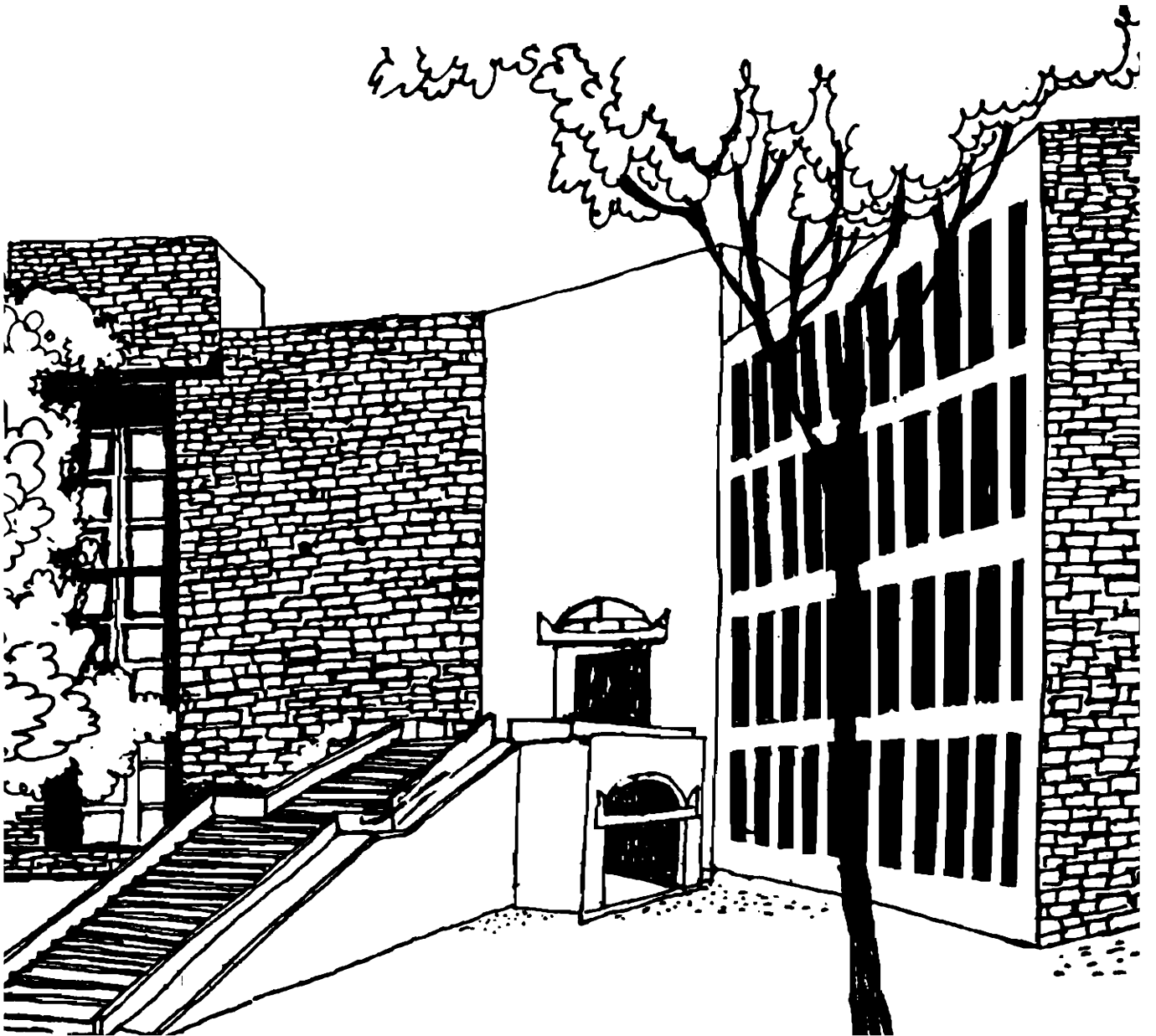




Working Paper



**SEBI'S REGULATORY PRIORITIES:
NEED FOR CHANGE**

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SEBI's Regulatory Priorities: *Need for Change*

Executive Summary

Genesis and Functions: SEBI was created in 1988 to reform and regulate the securities markets in India. It was given statutory powers in 1992 and assigned the following functions and responsibilities:

- * Make rules and regulations for various agencies connected with the securities markets.
- * Supervise and monitor the functioning of these agencies, including stock exchanges, to ensure that they follow the rules.
- * Protect investors from fraudulent and unfair trade practices.
- * Conduct necessary research for its function and undertake education and training of investors and intermediaries.

Reforms and Impact: The two main areas where SEBI took initiative after receiving statutory powers were: a) making rules for financial intermediaries, b) supervision and monitoring of functioning of stock exchanges. The reforms initiated by SEBI have met with only limited success. The main reasons for this are:

- * The reforms are piecemeal and do not fit into a larger cohesive plan of action.
- * The reforms are hastily conceived and implemented, without adequate time and effort being spent on wider consultations and feedback from market participants and experts.
- * The reforms attempt to make minor changes in the current antiquated method of operation of the markets, which create more friction and confrontation and little real benefit in terms of making markets more efficient.

Need for New Focus: The mission of SEBI needs to be reinterpreted as making the Indian securities markets informationally and operationally more efficient. This implies that SEBI should attempt to ensure that:

- * Reliable information is available to all market participants with increasing frequency.
- * The cost of transactions in the market is reduced and the ease of transactions is improved.

Achieving the Mission: A radical departure from the current method of functioning is needed to achieve the new mission. The strategic shift in SEBI's plans would involve the following:

- * Giving top priority to use of Information Technology to bring in scrip-less trading and computerized clearance and settlement trading systems.

- **Bringing the accounting and corporate disclosures standards on par with standards in the developed securities markets.**
- **Restructuring the markets to achieve an integrated, automated system of trading in all types of securities to ensure best possible service to all investors through greater competition and improved dissemination of information.**
- **Professionalizing the financial analysts function through training programmes.**
- **Changing the staffing pattern of SEBI by recruiting professionals rather than depending on personnel on deputation from various government departments.**

Role of the Government: To ensure that SEBI does not get degraded by personal ambitions and the pressures of the larger system, the government must do the following:

- **Clearly define the role and jurisdiction of the various agencies that have supervisory and regulatory authority over various aspects of the securities industry.**
- **Change the composition of the Board to include experts from the field of finance, accounting and economics.**
- **Ask SEBI to prepare a five year perspective plan with details about reforms contemplated and their schedule of implementation.**

SEBI's Regulatory Priorities: *Need for Change*

Genesis of SEBI

In his budget speech in 1987, Mr. Rajiv Gandhi, the then Prime Minister and also the Finance Minister of India, said,

"The capital markets in India have shown tremendous growth in the last few years. ... For a healthy growth of capital markets, investors rights must be fully protected. Trading malpractices must be prevented. Government have decided to set up a separate board for the regulation and orderly functioning of stock exchange and the securities industry."¹

The Securities and Exchange Board of India (SEBI) came into existence through a Government notification dated April 12, 1988. The financing of SEBI was to be through contributions from public financial and investment institutions. It was to function under the administrative control of the Department of Economic Affairs, Ministry of Finance. Four years after its creation, SEBI was finally given statutory powers in 1992. In his budget speech, the Finance Minister, Dr. Manmohan Singh said,

"Financial sector reform also includes reform of capital markets, which will increasingly play a vital role in mobilizing and allocating resources from the public. ... The Securities and Exchange Board of India (SEBI) has now been established on a statutory basis. As we gain experience, additional powers will be given to SEBI to strengthen its capability."²

SEBI acquired a statutory status from January 30, 1992. Until being given statutory powers, SEBI was not being taken seriously by the market participants. On numerous occasions, the Chairman of SEBI had lamented that unless it had powers to enforce its dictates, SEBI would be unable to play the role of a watchdog of the Indian capital market effectively.

