve around the pros and cons of globalization. This book by Raphael Kaplinsky, rises above the simple pros and cons and explains the importance of the manner of participation in globalization as the deciding factor of reaping the benefits of globalization. Kaplinsky carves out his arguments logically and in a simple and interesting way. The book examines why some countries failed to benefit from globalization and how the very success of some countries itself is a cause of poverty for others. As the author himself puts it, ‘what is relatively new in the study is that it focuses on the mechanisms through which the export surge from low income countries has affected the employment and inequality in other low income economies’.

The book is divided into three parts. Part I which is further divided into two chapters, examines the concept of globalization and poverty and also reviews the patterns of poverty which have emerged in the globalised era. By laying the theoretical framework in the second chapter, *i.e.*, whether the link between poverty and inequality is a relational or residual one, Kaplinsky tries to analyse it in the next two parts of the book. Part II of the book examines why certain producers may be worse off even though they expand their production and participate in the global economy. He explains this by drawing on the analytical framework of the theory of rent. Although rents provide sustainable income, it is not easily constructed and is also dynamic. Both the existence of rents and the ability to appropriate rent arise from the barriers to entry. The ability of producers to enjoy high and sustained income, depends on their ability to protect themselves from competition by constructing, and/or taking advantage of barriers to entry. Most of the barriers of entry protect the

endogenous categories of rents. With competition, rents erode and along with it the income. He argues that gains from globalization depend on how the producers position themselves in the global markets. The producer has to appropriate rent by adopting various strategies to escape the pressure of competition. Thus, the success of a producer in the global economy depends on how effectively he translates the comparative advantage into competitive advantage by innovation management. In this context he addresses four arenas of innovation management-within individual plants and firms; within co-located industrial clusters; within global value chains; and in managing relations with global buyers. Managing internal competitiveness in a firm itself does not ensure income in the globalised era where individual firms are embedded in a network of firms. So in an increasingly globalised world, managing innovation across the network of firms plays an important role in deciding the winners and losers of globalization.

However, whether the producers from low income countries were been able to absorb the lessons of innovation management is a question to ponder upon. In the fifth chapter, the author looks into this aspect by focusing on three core sectors-clothing and textiles, furniture and automobiles- which are of importance to developing countries. Though each of these sectors has common grounds they differ in the role played in developing countries. The textiles and clothing is a major exporting sector from low income countries, particularly from the lowest income group, whereas the furniture exports are spread among different income groups. Both these are buyer driven chains, while the automobile industry is driven by key transnational producers and is exported from mainly upper and middle income countries though China and India are low income countries. In each of these sectors, global trade has far exceeded global production. Within this trade growth there has been an increasing number of participating developing countries, while there is an increasing evidence of buying among retailers and specialized buyers in clothing and furniture and among assemblers and 0.5-tier component suppliers in autos. Similarly, although production and trade in physical commodities have expanded in each of these sectors, the

intangibles of design, branding and marketing have remained with high-income economies, or in the ownership of firms located in high income countries giving a prominent role to the key chain governors. Another significant factor Kaplinsky has found out, is the increasing role of China in each of these sectors.

The author reiterates that although in each of the sectors global production and trade has increased, it is not possible to say that this will necessarily lead to a wider distribution of incomes and that we can consider poverty as a residual of globalization. Similarly, it is impossible to say that the growth trajectory is sustainable and will spread to other low income countries and to other sectors. He points out that sector specific conclusions cannot be scaled up to the global level. Very often, a detailed analysis of individual firms, countries, groups of countries and sectors are undertaken and the results are scaled up to the global level. However, he points out that there is a fallacy of composition in doing so. In Part III, which is the most important section of the book, he explains these in detail and points out that the progress of some producers in some sectors does not translate into gains reaped by most producers and most sectors. As a consequence, it is difficult to sustain the residual explanation of poverty. Instead, he points out that a significant component of global poverty is relational, a direct result of working in the global economy.

By examining the trends in global production and trade he argues that the low income countries exporting manufactured goods are caught between a rock and a hard place, *i.e.*, between growing production capabilities around the world and increasing concentration of buying power. As a result of this lopsided market, the prices of their manufactured products are squeezed out, resulting in a deterioration in the terms of trade of most of the low income economies. He points out that the emergence of China in the global economy is a major reason for increasing productive capacity. This pressure on prices is likely to continue unless there is a corresponding increase in global consumption.

