

**Towards a Unified Market for
Trading Gilts in India**

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Abstract

A Working Group of the Reserve Bank of India (RBI) under the chairmanship of Dr. R. H. Patil has recommended that Indian government securities should be traded in two separate and segregated markets. Banks and primary dealers are to trade on an anonymous electronic screen based order matching trading system – a monopoly exchange based on the Negotiated Dealing System (NDS) owned by the RBI. Households, pension and provident funds and most other investors are proposed to be relegated to a separate segregated market driven by compulsory market making. The Patil Report also recommends that the RBI should indulge in systematic market manipulation in the NDS to reduce the borrowing cost of the government.

This paper argues for a reconsideration of most elements of this design. Government securities are a unique asset class to which all Indians should have non discriminatory access. Segregated markets are unacceptable. Nor are monopolies desirable since intense competition is the principal mechanism for fostering innovation and investor protection.

Market manipulation is unacceptable in any financial market even if this manipulation is performed by the state itself. Moreover market manipulation to reduce interest rates would reintroduce financial repression through the back door and would reverse the principal success of the financial sector reforms initiated in 1991.

The paper proposes an alternative design for the government securities market and also a new regulatory architecture. Unified markets, non discriminatory access to all classes of investors, intense competition and investor protection are the key elements of the proposed design.

Towards a Unified Market for Trading Gilts in India

Major technological and institutional changes are being proposed in the Indian gilt market. A Working Group of the Reserve Bank of India (RBI) under the chairmanship of Dr. R. H. Patil has reviewed the performance of Negotiated Dealing System (NDS) in the context of its operational efficiency and recommended an anonymous electronic screen based order matching trading system on the NDS¹. This is taking place at a time when new research in developed markets is revealing the inadequacies of existing market designs.

This provides us with an opportunity to undertake a comprehensive review of the government securities market and implement new ideas in trading, settlement, regulation. In this paper, I propose the broad contours of a redesigned government securities market starting with the key principle that markets should above all serve the interest of investors including household investors. A highly competitive market structure with multiple exchanges is essential to foster innovation and efficiency as well as to provide investor protection in an issuer regulated market.

I argue for a reconsideration of several aspects of the Patil Report – the neglect of household and other non bank investors, the segregation of retail and wholesale markets, the system of compulsory making, the recommendation for market manipulation by the RBI and the idea of a monopoly exchange.

In the current system, there are large gaps in the regulation and surveillance of the government securities market. There is no regulator with a clear statutory responsibility for investor protection and for prevention of fraudulent and unfair trade practices in this market. These deficiencies need to be corrected. The inherent conflicts of interests in an issuer regulated market must also be addressed.

The Existing Structure of the Government Securities Market

The government securities market in India is predominantly a telephone based OTC market where banks and primary dealers trade with each other. Overlaid on this market are three other trading and trade reporting systems:

1. The Negotiated Dealing System (NDS) is an electronic platform owned and maintained by RBI. Its membership is limited to those entities that have current accounts and securities accounts² with the Reserve Bank of India – mainly banks and primary dealers. Though the system has limited trade negotiation and quote entry capability, the NDS today works almost entirely as a trade reporting system.
2. The WDM (Wholesale Debt Market) at the National Stock Exchange (NSE) is another system with trading capability that functions only as a trade reporting system. The WDM has a much more open membership than the NDS. Through a

¹Reserve Bank of India, Report of Working Group On Screen Based Trading In Government Securities, November 2004

²These securities accounts are known as SGL (subsidiary general ledger) accounts for arcane historical reasons.

network of brokers, the WDM provides market access to all types of market participants.

3. The Retail Debt Market (RDM) segment on the NSE and a similar segment on the BSE (Stock Exchange, Mumbai) provide an electronic order book for trading in government securities in small lots. Trading and settlement uses the same system that is used to trade equities. The level of trading in this segment is negligible.

Most trades in the government securities market are settled electronically through the Reserve Bank's Securities Settlement System (SSS) using securities accounts that banks and primary dealers maintain with the Reserve Bank of India. Investors who do not have securities accounts with the RBI settle their trades using second tier securities accounts³ that they maintain with intermediaries who themselves have securities accounts with the RBI.

