

Opportunity Assessment and Entry Strategy Formulation

Assessing the Indian market for securities processing, clearing and outsourcing

Final Draft

Prepared for:

A multinational technology-driven solutions provider for the financial industry

IMA India

June 12, 2009



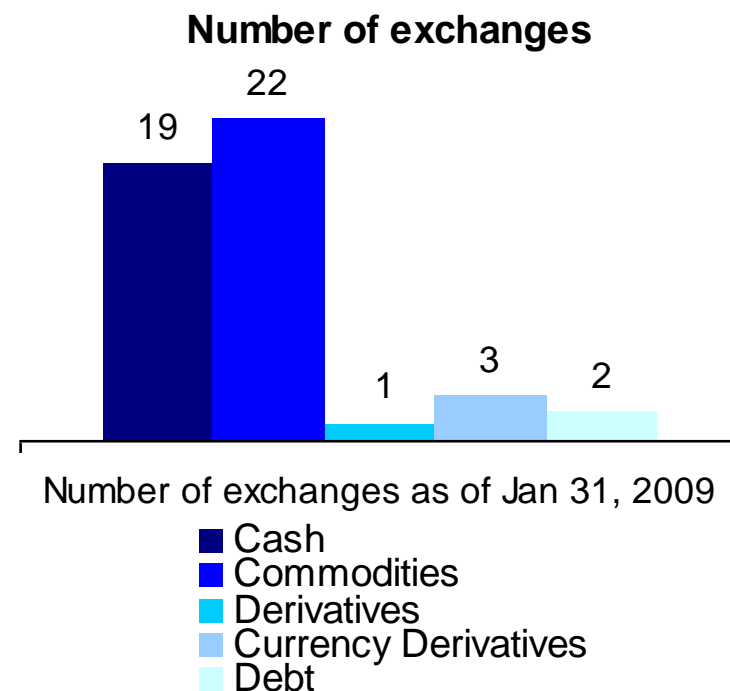
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I. Trends in exchanges and market intermediaries

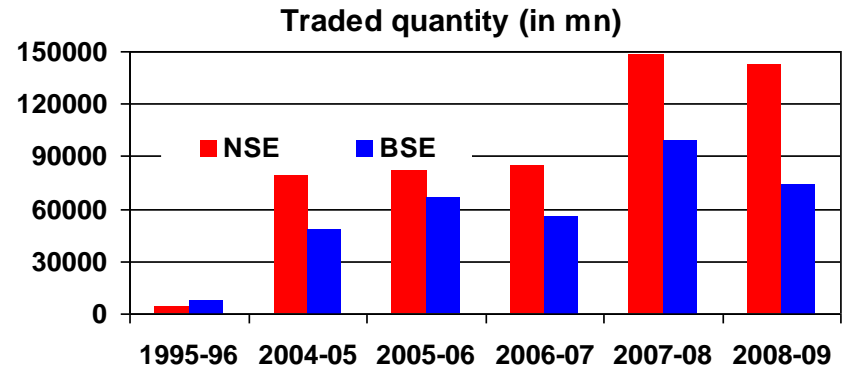
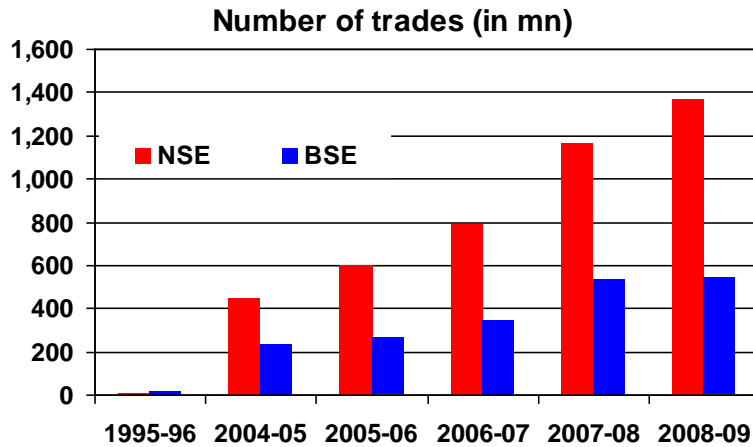
Number of Exchanges in India

- Of the 19 cash exchanges, only 4 are active in a meaningful way – NSE, BSE, CSE and UPSE. Of these, the first two are by far the largest
- Of the 22 commodity exchanges, only 6 are screen-based while 2 more are likely to shift to screen-based trading
- Two new commodity exchanges are being set up: The Kotak Group has recently obtained permission to open the country's 5th national commodity exchange; earlier, Indiabulls had obtained permission to set up a national commodities exchange
- All the 3 currency derivative exchanges are less than a year old

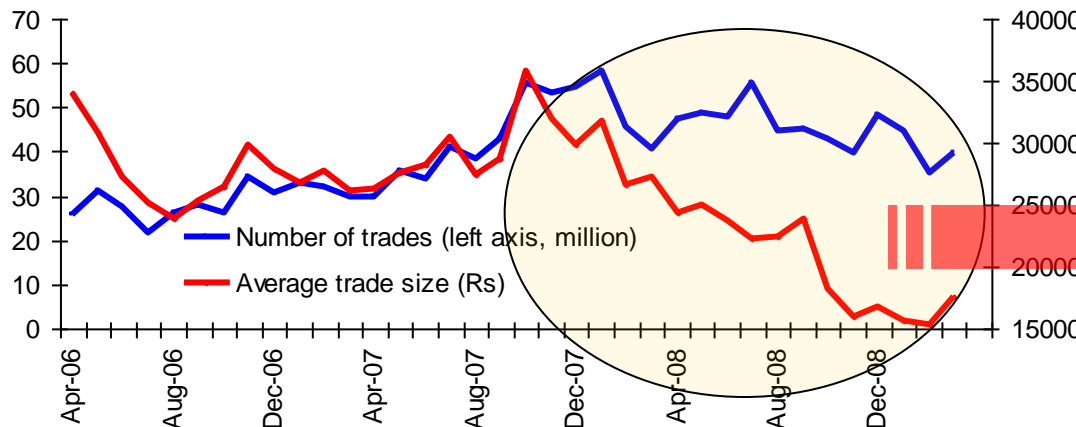


In the last 5 years, exchanges have increasingly begun to compete with each other in attracting issuers, investors and participants; technology, among other factors, is being used as a key competitive tool

