Quality Intermediation Services in the Securities Market

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Intermediation with a Difference

Efficient transfer of resources from those having idle resources to others who have a pressing need for them is achieved through securities markets. Stated formally, securities markets provide channels for allocation of savings to investments and thereby decouple these two activities. As a result, the savers and investors are not constrained by their individual abilities, but by the economy's abilities to invest and save respectively, which inevitably enhances savings and investment in the economy. Savings are linked to investments by a variety of intermediaries through a range of complex financial products called "securities" which include shares, bonds, scrips, stocks or other marketable securities of like nature in or of any incorporate company or body corporate, government securities, derivatives of securities, units of collective investment scheme, interest and rights in securities, or any other instruments so declared by the central government. There are a set of economic units who demand securities in lieu of funds and others who supply securities for funds. These demand for and supply of securities and funds determine, under competitive market conditions in both goods and securities market, the prices of securities which reflect the present value of future prospects of the issuer, adjusted for risks and also prices of funds.

It is not that the users and suppliers of funds meet each other and exchange funds for securities. It is difficult to have such double coincidence of wants. The amount of funds supplied by the supplier may not be the amount needed by the user. Similarly, the risk, liquidity and maturity characteristics of the securities issued by the issuer may not match preference of the supplier. In such cases, they incur substantial search costs to find each other. Search costs are minimised by the intermediaries who match and bring the suppliers and users of funds together. These intermediaries may act agents to match the needs of users and suppliers of funds for a commission, help suppliers and users in creation and sale of securities for a fee or buy the securities issued by users and in turn, sell their own securities to suppliers to book profit. It is, thus, a misnomer that securities market disintermediates by establishing a direct relationship between the savers and the users of funds. The market does not work in a vacuum; it requires services of a large variety of intermediaries. The disintermediation in the securities market is in fact an intermediation with a difference; it is a risk-less intermediation, where the ultimate risks are borne by the savers and not the intermediaries. A large variety and number of intermediaries provide intermediation services in the Indian securities market as may be seen from Table 1.

Table 1: Intermediaries in Corporate Securities Market in India

Market Intermediary	No. as on March 31, 2001
Brokers	9,782
Sub-brokers	9,957
Portfolio Managers	40
Foreign Institutional Investors	505
Custodians	14
Share Transfer Agents	186
Merchant Bankers	233
Bankers to an Issue	69
Underwriters	56
Debenture Trustees	37
Venture Capital Funds	35
Foreign Venture Capital Investors	1
Collective Investment Schemes	4
Mutual Funds	39
Depositories	2
Stock Exchanges	24
Regulators	4*

* SEBI, DCA, RBI, DEA. In a sense, the regulators and SROs are also intermediaries, as they ensure a smooth and safe channel between savings and investment.

The securities market, thus, has essentially three categories of participants, namely the issuers of securities, investors in securities and the intermediaries

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and two categories of products, namely the services of the intermediaries and the securities. The issuers and investors are the consumers of services rendered by the intermediaries while the investors are consumers of securities issued by issuers. In pursuit of providing a product to meet the needs of each investor and issuer, the intermediaries churn out more and more complicated products. They educate and guide them in their dealings and bring them. Those who receive funds in exchange for securities and those who receive securities in exchange for funds often need the reassurance that it is safe to do so. This reassurance is provided by the law and by custom, often enforced by the regulator. The regulator develops fair market practices and regulates the conduct of issuers of securities and the intermediaries so as to protect the interests of suppliers of funds. The regulator ensures a high standard of service from intermediaries and supply of quality securities and non-manipulated demand for them in the market.

The regulator (also SROs) and the intermediaries develop the securities market in a manner that enhances the confidence of investors and issuers in the system. The quality of their services determines the shape and health of the securities market. Despite the warning that the buyers be aware, the investors and issuers rely on the knowledge and expertise of the intermediaries/ regulators and look up to them for guidance and support. A certified, accountable and qualified intermediation network is a must in the interest of securities market, as an educated lady in the family.

