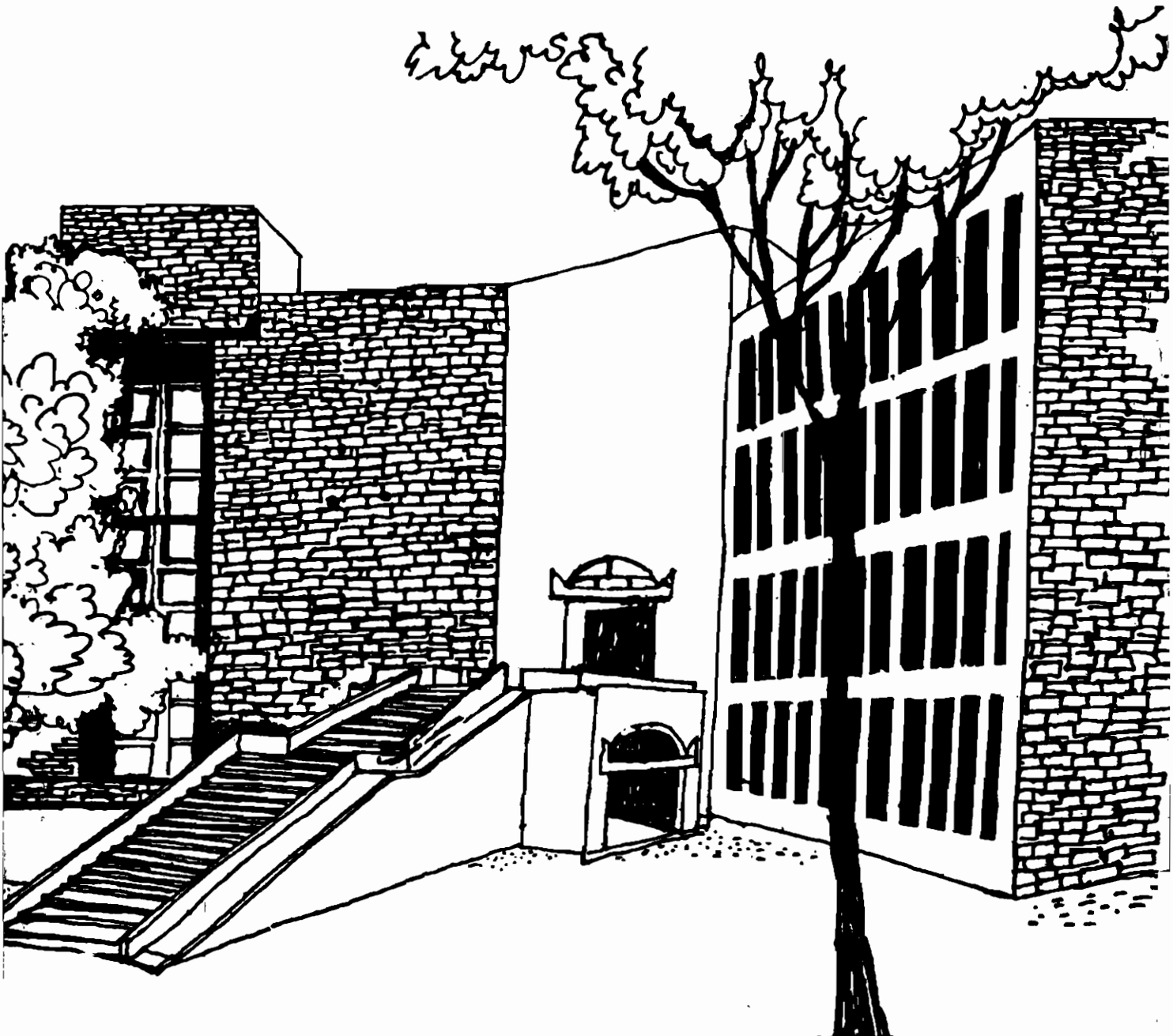




# Working Paper



**Regulatory Implications of  
Monopolies in the Securities Industry**

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# Regulatory Implications of Monopolies in the Securities Industry<sup>1</sup>

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## *Abstract*

Since the mid-1990s, investors and regulators have benefited from a high degree of competition in the Indian securities industry. Even more than all the policy changes that have taken place, it is technology and competition that have transformed the Indian capital market in the last 7-8 years. This paper shows that there is now considerable evidence that critical elements of the Indian securities industry are becoming significantly less competitive than in the past. Reduced competition would remove the single most important driver of capital market modernisation in this country and would create several serious regulatory problems. The paper argues that rather than applying the traditional solution of “regulated monopolies”, regulators need to adopt strong measures to stimulate competition. The regulator must also ruthlessly discard those elements of the regulatory regime that are anti-competitive in nature.

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## **Background**

Since the mid-1990s, investors and regulators have benefited from a high degree of competition in the securities industry. It is well recognised that even more than all the policy changes that have taken place, it is technology and competition that have

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<sup>1</sup> This study was partially supported by a research grant from the Indian Institute of Management, Ahmedabad

transformed the Indian capital market in the last 7-8 years. Since the rapid adoption of cutting edge technology is itself the product of intense competitive pressures, it would be fair to say that the progress that we have made in this period is due largely to the healthy effects of competition. The contribution of the capital market regulator has been to create a regulatory environment that permitted competition to flourish at a time when many other regulators in India have been reluctant to do so.

