Current Issues

India Special

# Deutsche Bank Research

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# India's capital markets

## Unlocking the door to future growth

**India's capital markets have experienced sweeping changes since the beginning of the last decade.** Its market infrastructure has advanced while corporate governance has progressed faster than in many other emerging market economies. But in contrast to several developed countries and Asian economies, India's capital markets are still shallow, implying that further reforms are needed to make India a world-class financial centre.

**At nearly 40% of GDP, the size of India's government bond segment is comparable to many other emerging market economies.** Its corporate bond market, however, remains small and is dwarfed by those of the United States, South Korea and Malaysia.

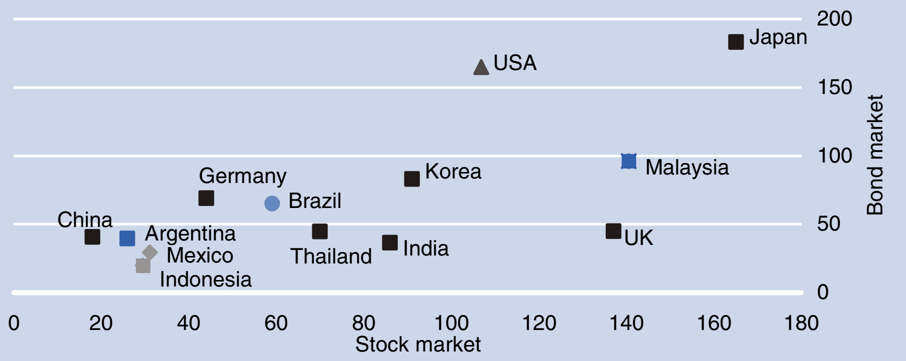
**India boasts a dynamic equity market.** The sharp rise in India's stock markets since 2003 reflects its improving macroeconomic fundamentals. However, the large size of insider holdings and the small presence of institutional investors belie these impressive figures.

**Innovative products such as securitised debt and fund products based on alternative assets are starting to break ground.** But an enabling environment is not yet in place and there remains an overriding need to increase domestic investors' knowledge regarding the merits and risks of capital market investing.

**A vibrant, well-developed capital market has been shown to facilitate investment and economic growth.** We believe that persistent reforms in the sector can support India's already impressive growth trend in the coming years.

**Financial deepening beckons in India**

Stock and bond market capitalisation (end-2005), % of GDP




Sources: Federation of World Exchanges, BIS, IMF, DB Research

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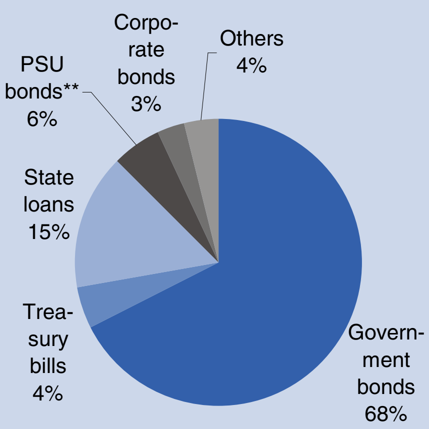
**India's stock markets: Scaling new highs**
BSE index


Source: Bloomberg 1

**Stock market still offer diversification benefits**
MSCI India and World Indices (USD) rolling correlation


Source: Datastream 2

**Government issuance leads the local bond market**
Domestic bonds outstanding, % of total*




*As of March 2006. ** PSU = Public Sector Undertakings. Source: National Stock Exchange 3

## Introduction

Improving macroeconomic fundamentals, a sizeable skilled labour force and greater integration with the world economy have increased India's global competitiveness, placing the country on the radar screens of investors the world over. The global ratings agencies Moody's and Fitch have awarded India investment grade ratings, indicating comparatively low sovereign risks.

These positive dynamics have led to a sustained surge in India's equity markets since 2003 (see chart 1), attracting sizeable capital from foreign investors. Net cumulative portfolio flows from 2003-2006 (bonds and equities) amounted to USD 35 bn. Moreover, India's stock market has outperformed world indices in recent years. And, despite its increasing correlation with world markets in recent years (see chart 2), India still offers diversification in global portfolios.

The bond market is dominated by government bonds. Government bond issuances, resulting from persistently high fiscal deficits, as well as specific regulatory requirements, have underpinned the supply and demand conditions in India's debt capital markets. Nearly 90% of total domestic bonds outstanding are government issuances (i.e. Treasury bills, notes and bonds), squeezing out corporate and other marketable debt securities (see chart 3). Initiatives to lift the corporate bond market from its nascent stages have been slow to progress, leaving companies unable to realise their optimum capital structure as a result. And unlike the derivative instruments that are available for equities, those for fixed income instruments (e.g. options in interest rates) in the organised exchanges have failed to take off, limiting the price discovery in the secondary markets.

We believe that India's economic transformation is irreversible. Against this backdrop, greater efficiency in financial intermediation is required to support investment and growth, but this will require structural changes in India's public finances and the dismantling of unwieldy regulations.

The paper follows an analysis of supply (bonds, equities and derivatives) and demand conditions (household and institutional investors) in India's capital markets. Some stylised facts regarding India's capital market infrastructure and corporate governance are first presented, followed by an analysis of its fixed income, equity and derivatives markets. Later, the paper discusses the classes of investors in India's markets and the constraints they face in optimising the risk/return objectives of their portfolios. Finally, some brief comments regarding the link between economic growth and capital markets reform conclude the paper.

## I. Capital markets development supported by steady infrastructure reforms

India's financial market began its transformation path in the early 1990s. The banking sector witnessed sweeping changes, including the elimination of interest rate controls, reductions in reserve and liquidity requirements and an overhaul in priority sector lending[1]. Persistent efforts by the Reserve Bank of India (RBI) to put in place

[1] Asian Development Bank Institute (2003).

effective supervision and prudential norms since then have lifted the country closer to global standards.

**India embarked upon comprehensive financial reforms over a decade ago…**

Around the same time, India's capital markets also began to stage extensive changes. The Securities and Exchange Board of India (SEBI) was established in 1992 with a mandate to protect investors and usher improvements into the microstructure of capital markets, while the repeal of the Controller of Capital Issues (CCI) in the same year removed the administrative controls over the pricing of new equity issues. India's financial markets also began to embrace technology. Competition in the markets increased with the establishment of the National Stock Exchange (NSE) in 1994, leading to a significant rise in the volume of transactions and to the emergence of new important instruments in financial intermediation.

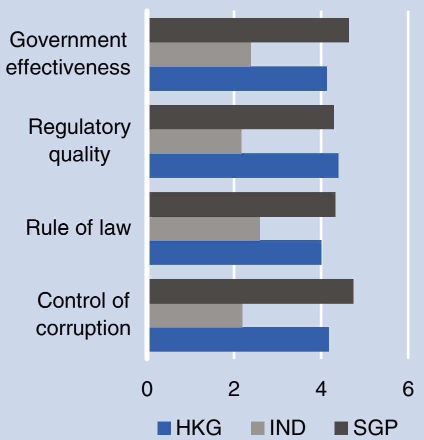
## A. Innovations have strengthened market infrastructure

**… heralding improvements in its market infrastructure**

Market infrastructure has strengthened markedly heralded by steady reforms. The government bond and equity markets have moved to T+1 and T+2 rolling settlement cycles in recent years[2], which significantly compressed the transfer of cash and securities to the relevant counterparties, thereby reducing settlement risks.

