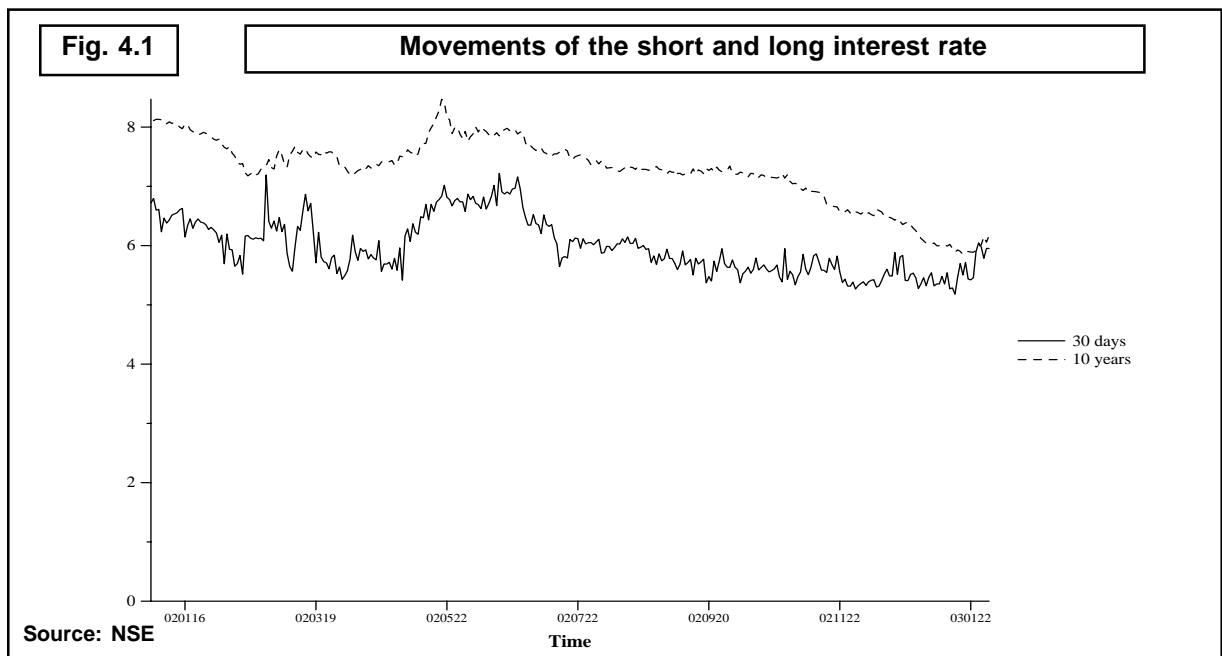


### Interest rates for government debt

4.26 Figure 4.1 shows the fluctuations of the short interest rate (30 day maturity) and long interest rate (10 year maturity) on the government bond market, as measured by

the NSE zero coupon yield curve. The short interest rate has been broadly stable from July 2002 onwards. However, the long interest rate has dropped. Coupled with a slight rise in the short rate in January 2003, this has given a yield curve which is now essentially



flat. As of 30 January 2003, the short rate was 5.95 percent and the long rate was 6.17 percent.

4.27 Table 4.10 shows returns on the NSE GOI Bond Index, which is the returns obtained by an investor who held all government bonds with weights proportional to their market capitalisation. This portfolio would earn positive returns when interest rates drop. The fall in interest rates in recent years has resulted in significant returns to this index. As of 31 December 2002, the portfolio duration of the GOI bond index was 5.796 years, which suggests that a one percentage point parallel shift in the yield curve would generate profits of roughly 5.796 percent on the GOI Bond Index.

