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Review of the establishment of Derivatives Exchange in India

Financial Institutions Reforms and Expansion (FIRE) Project

March 14, 1997

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March 14, 1997

Mr O P Gahrotra
Senior Executive Director
Securities and Exchange Board of India
Mittal Court, B Wing
Nariman Point
Mumbai 400 021,

Dear Mr Gahrotra,

Re: Review of the Establishment of Derivatives Exchange in India

As per the request of NSE and SEBI and as a part of the contract with US AID, in October 1996, Mr Paul Litteau, consultant to Price Waterhouse Capital Markets provided assistance to SEBI in derivatives trading training for the members of the "Co-ordinating Cell on Derivatives Trading" and assistance to the NSE with regard to designing advanced training of identified members

During January 1997, Mr Litteau made a second trip to India for the purpose of reviewing the recommendations in this report and a second report is being issued which details the accomplishments to date and the tasks to be completed

Purpose of the Activity

The seminars were conducted to inform SEBI and the potential market participants of the characteristics and potential uses of futures contracts, various risks associated with it and risk management, investor protection and market regulations required for derivatives market

In this trip, Mr Litteau also met with various market participants, NSE and SEBI executives The purpose of the activity was to assist SEBI in making an informed decision on the progress of the Indian Financial Community towards introduction of exchange traded derivatives

Based on the information that was gathered during this trip, Mr Paul Litteau has commented on the recommendations in Barclay's report with respect to the progress of the Indian marketplace towards introduction of Derivatives Exchange In addition to these steps, Mr Litteau has addressed certain financial responsibility and customer protection rules and procedures that should be place prior to launch of derivatives trading In this report, he has also addressed the issues and concerns raised by SEBI during his trip

Activities Undertaken

1 Assistance to the NSE With Regard to Designing an Advanced Training Program for Identified Members

To accomplish this purpose, two "End User" workshops were conducted Invitations were extended to institutional investors who were potential users of futures contracts and other derivatives, intermediaries (particularly exchange member brokers), academics and staff members of exchanges, chartered accounting firms and SEBI Dates of these training sessions, conducted at the Taj Hotel in Bombay, were September 25-26, and September 27-28, 1996

Concepts of futures trading were introduced using video tape presentations developed by the Chicago Board of Trade and Chicago Mercantile Exchange Using these presentations as a starting point, the concepts of the use of futures contracts for hedging and speculation, theoretical pricing models, arbitrage and other strategies were developed Cash settlement, margin and other operational matters were reviewed With assistance of the NSE in presenting the details of the proposed NSE-50 Futures Contract, applications of the fundamentals of futures trading to index futures were discussed

Special emphasis was given to identification of and management of risks inherent in trading derivatives for either hedging or speculative purposes Monika Jashani, a PW Consultant with experience and education in the US derivatives market made presentations on uses of Index Futures for Fund Management (complemented by a video tape developed by the Chicago Mercantile Exchange on Institutional Strategies using the Standard & Poors 500 Index Futures Contract), and End-User Risk Management, including steps required to identify and manage credit, operational/technological, legal and market risks by institutions utilising derivatives

Particular focus was given to customer and marketplace protection The presentation on these matters illustrated experiences of both developed as well as emerging markets in introduction of derivatives trading, and the regulatory and other infrastructure developed in these markets to address such concerns

A brief introduction was given to Options as another form of derivative Finally, the participants were provided with reference materials for their continued study, and were encouraged to raise questions and concerns, which discussion provided significant information and insights

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2 Assistance to SEBI in Derivatives Trading for Members of the "Co-ordination Cell on Derivatives Trading"

A dinner meeting was conducted on September 30, 1996, and a workshop held on October 1, 1996 at the Oberoi Hotel in Bombay During these sessions the observations and other information gathered during the prior two "End User" workshops were shared with the members of the SEBI Co-ordination Cell Notable among these concerns was the question of whether the market was ready for introduction of futures, whether adequate preparation had been made in development of the cash market, and whether the regulators and other concerned parties were prepared to properly oversee trading in such instruments at this time

This workshop reviewed the material which had been presented to the two prior "End User" workshops, and additional emphasis was given to the customer/marketplace protection matters Substantial discussion was conducted and examples provided on broker-customer duties, including "know your customer", risk disclosure, fair advertising and other promotional materials, and related topics Supervisory and oversight responsibilities, regulatory review, dispute resolution, monitoring of markets, and the roles of the Chartered Accountants in the overall scheme of customer/marketplace protection were reviewed The participants of this group were encouraged to raise their questions and concerns, several of which were addressed during the workshop, others of which will be followed up upon

Next Steps

Mr Paul Litteau will continue to work with the PW FIRE staff He will review the results of his trip with Dr Barclay in Chicago, and will work in assisting development of needed training, educational and qualification material In his subsequent trip during January 1997, he laid emphasis on regulatory aspects of derivatives trading to ensure financial integrity of the marketplace

Please find enclosed the details of his October trip findings and recommendations

Please get in touch with us at FIRE project for any clarifications or further information you may require

Thanking You,

Sincerely,

W.Dennis Grubb
Principal Consultant

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I EXECUTIVE SUMMARY

This report assesses the present market preparedness for introduction of derivatives exchange in relation to the recomendation of Dr Barclays In addition it addresses some additional steps required to ensure market financial integrity in derivatives trading The report also addresses the issues and concerns of SEBI staff in terms of the readiness of the Indian Financial Markets for the introduction of exchange traded derivatives

In March, 1996 Dr Barclay of the Chicago Board Options Exchange provided an excellent summary of the steps needed to be taken, and the probable time needed to ensure adequate preparation had been made for introduction of Futures and/or Options trading in India At that time Dr Barclay suggested a period of 18 months as the minimum needed to complete this preparation (assuming no delays at either the regulatory or legislative level) While many of the steps recommended by Dr Barclay have been begun if not completed, much work still remains to be done in this regard

Many of the potential participants, notably the NSE, are quite anxious to introduce Index Futures trading at the earliest possible date (as early as December, 1996) While their desire to stimulate market interest as well as to provide the ability for participants to hedge risk is understandable, substantial numbers of other potential participants are concerned such an early date would be premature, and that the market would not be properly prepared or ready PriceWater House FIRE Project share these concerns It is certainly possible to wait too long to introduce futures (or options) trading However, introduction of such instruments before full preparation could well result in significant problems in the market