Today, for the first time in nearly a decade, it appears likely that the securities industry would become significantly less competitive than in the past. This would weaken the principal engine of securities market reform and require new approaches to capital market regulation.

## **Could the Industry Structure Become Monopolistic?**

### ***Derivatives Markets***

We begin by looking at the first straw in the wind – the developments in the derivative market during the first half of 2001. The graph<sup>1</sup> below shows the market share of the Stock Exchange, Mumbai (known as BSE) in this market where there are currently only two players – the BSE and the National Stock Exchange (NSE). At a glance, it is evident that in the course of just three months from February 2001 to April 2001, the derivatives market was transformed from a competitive duopoly to an effective monopoly. The BSE's market share was effectively wiped out in this short period.

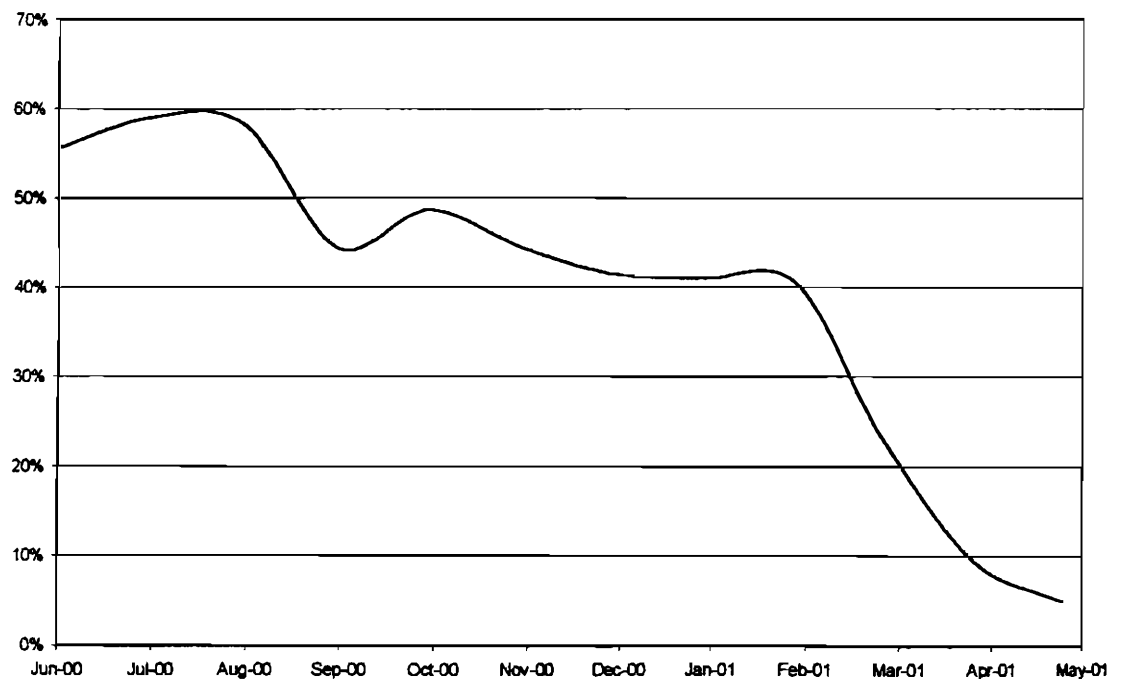
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<sup>1</sup> The source for the data underlying this graph is the Securities and Exchange Board of India.

In evaluating this phenomenon, it is worthwhile to keep in mind two important differences between the derivative market and the stock market.

- The trading and settlement cycle of a stock exchange is only a few days long while derivative contracts have much longer maturities going up to three months in India. During this period, participants can shift their position from one derivatives market to another market only by squaring off their position in one market and recreating the position in the other market. This requires them to incur the transaction costs in both markets. Alternatively, they have to wait for the existing contracts to expire in one market and create their new positions in the other market. Thus, unlike in the stock market where participants can shift from one market to another almost on a day to day basis, there are large switching costs in the derivative market.

BSE Market Share in Index Futures



- In India, most large stocks are listed in all major stock exchanges. This implies that the products traded in the various stock exchanges are more or less the same.

In the derivative market on the other hand, the contracts traded are on different indices which are not perfect substitutes for each other. It is noteworthy that the shift of volumes from one exchange to the other has happened despite this strong product differentiation.

The rapid shift of market share from BSE to NSE was reminiscent of the similar dramatic shift of trading volume in German bund futures from Liffe in London to DTB/Eurex<sup>2</sup> in Frankfurt during late 1997 and early 1998 (see chart<sup>3</sup>). That development quickly led to the sacking of Liffe's chairman and chief executive as well as the end of the trading floor and the shift to electronic trading.

