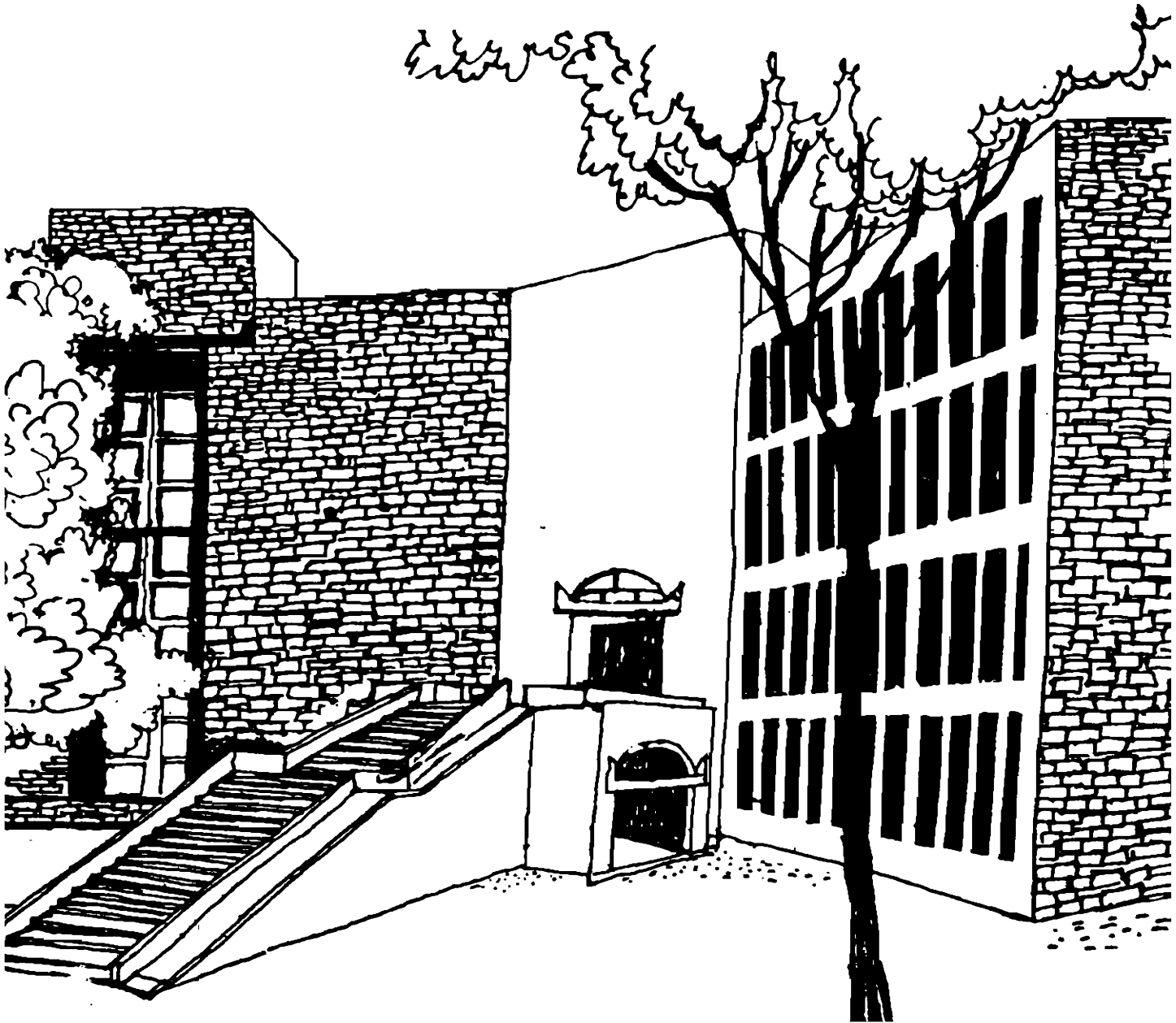




Working Paper



**DERIVATIVES COMMITTEE REPORT
- FOUR QUERIES**

By

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DERIVATIVES COMMITTEE REPORT - FOUR QUERIES

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L.C.Gupta's Committee on Derivatives has recently submitted its final report to SEBI. Its major recommendation is to introduce index futures in order to provide the facility for hedging against market risk in the most cost-efficient way. There are four pertinent questions that need to be publicly debated and the SEBI Board must seek satisfactory answers to these questions before accepting the recommendations.