SEBI should ensure that each broker organization proposing to trade in Futures for themselves or for clients has adequate expertise, systems and procedures for such activities All such systems and procedures should be documented and reviewed for adequacy prior to initiation of such activities

In this regard SEBI should require that a time line be established, identifying the required steps to be taken, establishing who is responsible for completion, and specifying the time scheduled for each step along the way In this way progress can be best monitored and control maintained This "critical path" time line could be established by SEBI, by the "Coordinating Cell" or by the NSE, but SEBI should ensure that it is established and monitored

The steps recommended in the Barclay report should be completed prior to initiation of derivatives trading Particular attention should be given to the recommendation to register and qualify brokers (indicating the need for a licensing/qualification examination) for such activities

Trading in futures and other derivatives will result in potential financial exposure to customers, brokers and to the system (exchange, clearinghouse and market as a whole) It is vital to ensure that risk management and financial safeguards are in place which are designed to prevent the accumulation of losses, ensure that sufficient resources are available to cover future obligations, promptly detect financial and operational weaknesses, allow rapid and appropriate action corrective action to be taken regarding any financial or operational problem

Primary among such risk control safeguards are margin rules, segregation requirements for customer funds, net capital rules, and books and records standards

Derivatives being leveraged instruments exposes the investors to new types and levels of risks which may or maynot be suitable to different clients To protect the investor, other market partcipants and intermediaries, "Know Your Customer" practice, disclosure of risk to customer and monitoring broker sales practices become critical to success of derivatives trading

As part of the presentation to the SEBI "Coordination Cell on Derivatives Trading" steps were outlined which had been taken by the US Securities and Exchange Commission to ensure that adequate preparation had been made for the introduction of trading of Standardized Options on the Chicago Board Options Exchange in 1973, and again during the Moratorium and Special Study of the Options Market in the late 1970's The FIRE project would urge SEBI to undertake similar such steps prior to introduction of Futures and/or Options Trading in India These steps are detailed in Appendix A

II CRITICAL PATH TO DERIVATIVES EXCHANGE

Comments on Recommendations in Barclay Report

In his Feasibility Study of a Derivatives Exchange in India dated March 18, 1996, Dr Barclay of the Chicago Board Options Exchange made 15 separate recommendations as to steps which should be taken as "the most important capabilities and enhancements that should be completed prior to equity derivative launch" in India Dr Barclay further stated "The estimated time for completion of the following is approximately 18 months, assuming no unexpected delays at either the legislative or regulatory level However, this latter assumption has not proved realistic in the experience with other derivatives markets where there has invariably been one or more delay"

Although a very detailed review of the status of completion of each of Dr Barclay's recommendations was beyond the scope of Mr Litteau's trip in September/October 1996, based on his observations and on discussions with market participants, SEBI and NSE managers, and FIRE project personnel, he finds no reason to disagree with any of the recommendations or with the anticipated time required to complete them

Observations and comments on Dr Barclay's recommendations

1. **"The NSE should review the actual level of stock market turnover/capitalization after removing the large number of companies that appear to be listed for purposes other than seeking an active trading and investing base. This is important in assessing the salience of risk among equity investors which, as measured by existing turnover levels in the Indian market, is relatively low compared with other successful equity derivatives markets."**

Presentations were made at the "end user" workshops on the studies commissioned by the NSE to determine the adequacy of trading volume and more significantly of liquidity of the issues comprising their NSE 50 index A critique of the methodology or of the basis for their conclusions was beyond the scope of this project In this regard the SEBI Coordinating Cell on Derivatives should satisfy themselves that such studies support the NSE's conclusions as to liquidity

2. **"A separate clearing house should be established for derivative products with the capability to undertake portfolio risk analysis, when the components of a portfolio contain both derivative and cash positions. This will require acquisition of portfolio risk assessment software such as those currently applied in existing derivative markets."**

NSE personnel have reviewed various clearing systems and risk control software currently in use (such as the system offered by the Chicago Mercantile Exchange) Our understanding is that NSE intends to develop its own system and software in this regard

From a risk control perspective, this is one of the most important issues to be addressed before derivative trading is introduced in India The SEBI Coordinating Cell should ensure that the clearing system and risk control software are in place and thoroughly tested well prior to launch

3. **"A depository for immobilization of shares (at least those subject to derivatives trading either as components of an index product or as the underlying stock for individual stock options) should be in place prior to launch of derivatives trading. The current paper based system for stock clearance will not support derivatives transactions, from either an operational or pricing efficiency standpoint."**

Preparation for launch of the depository was well underway during Mr Litteau's visit, and we understand that the depository was to become operational for the first several issues in early November Work should, of course, continue in this regard to ensure that the depository is in place for all issues comprising the index underlying the proposed future contract prior to launch

4. **"The NSE must acquire or build a trading system capable of handling the more complex products and trades that characterize derivatives markets in comparison to stocks. This system must maintain the level of transparency already established by the NSE in the Indian stock market."**

Although a brief introduction to the NSE trading system was given, an in depth review of the adequacy of this system was outside the scope of this visit The SEBI Coordinating Cell should determine that such system is in place, and is adequate for such trading

5. **"An independent market oversight function with adequate, trained staff needs to be established at the NSE (and other Indian exchanges trading the same stocks). Market regulatory staff at the various Indian stock exchanges need authority to open investigations and share sensitive information without prior authorization from senior non-regulatory staff of the exchange."**

It was noted that NSE has clearly taken steps to train a small number of staff members who are directly involved with their futures project proposal A review of the NSE's market oversight activities was outside the scope of this projecr The SEBI Coordinating Cell should ensure that this function is in place

6. **"SEBI must create a staff dedicated to the regulation and development of derivative markets. This should occur prior to exchange submission of a proposal for such markets and, in fact, SEBI staff should work closely with exchange staff developing any proposal(s) for establishing a derivatives trading capability."**