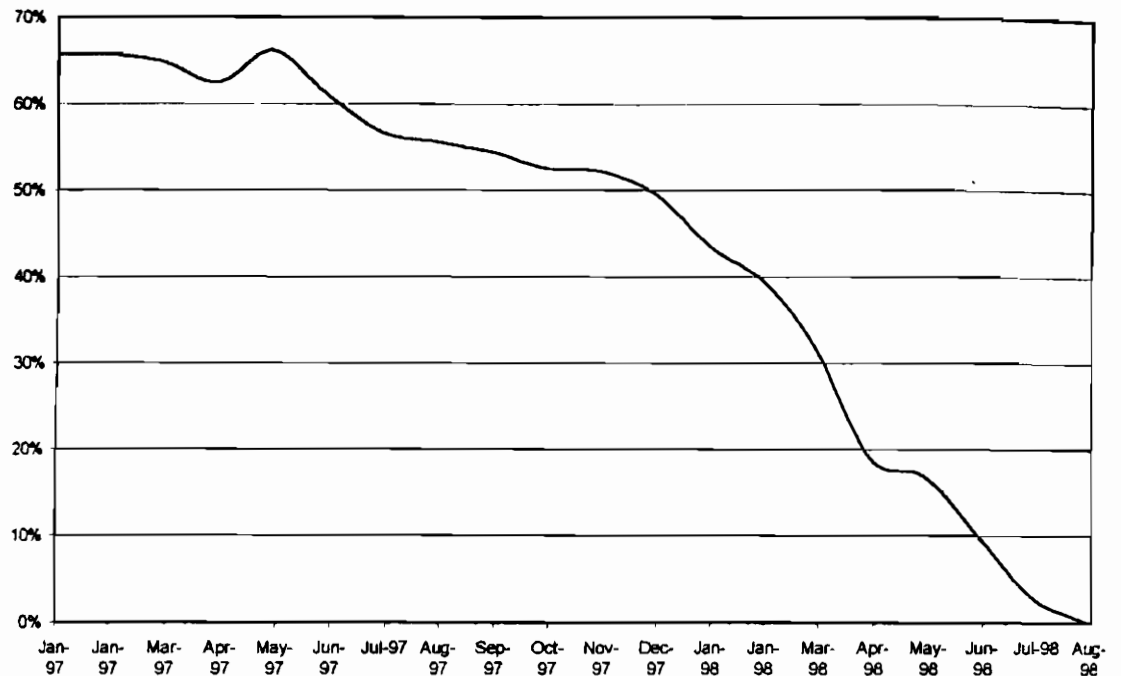
A comparison of BSE's loss of market share in Indian index futures with Liffe's loss of market share in bund futures is instructive.

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<sup>2</sup> DTB merged with the Swiss derivatives exchange and changed its name to Eurex in early 1998.

<sup>3</sup> The source for the data underlying this chart is Futures: News, Analysis & Strategies for Futures, Options & Derivatives Traders, Sep98, Vol. 27 Issue 9, p82 and Futures: News, Analysis & Strategies for Futures, Options & Derivatives Traders, Jan98, Vol. 27 Issue 1, p78.

Liffe Market Share In Bund Futures



The two cases were very different in terms of the initial trigger that took volumes away from the losing exchange. In the case of bund futures, the main driver was the lower costs of Eurex's electronic trading platform. Market participants believed that Liffe's trading pits offered superior execution quality but at a significantly higher cost. In the case of Indian index futures, both NSE and BSE offered electronic trading, and there is no evidence that costs were higher at the BSE. The shift away from BSE appears to have been induced by a drastic drop in liquidity during the market turbulence and governance crises of March 2001<sup>4</sup>.

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<sup>4</sup> There has been a suggestion that NSE's success could be attributed to the superior hedging effectiveness of the Nifty index. However, global evidence suggests that the relatively small difference between the two indices on this dimension is unlikely to have been decisive. Indeed global evidence is that the existence of a liquid cross-hedge effectively blocks the successful introduction of a future on a theoretically



- The dynamics of the shift in market share were however quite similar in both cases. Once an exchange's trading volume drops below a critical mass, a vicious circle ensues in which falling liquidity drives traders away causing liquidity to fall further. The speed with which this happens takes everybody by surprise. In the case of bund futures, the chief of Eurex was quoted in early 1998 as saying that he would be content with a 60% market share in bund futures. He certainly did not anticipate that his market share would reach 100% by the middle of the year. Similarly, in India, nobody seems to have anticipated the demise of the BSE derivative segment.

In August 2001, the BSE attempted to re-establish its derivatives market by charging a negative transaction fee. Brokers trading derivatives at BSE were offered a waiver of transaction fees in the cash market for trades up to the amount traded in the derivatives market. This effectively meant that the exchange paid its members to trade in its derivative segment. This led to a significant spike in volumes in the BSE index futures segment, and BSE's share of index futures trading volume rose from less than 5% to nearly 30%. There is however considerable evidence to suggest that this rise in volumes is unsustainable.

Anecdotal evidence suggests that a large part of this volume does not represent genuine speculative or hedging transactions, but are trades put through only to receive the fee waiver in the cash segment. There is also indirect evidence to support this proposition.

