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SEBI Conference Proceedings
"Creating a Vision for the 21st Century"
July 31-August 2, 1998 Mumbai

**Financial Institutions Reform and
Expansion (FIRE) Project**

August 1998

Financial Institutions Reform and Expansion (FIRE) Project
US Agency for International Development (USAID/India)
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August 5, 1998

Mr D R Mehta
Chairman
Securities and Exchange Board of India
Mittal Court B Wing
Nariman Point
Mumbai 400 021

Dear Mr Mehta,

Sub SEBI Conference “ Creating a Vision for the 21st Century”

As part of our contract with the USAID, the Price Waterhouse FIRE Project organized a workshop for the Securities and Exchange Board of India (SEBI) from July 31 - August 2 1998 at The Resort, Marve

Background

SEBI is into its second five years of existence as the regulator. It has gained credibility as the regulator in a capital market of enormous potential for explosive growth, as an institution, it can take pride in its past accomplishments. The capital markets industry is among the most dynamic in the world. Technology, communications, and regulatory environments worldwide are changing the way business is done and will be done in the years ahead. SEBI's success in the next 5 years and into the next millennium will depend critically on its senior management's ability to **anticipate** and **respond** appropriately to external and internal imperatives to maintain the viability and integrity of the Indian market.

Purpose of Activity

The broad goal of this workshop was to bring SEBI's senior management together to discuss changes in the industry and formulate the framework within which SEBI will operate to meet the challenges ahead.



Contents of the Report

This report is a compilation of the various presentations made at the conference

We would like to thank you and your colleagues at SEBI for the time, courtesy and cooperation extended to us during the course of this conference

Please contact us at the FIRE project for any clarifications you may require

Thanking you,

Sincerely yours,

A handwritten signature in black ink, appearing to read 'W. Dennis Grubb'.

**W DENNIS GRUBB
PRINCIPAL CONSULTANT FIRE PROJECT**

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Baruch College Training Programs K V Rajgopal Rao, SEBI

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Survey of Retail Financial Intermediaries Ashish Jain PricewaterhouseCoopers India

Integration and Price Discovery in Indian Stock Markets Dr Hari K Nagarajan IIM Bangalore

Session Six Working Group Sessions and Workshop Conclusions

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SEBI Creating A Vision for the 21st Century

Background

SEBI is into its second five years of existence as the regulator. It has gained credibility as the regulator in a capital market of enormous potential for explosive growth as an institution. It can take pride in its past accomplishments. But the capital markets industry is among the most dynamic in the world. Technology, communications, and regulatory environments worldwide are changing radically the way that business is done and will be done in the years ahead. SEBI's success in the next 5 years and into the next millennium will depend critically on its senior management's ability to **anticipate** and **respond** appropriately to external and internal imperatives to maintain the viability and integrity of the Indian market. The broad goal of this workshop is to bring SEBI's senior management together to discuss changes in the industry and formulate the framework within which SEBI will operate to meet the challenges ahead.

AGENDA

FRIDAY (July 31) Internal Analysis -- Creating a Common Understanding

- 09:00-10:30 Arrival and check-in
- 10:30-10:50 **Opening address** Speaker *Mr. D.R. Mchta, Chairman SEBI*
- 10:50-11:10 **Overview of the Workshop Structure and Objectives** Speaker *Mr. Dennis Grubb, Principal Consultant PwC FIRE*
- 11:10-13:20 **Session 1: Establishing a Framework for Action – Presentations by Executive Directors**
Session Chairman *Mr. D.R. Mchta, Chairman SEBI*
PwC Facilitator *Dr. Tessie San Martin, FIRE Project*
- Session objectives:* To provide the Executive Directors an opportunity to present an analysis of their division. They will provide their analysis of the strengths and weaknesses of the current operations and their vision for the future of their division, including staff development needs.
- 13:20-13:35 **Felicitation and Presentation of Project Results** Mr. Peter Thormman and Mr. Ashok Jha, USAID
- 13:35-13:45 **Group Photo** Gather on terrace outside conference facility
- 13:45-14:45 Lunch
- 14:45-16:05 **Session 2: The State of the Industry--Stakeholder Perspectives**
- Session Objective:** To provide SEBI with a variety of views on the current state of the industry.
Session Chairman *Mr. O.P. Gahrotra, SEBI*
PwC Facilitator *Mr. Dennis Grubb, FIRE Project*
- Panelist 1: The Domestic Perspective**
Presenter *Ashok Desai, Consulting Editor, Business Standard* (30 minutes)
- Panelist 2: Foreign Investors and India**
Presenter *P.K. Advani, Chairman, Advani and Company* (30 minutes)
- Discussion Q&A 20 minutes
- 16:05-16:25 Tea Break
- 16:25-17:50 **Session 3: Organizational Strategy--Issues and Strategy**
Session Chairman *Mr. Ashok Kacker, SEBI*
PwC Facilitator *Dr. Tessie San Martin, FIRE Project*

Session objectives To broaden SEBI management's understanding of the parameters they need to address to create a successful organization: internal communications, reporting relationships, organizational structures, staff preparation and recruitment, etc.

Panelist 1 ***Organizational Development: An Agenda for Action for SEBI***

Presenter: Dr. Tessie San Mutin, FIRE Project

(20 minutes)

Panelist 2 ***Creating the Learning Organization***

Presenter: Col. V.M. Verma, Director, HRD and General Administration, BSE

(20 minutes)

Panelist 3 ***Knowledge Management in SEBI*** Presentation from the SLBI groups who participated in the Baruch College Program

(25 minutes)

Discussion: Q&A, 20 minutes

19:15-20:00 **Cocktail Reception**

20:00 **Dinner**

SATURDAY (August 1) External Analysis: The Industry Speaks

7:30-8:30 **Activities**

1. Yoga and meditation
2. nature walk
3. low impact aerobics
4. Cardio Circuit: guided circuit workout using weight machines

8:30-9:30 **Breakfast**: buffet breakfast will be available from 7:30 onwards. Sebi Conference reserved seating available from 8:30 onwards.

9:30-12:20 **Session 4: Secondary Market Development**

Session Chairman: *Mr. O.P. Gahotra, Executive Director, SEBI*

PwC Facilitator: *Mr. Paritosh Sharma, FIRE Project*

Session objectives: To discuss critical issues affecting the development of a strong secondary market in India.

Panelist 1 ***Experience with non-equity Derivatives: potential pitfalls facing the Indian Derivatives Market***

Presenter: Martin Fish, Country Director, Standard & Chartered

(20 minutes)

Panelist 2 ***Stimulating the Indian Debt Market***

Presenter: N. Gopalkrishnan, Managing Director, SBI Gilts Ltd

(20 minutes)

Panelist 3 ***The Mutual Fund Industry: Valuation, Fund Growth, and Compliance***

Presenter: Simon Holdsworth, Chief Investment Officer, ITC Threadneedle

(20 minutes)

10:15-10:45 **Tea Break**

Panelist 4 ***The Mutual Fund Industry: The Compliance Perspective***

Presenter: Sandhya Bhate, FIRE Project Consultant

(20 minutes)

Panelist 5 ***Mutual Funds: The Credence Report on Guaranteed Products***

Presenters:

1. R.N.K. Prasad, FIRE Project
2. Vivek Sinha, Partner, Credence

(40 minutes)

Discussion: Q&A, 20 minutes

12:20-12:40 **Tea Break**

12 40-13 40	<p>Session 5 Market Intermediaries—Challenges and Opportunities Session Chairman <i>Mr M D Patel Executive Director SEBI</i> PwC Facilitator <i>Mr Dennis Grubb FIRE Project</i></p> <p><i>Session objectives</i> Panelists will discuss various ways in which SEBI can interact more effectively with market participants. Among the issues to be discussed in this session: the development and growth of effective SROs; mechanisms for enhancing exchange member accountability; the role of regional exchanges and the development of securities law in India.</p> <p>Panelist 1 <i>The Securities Law SEBI's Role—Setting and Leading the Legislative Agenda</i> Presenter <i>Mr C Schroff Partner Amarchand & Mangaldas & Suresh A Shroff</i> (20 minutes)</p> <p>Panelist 2 <i>Surveillance and Enforcement Stock Exchanges as Effective SROs</i> Presenter <i>M K Khanna Managing Director UTI Securities Exchange</i> (20 minutes)</p> <p>Discussion Q&A 20 minutes</p>
13 50-15 00	Lunch
15 00-16 20	<p>Session 5 Market Intermediaries—Challenges and Opportunities--(continued)</p> <p>Panelist 3 <i>Retail Intermediary Survey Preliminary Results from a FIRE Project Survey</i> Presenter <i>Ashish Jain Senior Manager PricewaterhouseCoopers India</i> (20 minutes)</p> <p>Panelist 4 <i>Price Discovery in Regional and National Stock Exchanges</i> Presenter <i>Dr Hari K Nagarajan Indian Institute of Management Bangalore</i> (20 minutes)</p> <p>Discussion Q&A 20 minutes</p>
16 20-16 35	Tea Break
16 35-17 50	<p>Session 6 Working Group Sessions and Conclusions--please see group assignments posted outside conference area Session Chairman <i>SEBI ED's</i> Facilitator <i>Dr Tessie San Martin FIRE Project</i></p> <p><i>Session objectives</i> Participants will review the proceedings from the last two days and work in teams to summarize: a) their assessment of the current situation in their area of responsibility relative to what the industry requires; and b) concrete recommendations for the Chairman regarding what SEBI must do as an organization to address shortfalls and meet challenges. The focus will be on SEBI's mission and the type of structure, staffing, communications and professional development mechanisms required to fulfill it. These summaries will provide a framework for future actions to improve SEBI as an organization. PwC FIRE will work with the working groups to pull the output of these sessions together into a final working paper from the workshop to be given to every workshop participant by Friday, August 7.</p>
17 50-18 05	Tea Break
18 05-18 50	<p>Final Observations and Workshop Summary "The Road Ahead"</p> <ul style="list-style-type: none"> • Dr Tessie San Martin FIRE Project • Mr Dennis Grubb FIRE Project • Mr D R Mehta SEBI
19 15-20 00	Cocktail Reception
20 00	Dinner

PARTICIPANTS

Securities and Exchange Board of India

D R Mehta	Chairman
L K Singhvi O P Gahrotra	Senior Executive Director
Pratip Kar D N Ravel M D Patel Ashok Kacker Vijay Ranjan	Executive Director
C M Mehra P Sri Sai Ram N J Hatkar	Division Chief 'F' Level
K E C Rajkumar P K Nagpal B K Kakkar S Kurien Aftab Alam Dulal Chanda Nagendra Parekh	Division Chief 'E' Level
Usha Narayan Iyer S V Murlidhar Rao A Satyanarayana R Gandhi Anil Kumar Sharma Ananta Barua Poonam Bamba Salil Gupta A Rajan Suresh Gupta M Natarajan Suresh B Menon M D Rao D Ravi Kumar S Ravindran K V Rajgopal Rao Piyoosh Gupta P K Bindlish P K Kuriachan G P Garg S V Krishnamohan I Rangnayakulu	Division Chief 'D' Level

Ramana Rao
Avarjeet Singh
Varsha Marathe
Rachna Anand
Ruchi Chojer
Rajesh Kumar
Partho Basu
Medha Dev
Babita Rayadu
Avenash Pandev
Sudipto Bhattacharya
Amar Navlanie
Ankit Sharma
Sanjay Purao
Abhay Tiwari
Suresh Prasad Jagdale
Ritam Roy
Manoj Kumar
Chandresh Shah
Rakesh Bhanot
Neeta Pimpale
Santosh Shukla
Sunil Kadam
Anukriti Upadhyay

Officer

Feli Fernandes
Sunita Fernandes
Harriet Miranda
Saisri Dasu
Infanta Conceicao
Sharrol Borges
Yezdi Pir

Executive Secretary

Panelists

Dr Ashok V Desai	Consultant Editor Business Standard
P K Advani	Director Advani Share Brokers
Col V M Verma	Director, HRD & General Administration, BSE
Martin Fish	Country Director Standard & Chartered Bank India
N Gopalkrishnan	Managing Director, SBI Gilts Ltd
Simon Holdsworth	Chief Investment Officer, ITC Threadneedle
Vivek Sinha	Partner Credence
C Shroff	Partner, Amarchand & Mangaldas & Suresh A Shroff
Ashish Jain	Senior Manager Price Waterhouse India
M K Khanna	Managing Director UTI Securities Exchange
Dr Hari K Nagarajan	Professor IIM Bangalore

FIRE Project Resource Persons

Dennis Grubb
Dr Tessie San Martin
R N K Prasad
Paritosh Sharma
Sandhya Bhate
Monica Jashani
Kavi Kapur
Ruby Iyer
John Harris

The Securities and Exchange Board of India: A Vision for the 21st Century¹

Unlike securities regulators in other countries which have had decades to hone their skills, the Securities and Exchange Board of India (SEBI) has come of age in an era of rapid consolidation and change in financial markets worldwide. Marked by the political liberalization accompanying the end of the Cold War and the loosening of foreign exchange barriers worldwide, the last decade of the 20th century has seen a sea change in the size and composition of the world's capital markets.

SEBI, which was founded in 1992 under the Securities and Exchange Board of India Act, has been forced to rapidly develop and mobilize its resources to keep up with the changes in the industry. Though SEBI has brought a measure of stability and oversight to India's market, there are still several steps to be taken to transform SEBI into a world class securities market regulator.

This paper outlines key issues that SEBI should consider as it moves forward into the 21st century in what is potentially one of the largest capital markets in the world.

I What Should a Regulator Be?

Throughout the world, each market is different and is influenced by diverse factors including location, progress in development, history, and culture. However, all securities markets share certain characteristics that must be addressed by a regulator. In particular, the objective of all securities market regulation is to ensure that the market is fair and transparent for all investors. In an emerging economy the regulator is also confronted with additional challenges not present in more mature economies including divided or unclear regulatory authority, insufficient power to discharge responsibilities, and insufficient resources. The challenge confronting a regulator such as SEBI is to draw upon the lessons of other regulatory agencies throughout the world while at the same time avoiding the problems that have plagued others.

A securities regulator exists to protect investors, ensure that markets are fair, efficient, and transparent, and to reduce systemic risk. One of the regulator's greatest challenges is to determine an appropriate level of intervention in the markets. When a regulator imposes numerous burdensome requirements, time spent to meet the regulator's demands may outweigh the benefits brought by the regulations. Conversely, too little regulation can decrease market fairness and transparency and result in slower capital formation.

¹This issues paper was developed by John Miraglia under the supervision of Dr. Tessie San Martin, both of *PricewaterhouseCoopers LLP*, for the Securities and Exchange Board of India (SEBI) workshop *Creating a Vision for the 21st Century*. This activity was conducted under the Financial Institution Reform and Expansion (FIRE) project, sponsored by the United States Agency for International Development (USAID). The paper is meant to serve as a basis for discussion, rather than to illustrate either effective or ineffective handling of a business scenario. The authors of the paper wish to thank Mr. Michael Sommer and Mr. Cliff Kennedy, both PwC consultants to SEBI under the FIRE project, without whose input this paper would not have been possible. Further use of the paper is prohibited without permission from *PricewaterhouseCoopers LLP*, SEBI, and USAID.

In order to function in an efficient and effective manner, a regulator such as SEBI must have the independent authority to

- Establish rules and standards
- Administer and enforce provisions of securities law
- Control access to the market primarily through licensing
- Monitor the behavior of market participants through surveillance inspection and investigations
- Enforce standards and rules by conducting investigations and bringing enforcement actions
- Take prompt corrective action to immediately end activities that bring harm to the securities markets (i.e. fraudulent selling of securities) without receiving prior court approval

To successfully carry out these tasks

- The regulator's responsibilities should be clearly stated
- The regulator should apply its judgement clearly and consistently
- The regulator should be independent² both within the government and with respect to the sector it regulates
- The regulator must maintain the highest standards of professionalism and confidentiality

II A Blueprint for Progress

In the six years since its inception in 1992, SEBI has made remarkable progress towards becoming an effective securities market regulator. SEBI has initiated self-regulation at the various exchanges, assisted in the formation of a depository, and conducted numerous investigations, inspections and enforcement actions targeted against insider trading and market manipulation. However there are still further steps to be taken to ensure it continues its ascendancy to its rightful position as a top-tier institution. Though there are many areas and avenues for improvement four key steps must be taken to ensure SEBI's continued development

- SEBI must work to develop a strategic plan and vision
- SEBI must establish minimum standards to cultivate the development of Self-Regulatory Organizations
- SEBI must develop a permanent dedicated staff of civil servants
- SEBI must invest in the development of support units such as the Office of General Counsel and the Office of Technology Management
- SEBI must take steps to promote public awareness of how securities markets function and the role of the regulator

Strategic Planning

SEBI is currently operating without a strategic plan. The starting point for the development of such a plan is a vision for the organization. Once this vision is articulated in the form of a

² The notion that a regulator should be operationally independent from external political or commercial interference in the exercise of its functions and powers is one that has gained great currency in the United States. In some nations however the decisions of the regulator might also require the approval of other agencies or ministers. The key is to clearly identify those circumstances in which the regulator must submit to outside approval to ensure the continued transparency and consistency of the regulatory process.

mission statement then SEBI can begin to set goals for achieving its vision. The strategic plan then serves as a road map as to how SEBI can reach its destination or goals.

In particular the strategic plan should try to address

- SEBI's goals
- The objectives of each goal
- Measurement of progress towards reaching goals

Strategic Planning at the U.S. Securities and Exchange Commission

The Securities and Exchange Commission (SEC) of the United States is the securities market regulator responsible for administering U.S. federal securities laws. The purpose of these laws is to protect investors in securities markets that operate fairly and to ensure that investors have access to disclosure of all material information concerning publicly traded securities. The Commission also regulates firms engaged in the purchase or sale of securities, people who provide investment advice, and investment companies.

Mission Statement: *The Securities and Exchange Commission is a law enforcement agency. Its mission is to administer and enforce the federal securities law in order to protect investors and maintain fair, honest, and efficient markets.*

Goals

1. Protect Investors
2. Maintain Fair, Honest, and Efficient Markets
3. Facilitate Capital Formation

Goal 1: Protect Investors

Objectives

- A. Deter fraud and require compliance with the federal securities laws
- B. Promote informed investment decisions by requiring full and fair disclosure of material information to investors
- C. Promote the prevention and detection of securities fraud through the education of investors
- D. Promote high professional standards in the securities industry

Performance Measures

1. Number/percent of enforcement actions in each program area
2. Number of requests by the SEC to foreign regulators for assistance in investigations and enforcement actions and the number of requests from foreign regulators for assistance by the SEC
3. Percent of investment companies examined since the beginning of the current regulatory cycle
4. Percent of SEC registered investment advisors examined since the beginning of the current regulatory cycle
5. Number of initial public offerings and reporting issuers' financial statements reviewed to maintain a substantial SEC influence on securities disclosure practices
6. Number of investor hits on the SEC web site
7. Number of Commission and SRO broker-dealer investor protection rules proposed and the percentage of proposed rules reviewed and adopted
8. Percent of portfolios identified by risk assessments for which follow-up leads to a significant change in disclosure or operations
9. Number and percent of new mutual fund portfolios and separately of new insurance product filings reviewed

Cultivating further development of Self-Regulatory Organizations³

Developing well managed and ethical Self-Regulatory Organizations (SROs) can also greatly facilitate SEBI's goal of creating an open and efficient market. SROs are normally professional organizations that exercise direct oversight responsibility within their assigned areas of competence. Like the Government Regulator, SROs establish rules and standards for their members, examine and license individual market participants, enact and enforce codes of conduct, and inspect and discipline their members. In addition, most SROs typically impose upon their members the same duty to supervise their employees. SROs possess the additional advantage that they are much closer to the center of action than the regulator and therefore have better information on the capabilities and tendencies of their members. It is important to keep in mind however that SROs must still be subject to the oversight of the regulator, by forming SROs the government is merely delegating authority rather than abdicating responsibility.

Before authorizing these and other entities to operate as SROs, however, certain requirements must be met. The potential SRO must

- Submit to SEBI oversight of its rules and policies
- Design a set of rules and standards for its members that protect investor's interests
- Diligently enforce its own rules, as well as those of SEBI
- Possess the capacity to monitor, investigate, and sanction members who do not comply with all applicable laws and regulations
- Cooperate with SEBI and other SROs in enforcement actions against its members
- Treat all members and applicants in a fair and consistent manner
- Pledge not to use its position of trust to enable one participant to gain advantage over any other

SEBI has already made measurable progress in facilitating the formation of SROs in India by enforcing self-policing and monitoring policies at the stock exchanges, and supporting the development of organizations such as the Association of Mutual Funds in India (AMFI). By requiring each exchange to designate a compliance officer charged with monitoring members SEBI has added an extra layer of protection to the lay investor. Furthermore, the public awareness of 'self-policing' and accountability can greatly enhance the reputation of the securities markets and SEBI.

Other likely candidates for SRO status include the Institute of Chartered Accountants of India (ICAI) and India's securities dealers.

The Institute of Chartered Accountants of India (ICAI) is particularly critical, in view of the growth of international business and trade in the 1990s. Companies now need to be able to cross borders to raise capital and nations must compete with each other to attract capital in an increasingly competitive market. Recognizing that uniform international accounting standards would help to achieve a truly global capital market the International Organization of Securities

³ SROs are very important to the efficient regulation of securities markets in the United States, the United Kingdom and several other countries however SROs are not predominant in all markets. In the United States the Securities and Exchange Commission is greatly aided by the efforts of the American Institute of Certified Public Accountants, the National Association of Securities Dealers and the various stock exchanges. Other regulators in emerging markets such as Russia and Poland are slowly developing new SROs. In addition, the importance of SROs to the regulator has been recognized by the *International Organization of Securities Commissions* in their recent paper on *Objectives and Principles of Securities Regulation* published in May 1998 which listed the presence of SROs among its 30 Principles of Securities Regulation.

Commissions (IOSCO) has announced that it will seek to establish international accounting standards by the turn of the century

As India's companies move to adopt recognized international standards the importance of the accounting profession's cooperation with SEBI will only grow. The ICAI can play a critical role as the first line of defense ensuring fair and open disclosure of financial information. The financial audit and auditor's opinion serve as a 'Seal of Approval' ensuring that all necessary disclosure requirements have been met in accordance with generally accepted accounting principles.

Working together with ICAI, SEBI can ensure that accounting requirements take into account all disclosures and reporting necessary to produce comparable financial information. Analyzing those in place in other countries around the world and then adapting them to India's unique environment can develop standards. Once investors are able to look at the financial information of two companies and make an informed comparison between them, then uncertainties surrounding disclosure will be eliminated and capital will begin to flow to the healthier companies offering the prospect of higher returns.

Internal Training and Organization Development

The most important asset for any services organization is its people. In the complex and rapidly evolving arena of global finance, SEBI's regulators must constantly update their skill sets in order to keep the organization abreast of the market's advances. Unfortunately, most of SEBI's employees follow the traditional route of the Indian Civil Service and rotate among the various agencies on a periodic basis. Though this approach is good for producing generalists familiar with the breadth of the Government's activities, SEBI must also cultivate specialists who understand the effects that complex emerging financial issues such as Y2K and derivatives will have on the securities markets.

Under the current system, after employees have spent two or three years at SEBI and are beginning to grasp the intricacies of securities regulation, their rotation is completed; they go to another agency or back to their home agency. In the process, SEBI loses the skills and experience those employees developed. In addition, SEBI loses intangible items such as its institutional memory. One of the most valuable rewards of a trained and professional staff is their knowledge of the 'SEBI way.' By knowing what problems SEBI has faced in the past, what courses of action were taken, and what results ensued, employees can greatly improve their operating effectiveness and efficiency. Therefore, SEBI must strive to develop a career model to ensure opportunities for professional development and advancement exist for those employees who stay there long term.

To ease this crisis, SEBI must begin to reorganize and develop an intensive in-house training program to bring its employees up to date on the latest strategies and practices used by other regulators around the world. In addition, as part of their initiative towards building a full-time staff, SEBI should attempt to recruit experienced market professionals who have private sector experience and know what will and what will not work.

SEBI's training programs need to focus on three areas:

- Introductory training

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- Continuing education
- Executive education

Entry level or introductory training of staff is essential for both new and inexperienced hires. Early training should focus on introducing employees to organization culture, regulation theory, and the operation of securities markets. Later training should focus on emerging issues and organizational management and development. Furthermore, top management should also undertake training courses to keep themselves apprised of new developments in the industry and to interface with management of market participants to ensure that SEBI is prepared to meet the challenges head-on.