Trends in the Equity Cash Segment

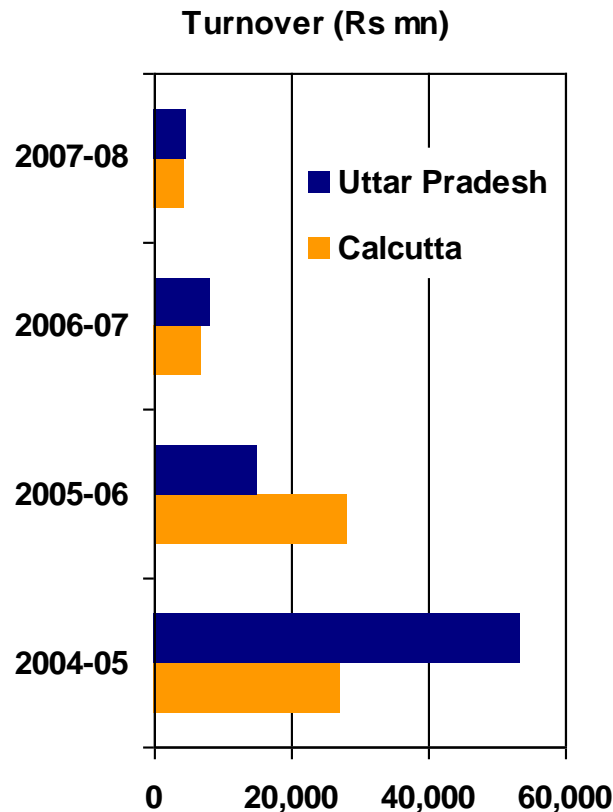
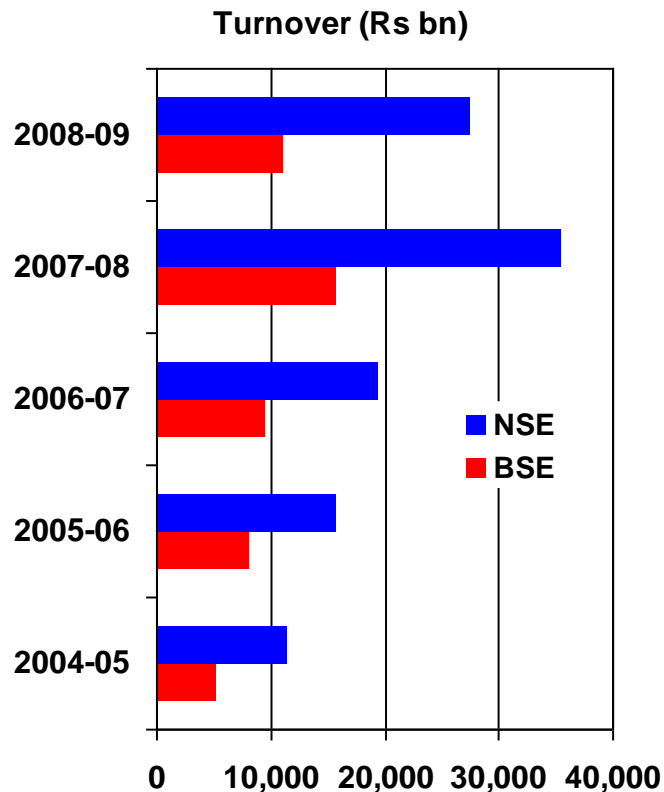


Trading volumes saw a significant increase through the bull run of 2004-08, but have subsequently declined



A decline in trading volumes and more drastically, in average trade size has impacted the income of brokerage firms