Retail gilt trades in the NSE/BSE are settled through the National Securities Depository Limited (NSDL) and Central Depository Services Limited (CDSL) which provide depository services for the equity markets. These depositories in turn are linked to the Reserve Bank's SSS.

The Clearing Corporation of India (CCIL) provides novation and Central Counterparty (CCP) services for trades that take place through the NDS. The National Securities Clearing Corporation (NSCC), a subsidiary of the NSE provides novation and Central Counterparty (CCP) services for trades that take place through the NSE's retail gilt trading segment. Trades on the NSE WDM are settled bilaterally.

Under the benign interest rate regime that has prevailed since 1999, the government securities market became quite liquid. The turnover in this market rose from 25% of market capitalization in 1998-99 to well over 100% by 2001-02. Trading volumes continues to be buoyant, but whether this liquidity will survive a more turbulent environment similar to that of 1997-98 remains to be seen.

Recommendations of Patil Group

The Working Group chaired by Dr. R. H. Patil has recommended sweeping changes in the structure of the market:

1. The NDS should be converted into a full fledged order matching system or an electronic exchange.
2. NDS should be a monopoly exchange: all banks and primary dealers to trade among themselves only on NDS. Banks to trade only on NDS; to be discouraged from trading with non NDS members.

³These accounts are known as CSGL or Customer SGL accounts. See footnote 2 above.

3. The NDS market should be completely segregated from the market between non NDS members.
4. Brokers of the WDM segment should be compelled to provide compulsory market making in government securities in this segment.
5. Primary dealers should serve as the bridge between the two markets. These entities would operate in both markets.
6. Electronic interfaces between exchanges, depositories and RBI should be improved to facilitate settlement.

The Patel Report divides the market for government securities into three segments:

1. The wholesale market consists of banks and primary dealers. Their needs would be met by the monopoly NDS.
2. The mid segment market consists of pension and provident funds, corporates and trusts as well as small cooperative banks. The compulsory market making on the WDM is intended to meet the requirements of this fast growing segment.
3. The retail segment consists of households and other small investors. The Patil report, by and large, ignores the needs of this segment.

The market design choices in the Patil Report are based on four fundamental assumptions:

1. Electronic exchanges are preferable to the OTC telephone markets.
2. Household investors are unimportant and the market design need not bother about their needs.
3. Wholesale and retail/mid segments of the market must be segregated from each other.
4. The existing system of market regulation and supervision is satisfactory.

This paper now proceeds to argue why all these assumptions (except the first) need reconsideration.

We Should Not Ignore Household Investors

Quite often, discussions about the government securities market completely ignore the needs of household investors on the ground that they are a small part of the market for government securities in most countries of the world. The Patil report seems to share this view as it hardly mentions household investors.

In this paper, I take a different view. It is true that this market is indeed dominated by institutional investors, but household investors are by no means negligible. Over the last five years, the share of households in the US public debt has ranged from 10% to 15%⁴. Similarly, while government securities are a small fraction of household financial assets, again this share is by no means negligible. Households' investment in sovereign and sub-sovereign⁵ securities in the United States has typically been in excess of \$ 1 trillion – an amount that exceeds the households' investment in life insurance and in money market mutual funds.

Moreover, the importance of government securities in household portfolios far exceeds what one may infer from these percentage shares. Government securities are the most risk free securities available to all investors. Households like other investors are entitled to fair and non discriminatory access to this unique asset class and any government policy that restricts the ability of households to operate in this market is inconsistent with the demands of a democratic polity.

Household Investors Need Liquid Exchange Markets

For long it has been fashionable to argue that while exchange traded markets have worked well in equities, they are not the natural market design for bonds. To some extent, this has always been a self serving argument put forth by those with a vested interest in OTC markets.

First of all there was the historical evidence that many of the older stock exchanges in the world started life as platforms for trading government securities. It is well known that, for a long time, government securities were the mainstay of the London Stock Exchange. In India also, government securities were actively traded in the BSE till the 1960s. It could well be argued that in most cases, exchange trading of government securities was subverted by financial repression, fiscal pre-emption and regulatory policies that tended to favour OTC markets.