Improving Quality of Intermediation

The intermediaries, of all shapes and sizes, thousands upon thousands, who package and sell the securities, compete with one another for the chance to handle investors/issuers' money. How does an investor/ issuer discriminate among them? How does he know that a particular intermediary really understands his needs? How does he know that a particular intermediary can handle his money in his best interest? He can have comfort if the intermediary as well as its employees (i) follow a certain code of conduct and behave properly and (ii) are capable of providing professional services. All the intermediaries in the securities market are now registered and regulated by SEBI. A code of conduct has been prescribed for each intermediary as well as for their employees in the regulations; capital adequacy and other norms have been specified; a system of monitoring and inspecting their operations has been instituted to enforce compliance; and disciplinary actions are being taken against them for violating any regulation. Thus a reasonably satisfactory arrangement is in place to ensure good conduct of the intermediaries.

The development of capability of the intermediaries for providing professional services has been left, by and large, to market forces. In other segments of financial markets in India, there are arrangements to equip the personnel with the required expertise. A person is required to undergo specified hours of class room training and pass the prescribed examination before he can be licensed to act as an insurance agent. The employees of insurance companies upgrade their competence by taking licenciate, associate and fellow examinations of the Insurance Institute of India. Similarly bank employees take junior associate and certified associate examinations conducted by the Indian Institute of Bankers. The employees taking these examinations successfully are rewarded through monetary benefits as well as preference in promotions.

In developed markets and in some of the developing markets, this is ensured through a system of testing and certification of persons joining market intermediaries in the securities market. Most of the overseas securities markets have practices requiring personnel working with intermediaries to pass qualifying examinations and even continuously update his capability. This sort of arrangement ensures that a person dealing with financial products has a minimum standard of knowledge about them, market and regulations so as to assist the customers in their dealings. This allows market participants and intermediaries to build their own tailored staff development strategies and improves career prospectus of certified professionals, while maintaining and enhancing the confidence of the investors in the market. Such arrangements is in a very nascent stage in the Indian securities market where it is needed most.

There is not adequate formal educational or training programmes on securities markets especially in the area of operations. No academic course teaches how to maintain depository accounts, how to sell mutual fund products, how to issue contract notes or how to trade, clear and settle trades on a stock exchange. The securities market of this country certainly does not deserve such neglect from the educational system. In the absence of any formal qualification which equips a person to operate in the securities market, the market employs chartered accountants, company secretaries,

financial analysts, who are trained for some other work, but can also handle the work in the securities market if they are given adequate on-the-job training. They acquire expertise by doing the job and by attending short-term courses/seminars. They also continuously acquire newer and newer capabilities to meet the changing requirements of the securities market, which is transforming continuously. In fact, the personnel working in the securities market have admirably acquired the skills required in the changing environment of 1990s. The transformation can be sustained and further reforms can be facilitated if there are adequately trained personnel who are willing to continuously update their professional competence. This fact is being fortunately increasingly realised by the regulators and industry associations who are prescribing certifications in their respective areas. The markets are also rapidly adopting certification programme and are soon becoming a turf of certified professionals because of regulatory compulsions and/or initiatives of the industry.

US Practice

Any securities professional associated with a member firm, including partners, officers, directors, branch managers, department supervisors, and salespersons, is required to register with the NASD. As part of the registration process, securities professionals must pass an examination administered by NASD Regulation to demonstrate competence in the areas in which they will work. These mandatory qualification examinations cover a broad range of subjects on the markets, as well as the securities industry and its regulatory structure, ensuring a minimum level of understanding and expertise. The NASD has prescribed two levels of qualification and registration: one for registered representatives, generally sales personnel and the other for principals, generally officers of the firm and other management personnel involved in the day-to-day operation of the firm's investment banking or securities business. The most popular is the general securities representative examination, called series 7. To supervise sales functions of a series 7 registered person, the supervisor must be series 24, or general securities principal qualified. In addition to its own examinations, NASD Regulation also administers for the securities industry and the states approximately 30 different examinations to individuals seeking to become registered representatives or principals of securities firms. The details of examinations administered by NASDR is presented in Table 3.