The role SEBI has to play in the capital markets is similar to the role played by the Securities and Exchange Commission (SEC) in the USA. The SEC was created to restore the confidence of people in the securities market after the great stock market crash between 1929 and 1932. As it happens, SEBI was given statutory powers just a few days before the securities scam shook the

foundations of the Indian capital markets. SEBI has the responsibility of not only restoring investor confidence but also of reforming the capital markets.

Since being given legal status, SEBI has taken many initiatives to improve the functioning of capital markets. This paper analyses the reforms initiated by SEBI and their impact on the markets. In light of such an analysis, the paper redefines SEBI's mission and goals. A detailed plan of action is then proposed to achieve the new mission and goals of SEBI.

The SEBI Act, 1992

The Functions/ Objectives

The preamble to the Act reads as follows: "An Act to provide for the establishment of a board to protect the interests of investors in securities and to promote the development of, and to regulate the securities market and matters connected therewith or incidental thereto."³ Elaborating on the above, Chapter IV of the Act, specifies the functions of the board as:

- (a) regulating the business in stock exchanges and any other securities market;**
- (b) registering and regulating the working of stock brokers, sub-brokers, share transfer agents, bankers to an issue, trustees of trust deeds, registrars to an issue, merchant bankers, underwriters, portfolio managers, investment advisers, and such other intermediaries who may be associated with securities markets in any manner;**
- (c) registering and regulating the working of collective investment schemes, including mutual funds;**
- (d) promoting and regulating self-regulatory organisations;**
- (e) prohibiting fraudulent and unfair trade practices relating to securities markets;**
- (f) promoting investors' education and training of intermediaries of securities markets;**
- (g) prohibiting insider trading in securities;**
- (h) regulating substantial acquisition of shares and take-over of companies;**
- (i) calling for information, undertaking inspection, conducting inquiries and audit of stock exchanges and intermediaries and self-regulatory organisations in the securities market;**
- (j) promoting such functions and exercising such powers under the provisions of the Capital Issues (Control) Act, 1947 and the Securities Contracts (Regulation) Act, 1956, as may be delegated to it by the Central Government;**

- (k) *levying fee or other charges for carrying out the purpose of this section;*
- (l) *conducting research for the above purpose;*
- (m) *performing such other functions as may be prescribed.*

The Board

The Act specifies that the Board shall consist of a Chairman, two members from officials of the Ministries of the Central Government dealing with Finance and Law, one member from officials of the Reserve Bank of India, and two members to be appointed by the Central Government. These members *"shall be persons of ability, integrity and standing who have shown capacity in dealing with problems relating to securities market or have special knowledge or experience of law, finance, economics, accountancy, administration or in any other discipline which, in the opinion of the Central Government, shall be useful to the Board."*

Powers to Make Regulations

The Act specifies that, *"The Board may, with the previous approval of the Central Government, by notification, make regulations consistent with this Act."*

Reforms Initiated by SEBI

Based on the Act, one can say that SEBI is expected to perform the following broad categories of functions:

- * **Make rules and regulations for various agencies connected with the securities markets.**
- * **Supervise and monitor the functioning of these agencies, including stock exchanges, to ensure that they follow the rules.**
- * **Protect investors from fraudulent and unfair trade practices.**
- * **Conduct necessary research for its function and undertake education and training of investors and intermediaries.**

This section contains detailed analysis of the initiatives taken by SEBI in each of these broad categories of functions. The analysis attempts to answer the following four questions:

- * **What triggered the initiative from SEBI? : the Problem.**
- * **What was the nature of initiative by SEBI? : the Response.**
- * **What was the consequence of the response? : the Outcome.**

- * How meaningful was the response? : the Evaluation.

Rules and Regulations

SEBI has come up with a large number of regulations covering issue of securities; functioning of mutual funds, merchant banker, portfolio managers, and registrars and transfer agents; takeover of companies and insider trading. A general shortcoming observed in these regulations is that none of them has a preamble which explains the purpose of the regulation. It also appears that the rules have been drafted without adequate discussions with the relevant participants in the market. Some of the regulations are analyzed in detail below:

Pricing of New Issues

<i>Problem:</i> Fixing the price and terms in public and rights issues	<i>Response:</i> Investor protection guidelines	<i>Outcome:</i> Chaotic situation in the primary market
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Evaluation: The credit for the single biggest reform in the Indian capital market must perhaps go to the Finance Minister, Dr. Manmohan Singh, who announced in his Budget Speech of 1992, that the Capital Issues (Control) Act, 1947 was to be repealed. By the end of May 1992, the office of the Controller of Capital Issues (CCI) ceased to exist and SEBI took over the function of regulating the primary capital market. The CCI guidelines which had become a major source of inefficiency in the market⁴ were replaced by SEBI guidelines⁵. Some of the important features of the new guidelines are:

- * Permission of SEBI is not required for issuing securities. However, the prospectus has to be vetted by SEBI.
- * Issuers are free to decide the issue price. They are however required to provide a justification of the price in their prospectus to the investors.
- * The terms of conversion of convertible debentures, that is the date of conversion and the exercise price, have to be announced at the time of issue.
- * Issue of debentures and convertible debentures with conversion date beyond 18 months have to be accompanied with credit rating.

The SEBI guidelines are in keeping with the policy of liberalization that is being followed by the government. The implementation of the guidelines however, created a chaotic situation in the primary markets, with issue after issue, even from well known business houses, failing to receive full subscription because of unduly high premia being charged by the issuers. Accustomed as they

are to massive oversubscription of issues, the Underwriters and Merchant Bankers were totally unprepared for the large devolvments arising from undersubscription of issues. SEBI rightly insisted that the underwriters had to honour their devolvments. The public financial and investment institutions bailed out the Underwriters by buying their devolvment at a considerable discount. That created an undesirable situation where the institutions obtained higher returns as compared to individual investors in the primary market. SEBI was not happy with such a development, but had to soft-pedal the issue to contain the destabilization of the market. In retrospect, it appears that SEBI should have thought of bringing in the "bought deal" process of managing new issues to the Indian market. That would put the onus of pricing squarely on the Merchant Bankers, and made them more responsible. We shall come back to this issue when we discuss restructuring of market later.