First, the open interest did not rise in step with the trading volume, and amounted to only half of the daily trading volume. By contrast, in the case of the Nifty futures (and

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superior instrument. See Holder and Tomas (1999) for an empirical analysis of the determinants of success in the battle between different futures contracts.

pre-August Sensex futures) the open interest has consistently been close to twice the daily trading volume. The very low open interest in Sensex futures since August means that most of these trades are reversed during the course of the day and only very few trades are left outstanding at the end of the day. This is exactly what would happen if people were doing derivative trades only to take advantage of the negative transaction charge. These traders might be willing to take the risk of the futures contract move against them during the short period that they keep the position open intra-day, but would be unwilling to take the much bigger risk of keeping the position open overnight.

The second piece of indirect evidence came in the week following the terrorist attacks on the World Trade Centre in New York. The heightened volatility that followed this attack saw record volumes in the Nifty futures contract, but volumes dropped sharply in the Sensex futures. On September 12, 2001, the day after the attack, Nifty volumes were over Rs 2 billion, about twice the pre-attack levels, while Sensex futures volumes of Rs 82 million were about half the pre-attack levels. A similar phenomenon was observed on September 17, 2001, as the markets in India braced themselves for the reopening of US markets that night. While Nifty futures volumes reached Rs 1.8 billion, Sensex futures volumes were only Rs 46 million. On both these days, the Sensex futures accounted for less than 5% of the index futures volumes, which is in line with the pre-August situation. Evidently, the heightened volatility on these days meant that even intra-day positions were risky, and few traders were willing to bear that risk to save a little bit of transaction costs.

The third bit of indirect evidence is that the spike in volumes in the BSE were only in the index futures contracts and not in the individual stock options that were launched in July on both exchanges. Both exchanges started off on a clean slate in this contract, but while NSE volumes rose sharply in August and September, there was no action at all in BSE. Since individual stocks are more volatile than the index, it is quite risky to keep an open position even intra-day in single stock contracts. Anybody trading

derivatives with the sole objective of saving some transaction charges in the cash market would stick to the index contract.

Both the anecdotal evidence and the indirect evidence suggest that the spike in derivative volumes on the BSE is not sustainable and would drop away when the artificial prop of a negative transaction fee is removed. Thus the effective monopoly of the NSE in derivative markets would appear to be firmly established.

### ***Equity Markets***

Indian equity markets witnessed a similar shift of market share from BSE to NSE during 1994-95. The newly started NSE took market share away from the established market leader to become the largest exchange in India. The vicious circle of falling liquidity should in normal circumstances have led to the NSE then taking the market away completely from the BSE. This did not happen for two reasons:

- BSE quickly adopted the electronic trading model introduced by the NSE. It also went on to emulate the national distribution network of the NSE though in this attempt, it was hamstrung by a regulatory regime that was biased in favour of the NSE.
- The differing trading/settlement cycles of the two exchanges meant that the product offerings of the two exchanges were not perfect substitutes. The NSE operated a Wednesday to Tuesday trading cycle where trades for the week ended Tuesday were netted and settled on a net basis. The BSE operated a Monday to Friday cycle with similar netting.

Moreover, the regulatory regime was lenient towards intra week trading positions as opposed to end of week positions. Even end of week positions could be carried forward to the next trading cycle on payment of a contango charge but much stiffer margins and limits applied to this facility than to intra week positions. There was thus

a scope for regulatory arbitrage by avoiding the creation of an end of week position and instead shifting the position from one exchange to the other on the last day of the week. In this manner it was possible to carry forward an open unsettled position indefinitely while all along being subject only to the lenient margining and risk containment regime that applied to intra week positions.

Differing settlement cycles allowed several exchanges to survive even where their market share had dropped below the critical level at which the vicious circle starts to operate. It is important to recognise that in the presence of different settlement cycles, even a person trading for delivery (with no intention of carrying positions forward) might find different exchanges attractive on different days. This is because prices differed systematically between different exchanges due to the implicit cost of carry that was impounded in the price. On a Tuesday for example, the price on BSE would be systematically higher than on the NSE because the BSE trade would be settled only three trading days after the NSE trade. The cost of carry for three days would therefore be impounded in the BSE price. Moreover, artificial regulatory barriers prevented most money market participants from arbitraging between the overnight money market interest rate and the implicit cost of carry in the stock market. Thus an institutional investor could find that the implicit cost of carry was very different from the opportunity cost of funds that it faced in the markets in which it operated. This was quite unlike the similar situation in other stock markets in the world where the implicit cost of carry was very close to the overnight inter-bank interest rate. Given this disparity, it made sense for Indian investors to choose that exchange which offered the cheapest equivalent spot rate after discounting the implicit futures price at the investor's opportunity cost of funds. This could provide an incentive for trading at an exchange where the liquidity was poorer but the effective price (equivalent spot price) was better.