The SEBI Coordinating Cell on Derivatives appears to be the appropriate action taken to form the group to address this topic To achieve their objectives, the SEBI Coordinating Cell should ensure that a "critical path" approach is used identifying the which steps are required to be taken in preparation for launch of derivatives trading, the sequence in which such steps should be taken, and who is responsible for such function Procedures should be established for regular status reports and review of progress in achievement

7. **"SEBI must establish itself as a credible regulator for Indian equity and equity derivative markets. To accomplish this requires both considerable strengthening of SEBI's enforcement and market oversight section and, most importantly, successfully prosecuting of one or more of the cases involving insider trading and related violations currently under investigation at the agency. This is particularly important to insure that both domestic and international investors develop the confidence necessary to participate in the new Indian equity derivatives market."**

A critique of SEBI and its regulatory effectiveness was beyond the scope of this visit Certainly SEBI must be perceived to be a credible regulator In this regard, SEBI may wish to request an audit of their activities and functions by an independent agency or competent organization

8. **"A document disclosing the risks of investment in derivative products should be developed that would be provided to all accounts seeking to trade derivatives. This document is primarily targeted towards individual investors but should be provided to institutional investors as well."**

At the time of Mr Litteau's visit it did not appear that such a document had yet been created Copies of such risk disclosure documents as developed by the National Futures Association (NFA) as well as by brokerage firms in the United States were provided as illustrative examples in this regard

The SEBI Coordinating Cell should determine that such document(s) have been developed and are adequate, and that procedures are in place to ensure that such disclosures are provided to investors prior to their first trade in derivatives

9. **"A short sale and stock borrow/lend capability needs to be established. This is essential for fair pricing of equity derivatives. The legal authorization for short selling has often taken a considerable period of time, despite apparent recognition of the necessity of such strategy, e.g. more than two years in the case of Hong Kong."**

Stock index futures contracts, to be viable, must typically trade within a narrow band over and above the 'theoretical fair market value" of the index itself This is accomplished by "index arbitrage When the futures contract is selling at a substantial premium over the theoretical fair market value of the index, arbitaguers sell the future and buy a market basket of stocks comparable to the index When the future trades at a substantial discount to the index arbitrage requires the ability to buy the future and short sell the stock Any impediment to the ability to affect such short sales will inhibit the arbitrage function, and will make it more likely that the future will become "uncoupled" from the cash market

The SEBI Coordinating Cell should ensure that capabilities for short sales and stock loan/borrow are in place and that the market is familiar with them well before launch of derivatives

10. **"There should be an overall review of the legal and regulatory provisions currently in place, and that may need to be required for the establishment, operations, and access to derivative trading in India. This review should include access issues such as usage by domestic institutional investors (FIs), implications of current tax law for treatment of derivatives gains or losses, restrictions on foreign institutional investors (FIIs) in terms of the limits on foreign ownership of an issuer, etc. This process should begin immediately."**

A review of this matter was outside the scope of Mr Litteau's visit The SEBI Coordinating Cell should ensure that this has been accomplished

11. **"An educational effort regarding the uses and functions of derivatives should be undertaken, probably by the NSE (and other interested exchanges) in conjunction with SEBI. The orientation and purposes of such effort are not primarily exploration of particular strategies but of the role and function of derivative products in a modern capital market."**

Several workshops and seminars have been conducted over the past several months in this regard These activities should continued A workbook could be developed to provide practical examples as part of educational presentations to potential end users

12. **"Brokers should be licensed and registered, both for the right to offer their services in the underlying cash equity market and also, with additional qualifications, for those seeking to offer access to derivatives trading to their clientele. This licensure process will allow Indian regulatory agencies to track the performance record (customer complains and their resolution) of brokers over time and take appropriate action against "rogue" brokers."**

A consultative paper on broker registration and qualification has been submitted to SEBI This proposal, developed by Thomas Keyes, would cover "general securities" broker qualifications and registration We concur with Dr Barclay's suggestion and further recommend that a qualification and registration procedure for derivatives brokers be established

Since no brokers are currently licensed to trade derivatives, there should be no need to consider "grandfathering" provisions (waiving examination requirements for persons currently acting in a particular capacity) The procedure for testing, qualifying and registering brokers for derivatives could then be the way in which such regulatory activities are initiated in India, and could over time be expanded to include the general securities" activities

In this regard, FIRE has provided SEBI personnel with copies of the National Futures Association (NFA) syllabus used to prepare for the Series 3 (Futures Broker) and Series 30 (Futures Sales Manager) examinations Series 3 Study Text and practice examinations as published by Dearborn Financial Services are available at FIRE office Work should commence, using this information as a model, on a qualification examination and registration procedures for derivatives activities by brokers in India

It should also be noted that the question of "sub broker" status is at least as important in derivatives as it is in equities and other securities One of the principal reasons why the NFA was established in the USA was to bring under the umbrella of regulation "non guaranteed" introducing brokers who were not being supervised by the exchange member firm servicing them These non guaranteed introducing brokers were, in many ways, similar to the sub brokers in India Copies of NFA guidelines and procedures have been provided to SEBI personnel for their reference in this regard

13. **"A program with appropriate incentives for market making should be developed to insure liquidity and immediacy for investors seeking to**

transact in derivatives products, particularly options. This program would include creation of regulations governing collateral treatment of such market professionals, probably issued by the Reserve Bank of India."

At present, NSE indicates their belief that adequate liquidity would exist in an index future even without establishment of a market maker function We agree with Dr Barclay that this would be even more important for options, but also believe that recognition of a market maker role (with regulatory oversight) would be beneficial in futures.

The need for market makers in futures could be held for later consideration, to be revisited after launch (particularly if it appears that liquidity is a problem).

