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Use of Derivatives by India's Institutional Investors: Issues and Impediments

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1 Coverage and perspectives

One of the observed features of the equity derivatives market in India is that there has been little participation of institutional investors. In the ensuing sections, we examine issues and impediments in the use of different types of derivatives available for use by these institutional investors in India: Equity, Fixed Income, Foreign Currency, and Commodity Derivatives. The intensity of derivatives usage by any institutional investor is a function of its ability and willingness to use derivatives for one or more of the following purposes:

1. Risk Containment: Using derivatives for hedging and risk containment purposes.
2. Risk Trading/Market Making: Running derivatives trading book for profits and arbitrage.
3. Covered Intermediation: On-balance-sheet derivatives intermediation for client transactions, without retaining any net-risk on the balance sheet (except credit risk).

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These perspectives are considered in examining issues and impediments in use of derivatives in the following sections. These sections are organised by type of institutional investor, and their use of each of the specific derivative types separately. The different institutional investors could be meaningfully classified into: Banks, All India Financial Institutions (FIs), Mutual Funds (MFs), Foreign Institutional Investors (FIIs) and Life and General Insurers.

2 Banks

Based on the differences in governance structure, business practices and organizational ethos, it is meaningful to classify the Indian banking sector into the following:

1. Public Sector Banks (PSBs);
2. Private Sector Banks (Old Generation);
3. Private Sector Banks (New Generation); and
4. Foreign Banks (with banking and authorized dealer license).

Credit and interest rate risks are two core risks all banks accept and hope to profit from. Foreign currency (price) risk accepted by banks varies widely across the four categories. Commodity (price) risk accepted by banks is limited to gold price risk in respect of gold deposits accepted by five banks under their schemes framed under RBI guidelines on the Gold Deposit Scheme 1999 announced in the union budget for the year 1999-2000. Equity (price) risk accepted by banks again is limited to their direct or indirect (through MFs) exposure to equities under the RBI prescribed 5 percent capital market instruments limit (of total outstanding advances as at previous year-end). Some banks may have further equity exposure on account of equities collaterals held against loans in default.

2.1 Credit derivatives

The market for credit derivatives is currently non-existent in India, and hence has been dealt with in brief here. Credit derivatives seek to transfer credit risk and returns of an asset from one counter party to another without transferring its ownership. Credit default swaps and options, total return swaps, credit linked notes, credit spread forwards and options are some examples. The market for credit derivatives is currently non-existent

in India, though it has the potential to develop. The sellers of credit derivatives must be able to hedge their risks, to be able to quote a price for the protection they are selling.

Perhaps, the following evolution in the corporate credit markets in India could pave way to a credit derivatives market:

1. Presence of a liquid corporate bond market is essential for a term structure of corporate credit spreads over the sovereign curve to emerge.
2. Insurance sector which is a seller of credit derivatives in other markets would need evolve on the sell side of the credit derivatives market.
3. RBI guidelines on guarantees and co-acceptances[2] presently preclude banks from issuing guarantees favoring other lending agencies, banks or FIs for loans extended by them. This restriction would need to go if banks are to sell or write credit derivatives.
4. There is no RBI guideline permitting use of credit derivatives by banks and FIs to reduce regulatory capital on their respective balance sheet. This is one of the best uses of credit derivatives internationally.

2.2 Equity derivatives

Given the highly leveraged nature of banking business, and the attendant regulatory concerns of their investment in equities, banks in India can, at best, be termed as marginal investors in equities. Use of equity derivatives by banks ought to be inherently limited to risk containment (hedging) and arbitrage trading between the cash market and options and futures market. However, for the following reasons, banks with direct or indirect equity market exposure are yet to use exchange traded equity derivatives (viz., index futures, index options, security-specific futures or security-specific options) currently available on the National Stock Exchange (NSE) or Bombay Stock Exchange (BSE):

1. RBI guidelines on investment by banks in capital market instruments do not authorize banks to use equity derivatives for any purpose. RBI guidelines also do not authorise banks to undertake securities lending and/or borrowing of equities. This disables also banks pos-

[2] RBI master circular DBOD no. DIR. BC. 07/13.03.00/2002-2003 dated 26 July 2002

sessing arbitrage trading skills and institutionalised risk management processes for running an arbitrage trading book to capture risk free pricing mis-match spreads between the equity cash and options and futures market – an activity banks currently any way undertake in the fixed income and FX cash and forward markets.