Table 3: NASD Administered Qualification Examinations

Sr. No.	Title of the Examination	For Whom	Start Up Date
1	Registered Representative	NA	1956 – 7/80
2	Non-Member General Securities	NA	N/A – 9/96
3	National Commodity Futures	O	1966
4	Registered Options Principal	P	4/75
5	Interest Rate Options	O	12/81
6	Investment Company Products/Variable Contracts Representative	R	8/80
7	General Securities Representative	R	9/74
9	General Securities Sales Supervisor—Options Module	P	9/81
10	General Securities Sales Supervisor—General Module	P	9/81
11	Assistant Representative—Order Processing	R	1/90
12	NYSE Branch Manager	O	1/64-4/84 4/91
14	NYSE Compliance Principal	P	9/89
15	Foreign Currency Options	O	9/82
16	NYSE Supervisory Analyst	O	1/65
17	Limited Registered Representative	R	5/91
18	Securities Industry Rules and Regulations	NA	N/A-6/88
21	NYSE Front Line Specialist Clerk	O	1/99
22	Direct Participation Programs Representative	R	8/80
24	General Securities Principal	P	1/79
25	NYSE Trading Assistant	O	2/98
26	Investment Company Products/ Variable Contracts Principal	P	6/79
27	Financial and Operations Principal	P	1/79
28	Introducing Broker/Dealer Financial and Operations Principal	P	1/90
30	Branch Managers – Futures	O	3/93
31	Futures Managed Funds	O	3/93
32	Limited Futures -Regulations	O	12/94
33	Financial Instruments	O	10/97
37	Canadian Module of Series 7 - with options	O	4/96
38	Canadian Module of Series 7 - no options	O	4/96
39	Direct Participation Programs Principal	P	6/79
40	Registered Principal	NA	9/65-5/79
41	NYSE Allied Member	NA	1/66-12/85
42	Registered Options Representative	R	6/95
47	Japan Module of Series 7		not yet effective
52	Municipal Securities Representative	R	11/78

Sr. No.	Title of the Examination	For Whom	Start Up Date
53	Municipal Securities Principal	P	2/80
54	Municipal Securities Financial and Operations Principal	NA	N/A-12/89
55	Limited Representative-Equity Trader	R	4/98
62	Corporate Securities Representative	R	6/88
63	Uniform Securities Agent State Law	O	4/79
65	Uniform Investment Adviser Law	O	1/89
66	Uniform Combined State Law	O	7/95
72	Government Securities Representative	R	4/98
82	Limited Representative-Private Securities Offerings	R	5/01

Note: NA - Since discontinued, R - Representative, P - Principal, O - Others

Source: NASDR website.

In addition, the NASD Membership and Registration Rules prescribe continuing education programme since 1995. Accordingly, the NYSE, for example, has a formal, two part, industry wide continuing education programme. The programmme comprises of the regulatory element and the firm element. The regulatory element requires registered persons to complete a computer-based training programme on the 2nd anniversary of their registrations, and every three years thereafter. The firm element requires members and member organizations to provide ongoing training tailored specifically to the products and services they provide.