The seamless move toward shorter settlement periods has been enabled by a number of innovations. The introduction of electronic transfer of securities brought down settlement costs markedly and ushered in greater transparency, while "dematerialisation" instituted a paper-free securities market. Together, these mechanisms eliminated forgery of share certificates. Straight-through processing automated the complete workflow (i.e. front, middle and back office and general ledger) involved in the financial transaction, thus doing away with multiple data re-entry and avoiding delays and errors. On the initiative of the Reserve Bank of India and the cooperation of public and private institutions, the Clearing Corporation of India Limited (CCIL) was established in 2001 to facilitate the clearing of trades and transactions in the foreign exchange and fixed income markets, catalysed by the extensive use of information technology.

**Stronger legal framework needed***




* The 4 governance indicators are measured in units ranging from -2.5 to 2.5, with higher values corresponding to better governance outcomes. Data have been rescaled to 0-5.

Source: World Bank Governance Index 2005 **4**

## B. Good corporate governance, but overall legal framework needs improving

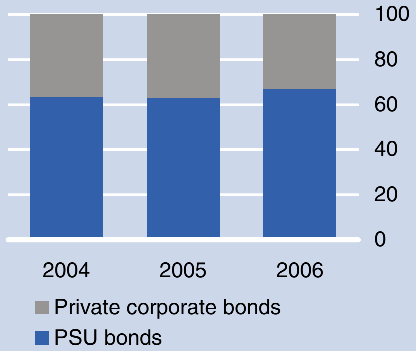
Continuing efforts by the SEBI to upgrade the corporate governance framework have positioned India at an above-average level against other emerging market economies, according to the Institute of International Finance (IIF), the global association of financial institutions[3]. Since March 2006, listed companies have been required to submit quarterly compliance reports to the SEBI, facilitating the valuation of companies and bringing it in line with the Sarbanes-Oxley Act.

Notwithstanding, enforcement remains a challenge due to a still limited number of adequately trained staff to implement the rules. Nor are companies subject to substantial fines or legal sanctions, which reduce their incentives to comply. In turn, this reflects the ongoing gaps in India's legal system, and somewhat undermines the steps to promote India's capital markets further. Although India does have a functional legal system, the country's law enforcement still lags behind the more advanced economies of Hong Kong and Singapore according to the World Bank (see chart 4). This implies that efforts to raise corporate governance need to be accompanied by a stronger

[2] National Stock Exchange Fact Book (2006).
[3] Institute of International Finance (2006).

**Private corporate bonds outweighed by PSU bonds**

Distribution of issuance*, %




*As of end-March of the year.
Source: National Stock Exchange **5**

**A wide range of instruments for investors**

| Market segment | Issuer | Instruments |
|---|---|---|
| Government Securities | Central Government | Zero Coupon Bonds, Coupon Bearing Bonds, Treasury Bills, STRIPS |
| | State Governments | Coupon Bearing Bonds |
| Public Sector Bonds | Government Agencies/ Statutory Bodies | Govt. Guaranteed Bonds, Debentures |
| | Public Sector Units | PSU Bonds, Debentures, Commercial Paper |
| Private Sector Bonds | Corporates | Debentures, Bonds, Commercial Paper, Floating Rate Bonds, Zero Coupon Bonds, Inter-Corporate Deposits |
| | Banks | Certificates of Deposits, Debentures, Bonds |
| | Financial Institutions | Certificates of Deposits, Bonds |

Source: Bombay Stock Exchange **6**

legal framework to bring greater stability in its capital markets and foster investor confidence.

## II. A sizeable but largely skewed capital market

For over a century, India's capital markets, which consist primarily of debt and equity markets, have increasingly played a significant role in mobilising funds to meet public and private entities' financing requirements. The advent of exchange-traded derivative instruments in 2000, such as options and futures, has enabled investors to better hedge their positions and reduce risks.

In total, India's debt and equity markets were equivalent to 130% of GDP at the end of 2005. This is an impressive stride, coming from just 75% in 1995, suggesting issuers' growing confidence in market-based financing. However, the size of the country's capital markets relative to the United States', Malaysia's and South Korea's remains low, implying a strong catch-up process for India.

### A. Debt markets shaped by the public sector

India's debt markets are divided into two segments. The government bond segment is the larger and more active of the two, with issuers comprising the central government – accounting for 90% of the total – and state governments. The Reserve Bank of India (RBI) has maintained its role as the government's debt manager and regulator of government-issued papers.

The corporate bond market represents the other segment, with Public Sector Undertakings (PSU), corporates, financial institutions and banks being the primary players. PSU bonds by far outweigh the size of private corporate bonds (see chart 5), reflecting a number of factors, foremost of which are the lists of regulatory requirements for private issues. Regulatory oversight of the segment falls under the purview of the Securities and Exchange Board of India (SEBI).

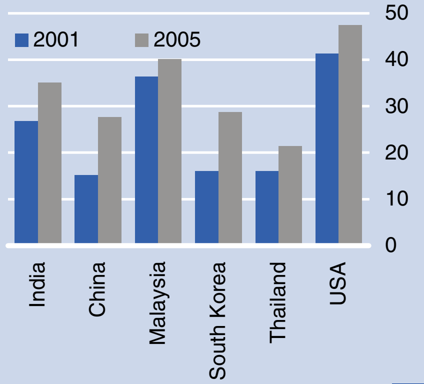
Each issuer has a range of instruments available in the market (see chart 6). Since institutional investors, especially banks, have remained the primary participants in fixed income securities, India's bond markets have predominantly been wholesale.

***Government bond issuances rule the roost***

The government bond segment is the oldest and largest component of the debt market. Its size has taken off exponentially over the past decades, with the total stock of debt outstanding at roughly USD 280 bn as of June 2006[4], increasing three and a half times since 1995. This translates to roughly 35% of GDP, in line with several large Asian economies and is not significantly lower than that of the United States (see chart 7). With growing demand from institutional investors such as insurance companies and pension funds, bonds with maturity extending to 30 years are now available, the longest in non-Japan Asia (see chart 8).

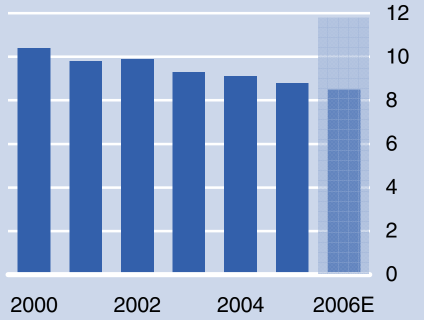
4 India's fiscal year runs from April of the current year through March of the following year. Data are based on the BIS (2006).

**A sizeable government bond market**
% of GDP



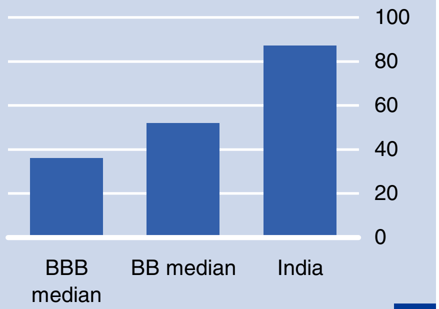

Source: BIS 7

**High fiscal deficits have encouraged large public borrowings**
Total public deficit, % of GDP



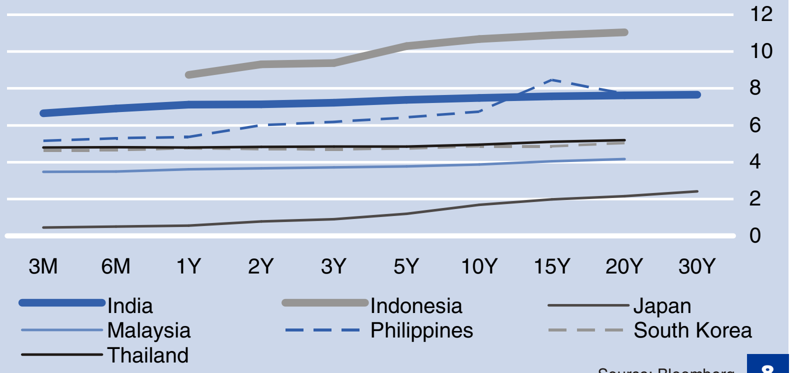

Sources: Reserve Bank of India, DB Research 9

**India's public debt high against its peers**
Average of total public debt, % GDP, 2001-2005




Source: Standard and Poor's 10

**Local tenors stretching out**
Government bond yield curves, %




Source: Bloomberg 8

The contours of the government bond market began taking shape around 1992 as a result of the government's broad-based attempts to reform the financial sector.[5] Advances in the segment benefited from a host of reforms, such as the move toward an auction-based sale of government securities, appointment of Primary Dealers, acting as market makers, and the implementation of delivery-versus-payment (DVP), mitigating the risks associated with trading and settlement.