During this year, some high quality studies have become available in the United States that provide hard evidence that OTC markets have not worked well as far as household investors are concerned. A study⁶ by the US Securities and Exchange

⁴The numerator in these computations is taken from the household balance sheets published by the Federal Reserve as part of the Flow of Funds data. The denominator is taken from the data published by the US Treasury, Bureau of the Public Debt. Both numerator and denominator include Savings Bonds which account for between 20-50% of household investment in US Treasury during this period.

⁵Sub sovereign includes municipal bonds. Holding of municipal bonds has varied between 35% and 60% of the total holding of sovereign and sub sovereign bonds in this period.

⁶**United States Securities and Exchange Commission (2004), *Report on Transactions In Municipal Securities***, Office of Economic Analysis, Office of

Commission (US SEC) on the municipal bond market showed that the average bid-ask spread for fixed coupon municipal securities was 1.84% of the principal amount traded. This compared to a bid-ask spread in Nasdaq (post decimalization) of about 0.2%. Thus the bid ask spread for municipal bonds was about nine times that for Nasdaq stocks. Theoretically, one would expect the bid ask spread to be considerably higher for stocks where market makers face more serious problems of price volatility, information asymmetry, adverse selection and insider trading. Viewed in this light, the outrageously high bid-ask spreads in the US municipal bond market can only be regarded as a failure of the market design itself.

Even more devastating is a more recent study⁷ of the corporate bond market in the United States. Though corporate bonds are more liquid than municipal bonds, still the average bid ask spread for \$20,000 trades is 1.38% as compared to 0.40% for a similar size equity trade. This study also provides direct empirical evidence for the theoretical inference that spreads should actually be lower for bonds than for equities. Bid ask spreads for junk bonds are about twice as large as those for high investment grade bonds and spreads for defaulted bonds are even higher. Since equity can be regarded as the lowest possible grade of debt, this evidence supports the theoretical proposition that equities should have higher spreads under equivalent market structures. That the actual relationship is the reverse of this is a severe indictment of OTC markets. Another strong indictment is the fact that while, in accordance with theory, impact costs in equity markets rise with trade size (except for very large block trades which are known to be uninformative trades), in the bond markets, the reverse is true in the corporate bond markets. The bid ask spread for a \$200,000 bond trade is only 0.54% as compared to 1.38% for \$20,000 trade. This is strong evidence that an OTC market does indeed load the dice against retail investors.

Finally, this study shows that the limited attempts at transparency in the corporate bond market using the TRACE (Trade Reporting and Compliance Engine) system have led to a reduction of 0.1-0.2% in bid-ask spreads. Since this reduction is only a small fraction of the excessive spread of bonds compared to equities, it is clear that it is not possible to salvage the market by improving transparency without changing market structure. Yet, the fact that transparency by itself reduces spreads does provide evidence that the huge spreads are due to the flawed market structure rather than to any intrinsic characteristic of bonds.

Institutions and Households Can Trade on the Same Exchange

Both in the current market design and in the design proposed in the Patil Report, households and institutions trade in different markets. In the next section I shall take

Municipal Securities, Division of Market Regulation, United States Securities and Exchange Commission, July 1, 2004

⁷Edwards, Amy K., Harris, Lawrence, E. and Piwovar, Michael S. (2004), "Corporate Bond Market Transparency and Transaction Costs", September 21, 2004, <http://ssrn.com/abstract=593823>

up the merits of unified markets and segregated markets. Before that, we must examine the question of feasibility: can the same exchange serve both institutional and household investors?

A clear affirmative answer is provided by the equity market where households and institutions of all sizes trade on the same exchange without any difficulty. The history of the equity market over the last three or four centuries is a fascinating story of how exclusive closed clubs have gradually evolved into inclusive markets where all traders – big and small – trade off the same order book. Both sets of traders have benefited from this unified market because the greater the diversity of players in the market the more likely it is that a potential trader would find a counter party to trade with. At critical points in this evolution, the transition to inclusive market structures has been facilitated by regulatory interventions to break down closed clubs.

