Indian stock market volatility

Ajay Shah

3 October 2006

Is vol bad?

- An efficient market is one which responds to news rapidly
- Prices that adjust are of essence to the efficient functioning of a market economy
- The job of financial markets is to hold a mirror up to the real economy.
- So equity returns vol is not bad.
- Example: Imagine a market manipulator, who trades on the market to force an artificial price and/or artificially low vol.

What drives equity vol?

- *"Fundamental" factors*
  - Macroeconomic stability - vol of GDP growth
    Stabilising or destabilising monetary policy, fiscal policy.
  - Competition on markets - more competition means more uncertain earnings
  - Leverage of firms
  - Indian firms that graduate into MNCs
  - Crises: currency crisis, political crises
- *Factors internal to the securities markets*
  - Liquidity of the market: be able to absorb shocks to the order flow.
  - Securities trading issues: "adequate" supply of rational traders - individuals, hedge funds, arbitrageurs.
  - Crises: payments crisis, scandal on the market, regulatory crackdown giving adverse shocks to liquidity.

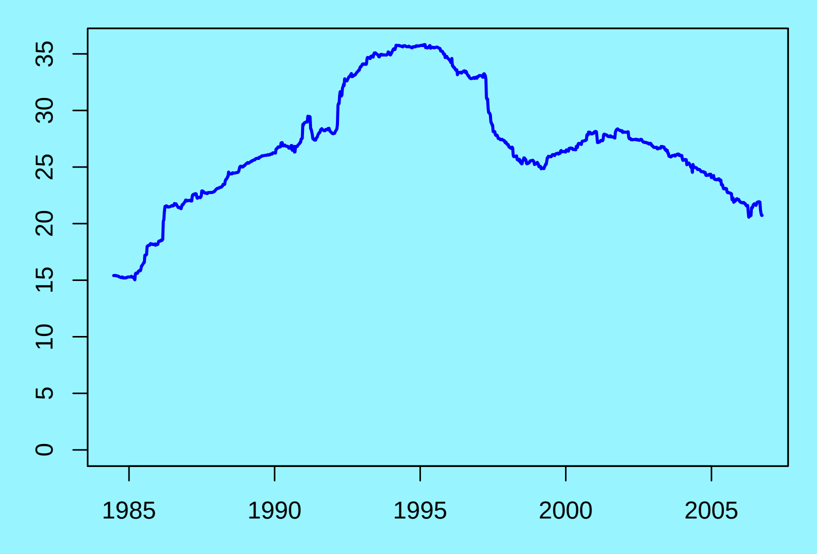
What happened in India in recent decades?

- GDP volatility has dropped
- Competition has gone up
- Equity has come to dominate the financing of firms
- Market liquidity has risen - but still small by world standards
- Firms have started becoming MNCs
- More rational traders - more individuals, more foreign investors, even a few hedge funds.
- Crises: 1991 currency crisis, 1992 Harshad Mehta, Sharp drop in IT stocks, Calcutta Stock Exchange scandal, elections in May 2004.

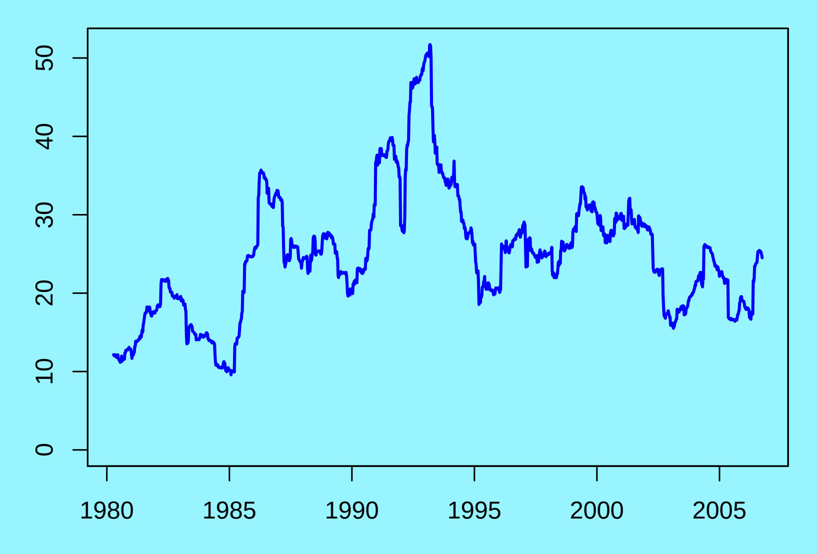
Data resources

- Indian market: BSE Sensex till July 1990, Nifty after that – 27.5 years.
- Data for 22 indexes in all, all of which have atleast 9.5 years of daily data
- Data updated till 30 September 2006.