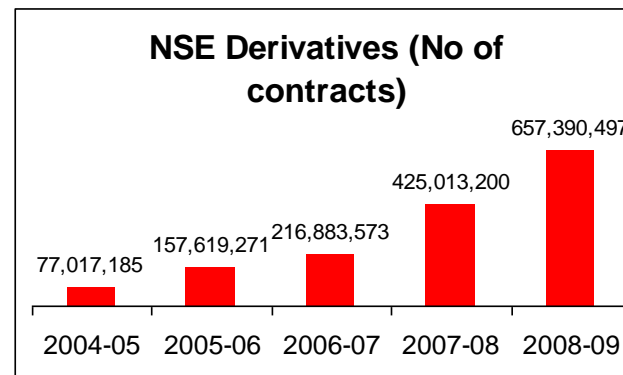
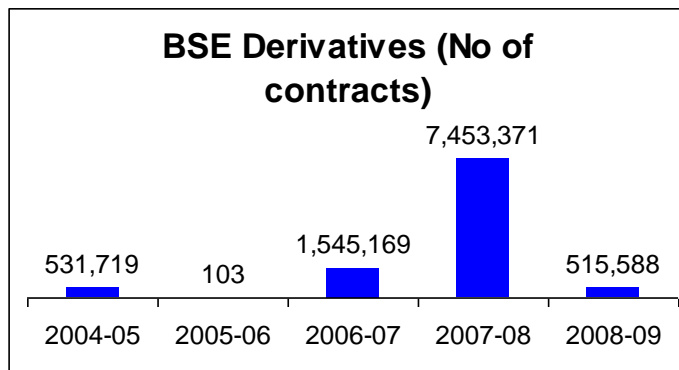
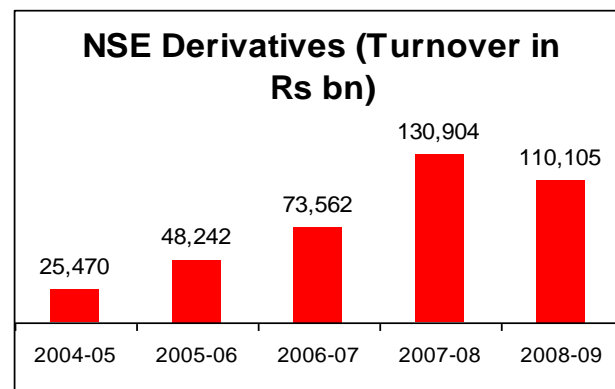
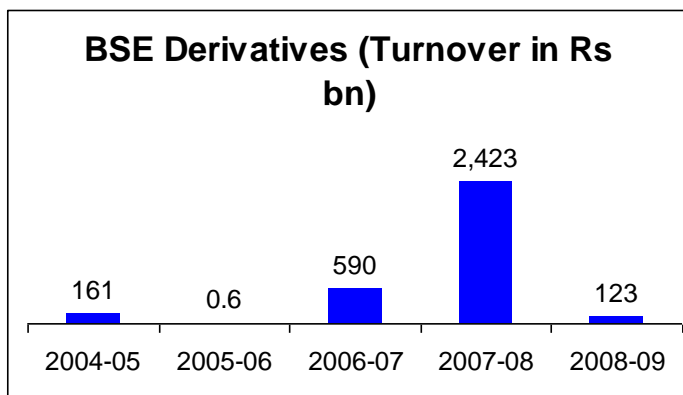
Trends in the Equity Cash Segment



- Compared to BSE and NSE, the turnover of other exchanges in the cash segment is significantly lower
- Volumes at exchanges other than UP and Calcutta exchanges are negligible

NSE, which is younger than the BSE and was smaller in comparison both in terms of number of trades and quantity of trade, overtook BSE in the late 1990s, with a consistently higher rate of growth

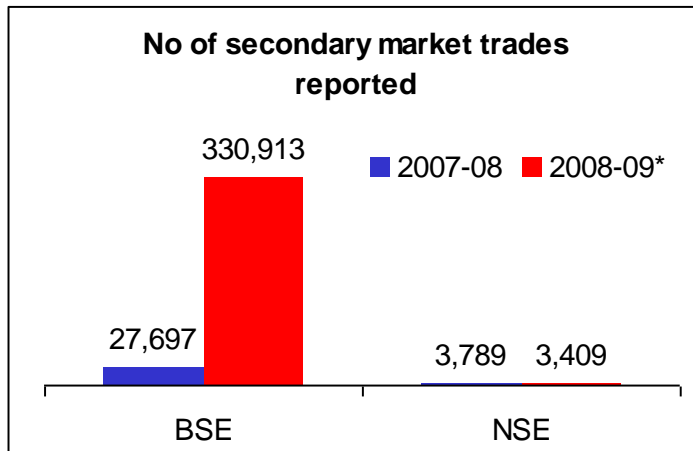
Trends in the Derivatives Segment



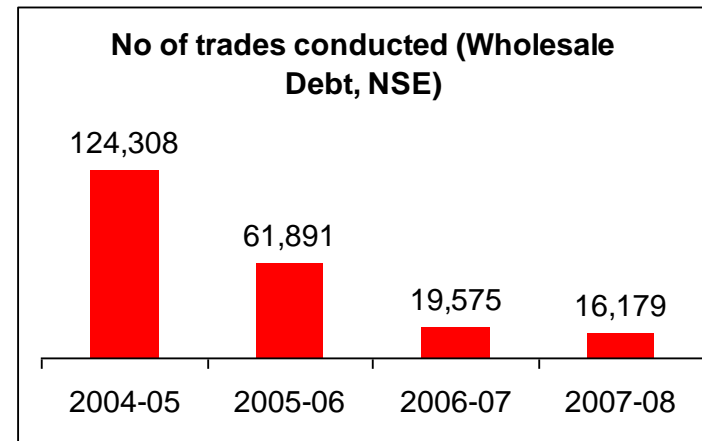
The average value of derivative contracts has seen a decline in 2008-09 both at BSE and NSE. However, at NSE, the number of contracts has risen in 2008-09, implying a sharp decline in average contract values.

*April to January 2008-09

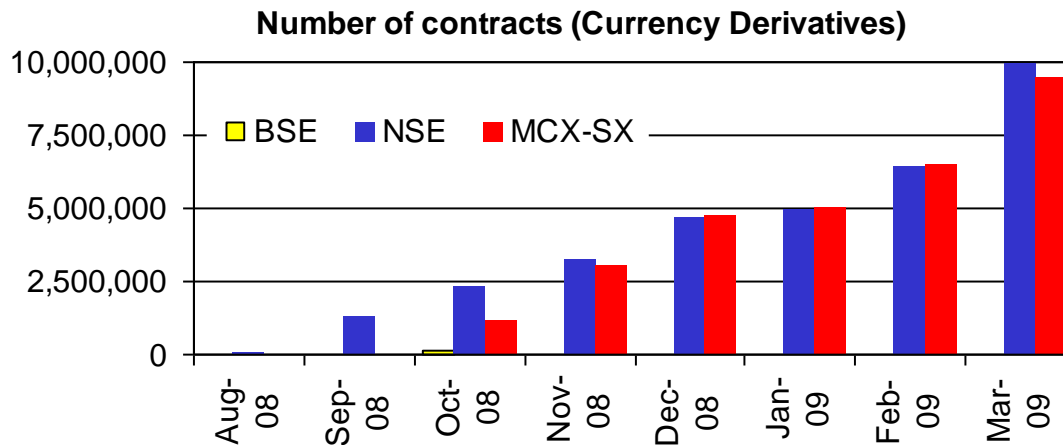
Trends in the Debt and Currency Segments



The corporate debt market saw a ten-fold increase in trade at BSE...