4.28 Table 4.11 summarises the various components of the debt market, focusing on products traded at the Wholesale Debt

Date	Level	Percentage change
1 January 1997	100.00	
31 March 1997	103.47	+3.47
31 March 1998	118.03	+14.07
31 March 1999	129.18	+9.45
31 March 2000	146.58	+13.47
31 March 2001	164.85	+12.46
30 March 2002	202.50	+22.84
18 January 2003	225.56	+11.39

Source: NSE

Market (WDM) segment of NSE. India's fiscal problems have implied a large volume of issuance of central government debt, which dominates the table. This has fueled tremendous growth of turnover on the debt market.

4.29 The NSE's WDM is a trade reporting facility, where roughly 60 percent of trades get reported. Table 4.12 shows the enormous growth of bond market turnover which was reported at WDM.

4.30 The government bond market has so far been a highly non-transparent 'over the

Class	Number of securities	Issue size (Rs. crore)
Government bonds	113	524,100
State government bonds	543	64,313
Treasury bills	39	29,170
State enterprise bonds	439	38,293
FI/Bank bonds	397	29,138
Certificates of deposit	9	175
Commercial paper	66	1,915
Corporate debt	263	16,040
Others	11	904
<b>Total</b>	<b>1,880</b>	<b>704,049</b>

Source: NSE

Period	Turnover
1998-99	105,469
1999-00	304,216
2000-01	428,581
2001-02	947,191
April-December 2002	807,024

Source: NSE

counter' (OTC) market. Transactions are privately negotiated, and not instantaneously publicly reported. The two parties to each transaction may be vulnerable to counterparty credit risk.

4.31 One line of attack in policy has been to obtain incremental improvements in the functioning of the OTC market. A key element of this process has been the establishment of the Clearing Corporation of India (CCIL) in 2001. CCIL was intended to perform clearing functions for the debt market, similar in function to those which have been performed by the National Securities Clearing Corporation (NSCC) from 1996 onwards on the equity market. CCIL does risk management on bond and currency market transactions of its participants. In the event of default by one participant, CCIL takes the full legal responsibility of the outstanding positions or settlement obligations.

4.32 In the week ended 3 January 2003, CCIL performed its functions in 87.22 percent of the total turnover on the GOI bond market. This suggests that for the major portion of debt market transactions, default by one participant would not generate contagion.

4.33 Apart from this reduction in systemic risk, a key benefit of exploiting the clearing corporation is the gains of netting efficiency. In the week ended 3 January 2003, the gross funds obligations from all participants would have been Rs.78,003 crore. Owing to multi-lateral netting at CCIL, the funds which actually changed hands were only Rs.17,266 crore, which implies a netting efficiency of 77.87 percent. In the case of the currency market, the netting efficiency at CCIL works out to 89.09 percent. In both cases, this suggests a sharp reduction in transactions costs and counter party risk.

4.34 In order to bring greater transparency to the debt market, and to move away from bilateral negotiation towards anonymous order-matching, on 16 January 2003, trading in government bonds began on stock exchanges. This reflected an implementation of the announcements made in the Budget Speech of 2001.

4.35 This involved exploiting the identical process flow used for trading in equities. Trades take place by anonymous order matching for all orders across the country, risk management is done by the clearing corporation, and settlement takes place at the depository. Under this system, government bonds appear in the depository statement of an investor alongside corporate equities

and bonds. This system has several strengths :

- Anonymous trading avoids the supervisory and regulatory difficulties of the telephone market, where counterparties are aware of identities and can engage in trades at off-market prices, form cartels, etc.
- This market design offers symmetric market access from locations all over India and over the Internet, as opposed to the telephone market, which favours entities in south Bombay.
- This market design exploits information technology to guarantee that orders are matched against the best price available in the country. This is in contrast with the telephone market, where traders can search for counterparties, but are not sure of having found the best counterparty.
- This market design is fully transparent in that orders and trades are visible in realtime. This is in contrast with the telephone market, where orders are not visible, and the transparency of trades is limited and delayed.
- This market design exploits the information technology of the depositories of the equity market (NSDL and CDSL), which have the full range of functionality required for investors such as a wide network of IT-enabled depository participants, Internet access, strong computer security, access to data about the beneficial owner down to the end-investor, etc.