Merchant Banking

<p><i>Problem:</i> Merchant Bankers * have too little capital * resort to dubious practices</p>	<p><i>Response:</i> Regulations: * capital adequacy norms * code of conduct</p>	<p><i>Outcome:</i> * capital norms inadequate * code of conduct not objective and enforceable</p>
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Evaluation: To overcome some of the fraudulent practices in the primary capital market, SEBI came out with Regulations for Merchant Bankers⁶. The regulation defines four categories of Merchant Bankers, with each category being allowed to provide certain specified services. The net worth requirements for the four categories are Rs. 1 crore, Rs. 50 lakh, Rs. 20 lakh, and Nil. The regulations require that the lead Merchant Banker holding Category I certificate must accept a minimum underwriting obligation of 5% of the total underwriting commitment or Rs. 25 lakhs, whichever is less. Since underwriting commissions are a major source of income for Merchant Bankers, they invariably underwrite amounts far bigger than the limit prescribed by the regulation. The net worth requirements in such situations are quite inadequate in relation to the underwriting commitments assumed. This inadequacy was well exposed when the Rs. 500 crore issue of Mangalore Refineries (a Birla company) resulted in hundreds of crores of devolvment on the underwriters. They were finally bailed out by the intervention of public financial and investment institutions.

SEBI's concern for fraudulent practices in the primary market is reflected in the code of conduct for Merchant Bankers specified in the Regulations. The code reads like the Ten Commandments, albeit without the moral persuasion of the latter. The list of "do's and dont's", is meaningless because there is little possibility of verifying whether they indeed "did or did not". For example,

the first code reads, "A merchant banker in the conduct of his business shall observe high standards of integrity and fairness in all his dealings ...". Would it ever be possible to establish that a Merchant Banker did not observe high standards of integrity and fairness? The objective of checking malpractices thus remains unserved by the regulations.

Disclosures in Prospectus

Problem: Inadequate disclosures in prospectus	Response: Prospectus must give: * financial projections * risk factors * justification for the price charged	Outcome: Prospectus gives: * two conflicting projections * routine risk factors * inane justification
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Evaluation: Issuers are required to provide financial projections for the next five years. Most issuers present two sets of figures, one based on their assessment and another based on assessment by a financial institution. Needless to add, the issuers' projections in general present a far rosier picture of the future performance of the company. An example of this is the recent issue by Reliance Polyethylene Limited. The financial projections are given alongside in the box.

Year ending	(Rs. in crores)		
31st March	1995	1996	1997
As per company:			
Capacity utilization	70%	80%	90%
Sales	214	475	569
Gross profit	86	187	236
As per ICICI:			
Capacity utilization	70%	80%	90%
Sales	190	432	479
Gross profit	55	121	128

It is quite obvious that the company expects to do far better than what ICICI expects it to do.

Which set of figures should the investors believe? If they reject the figures projected by the company as being too optimistic and accept the conservative forecast of the financial institution, they may miss a good opportunity for investment. Since the assumptions underlying the projections are not spelt out, investors are unable to judge the quality of either of the two financial projections or make an independent projection.

Issuers are also required to mention "risk factors". Since it is mandatory, some routine factors that could affect the performance of any company are cited as risk factors by issuers. The risk factors mentioned by Morepen Laboratories Limited in its recent issue were:

Risk Factors:

- * Major changes in regard to Drug/ Export Policies by Govt. of India could have an impact on Company's profitability/ exports.
- * Availability and cost of imported raw materials is subject to Govt. Policies and Exchange Rate Fluctuation.
- * Delay in implementing the project may affect the company's profitability.
- * Company's products are subject to market competition.

The information of the above kind is of little practical use to investors in judging the riskiness of investing in the issue. The prospectus does not provide information on the proportion of imported raw material, the percentage of output exported and the exchange rate assumed for making the financial projections. The investors are therefore in no position to quantify the risk in financial terms and make an informed decision.

The mandatory justification of the issue price too is so vague that it is of little use to investors. It is clear that "form" has taken precedence over "substance" in the new scheme of things. Adequate thought has not been given to the nature of disclosures that would indeed help an investor make informed decisions. It is worthwhile here to contrast the prospectus provided to Indian investors with the issue document that the same Indian companies are required to submit for raising money in the international capital markets. While Indian investors are given such inane information, Reliance Industries Limited, for example, brought out a 132 page document, with details about its operations and performance, for the issue of Global Depository Receipts (GDRs). The details contained in that document are perhaps not available even in their unabridged annual reports. It is time domestic investors are treated with the respect accorded to foreign investors. SEBI's initiatives in this direction fall far short of what is needed.

Mutual Funds

<i>Problem:</i> Governance of Mutual Funds	<i>Response:</i> Mutual Funds Regulations	<i>Outcome:</i> * pricing of units need not be based on NAV * lack of clear policy on inter-scheme transactions * confusion about roles of AMC, sponsor and trustee
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Evaluation: The first set of regulations on Mutual Funds were issued by the Ministry of Finance in 1990. Two of my colleagues and I had commented extensively on those regulations, suggesting that major changes were needed in the regulations⁷. Subsequently, new regulations were framed by an expert committee under the chairmanship of Mr. Dave, Chairman of UTI, which took into account our suggestions and comments. The Dave Committee regulations then became the basis for the regulations framed by SEBI. There are some major lacunae in these regulations which could create problems in supervision and could be a source of malpractices.

The regulations specify that the Net Asset Value (NAV) is to be published at least once a month in case of open ended schemes and at least once in three months in case of close ended schemes. While close ended schemes are to be listed in the stock exchanges, the Fund is required to announce purchase and sale prices of a unit of an open ended scheme every week. The regulations however do not require that these prices be linked to the NAV, which is the fundamental value of the unit. In the absence of information about the NAV of the unit, it would be possible for the Fund to overcharge the buyers or underpay the sellers, without their knowledge. To ensure that this does not happen, the information about NAV ought to be made available to the investors, at a far greater frequency. In this era of computers, it should be possible to publish NAV every day without any difficulty.

The way the regulations have been drafted, there appears to be considerable overlap in the roles and responsibilities of the Trustee, the Sponsor and the Asset Management Company. It also does not become clear if there is any restriction on the number of schemes that can be floated by any one of these agents. The regulations are also silent on inter-scheme transactions. These ambiguities and ambivalence could be a major source of genuine errors or deliberate malpractice, and pose difficulties in supervision.