Initiatives in India

With a view to improve investor protection through better quality intermediation, SEBI set up a Committee for certification and testing of persons joining capital market intermediaries. The Committee was mandated to prescribe standards of knowledge necessary for different types of specialised functions in the securities industry at operational and supervisory levels. SEBI approved the recommendations of the Committee in September 1998. The committee recommended that an examination based certification system is ideal to meet the needs of the Indian capital markets. The test may be offered on a voluntary basis in the initial period and may be made a mandatory requirement after a period of two years from the date of the first test. After the date on which test becomes mandatory, every person regardless of the qualifications he possesses should be required to pass the certification test within a period of 12 months from the date of employment with a capital market intermediary. Of the existing staff with the intermediary, two persons or 20%, whichever is higher, shall have to obtain the certificate within 12 months from the date on which the test becomes mandatory. The intermediary that violates the minimum number of certified employees norm should be deemed to be automatically de-registered from the date of the said violation. Initially there may be a single common test for all market intermediaries and specialised tests may be introduced for different participants at a later date, as required by the market conditions. The examination can be taken by anyone, irrespective of qualifications, age, employment or experience. The Committee also designed an exhaustive syllabus for the examination to test the understanding a candidate has of the securities market and his ability to provide sound advice to investors. Though the recommended testing and certification system is yet to be operationalised, it created awareness of and need for certification among the market participants.

The L. C. Gupta Committee set up by SEBI to develop appropriate regulatory framework for derivatives trading in India recommended that the broker-members, sales persons/dealers in the derivatives market must pass a certification programme, which is considered adequate by SEBI. The Parliamentary Standing Committee on Finance which examined derivatives bill also recommended that SEBI should in consultation with the stock exchanges endeavour to conduct the certification programme on derivatives trading with a view to educate investors and market players. In pursuance to this recommendation, SEBI has mandated that trading members must have qualified approved users and sales persons who have passed an approved certification programme.

The Association of Mutual Funds in India (AMFI) has launched a major initiative to build a cadre of trained professional distributors of mutual fund products and to facilitate the move towards the mutual fund industry employing trained and certified professionals in the interest of investors. SEBI Advisory Committee on mutual funds has recently decided that mutual funds should adopt the certification of agents and distributors for mutual fund schemes by the AMFI on a voluntary basis. Over a period of time, such certification may be made mandatory. The National Securities Depositories limited (NSDL) has also launched an initiative to accelerate the pace of professionalisation of the depository services. They have prescribed that all the branches of the depository participants must have at least one person who has obtained the prescribed certification. In order to improve the level of knowledge of market participants, only persons who have passed

the prescribed examination are authorised to use its trading system by the National Stock Exchange of India Limited. The Association of Merchant Bankers in India, Association of Financial Planners, Fixed Income Money Market Dealers Association etc. are working towards a certification mechanism for their members.

Certification in Financial Markets

A testing and certification mechanism that has become extremely popular and is sought after by the candidates as well as employers is an unique on-line testing and certification programme called National Stock Exchange's Certification in Financial Markets (NCFM). It is an on-line fully automated nation-wide testing and certification system where the entire process from generation of question paper, invigilation, testing, assessing, scores reporting and certifying is fully automated - there is absolutely no scope for human intervention. It allows tremendous flexibility in terms of testing centres, dates and timing and provides easy accessibility and convenience to candidates as he can be tested at any time and from any location. It tests practical knowledge and skills, that are required to operate in financial markets, in a very secure and unbiased manner, and certifies personnel who have a proper understanding of the market and business and skills to service different constituents of the market.

It aims to develop capability in a niche area like depository operations or derivatives trading where the person intends to render service. Accordingly it offers a comprehensive range of modules covering many different areas of financial services. It offers, inter alia, eight securities market related modules as presented in Table 3. About 15, 000 personnel have been certified in these modules.

Table 3: Modules of the NCFM

Sl. No.	Names of the Modules	Primary Inspiration
1	Derivatives Core Module	Regulatory Requirement
2	Capital Market Basic Module	SRO's Prescription
3	Depository Operations Module	NSDL's Initiative
4	Surveillance in Stock Exchanges Module	Regulatory Persuasion
5	Mutual Funds (Distributors) Module	AMFI Initiative
6	Mutual Funds (Employees) Module	AMFI Initiative
7	Capital Market (Dealers) Module	SRO's Prescription
8	Debt Market Basic Module	Industry Initiative

Institute for Securities Market

The certification is adequate for a person at operational level like distributor/agent/dealer/front office person who is rendering service in a niche area. The personnel having supervisory responsibilities with intermediaries and issuers, and also officers working with SROs and regulators need much broader exposure. There are institutes like the ICSI for grooming professionals for secretarial work or the ICAI for accounting work. A similar institute, say National Institute of Securities Market (NISM), can be set up with the responsibility to develop a distinct group of professionals for a career in the securities market. It may have three levels of examinations, which can be completed by an average person in three years' time under distance/on-line education, as indicated in Table 4.