The key goal of training however will be to establish an *esprit d corps* within SEBI. Intensive training will help the organization to build up an institutional identity and teach employees the 'SEBI-way'. As training becomes more uniform so will SEBI's policies and decisions that will ultimately increase market efficiency, as the possibility of conflicting statements and gestures from different divisions decreases.

Internal Organizational Development The Office of Chief Counsel and Information Technology Management

The Office of Chief Counsel is both an instrument of and an advisor to the regulator. One of the Chief Counsel's key roles is to interpret securities law to lay out the framework for the regulator's powers and responsibilities. In an emerging market such as India, the regulator's powers are often specified in law but largely undefined in practice. The Chief Counsel's responsibility is to review securities laws and aggressively assert the regulator's authority where provided in the law, and also to provide interpretive advice to the industry and its counsel regarding securities laws.

The Office of the Chief Counsel also often serves as the interface between the regulator and others who are either market participants themselves, or closely involved in the regulatory process such as lawyers, accountants, and the judiciary. Creating a Chief Counsel's office combining lawyers, accountants, and policy analysts, gives the regulator a foothold on the policy process from which most major initiatives flow. A vigorous Chief Counsel creates a strong framework of rules and responsibilities and provides a front line defense of that framework from outside challenges. The Chief Counsel will serve as a policy shop to educate the regulator's stakeholders as to its roles, goals, and responsibilities as well as an interface with the market itself to detect developing trends and ensure these are included in the regulator's policy strategy.

The role of the Chief Counsel will be especially important in facilitating SEBI's cooperation with the Dhanuka Committee as it strives to produce and develop a comprehensive securities law for India. As the law undergoes scrutiny in Parliament prior to approval, SEBI and the Chief Counsel in particular should ensure that at a minimum the new law

- Broadly establishes the functions of SEBI
- Establishes the authority of SEBI as an independent regulator
- Delineates the relationship between SEBI and the SROs
- Grants SEBI strong investigatory powers
- Strengthens the penalty provisions of the current securities law
- Grants SEBI cease and desist powers

Information Technology Management

Another 1990s trend is the rapid increase in the flow of information. Available technologies such as the Internet, e-mail, and personal computers have made previously unimaginable amounts and sources of information available at the press of a button. One of the challenges facing SEBI in the coming millennium is to harness the advances in information technology to increase its operating efficiency.

With more than 5,000 stocks being traded on the Bombay exchange alone and the National Stock Exchange emerging as a valid competitor, SEBI's information management requirements will only rise. In order to allocate its scarce resources effectively to target the largest potential problems, SEBI must develop a system capable of tracking vast amounts of market data and reporting this information at the touch of a button.

Therefore, SEBI's information management team must coordinate with the various operating divisions to create a system capable of tracking the vast amount of data produced in regulating securities markets. At the minimum, SEBI's system should have the capability to

- Track the filing of registration statements and prospectuses and if possible provide online access to scanned copies
- Track the filing of required periodic reports, highlight those firms not in compliance with filing regulations, and refer violators to the enforcement division for investigation and penalty
- Maintain a listing of all officers and directors of public companies to ensure those who have been banned from participation in the securities markets are not violating their ban
- Track ownership and trading of securities by officers, directors, and other 'insiders'
- Track the results of licensing and other testing of market professionals and their employees
- Track the progress of enforcement investigations and cases and their result
- Track all securities law violators and violations and reference these violations to other applicable fields within the database (i.e. When a query is run on an officer of a company the database would also note that enforcement action had been taken in the past against that individual)

Maintaining and tracking the above information will vastly increase the efficiency of SEBI's operations. This information should be tracked in a database customized to the unique requirements of India's securities markets. With this information at their fingertips, SEBI's compliance officers, investigators, and enforcers will have the up-to-the-minute status of securities regulation compliance of all major market participants. By tracking this information, companies and individuals that don't comply with SEBI's rules can be monitored and actions can be taken against them.

In addition to facilitating the monitoring of the markets, the Information Technology Department should also conduct an assessment of SEBI's internal operations to determine areas in which technology can improve overall operations. In this respect, the Department should

- Determine the needs and priorities for office automation and management information components

- Develop, plan and implement a strategy for ensuring SEBI's information management capabilities keep pace with SEBI's information management requirements
- Plan and implement a program to make information filed with the regulator accessible to the public
- Train SEBI's staff to use communication and hardware systems

Promoting Public Awareness

Every market, from those just emerging to the most mature, needs to develop and maintain investor trust and confidence. Bringing the work of the regulator to the attention of the public can trigger rising interest and awareness of the effectiveness of SEBI's programs.

One way to promote awareness is to set up a public reference room at SEBI's headquarters and district offices as well through other information sources such as the Internet. These reference centers should include information on issuer filings, SEBI's interpretations of securities laws, periodic reports by SEBI and by market participants, summaries of enforcement actions, press releases and other relevant documentation. Among the benefits of providing information to the public are

- Gives members of the investing public reliable information about the activities of issuers and professional market participants
- Educates the public and creates a familiarity about how securities markets operate
- Increases public sensitivity to the markets and SEBI's role as a regulator
- Deters violations by making market participants aware of the rules of the marketplace and the consequences of violating them

Increasing public awareness can stimulate market participants to further increase their compliance with securities laws and regulations because of the perception that they are in the public eye. In addition, providing investors with an independent and impartial source of information can further the development of India's securities markets.

III Organization Structure Issues

A key for any organization to achieve success is to have an organizational structure that matches its strategy and its functions. Securities regulators share many common organizational traits with SEBI. As constituted now, SEBI has operating divisions in place focusing on enforcement, registration and review, secondary market oversight, oversight of investment funds, and legal affairs. Though other regulators have taken different approaches (see discussion of Regulatory Examples in other countries in Section V) most agencies are formed around a similar core divisional format.

The divisional format has been proven best to match expertise with required tasks. A key element of this structure is to ensure that a division's responsibilities are neither too broad nor too narrow. A division with broad responsibilities over several market sectors is unable to develop the knowledge base needed to stay abreast of the complex and developing issues that affect the various aspects of capital and securities markets. Giving each division a narrow range of focus however could muddle the organizational structure by creating numerous divisions with the concomitant potential for turf wars and differing interpretation of rules and standards.

Once an organization structure has been adapted it should be adhered to, barring a major shake-up in the securities markets. Constantly shifting responsibilities leads to confusion both within the regulator and for the investing public as a whole. When responsibilities are moved enforcement and the focus of rule making necessarily shifts as an entirely different group of people is then making policy.

The responsibilities of each division should be strictly defined to eliminate any possible overlap and to increase operating efficiency. In addition, each division should formulate its own mission statement and vision to ensure it remains focused on its core goals.

The following is a breakout by division, of typical responsibilities and operating authority. It is meant to serve as a checklist and guidelines, providing some ideas for SEBI to consider as it reviews, and if necessary restructures, its own organizational structures, to meet the changing demands of the Indian market.

Corporate Finance (Full Disclosure) The Corporate Finance Division (CFD) sets standards and reviews information provided by issuers which offer or sell securities to the public. CFD's primary mission is to ensure that information is complete, adequate, accurate, and current. Issues related to corporate finance are very different from those handled in other divisions, therefore, personnel needs are also different. Most personnel in this division tend to be lawyers, accountants and financial analysts. In addition to its stated responsibilities, CFD should also

- Establish disclosure standards for issuers to file registration statements before their securities can be publicly traded
- Review registration statements and periodic reports and make recommendations for improvement
- Review press releases and other information on a test basis to ensure issuers do not provide misleading forecasts or inaccurate reports
- Deny permission to make public offerings if disclosures are incomplete or materially misleading
- Track issuer reports and filings to ensure timely compliance with applicable regulations and refer discrepancies to the enforcement division
- Refer matters to the Division of Enforcement or other appropriate regulators
- Review and comment on information about tender offers, mergers, takeovers, and proxy solicitations
- Interpret laws and rules applicable to issuers

Market Regulation The Division of Market Regulation handles all matters related to exchanges and persons who intervene in the markets, **excluding** investment funds and investment advisors. In a market where all market participants including sub-brokers must be licensed, supervised, and accountable to the regulator, this Division would establish entrance standards for professional market participants including stock exchanges, brokers, the depository, and their employees. The Division examines qualifications, licenses and monitors market participants and reviews their operations systems, procedures, and rules with a focus on ensuring efficient, effective, and timely clearing and settlement. As SROs, such as the exchanges and professional associations, become more developed in a market many of the responsibilities of Market Regulation can be spun off. The division can then become a watchdog over the SROs and focus on conducting random compliance tests and reviews rather than regulating the market as a whole. Other responsibilities of the Market Regulation Division are to

- Review rules and pronouncement developed by professional market participants and ensure those meet the minimum standards established by SEBI
- Examine applications under the rules and supervise professional market participants
- Oversee market surveillance conducted by exchanges and ensure adequacy
- Inspect market participants
- Consult with and advise professional market participants including securities exchanges

Investment Management This division regulates the activities of investment companies to ensure compliance with the registration, financial responsibility, sales practices, and advertising regulations

This division monitors compliance with disclosure requirements of investment companies and licenses market intermediaries such as investment managers and investment advisors. The responsibilities of this division overlap in some respects with those of the Corporate Finance and Market Regulation Divisions, however because of the complexity position of trust occupied by fund managers, and the sheer size of most investment funds, this regulatory function should repose in a separate division. The Division of Investment Management

- Registers, licenses and inspects investment funds and investment advisors
- Works to strengthen the professionalism of market participants
- Provides exchanges with authority to license and monitor their members
- Requires exchanges to increase member inspections to unearth possible violations and bring action if necessary
- Oversees offers, sales, and redemptions of fund shares
- Proposes rules regarding fund operations and standards of conduct

Enforcement Enforcement is separated from other divisions because of its emphasis on litigation. The credibility and effectiveness of a securities market regulatory program will depend, to a large extent, on the regulator's ability to take effective actions to enforce securities laws and regulations. A successful enforcement program must be able to both deter and detect violations. Therefore, it is important for this division to have the resources to conduct thorough investigations and the mechanisms for imposing meaningful and timely sentences. The Division of Enforcement must be able to

- Investigate possible violations of securities laws and regulations
- Recommend enforcement actions
- Take prompt action through injunction in cases where the securities markets or the investing public is facing imminent harm
- Institute administrative proceedings and court actions and negotiate settlements
- Review cases and with the Chief Counsel's Office, refer matters to criminal authorities for prosecution

In addition to setting up specialized divisions to regulate securities market participants SEBI must also take action to ensure that a sound regulatory framework is in place. To that extent SEBI must also work to enhance the Office of the Chief Counsel, create a liaison with the Institute of Chartered Accountants and develop the in-house Information Technology capability necessary to track the regulatory compliance of the numerous actors and participants in India's security markets

IV What Could SEBI Do?

Based on the above discussions there are several steps SEBI should consider immediately so that it may achieve its rightful place as a world class securities market regulator

- Facilitate and advise the Dhanuka Committee during its review of securities laws and ensure the new laws broadly define SEBI's role as a regulator
- Develop an active and vigorous Office of Chief Counsel As a regulator in an emerging market, a factor affecting SEBI's effectiveness is a lack of consensus on its mission and on its powers The Chief Counsel in concert with the Chairman can work to interpret securities laws consistent with SEBI's mission to ensure that SEBI's goals of developing a "transparent efficient, and competitive market" are met
- Implement structured internal training programs Training is the key ingredient an organization needs to develop a sense of unity and pride among its employees By instituting a comprehensive training program SEBI can begin to internally build a skilled and efficient team of regulators
- Foster the development of strong and effective SROs SROs can be very effective in removing much of the regulator's everyday oversight burden SROs foster the development of professionalism and accountability in market participants and aid in opening the market By making professional organizations stakeholders in ensuring the transparency of the market the ultimate effectiveness of market regulation is dramatically increased In addition, by encouraging self-policing, market professionals can enhance their position in the eyes of investors
- Fortify the Enforcement Division The above actions will enable SEBI to lay down a framework and an organizational plan to achieve regulatory success All that progress will be moot however if SEBI does not have the resource or the power to punish those who insist upon breaking the law Therefore, SEBI must develop a strong enforcement division with the capacity to impose administrative penalties on rule-breakers In addition, SEBI must cultivate cooperation with the judicial system to ensure that prosecutors are familiar with financial terms so that criminal cases can be referred to them In addition, SEBI might consider dedicating more staff and resources to the division of enforcement, specifically increase number of investigations conducted and enforcement actions brought and move to recover investor losses and impose penalties
- Develop a strong database and good management information system to tap it SEBI should only develop a strong internal database of various information including registration statements, prospectus, periodic reports, list of officers and directors of public companies, licensing of market participants, investigation progress etc It should harness the advances in information technology to tap external databases like price and volume movement information at exchanges when required Maintaining and tracking this information, SEBI's compliance officers, investigators, and enforcers will be able to monitor and take actions as needed Finally, technology is also a tool for promoting more effective knowledge transfer within the organization

- Develop a Public Information Program Bringing the work of the regulator to the attention of the public promotes trust and confidence, and strengthens the foundations of the regulatory program SEBI should take steps to ensure information including issuer filings, SEBI interpretations of regulation, periodic reports summaries of enforcement actions, news releases, and other documentation are available to the public

Appendix

Almost every country in the world has a differing philosophy for securities market regulation. In the United States a vigorous Securities and Exchange Commission works hand in hand with several powerful SROs including the Financial Accounting Standards Board, the National Association of Securities Dealers and the various securities markets including the New York Stock and American stock exchanges.

This however is not the only model. In other countries different philosophies have been applied. Following is a brief discussion of the organizational structures and management philosophies of several other regulators from both emerging and developed markets worldwide.

United Kingdom

The UK's securities markets are regulated by the Securities and Futures Authority (SFA) which in turn reports to the Financial Services Authority (www.sfa.org.uk)

SFA is divided into six committees reporting to a Chairman as follows:

- Authorisation Committee: Assesses the suitability of a firm to conduct investment business.
- Conduct of Business Committee: Develops rules governing services given to investors.
- Capital Committee: Assesses risk management policies and available capital to cover risks.
- Enforcement Committee: Monitors firms through inspections and analysis of financial reports, investigates suspected malpractice, and levies punishment against violators.
- Finance Committee
- Nominating Committee

In the United Kingdom the Financial Services Authority (FSA) will eventually be the sole regulator over most financial markets. Eventually the FSA will take over responsibilities for no less than eight regulatory agencies spanning securities, real estate, and insurance.

South Africa

The Financial Services Board (FSB) is an independent statutory body funded solely by levies on the financial services industry. The FSB supervises the exercise of control over such institutions and services as the Registrar of Insurance, Pension Funds, Unit Trust Companies, Stock Exchanges and Financial Markets. It also exercises regulatory control over the participation bonds industry, certain trust and depository institutions as well as central security depositories responsible for the safe custody of securities. Excluded from the FSB's responsibilities are some areas involving listing requirements or public issues, takeovers and mergers, and insider dealing investigation and prosecution. For further information see the FSB website at <http://www.fsb.co.za/home1.htm>

The eight divisions that comprise the FSB and their missions are:

Actuarial: Primarily responsible for supporting the pension department.

Financial Markets To ensure sound and efficient markets and related services for the exchange of relevant securities and financial instruments together with mechanisms for investor protection

Long Term Insurance Supervision of the Long Term Insurance Industry

Retirement Funds To ensure retirement funds operate in a stable environment so that all obligations are met when due

Unit Trusts To ensure all collective investment schemes available to the public are conducted in the interest of investor protection

Finance Provide accounting and financial support to the FSB

Information Technology Provides technology support to other FSB divisions

Legal & Policy Provides legal interpretations and policy analysis to further the objectives of FSB

Russia

The Federal Commission for the Securities Markets (FCSM) supervises Russia's capital markets. FCSM works to assist in the development of Russia's regulatory infrastructure as well as to ensure fair and transparent operations in the capital markets. FCSM lists its main goals and responsibilities as

- Protecting the rights of investors and other market participants
- Developing a uniquely Russian model of the market based on Russia's traditions and international experience
- Avoid excessive intervention in the market by maximizing self-regulation by organizations of professional market participants

For further information see the FCSM website at [http //www/fedcom ru](http://www/fedcom.ru)

Poland

The Polish Securities and Exchange Commission (PSEC) is generally recognized to be one of the best securities regulators in the transitioning economies of Eastern Europe. The main factor that has contributed to its early success is its organization as an independent and powerful commission that doesn't share authority with other government agencies

PSEC is divided into the following divisions and functions

- *Authorization Division* Licensing, examination, and inspection of all market intermediaries including investment funds
- *Corporate Finance* Reviews prospectuses and periodic reports, prepares economic analysis, and provides public information
- *Enforcement Division* Prepares enforcement actions
- *Legal Affairs* Interprets regulations, prepares legislation, interacts with other government agencies, and provides legal counsel to other divisions
- *Secretariat* Responds to public inquiries and complaints, organizes educational activities both internally and externally, and manages relationship with other government agencies
- *Administration* Handles all administrative functions of the Commission

Further information on the PSEC can be requested from [sekr@kpwg gov pl](mailto:sekr@kpwg.gov.pl)

Germany

In Germany the securities markets are regulated by the Bundesaufsichtsamt fuer Wertpapierhandel (BAW), a federal regulatory agency within the Ministry of Finance. BAW is divided into three main divisions as follows

- Directorate I Information Technology, Public Relations, Legal Issues Legislative Issues
- Directorate II Insider supervision, Ad hoc disclosure/Major shareholdings Reporting requirements
- Directorate III Investor protection Rules of Conduct, Prospectuses

BAW lists its main responsibilities as

- Combating insider trading
- Monitoring compliance with reporting requirements
- Monitoring the rules of conduct of investment services firms
- Providing information to the general public on all investment types

Further information on BAW can be found at [http //www bawe de/](http://www.baw.de/)

SEBI Workshop Vision 2000

31 July to 2 August

Overview of the Workshop Structure and Objectives

Mr Dennis Grubb

2

Agenda

- Workshop objectives
- Workshop structure
- Workshop outcomes

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Workshop objectives

- Analyze challenges
- Prioritize challenges and develop a vision for SEBI into the year 2000
- Formulate a strategy for SEBI

Workshop structure

- Internal analysis
 - Current status and issues
 - Developing an appropriate organizational structure
- External analysis industry perspective on SEBI
 - Secondary market development issues derivatives mutual funds
 - Market Players intermediaries stock exchanges
 - Market surveillance compliance mechanisms
- Working sessions to develop strategy recommendations

Workshop outcomes

- A vision
- Recommendations on concrete steps to implement the vision
- Management and staff buy-in

USAID-FIRE Project

Index of Capital Market Development

BACKGROUND

- Results Review and Resource Request
- Problem with the macro indicators

USAID-FIRE Project

Index of Capital Market Development

METHODOLOGY

- Identify critical areas of a developed capital market
- Identify objective in each of these areas
- Stages of development
- Assign score to each stage

USAID-FIRE Project

Index of Capital Market Development

AREAS

- I. Market oversight and enforcement
- II. Debt Market
- III. Information infrastructure
- IV. Trade, clearance and settlement infrastructure
- V. Self-regulation/licensing and certification
- VI. Risk management (Futures and Options)

USAID-FIRE Project

Index of Capital Market Development

STAGES (Score)

1. Minimal or no system in place (1-3)
2. Need for improved and efficient system recognized (4-6)
3. Policy and infrastructure issues being addressed (7-9)
4. State-of-the-art system in place (10-12)

12

USAID-FIRE Project

Index of Capital Market Development

EXAMPLE

IV. Trade, clearance and settlement infrastructure

Stages

- Existing infrastructure archaic and high on systemic risks
- Need for transparent, efficient and risk free systems recognized
- Policy, legal and regulatory constraints identified and being addressed
- State-of-the-art infrastructure operational

USAID-FIRE Project

Index of Capital Market Development

ANALYSIS

- Panel of independent experts
- The simple arithmetic mean of scores - Index number

USAID - FIRE Project

Index of Capital Market Development

Objective ->	I	II	III	IV	V	VI	Mean
Scorer							
(A)	6	4	6	9	4	5	5.67
(B)	7	5	7	8	5	6	6.33
(C)	6	4	3	9	3	6	5.17
Mean	6.33	4.33	5.33	8.67	4.00	5.67	5.72
Tar(T) (1998)	6	5	4	6	5	5	5.17
Mean	6.33	4.33	5.33	8.67	4.00	5.67	5.72
SD	0.47	0.47	1.70	0.47	0.82	0.47	0.48
Corrl (A & B)				0.95			
Corrl.(B & C)				0.69			
Corrl (A & C)				0.80			
Corrl (A & T)				0.48			
Corrl (B & T)				0.37			
Corrl (C & T)				0.78			

SEBI Creating A Vision for the 21st Century

Session 1 Establishing a Framework for Action – Presentations by Executive Directors

Session Chairman *Mr. D.R. Mehta* Chairman SEBI

PwC Facilitator *D. Tessa San Martin* FIRE Project

Session objectives To provide the Executive Directors an opportunity to present an analysis of their division. They will provide their analysis of the strengths and weaknesses of the current operations and their vision for the future of their division including staff development needs.

SEBI Workshop Vision 2000

31 July to 2 August

Session 1 Establishing a Framework for Action

Presentation by SEBI Executive Directors

2

Agenda for the session

- Executive Directors' Presentations
 - Mr O P Gahrotra
 - Mr Pratip Kar
 - Mr Ashok Kacker
 - Mr Vijay Ranjan
 - Ms D N Raval
 - Mr M D Patel
- Q&A
- Summary

FIRE Project

Executive Directors' Presentations

- ***State of the organization***
 - Enforcement and surveillance
 - Risk containment and investor protection
 - Primary markets
 - Secondary markets
 - Professionalizing the industry
 - Self regulation
 - Institutional investment
 - Staff development

FIRE Project

Summary ***A Vision for SEBI -- Year 2000 and Beyond***

- SEBI responding to a rapidly changing environment
 - Implies need for flexible structures and processes
- What strategies can public managers use to initiate change?
- What can you expect from the process?



FIRE Project

Responding to a changing environment

- The market has and continues to change
 - Information age, globalization are quickly changing competitive dynamics in capital markets
 - The regulator must respond
 - Organizations like SEBI can benefit from past experience around the world
 - Best practice companies and governments have taught us much about ways to dramatically improve organizational performance

FIRE Project

Responding to a changing environment

- Tools to implement change
 - Communications, IT and information
 - Networks, Internet
 - Knowledge management
 - Training
 - Best practices
 - Access to network of securities regulators from around the world



FIRE Project

Initiating change in the public sector

- Change requires a clear vision
 - To whom is SEBI accountable?
 - Who are its customers?
 - How to measure customer satisfaction?
 - What are SEBI's "products" and "services"?
 - Ultimately what is SEBI's mission?
 - And how do you sell that vision to every staff member?

FIRE Project

Change in what?

- **Customers**--revamping the relationship between your organization and its customers
 - Asking customers what they want? Radical idea!
 - How do you even determine who to ask?
- **Consequences**--Introduce accountability for consequences of actions
 - Introduction of mechanisms for rewarding success and forcing weak performers to improve
 - Use of budgeting and other rewards enable managers to feel repercussions of actions

FIRE Project

Change in what? (continued)

- **Control**—Creating entrepreneurial organization by devolving control to those in the “front lines” (in direct contact with agency “customers”)
- **Culture**—does organizational culture support the work people do to deliver value?
 - Creating culture of empowerment
 - Creating a learning organization a culture that rewards and motivates knowledge sharing

How to change a public sector agency?

You may have more tools than you think

- **Budgeting tools**—example from US NPR
 - “Big-bucket” budget or “mission-driven” budgeting
 - An experiment that began at the US Forest Service
 - Restructuring the budget reducing hundreds of thousands of line items and eliminating inflexible guidelines for moving monies around providing managers greater license to move allocations in response to organizational strategy
 - Allow agencies to keep a portion of what is not spent that year
- But Must hold managers **accountable for results**



Some tools available (2)

- **Procurement guidelines are streamlined**
 - introduce competition/deregulation
- **HRD and Organizational Restructuring**
 - The UK system heads of agencies sign performance agreement detailing objectives and timeframe
 - Restructuring staff appraisal/performance review process
 - Designate a COO responsible for change

Some tools available (3)

- **Performance measurement tools geared to tracking what matters to your clients**
 - Make clear the distinction between **outcomes** and **outputs**
 - Must get staff involved in determining what matters
 - Must determine the right tools and processes for measuring (e.g. surveys)

Some tools available (4)

- Technology can play a major role
 - Provides new ways to communicate and interact throughout the organization
 - Provides databases of best practices across divisions
 - Provides immediate feedback

What can you expect from the process?