2. Direct and indirect equity exposure of banks is negligible and does not warrant serious management attention and resources for hedging purposes.
3. The internal resources and processes in most bank treasuries are inadequate to manage the risk of equity market exposures, and monitor use of equity derivatives (even if used only for risk containment purposes).
4. Inadequate technological and business process readiness of their treasuries to run a equity arbitrage trading book, and manage related risks.

2.3 Fixed income derivatives

Scheduled Commercial Banks, Primary Dealers (PDs) and FIs have been allowed by RBI since July 1999[3] to write Interest Rate Swaps (IRS) and Forward Rate Agreements (FRAs) as products for their own asset liability management (ALM) or for market making (risk trading) purposes. Since October 2000, IRS can be written on benchmarks in domestic money or debt market (e.g. NSE MIBOR, Reuter Mibor, GoI Treasury Bills) or on implied foreign currency interest rates [e.g. Mumbai Interbank Forward Offer Rate (MIFOR), Mumbai Interbank Tom Offer Rate (MITOR)]. IRS based on MIFOR/MITOR could well be written on a stand-alone basis, and need not be a part of a Cross Currency Interest Rate Swap (CC-IRS). This enables corporates to benchmark the servicing cost on their rupee liabilities to the foreign currency forward yield curve.

There is now an active Over-The-Counter (OTC) IRS and FRA market in India. Yet, the bulk of the activity is concentrated around foreign banks and some private sector banks (new generation) that run active derivatives trading books in their treasuries. The presence of Public Sector Bank (PSB) majors (such as SBI, BoB, BoI, PNB, amongst others) in the rupee IRS market is marginal, at best. Most PSBs are either unable or unwilling to

[3]RBI Ref No. MPD>BC> 187/07.01.279/1999-2000 dated 7 July 1999

run a derivatives trading book enfolding IRS or FRAs. Further, most PSBs are not yet actively offering IRSs or FRAs to their corporate customers on a "covered" basis with back-to-back deals in the inter-institutional market. The consequence is a paradox. On the one side you have foreign banks and new generation private sector banks who run a derivatives trading book but do not have the ability to set significant counter party (credit) limits on a large segment of corporate customers of PSBs. And, on the other side are PSBs who have the ability and willingness to set significant counter party (credit) limits on corporate customers, but are unable or unwilling to write IRS or FRAs with them. Thereby, the end user corporates are denied access through this route to appropriate hedging and yield enhancing products, to better manage the asset-liability portfolio.

This inability or unwilling of PSB majors seemingly stems from the following key impediments they are yet to overcome:

1. Inadequate technological and business process readiness of their treasuries to run a derivatives trading book, and manage related risks.
2. Inadequate readiness of human resources/talent in their treasuries to run a derivatives trading book, and manage related risks.
3. Inadequate willingness of bank managements to the "risk" being held accountable for bona-fide trading losses in the derivatives book, and be exposed to subsequent onerous investigative reviews, in a milieu where there is no penal consequence for lost opportunity profit.
4. Inadequate readiness of their Board of Directors to permit the bank to run a derivatives trading book, partly for reasons cited above, and partly due to their own "discomfort of the unfamiliar."

2.3.1 Interest rate options and futures

The RBI is yet to permit banks to write rupee (INR) interest rate options. Indeed, for banks to be able to write interest rate options, a rupee interest rate futures market would need to first exist, so that the option writer can *delta* hedge the risk in the interest rate options positions. And, according to one school of thought, perhaps the policy dilemma before RBI is: how to permit an interest rate futures market when the current framework does not permit short selling of sovereign securities. Further, even if short selling of sovereign securities were to be permitted, it may be of little consequence unless lending and borrowing of sovereign securities is first permitted.