Table 4: Course Structure for Securities Market Professionals

Level	Subject
Basic	Securities Market in India
	Economics & Law
	Accounts & General Management
	Quantitative Techniques & IT
Associate	Legal & Regulatory Framework
	Corporate and Government Finance
	Primary Market & Merchant Banking
	Collective Investment Schemes
	Secondary Market for Equity
	Secondary Market for Debt
	Derivatives Market
	Ethics and Code of Conduct
Fellow (Any one of the areas comprising of four papers)	Market Research
	Risk Management
	International Markets
	Market Regulations
	Information Technology

The basic level should lay the foundation for a career in securities market. The associate level should enable a person to carry on any type of supervisory, regulatory/policy making work in the securities market. A person interested in specialisation should go for the fellow programme. The institute should maintain a

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Is there an Independent Secondary Market Yield Curve? - An Empirical Analysis

Gangadhar Darbha and Sudipta Dutta Roy*

Moving from an ad-hoc issuance procedure for Treasury bills (T-Bills), the RBI started an auction procedure for 364-day T-Bills in April 1992, followed by 91-day T-Bill auctions in January 1993. These were expected to help evolve market-related rates on these instruments. To help develop a rupee yield curve for the term money market, RBI subsequently introduced T-Bills of 14-day and 182-day maturities. Once the auctions are announced, market participants place bids for the amount they would like to subscribe to, along with the expected rate of interest. The RBI determines a cut-off price; bids above the cut-off are allotted their bid amount at their respective quotes except in 91-day T-Bill auctions which are held on a uniform price basis. In case of a shortfall of the accepted amount from the notified issue size, the balance amount devolves on the RBI and / or the PDs at the weighted average cut-off yield.

How successful have auctions been in terms of evolving market-related rates on these instruments? If the RBI exercises significant leverage in setting yields, the primary market response to secondary market information will be weak. On the other hand, if the market views the primary cut-off as a strong signal about the rates that would obtain at different maturities, the secondary market will respond strongly to primary market information, and an 'independent' secondary market yield curve will be difficult to achieve. In an ideal situation, we would expect a two-way information flow between the primary and secondary markets. A further interesting question is of whether the extent of market-relatedness is uniform across maturities. We analyse these issues through a time-series analysis of the primary and secondary market rates on these instruments.

The information feedback between primary and secondary markets can be analysed in terms of the correlation and lead-lag relation between the primary and secondary market rates for each instrument within a co-integration / vector error-correction framework [Engle & Granger (1987), Johansen (1988)]. The first step in such an exercise is the identification of a cointegrating vector which can be interpreted as the long run equilibrium between the primary and secondary market rates. If a long-run equilibrium relation exists, there exists an error-correction mechanism that moves the system towards equilibrium, should there be a deviation in any period. Two error correction equations with the primary and secondary market rates as the dependent variables constitute the vector error correction model (VECM) **(Equations 1 and 2).**

Equation 1

$$\Delta pmr_t = \gamma_{11}\,\Delta pmr_{t-1} + \varphi_{11}\,\Delta smr_{t-1} + \gamma_{21}\Delta pmr_{t-2} + \varphi_{21}\Delta smr_{t-2} \ldots\ldots\ldots + \beta_1(pmr - smr)_{t-1} + u_{1t}$$

Equation 2

$$\Delta smr_t = \gamma_{21}\Delta pmr_{t-1} + \varphi_{21}\Delta smr_{t-1} + \gamma_{22}\Delta pmr_{t-2} + \varphi_{22}\Delta smr_{t-2} + \ldots\ldots + \beta_2(pmr - smr)_{t-1} + u_{2t}$$

where *pmr* and *smr* are the primary and secondary market rates respectively. We impose the cointegrating vector (1, -1), *ie.* in the long run equilibrium, the primary and secondary market rates for any chosen maturity are equal. The coefficients β's on the cointegrating vector in the individual equations of the VECM provides a measure of the responsiveness of each rate to a deviation from the long run relation. Statistically significant coefficients in both equations imply the existence of a two-way information flow between the markets; - which rate plays the greater role in the error correction process being reflected by the size of the coefficients.