14. **"In addition to the general educational capability listed above, there needs to be targeted work with domestic financial institutions (FIs), at both the portfolio manager and, especially, the senior management level, regarding the strategic applications of derivatives products. This could include knowledgeable individuals working with various FI portfolios to demonstrate the utility of various derivative strategies. In addition, such programs should also emphasize the importance of management controls above the level of the portfolio trader"**

The observations with respect to this point are similar to those indicated in 11 above Educational activities should continue, and should become more formalized Again, preparation of a workbook is recommended to assist in such activities

15. **"An index development committee should be established consisting of both NSE staff and market participants. This committee will provide valuable guidance in the development of an index product, serve as an initial marketing group for a new index, and may also provide advice to SEBI in the review of such product."**

No review of the above was done during the visit

The composition of the index is a very important activity, and provides at least a possible area of potential conflict of interest (Experience shows that when a stock is added to an index such as the S&P 500 it experiences an incremental increase in price and volume The converse is also true for a stock which is deleted from such index) The SEBI Coordinating Cell should ensure that such decisions are made in a manner to avoid such real or perceived conflicts

OTHER RECOMMENDATIONS

Although not addressed in Dr Barclay's report, certain financial responsibility and customer protection rules and procedures should also be in place prior to the launch of derivatives Most particularly there should be

1. **Net Capital Requirements,**

2. **Books and Records Standards, and**

3. **Margin Rules.**

These topics are further expanded in section III of this report

III MARKET FINANCIAL INTEGRITY

Trading in futures and other derivatives will result in potential financial exposure to customers, brokers and to the system (exchange, clearinghouse and market as a whole) It is vital to ensure that risk management and financial safeguards are in place which are designed to

⇒ prevent the accumulation of losses

⇒ ensure that sufficient resources are available to cover future obligations

⇒ promptly detect financial and operational weaknesses

⇒ allow rapid and appropriate action corrective action to be taken regarding any financial or operational problem

Primary among such risk control safeguards are margin rules, segregation requirements for customer funds, net capital rules, and books and records standards

A. Margin Rules

Discussions with NSE staff and potential intermediaries indicate that rules and procedures are being formulated to ensure that performance bonds (margin) are deposited with the clearinghouse for all transactions, and that open positions are being marked to market daily, with profits and losses being posted to the members' account(s), with additional deposits to be made as needed to maintain adequate margin with the clearinghouse

Rules and procedures regarding customer initial and maintenance margin with the broker for trading in futures and other derivatives had not yet been developed Here it is noteworthy that in capital markets (equities) accounts, NSE rules and Indian industry customs appear to allow the broker some latitude In short, for at least some accounts the margin rules are seen as optional Whatever rationale there may be for such latitude in non-derivative accounts (which itself could be the subject of a separate study), at least the minimum customer margin standards should be consistently and uniformly enforced for accounts trading derivatives

The levels of margin for both broker and customer should be set, based on historical price, volatility and anticipated market conditions at a level sufficient to give a very high level of confidence that it will cover adverse market movements during the time needed for an account to meet additional margin calls or for close out action to be taken before the account liquidates to a loss This may require one or several days of anticipated maximum market movement, depending on the state of communications and banking facilities These margin levels should be reviewed once trading commences to ensure their continuing adequacy

B. Segregation of Customer Funds

Based on discussions with NSE personnel, financial activities with customers are currently required to be effected through a customer account which is separate from the firm account This would be a step toward achieving the protection of customer funds needed to protect customers in the event of the insolvency or financial instability of the broker A review should be made to ensure that each broker expecting to trade in futures or other derivatives has adequate systems, procedures and recordkeeping in place to achieve segregation of customer funds, and to ensure that there is liability or potential liability to any customer's funds resulting from activities of the broker or any other customers

C. Net Capital Requirements

A principal safeguard of customer assets in most, if not all securities markets is a "net capital rule", requiring the broker to maintain liquid assets well in excess of its obligations, and (among other restrictions), limiting the broker's size of business to some multiple of its net capital.

SEBI rules provide some net capital requirements for brokers Here it would be appropriate to review this rule to ensure that it is adequate for the anticipated derivatives market Questions which should be answered include

a) is the level of minimum net capital required adequate for brokers trading derivatives?

b) are appropriate charges to capital being taken for broker's illiquid assets? (These would include such items as unsecured customer debits resulting from accounts liquidated at a loss)

c) are charges to capital being taken for undermargined accounts and accounts where calls have not been timely met?

In addition to requiring a minimum level of net capital, it would be appropriate to consider an additional capital requirement based on a percentage of margin for all positions held by a firm. As an example, the Chicago Board of Trade and Board of Trade Clearing Corporation require a clearing member to maintain Adjusted Net Capital (ANC, as defined in their rules) of 7% of customers segregated and secured funds, plus 7% of minimum margin requirements for all non-customer accounts

Once net capital rules are in place, a surveillance system is needed to ensure continuous compliance This type of surveillance is usually best accomplished by the exchange (in this case, NSE), with the oversight of the government regulator (in this case, SEBI)

D. Books and Records Standards

Futures and other derivative trading will result in activities (mark to market, margin calls, segregation requirements, determination of available equity, etc) which will require the broker to maintain appropriate books and records Reports to customers in the form of confirmations and statements will also be required to adequately inform the customer as to the details of transactions and the status of his account

SEBI rules contain a list of required records to be maintained, but without specifics as to content or form.

Prior to introduction of derivatives trading, a determination should be made as to any needed expansion and/or modification of recordkeeping rules or practices A review should be performed of potential intermediaries (brokers) in the derivatives market to ensure that their recordkeeping and reporting procedures are in place and are adequate for the needs of this market In this regard, priority consideration should be given to assuring that customer account statements are being prepared and provided which reflect all activities and balances in money and securities by customer

IV SALES PRACTICES AND FAIR DEALING WITH CUSTOMERS

A. "Know Your Customer"

Discussions with brokers indicates that in the current equities market the broker is typically an "order taker", and that the client often neither seeks nor expects any guidance from the broker in determining what investments/trades to make Although the investor/trader may be personally known or personally introduced to the broker, little information seems to be gathered in order to assess the client's objectives, risk orientation or risk bearing ability