From July 2, 2001, the whole regime of differing settlement cycles has been done away with. For most large stocks, the weekly cycle itself has been abolished, and for

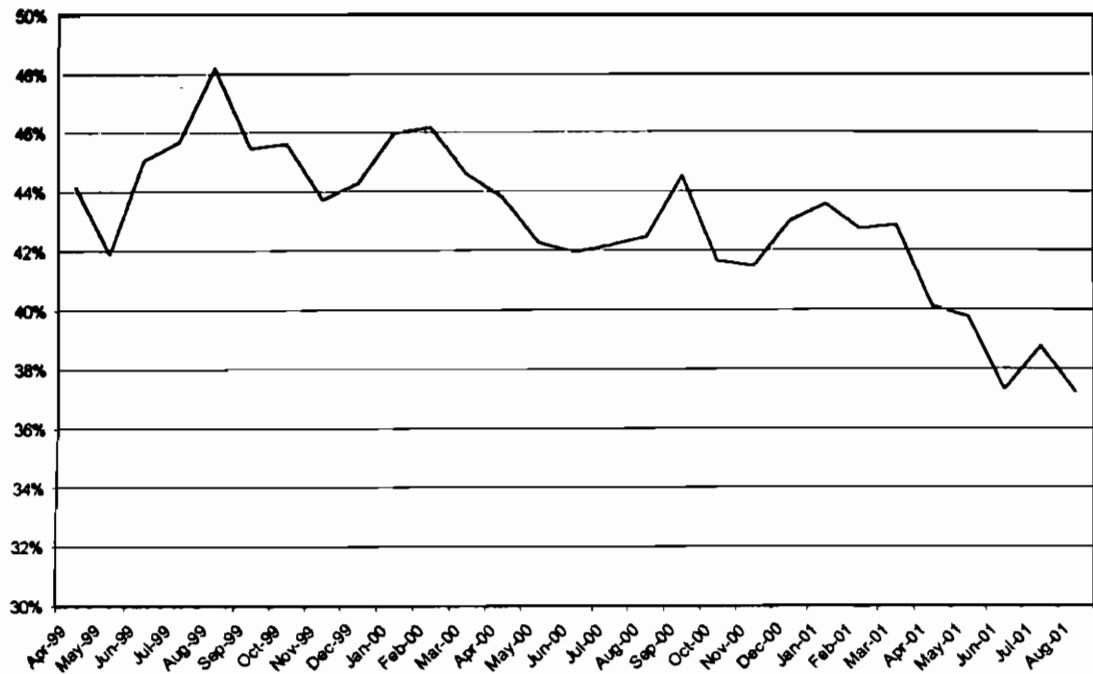
the rest, there is a uniform Monday-Friday cycle. This removes one major factor that enabled the survival of stock exchanges with low market shares. The critical question is whether that leaves room for one exchange or two.

It is significant in this context that BSE had reached near parity with NSE in terms of daily trading value in mid 1999 (see chart<sup>5</sup>). However, since early 2000, the market share of BSE in the combined trading volume of BSE and NSE has been falling steadily to below 38% in August 2001. It is possible that the high levels of market share of BSE in 1999 and its subsequent fall are related to the boom in technology stocks in 1999 and the subsequent bust in 2000. Still the sharp fall in market share since March 2001 does suggest deep-seated problems. The BSE's market share is today probably at the borderline of the critical level where the vicious circle of falling liquidity begins to operate.

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<sup>5</sup> The sources for the data underlying this chart are the web sites of the two exchanges.

**BSE Share in BSE+NSE Equity Trading**



The new regulatory regime that began on July 2, 2001 makes stock markets far more intensely competitive than they were earlier. In this environment, a situation where two exchanges have comparable market shares is not a very stable one. Both exchanges have every incentive to try and push the other below the critical level at which it ceases to be viable. Competitiveness is therefore a moving target that requires a proactive management with the ability to respond swiftly to competitive threats and opportunities. It is at this juncture that the BSE finds itself in a situation where there is a governance vacuum. The old mutual governance structure has been swept away, but the promised demutualised governance is not yet in place. In this situation, the ability of the exchange to fight an intense competitive battle and survive is open to doubt.

The possibility that the NSE's success in the derivative market could be replicated in the equity market is therefore a very real one.

## ***Depositories***

For the last few years, the market for depositories has been a contestable market struggling to become a competitive market. It is now becoming apparent that the challenger has failed to make much headway in some critical segments, and there is a possibility that the incumbent could become an effective monopoly. If part of the reason for this outcome is the presence of large switching costs, the market may perhaps not even be contestable.

The Depositories Ordinance was promulgated in September 1995 and was replaced by the Depositories Act in August 1996. The National Securities Depository Limited (NSDL) commenced business in November 1996, and enjoyed a monopoly for more than two years. The Depositories Act clearly envisaged a competitive industry structure and provided for a regulatory regime in which the depository was not subjected to price regulation or minimum performance standards. There was clearly a major disconnect between the regulatory regime and the monopoly of NSDL in the initial years. From a theoretical point of view, this regulatory vacuum could be defended only on the ground that the market was highly contestable<sup>6</sup>.