In 1997, the establishment of the Ways and Means Committee was a landmark event as it virtually ended the automatic monetisation of government deficits. In the same year, foreign institutions were permitted to invest in government-issued securities, thus broadening the institutional investor base. Zero-coupon bonds and index bonds represent novel products in the marketplace, but have so far received only tepid response from participants.

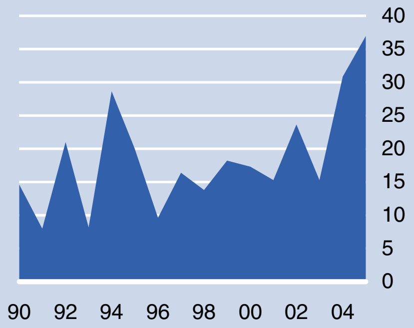
### *Why have government bonds dominated?*

Public sector fiscal dynamics and government regulations largely dictate the current state of affairs. That the size of the government bond market is large is not surprising due to persistently high fiscal deficits and the resulting high public sector borrowing[6] (see chart 9). Although the total public deficit has been declining since 2003, government debt has remained high, averaging 85% of GDP over the past 5 years. This places India's public debt considerably higher than similarly rated countries (see chart 10).

Banking regulations compound the problems. Banks are mandated to invest 25% of their net demand and time liabilities (i.e. deposits) in government bonds or other approved government securities, the so-called statutory liquidity reserve (SLR). The SLR has stayed at this level since it was reduced in 1991 from 38%. But in view of the (perceived) risk-free nature of these assets – requiring less provisioning in their books – banks tend to hold an even greater percentage of government bonds in their portfolios than prescribed by the SLR[7]. Large holdings of government bonds expose banks to interest rate volatility (thus affecting banks' income)[8] and could impact

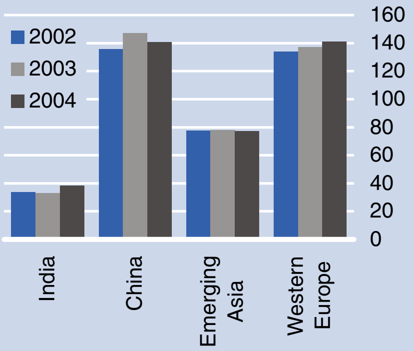
[5] The Development of Bond market in India in http://www.iimcal.ac.in/community/FinClub/dhan/dhan1/art15-bond.pdf
[6] Rawkins, Paul (2006).
[7] The IMF put the figure at roughly 41% in 2005, well in excess of the 25% SLR (IMF Article IV report, 2005).
[8] In 2004, the Reserve Bank of India allowed for a one-off reclassification of government securities to held-to-maturity from trading or available-for-sale securities in order to mitigate the losses from rising interest rates.

**Credit growth is surging...**
% yoy



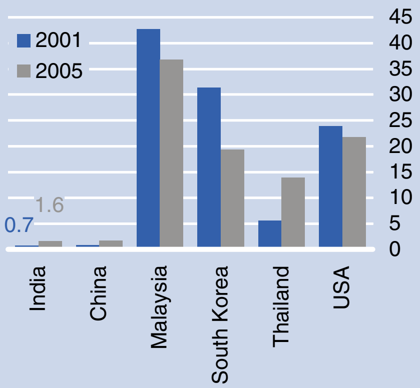

Source: Reserve Bank of India **11**

**... but financial intermediation remains low**
Bank credit, % of GDP




Source: IMF **12**

**Corporate bond market has yet to develop**
% of GDP




Source: BIS **13**

their capital adequacy in an environment of sharply increasing interest rates. This alone calls for greater diversification of income sources (such as fee-based income) aligned with more prudent credit risk assessment. Despite the super charge growth in bank credit over the past two years (see chart 11), India's credit-to-GDP ratio remains low in contrast to other countries in Asia, implying still low penetration of bank intermediation in the country (see chart 12).

Similar restrictive regulations to the SLR exist for the insurance sector and the pension fund system, thereby preventing a large portion of their capital from being channelled to other higher-yielding investment assets, which would enhance the risk/return profile of their portfolios. Insurance companies (carrying out the business of general insurance) are mandated by the Insurance Regulatory and Development Authority (IRDA), the regulatory body for the insurance industry, to invest at least 25% of their total assets in government securities and state government securities[9]. Pension funds face slightly higher requirements, although in both cases, investment in government paper may well be above the statutory level to preserve the safety of their assets.

### *Corporate bond market: A huge potential awaits*

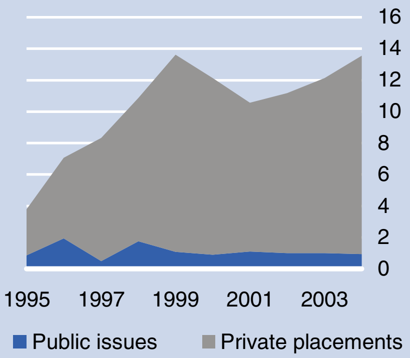
In contrast to the government bond market, the size of the corporate bond market (i.e. corporate issuers plus financial institutions) remains very shallow (see chart 13), amounting to just USD 16.8 bn[10], or less than 2% of GDP at the end of June 2006. A well-developed corporate bond market would give companies greater flexibility to define their optimum capital structure. By the same token, investors would benefit from having a wider range of asset classes to diversify their fixed income investments.

Within India's corporate bond market, state-owned Public Sector Undertakings (PSUs) have persistently outstripped private corporate issuances. PSUs and private companies can raise debt capital either by private placement or public issue, with the former being the preferred method by far. The growth of private placement of debt has shown a marked increase over the past decade, rising over four-fold in fiscal year 2004/2005 to roughly USD 12.6 bn from USD 3 bn in fiscal year 1995/1996 (see chart 14). The preference for the private placement route arises from less onerous regulatory requirements, such as the type of disclosures and registration requisites, than those for public issues[11]. Also, the considerably higher costs associated with public issuance have deterred corporates from accessing funds through this route, in addition to the fact that private debt placements can be customised in accordance with individual issuers' needs. Corporates are not mandated to obtain and disclose credit ratings from an approved credit rating agency, although companies themselves have increasingly sought to do so in recent years. In fiscal year 2004/2005, 93% of companies that raised bonds through private placements obtained credit ratings[12]. There is a preference to raise funds with maturities between three to five years, which suggests that companies remain cautious of borrowing over the medium-term segment, and also reflects investors' still limited demand for longer tenors.

Trading, clearing and settlement practices in the corporate bond market are less developed than in the government bond segment.