Theoretically, international trade is expected to bring benefit to the participating economies; most of the trade theories are based on

the assumption of full employment. However, in a world of unemployment, it may not necessarily follow that global production and exchange will benefit all the producers, as some countries may not be able to find markets for their products. If they do so, it might be at the cost of significant reductions in the prices of their products. Kaplinsky points out that the gains from outward oriented manufacturing, in many instances, may result in a fallacy of composition. It makes sense for an individual country such as China to expand massively their exports of manufactures and benefit from it. However, in a world of excess capacity and structural unemployment, there is little space for other less efficient producers. Entry by more and more producers will result only in a fall in the prices of their products. He points out that the surplus labour, the surfeit of investable funds and the mobility of global investors means that global integration provides a win-lose situation outcome on many dimensions, *i.e.*, for many in the global economy, poverty and inequality are not residual, but relational to globalization.

Since poverty and inequality are relational and not a residual concepts, the one-size-fits all approach to poverty and inequality fails to address the issue of poverty and inequality. The author emphasizes the need for active and integrated policies to allow countries to gain from globalization. Given that different countries have different experiences of globalization, it is necessary for countries and regions to respond with appropriately contextual policies, reflecting their individual comparative advantages, constraints, opportunities and trajectories.

On the whole, the book is a substantial contribution to the understanding of the process of globalization, particularly, in the context of developing countries. Shifting away from the dependence on trade in primary products and concentrating on exports of manufactured exports was often looked upon as panacea for the problems faced by the developing countries. Manufactures exports are expected to offer better export earnings and the experience of East Asian countries supported this argument. Nevertheless, questions were raised against the validity of this, pointing out that most of the

developing countries are participating in the low technology intensive section of the value chain, which makes their earnings meager in comparison to the developed countries that are in the high end of the value chain. The book by Kaplinsky is a valuable addition in this stream of thought where he logically and carefully carves out the intricacies in participating in the process of globalization.

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China and India: A tale of two economies by Dilip K. Das
Routledge Publication, New York, 2006, pages 175, price £ 65

While recent debate headlines the growing importance of China and India, the author's timely presentation of the book widely covers the issues relating to their economic growth and political economy. While China's sustained sky-scraping growth, huge capital inflows and tremendous trade surplus called for many debates, the recent achievement of India's high growth along with persistent services sector performance attracted the attention of the world. The book highlights how the two economies emerged as important for the world economy and discusses about their historic prosperity, economic turmoil and their transitional shifts. Going one step ahead, the author has said that while the present wave of globalization is being initiated and led by the United States economy, the current economic restructuring is being led by China and India.

The book is divided into five chapters. The first chapter introduces the book providing different historical facts, statistical evidences and economic analysis in some what a stark manner. The chapter specifically, provides a comparative analysis of the two economies with a special reference to their world economic integration and their importance in it. The next chapter deals with the differences which the two economies have in their growth paths, economic trajectories and political systems. The question of why the Indian economy lags behind the Chinese economy is answered in this chapter. Chapter three examines the issues of China's success in achieving high growth rates. A detailed analysis of China's export performance, saving-investment miracle along with massive foreign capital inflows and its regional importance are presented in this chapter. The Fiscal-cum-Balance of Payments crisis, the rationale for reform implementation and its success and global integration of the Indian economy are the main focus of chapter four. It also covers the impressive achievements of the Indian economy on the ICT front, R&D, pharmaceuticals and the recognition of its business communities in the world. The final chapter looks at the issues of

bilateral interaction of these two economies and their cooperation with each other.

Chapter one “Comparing the comparables” gives a comparative picture about the history, geography, political and economic emergence of China and India. Both the economies which were noted for their prowess and prosperity in history, were later known as poorer economies led by distressful colonization and feudal incompetence. Once they were stellar economies in terms of their GDP and social progress, they became low income countries till the end of 1970s. Comparatively, India was a little better off than China during this period. China started earlier and has gone much further than India in economic reforms and restructuring of the economy and in integrating with the global economy. China’s economic weight continues to increase and India is following it with a lag.

The second chapter “Diverse economic growth paths” deals with the different growth paths chosen by these economies, thereby achieving two different growth trajectories. However, both the economies initially consciously chose the path of deliberate isolation and remained insulated from the global economy for a long time, liberalising their economies at later stages. Since China adopted economic liberalization and modernization of its non-market economy in 1978, it has turned out with a stellar performance and left the Indian economy behind. Furthermore, high saving and investment rates of China successfully attracted Foreign Direct Investments (FDI) and along with it a phenomenal success of its Special Economic Zones (SEZs) outpaced India in achieving a high growth trajectory and large scale employment opportunities. In contrast, the private sector in India which was rigidly shackled by stringent government regulations and controls, known as license raj, created distortions. The implementation of reforms, however, improved the performance of different sectors and some sectors like ICT, ICTeS and BPO have turned out a dynamic performance and are justly regarded as globally competitive. However, the current macroeconomic scenario of the Indian economy presents a mixed picture and chances of catching up with the Chinese are dim. Furthermore, the probability of India’s

ability to sustain even the present level of growth momentum is low because of its tardy pace of implementation of reforms in the past. Despite slow private sector growth and banking and financial sector progress, China has established itself as the economy with the highest long term GDP growth in real terms over the last two decades of the previous century.