Many institutions argue however that bond markets are different and that exchanges do not meet their needs in this market. Careful analysis shows that many of the complaints that institutions have against exchange trading of government securities can be easily solved:

1. *Counterparty risk*: This is easily redressed by a clearing and settlement system that provides delivery versus payment⁸. Since government securities are by definition risk free, it is important that the trading of these instruments be also risk free. This means settlement in central bank money, but does not require bilateral settlement. In fact, ideally all trades should be settled through a clearing corporation that is either backed by the central bank itself or is so well capitalized as to be more creditworthy than any other market participant. Since, we already have the Clearing Corporation of India Limited (CCIL), the issue of counterparty risk is easily addressed. At worst, it may be necessary to strengthen the capitalization of this entity.
2. *Uninformative Block Trades*: Institutions may resist the exchange structure because of a perceived need to signal uninformative trades and reduce their impact cost. This should be less of a problem in government securities markets as compared to equity markets because of the much lower incidence of asymmetric information. Yet, to the extent to which this is a problem, it can be addressed through the same means that have been used in equity markets to handle large block trades.
3. *Opaqueness*: Opaqueness is valuable for institutions that can use this opaqueness to exploit other investors. This is the principal reason why institutions love to trade in opaque OTC markets. But that is precisely the reason why public policy should insist on transparent exchanges in important markets like government securities. This is one need of institutions that we do not want to accommodate at all.

⁸The Committee on Payment and Settlement Systems (CPSS) of the Bank for International Settlements (BIS) has laid down the standards for such a delivery versus settlement (DVP) system known as DVP III.

4. *Large Trading Lots*: Institutions are accustomed to trade in large lots and have a desire not to trade in smaller lots. This desire is not completely rational because round lots in terms of face value do not translate into round numbers in terms of either the clean price or the full price. From a fund management perspective (for example, portfolio composition and portfolio duration) the only thing that matters is the market price not the face value. From a settlement and back office point of view, round lots did make a lot of sense in the era of paper certificates. In a dematerialized environment, the cost of settling an odd lot transaction is no different from the cost of settling a round lot. Thus the desire to trade round lots is a vestigial habit originating in the era of paper certificates and is completely irrelevant in today's world.

However, it is still possible for an exchange to accommodate the desire of institutions to trade only in round lots. The “all or none^{9,10}” order type achieves this very easily without creating a segregation between retail and institutional markets. It is possible that an institution's order for selling Rs 50 million face value of securities is matched against a hundred retail buy orders. By interposing a clearing corporation, we ensure that the institution has only a single settlement obligation for the Rs 50 million trade and it is the job of the clearing corporation to settle with the hundred retail investors.

The possibility of an institutional order being matched wholly or partly against a large number of retail orders is perfectly plausible. If there is greater liquidity in round lots, it is quite rational for retail investors to place bids slightly above the best round lot bid price to muscle in to this market. If a large number of retail investors do this, even a round lot “all or none” sell order will be matched against these retail bids and not against the best round lot bid price. The possibility of “all or none” orders matching against smaller orders is even greater when we consider the mid market – pension funds, provident funds, trusts and corporates – where the order size is typically several millions of rupees.

The more interesting possibility is that some institutions will overcome the vestiges of a bygone era and decide that it is not sinful any more to trade in odd lots if the price is right. By hitting favourably priced retail limit orders, these smart institutions will buy cheaper and sell dearer than those who are fixated on round

⁹The “all or none” order has been abolished in Indian equity markets and it is perfectly possible that someday they will not be needed in the Government securities markets as well. In the transitional period however, they may have a role to play in coupling two markets that are today completely segregated.

¹⁰Strictly speaking, what we need is not an “all or none” order, but an order that can be executed only in multiples of the market lot. For example, an order for Rs 200 million could be partially executed to the extent of Rs 50 million, Rs 100 million or Rs 150 million, but not for say Rs 125 million. For simplicity, I use the term “all or none” order, but in practice, a “only multiples of market lot” order would be more appropriate to achieve the desired intent.

lots. Alternately, these smart institutions may get speedier execution at the same price. For example, a round lot “all or none” sell order for Rs 50 million may be matched against 10 retail buy orders aggregating Rs 5 million (at prices slightly higher than the current best round lot bid price) and a partial execution (to the extent of Rs 45 million) of a Rs 50 million *non* “all or none” buy order from a smart institution at the current best round lot bid price. This institution’s buy order will thus get 90% execution *ahead* of earlier orders at the same price from round-lot fixated institutions. The trade matching system will (or at least ought to) execute trades this way because that allows the *round lot sell order* to execute at a better price than would otherwise be possible. This is a win-win situation for all.