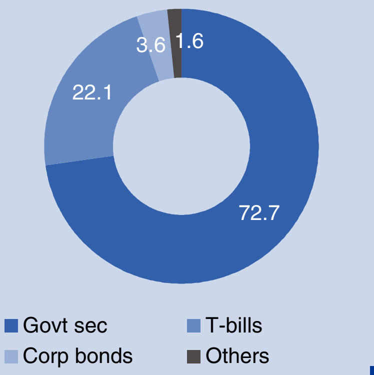
9 The Insurance Regulatory and Development Authority (2001).
10 Bank for International Settlements (September 2006).
11 National Stock Exchange (2005)
12 National Stock Exchange (2005).

**Private placement towers over public issuance**
Bond market, USD bn



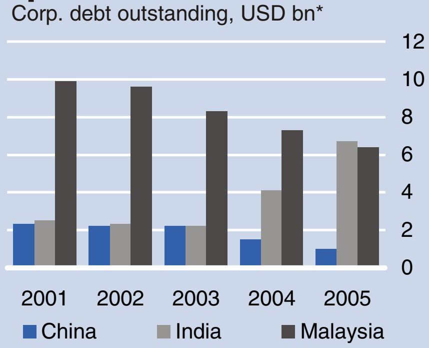

Source: National Stock Exchange 14

**Government bonds remains most actively traded**
Turnover, % (March 2006)




Source: National Stock Exchange 15

**Indian corporates have gone on a borrowing spree abroad...**
Corp. debt outstanding, USD bn*




*As of December of each year. Source: BIS 16

Deals are usually conducted over the counter and are struck between counterparties. In cases wherein brokers intermediate (often by telephone), they are required to report the transaction to the exchange, which facilitates post-trade information. Corporate debt can also be traded via an electronic order book system, but this has largely been unpopular in the absence of general retail interest in such securities[13]. Moreover, the more advanced clearing and settlement infrastructure for government bonds allow repo transactions for this segment, a facility that is not accessible for corporate bonds.

The large size of the government bond segment in comparison with its corporate equivalent explains its large trading activity in the secondary market, accounting for over 70% of turnover (see chart 15).

By contrast, turnover in the corporate segment amounts to just 3.6%, largely because of the limited supply owing to the preference for private placements mentioned above. In addition, large domestic institutional investors, such as pension funds and the insurance sector, are still restricted from allocating large portions of their investible funds in the corporate bond segment. Not only does this constrain the segment's development, but it also limits investors' ability to enhance their returns by diversifying their fixed income instruments investments.

Nonetheless, the potential for the segment to pick up is promising, judging by large corporate debt being raised in the international capital markets. And the propensities to borrow are expected to grow further, arising from companies' reassessment of their capitalisation. Nearly 50% of their financing comes from reinvested capital, while the rest arise from external sources either by raising equity or from bank and other financial institution borrowings.[14] Shareholders' calls for higher dividend payment and the quest to bring corporate cost of capital to optimum levels will support a rise in capital market financing in the future. At the same time, the pension fund system is moving toward defined contribution mechanism which should provide impetus to the demand for corporate bonds.

### *Corporates seize borrowing opportunities abroad*

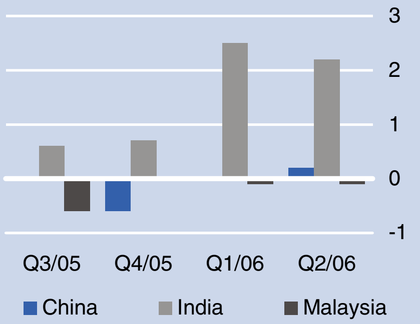
A more aggressive trend in overseas borrowing by Indian corporates has recently developed (see chart 16), fuelled by fewer listing requirements, lower cost of funding and better liquidity in the secondary markets. The trend also stands in contrast to the sovereign's absence in the international capital markets, reflecting the government's conservative approach to external debt management as a result of the current account crisis in 1991/1992.

At the end of 2005, the total amount of bonds outstanding raised by corporates abroad amounted to USD 6.7 bn[15], over two and a half times its size in 2001. This represents 60% of the value of corporate issuance in local markets. To put this in perspective, if this amount of issuance had been made in the domestic capital markets, the size of India's corporate debt market would be 2.5% of GDP instead of just 1.5% of GDP.

Indian companies continued to exert their presence in the international bond markets in 2006, outpacing their Asian counterparts (see chart 17). This strong appetite coincided with the still comparatively lower international interest rates (e.g. Ranbaxy's USD 400 m 5-year convertible bond issue fetched 5% versus 7.5% for a

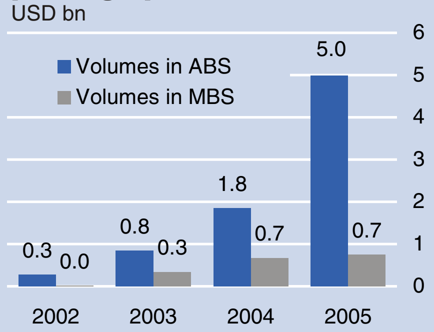
[13] Bank for International Settlements (2005).
[14] Handbook of Statistics (2006), Securities and Exchange Board of India.
[15] Excluding financial institutions.

**... and there's no retreat in 2006**
USD bn



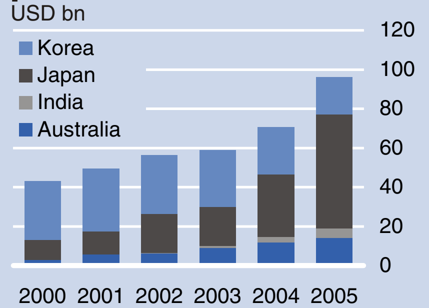

Source: BIS 17

**Securitisation is picking up...**
USD bn




Source: BIS 18

**... with India's ABS issuance a decent fourth place in Asia**
USD bn




Source: BIS 19

similar tenor in the domestic market)[16]. It also coincided with the better valuation by foreign investors of Indian companies, indicative of their improving global competitiveness.

***Structured finance offers immense potential***

Securitisation is an attractive growth segment in India's debt markets. The market is still in its nascent stages, where current activities primarily occur between banks, non-bank financial institutions and asset reconstruction companies through private placements. Paving the way for a secondary market is the implementation of the proposed changes to the Securities Contracts Regulation Act, which would reclassify securitised debt as true marketable securities[17].

Nevertheless, securitisation has developed robustly in recent years. Asset-backed securities (ABS) are the predominant asset class in India's securitised segment. This should not come as a surprise given the large component of retail loans in banks' and non-bank financial institutions' balance sheets. The ABS market has risen exponentially since 2002, in tune with the sharp pick up in credit growth since then (see chart 18). In 2005, India's ABS market volume was roughly USD 5 bn, making it the fourth-largest in Asia-Pacific (see chart 19).

Mortgage-backed securities (MBS) volumes are just a small fraction of the ABS market. Growth so far has been slack, explained by the absence of a secondary market and the prepayment and interest rate risks arising from prepayment/repricing of the underlying loans[18]. But the growth of commercial bank credit for housing, averaging approximately 90% since 2002, suggests that mortgage-backed securities is a segment that will take off, so long as market infrastructure and regulatory provisions are firmly grounded.