2.4 Foreign currency derivatives

Banks that are Authorized Dealers (ADs) under the exchange control law are permitted by RBI to undertake the following foreign currency (FCY) derivative transactions:

- For bank customers for hedging their FCY risks.
- FCY:INR Forward Contracts, and Swaps (currency only and/or CC-IRS).
- Cross-Currency Forward Contracts, and Swaps.
- Cross-Currency Options.
  - With inter-bank participants in India or overseas for risk containment or risk trading purposes (within the overall open position limit allowed by RBI to the respective bank).
- FCY:INR Forward Contracts, and Swaps (currency only and/or CC-IRS).
- Cross-Currency Forward Contracts, and Swaps.
- Cross-Currency Options (only on a fully covered back-to-back basis, wherein the cover transaction may be with a bank in India or overseas or on an internationally recognized options exchanges).
- With bank customers for swapping from INR to FCY their long term INR liabilities.
- FCY:INR Forward Contracts, and Swaps (currency only and/or CC-IRS).

RBI is yet to permit authorized dealers to write FCY:INR options. Interestingly, domestic corporates with rupee liabilities may also enter into FCY:INR swaps with authorized dealers to hedge their long-term interest rate exposures. (This enables corporates to benchmark their rupee liability servicing costs to foreign currency yield curve).

There is now an active Over-The-Counter (OTC) foreign currency derivatives market in India. However, the activity of most PSB majors in this market is limited to writing FCY derivatives contracts with their corporate customers on fully covered back-to-back basis. And, most PSBs do not run an active foreign currency derivatives trading book, on account of the impediments enumerated earlier that need to be overcome at their end.

2.4.1 Tax issues in foreign currency derivatives

From a market development perspective, the key tax issue that arises is, the applicability or otherwise of withholding tax on the cash flows exchanged in the FCY:INR derivatives contract. In absence of a specific binding ruling either of the Central Board of Direct Taxes ('CBDT') or a competent Court, the income-tax law remains wide open to interpretation. Technically, in absence of a prior "debt incurred", cash flows under CC-IRS or IRS do not bear the character of "interest" as understood under the income tax law.[4] Hence, withholding tax applicable to 'interest' payments should not apply. However, cash flows under interest rate swaps as well as currency swaps are 'revenue' in character in the hands of the recipient bank. And, where the recipient bank is a tax non-resident, whether any part thereof is (or is not) liable to tax in India, requires determination about applicability of relevant double tax avoidance treaties between India and the country of tax residence of the recipient bank, the business presence ('permanent establishment') of the recipient bank in India etc.. It is understood that, currently, market participants in the foreign currency derivatives market transact based on their legal/internal counsel views on these tax issues, leaving themselves exposed to contingent tax risk or litigation. Resolution of these tax issues is crucial for the long-term development of the foreign currency and fixed income derivatives market in India.

2.5 Commodity derivatives

In 1997, RBI permitted seven banks to import and resell gold as canalizing agencies. It is understood that now about 13 banks ('bullion banks', for short) are active in this business. The quantum of gold imported through bullion banks is in the region of 500 tonnes per annum.[5] However, bullion banks do this business on consignment purchase and sale basis for a transaction fee, and do not retain any gold price risk on its books. Typically, the bullion bank's customers are bullion traders and jewellery units in India. The commodity risk accepted by banks is limited to price risk of gold (deposits) accepted by five bullion banks that launched their schemes

[4] See section 2(28A) of the Income-tax Act, 1961

[5] See, Y.V.Reddy. 'Evolving role of gold – recent trends and future direction', address at conference organized by World Gold Council, New Delhi, 21 March 2002

under the RBI guidelines on the Gold Deposit Scheme 1999 announced in the union budget of 1999-2000.

In brief, these bullion banks accept assayed gold as a deposit for 3 to 7 years tenors, at the end of which the deposit is repayable at the price of gold as on date of maturity. These gold deposits carry interest ranging from 3 percent to 4 percent per annum. The quantum of gold mobilized so far by the bullion banks under these gold deposits schemes is about 7 tonnes.[6] SBI is a market leader in this segment with a market share of perhaps over 90 percent.

There is no forward market for gold in India. In fact, forward contracts on gold are prohibited.[7] And, for this purpose, a contract settled later than T+11 (days) is treated as a forward contract. Therefore, bullion banks have the following alternatives to hedge their gold price risk:

1. Sell the gold in the Indian spot OTC market, and buy gold futures or call option in an overseas commodities exchange (for example, the New York Mercantile Exchange (NYMEX)) along with a matching FCY:INR forward contract to hedge the foreign currency risk embedded in the gold futures contract.
2. Lend the gold (received in deposit) to jewellery manufacturing units in India in the form of 'gold loans', and manage the attendant credit risk accepted by it, through a combination of cash margins, bank guarantees and other collaterals.