Hopefully, over a period of time, the practice of trading only in round lots will gradually disappear from the market and the need for the “all or none” order would go away.

The critical point is that it is possible in a single market to have:

- Round lot “all or none” orders interacting with each other.
- Retail orders interacting with each other.
- A sufficiently large number of retail orders filling a round lot “all or none” order.
- Crossover institutional investors and arbitrageurs straddling the two sides of the market (round lot and retail) to get speedier execution and/or better prices.

Markets Should Not be Segregated

A single exchange serving the whole spectrum of investors from wholesale to retail markets is therefore perfectly feasible. However, the Patil Report asserts that the two markets must be segregated to allow the RBI to manipulate the market in order to lower the borrowing costs of the government:

“Given the current delicate stage of the G-sec market, movements in interest rates have to be suitably moderated/calibrated so that RBI is able to satisfactorily discharge its merchant banking responsibilities in respect of Central and State Government borrowings.”

It is deeply disturbing that a Group appointed by the central bank should so openly argue in favour of such brazen market manipulation. It is to be fervently hoped that this view of the report is an inadvertent aberration and that the RBI as well as the Government would reaffirm their commitment to the highest standards of market integrity. All those who value the rule of law would like to see a firm endorsement of the principle that market manipulation and fraudulent trading practices do not become any less deplorable when they are practised by the state itself.

The single most important achievement of the financial sector reforms since 1991 has been the end of financial repression and the shift to market determined rates of interest. It is universally accepted that this reform has been hugely beneficial and that it has made the Indian financial sector more robust, efficient and vibrant. If we were now to go back to financial repression (by regulating interest rates not through administrative fiat but through moral suasion) we would be surrendering the most visible and successful element of the financial sector reforms since 1991.

Apart from the totally unacceptable argument that segregation makes market manipulation and repression easier, the Patil Report offers no other argument why the two markets should be segregated. In fact every bit of evidence in the report itself argues against such segregation.

As the Patil report points out eloquently:

“The current reality is that satisfactory arrangements do not exist for non-NDS players to buy or sell government securities. Often they have to undertake trades at prices at great variance with the prices prevailing on NDS. They are also required to bear higher transaction costs.”

What the Report offers to all these genuine problems is a “solution” that has been thoroughly discredited wherever it has been tried. In India, the idea of compulsory market was first tried in the OTCEI (Over the Counter Exchange of India) which soon died a natural death. It was then proposed as a solution to the problems of lack of liquidity in mid cap and small stocks by the GP Gupta Committee in 1999¹¹. This experiment too yielded nothing. In the government bond market itself, it was introduced in the Euro MTS platform for trading Eurozone government bonds. It took all of two minutes on August 2, 2004 to show that this design does not work¹².

It is indeed surprising that the Patil Report which goes to such lengths in Section II of the report to wean the banks away from the brokers is quite happy in Section III to leave all non NDS players at the mercy of the brokers. It then adds to the misery of these non NDS players by discouraging banks from trading with them.

The market design proposed in the Report is not even a case of two “separate but equal” facilities; it consists of two separate and grossly unequal facilities. One is a liquid order driven market with low transaction costs and the other is an illiquid quote driven market. This design may be acceptable to those who think of the gilt market as a market of the banks, by the banks and for the banks. But for all those who regard the government securities market as a precious national resource to which all citizens of India should have equal and non discriminatory access, this market design is simply untenable.

¹¹G. P. Gupta (Chairman), 1999, Report of the Committee on Market Making, Securities and Exchange Board of India.

¹²The Euro MTS problem is discussed again later in this report. See also footnotes 17 and 18.