- Change will not happen overnight
- You may not get it right the first time
 - Must have freedom to fail
- Is leading change better than following it?
 - Change **will** happen
 - If you lead it you are in control of the agenda



Session 2 The State of the Industry--Stakeholder Perspectives

Session Chairman *Mr O P Gahlotra SEBI*

PwC Facilitator *Mr Dennis Giubb FIRE Project*

Session Objective To provide SEBI with a variety of views on the current state of the industry

Panelist 1 **The Domestic Perspective**

Presenter Ashok Desai Consulting Editor, Business Standard

Panelist 2 **Foreign Investors and India**

Presenter P K Advani Chairman, Advani and Company

Session 2 Some relevant Price Waterhouse FIRE Project Deliverables

<i>Deliverable #</i>	<i>Author</i>	<i>Title</i>
27	Mr Tom Keyes & Mr Paul Litteau	An Orientation Program on International Capital Markets for participants from the ministry of Finance SEBI & The Stock Exchange, Mumbai
45	Mr Thomas Keyes	Registration and Regulation of Retail Capital Market Intermediaries for SEBI
66	Ms Kate Hathaway	International Approaches to Derivatives Market Regulation Common Global Regulatory Objectives
78	Ms Kate Hathaway	Approaches to Derivatives Market Regulation for Financial Safety and Fairness by Various Jurisdictions



advani share brokers pvt. ltd.

52 bhupen chambers,

9, dalal street,

mumbai 400 023.

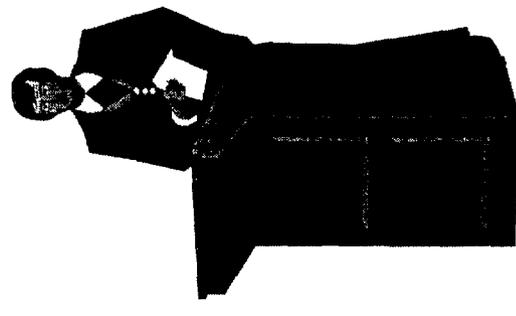
tel : 267 1533 fax : 262 4369

email : advani@viasbm01.vsnl.net in

Presenter...

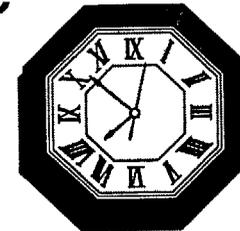
Pashupati K. Advani

Director



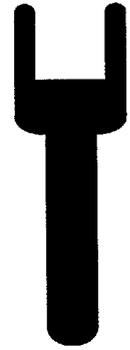
The State of the Industry - The International Perspective by a Domestic Broker

Date : July 31, 1998
Venue : The Resort, Marve
Time : 2.45 p.m.



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A Two Prong Approach...



- Selling India
- Creating a Level Playing Field for all Brokers - foreign and domestic

Selling India

List GDR's in India

- NSDL to settle
- Indian Mutual Funds/Indian clients to be allowed to take advantage of the arbitrage

Information

- Transparent, timely
- Norms to prevent leakages from RBI, Custodians, SE's, SEBI - articles in the Press come in on a timely basis, with specific trade information



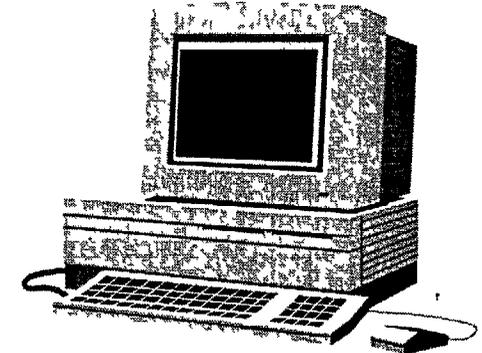
Selling India...

Internet Trading

- Norms to be worked on now

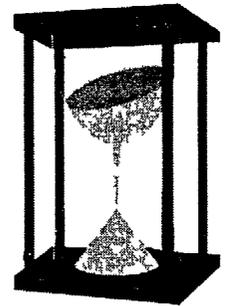
FII Registration

- Quicken the process
- Fees : Manager or fund?
- Re-examine fee structure for FIIs



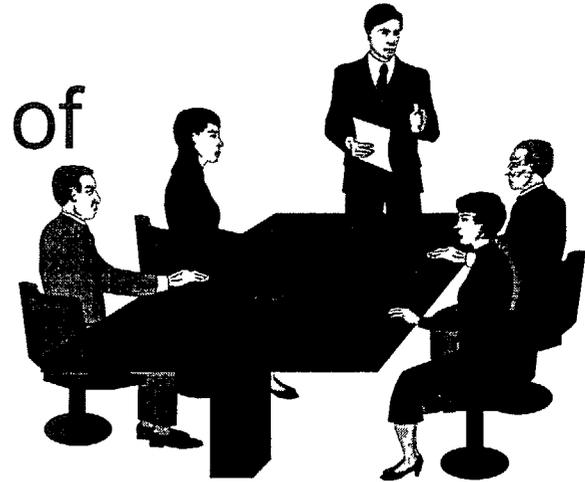
Level Playing Field....

- Reduce Risks
 - Insist on Clearing house trades for FIIs/FIs
 - Reduce Pay-In/Payout time gap - ideally match them
- Broking business to be given Industry Status
 - Lines of Credit
 - Better looking Balance Sheets

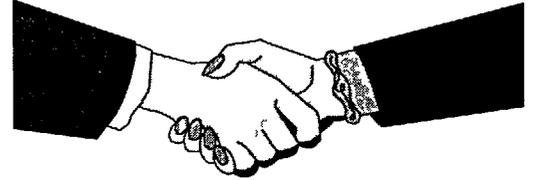


Level Playing field.....

- Transparency & Availability of Information
 - FII holdings
 - Analysts meetings
- Minimum % of business to be given to Indian brokers.
 - Monitoring by SEBI, publishing the data



In conclusion...



- Efforts put in by SEBI, FIRE are commendable.
- Need to continue these with greater vigour, keeping the lines of communication open at all times
- Improve the image of the domestic broking community

Session 3 Organizational Strategy--Issues and Strategy

Session Chairman *Mr. Ashok Kacker SEBI*

PwC Facilitator *Dr. Tessie San Martin FIRE Project*

Session objectives To broaden SEBI management's understanding of the parameters they need to address to create a "successful" organization: internal communications, reporting relationships, organizational structures, staff preparation and recruitment, etc.

Panelist 1 *Organizational Development: An Agenda for Action for SEBI*

Presenter: *Dr. Tessie San Martin FIRE Project*

Panelist 2 *Creating the Learning Organization*

Presenter: *Col. V. M. Verma, Director HRD and General Administration, BSE*

Panelist 3 *Knowledge Management in SEBI* Presentation from the SEBI groups who participated in the Baruch College Program

Session 3 Some relevant Price Waterhouse FIRE Project Deliverables

<i>Deliverable #</i>	<i>Author</i>	<i>Title</i>
17	Ms Susan Hertel	Organizational Structure Plan for NSDL
22	Ms Susan Hertel	Work flows and Job Description under the Organizational Plan for NSDL
28	Ms Susan Hertel	Follow up on the organizational structure plan for NSDL
36	Ms Susan Hertel	Review of Organizational Development of NSDL
48	Ms Susan Hertel	Management & Staff training through development of procedural manuals for NSDL
60	Ms Susan Hertel	Development of operating procedures manuals for NSDL - Departments of Participant Interface Issuer Interface Registrar Operations and Business Partner Inspection
68	Ms Susan Hertel	Development of Operating Procedures Manuals for NSDL Departments of Clearing Corporation Interface Corporate Communications-Marketing & Corporate Planning and Risk Management
70	Ms Susan Hertel	Establishment of a Continuing Training Program within the Human Resources Department of National Securities Depository Limited
75	Ms Susan Hertel	Development of Operating Procedures Manuals for National Securities Depository Limited (NSDL) Departments of Surveillance Compliance and Finance/Accounts
83	Ms Susan Hertel	Expansion of the Training Program within the Human Resources Department of The Stock Exchange Mumbai (BSE)
86	Ms Susan Hertel	Development of Operating Procedures Manuals for National Securities Depository Ltd - Departments of Information Technology Systems and Networking

Session 3

SEBI -- Organizational Development Issues and Strategy

SEBI Workshop 31 July - 2 August 1998

2

Agenda for the session

- Overview of internal organization priorities
 - Suggestions from the FIRE project experience
- Case studies from capital markets organizations in India
 - Lessons learned
- Knowledge management at SEBI The view of participants in US training under FIRE
 - Lessons learned

FIRE Project

Agenda for the presentation

- **Presentation objective**
 - Enhancing performance at SEBI--a blueprint for action
- **Issue areas covered**
 - The Mission
 - Functions and Characteristics
 - Action Areas
 - Organizational structures
 - HRD and Training
 - Knowledge management and institutionalization
 - Measures of Success

FIRE Project

The Mission

- **Elements of a vision**
 - Who are our customers?
 - who do we serve?
 - What our our products and services?
 - How do we measure success?
 - Outputs v outcomes

FIRE Project

Mission for SEBI--An Example

- Protect investors
 - Our customers
- Ensure fair, transparent markets
 - Rule making a product
 - Monitoring compliance enforcement services
 - These are outputs of the regulatory process
- Reduce systemic risks
 - Outcomes

FIRE Project

Functions

- Common functions of *any* market regulator Keeping the playing field level
 - Who can play?
 - Access to the market
 - What are the rules?
 - Rule making
 - Interpreting the rules Referee
 - Monitoring and disclosure
 - What happens if the game is not played fairly?
 - Compliance and enforcement

FIRE Project

What is needed to discharge these functions effectively?

Characteristics of the Regulator

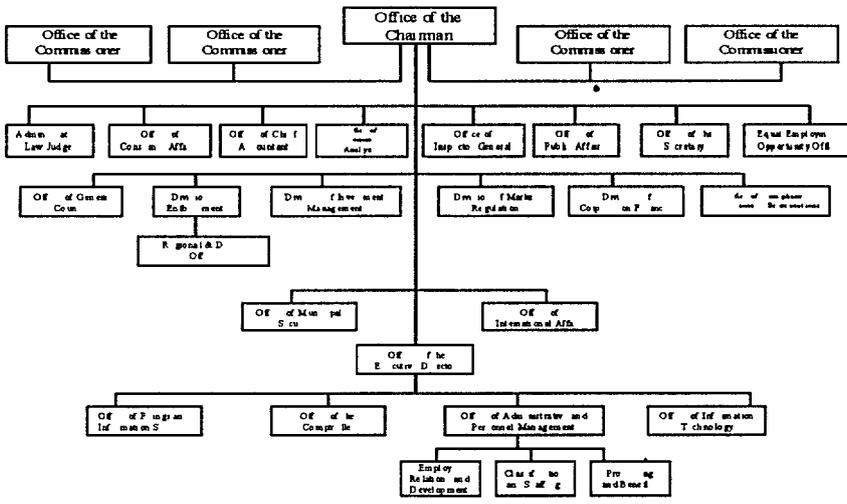
- Independence
- Consistency
- Professionalism, confidentiality



Organizational structure a tool of strategy

- How is SEBI organized?
- What areas can be strengthened?
- Key questions
 - Do we have the operating divisions required?
 - Are areas of responsibility well defined?
 - Is overlap extensive?

Organizational Structure Example at the U S SEC



FIRE Project

Organizational structure Office of General Counsel

> **Strong Office of the General Counsel**

- Interprets securities laws and provides framework for the regulators powers and responsibilities
- Defines powers protects regulator against outside challenges to its authority
- Provides interface between regulator and market participants and other stakeholders in the regulatory process
 - Policy shop to educate legislators judges and other stakeholders
- Particularly important today as SEBI works with Dhanuka Committee and others to develop a comprehensive legislative framework

FIRE Project

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Organizational structure Office of Information Management

- Tool to develop SEBI's monitoring capability, including tracking of
 - Filing of registration statements
 - Periodic reports
 - Banned players
 - Progress of enforcement actions/investigations
- Development of customized databases improves compliance and enforcement

FIRE Project

Organizational Structure Office of Technology Management

- But more than IT, hardware and software
- It is about ***knowledge management***
 - How does the organization learn and institutionalize knowledge about the market?
 - How does it keep in touch with evolving "customer" needs?
 - OTM can create and maintain databases of best practices
 - OTM can facilitate access to deliverables from projects such as FIRE
 - OTM can facilitate public education process (e.g. development of interactive websites)

FIRE Project

Knowledge management

- More than technology
 - Coaching and mentoring
 - Career models and paths (generalists, specialists and McKinsey's "T" professionals)
 - Organizational culture that values and rewards knowledge management and knowledge sharing
 - ↪ Through performance expectations placed on management
 - ↪ Special incentives
 - ↪ Training/professional development

FIRE Project

Organizational Structure The HRD Function

- **Developing HRD policy**
 - A tool to implement vision and strategy
 - ↪ More than training
 - Includes
 - ↪ Recruitment/selection at all levels
 - ↪ Skills development program per department (generalists vs specialists)
 - ↪ Staff evaluation/measurement

FIRE Project

Evolution of the Human Resources Function

- Traditional approach hiring and administrative functions (payroll, etc)
- Current approach broader and more complex functional responsibilities
 - emphasis on staff development and retention
 - closer interaction with line managers and senior executives



FIRE Project

Example U S SEC HRD Functions

- Employment Relations and Development
 - counsels management and employees on rights requirements and actions
 - administers and monitors leave alternative work schedule program annual awards
 - recommends policies and procedures for career development, including training
 - carries out training needs assessments
 - identifies and procure appropriate training programs as well as evaluates all training
 - Oversees development and maintenance of performance standards
- Classification and staffing
 - classifies positions and develops and implement grading
 - helps management develop and maintain org charts and functional statements
 - implements federal pay regulations/conducts pay studies
 - helps identify recruit and process new employees
- Processing and Benefits Branch
 - manages federal employee benefits programs (e g health life insurance retirement program)
 - maintains all employee personnel data

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Example HRD U S SEC

➤ **Performance standards**

- Each department/division works with the Employee Relations and Development Branch to establish descriptions for each job
- Based on the job description each department/division supervisor writes a performance standard to meet that function
- Performance standards for each employee must be written at least 30 days before the formal annual appraisal period
 - supervisor must communicate standard to the employee
 - both supervisor and employee agree on the performance standards
 - Performance standards must be measurable

FIRE Project

Example U S SEC

➤ **Staff appraisal process**

- Goal of Staff Appraisals
 - Assess employee performance against measurable standards
 - recognize outstanding performance
 - Identify employee development skills
- Process
 - management assesses employee s performance through the Performance Management Record
 - management discusses all the information going into the PMR with the employee

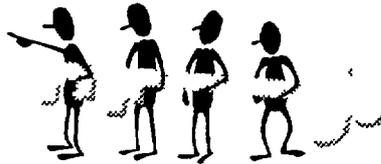
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The Role of Training Within Human Resources Development

- Training can impact job performance by
 - preparing new hires to perform their work
 - improving technical/industry knowledge
 - improving productivity/management/career skills

Create "the SEBI way"



FIRE Project

Three Levels of Learning Activities

- **Training:** learning directed toward the present job of the learner

- **Education:** learning directed toward a future identified job of the learner

- **Development:** learning that is not job-related

FIRE Project

Example Training at the SEC

Sample Offerings by Office of Compliance Inspection and Examination

Topics covered under the Broker/Dealer training program include

- Phase I
- explanation of structure of the SEC
 - the examination process
 - registration broker/dealers
 - report writing
 - NASD vs NYSE
 - books records and brokerage accounts
 - trading in the equities market
 - customer account review
 - other statutes and regulations of the Federal Reserve and other federal agency requirements
 - securities investor protection corporation
 - net capital computation
 - customer protection computation
 - ethics

Phase II

- review of Phase I
- explanation of 33/34X
- small issues/corporate finance
- transfer agents
- municipal securities
- different Acts that apply
- manipulation and accompanying facets

Phase III

- current developments in securities market regulation
- review of examination cases
- other hot topics

FIRE Project

Example Training at the SEC

Sample Offerings by Office of Compliance Inspection and Examination

Topics in the Investment Advisory training

Phase 1 (an introduction) and Phase 2 (in-depth)

- what is an investment advisor
- how to register schemes and mechanism for registering
- who is registering where
- differences between federal and state registration
- records that advisors create and are required to maintain
- paper-based Vs computer generated stored documents
- custody possession of securities and client fund security
- advertisements
- brochure rules
- marketing
- interrelation between advisor and portfolio management function
- interviewing skills
- ethics

Phase 3 covers

- current developments in securities market regulation
- other hot topics

FIRE Project

Example Training at the SEC Sample Offerings by Division of Enforcement

- | | |
|---|---|
| <p><i>1 Basics of Conducting an Investigation (1 week workshop for newly hired attorneys within the Division)</i></p> <ul style="list-style-type: none"> ➤ introduction to insider trading and financial disclosure ➤ how to organize investigations ➤ how to present and take testimony ➤ hands on exercise on presenting and taking testimony ➤ how to issue subpoenas | <p><i>2 Basics of Accounting (3 4 days)</i></p> <ul style="list-style-type: none"> ➤ basic concepts and applications of GAAS and GAAP <ul style="list-style-type: none"> • ➤ how to investigate using financial statements <p><i>3 Current issues on enforcement</i></p> <ul style="list-style-type: none"> ➤ Supreme Court series (focuses on securities cases addressed by the Supreme Court) |
|---|---|

FIRE Project

Organizational development institutionalization

- **Development of procedures**
 - Clear definition of each department's and division's responsibility
 - Systematization of key processes
 - Development and maintenance of manuals

FIRE Project

A Word about SRO's

- No amount of databases can address fundamental information asymmetries between the regulators and the players
 - SRO s are tools used by SEBI and other regulators to correct these asymmetries
 - SRO concept relies in increasing professionalization of market participants
 - SROs must be developed and the right earned
- Key issue to address in SEBI
 - Professionalization of market participants through testing and licensing
 - Role of accountancy profession
 - Schedule for devolving increasing authority to selected SROs

FIRE Project

Measuring success

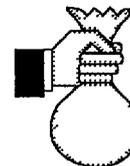
➤ *OUTPUTS--some examples*



- Number of enforcement actions in each program area
- Percent of investment companies examined
- Percent of SEC registered investment advisors examined since the beginning of the current regulatory cycles
- Number of investor hits in SEC website
- Number of new mutual fund portfolios and new insurance products reviewed

➤ *OUTCOMES--some examples*

- Number of violations
- Increase in number of small and medium investors active in the market
- Growth in volume and value of securities traded



FIRE Project

Presentations

- **Strengthening HRD Function The Case of the BSE**
 - development of an effective HRD function in a capital markets organization

- **Participant training at SEBI Observations from the field**
 - a case of knowledge management and institutionalization

CREATING A LEARNING ORGANISATION

The concept of learning organisation is not new, many authors have talked about organisations learning from others and their own past experiences. Probably Garratt was the first to publish a book on the subject in 1987 followed by another in 1990. But the term was popularised by Senge when his famous book 'The Fifth Discipline' was released in 1990. Senge's book triggered a great deal of interest in the subject of learning organisations. He emphasised that all learning organisations have five common characteristics. They include

Developing personal mastery, using mental models, building shared vision, understanding the power of team learning and using systems thinking. According to him the fifth (systems thinking) is the most critical one, and therefore he titled his famous book 'The Fifth Discipline'.

The concept

In 1970s Argyris proposed the concept of a different qualitative learning. Contrasted with traditional learning, or the 'single-loop' learning (involving incremental change within an existing framework), 'double-loop' learning emphasized testing of the underlying assumptions and achieving transformational change. Senge contrasted adaptive learning (solving problems in the present without examining appropriateness of current learning behaviours) with generative learning (emphasising continuous experimentation and feedback in an ongoing examination of the way organisations define and solve problems).

p t o

Organisational learning has been defined in various ways My definition of the concept is " the process by which an organisation acquires, retains and uses inputs for its development , resulting in an enhanced capacity for self learning and self renewal "

Organisational learning has been proposed as a development process, from individual to group to organisations However, there are certain Hindering and Facilitating factors in the organisation requiring attention of the HRD and the management

HINDERING FACTORS

- Frequent changes at the top leading to loss of continuity and absence of long-term orientation
- Culture of complacency arising from past successes inadequate efforts for improvement leading to process of slow decline
- Excessively bureaucratic and centralised methods of working leading to delays
- With a community of functional specialists having little appreciation of each others area, learning gets fragmented and this leads to functional myopia The tunnel vision of information sharing blocks learning
- Due to Preoccupation with day-to-day fire fighting, time and attention do not get allocated to issues of change and innovation As a result changes are not backed up with visible support and energetic action

FACILITATING FACTORS

There are five key conditions that are essential for organisational learning

- Clarity of purpose and mission Employees need to understand the goals they are striving for

p t o

- Leadership commitment and empowerment Leaders play a vital role in fostering a learning climate by being committed to goals, promoting openness and trust, identifying performance gaps and empowering their employees
- Experimentation and rewards Employees must have the freedom to take risks and innovate and, in fact, should be rewarded for it This is by far the most consistent managerial practice that is observed in learning organisations
- Transfer of knowledge Communication needs to be clear, fast and focussed to enable employees to learn from each other, from past failures and from other organisations
- Teamwork and group problem solving By working in teams knowledge can be shared by members Interaction generates new ideas and solutions

BSE - A LEARNING ORGANISATION

We in the BSE have had our own share of experiencing the advantages of being a learning organisation A silent HR revolution is taking place in the BSE for the past two years Taking clue from the environment, both internal and external as also the deep set cultural background of the organisation, we conducted an Organisation Climate Survey and identified the strength and weaknesses Thereafter the needs of the organisation were ascertained and identified as **ORGANISATIONAL RESTRUCTURING, COMMUNICATION** and **TRAINING** as key intervention areas BSE started off with all the three and several other HR interventions simultaneously two years back and have since been learning organisationally through its own experiences Our focussed areas of interventions which have given us tremendous learning experience which are also under constant review and revision are as under -

p t o

- **Organisational Climate Survey**
- **Beginning to develop a database of skills among employees**
- **Implementing a new employee appraisal system, main focus being PERFORMANCE REVIEW FOR REWARD and PERFORMANCE REVIEW FOR DEVELOPMENT**
- **Initiating an internal training programme based on need assessment, Impact & evaluation of training Behavioural, Functional, Technical and General Management Training needs are being addressed**
- **Communication Process, both Inter Personal and Intra Personal**
- **Automation & Human Resources Information System (HRIS)**
- **Induction & Mentoring at entry levels**
- **BSE Mission Statement (Review)**
- **Empowerment & Job Rotation**
- **Effective Internal Support Systems**

With the above interventions and several more to follow in the subsequent training year, we are expecting a total transformation through self renewal and constant review of internal learning process

The process by which an organisation **ACQUIRES, RETAINS** and **USES** **INPUTS** for its development, resulting in an enhanced capacity for self learning and self renewal

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2. HINDERING FACTORS

- Frequent changes at the top
- Culture of complacency arising from past successes
- Excessively bureaucratic and centralised methods
- The tunnel vision of information sharing blocks learning
- Hierarchical Organisations
- Preoccupation with day-to-day fire fighting

3. FACILITATING FACTORS

- Clarity of purpose and mission
- Leadership commitment and empowerment
- Experimentation and rewards
- Transfer of knowledge
- Teamwork and group problem solving

4. BSE - A LEARNING ORGANISATION

- Organisational Climate Survey
- Beginning to develop a database of skills among employees
- Implementing a new employee appraisal system
- Initiating an internal training programme based on need assessment, Impact & evaluation of training
- Communication Process
- Automation & HRIS
- Induction & Mentoring
- BSE Mission Statement (Review)
- Empowerment & Job Rotation
- Effective Internal Support Systems

A PRESENTATION ON

PARTICIPANTS TRAINING AT

BARUCH COLLEGE
NEW YORK

BACKGROUND

- Participants visited US for a training programme organised by USAID under FIRE Project during October - November, 1997
- An overview of US capital markets
- Class room lectures
- Visits to various Institutions and Intermediaries viz NYSE, AMEX, Meryll Lynch, Coffee, Cocoa and Sugar Exchange
- Visits to regulatory bodies viz. SEC, CFTC