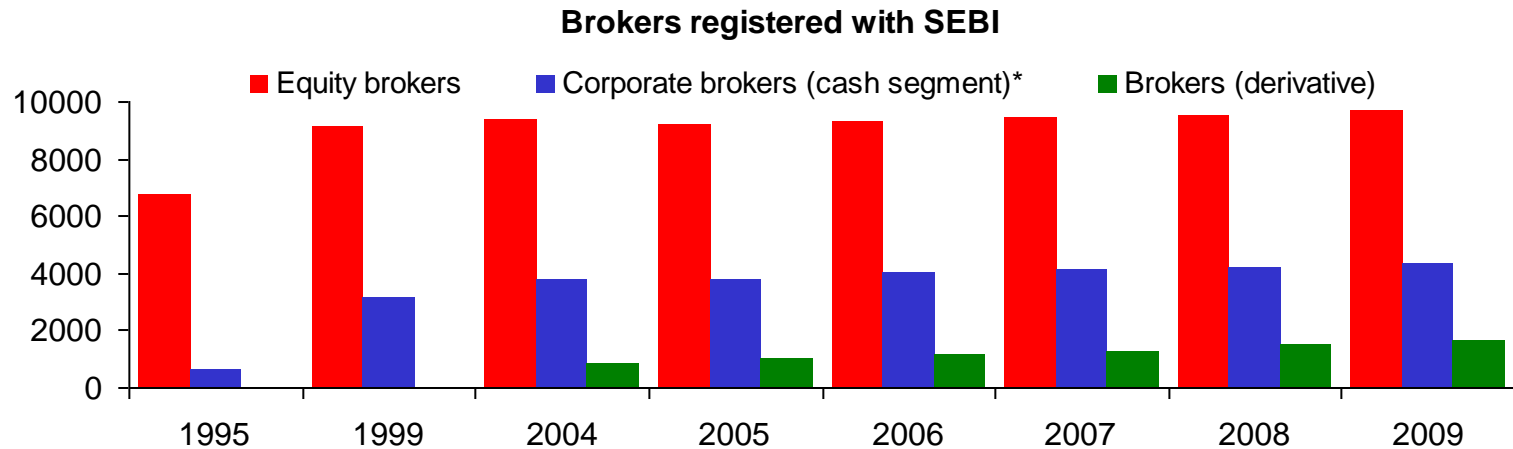
...however, the wholesale debt trade at NSE has seen a consistent decline over years



The main players in the currency derivative segment are NSE and MCX-SX, which are engaged in fierce competition; BSE is negligible by comparison