The fundamental point is that, unlike the call market, the government securities market is not just an inter bank market. The government securities market provides the foundation for all other fixed income markets, and is too important to be left to the banks alone. Viewed in this light, the bizarre eligibility rules of the NDS are totally inappropriate and irrational. Today, the NDS membership¹³ does not seem to be based on transparent criteria – for example, some but not all mutual funds are allowed to trade on the NDS, and pension funds are not allowed. It is perfectly conceivable that one day, the RBI would decide to evict all non banks from the NDS – after all there is no reason why the central bank should act as a banker to non banks by offering them current accounts and securities accounts.

After reading the Patil Report, one is left wondering whether the RBI as the guardian angel of the banks has simply invented another way to enhance the profitability of the banks through additional trading income by putting non banks like mutual funds, pension funds and insurance companies at a competitive disadvantage.

Thus a careful consideration of the arguments in the Patil Report only reinforce the intuitive and theoretically sound proposition that all investors should be able to trade in the same market. The market for government securities should not be segregated.

NDS Should Not be a Monopoly Exchange

The Patil Report simply takes it for granted that the NDS will be a monopoly exchange. It offers no arguments for why this should be so. In fact, it appears that the idea of competing exchanges was not even on the Working Group's agenda.

Over the last two decades, however, intense competition between exchanges has been one of the main driving forces for financial innovation, liquidity and efficiency. In India itself, it was the competition posed by the NSE to the incumbent BSE in the mid 1990s that converted the India equity market from a cosy club of brokers in Mumbai with antiquated trading and settlement systems to a world class electronic market with a truly national reach. In Europe the intense competition between DTB/Eurex and Liffe, between LSE and Tradepoint, between Eurex and Deutsche Borse has created large and liquid markets. In the United States, competition from ECNs (Electronic Communication Networks) has forced both the NYSE (New York Stock Exchange) and the Nasdaq to improve their trading practices. Competition from the ISE (International Stock Exchange) which raced past aside the incumbent CBOE (Chicago Board Options Exchange) in less than four years has transformed the trading of equity options.

We thus have ample evidence that competition is the best way to protect investors in the securities market¹⁴. When it comes to government securities markets, there is an

¹³More precisely, it is the eligibility rules for opening current accounts and securities accounts with the RBI that are non transparent. The eligibility to NDS flows from the possession of these accounts.

additional reason for a competitive market structure. This is because of a fundamental regulatory dilemma in the design of gilt markets:

- Central banks desire to regulate this market tightly because of the central role of the gilt markets in the financial system. Gilt markets impinge on exchange rate policy because sovereign bonds are an important vehicle for currency speculation in an open economy. They also impinge on monetary policy because of strong linkages between gilt markets and other fixed income markets including money markets. The integrity¹⁵ of these markets is therefore systemically important. Moreover since government securities are the most risk free assets in the economy, it is systemically important that they trade in markets that are free of settlement risks.
- However, since the central bank is the investment banker of the issuer of these securities, this regulatory jurisdiction gives rise to a clear conflict of interest. This conflict is only partly alleviated by shifting the jurisdiction to another government agency because the government is itself the issuer. A good example of this conflict of interest is the temptation of the central bank as the manager of the public debt government to force interest rates down using moral suasion¹⁶. Another example of the conflict of interest is the flawed market design of the Euro MTS system which was demonstrated by Citigroup's highly successful trading exploit earlier this year^{17,18}. Eurozone governments had used their clout as issuers to impose an

¹⁴One can ask whether the principle of competition does not extend to allowing OTC markets also to compete with exchanges. In principle, the answer is yes provided a truly level playing field can be ensured between OTC markets and exchanges. As I have argued earlier, however, governments and central banks have tended to favour OTC markets through regulatory and other means. For example, in the interest rate derivative market, the RBI allows banks to trade OTC derivatives, but not exchange traded derivatives. Moreover, the presence of vested interests (who prefer OTC markets for reasons other than market quality) sometimes requires a regulatory push in favour of exchanges. In the absence of these problems, we must allow the OTC markets to coexist with exchanges and wait for market forces to put these markets out of business.

¹⁵This is diametrically opposed to the suggestion in the Patil Report discussed earlier that the RBI should systemically subvert the integrity of the market by market manipulation.

¹⁶The very fact that a distinguished Working Group appointed by the RBI should not just condone but recommend that the RBI indulge in market manipulation shows how strong this temptation can become.