The exercise is carried out separately for 364-day, 91-day and 14-day rates. The cut-off yields in each auction provide the primary market rates. Instruments of same (residual) maturity may not always trade in the secondary market; secondary market rates at each of these maturities on their respective auction dates are read off the NSE-Zero Curve. The period of analysis is from February '98 to March '01. This provides us with 160 weekly observations for 91-day and 14-day rates and 80 fortnightly observations on 364-day rates.

The error correction (EC) term $(pmr\text{-}smr)_{t-1}$ is the spread between the primary and secondary market rates

* Consultants, NSE. The views expressed and the approach suggested in this paper are of the authors and not necessarily of NSE.

in the previous period. Estimates of the coefficients on the EC term in the individual equations **(Table 1)** reveal the following:

i The 14-day primary cut-off yield and secondary market rates both respond to deviations from the long run equilibrium; the extent of response is of comparable magnitude.

ii The extent of response of the 91-day primary yield to deviations from equilibrium, while statistically significant, is numerically small. The extent of response of the secondary market rate is, by comparison, significantly higher.

iii There is two-way response also in the case of 364-day rates; the degree of response is comparable for both markets but small in numerical terms.

Table 1: Extent of Responsiveness: Estimates of Coefficients on EC terms

	Primary market		Secondary market	
	Coeff	t-ratio	Coeff	t-ratio
14-day	-0.16	-3.16**	0.19	3.51**
91-day	-0.04	-1.70*	0.21	4.01**
364-day	-0.09	-2.44**	0.10	2.26**

** denotes significance at 10%, **at 5%.*

The difference in frequency of observations means that results for the 14 and 91 day rates are not strictly comparable to the 364-day rate; some observations are, however, in order. In terms of the degree of market-relatedness of primary yields, the 14-day rate emerges as most responsive, followed by the 364-day and the 91-day rates respectively. The degree of responsiveness of secondary market rates is also not uniform across maturities. The responsiveness of the 91-day secondary market rate is the highest among the three, and this takes the lead in the equilibrating mechanism, indicating that at this maturity, the market takes strong signals from the primary yields set by the RBI. Most importantly, the magnitudes of secondary market response are low across all maturities, which means that the market also factors in other information, besides the primary cut-off, in arriving at their rates.

In the analysis above, we have allowed the magnitude of response to be symmetric for both positive and negative spreads. It is reasonable to argue that the responsiveness of a particular rate would also depend on the sign of the spread. For instance, when the primary market rate is set lower than the secondary market rate and the market views this as signaling lower rates, the secondary market is expected to align. On the other hand, if the secondary market rate is lower than the primary market rate, correction may be primarily in terms of the RBI lowering the primary market rate. We analyse the possibility of asymmetric response by estimating asymmetric error correction equations, where the positive and negative spreads appear as independent variables. Our results **(Table 2)** reveal the following:

i. At 14-day maturity, both primary and secondary yields respond strongly to negative EC, while at 91-day maturity only the secondary yield response is statistically significant with respect to negative EC.

ii. Interestingly, on the part of RBI the reaction is different. It responds to negative ECs on 14-day market, but to positive ECs in the 91-day market indicating a discretionary approach. Also, numerically the response is smaller in the 91-day case, definitely pointing to its rate setting behaviour (in an exogenous) manner in the latter case.

iii. In the case of 364-day, only primary yields respond to negative EC, while neither responds significantly to positive ECMs.