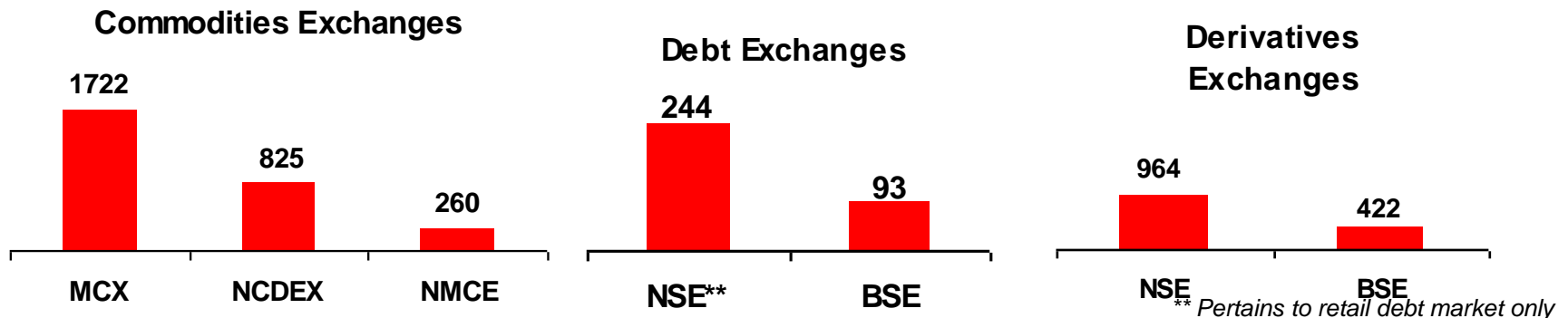
* April to January 2008-09

Number of Brokers, by Exchange

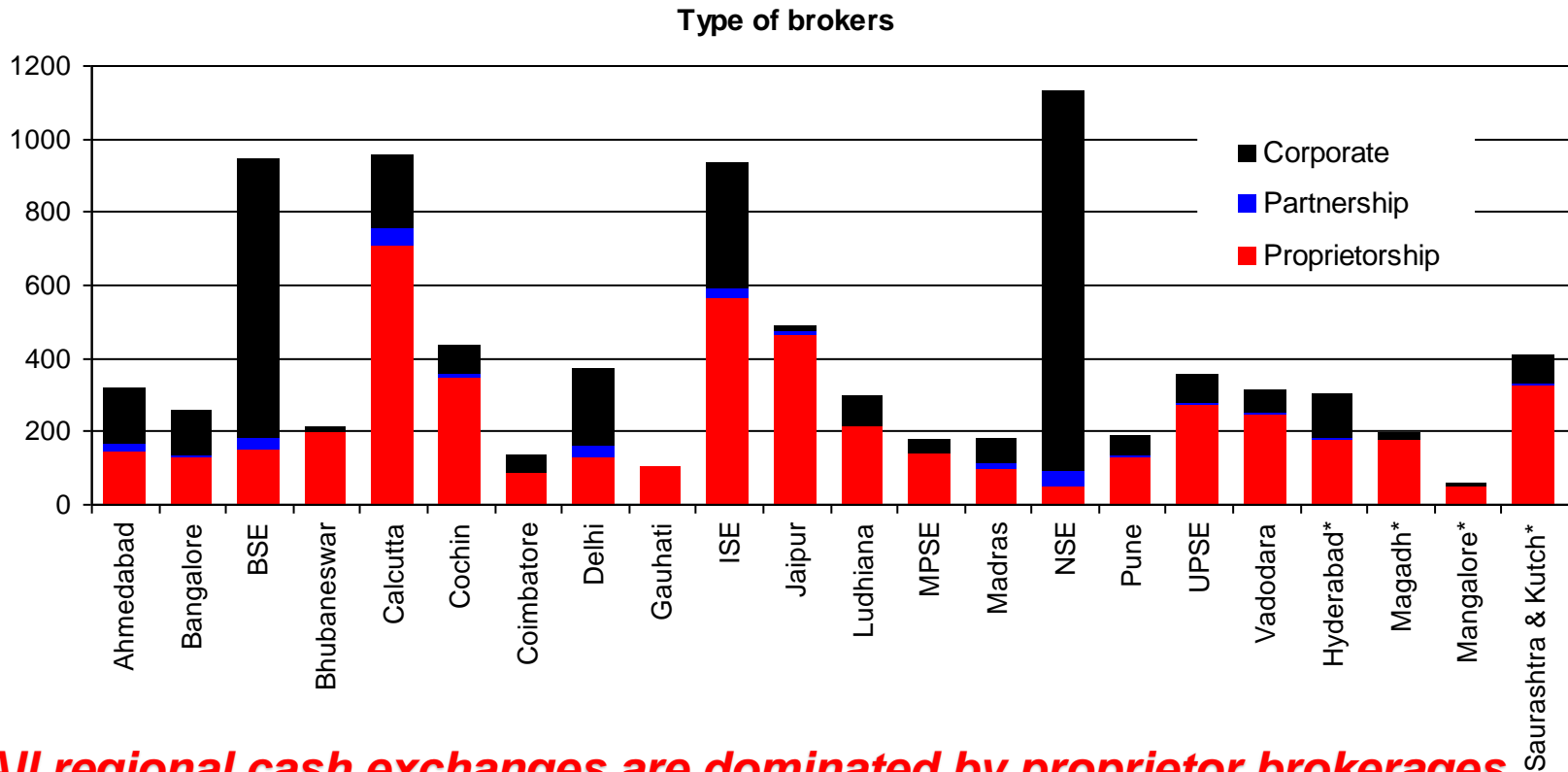


* Brokerages that operate as companies, not individuals

The number of brokers at the exchanges has not changed significantly during the past decade, especially in the cash segment. This scenario is likely to change if capital adequacy requirements are increased and more stringent regulations are introduced.



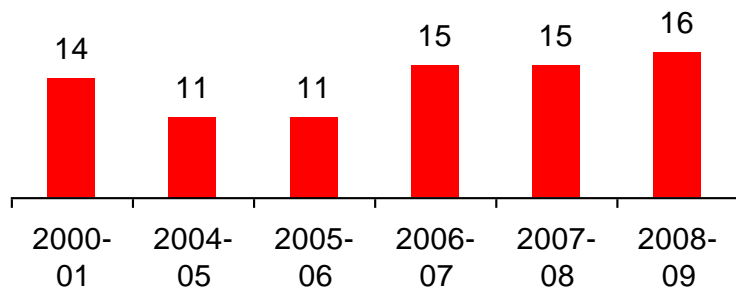
Type of Brokers: Cash Segment



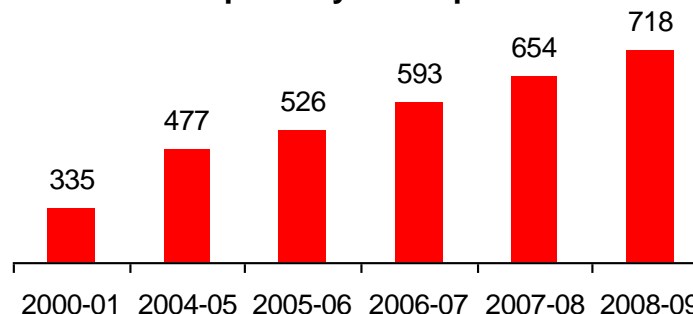
All regional cash exchanges are dominated by proprietor brokerages, which implies low transaction volumes as well as low technology sophistication. Hence, XX's market focus should be limited to NSE and BSE.

Other Market Intermediaries

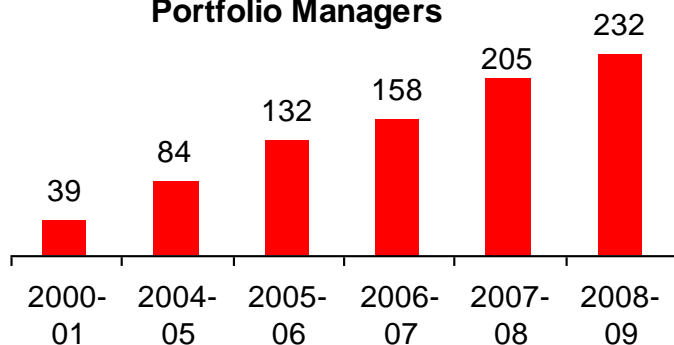
Custodians



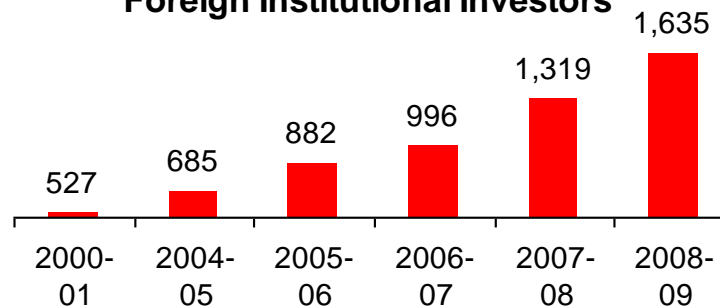
Depository Participants



Portfolio Managers



Foreign Institutional Investors



There has been a consistent growth in the number of market intermediaries over the past decade