Derivatives trading will expose investors/traders as well as the brokerage firm, exchange, clearinghouse and system to new types and levels of risk Such activity may be suitable for some clients without limitation (other than exchange imposed margin and position limits and similar considerations) For other clients, only very limited uses of these instruments may be consistent with their profile For some clients derivatives trading in any quantity for any purpose may be inappropriate Procedures should be in place for the broker and manager to help clients determine proper uses and levels of trading, if any, for their accounts This will allow the management of potential exposure and risk to the client's account as well as to the firm and other market participants and intermediaries This indicates the need for account approval and "Know Your Customer" practices whereby the broker would gather the essential information about each client regarding objectives, experience, financial resources and related items For some types of accounts, such as bona fide and sophisticated financial institutions, extensive inquiry in these matters may not be required For most retail accounts, a more detailed "due diligence" review of the client's risk orientation and risk bearing ability will be in order Based on such information the broker's manager can approve or disapprove the account for derivatives trading, monitor subsequent activity in light of such approval, and review the appropriateness of recommendations (if any) made by the broker

Some clients may be reluctant to provide such information A record of the fact that the inquiry was made, and that the client declined to respond should be made This typically indicates that the account should not be approved for trading such instruments, or at least that only limited uses and levels of exposure should be permitted

B. Disclosure of Risk to Customers

Clients often see the potential rewards of investing/trading without proper recognition of the risks Especially in light of the new and increased risks in derivatives, disclosure will be of vital importance Appropriate risk disclosure documents should be prepared, presenting in layman's language explanations, examples and illustrations of such risk In this regard the pamphlet "Understanding Opportunities and Risk in Futures Trading" prepared by the National Futures Association may serve as an example

Additionally, a document should be prepared for client signature prior to trading in any derivative, whereby the client acknowledges that the risk disclosure document described above has been received, read and understood, and that the client is willing and able to bear such risks An example of this agreement in the form of a "Risk Disclosure Statement for Futures and Options" was provided to seminar participants, and is included in the appendix of this report This can provide an illustration, but such agreement should be customized to the types of instruments to be traded and to the needs of this market at this time

C. Monitoring Broker Sales Practices

Establishment of procedures for account approval and "Know Your Customer", as well as risk disclosure are important at the front end when an account is being opened. Ongoing review of accounts will then be required to ensure that the continue to trade in a manner consistent with such approval (and/or to determine if any modification of such approval is in order) Particular attention should be given to trades in which the broker has provided a recommendation as to position and/or strategy This indicates managerial review of activity on a daily as well as overview of account activity on a periodic basis.

Review of the daily transaction blotter and client account ledgers, supplemented by exception reports are frequently used techniques in established markets in this regard

Rules and procedures for such managerial review and approval should be in place prior to commencing trading in derivatives

V BROKER/SUB-BROKER REGISTRATION & EXAMINATION

Earlier in 1996 two reports were prepared for the FIRE Project by Thomas Keyes dealing with the subject of licensing, certification and teatime for capital market intermediaries (February 15, 1996 and May 16, 1996) As these reports indicate, currently there are no standards of qualifications for employment in the securities industry in India While many brokers and other professionals have credentials as M B A 's, Chartered Accountants or other designations, knowledge of the securities industry is generally learned on the job Presently there is no formal education or training on capital markets, especially in terms of operations, except some short term courses and seminars conducted by some institutions As stated in Mr Keyes' May 16, 1996 report "Therefore, the industry needs to have a system of certification that would establish minimum standards for industry participation and enhance professionalism in the capital market " This conclusion would be all the more true with regard to futures, options and other derivatives

A program should be developed to ensure that all persons acting as intermediaries in derivatives are properly trained and qualified This would indicate training, testing and licensing requirements for those conducting such activities

As noted in Mr Keyes' earlier reports, it may be necessary to phase in such requirements for those conducting business in credit securities and/or equity (scrip) trading It would be impractical to stop a market that is currently trading in order to implement these standards in a single sweep, so a time line for working toward this goal has been suggested The Keyes report does recommend that "After the date on which this test becomes mandatory, no person shall be taken into employment by an intermediary unless he/she holds the certificate "

There should be no need for a "phase-in" of qualification, testing and licensing for those participating in the derivatives market Such standards can and should be developed at the same time that preparation is being made for trading, clearance and settlement, back office accounting and other systems This is consistent with the recommendation made in the Barclay report "12 Brokers should be licensed and registered, both for the right to offer their services in the underlying cash equity market and also, with additional qualifications, for those seeking to offer derivatives trading to their clientele This licensure process will allow Indian regulatory agencies to track the performance record (customer complaints and their resolution) of brokers over time and take appropriate action against "rogue" brokers "

While all brokers should be expected to know the basics of those derivatives trading in the local market, it is likely that only a percentage of brokers will choose to offer derivatives trading for their clients Addition of derivatives at an overview level would be appropriate for the general broker syllabus and examination A more detailed syllabus and examination should be developed and used for those brokers who will be active in these products

With respect to qualification, testing and licensing particular attention should be directed toward those acting as "sub brokers" This group appears to have much, if not most, of the interface with the actual customers in India As noted in the May 16, 1996 Keyes report

"Presently, there are no requirements for a person proposing to enter the industry other than the recently prescribed qualifications for new membership on exchanges For example a person intending to become a sub broker simply declares himself as a sub broker and commences business " Designing procedures to ensure that the broker is properly qualified and licensed, while very important, will achieve only very limited results as long as there is another level of intermediation between the broker and customer which is not subject to these same standards It is most important that these requirements be in place at the level where the market interfaces with the customer To the extent that sub brokers are acting in this capacity, their qualifications should be as thoroughly established as those of the broker, and there should be a registration/licensing procedure for these participants

VI. DISCUSSION OF ISSUES AND CONCERNS RAISED BY SEBI STAFF

1. Does the trading of derivatives introduce speculation into a market?

To the extent that the risk of ownership of a cash asset (such as equities) exists independent of the derivative, and to the extent that market participants are already speculating in a cash market, it can be argued that derivatives do not, in and of themselves, introduce speculation into a market.

Most derivatives (such as stock index futures) are highly leveraged. A speculator can typically take a position with a much greater notional value in the derivatives market in contrast to the cash market. As such, derivatives can significantly magnify certain risks in a speculative position.

It is generally agreed that a well functioning derivatives market exists to provide a hedging (risk transfer) purpose. Speculators are needed to provide the liquidity and price discovery functions needed to serve the hedgers, but a derivatives trading without a legitimate hedging function would not be enhancing the cash market.