Bullion banks operating schemes under the Gold Deposit Scheme, 1999 are permitted under the exchange control regulations to use exchange traded or OTC hedging products available overseas to manage the gold price risk. However, such fully hedged rupee cost of the gold deposit (i.e., the first alternative above) is particularly high given the two (gold and FCY) components that need to be hedged. This, coupled with the 3 percent to 4 percent annual interest payable on the deposit, makes the gold deposit product financially unviable for the bullion bank. Therefore, the only viable alternative for the bullion bank is to create a gold loan portfolio to match its gold deposit liability, and ensure that the spread is adequate to cover the credit risk, product servicing cost including SLR cost. (Incidentally, RBI has exempted balances under gold deposit scheme from CRR

[6]See, Y.V.Reddy. 'Evolving role of gold – recent trends and future direction', address at conference organized by World Gold Council, New Delhi, 21 March 2002

[7]Under the Forward Contracts (Regulations) Act, 1952

maintenance, but not SLR maintenance (though gold held by the bank in physical form constitutes and eligible SLR asset).[8] This implies an additional SLR cost of servicing the gold deposit.)

3 All India financial institutions (FIs)

With the merger of ICICI into ICICI Bank, the universe of all-India FIs comprises IDBI, IFCI, IIBI, SIDBI, EXIM, NABARD and IDFC. In the context of use of financial derivatives, the universe of FIs could perhaps be extended to include a few other financially significant players such as HDFC and NHB.

3.1 Equity derivatives

Equity risk exposure of most FIs is rather insignificant, and often limited to equity devolved on them under underwriting commitments they made in the era upto the mid-1990s. Use of equity derivatives by FIs could be for risk containment (hedging) purposes, and for arbitrage trading purposes between the cash market and options and futures market. For reasons identical to those outlined earlier vis-à-vis banks, FIs too are not users of equity derivatives. However, there is no RBI guideline disabling FIs from running an equities arbitrage trading book to capture risk free pricing mis-match spreads between the equity cash and options and futures market. Yet, it appears that most FIs do not run an equities arbitrage trading book. Possible reasons could include inadequate readiness in terms of possessing arbitrage trading skills and institutionalised risk management processes for running an arbitrage trading book.

3.2 Fixed income derivatives

Since July 1999, like banks, even FIs are permitted to write IRS and FRA for their asset liability management (ALM) as well as for market making purposes. Some FIs actively use IRS and FRA for their ALM. Also, a few have plans to offer IRS and FRA as products to their corporate customers (to hedge their liabilities), albeit on a fully covered back-to-back basis, to begin with. However, none are yet ready to run a rupee derivatives trading

[8] RBI notification dated October 5, 1999

book. The issues and impediments they need to yet overcome are largely similar to those facing PSBs.

3.3 Foreign currency derivatives

Most FIs with foreign currency borrowings have been users of FCY:INR swaps, cross currency swaps, CC-IRS, and FRAs for their liabilities management. With the prior approval of RBI, FIs can also offer foreign currency derivatives as a product to their corporate borrowers on a fully "covered" back-to-back basis. Yet, most FIs have not yet readied themselves to explore this business opportunity.

3.4 Commodities derivatives

FIs have no proximate exposure to commodities. There are also no credit products whose interest rate is benchmarked to any commodity prices. Therefore, the issue of they using commodity derivatives (whether in the overseas or Indian market) does not arise.

4 Mutual funds

4.1 Equity derivatives

Mutual Funds ought to be natural players in the equity derivatives market. SEBI (MF) Regulations also authorize use of exchange traded equity derivatives by mutual funds for hedging and portfolio re-balancing purposes. And, being tax exempt, there are also no tax issues relating to use of equity derivatives by them. However, most mutual funds (whether managed by Indian or foreign owned asset management companies) are not yet active in use of equity derivatives available on the NSE or BSE.

The following impediments seem to hinder use of exchange trade equity derivatives by mutual funds:

1. SEBI (Mutual funds) regulations restrict use of exchange traded equity derivatives to 'hedging and portfolio rebalancing purposes'. The popular view in the mutual fund industry is that this regulation is very open to interpretation; and the trustees of mutual funds do not wish to be caught on the wrong foot! The mutual fund industry therefore wants SEBI to clarify the scope of this regulatory provision.