Insider Trading

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Problem: Trading based on private information	Response: Code for insider trading	Outcome: Code remains on paper. No enforcement mechanism.
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Evaluation: The major weakness of the code is that with the current information system, it would be very difficult for market supervisors to spot insider trading. In the developed markets, automatic monitoring of prices and volumes provide an initial signal to a supervisor, who may then look for corroborating evidence in the financial press to initiate an investigation. Our antiquated

systems of market operations are simply not geared to check insider trading. One way of eliminating insider trading would be to eliminate inside information from the market by forcing companies to disclose more information quickly. Our disclosure norms are atrocious, and they need to be overhauled.

Corporate Takeover

Problem: Protecting interests of shareholders in takeover bids	Response: Code for Takeovers	Outcome: Code still permits unfair methods of acquisition
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Evaluation: The Takeover Code requires that whenever the percentage of shares to be acquired exceeds a certain specified limit, the acquirer can follow any of the following two methods for acquiring shares over and above the specified limit: a) make a tender offer, specifying the price and the number of shares he is interested in acquiring and the date on which the offer would open, b) announce the intention of acquiring shares and then resort to open market purchase. The regulations imply that SEBI is neutral about which of the two methods is used. The second method however, is quite unfair to shareholders since they are stampeded into selling their holdings, not knowing when the acquirer would stop purchasing from the market. The method is also unfair to shareholders residing in smaller towns and cities, with relatively poor access to stock exchanges. The regulations for partial takeover (acquiring minority stakes) also need to be re-examined. It allows the acquirer to enter the management of the acquired firm, and then use that as a leverage to increase his shareholding. A detailed discussion of the takeover code is contained in a paper written by my colleagues.⁸

Supervision and Monitoring

One of the first tasks taken up by SEBI after being given statutory powers was reformation of stock exchanges. However, its attempts to expand its role in the governance of stock exchanges met with stiff resistance from the brokers and the governing boards of stock exchanges. As a result of this confrontation, the markets have been closed intermittently, sometimes for extended periods, over the last one year. The issues which are still awaiting resolution are as follows:

Broker Registration

Problem: Supervision of brokers	Response: Registration of brokers with SEBI	Outcome: Bitter dispute
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Governing Boards of Stock Exchanges

<i>Problem:</i> Disciplining of brokers	<i>Response:</i> Change composition of stock exchange boards	<i>Outcome:</i> Bitter dispute
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Evaluation: The next move of SEBI was to ask the stock exchanges to change the composition of their governing boards. It argued that the stock exchanges were being run like private clubs of the brokers, by the brokers and for the brokers. In an attempt to break the stranglehold of brokers on the governing boards of exchanges, SEBI proposed that the proportion of outside members (non brokers) in the governing board of a stock exchange should be raised from 40% to 60%. The reason for the increased representation from outside was to ensure that the governing boards were able and willing to take disciplinary actions against member brokers for violating stock exchange norms and regulations, and indulging in other malpractices which hurt the investors. Starting with an initial position of refusing to accept any suggestion from SEBI about the composition of the governing board, the Bombay Stock Exchange (BSE), the largest and the most powerful exchange in the country, has yielded by agreeing to have 50% outsiders in its board. However, SEBI is unwilling to compromise on the proportion of outside representation and the battle of nerves is still on.

Though at first SEBI's insistence on majority outside representation, appears reasonable, a little reflection indicates that perhaps SEBI is yet again getting embroiled in a conflict of little consequence. An examination of the functioning of the governing boards of stock exchanges would show that the major problems in functioning of the boards have arisen because the outside members of these boards have not discharged their responsibilities. Whenever they have performed their role conscientiously, the governance of stock exchanges has been proper. Given that these outside members of the board are from the government, from large financial and investment institutions, from SEBI and professionals chosen from the public, I see no reason as to why they would be unable to exercise moral authority over the board, particularly if they have an equal representation.

The problem in the past has been that more often than not these members even failed to attend crucial meetings, and even when they did attend the meetings, they failed to protect investors' interests. Thus, what has been happening is that the outside members have been abdicating their responsibility, and letting the brokers unduly influence the boards' decisions. The mal-functioning of the governing boards is not going to be corrected merely by increasing the proportion of outside

members on the boards. The solution lies in changing the monitoring systems and procedures, so that the controls to be exercised on the functioning of the markets become less discretionary. It is yet another instance of SEBI prescribing a solution without proper diagnosis of the problem. The governance of the market has suffered, as a result of the prolonged confrontation between SEBI and the stock exchanges.

Commission Charged by Brokers

<i>Problem:</i> High commissions charged by brokers	<i>Response:</i> Commission to be shown separately	<i>Outcome:</i> Impossible to verify overcharging
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Evaluation: To eliminate charging of unduly high commissions, SEBI came up with the proposal that brokers must indicate the commission charged separately from the price. In several fora, I have argued that given the price fluctuations in the Indian markets, the above measure does not guarantee that investors would not be cheated by the brokers. They can always mention a very low commission, and include part of the commission in the price. Since neither is "time stamping" of transactions possible nor are prices at which all trades have been done on the floor available, it would be practically impossible to verify whether a broker has indeed been dishonest or not.

As a result of SEBI's insistence, some brokers have started indicating the commission separately. A contract note which came to my notice had the following figures: "*price: Rs. 133.30, commission: Rs. 0.70; price Rs. 40.02, commission: Rs. 0.23*". Any person who knows the Indian market would immediately say that the commissions mentioned are unbelievable. A brokerage of about 0.50% for small individual investors is too low. What is the utility of this measure? The investor gains nothing from commission being shown separately, because in any case he is more concerned about the gross price he has to pay than how much his broker earned from the transaction. The broker does not like the measure, but perhaps he does not mind the small inconvenience, if that satisfies SEBI. Yes, SEBI's edict has been followed, but has the purpose for which the measure was introduced been served?

The Securities Scam

<i>Problem:</i> Tainted shares	<i>Response:</i> None	<i>Outcome:</i> Problem still unresolved
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Evaluation: Almost immediately after SEBI was given statutory powers in April, 1992, it was presented with a miraculous opportunity in the form of securities scam to assert its role as the top

regulatory agency in the financial industry. However, SEBI shied away from the situation, choosing not to play any role in the scam investigations. As the scam unfolded and the capital markets went into a tailspin, SEBI's silence was deafening.

One of the most inappropriate responses of the government to the securities scam was the creation of "tainted" shares, which immobilized thousands of crores worth of shares. After more than a year, these shares continue to remain tainted, and SEBI has made no attempts to intervene and resolve the associated issues to bring these shares back into the trading rings of the stock markets.

The non-response of SEBI to the scam would perhaps have been pardonable had the agency been created only in April 1992. In such a case, its response would have been akin to that of an opening batsman in Cricket, ducking to a barrage of bouncers in the first over. That however was not the case with SEBI, as it had been "batting" for four years when the scam occurred (SEBI was established in April 1988). On numerous occasions, Chairman of SEBI, Mr. G.V. Ramakrishna had lamented that SEBI was unable to play its supervisory and regulatory role as it had no statutory powers. It is therefore strange that finally when SEBI got the (legal) authority it had been demanding, it chose not to exercise it when the markets went through a trying period and needed help from an agency like SEBI.