During the period in which NSDL was the sole depository, the regulator took a number of steps to kick-start the process of dematerialization. This had the unintended effect of giving a powerful head start to NSDL in this initial period. In January 1998, compulsory demat trading began for institutional investors, and in January 1999, compulsory demat trading commenced for retail investors. The country's second

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<sup>6</sup> This defence could be accepted if the regulatory regime was designed to ensure the contestability of this market. In retrospect, it is evident that the regulatory regime failed to do so. This is discussed later in this paper.

depository, the Central Depository Services (India) Limited (CDSL) commenced business in February 1999.

A price war ensued between the two depositories and it did appear for some time that the business had now become competitive. NSDL had a policy of levying a transaction charge on the value of securities bought/sold (debits/credits into the demat account) as also a custody charge on the total value of securities in the demat account. Initially, NSDL's custody charge was 7 basis points<sup>7</sup>; this was brought down to 3.5 basis points in 1997, 2 basis points in 1998 and 1 basis points in 1999. NSDL claims that the reduction was made possible by the increase in value of securities in custody, but it is possible that the last reduction or even the last two reductions were prompted by CDSL's stated policy of not levying a custody charge. NSDL's transaction charge was 2 basis points on buy and sell transactions. In 2000, this charge was halved by making it applicable only to debits into the demat account and not to credits into the account. Even after this cut, NSDL's transaction charges were twice that of CDSL, which charged 0.5 basis points on both buy and sell transactions.

Now that the second depository has been in existence for more than 2½ years, it is possible to assess the extent to which effective competition exists in the depositories business<sup>8</sup>.

On two important measures, CDSL does not seem to have even made a dent in the depositories business. In terms of investor accounts and in terms of shares dematerialised, CDSL's market share has consistently been very small.

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<sup>7</sup> A basis point is one-hundredths of one percent or one paise per hundred rupees.

<sup>8</sup> The sources for the market share data below are the web sites of the two depositories.



- In September 2001, CDSL had less than 0.1 million investor accounts as against 4.1 million investor accounts of NSDL, implying a minuscule market share of about 2%. In fact, the total number of investor accounts of CDSL was less than the number of investor accounts that NSDL was adding each month during 2000-01.
- In September 2001, the total shares dematerialised and lying in custody at NSDL was 43.8 billion shares valued at Rs 2700 billion as compared to 2.9 billion shares valued at Rs 100 billion in the case of CDSL. Again, this represents a minuscule market share for CDSL of 7% by number of shares and 4% by value.

The picture is dramatically different when we look at settlement statistics. CDSL's market share in terms of settlement value was a respectable 37-38% at the beginning of 2001. Then it rose sharply to about 46% in March-April 2001 before falling back to 37-38% by June 2001<sup>9</sup>.

The key to understanding the divergent behaviour of CDSL's share of settlement value as compared to other measures of market share is that the advantage of lower transaction fees of CDSL is highest for active traders. Every time an investor churns the portfolio around (sell all the stocks and replace them with other stocks), NSDL's charges would be 2 basis point (2 basis points on debit only) while CDSL's charges would be 1 basis point (0.5 basis points on buy and 0.5 basis points on sell). The cost

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<sup>9</sup> CDSL's share of settlement value appears to have fallen sharply to rather low levels after June 2001. This raises the question as to whether even the respectable share of settlement values that CDSL had achieved is a thing of the past. This paper is not concerned with this question because it argues that even if CDSL maintains approximate parity with NSDL on this dimension, it would make little difference to most investors.

advantage is 1 basis point in favour of CDSL. For a trader who churns the portfolio once a year, the gain of 1 basis point a year may be too small to induce switching to CDSL if there are other advantages of dealing with NSDL. For an investor who churned the portfolio once a fortnight, the gain is 1 basis points every fortnight, which translates into 26 basis points (or quarter percent) a year. This is large enough to induce a shift to CDSL unless NSDL offers compelling advantages on other dimensions. It follows therefore that it is the most active traders who would hold their demat accounts with CDSL<sup>10</sup>.

When CDSL reached near parity with NSDL in terms of settlement values with only a minuscule share of demat custody value, it is evident that its demat accounts must have been turning around very rapidly. Indeed, CDSL's demat settlement value in March 2001 was roughly equal to the entire value of demat custody at CDSL. This implies that on average CDSL account holders were churning their entire portfolio approximately once a month. By contrast, NSDL account holders were churning their entire portfolio once in one and a half years.

At its peak in March-April 2001, CDSL had a financially sustainable business model that targeted a niche market while leaving NSDL with an effective monopoly over most of the depository business. The key point here is that practically all of a

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<sup>10</sup> A word of caution is appropriate here. Depository charges are irrelevant for day traders who take only intra-day positions and therefore do not have to give or take delivery of shares. Depository transaction charges are critical to those who churn their portfolios rapidly by actually giving or taking delivery on their trades. These are the "active traders" referred to above.

depository's revenues come from transaction charges<sup>11</sup> and a depository that attracts enough active traders<sup>12</sup> can earn enough revenues to be profitable even if its market share in terms of investor accounts or custody is minuscule. This was the model that CDSL had followed with apparent success in early 2001. For reasons that are not fully clear<sup>13</sup>, even this niche model appears to have got into serious trouble in the second half of 2001 (see footnote 9). But the thrust of this paper is not on the difficulties that CDSL is facing now. The central argument here is that even in March-April 2001, CDSL was only a niche player and the depositories business was an effective monopoly.