REGULATORY FRAMEWORK/CAPITAL MARKETS IN USA

- Single Regulatory Authority for public held companies (No ROC)
- Strong Legal Framework and Enforcement
- Continuous Disclosure and Compliance Requirement for listed Companies with US SEC
- Issue Management Process
- Auditors' Involvement in Public held Companies
- Importance of NASDAQ in US Markets
- Settlement of Trade (majority) through depositories and supportive clearing corporations
- Strong Self-Regulatory Organisation for Mutual Fund Industry viz , ICI
- Large Spectrum of Investment Products Offered
- Dominant presence of Mutual Funds in Capital Markets to channelise Retails Investments
- On-Line Surveillance and Monitoring, Stock Watch

INTERMEDIARY TRAINING

- **Improved Compliance by Intermediaries due to Training and Development**
- **Securities Training Corporation (STC)**
- **National Association of Securities Dealers (NASD)**
- **Investors' Education**

TRAINING HIGHLIGHTS

- Supportive Legal System - Effective Enforcement of Securities Laws
- Specialised professional Skills of Securities Industry Professionals
- Back office Operations of Brokers
- Clearing Issues in Derivatives Markets
- Self discipline seen among intermediaries viz, brokers, Investment Banks and Issuer Companies ensuring better compliance
- Entry norms/restrictions for securities industry personnel
- Effective Time Management

SUGGESTIONS

- Continuation of Training programmes under USAID and other Global/Foreign Training Programmes
- Focused Training Programmes for future requirements of SEBI like
 - Derivatives
 - Depositories and clearing systems
 - Surveillance systems and Enforcement
 - Regulatory measures through legal recourses
- Strengthening the self-regulatory organisations/Stock-Exchanges for effective compliance
- In-House Trainings

Session 4 Secondary Market Development

Session Chairman *Mr O P Gahrotia Executive Director SEBI*

PwC Facilitator *Mr Paritosh Sharma FIRE Project*

Session objectives To discuss critical issues affecting the development of a strong secondary market in India

Panelist 1 *Experience with non-equity Derivatives potential pitfalls facing the Indian Derivatives Market*

Presenter Martin Iish Country Director Standard & Chartered

Panelist 2 *Stimulating the Indian Debt Market*

Presenter N Gopalkrishnan Managing Director, SBI Gilts Ltd

Panelist 3 *The Mutual Fund Industry Valuation, Fund Growth, and Compliance*

Presenter Simon Holdsworth Chief Investment Officer ITC Threadneedle

Panelist 4 *The Mutual Fund Industry The Compliance Perspective*

Presenter Sandhya Bhate FIRE Project Consultant

Panelist 5 *Mutual Funds The Credence Report on Guaranteed Products*

Presenters

1 R N K Prasad FIRE Project

2 Vivek Sinha Partner, Credence

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Session 4 Some relevant Price Waterhouse FIRE Project Deliverables

<i>Deliverable #</i>	<i>Author</i>	<i>Title</i>
8	Mr Stephen Brown	A review of the Operational Impediments of the Debt Market in India - NSE T O # 003
11	Dr William Barclay	Feasibility Study of a Derivatives Exchange in India - NSE T O # 003
15	Mr Rajat Saxena	Research paper on Retail Debt Marketing in India
21	Mr Lewis J Mendelson	A Comprehensive Strategic Plan for AMFI
31	Mr Bill Gorman	Inter -connected Market System Feasibility Report
32	Mr Lewis J Mendelson	Assistance to Mutual Funds - Review of comprehensive Strategic Plan and Investor Awareness campaign
33	Mr Joseph Schenk	World Securities market Clearing/ Settlement Proposal for Stock Exchange, Mumbai
37	Mr Lewis J Mendelson	Assistance to Mutual Funds
38	Mr Paul Litteau	Review of Regulations for Derivatives Exchange in India
43	Mr David Silver	Assistance to Mutual Funds - Improving Products and Services, Strengthening the regulatory Framework and AMFI
49	Mr Kush Chokshy & Mr A Devasurendia	Proposal for the establishment of a Debt Dealers Association in India
50	Mr Lewis J Mendelson	Assistance to Mutual Funds - Review of comprehensive strategic plan & Investor Awareness campaign
51	Dr William Barclay	Index Derivatives Trading and the Indian Equity Market Impact, Regulation and Control Design
57	Mr Lewis J Mendelson	Association of Mutual Funds in India (AMFI) Model Compliance Manual
61	Ms Susan Hertel	Review of the Cash Settlement Process and proposed securities depository for the Stock Exchange, Mumbai (BSE)
62	Mr Joseph Schenk	Review of Clearing and settlement Procedures at the Delhi Stock Exchange
63	Mr Peter Giennough	Strategy for Development of the Secondary Debt market in India

71	Ms Susan Hertel	Assistance to Securities Settlement and Clearance to The Stock Exchange Mumbai
72	Ms Kate Hathaway	A review of the SEBI Derivatives Committee Report A Regulator Framework For Derivatives Trading
74	Ms Anjali Kamat	Workshop AMFI Mutual Fund Compliance Workshop "Meeting our Professional Responsibilities"
76	Ms Kate Hathaway	A Framework of Derivatives Market Regulations for the Exchange Self Regulator in India Draft Futures Market Regulations for the National Stock Exchange of India Ltd
77	Ms Anjali Kamat	SEBI Mutual Fund Inspection Workshop "Quality Control and Consistency in Mutual Fund Inspections Insights from the US SEC Inspection Process"
79	PW/ FIRE	Assistance to Registrars Association of India - Manual of Standard Operating Procedures
80	Mr Michael Gorham	Report on Stock Index Futures for the National Stock Exchange of India Limited
81	Ms Kate Hathaway	Paragraph Review of the December 1997 Gupta Derivatives Committee Report
85	Mr Lewis J Mendelson	Assistance to Mutual Funds - Review of Comprehensive Strategic Plan & Investor Awareness Campaign
88	Mr Kush Choksy	Fixed Income Brokers Association (FIBA) Business Plan

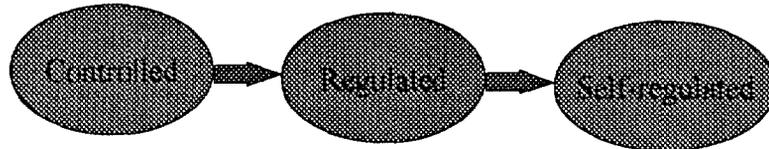
Stimulating the Indian Debt Market Issues and Role for SEBI

SBI Gilts Limited

Impact of reforms

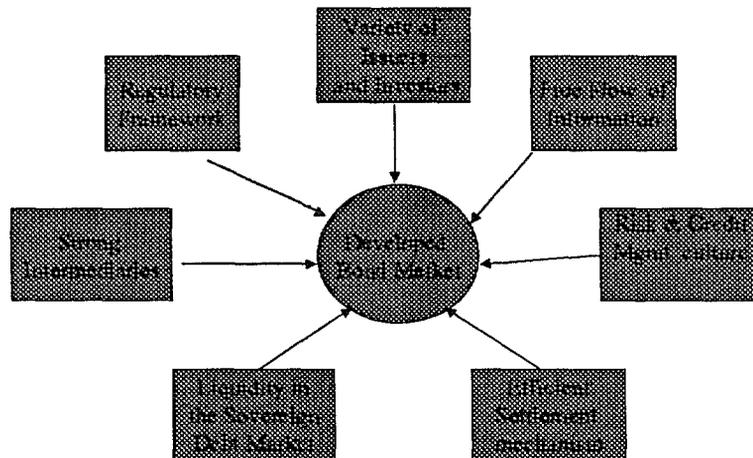
- *Govt borrowing at market rates*
- *Greater absorption of securities by market*
- *Increase in trading volumes*
- *Greater transparency*
- *Increased focus on treasury management and interest rate risk management*
- *Increased interest in debt market*
- *Large amounts being raised by corporate sector*

Evolution of Debt Markets



India is at present between the controlled and regulated state
-closer to the regulated side.

Features of a developed Bond Market



Secondary Market Development

- *Reasons for low secondary market activity*
 - *Uni-Directional Markets*
 - *Views based on call rates*
 - *No benchmark interest rates*
 - *No hedge mechanism*
 - *Herd Mentality*
 - *Investors holding paper to maturity*
 - *Low retail and corporate interest*
 - *Existence of stamp duty*

Suggestions to activate debt market

- *Investor education*
- *Move towards 100% mark to market for securities*
- *Setting up of dedicated gilt funds*
- *Marketing debt to corporates/high networth individuals*
- *Strengthen system of PDs*
- *Development of satellite dealers*
- *Establishment of when-issued market*
- *Introduction of derivatives*

Suggestions to activate debt market (contd)

■ **Regulatory issues**

- **Rationalisation of stamp duty**
 - *uniformity across states*
 - *one time stamp duty at the time of issuance*
 - *encourages dematerialization and facilitates securitization and hence improves liquidity*
- **Regulation of Private Placement market**
 - *ensure uniform and adequate disclosure requirements*
 - *Minimise delay between letter of allotment & issue of scrip*
 - *U S market, issuers use Rule 144A to privately place with QIBs(Qualified Institutional Buyers)*

Suggestions to activate debt market (contd)

■ **Regulatory issues (contd)**

- **Need to ensure consistent regulations**
 - *too many bodies regulating the same segment*
 - *Govt secs subject to regulations like Public Debt Act, SCRA etc*
- **Repos**
 - *standardisation of repo agreements*
 - *broadbasing the market by increasing the number of players and instruments*

Suggestions to activate debt market (contd)

■ *Regulatory issues (contd)*

- *Allow short-selling/stock lending which would lead to greater depth in the market*
- *Widening the investor base*
 - *permit Provident/Gratuity funds to purchase corporate debt and securitised paper*
 - *allow insurance companies to invest a larger portion of their funds in non-govt paper*
 - *blanket permission to be given to Public Trusts to invest in highly rated paper*

Suggestions to activate debt market (contd)

■ *Regulatory issues (contd)*

- *Withdrawal of withholding tax on interest income on FIs*
- *Clarification of ambiguity in taxation of interest under Section 10 (23(g))*
- *Introduce multiple credit ratings system*

Philosophy of Regulation

- *Partnership between SEBI and Industry*
- *Mutual Responsibility*
- *Should not shackle industry and prevent innovation*

The three steps of regulation

- *Work with industry to facilitate market innovation but protect investors*
- *Constantly reappraise regulation and discard what doesn't work*
- *Don't reinvent the wheel*

*What's good for the investor is good for the market
SEC Regulation is not a zero sum game in which
every new advance for investors brings an equal
and corresponding loss for the firms. Most of us
recognise that it is quite the opposite. Every new
improvement for investors makes a better
marketplace, one that's likely to attract more
investors and more capital."*

- Arthur Levitt, Chairman SEC

Valuation and Its Importance in Mutual Fund Growth

1st August 1998

SEBI Senior Management Conference

The Importance of Valuation

- Supporting Professionalism
- Maintaining Confidence
- Effect upon Liquidity
- Reducing Pricing Flexibility

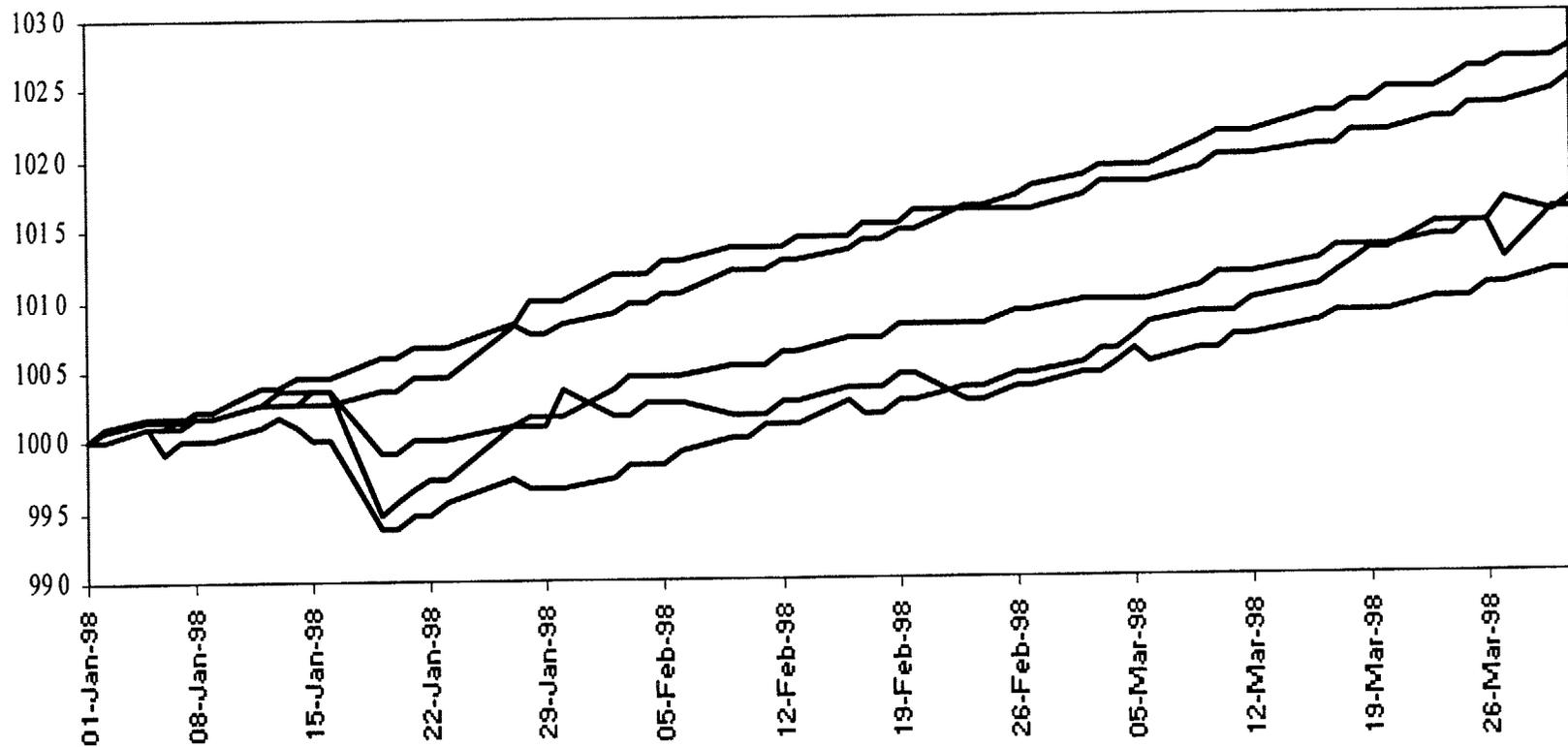
Supporting Professionalism

It is taken as read that for the Indian Mutual Fund Industry to have sustained growth it must attract and retain professional operators

These operators must provide adequate investment returns not only to investors within the funds they manage but also their own shareholders

One requirement of the valuation process is therefore that it must promote the success of professional operators, and it must actively hinder the growth of those who do not maintain the highest standards

Discrepancies in price movements, as occurred on January 19th 1998, between 'similar' open ended income mutual funds, serve as a clear signal that inconsistent, and therefore potentially dangerous, pricing policies are being followed within the industry



The lines represent the PUBLISHED NAV of 5 major open ended income mutual funds

AS

Satisfying User Expectations

Satisfying expectations on a sustained basis implies, amongst others, that **confidence** must be maintained. This confidence must be maintained even during periods of net redemption from the industry, or individual funds.

This need implies that a gap must not be allowed to appear between the actual realisable value of a fund's assets and its stated valuation.

Corporate Investors

Whilst corporate investment into Mutual Funds is likely to increase over the next few years, this growth will reverse at some point due to.-

- Shareholder pressure to return under utilised cash
- Deregulation allowing more responsive Capex
- More competitive bank deposit returns

Any movement by corporates to redeem units in funds will expose NAV mispricings. Perversely those funds with the greatest corporate exposure may be those with the greatest NAV mispricings

The Effect of Pricing Flexibility on Fund Manager Behaviour and Market Liquidity

- Pricing flexibility allows fund managers to immunise their fund's reported NAV's from changes in the traded value of the assets within the fund
- This reduces the incentive for the fund manager to react to investment views that are expected to increase value for the unit holders E.g The fund manager expects interest rates to rise/bond prices to fall If the fund is being fairly valued everyday the manager can improve the reported NAV by reducing exposure to those assets expected to fall However, if the reported NAV will be unaffected by market movements why bother?
- In addition, if assets are mis-priced, any open market transaction will immediately cause this mis-pricing to be recognised in the NAV Mis-pricing traps the manager into inactivity - Inactivity results in **Low Market LIQUIDITY** and further mis-pricing temptations

Proposals to Deter Pricing Flexibility

- There needs to be minimal discretion in the pricing process - if the structure allows some fund managers will hang themselves (and the industry)
- NAV's should always represent, on everyday, the realisable NAV on that day Only in this way can the industry avoid the development of a crisis of confidence at some point in the future
- Funds should be forced to disclose quarterly, asset by asset, and as a total %, those assets where some non recently traded price is being used
- Funds should publish quarterly a list of all transactions in non rated assets, and details of any non rated assets held

In Summary

A clear and consistent valuation environment will support professional investment managers, reduce the risk of a loss in consumer confidence, and improve market liquidity

MUTUAL FUNDS:

Compliance Perspectives

Overview

- Background
- Issues raised in the Model Compliance Manual
- Compliance Survey
- The Compliance Process
- Challenges Ahead

Background

- SEBI (Mutual Funds) Regulations, 1996
- AMFI Model Compliance Manual - September 1997
- Workshop for the implementation of the manual - December 1997
- Survey of AMFI Members on the implementation of the manual - July 1998

Model Compliance Manual issues

- Due diligence of key employees (reg. 7(d))
- Trustees' responsibilities and liabilities (reg. 16(2) and (6))
- Undue concentration of business with any broker (reg. 18(5))
- Private placements involving associate companies (reg. 18(5))



Model Compliance Manual Issues

cont.

- Logistics of shareholder approval (reg. 18(156))
- Fundamental attributes (reg. 18(150))
- Diversification
- Portfolio Disclosure
- Guarantees (reg. 38)

Highlights of the Survey of AUMFI Members

Questionnaire and Interviews

Questionnaire

- 21 responses and 23 interviews
- 85% of respondents using the manual
- 81% of respondents also have their own training, designing audit programs and performance calculations



Interviews

- 5% brokerage allocation (reg. 25(7))
- 25% group exposure (Seventh Schedule item 9c))
- is an associate of an associate an associate?
- PSU funds and redemptions
- train the trustees



5% Brokerage Allocation

25(7)(a) An AMC shall not through any broker associated with the sponsor, purchase or sell securities, which is average of 5% or more of the aggregate P&S of securities of the MF in all its schemes

provided further that the aforesaid limit of 5% shall apply for any block of three months

25(7)(b) An AMC shall not purchase or sell securities through any broker (other than 25(7)(a)) which is an average of 5% or more of the aggregate P&S of securities made by the fund in all its schemes, unless the AMC has recorded in writing the justification for exceeding the limit of 5% and reports of all such investments are sent to the trustees on a quarterly basis

Provided that the aforesaid limit shall apply for a block of three months

‘40Act Diversification Definition

- Sec 5(b)(1) “Diversified company” means a management company which meets the following requirements At least 75 per cent of the value of its total assets is represented by cash and cash items (including receivables), Government securities, securities of other investment companies, and other securities for the purposes of this limited in respect of any one issuer to an amount not greater in value than 5 per cent of the value of total assets of such management company and to not more than 10 percent of the outstanding voting securities of such issuer

Interviews cont.

- investment decisions (MD/trustees)
- balance sheet provisions - gratuity/ staff welfare fund
- defining front-running
- valuation at demat prices



The Compliance Process



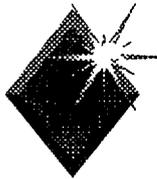
- Rules and regulations
- Compliance Officer: independence
- Compliance control program
- Audit programs, inspection manual
- Findings, corrective action
- Pro-active role

Challenges Ahead

- Effective regulation, intent, solicitation of industry comments
- Attitudes of the AMC
- Luring back the investor



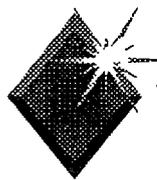
Conclusion



*SEBI Senior Management Conference -
Guaranteed Return Schemes*

**PW FIRE PROJECT TEAM
& CREDESCENCE**

August 1, 1998

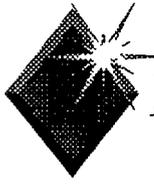


The FIRE Project Brief

“Does the continuation of GR schemes under
current conditions present

- ◆ Risks to unitholders and guarantors
- ◆ Embarrassment of the regulators
- ◆ A drain on the credibility of the fund industry?”

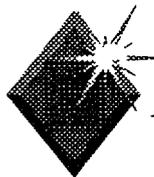
GR schemes do present several problems



Regulatory Objectives

- ◆ Sustainable growth and development
 - MFs develop into vibrant and efficient investment vehicles, and
 - provide the benefits of securities markets to millions of investors

- ◆ Smooth crisis-free functioning of market
 - Contractual obligations honoured in the normal course of business

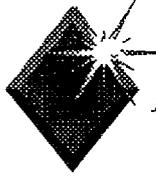


Magnitude

	<i>Rs Crores</i>
Net Assets of Industry	>70,000
Net assets of GR schemes	~25,000
Number of GR schemes	>50
Past Shortfalls	~950
Possible Shortfalls	2,000-3,000

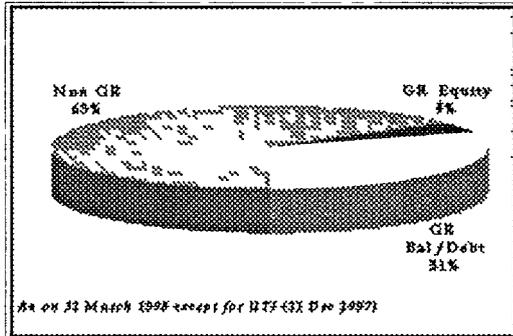
As on 31 March 1998 except for UTI (31 Dec 1997)

Shortfalls exclude open-ended schemes



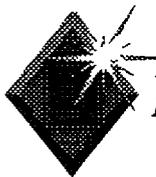
Pattern of GR schemes

MF Industry Net Assests



Total GR Share 35%

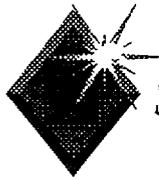
Predominantly closed end 77%



Large Shortfalls : Impact

Implications for Stakeholders

- ◆ Investors Loss of Trust
- ◆ MF Industry Loss of Credibility
- ◆ Regulator Loss of Credibility
- ◆ Sponsor/Shareholders Losses
- ◆ Taxpayers Recapitalisation of Sponsor Banks
- ◆ Insurance- policy holders Loss of Profits
- ◆ Economy Sub-optimal Utilisation of Assets



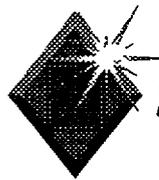
Significance for Issuers-1

- GR's high share of current corpus

Net Assets of the MFs (Rs crores)

	GR	Total	GR Share
Pvt Sector MFs	10	3,629	0.3%
UTI	20,516	59,593	34.4%
Other PSU MFs	4,318	7,689	56.2%
TOTAL	24,843	71,179	34.9%

As on 31 March 1998 Data for UTI as on 31 Dec 1997



Significance for Issuers-2

- Sharp rise in GR Fund Mobilisation

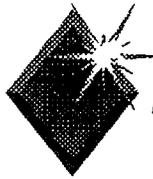
GR Initial Collections (Rs Crores)

	FY92	FY93	FY94	FY95	FY96	FY97	FY98
UTI	205	2,449	2,094	941	-	910	7,864*
Other MFs	1,742	391	0	130	76	225	555
TOTAL	1,947	2,840	2,094	1,071	76	1,135	8,419*

Note FY is Fiscal year ending March 31 except for UTI (30 June)

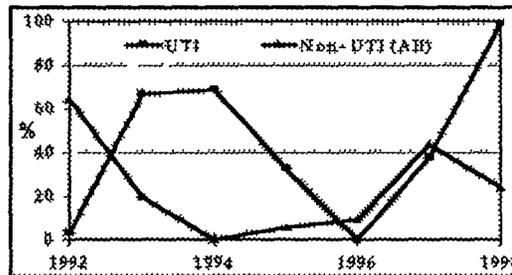
Data excludes ongoing sales by open-ended schemes

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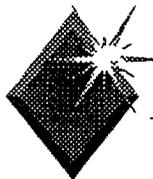
Significance for Issuers-3

- FY 98 New Money in MF 80% via GR
- GR share in Total IPO Collections



UTI 99%

FY end March for UTI end June



Need for GR Schemes-1

Investor's Viewpoint

- ◆ Safety aspects vis-à-vis
 - IPOs, Secondary market, Regular MF schemes
 - Gold, Real Estate, Corporate Bonds
- ◆ Rational choice
 - Low Failure Rate of GR schemes

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Need for GR Schemes-2

Investor's Viewpoint Comparatives

Criterion	Bank FDs	FI Bonds	GR
<i>Return</i>	Lowest	High	High, Upside
<i>Risk</i>			
Secured	No	Yes	No
Payment mechanism	Clear	Clear	Flawed
Insurance	Yes	No	No
Credit rating	Optional	Mandatory	No
Capital adequacy	Yes	Yes	No
Statutory funding	CRR, SLR	Sp Reserves	None



International Experience

- Similar, but not identical products exist

UK

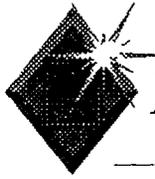
- Issuers do not take on Credit Risk
- Hedge Principal Loss via Derivatives
- Returns in sync with Market

USA GICs

- Offered by Assurance Industry
- Sold to Authorised Pension Plans

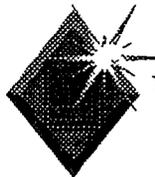
- ◆ Higher Guarantee Cover , Lower Assured Return

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Past Shortfalls (till 31/3/98)

	Shortfall	Earliest
BoI MF	1	FY1996
Canbank MF	600+	FY1994
GIC MF	58	FY1997
Indian Bank MF	61	FY1998
LIC MF	145	FY1997
PNB MF	24	FY1998
SBI MF	58	FY1997
UTI	??	??
TOTAL	947+	



Why Shortfalls ?