This serious lapse on the part of SEBI can not but invite the criticism that SEBI is willing to deal only with cosmetic issues. Or worse still, perhaps SEBI does not fully understand the role it is supposed to play in the securities industry.

Investor Protection

Since SEBI did not initially have statutory powers, it began by focusing attention on investor protection issues, rather than issues connected with operation and development of the markets. This was a sensible choice because measures for investor protection would meet with little resistance and would be acceptable to all concerned with the securities industry. It would also build for SEBI a large and vocal constituency. In a booklet brought out in December 1991¹⁰, SEBI listed 11 malpractices from which investors needed protection. Let us examine the measures initiated by SEBI to safeguard investors against these malpractices, after being granted statutory powers.

<u>Malpractice</u>	<u>SEBI's Response</u>
Misleading advertisements	Exhorting Merchant Bankers to provide true information, without exaggerations, to investors.
Disclosures in prospectus	As discussed earlier, the disclosure requirements specified by SEBI are quite inadequate.
Delay in listing of securities	This appears to be outside direct jurisdiction of SEBI. It only passes on complaints received from investors to concerned agencies.
Delay in despatch of allotment letters/refund orders	Promoting the Stockinvest scheme introduced by banks. The scheme does not reduce difficulties of investors (as discussed below).
Delay in despatch of securities	This appears to be outside direct jurisdiction of SEBI. It only passes on complaints received from investors to concerned agencies.
Delay in transfer of securities	This appears to be outside direct jurisdiction of SEBI. It only passes on complaints received from investors to concerned agencies.
Trading in odd lots	There is no fresh initiative by SEBI.
Stock market transactions	Separation of commission from price. As discussed earlier, the measure would not eliminate the problem of overcharging.
Default in repayment of deposits	This appears to be outside direct jurisdiction of SEBI. It only passes on complaints received from investors to concerned agencies.
Delay in payment of interest on debentures	This appears to be outside direct jurisdiction of SEBI. It only passes on complaints received from investors to concerned agencies.
Non-payment of dividends	This appears to be outside direct jurisdiction of SEBI. It only passes on complaints received from investors to concerned agencies.

As can be seen, SEBI is not authorized to deal with most of the malpractices affecting the investors. What SEBI has been doing is to collect investors' grievances, categorize them, publicise them and forward them to appropriate agencies for action. In the second half of July, 1993, SEBI received 22,781 complaints against 1,255 companies. Of these complaints, 14,988 (66%) pertained to non-receipt of refund orders/ allotment advice, 5,318 (23%) pertained to non-receipt of share/ debenture certificates after allotment, transfer, endorsement and conversion, and 1886 (8%) pertained to non-receipt of dividends on shares, interest on debentures/ fixed deposits¹¹. Since delay in receipt of refund orders/ allotment letters is by far the biggest culprit, accounting for two

thirds of investor complaints, let us examine in detail the response of SEBI to this particular problem:

The Stockinvest Scheme

<i>Problem:</i> Delays in despatch of refund orders	<i>Response:</i> Stockinvest scheme	<i>Outcome:</i> No one is happy with Stockinvest
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Evaluation: With active encouragement from SEBI, the State Bank of India (SBI) introduced the Stockinvest scheme with great fanfare, about a year ago. The scheme was meant to protect investors from losses arising because of delays in despatch of refund orders. The scheme ensures that investors do not lose interest on the application money, since the money is debited from an investor's account only when he is allotted shares by the issuing company. The scheme has not become popular because: a) it is extremely cumbersome to operate, b) most companies now pay interest on the application money for the period of delay beyond the stipulated period, and c) for most investors, loss of bank interest for a few months on the application amount is a non-issue, as they are more concerned about their inability to rotate the money faster from one issue to another. The Stockinvest does not result in faster circulation of their money. This is yet another instance of SEBI proposing a cure without proper diagnosis. The measure does not solve investors' difficulty in rotating their money faster.

The Stockinvest has become a scheme which is not wanted by any of the market participants. The bankers are not keen as it adds to their administrative burden, the issue managers are not happy with it since it complicates their processing of applications considerably, and the investors are at best indifferent to the scheme. The scheme is being continued, perhaps because it is designed ostensibly to benefit the investors and SEBI is backing it. This reinforces the earlier observation that SEBI is more interested in the form rather than the substance of any initiative.

Summarizing, it is clear that despite talking about investor protection since inception, SEBI has been able to do very little for investors. Part of the reason perhaps lies in the fact that most of the issues that lead to investor grievances, are outside the jurisdiction of SEBI. However, the response of SEBI to issues which are within its jurisdiction, does not inspire confidence in its ability to deal with investor protection issues even if all of them are brought within its purview.

Research, Education and Training

The Act specifies that SEBI must conduct research for the purpose of developing appropriate strategies for reforming the market. It also specifies that SEBI should educate and train investors and other market intermediaries. In all the three matters, SEBI's record is quite poor.

Overall Evaluation of SEBI

The analysis of SEBI's initiatives and their impact shows that the performance of SEBI in reforming and developing the Indian capital market has been quite mediocre. SEBI has got bogged down with detailed operational level problems instead of initiating major strategic shifts in the operation and management of the markets. This micro perspective is evident in the fact that even today SEBI continues to spend time and resources dealing with individual complaints, than plan and initiate systemic changes which could eliminate the very creation of these problems. Investor complaints should be used to trigger changes in the system in the right direction. The major shortcomings in SEBI's method of functioning are as follows:

- * The attempted reforms are based on the implicit assumption that the current systems and procedures would continue in the future. Therefore, the reforms initiated have only tinkered with the existing methods, to make the markets more efficient and fair. No attempt has been made to think of radically different methods of operating the markets.
- * There has been no attempt to ensure that the reforms initiated achieve the objectives of investor protection and market development in practice. There is a great concern for the "form" and little concern for the "substance" of the reforms initiated.
- * The attempted reforms are not based on detailed, serious studies carried out on the capital markets and the various associated agencies by experts in the field. The most important database for SEBI's decisions appears to be the thousands of complaints it receives every month from individual investors. There is complete absence of scientific approach to rule making.
- * The reforms initiated appear disjointed. They lack a clear direction. There is also a lack of appreciation of the fact that a change in one sub-system often needs accompanying changes in the other sub-systems for it to be implementable and sustainable. A holistic view thus must precede any intervention. This kind of global perspective is completely lacking in SEBI's initiatives.
- * The reforms have been attempted without adequate consultations with the agencies and people who are going to be affected by the reforms. This has exacerbated the problems of implementation. An approach based on consensus would have been superior to one based on confrontation.