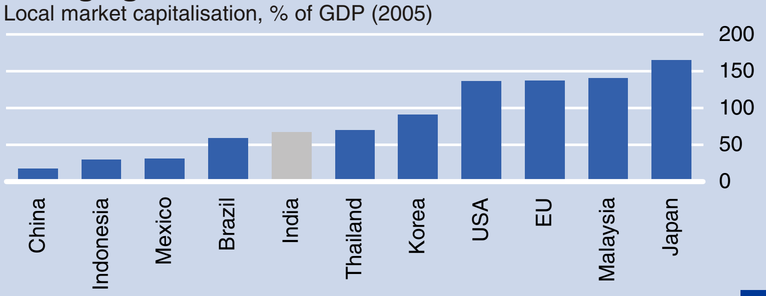
Other securitised assets backed by corporate loans, receivables and toll revenues have sprung recently, indicating the promising potential of the segment. As the government embarks upon modernising its infrastructure, the need to develop the structured finance segment will become crucial. Collateralised mortgage backed securities (CMBS), collateralised loan obligations (CLO) and collateralised debt obligations (CDO), which are actively traded in the United States, are innovations awaiting the Indian market in line with a maturing economy. Permitting foreign investors in the market will play a significant role in pricing and transparency. But for now, incomplete legislative and market norms may not allow the country to fully exploit the potential of securitisation activities.

## B. Vibrant equity markets

The development of India's equity capital markets has taken a more progressive trajectory than the bond market, largely reflecting the government's laissez faire approach in the segment. At 90% of GDP[19], its size is comparable to that of other emerging countries, although is still small relative to many developed markets (see chart 20).

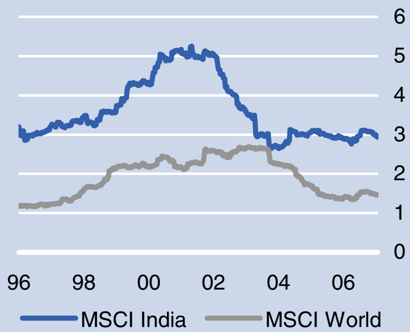
[16] Hindu Business Line (2006).
[17] Kothari, Vinod (2006) and Bank for International Settlements (2005).
[18] Bank for International Settlements (2005).
[19] Based on the capitalisation of the Bombay Stock Exchange as of December 2006.

**India's equity market comparable to other emerging markets**
Local market capitalisation, % of GDP (2005)



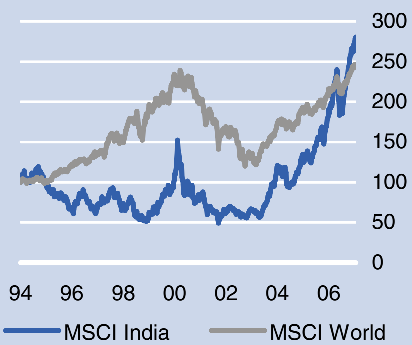

Source: IMF 20

**Indian equity markets have been volatile**
Standard deviation of rolling two-year weekly returns, index in USD




Source: Datastream 21

**Indian equities returns: catching up**
MSCI total return index, 1994=100




Source: Datastream 22

Of India's 23 stock exchanges, equity trading is most active in the National Stock Exchange (NSE) and the Bombay Stock Exchange (BSE). Since the NSE's inception in 1994, it has caught up with the BSE in terms of capitalisation but exceeded it in turnover. The BSE boasts of over 4,000 listed companies, surpassing stock exchanges in the US. This explains its slightly higher market capitalisation over the NSE, although its lower turnover implies that inefficiencies remain due to the high proportion of untraded companies. Its share of total equity turnover is just 33% compared to 66% of its rival, the NSE.

The increase in the limit for foreign direct investment in the stock exchanges to 49% announced early this year is expected to lend more dynamism to the equity capital markets. The investment limit for a single investor was set at 5%. It did not take long after the new limit was announced that the New York Stock Exchange (NYSE), Goldman Sachs, General Atlantic and Softbank Asian Infrastructure Fund all acquired a 5% stake in the National Stock Exchange (NSE). Increased foreign presence is expected to help the NSE to inch forward to the global markets, generate a wider customer and investor base and offer more innovative products. The Bombay Stock Exchange is also courting strategic investors. If it succeeds, this should help speed up the process of consolidating the thousands of inactive listed companies on the board. Moreover, the move will enhance its competitive strength against the NSE, which has diminished over the past decade.

### *Higher volatility, improving performance*

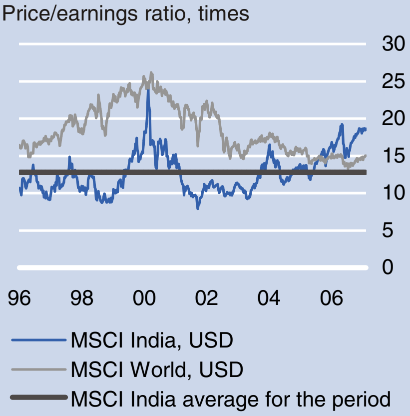
Benchmarking the risk/return characteristics of India's equity markets against the world average shows that India's stock market has historically been more volatile[20] (see chart 21), while its returns have, until recently, underperformed. This should not come as a surprise as the past decade witnessed several political and economic uncertainties, undermining business and investor confidence. Only from 2006 has India's stock market begun to outperform the world's index as momentum to liberalise the economy gathered pace and investors began to take notice (see chart 22).

Reflecting the recent sharp run-up in equity prices, India's stock markets today rank among the most expensive in the world (see chart 23), raising concerns over a correction, especially if earnings disappoint. However, sustained economic growth combined with continued market-friendly capital market reforms should prove to be supportive factors for superior returns in the medium run.

[20] Since the world index is a composite of indices and therefore, by nature, more diversified, it is expected to exhibit less volatility than the country index.

**Are India's equity prices stretched?**

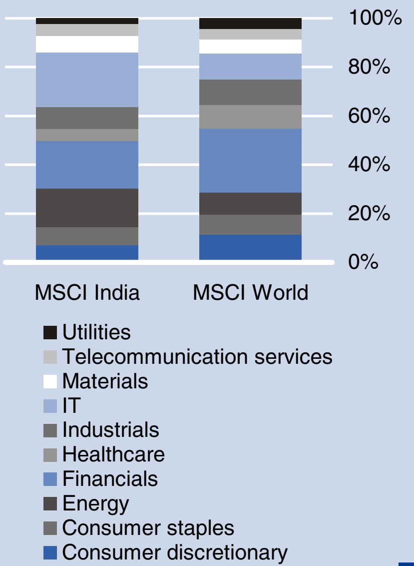
Price/earnings ratio, times




Source: Datastream **23**

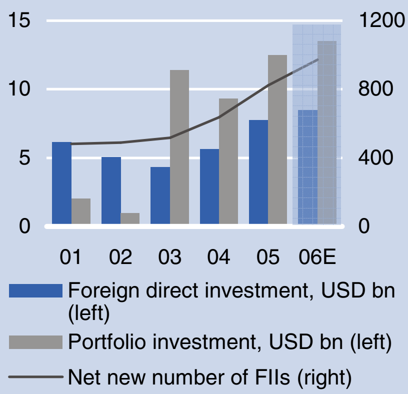
**India's equity market composition is broad-based**

%




Source: Datastream **24**

**Foreign investors flock to India's capital markets**




Sources: Reserve Bank of India, Deutsche Bank Research **25**

In terms of sectoral composition in benchmark indices, India's stock market is broad-based, putting it roughly in line with the world index (see chart 24). The higher weight of the IT sector today reflects the country's increasing turn toward a knowledge-based economy. But this may change, with consumer discretionary and consumer staples projected to get a larger share of the pie in tandem with rising incomes and as household preferences become more discerning. The shares of financials and healthcare sectors are also expected to increase markedly as industry consolidation picks up and the door to foreign direct investment is widened.