Table 2: Asymmetric Response: Estimates of Coefficients on EC terms

	Positive EC		Negative EC	
	Coeff	t-ratio	Coeff	t-ratio
14-day primary	-0.60	-1.13	-0.11	-2.16**
14-day secondary	0.41	0.73	0.18	3.43**
91-day primary	-0.46	-1.73*	-0.03	-1.22
91-day secondary	0.66	1.19	-0.22	3.83**
364-day primary	-0.11	0.35	-0.09	-2.23**
364-day secondary	0.61	1.66	0.05	1.01

** denotes significance at 10%, ** at 5%.*

Our results can be interpreted as follows. At both 14 and 91-day maturities, secondary yields are significantly responsive only to negative ECs, indicating that market alignment happens only in the downward direction, *i.e.* when the market thinks RBI is signaling lower interest rates. When the primary cut-off is higher than the secondary rate, there are no statistically significant effects. In the case of 364-day T-Bill, primary

yields appear to be market related, but markets do not seem to view primary yields as a strong signal, possibly indicating that the secondary market rate depends on other factors.

How do our findings compare with actual auction outcomes? Note that, since devolvement is not a [0,1] outcome, the comparisons are valid in terms of proportions of issue amount devolved rather than number of occurrences *per se*. Our findings would indicate that, with corrections happening in terms of both primary and secondary market rates in case of 14-day, extent of devolvement would be less than in either 91-day or 364-day segments. At 91-day maturity, we have only the secondary market responding while the primary market holds relatively firm, and the reverse is the case of 364-day T-Bills. The extent of devolvement in these two cases would depend on the extent of response, which, as we have seen, is higher in the case of 91-day than 364-day. Together, this implies that, in terms of an ordering of devolvement proportions, the numbers would increase with maturity for these three instruments. The period of analysis witnessed devolvement in 66 auctions of 14-day T-Bills, accounting for 59.4 per cent of the notified amounts in these auctions. 83 auctions of 91-day T-Bills devolved; the devolved amount constituting 60.0 per cent of the auctioned amount. By comparison, 25 devolvements of 364-day T-Bills accounted for 68.2 per cent of the notified amount. The actual outcomes are therefore consistent with the nature and extent of information flow indicated by our analysis.

What are the implications of our analysis with respect to the objective of facilitating a price discovery process through an auction procedure? An auction will provide a market-clearing yield only when price adjustment is the only market-clearing mechanism. As long as the issuing authority has leverage in adjusting quantities to set rates, either through change in notified amount or by accepting a devolvement, a market-related rate is difficult to achieve. Does there exist an independent secondary market yield curve? The answer that emerges from our analysis is that, primary cut-offs are viewed as a strong, but not the only signal, as far as secondary market rates are concerned. In a scenario of increasing integration between different markets, the secondary debt market could, for instance, be incorporating information on exchange rate behaviour.

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depository of associates and fellows and enforce a code of conduct for them to help the prospective employers access the depository to meet their personnel requirements.

Conclusion

The confidence of the investors can be maintained and enhanced by making provision for professional intermediation services through a system of certification. Industry/SROs/Regulators have made a modest beginning, but not adequate given the dimensions of the market. NCFM should offer a certification for each category of intermediary/activity. SEBI regulations, which lay down various requirements for registration as an intermediary, should specify certification as a mandatory requirement for operational level employees. This sort of requirement has been mandated by the IRDA in the regulations for life insurance agents and general insurance agents. While this requirement should apply at the entry point for all new employees joining the intermediaries and all intermediaries joining the market, regulation may allow a period of five years for the existing intermediaries and employees to qualify the certification. These people should also be required to update their skills and expertise by seeking certification at intervals of five years. The personnel having supervisory responsibilities with intermediaries and issuers, and officers working with SROs and regulators must at least be associates of the NISM. This would enhance the knowledge and skill of the intermediaries (including regulators and SROs), who can, in turn, educate and guide the investors in securities and issuers of securities.

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