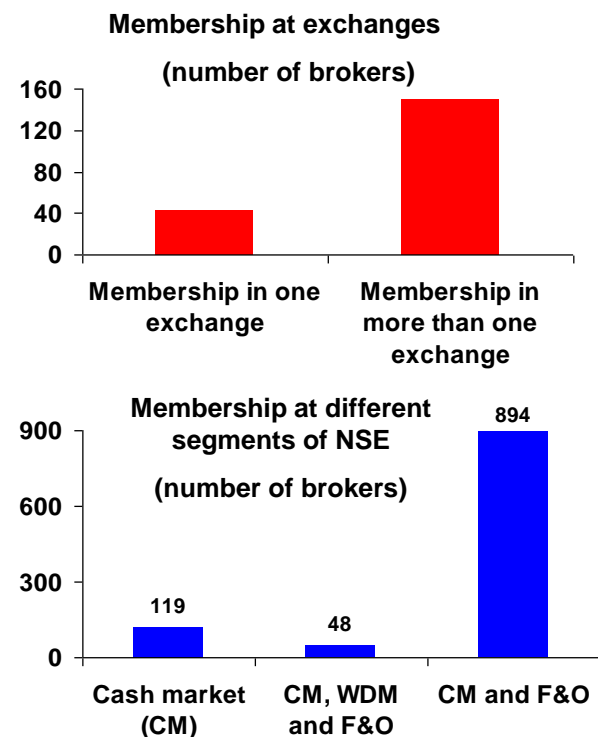
II. The broking industry

General Trends in the Broking Industry

- The broking industry comprises of over 9,000 brokers listed with the Securities and Exchange Board of India (SEBI); of these, only 47 are publicly listed organisations
- ***The top 100 brokers account for 73% and 75% of the cash market turnover of BSE and NSE respectively*** (the top 100 securities account for 71% of the trading volume in BSE and 84% in NSE) – implying that most of the other brokers are small and marginal players
 - While the share of top securities in the total turnover has declined over the years, ***the share of top brokers in trading volumes has increased***
 - this implies greater depth in securities trading and increasing consolidation in the broking industry
 - The recent slump in the stock market has affected small brokerage houses more than the medium and large ones, thus paving the way for further consolidation
- Despite the rapid growth in information technology, only a small share of trade takes place online; current industry estimates for online trading range from 5-20%; however, this share is rising rapidly

Trends in the Broking Industry

- Intense competition and price pressures have led brokerage houses to diversify into other exchanges or service offerings: several brokerages now have memberships in more than one stock exchange, and across equities, derivatives and commodities, enabling them to expand their business into a number of products; they are also increasingly offering portfolio management services, mutual funds, IPOs, depository services, and merchant banking, to enhance fee-based income
 - During the recent dip in the market, listed brokerages with pure broking exposure saw a sharper decline in their stock prices, compared to the more diversified ones.
- A number of retail-oriented players, such as Indiabulls, India Infoline, etc, are exploring an entry into the institutional broking space; conversely, institutional brokers like Enam Securities are entering the retail broking business
- Similarly, domestic brokerages have begun offering overseas investment options to Indian investors; conversely, international brokerage houses, such as Interactive Brokers Group, are utilising the same route to set up their business in India

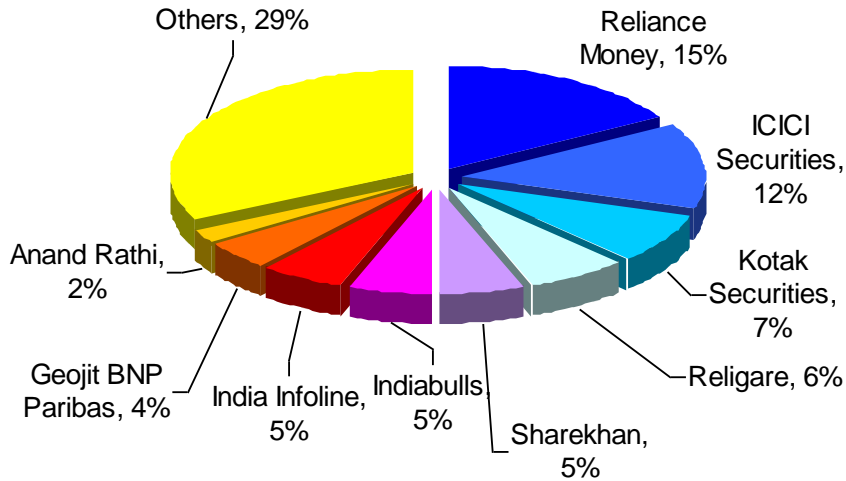


Source: Dun & Bradstreet, 2008 (data based on 200 brokerage firms surveyed by D&B); NSE