◆ Environmental Discontinuity

Upsets Issuers' Risk estimates

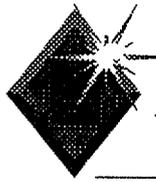
→ Equity-oriented GR Losses

- ◆ Bear market
- ◆ Severe erosion in IPO and small-cap stocks

→ Debt-oriented GR Losses

- ◆ Risks Tenor mismatch, default, reinvestment, volatility
- ◆ Constraints Paucity of quality paper, thin trading, poor asset recovery, no hedging tools

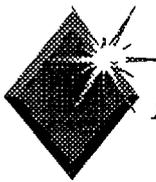
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Environment.. Then and Now

	Pre-1991	Post-1991
Real economy		
Level of Govt control	High	Reduced
Competition	Limited	Significantly higher
Financial markets		
Level of Govt control	High	Reduced
Interest rate volatility	Limited	Significantly higher
Credit risk	Low	High
Trading volumes	Thin	Thin

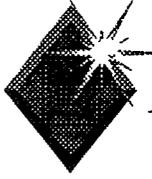
◆ Then, suitable Now, needs restructuring



Potential Shortfalls-1

Assumptions/Limitations

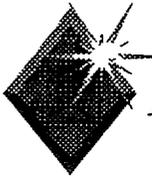
- Excludes Special purpose, Open-ended schemes
- Starting Point - Net Assets Sensitive to Valuation norms
- Multiple Options estimated Unit Capital Split
- Put options, Repurchase by Fund Ignored
- Rate Volatility, Winding- up Costs Ignored
- Costs and Asset Quality Stable



Potential Shortfalls-2

Methodology

- ◆ Start from adjusted Net Assets
- ◆ Estimate Guaranteed Outflows Assumptions
- ◆ Find Required IRR Net of Costs
- ◆ Does Required IRR appear Difficult ?
- ◆ Estimate Shortfall for Range of Net Earnings Rate



Potential Shortfalls-3

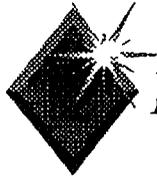
Investment- wise

MF / Scheme	Shortfall at Earnings Rate		
	5%	15%	20%
	<i>(Rs Crores)</i>		
Equity GR	1,234	892	709
Debt + Balanced GR	3,671	1,179	447
Total GR	4,905	2,072	1,156

Scheme earns at the given steady rate from 1 April 1998 until maturity net basis

→ Avg Returns

- ◆ Equity (BSE 100, historical)
23% (10 yrs), 11% (5 yrs)
- ◆ Debt Prevailing AAA yields < 13%



Potential Shortfalls-4

Fund- level Aggregates

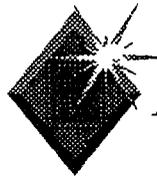
MF	Shortfall at Earnings Rate		
	5%	15%	20%
	<i>(Rs Crores)</i>		
BoI MF	617	384	256
Canbank MF	459	388	352
GIC MF	209	143	107
Indian Bank MF	60	44	36
LIC MF	32	26	23
SBI MF	179	136	115
UTI	3 350	950	268
TOTAL MF INDUSTRY	4,905	2,072	1,156

Note Scheme earns at the given steady rate from 1 April 1998 until mat net basis

→ Payment Crisis ?

PW FIRE/ CRENDENCE

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Risk-Reward for Issuer

◆ Key Risks

Credit risk default/downgrade

Market risk illiquidity, volatility

No fungibility

◆ Supply/ Market Constraints Increase Risk

→ This Increases the Required Rate of Return

◆ Reward is capped at 1 25% Is it adequate?

PW FIRE/ CRENDENCE

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Safeguards: Control ?..

Restricting Risk- taking

- ◆ Product Controls
 - Guarantee Returns One Year at a time
 - Limit Tenor
- ◆ Investment controls
 - At least 85% debt
 - Only AA- or Higher Grade, Listed, Reasonably Liquid, Paper

Severe Constraints in Offering GR

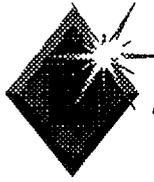


Safeguards: ..or Regulate

Capital Adequacy

- ◆ Reserve Creation
- ◆ Linked to net assets/ guaranteed outflows
- ◆ Norms to be defined by Regulator

Creates Up- front, Transparent, Payment Mechanism, Level Playing Field



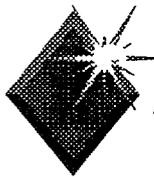
Safeguards-3

□ Plus Pro- Active Reserve Management

- ◆ SF to invest in Risk free, Liquid Assets
- ◆ Quarterly / Semi-annual Review
- ◆ Projected Shortfalls Automatic Top- up via special Sinking Fund (SF)

Alternate

→ Earmark Specific Assets, at Market Value



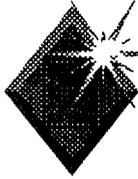
Safeguards-4

Improving the payment mechanism

Presently

Guarantors' funds insufficient to support obligations

- ◆ Explicit Contingent Liability Disclosure on Guarantor/Sponsor Balance Sheet
- ◆ Regular disclosure of Cap Adequacy/ SF
- ◆ Credit Rating for GR Schemes ?



Wrap Up

Do these recommendations meet these criteria?

- Investors 'Real' guarantees, adequate disclosure
- Market Smooth payment mechanism, no crises
- MFs Transparent regulations, level playing field
- Sponsors Upfront cost of GR schemes

- Fairness to all stake-holders

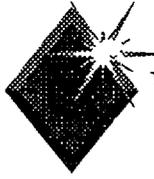


Definition of Net Assets

LIABILITIES	ASSETS
Unit Capital	Investments
Reserves	Current Assets
Loans	Deferred Revenue Exp
Current Liabilities	c/f Losses

$$\begin{aligned} \text{Net Assets} &= \text{Investments} + \text{Current Assets} \\ &\quad - \text{Loans} - \text{Current Liabilities} \\ &= \text{Unit Capital} + \text{Reserves} \\ &\quad - \text{Losses} - \text{Deferred Revenue Exp} \end{aligned}$$

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What a GR scheme must earn

- E.g. Closed-ended, 5 yr, income scheme

Between 270-600bps p.a.

Varies with size of scheme, costs and risk

Guaranteed return	13.5%	13.5%	13.5%
Add-on costs	Minimum	Reasonable	Maximum
-Initial Issue Expenses	0.4%	0.6%	1.2%
-Recurring Expenses	0.8%	1.5%	2.5%
-Credit risk	1.0%	1.0%	1.5%
-Market risk/liquidation	0.5%	1.0%	1.0%
TOTAL of all items	16.2%	17.6%	19.7%



GR. Derivatives Perspective

◆ Stock + Put Option

	Time 0	Index after 1 Year		
	100	90	110	120
Stock	98.0	88.2	107.8	117.6
Buy 97 Put	3.6	7.0	0.0	0.0
Sell 115 Call	-1.6	0.0	0.0	-5.0
Net Income		2.4	2.4	2.4
Total	100.0	97.6	110.2	115.0

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GR . Derivatives Perspective

◆ Cash + Call Option

	Time 0	Index after 3 Months		
	100	95	105	110
Deposit	98 3	98 3	98 3	98 3
Interest		17	17	17
100 Call Part 48%	17	00	24	48
Total	100 0	100 0	102 4	104 8

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Session 5 Market Intermediaries—Challenges and Opportunities

Session Chairman *Mr MD Patel Executive Director SEBI*

PwC Facilitator *Mr Dennis Grubb FIRE Project*

Session objectives Panelists will discuss various ways in which SEBI can interact more effectively with market participants. Among the issues to be discussed in this session: the development and growth of effective SROs; mechanisms for enhancing exchange member accountability; the role of regional exchanges and the development of securities law in India.

Panelist 1 *The Securities Law SEBI's Role--Setting and Leading the Legislative Agenda*

Presenter: Mr C Schroff, Partner, Amichand & Mangaldas & Suresh A Shroff

Panelist 2 *Surveillance and Enforcement Stock Exchanges as Effective SROs*

Presenter: M K Khanna, Managing Director, UTI Securities Exchange

Panelist 3 *Retail Intermediary Survey Preliminary Results from a FIRE Project Survey*

Presenter: Ashish Jain, Senior Manager, PricewaterhouseCoopers India

Panelist 4 *Price Discovery in Regional and National Stock Exchanges*

Presenter: Dr Hari K Nagarajan, Indian Institute of Management, Bangalore

Session 5 Some relevant Price Waterhouse FIRE Project Deliverables

<i>Deliverable #</i>	<i>Author</i>	<i>Title</i>
9	Mr Thomas Keyes	Design and Implementation of Licensing, Certification and Testing Program for persons joining capital market intermediaries
10	Mr Thomas Keyes	Design and Implementation of Licensing Certification and Testing Program for persons joining capital market intermediaries
13	Mr Thomas Keyes	Certification and Testing of Market Intermediaries
23	Mr Thomas Keyes & Mr Paul Litteau	An Orientation Programme on the US Model for Regulation And Registration of Retail Capital Market Intermediaries for SEBI
25	Mr Thomas Keyes	Registration and Regulation of Retail Capital Market Intermediaries the Sub-brokers for SEBI
39	Mr Thomas Keyes	Registration and Regulation of Retail capital market Intermediaries for Securities and Exchange Board of India - April 1997
42	Mr Hanv Melamed	Assistance to Securities and Exchange Board of India - Report on Financial Responsibility Framework
45	Mr Thomas Keyes	Registration and Regulation of Retail capital market Intermediaries for Securities and Exchange Board of India - May 1997
46	Mr Thomas Keyes	Certification and Testing of Capital Market Intermediaries for Securities and Exchange Board of India - May 1997
69	Mr Cliff Kennedy	India Securities Law Strategy
82	PW FIRE Project	Assistance to Securities and Exchange Board of India of Certification, Licensing and Testing of Capital Market Intermediaries
89	Mr Thomas Keyes	Distribution of Financial Products Registration and Regulation of Retail Capital Market Intermediaries

Study Objectives

- “To promote an understanding of the Retail Financial Intermediary (RFI)”
 - ✦ To characterise the different segments of intermediaries and linkages between segments
 - ✦ To profile the Retail Intermediary
 - ✦ To determine the nature of the Relationship between
 - ▲ Brokers - Sub-brokers
 - ▲ RFI - Clients



Study Coverage

- 1198 RFIs were covered
- 35 cities across Regions, covering 20 stock exchange towns
- Retail Focus - at least 25% of business from retail segment
- Brokers - Primary (139) and Secondary (332)
- Sub-brokers - Primary (239), Secondary (427) and Fixed Deposit Agents (472)
- Instrument - Structured Questionnaire
- Study Period - 2 weeks in June 1998 - Lean phase



Market Structure

- High degree of fluidity in the market
 - ▲ Intermediaries identify themselves as active in multiple roles in different markets
 - ▲ Intermediaries deal in a wide range of products - Primary, Secondary Fixed Deposits Mutual Funds, Life Insurance, Tax Saving Products
- Multiplicity of relationships
 - ▲ Brokers work on multiple stock exchanges - As brokers as well as sub-brokers
 - ▲ More than 50% of Sub-brokers met work with more than a single Broker
 - ▲ Even in the Primary Markets, Sub-brokers may work with other Sub-Brokers with Brokers, or even with Merchant Banks



Profile of Brokers

- ▲ Skills are mostly experience based
 - ◆ Lack of formal training - only 24% claimed to have undergone formal train
 - ◆ Education level - Vast majority were Graduates / Post Graduates
- ▲ Less than half the brokers read or prepare Research Reports and depend primarily on business newspapers (91%) and Annual Reports of Companies (76%)
- ▲ More than half of them also rely significantly on 'market buzz'
- ▲ Only 26% of brokers met were corporatised (Pvt Ltd Cos)
- ▲ Brokers are well equipped with telephones, faxes, computers, etc
- ▲ Overall around 60% of Brokers reported having reduced their Delivery based business on account of Bad Deliveries
- ▲ On an average around 60% of a Broker s business was reported to be Square-off



Profile of Sub-brokers

- ◆ Around 20% of sub brokers reported earning less than 50% of their total income from their financial business
- ◆ Around 25% of Sub brokers reported that they operated from their Brokers office while 20% claimed to operate from home
- ◆ Lack of formal training only 19% claimed to have undergone formal training
- ◆ Education level Vast majority claimed to be Graduates / Post Graduates
- ◆ Around 35% of sub brokers read Research Reports and depend primarily on business newspapers (87%) and Annual Reports of Companies (67%)
- ◆ More than half rely on Broker recommendations
- ◆ Less than 10% of sub brokers met were corporatised (Pvt Ltd Cos)
- ◆ Sub brokers are well equipped with telephones 40% claimed to have access to computers
- ◆ Overall 45% of Sub-brokers reported having reduced their 'Delivery based' business on account of Bad Deliveries
- ◆ On an average around 50% of a Sub-Brokers business was reported to be 'Square-off'



Relationships with other Intermediaries

- ◆ Only around 40% of the Brokers met admitted to having Sub-brokers
- ◆ Verification
 - ▲ Around 70% of these Brokers reported that they verify the sub-brokers background (Primarily References Financial Assets and Past track record) before appointing him Correspondingly, 60% of sub-brokers reported being asked to provide verification
- ◆ Documentation
 - ▲ About 65% of these Brokers reported having formal contractual documentation with their sub-brokers and half of them used a standard format as suggested by the stock-exchange Correspondingly only around half the sub-brokers reported having formal contractual documentation with their brokers



Relationships with other Intermediaries

Registration Issues

- ▲ Of the brokers who admitted having sub-brokers less than 40% of Brokers reported having registered sub-brokers
- ▲ Amongst those brokers who have not registered their sub-brokers with SEBI the primary reason provided is "Sub-brokers do not want to get registered and that they did not want to take responsibility for the actions of their sub-brokers"
- ▲ From the perspective of Sub-brokers
 - ◆ Only around 70% were aware of the SEBI registration requirement
 - ◆ Of those aware 55% were actually registered with SEBI (38% of all Sub brokers met)
 - ◆ Again of those aware another 13% had attempted to get registered directly with SEBI (around 9% of all Sub-brokers met)
- ▲ All Brokers who had Registered their sub-brokers reported that they take security deposits from their Registered sub-brokers whereas only 40% of the Other Brokers reported that they took a security deposit from their Unregistered sub-brokers



Relationships with Clients

- ◆ Whereas the vast majority of Brokers (around 80%) verify client background (Primarily References and Financial Assets are verified), a significantly lower percentage of Sub-brokers (15%) reported doing the same
- ◆ Marketing focus ?
 - Very few Secondary Market Intermediaries (around 30%) report canvassing for new clients and business
 - They primarily deal with their clients on the phone and that too mostly when the client calls up
- ◆ Less than 30% reported providing any research analysis to their clients and even fewer (around 15%) provided Portfolio management Services to clients
- ◆ However around 35% of Brokers and 63% of Sub brokers reported that clients mostly or always consult them before taking an investment decision
- ◆ The vast majority of Brokers and Sub brokers reported that they provide receipts to their clients



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Key Findings

- ◆ High degree of fluidity in the market, with a multiplicity of roles
- ◆ The number of active intermediaries have decreased significantly since 1994-95
- ◆ Few Intermediaries have formal training and most do not read / prepare research reports
- ◆ The majority of sub-brokers are unregistered, and a significant percentage of brokers deal with unregistered sub-brokers 30% of sub-brokers met reported that they were not aware of the SEBI Registration requirement
- ◆ Intermediaries reported a significant lack of marketing focus, both in canvassing for new business, as well as in dealing with existing clients



Issues for discussion

- Ambiguity in roles and Fluidity in the distribution chain ¹¹
- Professionalism ?
- Accountability ?
- Level playing field ?
- Adequacy of Reach ?



Integration and Price Discovery in Indian Stock Markets

Dr Raghendra Jha
Indira Gandhi Institute of Development Research (Mumbai)

Dr Chandrasekhar Krishnamurthy
National University of Singapore

Dr Hari K. Nagarajan
Indian Institute of Management, Bangalore

Assisted by

Ms Sunila George

Integration and Price Discovery in Indian Stock Markets

Objectives

Major objectives of the study were

☛ Are the stock markets in India integrated?

Market integration is a condition, where prices of the same stock across various markets exhibit long-term relationship. Under ideal conditions, these prices should adjust towards each other.

☛ Is there a concept of a Central market that produces prices, which are then fed to the other markets?

☛ Is price discovery taking place in the various regional markets?

☛ Are the regional exchanges important for the national exchanges?

☛ We wish to examine whether the regional exchanges provide any type of stabilizing influence on the process of price discovery in the market place.

☛ Finally, the evolution of prices of stocks in the various exchanges to a random macroeconomic shock is examined. Given this, we test whether the response depends on the structure of the market or, on the nature of the stock.

Data

Matched data sets were constructed for the most actively traded stocks in NSE, BSE Ludhiana, Delhi, Madras, and, Bangalore. The stocks taken up for consideration were, SBI, Telco, Reliance, Tisco, ACC, ICICI, and, Reliance Capital. Time stamped data was used. Consequently, three data sets were constructed. The first one was for the period April 1996 to April 1997 (that did not include Delhi), the second data set was for the period April 1997 to January 1998 (this included Delhi) and third data set was for the period April 1997 to November 1997 (without NSE).

Summary of the Data

Data Set 1

1 April 1996 to 30 March 1997

Stocks SBI, Reliance, Tisco, Telco, ACC, ICICI, Reliance Capital
Markets NSE, BSE, LSE, BgSE, MSE

Data Set 2

1 April 1997 to 30 January 1998

Stocks SBI, Reliance, Tisco, Telco, ACC, ICICI, Reliance Capital
Markets NSE, BSE, LSE, BgSE, MSE, DSE

Data Set 3

1 August 1997 to 30 November 1997

Stocks SBI, Reliance, Tisco
Markets BSE, BgSE, MSE, DSE

Methodology

To examine the long run relationship between prices of a given stock across exchanges, the method of cointegration was used. This is done for the following reasons. As shown in figures (1) and (2), the variance of the prices by themselves are increasing without bounds. The prices are also seemingly related over the entire horizon. Under these circumstances, simple correlation patterns yield at best spurious results. Hence, cointegration is used to unearth long run relationships between prices across various markets.

A cointegrating vector describes how prices adjust in the long run. For example, if the cointegrating vector is

$$-1 \text{ pmse} + 68 \text{ pbgs} = 0$$

$$\Rightarrow \frac{1}{68} \text{ pmse} = \text{pbgs}$$

We can say that a one percent increase in the price of this stock in Bangalore will bring about a 1/68% increase in the price in Madras. This is over the long run.

Price Discovery is a short run phenomenon. This is examined through the Error Correction Mechanism (ECM). This can detect whether prices in most exchanges are moving independently of each other in the short run or, influence each other. If prices in exchanges influence each other in the short run, we have price discovery taking place in the various markets.

A third method of examining market efficiency is the impulse response model, where the system is exposed to a random shock. Hence, given the data and the cointegrating vectors, we can examine the evolution of prices in various markets.

Results

➤ **Markets are integrated**

Implications

↳ In the long run prices across markets move together There is no undue long run arbitrage

↳ This does not imply that there is lack of arbitrage We find that there is absence of arbitrage at the margin

↳ Not much evidence that the current regulatory atmosphere is unduly stifling as has been claimed in certain quarters

➤ **Prices are discovered in all the markets**

Implications

↳ All exchanges seem to be independently contributing to the price discovery process

↳ Independent traders exist who act on information It is not as if any time new information is released into the market, BSE or NSE is the leader Regional markets provide a positive role

➤ **The short run adjustments are not stable**

Implications

↳ The short run price movements are not adjusting toward the long run relationship in some markets for some stocks. This implies that some markets are randomly volatile for certain stocks.

↳ A stock can be stable in some markets while being unstable in the others. But, given that there is a long run relationship between markets, price movements in the stable markets are ultimately prevailing upon the price movements in the other markets. This implies that it is advisable to list the active stocks on more regional exchanges and provide optimal avenues for healthy trading.

↳ Markets are not independently volatile. We find that 2 or 3 markets are simultaneously volatile for any given stock. This could imply that if one market is exhibiting short run volatility then it is being transmitted through short run arbitrage to other markets.

➤ **Impulse response functions show that the response to shocks on the various markets is not similar**

Implications

↳ In the very short run, these stocks are behaving as though they are different commodities. One of the reasons is the differences in the settlement cycles. The differences in the responses does not imply arbitrage, instead, merely reflect the differences in the trading structure and settlement cycles.

↳ To implement uniform settlement cycles we need a consolidated quotation system. Here, instead of each exchange putting up its own best quote to the market participants, in integrated exchanges, all market participants in all exchanges will observe only one quote. This will enable the impulse response across markets to be similar. At present, the difference in the impulse response is not necessarily damning. Instead it is a result of the stocks behaving as though they are different products.