¹⁷ Paivi Munter and Ivar Simensen (2004), "Citigroup eurozone bonds ploy leads to panic and clampdown on trading, *Financial Times*, August 10, 2004

¹⁸Aline van Duyn and Paivi Munter (2004) "Two minutes that shook Europe's bond markets", *Financial Times*, September 10, 2004.

unusual quote driven market design in the MTS system. Interestingly, the Patil Report proposes a similar design for the non NDS market.

While this dilemma does not have a perfect solution, it can be ameliorated by two closely related steps:

- Different elements of the trading-clearing-settlement-surveillance system must be unbundled and competition must be allowed to flourish to the maximum extent possible. The market structure must specifically guard against the emergence of regulatory monopolies sanctioned and sheltered by the regulations of the central bank.
- The regulatory efforts of the central bank must be focused on those elements of the trading-clearing-settlement-surveillance system that are systemically important and competition must be allowed full sway in the rest of the market.

Proposed Market Design

We now have all the elements of the proposed market design in place (see Figure 1).

We begin by unbundling Central Counter Party (CCP) services and settlement/custody functions from the trading function.

CCP being systemically important should be vested in a single clearing corporation subject to prudential supervision by the central bank. This could be the Clearing Corporation of India Limited (CCIL). The capitalization and risk management systems at CCIL need to be reviewed to ensure that the default risk in this entity is negligible. The single clearing corporation should either have an unambiguous AAA credit rating or should be directly guaranteed by the central bank itself.

CCP services should be available to all classes of investors – both household and institutional. Needless to say, most non bank investors will receive CCP services through other intermediaries. But it is critically important that these investors have access to a sufficient pool of competing CCP intermediaries untainted by conflicts of interest. In particular there should be CCP intermediaries that are not themselves trading in the market as principals. CCIL today provides CCP services only to NDS members who are all trading as principals and thus suffer from conflicts of interest in serving other investors. Rather than build illusory Chinese walls within these organizations, it would be far better for CCIL to extend CCP services to well capitalized CCP intermediaries who are not NDS members.

Securities settlement must ultimately happen in a single central depository under direct supervision of the central bank like the Securities Settlement System (SSS) run by the RBI. But competing second level depositories (like NSDL and CDSL today and possibly foreign settlement agencies like Clearstream and Euroclear in the future) must have non discriminatory access to the SSS. Through the depository participants

of these second level depositories, all classes of investors must have non discriminatory access to settlement and custody services in this market.

Next we unbundle surveillance since a market requires unified surveillance that can track the positions and activities of different entities across different trading platforms. Surveillance is discussed in detail later in this paper.

With surveillance, clearing and settlement unbundled away, the trading platform itself is not systemically important and public policy must be to encourage as much competition as possible. Different technologies and different market micro-structures must compete fiercely with each other to provide the best deal for households and institutions. The regulatory regime for these trading platforms must be light and must encompass only the following:

- All exchanges must provide non discriminatory access to all investors – both household and institutional. An exchange may or may not require/permit these investors to come through brokers or other intermediaries. But if any class of investors is forced to come through intermediaries, the exchange shall ensure these intermediaries operate in a competitive environment untainted by conflicts of interest (in particular, intermediaries that are not themselves trading in the market as principals).
- Exchanges may charge minimum fees per transaction to recover the costs of processing a large number of small orders. Competition is absolutely critical to ensue that these fees do not become extortionate.
- All exchanges must provide complete real time pre trade and post trade transparency.
- All exchanges must maintain sufficient real time records of order flows and transaction executions and must make these available to the unified surveillance system to allow effective surveillance.
- All exchanges must expose the Application Program Interfaces (API) of their trading engine and order routing software to third party developers to an extent sufficient to allow the creation of multiple exchange screens so that investors can choose to trade in any exchange after comparing prices across different exchanges. Any investor, intermediary or third party developer should be able to build IT (information technology) systems that can interact with the exchange to obtain order book information and inject orders in real time.
- The minimum trade lot, if any, shall be reasonable from the point of view of household investors.
- Exchanges may allow “all or none¹⁹” orders to be placed.

¹⁹See footnote 10 above on the precise nature of what this paper calls the “all or none” order.