The question that needs to be asked is that if the second depository is at best a niche player and at worst a failure, then is the depository market even contestable? There does not appear to be anybody in India<sup>14</sup> that is even thinking of the depository business as a potential business opportunity. Any new entrant would face even more severe entry barriers than CDSL faced in 1999. There appear to be significant

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<sup>11</sup> CDSL does not charge custody fees and depends almost entirely on transaction charges. NSDL uses a wide repertoire of charges, but in 2000-01, transaction charges accounted for 90% of operating revenues.

<sup>12</sup> See footnote 10.

<sup>13</sup> Once again, the governance issues at the CDSL might have had something to do with this. The dramatic drop in trading volumes beginning March 2001 and the shift to rolling settlement in July 2001 might also have played an important role.

<sup>14</sup> As and when India opens up its capital account, there might be an interest on the part of international clearing and settlement agencies like Clearstream, DTCC or Euroclear to enter the Indian depository business.

switching costs for most investors to change their depository participant or depository. More importantly, the regulatory regime has unwittingly created large entry barriers.

The key barrier is that the issuer company has to enter into an agreement with the depository and establish electronic connectivity with the depository before that depository can offer demat services in relation to that issuer. This barrier does not appear to be contemplated in the Depositories Act, but has been imposed by the regulator with a view to ensuring the co-operation of the issuer company.

Another key barrier is that the software systems of the existing depositories are not designed with open interfaces to allow any new depository to establish connectivity with them easily and automatically. I remember asking senior officials of the two depositories in a casual conversation whether their software was designed to allow a third depository to interface with them easily and quickly. Both of them said that they were hoping that no new depository would emerge. This is of course the fond dream of every monopolist or duopolist, but the tragedy is that this situation has arisen in a regulatory regime that is founded on the principle of competing depositories.

In retrospect, it is clear that the regulators did not realise the importance of software in the depository business and the consequential need to subject it to regulatory oversight<sup>15</sup>. In retrospect, it does appear that the competing depository model would work only if the software of the depositories is treated on par with its rules and by-laws. This is because the truly critical operating rules of a depository are embedded in

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<sup>15</sup> Since there is so little global experience with competing depositories (and the little that there is is so unsatisfactory), the regulatory failure is quite understandable. As more and more of the operating rules of financial intermediaries are embedded in software, the principle of extending regulatory oversight to software would probably become applicable to larger and larger segments of the financial sector globally.

its software and are not visible in its published rules and by-laws. If the source code of the software were treated as part of the by-laws<sup>16</sup>, then it would imply that the software would be open to public scrutiny and every major software change affecting the public interfaces should go through the same process of regulatory approval as changes in the by-laws.

Whatever the regulatory considerations might have been in 1996, it is evident today that the regulatory regime that was put in place then is internally inconsistent in that the fine print of that regime is at odds with the principle of competition that underlies it. There is an urgent need to review this regulatory regime today.

### **Regulatory Implications of a Monopolistic Industry Structure**

There are a number of ways in which the emerging monopolistic structure of the Indian securities industry impacts the regulatory regime:

- The current regulatory stance of the Securities and Exchange Board of India presumes a competitive market structure. In the case of the depositories, the competitive model is enshrined in the legislation itself.

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<sup>16</sup> It might be objected that this would require the depositories to give up their intellectual property in the software created by them. This is not necessarily so. With modern object oriented methodologies, it is possible to hide the actual implementation of most of the software while exposing all the important interfaces to public scrutiny. It should be possible to subject these interfaces to regulatory oversight without compromising the intellectual property of the bulk of the software. While I make no attempt to hide my personal commitment to open source software, the proposal being made here does not require the regulator to embrace the open source movement.

- The regulator has not hitherto interfered with commercial decisions regarding transaction charges and other pricing issues. If some hitherto competitive entities have to be treated like regulated utilities, it would be a major change in the regulatory paradigm.
- In the case of the stock market, there is a possibility that the predominant exchange in terms of trading may be different from the predominant exchange in terms of listing. This would call into question the whole SRO approach to listing regulation, which presumes that an exchange where the stock is actively traded has every incentive to enforce listing compliance. The dichotomy between listing and trading is already a serious issue in case of the smaller regional exchanges, but if the problem extends to the top rung of companies, it become critical.

Important as all of these are, an even more important consideration is the fact that reduced competition would remove one of the most powerful positive forces in the Indian capital market. The force that has made our capital markets more investor friendly and provided cost and efficiency gains in the last decade would no longer be available. It is possible that much of what has been achieved in the last few years would be reversed, as monopolies become progressively unresponsive to investor needs.