It is quite apparent that a radical change in the functioning of SEBI is called for, if it is to reform and develop the Indian capital markets at a pace needed by the larger economic liberalization

programme of the government. Without that, there is a danger that the securities market, instead of being an engine of growth of the economy, may become a drag on the economy.

The Mission of SEBI: A Restatement

As mentioned earlier, the SEBI Act spells out investor protection, and promotion, development and regulation of the securities market as the mission of SEBI. It then specifies the objectives SEBI must try to achieve to fulfil the mission. The phrase "promotion and development of the market" can be interpreted differently by different individuals. I would therefore, like to restate the mission of SEBI from a theoretical perspective, so as to give it a more precise meaning. Such a restatement, as we shall see later, would lead us to a totally new approach for reformation and growth of the Indian capital market.

It is now recognized the world over, including in communist China, that well functioning capital markets are absolutely essential for sustained economic growth. The importance of capital markets is eloquently captured in the 1975 Securities Amendments Act of USA, which states: "*The Congress finds that the securities markets are an important national asset which must be preserved and strengthened*"¹². One of the most important functions of the capital market is efficient allocation of capital, which means that capital should be made available to the most profitable investment opportunities in the economy. As the pace of liberalization accelerates, the Indian capital market would be called upon to perform this function with increasingly greater efficacy to ensure that the nation reaps maximum benefits from the move towards a free economy. The institution which has been assigned the difficult task of harnessing the capital market in such a manner is the Securities and Exchange Board of India.

The mission of SEBI therefore is to improve the allocational efficiency of the Indian capital markets. The allocational efficiency in turn depends on two other efficiencies, namely informational efficiency and operational efficiency of the markets. A market is informationally efficient if the prices of securities fully reflect all the information relevant for their valuation. A market is operationally efficient if it is possible to carry out transactions in the market with ease and at negligible cost. The objectives of SEBI should therefore be to make the Indian capital market increasingly more efficient both in terms of its ability to process and assimilate information and in terms of increasing the ease and reducing the cost of transactions. To understand how these could be achieved, we need to examine the meaning of informational and operational efficiencies in some more detail.

Informational Efficiency

A basic requirement for informational efficiency is that all participants in the market should have equal access to information and the reliability of information should be high. If this is ensured then competition among the participants to benefit from information would ensure that the prices quickly reflect the impact of information received by the market, and the opportunity to earn abnormal return by trading on information is eliminated. The information available to the market can be of three types:

- * Prices of securities
- * Publicly available information on performance of companies, industries and the economy.
- * Private information which is available to only a few individuals.

The objective of SEBI should be to ensure that the first two types of information are disseminated and made available quickly to all participants in the market, while no person is allowed to benefit from the third kind of information. Trading on the basis of private information, known as "insider" trading, has been a bane of capital markets the world over, and SEBI must devise mechanisms to detect and deter insider trading. One way of eliminating insider trading would be to eliminate inside information from the market by forcing companies to disclose more information quickly. Our disclosure norms are atrocious, and they need to be overhauled.

Operational Efficiency

The operational efficiency of a market is determined by the cost and the time taken to carry out transactions in the market. The lower the cost of transactions and lower the time taken to complete them, the higher would be the operational efficiency of the market. The three distinct steps in completing a transaction in the market are:

- * Placing an order with a broker.
- * Receiving a contract note from the broker if the order has been carried out.
- * Making payment to the broker and receiving certificates in exchange if securities have been bought or delivering certificates to the broker and receiving payment if securities have been sold.

The buyers have to send the securities acquired from the brokers, to the company for transfer to their names. The difficulties faced by the investors at various stages of this process have already been discussed in the earlier section on investor protection. The objective of SEBI should be to

bring about changes in the systems and procedures to make all these steps easy for investors, thereby improving the operational efficiency of the market.

A Framework for Accomplishing the Mission

The mission elaborated above can be achieved through: a) use of Information Technology (IT), b) improvement in corporate disclosures, c) restructuring of markets, and d) broadening of markets by introducing new instruments. The four measures have to be used in conjunction to ensure a quick and lasting impact on the markets.

Use of Information Technology

Traditionally securities transactions have been carried out by traders gathering on the floor of a stock exchange to quote buy and sell prices and strike a deal when the quotes matched. With the advent of computers, the exchanges came to provide a range of post-trade services such as clearance and settlement of transactions to their members. The last decade has however seen Information Technology bring about major changes not only in the clearance and settlement systems but also in the trading of securities. The use of modern data processing and communication technologies significantly improves the efficiency and effectiveness of market operations. The benefits are so immense in relation to the costs of using these technologies that even emerging markets such as those of Malaysia, Mexico and Korea opted for computerized securities transactions and settlement systems. Some of the East European countries too such as Poland and Hungary, which do not even have a well functioning financial system, are setting up computerized stock markets from the beginning, leap frogging thereby over the traditional stages of market development. In India we continue to use the manual method of trading in securities, with very basic level of computerization of the back office activities. It is time to bring in IT in a major way in the Indian markets, because only then can capital markets in India achieve international standards of efficiency, fairness and stability.

Improving Corporate Disclosures

In 1936, James Landis, one of the earliest Chairmen of the SEC said: "*The impact of almost daily tilts with accountants, some of them called leaders in their profession, often leaves little doubt that their loyalties to management are stronger than their sense of responsibility to the investor*".¹³

The quality and frequency of accounting information provided to investors in India is atrocious. Till recently, even this poor quality information about the financial performance of companies was available only once a year. Now the frequency has doubled, as the companies are required to

announce half yearly performance. However, to avoid announcing poor results in the middle of the accounting year, companies have resorted to announcing "unaudited" results which could be altered at the end of the year without being on the wrong side of the law. In this age of Information Technology, the frequency with which companies should be required to provide information ought to be much higher.

In 1973, the SEC Chairman, William Casey said, "*I believe, the public has lost more money through the use of permissible variations in accounting to exaggerate earnings and growth and to obscure declining performance than through the whole catalogue of things which we have made impermissible*".¹⁴ The situation in India is no different from the situation in the US, perhaps it is far worse. There is therefore an urgent need to overhaul our accounting standards to ensure that the accounting numbers present a fair and complete picture about the financial performance of companies.

Restructuring of Markets

There are 22 stock exchanges in the country today. Many securities are listed and traded in several stock exchanges. The fragmentation of markets, particularly when the floating stock is not large, leads to a situation where the same security may be quoted at widely different prices at the same time because of differences in the local demand and supply conditions. The prices also differ because of differences in the settlement systems from market to market. While Bombay has "carry forward" system of trading in addition to "cash" system, Madras has only cash trading system.¹⁵ While in Bombay settlement takes place about once every two weeks, in Madras settlement takes place every three trading days. Though Ahmedabad, Delhi and Calcutta follow the same system of trading as Bombay, the settlement periods in various stock exchanges are not synchronized. The lack of synchronization often leads to distortions in prices. An example of this is to be found in the closing prices of the well traded Reliance shares on July 30, 1993 in the two well connected markets at Bombay and Ahmedabad: *Price at Bombay: Rs. 236, Price at Ahmedabad: Rs. 225*, a difference of almost 5%.¹⁶ It is not uncommon to observe far wider differences between prices prevailing in any two markets, particularly in cases of less active securities. All these have created a situation for investors where they can never be quite certain whether they are getting the best possible prices. These problems can be overcome only by linking all the markets, thereby enhancing the efficiency through greater competition and wider dissemination of information to brokers and investors.