2. Inadequate technological and business process readiness of several players in the mutual fund industry to use equity derivatives and manage related risks.
3. The regulatory prohibition on use of equity derivatives for portfolio optimization return enhancement strategies, and arbitrage strategies constricts their ability to use equity derivatives.
4. Relatively insignificant investor interest in equity funds ever since exchange traded options and futures were launched in June 2000 (on NSE, later on BSE).

4.2 Fixed income derivatives

SEBI (MF) regulations are silent about use of IRS and FRA by mutual funds. Evidently, IRS and FRA transactions entered into by mutual funds are not construed by SEBI as derivatives transactions covered by the restrictive provisions which limit use of derivatives by mutual funds to exchange traded derivatives for hedging and portfolio balancing purposes. MFs are emerging as important users of IRS and FRA in the Indian fixed income derivatives market. At least a few mutual funds actively use IRS to optimize yield and reduce the *duration* of their bond scheme portfolios, by paying fixed rate and receiving floating rate. It is understood that some of these IRS are benchmarked to MIFOR as well. (Needless to add, given the open-ended nature of most bond schemes of mutual funds, such MIFOR linked IRS have the potential of generating noticeable *basis* risk, besides the liquidity risk in the underlying bond asset of longer maturity.)

4.3 Foreign currency derivatives

In September 1999,[9] Indian mutual funds were allowed to invest in ADRs/GDRs of Indian companies in the overseas market within the overall limit of US$ 500 million with a sub-ceiling for individual mutual funds of 10 percent of net assets managed by them (at previous year-end), subject to maximum of US$ 50 million per mutual fund. Several mutual funds had obtained the requisite approvals from SEBI and RBI for making such investments. However, given that most ADRs/GDRs of Indian companies traded in the overseas market at a premium to their prices on domestic eq-

[9] SEBI circular MFD/CIR. No.5/062/99 dated 30 September 2000.

uity markets, this facility has remained largely unutilized. Therefore, the question of using FCY:INR forward cover or swap did not much arise.

However, recently, from 30 March 2002,[10] domestic mutual funds have been permitted to invest in foreign sovereign and corporate debt securities (AAA rated by S&P or Moody or Fitch IBCA) in countries with fully convertible currencies within the overall market limit of US$ 500 million, with a sub-ceiling for individual mutual funds of four percent of net assets managed by them as on 28 February 2002, subject to a maximum of US$ 50 million per mutual fund. Several mutual funds have now obtained the requisite SEBI and RBI approvals for making these investments. Once investment in foreign debt securities pick-up, mutual funds ought to emerge as active users of FCY:INR swaps to hedge the foreign currency risk in these investments.

4.4 Commodity derivatives

Under SEBI (MF) regulations, mutual funds can invest only in transferable financial securities. In absence of any financial security linked to commodity prices, mutual funds cannot offer a fund product that entails a proximate exposure to the price of any commodity. Therefore, the issue of they using commodity derivatives (whether in the overseas or Indian market) does not arise.

However, interestingly, one of the players in the mutual fund industry proposes to offer an exchange traded gold fund that would invest solely in transferable gold receipts/certificates issued by one or more of the 13 bullion banks which have been authorized by RBI to accept gold deposits under the Gold Deposit Scheme 1999. The draft offer document of the scheme is awaiting SEBI clearance. This product aspires to offer investors the ability to hold gold as an asset class (with its attendant risks and rewards) in the form of a financial asset, with the prospect of also getting some regular income in the form of interest on the gold receipts/certificates held by the fund.

Incidentally, for market makers of the fund, it also offers the possibility of profiting from the spread which exists between the wholesale price of gold in India[11] at which the banks would issue the gold receipts/certificates,

[10] SEBI Circular MFD/CIR/17/419/02 dated 30 March 2002.

[11] That is, the 'all in' landed cost of imported gold, including custom duty, sales tax, and transaction charges

and the retail price of gold in India (which is often about five percent higher than the wholesale price) at which the units of the scheme could trade in the secondary market. [The implicit assumption here is that, though the scheme NAV is computed at the wholesale price of gold in India, the units may trade on the exchange at a premium to NAV-closer to the retail price of gold in India].

