

A case study of the Indian equity derivatives market

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The genesis

- The proposal to start the equity derivatives market in India was submitted by the NSE to SEBI in 1996.
Motivation? (a) Further development of the equity market, (b) differentiate NSE from BSE.
- SEBI's response was to set up a 28-person committee.
The chairman was Dr. L. C. Gupta.
The role of the committee: decide phasing of products, risk management for derivatives, to ensure the safety of equity markets.

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Institutional development for equity derivatives

- The same trading and clearing infrastructure as spot for equity derivatives.
- The first product decided by the committee was index derivatives.
Motivation? The index is less vulnerable to short-squeezes than individual stocks.
- Trading forwards was only permitted on securities by the Securities Contract Regulation Act, 1952.
The law had to be amended to permit trading index derivatives.
- Cash settlement was required for derivatives on index; contracts that were not physically settled had to be enforceable.
- Once the above laws were amended, the path was cleared for doing cash settlement for equity derivatives trades.

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What happened in between the proposal to the start of the market?

- The amendment to the SCRA was crucial.
- An index was constructed at the NSE, specifically suited to be liquid enough to be an underlying for derivatives. This is the Nifty index.
- Any trader on the derivatives market had to be certified to trade derivatives.

This initiated a tremendous effort to train the equity community on using equity derivatives, and set up processes for the certification of members.

The evolution of equity derivatives in India

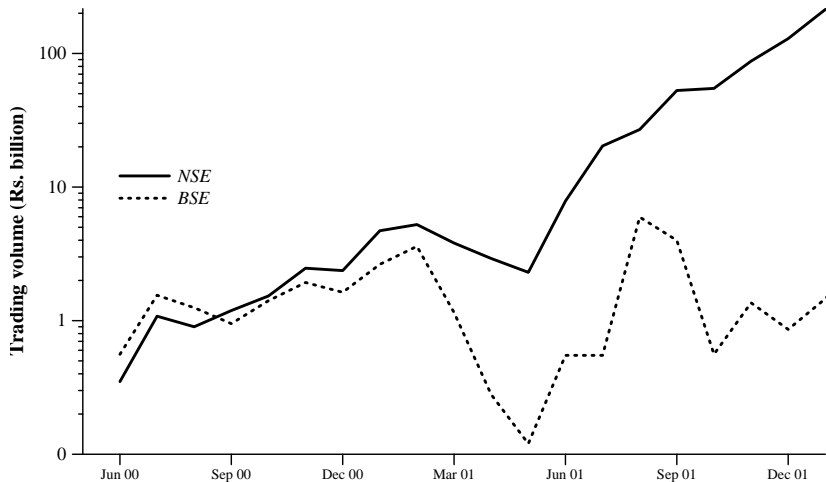
Index futures

- It took four years from 1996 to the start of derivatives trading in 2000.
- The first to trade were index futures in June 2000.
- At each point in time, there are three contract maturities: one-, two-, three-months.
- The contracts mature on the last Thursday of each month.

Growth of the derivatives market

- The initial market growth was very slow – the average daily traded volumes for the first six months was consistently under a crore rupees.
- The first fillip to equity derivatives trading came at the end of the IT crash of 2001.
SEBI moved the spot market decisively from weekly to rolling settlement and permitted trading of:
 - 1 Index options in June 2001,
 - 2 Stock options in July, and
 - 3 Stock futures in November 2001.

Growth in Indian equity derivatives



The state of the market today

- Equity derivatives trade 2.5 to 3 times the volumes of equity spot with 25,000 to 30,000 crores daily.
- The index is the most traded product, rather than individual stocks.
- Index options are around 24% of the product.
- Stock options trading is very thin.
- Most of the trading is concentrated in the near-month contract.

The size of the market today

Trade Statistics for 04-Oct-2007		
Product	No. of contracts	Turnover (Rs. cr.) *
Index Futures	618463	16112.04
Stock Futures	1024122	45622.93
Index Options	218347	5667.4
Stock Options	42767	1910.9
Interest Futures	0	0
F&O Total	1903699	69313.27

INR 69,313 crore is USD 17.55 billion.

ie, the daily F&O trades are equal to 1.6% of the equity market cap and four times that annually.

If the brokerage revenues are 15 bps on the roundtrip trade, it is INR 2.6 million daily.

The ten most active underlyings in the NSE F&O segment

Ten Most Active Underlyings

By Contract Value | [By No. of Contracts](#)

As on 04-Oct-2007 16:15:24 IST

Symbol	No of Contracts Traded	Contract Value (Rs.lakhs)
NFTYMCA50	-	-
POWERGRID	-	-
NIFTY	829727	2151898.91
REL	55987	459682.79
RELIANCE	84501	307241.10
RELCAPITAL	27620	271855.34
RPL	35292	193244.99
TATASTEEL	31736	184854.92
NTPC	45572	165906.09
RCOM	33539	150641.11

Number of stocks with derivatives trading on them

- At the start of every month, the set of stocks is re-assessed for entry into the derivatives market.
- The assessment is done using a set of rules – little ambiguity about which stocks are candidates for trading derivatives:
 - 1 The stock should be among the top 500 stocks by market cap and traded volume averaged over the last six months.
 - 2 The market open position should not be less than Rs.500 million.
 - 3 It should take more than Rs.100,000 to move the stock price by more than **quarter sigma**.
 - 4 If the issue size of an IPO is more than Rs.50 billion, derivatives can be issued on the stock on the date of listing.

Nifty futures volumes

Instrument Type	Symbol	Expiry Date	Option Type	Strike Price	No of Contracts Traded	Contract Value(Rs. lakhs)
FUTIDX	NIFTY	25OCT2007	-	-	601423	1559381.58
FUTIDX	NIFTY	29NOV2007	-	-	9174	23751.90
FUTIDX	NIFTY	27DEC2007	-	-	783	2025.61

Nifty options volumes

Instrument Type	Symbol	Expiry Date	Option Type	Strike Price	No of Contracts Traded	Contract Value(Rs. lakhs)
OPTIDX	NIFTY	25OCT2007	PE	5000.00	42275	107711.84
OPTIDX	NIFTY	25OCT2007	CE	5200.00	33384	89196.87
OPTIDX	NIFTY	25OCT2007	PE	5100.00	32484	84860.71
OPTIDX	NIFTY	25OCT2007	PE	5200.00	25943	69463.81
OPTIDX	NIFTY	25OCT2007	PE	4900.00	15205	37796.28
OPTIDX	NIFTY	25OCT2007	CE	5300.00	11381	30701.61
OPTIDX	NIFTY	25OCT2007	CE	5100.00	8962	23794.92
OPTIDX	NIFTY	25OCT2007	PE	4800.00	9477	22987.27
OPTIDX	NIFTY	25OCT2007	CE	5000.00	7313	19311.37
OPTIDX	NIFTY	25OCT2007	PE	4700.00	3631	8602.22

What India did differently

- A unified exchange for trading both spot and derivatives.
- A new methodology for stock market index, targetting low cost to arbitrage derivatives.
- Cash settlement for stock options and futures.
- Intra-day real-time margining at the client level.