The four questions are :

- 1) Do index futures provide portfolio hedging? Or do they merely facilitate rebalancing/restructuring of portfolio mix at a cheaper and faster way?
- 2) How the introduction of index futures would affect the functioning of underlying cash markets in terms of volatility, liquidity etc.?
- 3) Is there sufficient demand and supply for trading in market risk to facilitate a competitive futures market?
- 4) Whether Indian capital markets are ready for index hedging?

This paper is an attempt to examine critically the above four questions.

DO INDEX FUTURES PROVIDE HEDGING?

Conceptually, trading in futures markets does not provide hedging. A transactions in a futures market is a commitment which has to be honored irrespective of the price movement. Hedge comes only in options trading where the writer of the options bears the entire risk of an adverse fluctuations in price of underlying security for a premium. The

buyer of an option is protected for adverse movements and thus hedges himself from downside risk. Futures do not hedge you from downside risk.

Futures market merely provides a quick and inexpensive way in reallocating and/or readjusting one's portfolio. With futures market, investors would have one more trading location to alter portfolio positions when the new information that is expected to influence the value of assets arrives. To alter an exposure to an asset in cash markets the transactions costs (e.g., brokerage commissions) and execution costs (like bid-ask spreads and market impact costs) are generally high. Futures market provides larger liquidity, lower transactions costs and higher leverages to alter the exposure.

It is true that the depth and liquidity of the futures market facilitate the absorption of new fundamental information quickly; but in the absence of active arbitrage between cash and future market which keep the prices in two markets in line, it is highly probable that the futures market takes on a life of its own and the futures price does not reflect the economic value of an underlying instrument? If such arbitrage trades are not possible in a competitive way, futures market would be delinked from fundamentals and would be nothing more than a casino.

Then an important question arises : Do we in India have an effective arbitrage mechanism in place? The answer is a definite NO. Our cash markets are not pure spot market but a mixture of forward and spot market because of batch settlement system and the difference in trading cycles among stock exchanges. Moreover, for arbitrage to be effective, the system must provide for a working short sale facility. In the absence of short sale facility arbitrage would be possible only in one way that is when the basis point (i.e., difference between futures and spot prices) is at a premium. This would create a skewed and imperfect market, giving free rein to the speculators.

EFFECT OF FUTURES TRADING ON CASH MARKETS

Price volatility greater than what can be justified by relevant new information or fundamentals (or by the standard Assets Pricing Models) is undesirable. By definition, it makes prices inefficient and price discovery processes suffer. This is referred to as "excess volatility" .

Would introduction of a futures market increase the price volatility of the asset in the cash market? In literature, this is known as "destabilization hypothesis." Investors are concerned about the present and future value of their investments. Greater volatility leads to a perception of greater risk, which threatens investors' assets and wealth; and they lose confidence in the market. They begin to see financial markets as the province of the speculators resembling casinos.

Prof. Marty Subrahmanyam of New York University, a member of the L.C.Gupta Committee raised a pertinent issue in his communication to the Committee which has been conveniently ignored while finalizing the report. To quote from his communication,

"I would like to see added to the list of points in the proposal for a new product, some discussion of how the product would affect the functioning of underlying cash markets in terms of volatility, liquidity etc."

The relationship between the performance of a stock index and that of its corresponding futures contract has been of considerable interest to practitioners, regulatory authorities and academicians all over the world. There are several studies done to study the volatility and its effect on cash markets. Board and Sutcliffe (in their article "The Relative Volatility of the Markets in Equities and Index Futures," Journal of Business Finance and Accounting, March 1995) summarize nearly 30 studies of comparative volatility encompassing many of the principal stock markets of the world. Comparative volatility studies have been undertaken for the spot and futures returns of the stock markets in the United States, Japan, the United Kingdom, Switzerland, Germany, Finland and Hongkong. With the exception of

most of the Japanese studies, research generally indicates that index futures prices are significantly more volatile than the underlying index. Trading itself somehow generates volatility.