Table 1
Summary of Empirical Results

a) Without Delhi		
i) Long run relationship		
Stocks	Number of Cointegrating Vectors	Cointegrating vectors
SBI	3	-1 pmse - 3 621 plse + 4 232 pbgse - 075 pbse + 434 pnse = 0 -1 pmse + 849 plse + 071 pbgse - 067 pbse + 141 pnse = 0 -1 mse + 534 plse - 077 pbgse + 15 876 pbse - 15 028 pnse = 0
Telco	2	-1 pmse - 318 pnse - 1 296 pbse = 0 -1 pmse + 1 112 pnse - 077 pbse = 0
Reliance	4	-1 pmse - 1 821 plse + 1 589 pbgse - 1 779 pbse + 2 990 pnse = 0 -1 pmse + 7 137 plse - 6 459 pbgse + 208 pbse + 135 pnse = 0 -1 pmse - 531 plse - 325 pbgse + 1 145 pbse + 045 pnse = 0 -1 pmse + 870 plse + 410 pbgse - 242 pbse - 0371 pnse = 0
Tisco	3	-1 pmse - 3 480 pbgse + 3 869 pbse - 6 633 pnse = 0 -1 pmse + 1 878 pbgse - 914 pbse + 0058 pnse = 0 -1 pmse + 238 pbgse + 762 pbse + 015 pnse = 0
ACC	3	-1 pbgse - 1 131 pmse - 049 pnse + 2 18 pbse = 0 -1 pbgse - 098 pmse + 2 14 pnse - 1 026 pbse = 0 -1 pbgse + 1 098 pmse - 188 pnse + 072 pbse = 0
ICICI	1	-1 pbgse + 3 116 pmse + 1 469 pnse - 3 421 pbse = 0
Reliance Capital	1	-1 plse + 971 pnse = 0
ii) Endogeneity		
Stocks	Endogenous center(s)	Exogenous center(s)
SBI	bgse, bse, mse, nse	lse
Telco	bse, nse	mse
Reliance	bgse, bse, lse, mse, nse	
Tisco	bgse, bse, mse, nse	
ACC	bgse, bse, nse	mse
ICICI	bgse bse, mse	nse
Reliance Capital	lse, nse	

Table 1 contd

b) With Delhi		
i) Long run relationship		
Stocks	Number of Cointegrating Vectors	Cointegrating vectors
SBI	4	-1 pmse + 3 199 pbgse - 102 pdse - 076 pbse - 2 421 plse + 371 pnse = 0 -1 pmse - 013 pbgse - 158 pdse - 097 pbse + 1 098 plse + 162 pnse = 0 -1 pmse - 02 pbgse - 1 pdse + 2 029 pbse + 1 717 plse - 1 694 pnse = 0 -1 pmse + 244 pbgse + 12 252 pdse + 035 pbse - 11 63 plse + 142 pnse = 0
Telco	3	-1 pmse + 3 973 pbse - 409 pnse - 2 429 pdse = 0 -1 pmse + 029 pbse + 862 pnse + 104 pdse = 0 -1 pmse + 197 pbse - 2 726 pnse + 3 519 pdse = 0
Reliance	4	-1 pmse + 921 pbgse - 529 pdse - 1 184 pbse - 605 plse + 2 403 pnse = 0 -1 pmse - 5 09 pbgse + 351 pdse + 208 pbse + 5 567 plse - 006 pnse = 0 -1 pmse + 1 576 pbgse - 3 048 pdse - 891 pbse + 1 592 plse - 031 pnse = 0 -1 pmse + 111 pbgse + 1 922 pdse + 569 pbse - 1 592 plse - 024 pnse = 0
Tisco	3	-1 pmse - 799 pdse + 671 pbgse - 1 216 pbse + 2 360 pnse = 0 -1 pmse - 067 pdse + 1 219 pbgse - 106 pbse - 049 pnse = 0 -1 pmse + 2 363 pdse - 2 156 pbgse + 894 pbse - 031 pnse = 0
ACC	2	-1 pmse - 11 358 pbse + 1 85 pdse + 10 517 pnse = 0 -1 pmse + 138 pbse - 1193 pdse + 982 pnse = 0
ICICI	3	-1 pmse + 1 747 pdse - 1 68 pbse + 906 pnse = 0 -1 pmse + 2 78 pdse + 3 043 pbse - 4 788 pnse = 0 -1 pmse - 877 pdse + 1 361 pbse + 462 pnse = 0
Reliance Capital	2	-1 pdse - 4 374 plse + 5 452 pnse = 0 -1 pdse + 938 plse + 064 pnse = 0
ii) Endogeneity		
Stocks	Endogenous center(s)	Exogenous center(s)
SBI Telco Reliance	bgse, bse, lse mse, nse bse dse mse nse	dse
Tisco ACC ICICI Reliance Capital	bgse, bse, dse, mse bse nse bse, mse, dse, nse dse lse nse	nse mse dse

Table 1 contd

c) Without NSE		
i) Long Run Relationship		
Stocks	Number of Cointegrating Vectors	Cointegrating vectors
SBI	3	$-1 \text{ pmse} + 33 \text{ 563 pbgse} + 4 \text{ 198 pdse} - 37 \text{ 26 pbse} = 0$ $-1 \text{ pmse} + 1 \text{ 028 pbgse} - 167 \text{ pdse} + 123 \text{ pbse} = 0$ $-1 \text{ pmse} - 3 \text{ 791 pbgse} + 4 \text{ 841 pdse} - 13 \text{ pbse} = 0$
Reliance	2	$-1 \text{ pmse} + 1 \text{ 003 pbgse} - 03 \text{ pdse} + 021 \text{ pbse} = 0$ $-1 \text{ pmse} + 74 \text{ pbgse} + 6 \text{ 272 pdse} - 6 \text{ 12 pbse} = 0$
Tisco	3	$-1 \text{ pmse} + 059 \text{ pdse} + 94 \text{ pbgse} - 003 \text{ pbse} = 0$ $-1 \text{ pmse} + 5 \text{ 872 pdse} - 6 \text{ 584 pbgse} + 1 \text{ 754 pbse} = 0$ $-1 \text{ pbse} - 4 \text{ 098 pdse} - 2 \text{ 93 pbgse} + 8 \text{ 119 pbse} = 0$
ii) Endogeneity		
Stocks	Endogenous center(s)	Exogenous center(s)
SBI	bgse, bse, dse mse	
Reliance	bse, dse	mse, bgse
Tisco	bgse bse mse	dse
d) Stocks Specific to Regions		
i) Long run relationship		
Stocks	Number of Cointegrating Vectors	Cointegrating vectors
Ashok Leyland	2	$-1 \text{ pmse} + 28 \text{ pnse} + 705 \text{ pbse} = 0$ $-1 \text{ pmse} - 7 \text{ 424 pnse} + 12 \text{ 378 pbse} = 0$
IFCI	2	$-1 \text{ pdse} - 951 \text{ pnse} + 1 \text{ 882 pbse} = 0$ $-1 \text{ pdse} + 1 \text{ 048 pnse} - 04 \text{ pbse} = 0$
ii) Endogeneity		
Stocks	Endogenous center(s)	Exogenous center(s)
Ashok Leyland	mse, nse	bse
IFCI	bse, dse, nse	

Table 2
Profile of Short Run Behavior of Prices

a) Without Delhi			
Stocks	Stabilising market(s)	Destabilising market(s)	Random
SBI	bgse	lse	mse bse nse
Telco	nse	bse, mse	
Reliance	bgse nse	bse	mse lse
Tisco	nse	bse	bgse mse
ACC	bgse, mse		bse nse
ICICI	bgse		bse mse nse
Reliance Capital	lse	nse	
b) With Delhi			
Stocks	Stabilising market(s)	Destabilising market(s)	Random
SBI	bgse	dse mse	bse, lse, nse
Telco	bse		dse mse nse
Reliance	nse	bse, mse	bgse, dse lse
Tisco	dse, mse	nse	bgse, bse
ACC	mse nse	bse	dse
ICICI	bse, mse		dse, nse
Reliance Capital	dse, lse, nse		
c) Without NSE			
Stocks	Stabilising market(s)	Destabilising market(s)	Random
SBI		bse, dse, mse	bgse
Reliance	dse	bgse	bse, mse
Tisco		bse, dse, mse	bgse
d) Stocks specific to Regions			
Stocks	Stabilising market(s)	Destabilising market(s)	Random
Ashok Leyland	mse		bse nse
IFCI	dse, nse	bse	

Table 3
Error Correction Model for SBI

Regressor	Dependent Variable				
	Δmse	$\Delta plse$	$\Delta pbgs$	$\Delta pbse$	$\Delta pnse$
Intercept	194453(1703)	033687(74171)	-1 3452(-9 7838)	44405(2 5055)	019975(43853)
Trend	- 1683E-4(- 83052)	- 3171E-5(- 21133)	- 1433E-3(-3 1557)	- 1649E-4(- 2817)	- 1446E-4(- 96123)
$\Delta mse(t-1)$	- 43595(-16 5917)	016734(86006)	041296(70109)	070395(92718)	026424(1 3541)
$\Delta lse(t-1)$	27044(7 1416)	- 085090(-3 0345)	032115(37832)	18273(1 6700)	16192(5 7576)
$\Delta bgs(t-1)$	0059675(32576)	- 020930(-1 5429)	- 21612(-5 2628)	044736(84514)	- 020332(-1 4945)
$\Delta bse(t-1)$	012314(1 5715)	- 0045945(- 79184)	- 016111(- 91720)	- 74099(-32 727)	- 013768(-2 3659)
$\Delta nse(t-1)$	24457(7 7539)	075122(3 2163)	18792(2 6577)	28669(3 1455)	- 055330(-2 3620)
$\Delta mse(t-2)$	- 45091(-16 5777)	- 5483E-3(- 0272)	- 00372(- 061)	024612(31315)	0074171(36718)
$\Delta lse(t-2)$	19779(5 1527)	0048144(16938)	12210(1 4190)	10648(95997)	12539(4 3987)
$\Delta bgs(t-2)$	005413(5 31638)	- 015824(-1 2489)	- 17256(-4 4985)	037166(75170)	- 022905(-1 8025)
$\Delta bse(t-2)$	011720(1 3255)	- 0035485(- 54195)	- 012864(- 64896)	- 54905(-21 4893)	- 013974(-2 1280)
$\Delta nse(t-2)$	17933(5 5854)	- 0046568(- 19587)	- 00563(- 0782)	18978(2 0456)	- 079867(-3 3495)
$\Delta mse(t-3)$	- 26096(-9 6057)	010284(51118)	16539(2 7156)	- 014582(- 13576)	0070278(34832)
$\Delta lse(t-3)$	25723(6 8064)	017184(61403)	046482(54864)	26515(2 4281)	085492(3 0460)
$\Delta bgs(t-3)$	0084785(54050)	- 013524(-1 1643)	- 12926(-3 6757)	034783(76739)	- 019257(-1 6530)
$\Delta bse(t-3)$	010314(1 1454)	- 8600E-3(- 12897)	- 0096553(- 47829)	- 45480(-17 4784)	- 011667(-1 7446)
$\Delta nse(t-3)$	049876(1 5424)	- 012349(- 51572)	- 020801(- 28695)	055651(59559)	- 057337(-2 3876)
$\Delta mse(t-4)$	- 27929(-10 6800)	013981(72199)	13914(2 3735)	- 040746(- 53923)	021782(1 1216)
$\Delta lse(t-4)$	20891(5 6379)	- 010415(- 37957)	- 037765(- 45462)	25770(2 4067)	013242(48118)
$\Delta bgs(t-4)$	010297(74086)	- 0080767(- 78474)	- 082296(-2 6412)	016575(41271)	- 014238(-1 3794)
$\Delta bse(t-4)$	013339(1 5204)	0060563(93223)	- 0043262(- 21997)	- 37155(-14 6562)	- 0048561(- 74531)
$\Delta nse(t-4)$	0034929(10817)	028600(1 1961)	097561(1 3478)	16765(1 7968)	0038090(15884)

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Table 3 contd

$\Delta mse(t-5)$	- 13858(-5 8427)	- 045591(-2 5957)	097580(1 8351)	- 012663(- 18475)	- 032310(-1 8342)
$\Delta lse(t-5)$	11820(3 2945)	054446(2 0493)	- 081703(-1 0158)	28024(2 7031)	054137(2 0317)
$\Delta bgse(t-5)$	010305(88669)	- 0084559(- 98260)	- 060661(-2 3284)	0072584(21615)	- 013677(-1 5847)
$\Delta bse(t-5)$	012725(1 5667)	0072815(1 2107)	- 00141 (- 0775)	- 26410(-11 2531)	- 0051200(- 84880)
$\Delta mse(t-6)$	014570(45481)	- 038892(-1 6395)	- 069901(- 97334)	033615(36314)	- 013796(- 57990)
$\Delta lse(t-6)$	- 17883(-8 9186)	- 010895(- 73380)	12811(2 8500)	- 037373(- 64505)	0018683(12547)
$\Delta bgse(t-6)$	11974(3 5725)	015200(61244)	- 13266(-1 7656)	14274(1 4739)	0365221 4673
$\Delta bse(t-6)$	0028730(34150)	- 0029013(- 46571)	- 037591(-1 9932)	0020612(084788)	- 0060115(- 96216)
$\Delta mse(t-6)$	3391E-4(0053062)	- 4751E-3(- 10039)	0023358(16304)	- 13440(-7 2780)	- 00268(- 5648)
$\Delta lse(t-6)$	0053517(17154)	- 010815(- 46813)	- 00397 (- 0567)	- 092247(-1 0233)	- 045977(-1 9844)
$ecm1(-1)^1$	31278(33483)	1 3940(2 0152)	-35 15(-16 7851)	-2 6211(- 97105)	59089(85173)
$ecm2(-1)^2$	-6 9413(-7 4306)	29359(42442)	036932(017636)	-3 2720(-1 2122)	-2 6102(-3 7624)
$ecm3(-1)^3$	28808(30839)	- 92635(-1 3392)	-1 4777(- 70562)	13 2802(4 9199)	-2 4897(-3 5887)
R^2	29582	02014	46279	40534	046447
DW	2 0307	1 9992	2 0083	2 0328	1 9994
F-stat	36 5481(000)	1 7882(003)	74 9470(000)	59 3011(000)	4 2377(000)

$$^1 ecm1 = - 0048(pmse) - 0176(plse) + 0206(pbgse) - 0003(pbose) + 0021(pncr)$$

$$ecm2 = 0213(pmse) - 0181(plse) - 0015(pbgse) + 0013(pbose) - 003(pncr)$$

$$^1 ecm3 = 0003(pmse) - 0001(plse) + 00002(pbgse) - 0055(pbose) + 0052(pncr)$$

Table 4
Error Correction Model for Reliance

Regressor	Dependent Variable				
	$\Delta pmse$	$\Delta plse$	$\Delta pbgse$	$\Delta pbse$	$\Delta pnse$
Intercept	087366(1 1594)	013725(20139)	- 05751(- 70708)	001296(011223)	- 58876(-2 2717)
Trend	- 5243E-4(-1 051)	- 2605E-4(- 57784)	- 1489E-3(-2 767)	- 2598E-3(-3 3992)	- 3332E-3(-1 943)
$\Delta pmse(t-1)$	- 49482(-13 032)	030442(88651)	10568(2 578)	020664(35499)	- 48442(-3 709)
$\Delta plse(t-1)$	27964(4 5275)	- 16817(-3 0106)	26663(3 999)	40060(4 2305)	31999(1 506)
$\Delta pbgse(t-1)$	17247(3 7199)	10419(2 4846)	- 40955(-8 183)	20126(2 8314)	37787(2 369)
$\Delta pbse(t-1)$	- 072783(-3 6530)	- 052124(-2 8926)	- 073055(-3 396)	- 66895(-21 8993)	- 31396(-4 581)
$\Delta pnse(t-1)$	0013308(1298)	00666(71824)	019226(1 737)	- 028906(-1 8389)	- 049567(-1 405)
$\Delta pmse(t-2)$	- 27657(-6 562)	038813(1 018)	10190(2 2402)	033518(51877)	- 27107(-1 870)
$\Delta plse(t-2)$	12025(1 909)	- 20337(-3 5709)	16948(2 4934)	30674(3 177)	10223(47203)
$\Delta pbgse(t-2)$	17632(3 7907)	15458(3 6746)	- 25113(-5 0018)	22297(3 126)	39464(2 466)
$\Delta pbse(t-2)$	- 046749(-2 2265)	- 028294(-1 4899)	- 052681(-2 3244)	- 54017(-16 780)	- 23937(-3 314)
$\Delta pnse(t-2)$	- 0022350(- 23896)	4052E-3(04790)	0099355(9841)	- 031797(-2 217)	- 069469(-2 159)
$\Delta pmse(t-3)$	- 17836(-4 1785)	016622(4305)	080231(1 7413)	090916(1 3893)	- 063161(- 43021)
$\Delta plse(t-3)$	075514(1 2277)	- 094528(-1 699)	15289(2 3028)	17148(1 8184)	008256(03902)
$\Delta pbgse(t-3)$	17571(3 951)	16399(4 077)	- 13795(-2 8744)	26169(3 8388)	36600(2 393)
$\Delta pbse(t-3)$	- 08716(-4 190)	- 08065(-4 287)	- 10894(-4 8517)	- 45115(-14 1464)	- 25138(-3 513)
$\Delta pnse(t-3)$	7340E-3(0883)	0031793(42290)	011061(1 2327)	- 01658(-1 3010)	- 042413(-1 483)

Table 4 cntd.

$\Delta pmse(t-4)$	- 0686(-1 6681)	025808(6938)	059403(1 3381)	080738(1 2805)	- 10039(- 7097)
$\Delta plse(t-4)$	16670(2 9486)	061035(1 193)	27169(4 4522)	18214(2 1014)	11061(5688)
$\Delta pbgse(t-4)$	- 031695(- 7946)	- 013437(- 3724)	- 22708(-5 2741)	11150(1 8233)	14973(1 091)
$\Delta pbse(t-4)$	- 051221(-2 7072)	- 053167(-3 107)	- 07541(-3 6927)	- 30423(-10 487)	- 16328(-2 509)
$\Delta pnse(t-4)$	3481E-3(04948)	0030811(4843)	0062624(82479)	- 00851(- 78997)	- 026870(-1 110)
$\Delta pmse(t-5)$	- 051001(-1 438)	8677E-3(02706)	033043(86355)	033950(6246)	068323(56036)
$\Delta plse(t-5)$	084025(1 730)	008934(2034)	079744(1 5218)	002294(03082)	- 18422(-1 103)
$\Delta pbgse(t-5)$	- 01502(- 4802)	013003(4594)	- 086894(-2 5725)	12264(2 5563)	097095(90212)
$\Delta pbse(t-5)$	- 023833(-1 570)	- 026237(-1 9112)	- 027989(-1 7083)	- 13147(-5 649)	- 10792(-2 067)
$\Delta pnse(t-5)$	1433E-4 (002595)	0026476(53020)	0034998(58724)	- 3331E-3(- 03935)	- 0074651(- 3931)
$ecm1(-1)^4$	47478(25264)	- 63892(- 37592)	-3 5144(-1 7325)	8 4096(2 918)	-126 051(-19 501)
$ecm2(-1)^5$	7 4011(3 938)	1 8329(0784)	14 2919(7 0455)	1 2416(4309)	-6 6877(-1 034)
$ecm3(-1)^6$	-2 1963(-1 1687)	1 0345(60864)	3 8170(1 8817)	18 3304(6 362)	9 7837(1 513)
$ecm4(-1)^7$	-3 690(-1 9635)	10828(063709)	1 5609(76950)	-5 4503(-1 891)	-4 8113(- 74436)
R^2	11003	037995	17216	32073	38317
DW	1 9999	2 0003	2 006	2 0241	2 0053
F-stat	12 2106(000)	3 8966(000)	20 54(000)	46 6348(000)	61 3535(000)

⁴ $ecm1 = - 0019(pmse) - 0035(plse) + 0030(pbgse) - 0034(pbse) + 0057(pnse)$

⁵ $ecm2 = - 0034(pmse) + 0243(plse) - 0270(pbgse) + 0007(pbse) + 0004(pnse)$

⁶ $ecm3 = 0006(pmse) + 0035(plse) - 0021(pbgse) - 0076(pbse) - 0003(pnse)$

⁷ $ecm4 = 0065(pmse) - 0056(plse) - 0026(pbgse) + 0015(pbse) + 0002(pnse)$

Table 5
Error Correction Model for SBI

Regressor	Dependent Variable					
	$\Delta pmse$	$\Delta pbqse$	$\Delta pdse$	$\Delta pbse$	$\Delta plse$	$\Delta pnse$
Intercept	32892(3 518)	-1 9329(-9 767)	062459(8783)	71308(2 7150)	- 13526(-1 959)	- 059072(- 8207)
Trend	- 1185E-4(- 5597)	- 1761E-3(-3 929)	- 5578E-5(- 3463)	4391E-5(07381)	- 2236E-5(- 1430)	- 1311E-4(- 8042)
$\Delta pmse(t-1)$	- 48395(-18 624)	- 0307(- 5599)	031283(1 582)	099138(1 358)	3639E-3(0189)	005697(2848)
$\Delta pbqse(t-1)$	- 3230E-3(- 0193)	- 15506(-4 395)	- 027354(-2 158)	021055(4496)	- 012597(-1 023)	- 00797(- 6215)
$\Delta pdse(t-1)$	22609(4 346)	20942(1 901)	- 099485(-2 514)	21559(1 475)	38279(9 965)	36920(9 218)
$\Delta pbse(t-1)$	00725(9309)	- 0222(-1 349)	- 008352(-1 409)	- 63996(-29 230)	- 00931(-1 619)	- 01258(-2 097)
$\Delta plse(t-1)$	078980(1 351)	- 17726(-1 433)	052458(1 180)	- 0725(- 4419)	- 43638(-10 114)	- 14722(-3 272)
$\Delta pnse(t-1)$	20149(6 404)	16161(2 426)	- 0032679(- 1365)	19424(2 197)	032513(1 399)	- 14133(-5 835)
$\Delta pmse(t-2)$	- 47125(-17 72)	- 0762(-1 353)	011465(5668)	041580(5565)	- 00670(- 3415)	- 00891(- 4355)
$\Delta pbqse(t-2)$	- 00215(- 1458)	- 11526(-3 683)	- 02351(-2 091)	019114(4602)	- 00935(- 8569)	- 01138(-1 0002)
$\Delta pdse(t-2)$	27237(4 861)	16653(1 404)	- 07186(-1 686)	39283(2 496)	25421(6 145)	28544(6 618)
$\Delta pbse(t-2)$	0085199(1 019)	- 0159(- 8986)	- 01066(-1 676)	- 41870(-17 82)	- 00536(- 8688)	- 00907(-1 409)
$\Delta plse(t-2)$	- 027181(- 4421)	- 01547(- 1188)	093077(1 990)	- 30581(-1 770)	- 23531(-5 183)	- 1625(-3 434)
$\Delta pnse(t-2)$	18625(3 7977)	009355(1375)	- 04655(-1 905)	10994(1 218)	- 029003(-1 222)	- 11247(-4 547)
$\Delta pmse(t-3)$	- 18961(-7 676)	066698(1 275)	001047(05576)	- 033744(- 4863)	- 0027441(- 1504)	- 01685(- 8866)
$\Delta pbqse(t-3)$	- 00378(- 3056)	- 07357(-2 808)	- 01689(-1 794)	015906(4575)	- 00738(- 8077)	- 0086(- 9121)
$\Delta pdse(t-3)$	046212(8385)	001142(009794)	- 01518(- 3621)	50998(3 293)	16759(4 118)	21749(5 125)
$\Delta pbse(t-3)$	00127(1596)	- 01728(-1 019)	- 007394(-1 213)	- 29742(-13 214)	- 00493(- 8346)	- 00951(-1 542)
$\Delta plse(t-3)$	11858(1 986)	05717(4525)	017247(3799)	- 27282(-1 627)	- 14682(-3 331)	- 13012(-2 831)
$\Delta pnse(t-3)$	077376(2 396)	01795(2626)	0043293(1763)	022637(2495)	- 00114(- 04786)	- 04511(-1 815)

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Table 5 cntd

Apmse(t-4)	- 06122(-3 011)	03665(8518)	- 1913E-3(- 0123)	- 02597(- 4549)	005501(3665)	01440(9207)
Apbgse(t-4)	0023336(2597)	- 032275-1 6975	- 00538(- 7878)	013761(5452)	- 7803E-3(- 1176)	- 0022(- 3238)
Apdse(t-4)	080594(1 629)	- 18473-1 7645	00641(1703)	35545(2 557)	12485(3 418)	16274(4 273)
Apbse(t-4)	5718E-3(0876)	- 00976(- 7078)	- 0053(-1 071)	- 16301(-8 898)	- 00277(- 5772)	- 00605(-1 206)
Apkse(t-4)	032965(6269)	15497(1 392)	007779(1945)	- 18111(-1 226)	- 11824(-3 045)	- 12395(-3 062)
Apkse(t-4)	- 0162(- 5195)	089405(1 351)	003572(1502)	15599(1 776)	031696(1 373)	- 0014(- 05903)
ecm1(-1) ⁸	1 2080(1 235)	-42 196(-20 384)	1 3887(1 866)	-1 2485(- 4544)	84840(1 174)	0642(08536)
ecm2(-1) ⁹	8 6901(8 885)	78388(3786)	31384(4219)	7 56732 7542	- 82002(-1 135)	2 2715(3 016)
ecm3(-1) ¹⁰	1 2397(1 267)	1 3284(6417)	1 7488(2 351)	-19 87(-7 235)	1 0730(1 485)	2 7398(3 638)
ecm4(-1) ¹¹	-2 0389(-2 084)	-1 1623(- 5614)	12270(1649)	-1 126(- 4100)	-2 237(-3 097)	-2 171(-2 884)
R ²	32176	45646	012015	37362	06794	079883
DW	2 0075	1 9988	1 9984	2 0523	2 0052	2 0074
F-stat	48 4882(000)	85 8311(000)	1 2430(174)	60 9639 (000)	7 4517(000)	8 8734(000)

⁸ ecm1 = - 0058(pmse) + 0185(pbgse) - 0005(pdse) - 0004(pbse) - 0140(plse) + 0021(pkse)

⁹ ecm2 = - 0196(pmse) - 0002(pbgse) - 0030(pdse) - 0019(pbse) + 0125(plse) + 0031(pkse)