5 Foreign institutional investors (FIIs)

5.1 Equity derivatives

Till January 2002, applicable SEBI and RBI Guidelines permitted FIIs to trade only in index futures contracts on NSE and BSE. It is only since 4 February 2002[12] that RBI has permitted (as a sequel to SEBI permission in December 2001) FIIs to trade in all exchange traded derivatives contracts within the position limits for trading of FIIs and their sub-accounts. (These open position limits have been spelt out in SEBI circular dated 12 February 2002.)[13] With the enabling regulatory framework available to FIIs from February 2002, their activity in the exchange traded equity derivatives market in India should increase noticeably in the emerging future. Evidently, several FIIs are still in the process of completing the process of their internal approvals for use of exchange traded equity derivatives on the NSE or BSE. Perhaps, the two years of successful track record of the NSE in managing the systemic risk associated with its futures and options (F&O) segment would also pave way for greater FII activity in the equity derivatives market in India in the emerging future.

5.1.1 Tax issues in equity derivatives for FIIs

Two crucial tax issues arise in use of equity derivatives by FIIs:

1. Tax character of profit or gain from equity derivatives contract – is it business income or capital gains, and if business income, is it speculative business income or non-speculative business income.
2. Applicability or otherwise of withholding tax on profits from equity derivatives contracts.

[12] RBI Circular ECO.CO.FII/515/11.01.01/(16) 2000-01 dated 4 February 2002.
[13] SEBI circular SMD/DC/CIR-11/02 dated 12 February 2002

In absence of a specific finding ruling either from the CBDT or a competent court, the income-tax law on these issues remains wide open to interpretation. Technically, given the short tenor of equity derivative contracts, the better view seems to be that the profit or loss from equity derivative contracts would be business profit or loss rather than a capital gain/loss. Interestingly, the CBDT circular dating back to 12 September 1960[14] interprets very generously *hedging transactions* in commodities, stocks and shares, to include portfolio and strategic hedging, and does not confine hedging transactions to a *position* hedge. And, any profit or loss from a hedging transaction in stocks and shares is treated as a *non speculative business profit or loss*. This is significant because losses from speculative transactions are 'ring fenced' and cannot be offset against capital gains or other business profits.[15]

Given that all FIIs are non-residents for tax purposes, whether any part of the profit or loss from equity derivatives transactions is liable to tax in India or not, requires technical determination about applicability of the relevant double tax avoidance treaties between India and country of tax residence of the recipient FII, the business presence ('permanent establishment') of the recipient FII in India etc. The applicability or otherwise of withholding tax on profits from equity derivatives transactions by FIIs would also have to be based on the foregoing determination. Resolution of these tax issues at the policy level is perhaps crucial for the long term development of the equity derivatives market in India.

5.2 Fixed income derivatives

Since May 2000, FIIs are permitted to invest in domestic sovereign or corporate debt market under the 100 percent debt route subject to an overall cap under the external commercial borrowing (ECB) category, with individual sub-ceilings allocated by SEBI to each FII or sub-accounts. FIIs are also permitted to enter into foreign exchange derivative contracts (including currency swaps and CCIRS) by RBI[16] to hedge the currency and interest rate risk to the extent of market value of their debt investment under the 100 percent debt route.

[14] CBDT Circular No.23D(XXXIX-4) dated 12-9-1960

[15] See section 43(5) read with Explanation to section 28 read with section 73 of the Income-tax Act.

[16] RBI circular EC.FMD.No. 676/02.03.75/99-2000 dated 23 June 2000

However, investment by FIIs in the domestic sovereign or corporate debt market has been negligible till now. Perhaps, the spread between fully hedge rupee cost of funds for an FII and the return on investment in India sovereign securities or top rated domestic corporate debt securities is too thin to be attractive. In fact, the spread could turn negative after payment of Indian taxes (20 percent under domestic law, 10 percent to 15 percent under some double tax avoidance treaties) applicable on interest earned in India by FIIs. Therefore, FII activity in the domestic fixed income derivatives market has been largely absent.

5.3 Foreign currency derivatives

Equity investing FIIs leave their foreign currency risk largely unhedged since they believe that the currency risk can be readily absorbed by the expected returns on equity investments, barring in periods of unforeseen volatility (such as the far eastern crisis). FII investment in the domestic sovereign and corporate debt market has been negligible. Consequently, FII activity in the foreign currency derivatives market in India has also been negligible till now.