Particular reference can be made to a recent study done on Taiwanese market by Huang and Dawson and presented in a conference on futures organized by Chicago Board of Trade in Sydney on 9-10th February 1998). This study is of immediate relevance to us. Taiwan has introduced trading in index futures only in January 1997. Like us, Taiwan is also an emerging large and liquid market, ranks sixth in the world in terms of daily US dollar turnover and fifteenth in terms of market capitalization.

The authors have studied the MSCI Taiwan Index which was first compiled by Morgan Stanley & Co. Incorporate and Capital International Perspective, S.A. in 1988. It is a capitalization-weighted index with a 67% coverage of the Taiwan Stock market and is disseminated through major international price reporting media and is widely used to measure the performance of Taiwan Stock market. The result of their analysis generally conform with findings of studies of other markets in that a significantly higher volatility is observed in the futures product. Given the recent introduction and relatively low trading volumes of the Taiwan stock index futures contract, it is concluded that the volatility surplus appears to be an innate characteristic of stock index futures contracts and is not a function of market maturity or high volumes frequently observed in stock index futures trading in mature markets. Similar results of studies done on Malaysia's KLSE Composite Index Futures Trading were reported. Results were similar.

Nowhere in the Committee's report, this concern of likely effects of introducing index futures on cash markets has been examined.

DO INDIAN INVESTORS NEED FUTURES TRADING?

To quote from the Derivatives Committee's report (Executive Summary para 1):

"The Committee strongly favors the introduction of financial derivatives in order to provide the facility for hedging in the most cost-efficient way against market risk. This is an important economic purpose. At the same time, it recognizes that in order to make hedging possible, the market should also have speculators who are prepared to be counter-parties to hedgers. A derivatives market wholly or mostly consisting of speculators is unlikely to be sound economic institution. A soundly-based derivatives market requires the presence of both hedgers and speculators."

The above recommendation makes sense if there is a genuine demand for hedging by a large number of investors in India. And if sufficient number of hedgers with genuine hedging needs are not there and we still introduce futures market, then we would end up having only speculators. Such futures market would be devoid of any connection with cash/spot market and would have its own life full of speculation and bubbles. In fact, there is a strong possibility that trading in futures market would affect the genuine price discovery processes in the existing cash markets and distorts the genuine investment and allocation of funds processes in the economy.

The Committee should have made endeavors to estimate the hedging needs of portfolio owners in the country. For an academician, it is difficult to quantify such hedging needs without resources and an authority to procure information. However, if one examines the security holding structure and the market operation in India, one can easily conclude that such numbers are not very large and given their mandate genuine hedging needs are not there. In India, among the index stocks most of the shareholding is strategic holding owned either by the Government (e.g., SBI, BHEL, BPCL, MTNL etc.), or by multinationals (Hindustan Lever, Nestle, Colgate, etc), or by promoters (Tatas, Birlas, Bajaj, Mahindras) or by a few developmental financial institutions (like ICICI, IDBI, IFCI etc). These strategic shareholders are certainly not seeking hedging facility because they are not there for short-term trading/or investment gains in their holding. They do not have genuine hedging needs.

For the genuine portfolio (i.e., non strategic), the percentage shares available to the public is so little and varied (because of different level of float available in different securities) that it is impossible for anybody to hold any significant amount of index portfolio which would need hedging? Even 'tracking the Index portfolio' would be non-efficient as most of the shares do not have high correlation with the index. And even this small correlation varies a great deal over period of time. Given this scenario it was imperative on the part of the Committee to have done some credible and verifiable investigation to support their demand hypothesis for hedging.

To justify the need for hedging and trading in futures, the Committee has hastily conducted a questionnaire-based opinion survey. As per the report, out of 300 questionnaires sent, 112 replies were received. The break up provided for respondents are 67 brokers, 9 merchant bankers, 10 Mutual funds, 14 banks and FI, and 12 FII's. Questionnaire has not sought any information about the respondents in terms of their hedging needs, institutional affiliation and/or investment activities. It is also not known, whether respondents are actively participating in trading and/or investment activities or just experts/advisors affiliated to various organizations. If one goes by the supposed activities of respondents certainly 67 brokers and 9 merchant bankers would not be hedgers as they merely trade in shares on behalf of clients. Unless they are mixing up their activities and intend to do so in the future also to benefit from speculation. Nothing can be said about other respondents as no information has been provided about them.