Before introduction of trading in stock index options and futures it should be established that there will be bona fide hedgers on both sides of the market, establishing positions with both purchases and sales of the derivative. Once the legitimacy of the hedging purpose has been established, excess speculation can be controlled by introduction and enforcement of controls such as margin and position limits. These subjects are discussed in greater depth later in this report.

2. Why are derivatives considered by some to be a "regulatory nightmare"?

Positions in derivatives are normally established with only a small "good faith deposit" (margin). This affords high leverage, and allows the trader to seek much higher reward (with proportionally higher risk) through use of the derivative in contrast with the cash market. As a result, traders may overextend and in the event of adverse price movement may face losses far more quickly and in greater amounts than any which they may have faced in the cash market.

Such risks indicate the need for adequate systems and controls. Many of the problems which have been experienced in derivatives trading can be traced to inadequacies in these areas. Among the most important controls would be:

⇒ Recordkeeping at the exchange, broker and client (particularly institutional client) levels.

⇒ Margin rules and procedures, providing for initial margin adequate to cover reasonably anticipated adverse price movement as well as to control excess speculation, as well as maintenance margin.

⇒ Financial responsibility rules (such as Net Capital Rules and Customer Asset Protection Rules) to prevent misuse of client assets by brokers, as well as to protect clients from losses due to the financial failure of their broker Compliance with such rules by the brokers would require monitoring of capital position and allocation

Failure to establish such systems and controls, and/or failure to monitor and enforce compliance has resulted in many of the "regulatory nightmares" suggested by the question.

In order for these systems and procedures to be properly established it is important that regulators, exchanges, brokers and clients (as well as their support organizations, such as chartered accountants) understand the instruments and the market Although many derivatives (such as Stock Index Futures) are quite simple in concept, they may be used in more complex strategies This, coupled with the specialized terminology typical of most derivatives markets has allowed some traders to operate outside the scope of ordinary surveillance and controls (under the argument that their activities are "too complex" for internal or outside auditors, officers or directors, or even regulators to understand) Failure to properly account for, and report size and impact of positions in such highly leveraged instruments can well lead to major problems

Finally, derivatives are subject to every misuse and abuse as would be the underlying cash market instrument Again, the leverage can magnify the adverse impact of such misuse Among the more common problems encountered

⇒ Pre-arranged trading, front running (holding back a large client in order to place another order ahead, so as to enjoy the anticipated price impact of the large order)

⇒ Large losses experienced by clients who did not understand the risks and who did not have the risk tolerance or risk bearing ability in order to properly participate in the market The leverage as well as the rapid price movement in these markets can be seductive Unscrupulous brokers can prey on non-sophisticated clients Even well intentioned brokers who do not themselves understand the risks involved may cause their clients to take inappropriate positions

Such problems can, in large part be addressed by establishing and monitoring for compliance with

⇒ "Know your customer" rules

⇒ Risk disclosure and fair advertising rules

⇒ Margin rules

⇒ Training and accreditation standards for professionals (such as brokers and ~~their~~ supervisors) who will be participating in these markets

3. Does the introduction of stock index derivatives shift liquidity away from equities?

This is an important question, which does not lend itself to a simple answer

Assuming that prior to the introduction of a stock index future and/or option there was a deep and liquid cash market, there is no indication that the derivative drains liquidity away from the stocks which comprise the index (or generally in stocks of similar characteristics) Although it is impossible to isolate and quantify the effect of the introduction of such instruments, it is reasonable to infer from experience that there is at least an incremental enhancement in volume and liquidity in such stocks Stock index options and futures enable portfolio managers to take larger long or short positions with the cash market and to hedge the risk of such positions by use of the derivative Further, since market participants can typically calculate a "theoretical fair market value" for a futures contract, "index arbitrage" activity is expected to take place whenever the futures contract trades at a premium or discount to the theoretical fair market value This index arbitrage is accomplished by buying the undervalued future or selling the overvalued future, and taking the opposite action in the cash market in a market basket of stocks making up the index As an example, index arbitrage activity accounts for volume on the order of 10% on the New York Stock Exchange

Any possible salutary effect of introduction of a large capitalization stock index derivative on volume and liquidity in small or mid capitalization equities is far less clear Although volume in such issues was subject to many other negative influences, activity in many small capitalization markets declined when equity options were introduced in the United States Similarly, when large capitalization index options were introduced volume in equity options declined Again it is impossible to isolate and quantify the causal relationship in this regard, but the inference is clear, ie that the derivative market may drain some trading activity away from smaller scrips

Finally, we are unaware of any evidence to show that introduction of stock index options and/or futures makes an otherwise illiquid market into a liquid market

4. Why do some markets have both equity and financial derivatives regulated by the same government agency, and other markets have separate agencies to oversee these activities?

Futures contracts were initially used for agricultural products and other commodities in the United States and some other mature markets Application of the concepts of standardized contract terms to financial instruments, and development of cash settlement allowed the established futures exchanges to begin trading such instruments on bonds and stock indexes as well as other financial instruments The markets in which these new instruments were introduced were already under the regulatory oversight of the federal commodities regulatory agency in the United States Hence they assumed such responsibility for governmental regulation of trading in financial futures

Options, in contrast, were considered to have been a security (rather than a futures contract) even before the concept of standardized options contracts was suggested by members of the Chicago Board of Trade (a futures exchange) As a result, the Chicago Board Options Exchange was developed as an entity separate from its "parent" the Chicago Board of Trade, and options on equities and indexes are considered securities subject to regulation by the federal securities regulator the Securities and Exchange Commission

In short, in the United States there are two different governmental regulators because of the historical development of the contracts A study performed by former US Secretary of the Treasury Nicholas Brady after the 1987 market crash concluded that in spite of the two governmental regulators (and the various marketplaces) there was in fact a single market for financial instruments The Brady report acknowledged that it would be impractical to merge the securities and commodities regulators, but recommended instead that the Federal Reserve Board assume the function of overseeing and coordinating the activities of these two government agencies Although cooperation between the United States Securities and Exchange Commission has and Commodities Futures Trading Commission has improved in recent years, the recommendation from the Brady report has not been acted upon There appears to be no immediate prospect for either merging these two agencies or bringing them under the formal control of another body (such as the Federal Reserve Board)