6 Life and general insurers

6.1 Equity derivatives

The Insurance Act as well as the IRDA (Investment) Regulations 2000 are silent about use of equity (or other) derivatives by life or general insurance companies. It is the view of the Insurance Regulatory and Development Authority (IRDA) that life and general insurers are not permitted to use equity (or other financial) derivatives until IRDA frames guidelines/regulations relating to their use. And, IRDA is yet to frame these guidelines/regulations, though it is seized of the urgent need to frame them. Life or general insurers would have to wait for these guidelines/regulations to fall in place before they can use equity (or other financial) derivatives. Assuming this happens sooner than later, most new life and general insurers have been established only in the past two years or so, and they currently have little or no equity investments at all. Given the nascent stage at which they are, it will take at least a few years before they become active investors in the equity market.

Till then, use of equity derivatives would be of relevance primarily to the incumbent public sector insurance majors, namely, Life Insurance Corporation of India (LIC), General Insurance Corporation of India (GIC), New India Assurance Company Limited (NIA), United India Insurance Company Limited, National Insurance Company Limited, and Oriental Insurance Company Limited. And, these incumbents would have to overcome the following key impediments before they actively use equity (or other financial) derivatives:

1. Inadequate technological and business process readiness of their investment management function to run a derivatives trading book, and manage related risks.
2. Inadequate readiness of human resources/talent in their investment management function to run a derivatives trading book, and manage related risks.
3. Inadequate willingness of insurer managements to 'risk' being held accountable for bonafide losses in the derivatives trading book (assuming regulations permitting use of equity derivatives for purposes other than hedging), and be exposed to subsequent onerous investigative reviews.

6.2 Fixed income derivatives

As indicated earlier, it is view of the IRDA that use of rupee fixed income derivatives (including IRS and FRA) by Life and General Insurers too would have to wait for IRDA guidelines/regulations on use of financial derivatives. Typically, life insurers with their long-term liabilities under guaranteed products may be natural receivers of fixed interest rate and payers of floating rate in the rupee IRS market. On the other hand, banks, with their significant fixed rate SLR holdings and relatively shorter-term Demand and Time Liabilities (DTL), could be natural receivers of floating rate and payers of fixed rate in the rupee IRS market. Hence, one could expect significant increase in IRS market activity once IRDA guidelines/regulations on use of fixed income derivatives are in place.

6.3 Foreign currency derivatives

Given the long-term nature of life insurance contracts, insurance regulations in many parts of the world apply *currency-matching* principle for

assets and liabilities under life insurance contracts. Indian insurance law too prohibits investment of funds from insurance business written in India, into overseas or foreign securities. Hence, Indian life and general insurers have no presence in the foreign currency derivatives market in India.

6.4 Commodities derivatives

Life or general insurers have no proximate exposure to commodities. Therefore, the issue of they using commodity derivatives (whether in the overseas or Indian market) does not arise.

7 Concluding remarks

Derivative markets in equities, fixed income, and foreign currency are at their nascent stage of evolution in India, but have significant growth potential. For this potential to be realized, as discussed in the previous sections, one or more of the following issues or impediments would have to be overcome and resolved:

1. The regulatory framework applicable to the respective derivative markets and participants would need to evolve further.
2. The technological and business process framework of several key participants in these markets needs to readied to manage the risks relating their activity in the derivatives market.
3. The human resources/talent of several key participants in these markets needs to be vastly upgraded and readied to manage the exposures and risks relating their activity in the derivatives market.
4. A framework which (a) relieves managements of PSBs and FIs of the *risk* of being held accountable for bonafide trading losses in the derivatives book and being exposed to subsequent onerous investigative reviews; (b) but concomitantly holds managements of public sector banks and FIs accountable for lost opportunity profit, needs to be ushered in.
5. The senior and top management of several key participants needs to undergo an orientation phase to familiarize themselves with the conceptual underpinnings and microstructure of these derivatives markets to help them establish an appropriate governance framework for the derivatives market activity of the participant.

6. The tax treatment applicable to the participants vis-a-vis respective derivative contracts would need to be clarified to provide certainty about it to the market participants.