Broadening of Markets

The Indian capital markets offer a very narrow range of securities. While options and futures do not exist in the Indian market, there is a small and inactive market for bonds. India therefore does not have a "complete" market which would provide a wide range of investment choices to investors to design portfolios that would exactly fit their requirements. Though the last decade has witnessed a surge of innovative instruments particularly in the bond markets the world over, the Indian market is still stuck with traditional instruments. If India is to globalize its capital markets and ensure that capital markets perform the function of efficient allocation of capital, it would be imperative to widen the instruments available in the market. While one may argue that introduction of new instruments can not be within the purview of SEBI, setting up and developing new markets is certainly SEBI's responsibility. As my colleagues and I have argued in a recent study¹⁷, India needs an active bond market as well as markets in options and futures to facilitate risk management.

Implementing the Framework

To implement the framework suggested above, SEBI would have to change its focus and bring about major changes in the way it is organized and the kinds of issues it is dealing with. The details of the implementation plan is described in this section.

Development of A Strategic Plan

As has already been mentioned, SEBI has so far merely tinkered with the existing systems and procedures. This has perhaps been done in the belief that several small changes would finally add up to a major change in the functioning of the capital markets. However, the changes that SEBI has been making do not appear to fit a consciously designed larger plan for reforming capital markets. They are distinctly piecemeal changes dictated by the pressures created by various constituencies, primarily the investors. It is high time SEBI, designed a strategic plan for itself. The major components of such a strategic plan would be: a technology plan, a corporate disclosures plan, a market restructuring plan and a new institutions plan. The plan should spell out the goals and objectives of the various components of the plan. It should also contain a detailed implementation plan, which would specify the methodology, the time and the other resources needed to achieve the objectives.

Working with the Regulated

In his maiden address as the first Chairman of the SEC, Kennedy reassured Wall street by saying: *"We are not working on the theory that all the men and all the women connected with finance, ... are to be regarded as guilty of some undefined crime ... We regard ourselves ... as partners in a cooperative enterprise. ... We want to see the security business, by far the greatest in volume and the most important in its effects of any in the country go forward on a broad scale."*¹⁸ Kennedy convinced the other commissioners that the SEC could aid the Roosevelt's economic recovery policies only if the SEC won stock exchange and corporate acceptance. He insisted that the SEC should follow a balanced policy where prosecution for fraud was accompanied by appreciation for honest enterprise.

SEBI needs to follow a similar strategy. It would be a mistake if SEBI believes that it can transform the capital markets single handed. It would need cooperation from the brokers, the stock exchanges, and other agencies connected with the securities industry, if it has to speedily implement its agenda for reforms. Therefore, the earlier it wins the confidence of all concerned, the better would it be for capital markets and investors. The starting point for building bridges between SEBI and the other agencies could be the strategic plan. SEBI should widely circulate its plan and invite comments from all connected with the securities industry.

Use of Information Technology

Promoting use of IT should be the topmost priority of SEBI, because this measure alone can take care of perhaps 90% of the problems in the market operations today. As mentioned earlier, the benefits are so immense that emerging economies and even economies with fledgling financial systems are opting for computerized trading and settlement systems. India has well established and fairly professionalised financial system and stock markets. Therefore, transition to a computerized system quickly is possible. The initiative in the matter has to be taken by SEBI. Some of the principles on which such automated trading system would be based are as follows:

- * The system should meet the prevailing legal requirements. It may be necessary to change the legal provisions before a fully automated system, based on "book entry" can be implemented. For example, the current requirement of transfer deed being signed by both the parties may have to be done away with, as no signatures would be required in the book entry system.
- * The system must operate in an equitable manner, providing equal access to all participants. It should also be equitable in terms of providing information to all market participants. No

participant should have advantage either through early receipt of information or through receiving some information on an exclusive basis.

- * The system has to be tested at the time of implementation and periodically afterwards to assess the risk of unauthorized access and system failure due to human error. It may also be desirable to plan for contingencies arising from natural catastrophes such as fire or flooding affecting the system.
- * SEBI as the regulatory authority may provide some more safeguards over and above those that are built into the system, particularly in respect of interactions between the securities markets and other organizations in the financial system.

The first computerized system was implemented by the Toronto Stock Exchange, Canada¹⁹. The system is known as CATS (Computer Assisted Trading System). This system has been bought by Tokyo, Sao Paulo, Paris, Lyon, Brussels and Madrid. The systems operating in Korea, Malaysia and Taiwan, though locally developed, are patterned after CATS. It would be worthwhile to briefly list the main features of CATS:

- * *Price Quotation and Trading:* CATS is an order driven system. The screen displays the size of order, the price and the identity of the intermediary who has entered the order.
- * *Order Execution:* The buy and sell orders are matched and executed if possible. The confirmations are immediately sent to the concerned parties.
- * *Clearing and Settlement:* The centralized custodial and clearing facility is provided by the Canadian Depository and Securities Limited (CDS). CATS provides an Order Management System (OMS) which links CATS, brokers' back offices and CDS on an automated real time network.
- * *Market Surveillance:* The CATS market surveillance system contains pre-set surveillance parameters for price and volume for every security. Any trading activity exceeding these limits is signalled to the market supervisor.
- * *Market Information:* The CATS software creates a database based on the data generated by trading. These can be accessed by those connected on the network.

Today, several similar systems are available. Most of these systems would have features similar to those listed above. To cut down the time of implementation, SEBI should evaluate the various systems available and acquire one, rather than attempt to develop an indigenous system. Over time, the system acquired may be modified to incorporate special requirements.

Restructuring of Markets

In the recent past, several developments have taken place to modernize Indian capital markets. The Stock Holding Corporation of India Limited (SHCIL) is planning to establish a National

Clearing and Depository System. The IDBI has initiated a move to set up National Stock Exchange (NSE), which will provide fully computerized facility for trading (initially) in fixed return securities at Bombay. It would be possible to transact from all over the country, through terminals linked to the NSE. A move should be initiated by SEBI to fit all these separate efforts, with its own initiative of integrating all the stock markets, so that a comprehensive automated system of trading and settlement in all types of securities may emerge in India.

The primary capital market too needs major restructuring. As mentioned earlier, SEBI should initiate steps to move to the "bought deal" system where the new issues are first bought by the Merchant Bankers and then sold to the public. The method would introduce the much needed competition among the Merchant Bankers as they would have to compete by offering better prices to the issuers. This "bought deal" method along with scrip-less system can eliminate all the problems currently being faced by investors in the primary market.