Regulation and Surveillance

Regulation and surveillance of the government securities market has been a much neglected area in India. In a profoundly important sense, the government securities market lacks a regulator with a clear legal mandate.

In the equity market, the regulatory framework rests on two main statutory pillars – the Securities Contracts Regulation Act (SCRA) and the Securities and Exchange Board of India Act (SEBI Act). In the government securities market, the RBI has only one of these statutory pillars available to it – under Section 29A of the SCRA, the Government of India has delegated regulatory powers to RBI to regulate dealings in government securities and other related securities. Consequently, the government securities market lacks²⁰ several important regulatory functions:

1. There is no statutory duty cast on the RBI to protect the interests of investors in the government securities market similar to that laid down under Sections 11(1) of the SEBI Act. Nor is there a legal duty cast on the RBI to promote, develop and regulate the market.
2. There is no statutory provision (similar to Sections 11(2)(b), 11(2)(ba) and 11(2)(c) of the SEBI Act) for the registration and regulation of various market intermediaries. For example, there is no statutory provision providing for registration and regulation of the CCIL, NDS and the SSS. In the case of the SSS and the NDS, the problem has been side stepped by carrying out these functions directly under the RBI itself. However, the assumption of operational responsibilities by the central bank creates its own set of conflicts of interest. It would be desirable for the RBI to divest these operating divisions into entities that are regulated but not owned by the RBI. Another implication of the regulatory vacuum is that there is no clear set of open and transparent eligibility requirements for the establishment of new exchanges and other intermediaries.
3. There is no statutory provision (similar to Section 11(2)(e) of the SEBI Act) for the prohibition of fraud and unfair trade practices .
4. There is no statutory provision (similar to Section 11(2)(g) of the SEBI Act)²¹ for the prohibition of fraud and unfair trade practices .
5. There is no statutory framework (similar to Section 11(2)(d) of the SEBI Act) for the promotion and regulation of self regulatory organizations (SROs). As a result,

²⁰Neither the RBI Act nor the Public Debt Act provides the equivalent of these functions.

²¹One may wonder whether there is any point in insider trading regulations in an issuer regulated market. But there are examples like the insider trading in US Treasury securities on the basis of embargoed information that the Treasury was suspending the issuance of the 30 year bond in October 2001.

the self regulatory potential of organizations like FIMMDDA (Fixed Income Money Market and Derivatives Association of India) has not been adequately realized.

There is an urgent need to put in place a comprehensive regulatory framework for the government securities market. Once that has been done, it is necessary to create an effective surveillance and enforcement mechanism.

Globally, the track record of surveillance in the government securities market has been dismal. Events like the squeeze in the German government securities markets in early 2001 have shown that surveillance is practically non-existent in some of the largest government securities markets in the world. Governments typically worry about market integrity only when it affects their interests as issuers. As long as it is only investors who are victimized by market manipulation, governments have usually turned a blind eye to market abuses. This must change and an independent formal surveillance system must be created with a clear mandate to preserve market integrity.

The RBI's principal focus historically has been the regulation of financial institutions (particularly banks) rather than the regulation of financial markets. As a result, the idea of depositor protection is well ingrained into the culture of RBI. The Patel Report suggests that there is no such tradition and culture of investor protection in the RBI. This needs to be changed and changed urgently so that the people of India can have access to a vibrant, clean, transparent and efficient market for government securities.

Conclusion

There is a need for reconsideration of many elements of the Patil Report. Government securities are a unique asset class to which all Indians should have non-discriminatory access. Segregated markets are unacceptable. The NDS should not be a monopoly because intense competition is the principal mechanism for fostering innovation and investor protection.

The Patil Report's recommendation for market manipulation by the RBI to lower the cost of borrowing of the government is unacceptable as a matter of principle. Moreover, market manipulation to reduce interest rates would reintroduce financial repression through the back door and would reverse the principal success of the financial sector reforms initiated in 1991.

The paper has proposed an alternative design for the government securities market and also a new regulatory architecture. Unified markets, non-discriminatory access to all classes of investors, intense competition and investor protection are the key elements of the proposed design.

Figure 1: Proposed market design with competing exchanges and depositories and unified clearing and surveillance