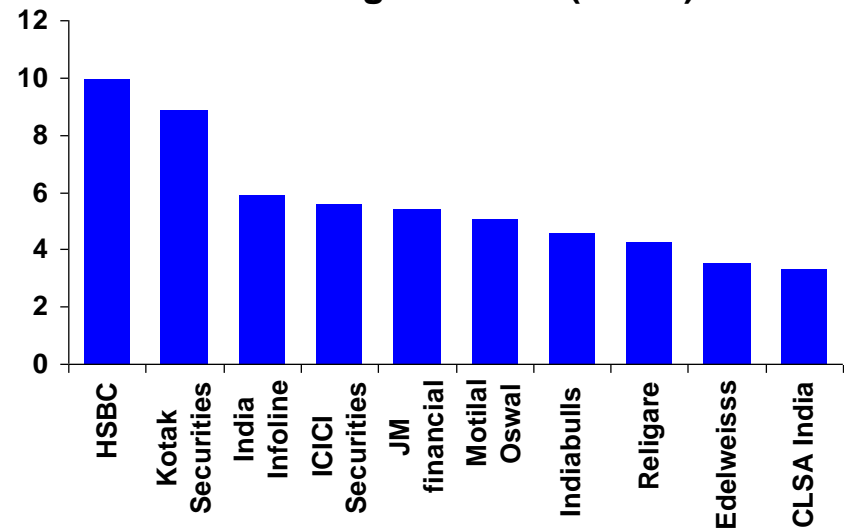
The Top Brokerage Firms

[See detailed list of brokerage firms](#)

Top brokerage firms by market share in terms of accounts



Top brokerage firms by brokerage revenue (Rs bn)*



Total accounts ~12 mn

Very recently, large brokerage houses have initiated talks with SEBI for grading Indian brokers in order to facilitate assignment of open interest limits for each broker and to help investors know the level of risk when they deal with brokers in each category. Credit rating agency CRISIL has also initiated a service for rating broking firms.

* Based on information released by select brokerage firms

II. A. Technology usage: Key findings

Technology needs

- The key areas of technology requirement include:
 - DP module
 - Client interface module (front end)
 - Exchange interface (front end)
 - Risk management
 - Clearing and settlement (back office)
 - Portfolio management; wealth management (front end and back end)
 - Payroll, accounts, CRM (internal)
- However, technology needs differ significantly, (both quantitatively and qualitatively) between domestic brokerages and foreign ones
- Since most medium to large brokers have diversified into a number of functions, their technology needs are also spread across those functions

Technology usage in the broking industry

- For most brokers, software accounts for the greatest share of technology spending, followed by human resources; for online brokerages, hardware is the biggest component (~50%), followed by software and people (~25% each)
- On average, medium to large broking companies spend 7-10% of their revenues on IT
- The usual industry spend on IT infrastructure and human resources range from Rs 2.5 million (in relatively smaller firms) to Rs 100 million (in large brokerages). IT spends are much higher for online retail brokerages and are estimated at Rs 250-500 million.
- AMC (Annual Maintenance Contract) cost ranges between 15-20% of capital cost across all categories of brokers – almost all software and hardware in a brokerage is covered by AMCs

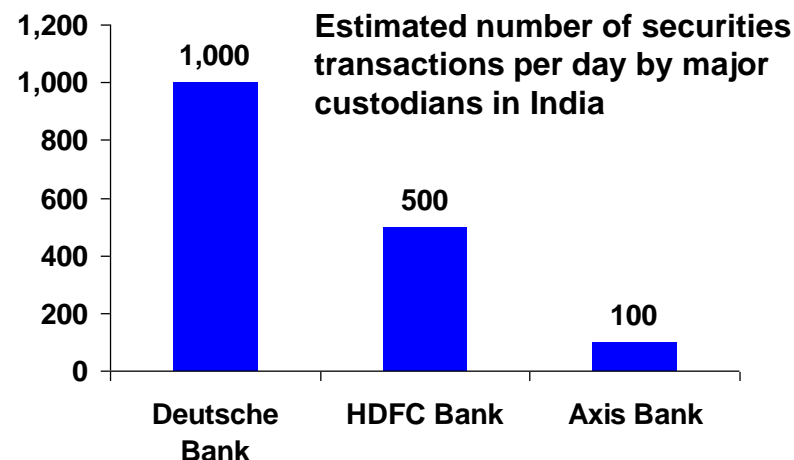
Technology in the Back Office: a nascent market

- Despite the introduction of STP (straight through processing), the broker back office is a relatively neglected area in the Indian broking industry – most brokers do not see it as a differentiating factor and have not historically given it priority
- Cost is the paramount decision driver when acquiring back office software, for most brokers
 - A number of small brokers continue to use DOS-based back office solutions which were acquired in the 1990s, as they are not willing to incur the cost or the inconvenience of shifting to Windows-based platforms
 - Vendors, such as Comtek and Apex Softcell, that used to provide DOS-based programmes, continue to support such installations, thereby reducing the incentive for brokerages to shift, even further
- The market for back office applications is characterised by the presence of many small and low cost service providers

III. Allied opportunity: Custodians

A Snapshot of Custodial Operations in India

- The majority of custodians (13 out of 16) in India are banks. Among the largest custodians are Deutsche Bank, Citibank, HSBC, Axis Bank, Standard Chartered Bank.
- Most FIIs operate through Deutsche Bank, Citibank and HSBC
- Overseas custodians often outsource their operations to a local player (sub-custodian). For instance, in India, JP Morgan has outsourced its custodial activities to Standard Chartered Bank. This arrangement has enabled JP Morgan to provide its clients the advantage of having a single point of contact, rather than operating separately through an Indian custodian.