Further, questions asked in the survey are presumptive, misleading and seek only ranking preferences. It does not probe their hedging needs and the price they would be willing to pay for meeting such needs. Further, if one performs the necessary non-parametric tests to answers, one can see the contradictions and statistical invalidity of the answers provided. One is skeptic about its validity to determine the genuine needs for futures trading in India.

If trading in Index futures is advocated on the basis of hedging needs of investors, one must assess the market demand and supply source for trading in the market risk before introducing the index futures. To determine demand, one would need to know -

- 1) How many investors (individual and/or institutional) hold the index portfolio (or a close approximate of it)?
- 2) What are the objectives of these investors in holding such a portfolio?
- 3) What is the size of their portfolio?
- 4) What are their hedging needs given the stated objective of their business?
- 5) What price would they be willing to pay for such hedging? (If a reasonably perfect market exists a completely hedged portfolio can earn only risk-free return minus administrative costs).
- 6) Would it be possible to have a reasonably continuous demand curve given the number of hedge seekers and their stated price preferences?

Similarly, on the supply side the question is: would there be a sufficient number of hedgers who would like to offset the opposite risks or liquidate another hedge as a result of a change in their positions in the cash markets? And if hedgers are few in number and if all hedge seekers are on the same side, which is most often the case, arbitrageurs and speculators would be needed to provide the other side of the transaction. For arbitrageurs to function properly, we would need to examine the working of the cash market.

If the above is not possible in our existing cash markets, then only speculators are going to dominate the future markets. Speculators who are going to specifically benefit from futures trading are those who have access to large funds, an appetite to risk and decisive edge in expertise; the rest would be first losers and then mere spectators. We would not be able

to have a competitive market. Few speculators would be able to dictate the markets because there would not be many left to provide the opposite side of the transactions. This question become much more crucial when settlements are done in cash only and not by actual delivery. One would have no choice but to enter the settlement contract at dictated prices.

One would expect that the SEBI appointed committee of national importance would be more circumspect in making such claims for the existence of demand for instruments which have wide ranging impact on stock market operations and investment process in the country. Committee with vast resources and talent at its command could have easily asked the potential users to disclose quantitative information on their exposure to the market risk on the lines of 'Value-at-Risk' methodology developed by Basle Committee on Banking Supervision and the Technical Committee of the International Organization of Securities Commission (IOSCO). An hastily conducted opinion survey among limited number of participants cannot be a substitute for a thorough enquiry in recommending a product which has potential of disrupting existing secondary markets.

WHAT IS THE HURRY?

Then one wonders why a premier stock exchange and regulators are pushing for a product for which sufficient genuine demand is convincingly not established and still wants to begin futures trading which could greatly affect the existing secondary market operations and genuine price discovery processes. One can only surmise their motivations. First, let us have a close look at current working of the stock exchanges in India and their economic benefits and impact on investment processes.

After introduction of automated screen based trading in 1994, both BSE and NSE are basking under glory for doubling the volumes traded every year. As reported by SEBI, trading volumes on 22 bourses in India have increased from Rs. 227,368 crores to Rs. 646,116 crores during 1996-97 showing a growth of 184%. BSE shows a growth of 148%

and NSE 332%. A significant achievement by any standards. However, one also notices that deliveries percentage are only 10 to 15 percent of the traded volume. The rest of the business is squared off during the same value itself. Even in this small percentage of deliveries, if one takes out the deliveries made on account of arbitrage business between BSE and NSE (both has different trading period), the actual investment deliveries would not be more than one or two percent. These are our markets spot/cash markets.