¹⁰ ecm3 = - 0026(pmse) - 00005(pbgse) - 0026(pdse) + 0053(pbse) + 0045(plse) + 0051(pkse)

¹¹ ecm4 = 0021(pmse) - 0005(pbgse) - 0265(pdse) - 00007(pbse) - 0251(plse) - 0003(pkse)

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Table 6
Error Correction Model for Reliance

Regressor	Dependent Variable					
	$\Delta pmse$	$\Delta pbgse$	$\Delta pdse$	$\Delta pbse$	$\Delta plse$	$\Delta pnse$
Intercept	- 073846(- 6968)	- 24304(-2 3693)	037909(39305)	- 18018(-1 437)	- 04418(- 46598)	76436(1 943)
Trend	1090E-4(151)	2033E-5(0291)	2746E-4(4187)	3325E-4(3901)	7071E-4(096)	1013E-3(378)
$\Delta mse(t-1)$	- 52927(-15 90)	017580(5457)	015918(52554)	11292(2 868)	013914(46726)	- 23331(-1 888)
$\Delta bgse(t-1)$	18695(3 4504)	- 51443(-9 808)	036588(74194)	14523(2 266)	076267(1 5731)	36575(1 818)
$\Delta dse(t-1)$	28425(4 3182)	32817(5 1502)	- 19407(-3 239)	12284(1 577)	14901(2 5299)	20215(8272)
$\Delta bse(t-1)$	026518(1 0695)	029354(1 223)	0014876 (0659)	- 7156(-24 40)	026365(1 1884)	- 14253(-1 548)
$\Delta lse(t-1)$	14426(1 88)	25332(3 4265)	24888(3 5804)	48942(5 4179)	- 15608(-2 283)	09039(3188)
$\Delta mse(t-2)$	- 0084(- 79454)	002674(26124)	9076E-3(09428)	- 0137(-1 0955)	- 00128(- 136)	- 1875(-4 775)
$\Delta bgse(t-2)$	- 2910(-7 7538)	018625(5126)	032375(9478)	10709(2 4126)	020471(6095)	- 1390(- 997)
$\Delta dse(t-2)$	029302(51056)	- 37822(-6 808)	031068(5947)	16187(2 3847)	05972(1 1630)	15545(7295)
$\Delta bse(t-2)$	29621(4 2897)	42683(6 3857)	- 11202(-1 7824)	10325(1 2643)	17929(2 901)	11678(4555)
$\Delta lse(t-2)$	058664(1 9864)	043089(1 5072)	04010(1 4919)	- 51747(-14 814)	060578(2 292)	00755(0689)
$\Delta mse(t-3)$	- 09926(-1 2524)	- 10365(-1 3510)	004171(0578)	17774(1 896)	- 32772(-4 6211)	04383(1489)
$\Delta bgse(t-3)$	- 01098(-1 1376)	- 00174(- 1869)	- 00201(- 229)	- 01329(-1 1638)	- 00285(- 33004)	- 15272(-4 259)
$\Delta dse(t-3)$	- 17257(-4 5269)	071776(1 945)	030975(8927)	091830(2 036)	020645(60528)	- 09708(- 6860)
$\Delta bse(t-3)$	045933(82008)	- 26244(-4 8406)	080937(1 587)	18160(2 7413)	090493(1 8057)	- 0794(- 3823)
$\Delta lse(t-3)$	21307(3 0154)	26916(3 9351)	- 073628(-1 1449)	- 00452(- 05419)	14985(2 3702)	1073(4092)
$\Delta mse(t-4)$	- 06981(-2 2657)	- 12893(-4 322)	- 10772(-3 8413)	- 51109(-14 024)	- 089326(-3 2401)	18218(1 592)
$\Delta bgse(t-4)$	00188(0238)	024090(31579)	070558(9837)	29215(3 1343)	- 17156(-2 4330)	- 16002(- 5469)
$\Delta dse(t-4)$	- 00497(582)	8180E-3(09907)	- 2773E-3(- 0357)	- 00710(- 70448)	- 4944E-3(- 0647)	- 10758(-3 3977)

Table 6 contd

Amse(t-4)	- 06812(-1 837)	03654(1 0179)	014868(44052)	060021(1 368)	01182(35636)	- 0826(- 6000)
Abgse (t-4)	02543(49135)	- 16245(-3 2420)	049449(1 0496)	15108(2 467)	071579(1 545)	- 3232(-1 682)
Adse(t-4)	10594(1 5482)	12034(1 8167)	- 10617(-1 7048)	00630(07787)	04994(81570)	15015(5910)
Abse(t-4)	- 07537(-2 5853)	- 10449(-3 7023)	- 10594(-3 9924)	- 37746(-10 946)	- 08886(-3 4063)	36648(3 385)
Alse(t-4)	00652(6 0869)	12311(1 6932)	15463(2 2619)	19267(2 168)	- 03032(- 4511)	- 03455(- 1239)
Anse(t-4)	- 00272(- 38389)	001199(17457)	7684E-3(1189)	- 00444(- 52924)	- 3184E-3(- 0501)	- 07066(-2 681)
Amse(t-5)	- 05515(-1 7252)	- 00350(- 1132)	- 00247(- 0849)	005140(13596)	- 0041659(- 14563)	- 16651(-1 403)
Abgse(t-5)	007031(1677)	- 10418(-2 5675)	010976(28772)	10824(2 183)	021063(56160)	14015(90063)
Adse(t-5)	17349(2 7437)	22934(3 7470)	062003(1 0774)	077055(1 030)	15215(2 6893)	0037(01589)
Abse(t-5)	- 05089(-2 1471)	- 05607(-2 443)	- 05304(-2 4589)	- 2094(-7 4707)	- 04798(-2 262)	636(7 228)
Alse(t-5)	- 06938(-1 0288)	- 05134(- 7865)	- 00864(- 14076)	02959(3710)	- 10743(-1 7804)	- 5998(-2 396)
Anse(t-5)	- 00162(- 31765)	2491E-3(0502)	0010589(22723)	- 00217(- 35965)	- 5127E-3(- 1119)	- 03647(-1 919)
ecm1 (-1) ¹²	3 031(1 8044)	26630(16378)	62918(41156)	3 856(1 9412)	1 0247(68180)	-113 04(-18 12)
ecm2 (-1) ¹³	-4 958(-2 9472)	-4 888(-3 0019)	- 24732(- 16151)	85344(4288)	1 7415(1 1568)	-1 444(- 2312)
ecm3 (-1) ¹⁴	70382(40787)	-4 2664(-2 5542)	60117(38279)	-4 7050(-2 3053)	-1 8024(-1 1674)	-3 734(- 5830)
ecm4 (-1) ¹⁵	- 1727(-1 3741)	- 22238(-1 8274)	- 08516(- 74430)	- 12894(- 86714)	- 14650(-1 3024)	- 66971(-1 435)
R ²	12962	12565	038961	21847	045282	21847
DW	2 0054	2 0046	2 0035	2 0216	2 0039	2 0216
F-stat	12 1988 (000)	11 7712 (000)	3 3209 (000)	22 8987 (000)	3 8852 (000)	22 8987 (000)

¹ ecm1 = - 0028(pmse) + 0025(pbgse) - 0014(pdse) - 0033(pbse) - 0016(plse) + 0674(pnse)
¹³ ecm2 = 0046(pmse) + 0236(pbgse) - 0016(pdse) - 0009(pbse) - 0258(plse) + 00001(pnse)
¹⁴ ecm3 = - 0051(pmse) + 0081(pbgse) - 0157(pdse) + 0046(pbse) - 0082(plse) - 0001(pnse)
¹⁵ ecm4 = 0073(pmse) - 0008(pbgse) - 0141(pdse) - 0418(pbse) + 0117(plse) + 0002(pnse)

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Table 7
Error Correction Model for SBI

Regressor	Dependent Variable			
	$\Delta pmse$	$\Delta pbmse$	$\Delta pdse$	$\Delta pbse$
Intercept	1 6037(7 783)	47334(2 526)	53966(2 6345)	3 6552(10 1713)
Trend	- 1181E-3(-4 852)	- 7567E-4(-3 419)	- 4585E-4(-1 8948)	- 1634E-3(-3 8504)
$\Delta pmse(t-1)$	- 33936(-10 662)	034538(1 193)	063599(2 0099)	13143(2 3676)
$\Delta pbmse(t-1)$	0073022(1582)	- 42861(-10 212)	0042828(093332)	- 26455(-3 2863)
$\Delta pdse(t-1)$	32105(9 131)	39849(12 466)	- 095604(-2 7353)	31992(5 2175)
$\Delta pbse(t-1)$	035608(1 361)	011617(4886)	041722(1 6051)	- 18097(-3 9685)
$\Delta pmse(t-2)$	- 23170(-7 054)	- 00526(- 1762)	018372(56265)	041901(73149)
$\Delta pbmse(t-2)$	- 06479(-1 376)	- 35501(-8 292)	- 053547(-1 1440)	- 14560(-1 7731)
$\Delta pdse(t-2)$	26421(7 026)	33930(9 924)	- 044063(-1 1788)	31130(4 7471)
$\Delta pbse(t-2)$	036065(1 461)	014695(6550)	049386(2 0135)	- 15467(-3 5945)
$\Delta pmse(t-3)$	- 15969(-4 869)	002056(06895)	1974E-3(0060533)	028866(50469)
$\Delta pbmse(t-3)$	- 057503(-1 231)	- 27848(-6 557)	- 063947(-1 3771)	- 071187(- 87387)
$\Delta pdse(t-3)$	15693(4 057)	26909(7 6503)	- 034108(- 88687)	16525(2 4492)
$\Delta pbse(t-3)$	028248(1 221)	026225(1 2476)	049525(2 1548)	- 12286(-3 0472)
$\Delta pmse(t-4)$	- 11839(-3 674)	0033164(11321)	0081485(25441)	016324(29051)
$\Delta pbmse(t-4)$	- 051661(-1 143)	- 22041(-5 3652)	- 045724(-1 0179)	- 13226(-1 6783)
$\Delta pdse(t-4)$	10453(2 701)	18183(5 1676)	- 028362(- 73720)	13889(2 0578)
$\Delta pbse(t-4)$	029690(1 392)	025314(1 3055)	050511(2 3825)	- 017020(- 45761)
$\Delta pmse(t-5)$	- 10870(-3 476)	- 020742(- 72958)	- 019175(- 61684)	053368(97861)
$\Delta pbmse(t-5)$	- 06221(-1 466)	- 13778(-3 5721)	- 051851(-1 2295)	- 12926(-1 7471)
$\Delta pdse(t-5)$	13593(3 617)	15615(4 5703)	011761(31481)	091826(1 4011)
$\Delta pbse(t-5)$	022926(1 225)	019409(1 1415)	043307(2 3295)	- 015199(- 46602)

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Table 7 contd

$\Delta pmse(t-6)$	- 095157(-3 218)	- 041458(-1 5423)	- 0047482(- 16155)	0066965(12987)
$\Delta pbgs(t-6)$	- 018938(- 4903)	- 066038(-1 8806)	- 017367(- 45233)	- 063958(- 94955)
$\Delta pdse(t-6)$	09641(2 736)	096315(3 0065)	- 011386(- 32507)	047058(76581)
$\Delta pbse(t-6)$	019784(1 281)	020289(1 4456)	035741(2 3290)	0063595(23622)
$\Delta pmse(t-7)$	- 01644(- 6355)	0074876(31829)	063176(2 4562)	031881(70653)
$\Delta pbgs(t-7)$	- 01731(- 5382)	- 018352(- 62727)	- 011535(- 36057)	- 043187(- 76953)
$\Delta pdse(t-7)$	04666(1 503)	041053(1 4548)	- 039759(-1 2885)	059522(1 0996)
$\Delta pbse(t-7)$	4694E-3(0422)	- 0073209(- 72400)	0071381(64563)	- 0096850(- 49933)
$ecm1(-1)^{16}$	2 2488(2 482)	42043(51049)	1 9276(2 1406)	25 6981(16 2671)
$ecm2(-1)^{17}$	5 8287(6 435)	-1 0969(-1 3318)	75299(83619)	-1 4751(- 93375)
$ecm3(-1)^{18}$	4 5281(4 999)	5 3226(6 4628)	1 8253(2 0270)	3 7921(2 4005)
R^{26}	16585	16736	1390	4480
DW	2 0004	2 0006	2 0023	2 0012
F-stat	18 3855 (000)	18 5866 (000)	1 03035 (119)	75 0337 (000)

$$^{16} ecm1 = - 0008(pmse) + 0271(pbgse) + 0034(pdse) - 0301(\text{tkr})$$

$$^{17} ecm2 = - 0255(pmse) + 0262(pbgse) - 0043(pdse) + 0031(pbse)$$

$$^{18} ecm3 = - 0051(pmse) - 0194(pbgse) + 0248(pdse) - 0007(\text{tkr})$$

Table 8
Error Correction Model for Reliance

Regressor	Dependent Variable			
	$\Delta pmse$	$\Delta pbqse$	$\Delta pdse$	$\Delta pbse$
Intercept	14371 (1 137)	- 06302 (- 5426)	- 052933 (- 4375)	15479 (8745)
Trend	- 1376E-3 (-1 887)	- 4526E-4 (- 6755)	- 2450E-4 (- 3511)	- 1409E-3 (-1 37)
$\Delta pmse(t-1)$	- 0077001 (- 4011)	- 033551 (-1 901)	10377 (5 646)	051077 (1 899)
$\Delta pbqse(t-1)$	- 003808 (- 1899)	- 014397 (- 7810)	11962 (6 231)	06831 (2 432)
$\Delta pdse(t-1)$	- 00303 (- 1561)	0064892 (3636)	11200 (6 0254)	03868 (1 422)
$\Delta pbse(t-1)$	- 00110 (- 08104)	007897 (6274)	- 05004 (-3 817)	- 19959 (-10 406)
$\Delta pmse(t-2)$	4268E-3 (02209)	- 04737 (-2 668)	- 00111 (- 06033)	013820 (510)
$\Delta pbqse(t-2)$	- 003918 (- 1940)	- 00352 (- 1896)	- 01135 (- 5870)	003465 (1225)
$\Delta pdse(t-2)$	0024954 (1277)	018317 (1 020)	- 7027E-3 (- 03757)	- 001094 (- 04000)
$\Delta pbse(t-2)$	0024439 (1750)	0046317 (3608)	- 015000 (-1 122)	- 03131 (-1 601)
$\Delta pmse(t-3)$	- 00597 (- 3093)	- 039405 (-2 218)	00412 (2232)	004874 (1801)
$\Delta pbqse(t-3)$	- 00798 (- 3954)	- 00715 (- 3855)	005739 (2968)	169E-4 (0004)
$\Delta pdse(t-3)$	- 00583 (- 2988)	- 00299 (- 1665)	- 5761E-3 (- 0308)	- 3947E-4 (- 0014)
$\Delta pbse(t-3)$	0076531 (5482)	00966 (7535)	- 01700 (-1 272)	- 0135 (- 6939)
$\Delta pmse(t-4)$	- 00976 (- 5058)	- 041902 (-2 359)	010799 (5839)	- 00579 (- 2141)
$\Delta pbqse(t-4)$	015381 (7616)	0092687 (4992)	0024242 (1253)	00544 (1926)
$\Delta pdse(t-4)$	011581 (5928)	009266 (5159)	00933 (4992)	004941 (1805)
$\Delta pbse(t-4)$	- 005143 (- 3683)	- 3418E-3 (- 0266)	- 02232 (-1 670)	001361 (06961)
$\Delta pmse(t-5)$	- 00433 (- 2246)	- 040625 (-2 288)	- 001508 (- 0815)	012121 (4481)
$\Delta pbqse(t-5)$	003381 (1674)	0031099 (1675)	- 00193 (- 09997)	- 00107 (- 0381)
$\Delta pdse(t-5)$	005053 (2587)	013319 (7417)	002563 (1370)	009434 (3447)
$\Delta pbse(t-5)$	6207E-3 (04444)	- 5293E-3 (- 0412)	- 01556 (-1 164)	00752 (3844)
$\Delta pmse(t-6)$	- 002547 (- 1320)	- 038234 (-2 154)	- 6388E-3 (- 0345)	003111 (1150)
$\Delta pbqse(t-6)$	- 2909E-3 (- 01440)	006501 (3502)	2097E-4 (00108)	002394 (08466)
$\Delta pdse(t-6)$	- 006392 (- 3272)	- 5160E-3 (- 0287)	- 00642 (- 3437)	- 0142 (- 5216)
$\Delta pbse(t-6)$	0029073 (2082)	012077 (9411)	- 00611 (- 4573)	- 01087 (- 5563)

Table 8 cntd

$\Delta pmse(t-7)$	014884 (7712)	- 03208 (-1 808)	002183 (1181)	004808 (1778)
$\Delta pbgs(t-7)$	- 002532 (- 1254)	0021867 (1178)	- 00107 (- 05548)	002704 (09563)
$\Delta pdse(t-7)$	- 001324 (- 06781)	- 00217 (- 1212)	- 00500 (- 2678)	- 01113 (- 406)
$\Delta pbse(t-7)$	0028883 (2071)	0066731 (5207)	- 015147 (-1 134)	021441 (1 097)
$\Delta pmse(t-8)$	- 00844 (- 4381)	- 039922 (-2 253)	0032691 (1771)	0073079 (2706)
$\Delta pbgs(t-8)$	0088189 (4371)	- 5272E-3 (- 0284)	0025819 (1336)	- 00605 (- 2141)
$\Delta pdse(t-8)$	- 006441 (- 3366)	- 00198 (- 1126)	7360E-3 (04016)	006829 (2547)
$\Delta pbse(t-8)$	0091691 (6722)	0022421 (1788)	- 011607 (- 888)	- 00441 (- 2312)
$ecm1(-1)^{19}$	-1 0040 (- 3009)	32 7708 (10 684)	-5 25 (-1 645)	-3 7281 (- 7976)
$ecm2(-1)^{20}$	73571 (2205)	4 0068 (1 306)	23 3802 (7 31)	-1 5132 (- 3237)
R^2	0027	0406	0606	0398
DW	2 000	2 0039	2 0007	2 0001
F-stat	2315 (1 000)	3 5697 (000)	5 4446 (000)	3 4993 (000)

¹⁹ $ecm1 = 0014(pmse) - 0014(pbgse) + 00004(pdse) - 00003(pbsr)$

²⁰ $ecm2 = 0001(pmse) - 00009(pbgse) - 0008(pdse) + 0008(pbsr)$



Figure 1
Cointegrated Series of Prices

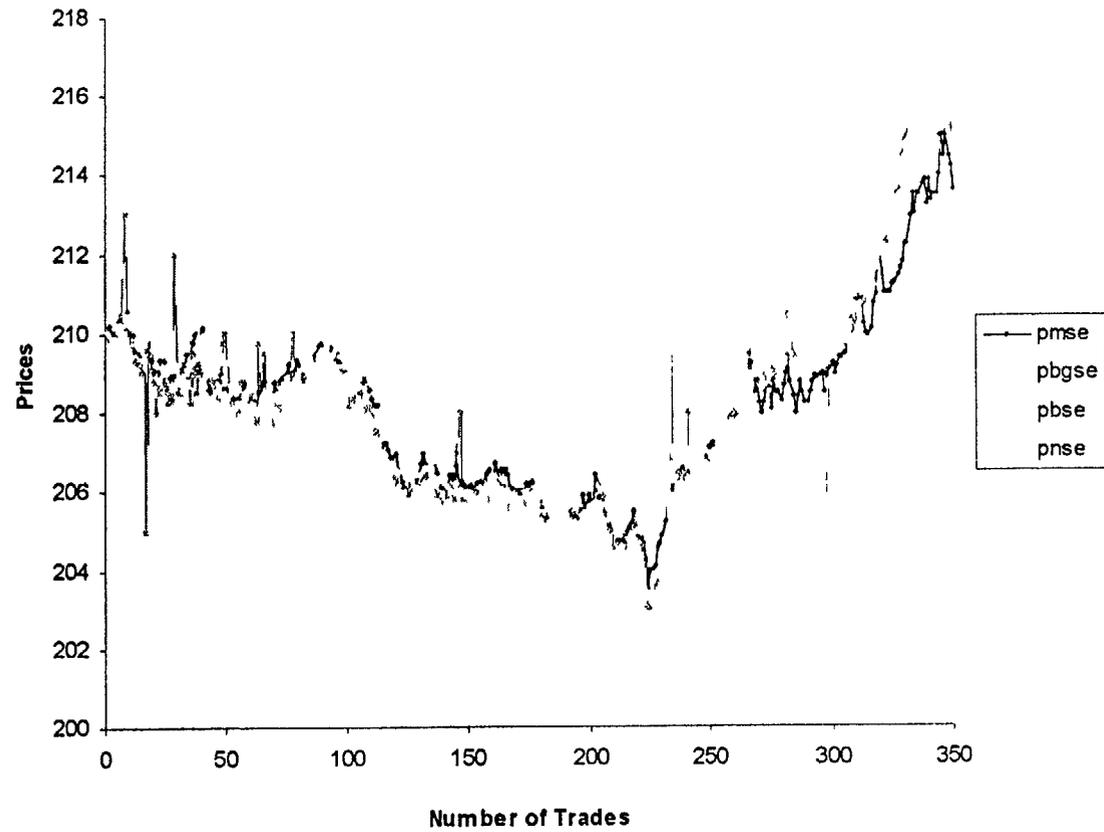


Figure 2
Cointegrated Prices across Exchanges

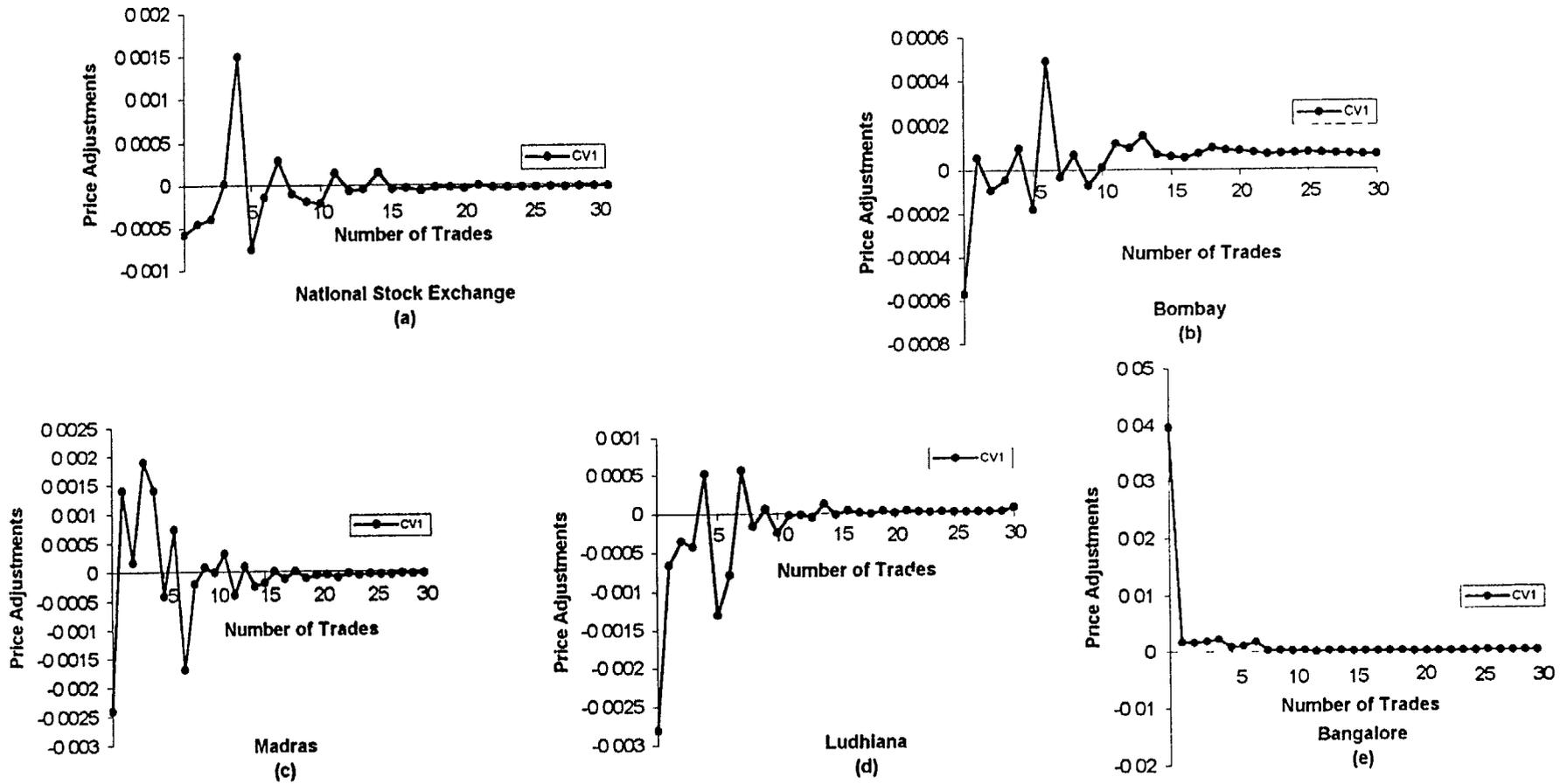


Figure (3)
Generalised Impulse Response of the Price of SBI to a Macroeconomic Shock