### *Foreign investors seize local market opportunities*

Reflecting India's improving macroeconomic fundamentals, increasing corporate profitability and competitiveness, and greater integration with the world economy, foreign institutional investors' (FIIs) participation grew steadily over the past 3 years (see chart 25). True, FII invest in local bonds and equity, but their interest has largely been on the latter. The inflow of portfolio capital continues to test new highs and in recent years has outpaced the inflow of foreign direct investment (FDI). India's accounting standards, although still not in full convergence with international practices, combined with the quarterly reporting frequency mandated by the SEBI on listed companies, offer guidance in corporate valuation. Greater inflows are still to be expected, arising from international investors' quest for higher returns and improved portfolio diversification, buttressed by ongoing structural changes in India's economy and its financial markets. Sustained inflow of capital will not only bring greater liquidity in the market, but foreign presence will encourage further market transparency.

### *Overseas listing inching up*

Domestic companies, both large- and small-cap, have been allowed to list abroad by way of American Depository Receipts and Global Depository Receipts (ADR, GDR) since 1992. Owing to global and local market conditions (e.g. global liquidity, stock market crashes, economic and financial crises), the amount raised through the ADR route since its inception has been quite volatile. Only in recent years have issuances picked up steadily, with the amount raised in fiscal year 2005/2006 exceeding USD 2.5 bn, a level not seen in over 10 years[21] (see chart 26). As one of the measures to allow greater capital account convertibility, the RBI has allowed two-way fungibility for Indian ADRs/GDRs. This allows holders of the instruments to cancel them with the depository and sell the underlying shares in the market. The company can then issue ADRs anew to the extent of the shares converted into local shares. This was not the case in the last decade, which limited companies' ability to access capital abroad.

### *Further room for improvement*

Impressive though the developments may be, India's stock markets still have some room for improvement. For one, the shareholder pattern needs to be broadened, as ownership is concentrated in the promoters[22] and company insiders show an increasing presence. This implies that minority shareholders' interest is minimal, which needs to be increased for the sake of an improved corporate governance.

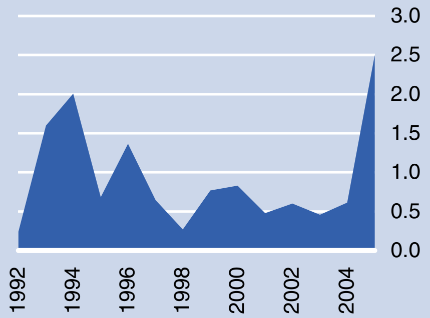
[21] Four of the top 25 ADR listings as of December 2005 are Infosys Technology (USD 884 m), ICICI Bank Ltd (USD 466 m), Satyam Computer Services Ltd (USD 323 m) and HDFC Bank Ltd (USD 300 m). Data are from Citigroup Corporation (http://wwss.citissb.com/adr/www/adr_info/YE2005_DR.pdf).

[22] Promoters include family members, relatives and close associates.

The presence of institutional investors in the equity market is also low, resulting from the restrictive investment guidelines set by the government for the insurance industry, banks and pension funds. Of note, while only 18% of the listed companies in the NSE are owned by retail investors, they account for an estimated 85% of the trading volume, according to a recent paper by McKinsey[23]. This suggests that retail investors tend to speculate in the stock market rather than follow a strategy of pursuing long-term benefits.

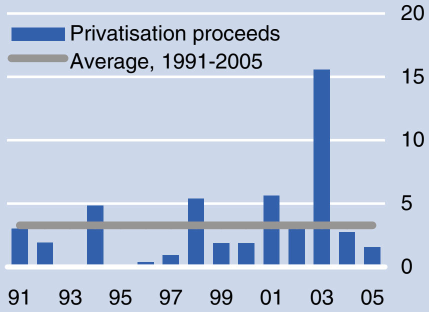
A resumption in privatisation is also key to further developing India's equity markets. Since FY 2003/2004, privatisation activities have dwindled, driven in part by the lack of political consensus to keep it on track (see chart 27). The sluggish process prevents publicly owned companies from accessing more efficient sources of funding. It also interferes with their movement toward market-disciplined processes and better corporate governance.

**ADR issuance makes a strong comeback**
USD bn



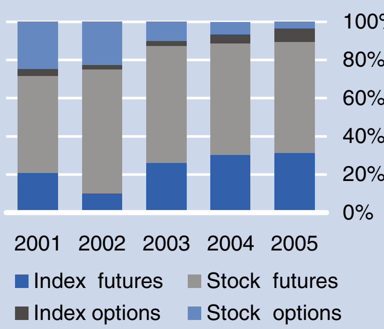

Source: Securities and Exchange Board India 26

**No clear signs of commitment to privatisation**
INR bn




Sources: Department of Disinvestment, Ministry of Finance 27

**Stock futures most popular derivatives segment**
Exchange-traded derivatives, % total turnover




Source: National Stock Exchange 28

## C. Financial derivatives march ahead

While some form of financial derivatives trading in India dates back to the 1870s, exchange traded derivative instruments started only in 2000. Then, stock index futures, with the Sensex 30 and the S&P CNX Nifty indices as the underlying, began trading at the BSE and NSE. Since their inception, the basket of instruments has expanded and now features individual stock futures, and options for stock index and individual stocks.

Among the four asset classes, single-stock futures have the lion's share, accounting for nearly 60% of the turnover in the NSE's derivatives segment (see chart 28). In its relatively short life span, single-stock futures are outperforming those in other global derivatives market (see chart 29). The security largely owes its success to the timing of its introduction: it came into stream shortly after "badla", a futures-like practice which permitted traders to carry forward sizeable net positions until the next settlement period, was banned.[24] The key difference with badla is that a clearing corporation owned by the NSE guarantees the futures transaction, thereby reducing settlement risks.

The derivative instruments traded in the exchanges reflect many of the features of the underlying instruments. First, as with the wholesale debt and equities segments, the NSE has steadily outpaced the BSE in terms of trading in the derivatives segment over the years. The NSE thus reflects the market's overall activity and sentiment.

Second, equity derivatives have developed more rapidly than their fixed income counterparts. Exchange-traded derivatives for interest rates failed to take off when introduced by the NSE in 2003, largely reflecting a flawed contract design.[25] Interest rate derivatives are primarily traded over-the-counter (OTC), and although any domestic money or debt market rate may be used as a benchmark rate, the Mumbai Interbank Offered Rate (MIBOR) and Mumbai Interbank Forward Offered Rate (MIFOR) are those that are widely used.

Interest rate swaps and forward rate agreements are instruments available for managing interest rate risks, although the former is by far the preferred choice. The overnight interest swap (OIS) is estimated to trade between USD 500 million and USD 1 billion per day.[26] A survey by FitchRatings of India's derivatives market in 2004

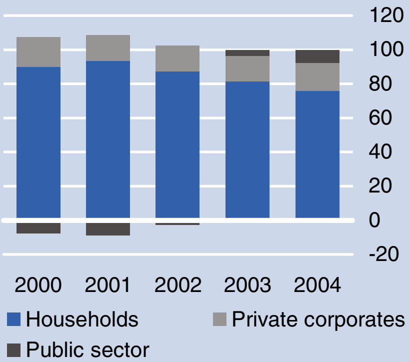
23 Farrell, Diana et al. (2006).
24 Gorham, Michael et al. (2005).
25 FitchRatings (2004).
26 FitchRatings (interview).