In markets in which financial derivatives have been recently introduced, the preference has been for a single government agency for both the cash and derivatives markets This seems logical, and we are aware of no compelling reason to develop, de novo, two different agencies to regulate such instruments and markets

5. Why do a majority of developed markets have separate exchanges for equities and stock index derivatives?

The answer here is similar to that given to question 4, above Often the development of the contract and settlement procedures were accomplished by other than the established equities exchanges In the United States all index futures activity takes place on one of the futures exchanges rather than on a stock exchange A substantial portion of options trading takes place on the Chicago Board Options Exchange (which trades options exclusively), although significant options activity does take place on the American and certain regional exchanges It is notable that although the New York Stock Exchange did introduce trading in standardized options several years ago, they never developed order flow in these instruments Currently discussions are under way regarding the possible sale of the NYSE option business to the CBOE.

One possible advantage of having separate exchanges for equities and stock index derivatives is the removal of a potential conflict If a single exchange determines the makeup of a stock index, and provides the facilities for trading both the derivative and the stocks composing the index there could be the potential for abuse Experience suggest, for example, that the addition of a stock to the Standard & Poors 500 index results in a price increase (on average on the order of 2%) while deletion of a stock from such index results in a price decrease (of similar order) Likewise, due to arbitrage activity and availability of hedging techniques inclusion of a stock in the S&P 500 index typically enhances trading volume Since the composition of this index is determined by the Standard & Poors Corporation (which is independent of any exchange), this potential conflict has been addressed in the US

The impetus for development of a derivatives market in India is coming from existing exchanges, who are providing the resources and absorbing the costs in anticipation of the potential rewards Development of a separate derivatives exchange would, of necessity, duplicate many of the resources of the existing exchanges In light of scarce resources and limited volume and activity in the existing markets, it would not seem practical to build a whole new independent derivatives exchange at this time (Consideration could be given to "spinning off" such activities into an independent exchange at a later time if volume and market interest so warrant) Rather it would seem appropriate to allow the exchanges who have begun to develop such markets to continue to do so, but to ensure adequate oversight by SEBI Particular attention should be given to SEBI oversight of changes in the makeup of any stock index underlying a futures or option contract

6. Why is the "open outcry" system rather than a screen based trading system used in the US?

The easiest answer here is, tradition Trading in futures began long before computers and screen based trading techniques were available The open outcry system has its roots in tradition, and technological developments in the US have generally been in support of, rather than in replacement of, the outcry system (It should be noted though that options exchanges in the US do provide for automatic execution through computer entry of ordinary retail size orders)

Most observers believe that if the futures or markets were being developed anew in the US, order execution would be more technology-intensive

7. Are there changes in the law necessary to allow for introduction of trading in derivatives in India? Specifically, must the Contract Act and/or the Securities Act be amended in this regard?

This being a legal question, is beyond the scope of Mr Litteau's current activities However, FIRE office will be able to forward you a few names in the London Exchange who may be able to guide you in this regard

It would also seem that these questions would be best addressed by the General Counsel (or equivalent) office of SEBI, and that they could review such with their counterparts in London or other Commonwealth countries in which derivatives have been introduced

8. Is it safe to introduce derivatives in the current scenario?
Is India ready for derivatives, or isn't there enough work to be done in the cash market?

As discussed in 1 above, while derivatives should not introduce speculation into a market the fact that they are highly leveraged could magnify risks which already are present To the extent that the cash market is deep and liquid, and to the extent that adequate systems and controls (including regulation and regulatory oversight, accounting and auditing standards, and education) are in place it should be possible to introduce stock index futures (or other similar derivatives) To the extent that any of this foundation is incomplete or inadequate for the cash market, derivatives would likely compound negative consequence

In addition to those necessary for a cash market, introduction of derivatives indicates specific and unique controls and systems, as well as an educational effort to assist all market participants to understand the risks as well as the opportunities involved In this regard a study was performed by Dr Barclay of the Chicago Board Options Exchange in March of 1996 In this report Dr Barclay lists 15 steps necessary to be taken in preparation for introduction of derivatives trading He suggests an estimated time for completion of such preparation as approximately 18 months "assuming no unexpected delays at either the legislative or regulatory level" He goes on to say that the latter assumption has not proved realistic in the experience with other derivatives markets where there has invariably been one or more such delay Based on our observations and discussions, seven months after Dr Barclay's study we concur with his recommendations and find no reason to modify his estimates of time required A point by point review of Dr Barclay's recommendations and my observation as to current status is provided earlier in this report

Much concern has been expressed by some of the exchanges (particularly the NSE) about the need for early introduction of such instruments, and the expected salutary effect on the market As discussed above, we believe that derivatives may enhance existing liquidity but will not cause an otherwise illiquid market to become liquid To the extent that there is a problem with liquidity in other than the top tier scrips, the causes for such problems should be identified and solutions sought separate from the introduction of derivatives

Similar concern has been expressed by some of the exchanges (again, particularly the NSE) about being too slow in introducing an index futures contract in India, and thus allowing another market to develop the contract and get the order flow and benefits As a case in point the experience of Japan is frequently discussed When Japanese exchanges found it difficult to introduce an index contract due to legal/regulatory constraints, a contract on a Japanese index was introduced in Singapore, and later in Chicago Although subsequently some of the restraints were reduced and Japanese exchanges found it possible to allow trading of such contracts, years later the majority of the order flow is still away from Japan

With respect to this latter concern, subsequent discussion with Product Development personnel at the Chicago Mercantile Exchange indicated that an Indian stock index contract is indeed on a long list of potential contracts for development, but that no developmental work has been undertaken or is even currently contemplated Several financial contracts are being given higher priority for such development

Further, the CME personnel advised that the Japanese experience is somewhat unique Even though restraints have been relaxed, there are still impediments, such as a significantly higher cost structure, to order in flow in these instruments to Japanese exchanges In most other markets where an index on the country's stocks was introduced outside the country, after trading began in country the majority of order flow came their way