How China has achieved a record vertiginous growth after the implementation of its reform process in 1978 is the main theme of discussion in the third chapter titled “The dragon’s breath: the transitioning Chinese economy”. China’s global share of trade, foreign investment and production soared at a historic pace in a short span of two and a half decades. Its macroeconomic management was prudent, if conservative and led to a successful implementation of reforms. But the fundamental reason of the success of reforms in China is that the political leadership, which is widely regarded as well educated, capable and pragmatic, was earnestly committed to it and was not beguiled by ideological dogmas. Their approach to implementation gave high priority to pragmatism. There was nothing of value in the capitalist economic system that they did not rationally consider and adopt for China. This indicates their lack in the reform process which is clearly visible in the state owned enterprises sector and the financial sector. However, China’s successful expansion of SEZs and accession of WTO became helpful in stimulating FDI inflows. All these made China to emerge as a large trading economy and become an export market of global significance for other economies.

“The elephant’s saunter: the transitioning Indian economy”, chapter four of the book, examines various issues relating to India’s success and failure. Since independence, India’s importance and participation in the global economy instantly declined and india was treated as a marginal economy because of its inward looking import substitution industrial policy. A large and grossly inefficient public sector, an intrusive government system and a large, corrupt and inefficient bureaucracy further degraded a deficient and anemic macroeconomic policy environment. The growth performance started improving with the implementation of a small number of furtive

reforms during the 1980s. But the fiscal profligacy of the 1980s again pushed the economy to the 1991 fiscal-cum-BoP crisis. It is because of 1991 crisis that the reform process again reinitiated as that is the reform of 1980s which had improved the growth performance of the economy. The reform programme worked adequately, as intended, and the short term objective of achieving economic stability was achieved. However, some sectors like the wasteful large public sector which needed the instantaneous adoption of aggressive privatization were dealt with in a reluctant manner. Though the first stage of reforms was implemented well, the second stage of reforms like supply side measures still falls short of implementation. The reform programme which outperformed in the financial sector did not succeed in fiscal consolidation, labour reform, *etc.* Despite all these facts, the Indian economy recorded a remarkable rise in the post reform period because of success in the services sector. While the Chinese economy has outpaced the Indian economy by a wide margin, Chinese companies have been found to perform poorly in comparison to their Indian counterparts. Some analysts see in these instances, the possibilities of the birth of a new generation of globally competitive Indian mini-multinationals or TNCs. To emulate China's growth trajectory, India needs to succeed in boldly and efficiently implementing the reforms and restructuring programmes, without ignoring crucial areas on the grounds of political expedience.

The interaction between Chinese and Indian economies is discussed in chapter five titled "Crouching tiger, hidden dragon" how the two emerging economies interact with each other. Starting from ancient civilization till date, both the countries have cooperated with each other in cultural and economic diaspora. They were contemporary potential competitors as well as potential partners and searched opportunities in each other's market. While bilateral trade relationship is increasing day by day, China is largely importing low value products from India despite a large trade surplus. However, both the economies compete only in 25 per cent of their products that are exported to third country markets: they become exporters to each other in some product categories. China is also influencing the

trade growth of many Asian countries including India through its trade performance. Apart from trade, both the economies are competing in getting FDI. The China-India relationship has also been evolving in accordance with the new diplomatic stance of conciliation.

The book covers most of the sides of the Chinese and Indian economies emphasising growth and economic reform issues. It also touches upon very small facts responsible for the success or the failure of economic reforms and economic restructuring. The author, however, has given more prominence to China's success overlooking the problems of the Chinese financial sector, particularly its persistent financial repression with deliberately fixed exchange rates and the role of the political system in its financial sector management. Furthermore, the author has also neglected the next young generation and knowledge economy of India who are going to drive the global economy in the coming years. The author has rightly flagged the issues related to India's failure of reform in some sectors and the requirements to achieve a sustained growth. The book is a systematic presentation of the political system, historical emergence and other ups and downs of China and India thereby becoming informative for all its readers apart from those of the economic stream. Written in a simple, comprehensive and authoritative manner, it will attract all those readers who have a keen interest in political macroeconomics. On the whole, the book provides all sorts of information associated with the two economies in an anecdote style.

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