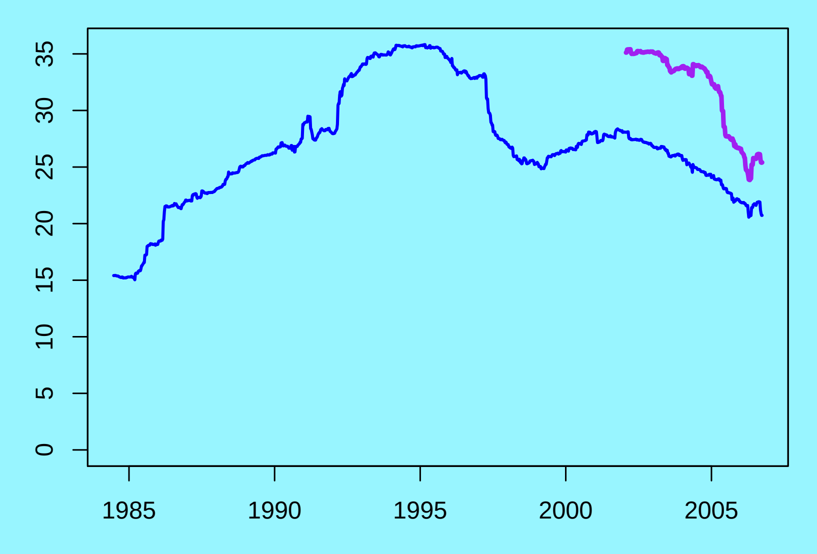
Five-year moving window volatility



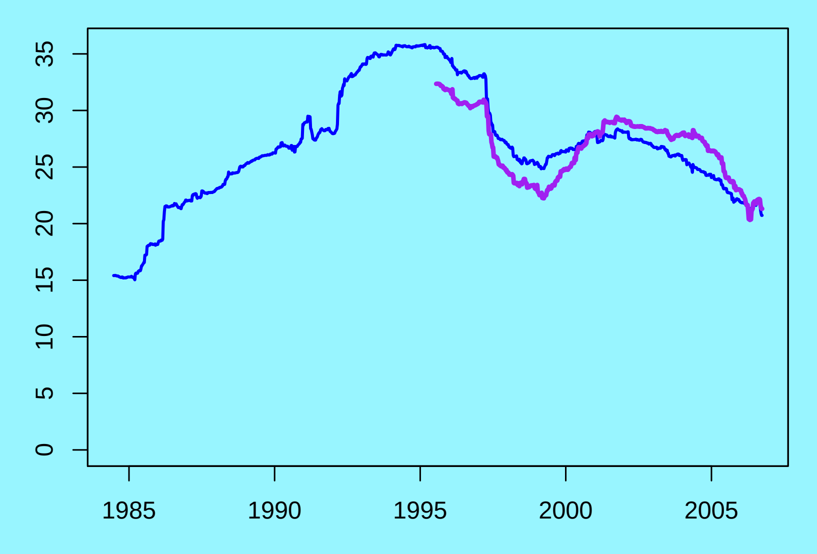
One-year moving window volatility



Nifty versus Nifty junior



Nifty versus broad market (CMIE Cospi)



Cross-country comparison (latest 9.5 years)

1	Australia	12.2	11	**Nifty**	**25.4**
2	Austria	17.3		**CMIE Cospi**	**25.4**
3	UK	18.4	13	Germany DAX	25.8
4	US	18.5	14	Mexico	25.8
5	Denmark	18.6	15	Hong Kong	27.4
6	Belgium	18.9	16	Malaysia	27.6
7	Switzerland	20.1	17	Venezuela	29.3
8	Singapore	22.4		**Nifty Jr.**	**30.5**
9	France	23.1	18	Netherlands	34.3
10	Japan	23.3	19	Argentina	37.0
			20	Brazil	37.3

What can help reduce equity market vol?

- *"Fundamental" factors*
  - Reduction in GDP growth volatility
  - Firms with more equity financing
  - Indian firms that are MNCs
  - Avoid currency crisis, avoid political crises.
- *Factors internal to the securities markets*
  - More liquidity
  - More rational traders
  - Avoid crises : payments crisis, scandal on the market, regulatory crackdown giving adverse shocks to liquidity.

Policy paths to increase liquidity

- Position limits on derivatives markets
- Improved information disclosure by firms

More rational traders and rational trading

- Global hedge funds
- Local hedge funds
- Individuals from outside India - shift from “FII” framework to “omnibus accounts”
- Improved regulation of banks, insurance companies, pension funds.
- Direct market access
- Futures trading on Nifty implied vol
- Fear on the street about doing smart things.

Thank you.