Are these increasing volumes on our stock exchanges serving the expected economic purpose for the society? The primary function of stock markets is to facilitate raising of funds by the corporate world and allocation of funds offering best risk-return trade off. This is done by providing liquidity and help in price discovery process as and when new information becomes available. Our experience in last two-three years tells us that fund raising in primary markets have reduced considerably and most of the new securities issued in 1992-94 period are now degraded to B-2 group which are never or hardly traded. Only about 300 securities are actively traded. If one examines the trading volumes, one would find that there are only about 5 securities which always dominates and clocks 90 percent of the value traded. Does so much trade in these securities provides liquidity or would it come as a deluge that even genuine price discovery processes gets swamped. Questions one can ask are: Who has benefitted from these high volumes? What purpose do these high volumes are serving for the economy? How are these affecting the investment processes?

One obvious answer seems to be that the stock exchanges where trading is taking place gains a great deal from high turn over. Stock exchanges collect fees on every trade, earn interests on the margins collected, and the management presides over every increasing area of operations (some may call it an empire). One is reminded of John K. Galbraith's early writings. In one of his classic book commenting on working of American corporations he observes how management being an agent of stakeholders starts functioning to serve self

interest and starts preaching what is best for the society. I hope regulators are taking note of it and conduct a proper survey to assess investors needs for such products.

Next questions is why SEBI is in hurry to introduce derivative trading? Are our regulators playing to the international gallery? Is it more important to retain global and innovative image than worrying about the health of domestic capital markets? Wasn't the sudden introduction of free pricing for new issues without adequate regulatory framework in 1992 in same vain which has killed the primary markets? Isn't emphasis on speedy institutionalization of financial markets without sufficient preparation responsible for alienating the retail investors so much that they do not trust any equity oriented mutual funds schemes anymore? Today regulators are trying their best to coax investors to come back to the markets, but investors are not picking the bait because regulators orientation and priorities seem to be misplaced.

Further, one prominent member of the Derivatives Committee in his communication to the Committee has suggested that three additional aspects need to be considered by the Committee for inclusion in the report: a) policies regarding accounting standard for derivative so as to ensure consistency in approach both for disclosing financial position (outstanding in all the stock exchanges and not just one proposed derivative exchange), (b) fixation or responsibility and accountability for trading failure on the derivative exchange for any reason including technical reasons such as communication failure or system failure, and c) the level of deterrence that need to be imposed on player, exchanges another participants for failure to meet prescribed standard and/or causing systematic failure. These suggestions have great implications for financial integrity and efficient functioning of futures market, but seem to have been ignored by the Committee in drafting the regulatory framework.

Question remain what is the hurry? Shouldn't SEBI examines all the aspects of the issues before exposing the markets to avoidable mishaps.

WHAT SHOULD BE REGULATORS' IMMEDIATE CONCERNS?

It is accepted that derivative instruments do play a significant role in allocating and transferring risk and there is no doubt that risk allocation is among the primary functions of capital markets. However, derivative trading requires a critical mass of sophisticated investors, supported by credit and stock analysts, serviced by market-makers providing a modicum of liquidity and protected by keen regulatory overseers. The Derivatives Committee in recommending index futures has placed considerable emphasis on the self-regulatory competence of derivative exchanges under an overall supervision and guidance of SEBI. In 1994 a well established badla system which is akin to a weekly forward was abolished mainly because SEBI did not think SRO's were satisfactorily managing 'system risk'. Now SEBI has reintroduced it realising that it serves a much needed functions like 'margin trading' and short sale which are not available in India. However, severe restrictions put while reintroducing indicate that SEBI either does not trust SRO's independent functioning or its capabilities to supervise the system risk as a regulator. Questions arise how does it intend to oversee the futures market where transactions remain outstanding for more than three months? Is it technically prepared to supervise derivatives trading which can cause catastrophe if not monitor properly?.

The desirability of adding derivatives, such as futures trading depends crucially on the solidity and maturity of cash markets in underlying securities. To make cash markets robust and effective, first let us put in place the mechanism of margin trading, short sale, dematerialised settlement and electronic transfer of funds among market participants. Let our regulators not behave like the French queen Marie Antoinette who advised her subjects to eat cake when they were starving for bread. SEBI owes it to the domestic investors, that it puts in place a stable and reliable spot market for conducting genuine investment processes.

Launch delay to insure that appropriate regulatory and institutional measures are in place are well worth the extra time. The haste may result into a major scandal that may undermine both the confidence in and acceptance of equity derivatives as well as the reputation of the entities involved in introducing these products.