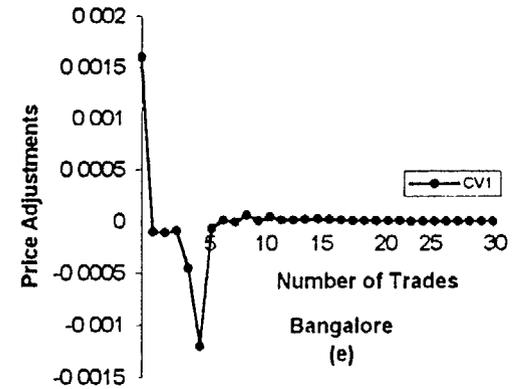
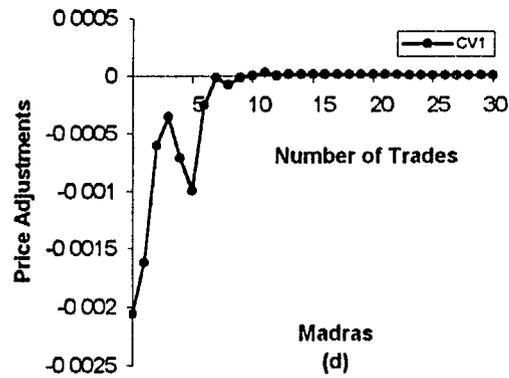
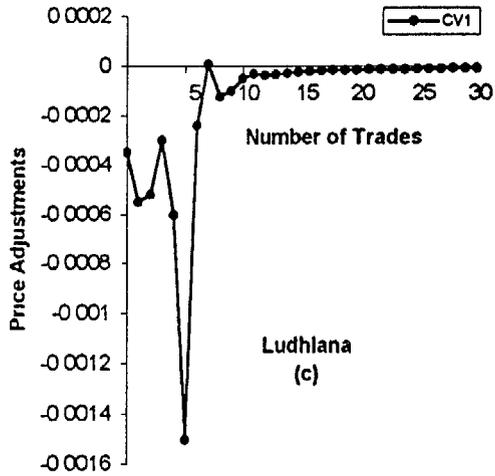
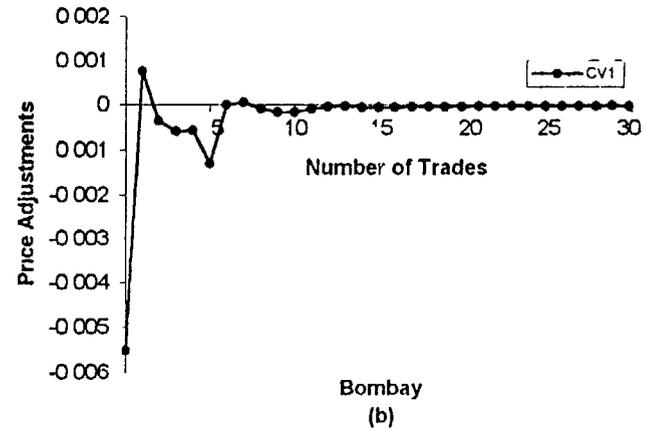
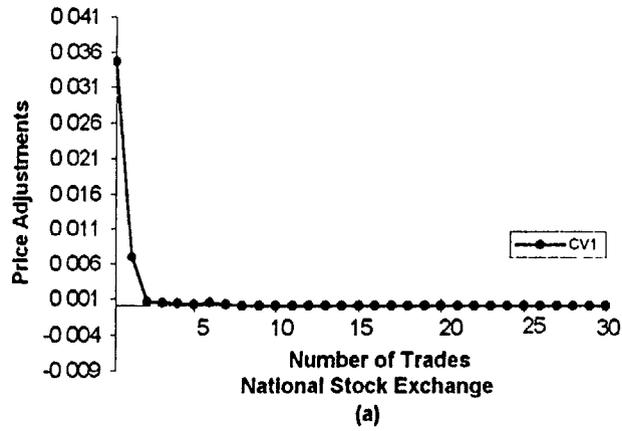


Figure (4)
Generalised Impulse Response of the Price of
Reliance to a Macroeconomic Shock

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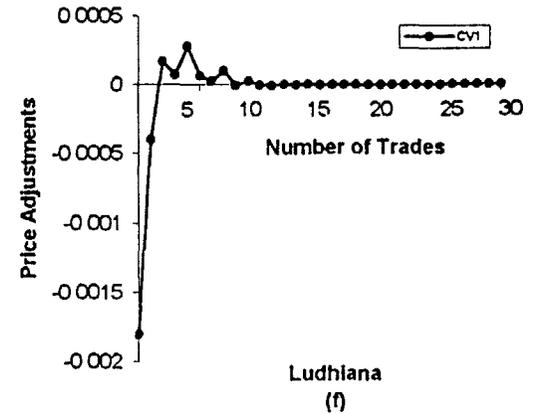
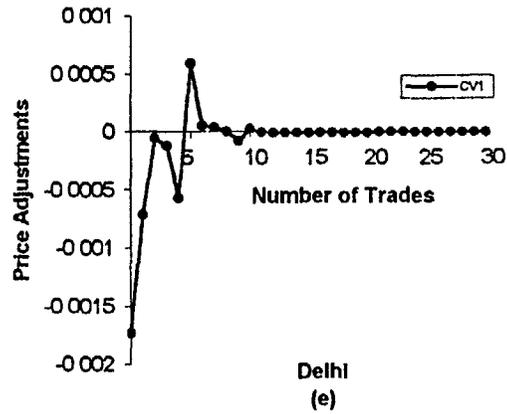
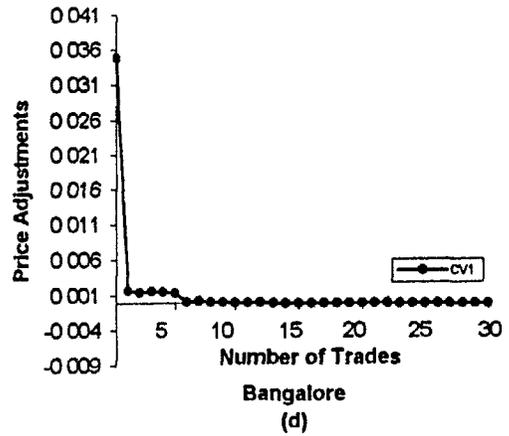
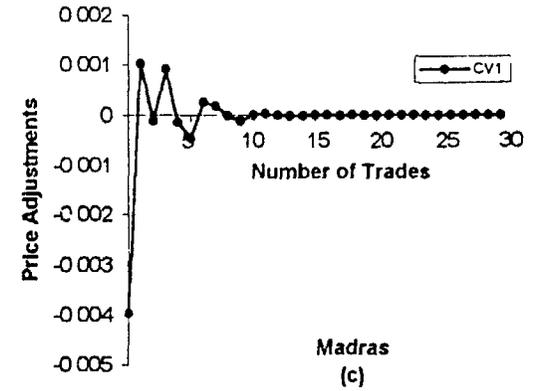
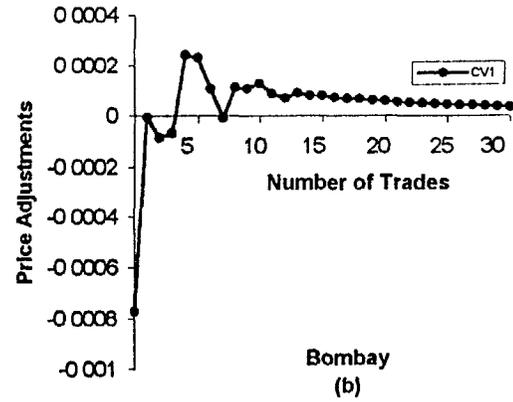
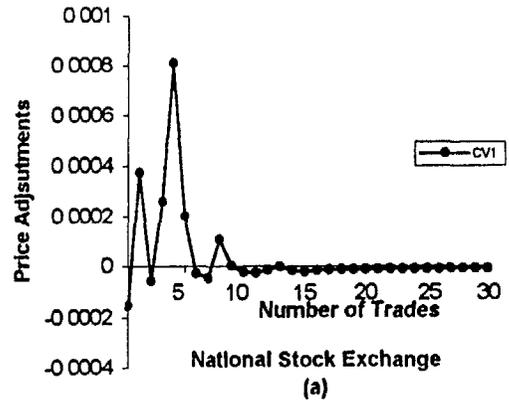
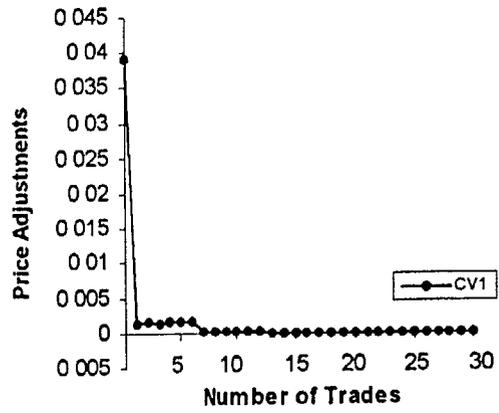
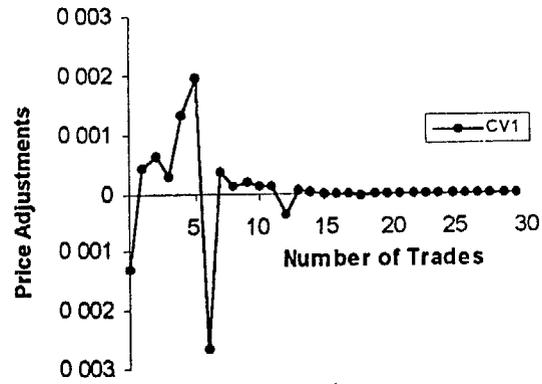


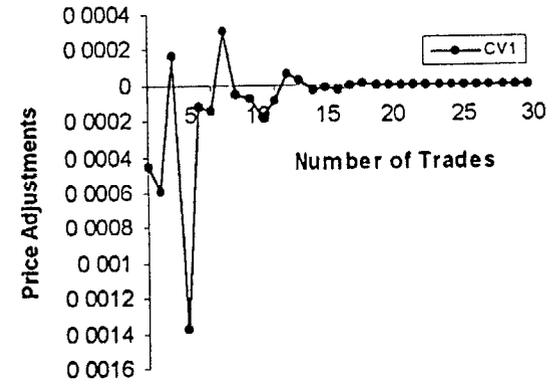
Figure (5)
Generalised Impulse Response of the Price of
SBI to a Macroeconomic Shock



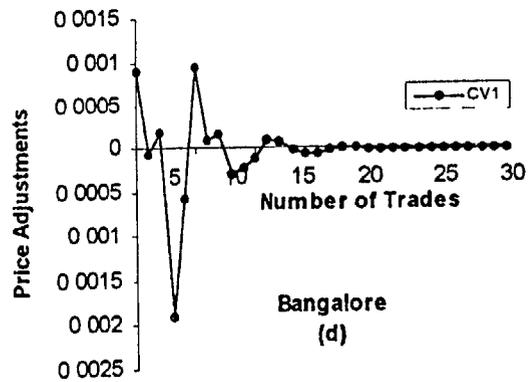
National Stock Exchange
(a)



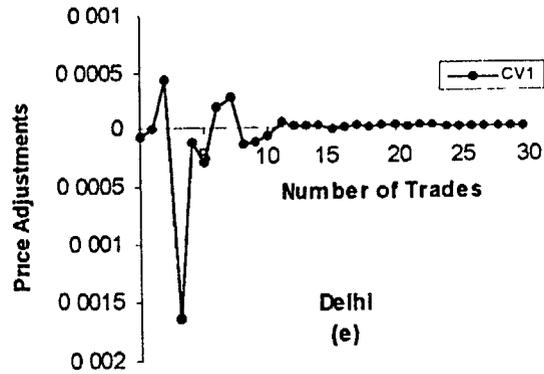
Bombay
(b)



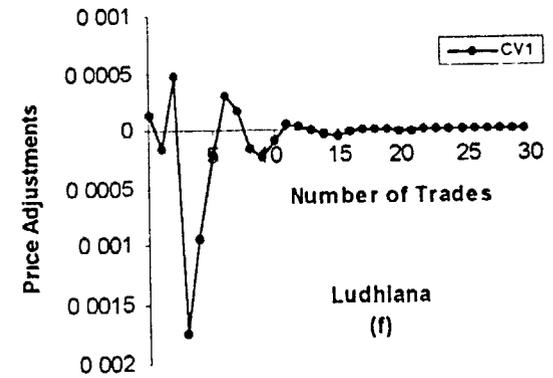
Madras
(c)



Bangalore
(d)



Delhi
(e)



Ludhiana
(f)

Figure (6)
Generalised Impulse Response of the Price of
Reliance to a Macroeconomic Shock

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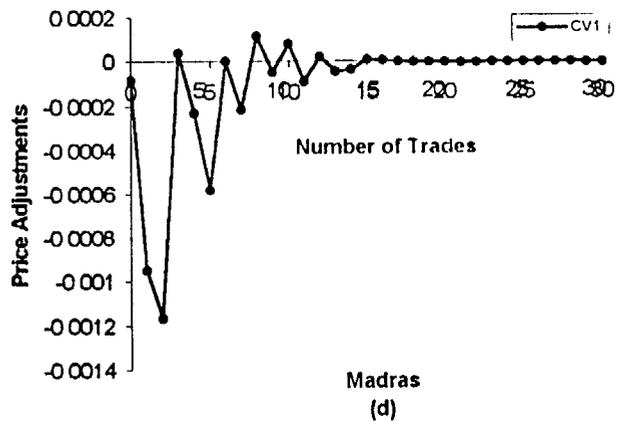
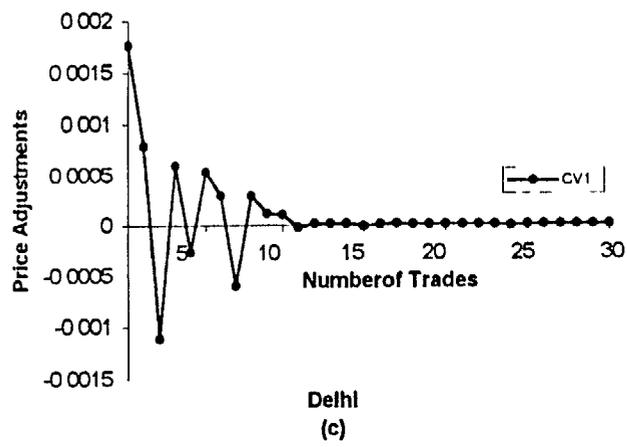
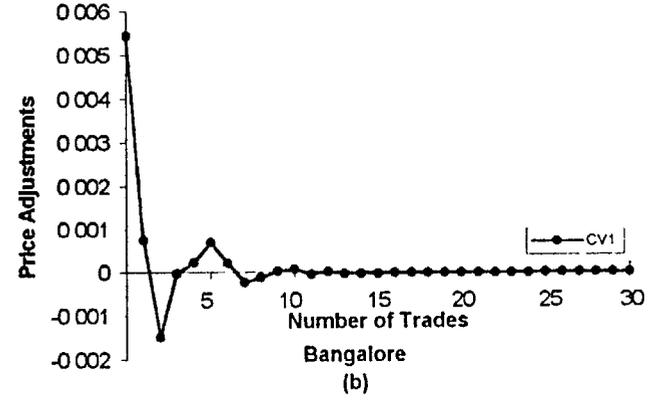
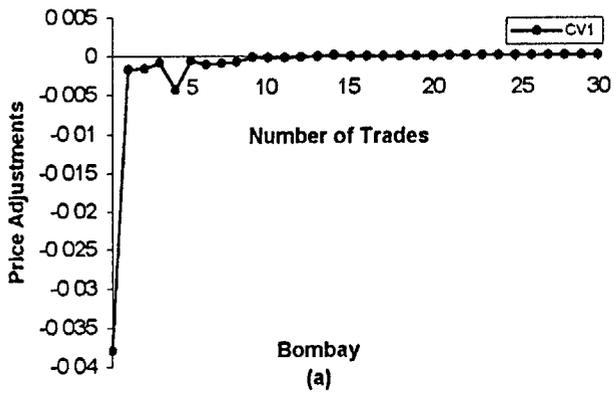


Figure (7)
Generalised Impulse Response of the Price of
SBI to a Macroeconomic Shock

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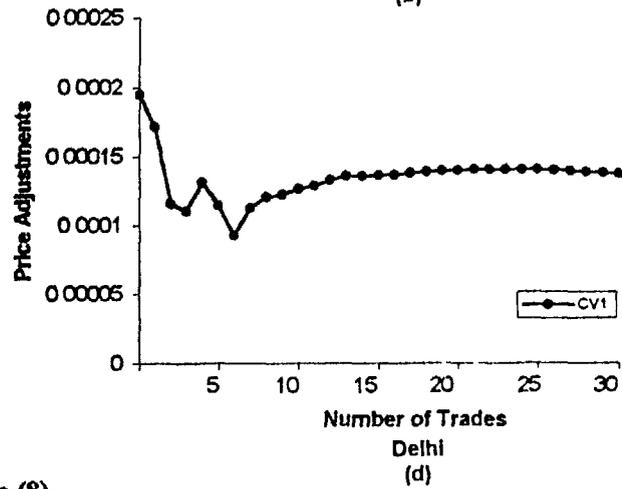
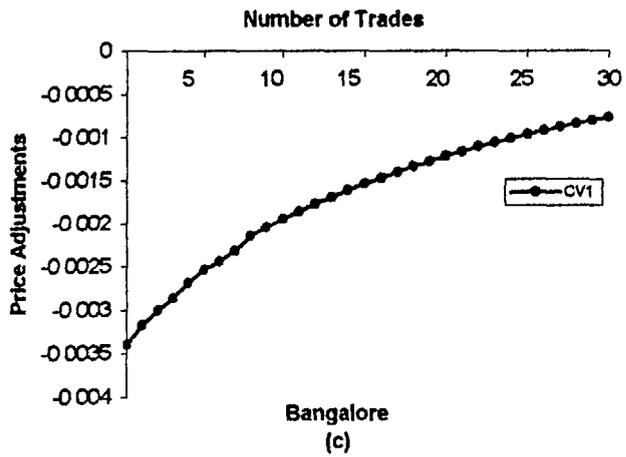
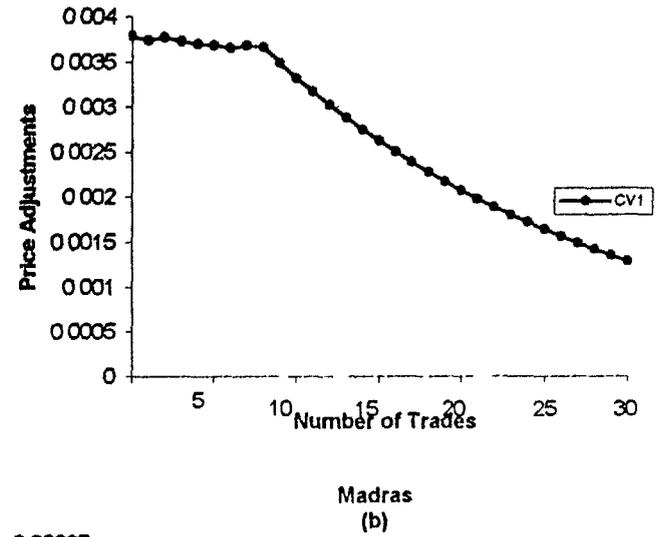
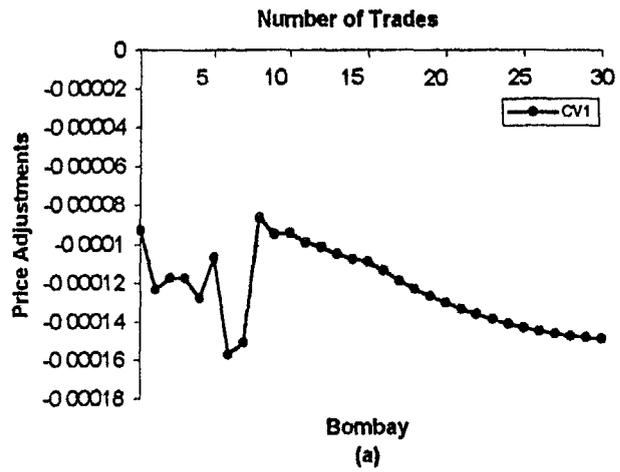


Figure (8)
Generalised Impulse Response of the Price of
Reliance to a Macroeconomic Shock

10/25

Session 6 Working Group Sessions and Conclusions

Session Chairman *SEBI ED's*

Facilitator *Dr. Fessie San Martin FIRE Project*

Session objectives Participants will review the proceedings from the last two days and work in teams to summarize a) their assessment of the current situation in their area of responsibility relative to what the industry requires and b) concrete recommendations for the Chairman regarding what SEBI must do as an organization to address shortfalls and meet challenges. The focus will be on SEBI's mission and the type of structure, staffing, communications and professional development mechanisms required to fulfill it. These summaries will provide a framework for future actions to improve SEBI as an organization. PwC FIRE will work with the working groups to pull the output of these sessions together into a final working paper from the workshop to be given to every workshop participant by Friday August 7.

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Session 6
Working Group Sessions and Workshop Conclusions

SEBI Workshop
31 July 2 August

2

Session objective

- What have we learned/heard?
- What does it mean?
 - Recommendations
 - Concrete
 - Short-term and longer-term
 - How do we follow-up?

What have we learned/heard?

- **Recommendations/suggestions fall into three broad categories**
 - **Customer/stakeholders**
 - Managing stakeholder relations more effectively
 - Communications with investors press/media interactions with intermediaries
 - **Organization/operations**
 - organizational structure and infrastructure (including IT)
 - Processes and procedures (systematization knowledge management)
 - **People**
 - Skills development
 - Staff deployment
 - Staff motivation
 - Staff retention

Summary to Date Client/Stakeholders (1)

- **Clarify SEBI's Role in the market**
 - To key stakeholder groups
 - Including judiciary
 - Outreach beyond Bombay
- **Management and communications of the media/press**
 - Leakage
 - Communications strategy/program
- **Public education**
 - Investor relations

Recommendations Organization/Systems (2)

- Planning and strategy
- Procedures and paper flow
 - Written procedures and processes
- Organizational structure
 - Flat organization vs hierarchy
 - Empowerment/delegation of authority

Recommendations Organization/Systems (2)

- Employee communications
 - Improve inter-departmental communications
 - Knowledge sharing mechanisms--e g staff working papers, newsletter
 - Periodic staff meetings and retreats
- Employee oversight--Maintaining integrity and confidentiality
 - Vigilance mechanisms

Recommendations People (3)

- Employee motivation and incentives
 - Improving retention and motivation
 - Remuneration policy
 - based on grade and performance
 - Empowerment
 - Clear duties and responsibilities
 - Selection into assignments
 - Survey of workload
 - Distribution of workload

Recommendations People (3)

- Training and skills development
 - Rotations vs depth of knowledge
 - Deputation
 - Induction and management training
 - Skills inventory
 - Identification of priority areas, such as depository, clearing systems, derivatives, etc

Group discussion agenda (For each working group)

- **What do you want to achieve? Identify 1-2 key objectives in**
 - Client/customers
 - Organization
 - People
- **How will you do it?**
 - Define actions required to achieve objectives/targets
- **How will you follow-up?**
 - Performance measures (how are we doing?)
 - Time frames
 - Monitoring/review processes
 - Responsibilities

Session structure

- Divide plenary into working groups (6 groups + 1)
- FIRE staff to serve as group "reporter"
- Report to plenary in 60 minutes
- Presentation of working group session recommendations
- Comments from senior management
- Final Q&A
- Summary and Conclusions