**Single-stock futures: India is world leader**
World ranking in terms of volumes traded

| | 2005 | 2004 |
|---|---|---|
| National Stock Exchange | 1 | 1 |
| Johannesburg Stock Exchange | 2 | 4 |
| BME Spanish Exchanges | 3 | 3 |
| Euronext Liffe | 4 | 2 |
| Borsa Italiana | 5 | 6 |
| OMX | 6 | 5 |
| Athens Stock Exchange | 7 | 7 |
| Budapest Stock Exchange | 8 | 8 |
| Australian Stock Exchange | 9 | 9 |
| Warsaw Stock Exchange | 10 | 10 |

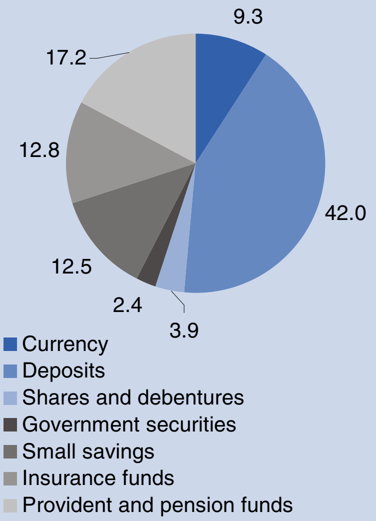
Source: World Federation of Exchanges 29

**Household sector the largest saver in the economy**
% of total savings




Source: Reserve Bank of India 30

**Households are ultra-conservative in their investment decisions**
Composition of household financial savings, % (average, 2000-2005)




Sources: Securities and Exchange Board of India, Reserve Bank of India 31

estimated that trading volumes at the end of the year amounted to roughly INR 30 bn, a three-fold increase from January 2004. This is expected to have picked up even further since then, spurred by sustained uncertainty over the interest rate outlook, leading market participants to hedge their exposures.

Tenors up to 5 years are the most liquid in the OIS market despite the fact that the yield curve stretches out to 30 years. Fitch attributed this to the absence of counterparty lines for longer maturities and partly by the lack of risk management tools for interest rate exposures longer than 5 years. There are a number of factors, though, which mitigate the risks in OTC derivatives for interest rates. One is that the majority of counterparties[27] have ratings that are investment-grade. Another is that India has accepted International Swaps and Derivatives Association (ISDA) documentation before striking any agreement with counterparties. However, combined with banks' and other institutional investors' large exposures to government bonds, and the prospects of a deepening bond market in general, the need to develop exchange-traded futures and options for interest rates is evident. This will significantly reduce risks inherent in the OTC markets through centralized settlement, enhanced risk management and multilateral netting.

## III. Right mix of investors, but participation is still low

A vibrant secondary market is characterised by the active participation of retail and institutional investors, underpinned by their long-term investment goals, with adjustments made in accordance with their short-term liquidity needs and in response to the business cycle. With a population of over 1 billion, India offers a large pool of potential investors. Indian households are by far the largest saver in the economy, constituting nearly 80% of the economy's aggregate saving (see chart 30).

Insurance companies, pension funds, mutual funds and foreign institutional investors (FIIs) form India's institutional investor base. Combined, their assets account for about 25% of GDP (see chart 31). This represents a significant increase compared to the mid-1990s, prior to the opening up of many of the sectors, such as the insurance industry, to competition. But, to put it in perspective, the combined size of the Indian institutional investors sector amounts to less than half of US mutual fund assets alone.

By and large, Indian investors tend to be conservative in their investment decisions, with a general preference for safe returns and capital preservation. As for large domestic institutional investors such as pension funds and insurance companies, their investment style has largely been the result of regulation.

### A. Indian household investments: low risk, low return

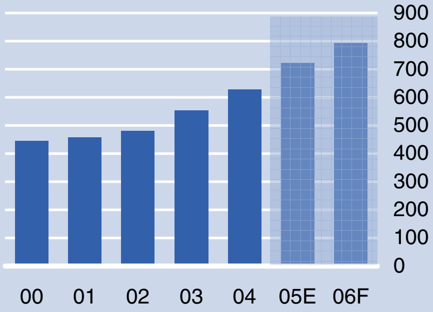
The lion's share of households' total financial savings, roughly 50%, is placed in bank deposit accounts (see chart 31). The rest of the pie is spread over small savings accounts[28], at just over 10%, and a combined 25% in insurance and pension funds. Because of these institutions' conservative approach to investing, they appeal very strongly to households.

[27] FitchRatings (2004).
[28] Small savings accounts are direct claims against the government.

Over the past 5 years, households had a mere 5% of their savings invested in the stock market on average. Granted, the general aversion to riskier instruments such as equities is not only a product of the public's preference for safe returns. India's equity markets have experienced several scandals in the past, resulting occasionally in substantial capital losses to many investors. This has essentially discouraged a considerable number of them to return to the stock markets, although in the past two years confidence has gradually regained some ground.

How many households are investing in the capital markets? A joint survey by the Securities and Exchange Board of India and National Council for Applied Economics Research (SEBI-NCAER) in March 2003 estimated that only 13 million households out of the total 177 million surveyed have investments in the capital markets. This is equivalent to a mere 7% of total Indian households. The robust economic expansion since the survey and the resulting increase in per capita GDP (see chart 32) may have widened the household investor base, but possibly not enough to considerably increase market volumes.

**India's GDP per capita steadily rising**
USD



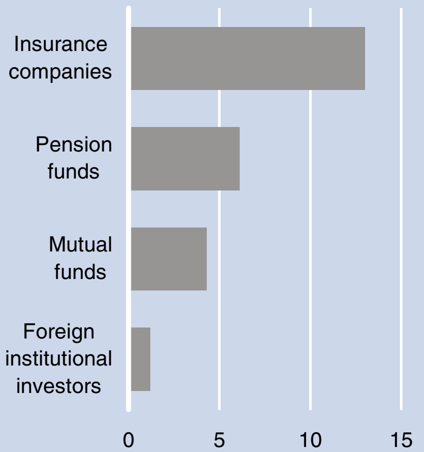

Sources: Institute of International Finance, Reserve Bank of India, DB Research 32

A key ingredient to reduce households' risk aversion is improving their understanding of long-term investment, particularly in the equity market. Regarding bonds, there is a concerted effort among the RBI and SEBI, as well as the BSE and NSE, to raise retail investors' knowledge about the mechanics and risk/return tradeoffs of debt securities. However, the thin volumes can be expected to persist so long as the government continues to provide savings schemes[29], which reduce incentives to invest in fixed-income instruments.

## B. Institutional investors: Easing regulations will unlock capital market growth

Nearly 25% of households' total financial savings are allocated in insurance and pension funds, dominated by the government-owned Life Insurance Company of India (LIC) and the Employee Pension Fund (EPF). The LIC continues to hold a near monopoly of the industry, accounting for nearly 75% of the business, despite the opening up of the industry to private competition in 1999. Similarly, although mutual funds have been permitted to offer pension plans, a majority of the public retirement scheme remains under the control of the EPF. The guaranteed rate of return of 9% they offer is a strong incentive for investors to place their financial savings with the institution. Overall, just roughly 10% of the labour force is enrolled in a pension scheme. The rest of the workers rely on their families for support at old age or on their accumulated savings.

**A small institutional investors sector**
Assets, % of GDP




Sources: Various domestic associations, IADB, author's estimates 33

### *Stringent asset allocation guidelines constrain returns*

Portfolio allocation decisions by the insurance and pension fund sector remain deeply regulated, requiring each to invest between 25 to 50% of total funds in government bonds or government-approved securities. Just over 85% of the LIC's total investments are in public securities – most of which are of long-term maturities – and about 15% in private securities. Given India's young labour force, it will take quite a number of years before a rush for redemption occurs, suggests that the LIC may not necessarily be optimising its portfolio returns. Portfolio managers' tendency to follow a buy-and-hold strategy precludes efficient duration management and the opti-

[29] Small savings schemes sponsored by the government offer guaranteed annual returns of 3.5% to 9% (Reserve Bank of India).

misation of the portfolio's risk/return profile. At the same time, the underdeveloped corporate bond markets inhibit fixed income portfolio managers to exploit relative value across different segments. Sub-optimal returns are also generated by the limited exposure allowed in the equity markets as a result of stringent regulation.