While we concur that there are legitimate purposes for derivatives (such as stock index futures), and that it is possible to unnecessarily delay introduction of such instruments, we would also agree with Dr Barclay's observation that "Launch delay(s)to insure such measures are in place are well worth an extra three to six months' The alternative may be a premature launch with the possible result of a major scandal that undermines both confidence in and acceptance of equity derivatives as well as the reputation of the entities involved in developing the trading capacity This would be a much more regrettable outcome than a launch in 24 rather than 18 months "

VII THE NEXT STEPS

The list of recommended next steps are

⇒ Establishment of a timeline and critical path management by the SEBI Coordinating Cell on Derivatives Trading to ensure that each of Barclays recommendations (as well as subsequent recommendations) are being followed

⇒ Development and/or necessary enhancement of systems and controls for customer protection and maintainance of financial integrity of the marketplace as a whole These would include recordkeeping, accounting and reporting rules along with net capital, margin rules and customer asset protection rules Emphasis also needs to placed on customer protection in terms of monitoring broker sales practice, disclosure of risk to customer, and "Know Your Customer" rules

⇒ Registration and qualification requirements for participants in derivatives markets This would include bringing "sub-brokers" under regulatory oversight, and establishing a qualifications examination and continuing education standards for brokers and managers of brokerage firms

APPENDICES

APPENDIX A

SEC ACTIVITIES IN THE SPECIAL STUDY OF OPTIONS MARKET

Sec Activities In The Special Study Of The Options Market

Listed options on equity securities began to trade in the US in 1973 Initially only call options on a few heavily traded large capitalisation common stock issues were registered After the first few years of experience, the industry began to prepare for introduction of put options, and to significantly expand the number (and types) of underlings on which options would be traded

The Securities and Exchange Commission had reservations about this proposed expansion of the listed options market A large number of customer complaints had indicated problems in the areas of risk disclosure, suitability, excessive activity, supervision, and related matters Follow up investigations of these complaints revealed brokers who did not understand the products and markets themselves, and who were intentionally or inadvertently misguiding their customers Regulatory examinations had also shown that several firms did not have adequately trained or experienced staffs, and in some cases lacked appropriate systems, in order to deal with the specialised financial and operational requirements for options trading Frequently senior management did not understand or appreciate the risks either to their firm or to their clients in the options market, and so did not properly exercise their managerial control

In the late 1970's the SEC called a "moratorium" on the listed options market Trading was allowed to continue and new expiration months could be opened in those classes of options which were already in existence (i e call options on a limited number of equity securities), but introduction of put options and expansion of the base for underlings was prohibited by the SEC pending completion of a "Special Study of the Options Market"

For the next several months, the SEC gathered data and information Among these activities were

⇒ a review of the oversight/surveillance activities of each of the "self regulatory organisations", including adequacy of the frequency and content of in-house inspections, handling of customer complaints, review of financial and operational conditions of member firms, sales practice rules, educational activities, licensing and testing of participants, and supervision

⇒ a similar review of many brokerage firms, large and small, engaged in options activities, with particular attention given to account opening and approval (with attendant "know your customer" requirements), risk disclosure, sales practices (including suitability of recommendations and advertising), financial and operational competence and capacity, and supervision

⇒ a questionnaire directed to several hundred retail customers who had been identified through other phases of this study as being engaged in the options market Through this inquiry the SEC attempted to learn how well the customer understood the product and the market, and how the broker was servicing the customers' interests

At the conclusion of this study, the SEC directed several actions to be taken prior to lifting their moratorium and allowing the desired expansion of the options market   Among these requirements were

⇒ an improved risk disclosure document, presenting in non-legal language clear information in this regard

⇒ enhanced account opening and approval procedures to ensure that adequate risk disclosure had been made, and that adequate "know your customer" information had been gathered to support any recommendations made by the broker, and to allow proper sales supervision by the manager

⇒ designation within each brokerage firm engaged in options activities of a "Senior Registered Options Principal" and a "Compliance Registered Options Principal" with specific regulatory responsibility in these areas

⇒ expanded coverage of options in the broker qualification and registration examination

Many brokerage firms in the US were (and are) members of multiple "self regulatory organisations" ("SRO's" - the exchanges and the NASD)   The SEC directed that each firm have one SRO with primary responsibility for its options activities   That SRO was required to review their members' current options activities as well as their preparation for participation in an expanded options environment   Such review included the firm's supervisory procedures, sales practices, back office accounting and reporting systems   The SRO was directed to determine that both front office (sales and trading) and back office operational and accounting systems were in place and were documented, that competent staffing was in place, and that adequate supervisory procedures had been created and documented with regard to the above   This resulted in a review of each such firm's internal controls and procedures with respect to both front and back office activities   In the event that significant deficiencies were noted in any firm's systems or procedures, corrective action was required to be taken prior to their participation in the expanded activities

Further, the SEC directed that the SRO's conduct a similar review for any potential new member which proposed to engage in options activities with or for customers prior to approval of their membership

The overall desired result of the "moratorium" and the "Special Study of the Options Market" was to shift the focus from reaction to problems to anticipation and preparation to avoid or minimise problems

APPENDIX B

INTERVIEWS CONDUCTED

Interviews Conducted

Interviews conducted prior to workshops

Ashishkumar Chauhan, Assistant Vice President
National Stock Exchange of India
Anil Narang, Executive Director
Morgan Stanley India

to gain additional information on the progress made to date as well as the current and continuing needs of the institutions and other participants in the development of these instruments and markets

During the End User workshops Mr Litteau met with most of the many participants to discuss their particular questions and concerns These sessions also afforded an opportunity to meet with·

Dr Ajay Shah, Assistant Professor
Indira Gandhi Institute of Development Research

who had conducted prior educational programs in futures on behalf of the NSE

Further, prior to the SEBI "Coordination Cell on Derivatives Trading Mr. Litteau met with

M D Patel, Executive Director
O P Gahrotra, Senior Executive Director
L K Singhvi, Senior Executive Director
of the Securities and Exchange Board of India

and R C Mathur, Executive Director
Bombay Stock Exchange

to review observations made as a result of the prior "End User" workshops regarding levels of understanding as well as expressions of concern made by the participants

APPENDIX C

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