Current Status of Technology Use and Needs

- The key software requirements of custodians involve trade reconciliation and confirmation in the clearing and settlement process
 - This requires interfaces with exchange, brokers, clearing corporation, clearing banks and depository participants
 - In addition, custodians are required to report to their clients regularly
- At present SEBI-empanelled vendors (NSE IT, FT, NSDL) provide an STP gateway that is used by brokers, fund managers and custodians to intimate the execution of trades
- The trade execution information is downloaded by custodians through this gateway (or through SWIFT codes in the case of overseas transactions) and subsequently uploaded to their back office software
- The back office software performs the trade matching process
- Confirmation is subsequently generated and sent to brokers

IV. Competition for XX

Capital Market Technology Vendors

Company Name		Company Name	
1. Financial Technologies (FTIL)	I	16. Comtek Bizsoft	I
2. SunGard	F	17. Futuresoft Solutions	I
3. SDG Software Technologies (bought by 3i-Infotech)	I	18. Hitech Software Solutions	I
4. Trigyn Technologies	I	19. Hypersoft Technologies	I
5. CMC	I	20. Indo-Swiss Infotech	I
6. NSE IT	I	21. Internet Exchangenet.com	I
7. Syntel	F	22. Mangalam Compunet	I
8. Headstrong	F	23. Microsense Services	I
9. Icicle Technologies	I	24. Nascent Computer Solutions	I
10. Marketplace Technologies	I	25. Net Equity Technologies	I
11. Cerebrus Technologies	I	26. Reliable Software Systems	I
12. Electronic Financial Network	F	27. SSI Technologies	I
13. Acer eSolutions	I	28. TCS	I
14. Apex Softcell	I	29. BitSoft Consultancy Services	I
15. Informatica	F	30. OMnesys	F

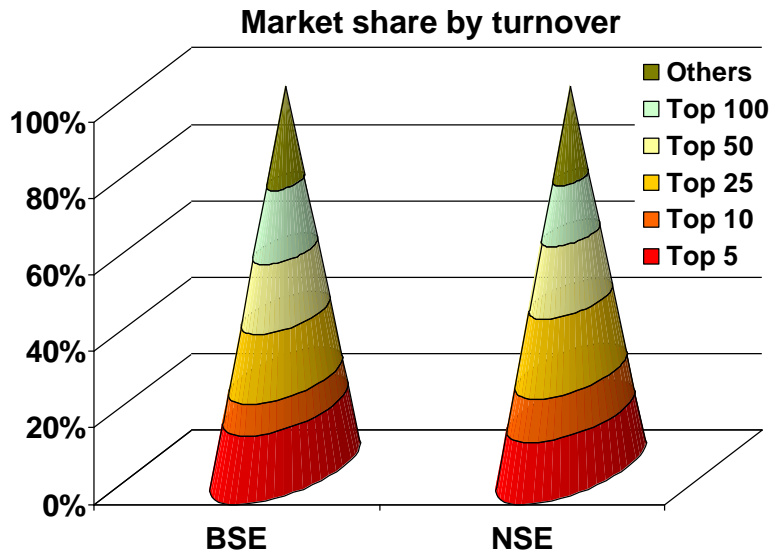
V. Outlook and Recommendations

The Outlook for (Large) Technology Vendors

- **Scalability will be a key prerequisite:** Growth in trading volumes is likely to put pressure on small technology vendors, both for front office and back office due to their limited scalability
 - The key challenge will be to provide cost-efficient solutions capable of handling significantly higher throughput, while retaining the element of personalised service
 - This presents an opportunity for large vendors provided they are able to adapt to dynamic customer requirements
- **Technology will need to keep pace with regulations:** As the regulatory framework in India becomes more stringent, technology solutions will have to integrate many new features
- **New markets:** Currently, debt market transactions are predominantly undertaken on an over-the-counter basis; as they move towards screen-based trading, an entirely new set of opportunities will become available for technology vendors – solution providers that have experience in debt markets will be at an advantage in this environment

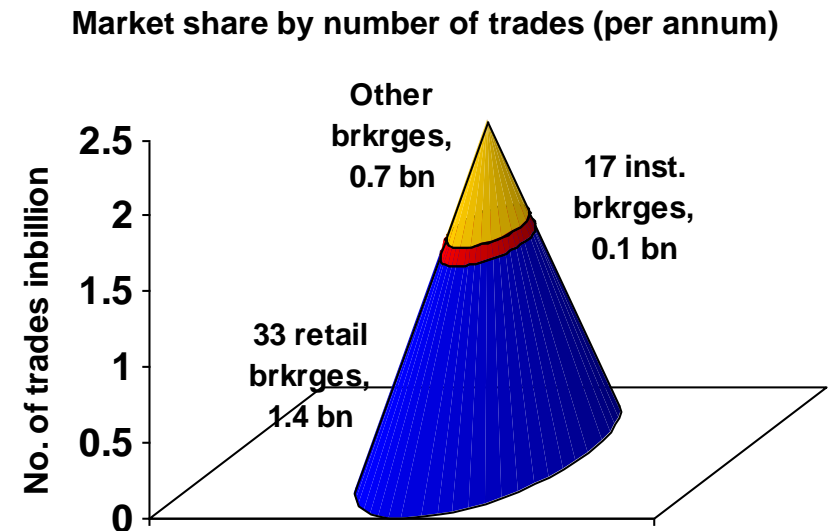
VI. Market size

Market Share of Top Brokers



Source: SEBI

Top 50 brokers trading at BSE and NSE account for almost 60% of turnover of the cash segment of these two exchanges



Source: IMA research

Top 50 brokers (consisting of 33 retail and 17 institutional brokers) account for around 68% of all trades in the equity and currency futures segments

Market size for back office applications (for top 50 brokers)

Market size for brokers' back office applications		
	Present market size (Rs mn per annum) Total back office cost per trade x estimated no. of trades per year	Future market size (5 years, Rs mn per annum)* Total back office cost per trade x estimated no. of trades per year
Retail	368.5 (USD 7.37 mn)	1080.3 (USD 21.61 mn)
Institutional	195.5 (USD 3.91 mn)	573.3 (USD 11.47 mn)
Total	564.0 (USD 11.28 mn)	1653.6 (USD 33.07 mn)

Source: IMA Research based on industry & vendor interviews; brokerage firm annual reports

* Assuming the compound annual growth rate for number of trades at BSE and NSE during the past 5 years will remain the same during the next 5 years, i.e., 24%.

The market can be significantly larger if the setting up of new exchanges and introduction of new products is taken into account.