Simply put, there is significant room to improve upon households' long-term wealth creation, but this will call for the relaxation of portfolio asset allocation rules prescribed by the government. Greater private participation will encourage competition in the insurance and pension funds, bringing product innovations in the market that better match investor risk/return requirements.

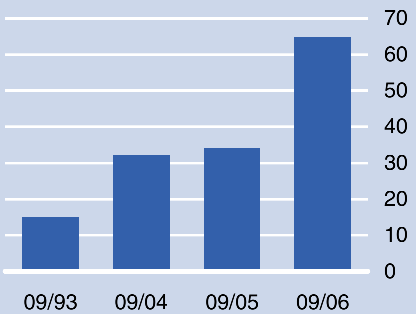
### *Creating more active markets with greater foreign presence*

Foreign institutional investors (FII) and mutual funds are accorded considerable leeway in their asset allocation decisions in contrast to the insurance and pension fund sectors. Because they can adjust their positions in response to changes in their liquidity needs or the economic environment, they tend to set the tone in market sentiment or influence prices despite their comparatively small size.

FIIs can invest across a variety of instruments in the local markets but are subject to limits. Current regulations permit all FIIs combined to own no more than 24% of any Indian company's total paid-up capital. Investments over the threshold are subject to the approval of the company's Board of Directors. There are ongoing calls to raise the limit further, which remain in constant debate among the policy-makers, due to their concerns about potential destabilising effects of sudden capital withdrawal. In 2004, maximum allowed FII investment in government securities, including Treasury bills, was raised to USD 2 bn from USD 1.75 bn and in corporate bonds to USD 1.5 bn from just USD 0.5 bn. Hedging foreign currency exposures in the forward market is permitted.

Although efforts to welcome FIIs are encouraging, the total amount of investment limits accorded to them is still meagre. Easing FII controls would accelerate the deepening and broadening of the capital markets, but this would require redressing capital account regulations aimed at preserving market stability in case portfolio positions are unwound.

**Assets under management of mutual funds have soared**
USD bn




Source: Association of Mutual Funds of India 34

### *Mutual funds are a viable long-term saving vehicle*

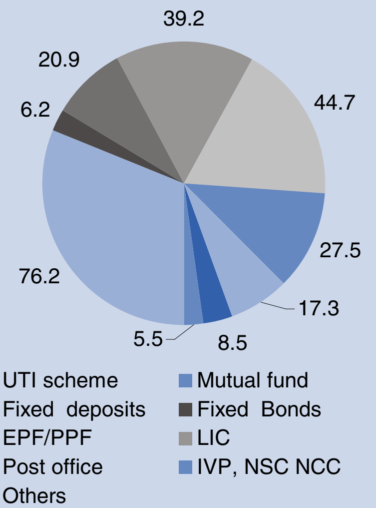
The landscape of the mutual fund industry has undergone significant changes since the establishment of the Unit Trust of India in 1964, which for decades held the monopoly. By the mid 1990s, barriers to entry were gradually dismantled, allowing domestic and foreign private institutions to enter the fray. Assets under management have grown to around USD 65 bn in September 2006 nearly 10% of GDP (see chart 34), quadrupling in value since 1993. At its current growth rate, the sector's size will double over the next 10 years.

With intense competition came the adoption of measures to improve transparency. Restrictions on investment in debt instruments and money markets were loosened. A number of different schemes are now available in the market[30], which appeals to investors' varying investment objectives and constraints. The listing of open-ended schemes allowed investors the flexibility to adjust their fund exposures, while regulations against fund managers' use of

[30] These include assured return, balanced, floating rate, fund of funds, gilt, growth, income, liquid and money market funds.

**Still very low penetration of mutual funds**

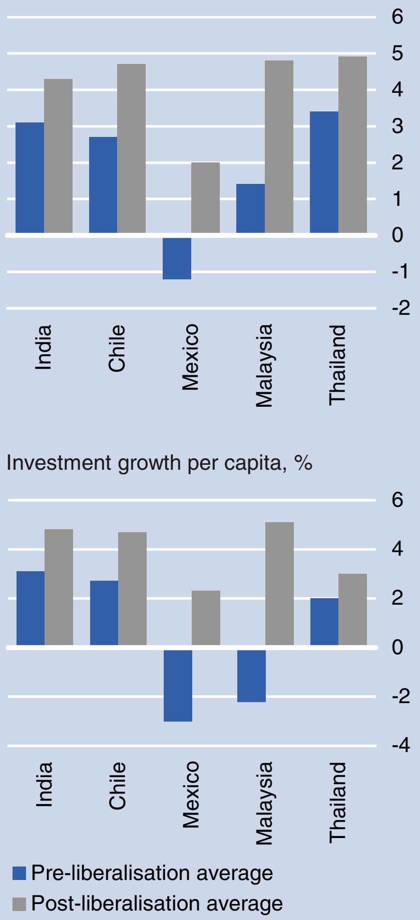
Households' investment by type, %*




Source: Securities and Exchange Board of India 35

**Capital market liberalisation is good for GDP growth**

Real GDP growth per capita, %




Official liberalisation date: India, 11/92; Chile, 01/92; Mexico, 05/89; Malaysia, 12/88; Thailand, 09/87

Source: Federal Reserve Bank of St. Louis 36

derivatives have been relaxed, allowing them to hedge their positions.

Given the rapid growth of the industry in the past 3 years, can the Indian mutual fund industry be characterised as having come of age? Not when seen in the light of the low share of mutual funds in the household sector's total investment pie (see chart 35).

One promising development announced in the Budget in 2006 was the lifting of overseas investment limits by mutual funds to USD 3 bn from USD 2 bn. This will allow domestic fund managers to offer new opportunities in higher-yielding funds, such as those dedicated to emerging markets and alternative investments (e.g. commodities), which are currently not available in the local market. Combined with rising per-capita income, improving awareness of capital market investing and pension fund reforms will make mutual fund investing a viable long-term investment vehicle.

## IV. The road ahead

India's regulators have been active in seeking ways to develop the country's financial markets, and a culture of introducing greater risk management is starting to set in. The main challenge ahead is to strengthen the political will to further ease regulations in the capital markets and the limits prescribed to market participants.

India's economy is expected to benefit enormously from the process of gradual capital market liberalisation. Empirical evidence has shown that emerging market economies that have heralded changes in their financial markets experienced higher growth and investment[31] (see chart 36). India is no exception, with per-capita GDP and domestic investment rising post-liberalisation. Economies which pursued deeper financial market reforms, and whose per-capita incomes were roughly similar to India's prior to their liberalisation periods, not surprisingly experienced even greater rewards. Drawing from these countries' experiences, India's growth potential can experience a sustained pick-up if it stays on the path of reforming its capital markets.

Full capital account convertibility no longer appears to be a pipe dream, going by the RBI's reconsideration of the Tarapore Committee's roadmap to capital account liberalisation[32]. Early in 2006, the conditions for full capital account convertibility have been re-examined against issues such as exchange rate management, prudential safeguards to monetary and financial stability and implications of dollarisation in India[33]. Although full convertibility is still not expected to occur overnight, the momentum towards that goal seems to have accelerated.

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[31] Bekaert, Geert et al (2003).

[32] A committee headed by S.S. Tarapore submitted its recommendations for full capital account convertibility in 1997, shortly before the Asian financial crisis. In the event, authorities delayed the implementation of the Committee's prescriptions, opting for calibrated measures instead.

[33] Reserve Bank of India (2006).

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