Accounting Standards and Corporate Disclosures

The accounting standards in India are set by the Institute of Chartered Accountants, headquartered at Delhi. The Indian accounting standards and disclosure requirements are extremely poor and violate the comparability of corporate performance over time and across firms. SEBI should forthwith insist that India adopt International Accounting Standards, which are framed by The International Federation of Accountants, based on the experience and needs of a large number of nations. This move is all the more necessary since India has opened its capital markets to investment by foreigners. SEBI should initiate a dialogue with the Institute of Chartered Accountants at the earliest to bring about changes in accounting standards in India. Segmentwise reporting and consolidated accounts are the major areas where disclosure needs to be made mandatory.

Commissioning Special Studies

The rule making should be based on comprehensive empirical studies on Indian capital markets. It is therefore necessary for SEBI to collect and analyze the various studies done on the Indian market by the academicians and other professionals. If a need is felt, SEBI should not hesitate from commissioning studies on specific topics to understand certain aspects of markets and their linkages with other aspects. The regulations should be based on sound theoretical arguments, because only then would they serve the needs of the market well.

New Instruments and Markets

This is one activity which is necessary for the growth of capital markets. The Indian market is still very narrow and does not provide adequate diversification facility. SEBI needs to take the initiative to develop bond market and markets for options and futures. SEBI could also take the initiative in securitization of debt. Housing finance is one large financial system which could benefit from securitization. A beginning in this direction however should be made by commissioning studies on how these new instruments may be introduced in the Indian market and how markets could be created for the instruments. This however, would be a low priority activity in SEBI's immediate portfolio of activities.

Development of Analysts and Upgradation of Skills

A major lacuna in the Indian markets is the absence of financial analysts who would forecast corporate performance based on flow of information to the market. Because of this, an investor is left to his own resources to analyze the annual statements of companies and interpret changes in the government policies. Since the ultimate protection for an investor is efficient processing of information, SEBI ought to try to develop the profession of financial analysts. The best and the easiest way to achieve this objective would be to sponsor training programmes in the area of financial services in business schools. However, this again is an activity which should have a low priority at the present juncture.

Staffing of SEBI

One of the main reasons cited for the excellent performance of SEC is its ability to attract talented individuals. The standards were set by the set of people who were hired by the first Chairman of the SEC, Joseph Kennedy. Of the five commissioners, two were well known professors, John J. Burns from Harvard Law School and William O. Douglas who was the nation's leading law professor of corporate finance from Yale Law School. Viewed against this, the staffing policy of SEBI needs to be seriously reviewed. Some of the top positions in SEBI are occupied by persons who have practically no previous exposure to the securities industry. In addition, most of the other staff too consists of persons on deputation from other government departments. The total staff strength of about 100 persons is also quite inadequate for the task assigned to SEBI. Fourteen months after its establishment, the SEC had a staff strength of 692²⁰. If SEBI is to achieve its mission, the staffing policy will have to be drastically changed. It must recruit experts who thoroughly understand the functioning of Indian as well as international financial systems. Without the services of such qualified persons, there is little hope of SEBI achieving its mission.

Government's Role

The Government is planning major reforms in the financial sector. The foreign funding agencies are also emphasizing the need for increasing the pace of such reforms, if India is to benefit from the large scale liberalization of its economy. It is therefore imperative to ensure that SEBI's efforts of reforming the securities markets in India proceed in the right direction. In India, one has often been witness to Institutions, started with noble intentions, get degraded by personal ambitions and the pressures of the larger system. So important is the mandate given to SEBI, that such a degradation of SEBI must be avoided at all costs. To achieve this, the government needs to do the following:

- * The securities industry is today being supervised and regulated by a variety of agencies such as the Company Law Board, the Registrars of Companies, the Stock Exchanges and now the SEBI. This fragmentation of control has resulted in indecent and unhealthy battle for turf. The government must intervene to clarify the role and jurisdiction of each of these agencies.
- * The government must reconsider the composition of the Board. The Board must have larger number of experts from the field of finance, accounting and economics, who have the experience and the necessary theoretical knowledge about the functioning of the securities markets and their linkages with the other systems in the economy.
- * The government must ask SEBI to prepare a perspective plan for the next five years which would spell out in detail the reforms contemplated, the methodology to be used for the reforms, the resources needed for the reforms and the schedule of implementation. The plan must be widely discussed before finalization.

Notes

1. As reported in *The Economic Times*, March 1, 1987.
2. As reported in *The Economic Times*, March 1, 1992.
3. See *The Securities and Exchange Board of India Act, 1992*.
4. Samir K. Barua and V. Raghunathan, "Inefficiency of the Indian Capital Market", *Vikalpa*, 11(3), July - September 1986.

Samir K. Barua and V. Raghunathan, "Inefficiency and Speculation in the Indian Capital Market", *Vikalpa*, 12(3), July - September 1987.
5. These are known as *Consolidated Guidelines for Disclosure and Investor Protection*, published by SEBI, April, 1993.
6. See *Securities and Exchange Board of India (Merchant Bankers) Rules, 1992*.
7. S.K. Barua, J.R. Varma, & N. Venkiteswaran, "A Regulatory Framework for Mutual Funds", *Economic and Political Weekly*, 26, May 25, 1991.
8. Jayanth R. Varma, V. Raghunathan and M.C. Bhatt, "Comments On SEBI's Draft: Towards More Transparency", *Economic Times*, June 9 & 10, 1992.
9. S.K. Barua and J.R. Varma, *The Great Indian Scam: Story of Missing Rs. 4000 Crore*, Vision Books, New Delhi, 1993.
10. See *Investor Grievances - Rights and Remedies*, published by SEBI, December, 1991.
11. *The Times of India*, August 8, 1993.
12. Joel Seligman, *The Transformation of Wall Street: A History of the Securities and Exchange Commission and Modern Corporate Finance*, Houghton Mifflin, Boston, 1982.
13. Joel Seligman, *op. cit.*
14. Joel Seligman, *op. cit.*
15. For a description of the systems of trading see V. Raghunathan, *Stock Exchanges and Investments: Straight Answers to 100 Nagging Questions*, 2nd reprint, Tata McGraw Hill, New Delhi, 1992.
16. Prices as quoted in *The Economic Times*, July 31, 1993.
17. Samir K. Barua, V. Raghunathan, N. Venkiteswaran and Jayanth R. Varma, *Analysis of the Indian Securities Industry: Market for Debt*, unpublished study done for USAID, July, 1993.
18. Joel Seligman, *op. cit.*
19. The details about CATS is taken entirely from the following:
Robert Parady, *Regulatory and Institutional Impacts of Securities Market Computerization*, WPS 866, published by The World Bank, February, 1992.
20. Joel Seligman, *op. cit.*

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