### **Possible Regulatory Response to Monopolistic Trends**

There are broadly two approaches to deal with the emerging monopolistic trends. The first and more obvious approach is to attempt to regulate the emerging monopolies. The second and far more effective approach is to pursue regulatory policies that would increase competition significantly. To the extent to which the second approach is successful, the first approach may not be needed at all. Nevertheless, there is the possibility that competition may not emerge and the regulator may then have to consider ways of regulating the monopolies that it is unable to eliminate.

### ***Regulating the Monopolies***

In the case of the depository, one option available to the regulator is to consider treating the depository as a regulated monopoly subject to minimum performance standards and price regulation. This would require significant enhancement of the regulator's competence and resources. Moreover, global experience with regulated monopolies in financial and non-financial sector suggest that competition is a much more effective regulator than administrative decision-making (see, for example, the criticism in Hriska and Ellig (2000) of the SEC's proposal (Securities and Exchange Commission, 2000) to impose cost-of-service regulation on the providers of stock market data). Similarly, Gramm and Gay (1994) document the enormous difficulties that even a well meaning head of a regulatory agency faces in preventing regulations from becoming obsolete and stifling innovation.

Another option is to change the governance structure of the depository by making it essentially user owned and user managed. Many clearing and settlement agencies world-wide have this characteristic, but the current discontent with clearing and settlement globally does not suggest that this approach too has been hugely successful.

In the case of the stock exchanges, the regulatory problems are accentuated by the dichotomy between listing and trading. As already stated, the NSE is the dominant exchange by trading volume but is unimportant in terms of primary listing. This dichotomy could be addressed by creating a National Listing Authority (NLA) on the lines of the UK model. The NLA could be within SEBI or it could be a separate SRO subject to SEBI oversight. Even if the regulator is able to foster increased competition in securities trading, the dichotomy between trading and listing is unlikely to go away. As such, the creation of an NLA is a desirable step in any case. This would also provide an opportunity to strengthen the statutory penalties for non-compliance with listing requirements.

In the case of stock exchanges, the option of treating them as regulated monopolies is even less attractive than in case of depositories because of the constant process of innovation that goes on in terms of design of new instruments and changes in market microstructure.

### ***Fostering Competition***

Given the limited possibility of effective regulation of monopolies in the securities industry, the regulatory initiatives to foster competition are extremely important.

Global experience suggests that securities trading is a highly contestable and competitive business (Beny and Jackson, 1999). Fostering competition in this area should be relatively easy (Biglari and Hunt, 2000). What is required is the willingness on the part of the regulator to license new stock exchanges with varying governance structures and market designs. For example, active encouragement to ECNs could be one way to maintain competition in the stock market. Similarly, regulatory provisions that artificially preserve monopolies should be scrapped quickly. For example, section 13 of the Securities Contract Regulation Act prohibits two persons from entering into securities contracts (other than spot delivery contracts) except through a stock exchange. This section confers totally unwarranted and unjustified monopoly privileges on a stock exchange, and therefore, it needs to be repealed as soon as possible. Similarly, the by-laws of the stock exchanges must be perused carefully to identify and repeal those that are anti-competitive in nature. Oesterle (2000) provides a good description of how self-regulatory organisations (SROs) use their by-laws to stifle competition.

The depository business on the other hand is significantly less competitive globally and is perhaps not highly contestable either. Nevertheless, I believe that regulatory interventions could make this business sufficiently contestable. But for this to happen our regulators would have to go beyond what regulators have done globally. The key is to reduce switching costs for investors and depository participants and to ensure



fast and easy inter-connectivity for a potential new depository. The crucial hurdles here are at the software end, and I believe that the regulators would have to extend their oversight to software source code to make this happen. The source code<sup>17</sup> for the key interfaces of the depository must be regarded as part of its by-laws and subjected to the same level of public scrutiny and regulatory oversight.

The ultimate source of competition to the Indian securities industry would be from outside the country. As and when the country becomes more open on the capital account, incumbent monopolies would face intense competition from global exchanges as well as clearing and settlement agencies. However, it is imprudent to rely only on this source of competition. First, on current indications, an open capital account appears to be a distant destination. Second, a highly competitive domestic securities industry would be more likely to withstand global competition when it does arrive. To tolerate monopolies today would be to risk the complete domination of the Indian securities industry by foreign players when do we open our markets to global competition.

## **Conclusion**

This paper has shown that there is now considerable evidence that critical elements of the Indian securities industry are becoming significantly less competitive than in the past. Reduced competition would remove the single most important driver of capital market modernisation in this country and would create several serious regulatory problems. It is true that regulators could attempt to deal with this problem by applying the traditional solution of “regulated monopolies”. Some steps in this direction may be indeed be called for – the creation of a National Listing Authority for example – but this approach has its limitations. In the long run, it is necessary to think of

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<sup>17</sup> See however footnote 16

measures that would stimulate competition. Fostering competition is part of the regulator's mandate to regulate and develop our capital markets. To achieve this goal, the regulator must ruthlessly discard those elements of the regulatory regime that are anti-competitive in nature. Pro-active measures to encourage competition are also called for. I also believe that regulators need to go beyond their traditional domain and extend their regulatory oversight to key elements of software that could create barriers to entry.

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